

Diamond Drill Geological Log



FORDING RIVER OPERATIONS

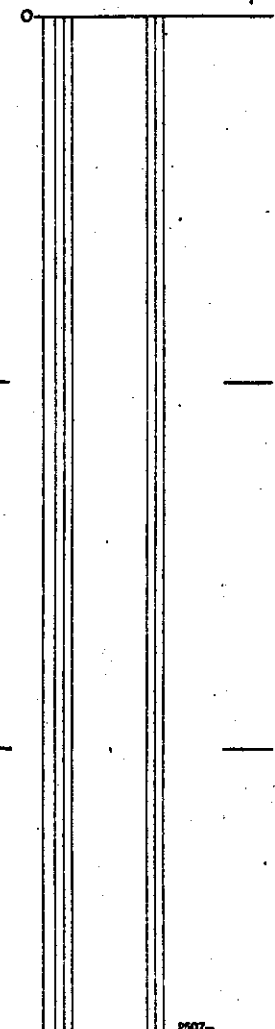
Objective: _____ Sampled: _____

Logged By: KH Date: _____ Composites: _____

Block: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
138	140.5	137	143	41.8	43.6		Mudstone intermixed with coal. Highly brecciated Mainly mudstone 1.8m 6' Coal
							Part SEAM R-5/
140.5	142.5						Mudstone intermixed with siltstone. Mudstone dark grey, Sandstone light grey. Slumping of siltstone into mudstone. Beds about .5mm thick. Bedding planes at 80 deg to core axis. All fractures along bedding planes.
142.5	144						Mudstone and coal. Highly broken core. Bedding planes at 180 deg to core axis.
144	151						Mudstone - dark grey in colour. Most fractures along the bedding plane. Slight amount of coal present. Bedding planes at 80 deg to core axis. Joint fracture with calcite healing at 10 deg to core axis at 148 feet.
151	160						Siltstone and mudstone interbedded. Broken at 151-152 feet, 154-155 and 158 feet. Bedding planes at 85 deg to core axis. Beds about .5mm thick.
160	180						Siltstone changing to sandstone with depth at 164'. Colour - medium grey. Cross-bedding at 170' 174'-175', 177', 178'. Slumping at 169'. At 189' sandstone changes to siltstone then grain size again increases with depth. Bedding well developed but exhibits much slumping, crossbedding etc., Bedding planes at approximately 70 deg to core axis. Pyrite at J4 type fault at 178'.
180	194						Sandstone - fine grained. Light grey. Crossbedding from 180-181' and 187-189'. Bedding at approx 70 deg to core axis. Most fractures along bedding planes. Major J4 type fracture from 188.5 - 191' at 12 deg to core axis. Grain size decreasing with depth.
194	201						Sandstone - fine grained - light colour - interbedded with darker siltstone. Slikenslide at bedding plane fracture at 195'. Bedding at 80 deg to core axis! All fractures along bedding plane

40 Scale
Color Plot & Dips
Ore Classes & Ave'r.



Core Size

Hole No. DDH. 280

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Diamond Drill Geological Log



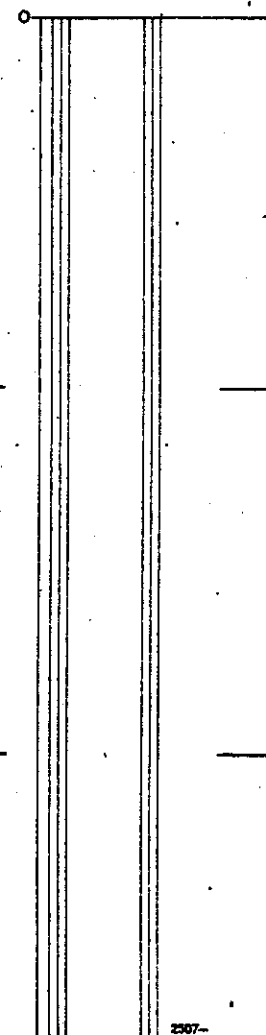
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To		
							approximately 1 - 2 per foot.
201	216						Sandstone - medium grained - light colour. Grain size increasing with depth to coarse grained at approximately 204 feet. Calcite infilling along J-4 type fracture at 201 feet. Most fractures along bedding plane. Slickenside and calcite along bedding plane fracture at 202 feet. Calcite along joint and bedding plane fracture at 205'. Small amounts of coal being interbedded with sandstone with amount increasing with depth. Coal appearing as infilling along some bedding plane fractures. Bedding planes at 70 deg to core axis. from 201' - 210'. At 210' the bedding planes change to approx. 60 deg to core axis. Cross bedding at 213 feet. Slumping at 208 - 209 feet with sandstone slumping into coal.
216	220						Sandstone - coarse grained - light grey in colour. Poor bedding. Only fracture is J-4 type with coal infilling at 219 feet. Sandstone has a hardness greater than 4. Bedding planes approx 70 deg to core axis - but hard to determine.
220	221						Sandstone - light coloured - medium grained - interbedded with coal. Bl type fracture at 220.5 has coal infilling. Bedding planes at 70 deg to core axis. Slumping of sandstone into coal immediately below fracture.
221	222						Siltstone & Coal. Coal decreasing with depth. Bedding is irregular; at approx. 80 deg to core axis.
222	223						Sandstone medium grained, light colour. Bedding at 65 deg to core axis. Carbon infilling at Bl type fractures on either side of section

40 Scale
 Color Plot & Dips
 Ore Classes & Aveir.



Core Size _____
 Hole No. DDH. 280
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Diamond Drill Geological Log

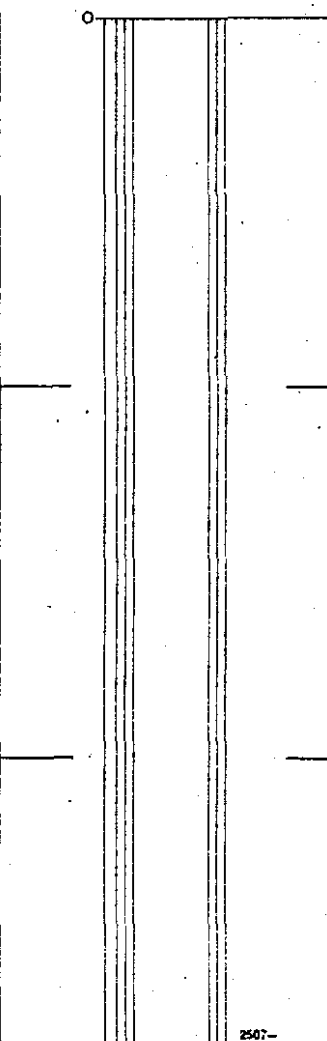


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

Color Plot & Dips _____ Ore Classes & Aver. _____
 40 Scale _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
223	224					Siltstone dark grey - black in colour. Bedding at 70 deg to core axis. Bl type fractures have carbon infilling at either end of section.
224	238					Sandstone medium grained - increasing to coarse grained with depth. Light colour. Coal Infilling along fractures. All fractures along bedding plane - less than one per foot. Bedding planes at 60 deg to core axis at 228 feet, and increasing to 70 deg to core axis at 234 feet. Crossbedding at 230 feet. Slickenslide along Bl type fracture at 231 feet - also containing coal infilling. Vugs with siltstone infilling at 235 feet. Presence of poorly developed joint fractures starting at 235 feet. Pyrite along joint fracture at 237 feet.
238	248.5					Sandstone - Coarse grained - grain size decreasing with depth. Bedding Planes at 50 deg to core axis. Considerable amount of coal infilling along Bl type fractures at 238 feet. Coal infilled vugs from 238 - 240 feet. Coal infilling along vug induced joint fracture at 239.5 feet - also containing a small amt. of calcite. At 241 feet the bedding plane increases to 75 deg to core axis. Coal infilling along fractures - mostly Bl type - approx 1 per foot. Large amount of vugs at 242.5 feet - some up to 1cm thick. Vugs are coal filled with minor amounts of calcite. At 245 - 246 feet there are several coal infilled joint fractures - probably drill induced.
248.5	268					Sandstone - coarse grained - grain size decreasing with depth. Most fractures along bedding plane at 250.5 feet has siltstone healing. Joint fracture at 260.5 feet has a large amount of coal infilling.



Core Size

Hole No. DDH. 280

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
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40 Scale
 Color Plot & Dips Ore Classes & Avar.

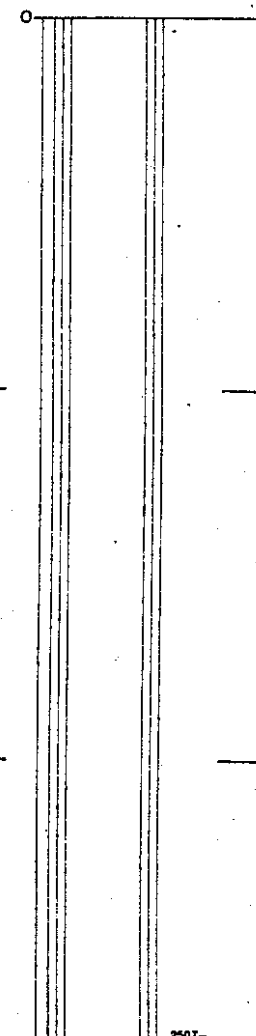
Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. in meters
 From To From To From To

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

268	279					Vugs at 261.5 feet with coal infilling. Bedding is at 65 deg to core axis, throughout section. Slumping at 250 feet
						Siltstone - dark grey in colour. Minor layers of medium grained sandstone from 268.5 - 269 feet and 275 - 276 feet. Most fractures along bedding plane - one to two per foot. Calcite along joint fracture and around broken core at 275 feet. Bedding at 60 deg to core axis. Interbedded sandstone and siltstone from 270 - 271 feet.
279	282					Sandstone - medium grained - light grey to colour. Bitumen infilling along fractures. All fractures along bedding plane, approximately two per foot. Six inches of siltstone from 281.5 - 282 feet. Calcite healing of B 1 type fracture at 280 feet. Also minor calcite infilling of J-4 type fractures at 282 feet. Bedding lies predominantly at 78 deg to core axis.
282	286					Siltstone - dark grey - black in colour. Calcite infilling of joint fractures at 284 ft. Most fractures along bedding plane - approximately one per foot. Bedding is at 78 deg to core axis. Slight crossbedding at 285 feet indicating an agitated environment.
286	287.5					Sandstone /Siltstone - fine grained sandstone - lith coloured. Siltstone is dark coloured. Beds are disturbed from 286.5 - 287.5 indicating a disturbed environment. Layers are 2-3mm thick. Bedding is at approximately 75 deg to core axis.
287.5	288					Siltstone/sandstone - dark siltstone interbedded with fine grained light sandstone. Beds are regular and 1-2mm thick and are at 80 deg to core axis.

Core Size _____
 Hole No. DDH. 280 Page 6 of _____



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

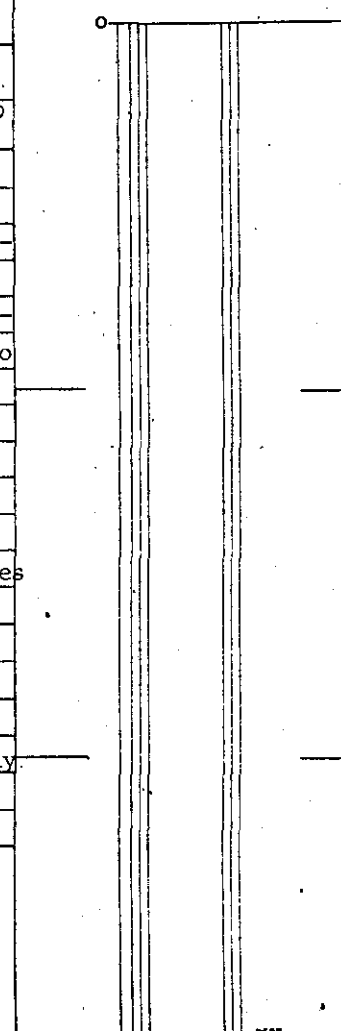
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Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
288	300					Sandstone / Siltstone. Sandstone is fine grained and light colour. Siltstone is dark grey - black. Most fractures along the bedding plane and through the siltstone. Small amount of broken coal at 291 feet. Core is predominantly siltstone at 292-293 feet. Amount of siltstone increasing with depth. Irregular bedding at 295 feet indicating a disturbed environment. Beds are 1-2 mm thick and lie at 80 deg to core axis. Some slumping of sandstone into larger bands of siltstone at 297 feet.
300	306					Siltstone - dark grey in colour. Poor bedding. Most fractures appear to be along bedding plane. Approx one per foot. Bedding planes lie at 80 deg to core axis. J4 type fracture at 301' is about 1 foot long. J2 type fracture at 305'. Calcite healing of B1 type fracture at 305.5 feet - but other fractures are all clean.
306	308.5					Siltstone/Sandstone - dark grey siltstone. Light grey fine grained sandstone. Sandstone increasing with depth. Vugs at 307 - 308 feet, bituminous filled. Also minor calcite infilling along J-4 type fracture at 308 feet. Bituminous infilling along B-2 type fracture at 307 feet. Bedding lies at approximately 70 deg to core axis. Poor bedding. Sandstone occurs irregularly and in layers of 1cm - 3cm thick.
308.5	313					Siltstone dark grey in colour. Bituminous infilling along bedding plane fractures. at 311-313 feet. Several joint fractures at 313 feet. Most other fractures are drill induced along the bedding plane. Bedding lies at approx 80 deg to core axis

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size
Hole No. DDH. 280.
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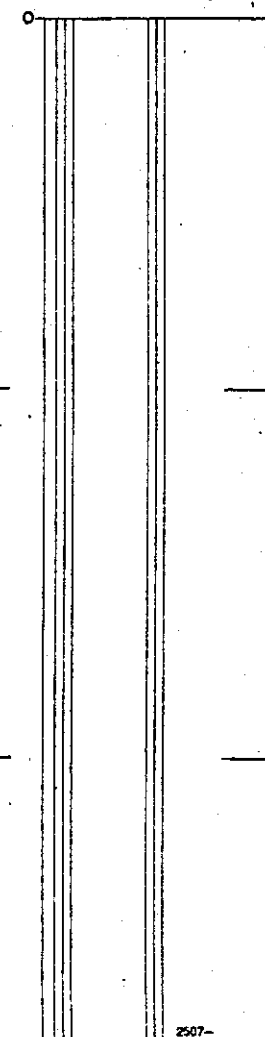


FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO		DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To			
313	321							Siltstone / Sandstone - Siltstone dark grey in colour. Sandstone - medium grained - medium grey in colour. Sandstone exists in intermitant beds 1cm - 7cm thick at 313', 315', 316' and 319 feet. Coal infilling along fractures from 318 feet on down. Broken siltstone and coal at 320 feet. Bedding lies at 70 deg to core axis. Dominant fractures along the bedding plane - approx 2 per foot.
321	332							Coal / Siltstone Dark grey in colour. Hardness of about 2½. Dull lustre. Approx 4 fractures per foot. Brecciated coal at 330 feet.
332	342							Coal - Black fairly shiny lustre. Hardness of 2. Broken core at 332', 334', 341 - 342 feet Broken core at 333 feet. Bedding is at approx 80 deg to core axis. Small amount of mudstone from 338 - 340 feet intermixed with coal.
342	346	343.5	379	104.7	115.6			Coal with one 0.9m mudstone parting at 113.1m 10.9 (10)m 35.5 (32.5)' SEAM R4 Coal / Mudstone, medium grey in colour. hardness or 2½ - 3. Bedding is at 73 deg to core axis. Several J1 type fractures at 15 deg to 20 deg to core axis from 342 - 345 feet.
346	349							Coal - glossy lustre - higly broken. Extremely soft.
349	356							Coal - Mudstone - dull lustre medium grey in colour. Hardness about 2½ - 3. Broken core at 347 - 347.5, 349.5 - 350, 355.5 - 355.25. Abundant fractures throughout mostly along the bedding plane. Bedding is at 80 deg to core axis
356	364							Siltstone med. grey bedding 78° to C.A.
364	368							Siltstone / sandstone dark grey siltstone with irregular beds of light grey fine grained sandstone. Beds are agitated siltstone and sandstone indicating a disturbed environment. Amount of sandstone increasing with depth.

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



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FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

Color Plot & Dips _____ Ore Classes & Aver. _____
 40 Scale _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
						Crossbedding of siltstone and sandstone at 368 feet. Most fractures along bedding planes, less than one per foot. Predominant bedding at 75 deg to core axis. Core is fairly soft less than 3.
368	373					Sandstone/ Siltstone/Mudstone Sandstone is light coloured fine grained. Siltstone is dark grey, mudstone is black. Beds are regular sst. mdst siltstone beds from 368 - 370. Only fractures are along the bedding plane through the siltstone / mudstone and lie at 80 deg to core axis. From 370 - 373 feet the beds are agitated indicating a disturbed environment. Sandstone increasing with depth. Clast of medium grained sandstone at 373 feet. Bedding lies at 80 deg to core axis. All fractures are clean, through bedding plane and through siltstone / mudstone beds.
373	380					Sandstone - coarse grained light grey in colour. Grainsize increasing with depth. Poorly bedded at 373 feet but bedding improves with depth. Three inch band of darker coloured fine grained sandstone at 378 feet. Fractures are along the bedding plane and appear to be drill induced. Bedding change at 375 feet from 90 deg to core axis to 75 deg to core axis, and to 85 deg at 377 feet. Bedding changes to 75 deg at 378 feet with cross bedding immediately after. Bedding lies at 70 deg to core axis from 378 - 380 feet. Polished bituminous infilling of fracture separating coarse grained and fine grained sandstone at 378 feet.
380	406.5					Sandstone - Medium grained medium grey in colour. Bituminous infilling along some of the bedding plane fractures. 2 cm of bituminous healing at 401 feet. Large

Core Size

Hole No. DDH. 280

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FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____

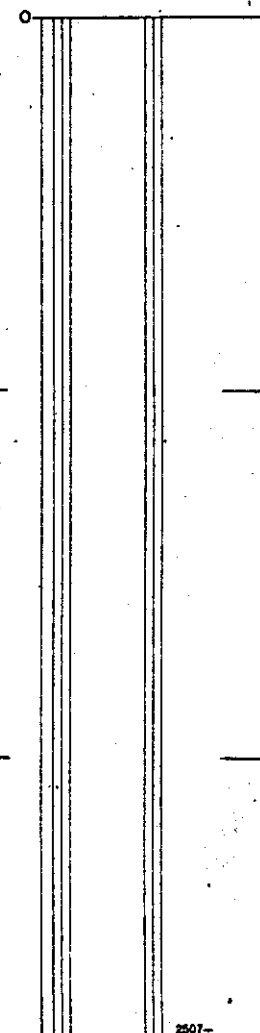
Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
						amount of pyrite at 406 feet. Major bedding change at 389 - 390 feet from 10 deg to core axis to 70 deg to core axis at 390 feet. Predominant bedding is at 80 deg to core axis.
						Beds are about 5mm thick and are fairly consistent throughout crossbedding at 404 feet.
406.5	411					Sandstone / Siltstone. Sandstone - light grey medium grey poor bedding. Siltstone dark grey. Siltstone and sandstone not interbedded but has 4 inches of siltstone starting at 406.5 feet and another three inches starting at 407.5 feet. Loadcasting of siltstone and sandstone immediately above band of siltstone at 406.5'. Place deposit of pyrite at 410.5 feet. Bedding through siltstone at 65 deg to core axis.
						END OF HOLE May 13/79

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Core Size _____
 Hole No. DDH. 280 Page 10 of 10

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG, KH, DM Date: MAY 24, 1979 Composites: _____
 Block: _____ Sect.: _____ Place: Turnbull App. Bear: _____ App. Dip.: _____ Length: 132.9m
 436' Color Plot & Dips Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
From	To	From	To	From	To	
0	20	0	23	0	7	OVERBURDEN
20	101					Sandstone - Fine grained medium grey. Limonite and iron staining along fracture surface between 22 feet and 24 feet and also at 28 feet. Broken core between 20 feet and 22 feet, 24.5 and 26 feet. Laminations are oriented 77 deg to core axis. Major joint fractures are oriented approx. 14 deg to core axis. Calcite healing along fractures, laminations are silty & darker grey. Cement is silicic. Bituminous parting along fracture parallel to laminations at 94.5 feet. Joint fractures are prevalent approx. 1 to 2 feet. Increase in siltstone with depth from 94.5 feet to 101 feet.
101	103					Mudstone / Siltstone - interbedded - beds oriented 50 deg to core axis. Bitumen along bedding planes. Fracture along bedding plane indicate movement 52 deg along the surface - from striations. Slicken sided. Minor calcite healing along fractures.
103	110					Sandstone - fine to medium grained sandstone & siltstone poorly sorted. Some minor calcite along fractures. Some broken core between 108 and 110 feet. Dominant joint fractures oriented 12 deg to core axis.
110	129					Mudstone / Siltstone / Sandstone - grain size decreasing with depth, regularly, evenly bedded - bedding plane 79 deg to core axis. Calcite infilling. Joint fractures 20 deg to core axis. Breakage at 122½' (crushed) - breakage at 124' 122½ feet, siltstone friable.
						Core Size
						Hole No. DDH. 285

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:						Sampled:					
Logged By: DG, KH, DM						Date: May 24, 1979					
Block:						Composites:					
Sect.:		Place:		App. Bear:		App. Dip.:		Length:		40 Scale	
Color Plot & Dips						Ore Classes & Aver.					
CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO					
From To		From To		From To		DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO					
129	134					Siltstone with small mudstone clasts and stringers. Dark grey in colour. Slight loadcasting no regular bedding. Minor calcite along fractures. 130% - 134 fine to medium sandstone with grain size increasing with depth. Minor calcite and coal in fractures. Joint fractures 10 deg to core axis.					
		131.5	134	40.1	40.9	Coal 0.8m 2.5'					
134	142½					Coal Measures soft, black medium lustre Part SEAM - R5					
		137	143	41.8	43.6	Coal 1.8m 6'					
142½	145					Siltstone - dark grey - fractures approx 82 deg to core axis - Coal interbeds from 142½ to 143 - crushed, broken core.					
145	146.5					Sandstone minor calcite healing along fractures at 147' joint fractures 50 deg - 60 deg at 149'. Grading into siltstone at 149'. Poorly sorted medium to fine grain					
146.5	154½					Siltstone - Dark grey, minor calcite in J-4 type fractures. Calcite in joint fractures. Calcite and brecciation at 154' 1.5 inches thick. Bedding plane 60 deg to core axis. Calcite along fractures in bedding plane. Joint fractures 15 deg to core axis.					
154½	157					Sandstone / Siltstone - at 154' with increasing siltstone.					
157	158					Joint fractures 20 deg to core axis. S.S with Silty laminations @ 40° to C.A. Avg. 3 fractures/ft.					
159	161					Mudstone - broken - joint fractures at bedding plane - dark coloured					
161	171					Fine grained sandstone / Siltstone - light grey - joints at 70 deg to core axis 163'. Minor calcium healing 166½ - 168' several joints approx 60 deg					
						Siltstone at 170' joint fractures at 60 deg.					

Core Size

Hole No. DDH.

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Diamond Drill Geological Log



FORDING RIVER OPERATIONS

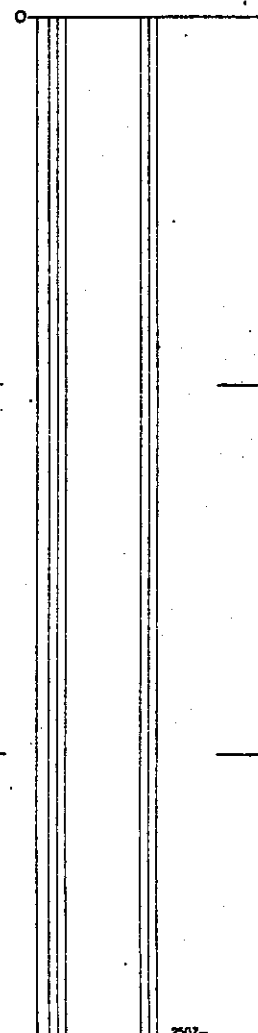
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Logged By: **DC KH DM** Date: **May 24/79** Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
171	180						Siltstone - dark grey. Bedding joints at 50 deg to core axis. Finely bedded. Minor calcite at 173'. Calcite between bedding planes. Cross bedding at 174'.
180	191						Dark Grey - Interbedded sandstone and siltstone. Even Beds 1mm to 1.5mm thick. Bedding Planes at 25 deg to core axis. Vuges at 183.5'. With minor Calcite infilling. Joint fractures 47deg Siltstone from 185' to 186'. Changing from sandstone to siltstone with depth.
191	196						Sandstone - light and fine grained. Interbedded with siltstone. Bedding planes at 55 deg to core axis. Cross bedding at 192 feet. Numerous calcite healings along fractures.
196	200						Sandstones - light colour, med. grained changing to siltstone at 197'. Mudstones at 200 feet. Bedding at 50 deg to core axis. Minor fault of displacement approx. 1 cm at 199 feet.
200	208						Med. grained sandstone - light colour. Bedding planes at 60 deg to core axis. Changing to sandstone interbedded with siltstone at 202 feet. Changes to predominantly siltstone at 207' and mudstone at 208 feet. Carboniferous infilling at 208' in mudstone.
208	234						Med. grained sandstone - light colour. Vugs at 209', 212', 217' etc. Carboniferous infilling throughout section increasing with depth. Bedding at 70 deg (seventy) to core axis. Calcite infilling along fractures - type J1 at 212'. Also partial calcite infilling of vugs at 211½ feet. Sandstone becoming coarser grained with depth. Joint fractures at 221 feet are 15 deg to core axis.

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size _____
Hole No. DDH. **285** Page **3** of **9**

Diamond Drill Geological Log



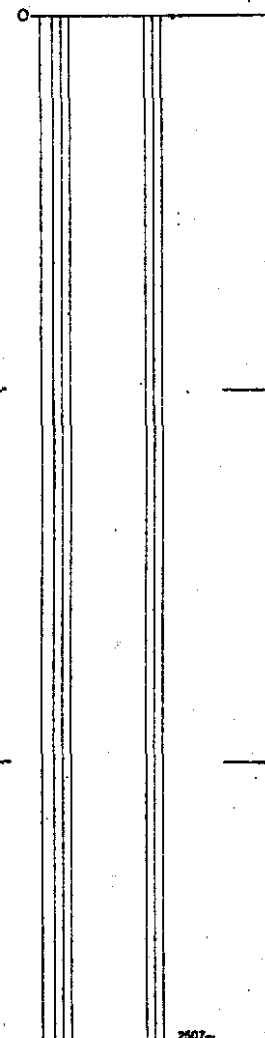
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG KH Date: May 29/79 Composites: _____

Block: _____ Sect.: _____ Place: **Turnbull** App. Bear: _____ App.: Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
234	239					Coarse grained Sandstone - light colour. Carboniferous infilling along bedding fractures J4 Type fracture at 234' with calcite infilling. Calcite healing at 234.5 feet through fracture. Bedding at 65 deg to core axis. Vugs at 234 and 236½ feet. Poor bedding from 236 to 237 feet.
239	249					Course grained light coloured sandstone. Bedding changing from 40 deg to 85 deg to core axis at depth 239 - 240 feet. Angular fractures with bituminous infilling at 239 feet. Bituminous infilling increasing with depth - filling up vugs, joint fractures and bedding plane fractures. Vugs are from 247 - 248½ feet
249	255					Mudstone - Dark grey - brown in colour. Bedding is at 17 deg to core axis at 252 feet. Cross bedding at 251 feet. Calcite and bitumous infilling of bedding fractures Calcite Infilling of J1 type fractures. Breccia at 250'.
255	262					Mudstone - dark grey - black in colour. Bitumous Infilling increasing with depth. Bedding is at 50 deg. to core axis at 256 feet. Increases to 70 deg to core axis at 260 feet. J1 type joint at 257 feet with bitumous infilling. Breccia at 256½ feet. Joint fracture at 262 containing bitumous and calcite infilling Changing slightly into silty - mudstone with depth
262	270					Sandstone - medium grained. Light grey colour. Grainsize increasing with depth. Carboniferous infilling from 262 - 264 feet. Pyrite at 264 feet. Poor bedding at 40 deg to core axis. Joint fractures at 30 deg to core axis. Vugs from 264 - 265 feet also at 267 feet Broken rock at 269 feet. Bitumous in joint fractures at 268 feet. Flakes of biotite at 268 feet and 262 feet.
270	276					Medium grained, light grey sandstone. Bedding planes

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Core Size

Hole No. DDH. 285

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:

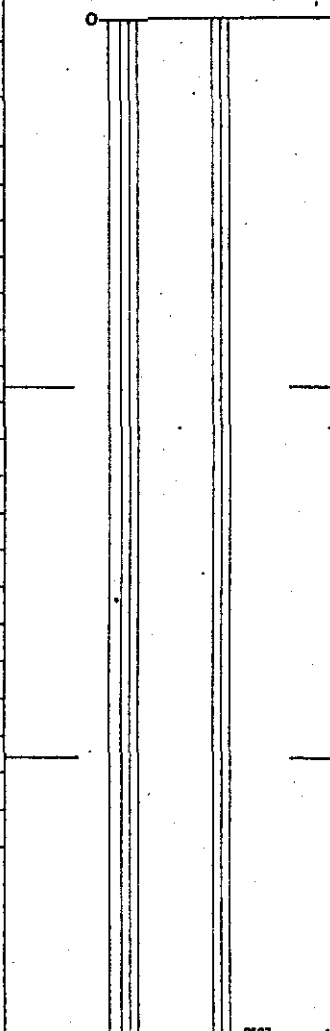
Sampled:

Logged By: DG Date: May 29/79 Composites:

Block: Sect.: Place: Turnbull App. Bear: App. Dip.: Length:

40 Scale
Color Plot & Dips Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
270	276					at 70 deg to core axis. Large joints apparent. Cross bedding at 271 feet at 20 deg to core axis. Bedding plane 50 deg to core axis at 272 feet. Carboniferous infilling of fractures. Broken rock at 273' and 275'. Bedding planes 50 deg to core axis at 276 feet.
276	281					Bedding at 40 deg to core axis at 276 feet. Still medium grained light grey sandstone interbedded with some darker grey sandstone. Some calcite infillings on bedding fractures. Bedding plane at 40 deg to core axis at 280 feet. Large vug at 279'.
281	286					Still light grey medium grain darker sandstone. Darker interbeds at 282', bedding planes are 40 deg to core axis. At 284' - 286' sandstone is well fractured. No infilling.
286	291					Light grey sandstone, medium grained. Bedding planes at about 65 deg. to core axis. Heavy Carboniferous infilling of fractures and joints at 286' to 287'. Less interbedding in sandstone at this point. Heavy carboniferous infilling of fractures at 290' - 291'. Bedding planes at 40 deg to core axis.
291	296					Medium grained sandstone. Light grey in colour. Bedding Planes at 90 deg to core axis. Coal infilling of fractures at 292' Carboniferous healing and infilling of small joints at 293' to 294'. Bedding plane at 50 deg to core axis at 293'. Cross bedding to 90 deg to core axis at 295 feet. Bedding Plane at 60 deg to core axis at 296' - gradual change.



Core Size
Hole No. DDH. 285 Page 5 of 9

Diamond Drill Geological Log



FORDING RIVER OPERATIONS

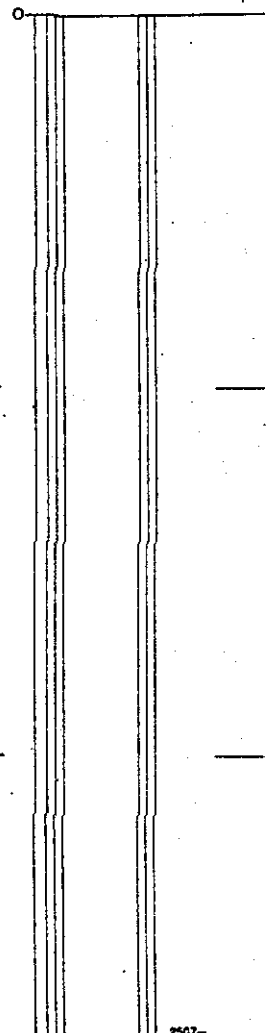
Objective: _____ Sampled: _____
 Logged By: DG Date: May 29/79 Composites: _____

Block: _____ Sect.: _____ Place: Turnbull App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
296	301					Medium grained sandstone, light grey in colour. Darker sandstone interbeds. Bedding plane at 40 degrees to core axis from 296' to 301'. Clean fractures - few joints and fractures.
301	306					Medium grained sandstone, light grey in colour. Bedding planes not well defined. Few joints or fractures until 303'. Bedding plane at 60 deg to core axis at 305'. Mudstone at 305½ abrupt. Some lodecasting. Carboniferous infilling & fractures at this point.
306	311					Light grey sandstone - medium grained - for 3 inches. Mudstone (dark brown) with carboniferous infilling. 307' - sandstone light grey - medium grained. Evidence of ferrous infilling at mudstone - sandstone interface. Bedding planes at 60 deg to core axis. Carboniferous infilling of fractures. Iron in evidence too. Slickensides at 308', light grey - medium grained sandstone continues to 311'. Bedding planes 60 deg to core axis. Iron & Carbon infilling.
311	316					Light grey sandstone - medium grained. Well fractured. Bedding planes at 60 deg to core axis. Some calcite healing. Carboniferous - Coal infilling of continuous fractures at 312'. Bedding planes at 50 deg to core axis at 314'. Cleaner fractures. 315' less distinct bedding planes. 315½' broken rock, carboniferous on fracture surface.
316	321					Broken sandstone for 5". Medium grained, light grey sandstone at that point. Bedding Plane at 50 deg to core axis. AT 317' abrupt change to dark grey, fine grained sandstone, bedding plane at 50 deg to core axis.

40 Scale
 Color Plot & Dips Ore Classes & Aver.



Core Size

Hole No. DDH. 285

Page 6 of 9

Diamond Drill Geological Log

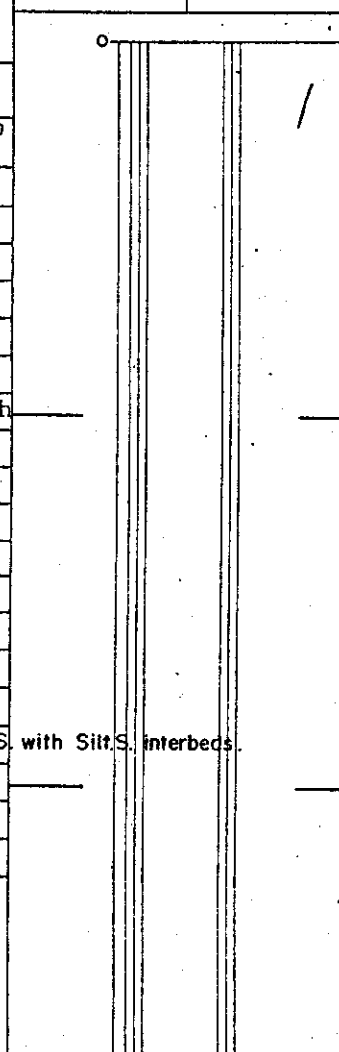


FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: May 29/79 Composites: _____
 Block: _____ Sect.: _____ Place: Turnbull App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
316	321					Carboniferous infilling of fractures. Heavy carbon - coal infilling at 319'
						Fractures & cracks filled with carbon. Bedding continues at about 50 deg to core axis but is less distinct. At 320' abrupt change to mudstone.
321	326					Dark Mudstone for 5" gradual change to siltstone. Calcite intrusion at 321½'. Broken rock at this point. Siltstone continues to 325'. Bedding planes about 60 deg to core axis. Not many fractures. At 325' abrupt layer of coal which is solid for 3" then broken for 4". Siltstone continues after the 7" of coal with some carboniferous infilling at the coal interface.
326	331					Dark siltstone, fine bedding at about 40 deg to core axis. Few fractures. Smooth core broken by fracture at coal deposit at 329' for 3". Siltstone continues Carboniferous infilling at 329' of a J1. Core smooth to 330'. Fracture with carboniferous infilling. Some calcite healings. At this point bedding plane at 50 deg to core axis.
331	336					Dark siltstone. Bedding not visible. AT 332' bedding visible at 60 deg to core axis. Some fracturing at this point 332" to 335 smooth core-bedding at 60 deg to core axis. Some calcite infilling - J4. At 334' gradual change to lighter S.S. with Silt.S. interbeds. Band of lighter sandstone at 335' - fractured with J1. At 335½' band of siltstone 2" wide. Bedding plane at 60 deg to core axis. AT 335' 8" there is mudstone, interfacing with the siltstone at 60 deg to the core axis.
336	341					Siltstone - dark. Bedding not visible. After about 4" it gradually changes to mudstone and coal. Some fracturing with infilling carboniferous with slickensides. Bedding planes at 60 deg to core axis.

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Core Size

Hole No. DDH. 285

Page 7 of 9

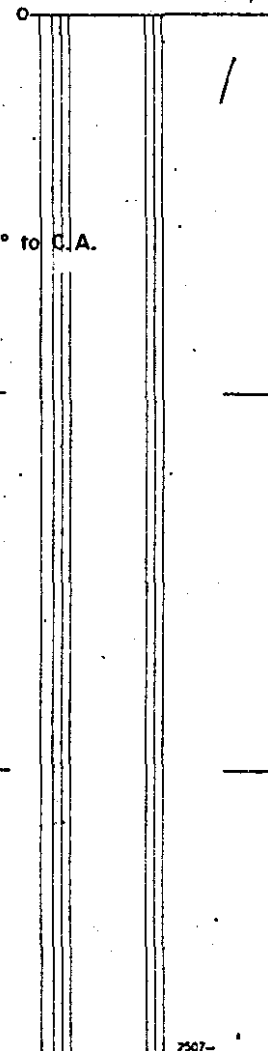
Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:				Sampled:			
Logged By: DG				Date: May 29/75			
Block:				Composites:			
Sect.:		Place:		App. Bear:		App. Dip.:	
		Turnbull					
Length:		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO					
DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO							
CORE In Ft.	RAD. LOG In Ft.	In meters					
From	To	From	To	From	To		
336	341					mixture of Coal & mudstone	
341	342					Dark mudstone. Quite abit of mud in evidence. Bedding planes about 70 deg to core axis. At 341½ - coal deposit to 342'. Coal is fairly hard - bedding planes	
342	345.5					Coal. Fairly hard. Bedding planes of 70° to C.A. Some fracturing. At 344.5' soft coal - broken up to 345.5'	
		343.5	379	104.7	115.6	Coal with 0.9m (3') shale parting at 113.1m (371'). 10.9(10)m, 35° (32.5) Seam R4	
348	350					Hard coal 80 deg to core axis to 349½'. Band of soft broken coal at this depth. At 349' 9" harder coal again fractured at about 80 deg to core axis.	
350	364					Coal, Relatively hard. Bedding planes at 70 deg to core axis. Fractures along bedding plane. Softer coal between 359 - 362.	
365	377.5					Coal, Hard from 365 - 370.5 soft from 370.5 to 377.5. Bedding planes 70deg to core axis. Fractures along bedding planes.	
377.5	381.5					Mudstone - between 378 and 381 mudstone is interbedded with the coal fractures dominate along bedding planes. The angle is 70 deg to the core axis.	
381.5	382					Mudstone- black mudstone with coal interbeds 5mm to 10mm thick, beds are oriented approx 82 deg to core axis.	
382	384					Siltstone - dark grey with some minor coalified plant fossils.	
384	386					Siltstone/ sandstone - Siltstone grading into a fine grained sandstone bed at 1.5 to 4 Inches thick. Siltstone is dark grey-sandstone is fine grained, lighter grey some lodcasting.	
386	391					Sandstone light grey - fine grained. Silty laminations, some cross bedding at 390.5 ' Indicating tops are up. Bedding oriented ≈75 deg. Fracture dominate along bedding planes some minor calcite along bedding.	

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size
HQ
Hole No. DDH. 285

Page 8 of 9

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

Logged By: KH, LL Date: May 31/79 Composites: _____

Block: _____ Sect.: _____ Place: **Turnbull** App. Bear: _____ App.: Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

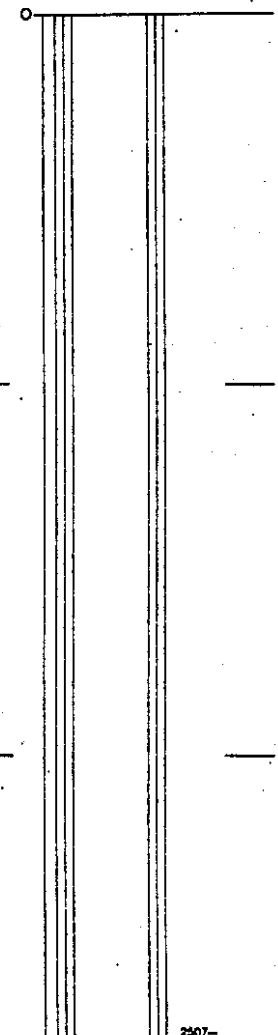
CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
391	396					Siltstone, sandstone - calcite along fractures. Bedding planes 70 deg along core axis. Vugs from 391.5 to 395 Slickenside from 392.5 to 395. Fractures 10 deg to core axis at 391 to 395 then at 395 it is 40 deg to core axis.
396	401					Sandstone - medium grained, medium grey color. Bedding planes 40 deg to core axis (at 396) Calcite in fractutes along bedding planes. Slickenside at 396.5 Vugs beginning at 397.5. Fractures along bedding Planes. At 399 breccia with slip'n'side Bedding at 401 60 deg to core axis.
402	403					Sandstone - medium grey, slip'n'slide at 402, Joints along bedding planes. Calcite healing at 403'.
403	411					Sandstone - medium grained, light grey, Bedding at 50 deg to core axis. Calcite along fractures. Fractures at 15 deg to core axis. Slip'n'slide at 410' bedding at 60 deg to core axis at 410. Clacite at 412'. Fractures are all along bedding planes.
411	412					Siltstone with slic'n'slide at 412. Bedding at 70 deg to core axis.
412	431					Sandstone - medium grain from 412 to 415.5 coarse grain from 415.5 to 416.5. Medium grain sandstone, bedding at 65 deg to core axis. Coarse grain sandstone, bedding is at 70 deg. Cross bedding at 416' Slic'n'slides at 416.5'. Medium grain sandstone beginning at 416.5, bedding at 65deg to core axis. Fractures along bedding planes.
431	436			132.9		Sandstone - fine grained. Slic'n'slide at 432'. Bedding at 80 deg to core axis. Carboniferous infilling at 432.5 Fracture at 434' is 90 deg. to core axis. (J4-type) Slic'n'slide at 435' fracture (J4) at 90 deg to core axis

Core Size

Hole No. DDH. 285

End of Hole

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____

Logged By: RK Date: JUN 79

Block: _____ Sect: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: 195m 640'

LATITUDE 148 864.0 DEPARTURE 21 855.4 ELEVATION 1761.5

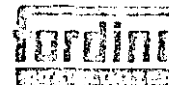
488 399 71704 5779.3

On Classes & Aver. 0.0

INTERSECTIONS TAKEN FROM GAMMA RAY-NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	5	0	1.5	Overburden				
		1.5	3.9	Siltstone				
13	37.5	3.9	11.4	Coal with 0.5m shale parting at 9.1m 7.5(7)m				
				24.5(23') SEAM-F	F	5766		
		11.4	20	Mudstone with thin bands of siltstone				
		20	30	Sandstone with some siltstone				
		30	32.6	Mudstone	E			
107	110	32.6	33.6	Coal 0.3m 3'				
		33.6	48	Mostly mudstone, siltstone bands, in sandstone at 36.8m				
		48	59.5	Sandstone and mudstone interbeds	D			
		59.5	64	Mudstone				
		64	87	Siltstone				
		87	89.5	Mudstone	DL			
293.5	333.5	89.5	106.5	Coal with two 0.4m & 0.8m mudstone partings at 92.2m & 96.8m 12.1(11)m 40(36) SEAM				
		101.6	111	Mudstone near top, siltstone	B			
		111	117	Sandstone and siltstone				
		117	122	Siltstone				
		122	123.3	Mudstone				
404.5	432	123.3	131.7	Coal 8.4m 27.5' SEAM-D				
		131.7	133.3	Mudstone				
437.5	443	133.3	135	Coal 1.7m 5.5'				

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: _____ Date: _____

Spec. _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

Ore Classes & Aver. _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
		135	138.8	Mudstone						
455.5	462	138.8	140.8	Coal	2m	6.5'	SEAM-DL			
		140.8	165.5	Mudstone						
		165.5	173	Siltstone						
		173	176.3	Mudstone						
579.5	602	176.3	183.6	Coal	7.3m	24'	SEAM-B			
		183.6	184.7	Mudstone						
606	606	184.7	185.4	Coal	0.7m	2'				
		185.4	193	Mudstone						
	640	193	195	Siltstone						
End of hole										
May 30/79										

Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ LATITUDE 146 467.4' W. DEPARTURE 22 424.4' W. ELEVATION 1720.9'

Logged By: R.K. Date: SEPT ' 79 480 536.1' 73 510.7' 5646.0' 0.0

Block: _____ Sect.: _____ Place: GREENHILLS App. Bear: _____ App. Dip.: _____ Length: _____

INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	35	0	10.7	Overburden				
		10.7	15.2	Sandstone				
		15.2	19	Mudstone				
		19	21.5	Siltstone				
		21.5	23.8	Mudstone				
78	84.5	23.8	25.8	Coal 2 m 6.5' seam - Hm1	Hm1			
		25.8	32.8	Mudstone siltstone band near bottom				
107.5	130	32.8	39.6	Coal with 0.4 m / 1.5' shale at 35.1 m 6.8(6.4) m 22.5(21)' seam - H	H			
		39.6	47.5	Mudstone, sandstone 131.5 m - 132.3 m				
156	159	47.5	48.5	Coal 1 m 3'				
		48.5	62.5	Mudstone, silty from 57 m - 62.5 m				
		62.5	63.9	Mudstone				
209.5	221.5	63.9	67.5	Coal 3.6 m				
		67.5	68.5	1 m mudstone 7.2(6.2) 23.5(20.5) seam - G	G			
224.5	233	68.5	71.1	Coal 2.6 m				
		71.1	76	Mudstone				
		76	84	Siltstone, sandy near bottom				
275.5	278.5	84	85	Coal 1 m 3'				
		85	101	Sandstone with siltstone interbeds				
		101	106.3	Interbedded mudstone and siltstone				
349.5	356	106.3	108.3	Coal and some coaly shale 2 m 6.5' seam - Fm3	Fm3			
		376	108.3	Mudstone				
				End of hole	June 14, 1979			

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ LATITUDE 146 344.2² W. DEPARTURE 22 458.3³ ELEVATION _____ Ore Classes & Aver. _____

Logged By: RK Date: Sept, '79 480 131.9 73 682.1 5639.0 0.0

Block: _____ Sect: _____ Place: Greenhill S. Burnt Ridge Area App. Bear: 146,344.2 App. Dip.: 22,458.3 Length: 1718.8

From To From To INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	9	0	2.7	Overburden				
		2.7	8	Siltstone				
		8	22	Sandstone, mudstone 11 - 13 m; sandy siltstone near bottom				
		22	23.1	Mudstone				
76	82	23.1	25	Coal 1.9 m 6'	H			
		25	27.3	2.3 m / 7.5' mudstone SEAM - H				
89.5	101.5	27.3	31	Coal 3.7 m 12'				
		31	44.8	Shaley siltstone with some mudstone, coal stringers at 102.3 m				
147	157.5	44.8	48	Coal 3.2 m 10.5'				
		48	60	Mudstone, bands of siltstone	G			
197	200	60	61	Coal 1 m 3'				
		61	72.6	Mudstone with siltstone interbeds				
238	253	72.6	77.2	Coal 4.6 m 15'				
		77.2	78.5	1.3 m / 4' mudstone SEAM - G				
257.5	267.5	78.5	81.5	Coal 3 m 10'	Fm3			
		81.5	96	Mudstone, coal stringers at 83.8 m				
		96	112.5	Silty sandstone and siltstone				
		112.5	117	Sandstone				
		117	120.8	Mudstone, 0.3 m coal band at 119.3 m				
306.5	405	120.8	123.5	1.5 m coal / 0.3 m shale / 0.3 m coal / 0.3 m shale / 0.3 coal; 4.5' c / 1' sh / 1' c / 1' sh / 1' c Seam Fm3				
		459	139.9	Mudstone, sandstone 129.5 - 135.2 m				

End of hole June 29, 1979

Hole No. RH 1177

Page 1 of 1

Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____

Logged By: **RK** Date: **Sept. '79**

Book: _____ Sect.: _____ Place: **Greenhills S. Burnt Ridge Area** App. Bear: _____ App. Dip.: _____ Length: _____

LATITUDE **146.195¹** DEPARTURE **22 530.4** ELEVATION **1705.9**

479 642.5 **73 918.5** **5596.7**

Ore Classes & Aver. **0.0**

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	3	0	1	Overburden				
		1	11	Sandstone, 1m mudstone from 10m - 11m				
36	42.5	11	13	Coal 2 m 6.5'				
		13	14.2	1.2 m / 4' mudstone 7(5.8)m 23(19)' seam - H				
46.5	59	14.2	18.0	Coal 3.8 m 12.5'				
		18.	22.2	Mudstone				
		22.2	39	Shaley siltstone, sandstone at top and 29.5 - 31.5 m				
		39	41.3	Mudstone				
135.5	146.5	41.3	44.7	Coal 3.4m 11'				
		44.7	64.2	Mudstone, siltstone bands				
210.5	216.4	64.2	66	Coal 1.8 m 6'				
		66	68.9	2.9 m / 9.5' Mudstone				
226.	246.5	68.9	75.2	Coal 6.3 m 20.5' seam - G				
		75.2	78.2	Mudstone, in top 0.6 m one m shaley coal				
256.5	267	78.2	81.4	Coal 3.2 m 10.5' seam GL				
		81.4	95	Mudstone, with bands of siltstone				
		95	116	Mostly siltstone with mudstone interbeds				
380.5	387	116	118	Coal 2 m 6.5' seam - FM 3				
		118	138	Mudstone, siltstone 126.5 - 131 m				
		138	175.8	Sandstone, silty in upper half interval, siltstone mudstone near bottom				
576.5	591	175.8	180.2	Coal 4.4 m 14.5'				
		180.2	181.9	1.7 m / 5.5' mudstone seam - F				
596.5	614.5	181.9	187.4	Coal with 0.3 m band of shale 5.5(5.2) 18(17)'				

Hole No. **RH 1178** Page **1** of **2**

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

Logged By: _____ Date: _____ Composites: _____

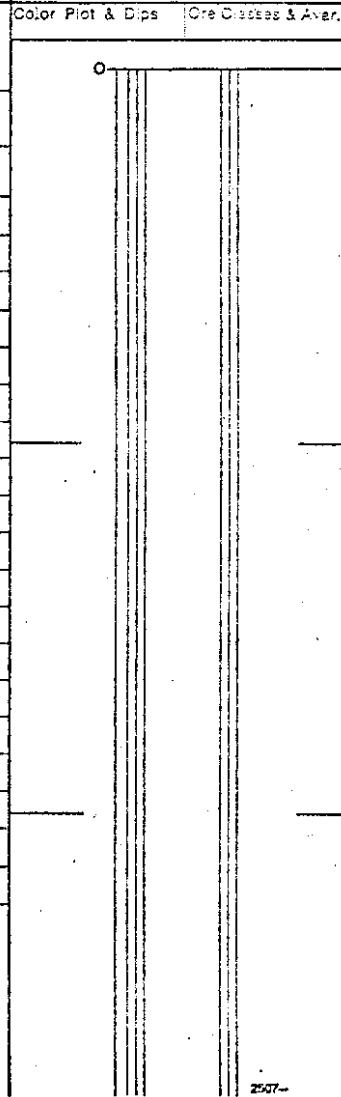
Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From Ft. To Ft. From m. To m. INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

187.4 192 Mudstone

635 192 193.5 Siltstone

End of hole June 25, 1979



Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ LATITUDE 146 006' S DEPARTURE 22 715' 0 ELEVATION 1678' 4

Logged By: RK Date: Sept. '79 479 023' 9 7A 524' 3 5506' 5 0.0

Block: _____ Sect.: _____ Place: Greenhills S. Burnt Ridge Area App. Bear: _____ App. Dip.: _____ Length: _____

INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	36	0	11	Overburden (Driller reported 14 m / 46' Overburden ; 5.2 m / 17' Casing)				
		11	15	Mudstone				
		15	16.5	Siltstone				
		16.5	19	Sandstone				
		19	25	Siltstone				
		25	46	Sandstone grading to siltstone towards bottom				
		46	48.4	Mudstone				
159	187	48.4	57	Coal 8.6 m 28' seam - F.				
		57	62.4	Mudstone				
204.5	206.5	62.4	63	Coal 0.6 m 2'				
		63	66	Mudstone and siltstone				
		66	73.7	Sandstone				
		73.7	75.5	Mudstone				
247.5	259.5	75.5	79.1	Coal 3.6 m 12' seam - f				
		79.1	87.7	Mudstone with one siltstone band				
287.5	292	87.7	89	Coal 1.3 m 4.5'				
		89	96	Mudstone				
		96	101.5	Siltstone, sandy				
		101.5	105.5	Mudstone				
346	359	105.5	109.5	Coal 4 m 13' seam - Eu ?				
		402	122.5	Mudstone				

End of hole June 13, 1979

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: **RK** Date: **Sept. '79**

Block: _____ Sect.: _____ Place: **Greenhills S. Burnt Ridge Ext.** App. Bear: _____ App. Dip.: _____ Length: _____

LATITUDE **145 001.3** DEPARTURE **22 757.7** ELEVATION **1691.7**

478 613.1 **74 664.4** **5550.3**

Ore Classes & Awt. **0.0**

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY-NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	5	0	1.5	Overburden				
		1.5	9.8	Siltstone, sandy near top				
32	42	9.8	12.9	Coal 3.1 m 10' seam -				
		12.9	32	Mudstone, highly carbonaceous band at 25 m				
		32	55	Silty sandstone and some siltstone				
		55	62	Siltstone and mudstone near bottom				
203.5	206.5	62	62.9	Coal 0.9 m 3'				
		62.9	64.6	1.7 m / 55' mudstone				
212	217.5	64.6	66.3	Coal 1.7 m 5.5' seam -				
		66.3	67.6	1.3 m / 4' mudstone				
221.5	223.5	67.6	68.2	Coal 0.6 m 2'				
		68.2	73.8	Mudstone, with siltstone interbed				
242	244	73.8	74.4	Coal 0.6 m 2'				
		74.4	81.3	Mudstone, some siltstone, thin coal band at 79.8 m				
266.5	268.5	81.3	81.9	Coal 0.6 m 2'				
		81.9	102.2	Siltstone with mudstone near bottom				
335	345	102.2	105.3	Coal 3.1 m 10' seam -				
		105.3	109.2	Mudstone				
358	361	109.2	110.1	Coal 0.9 m 3'				
		110.1	132.5	Siltstone				
	499	132.5	152.1	Sandstone with bands of siltstone, silty near bottom				
				End of hole July 4, 1979	Hole No. RH 1180		Page 1 of 1	

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ LATITUDE 145 628.8 DEPARTURE 22 849.6 ELEVATION 1755.8 Ore Classes & Avgr.

Logged By: RK Date: Sept. '79 477 784.7 74 965.8 5760.5 0.0

Block: _____ Sect.: _____ Place: Greenhills S. Burnt Ridge Ext. App. Bear: _____ App. Dip: _____ Length: _____

INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	20.	0	6.1	Overburden				
		6.1	7	Mudstone				
		7.	7.6	Coal 0.6 m 2'				
		7.6	14.	Siltstone				
		14.	38.4	Mudstone, silty intervals				
126.	147.5	38.4	45.	Coal 6.6 m 21.5' seam - F?				
		45.	46.7	1.7 m / 5.5' Mudstone				
153.	161.5	46.7	49.3	Coal 2.6 m 8.5'				
		49.3	54.	Mudstone				
		54.	67.	Siltstone, mudstone 59.5 - 62.5 m				
220.	235.5	67.	71.7	Coal 4.7 m 15.5' seam -				
		71.7	88.6	Interbedded siltstone and mudstone				
290.5	301.5	88.6	91.9	Coal 3.3 m 11' seam -				
		91.9	105.	Mudstone with several bands of siltstone				
		105.	121.	Siltstone				
		121.	127.	Mudstone, siltstone near bottom				
416.5	426.5	127.	130.	Coal with 0.3 m shale at 127.7 m 3(2.7)m 10(9)' seam -				
		130.	136.	Mudstone, some siltstone near top				
446.5	454.	136.	138.4	Coal 2.4 m 7.5'				
		138.4	139.1	0.7 m / 2.5' mudstone				
456.4	458.5	139.1	139.7	Coal 0.6 m 2'				
		139.7	149.	Mudstone				
520.	149.	158.5		Sandstone				

End of hole July 3, 1979

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ LATITUDE 145 628⁵ DEPARTURE 22 728² ELEVATION 1752⁹ Ore Classes & Aver.

Logged By: RK Date: Sept, '79 477 783⁷ 74 567⁶ 5750⁹ 0.0

Block: _____ Sect.: _____ Place: Greenhill S. Burnt Ridge Ext. App. Bear: _____ App. Dip: _____ Length: _____

From To From To INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0.	13.	0.	4.	Overburden				
		4.	5.	Mudstone				
16.5	34.5	5.	10.6	Coal with 0.6 m / 2' Coaly shale at 7.8 m 5.6(5.0)m' 18(16)' seam -				
		10.6	12.7	Mudstone				
		12.7	14.5	Sandstone				
		14.5	37.6	Siltstone with interbeds of mudstone and silty sandstone, 0.3m/1' coal band at 15.5 m				
123.5	129.5	37.6	39.5	Coal 1.9 m 6' seam -				
		39.5	47.	Mudstone siltstone band at 42.5 m				
154.	161.5	47.	49.3	Coal 2.3 m 7.5' seam -				
		49.3	58.	Mudstone				
		58.	75.	Sandstone, silty intervals in lower half portion				
		75.	76.2	Mudstone				
250.	251.5	76.2	76.7	Coal 0.5 m 1.5'				
		76.7	77.7	1 m / 3' Mudstone				
255.	270.	77.7	82.3	Coal 4.6 m 15' seam - H?				
		82.3	88.	Mudstone				
		88.	90.	Sandstone				
		90.	99.6	Siltstone, mudstone band near bottom				
326.5	329.	99.6	100.4	Coal 0.8 m 2.5'				
		100.4	113.4	Mudstone, siltstone interbed 109-110.5 m				
372.	377.	113.4	115.	Coal 1.6 m 5' seam -				
		115.	116.8	1.8 m / 6' mudstone				

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

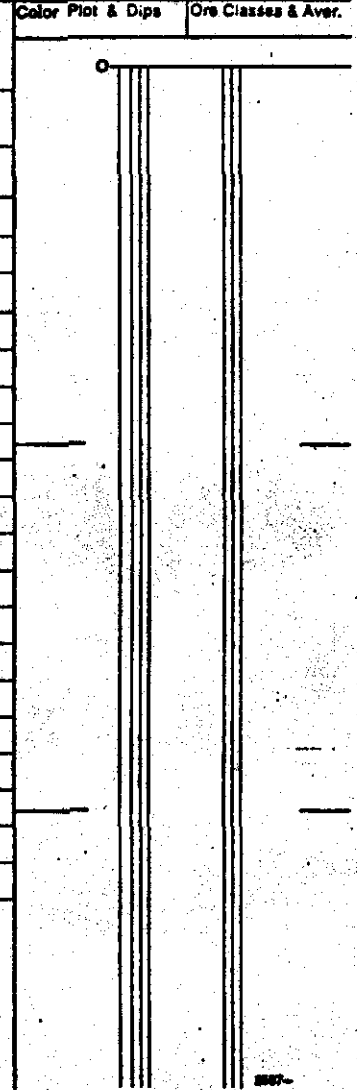
Objective: _____ Sampled: _____
 Logged By: R Date: _____ Composites: _____

Block: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

INTERSECTIONS TAKEN FROM SAMMA BAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	
		116.8	119	Coal 2.2 m / 7' seam -	
		119	120.3	1.3 m / 4' Mudstone	
345	397.5	120.3	121.2	Coal 0.9 m 3'	
		121.2	130.4	Mudstone	
428	430	130.4	131	Coal 0.6 m 2'	
		519	131	158.2	Mostly mudstone with several thin interbeds of siltstone

End of hole July 2, 1979



Rotary Drill Geological Log



FORDING RIVER OPERATIONS

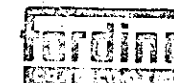
Objective: _____ LATITUDE 146 450.0 DEPARTURE 22 237.5 ELEVATION 1726.5 Ore Classes & Avs. _____

Logged By: RK Date: Sept. '79 477 138.1 74 226.1 5862.4 0.0

Block: _____ Sect: _____ Place: Greenhills S. Burnt Ridge Ext. App. Bear: _____ App. Dip: _____ Length: _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY-NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	7	0	2.1	Overburden				
		2.1	7	Mudstone, siltstone 3-5 m				
		7	32	Sandstone, siltstone near bottom				
		32	33.2	Mudstone				
109	132	33.2	40.2	Coal 7 m 23' seam - H ?				
		40.2	42	Mudstone				
		42	49.5	Sandstone				
		49.5	54.5	Siltstone, mudstone band at bottom				
179	185	54.5	56.3	Coal 1.8 m 6'				
		56.3	63.3	Mudstone, silty near bottom				
		63.3	64.7	Sandstone				
		64.7	73.5	Mudstone				
241	257.5	73.5	78.5	Coal 5 m 16.5' seam -				
		78.5	84	Siltstone				
		84	90.8	Mudstone, siltstone band near bottom coal stringers at 87 m				
298	309.5	90.8	94.3	Coal 3.5 m 11.5' seam -				
		94.3	106	Mudstone and some shaley siltstone				
		106	122	Sandstone				
		122	136.7	Siltstone, sandy near bottom				
448.5	450.5	136.7	137.3	Coal 0.6 m 2'				
		137.3	144	Mostly mudstone some siltstone				
472.5	476.5	144	145.2	Coal 1.2 m 4'				

Rotary Drill Geological Log



FORDING RIVER OPERATIONS

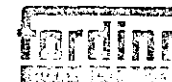
Objective: _____

Logged By: **RK** Date: **September, 1979** LATITUDE **146 432.1** DEPARTURE **22 664.5** ELEVATION **1714'** Ore Classes & Aver. _____

Block: _____ Sect.: _____ Place: **Greenhills S. - Burnt Ridge Area** App. Bear: **420 420.3** App. Dip.: **74 358.5** Length: **56.5** 0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	6.5	0	2	Overburden				
		2	39	Sandstone, siltstone intervals				
		39	42.6	Mudstone				
139.5	152	42.6	46.4	Coal 3.8 m 12.5'				
		46.4	48.4	2 m 6.5' Mudstone				
159	167	48.4	50.9	Coal 2.5m 8' Seam - F				
		50.9	52	1.1 m 3.5' Mudstone				
170.5	178.5	52	54.4	Coal 2.4m 8'				
		54.4	55.5	Mudstone				
		55.5	63	Siltstone, sandstone near bottom				
		63	64	Mudstone				
210	213	64	65	Coal 1m 3'				
		65	66.8	1.8m 6' Mudstone				
219	226	66.8	68.9	Coal 2.1 m 7'				
		68.9	98	Mudstone				
	357	98	108.8	Siltstone with thin interbeds of mudstone.				
				End of hole				
				June 22, 1979				

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ LATITUDE 146 522.4 DEPARTURE 22 702.1 ELEVATION 1713.4 Ore Classes & Aver.

Logged By: RK Date: September, 1979 _____ 480 716.4 _____ 74 481.8 _____ 5621.3 0.0

Block: _____ Sect.: _____ Place: Greenhills S. - Burnt Ridge area App. Bear: _____ App. Dip.: _____ Length: _____

From To From To INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	SEAM	ELEVATION	TTL. TH.	NET TH.
0	10	0	3	Overburden? (Driller reported 16' Overburden)				
		3	4.4	Mudstone				
14.5	21.5	4.4	6.6	Coal 2.2m 7'	Seam - E			
		6.6	8.8	2.2m 7' Mudstone	Seam - F			
29	37	8.8	11.2	Coal 2.4 m 8'	Seam - F			
		11.2	21	Siltstone and mudstone				
		21	25	Sandstone				
		25	28.6	Mudstone				
94	105	28.6	32	Coal 3.4 m 11'	Seam - f			
		32	49.5	Mostly mudstone with thin interbeds of siltstone				
		49.5	51.5	Silty sandstone				
		51.5	54.2	Mudstone				
178	210	54.2	64	Coal 9.8 m 32'	Seam - Eu			
		64	65.3	1.3 m 4' Mudstone				
214	219	65.3	66.8	Coal 1.5 m 5'				
		66.8	71	Shaley siltstone				
		71	85	Silty sandstone and siltstone near bottom				
		85	87	Mudstone				
285.5	298	87	90.8	Coal 3.8 m 12.5'	Seam - EL			
		90.8	112.9	Mostly mudstone, several siltstone interbeds				
370.5	402.5	112.9	122.6	Coal with 0.3m mudstone at 114.6 m 9.7m(9.4)m 32(31)'	Seam - D			

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ LATITUDE 146 690' S DEPARTURE 22 772' 07" ELEVATION 1672' 2"

Logged By: _____ Date: _____ 481205' 74 71' S 5486' 4" C.O.

Block: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From Ft. To Ft. From m. To m. INTERSECTIONS TAKEN FROM GAMMA RAY-NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
		0	15.6	Broken rock (blasted)				
		15.6	18.6	Mudstone				
61	86	18.6	26.3	Coal 7.7 m 25' Seam - D				
		26.3	58.4	Mudstone, occasional thin siltstone interbeds				
191.5	194.5	58.4	59.3	Coal 0.9 m 3' Seam - DL				
		59.3	70	Mudstone near top grading to siltstone towards bottom				
		70	88	Sandstone				
		88	91.5	Mudstone and siltstone				
		91.5	95	Sandstone				
311.5	331	95	100.9	Coal 5.9m 19.5' Seam - B				
		100.9	103	Mudstone				
		103	112.7	Silty sandstone				
369.5	407.5	112.7	124.3	Coal 11.6 m 38' Seam - B				
		124.3	131.7	Sandstone and siltstone				
				End of hole June 26, 1979				

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: RK Date: September, 1979

Block: _____ Sect.: _____ Place: Greenhills S. Burnt Ridge

LATITUDE 146 630' S DEPARTURE 22 629' 3 ELEVATION 1711' 7

481 235' 74 243' 0 5415' 96

App. Bear: _____ App. Dip.: _____ Length: _____

Ore Classes & Aver. 0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
		0	8	Interbedded mudstone and siltstone				
26	29	8	9	Coal 1m 3'				
		9	10.2	1.2 m 4' Mudstone				
35.5	41.5	10.2	12.7	Coal with 0.3 m Mudstone band at 11.8 m 2.5(2.2)m 8(7)'	Seam - F			
		12.7	15.7	Mudstone				
51.5	58.5	15.7	17.8	Coal 2.1 m 7'				
		17.8	23.2	Mudstone				
		23.2	32	Siltstone, mudstone near bottom				
105	109	32	33.3	Coal 1.3 m 4' Seam - f				
		33.3	48	Siltstone, with bands of sandstone and mudstone				
157.5	169.5	48	51.7	Coal 3.7m 12' Seam - f				
		51.7	63.6	Mudstone, silty intervals				
208.5	210.5	63.6	64.2	Coal 0.6 m 2'				
		64.2	76	Mudstone with bands of siltstone				
		76	82	Siltstone				
		82	84.9	Mudstone				
278.5	280	84.9	85.4	Coal 0.5 m 1.5'				
		85.4	101	Siltstone				
		101	104	Sandstone				
		104	110.9	Mudstone				
364	379.5	110.9	115.6	Coal 47m 15.5' Seam - FL				
		115.6	120	Mudstone				
		120	135.9	Siltstone with interbedded mudstone				

Hole No. RH 1187

Page 1 of 2

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____ Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: _____ Date: _____ Composites: _____

Elev: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

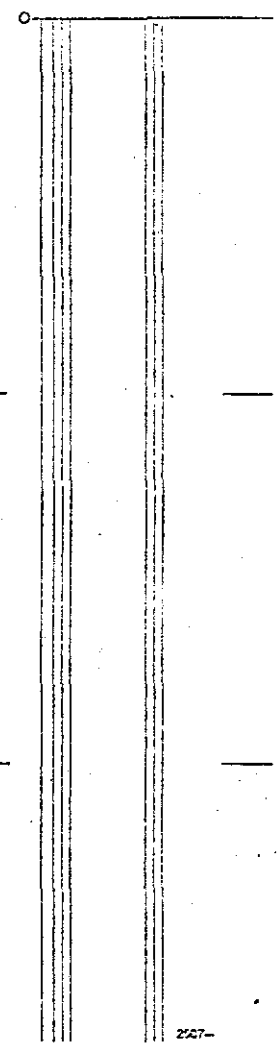
INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description
446	468	135.9	142.7	Coal 6.8 m 22' Seam - D
		142.7	147.5	Silty mudstone
		147.5	149.5	Sandstone
		149.5	159.3	Mudstone, with sandstone band
522.5	531.5	159.3	162.1	Coal 2.8 m 9' Seam - D1
		162.1	170	Mudstone near top, grading to siltstone near bottom
	651	170	198.4	Sandstone.
Hole could not be drilled past 651' / 198.4 m because of unloading problems (too much water)				

End of hole August 2, 1979

Hole No. RH 1187

Page 2 of 2



Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: RK Date: September, 1979

LATITUDE 146 2263 DEPARTURE 22 5647 ELEVATION 1724.5

Block: _____ Sect.: _____ Place: Greenhills S. App. Bear: _____ App. Dip.: _____ Length: _____

INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

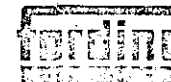
From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	48	0	14.6	Broken rock (blasted)				
		14.6	22.6	Siltstone, sandy intervals				
24	78.5	22.6	24	Coal 1.4 m 4.5' Seam - f1				
		24	33.8	Mudstone with siltstone interbeds				
111	116.5	33.8	35.5	Coal 1.7 m 5.5' Seam - f2				
		35.5	40.6	Mudstone				
133	135	40.6	41.2	Coal 0.6 m 2'				
		41.2	51	Mudstone				
		51	60.1	Siltstone, mudstone near bottom				
197	218.5	60.1	66.6	Coal with 0.9m mudstone 64.1m 6.5(5.6)m 21.5(18.5)' Seam - EU				
		66.6	74	Mudstone				
		74	87.5	Siltstone, sandy near bottom				
		87.5	91.1	Mudstone				
299	308.5	91.1	94	Coal 2.9m 9.5' Seam - EL				
		94	102.6	Mudstone, siltstone band near bottom				
336.5	340.5	102.6	103.9	Coal, shaley 1.3m 4'				
		103.9	112	Mudstone and siltstone				
367.5	385	112	117.3	Coal 5.3 m 17.5' Seam - D				
		117.3	132.1	Mudstone, siltstone 118.5 - 121.5m				
433.5	442	132.1	134.7	Coal 2.6m 8.5' Sec m - D1				
	499	134.7	152.1	Interbedded siltstone and mudstone				

End of hole August 5, 1979

Hole No. RH 1188

Page 1 of 1

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ LATITUDE 146 517.9 DEPARTURE 22 545.8 ELEVATION 1724.4 Ore Classes & Aver. _____

Logged By: NK Date: September, 1979 482.014 73 929 50576 0.0

Block: _____ Sect.: _____ Place: Greenhills S. App. Bear: _____ App. Dip: _____ Length: _____

From Ft. To Ft. From m. To m. Intersections taken from driller's report INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	60	0	18.2	Broken - Blasted rock (casing 20' / 6.1 m)				
		18.2	27.4	Mudstone				
90	98	27.4	29.9	Coal 2.5 m 8'				
		29.9	37.2	Mudstone				
122	130	37.2	39.6	Coal 2.4 m 8'				
	162	39.6	49.4	Mudstone				
				Hole abandoned at 162' / 49.4 m as drill stems got stuck in the hole and had to be blasted to break off at 140'.				
				End of hole August 7, 1979				

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:

LATITUDE 147 563.6 DEPARTURE 72 486.1 ELEVATION 1724.8

Ore Classes & Aver.

Logged By: RK

Date: September, 1979

482 492

73 775

3652.9

G.O.

Block:

Sect.:

Place:

App. Bear:

App. Dip.:

Length:

Greenhills S.

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	20	0	6.1	Blast rock or fill					
		6.1	11.8	Siltstone and mudstone					
39	45	11.8	13.7	Coal	1.9 m 6'				
		13.7	14.8	1. m 3.5' Mudstone	Seam - F				
48.5	61	14.8	18.7	Coal	3.9 m 12.5'				
		18.7	25.4	Mudstone					
83.5	88.5	25.4	27	Coal	1.6 m 5'				
		27	33.7	Mudstone, siltstone bands					
110.5	117	33.7	35.7	Coal	2 m 6.5'				
		35.7	40.8	Mudstone					
134	137	40.8	41.8	Coal	1.9 m 3'				
		41.8	55.5	Mudstone, shaley siltstone 46.5 - 52 m					
		55.5	59	Sandy siltstone					
		59	68	Mudstone					
223	246	68	75	Coal, with 0.9m shale band at 72.1m	7(6.1)m 23(20)'				
		75	76	1.0 m 3'	Mudstone				
249	251	76	76.6	Coal	0.6 m 2'				
		76.6	78.2	Mudstone					
259.5	259	78.2	79	Shaley coal	0.8 m 2.5'				
		79	94	Interbedded mudstone and siltstone					
308.5	319.5	94	97.3	Coal	3.3 m 11'				
		97.3	121.5	Mudstone, interbedded siltstone 105 - 117m					

Hole No. RH 1190

Page 1 of 2

Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ LATITUDE 147 283.6 DEPARTURE 22 428.7 ELEVATION 1711.4 Core Classes & Avgr.

Logged By: RK Date: September, 1979 _____ 493 212.8 _____ 73 585.0 _____ 5614.7 _____ 0.0

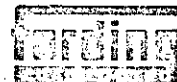
Block: _____ Sect.: _____ Place: Greenhills S. App. Bear: _____ App. Dip.: _____ Length: _____

From To From To INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	40	0	12	Fill and/or overburden				
		12	21.5	Siltstone with mudstone interbeds				
		21.5	32.2	Sandstone				
		32.2	53	Silty mudstone, siltstone near top				
174	191	53	58.2	Coal with 0.6m mudstone at 56m 5.2(4.6)m 17(15)' Seam - EU				
		58.2	59.2	1.0 m 3' Mudstone				
194	197.5	59.2	60.3	Coal 1.1 m 3.5'				
		60.3	61.5	1.2 m 4' Mudstone				
201.5	203.5	61.5	62.2	Coal 0.7 m 2'				
		62.2	68.7	Mudstone with siltstone bands				
225.5	236.5	68.7	72	Coal 3.3m 11' Seam - EL				
		72	79	Mudstone				
		79	101.2	Siltstone with mudstone interbeds, 91-95m sandy				
		101.2	103.4	Mudstone				
339.5	366.5	103.4	111.7	Coal 8.3 m 27' Seam - D				
		111.7	123.3	Mudstone				
404.5	417	123.3	127.1	Coal with 0.6m mudstone band at 124.6m 3.8(3.2)m 12.5(10.5)' Seam - DL				
		127.1	139	Mudstone near top grading progressively to siltstone towards bottom				
		139	152	Sandstone				
		152	160.1	Siltstone, mudstone near bottom				
525	549.5	160.1	167.6	Coal 7.5m 24.5' Seam - B				
	567	167.6	172.8	Mudstone near top and siltstone				

End of hole June 19, 1979

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ LATITUDE 147 389.7 DEPARTURE 22 380.2 ELEVATION 1712.0

Logged By: RK Date: September, 1979 _____ 483 011.9 _____ 75 445.9 _____ 5018.0

Block: _____ Sect.: _____ Place: Greenhills S. App. Bear: _____ App. Dip.: _____ Length: _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	24	0	7.3	fill and/or overburden				
		7.3	12.5	Silty sandstone				
		12.5	16.8	Mudstone				
		16.8	18.3	Sandstone				
		18.3	30	Sandy siltstone with some sandstone				
		30	35	Sandstone				
		35	60	Siltstone, shaley siltstone interval				
		60	62.7	Mudstone				
205.5	210	62.7	64	Coal 1.3 m 4.5'				
		64	64.8	0.8 m 2.5' Mudstone				
212.5	215.5	64.8	65.7	Coal 0.9 m 3' Seam - EU				
		65.7	66.8	1.1 m 3.5' Mudstone				
219	222	66.8	67.7	Coal 0.9 m 3'				
		67.7	73.2	Mudstone				
240	252.5	73.2	77	Coal 3.8m 12.5' Seam - EL				
		77	92.3	Mudstone with siltstone bands				
		92.3	92.6	Coal 0.3 m 1'				
		92.6	101.2	Siltstone, sandstone bands				
		101.2	103.7	Mudstone				
340	364.5	103.7	111.2	Coal 7.5 m 24.5' Seam - D				
		111.2	125	Mudstone, shaley siltstone intervals				
410	415	125	126.5	Very poor coal 1.5 m 5'				
		126.5	127.3	0.8 m sandstone				

Hole No. RH 1192

Page 1 of 2

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ LATITUDE: 147 256' DEPARTURE 2.2 250' ELEVATION 1715'

Logged By: RK Date: September, 1979 433 255' 73 427' 9' 5120' 0:0

Block: _____ Sect.: _____ Place: Greenhills S. App. Bear: _____ App. Dip.: _____ Length: _____

From To From To INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	9	0	2.7	Overburden				
		2.7	8.7	Mudstone				
28.5	31.5	8.7	9.6	Coal 0.9 m 3'				
		9.6	11	Mudstone				
		11	29.5	Siltstone, sandy interval 17.5 - 21 m, mudstone near bottom				
		29.5	44	Sandstone with siltstone interbeds				
		44	68.8	Siltstone, mudstone near bottom.				
225.5	251.5	68.8	76.7	Coal with 0.7 m & 0.5 m mudstone at 72.7 m & 75.4 m respectively 7.9(6.7)m 26(22)' Seam - EL				
		76.7	78	1.3 m 4' Mudstone				
256	259	78	78.9	Coal 0.9 m 3'				
		78.9	80.5	Mudstone				
264	266.5	80.5	81.2	Coal 0.7 m 2.5'				
		81.2	87.2	Siltstone near top and mudstone				
286	297	87.2	90.6	Coal 3.4 m 11' Seam - EL				
		90.6	100	Mudstone near top and siltstone				
		100	103	Silty sandstone				
		103	109	Interbedded siltstone and mudstone				
		109	111	Sandstone				
		111	116.3	Mudstone, siltstone 112.6 - 114 m				
381.5	402	116.3	122.6	Coal 6.3 m 20.5' Seam - D				
		122.6	136.6	Mudstone, several bands of siltstone				

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

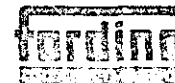
Objective:		Sampled:	
Logged By:		Composites:	
Date:			

Block:	Sect.:	Place:	App. Bear:	App. Dip.:	Length:
--------	--------	--------	------------	------------	---------

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
448	449.5	136.6	137	Coal 0.4 m 1.5'		
		137	137.7	0.3 m 1' Mudstone		
450	457	137.3	139.3	Coal 2m 6.5' Seam - DL		
		139.3	145	Mudstone		
		145	153	Siltstone		
		153	168	Sandstone		
		168	175	Siltstone, mudstone near bottom		
574	603.5	175	184	Coal 9m 29.5' Seam - B		
		184	184.3	0.3 m 1' Mudstone		
604	607	184.3	185.1	Coal 0.8 m 2.5'		
		185	188	Mudstone		
		188	192	Siltstone and bands of sandstone		
	639	192	194.8	Mudstone and siltstone		
				End of hole	June 11, 1979	

Color Plot & Dips	Ore Classes & Aver.
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Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:

LATITUDE 147 53¹.7 DEPARTURE 22 355¹ ELEVATION 1714.6

Core Classes & Aver.

Logged By: RK

Date: September, 1979

484 028

73 343

5625.2

0.0

Block: Sect.: Place: App. Bear: App. Dip.: Length:

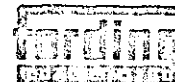
Greenhills S.

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	YES	NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	15	0	4.6	Overburden						
		4.6	11.2	Sandstone						
		11.2	19	Siltstone with mudstone intervals						
		19	20	Sandstone						
		20	22.5	Siltstone						
		22.5	46.5	Mostly sandstone and some siltstone						
		46.5	55	Siltstone						
		55	63.3	Mudstone, siltstone band at 60.5 m						
		63.3	72.5	Coal with 0.6 m mudstone band at 68.3 m 9.2(8.6)m 30(28)' Seam - E						
		72.5	78	Mudstone						
		78	95.5	Siltstone with interbedded mudstone bands						
		95.5	97.5	Mudstone						
320	333	97.5	107.6	Coal 10.1 m 33' Seam - D						
		107.6	122.2	Mudstone						
401	404	122.2	123.2	Coal 1 m 3'						
		123.2	124.7	1.5 m 5' Mudstone						
409	415.5	124.7	126.7	Coal 2m 6.5' Seam - DL						
		126.7	130	Mudstone						
		130	140	Siltstone						
		140	157.5	Sandstone, mudstone band near bottom						
516.5	527.5	157.5	160.9	Coal 3.4 m 11' Seam - B						
		160.9	161.6	0.7 m Mudstone						
530.5	532.5	161.6	162.3	Coal 0.7 m 2'						
		162.3	170.4	Mudstone near top, siltstone						
				End of hole June 13, 1979						

Hole No. RH 1194

Page 1 of 1

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ LATITUDE 147 610'S DEPARTURE 22 306'S ELEVATION 1714'S Ore Classes & Aver.

Logged By: RK Date: September, 1979 484288 73 184 56249 O.G.

Block: _____ Sect.: _____ Place: Greenhills S. App. Bear: _____ App. Dip.: _____ Length: _____

From To From To INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	14	0	4.2	Overburden				
14	16.5	4.2	5.0	Coal 0.8 m 2.5'				
		5.0	14.5	Mudstone				
		14.5	40.5	Sandstone occasional mudstone band				
		40.5	58.5	Mostly siltstone, mudstone intervals, bands of sandstone				
		58.5	60.7	Mudstone				
199	217.5	60.7	66.3	Coal 5.6 m 18.5' Seam - EII				
		66.3	70.3	Mudstone				
230.5	242.5	70.3	73.9	Coal 3.6 m 12' Seam - EL				
		73.9	81	Mudstone				
		81	91	Siltstone near top and sandstone				
		91	93.3	Mudstone				
306	333.5	93.3	101.7	Coal 8.4 m 27.5' Seam - D				
		101.7	104	Mudstone				
		104	116.4	Siltstone, sandy intervals, mudstone bands				
382	385	116.4	117.4	Coal 1.0 m 3'				
		117.4	118.8	1.4 m / 4.5' Mudstone				
389.5	396	118.8	120.8	Coal 2m 6.5' Seam - DL				
		120.8	124	Mudstone				
		124	136	Siltstone with sandstone bands				
		136	142	Sandstone				
		142	152.2	Siltstone				

Rotary Drill Geological Log



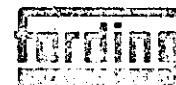
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____
 Color Plot & Dips | Ore Grades & Aves.

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
		152.2	153	Midstone		
502	515	153	157	Coal 4m 13' Seam - B		
		157	162.7	Mudstone		
		162.7	167	Siltstone		
	553	167	168.6	Sandstone		

End of hole June 21, 1979

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: RC Date: September, 1979

Block: _____ Sect.: _____ Place: Greenhills S. App. Bear: _____ App. Dip.: _____ Length: _____

LATITUDE 147 981.2 DEPARTURE 22084.1 ELEVATION 1713.0

485 502.6 72.461.1 5020.1

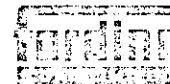
Ore Classes & Asses. _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	8	0	2.4	Overburden				
		2.4	11	Sandstone				
		11	24	Mudstone, some siltstone				
		24	36	Sandstone				
		36	42	Siltstone near top and mudstone				
138	167	42	50.9	Coal with 0.7 & 0.7 m mudstone bands at 45.3 & 49.3m 8.9(7.5)m 29(24.5)' Seam - E				
		50.9	52.5	1.6 m 5' Mudstone				
172	185.5	52.5	56.6	Coal 4.1 m 13.5' Seam - E Lwr Part.				
		56.6	69.5	Mudstone				
		69.5	80	Silty sandstone near top and siltstone				
		80	81.4	Mudstone				
267	292.5	81.4	89.2	Coal 7.8 m 25.5' Seam - D				
		89.2	91.2	2 m 6.5' Mudstone				
299	303.5	91.2	92.6	Coal 1.4 m 4.5'				
		92.6	102.6	Interbedded siltstone and sandstone				
336.5	339.5	102.6	103.5	Coal 0.9 m 3'				
		103.5	105.3	1.8 m 6.0' Mudstone				
345.5	351	105.3	107	Coal 1.7 m 5.5' Seam - DL				
		107	126	Siltstone, top 2m mudstone				
		126	134.5	Sandstone				
		134.5	142	Siltstone, bottom 1 m Mudstone				
465	525	142	160	Coal 18m 59' Seam - B				
	569	160	164.3	Mudstone End og hole August 9, 1979				

Hole No. RH 1196

Page 1 of 1

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: RK Date: June 1979

Block: _____ Sect.: _____ Place: Greenhills N. App. Bear: _____ App. Dip.: _____ Length: 176.8m 580'

LATITUDE 148° 25' 56" DEPARTURE 21 02' 25" ELEVATION 1036'

4966 A04 71 53A 52-0359

Cre Cisses & Aver. 0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY-NEUTRON LOG	YES	NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	110	0	33.5	Overburden						
		33.5	35	Mudstone						
115	122.5	35	37.4	Highly carbonaceous zone or shaley coal						
		37.4	42	Siltstone mudstone near top						
		42	48	Silty sandstone			E			
		48	76.8	Mudstone near top, siltstone						
252	293.5	76.8	89.5	Coal 12.7m 41.5 SEAM-E						
		89.5	112.2	Mudstone with siltstone intervals			D			
368	395.5	112.2	120.6	Coal 8.4m 27.5' SEAM-D						
		120.6	125.4	Mudstone						
411.5	418.5	125.4	127.6	Coal 2.2m 7'			DL			
		127.6	129.6	Mudstone						
425	433	129.6	132	Coal 2.4m 8' SEAM-DL						
		132	134	Mudstone			B			
		134	148	Siltstone						
		148	164	Sandstone						
		164	165.7	Mudstone						
543.5	551	165.7	168	Coal 2.3m 7.5' SEAM-B						
		168	169.5	Mudstone						
556	557.5	169.5	170	Coal 0.5m 1.5'						
		170	173	Mudstone with coal stringers						
	380	173	176.8	Siltstone, sandstone near bottom						

Hole No. RH 1197

Page 1 of 1

End of Hole May 27/79

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ LATITUDE 142 133.4 DEPARTURE 21 017.7 ELEVATION 1150.0

Logged By: RK Date: June 79 _____ 186 386 71309 0122.0

Block: _____ Sect.: _____ Place: Greenhills N. App. Bear: _____ App. Dip.: _____ Length: 2 07m 679'

From Ft. To Ft. From m. To m. INTERSECTIONS TAKEN FROM GAMMA RAY-NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	6	0	2	Overburden				
		2	16	Silty sandstone (shattered)				
52.5	55.5	16	17	Coal 1m 3' SEAM-f				
		17	22	Mudstone near top, siltstone, sandstone band at bottom				
		22	28	Mudstone	E			
		28	38.5	Siltstone, one sandstone band at 32m				
		38.5	45	Sandstone				
		45	49	Siltstone	D	1152.0		
		49	53.5	Mudstone				
		53.5	79.3	Siltstone, mudstone band near bottom				
260	302.5	79.3	92.3	Coal with two 0.4m & 1m parting at 82m & 87m 13(11.6)m 42.5(38)' SEAM-E	DL			
		92.3	117.6	Mudstone with siltstone interbeds				
386	415.5	117.6	126.6	Coal 9m 29.5' SEAM-D	B			
		126.6	130	Mudstone				
426.5	431	130	131.4	Coal 1.4m 4.5'				
		131.4	134.4	Mudstone				
441	447.5	134.4	136.4	Coal 2m 6.5'				
		136.4	156	Mudstone with silty intervals				
		156	165.3	Sandstone				
542	576	165.3	175.7	Coal 10.4m 34' SEAM-B				
		175.7	200.7	Sandstone				

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: _____ Date: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

Ore Classes & Aver. _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO				TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
658.5	660.5	200.7	201.3	Coal	0.6m	2'	SEAM-A				
		201.3	204	Mudstone							
669	670	204	204.3	Coal	0.3m	1'					
	679	204.3	207	Mudstone							
End of Hole											
May 25/79											

Hole No. RH 1198

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ LATITUDE 143 747' DEPARTURE 21 885' ELEVATION 17500' 2 Ore Classes & Aver.

Logged By: RK Date: June 79 _____

Block: _____ Sect.: _____ Place: Greenhills N App. Bear: _____ App. Dip.: _____ Length: _____

From Ft. To Ft. From m. To m. INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	16.5	0	5	Coal or highly carbonaceous zone (Driller: Overburden)				
		5	14	Mudstone				
		14	26	Interbedded siltstone and sandstone				
		26	27.7	Mudstone				
91	94	27.7	28.7	Coal 1m 3'	F			
		28.7	41.5	Mudstone, sandstone band at 32m				
		41.5	53	Sandy siltstone with thin interbeds of sandstone				
		53	84.7	Mostly siltstone with mudstone interbeds	E	17500		
278	306	84.7	93.3	Coal with 0.3m Mudstone band at 86.2m				
				8.6(8.3)m 28(27)' SEAM-E				
		93.3	97	Mudstone	D			
		97	117	Siltstone with bands of sandstone and mudstone				
		117	118.6	Mudstone				
389	416	118.6	126.9	Coal 8.3m 27' SEAM-D	DI			
		126.9	128.3	1.4m Mudstone				
421	425	128.3	129.6	Coal 1.3m 4'				
		129.6	130.3	Shaley Coal	B			
		130.3	133.4	Mudstone				
437	544	133.4	135.3	Coal 1.9m 6' 3(2.6)m 10(8.5)' SEAM DL				
		135.3	136.4	Shale and coal at bottom				
		136.4	168.6	Mudstone, siltstone 146-148.5m and 162-164m				
533	532.5	168.6	177.6	Coal 9m 29.5' SEAM-B				
		177.6	188.7	Mudstone, siltstone near bottom.				

Hole No. RH 1199 Page 1 of 1

End of Hole May 29/79

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ LATITUDE 148 323.4 DEPARTURE 21 050.7 ELEVATION 1922.7 Color Plot & Dips Ore Classes & Aver.

Logged By: RK Date: March 1979

Block: _____ Sect: _____ Place: Greenhills N. Upper Seams Area App. Bear: _____ App. Dip: _____ Length: _____

INTERSECTIONS TAKEN FROM GAMMA RAY-NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	32	0	9.75	OVERBURDEN, TILL & BOULDERS.				
		9.75	19.5	Siltstone, sandy siltstone near top and bottom.				
64	72	19.5	22	Coal 2.5m 8'				
		22	24.5	Mudstone, some siltstone				
		24.5	25	Shaley Coal				
		25	27	Mudstone				
		27	31.5	Sandstone				
		31.5	41	Mudstone				
134.5	137.5	41	42	Coal 1m 3'				
	154	42	47	Mudstone Band at top and siltstone				
				No K to 1875.7m.				
				End of hole. February 9, 1979				

Core Size

Hole No. R H 1218 *

Page 1 of 1

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT. U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
64	66		27 291		2		13.1			7		
66	68		292		2		22.6			6 1/2		
68	70		27 293		2		29.5			6		
71	73		27 294		2		5.1			1 1/2		
64	73	COMPO.		12 243	3/4	1.0	17.9	31.5	49.6	6 1/2	0.62	
80	82		27 295		2		36.2			6		
132	134		27 296		2		67.0			1		
134	136		297		2		32.5			6		
136	138		298		2		37.7			5		
138	140		299		2		53.7			2		
121	122	COMPO		9 373	4	0.9	35.0	24.6	39.5	5 1/2	0.66	

BCU-1110-K

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: R.K. Date: Feb./79

Block: _____ Sect.: _____ Place: GREENHILLS N. UPPER SEAMS AREA App. Bear: _____ App. Dip.: _____ Length: _____

LATITUDE: 149 171.69 DEPARTURE: 21,035.1 ELEVATION: 1930.27

Color Plot & Dips: _____ Ore Classes & Aver.: 0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	YES	NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
	18	0	5.5	Overburden Casing 20'	6.1m					
18		5.5	12.5	Mudstone with bands of siltstone						
		12.5	16	Sandstone						
		16	27.5	Mudstone						
		27.5	39.5	Siltstone, sandy intervals.			K	1747.5	3.2	
129.6	136.2	39.5	41.5	Coal 2m 6.5'		NO name yb				
		41.5	45.5	Mudstone with one siltstone band.						
		45.5	52	Shaley siltstone.			J	1721.3	2.6	
		52	61.4	Mudstone						
201.4	203.4	61.4	62	Coal 0.6m 2'						
		62	64	Mudstone			I	1705.6	4.0	
		64	75.5	Sandstone						
		75.5	78	Mudstone						
		78	82.5	Siltstone and silty sandstone.						
270.7	281.2	82.5	85.7	Coal, with shale less than 0.5m 3.2m 10.5'						
		85.7	92.5	Siltstone with bands of sandstone and mudstone.						
303.5		92.5	93	Coal 0.5m 1.5'						
		93	95	Sandstone						
311.7		95	95.3	Coal 0.3m						
		95.3	109	Mostly siltstone with sandy intervals and bands of mudstone.						
357.6	366.1	109	111.6	Coal 2.6m 8.5'						
		111.6	116.5	Mudstone						
382.2		116.5	116.8	Coal 0.3m						

Core Size

Hole No. RH 1219.

Page 1 of 2

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____ Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
		116.6	124	Siltstone with bands of mudstone, sandy towards bottom.
		124	130	Sandstone
		130	142.7	Silty sandstone, siltstone towards bottom.
468.2		142.7	143	Coal 0.3m
		143.0	144.5	Mudstone
474.0	487	144.5	148.5	Coal 4m 13' SEAM-I
		148.5	158	Mudstone band at top, sandy siltstone and sandstone.
		158	159.2	Mudstone
		159.2	160	Coal 0.8m
	539	160	164.3	Siltstone and/or sandstone
END OF HOLE				
FEBRUARY 8, 1979				

Hole No. RH 1219

Page 2 of 2

Rotary Drill Geological Log



FORDING - RIVER OPERATIONS

Objective: _____

Logged By: **RK** Date: **March 1979** LATITUDE: **148 593.4** DEPARTURE: **21 012.3** ELEVATION: **1936.4** Color Plot & Dips: _____ Ore Classes & Aver.: **0.0**

Block: _____ Sect.: _____ Place: **Greenhills N. Upper Seams Area** App. Bear: _____ App. Dip.: _____ Length: _____

From Ft. To Ft. From m. To m. INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	18	0	5.5	Overburden				
		5.5	11.8	Mudstone, siltstone band at 8.5 m				
		11.8	12.7	Coal 0.9 m				
		12.7	14	Mudstone				
		14	14.6	Coal 0.6m	K	1962.7	S	
		14.6	17.5	Mudstone				
		17.5	19.5	Siltstone, thin coal band at 18.5m	J			
		19.5	30	Mudstone, sandy siltstone interbed at 24.5m	J	1954.7	S	
		30	30.5	Coal 0.6m				
		30.6	41	Shaley siltstone near top, grades into sandstone near bottom				
		41	57	Siltstone	I	1920.1	S	
		57	62	Sandstone				
		62	67.7	Siltstone and silty, sandstone				
222	238.5	67.7	72.7	Coal 5m 16.5' SEAM-K				
		72.7	74.5	Mudstone				
244.5	249.5	74.5	76	Coal 1.5m 5'				
		76	81.7	Mudstone, siltstone band				
268	278	81.7	84.7	Coal 3m 10' SEAM-J				
		84.7	113	Mudstone, with several siltstone bands, thin coal bands (less than 0.3m) at 94.5 & 104m				
370.5	374	113	114	Coal 1m 3.5'				
		114	116.25	Mudstone				
381.5	398	116.25	121.25	Coal 5m 16.5' SEAM-I				
		121.25	127.7	Mudstone				

Core Size

Hole No. **RH 1220** Page 1 of 1

End of Hole. February 14, 1979

Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ LATITUDE _____ DEPARTURE _____ ELEVATION _____ Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: R.K. Date: Feb./79 LATITUDE 149,549.51 DEPARTURE 21,128.24 ELEVATION 1500.05 0.0

Block: _____ Sect.: _____ Piece: GREENHILLS N. UPPER SEAMS AREA App. Bear: _____ App. Dip.: _____ Length: _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	7	0	2.13	Overburden, casing 8'						
7	18			Siltstone						
18	22			Mudstone						
22	48			Siltstone, sandstone 35'-41'						
48	50			Shaley coal						
50	60			Mudstone						
60	78	18.29	23.77	Coal with one foot shale parting at 71'	18'(17)'	5.5(5.2)m	SEAM - K	K	1560.5	
78	82			Mudstone						
82	93			Sandstone with sandy siltstone bands						
93	107			Mudstone						
107	116	32.61	35.36	Coal 9'	2.74m					
116	158			Mudstone, several siltstone bands						
158	216.5			Sandstone with siltstone intervals						
216.5	242	65.99	73.76	Coal with 3.5' mudstone from 222.5 to 226'	25.5(22)'	7.8(6.7)m	SEAM-I	I	1542.1	
242	246			Mudstone						
246	259			Siltstone						
259	352			Mostly sandstone with siltstone interbeds						
352	410			Siltstone, with thin bands of sandstone					1778.5	
410	425			Mudstone						
425	431	129.54	131.37	Coal 6'	1.83m		SEAM Hml or Hu			
431	434			3' mudstone						
434	442	132.28	134.72	1.5' coal/2.5' shale/2.5' coal/1.5' coal & shale/2.44(1.22)m						
442	461			Mudstone, 450-458' siltstone and sandstone						

Core Size

Hole No. RH 1221

Page 1 of 1

END OF HOLE FEBRUARY 6, 1979

Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____

Logged By: RK Date: March 7, 1979

Block: _____

Sect.: _____

Place: Greenhills N. Upper Seams Area

App. Bear: _____

App. Dip.: _____

Length: _____

LATITUDE: 149 130.3 DEPARTURE: 20,893.9 ELEVATION: 1937.7

Ore Classes & Aver. 0.0

From Ft.	To Ft.	From m.	To m.	DESCRIPTION	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	18	0	5.5	Overburden, till and boulders.	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO				
		5.5	8	Sandstone					
		8	39	Mudstone with occasional thin bands of siltstone.		K.	1856.2	5	
		39	47.5	Sandstone					
		47.5	49.5	Mudstone					
		49.5	52.5	Sandstone					
		52.5	57.4	Mudstone with sandstone band at 54m					
188	190	57.4	58	Coal 0.6m 2'					
		58	61.5	Siltstone and Mudstone					
		61.5	81.5	Sandstone with Silty intervals, 0.5 m mudstone at bottom					
267.5	284	81.5	86.5	Coal 5m 16.5' SEAM-K					
		299	91.1	Mudstone					
End of Hole. February 14, 1979									
					Hole No. RH 1222 ✓ Page 1 of 1				

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ LATITUDE _____ DEPARTURE _____ ELEVATION _____ Cre Classes & Aver. _____

Logged By: RK Date: March 1979 LATITUDE 149.108² DEPARTURE 20.927³ ELEVATION 1917.3

Block: _____ Sect.: _____ Place: Greenhills N. Upper Seams Area App. Bear: _____ App. Dip.: _____ Length: _____

INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	9	0	2.75	Overburden				
		2.75	6	Sandstone				
		6	7.6	Mudstone				
25	27	7.6	8.2	Coal 0.6m 2'				
		8.2	18	Mudstone, with one band of sandstone at 10m				
		18	22.5	Sandstone				
		22.5	27	Siltstone and Sandstone interbeds				
		27	29	Mudstone				
		29	33.5	Sandstone				
		33.8	38	Silty Mudstone				
124.5	128.5	38	39.2	Coal, Shaley near top, 1.2m 4'				
		39.2	53.3	Silty sandstone with some siltstone				
175	192	53.3	58.6	Coal 5.3m 17' SEAM-K	K	1864.0	8.2	
		58.6	63.2	Mudstone, silty near bottom				
207	212	63.2	64.6	Coal, shaley 1.4m 5'				
		64.6	65.3	Mudstone				
214	217	65.3	66.3	Coal 1.0m 3'				
		66.3	69.4	Mudstone				
227.5	229.5	69.4	70	Coal 0.6m 2'				
		70	72.8	Mudstone				

End of Hole. February 16, 1979

Hole No. RH 1223

Page 1 of 1

Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____

Logged By: RK Date: March 1979

Block: _____

LATITUDE: 143 55.4 DEPARTURE: 21 091.1 ELEVATION: 1906.2

Ore Classes & Aver. 0.0

Sect.: _____ Place: Greenhills N. Upper Seams App. Bear: Area App. Dip.: _____ Length: 1'

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	6	0	1.7	Overburden				
			17.6	Mudstone with several bands of siltstone				
5.8	63.5	17.6	19.3	Coal 1.7m 5.5'				
			22	Mudstone				
72	93.5	22	28.5	Coal 6.5m 21.5' K-Seam				
			33	Mudstone	K	1904.2	4.5	
108	113	33	34.5	Shaley Coal and Coaly Shale 1.5m 5'				
			35.3	Mudstone				
			36.3	Coal 1m 3'				
			48	Mudstone, carbonaceous, coal bands (approx. 0.3m) at 43.2 & 47m				
			60.5	Mostly siltstone with interbeds of sandstone				
			62	Mudstone				
203.5	208	62	63.4	Coal 1.4m 4.5'				
			65.5	Mudstone				
215	228	65.5	69.5	Coal 4m 13' I-Seam				
			77	Siltstone with mudstone bands	I	1840.7	4	
			80.5	Mudstone				
			96	Sandstone, with several thin bands of siltstone.				
			107.5	Interbedded mudstone and siltstone, 0.3m coal band at 106.8m				
			118	Siltstone, some sandstone near top				
			124.3	Mudstone with siltstone, bands				
408	413.5	124.3	126	Coal 1.7m 5.5'				
	430	126	131	Mudstone; 0.3m coal band at 128.3 m				

Hole No. RH 1224

Page 1 of 1

End of Hole. February 15/79

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: R.K. Date: Feb./79

Block: _____ Sect: _____ Place: GREENHILLS N. UPPER SEAMS AREA App. Bear: _____ App. Dip: _____ Length: _____

LATITUDE	DEPARTURE	ELEVATION	Color Plot & Dips	Ore Classes & Aver.
141 307.04	21004.56	1402.47		0.0

INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	8	0	2.4	Overburden				
		2.4	14.6	Sandstone, siltstone near top.				
		14.6	15.2	Coal 0.6m				
		15.2	18.5	Silty sandstone.				
		18.5	21.8	Siltstone, mudstone bands.				
		21.8	22.4	Coal 0.6m	K	1655.5	4.7	
		22.4	26.5	Sandstone, thin mudstone band near top.				
		26.5	29.5	Mudstone				
		29.5	41	Mudstone, silty intervals, siltstone near top.				
		41	46.5	Sandstone, bottom 2m mudstone.				
		46.5	47.2	Coal 0.7m				
		47.2	49.5	Mudstone		1754.0	2.5	
162.4	184.4	49.5	56.2	Coal 6.7m 22' SEAM-K				
		56.2	62	Mudstone, bottom 1.5m very highly carbonaceous.				
		62	69	Silty sandstone		1773.5	2	
		69	69.5	Mudstone				
		69.5	70	Coal 0.5m				
		70	82.2	Mudstone, siltstone in lower half interval. Coal stringers at 72m.				
269.7	274.3	82.2	83.6	Coal 1.4m 4.5'				
		83.6	102.5	Interbedded mudstone and siltstone.				
		102.5	104.5	Sandstone				
		104.5	108	Siltstone, mudstone near bottom.				

Core Size _____
Hole No. R H 1225 ✓ Page 1 of 2

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____ Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From To From To INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO
Ft. Ft. m. m.

354	362	108	110.5	Coal 2.5m	8'	SEAM-I???
		110.5	120.5	Mostly mudstone, some siltstone.		
		120.5	124.5	Sandstone		
		124.5	129	Mudstone and siltstone.		
423	430	129	131	Coal 2m	7'	?
		131	135	Mudstone		
		135	139.5	Mudstone and siltstone		
	499	139.5	152.5	Sandstone, grading to sandy siltstone towards bottom.		

END OF HOLE

FEBRUARY 13, 1979

Hole No. RH 1225

Page 2 of 2

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: R.K. Date: Feb./79 LATITUDE: 19.968.34 DEPARTURE: 20.901.66 ELEVATION: 1901.43 Color Plot & Dips: _____ Ore Classes & Aver.: 0.0

Block: _____ Sect.: _____ Place: GREENHILLS N. UPPER SEAMS AREA App. Bear: _____ App. Dip.: _____ Length: _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY-NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	28	0	8.5	Overburden? (Driller: Overburden 31' 9.4m)				
		8.5	12	Mudstone, thin coal band 0.25m at 10.75m				
		12	34.4	Silty sandstone, some siltstone., Mudstn 32-34.4 m				
113		34.4	35	Coal 0.6m 2'				
		35	37	Siltstone				
		37	41	Mudstone				
		41	48.5	Sandstone, siltstone near top.				
		48.5	51	Mudstone				
167		51	52	Coal 1m				
		52	57	Mudstone, siltstone near bottom.				
		57	60	Sandstone				
		60	63.3	Siltstone				
207.5	224.5	63.3	68.5	Coal 5.2m 17' SEAM-K		1832.1	5.2	
		68.5	70	Mudstone				
	248	70	75.6	Siltstone, mudstone bands.				
				END OF HOLE				
				FEBRUARY 14, 1979				

Core Size

Hole No. R H 1226

Page 1 of 1

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: _____ Date: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

LATITUDE: 149,292.3 DEPARTURE: 21,182.3 ELEVATION: 1867.87

Color Plot & Dips: _____ Ore Classes & Aver.: 0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	11	0	3.4	Overburden				
11	25	3.4	7.6	Coal 14' 43m SEAM - K				
25	35			Mudstone and some siltstone				
35	40	10.7	12.2	Shaley Coal, Coal and some shale 5' 1.5 m /				
40	42			Mudstone				
42	46		14	Sandstone	K	2184.4	3.0	
				END OF HOLE April 23/79				

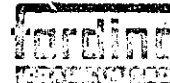
SAMPLE	SAMPLE NO.	I.M.	ASH	V.C.M.	F.C.	F.S.I.	S	ACTUAL B.T.U.
15	17		29 426	2.3		0		
17	19		427	20.6		0		
19	21		428	9.8		0		
21	23		429	7.6		0		
23	25		430	22.6		0		
25	27		29 431	21.6		2 1/2		
15	27	12'		-		-	0.52	11,258
37	38		29 432	33.6		3 1/2		
39	41		433	30.1		5		
41	42		29 434	56.2		1 1/2		

Core Size

Hole No. R H 1236

Page 1 of 1

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: RK Date: April /79

Block: _____ Sect.: _____ Place: Greenhills North App. Bear: _____ App. Dip.: _____ Length: _____

LATITUDE: 149,384.3 DEPARTURE: 21,172.1 ELEVATION: 1360.57

Color Plot & Dips: _____ Ore Classes & Aver.: 0.0

From Ft.	To Ft.	From m.	To m.	Description	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	11	0	3.4	Overburden	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO				
11	24			Sandstone, with siltstone bands					
24	27.5	7.3	8.4	Coal 3.5' 1.1m					
27.5	29.5			2' Mudstone 22(20)' SEAM-K 6.7(6.1) m			1353.3	6.7	6.1
29.5	46	9.0	14.0	Coal 16.5' 5 m					
46	56		171	Midstone Band at top and sandstone					
End of Hole April 21/79									

From Ft.	To Ft.	From m.	To m.	SAMPLE	SAMPLE NO.	I.M.	ASH	V.C.M.	F.C.	F.S.I.	S	ACTUAL B.T.U.	Other
24	26				2944		39.8			3 1/2			
26	28				415		20.9			6 1/2			
28	30			SHALE.									
30	32				416		4.8			6 1/2			
32	34				417		6.9			7			
34	36				418		3.4			7 1/2			
36	38				419		5.1			7 1/2		13,573	ALSO PETROGRAPHY (FLUIDITY NOT RGD)
38	40				420		7.3			7			
40	42				421		8.5			7 1/2			
42	44				422		5.1			8			
44	46				423		3.8			7			
46	48				424		13.8			7 1/2			
2A	48	22	24			10	11.0	32.2	55.8	7	0.56		

Core Size

Hole No. RH

1237

Page 1 of 1

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: _____ Date: _____

Latitude: 149.473.7 Departure: 21.173.1 Elevation: 1852.53

Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	13	0	4	Overburden				
13	22	4	6.7	Mudstone, 18-22' Shaley Siltstone				
22	32	6.7	9.7	Sandstone, thin bands of siltstone near bottom				
32	40	9.7	12.2	Siltstone some mudstone				
40	43	12.2	13.1	Shaley Coal 3'				
43	45	13.1	13.7	Mudstone				
45	61	13.7	18.6	Coal with one foot shale band at 55' 16'(15') SEAM-K 4.9(4.6)m		1852.53	4.9	4.6
61	63	18.6	19.0	Shale and 62-63' coal				
63	71	19.0	21.6	Siltstone near top and sandstone				

END OF HOLE April 21/79

SAMPLE	SAMPLE NO.	I.M.	ASH	V.C.M.	F.C.	F.S.I.	'S	ACTUAL B.T.U.
42	44	2	29404	5.0		5 1/2		
44	46	2	405	5.0		8		
46	48	2	406	4.7		7		
48	50	2	407	3.3		7		
50	52	2	408	5.1		7		
52	54	2	409	3.5		6		
55	56	1	410	5.1		7 1/2		
57	59	2	411	4.5		7 1/2		
59	61	2	29412	16.5		7		
42	61	18/19		1.2	2.2	31.8	60.8	7

Core Size: 50 ACTUAL B.T.U.: 14,505

PE-ROGRAPHY (FELD. NET RECD.)

Hole No. R.H 1238 ✓ Page 1 of 1

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: RK Date: April /79

Back: _____

Sect.: _____

Place: Greenhill N. Upp. Seams

App. Bear: Area

App. Dip.: _____

Length: _____

LATITUDE: 149.647.5

DEPARTURE: 21,127.5

ELEVATION: 1833.8

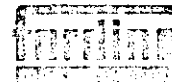
Gr's Classes & Aver. 0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	27	0	8.2	Overburden				
27	34	8.2	10.4	Sandstone				
34	41.5	10.4	12.6	Mudstone				
41.5	62.5	12.6	19.0	Coal, top 4' poor/shaley coal 21' 6.4m SEAM-K	K	1826.2	4.4	
62.5	83	19.0	25.0	Interbedded mudstone and siltstone				
83	95	25.0	29.0	Siltstone				
95	97	29.0	29.6	Coal 2' 0.6m				
97	108	29.6	33.0	Siltstone, shaley near top				
108	110	33.0	33.5	Mudstone				
110	130	33.5	37.0	Sandstone, top 3' silty				
130	150	37.0	41.0	Silty sandstone and siltstone				
150	156	41.0	47.0	Mudstone				
156	160	47.0	48.8	Coal 4' 1.2m	I	1828.5	2.0	
160	180	48.8	51.0	Siltstone, lower 3' sandstone				
180	185	51.0	52.0	Mudstone				
185	218	52.0	69.0	Siltstone with sandstone interbeds, lower 3' sandstone				
218	226.5	69.0	69.0	Mudstone				
226.5	228	69.0	69.5	Coal 1.5' 0.5m				
228	230.5	69.5	70.3	2.5' Mudstone				
230.5	240.5	70.3	73.3	Coal 10' 3.0 m SEAM - I				
240.5	254	73.3	77.0	Mudstone, highly carbonaceous, thin coal bands at 243' & 249'				

Hole No. RH 1239

Page 1 of 2

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: **NK** Date: **May 28, 1979**

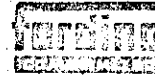
Block: _____ Sect.: _____ Place: **Greenhills** App. Bear: _____ App. Dip.: _____ Length: **735'**
224m

LATITUDE: **149 51.6 W** DEPARTURE: **21 78.1 W** ELEVATION: **1500.6m**

1016 C. Roads & Aves. 0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY-NEUTRON LOG	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
	0	4.3		Coal 4.3m 14' Part. Seam - F				
	4.3	11		Mudstone, Coal stringers at 9.3m				
	11	21		Siltstone				
	21	45		Sandstone, siltstone bands near top	F	1522.4		
	45	77		Mudstone				
	77	89.5		Sandstone and siltstone				
	89.5	97		Mudstone	E	1522.6	10.4	10.4
318	352	97	107.4	Coal with 0.3m parting at 102.7m, 10.4(10.1) 34(33)' Seam - E				
	107.4	133.6		Mudstone with occasional siltstone bands				
438.5	470.5	133.6	143.4	Coal with 0.3m shale 141.7m 2.8(2.5) 32'(31') Seam - D	D	1522.6	2.8	2.8
	143.4	144.2		Shale and Shaley coal				
	144.2	150.5		Mudstone near top and bottom and siltstone				
494	500	150.5	152.4	Coal 1.9m 6' Seam - D1	D1	1527.6	1.9	1.9
	152.4	157.5		Mudstone				
	157.5	161.5		Sandstone				
	161.5	168.5		Siltstone with sandstone bands mudstone near bottom	B	1527.6	1.9	1.9
533	578	168.5	176.2	Coal 7.7m 25' Seam - E				
	176.2	181.2		Mudstone				
	181.2	208.8		Sandstone Mudstone band 198.2 - 199.5m				
695	690.5	208.8	210.5	Coal 1.7m 5.5'				
	210.5	212		Mudstone				
695.3	701	212	213.7	Coal 1.7m 5.5'				

Rotary Drill Geological Log



**FORDING RIVER
OPERATIONS**

Objective: _____ Sampled: _____ Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: **RK** Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	<input type="checkbox"/> YES	<input type="checkbox"/> NO
----------	--------	---------	-------	--	------------------------------	-----------------------------

		213.7	215	Mudstone		
--	--	-------	-----	----------	--	--

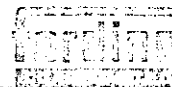
705.5	709.5	215	216.3	Coal 1.3m 4'		
-------	-------	-----	-------	--------------	--	--

	735	216.3	224	Sandstone		
--	-----	-------	-----	-----------	--	--

End of Hole

May 23 '79

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: RK Date: May 28, 1979

Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip: _____ Length: 745'
227'm

LATITUDE: 149 126.2 DEPARTURE: 21 751.1 ELEVATION: 1735.6

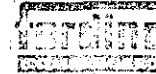
Dr. Classes & Avar. O.C.

From Ft.	To Ft.	From m.	To m.	For 640' 195m	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	1	0	0.3		Blasted Rock				
1	7.5	0.3	2.3		Coal 2m 6.5'				
		2.3	25.7		Mudstone Siltstone bands from 16-21m				
84	104	25.7	31.7		Coal 6m 20' Seam - E				
		31.7	40		Mudstone Coal Stringers at 36.6, 0.3m coal band at 38.2m	F	1735.9	6	
		40	45.5		Mudstone some siltstone				
		45.5	52.7		Siltstone				
173	175	52.7	53.3		Coal 0.6m 2'	E	1735.9	27	
		53.3	62		Mudstone bands of siltstone				
		62	72		Siltstone near top and sandstone				
		72	88		Mudstone	D	1735.2	11	12
		88	107		Mudstone with interbedded siltstone				
		107	110		Sandstone				
		110	115.5		Siltstone	DI	1735.6	1	
		115.5	117.6		Sandstone				
336	414.3	117.6	126.3		Coal 8.7m 28.5' Seam - E				
		126.3	130		Mudstone	B	1735.6	2.4	
		130	150.4		Siltstone with mudstone bands, bottom 2m mudstone				
493.5	529.3	150.4	161.4		Coal 11(10)m 36(33)' Seam - D				
		161.4	163		Mudstone				
		163	167		Mudstone and siltstone				
548	551	167	168		Coal 1m 3'				
		168	170.5		Mudstone				

Hole No. RH 1241

Page 1 of 2

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____ Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From Ft. To Ft. From m. To m. INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

		170.5	188	Mostly siltstone some sandstone, 178 - 181.5m		Sandstone
		188	194	Sandstone		
636	644	194	196.4	Coal 2.4m	8'	Seam - B
		196.4	200.6	Sandstone		
658	666	200.6	203	Coal and Shale	2.4m	8'
		745	227.1	Sandstone		

End of Hole
May 21, 1979

Hole No. RH 1241 Page 2 of 2

Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____

LATITUDE

DEPARTURE

ELEVATION

(Or Classes & A. or)

Logged By: Rk

Date: June 79

143 963.6

22 112.5

14.93.0

0.0

Block:

Sect.:

Place: Greenhills N

App. Bear:

App. Dip.:

Length:

For 128m/420'

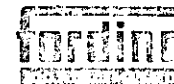
Rejects Spoil Area

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	174	0	53	Overburden and casing				
174	305	53	93	Basal Sandstone - Sandstone grading progressively to siltstone towards bottom				
		93	97.5	Midstone, Possible fault zone at 96m				
		97.5	125	Basal Sandstone - Sandstone and in lower half Interval sandy siltstone				
500		125	152.4	Sandstone, hard drilling				
				End of Hole				
				May 23/79				

Hole No. RH 1242 ✓

Page 1 of 1

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ LATITUDE _____ DEPARTURE _____ ELEVATION _____ Ore Classes & Aver. _____

Logged By: RK Date: June 79 LATITUDE 150 093.9 DEPARTURE 22 102.4 ELEVATION 1700.3 Ore Classes & Aver. 0.0

Block: _____ Sect.: _____ Place: Greenhills N Rejects Spoil Area App. Bear: _____ App. Dip: _____ Length: _____

From Ft. To Ft. From m. To m. INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.		TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	197	0	60	Casing - Fill and overburden				
197	301	60	91.7	Overburden				

Hole was abandoned @ 301' because of loss of circulation
May 21/79

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: RK Date: Jun /79

Block: _____

Sect.: _____

Place: Greenhill N. Upper Seams Area

App. Bear: _____

App. Dip.: _____

Length: 172.2m/565'

LATITUDE: 49,613.91

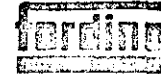
DEPARTURE: 20,976.74

ELEVATION: 1847.84

Ore Classes & Aver. 0.0

From Ft.	To Ft.	From m.	To m.	DESCRIPTION	INTERSECTIONS TAKEN FROM GAMMA RAY - LOG	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	35	0	10.7	OVERBURDEN	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO				
		10.7	15.8	Mudstone					
		15.8	16.8	Sandstone					
		16.8	19.8	Mudstone, some siltstone					
65	67	19.8	20.4	Coal 0.6m 2'		K	1825.9		
		20.4	21.9	Mudstone					
72	89	21.9	27.1	Coal with thin shale band at 25m 5.2m 17' SEAM K		J	1799.5	1.5	
		27.1	29.6	Mudstone					
		29.6	41.4	Mostly siltstone, bands of mudstone and sandstone		J	1757.9	1.8	
136	138	41.4	42	Coal 0.6m 2'					
		42	54.2	Mudstone near top and sandstone		I	1746.6	3	
		54.1	57.3	Mudstone					
188	193	57.3	58.8	Coal 1.5m 5' SEAM S					
		58.8	89.9	Interbedded siltstone and sandstone, bands of mudstone		H	1682.4	4.3	
295	301	89.9	91.7	Coal 1.8m 6' SEAM S					
		91.7	97.5	Siltstone					
		97.5	101.2	Mudstone		HL	1682	3	
332	342	101.2	104.2	Coal 3m 10' SEAM-I					
		104.2	105.7	Mudstone					
		105.7	133.5	Interbedded sandstone and siltstone					
		133.5	139.9	Mudstone					
459	461	139.9	140.5	Coal 0.6m 2'					

Rotary Drill Geological Log



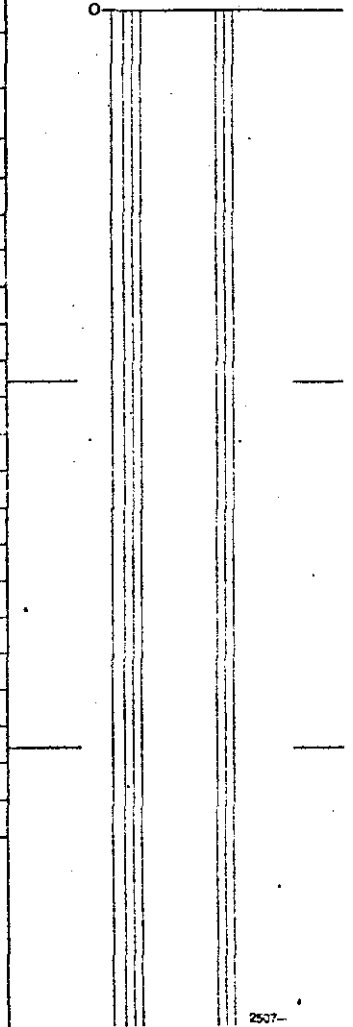
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____ Color Plot & Dips _____ Core Classes & Avar. _____

Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM		GAMMA RAY - NEUTRON LOG	<input type="checkbox"/> YES	<input type="checkbox"/> NO
		140.5	159.4	Mudstone				
523	537	159.4	163.7	Coal	4.3m	14'	SEAM-H	
		163.7	164.3	Shale and coal				
		164.3	165.8	Mudstone				
544	554	165.8	168.8	Coal	3m	10'	SEAM - HI	
	565	168.8	172.2	Mudstone				
				END of HOLE				
				May 16/79				



Hole No. RH 1246 Page 2 of 2

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: **RK** Date: **April/79**

Block: _____ Sect.: _____ Place: **Greenhills N. Upp. Seams area**

LATITUDE: **149.884** DEPARTURE: **21,067.4** ELEVATION: **1847.3**

App. Bear: _____ App. Dip.: _____ Length: _____

Ore Classes & Aver. **0.0**

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	79		24.1	Overburden				
79	88			Siltstone or overburden near top and mudstone				
88	106			Sandstone				
106	112			Sandy siltstone				
112	117			Mudstone				
117	120.5	35.7	36.7	Coal 3.5' 1.1m				
120.5	122.5			2' Mudstone				
122.5	125.5	37.3	38.2	Coal 3' 0.9m				
125.5	131			5.5' Mudstone				
131	134.5	39.9	41.0	Coal 3.5' 1.1m				
134.5	136			1.5' Mudstone				
136	154.5	41.5	47.1	Coal 18.5' 5.6m SEAM-K	K	1807.4	7.2	6.7
154.5	172			Siltstone, Sandstone near bottom				
172	186			Mudstone				
186	192			Sandstone				
192	203			Mudstone				
203	206	61.9	62.8	Coal 3' 0.9m				
206	216			Siltstone, silty sandstone				
216	218	65.8	66.4	Coal 2' 0.6m				
218	224			Mudstone				
224	240			Sandstone				
240	253			Siltstone				
253	258	77.1	78.6	Coal 5' 1.5m				
258	275		83.8	Sandstone, silty intervals END OF HOLE				

Hole No. **RH 1247** ✓

Page 1 of 1

Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____

Logged By: _____ Date: _____

Book: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: 167.9m/551'

LATITUDE: 149,667.45 DEPARTURE: 20,917.42 ELEVATION: 1855.39

Ore Classes & Aver. 0.0

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	62	0	18.9	Overburden				
		18.9	32.5	Interbedded mudstone and siltstone				
106.5	109.5	32.5	33.5	Coal 1m 3'				
		33.5	36	Mudstone				
118	138	36	42	Coal 6m 20' SEAM - K	K	1715.4	6	
		42	45	Mudstone				
		45	52	Sandstone				
		52	59.8	Mudstone, siltstone 55-58m	J			
196.0	200.0	59.8	61	Coal 1.2m 4'				
		61	61.8	0.8 Mudstone				
203	205	61.8	62.5	Coal .7m 2'	J			
		62.5	65	Mudstone				
		65	73	Sandstone mudstone interbed 67-71'm				
		73	75	Mudstone				
246	251	75	76.5	Coal 1.5m 5'				
		76.5	78.5	Mudstone				
		78.5	90	Sandstone with interbeds of siltstone	I	1742.5	2.5	
		90	95.4	Mudstone				
313	316	95.4	96.4	Coal 1m 3'				
		96.4	97.3	0.9m Mudstone				
319	323.5	97.3	98.7	Coal 1.4m 4.5'				
		98.7	100	Siltstone				
328	329	100	100.3	Coal 0.3m 1'				

Hole No. RH 1248

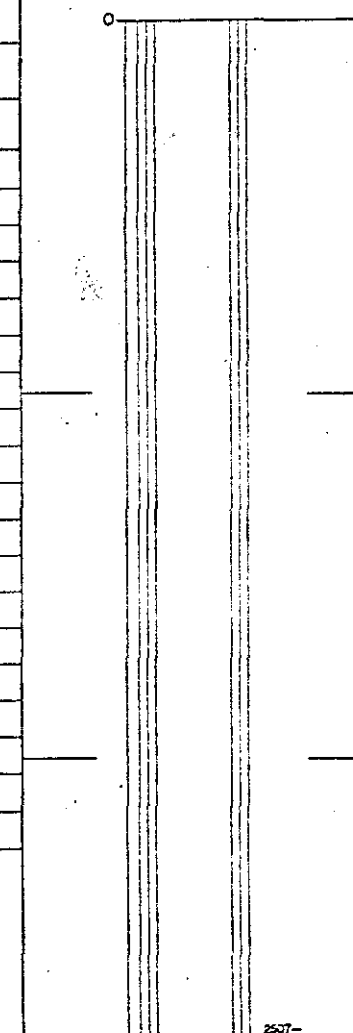
Page 1 of 2

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:				Sampled:				Color Plot & Dips		Ore Classes & Aver.							
Logged By:				Date:				Composites:									
Block:			Sect.:		Place:		App. Bear:		App. Dip.:		Length:						
From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG								<input type="checkbox"/>	YES	<input type="checkbox"/>	NO		
		100.3	101.6	Mudstone													
333	340	101.6	103.7	Coal with 0.3m parting at 102.8m. 2.1(1.8)m 7(6)'													
		103.7	111.9	Mudstone with siltstone in middle													
367	375	111.9	114.4	Coal 2.5m 8' SEAM-I													
		114.4	119	Mudstone													
		119	123	Siltstone													
	551	123	167.9	Sandstone, Coal stringers at 152'm, Siltstone 132-135m													
												End of Hole		May 17/79			
												Hole No. RH		1248 ✓		Page 2 of 2	



Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: RK Date: June 79

Block: _____ Sect.: _____ Place: Greenhills N. Upper Seams App. Bear: Area App. Dip.: _____ Length: 188.7m/ 619'

LATITUDE: 150,563.44 DEPARTURE: 21124.49 ELEVATION: 1816.31

Core Classes & Aver. 0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	26	0	7.9	Overburden - Till and gravel (Casing 6.1m 20')				
		7.9	10.5	Mudstone				
		10.5	15.7	Sandstone				
51.5	53.5	15.7	16.3	Coal 0.6m 2'		1727.1	1.6	
		16.3	19.2	Siltstone with band of mudstone				
63	68	19.2	20.8	Coal 1.6m 5'		1754.1	1.1	
		20.8	25	Mudstone				
		25	32	Siltstone, mudstone near bottom		1714.1	4	2.2
		32	41	Sandstone				
		41	45.5	Carbonaceous mudstone, thin coal band less than or equal to 0.3m at 41.5m		1621.9	2	
		45.5	62.2	Sandstone, shale, siltstone near bottom				
204	207.5	62.2	63.3	Coal 1.1m 3.5'				
		63.3	67	Sandstone				
		67	74	Mudstone		1666.3	3.4	
		74	83	Siltstone, sandy				
		83	102.2	Sandstone		1665.3	3.6	3
335.5	339.5	102.2	103.4	Coal 1.2m 4'				
		103.4	104.2	0.8m Mudstone	4(3.2)m	13(10.5')	SEAM -	
342	348.5	104.2	106.2	Coal 2.0m 6.5'	I	1638.5	2.8	
		106.2	112.5	Siltstone and silty sandstone				
368.5		112.3	112.8	Coal 0.5m				
		112.8	115.2	Highly Carbonaceous mudstone				

Rotary Drill Geological Log



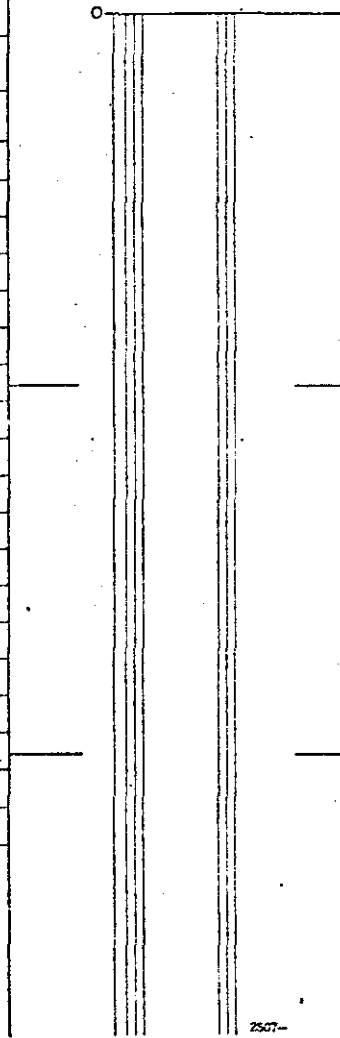
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____ Color Plot & Dips _____ Ore Classes & Aver. _____

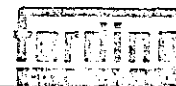
Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	YES	NO
378	380	115.2	115.8	Coal 0.6m 2'		
		115.8	124.4	Midstone		
408	414.5	124.4	126.4	Coal 2m 6.5'		
		126.4	130	Midstone, siltstone near bottom		
426.5	437.5	130	133.4	Coal, top 0.6m Shaley, 34m 11' SEAM--		
437.5	443	133.4	135	Shaley, poor coal 1.6m 5'		
		135	138	Midstone		
		138	143	Sandstone		
		143	147	Siltstone at top and midstone		
482	494	147	150.6	Coal with 0.3m midstone parting at 148.9m		
				3.6 (3.3)m 12(11)'		
		150.6	164.5	Midstone bad at top, siltstone with some sandstone		
		164.5	177.8	Midstone		
583	592	177.8	180.6	Coal 2.8m 9' SEAM - I		
		180.6	183	Midstone		
		183	188.7	Siltstone		
				End of hole		



Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:

LATITUDE 142.632.3 DEPARTURE 21008.1 ELEVATION 1624.5

Ore Classes & Aver.

Logged By: RK

Date: Sept. '79

44.0536

70 172.2

1624.5

C.O.

Block:

Sect:

Place:

App. Bear:

App. Dip:

Length:

Greenhills North

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	YES	NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	20.	0.	6.	Overburden						
		6.	8.7	Mudstone near top, siltstone						
		8.7	14.2	Sandstone						
		14.2	16.7	Mudstone						
		16.7	17.1	Coal 0.4 m - 1.5'						
		17.1	20	Mudstone						
		20	34	Sandstone, silty near top						
		34	38	Mudstone						
		38	55.4	Interbedded mudstone and siltstone, bands of sandstone						
		55.4	63.5	Sandstone with siltstone						
		63.5	76	Siltstone with interbeds of mudstone						
		76	78	Mudstone						
236	284.5	78	86.7	Coal 8.7 m 28.5 seam - E						
		86.7	90	Mudstone						
		90	108.5	Interbedded mudstone and siltstone						
		108.5	109.8	Mudstone						
260	332	109.8	119.5	Coal 9.7 m 32' seam - D						
		119.5	123	Mudstone						
		123	126.4	Siltstone						
414.5	420.5	126.4	128.3	Coal 1.9 m 6' seam - DL			74	1357.9	119	
	438	128.3	133.5	Mudstone						
				End of hole	August 15, 1979					
						Hole No. RH 1282	Page 1 of 1			

Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____

Logged By: RK Date: Sept. '79

Block: _____ Sect.: _____ Place: Greenhills

LATITUDE 148 346.8' W DEPARTURE 21,923.6' W ELEVATION 1746.0' W

486702.2 71927.9 5728.2

App. Bear: _____ App. Dip.: _____ Length: _____

Ore Classes & Aver. 0.0

From Ft.	To Ft.	From m.	To m.	Description	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	2	0	0.6	Overburden					
		0.6	13.4	Siltstone with mudstone interbeds					
44	46.5	13.4	14.2	Coal 0.8 m 2.5'					
		14.2	18	Mudstone					
		18	31	Siltstone near top, mudstone		E	1648	7.6	6.4
		31	36	Siltstone				4.2	
		36	45.5	Sandstone					
		45.5	50.8	Mudstone		D	1630	8.2	
		50.8	76.6	Sandstone band at top, siltstone, shaley near bottom					
		76.6	78.	Mudstone		DI	1614.2	2.7	
255	281	78	85.6	Coal with 0.6, 0.3, 0.3 m shale bands at 80.8, 83.3 and 84.8 m respectively 7.6m(6.4)m		25(21)'			seam E
		85.6	86.8	1.2 m / 4' Mudstone					
285	298.5	86.8	91	Coal 4.2m 13.5' seam E twr. pt.					
		91	95	Mudstone					
		95	100.5	Siltstone		B	1581.7	2.1	
		100.5	110	Sandstone with siltstone					
		110	114	Shaley siltstone					
		114	116	Mudstone		A	1547	2.6	
380.5	407.5	116	124.2	Coal 8.2 m 27' seam - D					
		124.2	128.8	Mudstone					
		128.8	129.4	Shaley coal 0.6 m 2'					
		129.4	131.8	Mudstone					

Extend 63C

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____ Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From Ft. To Ft. From m. To m. INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

432.5 441.5 131.8 134.5 Coal 2.7 m 9' Seam - DL

134.5 137 Mudstone

137 151 Siltstone

151 164.3 Sandstone. 0.9 m band of mudstone near bottom

539 546 164.3 166.4 Coal 2.1 m 7' Seam - B

166.4 170.7 Mudstone

170.7 195.5 Sandstone

195.5 199 Siltstone

653 661.5 199 201.6 Coal 2.6 m 8.5'

201.6 202.4 0.8 m / 2.5' Mudstone

664 668 202.4 203.6 Coal 1.2 m 4'

203.6 204.7 1.1 m / 3.5' Mudstone Seam - A

671.5 674.5 204.7 205.7 Coal 1 m 3'

205.7 206.8 1.1 m / 3.5' Mudstone

678.5 683 206.8 208.2 Coal 1.4 m 4.5'

699 208.2 213.1 Basal Sandstone

End of hole August 11, 1979

Hole No. RH 1298

Page 2 of 2

Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____

LATITUDE 148 631⁰ DEPARTURE 21 946² ELEVATION 1738⁴

Ore Classes & Aver. _____

Logged By: RK

Date: Sept. '79

487.634⁶

72.002⁰

5704¹

0.0

Block: _____ Sect: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY-NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	19.	0.	5.8	Overburden				
		5.8	11.	Mudstone				
		11.	46.5	Interbedded mudstone and siltstone				
		46.5	51.	Mudstone				
167.	207.	51.	63.2	Coal with 0.8 m shale at 58.3 m 12.2(11.4)m 40(375)' seam - E	E	1687.6	12 ²	11.4
		63.2	67.	Mudstone				
		67.	88.	Sandy siltstone with interbedded mudstone				
		88.	92.	Mudstone				
302.	331.5	92.	101.	Coal 9 m 29.5' seam - D	D	1646.6	9	
		101.	103.	2 m / 6.5' Mudstone				
338.	342.	103.	104.3	Coal 1.3 m 4'				
		104.3	107.4	3.1 m / 10' Mudstone				
352.5	359.5	107.4	109.6	Coal 2.2 m 7' Seam - DL	DL	1631.2	2 ²	
		109.6	112.	Mudstone				
		112.	125.3	Siltstone				
		125.3	136.	Silty sandstone				
		136.	139.8	Mudstone				
458.5	492.	139.8	150.	Coal 10.2 m 33.5' seam - B	B	1598.8	10 ²	
		150	151	Mudstone				
		151	154	Sandstone				
		154	158	Mudstone				
	532	158	162.2	Sandstone				
				End of hole August 10, 1979				

Hole No. RH 1289

Page 1 of 1

Entered BJC

Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____

Logged By: RK Date: June 79

Block: _____ Sect: _____ Place: K 4 Pit Eagle Mt. S App. Bear: _____ App. Dip.: _____ Length: _____

LATITUDE: 148 177.8 DEPARTURE: 26 090.0 ELEVATION: 1762.7

0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY-NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	5	0	1.5	Overburden (Casing 2.1m/7')				
		1.5	2.5	Mudstone				
		2.5	10.3	Sandstone, some siltstone near top. Grey cuttings				
		10.3	11.3	Mudstone, brown cuttings				
37	40	11.3	12.3	Coal 1m 3'		1751.4	1	
		12.3	14.3	Mudstone brown cuttings				
		14.3	14.9	Poor, Shaley Coal 0.6 2'				
		14.9	17.5	Mudstone				
57.5	59.5	17.5	18.2	Coal 0.7m 2'				
		18.2	18.8	0.6m 2' Mudstone				
61.5	69	18.8	27.2	Coal 8.4m 27.5' SEAM-4	4	1745.2	97	9.1
	100	27.2	30.4	Siltstone, Sandy near bottom grey cuttings				
				End of Hole				
				May 23/79				
					B50 Hole	k-4 Pit Area		
					Hole No. RH 1515 ✓	Page 1 of 1		

FORDING COAL LTD. - FORDING RIVER OPERATIONS

GEOLOGY

LATITUDE 148 177.8 DEPARTURE 26090.0 ELEVATION 1762.7

PLACE		PLATE NO.		BEARING			APPROX. DIP			
IN FEET		IN METERS		THICKNESS	TOTAL THICKNESS	NET THICKNESS	SEAM No.	TOP OF SEAM	BOTTOM OF SEAM	
FROM	TO	FROM	TO	m	m	m				
0	5	0	1.5				OVERBURDEN			
37	40	11.3	12.3				1	1751.4		
57.5	59.5	17.5	18.2	0.7	9.1	3				
61.5	89.	18.8	27.2	8.4			4	1745.2		
TOTAL DEPTH						30.4				

DRILL HOLE SUMMARY
METRIC SCALE

RADIATION LOGGED YES NO
DEPTH LOGGED (IF LESS THAN T.D.)
HOLE No. DDH / RH 1515



ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ST.U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
37	40		28350		3		24.1			1		
40	42		28351		2		41.9			1		
47	50		28352		3		68.8			1/2		
60	65		28353		5		30.6			3		
65	70		354		5		12.0			3 1/2		
70	75		28354		5		13.5			6		
75	80		356		5		11.5			5 1/2		
80	85		357		5		13.5			4		
85	90		28355		5		22.8			5		
		SEAM-4	COMPO		30'	0.5	17.1	20.8	61.6	4 1/2	0.20	

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: RK Date: June/79

Block: _____ Sect.: _____ Place: Clode Pit App. Bear: _____ App. Dip.: _____ Length: 182.6m/599'

LATITUDE 150 93' 6" DEPARTURE 24 209.3 ELEVATION 1832.1

495.182.3 79 426.9 6010.94

Ore Classes & Avgr. 0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY-NEUTRON LOG	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
		0	11.5	Silty sandstone with mudstone interbeds				
		11.5	20.4	Sandstone				
67	69	20.4	21	Coal 0.6m 2' SEAM-2				
		21	24.2	Siltstone near top and sandstone	2			
79.5	89.5	24.2	27.2	Coal 3m 10' SEAM-1				
		27.2	79	Basal Sandstone (Fractured S.S. 42.4 - 48.5m - DRILLER)	1			
		79	98.5	Mudstone near top and interbeds of sandy siltstone and mudstone				
		98.5	104.5	Sandstone				
		104.5	111.5	Mudstone, some siltstone				
		111.5	138	Sandstone, silty near top, siltstone from 119-122m				
		138	140.2	Mudstone	R4			
		140.2	141.2	Coal 1m 3'				
		141.2	151.5	Sandstone, siltstone towards bottom				
		151.5	153	Mudstone				
		153	162.5	Sandstone				
		162.5	166.9	Mudstone				
547.5		166.9	167.3	Shaley Coal 0.4m				
	566.5	167.3	172.7	Coal 5.4m 17.5' SEAM-R4				
		172.7	173.7	1m Mudstone				
570	574	173.7	175	Coal 1.3m 4'				
	599	175	182.6	Mudstone with some siltstone				
				End of Hole				
				June 3/79				

Hole No. RH 1534

Page 1 of 1

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: RK Date: June 79

Block: _____ Sect.: _____ Place: Clode Pit App. Bear: _____ App. Dip.: _____ Length: 176.8m/580'

LATITUDE 151 076.5 DEPARTURE 24 174.7 ELEVATION 1815.9

455 657.2 79 313.5 5957.7

Ore Classes & Aver. 0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
		0	16	Interbedded siltstone and silty mudstone; sandstone 10-12m				
		16	22	Sandstone with mudstone sand at 17.5 m				
		22	24.3	Mudstone				
79.5	82	24.3	25	Coal 0.7m 2.5'	2			
		25	26.3	1.3m Mudstone				
86	88	26.3	26.8	Coal 0.5m 2'	1			
		26.8	29.2	Mudstone and siltstone				
99	107.5	30.2	32.8	Coal 2.6m 8.5' SEAM - 1				
		32.8	72	Basal Sandstone				
		72	78	Mudstone	R4			
		78	106	Siltstone with several silty mudstone interbeds				
		106	122.5	Silty sandstone				
		122.5	126	Silty mudstone				
		126	142	Sandstone, mudstone band at 132.5m				
		142	153.5	Interbedded siltstone and sandstone				
		153.5	161.4	Sandstone				
529.5	557.7	161.4	169.9	Coal 8.5m 28' SEAM-R4				
		169.9	170.7	0.8m Mudstone				
560	564	170.7	172	Coal 1.3m 4'				
		172	173.5	Mudstone				
	580	173.5	176.8	Siltstone				
				End of Hole May 31/79				
					Hole No. RH 1535	Page 1 of 1		

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Latitude 151 19' 3" . DEPARTURE 24 01' 6" ELEVATION 1837.0

Logged By: RK Date: June/79

Block: _____ Sect: _____ Place: Clode Pit App. Bear: _____ App. Dip.: _____ Length: 180.4m/592'

Ore Classes & Aver. 0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	4	0	1.2	Overburden				
		1.2	17.1	Mostly mudstone, some siltstone, sandstone band near bottom				
		17.1	17.4	Coal 0.3m 1'				
		17.4	20.6	Mudstone				
67.5	70	20.6	21.4	Coal 0.8m 2.5' SEAM-2				
		21.4	24.3	Siltstone and sandstone				
80	88	24.3	26.7	Coal 2.4m 8' SEAM-1				
		26.7	77	Basal Sandstone, grading to silty sandstone towards bottom				
		77	81.3	Mudstone, Coal stringers at 78.3m & 79.2m				
266.5	268	81.3	81.8	Coal 0.5m 1.5'				
		81.8	87.8	Mudstone				
288	289.5	87.8	88.2	Coal 0.4m 1.5'				
		88.2	102	Mudstone, Siltstone interbeds				
334	5336	102	102.5	Coal 0.5m 1.5'				
		102.5	106	Mudstone				
		106	115.5	Siltstone grading to sandstone towards bottom				
		115.5	132.5	Sandstone				
		132.5	135.5	Siltstone and mudstone				
		135.5	140.5	Sandstone				
		140.5	143	Siltstone				
		143	153.5	Sandstone				
		153.5	155.5	Shaley Coal and Shale				
510	512.5	155.5	156.3	Coal 0.8m 2.5'				

Hole No. RH 1536

Page 1 of 2

Rotary Drill Geological Log



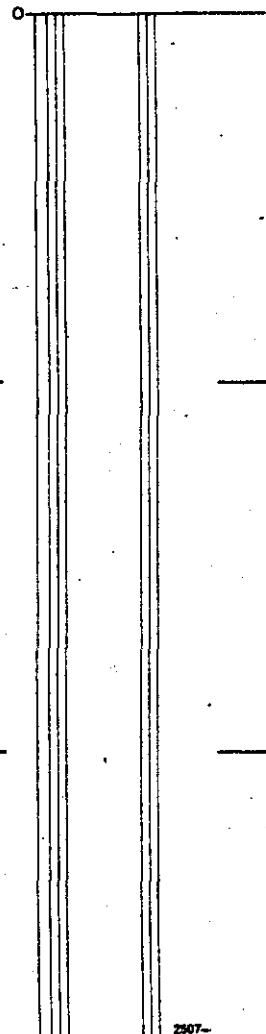
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____ Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App.: Dip.: _____ Length: _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG				<input type="checkbox"/> YES	<input type="checkbox"/> NO
		156.3	159.5	Sandstone					
		159.5	162.5	Carbonaceous mudstone					
		162.5	166.5	Sandstone					
546.5	561	166.5	171	Coal	4.5m	14.5'	SEAM-R4		
		171	172.3	1.3m	Midstone				
565	570.5	172.3	174	Coal	1.7m	5.5'			
		174	175.5	Midstone					
	592	175.5	180.4	Sandstone					
End of Hole									
June 6/79									
○									
								Hole No. RH 1536	
								Page 2 of 2	



Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ LATITUDE _____ DEPARTURE _____ ELEVATION _____ Ore Classes & Aver. _____

Logged By: RK Date: Sept. '79 LATITUDE 148 215.4 DEPARTURE 25 700.3 ELEVATION 1810.8 O.C. _____

Block: _____ Sect.: _____ Place: Eagle Mt. - Blackwood Pit App. Bear: _____ App. Dip.: _____ Length: _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	16	0	4.9	Overburden				
		4.9	17	Siltstone, mudstone near bottom				
55.5	83.5	17.	25.6	Coal 8.6 28' seam - 4	4	1753.8	2.6	
		25.6	29.5	Mudstone				
		29.5	43	Siltstone and mudstone interbeds				
		43	46.3	Silty sandstone				
152	162	46.3	49.3	Coal 3 m 10' seam -		1764.5	3	
		49.3	57	Mudstone				
		57	68.5	Siltstone, silty sandstone near bottom				
224.5	234.5	68.5	71.5	Coal 3.0 m 10' seam - 3	3	1742.3	3	
		71.5	74.2	Mudstone				
		74.2	80	Shaley siltstone				
		80	82	Mudstone and silty sandstone				
269	280.5	82	85.5	Coal 3.5 m 11.5' seam - 2				
		85.5	89.9	Mudstone, bands of siltstone	2	1728.3	3.5	
295	300	89.9	91.5	Coal 1.6 m 5' seam - 1				
		91.5	97.2	Basal sandstone	1	1720.9	1.6	
				End of hole August 14, 1979				

Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____

Drilled By: RK Date: June '79

LATITUDE: 148 165.3 DEPARTURE: 26 059.3 ELEVATION: 1760.5

Color Plot & Dips: _____ Ore Classes & Avar: 0.0

Sec1.: _____ Place: K 4 Pit Eagle Mt. S App. Bear: _____ App. Dip.: _____ Length: _____

From	To	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	2	Overburden & Casing				
	2	Siltstone, some mudstone coal stringers at 12.5m, grey cuttings.				
	9.6	Coal 0.6m 2'				
	10.2	Mudstone with thin bands of siltstone grey cuttings				
73	22.3	Top 0.3m 1' Coal, and mudstone				
77.5	23.6	Coal 9.1m 30' SEAM-4	4	1736.9	9.1	—
	32.7	Mudstone				
	33.3	Coal 0.3m 1'				
135	33.6	Mudstone & Siltstone grey cuttings				

End of Hole May 5/79

DEPTH	DIAMETER	SAMPLE NO.	I.M.	ASH	V.C.N.	P.C.	F.S.I.	S	ACTUAL B.T.U.
80	85	28526		13.4			6		
85	90	527		17.1			4		
90	95	528		13.5			2 1/2		
95	100	529		11.2			2 1/2		
100	105	530		13.5			5		
105	110	28531		30.3			5		
		SEAM-4 COMPO.	0.6	16.8	21.7	60.9	4 1/2	0.28	

Core Size
B50 Hole K-4 Pit Area
Hole No. RH 1555 Page 1 of 1

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: **RK** Date: **Jun /79**

Block: _____ Sect.: _____ Place: **K-4 Pit Eagle Mt. S Area** App. Bear: _____ App. Dip.: _____ Length: _____

LATITUDE: **148 102' 0** DEPARTURE: **25 980' 6** ELEVATION: **1738' 0**

Ore Classes & Aver. **0.0**

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TCP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	4	0	1.2	Overburden (Casing 3m 10')				
		1.2	3.8	Mudstone, Coal stringer at 2.5m				
12.5	43.5	3.8	13.3	Coal 9.5m 31' SEAM-4				
		13.3	15.7	Silty mudstone				
		15.7	18.5	Siltstone, sandy near bottom grey cuttings				
		18.5	23.8	Mudstone	4	1734.2	95	-
		23.8	26.5	Sandy siltstone				
		26.5	30.7	Silty mudstone				
		30.7	46	Siltstone, silty sandstone near top				
		46	47.7	Mudstone				
156.5	164	47.7	50	Coal, 1.5 5' Good Coal, 0.8m 2.5' shale and shaley coal) (Seam above seam 2 & 1)				
		50	54.5	Mudstone				
205		54.5	62.5	Sandstone near top and siltstone				
				End of hole				

B50 Hole K-4 Pit

Hole No. RH 1556

Page 1 of 1

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: RK Date: Jun/79

Block: _____ Sect.: _____ Place: K 4 Pit Eagle Mt. S App. Bear: _____ App. Dip.: _____ Length: _____

LATITUDE: 148 098.4 DEPARTURE: 25 865.2 ELEVATION: 1739.4

Ore Classes & Aver. 0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	5.5	0	1.7	Overburden (Casing 2.3m 7.5')				
		1.7	5.6	Mudstone				
18.5	50.5	5.6	15.4	Coal 9.8m 32' SEAM - 4				
		15.4	29	Mudstone, thin sandstone band at 18.6 m	4	1733.8	9.8	—
		29	41.7	Siltstone				
		41.7	43	Mudstone				
141	147.5	43	45	Coal 2m 6.5'		1696.4	2	—
		45	45.5	Shaley coal and shale 0.5m				
		45.5	53	Mudstone near top and siltstone				
		53	57	Sandstone with a mudstone band				
187	197	57	60	Coal 3m 10' SEAM-2 (F.W. Estimated)				
		60	62.4	Mudstone and sandstone	2	1682.4	3	—
				End of Hole				
				May 11/79				

B50 Hole K-4Pit

Hole No. RH . 1557

Page 1 of 1

Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective:

Logged By: RK

Date: Sept. '79

Block:

Sect.:

Place:

Eagle Mt. N. Face

App. Bear:

App. Dip:

Length:

137.8 / 452'

Ore Classes & Avor.

0.0

LATITUDE

DÉPARTURE

ELEVATION

150 631' 22" m

25 632' 47" m

2049.28 m

From Ft.	To Ft.	From m.	To m.
		0	0.6
2	21	0.6	6.4
		6.4	7.6
25	30	7.6	9.1
		9.1	27
		27	33
108.5	110.5	33	33.6
		33	37
		37	49.2
161.5	165.5	49.2	50.4
		50.4	52
170.5	173.5	52	53
		53	54.3
178	182	54.3	55.4
		55.4	61
		61	85
		85	88
288.5	300.5	88	91.7
		91.7	100.7
330.5	332	100.7	101.2
		101.2	107.3
352	355	107.3	108.2
		108.2	122.1

INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
		0	0.6	Overburden				
2	21	0.6	6.4	Coal 5.8 m 19' seam - 13				
		6.4	7.6	Mudstone				
25	30	7.6	9.1	Coal 1.5 m 5'				
		9.1	27	Mostly siltstone, some mudstone	13			
		27	33	Mudstone				
108.5	110.5	33	33.6	Coal 0.6 m 2'				
		33	37	Mudstone	12			
		37	49.2	Siltstone, sandy towards bottom, some sandstone				
161.5	165.5	49.2	50.4	Coal 1.2 m 4'				
		50.4	52	Mudstone				
170.5	173.5	52	53	Coal 1 m 3' seam 12				
		53	54.3	Mudstone				
178	182	54.3	55.4	Coal 1.2 m 4'	11u			
		55.4	61	Mudstone				
		61	85	Silty sandstone, siltstone near bottom				
		85	88	Mudstone				
288.5	300.5	88	91.7	Coal 3.7 m 12' seam 11v				
		91.7	100.7	Mudstone with thin bands of siltstone				
330.5	332	100.7	101.2	Coal 0.5 m 1.5'				
		101.2	107.3	Mudstone				
352	355	107.3	108.2	Coal 0.9 m 3'				
		108.2	122.1	Mudstone & siltstone near top, sandstone				

Hole No. RH 1558

Page 1 of 2

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____ Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM	GAMMA RAY - NEUTRON LOG	<input type="checkbox"/> YES	<input type="checkbox"/> NO
400.5	402.5	122.1	122.7	Coal	0.6 m	2'	
		122.7	131	Midstone			
	452	131	137.8	Siltstone, shaley near bottom, sandstone bands			
				End of hole			
				June 22, 1979			

Color Plot & Dips _____ Ore Classes & Aver. _____

0 _____

2807-

Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____

Logged By: **RK** Date: **Sept. '79** LATITUDE: **150 521.04 m** DEPARTURE: **25792.69 m** ELEVATION: **2071.79** Ore Classes & Aver. **0.0**

Block: _____ Sect.: _____ Place: **Eagle Mt. N. Face** App. Bear: _____ App. Dip.: _____ Length: _____

INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	Description	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	2	0	0.6	Overburden				
		0.6	13	Mudstone, 1 - 11.5 m sandy siltstone				
42.5	65	13	19.8	Coal with 0.6 m shale at 18.6 m 6.8(6.2) m 22.5'(20.5)' seam - 13				
		19.8	21	Mudstone				
		21	31	Silty sandstone				
		31	35.8	Mudstone some siltstone neat top				
117.5	120	35.8	36.6	Coal 0.8 m 2.5 m				
		36.6	38.4	Mudstone				
126	130	38.4	39.7	Coal 1.3 m 4'				
		39.7	40.4	0.7 m Mudstone				
132.5	137.5	40.4	41.9	Coal 1.5 m 5' seam 12				
		41.9	44.1	Mudstone				
144.5	149.5	44.1	45.6	Coal 1.5 m 5'				
		45.6	48.	Mudstone				
157.5	162.5	48	49.5	Coal 1.5 m 5'				
		49.5	59.5	Mudstone, siltstone in lower half interval				
		59.5	60.1	Poor Coal 0.6 m 2'				
		60.1	63.5	Sandy siltstone				
		63.5	74.7	Mudstone, silty near top				
245	252.5	74.7	77	Coal 2.3 m 7.5' seam 11v				
		77	79	Mudstone				
		79	107	Sandy siltstone, some sandstone near bottom Mudstone 93.5-96m				

Rotary Drill Geological Log

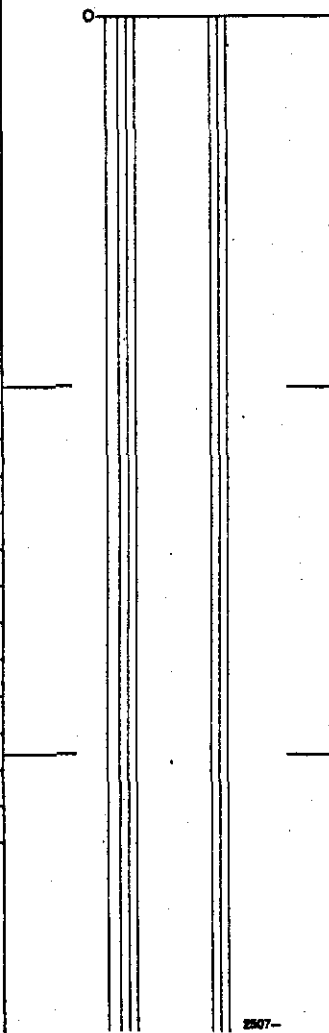


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

Color Plot & Dips _____ Ore Classes & Aver. _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
351	353	107	107.6	Coal	0.6 m 2'
		107.6	110	Mudstone	
		110	119.5	Sandstone	
		119.5	123	Mudstone	
403.5	406.5	123	124	Coal	1 m 3'
		124	131	Mudstone, coal stringers at 127 m	
		131	146	Sandstone	
		146	149.6	Mudstone	
		149.6	158	Interbedded siltstone and sandstone	
		158	166	Siltstone with bands of mudstone	
		166	170.7	Sandstone	
				End of hole	June 18, 1979
Hole No. RH 1559					



Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____

Logged By: RK Date: Sept. '79

Block: _____ Sect.: _____ Place: Eagle Mt. M. Face

LATITUDE: 150 406.0 m DEPARTURE: 25 251.7 m ELEVATION: 20 035.13 m

App. Bear: _____ App. Dip.: _____ Length: _____

Ore Classes & Aver. 0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY-NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	20	0	6.1	Overburden (Driller reported 2 m shale and coal at 4.3 m in overburden)				
		6.1	10.3	Siltstone				
		10.3	21.5	Sandstone with thin interbeds of siltstone				
		21.5	22.6	Mudstone				
74	97	22.6	29.6	Coal with 0.3 & 0.6 m shale at 26 m & 27.4 m 7 m (6.1m) 23(20)' seam - 13				
		29.6	47.3	Siltstone, with sandy intervals, mudstone near bottom, 0.3m coal band at 30.7 m				
155	157.5	47.3	48	Coal 0.7 m 2.5'				
		48	49.8	Mudstone				
163.5	172.5	49.8	52.6	Coal 2.8 m 9' seam - 12				
		52.6	56.3	Mudstone with siltstone band				
185	188	56.3	57.3	Coal 1 m 3'				
		57.3	58.3	1 m Mudstone				
191	195	58.3	59.5	Coal 1.2 m 4'				
		59.5	70.8	Siltstone with bands of mudstone, coal stringers at 63.8				
		70.8	71.5	Poor Coal 0.7 m 2'				
		71.5	81.5	Silty mudstone coal stringers at 80.4 m				
		81.5	85.5	Sandstone				
		85.5	90.6	Mudstone				
297	301.5	90.6	92	Coal 1.4 m 4.5' seam - 11g. ?				
		92	101.5	Mudstone with bands of siltstone coal stringers at 95.7 m				

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:	Sampled:	Color Plot & Dips	Ore Classes & Aver.
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Logged By:	Date:	Composites:	
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Block:	Sect.:	Place:	App. Bear:	App. Dip.:	Length:
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From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	<input type="checkbox"/> YES	<input type="checkbox"/> NO
		101.5	120	Silty sandstone and siltstone		
		120	126	Sandstone, silty near bottom		
		126	129	Mudstone		
		129	140	Silty sandstone, mudstone band 137 - 138.5 m		
		140	144	Mudstone		
472.5	474.5	144	144.6	Coal 0.6 m 2'		
		144.6	165.5	Siltstone with bands of mudstone, sandy near bottom		
		165.5	171.5	Sandstone		
		171.5	178.7	Mudstone		
586	595	178.7	181.5	Coal 2.8 m 9' seam -		
		181.5	183.3	Shaley coal and shale		
		183.3	184.3	Mudstone		
604.5	608	184.3	185.3	Coal 1.0 m 3'		
		185.3	189.5	Mudstone		
		189.5	196.5	Siltstone, sandstone band near top		
		196.5	198.4	Mudstone		
651	665	198.4	202.8	Coal 4.4 m 14' seam -		
		202.8	203.4	Mudstone		
667	669	203.4	204	Coal 0.6 m 2'		
	698	204	212.7	Mudstone		
				End of hole	June 15, 1979	

Hole No. RH 1560

Page 2 of 2

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ LATITUDE _____ DEPARTURE _____ ELEVATION _____ Ore Classes & Aver. _____

Logged By: RK Date: Sept. '79 LATITUDE 150 355 39 m DEPARTURE 25 971' 33 ELEVATION 2097.89. 0.0

Block: _____ Sect.: _____ Place: Eagle Mt., N. Face App. Bear: _____ App. Dip.: _____ Length: _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	32	0	9.7	Overburden (Driller's report 12 m / 40' overburden)					
32	37	9.7	11.3	Coal ?	1.6 m 5'				
		11.3	13.6	Mudstone					
44.5	48	13.6	14.7	Coal	1.1 m 3.5'				
		14.7	15.8	1.1 m / 3.5' mudstone					
52	63	15.8	19.2	Coal	3.4 m 11'				
		19.2	22.1	Mudstone					
72.5	75.5	22.1	23	Coal	0.9 m 3'				
		23	24.4	Sandstone					
80	85	24.4	26	Coal	1.6 m 5'				
		26	36.5	Interbedded siltstone and mudstone					
		36.5	48	Sandstone, silty near top					
		48	53.4	Mudstone					
175	179	53.4	54.6	Coal	1.2 m 4'				
		54.6	56	1.4 m / 4.5' mudstone					
183.5	207	56	63.1	Coal with 0.4 m / 1.5' shale parting at 57.6 7.1(6.7)m 23.5(22)' seam - 1lv					
		63.1	70.3	Mudstone, bands of siltstone					
230.5	233	70.3	71.1	Coal	0.8 m 2.5'				
		71.1	79.5	Siltstone and mudstone near bottom					
		79.5	85	Sandstone					
		85	89.6	Silty mudstone					
294	297.5	89.6	90.7	Coal	1.1 m 3.5'				

Hole No. RH 1561

Page 1 of 2

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

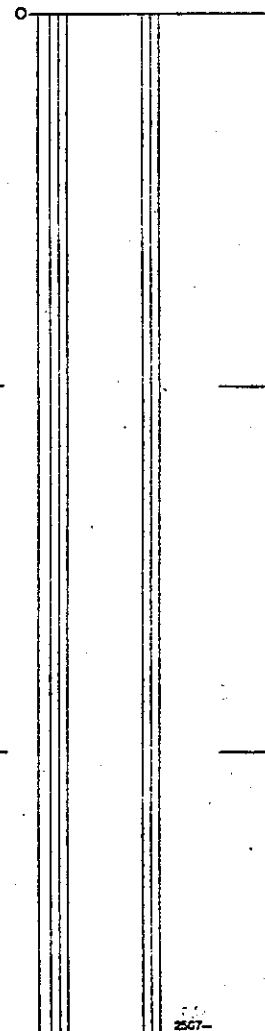
Objective: _____ Sampled: _____

Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App.: Dip.: _____ Length: _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM	GAMMA RAY - NEUTRON LOG	<input type="checkbox"/> YES	<input type="checkbox"/> NO
		90.7	93	Mudstone			
		93	97	Siltstone, sandstone band near bottom			
		97	101	Mudstone			
		101	110	Siltstone			
		110	122	Sandstone			
		122	127.5	Mudstone and siltstone			
		127.5	130	Sandstone			
		130	138	Mudstone			
		138	162.5	Silty sandstone and siltstone, mudstone	146.5 - 148 m		
		162.5	164.5	Sandstone			
563		164.5	171.6	Silty sandstone			
				End of hole	June 20, 1979		

Color Plot & Dips | Core Classes & Aver.



Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective:			LATITUDE		DEPARTURE		ELEVATION		Color Plot & Dips	Ore Cases & Aver.
Logged By:			150 746.8 m		25 839.7 m		2061.6 m.			0.0
Date:			Place:		App. Bear:		App. Dip.:		Length:	
Block:			Sect.:							

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="checked" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	7.5	0	2.3	Casing				
7.5	51			Mudstone with occasional thin siltstone bands				
51	62			Siltstone				
62	74			Silty sandstone				
74	78	22.6	23.8	Coal, shaley 4'				
78	79.5			1.5' Mudstone		8'*(6.5)' 2.4(2)M		
79.5	82	24.2	25.0	Coal 2.5' 0.8				
82	92			Mudstone				
92	120			Sandy siltstone, hard sandstone 98 - 104'				
120	192			Sandstone several siltstone interbeds (thin) End of hole				

GRAB SAMPLE	SAMPLE NO.	I.M.	ASH	V.C.M.	F.C.	F.S.I.	S	ACTUAL B.T.U.
73 75	28160		65.0			1½		
75 80	28161		37.4			5½		
80 85	28162		41.4			5		

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: _____ Date: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

LATITUDE	DEPARTURE	ELEVATION	Ore Classes & Aver.
150 609.43 m	25 828.02	2071.03	0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	5	0	1.5	Overburden (Casing 0-10'; 0-3m)				
		1.5	4.2	Mudstone				
13.5	32.5	4.2	10	Coal with 0.5m/1.5' parting at 8m/26'				
				5.8(5.3)m 19(17.5)' SEAM-				
		10	11	1m mudstone				
36	39	11	12	Coal 1m .3'				
		12	16.7	Mudstone				
54.5	56.5	16.7	17.3	coal 0.6m 2'				
		17.3	20.7	Mudstone				
68	74	20.7	22.5	Coal 1.8m 6'				
		22.5	36	Mudstone band near top and sandstone, grey cuttings				
		36	36.9	Mudstone				
121	124	36.9	37.8	Coal 0.9m 3'				
		37.8	39.6	Mudstone				
130	133	39.6	40.5	Coal 0.9m 3'				
		40.5	41.1	Mudstone				
	210	41.1	64	Siltstone and or sandstone grey cuttings.				

End of Hole

June 12/79

Hole No. RH 1563

Page 1 of 1

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: **RK** Date: **July 26/79**

Block: _____

Sect.: _____

Place: **Eagle Mtn. N. Face**

App. Bear: _____

App. Dip.: _____

Length: _____

LATITUDE: **150 520.26 m**

DEPARTURE: **25 877.22 m**

ELEVATION: **2077.03 m**

Core Classes & Aver. **0.0**

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	10			Casing				
10	21			Siltstone, mudstone band near bottom				
21	37	6.4	11.3	Coal 16' 4.9m SEAM-13	13			
37	41			Mudstone				
41	44	12.5	13.4	Coal 3' 0.9m				
44	58			Mudstone, some siltstone				
58	64			Sandstone, grey cuttings				
64	76			Mudstone				
76	95			Mudstone with siltstone, highly carbonaceous shale and shaley-				
				Coal from 81-91'				
95	97	29.0	29.6	Coal 2' 0.6m 5' mudstone 97-102'				
102	104	31.1	31.7	Coal 2' 0.6m				
104	124			Sandstone, hard drilling grey cuttings, mudstone band at top				
124	130			Mudstone brown cuttings				
130	140			Sandstone, grey cuttings hard drilling				
140	185		56.4	Interbedded siltstone and silty sandstone with bands of mudstone				
				End of hole June 20/79				

Hole No. **RH 1564** Page 1 of 1

B-50 Hole

Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____

Logged By: RK Date: Oct 79

Block: _____

Sect.: _____

Place: Eagle Mtn. S Face East Limb

App. Bear: _____

App. Dip.: _____

Length: _____

LATITUDE: 148 44.90 m

DEPARTURE: 26 794.63 m

ELEVATION: 1800.72 m

Ore Classes & Aver. 0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	128	0	39	Sandstone, occasional siltstone bands				
		39	39.7	Mudstone				
130	137.5	39.7	42	Coal 2.3m 7.5'				
		42	47.6	Mudstone				
		47.6	50.5	Sandy siltstone iwth mudstone bands				
165.5	210.5	50.5	64.3	Coal 13.8m 45' SEAM-				
		64.3	66.2	1.9m 6' mudstone				
217	223	66.2	68	Coal 1.8m 6'				
		68	70	Siltstone				
		70	74.5	Mudstone				
		74.5	77.5	Siltstone near top and sandstone				
		77.5	78.5	Mudstone				
258	262.5	78.6	80	Coal 1.4m 4.5'				
		80	87	Mudstone with thin bands of siltstone				
		87	92.5	Siltstone				
		92.5	111.5	Sandstone with thin interbeds of siltstone				
		111.5	130	Siltstone				
		130	131.3	Mudstone				
430.5	432.5	131.3	131.9	Coal 0.6m 2'				
		131.9	132.5	0.6m 2' Mudstone				
434.5	445	132.5	135.7	Coal 30 m 10.5' SEAM-				
		135.7	150.7	Mudstone				
		150.7	151.3	Coal 0.6m 2'				

Rotary Drill Geological Log



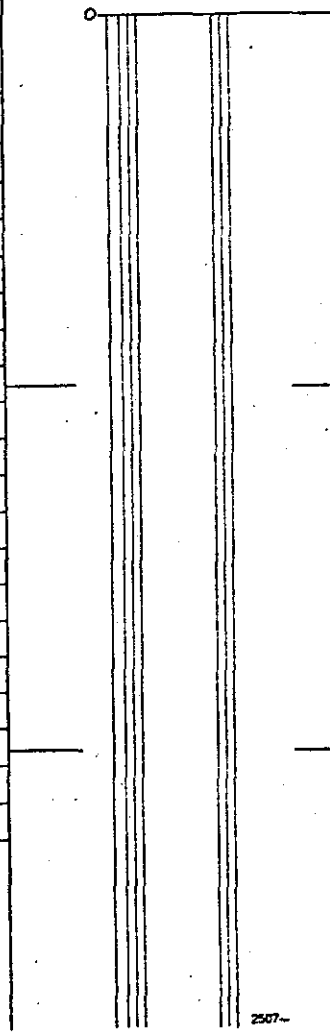
**FORDING RIVER
OPERATIONS**

Objective: _____ Sampled: _____ Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App.: Dip.: _____ Length: _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
		151.3	155	Mudstone
		155	162	Shaley Siltstone
		162	166	Mudstone
		166	169.7	Silty sandstone
556.5	559.5	169.7	170.7	Coal 1m 3'
		170.7	175.5	Siltstone and silty sandstone
		175.5	176.2	Poor (Shaley) coal
578	589	176.2	179.6	Coal with 0.4m mudstone band 3.4m(3)m 11' (10)' SEAM-
		179.6	196	Mudstone, siltstone 189-192.5m, 0.3m Coal band at 183.8m
		196	227.7	Mostly siltstone with sandstone interbeds.
End of hole.				
July 25/79				
				Hole No. RH 1565
				Page 2 of 2



Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____

Logged By: RK Date: Sept. '79

Block: _____ Sect.: _____ Place: Eagle Mt. South Face Ease App. Bear: Limb App. Dip.: _____ Length: 237.4 m / 779'

LATITUDE: 128 429.32 m DEPARTURE: 26 586.63 m ELEVATION: 1829.90 m

Ore Classes & Aver. 0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG	TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	1	0	0.3	Overburden				
		0.3	6	Siltstone and mudstone				
20	64	6	19.5	Coal 13.5 m 44' Seam -				
		19.5	23	Mudstone				
75.5	89.5	23	27.3	Coal 4.3 m 14'				
		27.3	36.7	Mudstone, some siltstone, sandstone band 34.8 - 36 m				
120.5	124	36.7	37.8	Coal 1.1 m 3.5'				
		37.8	47.1	Siltstone, mudstone near top				
154.5	158.5	47.1	48.4	Coal 1.3 m 4'				
		48.4	66.8	Silty sandstone with mudstone bands				
219.5	235	66.8	71.6	Coal 4.8 m 15.5' seam -				
		71.6	76	Mudstone				
		76	87.1	Sandstone band at top and siltstone				
285.5	297.5	87.1	90.7	Coal 3.6 m 12' seam -				
		90.7	102	Mudstone, 0.3 m / 1' coal band at 94 m				
		102	125.6	Silty sandstone, shaley near bottom				
		125.6	143.5	Sandstone, some siltstone				
		143.5	156.9	Siltstone, mudstone near bottom				
514.5	522.5	156.9	159.4	Coal 2.5 m 8' seam -				
		159.4	180	Sandstone with several siltstone interbeds				
		180	186.4	Siltstone mudstone near bottom				
61.5	621.5	186.4	189.4	Coal 3(2.7) m 10(9)' 0.3m/1' shale band at 188.3 seam -				

Hole No. RH 1566

Page 1 of 2

Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

Logged By: _____ Date: _____ Composites: _____

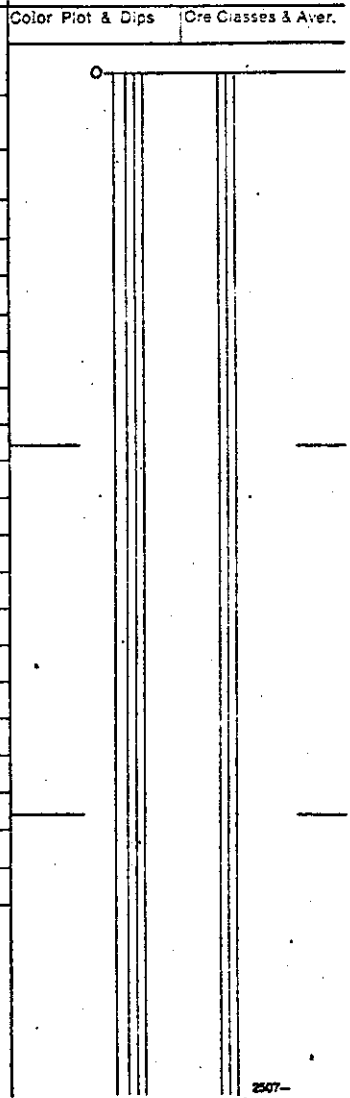
Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App.: Dip.: _____ Length: _____

INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG YES NO

From Ft.	To Ft.	From m.	To m.	
		189.4	201.5	Interbedded siltstone and mudstone
		201.5	205.6	Silty sandstone, mudstone near bottom
674.5	678	205.6	206.7	Coal 1.1 m 3.5'
		206.7	211	Mudstone near top and sandstone
		211	220.3	Mudstone with siltstone interbeds, sandstone near bottom
	779	220.3	237.4	Mudstone, with interbeds of siltstone

End of hole July 22, 1979

Hole No. RH 1566



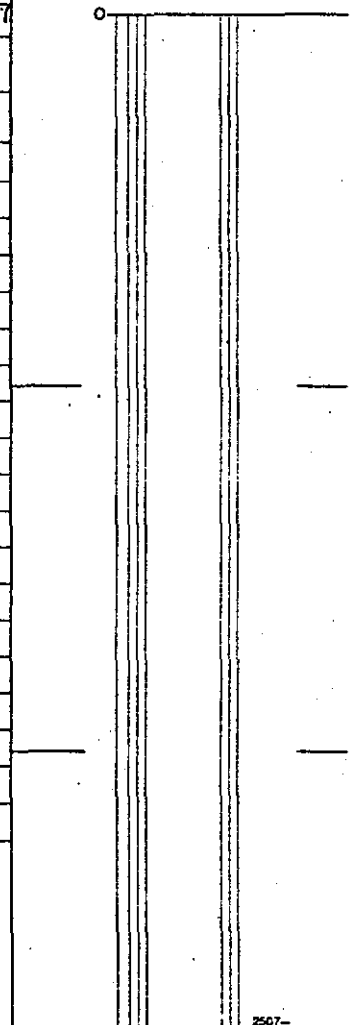
Rotary Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: RK Date: Sept. '79 Composites: 148 450' 48 M N 26 396' 71 M E 1851' 67
 Block: _____ Sect.: _____ Place: Eagle Mt. S. Face East Limb App. Bear: _____ App. Dip: _____ Length: _____
 Color Plot & Dips _____ Ore Classes & Aver. _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
0	8	0	2.4	Overburden
		2.4	19.8	Mudstone, coal stringers at 5.8, 11.4 & 13 m
65	71	19.8	21.6	Coal 1.8 m 6'
		21.6	22.8	1.2 m / 4' Mudstone seam -
75	79	22.8	24.2	Coal 1.4 m 4.5'
		24.2	46.6	Mostly sandstone with bands siltstone, mudstone near bottom
153	166	46.6	50.6	Coal 4 m 13' seam -
		50.6	52.6	Mudstone
		52.6	65.3	Sandstone, siltstone bands
		65.3	65.7	Coal and shale
215.5	220.5	65.7	67.3	Coal 1.6 m 5'
		67.3	69.5	Siltstone, sandstone
228	235	69.5	71.7	Coal, shaley near bottom 2.2 m 7'
		71.7	75.6	Mudstone and sandstone near bottom
248	262.5	75.6	80	Coal with 0.9 m / 3' mudstone partings 4.4(3.5)m 14.5(11.5)'
		80	81.5	Mudstone
		81.5	83	Sandstone
		83	90	Mudstone near top and sandy siltstone
295	299	90	91.2	Coal 1.2 m 4'
		91.2	95.7	Mudstone band at top silty sandstone
314	334.5	95.7	101.9	Coal 6.2 m 20.5' seam -
		101.9	121.5	Sandstone grading to siltstone towards bottom



Rotary Drill Geological Log



**FORDING RIVER
OPERATIONS**

Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____

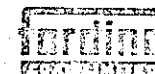
Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM	GAMMA RAY - NEUTRON LOG	<input type="checkbox"/> YES	<input type="checkbox"/> NO
		121.5	139.2	Sandstone, massive coarse grained			
456.5	461.5	139.2	140.7	Coal 1.5 m 5'			
		140.7	148.1	Mudstone and siltstone			
486	498.5	148.1	152	Coal 3.9 m 12.5' seam -			
		152	160	Sandstone			
		160	165	Carbonaceous mudstone, thin coal bands			
		165	179	Mudstone grading to siltstone and sandstone towards bottom			
		179	192.5	Siltstone, some mudstone			
		192.5	200.3	Sandstone			
657	664.5	200.3	202.6	Coal 2.3 m 7.5'			
		202.6	223.5	Siltstone, sandy in the middle, mudstone near bottom			
733	736	223.5	224.4	Coal 0.9 m 3' seam -			
		224.4	225.2	0.8 m / 2.5' Mudstone			
739	748	225.2	228	Coal, shaley from 226.4 - 227 m 2.8 m 9' seam -			
		228	236.8	Siltstone, mudstone near bottom			
777	778	236.8	237.1	Coal 0.3 m 1'			
		799	237.1	243.5	Silty sandstone (Driller reported hard sandstone)		

End of hole July 18, 1979

Color Plot & Dips
Ore Classes & Aver.

Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann Date: July 24/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
From	To	From	To	From	To		
0	10						OVERBURDEN/TRICONE; OVERBURDEN TO 15.5m 51'?
10	56						Mudstone: Core is entirely broken, or brecciated. The mudstone is very dark and soft. Calcite deposits found on brecciated core from 31 - 35'. A band of siltstone is at 41 - 42'. Core is broken here also. Changes back to very soft mudstone. Some iron oxides are found on pieces of core at 50'.
56	66						Mudstone: Medium grey in color, grain size is medium. Core is relatively intact. Fractures are clean. Fractures at 88' contain carbonaceous infilling. Core from 59' - 62' is broken. Fracture at 58' are oriented at 73 deg to core axis. Broken core shows traces of calcite deposits. Carbonaceous infilling occurs on broken core at 62'.
							Core from 62 - 66' contain some traces of carbonaceous infilling. Fractures orient at 35 deg to core axis. A J1 fracture at 65.5' contains carbonaceous infilling and orients at 30 deg and 243 deg to bedding.
66	90						Siltstone: Very dark in color, medium grained siltstone is hard. Fractures are clear. Fracture at 66.5' orients at 27 deg to core axis. Areas of brown core show no traces of calcite or iron oxides, calcite begins to appear on the core at 72'. J1 fractures occur at 71'. These orient at 17 deg and 180 deg to core axis. They too are clear. Fractures at 72' orient at 35 deg and contain traces of calcite. Pieces of broken core from 74 - 75' has calcite deposits on them. At 75' the color of the siltstone darkens but the grain size and hardness remains the same. Some carbonaceous infilling occurs in the fractures at 77'. Fractures are B1 type, at 10 deg to core axis. A J1 fracture

Hole No. 1250 Elev. 1769.8
 146754.9 Elev. 22085.7
 Top of @
 @
 @
 @

END OF
 NO. 1
 126.2

Core Size

Hole No. DDH. 1250

Diamond Drill Geological Log



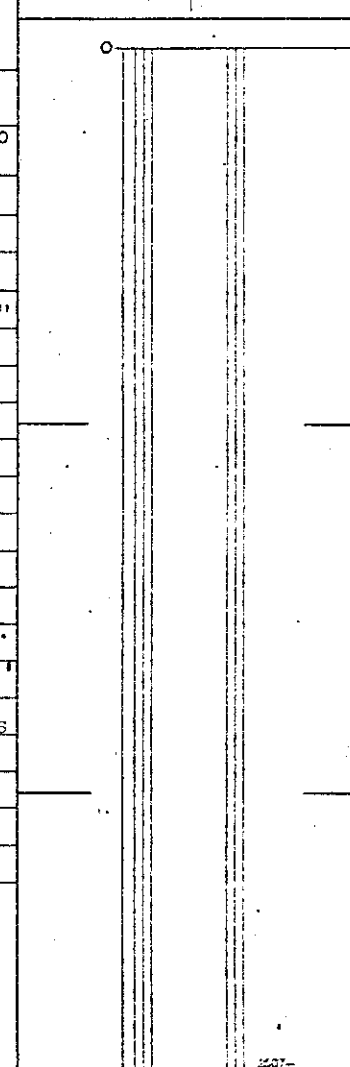
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
							orients at 60 deg and 210 deg. Bands of calcite begin appearing in the core at 77.5'. They are very thin at this point, but begin to get bigger.
							Fractures of the J4 type at 80' are calcite healed. They orient at 45 deg and 105 deg. Large bands of calcite occur at 83'. They range from 1 1/2" to 1/2" wide. They occur throughout the 83' - 85' mark. Broken core occurs from 85' - 86'. Fractures from 83 - 85' are all calcite filled. Some evidence of slip n' slide occurs at the 84' mark. Fractures orient at 35 deg and 70 deg.
							Fractures at 86' are J1 type, clear and orient at 47 deg and 125 deg. Broken core then occurs from 86.5' - 90'. The pieces of broken core all contain traces of calcite.
90	106						Mudstone - Medium grey in color, medium grained. Most of the core is brown. The mudstone is very soft. Fractures at 92' are oriented at 25 - 30' they all contain carbonaceous infilling. Most of the pieces of broken core have traces of carbonaceous deposits. Some calcite is found at 97' in the form of thin bands. Mudstone then becomes very soft and contains alot of carbonaceous infilling. Fractures oriented at 25 deg. Some calcite is found in the fractures at 104'. Fractures are 10 deg and 35 deg to core axis.
106	108						Siltstone: Medium grey in color, medium grained. Alot of calcite found in the fractures at 106.5'. Fractures are 51, orienting at 25 deg and 110 deg. Broken core then occurs from 106.5' to 108'.
108	119	107	111.5	32.7	34.0		Coal: Very soft, highly broken core. Dull shine. Lacks lustre 1.3m 4.5'

40 Scale
Color Plot & D ps Core Classes & Av.:



Core Size
Hole No. DDH: 1250 Page 2 of 11

Diamond Drill Geological Log



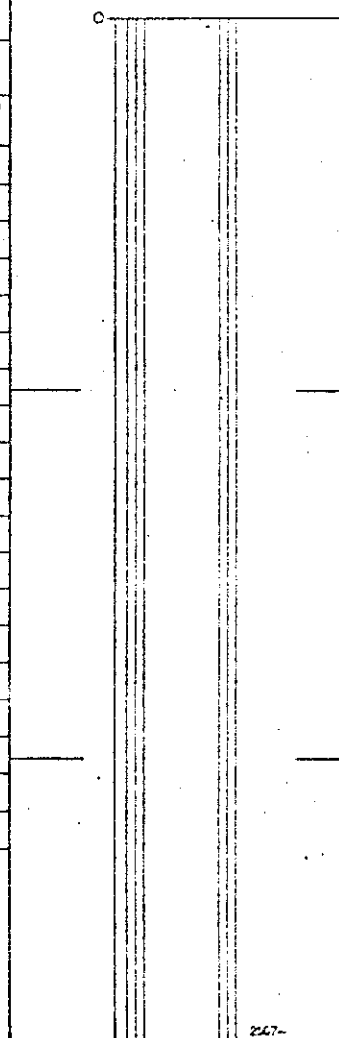
FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann Date: July 24/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips | Ore Classes & Aver.

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
						Begins to harden at 114'. Becomes shinier. Fractures have orient at 10 deg to core axis.
119	145					Siltstone: Dark grey in color, medium grain size. Very hard. Some calcite in fractures. Fracture at 119.5' orients at 25 deg to core axis. Calcite banding occurs at 120'. Broken core occurs from 121 - 122'. There pieces show signs of slip n' slide. At 123' two J1 fractues occur. They are filled with calcite. They orient at 30 deg and 242 deg and 45 deg and 190 deg. Calcite banding also occurs from 123.5' to 124'. Then broken core from 124 to 126'. The pieces of broken core have carbonaceous infilling. A band of mudstone occurs through this broken core. It is very soft. From 126 - 128' there is alot of calcite found in the fractures. Fractures here are B1 and orient at 53 deg and 70 deg to core axis. The fractures from 128' on show signs of slip n. " slide. They too are B1 types, but orient at 80 deg to core axis. There is a J4 fracture throught the length of core from 136' - 138'. It has been healed with calcite. Bands of calcite throughout this length of core. The J4 fracture orients at 15 deg and 240 deg. Fractures at 138' are clean, but have a little carbonaceous infilling. Broken core then occurs from 139 - 141'. Calcite banding occurs throughout the core, from 141 - 142'. Fractures here are also filled with calcite. They orient at 35 - 37 deg.
145	152					Mudstone - Very large grained, medium grey in color. A band of calcite occurs at 145.5'. It is approx. 1" wide. Fractures here are clacite filled. They are 35 deg. to core axis.



Core Size

Hole No. DDH. 1250

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

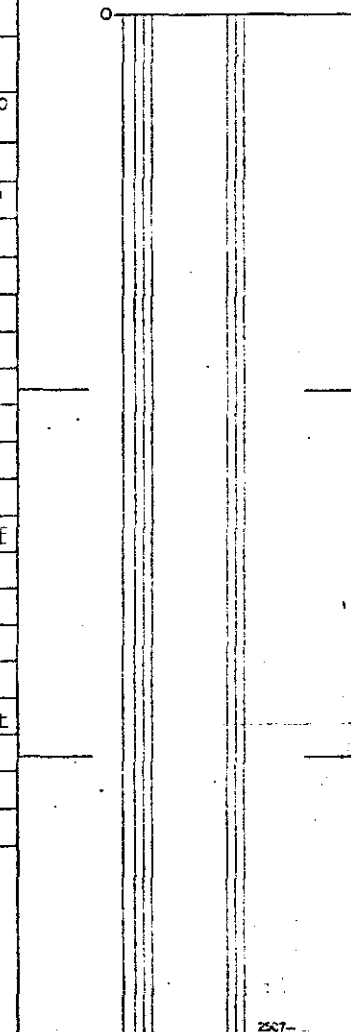
Logged By: Loriann Date: July 25/79 Composites: _____

Block: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
Color Plot & Dips Ore Grades & Avar.

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
From To From To From To DIRECTIONAL SURVEY DONE YES NO

						A sandstone band occurs at 147' Calcite is found throughout this sandstone band. The fractures here are calcite filled. A J4 fracture occurs at 147.5' It has been calcite healed. The fracture orients at 10 deg and 295 deg, to core axis. Mudstone reappears at 148.5'. It is much harder than at 145'. The grain size has decreased and the color has become darker. Fractures here are clean. They orient at 45 deg to core axis. Broken core occurs from 149 - 150.5'. The broken core pieces are clean. At 151 - 152' calcite appears in fractures. A J1 fracture orients at 75 deg and 180 deg.
152	156.5					Sandstone: Medium grained, light grey. The sandstone is very hard. It has some mudstone bands occurring at 153.5'. Broken core at 152' has a large amount of calcite on it. It also has traces of iron oxides. A J4 fracture has been calcite healed. It orients at 20 deg and 225 deg, to core axis. A fracture at 154' has slip n' slide in the fracture. It orients at 33 deg to bedding. A band of mudstone occurs at 155.5'. It is very soft.
156	166	155	165	47.3	50.3	Coal: Very dull, lacks lustre. Very soft, core is brown almost entirely fractures at 164 - 166' orient at 40 deg to core axis. 3m 10' SEAM - J
166	195					Mudstone - Dark grey in color. Small grain size. Very hard for mudstone. Fractures are filled with calcite. J1 fracture as 166.5' orients at 60 deg and 125 deg to core axis. Fracture at 170' is full of calcite. It orients at 40 deg to core axis. Calcite bands appear to be in possible J4 fractures.



Core Size
Hole No. DDH. 1250 Page 4 of 11

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

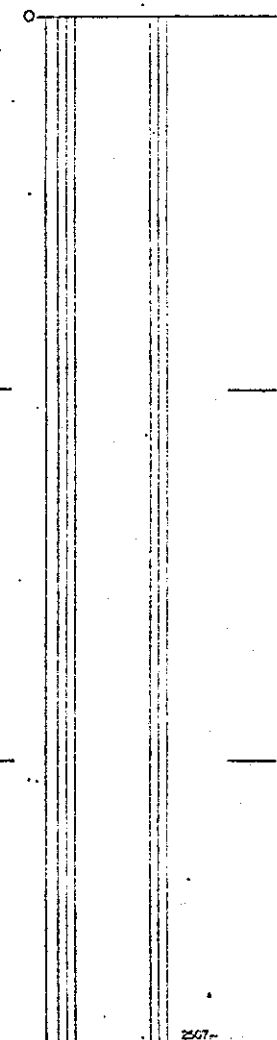
Logged By: **Loriann** Date: **July 24/79** Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.	RAD. LOG In Ft.	In meters	Description
From	To	From	To
			Begins to harden at 114'. Becomes shinier. Fractures have orient at 10 deg to core axis.
119	145		Siltstone: Dark grey in color, medium grain size. Very hard. Some calcite in fractures. Fracture at 119.5' orients at 25 deg to core axis. Calcite banding occurs at 120'. Broken core occurs from 121 - 122'. There pieces show signs of slip n' slide. At 123' two J1 fractures occur. They are filled with calcite. They orient at 30 deg and 242 deg and 45 deg and 190 deg. Calcite banding also occurs from 123.5' to 124'. Then broken core from 124 to 126'. The pieces of broken core have carbonaceous infilling. A band of mudstone occurs through this broken core. It is very soft. From 126 - 128' there is alot of calcite found in the fractures. Fractures here are B1 and orient at 53 deg and 70 deg to core axis. The fractures from 128' on show signs of slip n'' slide. They too are B1 types, but orient at 80 deg to core axis. There is a J4 fracture through the length of core from 136' - 138'. It has been healed with calcite. Bands of calcite throughout this length of core. The J4 fracture orients at 15 deg and 240 deg. Fractures at 138' are clean, but have a little carbonaceous infilling. Broken core then occurs from 139 - 141'. Calcite banding occurs throughout the core, from 141 - 142'. Fractures here are also filled with calcite. They orient at 35 - 37 deg.
145	152		Mudstone - Very large grained, medium grey in color. A band of calcite occurs at 145.5'. It is approx. 1" wide. Fractures here are clacite filled. They are 35 deg. to core axis.

40 Scale
Color Plot & Dips Ore Classes & Aver.



Core Size

Hole No. DDH. 1250

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

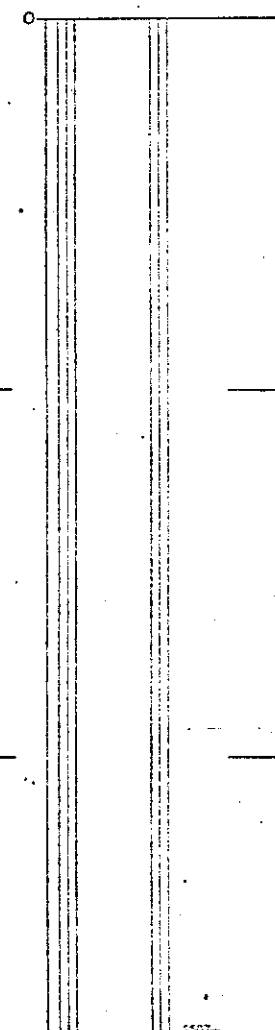
Logged By: Loriam Date: July 25/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
						Fractures at 174' are carbonaceous filled. They are B1 fractures and seem to be oriented at 65 deg. There are three of them. There is broken core from 182 to 187'. It is very soft mudstone, with carbonaceous infilling, on core pieces. There is a band of siltstone from 188 - 190'. It is medium grey & medium grained. It contains alot of calcite in the fractures, and in bands.
195	197					Coal: Very dull, lacks lustre, very soft.
197	211					Siltstone: Medium grey in color, medium grained. Very hard. Contains alot of calcite. Broken core from 197 - 199'. Fracture at 201.5' is calcite filled. It orients at 60 deg. Fractures at 201' orient at 65 deg. They are calcite filled. Broken core occurs from 204 - 206'. The pieces are filled with calcite. Fractures at 208' have signs of slippage. The fractures are oriented at 20 deg to core axis. There are two of them. A J1 type fracture at 210' has alot of calcite in it. It is 13 deg to core axis and 180 deg.
211	218					Mudstone: Small grained, dark grey in color. Calcite banding occuring throughout the the core. Fractures show slip n'slide. Fractures orient at 20 deg to core axis at 213' and 40 deg at 215'. The mudstone is relatively hard. Fractures are clean at 217'. They orient at 45 deg.
218	234					Siltstone: Medium grey, small grain size. Broken core from 218 - 220'. Broken core pieces have some calcite infilling on them. There is a band of mudstone at 221 - 222.5'. It is softer than the siltstone. Fractures here are clean. Fracture at 222' orients at 35 deg. Fractures at 222' orients at 35 deg.

40 Scale
Color Plot & Dips | Core Classes & Aven.



Core Size
Hole No. DDH! 1250 Page 5 of 11

Diamond Drill Geological Log

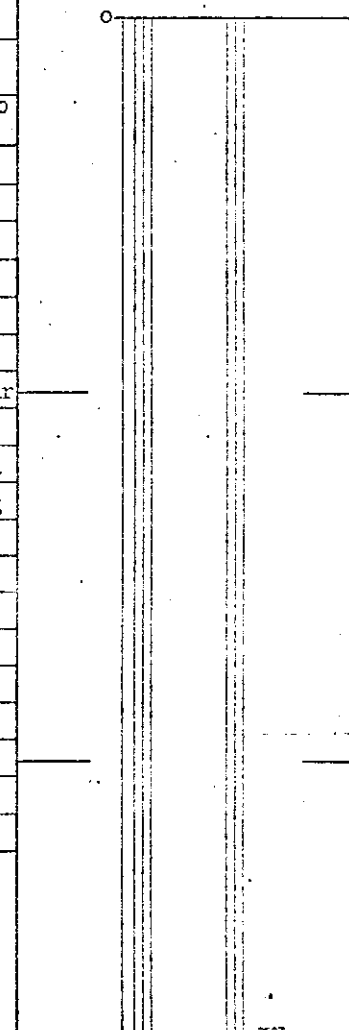


FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann Date: July 25/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips _____ Ore Cases & Aver. _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To		
							Fractures at 224' have slip N' slide. These fractures orient at 35 deg to core axis. There is some calcite banding at 228' and at 230.5'. Fractures in this area are calcite filled.
234	271						Mudstone: Medium grain size, dark grey in color. Alot of broken core. Broken core is relatively clean, with some calcite deposits near 236'. A band of calcite at 241' is 1/2" thick. Fractures in this area are calcite filled. Fracture here is J1 type, it orients at 20 deg and 190 deg to core axis. Fractures near 246 begin to show signs of slip n' slide. The fractures here are 60 deg to core axis. Calcite occurs in fractures near 248'. Bands of calcite appear in the core at this area too. Fractures at 254' are clear, they orient at 10 deg to core axis. There are three of these fractures. Broken core occurs again from 257 - 258.8' and 262 - 264'. These pieces contain a lot of calcite on them. Bands of calcite appear in the core at 263'. Fractures here are filled with calcite.
271	284	269	280	82.0	85.4		Coal: Very dull, lacks lustre and shine. All broken core very soft. 3.4m 11' SEAM -I
284	295						Mudstone - Dark grey color, small grained. Very soft. Broken core from 284 - 287'. Fractures at 287.5' are 80 deg to core axis. Fractures have carbonaceous infilling. Fractures at 292' have signs of slip n' slide. The orient at 45 deg. Broken core from 292.5 to 295'.
							Core Size
							Hole No. DD# 1250



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

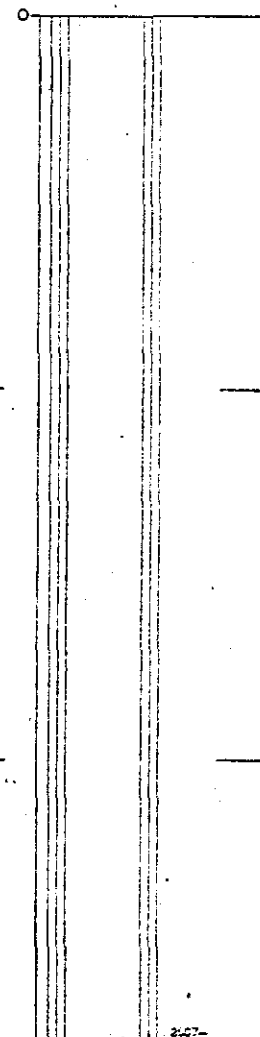
Logged By: **Loriam** Date: **July 25/79** Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
295	303					Siltstone: Medium grey in color, small grained. Very hard. Calcite banding at 298'. Fractures are filled with calcite. Fracture at 297' orients at 83 deg to core axis. Broken core occurs from 298.5 - 300'. Broken core pieces have alot of calcite on them. A band of mudstone occurs at 300.5' Fractures are clean here. They orient at 65 deg.
303	306					Coal Very dull and soft. Looks like it contains a large amount of mudstone. All broken core.
306	315					Sandstone: Medium grey, small grain size. Very hard. Bands of mudstone appear through out the core. Fractures occur in these bands. Fractures orient at 60 deg through out most of the core. All have mudstone bands. Fractures also show evidence of slip n' slide around the 309' mark. J1 fracture at 314.5 is clean. It orients at 10 deg and 180 deg to core axis.
315	327					Mudstone: Dark grey, Large grained. Mostly broken core. Fractures are clean. Fractures at 316' orient at 45 deg. J1 fracture at 320' is 25 deg and 231 deg to core axis. Broken core from 322' - 326' Broken core pieces have carbonaceous infilling.
327	335					Siltstone. Medium grey in color, medium grain size. Fractures have calcite infilling Broken core from 330 - 333'. Fractures at 331' orient at 13deg to core axis. Calcite banding occurs at 334'. It is thin. Carbonaceous infilling occurs in fractures at 334 - 335'. Fractures here orient at 63 deg. Mudstone very dark in color. Large grain size. Fractures from 335 - 343' have carbonaceous infilling.

40 Scale
Color Plot & Dips | Ore Grades & Aver.



Core Size

Hole No. DDH. 1250

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 40 Scale
 Color Plot & Dips Ore Classes & Aver.

Logged By: Loriann Date: July 30/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App.: Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
							Fractures at 347' orient at 47 deg. They are clean. Calcite banding occurs at 350' this continues for approx 2.5'. Fractures here are calcite filled.
							Fracture at 352' orients at 61 deg to core axis.
357	361						Siltstone: Medium grained medium grey color. A lot of calcite banding. Fractures orient at 53 deg to core axis. Fracture at 360.5' contains carbonaceous infilling. It is a J1 and orients at 83 deg and 191 deg to core axis.
361	392						Mudstone: Dark grey color, small grain size. Very hard for mudstone. Fractures are clean. Fractures at 362' orient at 63 deg to core axis. There is no calcite in the fractures, but there is calcite banding between 378 - 383'. Fractures here orient at 45 deg. There is broken core from 373 - 374.5'. All core pieces are clean. Core is fairly intact. Some calcite found in fracture at 391', but very little.
392	395						Sandstone: Light grey in color, large grain size. Very hard, but core is brown. some calcite found on core pieces. Fracture at 395' is a J1 and orients at 68 deg and 183 deg to bedding.
395	400						Siltstone; Medium grey in color medium grained (Fairly hard but core here is broken from 397 - 400') Difference between hardness and brittleness. Broken core pieces contain alot of calcite deposits. Fractures at 395.5' are clean and 17 deg to core axis. Fractures at 396' are 20 deg and repeats 3 times. They contain calcite infilling.
400	404						Sandstone: Dark grey In color, medium grained core is entirely broken from 400 - 404'. Broken core pieces contain alot of calcite.

Core Size

Hole No. DDH. 1250

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

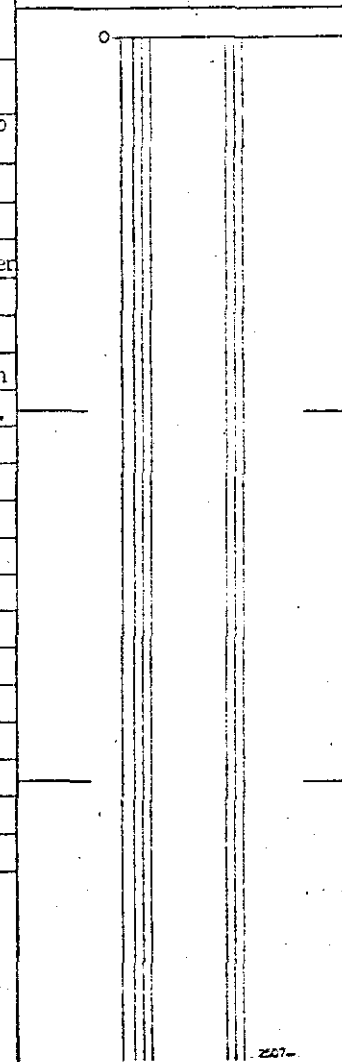
Logged By: Loriann Date: July 31/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
404	406					Mudstone: Dark grey in color, large grained core is completely broken. Core pieces have some calcite on them.
406	409					Sandstone: Light grey in color, large grained. Calcite deposits on broken core. Broken core from 406 - 408'. Fractures at 408.5' - 409' have calcite infilling and orient at 33 deg to bedding.
409	427					Mudstone: Dark grey in color, large grained. Core is very intact. Fractures are clean. All fractures are clean B1's. From 409 - 419 they orient at 89 deg to bedding. From 419 - 427 they are 63 deg to bedding. All these fractures are clean too.
427	441.5	427	446	130.1	135.9	Coal: Very dull and soft. Core is broken entirely except for around the 440' mark. Here the fractures orient at 85 deg to bedding. 5.8m 19' SEAM - I
441.5	446					Coal: Very dull, lacks lustre. Fractures are B2 type. Most of the core is broken.
446	459					Mudstone: Dark grey in color. Medium grained. Fractures have carbonaceous infilling around the 446 - 451' mark. Brown color from 458 - 459'. Core pieces have traces of carbonaceous infilling. The mudstone is quite soft in this area. It begins to harden at 451'. Fractures here are clean. Broken core begins again at 454' - 459'. Core pieces have calcite deposits on them.
459	461	458	461	139.7	140.7	Coal: very dull, it looks like its mostly mudstone. 1m 3'
461	480					Mudstone: Dark grey in color. Small grain size. Broken core from 461 - 464'. Broken core pieces have carbonaceous infilling. Fractures after 464' are clean and orient at 62 deg. There are three J1 fractures at 466.5'. They too are clean and orient at 23 deg and 198 deg. Some calcite banding occurs at 467.5'. The calcite is very thinly banded.

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size

Hole No. DDH. 1250

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Diamond Drill Geological Log



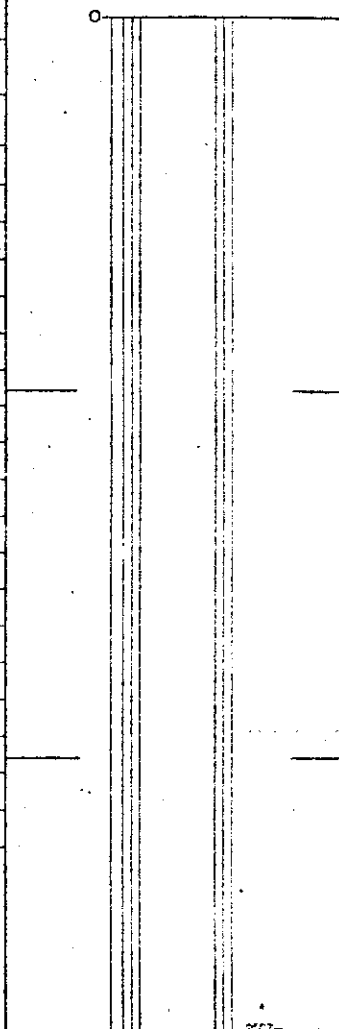
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Lorian Date: August 9/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Discs Core Classes & Aves.

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
						Fractures at 472' are clear they are B1 types and orient at 86 deg. There are 6 of them. Fractures at 474' begin to have carbonaceous infilling.
480	493					Siltstone: Medium grained, light grey in color. A lot of calcite occurs in the fractures and also in bands. The siltstone is hard, Fractures are full of calcite. Fractures at 483' seem to be driller induced because they are clean, while all others are covered with calcite. These are J2 types. There are 2 of them, and they orient at 33 deg and 213 deg to bedding.
						Broken core occurs from 486.5' - 488'. Broken core pieces contain a lot of calcite. Calcite bands occur at 492'. They are very thin.
493	511					Sandstone/Mudstone: Sandstone is light grey in color and small grained. It contains a lot of calcite in the fractures. Fractures at 493 - 496' orient at 62 deg and have calcite infilling. A J1 fracture at 497.5' is clean, and orients at 11 deg and 96 deg to bedding.
						A band of mudstone which is large grained and dark grey in color, occurs at 503 - 506'. Fractures here are clean. Broken core occurs from 507 - 510'. Broken core pieces have a lot of calcite on them.
511	517					Mudstone, Dark grey in color. Medium grain size. Fractures are clean and orient at 76 deg. A J1 fracture at 516.5' is clean and is 16 deg and 83 deg to bedding.
517	521	516	519			Mudstone/Coal: Mostly mudstone, but some coal. Broken core from 517 - 521'. Very dull and very soft. 1m 3'
521	526					Mudstone: Dark grey in color, medium grain size. Fractures contain slip n' slides. Broken core from 522.5 - 526'. All core pieces have slip n' slides.



Core Size
 Hole No. DDH. 1250 Page 10 of 11

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

Logged By: Loriann Date: August 9/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

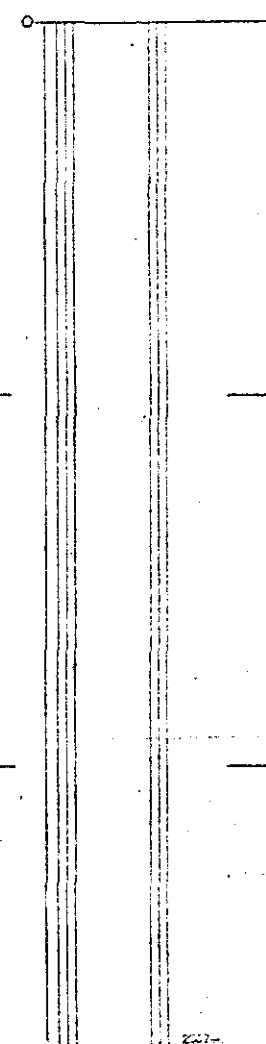
CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
526	540					Siltstone: Medium grey, small grained. Calcite banding also calcite found in fractures Slip n' slide found in fractures at 534'. Fractures at 526' are 35 deg to core axis. J1 fracture is 47 deg and 193 deg to bedding. Calcite banding found at 528 - 532'. Broken core from 539 - 541' but core pieces contain no calcite, so it's probalby drill induced.
540	544					Mudstone/Coal Dark in color, large grained. Carbonaceous infilling in fractures at 540 - 541'. Fractures orient at 82 deg.
544	566	541.5	564.5	165	172.1	coal: Very dull, lacks lustre, all brown core. It's very soft. 0.6 shale parting at 166.6m 7.1m (6.5)m 23(21)'
566	570					Siltstone: Dark Grey in color, large grain size. Fractures clean, with some evidence of calcite infilling. Broken core from 568 - 569.5'. Pieces of core have evidence of slip n' slide.
570	611				186.2	Sandstone: Medium grey in color, small grain size. Calcite banding throughout the core. Very hard. Fractures are calcite filled. They orient at 58 deg to core axis at 580'. Some carbonaceous infilling at 584' - 587'. Broken core pieces are calcite filled. Fractures at 600' are clean and orient at 80 deg to core axis.

END OF HOLE T.C.

Core Size _____

Hole No. DDH. 1250 Page 11 of 11

40 Scale
Color Plot & Dips | Ore Classes & Aver.



DDH- 1250

LOCATION- GREENHILLS

TOTAL DEPTH- 611'

LOGGED BY -

DATE

RAD. LOG INTERSECTIONS CORE INTERSECTIONS (COAL SEAMS)

SEAM FROM TO THICKNESS FROM TO THICKNESS ACTUAL CORE % RECOVERED RECOVERY

107 111.5 4.5' 108 119 11' 100%

J 155 165 10' 156.5 166 9.5 95

I 269 280 11' 271 284 14 100%

303 306 3

H 427 446 19' 428 446 18 17.5 91.7

458 461 3' 459 461 2

Gu 516 519 3' 517 521 4 100

G 541.5 564.5 21/23' 544 570 26 no missing - I have

544-566 only

Diamond Drill Geological Log



FORDING RIVER OPERATIONS

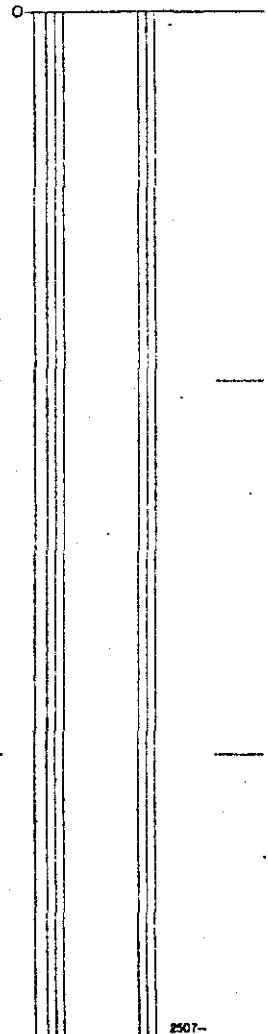
Objective: _____ Sampled: LAT. DEP. ELEV.
 Logged By: DG Date: July 26/79 Composites: 146.606⁴ N 22.557⁶ E 1728⁴

Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: 299m / 981'

CORE in Ft. RAD. LOG in Ft. In meters For 213m/699 COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

CORE in Ft.	RAD. LOG in Ft.	In meters	Description	
From	To	From	To	
0	74	0	21	OVERBURDEN
74	88			Siltstone. Dark grey, Core well broken. Bedding at 85 deg to core axis. Fractures clean. Interbedding with sandstone and mudstone at 86½' - Some lodocasting, some iron present at 87'.
88	121	110	121	POOR COAL - with one shale band 3.4m (3.1)m 11' (10)' SEAM - Fm3 Mudstone. Dark brown. Core well broken. High core loss. Some calcite infilling at 101' and slickenslides at 93'. Bedding at 77deg to core axis.
121	122	122.5	125.5	Coal. Soft, powdery. Some calcite infilling in evidence. 0.9m 3'
122	126			Siltstone. Dark grey, core well broken. Low core recovery. Calcite infilling of fractures. Bedding at 80 deg to core axis.
125	140	128.5	130.5	Coal 0.6m 2' Mudstone. Dark brown. Core well broken. Low core recovery. Bedding at 69 deg to the core axis. Some carbonaceous infilling of fractures.
140	142			Siltstone. Dark grey, core well broken. Low core recovery. Bedding not distinguishable. Clean fractures.
142	153			Mudstone. Dark brown. Core well broken. Low core recovery. Bedding at 76 deg to the core axis. Slickenslides in fractures.
153	157			Coal - Soft but core has intact sections. Some harder coal at 155'. Bedding not distinguishable.
157	161			Siltstone/Sandstone - Light grey fine grained sandstone. Darker grey siltstone irregularly interbedded. Calcite infilling and slickenslides in fractures. Core fairly intact. Bedding at 57 deg to the core axis.

49 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Core Size

Hoie No. DDH. 1251

Page 1 of 12

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

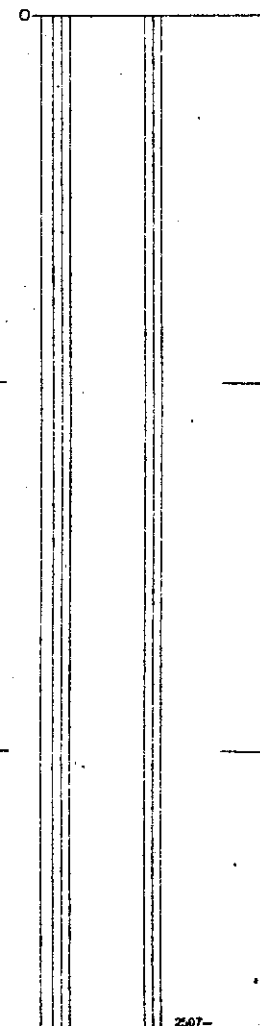
Objective: _____ Sampled: _____

Logged By: DG Date: July 26/79 Composites: _____

Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: _____

CORE in Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To		
							Calcite infilled J4 fractures throughout the section.
161	167						Siltstone. Dark grey. Core quite intact. Slickenslides in the fractures. Bedding at 85 deg to the core axis. Abrupt interface with sandstone/siltstone at 167' calcite infilling separates.
167	170						Sandstone/Siltstone - Light grey, fine grained sandstone irregularly interbedded with dark grey siltstone. Fractures are calcite infilled. Core quite intact. Bedding areas - average about 64 deg to the core axis.
170	172						Siltstone. Dark grey. Core quite intact. Fractures are clean. Bedding at 70 deg to the core axis.
172	177						Midstone. Dark brown. Core quite intact. Slickenslides in the fractures. Bedding at about 62 deg to the core axis.
177	179						Siltstone/Sandstone. Light grey, fine grained sandstone. Dark grey siltstone - irregularly interbedded. Calcite infilled fractures (only 2 fractures). Bedding at 66 deg to the core axis.
179	185						Siltstone. Dark grey core quite intact. Slickenslides in the fractures. Bedding at 78 deg to the core axis.
185	190						Mudstone. Dark brown. Bedding at 86 deg to the core axis core fairly broken. Fractures are clean.
190	197						Siltstone/Sandstone. Light grey, fine grained sandstone & dark grey siltstone irregularly interbedded. Slickenslides in the fractures. Core quite intact. Bedding at 61 deg to the core axis. Heavy calcite infilling at 197'.

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size

Hole No. DDH. 1251

Page 2 of 2

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

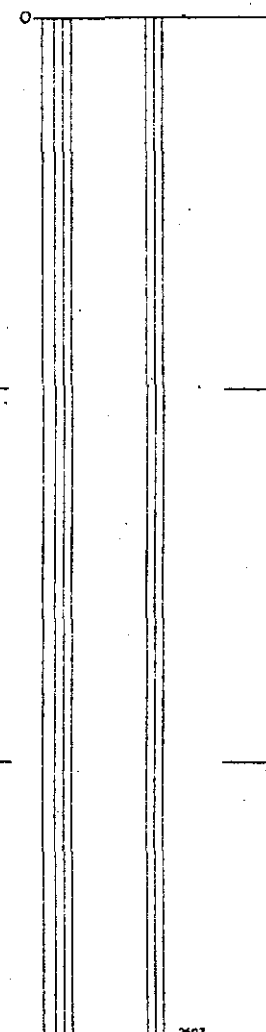
Logged By: DG Date: July 26/79 Composites: _____

Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
197	201					Siltstone - Dark grey, core quite intact., fairly heavy calcite infilling in fractures. Bedding at 66 deg to core axis.
201	209					Siltstone/Sandstone. Light grey, fine grained sandstone. Dark grey siltstone. Calcite infilling of fractures. Bedding is irregular. It is at 60 deg to the core axis.
209	227					Mudstone. Core quite intact. Dark brown. Fractures are clean except for one V1 with heavy calcite at 226½'. Bedding is at 62 deg to the core axis.
227	249					Siltstone/Sandstone. Dark grey siltstone irregularly interbedded with light grey - fine grained sandstone. Core is well fractured. Most fractures are clean but here is some minor calcite infilling throughout the section especially around 231'. Bedding is at 64 deg to the core axis.
249	251					Mudstone. Dark brown. Core well fractured. Bedding is at 66 deg to the core axis. Most fractures are clean - some minor calcite infilling.
251	308					Siltstone/Sandstone. Dark grey siltstone interbedded irregularly with light grey fine grained sandstone. Core well broken. Bedding at 68 deg to the core axis. Fractures are clean except for J1 fractues with minor calcite at 267', 277' and 292'.
308	317					Siltstone. Dark grey core well broken. Bedding at 70 deg to the core axis. Fractures are clean.
317	336	316	327	96.3	99.6	Coal. Crushed - powdered condition to 330½ where it is harder and more intact to 332'. It is crushed 332' to 336'. 3.3m 11' SEAM-F
		332	335	101.3	102.3	VERY POOR COAL .1m 3'

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Diamond Drill Geological Log

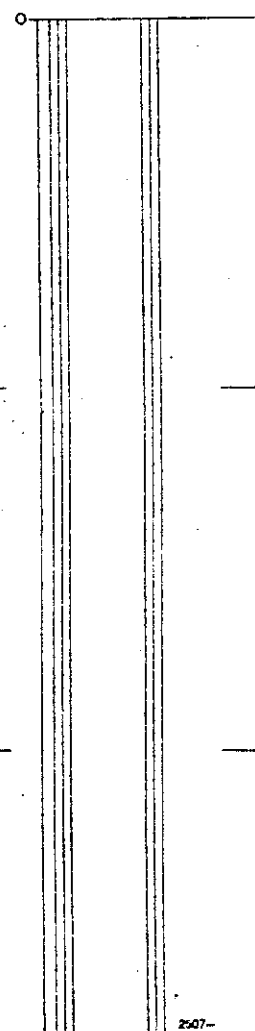


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: July 27/79 Composites: _____
 Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip: _____ Length: _____

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
336	341			103.4	103.9	Mudstone - dark brown, core broken. bituminous clean fractures. Some calcite infilling at 338'. Bedding at 67 deg to the core axis.
341	348	341	347.5	104	106	Coal. Crushed. Lustrous. In a powder condition. 2m 6.5' PART SEAM-F
348	350					Mudstone. Dark brown. core well fractured, calcite infilling of fractues. Bedding is at 76 deg to the core axis.
350	352					Siltstone/Sandstone. Dark grey siltstone, irregularly interbedded with light grey, fine grained sandstone. Bedding is at 61 deg to the core axis. Core is well fractured (they are clean).
352	355					Mudstone, Dark brown. Core well broken. Bedding is at 70 deg to the core axis. It is bituminous mudstone. Also some calcite at 355'.
355	363					Siltstone. Dark grey, core well broken. Bedding at 73 deg to the core axis. Fractures are clean. There is some fine interbedding with light grey, fine grained sandstone at 357' for 6" and 361' for 3".
363	366					Mudstone. Dark brown. Core is broken, bedding plane at 84 deg to the core axis. There is heavy carbonaceous infilling with some calcite infilling.
366	367					Sandstone. Light grey, fine grained. Core is broken. Some slickenslides in the fractures. Bedding planes at 58 deg to the core axis.
367	369					Mudstone. Dark brown core is well broken. Heavy carbonaceous infilling. There is a 3' area of soft, crushed coal at 368 1/2 ft. Bedding of the mudstone is at about 53 deg to core axis. Mudstone is bituminous



Core Size

Hole No. DDH. 1251

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Diamond Drill Geological Log

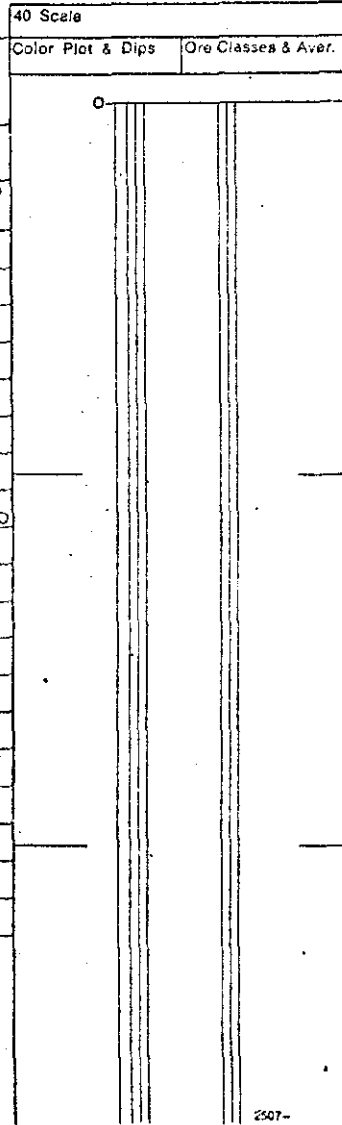


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: **DC** Date: **July 31/79** Composites: _____
 Color Plot & Dips _____ Ore Classes & Aver. _____

Block _____ Sect.: _____ Place: **Greenhills** App. Bear: _____ App. Dip: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To		
369	371						Siltstone. Dark grey. Core well broken. Fractures have minor calcite infilling. Bedding is at 61 deg to the core axis.
371	373						Sandstone. Light grey, fine grained. Bedding is at 57 deg to the core axis. There is calcite infilling of fractures.
373	379						Siltstone - Dark grey, core well broken. Fractures are clean. Bedding is at 78 deg to the core axis.
379	384						Mudstone. Dark brown. Core well broken. There is carbonaceous infilling of fractures. There is also some minor calcite infilling at 384'. Bedding planes at 66 deg to the core axis.
384	387						Siltstone. Dark grey. Core quite intact. Fractures are clean. Bedding is at about 56 deg to core axis.
387	388						Mudstone - Dark brown. Bituminous core well broken. Fractures are clean. Bedding cannot be determined.
388	401	388	399	118.3	121.7		Coal - Soft and friable. It is in a powdered (crushed) condition 3.4m 11' SEAM-F1
401	405						Mudstone. Dark brown. Bituminous. There is carbonaceous infilling especially heavy around 405'. Bedding is at 79 deg to the core axis. Core is broken.
408	414						Siltstone. Dark grey. Core quite intact. Fractures are clean. Bedding plane is at 50 deg to the core axis.
414	416						Mudstone. Dark brown. Core quite fractured. Fractures are clean. Bedding planes at 52 deg to the core axis.
416	417						Siltstone. Dark grey. intact section - no infilling. Bedding at 56 deg to the core axis.



Core Size

Hole No. DDH. 1251

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

Logged By: DG Date: July 31/79 Composites: _____

U.S.K. Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
Color Plot & Dips
Ora Classes & Aver.

CORE in Ft.		RAD. LOG in Ft.		in meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
417	418½						Siltstone/Sandstone. Dark grey siltstone regularly, interbedded with light grey, fine grained sandstone. Core is intact. There is some carbonaceous infilling. Bedding is at 45 deg to the core axis.
418½	424						Mudstone. Dark brown. Bituminous bedding planes are at 56 deg to the core axis. Fractures are clean.
424	432	424	428.5	129.3	130.7		Coal, soft friable. In a crushed condition. lustrous, 1.4m 4.5' SEAM-f2
432	445						Mudstone. Dark brown. Bituminous. Carbonaceous infilling of fractures. Well fractured core. Small soft coal deposit at 435'. Bedding is at 69 deg to the core axis.
445	446						Sandstone. Light grey, fine grained. Bedding at 61 deg to the core axis. Fractures are clean,
446	474						Mudstone fractured core, Bedding is at 58 deg to the core axis.
474	483						Siltstone/Sandstone. Dark grey siltstone irregularly interbedded with light grey, fine grained sandstone. Bedding at 76 deg to the core axis. Core quite intact. Fractures have minor calcite infilling.
483	493						Siltstone. Dark grey, core quite intact. Fractures are clean. Bedding planes at 60° to C.A.
493	496.5						Mudstone, dip 59 deg to the core axis, broken core, bituminous infillings in fractures
496	509	495.5	508.5	151	155		Coal. Crushed condition. Harder coal - more intact from 499' to 501' and 505' to 509'. soft friable, lustrous. 4m 13' SEAM-Eu
509	512						Mudstone. Dark brown. Bituminous. Core well fractured. Some carbonaceous infilling and slickensides. Bedding is at 70 deg to the core axis. Large core loss 511' to 516'

Hole No. DDH. 1251 Page 6 of 12

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: August 1/79 Composites: _____
 Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

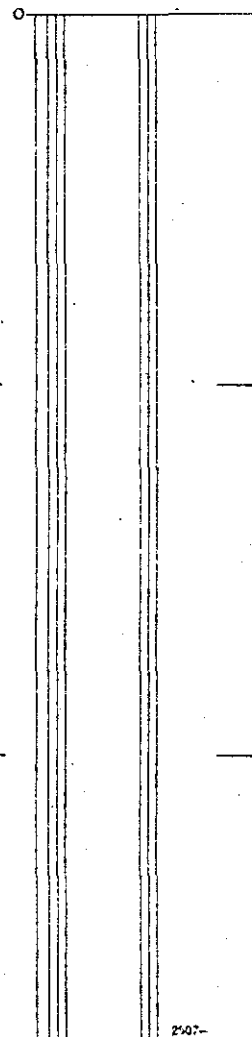
40 Scale
 Color Plot & Dips Ore Classes & Avc.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
512	520	512.5	519	156.3	158.3	Coal, soft, friable, lustrous - in a crushed condition. 2m 6.5' PART SEAM -Eu
520	522					Mudstone. Dark brown. Core well fractured. Bituminous. Some carbonaceous infilling. Bedding at 65 deg to the core axis.
522	526					Siltstone. Dark grey. Core quite intact. Some minor calcite infilling. Bedding planes at 47 deg to the core axis.
526	554					Mudstone. Dark brown, core well broken. Bituminous. Some carbonaceous infilling of fractures. Bedding at 58 deg to the core axis.
554	556					Siltstone. Dark grey. Core well fractured. Carbonaceous infilling of fractures. Bedding is at 58 deg to the core axis.
556	564					Siltstone/Sandstone. Light grey fine grained irregularly interbedded with dark grey siltstone. Core well broken. Calcite infilling of fractures. Bedding at 47 deg to the core axis.
564	566					Mudstone. Dark brown. Core well broken. There is carbonaceous infilling and calcite in fractures. Bedding at 70 deg to the core axis.
566	570					Siltstone - dark grey. Core well fractured. There is calcite in the fractures. Bedding is at 40 deg to the core axis.
570	601					Siltstone/Sandstone. Light grey, fine grained sandstone irregularly interbedded with dark grey siltstone. Calcite infilling of fractures. Band of pure siltstone 577' to 578'. Also some small soft coal deposit at 583'. Bedding on this section is at 59 deg to the core axis.
601	611					Siltstone. Dark grey. Core quite intact. Bedding at 50 deg to the core axis. Minor calcite infilling of fractures. There is a 6" section of light grey, fine grained sandstone at 606'.

Core Size

Hole No. DDH. 1251

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Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____

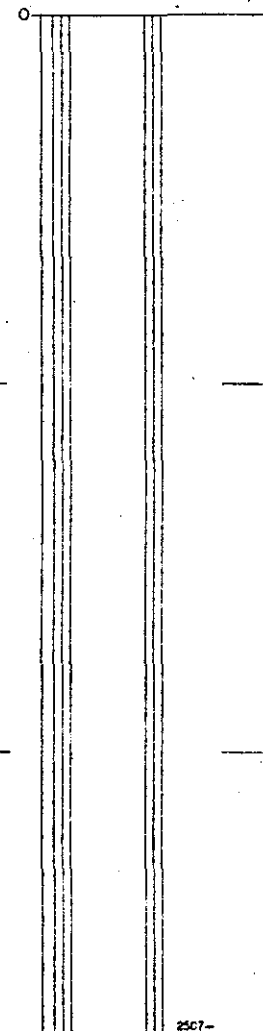
Logged By: DC Date: August 7/79 Composites: _____

Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
611	627					Siltstone/Sandstone. Light grey, fine grained sandstone finely interbedded with dark grey siltstone. Bedding is at 40 deg to the core axis. Some minor calcite infilling of fractures.
627	631					Sandstone. Light grey, fine grained. Core well fractured. Calcite infilling of vugs. Bedding at 71 deg to the core axis.
631	642					Siltstone/Sandstone. Light grey, fine grained sandstone. Finely interbedded with dark grey siltstone. Bedding is at 61 deg to core axis. Slickensides and calcite in the fractures. Band of pure siltstone 636 to 637'.
642	646					Siltstone. Dark grey. Core quite intact. Bedding at 64 deg to the core axis. Fractures are clean.
646	651					Sandstone/Siltstone. Light grey, fine grained sandstone finely interbedded with dark grey siltstone. Bedding at 62 deg to the core axis. Fractures are clean. Core well broken.
651	658					Mudstone. Dark brown. Core well broken. Fractures have minor calcite infilling - Bituminous bedding at 67 deg to the core axis. Some interbedding with light grey, fine grained sandstone at 655'. Which is bedded at 47 deg to the core axis.
658	671	658	670	200.5	204.2	Coal - soft, friable, lustrous - intact sections of core. Bedded at about 62 deg to the core axis. 3.7m 12' SEAM-EL
671	677					Mudstone. Dark brown. Core well broken. Carbonaceous infilling of fractures. Bedding at 71 deg to the core axis. Also some slickensides.
677	678					Siltstone. Dark grey, core quite intact, carbonaceous infilling of fractures. Bedding at 55 deg to core axis.

40 Scale
 Color Plot & Dips
 Ore Grades & Avar.



Core Size

Hole No. DDH. 1251

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Diamond Drill Geological Log

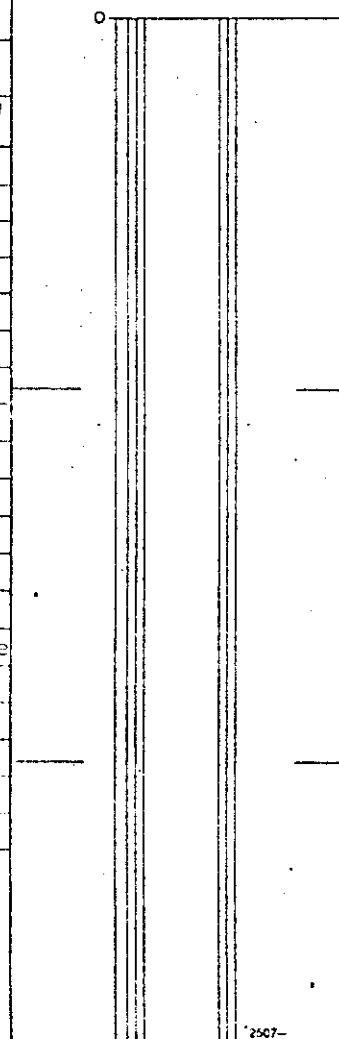


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: August 9/79 Composites: _____
 Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
678	684					Mudstone. Dark brown. Core broken. Bituminous. Carbonaceous infilling of fractures Bedding at 57 deg to the core axis.
684	692					Siltstone. Dark grey. Core quite intact. Bedding at 71 deg to the core axis. Fractures are clean. Interbedding with light grey, fine grained sandstone at 685 deg.
692	701					Mudstone/Sandstone. Hard dark brown bituminous mudstone, irregularly interbedded with light grey, fine grained sandstone. Some minor calcite in fractures. Core well broken in some places. Bedding is at 71 deg to the core axis.
701	704					Siltstone/Sandstone. Dark brown siltstone irregularly interbedded with light grey, fine grained sandstone. Core is well fractured. Minor calcite infilling. Bedding is at 68 deg to the core axis.
704	726					Mudstone. Dark brown. Core quite intact. Minor calcite infilling of fractures. Bedding is at 64 deg to the core axis. There are sections of soft lustrous crushed coal from 720 to 721 and 721½ to 722½ and 724 to 724½'. There are some carbonaceous fractures around these sections.
726	733					Siltstone/Sandstone. Dark grey siltstone irregularly interbedded with light grey, fine grained sandstone. Core intact. Fractures are clean. Bedding at 75 deg to the core axis. Some interbedding with mudstone at 729'.
733	737					Mudstone. Core quite intact. Dark brown. Not bituminous. Some slickenslides. Bedding planes at 49 deg to the core axis.
737	740					Siltstone/Sandstone. Dark grey siltstone irregularly interbedded with light grey, fine grained sandstone Fractures are clean. Core quite intact. Bedding planes at 74 deg to the core axis.



Core Size

Hole No. DDH. 1251

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Diamond Drill Geological Log

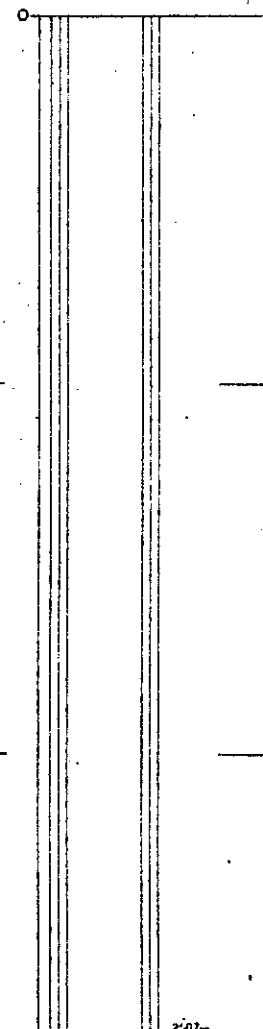
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: August 10/79 Composites: _____

Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
740	743					Mudstone. Dark brown. Core quite intact. Fractures are clean. Bedding is at 58 deg to core axis.
743	769			226.5	234.1	Coal - soft, friable, lustrous. Core fairly intact throughout section - some areas where the coal is crushed. Bedded at 52 deg to the core axis. Section 761' to 766' - core is completely lost 7.9m 26' SEAM-D
769	772					Mudstone. Dark brown. Bituminous. Core highly broken. Calcite infilling present on surfaces. Bedding at 67 deg to the core axis.
772	778					Siltstone/Sandstone - dark grey siltstone irregularly interbedded with light grey, fine grained sandstone. Core highly broken. Some calcite and slickensides are present. Bedding at 62 deg to the core axis. Some carbonaceous infilling at 775".
778	780					Mudstone. Dark brown. core well broken. Bedding at 60 deg to the core axis. There is calcite infilling of fractures.
780	786					Sandstone. Light grey fine grained. Bedding is at 77 deg to the core axis. Core well broken. Fractures are clean.
786	789					Sandstone/Siltstone. Light grey, fine grained sandstone. Regularly interbedded with dark grey siltstone. Bedding at 80 deg to the core axis. at 788' and at 61 deg to the core axis at 786'. There is some minor calcite infilling of the fractures
789	790					Siltstone. Dark grey core well fractured. Bedding at 61 deg to the core axis. Fractures are clean.

40 Scale
Color Plot & Dips
Ore Classes & Aver.



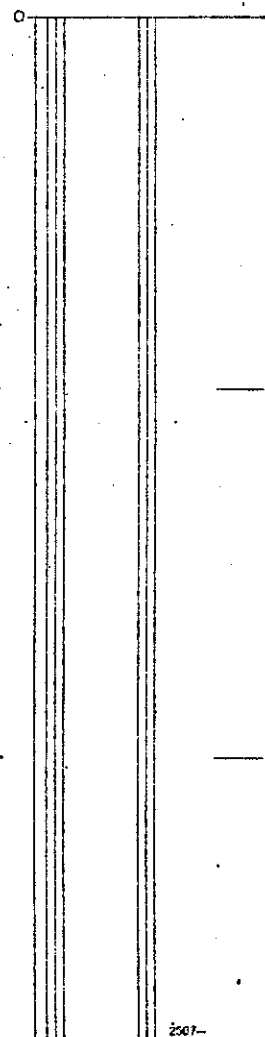
Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective:				Sampled:			
Logged By: DH				Date: August 13/79			
Composites:				Place: Greenhills			
Sect.:				App. Bear:			
App. Dip:				Length:			
CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA LOG - NEUTRON LOG LOGS BY L. J. []	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
790	794					Mudstone. Dark brown. Core well broken. Bedding at 69 deg to the core axis. Fractures are clean.	
794	795					Coal - soft friable in a crushed, powdery condition. Lustrous.	
795	814					Mudstone. Dark brown. Core well broken. Bedding at 66 deg to the core axis. Mudstone is bituminous. There is also calcite infilling of fractures.	
814	825			248.1	251.5	Coal - soft, friable, lustrous. In a crushed condition, from 814' to 816'. More intact core 816' to 825'. Bedded at about 84 deg to the core axis. 3.4m 11'	
						SEAM-DL	
825	831					Mudstone. Dark brown. Bituminous with calcite infilling. Core well broken. Bedding at 64 deg to the core axis.	
831	831.5					Coal - soft, friable lustrous. In a crushed condition.	
831.5	834					Mudstone. Dark brown. Core well fractured. Some carbonaceous infilling fractures. Bituminous mudstone. Bedding at 70 deg to the core axis. Some slickensides present at 832'.	
834	861					Siltstone/Sandstone. Dark grey siltstone irregularly interbedded with light grey, fine grained sandstone. Core quite intact. There is calcite infilling of fractures. Bedding is at 67 deg to the core axis.	
861	865					Mudstone. Dark brown. Core well broken. There is calcite infilling of fractures. Bedding is at 67 deg to the core axis.	
865	876					Siltstone. Dark grey. Core well broken. Some calcite infilling of fractures. Bedding is at 62 deg to the core axis. There is some light grey, fine grained sandstone interbedding at 870' and 874'.	

40 Scale
Color Plot & Dips
Ore Classes & Avar.



Core Size

Site No. CDH. 1251

Page 11 of 12

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

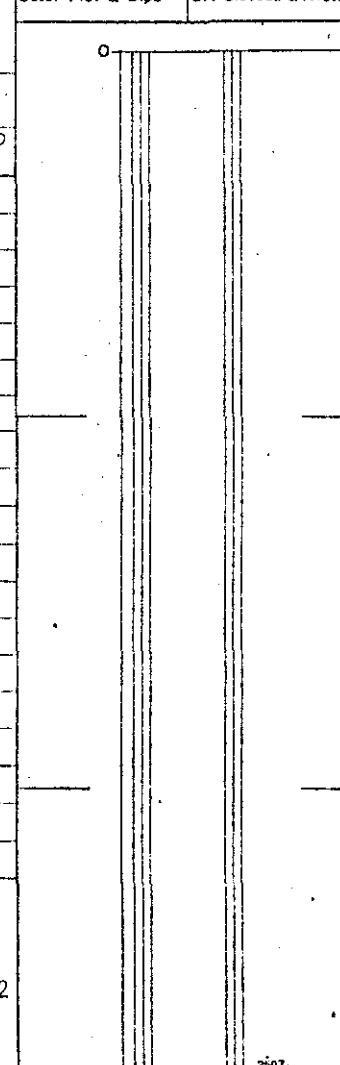
Logged By: DG Date: August 14/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
876	960					Sandstone - medium grained light grey. Core highly broken from 876' to 896'. From 896' to it is quite intact. There is some carbonaceous infilling of fractures at 886' and 910'. There is some calcite infilling at 881'. The rest of the section has clean fractures. Bedding changes from 59 deg at 885' to 54 deg at 897' to 46 deg at 928'.
960	973					Siltstone. Dark grey core well fractured. Fractures are clean except for some slickenslides. Bedding is at 69 deg to the core axis.
973	981			296.6	299	Coal/Mudstone. Core in a crushed condition. Mixture of bituminous mudstone and soft coal. Highly lustrous. Some slickenslides in evidence on pieces. 2.4m+ 8'+ SEAM-B
END OF HOLE						
						Core Size
						Well No. DDH. 1251
						Page 12 of 12

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Diamond Drill Geological Log



FORDING RIVER OPERATIONS

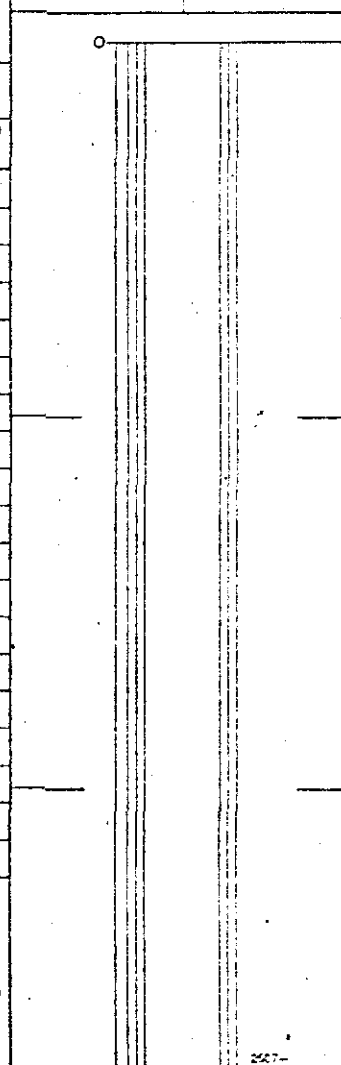
Objective: _____ Sampled: **LAT. DEP. ELEV.**
 Logged By: KH Date: July 11/79 Composites: **2 142.990N 2 22.476 2 1730.4**

Block: _____ Sect.: _____ Place: **Greenhills** App. Bear: _____ App. Dip: _____ Length: **751' / 228.9**

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
0	10			0	3.0	Overburden
10	23					Sandstone/Siltstone. Sandstone - light color, medium gray. Siltstone - dark grey, brown Bedding 1mm - 5mm thick. Highly agitated bedding indicative of a disturbed environment. Calcite and iron infilling along joint and bedding planes. Most fractures along bedding plane approximately 1 per 8 inches. Bedding at 72 deg to core axis.
23	33					Siltstone/Sandstone. Siltstone - dark grey sandstone light grey, fine grained. Grain size decreasing with depth. Most fractures along bedding plane, approximately 2 per foot. Bedding at 78 deg to core axis.
33	58					Siltstone/Mudstone. Dark grey/black in color. Core changing to mudstone with depth. Thick iron oxide infilling along joint fracture at 50 feet. Minor amount of bituminous infilling and 55 feet and deeper. Bedding at 68 deg to core axis at 42 feet and at 72 deg to core axis at 53 feet. Most fractures along bedding plane but joint fractures becoming more common with depth.
58	67	58.5	77.5	17.8	23.6	Mudstone/ Coal, - Dark grey- black intermixed mudstone and coal. Coal becoming more prominent with depth. Approximately 10-15 fractures per foot. Dull lustre Bedding at 80 deg to core axis. 19(17.5)' 5.8 (5.3)'m SEAM - F
67	78					Coal - black in color, medium shiny lustre. Broken throughout section. Minor amounts of siltstone at 77 - 78 feet. Bedding at 80 deg to core axis.
78	97					Mudstone- Dark grey in color. Coal partings at 83 feet about 4 inches thick. Coal infilling along bedding plane fractures, amount decreasing with depth. Calcite along joint fracture at 81 and 86 feet. Highly broken

40 Scale
 Color Plot & Dips | Ore Classes & Aver.



Diamond Drill Geological Log

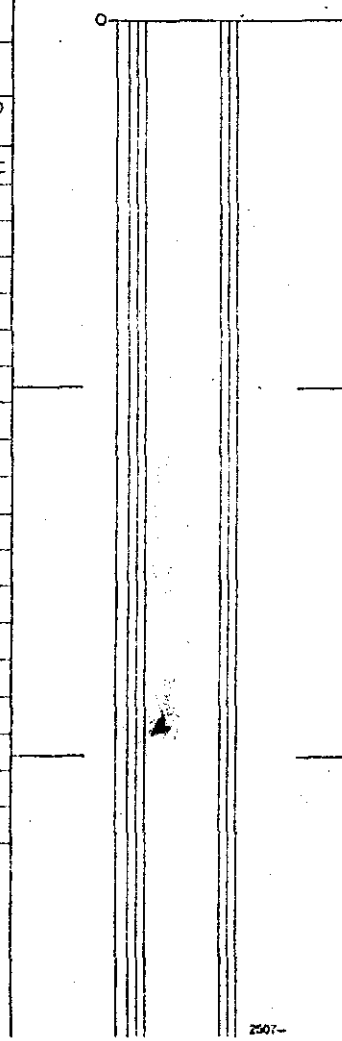


FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: KH Date: July 11/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
						and brecciated from 92 to 95 feet. Core is broken throughout usually at about 8 fractures per foot. Poor bedding. Bedding at 84 deg to core axis.	
97	116.5					Siltstone/Mudstone - dark grey in color. Large amounts of coal intermixed. Coal parting at 107 feet. Calcite infilling along joint fractures. Slickenslide at 100 and 110 feet. Poor bedding. Highly broken core throughout. Bedding at 80 deg to core axis. Grain size decreasing with depth.	
116.5	120					Mudstone dark grey. Massive mudstone. Poor bedding. Approx. one fracture per foot. Calcite infilling at 121 feet along joint fracture. Bedding at 80 deg to core axis.	
120	121					Mudstone - dark grey in color. Calcite infilling along joint fractures. Brecciated from 120.5 to 121 feet. Bedding at 80 deg to core axis.	
121	128	120.5	126.5	36.7	38.6	Coal / Mudstone - dark grey in color. Amount of mudstone decreasing with depth. Fairly well intact core, approx. 8 fractures per foot. Bedding at 80 deg to core axis. High lustre.	
128	131.5					6' 1.9m SEAM-fl Mudstone dark grey in color. Small coal parting at 131 feet. Minor calcite along joint fracture at 129 feet and along bedding plane at 130.5 feet. Bedding at 77 deg to core axis.	
131.5	148					Sandstone/Siltstone. Sandstone-medium grey-fine grained siltstone- dark grey in color. Grain size increasing with depth. Coal parting at 139 feet, and occasional amount of coal infilling. Calcite infilling at 132 feet. Cross bedding at 133 feet. Agitated bedding throughout section.	



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: KH Date: July 11/79 Composites: _____
 Color Plot & Dips Ore Classes & Aver.

Core: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
							Broken core from 134-136 feet and 138 to 139 feet. Bedding at 78 deg to core axis.
148	152						Sandstone/Siltstone/Mudstone - fine grained light grey sandstone. Dark grey siltstone and mudstone. Thick infilling of coal along fractures. Calcite infilling along broken core from 151 - 152 feet. Bedding is regular and approx. 10mm thick. Bedding at 78 deg to core axis.
152	158	154	157	47	48		Coal/Mudstone- Medium grey, dull lustre- changing to reflective lustre with depth. Bedding at 80 deg to core axis. 3' 1m SEAM-f2
158	167						Sandstone/Siltstone- sandstone - fine to medium grained - light color. Siltstone dark grey, black in color. Sandstone irregularly interbedded with siltstone Agitated bedding. Calcite infilling along joint fractures at 167 feet. Bituminous infilling along bedding plane fractures. Bedding at 80 deg to core axis.
167	169						Sandstone - light grey - medium grained. Cross bedding and agitated bedding. Bedding at 60 deg to core axis.
169	172.5						Siltstone - medium grey in color. Large amounts of coal. Broken core throughout. Bedding at 80 deg to core axis.
172.5	176	173	176	52.7	53.6		Coal - Black color, reflective lustre. Broken throughout. 3' 0.9m SEAM - f3
176	189						Mudstone - dark grey in color. Bituminous infilling. Massive fractures. Bedding at 80 deg. to core axis.
189	199						Sandstone/Siltstone. Sandstone - light grey color, extremely fine grained. Siltstone dark grey, black. Beds are 2-3 mm thick, but agitated, indicative of a disturbed

Core Size

Plot No. DDH. 1252

Page 3 of 13

Diamond Drill Geological Log



**FORDING RIVER
OPERATIONS**

Objective: _____ Sampled: _____

Logged By: KH Date: July 11/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
Color Plot & Dips Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
						environment. Grainsize decreasing with depth. Calcite along several joint fractures - approx. 1 joint fracture per foot. Minor bituminous infilling at 195 feet. Bedding at 80 deg to core axis. Calcite cement of sandstone.
199	215					Siltstone dark grey in color. Calcite infillings along joint fractures. Minor bituminous infilling at 210 feet. Broken core for approx. 1 foot out of every 3 feet. Most other fractures along bedding plane. Bedding at 83 deg to core axis.
215	239					Sandstone/Siltstone - sandstone - fine grained light color- siltstone - dark grey. Core is mostly siltstone with interbedded sandstone and siltstone partings. Bedding in the partings are 2-3mm thick and agitated indicative of a disturbed environment. Thick calcite healing of joint fracture at 224 feet, and along joint fracture at 229 feet. Large amount of broken core. Bedding at 80 deg to core axis. Vugs at 222 feet.
239	245					Siltstone/mudstone - dark grey-blue in color. Coal healings and infillings. Bedding at 82 deg to core axis.
245	256					Siltstone/mudstone/sandstone- Siltstone dark grey, mudstone - dark grey-blue, sandstone - light grey, extremely fine grained. Sandstone - 251 - 252 feet agitated bedding and cross bedding. Coal infilling along bedding and joint fractures - thickness increasing with depth. Calcite infilling along joint fractures. Broken core at 246-
						247 feet and from 254 - 256 feet. Bedding at 78 deg to core axis.
256	275.5	256	275.5	78	84	Coal - dark gray, black. Medium lustre. Mostly intact with B2 type fractures approximately

Core Size

Well No. DDH. 1252

Page 4 of 13

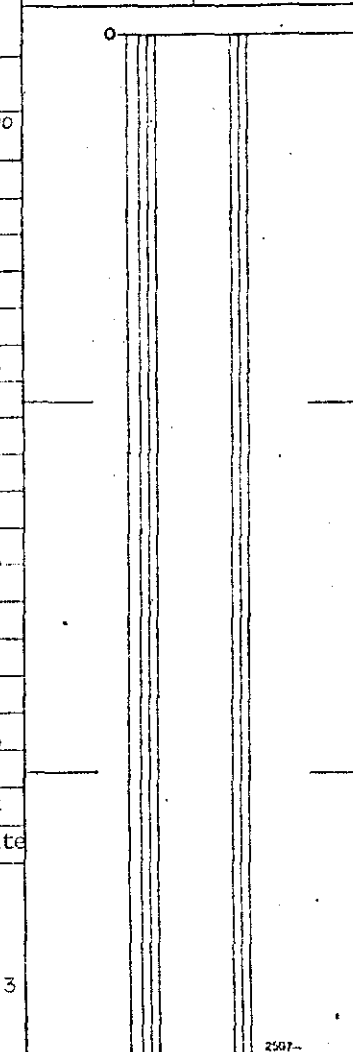
Diamond Drill Geological Log

FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: KH Date: July 12/79 Composites: _____
 Book: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips _____ Ore Classes & Avar. _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
							12 per foot. Occasional pebble size coal. Bedding at 76 deg to core axis. 0.5m parting at 82 m.
							19.5(18)' 6(5.5)m SEAM-EW
275.5	286	280	281	85.3	85.6		Mudstone/Coal - dark grey in color - very poor coal. Bedding at 70 deg to core axis. No lustre 1' 0.3m
286	290	286.5	290	87.4	88.4		Coal - Large amount of mudstone - Hard coal. Medium lustre poor coal. Bedding at 70 -75 deg to core axis. Poor coal 3.5' 1m
290	300						Mudstone/Siltstone. Medium grey in color, grain size and hardness increasing with depth. Calcite infilling along joint fractures, Bituminous infilling along bedding plane fractures above 298 feet. Brecciated core at 296 feet. Bedding at 75 deg to 80 deg to core axis.
300	310.5						Siltstone/Sandstone Siltstone medium grey. Sandstone - fine grained light color. Grain size increasing with depth. Calcite infilling along joint fractures Beds are agitated indicative of a disturbed environment. Beds are 2-3mm thick. Most fractures are joint fractures, J4 type. Bedding at 75 - 80 deg to core axis.
310.5	322						Sandstone/Siltstone alternating beds of sandstone and siltstone - each about 1' thick Siltstone - dark grey in color. Sandstone - light grey, fine grained. Calcite and bituminous infilling of joint and bedding plane fractures. Slumping of sandstone, into siltstone. Bedding angle varies greatly from 50-80 deg to core axis



Core Size _____
 Hole No. DDH. 1252 Page 5 of 13

Diamond Drill Geological Log

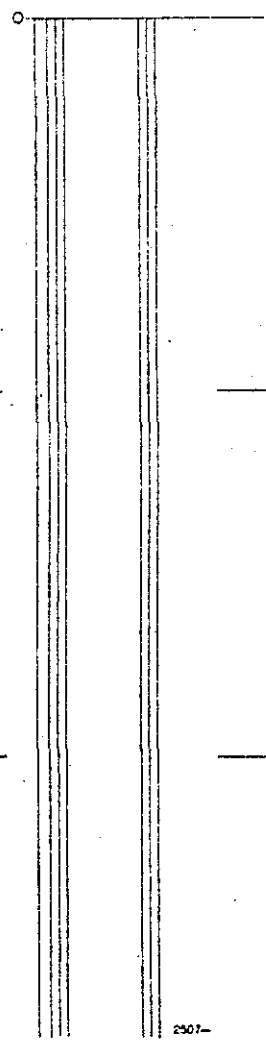
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: KH Date: July 13/79 Composites: _____

Block: _____ Sect: _____ Place: Greenhills App. Bear: _____ App. Dip: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To		
322	328						Sandstone - fine grained, light grey in color. Calcite infilling along joint fractures Relatively intact rock. Bedding at 80 deg to core axis.
328	334.5						Siltstone/Sandstone. Sandstone - light color, fine grained. Siltstone dark grey brown color. Minor calcite infilling joint fractures. Mostly siltstone with 3 inch thick sandstone partings. Slumping of sandstone into siltstone at 330 feet. Most fractures are joint fractures. Bedding at approx. 75 deg to core axis.
334.5	337.5						Sandstone - light color, medium grained. Interbedded dark siltstone. Grain size decreasing with depth. Bedding is agitated indicative of a disturbed environment. Bedding at approx. 78 deg to core axis.
337.5	344						Siltstone - dark grey in color. Massive siltstone, Bituminous and calcite infilling of fracture. Bedding at 70 deg to core axis.
344	345						Mudstone - black - bituminous infilling - bedding at 80 deg to core axis.
345	361	346	357.5	105.5	109.0		Coal - black - high lustre - turning to a large amount of mudstone 358.5. Relatively intact coal core. Bedding at approx. 75 deg to core axis. 11.5' 3.5m SEAM-E1
361	376						Siltstone - medium grey in color. Coal infilling healing and partings - amount decreasing with depth. Most fractures along bedding plane - approx. 3-4 per foot. Massive sandstone. Bedding at approx. 70 deg to core axis.
376	388	361	362	110	110.3		Coal 1' 0.3m Sandstone/Siltstone. Sandstone - medium grey, extremely fine grained. Siltstone - dark grey. Calcite infilling of bedding plane fractures. Bedding is agitated indicative of a disturbed environment.

40 Scale
Color Plot & Dips Ore Classes & Aver.



Diamond Drill Geological Log



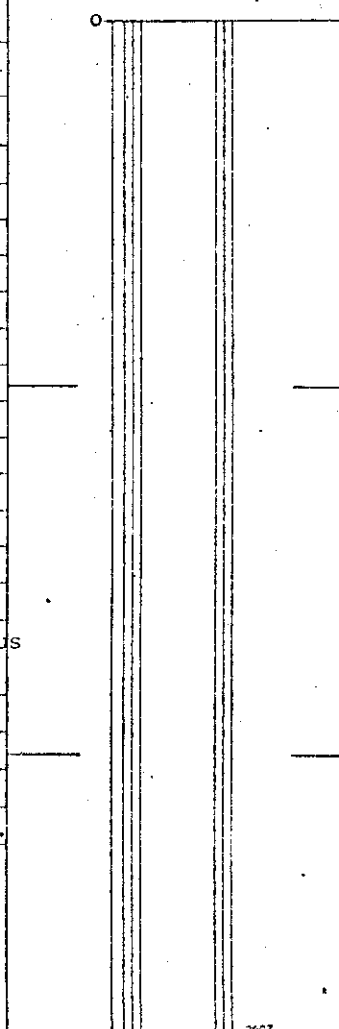
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: KH Date: July 16/79 Composites: _____
 Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
						Slumping of sandstone down into siltstone.
388	396					Sandstone/Siltstone - fine grained light colored sandstone with interbedded dark grey siltstone. Grain size decreasing with depth. Calcite infilling of joint fractures. Bituminous infilling of bedding plane and joint fractures. Highly broken core. Bedding at approx. 70 deg to core axis. Beds are fairly regular and 1-2 mm thick.
396	403					Siltstone/mudstone - dark grey, black in color - changing gradually from siltstone to mudstone with depth. Bituminous infilling of joint fractures.
403	421					Siltstone/sandstone, dark grey siltstone with 6 inch light grey fine grained sandstone partings. Minor bituminous infilling soft bedding plane fractures. Bedding is slightly agitated. Minor calcite along some of the joint fractures. Bedding at 70 deg to core axis. Slumping of sandstone down the core into the siltstone.
421	432					Siltstone/Mudstone - dark grey- mudstone becoming more predominant with depth. Bituminous infilling and healing along bedding plane fractures. Bedding at approx. 72 deg to core axis. Massive core amount of bituminous increasing with depth.
432	425.5	431	452.5	131.4	138	Coal - Black - dull lustre- Spongy and broken throughout section. Bedding at approx. 76 deg to core axis. 21.5' 6.6m SEAN-D
452.5	454.5					Mudstone - medium grey. Bituminous infilling and healing along bedding plane fractures. Minor calcite infilling. Bedding at 70 deg. to core axis.
454.5	456.5					Coal/Mudstone - medium grey in color. Calcite infilling around mudstone. Brecciated section.



Hole No. DDH. 1252

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

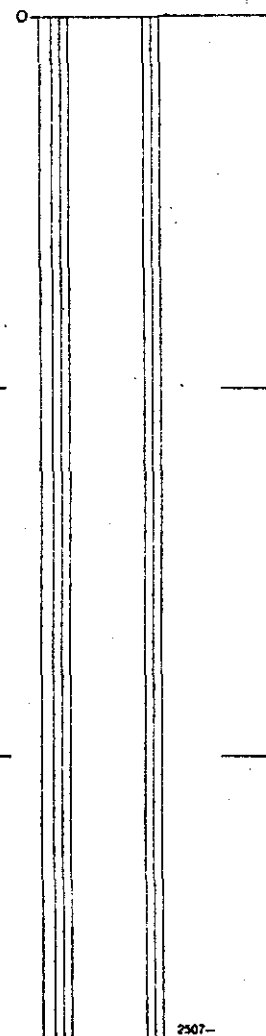
Logged By: KH Date: July 1/79 Composites: _____

Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
456.5	459					Siltstone/mudstone - medium grey in color. Calcite infilling along joint and bedding plane fractures. Bedding at approx. 76 deg to core axis.
459	463					Siltstone - medium to dark grey in color. Calcite infilling. Minor brecciated sections throughout. Loose coal particles along fractures. Bedding at approx. 70 deg to core axis.
463	472					Sandstone - medium grey color, fine grained. Large amount of broken core and brecciation with calcite infilling. Bituminous infilling along fractures. Slightly agitated bedding. Bedding at approx 73 deg to core axis.
472	488					Siltstone - dark grey in color. Bituminous and calcite infilling along joint and bedding plane fractures. Six inch coal parting at 478 feet. Broken core from 474.5 - 475', 481 - 484 feet. Bedding at 80 deg to core axis.
488	509					Siltstone/mudstone - dark grey - brown in color. Bituminous and calcite infilling along fractures. No section over 4" long. Large amounts of broken and crushed core. Vugs at 499 feet. Bedding at 76 deg to core axis.
509	517					Siltstone - dark grey in color. Bituminous and calcite infilling along fractures. Most fractures along bedding plane approx. 2 per foot. Bedding at 80 deg to core axis.
517	518.5	517	526.5	157.6	160.5	Coal - black shiny lustre. Broken and crushed throughout - very soft coal. Bedding at approx 70d deg to core axis.
						0.3m shale parting at 158m 9.5 (8.5)'
						2.9(2.6)m SEAM-DL

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size
Hole No. DDH. 1252 Page 8 of

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____
 Work: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
518.2	520					Siltstone/sandstone - siltstone - dark grey in color. Sandstone light grey fine grained Grain size increasing with depth. Bedding 2-3mm thick. Slightly agitated bedding. Bedding at approx. 74 deg to core axis.
520	529.5					Coal - black with shiny lustre. Crushed and very soft from 526 - 527 feet - but mostly hard and intact elsewhere. Small amount of mudstone in coal. Bedding at approx. 76 deg to core axis.
529.5	536					Mudstone - dark grey, brown in color. Bituminous infilling decreasing with depth Broken and crushed from 534 - 535.5. Bedding at approx. 80 deg to core axis.
536	545					Siltstone - medium grey in color. Minor bituminous and calcite infillings. Several J2 type joint fractures. Bedding at approx. 70 deg to core axis.
545	550					Sandstone/Siltstone. Interbedded dark grey siltstone with light grey fine grained sandstone. Grain size increasing with depth. Minor bituminous infilling of fractures. Beds about 2-3mm thick. Bedding at approx. 70 deg to core axis.
550	565					Siltstone - dark grey, black in color. Minor bituminous infilling along fractures. Calcite infilling and healing along joint fractures at 561 feet. Some small 2-3 inch sandstone partings. The sandstone is light grey and fine grained. Most core broken few intact pieces over 3 inches. Bedding at approx. 68 deg to core axis.
565	571					Sandstone / Siltstone - Medium grey in color. Sandstone extremely fine grained. Calcite infilling along fractures. Bedding is slightly agitated with some cross bedding and slumping of sandstone down the core

Core Size

Hole No. DDH. 1252

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: KH Date: July 18/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips _____
 Ore Classes & Aver. _____

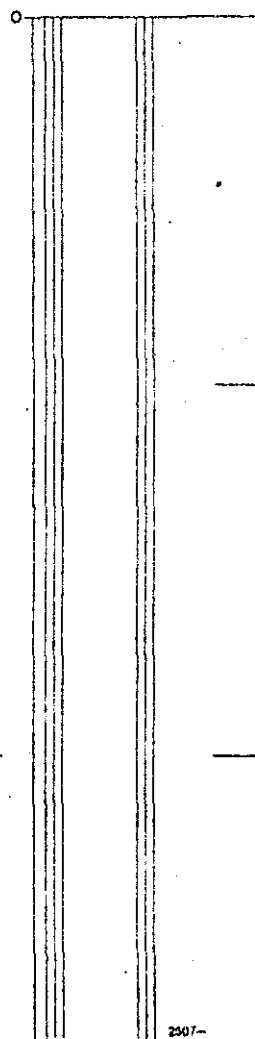
CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

							into the siltstone. Most fractures that are along the bedding plane are through siltstone. Bedding at 70 deg to core axis.
571	589						Sandstone - medium grained, light grey color. Grain size increasing with depth. Mostly broken and crushed core. Slicken slide at 573 feet. Minor bituminous infilling at bedding plane fractures. Bedding at approx. 70 deg to core axis.
589	598						Sandstone - light grey colour medium grained. Minor calcite and bituminous infilling of fractures. Sandstone has calcite cement. Few peices over 4" long. Several joint fractures at approx 45 deg to core axis. Bedding at approx. 74 deg to core axis.
598	605						Sandstone - medium grained, light grey color. Bituminous infilling to 604 feet - fairly thick. 3 inch coal parting at 599 feet. Vugs at 605 feet. No piece over 4 inches long. Bedding at approx. 76 deg to core axis.
605	614						Sandstone - medium grained, light grey color. Minor bituminous infilling. Crushed and broken core throughout section. Several joint fractures at 45 deg to core axis. Bedding at approx. 75 deg to core axis. Major change in bedding to approx. 55 deg to core axis - around 606 feet.
614	631						Sandstone - light and dark grey alternating beds. Beds 1-2mm thick. Minor bituminous infilling at bedding plane fractures 30mm coal healing at 616 feet. Core is mostly broken with about 35 % being intact. Bedding at 54 deg to core axis.
631	635						Sandstone - medium grained grey color. Bituminous infilling of fractures. Through the section the bedding changes form approx. 55 deg to core axis to approx. 72 deg to core axis.

Core Size

Hole No. DDH. 1252

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Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____

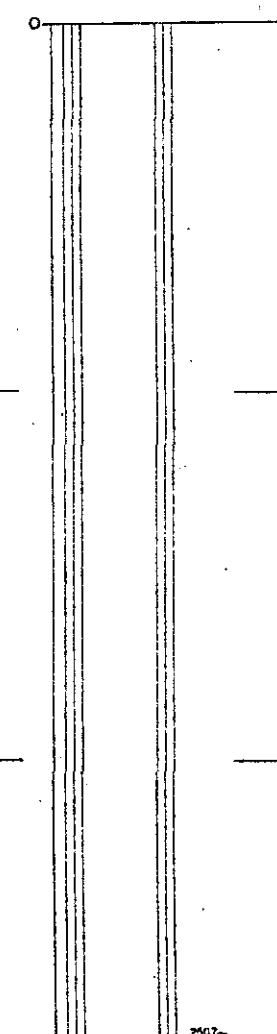
Logged By: KH Date: July 19/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

From	To	From	To	In meters	To	Description
635	658					Sandstone - medium grained grey color. Cross bedding at 649 feet and 657 feet. Relatively intact core. Minor bituminous infilling of bedding plane fractures Slickenslided at 657 feet. Bedding at approx. 68 deg to core axis - variable throughout section. Large J1 type fractures at 668 feet - calcite infilling.
658	659.5					Mudstone/Coal - bituminous mudstone - mudstone getting harder with depth. Bedding at approx 70 deg to core axis.
659.5	670					Sandstone - medium grained - light grey color. Bituminous infilling of fractures. Bedding at 68 deg to core axis. Broken core from 665 - 666 feet and highly fractured throughout section. Minor fault at 671 feet - bedding approx. 45 deg to core axis - displacement - 1 cm.
670	677					Siltstone/Sandstone - siltstone dark grey in color. Sandstone - light grey, medium to fine grained. Calcite infilling of fractures at 672.5 feet. Minor bituminous infilling. Grainsize increasing with depth. Relatively intact core. Bedding is slightly agitated indicative of a disturbed environment Bedding at 74 deg to core axis.
677	689					Sandstone/Siltstone - dark grey siltstone - light grey fine grained sandstone. Alternating beds of siltstone and sandstone - at least 10 cm thick - predominantly siltstone - greater than 80 %. Minor bituminous Infilling of fractures. Minor calcite infilling of joint and bedding plane fracutes. Broken core from 690 - 691 feet. Slumping of sandstone down the core into the siltstone. Bedding at approx. 75 deg to core axis.

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.

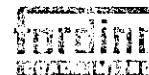


Core Size

Site No DDH. 1252

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

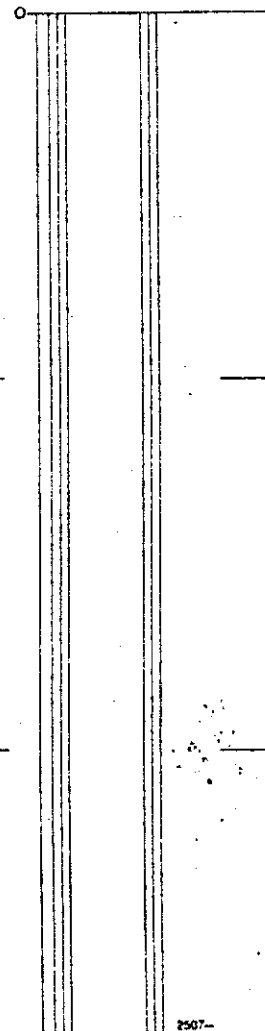
Objective: _____ Sampled: _____

Logged By: KH Date: July 20/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
689	691						Mudstone - dark grey, black in color. large amount of bituminous infilling. Bedding at 79 deg to core axis.
691	701						Siltstone/Sandstone/Mudstone - Predominantly dark grey siltstone mudstone with 8" of light grey fine grained sandstone at 699 feet. Bituminous infilling throughout. Calcite at 691 feet. Bedding at approx. 72 deg to core axis.
701	706						Siltstone/Sandstone - siltstone - dark grey, sandstone medium grey, fine grained. Calcite and bituminous infilling of fractures. Grain size decreasing with depth. Bedding at 76 deg to core axis.
706	711.5						Mudstone - medium grey in color. Large amount of bituminous in core amount increasing with depth. Bedding at 76 deg to core axis.
711	5717						Coal - soft, black-changing to large amounts of mudstone with depth- highly broken.
717	718						Mudstone - medium grey - highly fractured.
718	721						Coal - black, soft, highly broken - shiny lustre
721	723						Mudstone - medium grey, highly broken
723	729.5	723	729.5	220.3	222.3		Coal - soft, black, shiny lustre, high quality coal. 6.5' 2m SEAM-B
729.5	732						Mudstone - Medium grey in color - bituminous mudstone
732	733	732	733	223.1	223.4		Coal - same as always 1' 0.3m
733	740						Mudstone - Bituminous mudstone - amount of bituminous decreasing with depth. Dark grey color.
740	751				228.9		Siltstone/Sandstone - medium grey siltstone with light grey fine grained sandstone. Grain size increasing slightly with depth. Slickenslide at 746 feet. Bituminous infilling throughout.

40 Scale
Color Plot & Dips
Ore Classes & Aver.

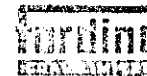


Core Size

Hole No. DDH. 1252

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

40 Scale
Color Plot & Dips Ore Classes & Aver.

Objective:

Sampled:

Logged By: KH Date: July 20/79 Composites:

Block:

Sect.:

Place: Greenhills

App. Bear:

App. Dip.:

Length:

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
From To From To From To DIRECTIONAL SURVEY DONE YES NO

Calcite healing at 743 feet. Each piece about 6" long. Bedding at approx. 65 deg to core axis. Medium grained sandstone at 750'. Large amount of bituminous in core

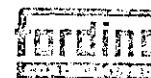
END OF HOLE

Core Size

Hole No. DDH. 1252

Page 13 of 13

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: LAT. _____ DEP. _____ ELEV. _____

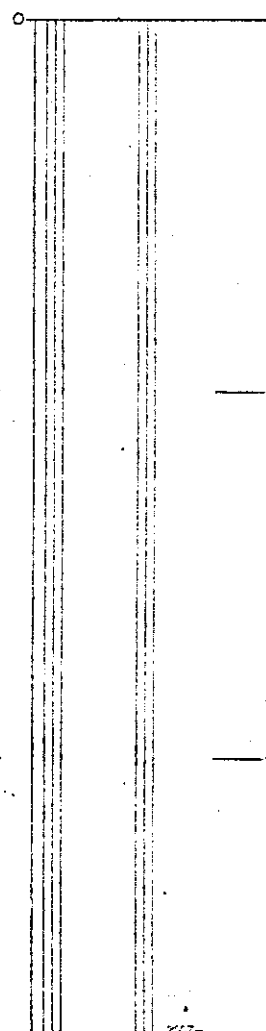
Logged By: DG Date: July 16/79 Composites: 147,445.2 22,303.8 1714.3

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
0	20	0	20	0	6.1	OVERBURDEN
20	26.5					Mudstone. Dark brown. Bedding at 75 deg to the core axis. Core well broken. Fractures are clean except for some calcite at 22'
26.5	33	27	32	8.2	9.8	Coal. Soft, black, core quite intact. Bedding planes at 70 deg to the core axis. 1.6m 5' SEAM - f1
33	36					Siltstone. Dark grey, well broken. Bedding planes at 87 deg to the core axis. Some carbonaceous infilling of fractures
		59.5	61.5	18.2	18.9	Coal 0.7m 2' SEAM - f2
36	61					Siltstone/Sandstone, irregularly interbedded. Sandstone light grey and fine grained Siltstone is dark grey. Bedding planes at 86 deg to the core axis. Slickensides and calcite in fractures. Core quite intact there is some lodecasting in the section 47' to 61'. Slickensides found in section around 42'/
61	66					Mudstone. Dark brown. Core highly broken. High core loss. Bedding at 84 deg to the core axis. There is slickensides in the fractures.
66	77					Siltstone. Dark grey. Bedding planes at 85 deg to the core axis. Some calcite in fractures at 68'. Carbonaceous infilling at 76'. core is well fractured.
77	83	80	82	24.4	25	Coal Black, soft, bedding planes at 83 deg to the core axis. Core is well broken. A section of bituminous mudstone at 79' for 1'. 0.6m 2' SEAM - f3
83	86					Mudstone. Bituminous dark brown. Core quite intact some carbonaceous infilling and slickensides. Bedding at 80 deg to the core axis.

40 Scale
Color Pic & Dips Core Grades & Aver.



Core Size
Hole No. DDH, 1253 Page 1 of 8

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

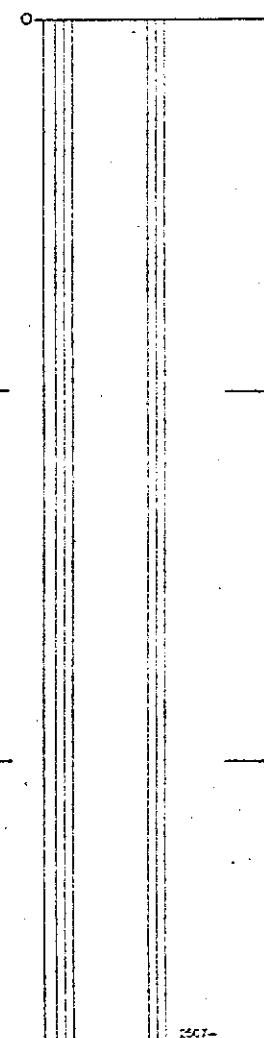
Logged By: DG Date: July 16/79 Composites: _____

Block: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.	RAD. LOG In Ft.	In meters	Description
From To	From To	From To	
86 101			Siltstone. Dark grey. Core quite intact. Bedding at 87 deg to the core axis. Some calcite in the fractures at 97'.
101 107			Mudstone/Siltstone Dark brown, core quite intact. Bedding at about 86 deg to the core axis. Calcite infilling at 105'. Also some slickenslides at 106". There is fine interbedding.
107 120			Mudstone, Bituminous. Some slickenslides. Dark brown. Bedding planes at 70 deg to the core axis. Fractures are clean, except for some carbonaceous infilling at 111'. There is some fine interbedding with siltstone at 110', 115' and 116'.
120 123			Sandstone/Siltstone. Light grey. Sandstone is fine grained fine interbedding. Bedding plane is at 70 deg to the core axis. Most fractures are clean - some calcite infilling at 120'. At 123' there is a graded transition from sandstone to siltstone to mudstone (light grey to brown to dark brown) for 6".
123 126			Mudstone. Dark brown. Bedding planes at 85 deg to the core axis. Bituminous mudstone slickenslided fractures. Core well broken.
126 137			Siltstone. Dark grey. Bedding planes at 87 deg to the core axis. Most fractures are clean - some calcite. There is some interbedding with sandstone at 135'.
137 140			Sandstone. Light grey. fine to medium grain size. Well fractured core. Some lode casting at 137' Bedding planes at 88 deg to the core axis. Minor calcite infilling of fractures.

40 Scale
Color Plot & Dips Core Classes & Aver.



Hole No. DDH. 1253 Page 2 of 8

Diamond Drill Geological Log



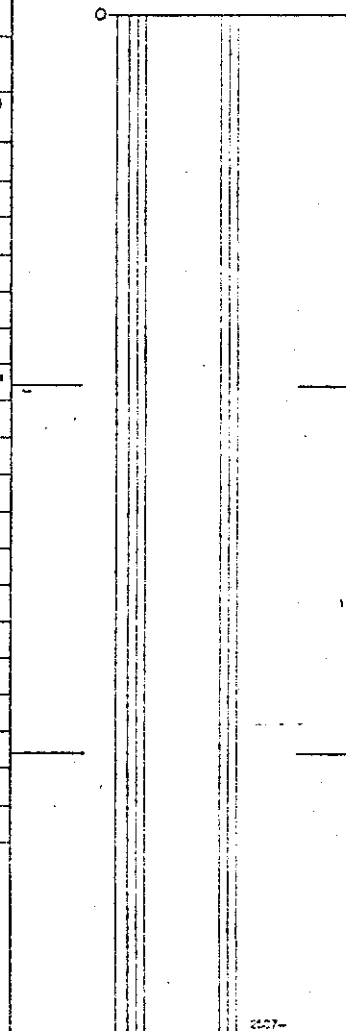
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: July 17/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips | Ore Classes & Aver.

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
140	146					Siltstone. Light - dark grey. Some interbedding with sandstone at 143'. Fractures are clean. The core is well broken. Bedding planes are at 82 deg to core axis.
146	162					Siltstone/Sandstone Light grey sandstone is fine grained. Core is well broken. Fine interbedding. Section 146' - 147' is pure sandstone. Some calcite In fractures. Bedding planes are at 79 deg to the core axis.
162	190					Siltstone. Dark grey. Fractures mostly clean. Some interbedding with sandstone at 179' to 180' Bedding planes at 88 deg to the core axis. Core quite intact.
190	194					Sandstone. Light grey - fine grained. Bedding planes at 82 deg to the core axis. Core quite intact fractures are clean.
194	220					Siltstone/Sandstone - Irregular bedding of light and dark grey. Sandstone is fine grained. Bedding planes are at 85 deg to the core axis. Fractures are clean. Section 198' to 199' is pure sandstone. Small coal deposit at 211'.
226	251					Siltstone. Dark grey, Bedding planes at 88 deg to the core axis. Fractures are clean. Interbedding with light-grey fine grained sandstone at 239' and 243'.
251	253					Mudstone. Dark brown. Bedding planes at 81 deg to the core axis. Core well broken Fractures are clean.
253	281	254	269	77.4	82	Coal Black, soft & friable. Most of the core is intact. Bedding planes at about 79 deg to the core axis. Quite lustrous, some mudstone at 276' to 277' (bituminous) 4.6m 15' SEAM-Eu
		278.5	281	84.9	85.6	Shaley coal 0.7m 2.5'



Core Size
 Hole No. DDH. 1253 Page 3 of 8

Diamond Drill Geological Log

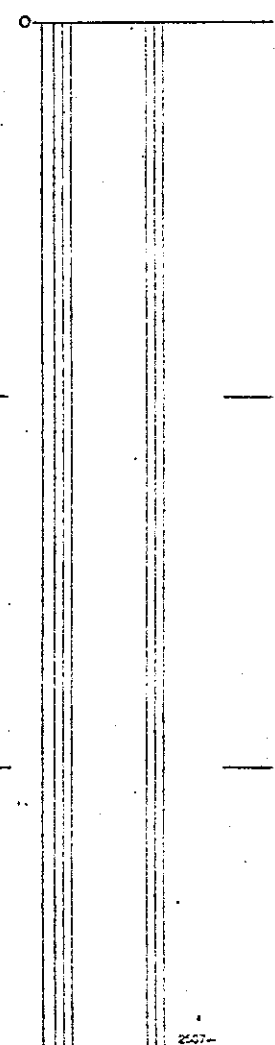


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: July 18/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips Ore Classes & A-er.

CORE in Ft.		RAD. LOG in Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
281	287						Siltstone. Dark grey, core quite intact. Bedding planes at 86 deg to the core axis. Some mudstone for 6" at 282'. Also some interbedding with sandstone at 285'. There is slickenslides and calcite in the fractures.
287	293						Mudstone. Dark brown. Core well broken. Bituminous mudstone. There are some slickenslides in the fractures. Bedding planes at 88 deg to the core axis. There is a 6" coal deposit (soft, friable) which is crushed at 288'.
293	304	292	303	89	92.3		Coal - black. Soft, crushed coal from 293' to 296'. then harder more intact core from 296' to 304'. Some mudstone at 295'. 3.3m 11' SEAM-E1
304	310						Mudstone. Dark brown. Core well broken. Bituminous mudstone. Bedding planes at 86 deg to the core axis.
310	330						Siltstone. Dark grey. Core well broken. Most fractures are clean except for slickenslides at 323' and calcite at 326'. Bedding planes at 87 deg to the core axis. There is a small coal deposit at 319'. Mudstone for 6" at 327'.
330	337						Mudstone. Dark brown core well broken. Calcite infilling of fractures. Bituminous at 335'. Bedding planes at 88 deg to the core axis. Grades into siltstone at 337'.
337	358						Siltstone. Dark grey. Some large intact sections. Calcite infilling of fractures. Bedding planes at 85 deg to the core axis. 6" coal deposit at 351'
358	361						Mudstone. Dark brown. Core quite intact. Bedding planes at 88 deg to the core axis. Carbonaceous infilling of fractures. A small soft coal deposit at 360'



Diamond Drill Geological Log



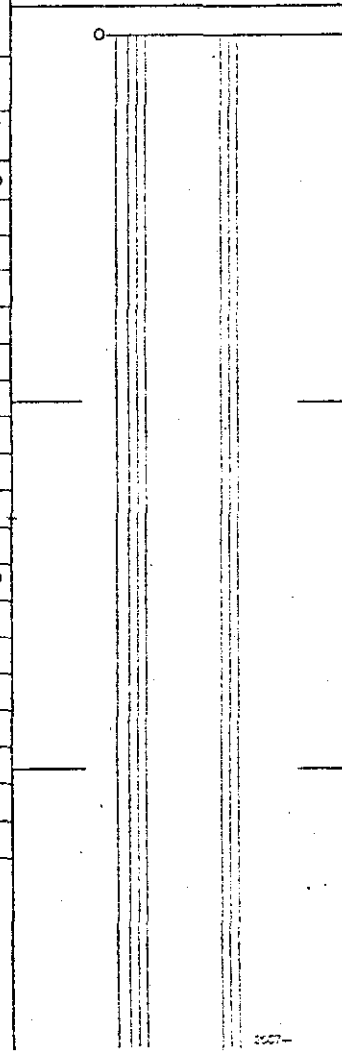
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: July 20/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

Greenhills
 COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE IN Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
361	364					Siltstone. Dark grey. Clean fractures. Core quite intact. Bedding planes at 87 deg to the core axis.
364	365					Coal. Soft, friable highly lustrous. Crushed condition
365	378					Siltstone. Dark grey. Core quite intact. Bedding planes at 89 deg to the core axis. Some minor calcite infilling. Also some slickensides around 370'. sandstone interbedding 373 - 374 light grey fine grained.
378	379					Sandstone. Light grey fine grained well fractured core. Bedding at 77 deg to the core axis. Clean fractures.
379	396					Siltstone. Dark grey. Core quite intact. Clean fractures.
396	402					Mudstone. Dark brown Core well fractured. Fractures have carbonaceous infilling. Bedding planes at 79 deg to the core axis.
402	435	401	434	122.3	132.3	coal - soft friable lustrous, core intact but highly fractured. Crushed coal 425' - 427'. Also small areas of crushed coal at 412' and 415' 10m 33' SEAM-D
435	437					Mudstone. Dark brown. Bedding at 89 deg to the core axis. Fractures are clean core is well fractured
437	442					Siltstone - Dark grey. Bedding at 86 deg to the core axis. Core quite intact Carbonaceous infilling of fractures.
442	463					Mudstone. Dark brown, core quite intact fractures are clean except for a bituminous slickenslide at 445' and carbonaceous infilling at 446'
463	474					Siltstone. Dark grey, core well fractured. Most fractures are clean - some calcite infilling around 466'. Bedding at about 81 deg to the core axis.

40 Scale
 Color Plot & Dips
 Ore Classes & Avar.



Core Size
 Hole No. DDH. 1253
 Page 5 of 8

Diamond Drill Geological Log



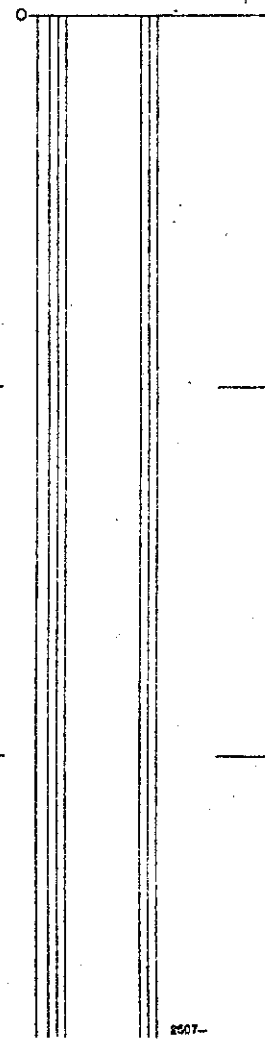
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: July 23/79 Composites: _____

Block: _____ Sect.: _____ Place: Freenhills App. Bear: _____ App. Dip: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
474	477					Mudstone. Dark brown. Core well broken carbonaceous infilling of fractures. Bedding planes at 87 deg to the core axis.
477	480	475.5	480.5			Coal. Soft, friable - in a crushed condition - lustrous V. Poor coal 1.3m 4.5'
480	482					Sandstone. Light grey and fine grained. Core quite intact. Bedding at 87 deg to the core axis. Fractures clean, grades into siltstone at 482'.
482	483					Siltstone. Dark grey. Core well broken. Some slickensides in fractures. Bedding planes at about 87 deg to the core axis.
483	490	483	490	147.1	149.3	Coal. Hard and intact core 483' to 487'. Soft friable, lustrous 487' to 490'. Bedding at about 78 deg to the core axis. 2.2m 7' SEAM - D1
490	493					Siltstone - Dark grey core well broken. Bedding at 88 deg to the core axis. Carbonaceous infilling of fractures.
494	494 1/2					Coal - quite hard. Lustrous, Bedding at about 80 deg to the core axis.
494	497					Siltstone. Dark grey. Core well broken. Bedding at 83 deg to the core axis. Carbonaceous infilling of fractures
497	498					Coal. Soft friable, lustrous It is in a crushed condition.
498	512					Siltstone. Dark grey, Core quite intact. Minor calcite infilling of fractures Bedding planes at 89 deg to the core axis. Some interbedding with sandstone - light grey - fine grained at 501' to 502'
512	523					Siltstone/ Sandstone. Siltstone is dark grey while sandstone is light grey and fine grained. Fine interbedding. Some minor calcite infilling of fractures. Bedding planes are at 86 deg to the core axis.

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size
Hole No. DDH. 1253 Page 6 of 8

Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____

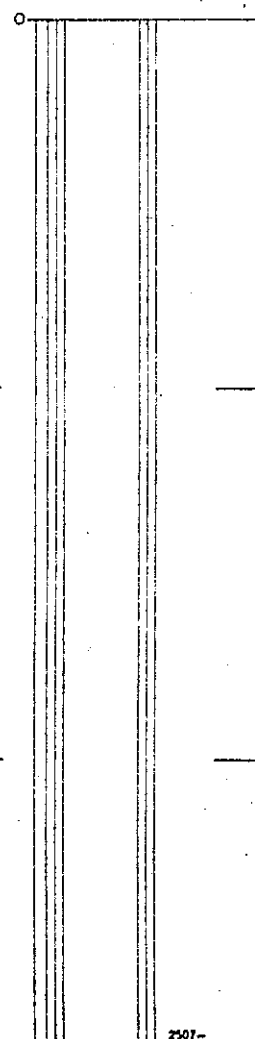
Logged By: DG Date: July 23/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

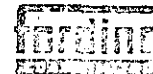
523	524					Siltstone. Dark grey. Core quite intact. Bedding at 82 deg to the core axis. Fractures are clean - some calcite infilling at 530'. There is some interbedding with sandstone - light grey & fine grained from 531' to 532'.
534	547					Sandstone. Light grey, fine grained. Bedding at 79 deg to the core axis. Core well fractured. Fractures are clean. Some interbedding with siltstone at 536, 539, and 543'.
547	553					Sandstone/Siltstone. Irregularly interbedded. Bedding at 78 deg to the core axis. Minor calcite infilling of fractures. Sandstone - light grey, fine grained.
553	572					Sandstone - Light grey, medium - fine grained. Bedding at 82 deg to the core axis. Clean fractures. Core well fractured abrupt interface with siltstone at 572'.
572	573					Siltstone. Dark grey. Bedding at 83 deg to the core axis. Fractures have minor calcite.
573	587					Sandstone. Light grey - fine grained. Core well fractured and broken. Fractures are carbonaceously infilled. Bedding at 82 deg to the core axis. Some breccia at 581'.
587	591					Siltstone/ Sandstone. Irregularly interbedded. Bedded at about 85 deg to the core axis. Sandstone is light grey and fine grained. Minor calcite infilling of fractures.
591	596					Mudstone. Dark brown. Core highly broken. Breccia at 595'. Bedding at about 84 deg to the core axis. Minor calcite infilling of fractures.

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Core Size
 Hole No. DDH. 1253 Page 7 of 8

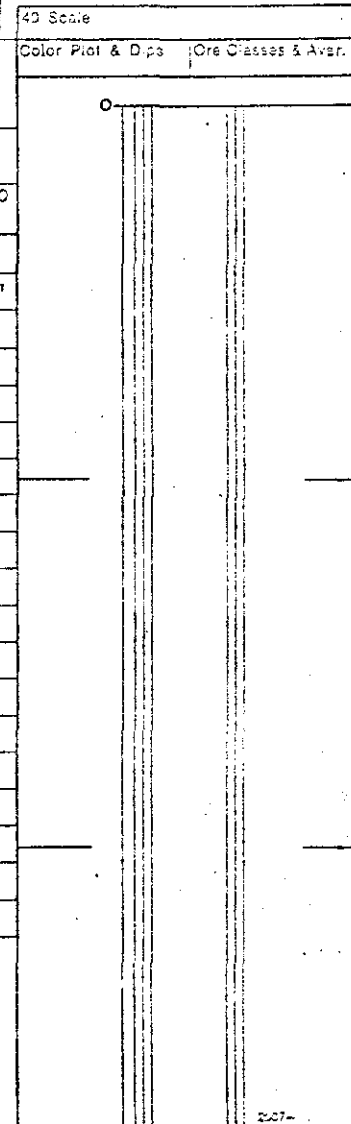
Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: July 24/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
595	610	596.5	597.5	181.8	182.1	Coal Soft, fraiable core not intact. Coal
		599.5	602.5	182.7	183.7	Highly crushed. Breccia - calcite coated coal at 599'. Some bituminous mudstone at 607'
						0.3m Coal 0.6m Shale 1m Coal
						1' Coal / 2' Shale / 3' Coal SEAM - B
610	621					Mudstone. Dark brown core well broken. Fractures are clean. There is a 6" space of crushed coal at 624'. Bedding of siltstone is at 87 deg to the core axis.
621	626			190.8		Siltstone dark grey, core broken, fractures clean, 6" crushed coal at 624' bedding 87° to C.A.
						END OF HOLE
						Core Size
						Hole No. DDH. 1253 Page 8 of 8



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

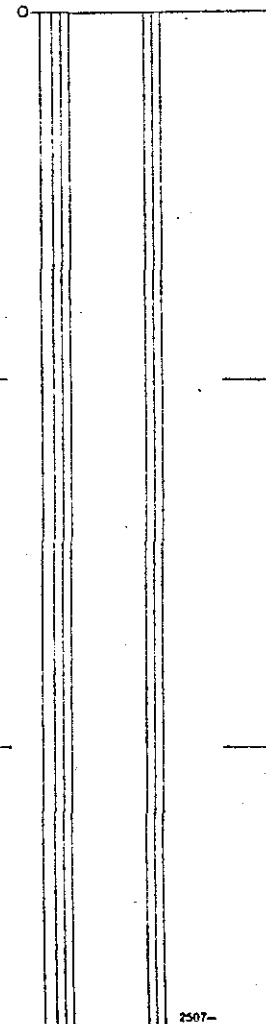
Objective: _____ Sampled: _____
 Logged By: DG Date: August 16/79 Composites: 485750.5 72180.3 5437.4
 142056.7 22600.5 1713.3

Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip: _____ Length: 198.4m / 651'

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.	RAD. LOG In Ft.	In meters	
From To	From To	From To	
0 17		0 5.2	Overburden
17 23			Siltstone. Dark grey. Core well fractured, fractures are clean except for iron infilling from 19' - 21'. There is some mudstone interbedding at 22' Bedding in this section is at about 72 deg to the core axis.
23 59			Sandstone. Light grey, fine grained. There is some siltstone interbedding at 35'. At this 35' point the sandstone grades into medium grained to 56'. Band of siltstone - dark grey 3" thick at 30'. Core is quite intact. Fractures are clean except for some carbonaceous infilling at 36'. Bedding is at 61 deg to the core axis. Grades into fine grained sandstone at 56' to 59'. Some iron infilling 24' to 26'.
59 64			Siltstone - Dark grey. Core quite intact. Fractures are clean. Some sandstone interbedding at 63'. Bedding is at 75 deg to the core axis.
64 70			Sandstone. Light grey, core well fractured. Medium grain. Fractures are clean. Bedding is at 74 deg to core axis.
70 79			Siltstone - Dark grey. Core quite intact. Fractures are clean except for some carbonaceous infilling at 78'. Bedding is at 87 deg to the core axis.
79 93			Sandstone/Siltstone - Light grey, fine grained sandstone irregularly interbedded with dark grey siltstone. Core is quite intact. Fractures are clean. Bedding is at 62 deg to the core axis.
93 101			Siltstone - Dark grey. Core quite intact. Fractures are clean. Bedding is at 72 deg to core axis.
101 121			Sandstone/Siltstone - Light grey, fine grained sandstone, evenly interbedded with dark grey siltstone.

40 Scale
 Color Plot & Dips
 Ore Classes & Avgr.



Core Size

Hole No. DDH. 1254

Page 1 of 6

Diamond Drill Geological Log

FORDING RIVER
OPERATIONS

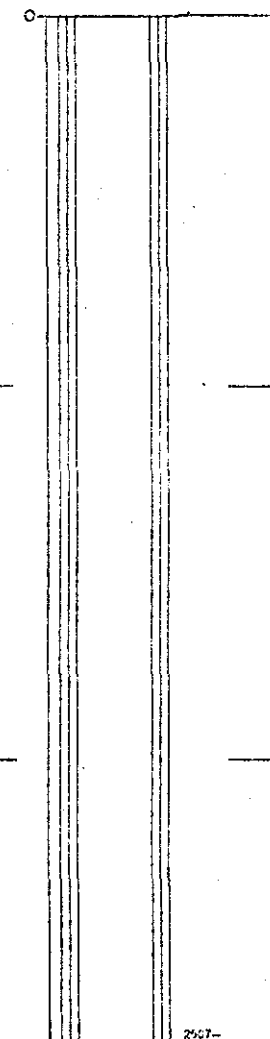
Objective: _____ Sampled: _____

Logged By: DG Date: Aug. 17/79 Composites: _____

Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
							Core is quite intact; fractures are clean. 6" band of pure siltstone at 117'. Bedding is at 86 deg to the core axis.
121	141						Siltstone/Sandstone. Dark grey siltstone irregularly interbedded with light grey fine grained sandstone. Core is quite intact. Fractures are clean. Bedding is at 73 deg to the core axis.
141	178						Siltstone. Dark grey. Core quite intact. Fractures are clean. Some interbedding with light grey, fine grained sandstone at 160' (lodocasting) 149' and 173'. Bedding is at 75 deg to the core axis. Calcite infilling at 186'.
178	202 1/2						Mudstone. Dark brown. Core quite intact. Fractures are clean. Some interbedding with siltstone and sandstone at 193'. Bedding is at 74 deg to the core axis.
202 1/2	227	201	226.5	61.3	69.1		Coal - core intact for 202 1/2 to 204. The rest of the section is well broken. The coal is harder (ie) there are no areas of crushed coal. Intact section 216' to 219'. Bedding is at about 69 deg to the core axis. 7.8(7.2)m 25.5'(23.5)'
227	232						SEAM-E Mudstone. Dark brown. Core well fractured. There is heavy carbonaceous infilling of fractures. There is some slickenslides at 231'. Bedding is at 80 deg to the core axis.
232	246	232	245	70.7	74.7		Coal Crushed coal from 232 - 235. Core is harder - more intact 235 1/2 to 246' - still well fractured. Bedding is at 70 deg to core axis. 4m 13' L. PART SEAM -E

40 Scale
Color Plot & Dips
Ora Classes & Aver.



Hole No. DDH. 1254

Page 2 of 6

Diamond Drill Geological Log

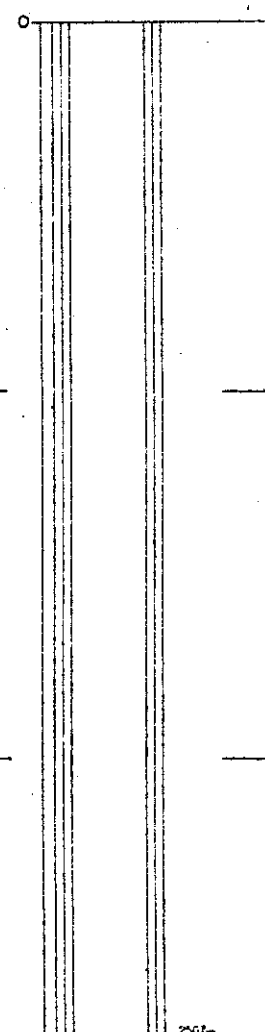
FORDING RIVER
OPERATIONS

Objective: Sampled: 202½ - 227 ft., 232 - 246 ft.
 Logged By: DG Date: Aug. 16/79 Composites:

Block: Sect.: Place: Greenhills App. Bear: App. Dip: Length:

CORE in Ft.		RAD. LOG in Ft.		in meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To		
246	267						Mudstone. Dark brown. Core well fractured. There is carbonaceous infilling of fractures from 246 to 160'. Slickensides at 256'. Other fractures are clean - except for some calcite at 266'. There is some sandstone and siltstone interbedding at 262'. Bedding is at 80 deg to the core axis.
267	269						Siltstone/Sandstone. Dark grey. Core intact. Fractures clean. Light grey, fine grained sandstone interbedding. Bedding is at 60 deg to the core axis.
269	272½						Mudstone. Dark brown. Core quite intact. Fractures are clean. Bedding is at 75 deg to core axis.
272½	300						Siltstone. Dark grey. Core quite intact. Fractures are clean. Bedding is at 80 deg to core axis. There is some interbedding with light grey, fine grained sandstone at 277' to 278'. There is some coal and bituminous mudstone, at 287' for 6".
300	310						Siltstone / Sandstone. Dark grey siltstone interbedded with light grey, fine grained sandstone. It is irregularly interbedded. Fractures are clean. Bedding is at 77 deg to the core axis.
310	315						Siltstone. Dark grey. Core quite intact. Fractures are clean. Bedding is at 76 deg to the core axis. Some calcite at 312' and some carbonaceous infilling at 313'.
315	318						Siltstone/Sandstone - Dark grey siltstone irregularly interbedded with light grey, fine grained sandstone. Core quite intact. Fractures are clean. Bedding at 78 deg to the core axis.
318	321						Mudstone. Bituminous. Dark brown. Core well broken. Some heavy carbonaceous infilling at 319'. Other fractures are clean. Bedding is at 81 deg to the core axis.

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Diamond Drill Geological Log

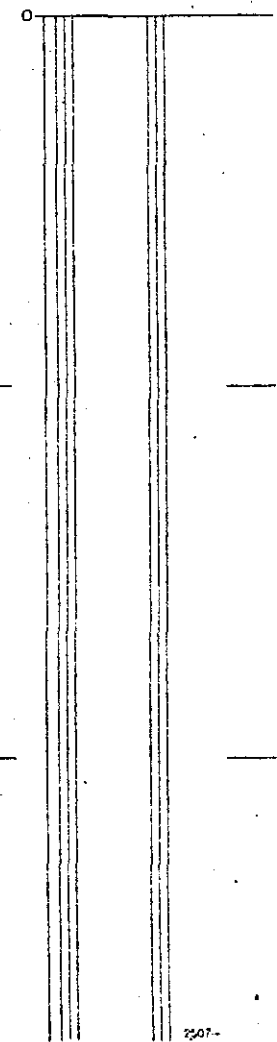
FORDING RIVER OPERATIONS

Objective: Sampled: 321 - 346 393½-396½ 402 - 416
 Logged By: DG Date: Aug/17/79
 Composites:

Block: Sect.: Greenhills
 App. Bear: App. Dip.:
 Length:

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
321	346	320	344	97.6	105	Coal - Hard core quite intact. Bedded at about 82 deg to the core axis. Core well fractured but not crushed. 7.4m 24' SEAM-D
346	391					Siltstone. Dark grey. Core quite intact. Some fractures have minor calcite infilling. There is some dark brown mudstone for 6" at 346'. Bedding is at 75 deg to the core axis. Interbedded fine grained sandstone 351, 355, 364, & 385 feet minor constituent but some soft sediment deformation is present with lodecasting and rip up clasts. Calcite infilling along fractures the rock is quite well fractured. Fault gauge at 363 feet. Some bituminous fractures.
391	393½	389	394	118.6	120.2	Mudstone/Coal - Interbedded, black mudstone & coal interbedded at 82 deg to core axis. Mostly mudstone. 1.6m 5'
393½	396½					Coal - black hard, quite crushed shiny high lustre.
396½	402					Mudstone - black fairly massive minor calcite on fracture surfaces. Some HB coal between 400 - 401 ft.
402	416	398.5	410.5	121.5	125.5	Coal - black - hard shiny crushed major fracture orientation is 82 deg to core axis. Some mudstone between 411 and 413 feet. 3.7m 12' SEAM-DL
416	420					Mudstone/Coal - Interbedded black mudstone & coal. Bedding is oriented approx 80 deg to core. Fractures dominate parallel to bedding.
420	455					Siltstone - grey massive, calcite along fractures oriented 45 deg to core axis. Fractures dominate at 56 deg to core axis. Some minor sandstone 429 - 430 ft. and 422 to 423 feet. More sandstone interbedding at 434' and 440'. There is heavy calcite infilling at 444'. Core is well fractured.

40 Scale Color Plot & Dips Ore Classes & Aver.



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:

Sampled:

Logged By: DG, DM

Date: Aug. /79

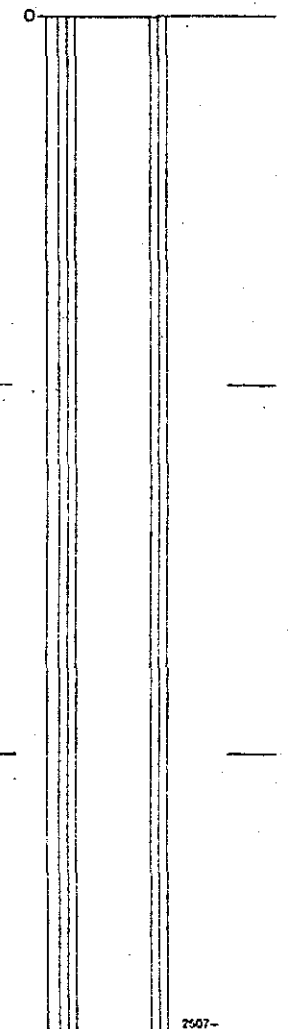
Composites:

Block: Sect: Place: App. Bear: App. Dip.: Length:

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

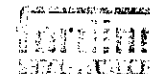
CORE in Ft.		RAD. LOG in Ft.		In meters		Description
From	To	From	To	From	To	
455	461					Sandstone - Light grey, fine grained core well fractured there is minor calcite infilling of fractures. Bedding is at 75 deg to the core axis.
461	467½					Siltstone/Sandstone. Dark grey siltstone irregularly interbedded with light grey fine grained sandstone. Core is well fractured. There is heavy calcite infilling of fractures. Bedding is at 65 deg to the core axis.
467½	510					Sandstone. Light grey, medium grain. Core well broken. Very broken 499' to 509'. Fractures are clean 467½ to 502' then there is carbonaceous infilling to 510'. Sandstone has vugs 488'. Bedding is at 71 deg to the core axis.
510	521					Siltstone. Dark grey, core quite intact. Some minor calcite infilling of fractures. Some interbedding with sandstone light grey, fine grained at 513'. Bedding is at 69 deg to the core axis.
521	526					Siltstone./ Sandstone. Dark grey siltstone irregularly interbedded with light grey, fine grained sandstone. Core is quite intact. Fractures are clean. Bedding is at 67 deg to the core axis.
526	531					Siltstone. Dark grey, core well fractured. There is minor calcite infilling of fractures. Bedding is at 78 deg to the core axis.
531	534					Mudstone. Dark brown. Core well fractured. There is some minor calcite infilling of fractures. Bedding is at 67 deg to core axis.
534	538					Siltstone/Sandstone. Dark grey siltstone finely interbedded with light grey, fine grained sandstone. Core well broken. There is minor calcite infilling of fractures. Bedding is at 43 deg to the core axis.

40 Scale
Color Plot & Dips
Ore Classes & Avar.



Diamond Drill Geological Log

FORDING RIVER
OPERATIONS

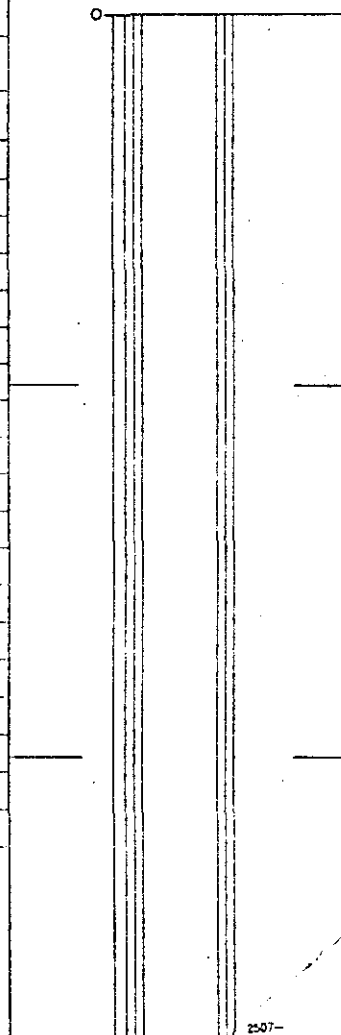


Objective: _____ Sampled: _____
 Logged By: DG Date: Aug 18/79 Composites: _____

Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
538	549						Mudstone. Dark brown. Core well fractured. Some minor calcite infilling of fractures Some slickensides, at 548'. Bedding is at 61 deg to the core axis.
549	601	548	595	167.0	181.3		Coal - soft, friable, lustrous. The core is in crushed condition, some mudstone between 592 - 601'. 14.3m 47' SEAM-B
601	606						Siltstone - grey massive mudstone zone of found along fractured surfaces section is well fractured and broken weak zone.
606	651				198.4		Sandstone medium grained grey sandstone silic cement. Some fine grained sand poorly sorted - the rock is well broken quite massive, featureless some mudclasts between 616 to 618 & 621 to 623 feet. some coalified plant fossils 613 to 627ft.



Core Size
 Hole No. DDH. 1254 Page 6 of 6

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: **LAT. DEP. ELEV.**

Logged By: **KH** Date: **August 15/79** Composites: **143.602° N 21.761° E 1792' S**

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: **277.2m / 909½'**

40 Scale
Color Plot & Dips
Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		in meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
0	32			0	9.7	Overburden (Tricone & Casing) 4.8m Coal at 1.6m ??
32	42					Sandstone/siltstone- extremely fine grained sandstone with medium grey siltstone Bituminous infilling at 35 feet. Minor calcite along joint fracture at 32'. Minor amounts of iron oxide staining. Pyrite flecks at 33 feet. Bedding agitated at top, becoming more regular with depth. Bedding at 80 deg to core axis.
42	44.5					Mudstone- Coal. - Black in color. High lustre. Bedding at 74 deg to core axis.
44.5	54					Sandstone/Siltstone - interbedded fine grained light colored sandstone with darker siltstone. Large calcite infilled joint fractures at 44 and 47 feet. Fracture is at about 8 deg to core axis. Beds are 3-4 mm thick and slightly agitated. Bedding at 82 deg to core axis.
54	67					Siltstone/Mudstone - dark grey black in color. Minor amounts of bituminous infilling along fractures. 8 inch sandstone parting at 65 feet - fine grained medium grey color. Brecciated section at 61 feet. Bedding at 83 deg to core axis.
		65.5	71	20	21.7	Coal 1.7m 5.5'
57	76					Mudstone/Coal - black color. Shiny lustre. Alternating 1 foot bands of pure coal and coal/mudstone. Coal is highly broken. Coal / Mudstone is fairly intact. Bedding at 86 deg to core axis.
76	80					Mudstone - dark grey in color. Bituminous infilling of fractures, Bedding at 77 deg to core axis.
80	96					Sandstone/Siltstone/mudstone - Sandstone - med to fine grained. Siltstone, mudstone - dark grey. Predominantly sandstone siltstone interbedded with 3" mudstone

Core Size

Hole No. DDH. 1255

Page 1 of 10

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

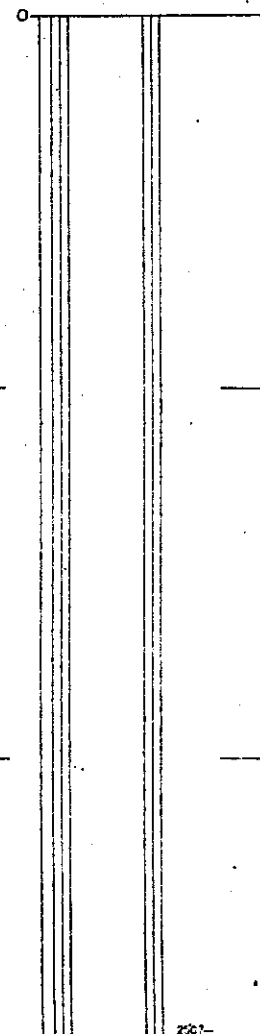
Logged By: HK Date: August 15/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
						partings. Large amountsof bituminous infilling of fractures. Calcite infilling of fractures from 88-90 feet. Bedding change at 90 feet. Before 90' bedding is at 78 deg to core axis. After 90' bedding is at 32 deg to core axis. At 95' bedding is at 82 deg to core axis. Minor brecciation at 94 feet.
95	101					Mudstone/Coal - Black color, predominatly mudstone. Bedding at 78 deg to core axis.
101	102					Sandstone - light color extremely fine grained. Slightly agitated bedding. Bedding at 78 deg to core axis.
102	112					Mudstone/Coal - dark grey, high lustre. Amount of coal increasing with depth. Calcite stringers at 106 feet. Bedding at 84 deg to core axis.
112	116	110	114	33.5	34.8	Coal - black medium lustre. Bedding at 70 deg to core axis.. 1.3m 4'
116	118					Siltstone- dark grey in color. Mosif bedding at 78 deg to core axis.
118	124	118	120	36	36.6	Coal - dark grey, medium lustre. Several fractures along bedding plane. Bedding at 82 deg to core axis, 0.6m 2'
125	139.5					Siltstone/Mudstone. Dark grey in color. Changing from mudstone to siltstone with depth. Large amounts of broken core in section. Minor calcite infillings of joint fractures. Minor brecciation at 138 feet. Bedding at 81 deg to core axis.
139.5	148					Sandstone/Siltstone - extremely fine grained light colored sandstone with interbedded medium grey siltstone. Calcite healing of joint fractures at 142 and 144 feet. Bedding is agitated indicative of a disturbed environment. Several joint fractures with calcite infilling at 17 deg

40 Scale
Color Pict & Dips
Ore Classes & Aver.



Core Size
Hole No. DDH. 1255

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Diamond Drill Geological Log

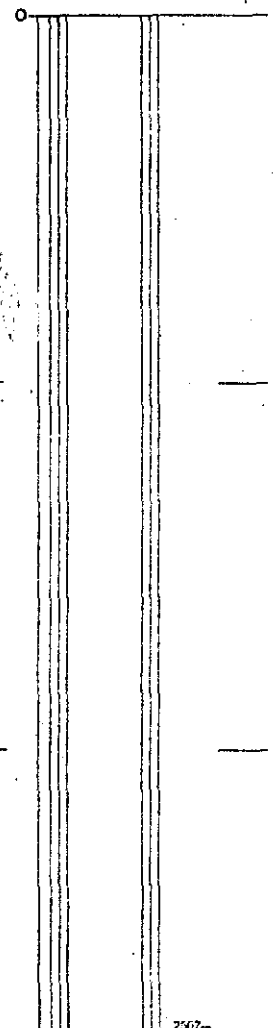


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: KH Date: August 15/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips Ore Classes & Aver.

CORE In Ft.		RAI LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To		
							to core axis. Core showing less sandstone with depth. Bedding at 76 deg to core axis.
148	163						Siltstone/mudstone - dark grey in color. Minor bands of light grey sandstone - siltstone. Calcite infilling of joint fractures, at, approximately 20 deg to core axis. Occasionally .5 sections of broken core. Slightly agitated bedding. Bedding at approx. 76 deg to core axis.
163	166						Sandstone/Siltstone. Fine grained sandstone. Medium grey color. Calcite infilling of joint fractures. Minor bituminous infilling of bedding plane fractures. Agitated bedding. Bedding at approx. 79 deg to core axis.
166	176						Siltstone - dark grey in color. Relatively soft siltstone. Calcite infilling of joint fractures. Masif section bedding at 74 deg to core axis. Relatively intact section - few natural fractures.
176	194						Sandstone/Siltstone - Sandstone is light grey color, extremely fine grained. Siltstone dark grey. Changing to predominantly sandstone with depth. Calcite infilling and healing of joint fractures. The fractures are at approximately 30 deg to core axis, and at 170 deg to bedding. Minor fault at 192 feet with a 1cm displacement agitated, becoming more disturbed with depth. Bedding at 72 deg to core axis. Slickenslides along bedding plane fractures.
194	202						Siltstone/Mudstone - extremely fine grained light grey sandstone with dark grey interbedded siltstone. Calcite healing and infilling along joint fractures. Beds are up to 1" thick and extremely agitated. Lodecasting at 195 feet. Bedding at 70 deg to core axis.



Hold No. DDH. 1255

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Diamond Drill Geological Log

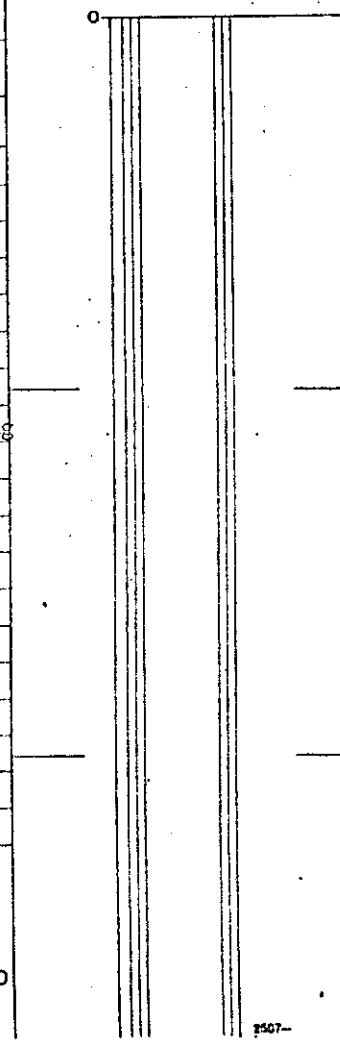


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: KH Date: August 15/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

40 Scale
 Color Plot & Dips _____ Ore Classes & Aver. _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
202	216						Siltstone - dark grey in color. Mosif features. Minor bituminous infilling of bedding plane fractures. Bedding at approximately 77 deg to core axis.
216	225						Mudstone - dark grey in color 6" light grey siltstone parting at 222 feet. Bedding here is slightly agitated - beds about 8mm thick. Bituminous infilling of fractures - amount increasing with depth. Minor calcite infilling of fracture at 220 feet. Bedding at 66 deg to core axis.
225	250.6	225.5	247	68.8	75.4		Coal - dark grey, black. Medium lustre - fairly hard. Some mudstone present. Mostly highly broken, but with occasional 3" pieces of intact core. Bedding at 78 deg to core axis. 0.6m parting at 73m 6.6(6m) 21.5(19.5') SEAM-F
250.6	256.5						Siltstone - medium and dark grey. Beds slightly agitated an 1-2mm thick. Large amount of carbonaceous infillings and some bands of coal around 256 feet. Calcite stringers at 256 feet. Most fractures along bedding plane. Bedding at approx. 79 deg to core axis.
256.5	271.5						Mudstone - blue - black color. Large amounts of bituminous infillings of bedding plane fractures. Bedding at 83 deg to core axis.
271.5	274						Siltstone/mudstone. Dark grey in color. Minor amounts of bituminous and clacite infilling of fractures. Slickenslide at 273 feet. Becoming more bituminous with depth. Bedding at approx. 80 deg to core axis.
274	276	272.5	274	83	83.5		Coal - dark grey in color - dull lustre. Large amount of mudstone. Bedding at 81 deg to core axis. 0.5m 1.5'



Core Size

Hole No. DDH. 1255

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: KH Date: August 15/79 Composites: _____

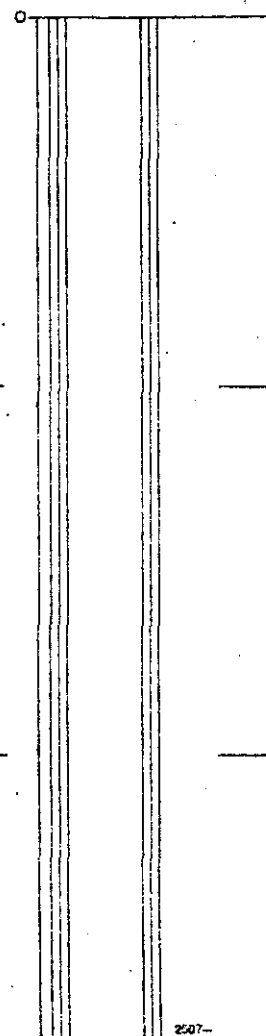
Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.	RAD. LOG In Ft.	In meters	COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG
From	To	From	To
276	278.5		
283.5	290		
290	310		
310	315.5	309.5	313
315.5	323		
323	325		
325	343		
343	362		

Mudstone - dark grey in color. Large amounts of coal. Highly broken throughout.
 Siltstone/Sandstone - light grey, fine grained sandstone with interbedded medium grey siltstone. Minor amount of bituminous of bedding plane fractures. Slightly agitated bedding. Bedding at 78 deg to core axis. Calcite infilling along joint fractures at 284 feet. Slickenside at 285 feet.
 Mudstone/Siltstone - dark grey-blue in color. Fine grained light color 6" sandstone partings at 296 and 301 feet. Minor calcite along joint fractures in sandstone parting at 301 feet. Bituminous infilling of bedding plane fractures. Most fractures along bedding plane approx. 2 per foot. Bedding is fairly regular, not agitated. Bedding at 66 deg to core axis at 295 feet, increasing to 82 deg to core axis at 303 feet.
 Coal - black, medium lustre - fairly soft, but also fairly intact. Bedding at approx. 75 deg to core axis. **1.1 m 3.5'**
 Mudstone - dark grey, blue in color. Bituminous infilling of fractures. 6" bituminous parting at 318 feet. Bedding at 78 deg to core axis.
 Siltstone medium grey in color. Minor bituminous infilling of fractures. Slightly agitated bedding. Bedding at 81 deg to core axis.
 Siltstone / Mudstone - dark grey blue in color. Large amount of carbonaceous infilling and bands. Minor calcite along joint fractures at 336 feet. Bedding at 80 deg to core axis.
 Mudstone/Siltstone - dark grey in color. Minor bituminous infilling. Several long joint fractures throughout section. Mosif fractures. Bedding at approx. 78 deg to core axis.

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Diamond Drill Geological Log



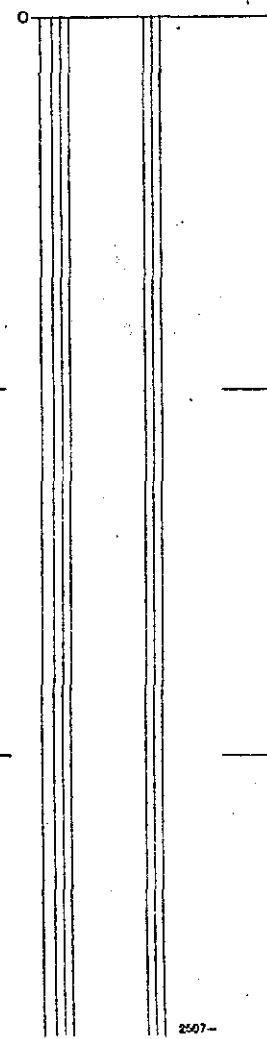
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To		
362	373					Siltstone - medium grey in color. Several long joint fractures in section. Poor bedding. Bedding at approx. 85 deg to core axis. Dolomite (Ca(Mg)CO ₄) infilling at joint fractures. Calcite stringers at 370 feet.	
373	391					Siltstone/Sandstone - extremely fine grained medium grey with medium grey siltstone. Grainsize decreasing with depth. Bedding at approx. 82 deg to core axis.	
391	393					Siltstone/Mudstone. Dark grey in color. Large amount of bituminous infilling. Changing to predominantly siltstone with depth minor calcite infilling of joint fractures. Bedding at 77 deg to core axis.	
393	422					Sandstone light grey in color medium to fine grained. Grainsize increasing with depth. Large amount of coal infilling and healing of bedding plane fractures. Fairly regular bedding. Bituminous stringers below 414 feet. Mudstone parting at 418' showing pyrite nuggets. Bedding at approx. 76 deg to core axis. Slight loadcasting at 415 feet.	
422	448					Siltstone/Mudstone - dark grey, black in color. Calcite infilling along joint fractures at 430 feet. Rest of fractures clean. Poor bedding. Fairly well intact core, most fractures being B2 type, approx. One per foot. Bedding at approx. 77 deg to core axis.	
448	511					Siltstone / Mudstone - dark grey in color. Minor calcite stringers at 450 feet. Minor bituminous infilling below 495 feet. Most fractures B2 type, approx. 1 per foot Nasif core. Predominantly mudstone below 501 feet. Light grained, extremely fine grained sandstone bands from 448 - 511 ft. Calcite in J1 type fracture at 461 ft. Slightly agitated bedding. Bedding at approx. 85 deg to core axis.	

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Howe No. DDH. 1255 Page 6 of 10

Diamond Drill Geological Log



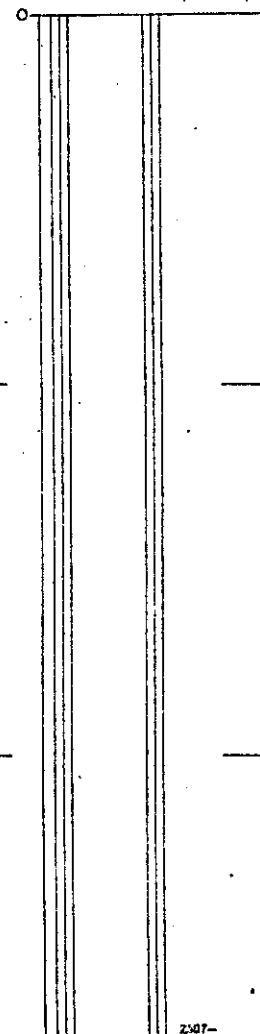
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
511	551	511	549.5	155.8	167.6	Coal - Black high lustre. Fractured throughout, with hardness of 1 and bands of coal with less hardness. Bedding at approx. 81 deg to core axis. 11.8(11.2)m 38.5 (36.5)' SEAM-E
551	556					Coal/Mudstone - dark grey, medium lustre. Highly broken - most fractures along bedding plane. Bedding at 80 deg to core axis.
556	567					Mudstone - dark grey in color. Large amount of bitumous infilling and bands, amount decreasing with depth. Highly fractured in bitumous bands. Calcite infilling of J4 type fracture at 566 feet. Most fractures along bedding plane. Bedding at 83 deg to core axis.
567	575					Siltstone - medium grey in color. Bituminous infilling of bedding plane fractures. Calcite infilling of joint fractures - mostly at 570 - 572 feet. Highly fractured broken core from 570 - 572 feet. Bedding at 84 deg to core axis. Slightly agitated bedding.
575	587.5					Mudstone - dark grey 'blue' in color. Minor calcite infilling at joint fractures. Broken core from 582 - 584 feet. Bedding at 82 deg to core axis.
587.5	596					Siltstone / Mudstone - alternating 1' beds of siltstone and mudstone. Siltstone light grey with mudstone bands. Mudstone - dark grey in color. Calcite infilling of joint fractures and calcite healing at 590 feet. Agitated bedding. Bedding at approx. 77 deg to core axis.
596	620					Mudstone - dark grey in color. Bituminous infilling of fractures, becoming more prominent with depth. Minor calcite infilling Slickenslide at 600'. 4" siltstone bands at 602' & 607'. Bedding at approx. 80 deg to core axis.

40 Scale
Color Plot & Dips Ore Classes & Aver.



Core Size

Hole No. DDH. 1255

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

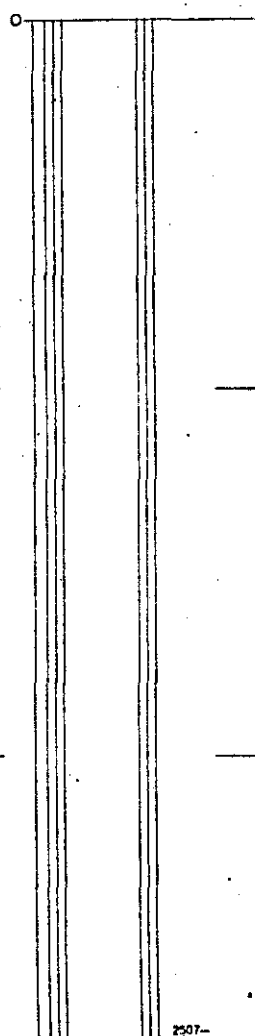
Logged By: Lorian Date: August 17/79 Composites: _____

S Jack: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. in meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
From To From To From To DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.	RAD. LOG In Ft.	in meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO		
From	To	From	To	From	To	
620	656	622	652	189.6	198.8	Coal - very soft, dull lustre, bedding is 63 deg to core axis. Core is entirely broken except for 650' where the fractures orient at 60 deg to core axis. 30' 9.2m SEAM-D
656	661					Siltstone - medium grained, dark grey in color. Fractures are calcite filled. Bedding is 76 deg to core axis. Some carbonaceous infilling near 660'.
661	670	660.55	664.5	201.3	202.6	Coal - very dull and soft, bedding is approx. 41 deg to core axis. 1.3m 4' Fractures at 666' orient at 84 deg to core axis.
670	680					Mudstone; very dark in color, large grained. Carbonaceous infilling. Bedding is 87 deg to core axis. Slickenslide at 679' otherwise fractures contain carbonaceous infilling.
680	696	677.5	687	206.5	209.4	Coal - very dull, lacks lustre. Two foot parting of mudstone at 691' - 693'. Otherwise core is entirely broken up. Bedding is 69 deg to core axis in mudstone. 2.9m 9.5' SEAM-DL
696	710					Sandstone - Light grey in color. Very large grain size. Calcite infilling occurring in fracture. Also there's a band of calcite running through the core. Bedding is 80 deg to core axis. Bedding changes at 701.5 to 69 deg to core axis. Larger bands of calcite are evident. Broken core begins at 704' and continues to 709'. The broken core pieces have alot of calcite deposits on them.
710	715					Mudstone; medium grey/black in color, medium to large grained. Alot of calcite deposits found on the core. Bedding is 88 deg to core axis. Some siltstone banding occurring at 708' Bands are large grained, very hard, containing alot of calcite.

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size
Hole No. DDH. 1255 Page 8 of 10

Diamond Drill Geological Log



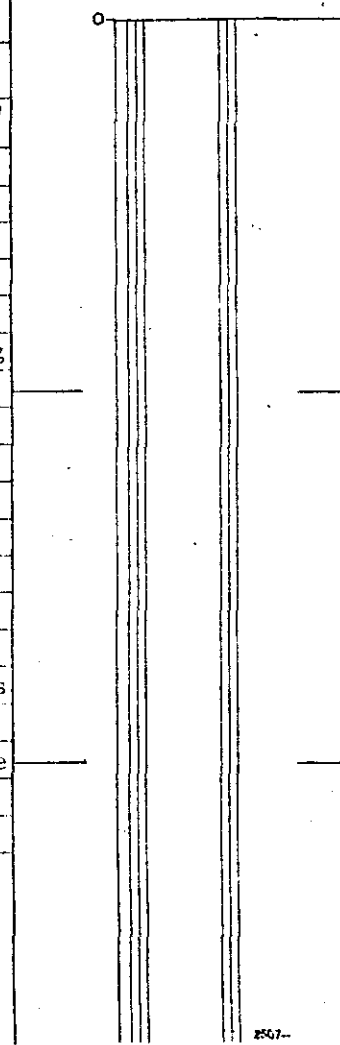
**FORDING RIVER
OPERATIONS**

Objective: _____ Sampled: _____
 Logged By: **Loriann** Date: **August 17/79** Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips
 Ore Classes & Avur.

CORE in Ft.		RAD. LOG in Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
715	720					Siltstone - medium grained, dark grey in color. Bedding is 79 deg to core axis. Alot of calcite found on the core especially in the fractures. Some iron oxides found on the core at 718.5' (not a large amt.)
720	727					Mudstone - very dark in color, medium grained. The mudstone is quite hard. Some interbedding with siltstone near the 720-721" mark. Alot of calcite is found on the core pieces, also in bands running through the core. Bedding is 90 deg to the core axis.
727	778					Sandstone - very dark in color, and small grain size up until 756' then the grain size becomes very large and the color lightens. Fractures at 731' contain calcite bedding here is 61 deg to core axis. Broken core begins at 746' and ends at 750', looks to be a fault zone, because core contains alot of calcite. Bedding here also changes to 51 deg to core axis. Fractures begin to have carbonaceous infilling at 754'. Core here is very hard. Bedding here is 82 deg to core axis. There is no calcite on the core here.
777	790.5					Sandstone - medium grey in color. Medium grain size. Bituminous infiling of fractures amount increasing with depth. Regular beds 2-4mm thick. Some crossbedding at 782'. Bituminous stringers from 789 - 790.5. Intact core from 781 - 789 the rest is broken by J1 and J2 type fractures. Bedding at 78 deg to core axis.
790.5	848	790	845.5	240.7	257.7	Coal - black medium lustre. Very soft highly crushed throughout section 17.0m 55.5' SEAM - B
848	851					Siltstone/Mudstone - dark grey in color. Minor bituminous infilling. Mudstone becoming more prominent with depth. Broken through out by J1 type fractures. Bedding at 74 deg to core axis.



Core Size

File No. DDH. 1255

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

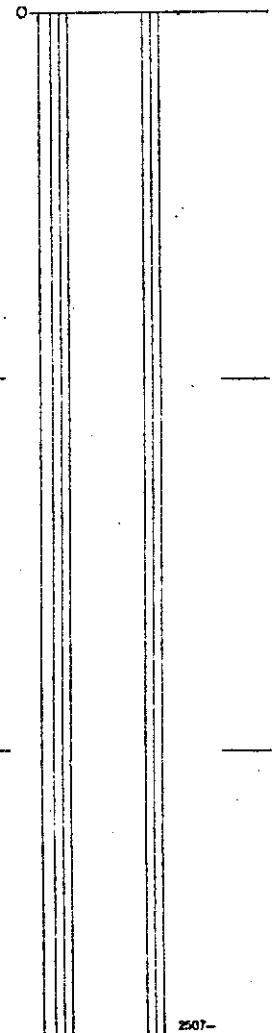
Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

CORE in Ft. RAD. LOG in Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

From	To	From	To	From	To	
851	856					No core in this section.
856	863					Coal/mudstone dark grey in color. Bands of pure mudstone at 856 feet. & 860, 862. Highly broken and crushed core. Mudstone becoming more prominent with depth. Bedding at 77 deg to core axis.
863	868					Siltstone - medium grey in color. Soft siltstone. Minor bitumous infilling. Highly broken core. Bedding at 77 deg to core axis. Fairly regular bedding, with some minor cross bedding at 867 feet.
868	877					Sandstone/Siltstone. Light grey, fine grained sandstone with interbedded dark grey siltstone. Grainsize increasing with depth. Minor bitumous infilling below 876 feet. Broken core from 875 - 875.5 feet and 876 - 877 feet. Bedding is fairly regular. Bedding at 61 deg to core axis.
877	899.5					Sandstone light grey in color, medium grained. Highly broken throughout. Bitumous infilling of bedding plane fractures below 899 feet. Gouged core possibly, because of faulting. Bedding at 42 deg to core axis.
899.5	902	898	902	273.8	275	Coal black - high lustre, Highly crushed. 30% core loss. 1.2m 4' SEAM-A
902	909.5			277.2		Sandstone - light grey, medium grained minor bitumous infilling of fractures. Most pieces about 4" long - most fractures along bedding plane regular non agitated bedding but faint in places. Bedding at approximately 66 deg to core axis.
END OF HOLE						

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size

Hole No. DDH. 1255

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: LAT. _____ DEP. _____ ELEV. _____

Logged By: DTM Date: June 6/79 Composites: 148757³ N 21605⁴ E 1326⁰

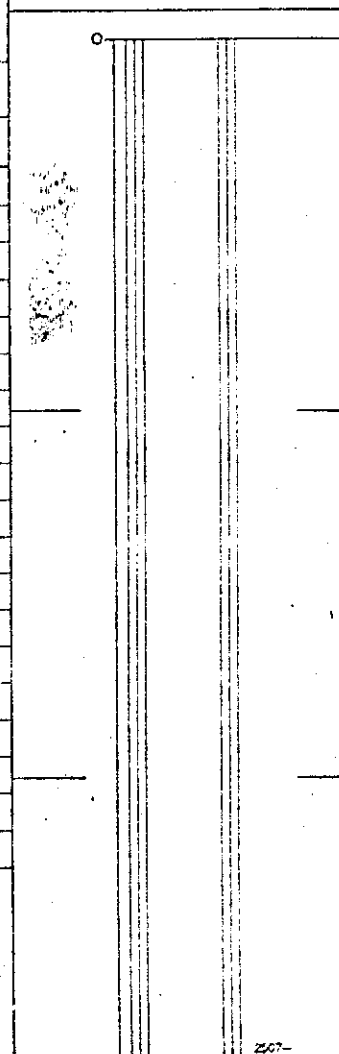
Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: 1071' 326.4m

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
0	16			0	4.9	Overburden
16	20					Siltstone/sandstone - poorly sorted siltstone and very fine grained sandstone core is well fractures. dominant orientation approx 60 deg to core axis. Some weathering medium grey color.
20	26					Sandstone - fine grained sandstone with silty laminations crossbedding from 23 to 25 feet - tops upwards bdg orientation 67 deg to core axis. Iron staining from 21 to 23 feet.
26	27½					Mudstone - black massive dominant fracture orientation is 65 deg to core axis.
27½	31					Siltstone/Sandstone - medium grained sandstone, grey siltstone beds are disturbed indicating an agitated environment. Soft sediments deformation. Calcite healing of fractures.
31	34					Sandstone Medium grained, light grey sandstone, regular bedding, some coaly interbeds 1 - 5 mm thick, also some coalified plant fossils. Bedding is oriented 64 deg to core axis.
34	37					Mudstone - dark grey some interbedded coal 2 cm thick bedding fractures are oriented approx 70 deg and are bituminous.
37	40					Sandstone/Siltstone - interbedded fairly regular bedding fine grained, light grey sandstone, dark grey siltstone. Bedding orientation 75 deg to 55 deg with depth to decreases.
40	53					Mudstone - dark grey, massive. Some pyrite at 45 feet. Bituminous partings oriented 52 deg to core axis, some plant fossils.

Core Size _____
Hole No. DDH. 1256 Page 1 of 14

40 Scale
Color Plot & Dips Core Cases & Aven.



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

40 Scale
Color Plot & Dips
Core Classes & Aven.

Objective:
Logged By: DTM
Date: June 18/79

Sampled:
Composites:

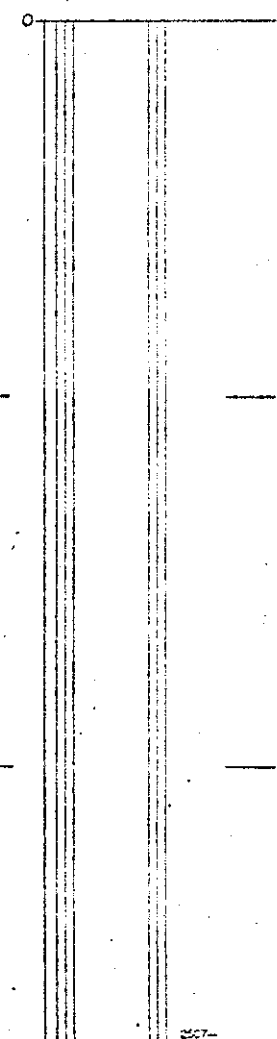
Block: Sect.: Place: Greenhills App. Bear: App. Dip.: Length:

CORE In Ft.		RAD. LOG In Ft.		in meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
53	87					Siltstone - dark grey - fairly broken with some very fine grained sandstone at 55 feet and between 57 to 58 feet which exhibits lode casting and pseudo nodules. Major fracture orientation 70 deg to core axis. Some interbedded fine grained interbedded sandstone between 72 and 73 feet and 78 to 78½ feet. Some shale between 70 and 74 feet. A one foot coal parting exists from 80 - 81 feet. Fault gauge at 79 feet. Some calcite stringers and minor brecciation between 82 and 83 feet. Indicates fault zone. Bedding is approx 80 deg.
87	98					Siltstone / Sandstone - fine grained sandstone, light grey interbedded with siltstone. The beds are disturbed indicating a turbulent environment. Bedding is oriented 70 deg+. to the core axis. Some lode casting at 96 feet. Bedding is oriented .60 deg to core axis. Joint fractures oriented 25 deg to core axis. Most fractures are along bedding planes.
98	107					Mudstone - black with some interbedded coal approx 5mm to 1 cm thickness oriented 80 deg to the core axis.
107	111	104	110.5	31.7	33.7	Coal - Black, dull sheen moderatley hard Fractures oriented 70 deg to 80 deg to the core axis. 6.5' 2m SEAM -Gu
111	116					Mudstone - with some interbedded coal
116	130					Siltstone - Dark grey with some fine grained sandstone interbedded between 117 and 118 ft. bedding

Core Size

Hole No. DDH. 1256

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Diamond Drill Geological Log

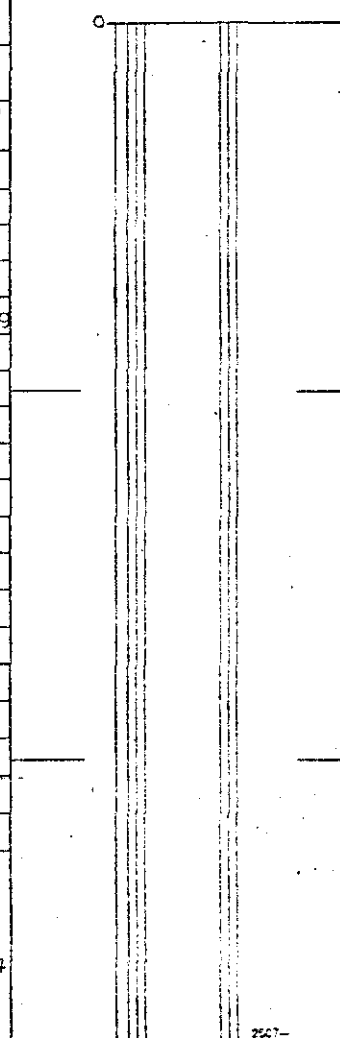


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

40 Scale
 Color Plot & Dips
 Ore Classes & Avar.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
						is oriented 65 deg to core axis. More fine grained sandstone between 119 and 120 feet with cross bedding indicates top is up. Joint fracture 30 deg to core axis. Some minor calcite in fractures.
130	152					SST/SLST - Interbedded fine grained light grey sandstone interbedded with siltstone. Bedding 84 deg to core axis. Fractures dominant along bedding planes some joint fractures at 40 deg to core axis. Some cross bedding at 118 ft.
152	156					Siltstone - dark grey well fractured some interbedded coal from 154 to 156 ft Coal - a few mm thick oriented approx 74 deg to core axis. fractures are parallel to bedding plane.
156	158	155	158	47.3	48.3	Coal - Black - moderately hard dull sheen fractures oriented 45 deg to core axis.
						3' 1m PART SEAM - GL
158	163					Mudstone - Black massive some bitumen on fracture surfaces. Fractures oriented approx 20 deg to core axis. Interbedded coal at 162 to 163 ft.
163	167	161.5	170.5	49.2	52	Coal - Black Hard, dull sheen fractures 80 deg to core axis. 9' 2.8m SEAM - GL
167	181					Mudstone / Coal - Interbedded - bedding 74 deg to core axis. Some coalified plant fossils. Rock is well fractured fairly well fractured Interbedded fine grained sandstone between 174 to 176 feet and 179 to 180 ft.



Core Size
 Hole No. DDH. 1256
 Page 3 of 14

Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DTM Date: June 24/79 Composites: _____
 Block: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

Color: Plot & Dips _____ Ore Classes & Aver. _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
181	186						Siltstone - grey some fine grained sandstone clasts at 186 feet. Also minor calcite in stringers and as infilling on fracture surfaces.
186	189½						Siltstone/Sandstone/mudstone - interbedded fine grained. Light grey sandstone, black mudstone fairly regular bedding oriented 75 deg to core axis. Minor calcite along fracture surfaces.
189½	194						Mudstone - Black - Interbedded coal from 189½ to 191½ coal beds 5 mm thick orientation 78 deg to core axis.
194	196						Sandstone/Siltstone/Mudstone - Interbedded fine grained sst. Siltstone & mudstone regular even bedding a few millimeters thick oriented 78 deg to core axis. Fractured along bedding planes.
196	206						Mudstone - Black, Massive, fractures dominate at 82 deg to core axis. Coal between 203 and 205½ ft in beds 1cm thick oriented 82 deg to core axis.
206	209½						Sandstone/Siltstone/Mudstone . Interbedded beds exhibited soft sediment Deformation some lode casting & flame structure. Sandstone is fine grained, light grey.
209½	211						Mudstone, Black massive
211	212						Mudstone/coal, black interbedded mudstone, coal, fairly well broken.
212	216	211	216	64.3	65.8		Coal - Hard, black, dull sheen, broken 5' 1.5m SEAM - Fm3
216	221						SST/SLST/MDST - Fine grained sandstone crossbedding at 216 to 217½ ft. Calcite healed joint fractures are oriented 2 deg to core axis. Some

40 Scale

Color: Plot & Dips _____ Ore Classes & Aver. _____

Core Size

Hole No. DDH. 1256 Page 4 of 14

Diamond Drill Geological Log

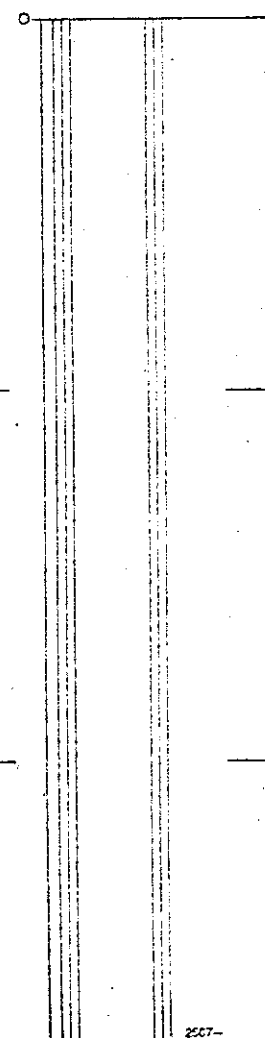


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DTM Date: June 25/79 Composites: _____
 Block: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
						coalified plant fossils. Bituminous partings along bedding planes. bedding is oriented 75 deg to core axis.
221	235					Siltstone: Grey, broken between 226 and 234 feet. Calcite on fracture surfaces. Some interbedded coal between 222 and 226 feet.
235	236					Sandstone - Laminated fine grained sandstone, Laminations oriented 70 deg to core axis.
236	249					Siltstone - grey, sandstone grades into siltstone from 236 to 237 1/2 ft. Some bands of sandstone 2 to 3 cm thick with siltstone clasts. Some interbedded sandstone between 245 and 246 feet. Calcite healed fractures.
249	251 1/2					Sandstone/Siltstone interbedded some deformation at 250 feet. Bedding orientation 73 deg to core axis. Minor calcite along joint fractures.
251 1/2	253 1/2					Siltstone, grey massive fractures oriented 80 deg to core axis.
253 1/2	257					SLST/SST - regular bedding oriented 60 deg to core axis. Some lode casting at 255 feet. Sandstone is light grey, fine grained siltstone - medium grey. Fractures dominate parallel to bedding planes.
257	259 1/2					Siltstone - dark grey, siltstone, fractures dominate between 65 deg and 75 deg to core axis.
259 1/2	262					Siltstone / Sandstone - Interbedded light grey fine grained sandstone & medium grained siltstone regular even bedding oriented 70 deg to core axis. Fractures parallel bedding planes.

40 Scale
Color Plot & Disc Ore Classes & A-cr.



Core Size

Hole No. DDH. 1256

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Diamond Drill Geological Log

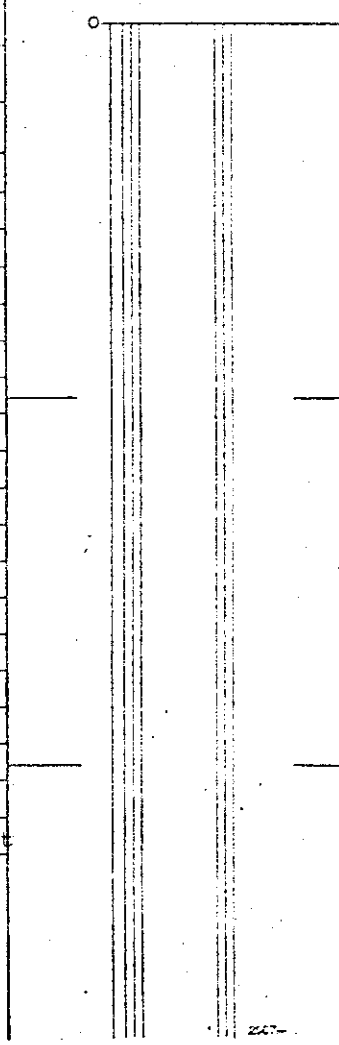


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DTM Date: June 25/79 Composites: _____
 Book: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____
 Color Plot & Dips _____ Ore Classes & Aver. _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
262	266					Siltstone - dark grey some interbedded coal oriented 76 deg to core axis. Minor calcite along gash fractures. Some minor fine grained sandstone between 262½ to 263 feet orientation of bedding 84 deg to core axis.
266	281	277	281	84.5	85.7	Mudstone / Coal - Interbedded black mudstone and black coal, bedding is oriented 78 deg to core axis. Some siltstone and mudstone interbedded between 271 and 272 feet.
		284	286.5	86.5	87.3	4'c/3' sh/2.5'c 1.2mc / 0.8m sh/ 0.8mc SEAM-Fm2
281	283½					Siltstone. Grey fairly well broken - calcite filled joint fractures Bitumen on fracture surfaces
283	287					Coal - black fairly shiny moderately hard fractures 40 deg to 60 deg to core axis.
287	289					Mudstone /Coal - Coal beds a few millimeters thick are interbedded with mudstone beds range 72 to 80 deg to core axis. Some crushed shiny coal in a band 4 cm thick at 288½ feet.
289	294					Mudstone - Black, massive, mudstone. Some calcite on fracture surfaces Irregular clasts of siltstone at 293 feet.
294	299					SST/SLST/MDST - Interbedded fine grained, light grey, sandstone, dark grey siltstone, black mudstone. Beds are 5mm to 2 cm thick oriented 80 deg to core axis. Lode casting at 295 ft. some cross bedding at 296½ ft. Tops is upwards. Calcite healed joint fractures oriented 5° to core axis 4 or 5/ ft.

Core Size _____
 Hole No. DDH. 1256 Page 6 of _____



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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

Logged By: DTM Date: June 31/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App.: Dip.: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

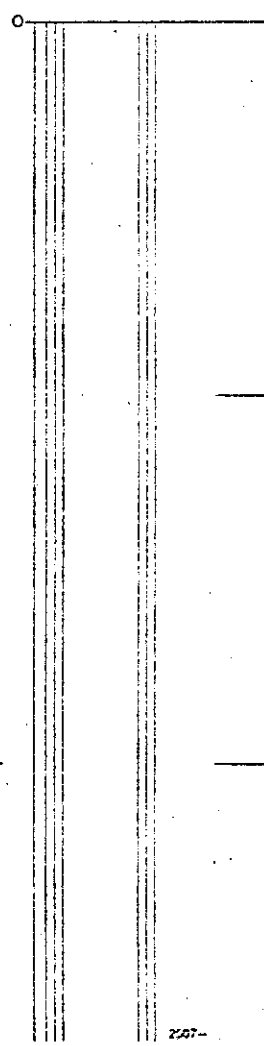
299	310								Mudstone - Grey, fairly massive, with fractures dominating at 83 deg to core axis. Quite well fractured between 307 to 310 feet.
310	311								Mudstone - crushed rock soft highly friable indicates fault zone some gauge present.
311	342								Siltstone - grey siltstone with some bands of fine grained sandstone approx 1 cm thick at 315, 320 to 321 ft. Minor calcite as infilling on fractures surfaces. Some mudstone between 320 and 321 interbedded also 336 to 337 ft. Bedding regular even oriented 80 deg to core axis. Most fractures parallel bedding or oriented 15 deg to core axis. Rock is fairly well broken.
		337	340	102.8	103.8	COAL	3'	1m	SEAM-Fml
342	351								Sandstone/Siltstone finely interbedded fine grained sandstone and siltstone. Bedding is oriented 65 deg to 78 deg to core axis. Some calcite along joint fracture surfaces.
351	371								Siltstone - grey fairly massive, broken along joint surfaces oriented 42 deg to core axis. Also along bedding planes oriented approx 80 deg to core axis. Some interbedded fine grained sandstone from 370 to 371 feet and 366 to 367. Bedding approx 80 deg to core axis.
371	382								Mudstone - dark grey mudstone fairly massive coalified fossils and bituminous partings present

Core Size
Coal

Hole No. DDH. 1 256

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40 Scale
Color Plot & Dps Gre Classes & Aver.



Diamond Drill Geological Log

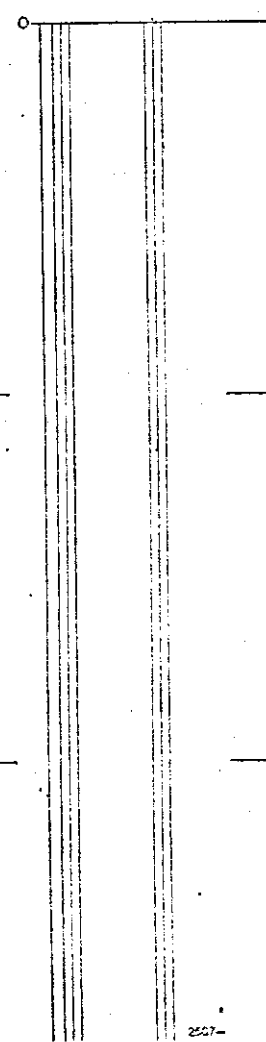


FORDING RIVER
OPERATIONS

Colective: _____ Sampled: _____
 Logged By: DTM Date: July 28/79 Composites: _____
 Block: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
382	401 1/2	382	406	116.4	123.8	Coal - black, hard, dull sheen, fractures oriented 55 deg and 80 deg to core axis.
						1' / 0.4m Parting at 121.6m 24(23)' 7.4(7)m SEAM - F
401 1/2	432					Mudstone - black fairly massive, some interbedded coal between 425 and 432 feet, 408 to 409 feet. Minor calcite along fracture surfaces. Major fracture orientation approx 80 deg.
432	435.4	431.5	434	131.5	132.3	Coal - Black, hard, shiny, fractures are oriented 60 deg to 80 deg to core axis. 2.5' 0.8m SEAM-fl
431	439					Mudstone - Black massive, some interbedded coal 435.5 to 436.4 feet approx 5mm thick beds fractures are oriented 70 deg to 80 deg
439	441					Siltstone/Sandstone - regular interbedded fine grained sandstone and siltstone bedding is oriented 67 deg to core axis. Calcite on fracture surfaces.
441	443					Mudstone - Black, massive, fractures oriented 88 deg to core axis.
433	434					Sandstone/Siltstone - fine grained sandstone interbedded with siltstone, slumped sediments. Some minor calcite along joint fractures and on bedding fractures.
434	462					Mudstone, Black massive, some interbedded siltstone between 446 and 448 feet. Coal is interbedded between 454 and 457 feet, oriented 77 deg to core axis, beds approx 5 mm thick.
462	464	462.5	465.5	141	142	Coal/Mudstone interbedded, Black, beds are 5 mm thick

40 Scale
Color Plot & Dips
Core Classes & Avar.



Core Size

Hole No. DDH. 1256

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Diamond Drill Geological Log

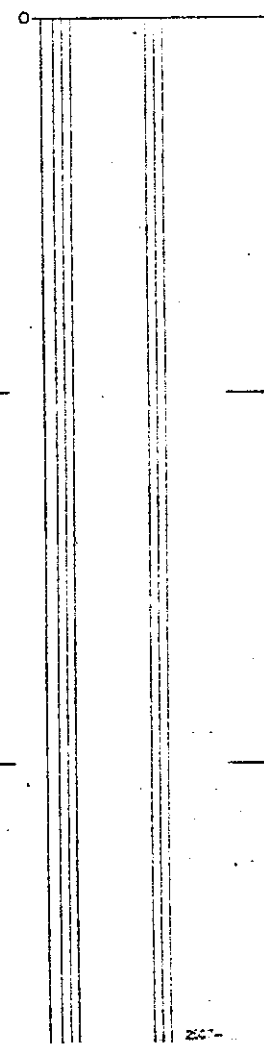


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DTM Date: July 3/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips | Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
						oriented 80 deg to core axis 3' 1m SEAM - f2	
464	466					Coal - Black, hard, dull sheen, fractures dominant at 80 deg.	
466	512					Mudstone - Black, fairly massive some interbedded coal between 482 to 483 feet. The core is fairly well broken between 491 and 512 feet. Major fracture orientation is 80 deg to the core axis.	
512	537					Siltstone - dark grey siltstone some interbedded fine grained sandstone between 519 and 520 ft. Minor calcite along fractures between 528 and 532 feet.	
537	542					SST/Siltstone - Interbedded light grey fine grained sandstone interbedded with grey siltstone radial contact with sandstone & siltstone some interbedded coal between 541.5 and 542 ft. Beds 1 to 5 mm thick. Bedding orientation 80 deg to core axis. Bedding is regular and even. Some minor calcite along joint fractures.	
542	558					Sandstone - medium to coarse grained wacke some interbedded coal, between 551 and 558 feet. Beds are 2 to 6 mm thick. Bedding 80 deg to core axis. Silty laminations.	
		621.5	623.5	189.5	190.1	COAL 2' 0.6m	
558	641					Mudstone - dark grey to black. Some minor bituminous partings oriented 78 deg to core axis. Fractures 80 deg to 90 deg to core axis and 5 deg to core axis. Calcite on joint fracture. Some interbedded coal between 621 and 626 feet. Beds are a few millimeters thick some very fine grained sandstone between 619	



Core Size

Hole No. DDH. 1256

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Diamond Drill Geological Log

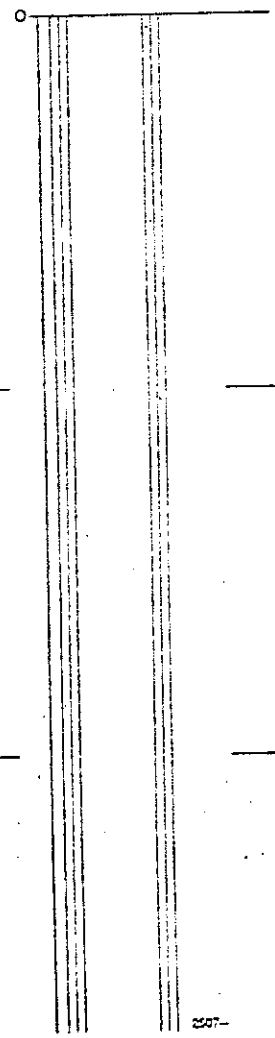


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DTM Date: July 4/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
						and 620 feet. Orientation of bedding is 80 deg to core axis. Some crossbeds.
641	647					Siltstone = dark grey some coal between 641 and 642 feet. Fractures dominate along bedding planes.
647	648½					Siltstone/Sandstone - Interbedded light grey fine grained sandstone. Beds oriented 80 deg to core axis. Some soft sediment deformation at 647 feet - lode casting is present. Fractured parallel to bedding planes
648½	655					Mudstone - dark grey - minor calcite along joint fractures. Some bituminous partings along bedding. Grades into siltstone at 654 to 655 ft. Fractures are along bedding planes.
655	657					Mdst/Slst/sst - Interbedded fine grained sandstone, siltstone, mudstone. Bedding is regular, even, 1mm to 2cm thick oriented 70 deg to core axis. Some soft sediment deformation, lode casting, slumping between 655 and 655½ feet.
657	663					Mudstone. Black fairly massive some interbedded core between 659 and 661ft Bedding orientation 70 deg to core axis. Fractures are dominantly 70 deg to 80 deg to core axis.
661	702	660	704.5	201.2	214.8	Coal - Black hard, quite well fractured, dull sheen. Mudstone interbedded between 661 and 662, 675 and 680, 683 and 685, 688 and 689 ft. mudstone is a minor constituent
						3.5'/1.1m Parting at 208.4m 44.5(41)'
						13.6(12.5)m SEAM -E

40 Scale
Color Plot & Dips Core Grades & Avar.



Core Size
Hole No. EDH. 1256 Page 10 of 14

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

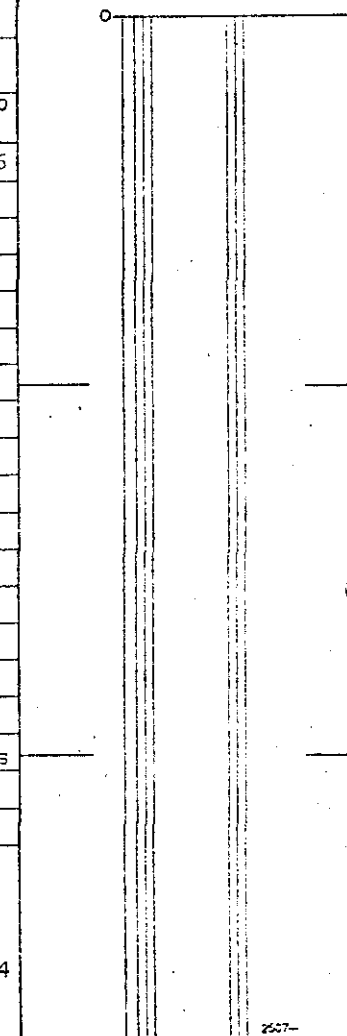
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Logged By: DTM Date: July 4/79 Composites: _____

Book: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
Color Plot & Dips Ore Grades & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
702	709					Mudstone/Coal - Interbedded mudstone & coal + Black, beds are 0.5 cm to 6 cm thick. Oriented 85 deg to the core axis. Fractures are common parallel to bedding planes. The coal decreases with depth grading into mudstone.
709	750.5					Mudstone - Black fairly massive - Fractures dominantly 88 - 90 deg. Minor calcite 731 to 742 ft along fractues. Minor carbonaceous partings a few mm thick at 713, 731, and 750.5 ft.
750.5	752					Siltstone - dark grey, massive, fractured along bedding planes.
752	755					Mudstone - Black, massive, coalified plant fossils at 755 ft., Fractures dominantly at 80 deg - 90 deg to core axis.
755	761					Siltstone/Sandstone - Interbedded fine grained light grey sandstone, beds are 1cm to soft sediment deformation between 757 and 759 ft. Some flame structures at 757 feet. Bedding is oriented 70 deg to core axis. Cross bedding at 755 feet.
761	767½					Mudstone - Black massive fractured along bedding planes.
767½	769½					MDST/SLST/SST - interbedded fine grained sandstone, siltstone and mudstone some crossbeds indicating that top is upwards. Bedding is oriented 80 deg to core axis.
769½	781					Mudstone, black massive some interbedded coal at 770½ to 771 feet. AT 771 ft calcite healed joint fracture oriented 18 deg. Fractures dominantly 70 to 80 deg to core axis. Some fine grained sandstone and siltstone with regular evenly bedding between



Core Size

Hole No. DDH. 1256

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Diamond Drill Geological Log



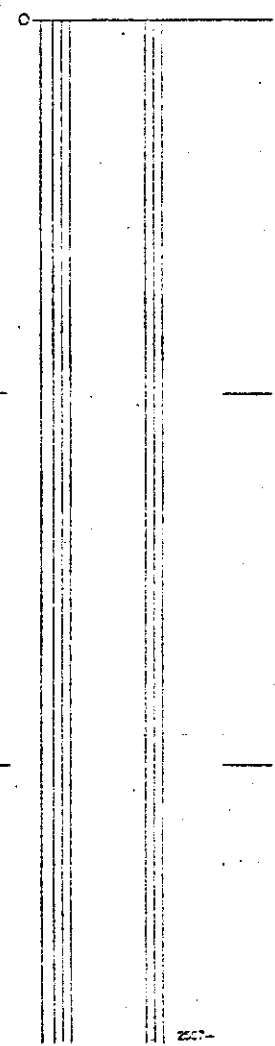
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DTM Date: July 5/79 Composites: _____
 Back: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

COPE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
						776 and 776½ feet and 778 to 779 feet. Some interbedded coal between 779 and 781 feet. Beds are 2mm to 1.5 cm thick.
781	811½	781	811.5	238	247.3	Coal - black, hard, dull sheen to very shiny. Fractures are oriented 65 to 82 feet to core axis and joint fractures oriented 20 deg to core axis. 30.5' 9.3 m SEAM - D
811½	819					Mudstone - Black fairly massive some coal beds at 817 ft. some fault gague at 818 ft. Fractured parallel to bedding planes and along oriented 47 deg to core axis.
819	822	818.5	822	249.5	250.6	Coal - Black, fairly hard, some mudstone interbedded. Fractured parallel to bedding plane approx 80 deg to core axis. 3.5' 1.1m
822	825					Coal/Mudstone - Interbedded black mudstone and black shiny coal beds 0.5m to 3 cm thick oriented 20 deg to core axis.
825	827					Mudstone - Black massive, fractured along bedding planes.
827	829					Mudstone/Siltstone/Sandstone - Interbedded fine grained light grey sandstone, grey siltstone, black mudstone. Minor calcite along bedding fractures. Beds are deformed clasts of sandstone and mudstone some crossbedding at 829 feet also some lode casting.
829	833					Siltstone Grey, massive, minor calcite along bedding fractures. Bituminous partings parallel to bedding planes
833	837					Siltstone/Sandstone - interbedded cross beds at 834 & 835½ feet. Regular even beds 2mm to 1cm thick - some soft sediment deformation at 837 ft - lode casting

40 Scale
 Color Plot & Dips
 Ore Casses & Avar.



Core Size
 Hole No. DDH. 1256 Page 12 of 14

Diamond Drill Geological Log

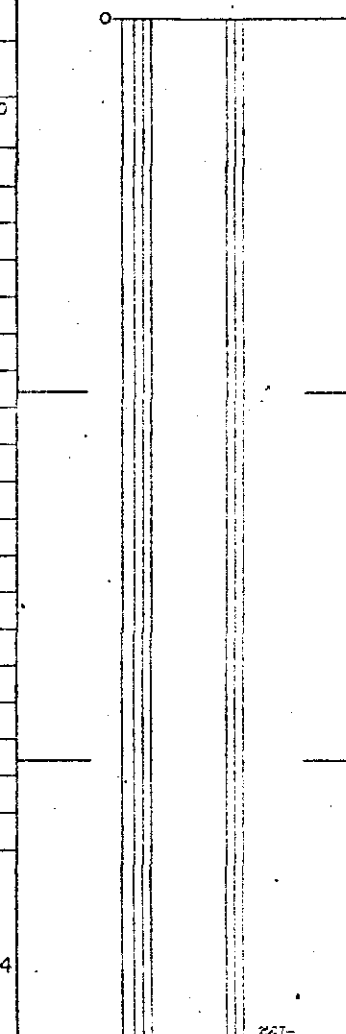


FORDING RIVER
OPERATIONS

Collective: _____ Sampled: _____
 Logged By: DTM Date: July 6/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips Ore Classes & Aves.

COPE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
837	839½						Siltstone - grey massive, minor calcite along joint fractures
839½	844½						Mudstone - Black, interbedded coal between 839½ to 842 ft. Beds are oriented 78 deg to core axis. Fractures are parallel to bedding planes.
844	856	845	851.5	257.5	259.5		Mudstone / Coal - interbedded coal & mudstone rock is well fractured beds are 1 cm to 8 cm thick. Bedding is oriented 80 deg to core axis. Coal is shiny, black - hard.
							Coal 6.5' 2m SEAM - DL
856	861						Mudstone - Black massive with fractures oriented 80 deg to core axis. Some coal between 859 and 860 feet.
861	863						Sandstone/ Siltstone / Mudstone - interbedded fine grained sandstone grey mudstone. Some cross beds
863	878						Mudstone - Black, massive, fractures oriented 70 deg to 80 deg to core axis are dominant. Some minor siltstone & sandstone, between 866 and 866½ feet. Some minor calcite in joint fracture.
878	880						Sandstone/Siltstone/Mudstone - Interbedded, cross bedding prevalent. Some fracture slippage of 2 cr. Bedding 74 to 80 deg to core axis. Some mudstone clasts. 8mm to 3cm irregular in shape. Minor calcite.
880	896						Mudstone - Black, massive, fractures 70 to 90 deg approx 2 or 3 per foot. Some fine grained sandstone and siltstone between 884 to 885ft.
896	898						Siltstone - grey massive, quite fractured along irregular planes of fracture



Core Size

Hole No. DDH. 1256

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Diamond Drill Geological Log

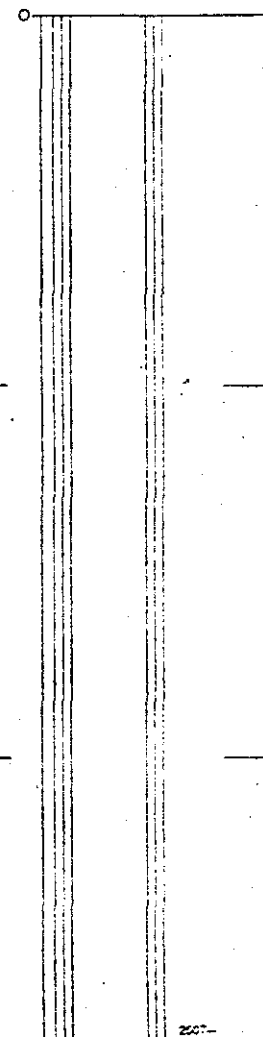


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DTM Date: July /79 Composites: _____
 Book: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips Ore Cases & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To		
898	908						Siltstone/Sandstone/Mudstone - Interbedded fine grained sandstone, siltstone and mudstone beds are a few Mm thick or bedded 80 deg to 90 deg to core axis. Some cross bedding. Top is indicated upwards.
908	953						Sandstone - medium grained, light grey sandstone. Poorly sorted, wacke. Some interbedded coal and coalified plant fossils throughout the sandstone. Beds are a few millimeters thick. Fairly massive sandstone.
953	956						Siltstone - dark grey, well fractured between 953 to 953½ feet. Fractures generally oriented 80 deg to core axis.
956½	1020	957	1019	291.6	310.7		Coal - Black shiny soft well broken and crushed, fractured calcite some fractures oriented 70 deg to core axis. 62' 19m SEAM - B
1020	1039						Mudstone - Bituminous mudstone - crushed well fractured, calcite some fault gouge between 1024 to 1031 feet.
1039	1046½						Siltstone - grey, well fractured calcite on fracture surfaces. Interbedded sandstone between 1043 and 1045 feet. Sandstone is fine grained light grey. Beds are oriented 70 deg to core axis. Beds are 2mm - 3 cm thick fairly even.
1046½	1071			326.4			Sandstone - Medium grained, poorly sorted, silty laminations oriented 68 deg to core axis. Bituminous partings along bedding planes. Calcite is minor, found in fracture fillings. The core is quite broken
							End of Hole



Diamond Drill Geological Log



FORDING RIVER OPERATIONS

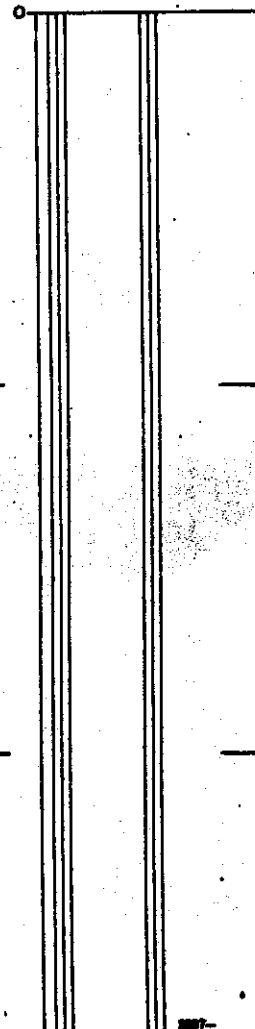
Objective: _____ Sampled: LAT. _____ DEP. _____ ELEV. _____
 Logged By: DG Date: June 1/79 Composites: 148 914° N 21 636° S E 1816.2

Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: 981' 299m

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
0	20			0	6.2	TRICONE & CASING
		12	18.5	3.6	5.6	Highly carbonaceous zone (Probably coal seam)
						6.5' 2m
20	23					Siltstone - dark brown - broken Lighter interbeds at 70 deg to core axis Iron oxide in the fractures - many BI fractures 21' - 23'
23	25 1/2					Mudstone - Carbonaceous infilling - band of sandstone - light grey, fine grained at 23 1/2' abundance of iron oxide in the fractures.
25 1/2	26					Siltstone/mudstone interbedding - bedding planes fluctuate in angle to core axis.
26	30					Mudstone - dark brown, bedding planes at 65 deg to the core axis. 3" bed of siltstone at 27'. Iron oxide infilling. At 27' there is carbonaceous infilling. Bedding planes at 70 deg to the core axis. - bank of sandstone 3" at 28' - light grey, fine grained beds are contorted. AT 28' some broken sandstone - iron oxide infilling.
30	31					Sandstone - light grey-fine grained. Lots of iron oxide infilling of fractures Bedding planes at 80 deg to the core axis.
31	35 1/2					Mudstone/sandstone - light grey - fine grained. Some interbedding siltstone at 32' Bedding planes at 70 deg to core axis. - Many iron filled V4 fractures at this point.

40 Scale
Color Plot & Dips Ore Classes & Aver.



Diamond Drill Geological Log



FORDING RIVER OPERATIONS

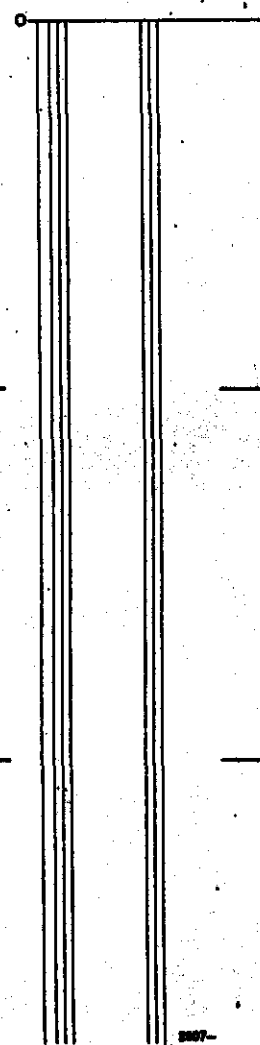
Objective: _____ Sampled: _____

Logged By: DG Date: June 1/79 Composites: _____

Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		in meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
35½	40						Mudstone/siltstone - finely interbedded at planes of 85 deg to the core axis. Fractures are clean - broken at 37'
40	41						Siltstone/sandstone dark brown - clean infilling. Bedding planes at 85 deg to the core axis.
41	45						Siltstone - Bedding planes at 85 deg to core axis. - Dark brown
45	46						Siltstone/Mudstone - dark brown. Bedding at 70 deg to core axis.
46	61						Siltstone - dark brown - 12B, fractures 46' - 49'. Bedding at 85 deg to the core axis There are clean infillings. Some interbedding into mudstone at 48' and sandstone at 49½. Some sandstone interbeds at 52½'. 15 B fractures between 50 and 55' (85 deg to core axis) Some sandstone interbedding at 58½ to 57'. Core is intact at this point. Fractures clean - Bl at 59' has iron oxide.
61	68						Siltstone/sandstone - regular interbeds light grey colour. Rock is broken. Bedding planes at 80 deg to core axis. Many fractures with iron oxide infilling 61' to 65'.
68	70½						Mudstone - dark brown, broken core. Bedding planes at 85 deg to core axis. Many fractures - clean infilling.
		69.5	72	21.2	22	Coal 2.5' 0.8m	
70½	74						Coal - hard for 1'. Then becomes soft - more broken. Bedding planes at 70 deg to 75 deg to the core axis. There are 13 Bl fractures between 72 to 74'. They are clean
74	76½						Mudstone - pure dark brown. Bedding planes at about 90 deg to the core axis, core intact - fractures clean

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size
Note No. DDH. 1257 Page 2 of 14

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: June L/79 Composites: _____
 Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: _____

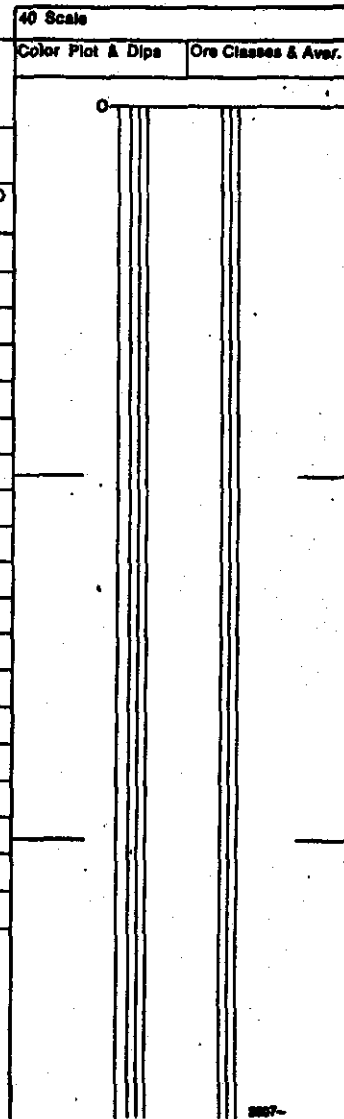
Color Plot & Dips _____ Ore Classes & Aver. _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
		75½	84½	23	25.7	Coal with 2' 0.6m shale parting at 24.7m 9(7)' 2.7(2.1)m
76½	91					Coal soft coal broken, some harder coal and mudstone at 82½, 84' to 84½' is mudstone. soft coal in this section has a bedding plane about 85 deg to the core axis. More mudstone at 87' to 88'. Coal is harder and more intact 90' to 91'. Bedding here is about 80 deg to 90 deg to the core axis.
91	93					Mudstone/siltstone - Dark brown. Bedding planes are 80 deg to core axis. Fractures are carbonaceous infilling. Some soft coal at 93' broken up.
93	96					Siltstone - 4 Bl fractures in 3' lengths they are clean and at 85 deg to the core axis.
96	101					Mudstone/Siltstone - dark brown. Bedding planes at 80 deg to core axis. Fractures clean. Some soft coal at 96'. Mainly pure siltstone 100' to 101'
101	105					Mudstone - Dark brown. Coal infilling & Fractures - broken up core. Fractures are about 70 deg to core axis.
105	112					Siltstone - light grey - J4 fractures calcite filled. Core intact. Bedding planes at 85 deg to 90 deg to the core axis.
112	115½					Sandstone - light grey, fine grained - J4 fractures contain calcite. Bedding plane at 80 deg to the core axis.
115½	124					Siltstone/mudstone - dark brown. Bedding planes at 85 deg to the core axis. Broken around 116' Many Bl fractures.
124	129					Siltstone - dark brown - quite intact. Bedding planes at 85 deg to the core axis.
129	130					Mudstone - dark brown - well broken. Bedding at 85 deg to the core axis.
		129	133.5	39.3	40.7	coal 4.5' 1.4m
130	135					Coal - Soft highly brecciated almost to powder

Core Size

Hole No. DDH. 125 7

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Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____

Logged By: DG Date: June 5/79 Composites: _____

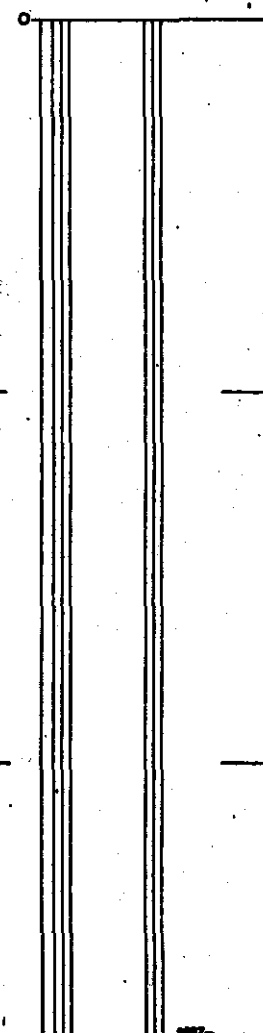
Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
135	136					Mudstone - dark brown. Bedding planes about 85 deg to the core axis. Fairly intact	
						core.	
137	139					Coal/mudstone - soft coal, heavily brecciated to 137½ where there is a section of	
						mudstone for 1' then a mixture of broken coal and mudstone.	
139	141½					Mudstone - dark brown. There are many BI fractures which are carbonaceously infilled.	
						Bedding planes are about 80 deg to the core axis.	
141½	171					Siltstone - light brown - core is quite intact. Bedding planes at 80 deg to 85 deg to	
						the core axis. There is calcite infilling of fractures at 157'. Most all other	
						fractures are clean. There is interbedding with sandstone at 156' and 158'	
171	175					Mudstone/Siltstone - dark brown - lighter interbeds (irregular) Bedding planes at 90	
						deg to the core axis. There are few fractures.	
175	176					Sandstone/Coal - Light grey, fine grained sandstone with bedding of soft coal. Broken	
						rock. Bedding planes at 70 deg to the core axis.	
176	187					Mudstone/Siltstone - dark brown. Clean fractures. Some silckenslides at 182'.	
						Bedding planes at about 80 deg. Broken core around 182'. Many BI fractures	
						185 - 187' (85 deg to core axis)	
187	198					Siltstone. Dark brown - finely bedded. Bedding planes at 90 deg to core axis.	
198	199					Mudstone - Dark brown intact core bedding at 90 deg to the core axis. Clean fractures	
		199.5	201.5	60.8	61.5	coal - 2' 0.7m	
199	201					Mudstone/ coal Highly broken - brecciated	
		204.5	207.5	62.3	63.3	COAL 3' 1m	
201	212					Coal - core well broken. Bedding plane at 203' to	
						85 deg to the core axis, and at 211' 70° to C.A.	

Note No. DDH. 1257

Page 4 of 14

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____

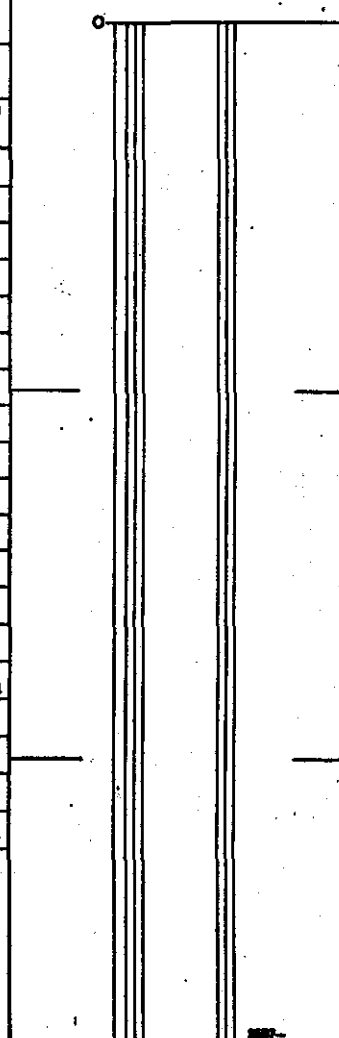
Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
		209	210	63.7	64	COAL 1' 0.3m
212	215					Mudstone/siltstone - Dark brown fine interbeds. Core well intact. Bedding at 90 deg to the core axis. Calcite in fractures.
215	228					Siltstone Dark grey, fine bedding. Bedding plane at 85 deg to the core axis. Core well broken. Fractures full of calcite.
228	231					Siltstone/sandstone, irregular interbedding. Light grey fractures filled with calcite Bedding planes at 80 deg to the core axis.
231	236					Siltstone. Dark grey. Core well broken. Bedding at 85 deg to the core axis. Calcite infilling of fractures.
236	239					Mudstone. Dark brown. Highly broken core. Bedding at 80 deg to the core axis. Core covered with mud. Clean infilling of fractures.
239	270					Siltstone. Dark brown. Bedding planes at 85 deg to the core axis. Calcite infilling of fractures. Rhombic crystals of calcite at 252'. Core well broken at this point (Large JI fractures) Slickensides at 268'. Breccia at 244'. There is some mudstone interbedding at this depth. There is some sandstone interbedding between 241' and 242'.
270	307					Siltstone continues to 307' Siltstone. Dark brown. Broken core 270' to 275' and 279' to 281', 283' to 285' 290 to 299'. The bedding plane remains at about 85 deg to the core axis throughout this section. Most all fractures are clean. There is some calcite infilling at 279', 289' and 276' There is some interbedding with sandstone at 289' and 306".

40 Scale
Color Plot & Dip Ore Classes & Aver.



Core Size _____
 Hole No. DDH. 1257 Page 5 of 14

Diamond Drill Geological Log



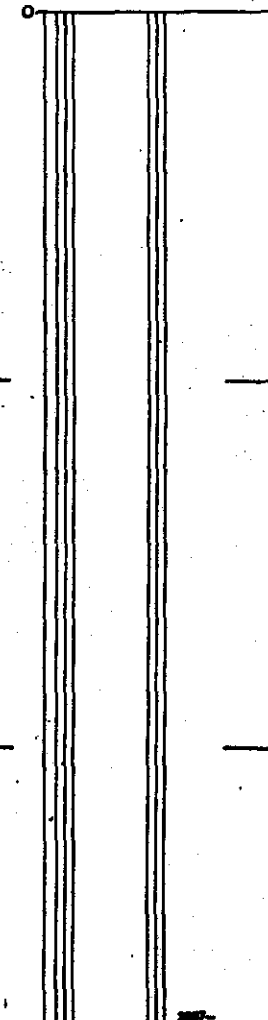
FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: June 8/79 Composites: _____

Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO		DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To				
307	310								Mudstone / Coal. Dark brown mudstone with coal infilling of the fractures. There is a 6" seam of soft brecciated coal at 308'. The mudstone is highly broken. The bedding plane is 85 deg to the core axis.
		309	333	94.3	101.6	Coal	24'	7.3m	SEAM - F
310	335								Coal. Core quite intact. Bedding plane is 80 deg - 85 deg to the core axis. Highly lustrous coal at 322'.
335	345								Mudstone/ Siltstone. Irregular interbedding. Bedding planes are 80 deg to the core axis. There is a 6" seam of coal at 339'. There is a carbonaceous infilling of fractures at 338' and 336'.
345	352								Mudstone. Dark brown. Bedding plane at 90 deg to the core axis. Core is broken. There is some carbonaceous infilling of fractures and slickenslides. Some coal deposit at 349'.
		349.5	351	106.5	107	Coal	1.5'	0.5m	
352	353								Coal. Friable. Highly broken (Breccia) lustrous.
353	357								Mudstone/Siltstone. Fine interbedding of siltstone. Dark brown. Bedding planes at 80 deg to the core axis. There is some carbonaceous infilling of fractures. Core quite intact.
		355.5	357.5	108.3	109	Coal	2'	0.7m	
357	359								Coal. Soft and friable, highly lustrous. Core is well broken.
359	360								Mudstone/ coal. Dark brown - black. Between mixed mudstone infilling fractures has been slickenslided. Core well broken. Bedding planes at 70 deg to the core axis.

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____

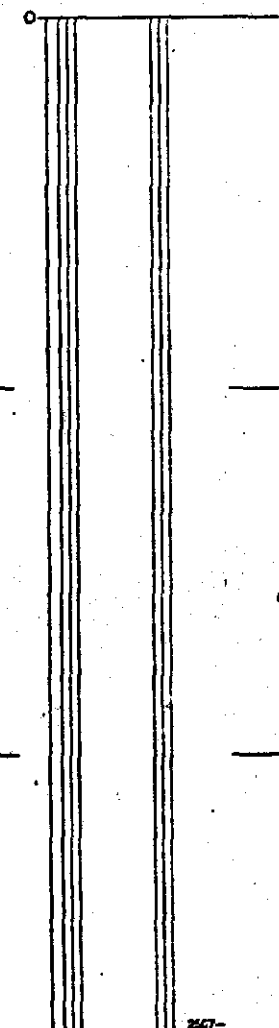
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Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

From	To	From	To	From	To	Description
360	366					Mudstone/siltstone. Dark brown with grey interbedding. Core quite intact. Bedding at 90 deg to the core axis. Clean infilling of the fractures.
366	381					Siltstone - Sandstone - fine grain. Dark grey with light grey interbeds. Bedding planes at 85 deg to the core axis in this section. The core is predominantly siltstone from 373' to 375'. There is calcite infilling of fractures at 367' to 377'. Clean infilling 377' to 381'. Core quite intact large calcite infilled J1 fracutres at 367', 375' and 377'.
381	392					Mudstone/ Siltstone. Dark brown, core well broken. Bedding planes at about 80 deg to the core axis. Band of pure siltstone from 384' to 385'. Fractures are clean to 387' where there is some calcite infilling. There is carbonaceous infilling from 387' to 392'. There is a small deposit of soft coal at 390'.
		390	393	118.8	119.8	Coal 3' lm
392	395					Coal. Soft and friable highly lustrous. Core brecciated. Bedding around 80 deg to the core axis.
395	397					Mudstone/Coal. Bitumen, carbonaceous mudstone. Mildly lustrous. Core is broken with BI fractures. Soft coal infilling of fracutes at 397'. Bedding planes at 80 deg to the core axis.
397	415					Siltstone/sandstone. Fine interbedding. Dark grey with light grey interbeds. Sandstone is fine grained 3' intact core at 397'. Bedding planes are at 80 deg to the core axis in this section. There is calcite infilling of fractures at 400' 402' and 407'. There is some carbonaceous infilling at 408'. Core is broken at 412' to 415'.

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Core Size
 Hole No. DDH. 1257 Page 7 of 14

Diamond Drill Geological Log



FORDING RIVER OPERATIONS

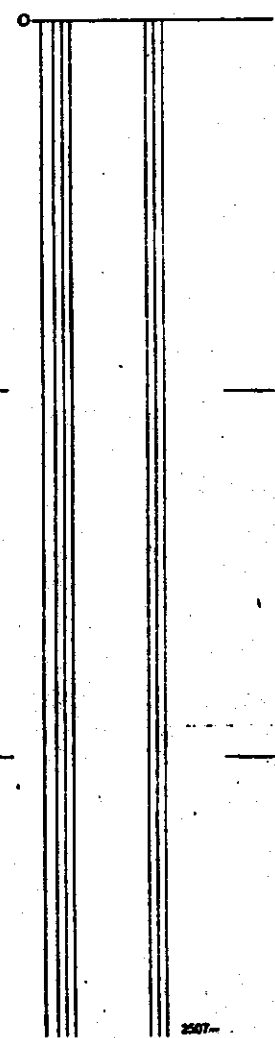
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 Logged By: DG Date: June 11/79 Composites: _____

Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
		447	449	136.3	136.9	Shaley coal 2' 0.6m
415	454					Siltstone. Dark brown. Bedding planes at 85 deg to the core axis. There is carbonaceous infilling of fractures at 415' and 417'. There is calcite infilling of fractures 421'. There are slickensides at 426'. The core is fairly intact in this section. There are many hairline fractures at 430'. Broken Up some breccia core from 441' to 452'. Clean infilling of fractures 428' to 437'. Calcite at 437'. Clean infilling from there to 456'
454	462					Sandstone/Siltstone. light grey with darker interbeds. The sandstone is fine grained bedding planes at 80 deg to the core axis. Core is intact except for J1 fractures. Carbonaceous infilling (coal) at 456' for 6" from this part to 462' fractures are clean.
462	469					Siltstone. Dark brown. Fine bedding at 85 deg to the core axis. Core quite intact. Fractures are clean except for a B1 fracture at 466' which is carbonaceously infilled.
469	481					Sandstone. Light grey fine grained bedding is 70 deg to the core axis at 470', changing to 80 deg to the core axis at 475'. Clean fractures to 472'. AT 472' there is carbonaceous coal infilling of fractures to 481'. Heavy coal infilling of J4 fractures at 475' and 476'. There is a 6" bed of pure dark brown siltstone at 479'. Some interbedding with sandstone siltstone to 480'.
481	534					Siltstone. Dark brown. Fine bedding at 85 deg to the core axis. Core intact through this section. Fractures are carbonaceously infilled 481 - 482'. Clean fractures through the rest of this section except

40 Scale
 Color Plot & Dips Ore Classes & Aver.



Core Size
 Hole No. DDH. 1257 Page 8 of

Diamond Drill Geological Log



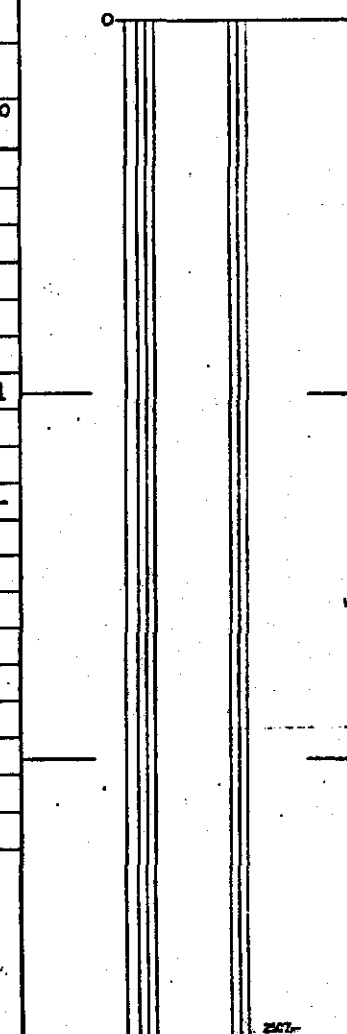
FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: June 13/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
						for a calcite J4 at 487' and J1 fractures with calcite infilling at 495' and 498'. Calcite infilling at 520'.
534	536					Mudstone/ coal. Bituminous mudstone. Black. Core broken - some breccia. Bedding plane at 80 deg to the core axis.
536	539					Siltstone. Dark brown. Bedded at 80 deg to the core axis. Core quite intact. Carbonaceous infilling of fractures.
539	542					Mudstone/Coal. Black. Core well broken. Bedding planes at 80 deg to the core axis. Coal very lustrous. Bituminous mudstone.
542	551					Siltstone. Dark brown. Bedded at 80 deg to the core axis. B1 fractures are evenly spaced throughout core which is otherwise quite intact. There is some sandstone interbedding at 548'. There is calcite infilling of fractures at 543'. There is carbonaceous infilling of fractures at 545' to 546". Other fractures in this section are clean.
551	559					Mudstone. Light brown in color. Brecciated to pilable size from 551 to 556 and 557 to 559'. There is some carbonaceous covering on loose pebbles at 552'. Bedding at about 70 deg to the core axis.
559	570					Siltstone/Sandstone. Dark brown with light grey interbeds. Bedding at 80 deg with light grey interbeds. Bedding at 80 deg to the core axis. Sandstone is fine grained. Fractures are clean. Core quite intact. Some cross bedding at 563'.
570	594					Siltstone. Dark brown. Bedding planes at 85 deg to the core axis. Most fractures are clean except for some calcite infilling at 584 and 586'. There is also some



Core Size

Hole No. DDH. 1257

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Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: June 15/79 Composites: _____
 Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip: _____ Length: _____

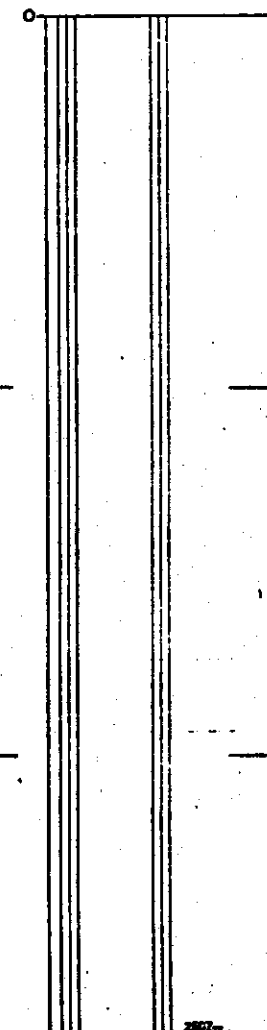
40 Scale
 Color Plot & Dips _____ Ore Classes & Aver. _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
						carbonaceous infilling of fractures with broken core at 590'. There is some interbedding with fine grained sandstone at 581' and 583'.	
594	596					Mudstone/ Coal. Bituminous mudstone except for soft friable coal at 595' for 6'. Bedding planes at 80 deg to the core axis. Some calcite infilling of a J4 fracture at 595½.	
596	597					Siltstone. Dark brown. Bedding planes at 85 deg to the core axis. Fractures have carbonaceous infilling.	
597	598½					Mudstone/Coal. Bituminous Mudstone. Bedding at 85 deg to the core axis. Fractures are clean. Fractures surfaces (exposed) are highly lustrous, Core well broken.	
		597	636.5	182.0	194.0	Coal with 1' & 2.5' shale partings 39.5' (36)' 12(11)m SEAM -E	
598½	639					Coal. Black. Brecciated - Very friable. Bedding at 80 deg to the core axis. Core is highly broken. Area of harder coal at 617' to 618', 602' to 604' & 638' to 639'.	
639	643					Mudstone. Carbonaceous Mudstone. Dark brown. Core is broken by many B1 fractures. There is carbonaceous infilling of fractures except at 641' where there is some calcite infilling. Bedding is 85 deg to the core axis.	
643	659					Siltstone / mudstone - Dark brown & dark grey fine interbedding. Carbonaceous infilling of fractures. Slickenslides at 645' There is a 3" layer of soft coal at 646'. There is some heavily infilled fractures (closed) at 650' with calcite Bedding is at 80 deg to the core axis.	
659	683½					Siltstone. Dark Brown. core well broken with J1 fractures. Bedding at 85 deg to the core axis. Fractures are generally clean except for some slickenslides	

Core Size

Hole No. DDH. 1257

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Diamond Drill Geological Log



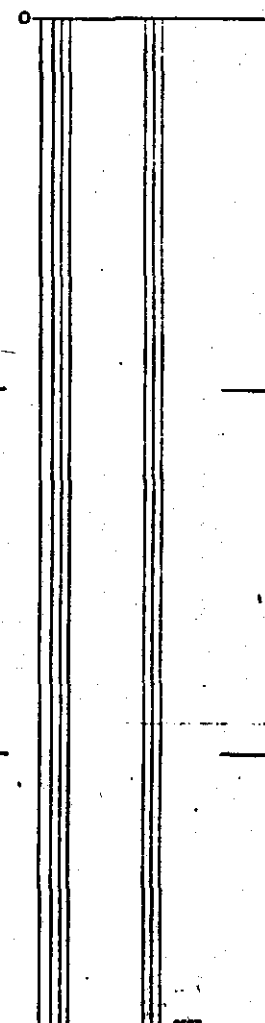
FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: June 19/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App.: Dip.: _____ Length: _____

40 Scale

Color Plot & Dips Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
						at 663' and calcite at 659', 670' and 676'. Core is highly broken from 669' to 675'. Here is some breccia in this area. Slickensides 676', to 683½'.	
683½	685					Mudstone. Dark brown. Bedding at 85 deg to the core axis. Clean fractures.	
685	687½					Siltstone. Dark brown. Not many fractures. Bedding at about 80 deg to the core axis. Fractures are clean.	
687½	689					Siltstone/Sandstone. Fine interbedding. Sandstone is fine grained and light grey while the siltstone is dark brown. Bedding at 80 deg to the core axis. Fractures are clean-some calcite in one fracture.	
689	691					Siltstone. Dark brown. Bedding at 80 deg to the core axis. Clean fractures. Core well fractured.	
691	701					DRILLERS MISTAKE - 10 ft of core missing	
701	726					Mudstone. Dark brown. Bedding at 80 deg to the core axis. Core well intact. Fractures clean to 715'. From 715' to 726' there is mostly carbonaceous infilling. Some soft coal deposti in fractures at 721' and 716'.	
		715	743	218	226.5	Coal 28'	8.5m SEAM-D
726	755					Coal. Black, soft and friable. Core well broken. There is some breccia. Bedded at about 85 deg to the core axis. Coal is lustrous.	
		748	753	227.9	229.4	Coal 5'	1.5m SEAM- PART D
755	759					Siltstone/mudstone, irregularly interbedded. Dark brown, bands of mudstone with lighter brown bands of siltstone. Some sandstone interbedding at 756' - light grey, fine grained. Core is quite intact, There	



Core Size

Hole No. DDH. 1257

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Diamond Drill Geological Log

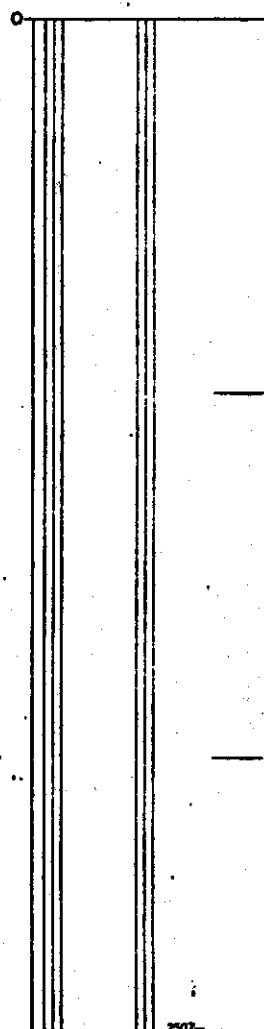


FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: June 20/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO		DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To				
									is some calcite infilling of fractures.
758	759								Mudstone. Dark brown. Core well broken. Bedding at 85 deg to the core axis. Fractures are carbonaceously infilled.
759	765								Coal. Black, soft and very friable. Core well broken and brecciated. Coal very lustrous.
765	771								Siltstone/sandstone, irregularly interbedded. Siltstone is light brown while sandstone is fine grained and light grey. Mixture of infillings in the fractures. Bedding at 85 deg to the core axis.
		770.3	776.8	234.8	236.8	Coal	2m	6.5'	SEAM-DL
771	778								Siltstone. Dark Brown. Core well broken. Fractures are clean. Bedding is at 85 deg to the core axis. Carbonaceous infilling at 776'.
778	779								Sandstone. Light grey, fine grained. Calcite and carbonaceous infilling of fractures. Bedding at 80 deg to the core axis.
779	781								Mudstone. Dark brown. Well broken core. Bedding at 85 deg to the core axis. Clean fractures.
781	792								Coal. Black, soft and friable. Core is brecciated. Coal is lustrous.
792	796								Mudstone. Dark brown. Core well broken. Most fractures are carbonaceously infilled. Bedding is at 85 deg to the core axis.
796	842								Siltstone/Sandstone. Dark brown siltstone with light grey sandstone (fine grained) which is irregularly interbedded. Core is fairly intact. Fractures are clean except for some calcite at 838' 825'. Bedding at 85 deg to the core axis. Here are pure bands of siltstone

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Core Size

Core No. DDH: 1257

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Diamond Drill Geological Log



FORDING RIVER OPERATIONS

40 Scale

Objective: _____ Sampled: _____
 Logged By: **DC** Date: **June 22/79** Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

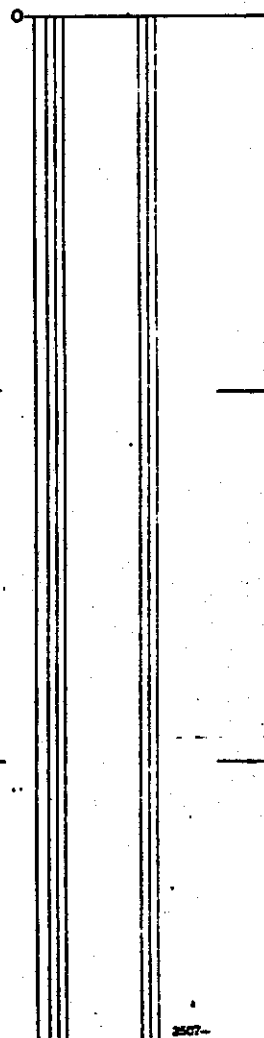
Color Plot & Dips _____ Ore Classes & Aver. _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO		DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To				
									819' to 824' and 826' to 829'.
842	876								Sandstone, Light grey and fine grained. Core quite intact. Bedding is at 80 deg to the core axis. There is some cross bedding at 852'. Fractures are clean except for some carbonaceous infilling at 854'. More carbonaceous infilling 854' to 862'. The sandstone grades into medium grain size at 856" through 876'. Core is highly broken at 874' it is coated with carbonaceous material. Some iron infilling at 872 & 855'.
		878	880	267.5	268.1	coal	2'	6.6m	
876	880								Sandstone/Siltstone. Finely interbedded, regularly distributed. Core fairly intact. Bedding is at 70 deg to the core axis. Sandstone is fine grained and light grey. Siltstone is dark brown. Here is calcite infilling of fractures.
880	888								Siltstone. Dark brown. Core quite intact. Most fractures are clean. There is some minor calcite infilling at 884'. Bedding is at 70 deg to the core axis. The siltstone is pure - there is no interbedding.
		889	898	271	273.7	Coal	9'	2.7m	SEAM - B
888	891								Coal black, soft and friable. Highly brecciated. It is highly lustrous.
891	899								Mudstone. Bituminous mudstone with lustrous fracture faces. The coal in this section is completely brecciated to pebbles. The bedding is at 70 deg to the core axis.
		917	920.5	279.4	280.5	Coal	3.5'	1.1m	
899	931								Coal. Black soft and friable. Highly lustrous. The coal in this section is almost in a powder form.

Core Size

Note No. DDH/ 1257

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Diamond Drill Geological Log

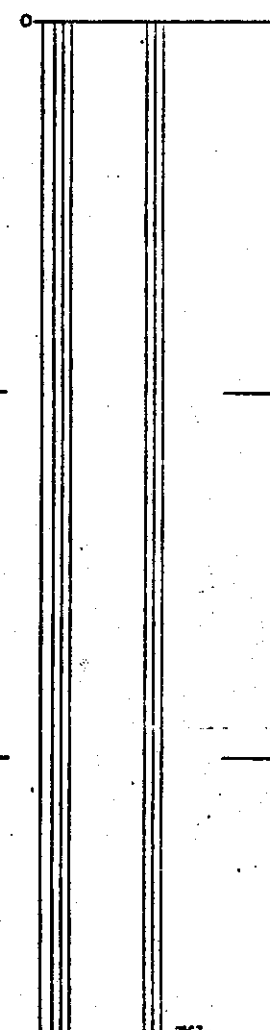


FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: June 22/79 Composites: _____
 Block: _____ Sect: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips
 Ore Classes & Aver:

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
931	941					Siltstone. Dark grey. There is some coal deposit for 6" at 932'. There is also some sandstone light grey and fine grained at 934'. The core is highly broken. There are clean fractures. Bedding is at 80 deg to the core axis.
941	946					Mudstone. Dark brown. Bedding at 85 deg to the core axis. Bituminous mudstone at 945'. There is carbonaceous infilling of fractures. Sections of broken core 935' to 936', 942 to 943' and 945' to 946'.
946	948					Coal. Black soft and friable. It is lustrous. Here are some pieces of broken mudstone at 947'.
948	952					Mudstone Dark brown. Bedding at 85 deg to the core axis. There is carbonaceous infilling of the fractures. There is a soft coal deposit for 6" at 951 1/2'.
952	953 1/2					Siltstone. Dark brown. Core well intact. Bedding at 85 deg to the core axis. There are clean infillings.
953 1/2	981					Sandstone. Fine grained from 953 1/2 to 968' where it grades to medium grained to the end (981') It is light grey in color. Bedding is at 80 deg to the core axis, throughout this section. Most fractures are clean. There is some carbonaceous infilling at 966' and 961'. There is some interbedding with siltstone at 962' to 965' and 955' to 958'.
END OF HOLE						Core Size
						Note No. DDH. 1257
						Page 14 of 14



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

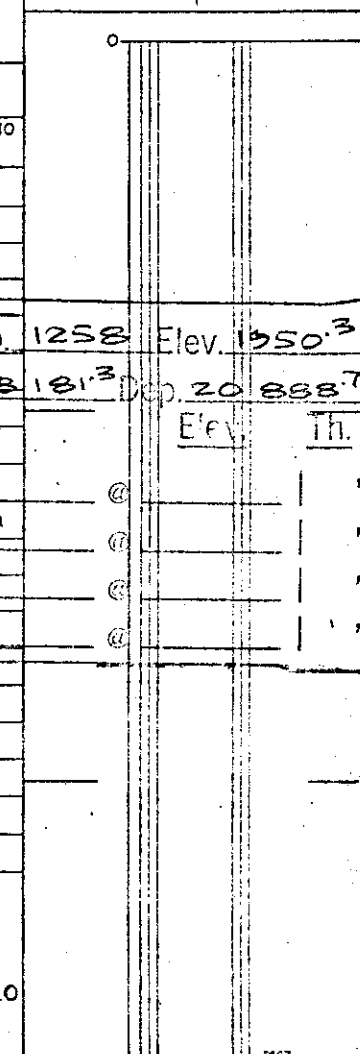
Logged By: Loriann Date: July 5/79 Composites: _____

Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: 441'/134.4m

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
0	45			0	13.7	CASING (TRICONE)
		35	43	10.7	13.1	Highly carbonaceous zone (probably coal seam) 8' 2.4m
45	46					Mudstone: Broken core. Dark in color, large grained. Very soft. Lots of iron oxides visible on the pieces of core.
46	55					Siltstone: Medium grey in color. Medium grain. Iron oxides are predominant in the core. Fractures are filled with iron oxides. Fracture at 46' is J1 10° and 160° to core axis. Core is broken from 48-49'. Fractures after this point at B1 type. They orient at 85° to bedding. They too are filled with iron oxides. Fractures at 50' are B1, oriented at 70°. The fractures here are filled with calcite deposits. J1 fracture at 51.5' is 25 deg and 60 deg to core axis.
55	56					Coal: Very dull. Lacks lustre. Highly brecciated. Very soft.
56	61					Siltstone/Mudstone: Mostly siltstone. Light grey in color. Medium grain size. Brecciated core at 56' to 57'. A band of mudstone approx 4" in length occurs at 57'. Fracture at 57' is 90 deg to bedding. A J4 type fracture occurs at 58', it is 15 deg and 80 deg to core axis, and has been healed with calcite. Iron oxides appear in a fracture at 58.5' to 61'. Fractures at 59-61' are full of iron oxides, and some small deposits of calcite. Broken core occurs from 60-61'.

40 Scale
Color Plot & Dips Core Classes & Aver.



Core Size
Hole No. DDH. 1258 Page 1 of 10

Diamond Drill Geological Log



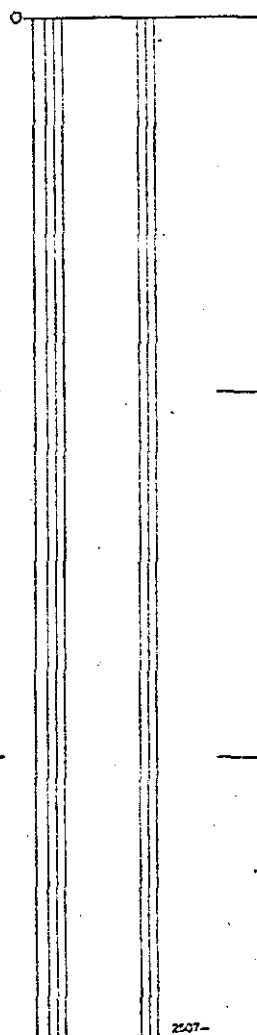
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	Description	Core Size
From	To	From	To	From	To			
61	64	61	65	18.5	19.8		Coal: Very broken core. Coal lacks lustre. Very dull in appearance. Very soft 4'	1.3m
64	69						Siltstone with sandstone banding - siltstone is light grey in color. Small grained. Fractures are 80 deg and contain iron oxides and some small quantities of calcite. J1 fracture at 65.5' is full of iron oxides. The fracture is 50 deg and 65 deg to core axis. Sandstone banding occurs at 65.5'. It is approx. 5-6" long. Fractures at 68 deg are 10 deg and 150 deg to core axis. A sandstone band occurs at 68'. Fractures at 70' are full of iron oxides. The fractures are 40 deg and 120 deg to core axis. Fractures (B1) are 75 deg to bedding.	
69	74.5						Mudstone: Broken core from 71' - 72.5'. Mudstone is large grained. Dark in colour. Some carboniferous infilling is evident on the core pieces at 72'. The fractures are clean.	
74.5	77						Siltstone: Light grey in colour. Small grained. Contains alot of calcite. Fractures orient at 85 deg. The are filled with calcite. J4 fracture at 75' is a clean one. It is 10 deg and 30 deg to core axis.	
77	85						Mudstone: Dark grey in color. Large grain size. Some siltstone banding near 78'. Fractures are clean, they orient at 80 deg to bedding. Brown core at 80' to 81'. The core is relatively intact. The fractures are B1 and orient at 90deg to bedding.	
85	88						Siltstone: Medium grey in color. Large grains. Some mudstone banding near 86'. Fractures are B1's and range from 50deg	

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Hole No. DDH. 1258 Page 2 of 10

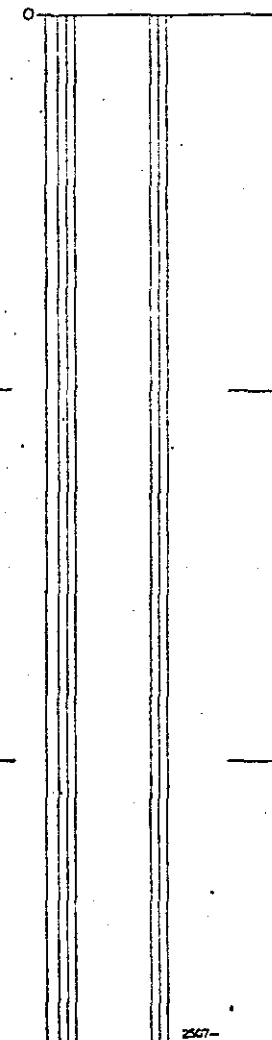
Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:						Sampled:					
Logged By: Lorian						Date: July 4/79					
Block:						Sect.:					
Place:						App. Bear:					
App. Dip.:						Length:					
CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO					
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO					
						to 75 deg to bedding.					
85	88					Siltstone: Medium grey in color. Large grains. Some mudstone banding near 86'. Fractures are Bl's and range from 50 deg to 75 deg to bedding.					
88	100					Mudstone: Dark in color, large grain size. Brown core from 88-89, and 91 - 92. Fractures from 88-91 are Bl. They are clean and are oriented at 80 deg. There is some slip n' slide in the fractures. In the broken core at 91' there are some carbonaceous infilling at 91'. The fractures at 91.5' are J1's and they are 10 deg and 160 deg and 25 deg and 90 deg to core axis. There is a band of calcite at 95'. Fractures after 95' contain traces of calcite.					
100	111					Sandstone: Medium grey in color, medium grain size. Calcite banding occurs near 101'. Fractures contain calcite. Fracture at 103' to 106'. Some carbonaceous infilling on the broken core. Some mudstone banding occurs from 106-108'. Fracture at 108.5' contains large amounts of iron oxides. It is a J1 fracture at 15 deg and 55 deg to core axis. Fracture after this point is clean and is at 70 deg to bedding.					
111	118					Mudstone: Dark grey in color. Large grain size. A lot of iron oxides present in fractures Fracture at 111.5' is 75 deg to bedding and 10 deg / 35 deg to core axis. Fracture at 112' - 115.5' is a J1 and runs the entire length of the core. It occurs at 25 deg and 180 deg to core axis It contains iron oxides. Broken core from 115.5' to 118'					

40 Scale
Color Plot & Dips | Ore Classes & Aver.



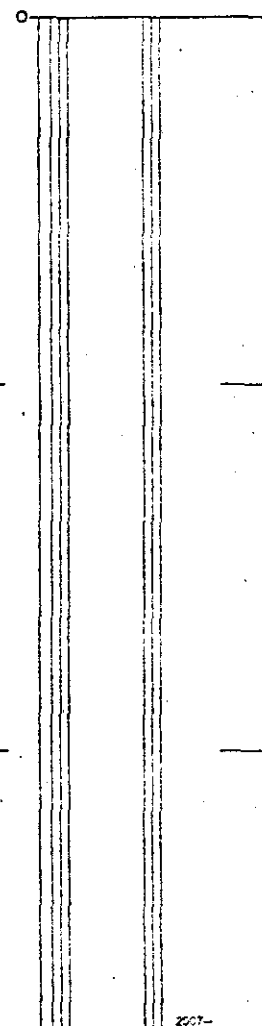
Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:						Sampled:					
Logged By: Loriann						Date: July 4/79					
Sect.:						Place:					
App. Bear:						App. Dip.:					
Book:						Length:					
COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO						DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO					
From	To	From	To	From	To						
118	121					Siltstone: Siltstone is light grey/medium grain size. Mudstone banding occurs throughout the core. Fractures are filled with iron oxides. They are 70 deg at 119' and 85 deg at 120 feet. Broken core from 120-121'					
121	126	121.5	126.5	37	38.6	Coal: Very dull Lacks lustre. Very soft The core is entirely broken up 5' 1.6m					
126	131					Sandstone: Broken core from 126-128'. Sandstone is light grey in color, medium grained It contains alot of calcite. Fracture at 128½ is 90 deg to bedding. A J1 fracture at 129' contains deposits of calcite and traces of iron oxides. It is 30 deg and 60 deg to core axis. Fractures at 130 feet are filled with calcite and orient at 85 - 90 deg.					
131	146	132.5	134.5	40.4	41.0	Mudstone / Coal: Mudstone is the main rock type. It is dark grey and large grained, 2' 0.6m The coal is interbedded in the mudstone. It is very dull, and soft The fractures at 131.5' are oriented at 85 deg and have carbonaceous infilling it is 20 deg and 115deg to core axis. Fractures at 146' are oriented at 85 deg they too are carbonaceous infilled.					
146	151					Sandstone: Light grey in color, medium grained contains bands of siltstone at 147'. Core is broken from 146 - 147'. Fractures after 147' are 30 deg and 150 deg to core axis. this repeats once again at 147.5'. Fractures contain calcite.					
151	163					Mudstone: Siltstone. Mudstone is large grained, dark in color. Fracture at 152' is 85 and shows slip n' slide. Broken core occurs at 153 - 156'. Fractures show alot of calcite infilling. Fracture at 158' is 30 deg and 110 deg and filled with calcite. Broken core at 160' shows traces of iron oxides.					
						Core Size					
						Hole No. DDH. 1258					

40 Scale
Color Plot & Dips
Ore Classes & Avar.



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

Logged By: Loriann Date: July 6/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
From To From To From To DIRECTIONAL SURVEY DONE YES NO

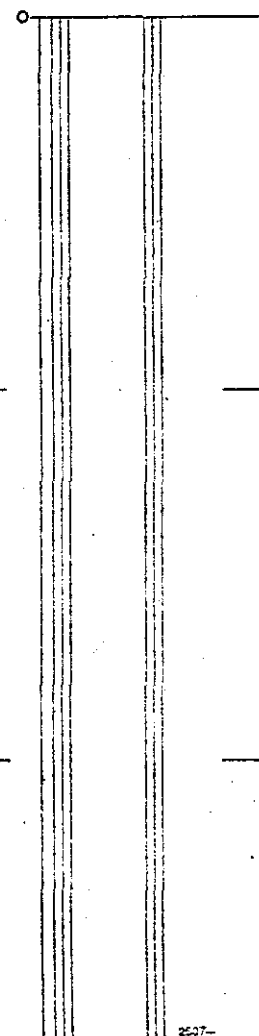
163	170.5					Siltstone: Light grey in color, medium grain size. Large amounts of calcite are found in the fractures in the core. Fractures at 163' is 30 deg and 65 deg to core axis, it is filled with calcite. Broken core occurs from 163' to 165'. Fracture at 166' is calcite filled and orients at 75 deg. A band of mudstone occurs at 168'. It is approx 8" long. Broken core then occurs from 168.5' - 170.5'. A band of sandstone occurs at 170.5'
170.5	173					Sandstone: Light grey in color. Small grained. Some calcite banding is evident. Calcite is found in the fracture in large amounts. Fracture at 172' is 60 deg and 130 deg to core axis. Traces of iron oxides are found in pieces of core at 172 - 173'.
173	177					Mudstone: Dark grey in color, large grained, very soft. Broken core throughout this length. Traces of iron oxides are found on the pieces of core.
177	200					Siltstone: Medium grey in color, Medium grain size. Calcite bands appear in the core and large amts of calcite is found in the fractures. Carbonaceous infilling occurs in fractures at 179.5'. The fracture is 85 deg to bedding. This repeats twice. Fractures at 185' is carbonaceous infilled it orients at 30 deg and 180 deg to core axis. Broken core then occurs from 188' to 190 feet, traces of carbonaceous infilling if found on the broken core. Bands of coal are found in the core at 190'. Fractures are 60 deg and coal filled. Broken core then from 191-195'. After this the siltstone is band with coal, and all fractures are coal filled. Fractures are oriented at 70° and at 200' 50 deg.

Core Size

Hole No. DDH. 1258

Page 5 of 10

40 Scale
Color Plot & Dips
Ore Classes & Avar.



Diamond Drill Geological Log



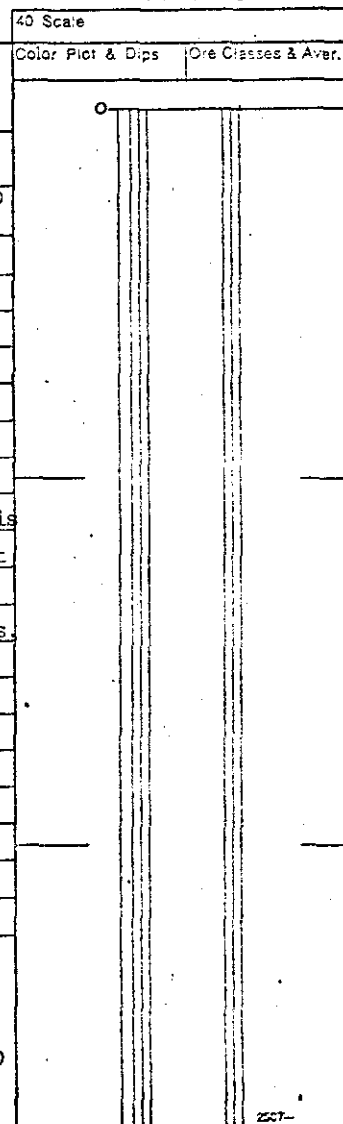
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann Date: July 6/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

Color Plot & Dips _____ Ore Classes & Aver. _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
200	205					Siltstone: Light grey in color, small grain size, Carbonaceous infilling in core. Fracture at 200.5' is 70 deg to bedding. Fracture at 202' is calcite filled, and oriented at 55 deg. The fracture at 203' shows evidence of slip n' slide, angle is 60 deg.
205	221					Mudstone: Very dark in color, medium grain size. Core is very soft. Fractures are oriented at 60 deg at Core is broken up from 208 - 213'. Pieces of core don't have any signs of calcite or iron oxides. Fracture at 213' is clean, oriented at 90 deg. This repeats three times. Core becomes alot harder after 215'. Fractures orient at 60 deg. They contain some carbonaceous infilling. Broken soft core from 217 - 218'. Alot of carbonaceous infilling is found on the core pieces.
221	223					Siltstone: Light grey, medium grain size. Core contains alot of calcite infilling. Fracture at 221' orients at 25 deg and 270 deg if contains alot of calcite. A fracture at 221.5' orients at 10 deg and has been healed by calcite.
223	240.8					Mudstone - Dark grey in color. Small grain. Core is relatively hard. Fracture at 224' is oriented at 90 deg A J1 fracture at 226' is clean. It orients at 50 deg and 115 deg. There is a calcite band forming at 227'. A B1 fracture at 230' has calcite infilling, it is 85 deg to bedding. Broken core occurs at 230' - 231.5' There is a band of coal at 232'. A fracture there also has carbonaceous infilling. The fractures at 237' are clear. They orient at 85 deg to bedding



Core Size _____
 Hole No. DDH. '1258 Page 6 of 10

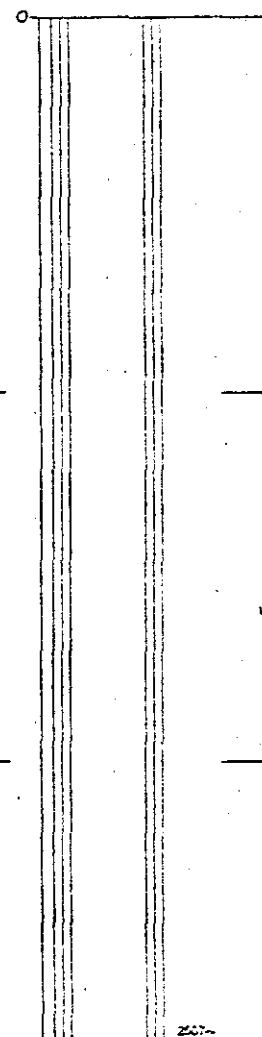
Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:				Sampled:			
Logged By:				Date:			
Block:				Composites:			
Sect.:		Place:		App. Bear:		App. Dip.:	
Length:							
CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
240.8	251					Siltstone: Medium grey in color. Small grain size. Relatively hard core. Fractures are clean. Traces of iron oxides begin to appear at 244'. Fractures at 244' are oriented at 65 deg and contain iron oxides. Broken core begins at 244' and continues to 245.5'. Iron oxides are found on the core pieces. J1 fracture at 245.5' has iron oxides it orients at 25 deg and 175 deg to core axis. Broken core occurs from 243-245' from 246 - 251' There are iron oxides visible on these core pieces.	
251	276					Mudstone: Relatively soft, dark in color, large grain. Fracture contain iron oxides. Fractures orient at 85 deg throughout most of the core. Broken core occurs from 261 - 265', and 271 - 276' iron oxides are abundant on the core.	
276	285	275	285	83.8	86.8	Coal: Relatively hard, dark color, very shiny. Fractures are 90 deg to bedding. 10' 3m SEAM - K	
285	288.5					Siltstone: Medium grey, small grained. Fractures are clean. They are 85 deg to bedding.	
288.5	293	289	293	88	89.3	Coal: Very soft, highly broken core. Very shiny 4' 1.3m	
293	306					Siltstone: Dark grey in color, medium grain size. Fractures at 295 show evidence on slip n' slide. Fractures are 80 deg to bedding. J1 fracture at 294' is clear. It orients at 35 deg and 195 deg to core axis. There is carbonaceous infilling in fractures after 296'. The fractures are 90 deg to bedding	
						Core Size	
						Hole No. DDH. 1258	
						Page 7 of 10	

40 Scale
Color Plot & Dips | Ore Classes & Aver.



Diamond Drill Geological Log

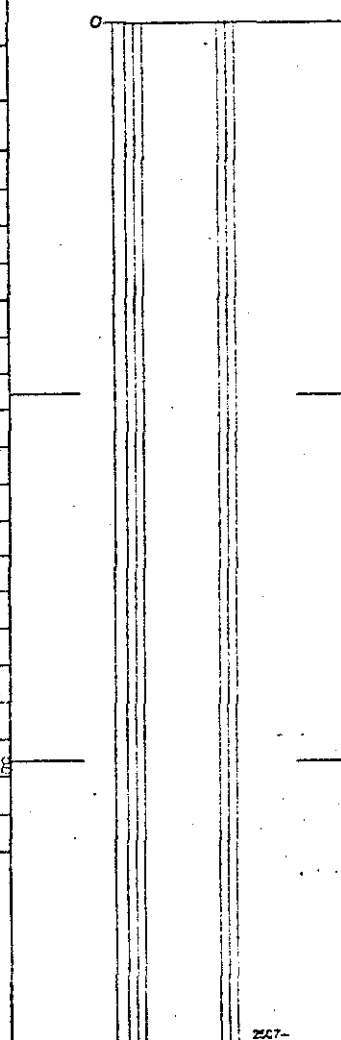


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dps Core Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
306	311					Sandstone: Very dark in color. Medium grain size. Evidence of iron oxides in fractures. Fractures at 307' are 90 deg to bedding. At 308 they are 65 deg. There is carbonaceous infilling at the fracture at 309'. It orients at 85 deg.
311	321					Mudstone: Very dark, very soft, large grain size. Core is broken from 311-313', then a one foot band of siltstone occurs. There is evidence of calcite infilling in the siltstone. The core is then once again broken up from 313' - 319'. Fractures at 319' are 60 deg to bedding, and have carbonaceous infilling.
321	323.5	320.5	323.5	97.7	98.7	Coal/Mudstone. Very soft and dull, this section looks like it is mostly mudstone. Very broken up. 3' lm
323.5	340					Siltstone: Medium color, large grain size. Fractures are clean. Fracture at 329' is 75 deg to bedding. Fracture at 334' has carbonaceous infilling. It orients at 80 deg to bedding. Evident of iron oxides in the fractures begins at 334.5'. Fracture is 40 deg to bedding. Fracture at 338' contains iron oxides, and orients at 75 deg to bedding.
340	350					Mudstone: Dark in color, large grain size. Very soft. Broken core from 340 - 344'. there is carbonaceous infilling on the pieces of core. There is also a calcite deposit at 341.5'. Fractures at 344' orient at 80 deg and have carbonaceous infilling. Fractures at 348 - 349' are 90 deg to bedding and are clean.
350	362					Siltstone: Medium grey in color. Small grained. Mudstone band at 361 - 362'. Fractures are clean. There is brown core from 355 - 356'. Calcite infilling in fracture at 358'. Fracture is J1 type, 45 deg and 210 deg to core axis.



Core Size
 Hole No. DDH. 1258 Page 8 of 10

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

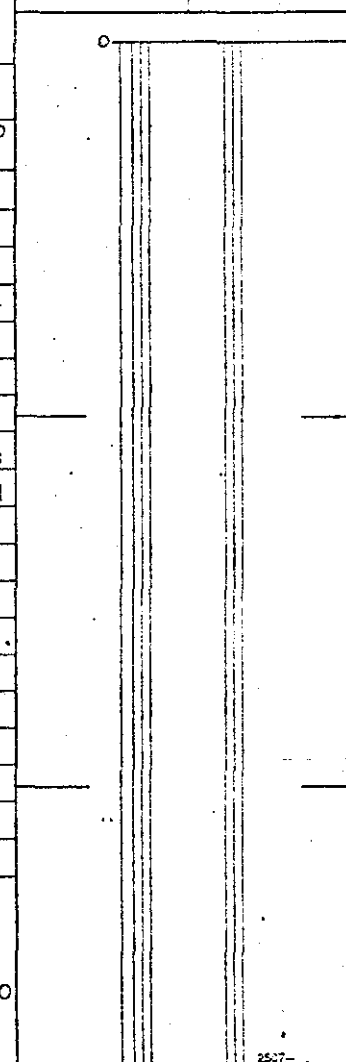
Logged By: Loriann Date: July 9/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.	From	To	RAD. LOG In Ft.	From	To	In meters	From	To	Description
362	379.5								Siltstone: medium grained, Medium grey in color. Fractures are clean from 362 - 371. Calcite found in fractures after 371. Fracture at 364 is clean, at 85 deg. J1 fracture at 369 has calcite infilling. It orients at 45 deg and 160 deg. There is a band of calcite at 375.5'. Cross bedding occurs at 376'. Fractures after 376' are clean, and orient at 85 deg.
379.5	389		379.5	389.5	115.7	118.7			Coal - Shiny, very soft & broken up. Band of siltstone, approx 1' long at 383-383.5'. Fracture is clean, and orients at 85 deg 10(8.5)' 3(2.6)m SEAM - J
389	401								Sandstone: Very light grey, small grained. Fractures are filled with calcite. Fractures are oriented at 75 deg at 389 - 390. A J1 fracture at 392' is oriented at 10 deg and 175 deg it is filled with calcite. Bands of calcite appear thru out the core. Fractures at 398 are oriented at 75 deg.
401	420								Mudstone: Medium grey, small grained, Fractures at 401-406 are clean. Fractures at 402' are oriented at 90 deg. This occurs three times. A J1 fracture at 405' is clean, it is 35 deg and 290 deg to core axis. Broken core occurs from 405 - 406'. Some calcite is shown on the core pieces. Core from 406 - 420' the fractures are calcite filled. The fractures are oriented at 85 deg. A band of calcite at 412' is approx. 2" long. Broken core occurs at 413 - 415'. After this point the core is softer.
420	422.5		420.5	422.5	128.2	128.8			Coal: Very dull, soft. Lacks lustre. Coal is very broken up. 2' 0.6m
422.5	436								Siltstone: Light grey in color. Small grain size. Bands of calcite appear throughout the core. Fractures are calcite filled. Fractures at 430 are oriented at 75 deg and calcite filled. J1 fracture at 433' orients at 35 deg and 175 deg to core axis.

40 Scale
Color Plot & Dips Ore Classes & Avar.



Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____

Logged By: _____ Date: _____ Composites: _____

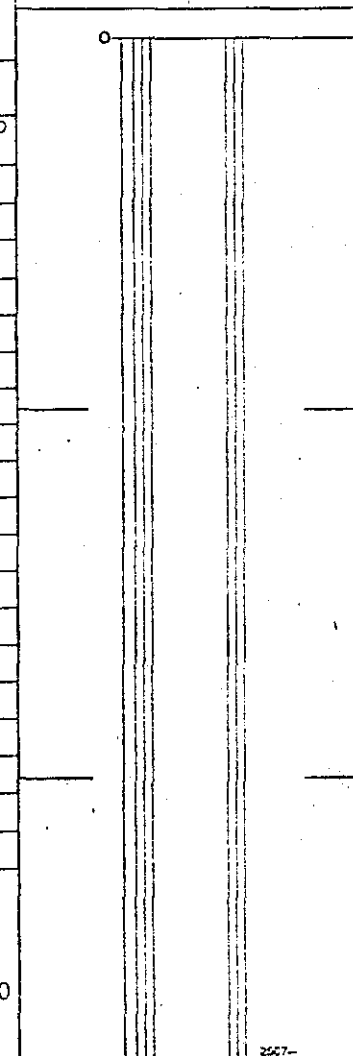
Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

436 441 134.4 Midstone: very soft. Broken core from 436 - 440', Dark color, large grained. Fracture at 441, is 80 deg to bedding.

_____ End of Hole _____

40 Scale
Color Plot & Dips Core Cases & Avar.



Core Size
Hole No. DDH. 1258 Page 10 of 10

Diamond Drill Geological Log

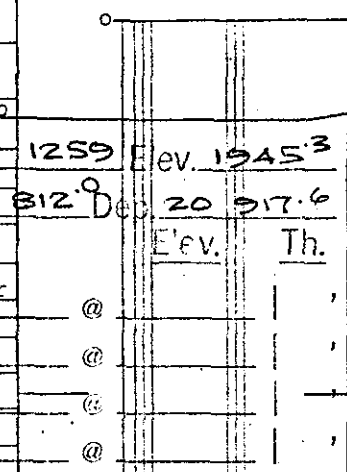


FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: KH Date: June /1979 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: 351' / 107 m

40 Scale
 Color Plot & Dips Core Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Hole No. 1259	Elev. 1945.3
From	To	From	To	From	To				
0	25			0	7.6	Overburden			
25	47					Sandstone - medium and coarse grained. Iron Oxides infilling along bedding plane fractures. One inch thick of Iron Oxide healing at 27 feet. Coal infilling of irregular fractures from 26 to 28 feet and from 44 to 47 feet. Bedding is irregular at 32' and 36-38 feet indicative of a disturbed environment. Bedding is at 80 deg to core axis from 25 to 39 feet. At 39 to 44 feet bedding is at 70 deg to core axis. Cross bedding at 44 feet. Bedding at 80 deg to core axis from 44 to 47 feet. Large amount of siltstone interbedded with sandstone at 32 feet & from 36 to 38 feet. Sandstone changes abruptly from coarse grained to fine grained at 41.5 - 42 feet then back to coarse grained.		at 148 312' Dip	20 917.6
47	62					Siltstone - dark grey-black in colour. Iron oxide infilling along fractures above 58 feet.		@	
62	82					Mudstone - Small amounts of iron oxide infilling around 80 feet. Coal infilling throughout with amount increasing with depth. Broken core from 63 to 66 feet, being highly broken from 65 to 66 feet. Highly broken core from 73 to 74 feet. Broken core from 79.5 - 80.5 feet. The highly broken core exhibits a large amount of coal. Bedding is predominantly at approx 85 deg to core axis. Rock is alternately highly fractured or relatively unbroken for approx 2 feet intervals.		@	
82	94	82	94	25	28.7	Coal - shiny lustre. Soft and broken from 83 to 86 feet & broken from 91 to 94 feet. Rest of the coal is relatively hard. Bedding is at 85 deg to core axis.		@	
						1 2' 3.7m	Core Size		



Bedding 80° to C.A., Pyrite @ 56'

Diamond Drill Geological Log

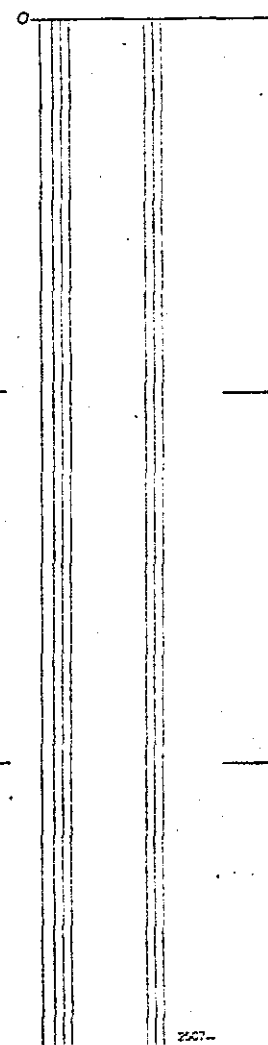


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: KH Date: June 11/79 Composites: _____
 Back: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
Color Plot & Dips Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
94	110					Sandstone/siltstone/mudstone. Sandstone is fine grained - light grey in color. Siltstone and mudstone are dark grey in colour. Coal infilling along some of the fractures. Major II type fracture from 99.5 - 103 feet - calcite infilled. Several other joint fractures below this, also calcite filled. Irregular bedding throughout section, indicative of a disturbed environment. 6 rainsize decreasing with depth. Four inch band of pure mudstone at 98 feet. Core changes abruptly at 100.5' from predominantly sandstone to predominantly siltstone. Bedding is at about 80 deg to core axis - but hard to determine due to disturbed bedding.
110	112					Mudstone - dark grey, black in colour. Large amount of coal-high lustre. Amount of coal increasing with depth. Pyrite at 111.5 feet. Poor bedding. Bedding at 80 deg to core axis.
112	116.5					Coal / mudstone - shiny lustre - fairly hard. One break per 3 inches approximately. Bedding is at 80 deg to core axis.
116.5	123					Sandstone/siltstone/mudstone. Sandstone - light colored and fine grained. Siltstone & mudstone dark grained. Calcite infilling along joint fractures at 118' and 122'. Also along a bedding plane fracture at 122'. Polished bitumen infilling along bedding plane fractures. Sandstone appears irregularly in sections of about 8 inches. Bedding in the sandstone is irregular indicative of a disturbed environment. Bedding is at 90 deg to core axis at 116.5' feet at changes to 80 deg to core axis at 119 feet.
						Core Size
						Hole No. DDH. 1259
						Page 2 of 7



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

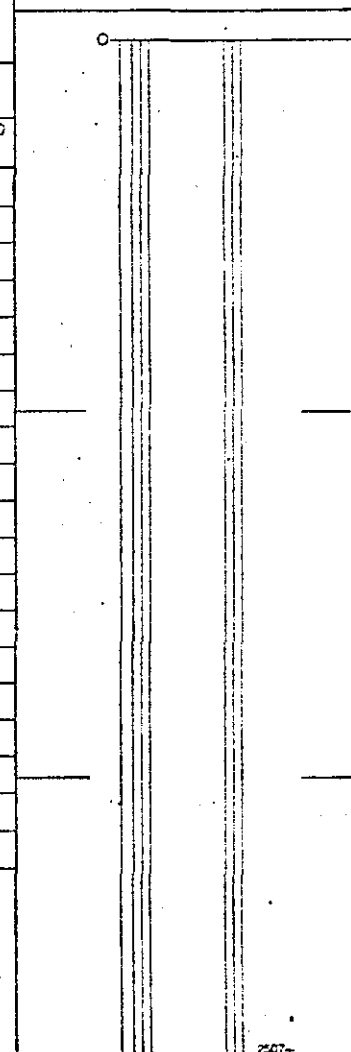
Logged By: KH Date: June 12/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.	From	To	RAD. LOG In Ft.	From	To	In meters	From	To	Description
123	129								Siltstone medium grey in colour. Coal along fractures below 127 feet. Slight brecciation at 128'. Bedding at 70 deg to core axis.
129	137								Midstone - black in colour. Large amount of bitumen throughout. Broken core from 129 to 130 feet and a small amount at 134.5 feet. Bedding at 85 deg to core axis. Fractures are about 1 for every 2 inches.
137	154								Sandstone/siltstone. Sandstone - light grey fine grained. Siltstone - dark grey. Highly broken core at 147 - 148 feet. Polished bitumen along fractures. Calcite along joint fractures. Sandstone exists in sections 4 - 8 inches thick and is interbedded siltstone. Beds are irregular indicative of a disturbed environment. Frequency of sandstone sections decreasing with depth. Bedding is at 85 deg to core axis.
154	162								Siltstone/mudstone - dark grey- black in color. Bitumous infilling along fractures - amount increasing with depth. Calcite infilling along joint fractures at 157 feet. Coal parting exists between 157.5 & 158 feet. Brecciated core from 159 - 160.5 feet. Most fractures along bedding plane. Bedding plane is at 80 deg to core axis. Most beds are agitated indicative of a disturbed environment.
162	166	162	166	49.4	50.7				Coal - black - dull lustre. Most fractures along bedding plane. Bedding is located at 75 deg to core axis. 4' 1.3m
166	176.5								Siltstone/sandstone. Siltstone - dark grey in colour. Sandstone light grey, fine grained. Microfossil streamers and coal above 170 feet. Sandstone in short 3 inch sections and with bedding indicative of a disturbed environment. Microfossils and bitumous infilling

40 Scale
Color Plot & Dips Ore Classes & Aver.



Core Size

Hole No. DDH. 1259

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

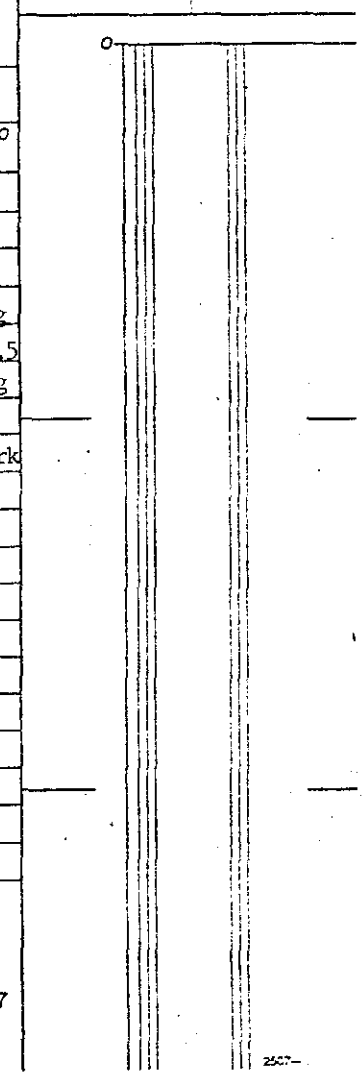
Logged By: KH Date: June 12/79 Composites: _____

Block: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
						and bitumous infilling along tractures at 174 feet and 175 - 176.5 feet. Minor calcite infilling at 174 feet. Small amounts of pyrite at 176 feet. Bedding is at 80 deg to core axis.
176.5	193					Sandstone - extremely fine grained medium grey in colour. Minor bitumous infilling along fractures throughout. Small amount of calcite along joint fractures from 183.5 - 184.5 Pyrite along joint fractues at 192 feet. Bedding is poor and at approximately 80 deg to core axis.
193	216					Sandstone/siltstone. Sandstone - medium grey, color, fine grained - with interbedded dark grey siltstone. Fractures are clean and through the siltstone ~ approximately one per foot. The beds are agitated throughout indicative of a disturbed environment. Minor cross bedding at 205 feet. Large J 1 type fracture at 205 - 206 feet with calcite infilling continued. Minor bitumous infilling at 208 feet. Broken core from 215 - 216 feet. Bedding is at 80 deg to core axis until 204 feet. It then increases to 88 deg to core axis until 206 feet. At 206 feet it is at 85 deg to core axis.
216	236					Sandstone/Siltstone. Sandstone - light grey colour, medium to fine grained. Siltstone dark grey colour minor calcite infilling at 220 feet. Bitumous infilling below 231 feet, amount and frequency increasing with depth. Beds are irregular throughout section indicative of a disturbed environment. Layers of sandstone and siltstone 1 - 2 mm thick. Broken core from 216 - 219 feet. Bedding planes irregular, but usually approx 85 deg to core axis.
236	237.5					Coal - highly reflective lustre - black colour. Bedding at 75 deg to core axis.

40 Scale
Color Plot & Dips
Core Classes & Avar.



Core Size
Hole No. DDH. 1259

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

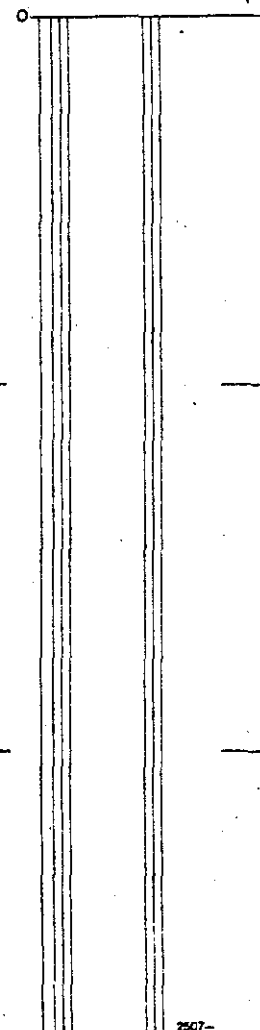
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Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
237.5	240					Siltstone / mudstone . Medium grey in colour. Small amount of bitumous infilling along fractures. Poor bedding. Bedding at 80 deg to core axis.
		236	238	71.9	72.5	Coal 2' 0.6m
240	258	240	258	73.1	78.6	Coal Dark grey and black color. Relatively dull lustre. Highly broken from 251.5 - 253 feet. Bedding at 80 deg to core axis. 18' 5.5m SEAM - K
258	259					Mudstone - medium grey- brown in colour. Bedding at 85 deg to core axis.
259	261					Sandstone/siltstone/mudstone. Sandstone - light grey, fine grained. Siltstone - medium grey. Mudstone dark grey-brown. Bitumous infilling along fractures. Grain size decreasing with depth, making gradual transition from sandstone to mudstone. Sandstone beds are irregular, indicative of a disturbed environment. Bedding at 75 deg to core axis.
261	264					Coal/mudstone. Hard coal. Dark grey in colour. Lustre reflective at 261 feet, dull lustre from 263 - 264 feet. Increasing mudstone with depth. Bedding at 78 deg to core axis.
264	266					Mudstone. Dark grey in color. Large amount of bitumous intermixing. Broken core at 265 - 265.5'. Bedding at 80 deg to core axis.
266	270					Mudstone - dark grey in colour. Broken core throughout. Minor bitumous infilling bedding at 80 deg to core axis
270	275					Sandstone/siltstone/mudstone. Sandstone fine grained. Sst, siltstone, mdst - dark grey color. Grain size decreasing with depth. Large J1 type fracture from 272 feet to 275 feet. At 271 feet the beds are agitated, indicative of a

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size
Hole No. DDH. 1259
Page 5 of 7

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:				Sampled:			
Logged By:				Date:			
Block:				Composites:			
Sect.:		Place:		App. Bear:		App. Dip.:	
Length:							
CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO	
						disturbed environment. Most other bedding is poor and faint. Bedding is at 80 deg to core axis.	
275	285.5	274	285	83.6	87	Coal - Black with medium lustre. Fairly hard. Bedding at 55 deg to core axis.	
						11' 3.4m SEAM JB	
285.5	295					Sandstone/siltstone/mudstone. Sandstone light color extremely fine grained. Siltstone medium grey brown mudstone - dark grey black minor amounts of bitumous infilling along bedding plane fractures. Most fractures along bedding plane - approximately one per .5 feet. Broken core at 292 feet. The sandstone appears irregularly interbedded with siltstone. The beds are agitated indicative of a disturbed environment. Bedding is at 75 deg to core axis.	
295	303					Siltstone. Medium grey in colour. Calcite infilling of vugs at 302.5 - 303 feet. bitumous infilling of fractures at 295 - 296 feet. Mudstone parting at 302 - 302.5 feet. Bedding at 80 deg to core axis. Approximately 2 fractures per foot.	
303	308					Mudstone - dark grey-black in colour. Highly brittle. Bedding at 85 deg to core axis.	
308	312.5					Mudstone/Coal - Coal dark grey- high lustre. Mudstone - dark grey. Mostly coal at 308' degrading into mudstone with depth. Core is highly broken. Bedding is at 80 degrees to core axis.	
312.5	322					Sandstone / Siltstone. Sandstone - fine grained, light grey in color. Siltstone dark grained. Grain size decreasing with depth. Most fractures are joint fractures - approximately one per foot. Beds are highly agitated - indicative of a disturbed environment. Minor bitumous infilling at 318 feet. Bedding at 75 deg to core axis.	
						Core Size	
						Hole No. DDH. 1259	
						Page 6 of 7	

40 Scale
Color Plot & Dips
Ore Classes & Aver.

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:				Sampled:				40 Scale	
Logged By: KH				Date: June 14/79				Color Plot & Dips	
Block:				Sect.:				Ore Classes & Aver.	
Place:				App. Bear:				App. Dip.:	
Length:									
CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO			
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO			
322	326					Mudstone - dark grey - blue/black in color. Sandstone and siltstone are parting at 323.5 - 324 feet. Bitumous infilling of bedding plane fractures at 324 feet. Bedding at 80 deg to core axis. The sandstone and siltstone parting are highly agitated.			
326	328	326	328	99.4	100	Coal - blue black color. Polished lustre. Bedding at 85 deg to core axis. 2' 0.6m			
328	329.5					Mudstone - dark grey in color. Broken core from 328 - 328.5 feet. Bedding at 85 deg to core axis.			
329.5	332					Siltstone - light grey in color. Large amounts of calcite healing of bedding plane fractures and vugs. Some unhealed vugs. Calcite also along joint fracture. Bedding at 80 deg to core axis. - but bedding poor to non-existent.			
332	340.5					Mudstone - dark grey in color. Most fractures along bedding plane and drill induced. Brecciated core at 332 - 332.5 feet. Calcite infilling of joint fracture at 333 ft. Bedding is at 80 deg to core axis.			
340.5	351					Sandstone/Siltstone/Mudstone. Sandstone light grey fine grained, interbedded with dark grey siltstone. Siltstone - dark grey, black in color. The sandstone exists in sections at 340.5 - 342 feet, 345 346 and 350 - 351. The rest is mudstone. Calcite healing of sandstone at 341 feet and infilling at 340.5 - 342 feet, 345 feet and 351 feet. Bitumous infilling of bedding plane fracture in mudstone at 348 feet. Mudstone is brittle. Most fractures along bedding plane - approx. 2 per foot. Bedding at 75 deg to core axis. The sandstone beds are agitated.			
						Core Size			
						Hole No. DDH. 1259			
						Page 7 of 7			

Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann Date: June 27/79 Composites: _____

Block: _____ Sect.: _____ Place: Greenhills App. Bear: _____ App. Dip.: _____ Length: 391' / 119.2m

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description	Hole No.	Elev.	Th.
From	To	From	To	From	To				
0	27	0	26	0	8	Overburden	1260	1945.0	
27	36					Siltstone - Medium grained, light in color. Iron oxides present in fractures up to 30'. Then calcite in fractures up to 36'. Fractures are 50 deg to bedding. Some mudstone present at 35' 10".	149 193.3	20842.9	
36	41					Mudstone - dark color, large grained. Highly brecciated. Iron oxides present at 36.5'. Core is broken from 37' to 41'. Some calcite visible at 39.5'.			
41	43					Siltstone/Mudstone: Mudstone gradually changes to siltstone at 41.5'. Finely grained and light in color. Fractures are 40 deg to core axis at 41.5' and 85 deg to core axis at 43'. Iron oxides present in large amounts at 43' and some calcite infilling.			
43	49					Sandstone: Medium grain, light in color. Fractures are all 90 deg to core axis. All fractures are clean. No calcite / iron oxides present.			
49	56					Mudstone: highly broken core throughout this footage. Dark in color, Medium to large grain. Iron oxides present in all fractures. Some calcite infilling at 51.5'.			
56	65					Mudstone: dark in color, medium grained. Highly broken core from 56' to 58'. Iron oxides present in this broken core. Fractures are 85 deg to core axis. Fracture at 62' is 165 deg to bedding. Calcite is also present in the fractures. Slip n' slides are also present in the fractures.			
65	67					Siltstone: Medium in color and in grain size. Fractures are 90 deg to core axis. Calcite is present in the fractures.			
67	71					Siltstone/ Mudstone: Mudstone is dark in color fine grained. It is present from 66'			

Core Size

Hole No. DDH. 1260

Page 1 of 10

Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____

Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

to 67' and then it is banded with the siltstone. Fractures are more evident in the mudstone. There is a lot of iron oxides present in the fractures. Fractures are 90 deg to core axis, and at 68' fracture is at 180 deg to bedding, slip n' slides are evident at 70'. Fracture at 70.5' has evidence of the beginning of calcite healing. Iron oxides are abundant in the fractures at this point.

71 73 Mudstone - dark in color, medium grained. Fractures are 85 deg to core axis.

73 85 Sandstone - large grained, medium grey color. Broken core from 73' to 74' contains small bands of mudstone. Fractures are oriented generally at 85 to 90 deg to core axis. Fractures are also 175 deg to bedding. Fractures begin to vary from 60 deg to 70 deg from 77' to 79'. There is a small amount of coal in a fracture at 78'. Slip n' slides are present from 78' to 85' in fractures. Bands of mudstone begin at 82'. Fractures are oriented at 85 deg. Iron oxides are present in the fractures at 84'. Some coal is present in fractures between 83 and 84'.

85 96 Mudstone: Highly broken core from 85' to 90.6'. The mudstone is dark in color and large in grain size. Calcite is visible on pieces of core as is iron oxides. After 90.6' the core isn't brown. Fractures at 91' are 70 deg to core axis, and then go to 85 deg at 92' to 96'. Most fractures are clean.

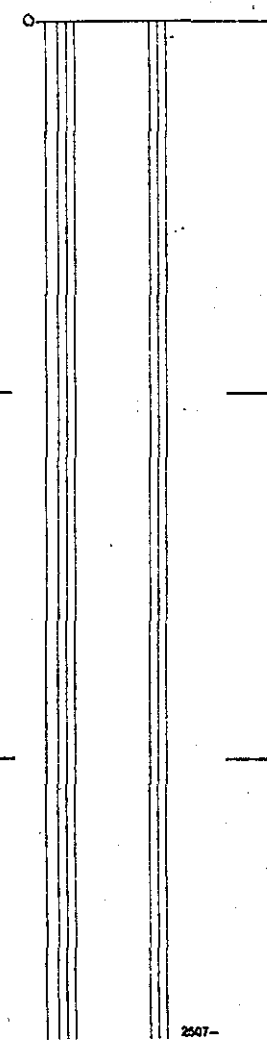
Fractures at 90.6' to 91' have a little calcite in them.

Core Size

Hole No. DDH. DDH 1260

Page 2 of

40 Scale
Color Plot & Dips Ore Classes & Aver.



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips _____ Ore Classes & Aver. _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY-NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

96	102					Siltstone/Mudstone: Mostly siltstone with interbedded bands of mudstone. Medium grey in color, grain size varies from small to medium. Fractures from 96' to 98'. Fracture at 98.5' is 10 deg and continuous throughout the entire length of core which is a foot and 1/2 long. A lot of calcite is found in these fractures. A fracture at 101' is 85 deg to core axis.
102	108					Siltstone: Fine grained, light in color. Fracture at 102.5' is at 85 deg to core axis. No calcite or iron oxides are present. it is a clean fracture. Fracture at 105' is 60 deg to core axis and contains traces of iron oxides. Fracture at 106' is 10 deg to bedding. Traces of calcite are visible. Fracture at 106.5' has been healed with calcite. it is 60 deg to core axis. Calcite is also visible in other healed fractures, slip n' slides are also present in fractures in the core.
108	109					Mudstone: Dark in color. Grain size is large. A lot of calcite is visible in the core fractures. Iron oxides are also present in the fractures at 108'.
109	114					Mudstone: Dark color, medium grain size. Calcite deposits found in all fractures. A lot of broken core from 109 - 111. Fractures are Bl, 10 deg at 112'. Bands of siltstone are evident at 113.5'.
113.5	116					Siltstone: Light grey in color. Grain size is small. Bands of mudstone appear at 115'. Fractures have small deposits of calcite, most are clean. Fractures are oriented at 20 deg to core axis.

Core Size

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

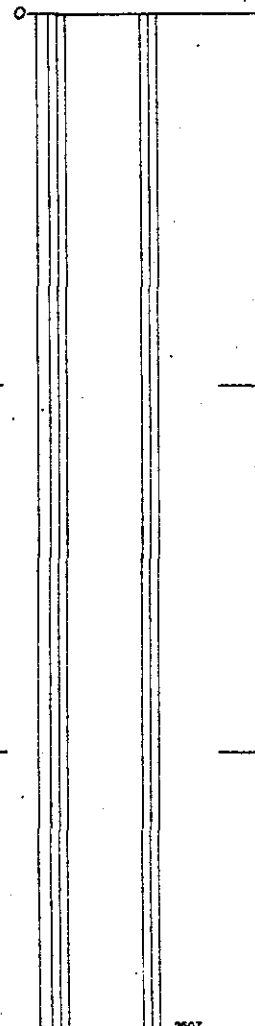
Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.	RAD. LOG In Ft.	In meters	DESCRIPTION
From	To	From	To
116	121		Mudstone/Siltstone - major rock type is siltstone, but there are bands of mudstone, appearing in great numbers. Fractures are orientated at 10 deg. There is a J4 type fracture, calcite healed. It is at 80 deg to bedding.
121	129		Siltstone: Medium grained, medium grey in color. Some mudstone interbedded. Calcite healing occurs along the fracture. Slip n' slide occurs along the fractures at 126.5'. At the fracture. Also iron oxides are present here.
129	131		Mudstone: Dark grey in color. Medium grained. Fractures are of the B1 type and are 15 deg to core axis. slip n' slides occur along these points. Calcite deposits are found at 130.5'.
131	136		Siltstone/Mudstone: Siltstone with interbedded mudstone, siltstone is medium grey, small grained. Calcite deposits are found in fractures, especially around the 132' point. Slip n' slides also occur in fractures near the 133 - 135' point. Fractures orient at approx 85 - 90 deg to core axis. Deposits of coal occur in the fractures at 135.5'.
136	148		Mudstone: Dark grey in color. Grain size is large. A lot of broken core occurs in the range of 137' - 146'. Fractures at 141' are 85 deg to core axis. Slip n' slide occurs in fractures from 141 to 146'. Brecciated core is evident at 145.5' - 146'. Calcite healing is evident at the 148' mark. This fracture is orientated at 75deg.
148	154		Siltstone: Light grey in color. Small grain size. Calcite deposits found in the fractures. Fractures are 60 deg at 148'. There is a J1 type fracture at 150'. It contains traces of iron oxides it is orientated at

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Core Size
Hole No. DDH. 1260 Page 4 of 4

Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____

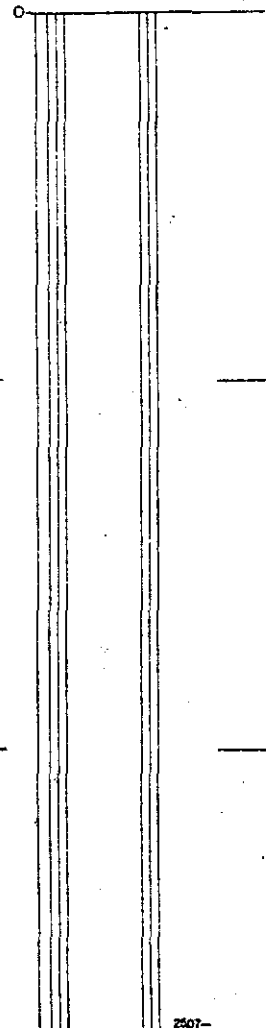
Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.	RAD. LOG In Ft.	In meters	DESCRIPTION
From	To	From	To
			10 deg to bedding. There are mudstone bands occurring at 151.5'. Here there occurs a numerous amount of J1 type fractures. These vary from 10 deg to 30 deg to bedding. Also calcite deposits are abundant in these fractures.
154	164		Mudstone: Dark grey in color. Large grain size. Very soft. A lot of calcite deposits occur in the fractures at 155'. Fractures are 80 deg and slip n' slide occurs. Fracture at 158.5' is 50 deg, a lot of slippage is evident. A J1 type fracture occurs at 160'. It is oriented at 30 deg to bedding. Broken core then occurs from 160' to 162'. Deposits of coal occur in the fractures at 162.5'. The core here too is also highly broken.
164	165		Coal: Highly broken up.
165	173		Mudstone: Broken core from 165 = 166', Mudstone is dark in color, large grain size. It is very soft. Fracture at 167.5' is 75 deg to core axis. J1 fracture at 168' is oriented at 20 deg to bedding. It also contains iron oxides. Calcite deposits also occur in fractures at 170' to 173'. Fracture at 170' is oriented at 90 deg to core axis and at 173 the fractures are 10 deg to bedding.
173	192		Sandstone: Light grey in color. Medium/small grain size. Fractures at 173.5' are oriented at 90 deg and contain large amounts of calcite. At 175.5' the J1 fracture is 30 deg to bedding and also contains also of calcite. A J4 type fracture occurs at 178' with calcite healing occurring. Iron oxides are also present in broken core at 177.5'. At 179.5' coal is found in fractures. The fractures are 85 deg to core axis.

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Core Size

Hole No. DDH. 1260

Page 5 of 10

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

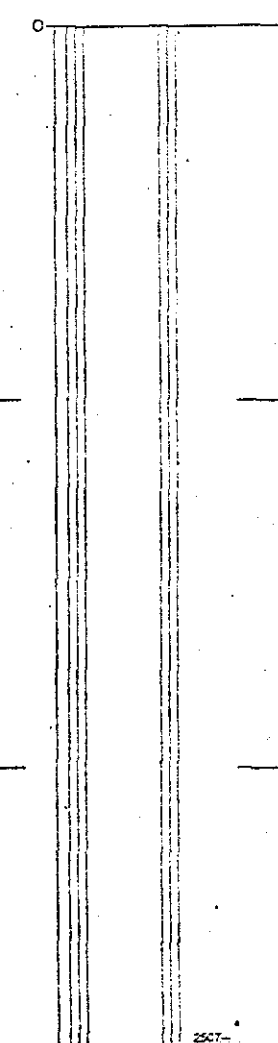
Logged By: Lorian Date: June 29/79 Composites: _____

Block: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

								At 180' a J1 fracture at 35 deg has calcite deposits. At 180.5' a fracture at 85 deg is clean. A large J1 fracture occurs at 183.5'. It has a large amount of calcite deposited in it. It is orientated at 10 deg. Bands of mudstone occur at 186'. Brown core occurs at 187.5' to 188.5'. A lot of calcite is deposited on the broken core. Fracture at 191' are 30 deg to core axis. It has calcite deposited.
192	202							Sandstone: Light grey in color. Medium grain size. Some mudstone bands near the 193' mark. Fractures are oriented at 60 deg with deposits of calcite, and slip n' slide occurring. J1 fracture at 195' at 20 deg. Broken core occurring at 196' to 202'. Deposits of calcite are very evident in this brown core.
202	234							Mudstone: dark grey in color, large grained very soft. Fractures at 203' are 80 deg Broken core from 203.5' - 205". Some siltstone banding occurring at 206'. Fractures at 207' are J1 or can be J4 They are clean. Some slip n' slide occurring at 209'. The J1 fractures are 15 deg. Broken core occurring from 211' to 216'. Some calcite deposits occur at 216.5' There is a J4 fracture at this footage, that has been calcite healed. Fractures at 221' are B1 and are oriented at 85 deg. This occurs for 5 fractures. They have further evidence of calcite deposits. J1 fracture at 223 is clean. It is oriented at 40 deg. Some slippage occurs at 225 in the B1 fractures. These are oriented at 80 deg.

40 Scale
Color Plot & Dips | Ore Classes & Aver.



Diamond Drill Geological Log



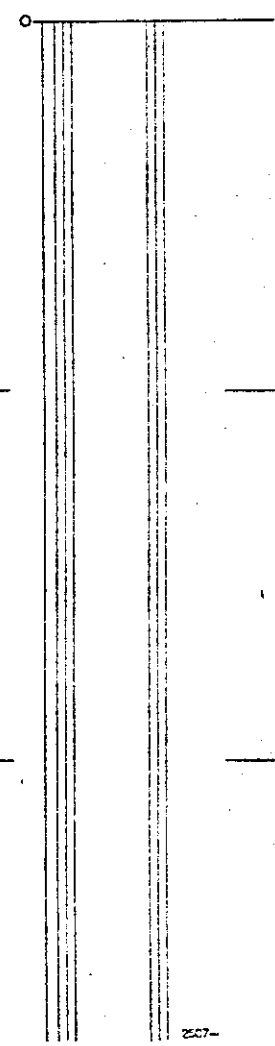
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann Date: June 29/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
234	237	234	237	71.4	72.4	Coal: Highly brecciated. Very soft. Fractures in the core are oriented at 60 deg 3' 1.0m
237	241					Mudstone: Dark grey in color. Very large grain size. A lot of calcite is found in the fractures. Fractures at 237.5' are 80 deg. The J1 fracture is 25 deg. A lot of calcite is also found in these fractures.
241	246					Sandstone: Medium grey in color. Grain size is small. Highly fractured, a lot of broken core from 241 to 242'. Lots of calcite deposits are evident in this section. Fractures at 242.5' are oriented at 45 deg and at 244'; they are clean and are 85 deg. Some mudstone banding occurs at 245'.
246	262					Siltstone: Dark grey in color. Medium grained. Fractures are 85 deg with a lot of calcite deposits present. Slip n' slides present in fractures at 251'. A band of mudstone, approx. 3" is present at 251.5'. A lot of calcite has been deposited thru-out this length. The fracture at 251' is 3 deg to core axis. A lot of broken core occurs from 251.5' - 254'. At 256' a band of calcite is deposited within a fracture of 65 deg. A lot of calcite healing occurs at 258'. Fractures after this point orient at 60 deg. They are clean fractures.
262	271					Sandstone: Light grey medium grained. Fractures orient at 80 deg with a lot of calcite infilling. A J4 type fracture occurs at 265.5'. It too contains calcite. Broken core from 266 - 268' A lot of calcite is evident on the pieces of broken core. At 269' fractures are calcite filled, at 80 deg. After this they orient at 60 deg, but contain a lot of calcite

46 Scale
Color Plot & Dips Ore Classes & Aver.



Core Size
Hole No. DDH. 1260
Page 7 of 10

Diamond Drill Geological Log



FORGING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 40 Scale _____
 Color Plot & Dips _____ Ore Classes & Aver. _____

Logged By: Loriann Date: July 3/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
271	299					<p>Siltstone: Light grey large grained. Fractures are 85 - 90 deg, and are calcite filled. Bands of calcite found in fractures at 276. Fractures are oriented at 85 deg. A J1 type fracture at 277' is 10 deg and 60 deg to core axis. A large band of calcite occurs at 279'. It is approx. 1/2" thick and lies in a B1 fracture of 65 deg. Broken core occurs from 281 to 283'. Fractures after 283' are mostly of the J1 type. These all have calcite infilling. Broken core then occurs again from 286' to 292'. The core is broken into quite small pieces. A lot of calcite infilling is found on the pieces. Core from 292' on is fairly broken up, but not in quite so small of pieces. J1 fractures occur at 293'. These are 15 deg and 85 deg to core axis. B1 fractures occur along the core at 295'. These orient at 75 deg. That looks like a J4, fracture has occurred at 298'. It is 30 deg and 55 deg to core axis. Broken core then occurs again from 298 - 299'.</p>
299	312					<p>Sandstone/Mudstone: Very large grained, medium gray to light grey in color. Main rock type is sandstone, but bands of various thicknesses of mudstone occurs. Fracture at 300.5' is J1, 15 deg and 155 deg to core axis. A fracture at 302' is 65 deg and clean. No calcite or iron oxides are found in the fractures thru out the section of core from 299' to 303'. B1 fractures at 305 are oriented at 85 deg with calcite and iron oxide infilling. After this point, iron oxides are found in the fractures. Broken core occurs from 309' - 321'.</p>

Core Size

Hole No. DDH. 1260

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann Date: July 3/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

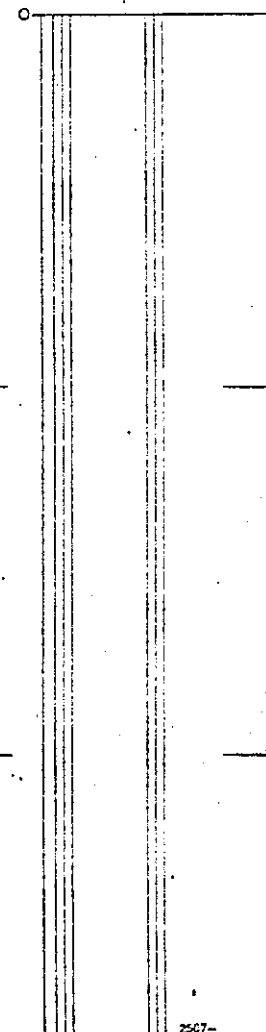
40 Scale
 Color Plot & Dps Core Glasses & Aver.

CORE in Ft.		RAD. LOG in Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To		
312	331	312	331	95.2	101	Coal, Highly brecciated dull shine. The coal has some bands of siltstone, interbedded with it. From 321 - 316' the coal is very soft, but seems to harden slightly after this. The core is well intact from 316 to 326'. Fractures in this section are Bl and orient from 60 to 85 deg to the core axis. The core is highly broken up again from 326 to 331. 19' 5.8m SEAM - K	
331	361					Mudstone/ Coal: Mainly mudstone dark in color. Large grained. Most of the coal is found along the fractures. Fractures are Bl. They orient from 75 deg to 80 deg at the 332' mark. They contain carboniferous infilling. No J1 or J4 fractures occur. All fractures are Bl. AT 336' the core is well intact. No Coal banding occurs after 336'. The fractures are Bl's and are 90 deg. Broken core from 339.5 to 340.5' After this point the core is intact till 356. All fractures are Bl they range from 65 to 90 deg. All fractures are clean. They contain no calcite or iron oxides. A J1 type fracture occurs at 351.5'. It is 35 deg and 50 deg to core axis. Some siltstone banding occurs at 353'. Fractures at 356' are 90 deg to core axis. A J1 fracture 360' and continues to 361'.	
361	374					Mudstone/Coal: Mudstone is dark in color, large grained. Coal found mainly in small sections. The core is completely broken up. Coal has a bright lustre	
374	378					Mudstone: Very soft, Light in color large grain size. Fractures are 90 deg to core axis. A few calcite deposits are found in the fractures. From 376' to 378' the core is broken up. Small coal deposit is found at 377.5'.	

Core Size

Hole No. DD1. 1260

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

Logged By: Loriann Date: July 4/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
Color Plot & Dips Ore Classes & Avar.

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
From To From To From To DIRECTIONAL SURVEY DONE YES NO

378	389						Siltstone: Medium grey, small grained. Fractures are 85 to 90 deg to core axis. These are no signs of calcite or iron oxides present.
389	391						Mudstone: Core is broken up. Mudstone is dark in color, large grained. Calcite deposits are found on some pieces of the core.

END OF HOLE

Core Size _____
Hole No. DDH. 1260 Page 10 of 10

Diamond Drill Geological Log



FORDING RIVER OPERATIONS

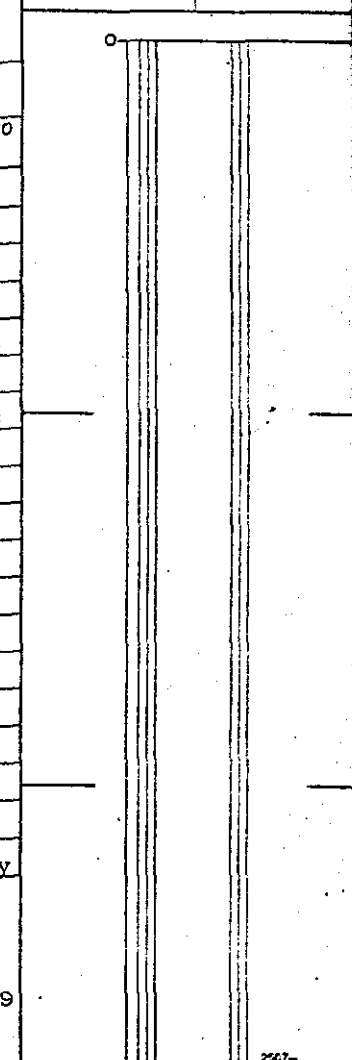
Objective: _____ Sampled: _____
 Logged By: DG Date: August 17, 1979 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: 539.5 m / 1770'

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
0	18	0	15	0	4.5	Overburden
18	20½					Siltstone/Sandstone: Dark grey siltstone irregularly interbedded with light grey, fine grained sandstone. Core is quite intact. Fractures are calcite infilled. Bedding is at 85° to the core axis.
20½	25					Mudstone: Dark brown, core quite intact, fractures are clean. Bedding is at 80° to the core axis.
25	26					Siltstone/Sandstone: Dark grey siltstone irregularly interbedded with light grey, fine grained sandstone. There is some lode casting. Core is intact. Bedding is at 72° to core axis.
26	42					Mudstone: Dark brown, core well fractured. Fractures are clean except for some iron infilling at 30', 37', 41'. Here is some sandstone (light grey, fine grained) interbedding at 42'. Bedding is at 79° to core axis.
42	45	39.5	43.5	12	13.3	Coal: Quite hard, lustrous. In a highly fractured condition. 1.3 m 4'
45	47					Mudstone: Dark brown, core quite intact. Fractures are clean. Bedding is at 82'. A slicken slide at 46'.
47	49½					Mudstone/Siltstone: Dark brown mudstone irregularly interbedded with light grey siltstone. Core is quite intact, fractures are clean. Bedding is at 69° to core axis.
49½	63					Mudstone: Dark brown, core well fractured, here is calcite infilling of fractures. Heavy infilling at 58'. Clean fractures at 60.5' to 63'. Bedding is at 85° to core axis.

40 Scale
 Color Plot & Dips
 Ore Classes & Aven



Diamond Drill Geological Log



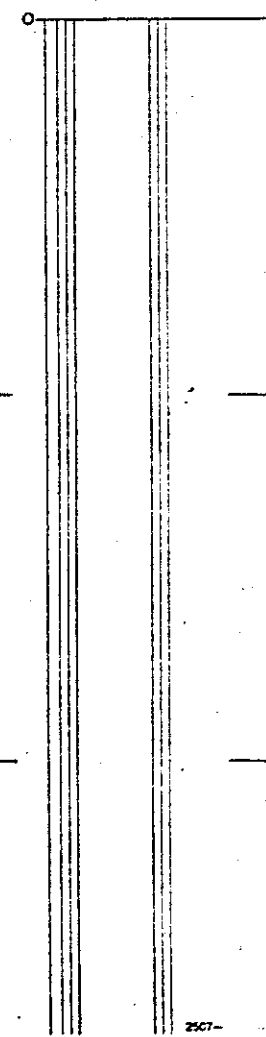
FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: August 17, 1979 Composites: _____

Block: _____ Sect.: _____ Place: Eagle App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
63	65½						Siltstone: Dark grey, core quite intact. Fractures are clean. Some mudstone interbedding at 65'. Bedding is at 85° to core axis.
65½	90						Mudstone: Dark brown/grey, core quite intact. Fractures are clean except for some calcite infilling at 85'. Interbedding with siltstone at 81'. Bedding is at 68° to the core axis.
90	100						Siltstone: Dark grey, core quite intact, there is some minor calcite infilling at 98'. Other fractures are clean. Bedding is at 74° to the core axis.
100	133	97.5	131	29.8	40.0		Coal: Hard, core well fractured but intact. Some mudstone at 117'. Bedding is at 73° to core axis. Mudstone partings 0.6, 0.3, 0.6 and 0.3 thick. 10.2(8.4)m 33.5(27.5)' SEAM - 13
133	139						Siltstone/Sandstone: Dark grey/brown siltstone irregularly interbedded with light grey, fine grained sandstone. Core is quite intact. Fractures are clean. Bedding is at 69° to core axis.
139	143						Siltstone: Dark grey, core quite intact, fractures are clean. Bedding is at 75° to core axis.
143	192						Siltstone/Sandstone: Dark grey siltstone irregularly interbedded with light grey, fine grained sandstone, there is some regular interbedding 172' to 174'. Some lodecasting in this area too. Bedding is at 72° to core axis.
192	216	189.5	214	57.7	65.2		Coal: Hard, core well fractured but intact. Bedding is at 81° to the core axis. 0.3 m shale at 59.2 m 7.5(7.2)m 24.5(23.5)' SEAM - 12

40 Scale
 Color Plot & C.ps Ore Casses & Avar.



Hole No. DDH. 1568 Page 2 of 19

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

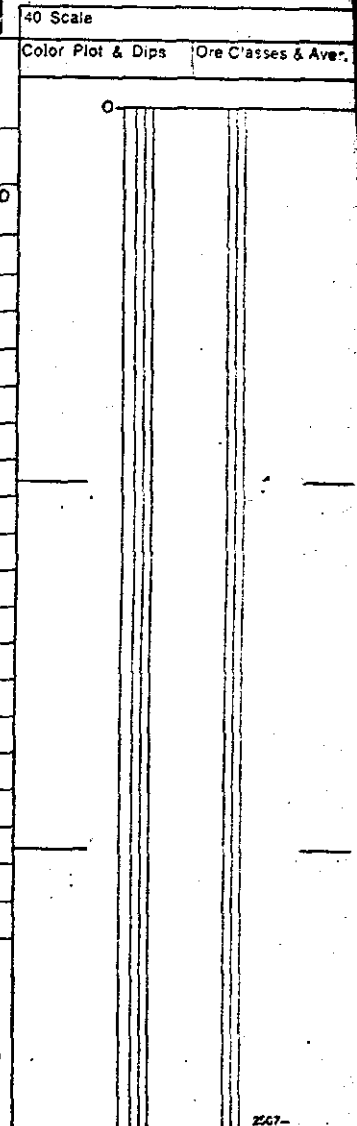
Objective: _____ Sampled: _____

Logged By: DG Date: August 20, 1979 Composites: _____

Block: _____ Sect: _____ Place: Eagle App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

From	To	From	To	From	To	Description
216	218					Mudstone: Core well fractured. Dark brown. Fractures are clean. Bedding is at 83° to the core axis.
218	220					Siltstone/Sandstone: Dark grey siltstone irregularly interbedded with light grey, fine grained sandstone. There is some regular interbedding 219' to 220'. Fractures are clean. Core is quite intact. Bedding is at 66° to the core axis.
220	221					Mudstone: Dark brown, bituminous, core well broken. Fractures are clean. Bedding is at 59° to the core axis.
221	234					Siltstone/Sandstone: Dark grey siltstone irregularly interbedded with light grey, fine grained sandstone. There is some regular interbedding 230' to 231'. Core is quite intact. Fractures are clean. Bedding is at 67° to the core axis.
234	238					Mudstone: Dark brown, core well fractured. Bituminous. Bedding at 67° to core axis.
238	257					Siltstone/Sandstone: Dark grey siltstone irregularly interbedded with light grey, fine grained sandstone. Minor infilling of fractures. Core is quite well intact. Lodcasting 248' to 252'. Bedding is at about 79° to core axis.
257	269					Siltstone: Dark grey, core quite intact. Fractures are clean, some calcite infilling at 265'. Bedding is at 70° to the core axis.
269	271					Sandstone/Siltstone: Light grey, fine grained sandstone regularly interbedded with dark grey siltstone. Core intact, some calcite infilling. Bedding is at 81° to the core axis.
271	288					Siltstone: Dark grey, core quite intact, calcite infilling of fractures. There is some interbedding with light grey, fine grained sandstone at 272', 282', 285'. Bedding is at 80° to the core axis.



Core Size _____
 Hole No. DDH. 1568 Page 3 of 19

Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DG Date: August 21, 1979 Composites: _____

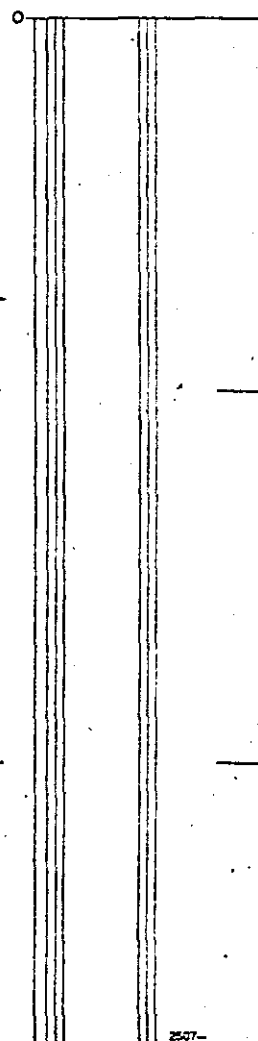
40 Scale _____
 Color Plot & Dips _____ Core Cases & Ave. _____

Block: _____ Sect.: _____ Place: Eagle App. Bear: _____ App. Dip: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
288	316					Siltstone/Sandstone: Dark grey siltstone irregularly interbedded with light grey, fine grained sandstone. There are intermatant bands of fine to thicker interbeddings of siltstone and sandstone. Fractures are clean. Bedding is 84° to core axis.
316	331	313	327.5	95.4	99.9	Coal: Hard, well fractured but intact. Bedding is at 72° to core axis. 4.5m 14.5' SEAM - 11u
331	347					Siltstone: Dark grey, core quite intact, fractures are clean. There is some interbedding with fine grained, light grey sandstone at 334', 340', 344'. There is some mudstone present at 336' and 346'. Bedding is at 71° to the core axis.
		345.5	347	105.3	105.7	Coal: 0.4 m 1.5' SEAM - 11
		348.5	359.5	106.3	109.3	Coal: 3.3 m 11' SEAM - 11
		365	369	111.3	112.6	Coal: 1.3 m 4' SEAM - 11
347	375					Coal: Hard, core intact, well fractured. Some mudstone at 366'. Bedding at 80° to core axis.
375	379					Mudstone: Dark brown, core quite intact, some carbonaceous infilling, bedding is at 82° to the core axis.
379	383					Siltstone: Dark grey/brown, core quite intact. Fractures are clean. Bedding at 81° to core axis.
383	385					Sandstone/Siltstone: Light grey, fine grained sandstone finely and irregularly interbedded with dark grey siltstone. Some calcite infilling of fractures. Bedding is at 82° to the core axis.
385	399					Siltstone: Dark grey, core well fractured. Some carbonaceous infilling of fractures. Bedding is at 77° to core axis.

Core Size _____
 Hole No. DDH. 1568 Page 4 of 19



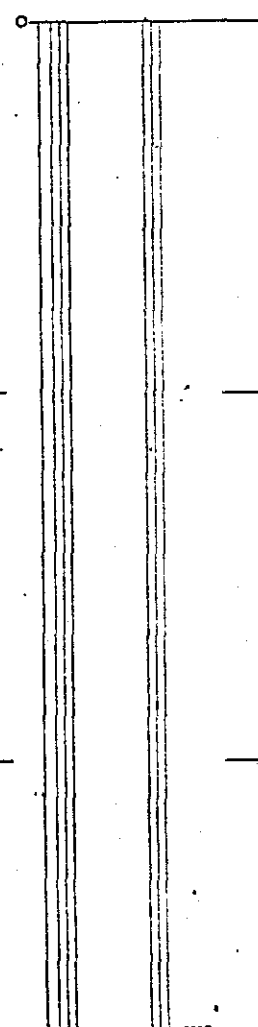
Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:						Sampled:											
Logged By: DG						Date: August 21, 1979											
Block:						Composites:											
Sect.:			Place:			App. Bear:			App. Dip.:			Length:					
CORE In Ft.						RAD. LOG In Ft.						In meters					
From		To		From		To		From		To		From		To			
COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO												DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO					
399	401							Siltstone/Sandstone: Dark grey siltstone irregularly interbedded with light grey, fine grained sandstone. Core is quite intact, there is calcite infilling of fractures. Bedding is at 74° to core axis.									
401	403							Sandstone: Light grey, fine grained, core quite intact. Calcite infilling of fractures. Bedding is at 72° to core axis.									
403	405							Mudstone: Dark brown, core well fractured, fractures are clean. Bedding is at 87° to core axis.									
405	411							Siltstone/Sandstone: Dark grey siltstone irregularly interbedded with light grey, fine grained sandstone. Core. Fractures are vlean. Bedding at 62° to core axis.									
411	414							Mudstone: Dark brown, core well fractured. Fractures are clean, bedding is at 62° to core axis. It is bituminous mudstone.									
414	426							Siltstone: Dark grey, core quite intact, fractures are clean, there is some fine grained light grey sandstone interbedding at 416'. Bedding is 74° to core axis.									
426	443							Mudstone: Medium grey/black, core is quite consistent, fractures are clean. Bedding is 88° to core axis. Some carbonaceous infilling fractures beginning at 435'. Bedding changes at 440' to 63° to core axis.									
443	444							Coal: Low lustre, very hard, looks like it's mostly mudstone. Bedding is 65° to core axis.									
444	450							Mudstone: Medium grey, large grained, carbonaceous infilling in fractures throughout the core. Core is quite soft. It is highly fractured. Bedding is 84° to core axis.									
												Core Size					
												Hole No. DDH. / 1568					
												Page 5 of 19					

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Diamond Drill Geological Log



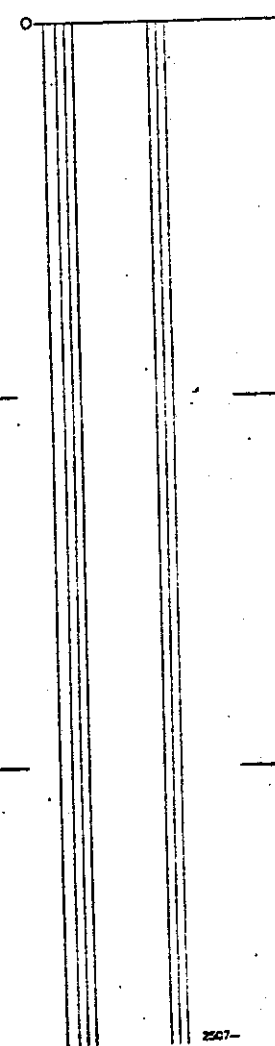
FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann Date: August 24, 1979 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale

Color Plot & Dips | Core Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
450	454						Sandstone: Light grey in color. Medium to large grained. Calcite infilled in fractures, also calcite banding throughout the core. The bedding is 70° to core axis. Cross bedding occurs at 451.5' with angles of 70° and 43° to core axis.
454	460						Mudstone: Dark grey/black in color. Small grain size. Core is quite soft. Highly fractured. Traces of iron oxides on core. Bedding is 87° to core axis.
460	476						Siltstone: Medium grey in color. Large grained, mudstone bands throughout the core. Bedding is 65° to core axis. Fractures have calcite and iron oxides in fractures.
476	485						Sandstone: Light grey, large grain size. Bedding is 63° to core axis. Fractures are clean. Some calcite in the core at 484'.
485	494						Mudstone: Dark grey/black in color. Medium grain size. Fractures have slicken slides. Bedding is 44° to core axis. Some carbonaceous infilling near 490'.
494	513						Siltstone: Medium grey in color. Grain size is small. A lot of calcite in the fractures. Bedding is 83° to core axis. Fractures run parallel with the bedding.
		513.5	530	156.6	161.6		Coal: 5 m 16.5' SEAM - 9
513	531						Mudstone/Coal: Very soft, dark grey/black in color. Grain size is medium. Core is almost all broken. Bedding at 513' is 71° to core axis. Fractures contain slicken slides. Also some traces of iron oxides at 525 - 531' on broken core pieces. Very poor quality coal..
		532.5	533.5	162.3	162.6		Coal: 0.3 m 1'
531	536						Coal: Very dull and hard. Lacks lustre. Seems to contain a lot of interbedded mudstone. Bedding is 90° to core axis.



Core Size

Hole No. DDH. 1568

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Diamond Drill Geological Log

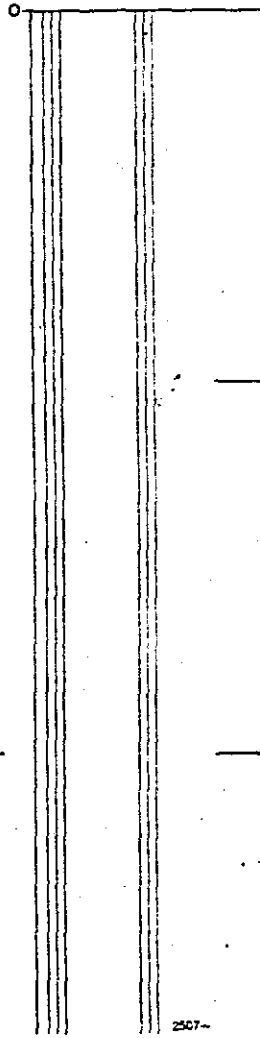


FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann Date: August 24, 1979 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
		542.2	545	165.4	166.1	Coal: 0.7 m 2.5' SEAM - 8	
536	566					Mudstone: Medium black in color. Grain size is large. Fractures have carbonaceous infilling at 536 - 551' then have traces of calcite infilling. Bedding changes at 541' from 90° to 71° to core axis.	
566	571					Siltstone: Light grey in color. Small grain size. A lot of calcite on the core and also in fractures. Bedding is 63° to core axis.	
571	580					Mudstone: Medium grey in color. Very large grained. Very soft core. Highly fracturous. A lot of calcite on the core. Bedding is 43° to core axis.	
580	615					Siltstone: Medium grey in color. Large grain size. Bedding is 86° to core axis. Cross bedding occurs at 588' with angles of 86° and 71° to core axis. Fractures are calcite infilled. Also gouge marks at 601' that have iron oxides infilled in them.	
		614.5	645	187.3	196.6	Coal: shaley from 189.3 m to 190.3 m & 0.6 m mudstone at 194.4m, 9.3(8.7)m 30.5(28.5)' SEAM -	
615	616					Mudstone: Very dark black, very soft. Carbonaceous infilling in fractures. Bedding is 73° to core axis.	
616	644					Mudstone/Coal: Interbedded mudstone and coal. Very dull, highly fractured. Looks like it's mostly mudstone. Bedding is 68° to core axis at 618' but changes at 621' to 77° to core axis. (SAMPLE TAKEN)	
644	648					Coal: Black-medium lustre. Most fractures along bedding plane. Relatively intact coal. Bedding at 78° to core axis.	

40 Scale
 Color Plot & Dips
 Core Grades & Aver.



Core Size
 Hole No. DDH. 1568
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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

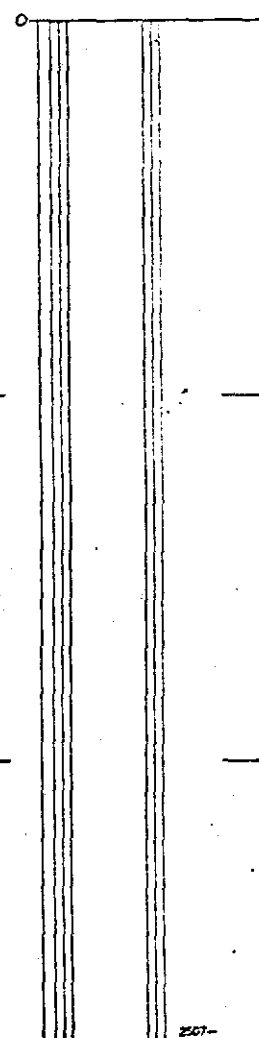
Objective: _____ Sampled: _____

Logged By: KH Date: August 27, 1979 Composites: _____

Block: _____ Sect.: _____ Place: Eagle Mountain App. Bear: _____ App. Dip: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		in meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To		
648	653.5						Mudstone: Dark grey "blue" in color. Bituminous particles throughout section. Massive section. Mudstone turning harder with depth. Minor calcite infilling of joint fractures at 650'. Bedding at 78° to core axis.
653.3	656						Siltstone/Mudstone: Siltstone large grained, light color with interbedded black mudstone slightly agitated bedding indicative of a disturbed environment. Beds are approx. 2mm thick. Bedding at 78° to core axis.
656	661						Mudstone: Dark grey/black in color. Carbonaceous infilling of fractures, amount increasing with depth. Fine grained 3" sandstone parting at 660' followed by 2" shale parting. Bedding at 84° to core axis. Minor calcite infilling of fractures.
661	665.5	659.5	662.5	201	202		Coal: Black - medium lustre. Large amounts of mudstone, but decreasing with depth. Fairly intact and hard coal. Bedding at 78° to core axis. Im 3'.
665.5	670						Mudstone: Dark grey in color. Carbonaceous infilling of bedding plane fractures turning harder with depth. Slightly agitated bedding. Bedding at 74° to core axis.
670	673						Sandstone/Siltstone/Mudstone: Interbedded light grey extremely fine grained sandstone and siltstone with dark grey mudstone. Minor calcite infilling of joint fracture agitated bedding indicative of a disturbed environment. Bedding at approx. 67° to core axis.
673	711						Mudstone/Siltstone: Dark grey/black in color. Predominantly hard mudstone. Calcite infilling of joint fracture from 710 to 711 feet. Relatively intact core, most fractures being along bedding plane, and drill induced. Approx. 1 fracture/foot. Microfossils in section. Bedding approx. 85° to core axis.

40 Scale
Color Plot & Dips Core Classes & Ave.



Core Size

Hole No. DDH. 1568

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Diamond Drill Geological Log



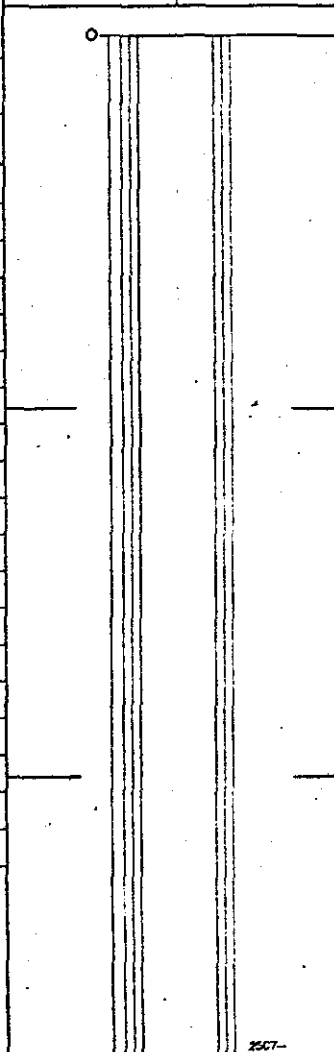
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: KH Date: August 27, 1979 Composites: _____
 Block: _____ Sect: _____ Place: Eagle Mountain App. Bear: _____ App. Dip: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
711	712					Sandstone: Medium grey, medium grained. Bituminous stringers. Poor bedding.
712	717					Siltstone: Dark grey in color. Minor amounts of interbedded extremely fine grained sandstone. Fairly regular bedding. Bedding at approx. 84° to core axis.
717	735.5					Sandstone: Light grey, medium to coarse grained. Large amounts of carbonaceous stringers. Occasional mudstone castings. Calcite infilling of joint fracture at 725' and below. Regular bedding. Grains largest around 728'. Bedding at approx. 78° to core axis at 721' decreasing to 71° to core axis at 734'.
735.5	741					Sandstone/Siltstone/Mudstone/Shale: Medium grained sandstone partings, predominantly siltstone and mudstone. Shale predominant at 736 - 737'. Bituminous stringers and healing above 738'. Slightly agitated bedding. Calcite stringers at 737'. Slumping of sandstone down into siltstone indicating that the beds are non inverted. Bedding at approx. 78° to core axis.
741	763					Sandstone: Medium grained, light grey in color. Large amount of bituminous stringers and infillings from 753 - 758'. Calcite infilling of joint fractures at 747'. Mudstone castings at 752'. Fairly regular bedding but some minor cross bedding at 743' and 748'. Bedding at approx. 76° to core axis.
763	783					Siltstone/Mudstone: Dark grey in color. Massive core, changing gradually from siltstone to mudstone. Minor calcite infilling of joint fractures, mostly J-4 type. Minor carbonaceous infillings of fractures, increasing around 782'. Relatively intact core, most fractures being B-2 type, less than 1/foot. Bedding at 79° to core axis.

40 Scale
 Color Plot & Dips
 Ore Classes & Avar.



Core Size
 Hole No. DDH. 1568 Page 9 of 19

Diamond Drill Geological Log

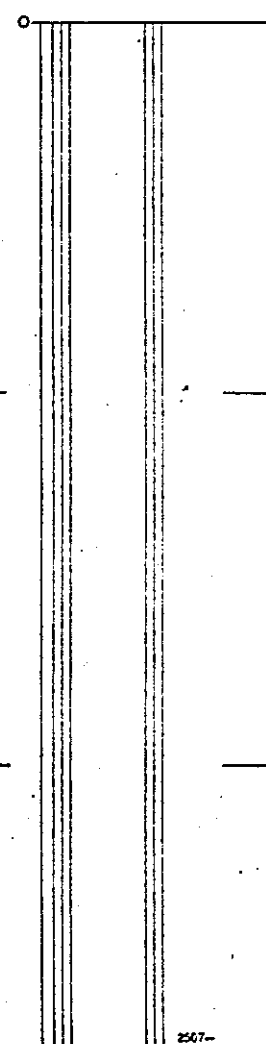


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: KH Date: August 27, 1979 Composites: _____
 Block: _____ Sect.: _____ Place: Eagle Mountain App. Bear: _____ App. Dip.: _____ Length: _____
 Color Plot & Dips _____ Ore Classes & Aver. _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
783	786	779	782	237.5	238.5	Coal: Black, high lustre. Mudstone intermixed at 783', amount decreasing with depth. Highly crushed from 782.5 - 783'. Bedding at 80° to core axis. 1.0m 3'
786	820					Siltstone: Dark grey in color. Bituminous infilling and bituminous bands at 784 and 801'. Calcite infilling of joint fractures at 798'. Mudstone partings at 787 and 802'. Most fractures along bedding plane, approx. 1/foot. Bedding at approx. 84° to core axis.
		827	828.5	252	252.5	Coal: 0.5 m 1.5'
820	866					Mudstone: Dark grey in color. Fairly thick bituminous infillings of fractures. Thick calcite infilling of J1 type fracture at 837'. Core becoming more broken and fractured with depth. 6" brecciation at 864'. Bedding at 82° to core axis. (this section may contain some shale).
866	892					Mudstone/Siltstone: Dark grey in color. Changing gradually from predominantly mudstone to predominantly siltstone with depth. Fairly intact core - most fractures being B2 type. Bituminous healing at bedding plane. Fracture at 884 - 886', the rest of the fractures are clean, slightly agitated bedding. Bedding at 82° to core axis.
892	900					Sandstone: Light grey in color. Fine to medium grained, grain size increasing with depth. Calcite infilling of joint fractures. Bituminous infilling of bedding plane fractures. Bedding at 74° to core axis. Bedding is regular 2 - 4 mm thick.
						Core Size _____
						Hole No. DDH. 1568 Page 10 of 19

40 Scale _____
 Color Plot & Dips _____ Ore Classes & Aver. _____



Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: KH/Loriann Date: August 29, 1979 Composites: _____

Block: _____ Sect.: _____ Place: Eagle Mountain App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
900	923					Sandstone/Siltstone: Sandstone - light grey, fine grained. Siltstone - dark grey. Grain size decreasing with depth. Bituminous infilling of bedding plane fractures. Lodcasting at 903'. Slightly agitated bedding. Calcite infilling of joint fractures. Crossbedding at 502' indicating that bedding has not been inverted since deposition. Bedding at approx. 80° to core axis.
		923	925	281	281.6	Coal: 0.6 m 2'
923	949					Mudstone: Dark black in color. Medium graine size. Very soft core. Some carbonaceous infilling throughout the core length. Broken core from 925 - 934', 936 - 949'. Broken core has carbonaceous infilling on pieces. Bedding taken at 935', it is 64° to core axis. There is a band of siltstone interbedded at 936'. It is medium grey, large grained, calcite deposits on core piece. Bedding here is 71° to core axis.
949	961					Siltstone/Mudstone: Interbedded. Siltstone is medium grey, small grained. The mudstone is dark black, small grained. Carbonaceous infilling in fractures. Some calcite in fractures in the siltstone. Bedding is 73° to core axis. Where mudstone banding occurs the core is very soft. Slicken slides appear in fractures at 954'. Grain size of siltstone increases at 959'. The bedding changes to 88° to core axis.
961	968					Siltstone: Large grain size. Medium grey in color. Bedding is 70° to core axis. Fractures are calcite infilled. There is also calcite running through the core. Bedding is fairly regular throughout the length.

40 Scale

Color Plot & Dips Ore Classes & Aver.

Core Size

Hole No. DDH' 1568

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Diamond Drill Geological Log

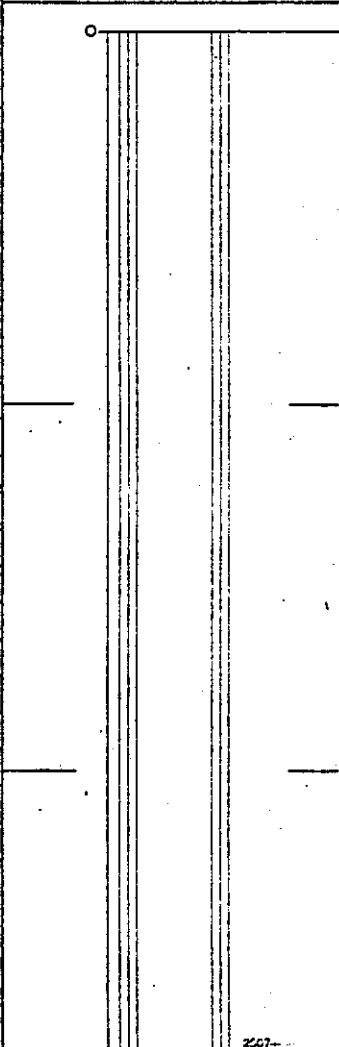


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann/KH Date: August 29, 1979 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS DIRECTIONAL SURVEY	CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To		
968	985						<input type="checkbox"/> YES <input type="checkbox"/> NO
						Sandstone/Siltstone: Interbedded, both have fairly large grains. Sandstone is medium grey, while the siltstone is quite light in color. A lot of calcite infilling in the fractures and also running through the core. Bedding is irregular, varying from 74° to 61° to core axis. Core is quite hard. There's approx. 1 fracture per foot. There is some carbonaceous infilling in a fracture at 985'.	
985	996						<input type="checkbox"/> YES <input type="checkbox"/> NO
						Siltstone: Dark grey in color. Small grain size, carbonaceous infilling in fractures. Bedding is irregular throughout the core. The bedding is 62° to core axis. It changes to 88° within the next foot. Lots of carbonaceous banding after 989'.	
996	1016						<input type="checkbox"/> YES <input type="checkbox"/> NO
						Sandstone: Large grained. Light grey in color. Carbonaceous infilling in all fractures. Bedding is fairly regular throughout to core length. Bedding is 70° to core axis. Some gouging of core at 1004'. The gouges are filled with coal. Grain size decreases at 1009'. Color remains the same. Some slicken slides at 1009'. The fractures are quite polished.	
1016	1030						<input type="checkbox"/> YES <input type="checkbox"/> NO
						Sandstone: Fairly dark grey in color. Large grained. A band of mudstone at 1016.5'. Fractures are infilled with coal. Also carbonaceous bands running through the core in bands. The bedding is 80° to core axis, and remains the same throughout the length, with 1 - 2° variance.	
1030	1036						<input type="checkbox"/> YES <input type="checkbox"/> NO
						Mudstone: Very dark black in color. Grain size is small. Core contains alot of calcite in fractures. Core is quite intact. Fractures are few, but are full of calcite. Bedding remains regular at 64° to core axis.	

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



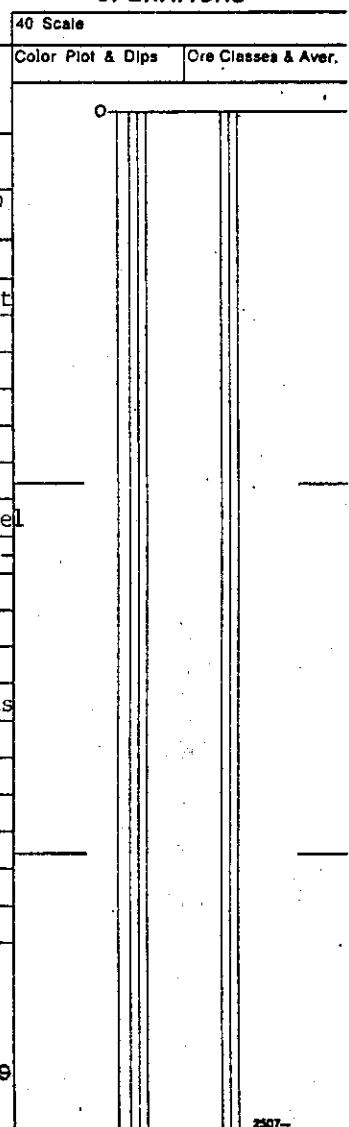
Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Lorian/KH Date: August 29, 1979 Composites: _____
 Block: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
1036	1053					Siltstone: Dark grey in color. Small grained. Fractures are quite clean, very small amounts of calcite in them. Bedding is 69° to core axis. Some crossbedding at 1043'. Angles orient at 67° and 53° to core axis. Grain size also increases at this point. Slicken slides show up in fractures at 1044', the fractures are quite polished. Small amounts of calcite are also in fractures. Bedding once again changes at 1051' to 71° to core axis.
1053	1112					Mudstone/Siltstone: Mudstone is dark grey/black in color, medium grained. Bedding is 84° to core axis. Siltstone is light and large grained. Fractures run parallel to the bedding. Fractures are clean. Small traces of calcite at 1057'. Cross-bedding at 1058'. Angles orient at 81° to 70°. Looks as if the bedding becomes folded at this point. Fractures remain clean. They are mostly B1 type fractures. Some coal at 1074'. Perhaps 1/2', poor quality, mostly mudstone. Highly fractured. Bedding once again becomes quite folded at 1077'. Fractures begin to have carbonaceous infillings at 1097'. A J4 fracture at 1100' runs for approx. 1 foot and has been completely healed with calcite.
1112	1114					Sandstone: Light grey in color. Large grain size. Fractures contain a lot of calcite. Bedding is 86° to core axis. Some brecciated core at 1112'.
1114	1143					Siltstone/Mudstone: Light grey siltstone, medium grained. Mudstone is small grained, medium grey/black in color. Very finely interbedded. Bedding remains quite regular at 63° to core axis. Carbonaceous infilling in fractures throughout core length. Small amounts of calcite in core. Traces of iron oxides found at 1125'.



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

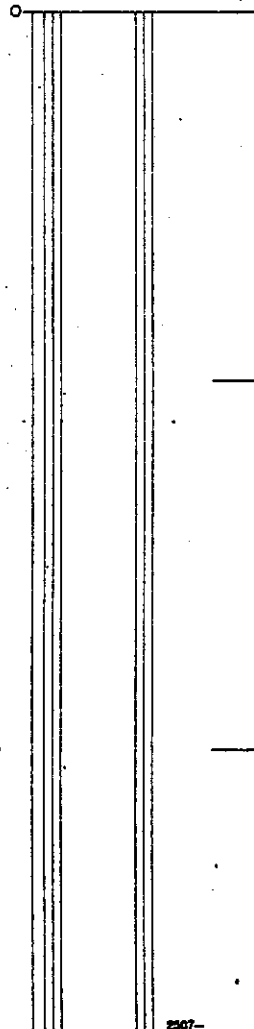
Logged By: Loriann/KH Date: August 29, 1979 Composites: _____

Block: _____ Sect.: _____ Place: Eagle Mountain App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
						This only lasts approx. 1.2'. Bedding changes at 1137' to 88° to core axis. Fractures become filled with calcite.
1143	1167	1140.5	1161.5	347.6	354.0	Coal: Quite dull, low lustre. Highly fracterous. Some mudstone interbedded at 1149' to 1152'. Bedding here is 86° to core axis. 6.4m 21' SEAM - Some iron oxides found at 1155'. Core is completely broken and very soft. At 1157' coal becomes quite hard. Bedding is 83° to core axis. It also begins to become highly lustrous. Becomes soft again at 1164'. Core once again becomes completely broken, but continues to be quite shiny.
1167	1196					Coal/Mudstone: Interbedded coal and mudstone. Mostly mudstone. Core is quite broken up. Bedding is 82° to core axis. Some calcite infilling in fractures and on broken core pieces.
		1172	1180	357.3	359.7	Coal: Bottom 1.1m Poor coal 2.4 m 8'
1196	1226.5	1193	1222.5	363.6	372.6	Coal: High lustre, completely broken core (NO BEDDING TAKEN). Very soft coal. Some mudstone interbedded at 1126'. Mudstone partings of 0.6m & 1m thickness at 365.4 & 369.1 9(7.4)m 29.5(24) SEAM -
1226.5	1236					Siltstone/Mudstone: Interbedded, both are large grained. Quite soft core. Completely broken from 1266.5 - 1269', quite polished core pieces. Fractures after 1269' have slicken slides present. Some calcite present in small amounts near 1231'. More broken core at 1232 - 1233', pieces are once again quite polished.
						Core Size

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Diamond Drill Geological Log

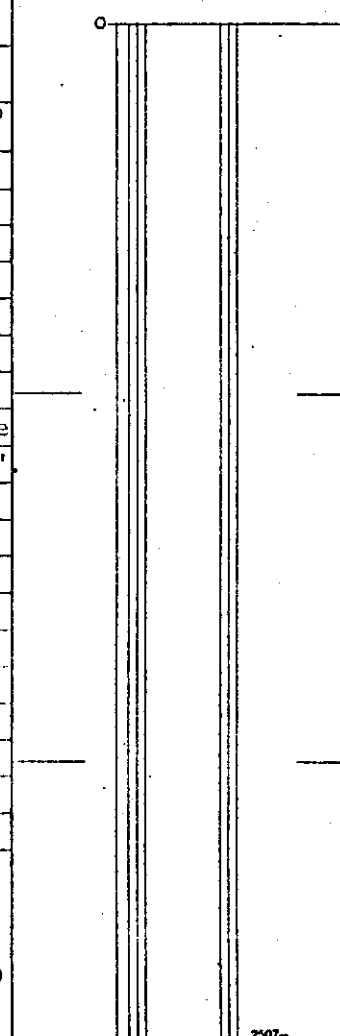


FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann/KH Date: August 30, 1979 Composites: _____
 Block: _____ Sect.: _____ Place: Eagle Mountain App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips _____ Ore Classes & Aver. _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
1236	1296					Siltstone: Medium grey in color. Small grained. A lot of calcite in fractures. Fractures also have alot of slicken slides present. Bedding is very irregular, angles orient from 41° to 68° to core axis. The bedding also becomes very irregular and folded at 1254-1256'. Some mudstone banding at 1244'. Very small amounts of mudstone. Fractures are frequent, and tend to occur parallel to the bedding angle, near the 1254-1256' fractures orient in all directions. Large amounts of calcite found in fractures at 1256'. Also the surfaces of the fractures are quite polished. A very large amount of calcite in fracture at 1269'. Bedding remains quite regular from this point to 1296'.
1296	1357					Mudstone/Siltstone: Interbedded; mudstone is very dark black in color, small grained. The siltstone varies from medium to dark grey in color, medium grained. There are large amounts of calcite deposits in the fractures. Bedding becomes very irregular and folded 1297'. Angles vary from 33° to 87° to core axis. A lot of interbedding occurs in this area. Also fractures are very polished, and small amounts of calcite and iron oxides are found. Mudstone becomes more dominant at 1308'. The banding still occurs. Large amounts of calcite are found. The bedding is still very irregular. Fractures have no set orientation. A 1' band of sandstone occurs at 1319-1320'. It is large grained and medium grey in color. Bedding changes at 1326.5' to 31°, bedding is quite folded. Fracture surfaces are still very polished. Calcite still is visible in fractures. No more signs of iron oxides.



Core Size _____
 Hole No. DDH. 1568 Page 15 of 19

Diamond Drill Geological Log



FORDING RIVER OPERATIONS

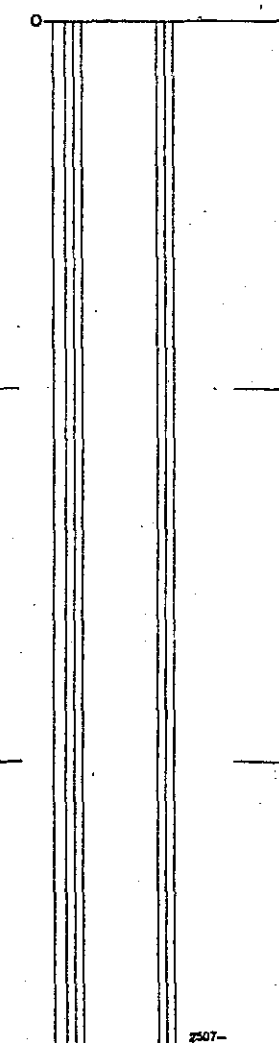
Objective: _____ Sampled: _____
 Logged By: Loriann/KH Date: August 30, 1979 Composites: _____

Block: _____ Sect.: _____ Place: Eagle Mountain App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
1357	1377					Mudstone: Medium grey/black in color. Small grain size. Fracture surfaces are quite polished. Small amounts of calcite found on core. Broken core from 1355.5 - 1357'. A lot of calcite found on the broken core pieces. The mudstone has small amounts of siltstone in areas. Broken core once again from 1364 - 1366'. There is a lot of bituminous infilling on the broken core pieces. Broken core once again from 1375 - 1377'. Bedding of the mudstone is 52° to core axis.
1377	1384	1369	1381	417.3	421.0	Coal: Low lustre, highly fractured, becomes quite shiny at 1382 - 1384', but still remains very soft. 3.7m 12' SEAM -
		1387	1390	422.8	423.7	Coal: 0.9m 3'
1384	1417					Mudstone/Coal: Very dark in color, medium grained. Very soft. Carbonaceous infilling in fractures also on core pieces. Core is completely broken. Bedding (taken on a core piece) is 63° to core axis.
		1398.5	1429.5	426.3	435.7	Coal: 9.4 m 31' SEAM -
1417	1435					Coal: Medium lustre, very soft, bedding is 64° to core axis. Fractures tend to orient along this angle. Looks like quite good coal.
1435	1437					Mudstone: Dark black in color. Small grained. Bedding is 44° to core axis. Fractures contain carbonaceous infilling.
1437	1447	1437.5	1443	438.2	439.9	Coal: Looks like it's coal/mudstone. Very dull black. Quite intact, very low, dull lustre. Bedding is 69° to core axis.
						1.7 m (0.6 m POOR COAL) 5.5' (2' POOR COAL)

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Diamc. d Drill Geological Log

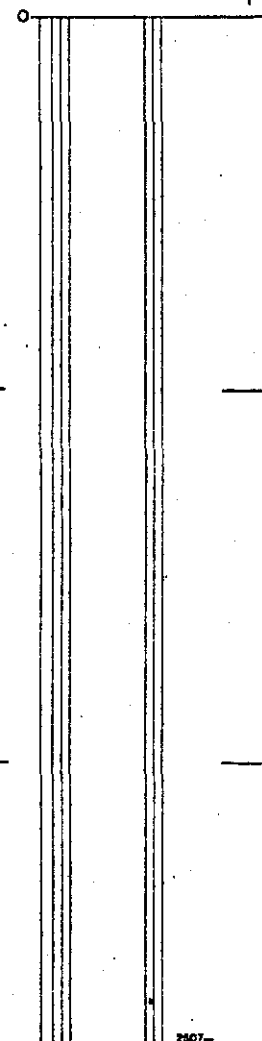


FORDI RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann/KH Date: August 30, 1979 Composites: _____
 Block: _____ Sect.: _____ Place: Eagle Mountain App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dip _____ Ore Classes & Aver. _____

CORE in Ft.		RAD. LOG in Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To		
1447	1453						Mudstone: Medium black in color. Carbonaceous infilling in fractures. Core is quite intact. Bedding is 86° to core axis. Fractures tend to orient parallel to this bedding angle. Some iron oxides at 1449' (very small amounts). Fractures are clean after 1450'.
1453	1475						Siltstone/Mudstone: Interbedded: Siltstone is medium grey, medium grained, mudstone is dark grey/black, medium grained. Some carbonaceous banding at 1454'. Fractures contain slicken slides. Very polished surfaces with little calcite buildup. Calcite becomes abundant in fractures at 1467 - 1473'. Large amounts in fractures, also stringers in core. Bedding remains quite regular at 73° to core axis. Fractures become polished at 1473' till 1475'.
1475	1486						Mudstone: Dark black in color. Small grained. Bedding remains regular throughout the core length. Core is rather well intact. Fractures show slippage. They are fairly rough and irregular, but are polished. Bedding is 82° to core axis.
1486	1515						Siltstone/Mudstone: Interbedded, mostly mudstone. The mudstone is fairly dark, small grained. The siltstone is light grey, small grained. There is alot of calcite in the fractures and also calcite stringers in the core. Bedding is 68° to core axis., and remains fairly regular till 1510'. The bedding here changes to 28° to core axis. Fractures run parallel to the angles. They are calcite filled. Fractures after 1510' are polished, with small amounts of calcite.
							Core Size _____
							Hole No. DDH. 1568 Page 17 of 19



Diamond Drill Geological Log



FORDING RIVER OPERATIONS

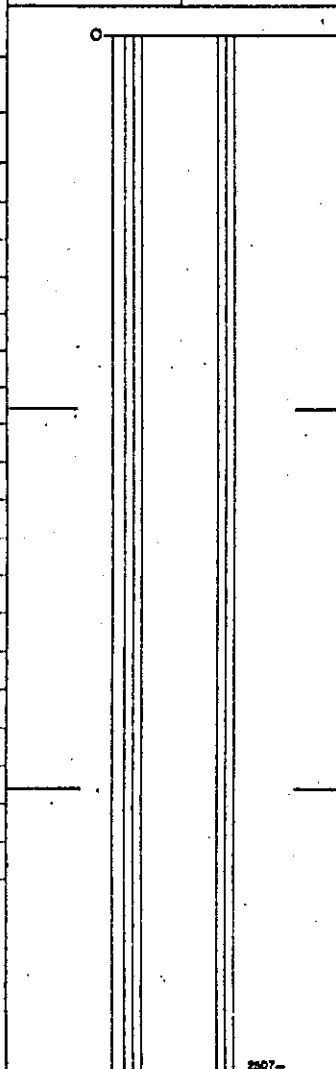
Objective: _____ Sampled: _____
 Logged By: Loriann/KH Date: August 30, 1979 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

Block: _____ Sect.: _____ Place: Eagle Mountain App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
1515	1527					Siltstone: Medium grained, dark grey in color. Fractures are calcite infilled. Calcite also running through the core. Bedding is very irregular. Crossbedding occurs at 1516' with angles of 64° and 51° to core axis. Abundant amounts of calcite appear in the core at 1520'. They are in bands approx. 1/2" wide. Bedding here is 84° to core axis. Gouges appear in the core at 1521'. They are calcite filled. Fractures from 1521.5' - 1527' are clean, rough and irregular.
1527	1568					Mudstone: Medium grey/black in color. Graine size is small. Fractures have traces of iron oxides. Also core is broken from 1527' - 1528.5' and core pieces have traces of iron oxides. Bedding at 1530' is 82° to core axis, and fractures run parallel to this angle. Fractures here are clean. Slicken slides in fractures beginning at 1542'. The surfaces are highly polished and smooth. A small trace of iron oxides is found at 1542' in a J4 type fracture. Fractures from 1544 - 1558' are clean. The bedding remains fairly constant. Broken core at 1557' but core pieces are clean.
1568	1607					Siltstone: Dark grey in color. Small grain size. Fractures have calcite infilling. Bedding runs parallel with fractures at 81° to core axis. Calcite dies out, fractures become clean. Fractures remain clean until 1596.5'. Calcite infills these fractures, also calcite bands run through the core, they are 1/2" wide.
1607	1732					Sandstone: Medium grey in color. Large grain size. Fractures have carbonaceous infilling. There is also alot of calcite running through the core, but not in the fractures. Bedding is fairly regular throughout the footage. It differs by less that 10° be-

40 Scale
 Color Plot & Dips
 Ore Classes & Aver.



Core Size
 Hole No. DDH. 1568 Page 18 of 19

Diamond Drill Geological Log

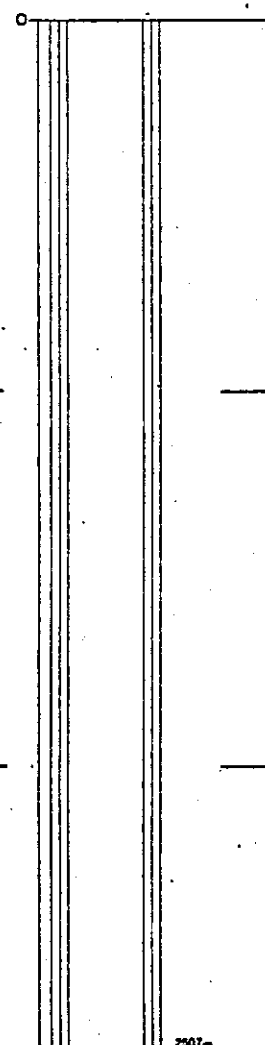


FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriam/KH Date: August 30, 1979 Composites: _____
 Block: _____ Sect.: _____ Place: Eagle Mountain App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips _____ Ore Classes & Aver. _____

CORE in Ft.		RAD. LOG in Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To		
							ginning at 76° then 82°. Core becomes highly fractured at 1657', it contains a lot of carbonaceous infilling. Color of the sandstone lightens at 1662', but grain size remains the same. A band of siltstone occurs 1671'. It is 1' long approx. Fractures are calcite filled. Crossbedding occurs with angles at 61° and 84° to core axis. Sandstone continues to have bituminous filled fractures. A small band of mudstone occurs at 1690'. Fractures continue to have carbonaceous infilling after 1690'. Bedding remains fairly regular. Some calcite in fractures at 1714'. Bedding changes at 1723' to 71° to core axis.
1732	1770			539.5			Siltstone: Dark grey in color, small grain size. Fractures are clean. Bedding is 61° to core axis. It remains fairly regular till 1754' where crossbedding occurs with angles of 61° and 74° to core axis. Fractures are still clean. Siltstone lightens in color. Grain size also enlarges at 1758'. A band of mudstone occurs at 1769' for 1' to end of hole at 1770'. Fractures are clean, and orient at 86° to core axis. A trace of iron oxide is found at 1768.5' on a gouge in a core piece.
							End of hole.



Core Size _____
 Hole No. DDH: 1568 Page 19 of 19

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: _____ Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: 763.8m / 2506'

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

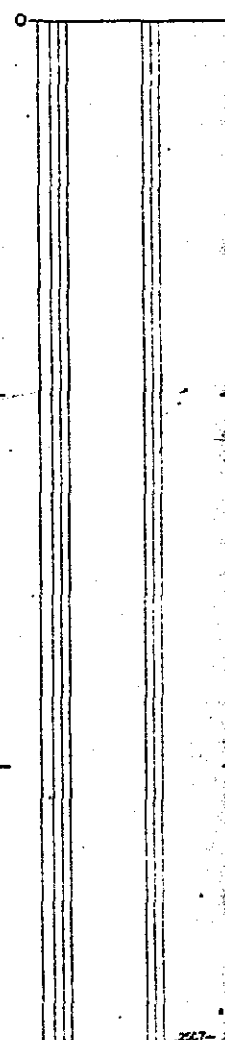
CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
0	20			0	6.1	Overburden
20	27					Siltstone: Grey, fairly massive, quite broken between 25 and 27 feet. Dominant fracture orientation is 72° to core axis. Point orientation 21° to core axis, with iron oxides along fracture surface.
27	28					Mudstone: Black, some interbedded coal a few mm thick, orientated 76° to core axis. Core is well fractured. Dominant orientation parallels bedding.
28	36½					Siltstone: Grey massive fractures oriented 55° and 0° dominant fairly well broken core from 28 to 33 feet.
36½	44½					Mudstone: Black, interbeds of coal from 39 to 44½ feet a few mm thick quite well broken from 41 to 44½ feet. Iron oxides along bedding fractures between 40 to 41 feet. Fractures dominate at 76°. Joint fracture 20° to core axis have iron staining between 37 and 39 feet.
44½	56	42.5	54	12.9	16.5	Coal: Black, moderately hard, dull sheen, dominant orientation of fracture 70°. Interbedded shales between 55 and 56 feet. 3.6 m 11.5' SEAM - 13
56	62					Siltstone: Dark grey major orientation of fractures is 78° to core axis. Some betumen on fracture surfaces.
62	70½					Mudstone: Black, some interbedded coal a few mm thick. Bedding orientation 63° to core axis. Core is well broken with predominant fracture orientation parallel to bedding.
70½	71	67.5	70.5	20.6	21.5	Coal: 6 inch coal parting, shiny, hard coal with some shale. 0.9 m 3'
71	78					Mudstone: Black, some interbedded coal bedding orientation 86° to core axis. Some iron

Core Size

Hole No. DDH. '1569

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40 Scale
Color Plot & Dips
Org Classes & A



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

40 Scale

Color Plot & Dips Core Cases &

Objective: _____ Sampled: _____

Logged By: DM Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

From	To	From	To	From	To	Description
						staining at 72 feet along fractures oriented 56° and 0°.
78	80½					Sandstone, Siltstone, Mudstone: Fine grained sandstone regularly bedded with silt and mud. Orientation of bedding is 79° to core axis. Some iron staining along bedding at 80 feet.
80½	84					Mudstone: Black, some iron staining along fracture surfaces. Fault gouge 2 inches thick at 81½ feet.
84	85					Sandstone: Fine grained, minor calcite stringers some cross bedding. Fractures dominate at 75° to core axis. Bedding at 75° to core axis.
85	89					Mudstone: Black, fairly massive dominant orientation of fractures 84° to core axis. Some joints at 11° to core axis.
89	95					Siltstone: Grey calcite zone between 90 and 91½ feet with some brecciation between 90½ and 91 feet. Some dusts of sandstone between 92 and 94 feet. Fractures oriented 40° and 80° to core axis.
95	96					Mudstone: Black, some interbedded coal a few mm thick, bedding oriented 80° to core axis. Core is crushed between 95½ and 96 feet.
96	112					Sandstone: Fine grained light grey sandstone with silty laminations laminae oriented 84°. Fractures parallel laminations some bituminous fractures between 97 & 99'.
112	116					Siltstone: Massive, grey, a couple bands 1/2 cm thick at 114 feet. Bedding 86° to core axis. Fractures are appr. parallel. One jt oriented 66° to axis with calcite on the surface.

Core Size

Hole No. DDH. 1569

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ZCT-

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

Logged By: **DM** Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

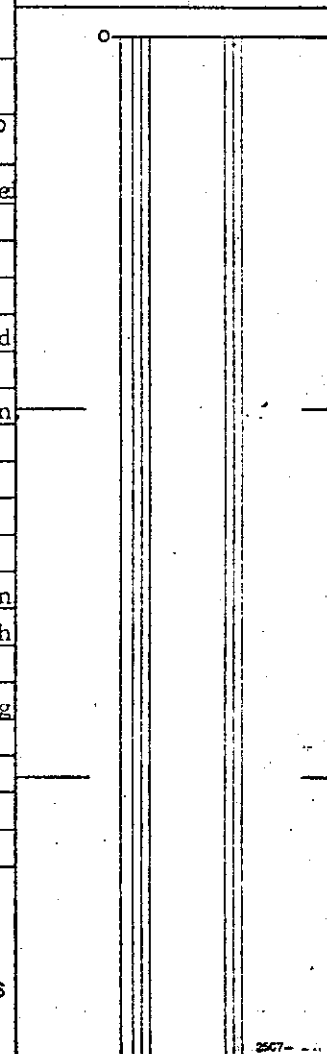
CORE In Ft.	RAD. LOG In Ft.	In meters	
From To	From To	From To	
116	136		Sandstone, Siltstone: Interbedded siltstone and fine grained sandstone. Bedding oriente 83° to core axis, fairly regular bedding indicating a quiet environment during deposition. From 129 to 130 sediments are deformed, irregular shaped, mud clasts are present up to 2 inches across. Fractures parallel bedding, some iron staining on fracture surfaces between 126 and 128 feet. Rock is broken and crushed between 133 and 136 feet.
136	138		Mudstone/Coal: Interbedded black mudstone and black shiny coal. Core is crushed & broken
138	139		Mudstone: Black, fairly massive fractures are oriented 72° and 40° to core axis.
139	152		Siltstone: Grey, fairly well broken. Joint fractures at 34° and 47° to core axis. Cal- cite is present along fractures. Iron staining along fractures between 139 and 146 feet. Some bitumen been 146 and 152 feet.
152	157		Sandstone: Fine grained light grey sandstone with silty laminations crossbedded between 152 and 154 feet. Top is upward. Laminations are oriented 70° to core axis with fractures dominantly parallel to laminae.
157	161		Siltstone: Grey, massive with fractures dominantly 68° to core axis. Some calsite along fractures.
161	167		Siltstone/Sandstone: Interbedded with orientation of bedding ranging 49° to 56° to core axis. Some calcite healed joint fractures oriented 48° to core axis. Some iron oxides at 165 feet. Bedding is fairly regular and even.
167	171		Siltstone: Grey, massive some minor calcite along joint fractures, fractures are dominantly 65° to core axis. Calcite healed fractures are 30° to core axis.

Core Size HQ

Core No. DDH. 1569

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40 Scale
Color Plot & Dips
Core Crashes & Aves



Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DM Date: _____ Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

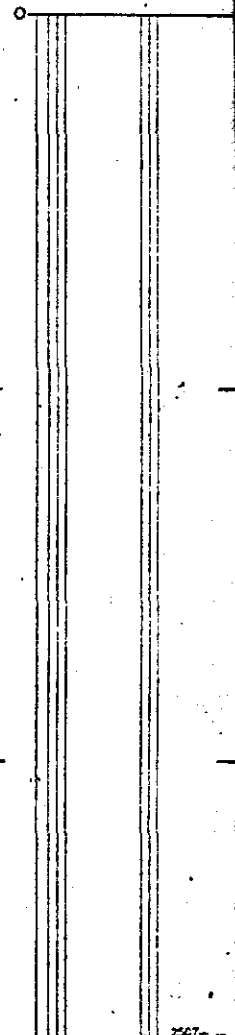
CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
171	219					Sandstone: Light grey, fine grained, with silty laminations. Some bitumen between 175 and 176 feet, laminations are oriented 69° to core axis, with fractures dominantly parallel 3 or 4 foot. Joint fracture oriented 11° to core axis. Some soft sediment deformation between 179 and 180 feet lode casting and pseudonodules g. siltstone are present. Minor calcite between 180 and 181 feet. The sandstone is very silty between 211 and 216 exhibiting cross bedding. Some vuggy calcite healed fractures at 209 and 213 feet. Bituminous parting appr. 1mm thick between 215 and 219 feet.
219	223					Mudstone: Black, with bitumen on fracture surfaces fairly well broken and crushed core in this section. Fractures are oriented 49° and 74° to core axis.
223	225					Siltstone/Sandstone: 2" to 6" bands of siltstone and light grey fine grained sandstone. Bedding is oriented 65° to core axis. Minor calcite along bedding and joint fractures oriented 28° to core axis.
225	232					Mudstone/Coal: Black, fairly well fractured mudstone with bands of shiny black coal. Fractures dominate along bedding planes oriented 65° to the core axis. Mainly mudstone in this section.
232	249	232	248.5	70.8	75.8	Coal Measures: Black, moderately hard, dull sheen. Fractures oriented 67° to core axis dominate. 0.6m mudstone parting at 71m. 5(4.4)m 16.5(14.5)' SFAM - 12
249	283					Mudstone: Black, fairly massive, some bitumen along fracture surfaces. Minor calcite stringers, minor sandstone 2 inch band at 255' and 4" band at 256'. Some siltstone. Calcite along joint fractures oriented 29° to core axis. Major fracture orientation

Core Size

Hole No. DDH. 1569

Page 4 of 26

40 Scale
 Color Plot & Dips
 Ore Classes & A



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DM Date: August 22, 1979 Composites: _____
 Block: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

40 Scale
 Color Plot & Dips _____ Ore Classes & Ave _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
						is 69° to core axis. 6 inch parting at 261½ feet. Some minor fine grained sandstone between 281 and 282 feet. Bedding is oriented 66° to core axis.
283	286					Coal: Black, hard, shiny, coal interbedded with mudstone.
286	294					Mudstone: Black, with bituminous parting a few mm thick. Orientation of beds 67° to core axis. Some minor fine grained sandstone and siltstone at 290½ to 291 ft. Fractures are dominantly along bedding planes, jt. fractures oriented 11° to core axis.
294	305					Siltstone: Grey, fairly massive, some interbedded fine grained light grey sandstone between 295½ to 296 feet. Some bitumen and calcite on fracture surfaces. Fractures dominantly oriented 65° to core axis. Joint fractures are oriented 11° to core axis. Bedding is oriented 76° to core axis.
305	324½					Mudstone: Breccia zone between 305 and 305½ feet. Black massive mudstone with fractures dominantly oriented 59° to the core axis. Bitumen between 311 and 318 feet along bedding fractures.
324½	352					Sandstone/Siltstone/Mudstone: Interbedded light grey fine grained sandstone, grey siltstone and black mudstone. Bedding is oriented 54°. Fractures are dominantly along bedding planes with bitumen and sometimes calcite on fracture surface, a calcite zone exists between 347 and 349 feet with calcite stringers and some brecciation joints oriented 23° to core axis are common. 4 bedding fractures per ft. Some soft sediments and irregular shaped clasts.

Core Size HQ
 Hole No. DDH. 1569 Page 5 of 26

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

Logged By: **DM** Date: **August 22, 1979** Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

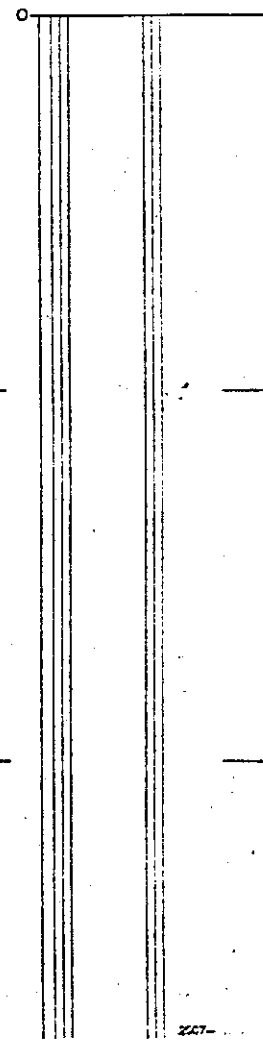
CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
352	356					Mudstone: Black, massive, fairly well broken. Bedding fractures are oriented 73° to core axis and joint fractures are 24° to core axis and 0° to core axis.
356	357					Sandstone/Siltstone/Mudstone: Regular, even interbeds of light grey, fine grained sandstone, and grey siltstone and black mudstone. Calcite healed fracture cross cut each other and exhibit a few mm displacement.
357	363					Mudstone: Black, massive, fractures are oriented 60° to core axis 1 or 2 / foot. Well broken between 358 and 359½ feet.
363	365					Siltstone/Sandstone/Mudstone: Finely interbedded light grey fine grained sandstone, grey siltstone, black mudstone. Bedding is 50° to core axis. Calcite healing along bedding planes and joint fractures oriented 19° to core axis. Also calcite stringers present.
365	371					Mudstone: Black massive with fractures oriented 62°, approx. 3 per foot. Joint fracture present oriented 11° to core axis. Small calcite healed Breccia zone of 366 ft.
371	373					Siltstone/Sandstone/Mudstone: Light grey, fine grained sandstone, grey siltstone, black mudstone, finely interbedded orientation of bedding is 60° to core axis with fractures parallel to bedding, cross bedding is present with tops indicate upwards. Minor calcite present. Joint fractures present oriented 15° to core axis.
373	379					Mudstone: Black massive with minor calcite stringers. Fracture orientation is predominantly 56° to core axis. Joint fracture oriented 23° to core axis. Some calcite along fractures.

Core Size **HQ**

Hole No. DDH. **1569**

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40 Scale
Color Plot & Dips
Ore Classes & Aver.



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

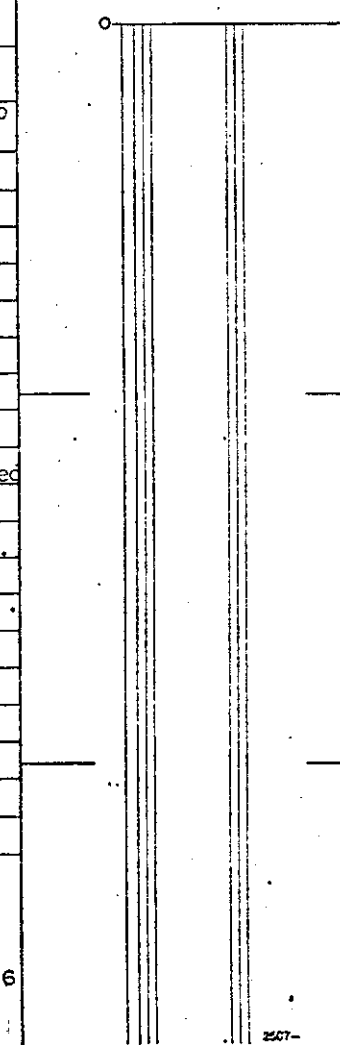
Logged By: DM Date: August 22, 1979 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
379	386					Mudstone/Siltstone/Sandstone: Finely interbedded light grey fine grained sandstone, grey siltstone, black mudstone. Bedding is 72° to core axis. Joint fractures oriented 32° to core axis. Some cross bedding with top indicated toward top of hole. Minor calcite and bitumen present. Some disturbed sediments at 382 feet, indicating agitated waters. Some calcite healed fractures are vuggy between 382 to 383 feet.
386	393					Mudstone: Black massive mudstone some minor fine ground sandstone and siltstone at 387 feet - 4" thick.
393	395					Sandstone: Fine to medium grains well cemented clasts of mudstone present. Well fractured and calcite healed. Bitumen as well as calcite is present on fracture surfaces. Fractures oriented 70° to 80° to core axis. Joint fractures at 37° to core axis. Fairly well fractured section.
395	402½					Siltstone: Grey, fairly massive grading into fine grained sandstone from 401 to 402½ feet. Minor calcite present, vuggy at 400 feet. Fractures oriented 70° and 32° to core axis.
402½	427					Sandstone/Siltstone: Fine grained sandstone which is quite silty. Bedding is oriented 66° to core axis with fractures oriented parallel to bedding 1/ft. Some calcite healed fractures oriented 15° to core axis. Bitumen is present on surface of bedding fractures. Crossbedding is present with top indicated upwards.
427	441					Sandstone: Medium grained grey sandstone. Quite massive with some bituminous partings a few mm thick oriented 76° to core axis. Some plant fossils from 338 to 441 ft. Calcite is

40 Scale
Color Plot & Dips
Ore Classes & Av. ar.



Core Size HQ

Hole No. DDH. 1569

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Diamond Drill Geological Log

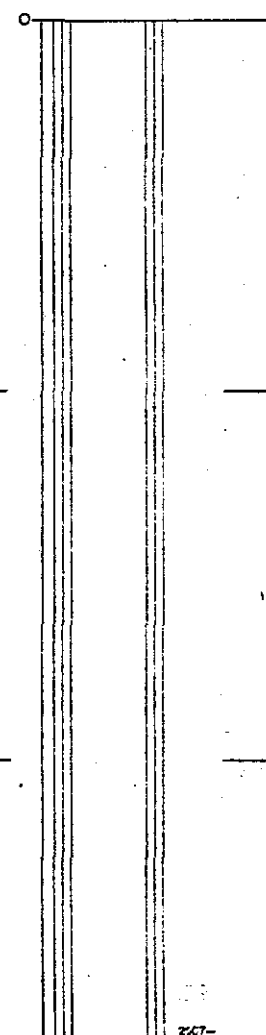


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DM Date: August 22, 1979 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

40 Scale
 Color Plot & Dips _____ Core Classes & Avar. _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
							present along joint fractures oriented 26° to core axis.
441	461	440	451.5	134.2	137.7		Coal: Black massive interbedded coal and mudstone with fractures oriented 70° to 80° to core axis. Coal is hard, dull. 3.5 m 11.5' SEAM - 1lu
		455	457	138.7	139.3		Coal: 0.6 m 2'
461	467						Mudstone: Black massive with dominant fracture orientation at 75° to core axis.
467	481						Siltstone: Grey massive fractures are oriented 70° and 26° to core axis. Calcite zone between 478 and 479 feet with a breccia zone at 478 feet. A few bituminous partings at 471 feet approx. 5mm thick.
481	484						Sandstone/Siltstone: Fine grained sandstone, siltstone regular. Bedding up to 484 feet oriented 60° to core axis. Beds are disturbed from 484 to 485 with mud clasts swirled beds some flame structures.
484	511						Mudstone: Black, minor fine grained sand and silt at 489 to 489½ ft. with some calcite stringers. Bituminous partings between 496 and 500 feet. Partings are a few mm thick. Major fracture orientation is 77° to core axis. Also joint fractures at 13° to core axis.
511	522						Siltstone: Grey massive some minor fine grained sandstone oriented 85° to core axis. Fractures are dominantly parallel to bedding. Some bitumen at 517 feet.
522	526						Siltstone/Sandstone: Interbedded fine grained sandstone, irregular bedding approx. 67° to core axis. Minor calcite joint fracture oriented 17° to core axis.
							Core Size <u>HQ</u>
							Hole No. DDH. <u>1569</u> Page <u>8</u> of <u>26</u>



Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: **DM** Date: **August 23, 1979** Composites: _____

40 Scale
 Color Plot & Dips Ore Classes & Avar.

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App.: Dip.: _____ Length: _____

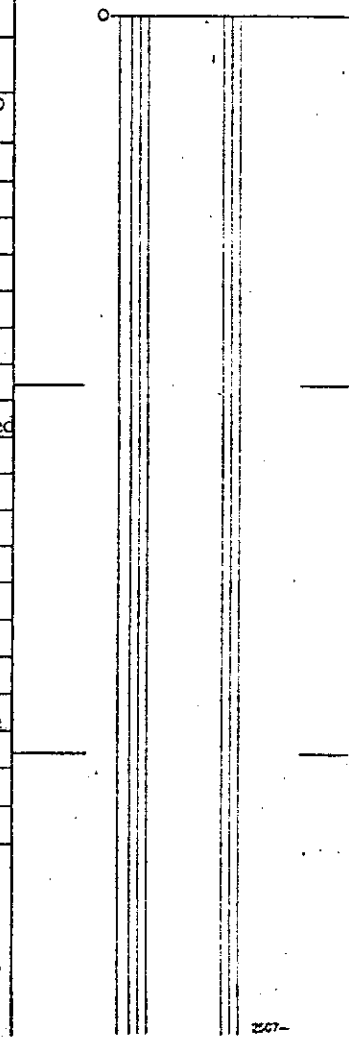
COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
526	535					Sandstone: Fine grained laminated sandstone from 525 to 531 feet. Medium grained from 531 feet. Bitumen along bedding surfaces and plant fossils present. Some cross-bedding at 534 ft with top indicated upward. Fractures parallel to bedding. Bedding is approx. 80° to core axis. Minor calcite stringers present.
535	541					Mudstone: Bituminous between 535 and 538 feet, fractures are oriented 80° to core axis.
541	542½					Sandstone/Siltstone: Fine grained light grey sandstone and siltstone interbedded. Beds are disturbed exhibiting soft sediment deformation.
542½	551					Mudstone: Black bituminous between 542½ and 545 ft. Coal beds a few mm thick are oriented 76° to core axis. Fractures parallel bedding and joint fractures are oriented 36° to core axis.
551	553					Siltstone/Mudstone/Sandstone: Interbedded fine grained sandstone silt and mudstone. Beds are disturbed indicating a turbulent environment.
553	555					Siltstone: Massive grey with calcite and bitumen on fractures oriented 86° to core axis. Approx. 2 fractures / foot.
555	556½					Sandstone: Fine grained light grey sandstone laminated with a lot of cross bedding. There is an increase of silt with depth from 564 to 566 feet. Some minor calcite is present. Laminations are oriented 80° to core axis. With fractures parallel to laminations .2 per foot.
556½	588					Mudstone: Black massive with some fine grained sand and silt between 574 and 576 feet. as well as 569 and 570 feet. Beds are 85° and fractures are predominantly parallel to bedding. Some joint fractures are oriented 40° to core axis. Some minor calcite between

Core Size **HQ**

Hole No. DDH. **1569**

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
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 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale

Color Plot & Dips Ore Classes & Aver.

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
						568 and 570 feet. Fractures are calcite healed and are vuggy.
588	597					Siltstone: Grey, fairly massive siltstone with calcite healed fractures between 588 and 591 feet, oriented 86°, some are vuggy. Fractures are oriented 86° and have bitumen on surface, slicken sided polished surfaces at 596 feet.
597	598					Mudstone: Black, massive.
598	620	597	617	182	188.2	Coal: Hard, black, dull sheen, fractures are oriented predominantly 65° to core axis. Some joint fractures at 35° to core axis. 6.2m 20' SEAM - 11 ?
620	639					Mudstone: Black, massive with fractures oriented 75° to core axis 3 or 4 per foot. Fairly bituminous from 620 to 627 feet with beds a few mm thick, some fine grained sand and silt between 622½ to 623 feet. Beds are fairly deformed.
639	642					Siltstone/Sandstone/Mudstone: Fine grained light grey sandstone, grey siltstone, black mudstone interbedded at 82° to core axis. Some crossbedding is present, some minor calcite along joint fractures.
642	665					Mudstone: Black massive mudstone with coal interbedded between 642 and 643 feet as well as 647 and 648 feet. Fractures are oriented 86° to core axis with joint fractures at 27° to core axis. Approx. 3 or 4 fractures per foot.
665	675					Sandstone/Siltstone/Mudstone: Interbedded light grey fine grained sandstone, mudstone, grey siltstone bedded at 80° to core axis. Some bitumen on fractured surfaces. Fractures are parallel to bedding.
675	692					Mudstone: Black mudstone, coal interbedded between 680 and 683 feet. Beds approx. 80° to core axis. Fractures are 80° to core axis also 40° to core axis. Core well fractured.

Core Size HQ

Hole No. DDH. 1569

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

Logged By: **DM** Date: **August 23, 1979** Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
From To From To From To DIRECTIONAL SURVEY DONE YES NO

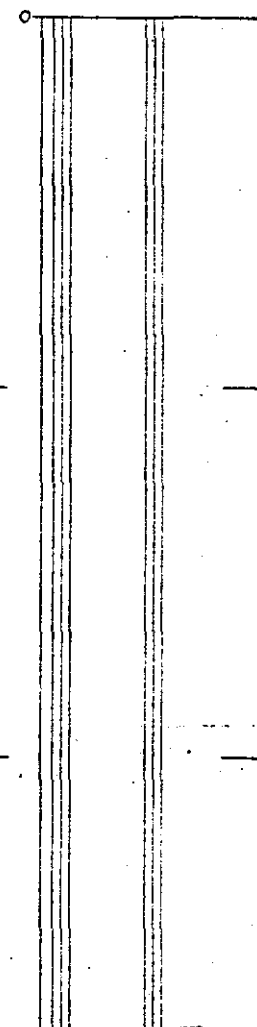
CORE In Ft.	RAD. LOG In Ft.	In meters	COAL INTERSECTIONS	CORRECTED BY	GAMMA RAY - NEUTRON	LOG
From	To	From To	DIRECTIONAL SURVEY	DONE		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
	677	681	206.4	207.7	Coal: 1.3 m 4'	
692	706				Siltstone: Grey massive calcite zone between 694 and 695½ with a one-inch thick segment of calcite and numerous calcite stringers, some coalified plant fossils at 696 feet. Fractures are 67° to core axis.	
706	710				Mudstone: Black massive with fractures oriented 80° to core axis. Bituminous parting a few mm thick between 708 and 709 feet.	
710	717				Sandstone/Siltstone/Mudstone: Light grey fine grained sandstone, grey siltstone, black mudstone interbedded. Irregular bedding. Cross bedded 715 to 716 feet. Lode casting and sediment slumping between 712 and 715 feet. Beds are approx. 78° to core axis. Dominant fracture orientation is parallel to bedding 1 per foot. Joint fracture oriented 24° to core axis.	
717	728				Mudstone: Black massive mudstone fractures dominantly oriented 84° to core axis, with joint fractures at 30° to core axis. Some calcite in joint fractures 2 to 3 fractures per foot.	
728	732				Sandstone/Siltstone/Mudstone: Interbedded fine grained sandstone grey siltstone and black mudstone, some calcite healed fractures. Bedding is oriented 86° to core axis. Approx. 2 fractures / foot along bedding planes. Some joint fractures approx. 5° to core axis.	
732	734				Mudstone: Black, massive, fairly well broken fractures oriented generally 84° to core axis.	
734	735½				Coal Black, shiny, fairly hard. Fractures 76° to 82° to core axis. Core intact but well fractured.	

Core Size HQ

Hole No. DDH. 1569

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40 Scale
Color Plot & Dips Ore Classes & Aver.



Diamond Drill Geological Log

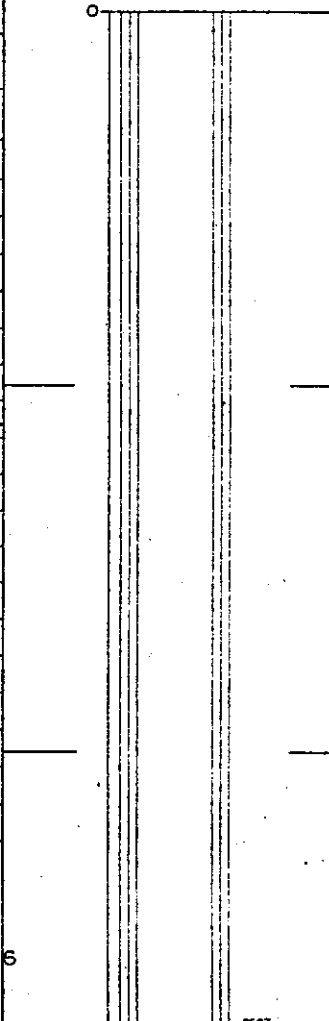


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: **DM** Date: **August 24, 1979** Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

Color Plot & Dips _____ Ore Classes & Aver. _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
735½	746					Mudstone: Black, some fine grained sandstone from 737 to 738 ft and 741 to 742 ft. Calcite healed fractures some calcite wads ½ thick at 740 ft. Rock is quite broken from 735½ to 739 feet. Fractures are dominantly 70° to core axis, also at 41° to core axis.	
746	750					Sandstone/Siltstone/Mudstone: Interbedded firm grained sandstone grey siltstone, black mudstone. Crossbedded from 749 to 750 ft. Fractures oriented 76° to core axis.	
		750.5	752.5	228.8	229.4	Coal: 0.6 m 2'	
750	755					Midstone: Black, massive, fractures oriented 86° to core axis. Crushed rock 752 to 753ft.	
755	775	754.5	766.5	230	233.6	Coal: Black, hard, shiny. Quite well broken but still intact. Fractures range 60° to 80° to core axis. 12' 3.6 m SEAM - 9 ?	
		765.5	773	234	235.7	0.3 m Coal / 0.5 Shale / 0.6 Coal 1' C / 2.0' Sh / 2' C	
775	816					Midstone: Black, massive. Quite well fractured 4/ft oriented 70° to 80° to core axis. Fractures are bituminous. Occasionally fractures oriented 16° to core axis.	
816	831					Siltstone: Grey, massive, fractures oriented 80° approx. 2 per foot. Calcite zone 821½ to 822 feet. Tiny calcite crystals visible, quite vuggy, open space filling.	
831	834½					Sandstone: Fine grained light grey sandstone poor bedding. Fractures are oriented 82° to core axis. Some bitumen on fracture surfaces.	
834½	854					Mudstone: Black, massive bitumen between 844½ and 845. Fractures are generally oriented 80° to core axis with bitumen along the surface.	



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DM Date: August 24, 1979 Composites: _____
 Block: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
854	862					Sandstone/Siltstone/Mudstone: Interbedded fine grained sandstone siltstone, black mudstone. Bedding is irregular oriented 56° to 75° to core axis. Some cross beds indicating top upwards. Lode casting and sediment slumping present. Calcite healed fractures oriented 0° to core axis. Fractures dominant along bedding planes
862	867					Mudstone: Black massive mudstone with fractures oriented 86° to 90° to core axis. 3 to 4 fractures per foot. Bitumen on fracture surfaces.
867	874					Siltstone/Sandstone/Mudstone: Interbedded fine grained light grey sandstone, grey siltstone, and black mudstone. Irregular bedding oriented 72° to 86° to core axis. Some lode casting at 870 feet.
874	887					Mudstone: Black massive, fractures are oriented 83° to core axis. Bitumen on fracture surface also. Minor calcite along fractures.
887	921					Siltstone/Mudstone/Sandstone: Interbedded fine grained sandstone, grey siltstone, black mudstone. Bedding oriented 78° to 86° to core axis. Bituminous fractures oriented 67° as well as those along bedding. Some minor calcite is present.
921	931					Mudstone: Black, massive, major fracture orientation 78° to core axis. Some bitumen on fracture surface.
931	936	930.5	934	283.7	284.8	Coal: Black, shiny, fairly hard and intact. Cone joint fractures oriented 40° to core axis. 1.1 m 3.5'
936	946					Mudstone: Black, some interbedded coal from 936 to 939. Beds a few mm thick oriented 80° to core axis. Fractured along bedding. Interbedded fine grained sandstone between 940 & 941 ft with calcite stringers. Bedding is 85° to core axis.

Core Size 1 1/4"

Hole No. DDH. 1569

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Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: **DM** Date: **August 27, 1979** Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

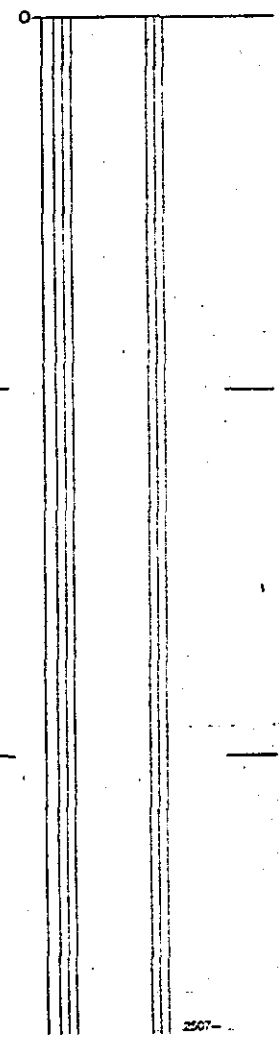
CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
946	984	946	982.5	288.3	299.5	Coal: Fairly hard, black, shiny fracture oriented 80° to 90° to core axis. 0.4 & 0.8m partings at 289.6m & 292.8m 11.2(10)m 36.5' (32.5)' SEAM - 7 ?
984	1005					Siltstone: Grey, massive fractures, dominate at 86° to core access and are bituminous.
1005	1015					Mudstone: Black, massive with interbedded coal oriented 74° to core axis. Fractures are bituminous 3 or 4 per ft.
1015	1024					Sandstone: Fine grained light grey sandstone, some minor calcite and bitumen along fracture surfaces. Bedding is oriented 82°. Sediments are deformed 1023 to 1024 with clasts of sandstone within siltstone. Fractures are parallel to bedding.
1024	1036					Siltstone: Grey, massive with fracture oriented 82° to core axis, 1 or 2 per foot, some fine grained sandstone is present with bedding 62° to 75° to core axis. Some interbedded coal is present at 1032 ft.
1036	1061					Mudstone: Black, fairly massive, fractures are oriented 80° to core axis. 4 per foot. Some calcite between 1045 and 1048 feet along fractures, some bitumen present on fractures.
1061	1065					Sandstone: Fine grained sandstone, light grey, some silt is interbedded. Bedding varies from 65° to 72° to core axis, some bitumen along fractures.
1065	1075					Siltstone: Grey, massive fractures are 85° to core axis. Plant fossils present on fracture surfaces. 2 fractures / foot.
1075	1080					Mudstone: Black, massive, some coal between 1076½ and 1077½. Fractures 90° to core axis, 1 per foot. Between 1076½ and 1077½ core is crushed.

Core Size **HQ**

Hole No. DDH. **1569**

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40 Scale
Color Plot & Dips Ore Classes & A-ver.



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: **DM** Date: **August 27, 1979** Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

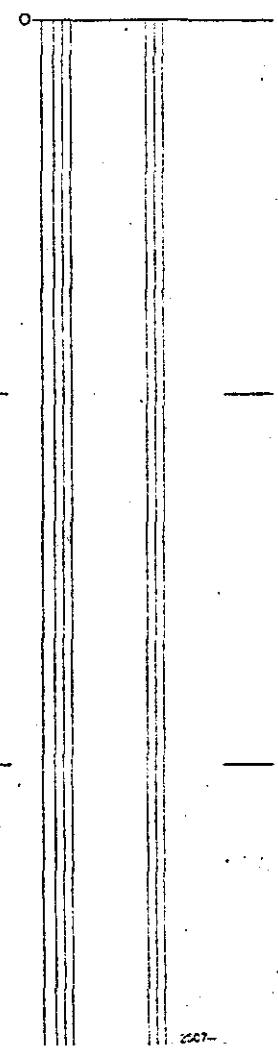
CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
1080	1123					Siltstone: Fairly massive, grey siltstone with fractures oriented 80° to 90° to core axis, 1 or 2 per foot. Occasional joint fracture, 45° to core axis. Some calcite 1 inch thick at 1094 ft. Some fine grained sandstone from 1094 to 1096 ft. Bedding ranges from 68° to 84° to core axis. Some cross bedding, minor calcite is present throughout the core along joint and bedding fractures. Some fine grained sandstone between 1115 to 1116½ bedding is oriented 76° to core axis. Cross bedding between 1116 and 1116½ ft.
1123	1137	1122.5	1132.5	342.2	345.3	Coal Measures: Black, hard, shiny coal. Crushed coal major fractures 78° to core axis. 3.1 m 10'
1137	1158					Siltstone: Grey, massive siltstone with bituminous fractures oriented 82° to core axis 3 per ft. Joint fractures 32° to core axis. Calcite along fractures between 1152 and 1158 feet.
1158	1166					Siltstone/Sandstone: Interbedded fine grained sandstone and siltstone. Bedding is 72° to core axis with fractures generally parallel to bedding, calcite zone between 1159 ft and 1166 with vuggy thick calcite fractures oriented 20° to 45° to axis.
1166	1171					Mudstone: Very black massive. Fractures are carbonaceous infilled, oriented at 75° to core axis.
1171	1176					Siltstone: Light grey massive structure, bituminous fractures oriented at 80° to core axis. Calcite banding between 1172 and 1174.
1176	1184					Siltstone/Sandstone: Interbedded medium grained sandstone and siltstone. Fractures are running parallel to bedding at 81° to core axis, Calcite zone at 1178-1183', very rug-

Core Size **HQ**

Hole No. DDH. **1569**

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40 Scale
Color Plot & Dips
Ore Classes & Aver.



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:

Sampled:

Logged By: DM

Date: August 29, 1979

Composites:

Block:

Sect.:

Place:

App. Bear:

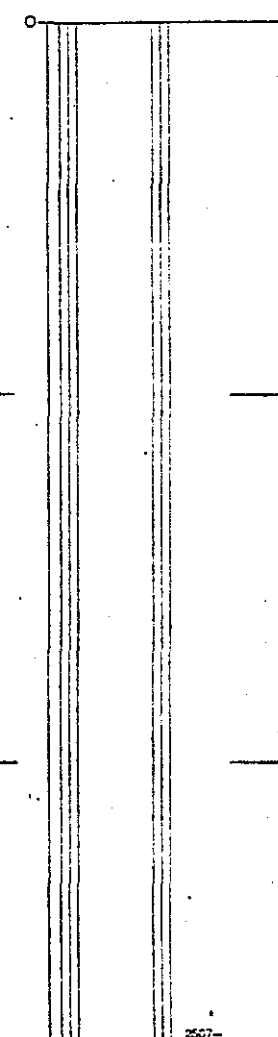
App. Dip.:

Length:

40 Scale

Color Plot & Dips Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
						ged and thick bands. Breccia zone from 1181 to 1182. Calcite infilling along fractures is prominent between 1170 and 1176 feet.
1184	1191					Mudstone: Black massive with bituminous partings oriented 86° to core axis. Core fractured along partings.
1191	1196½	1189.5	1194	362.6	364	Coal Measures: Black fairly hard shiny coal. Fractures 85° and 65° to core axis. Coal is well broken. 1.4 m 4.5'
1196½	1217					Mudstone: Black, massive, fractures are oriented 86° to core. Bituminous partings along fractures.
1217	1219					Coal Measures: Black, hard, shiny, well broken with fractures dominantly 86° to core axis.
1219	1222					Mudstone: Black massive with fractures at 78° to core axis. Appr. 5 fractures per foot.
1222	1226					Coal/Mudstone: Interbedded coal and mudstone. Black, shiny, hard coal, beds are oriented 84° to core axis. Fractured along bedding planes appr. 6 fractures per foot.
1226	1234					Siltstone: Grey, massive siltstone with a few minor bands of fine grained light grey sandstone, 1234 to 1234½ ft and 1229 to 1229½ feet. Bedding is 80° to core axis. Some minor calcite along bedding fractures associated with sandstone. Bedding is fairly regular.
1234	1246					Mudstone: Black, massive. Some bituminous partings oriented 76° to core axis. Fractures are parallel to partings. Some joint fractures at 38° & 12° to core axis.
1246	1248					Siltstone: Dark grey siltstone. slicken sealed surface at 1246½ ft oriented 46° to core axis. Some calcite on surface.
						Core Size HQ
						Hole No. DDH, 1569 Page 16 of 26



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DM Date: August 29, 1979 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____
 49 Scale _____ Color Plot & Dips _____ Ore Grades & Aver. _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
1248	1256					Sandstone: Light grey, fine grained sandstone with silty laminations some calcite along bedding fractures. Laminations are oriented 62° to 84° to core axis. Fractures dominate along bedding planes. 1 or 2 fractures per foot.
1256	1259					Siltstone/Sandstone: Interbedded with amount of silt increasing with depth some cross-bedding and lode casting present.
1259	1260					Siltstone: Dark grey, massive, fracture at 86° to core axis.
1260	1260½					Coal Measures: Black, shiny, hard, intact.
1260½	1266					Mudstone: Black, hard, massive, some interbedded coal oriented 80° to core axis. Core is fractured along bituminous bedding planes 4 fractures per foot.
1266	1270	1263.5	1268.5	385.2	386.8	Coal Measures: Black, hard, shiny. Fractures at 80° to core axis. 1.6m 5'
1270	1276					Mudstone: Black, massive with some minor coal beds a few mm thick oriented 86° to core axis. Core is fairly well broken along bedding planes.
1276	1278					Coal/Mudstone: Interbedded black shiny coal and black mudstone. Core is well broken. Fractures are quite dominantly 80° to core axis.
1278	1284					Mudstone: Black with interbedded coal a few mm thick beds are 73° to core axis. Core is well fractured along bedding planes.
1284	1287					Coal: Black, hard, shiny. Some interbedded mudstone. Beds 80° to core axis. Well broken parallel to bedding. Minor calcite at 1287 ft.
1287	1296½					Siltstone/Sandstone: Interbedded irregular bedding, some flame structures at 1293 ft. Lode casts at 1292 ft. Calcite zone at 1295½ feet.

Core Size HQ

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

Logged By: DM Date: August 29, 1979 Composites: _____

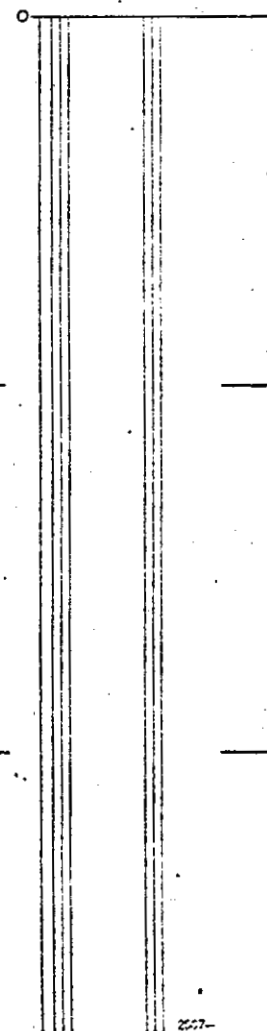
Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App.: Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
1296½	1298					Siltstone: Grey, massive.
1298	1300					Mudstone: Black, massive, well fractured. Dominant fracture 80° to core axis.
1300	1316½	1298.5	1315	395.8	400.9	Coal Measures: Black, hard, shiny. Major fracture orientation 70° to 80° to core axis. Well broken. 5.1 m 16.5'
1316½	1347					Siltstone: Grey, massive, some minor calcite along fractures more intense calcite infilling from 1344 to 1346 ft. Fractures are vuggy, open space filling. Fractures are oriented 43° and 68° to 82° to core axis. 2 or 3 fractures per foot.
1347	1360					Mudstone: Black massive with some calcite between 1359 and 1360 feet. Major fracture orientation is 68° to core axis.
1360	1365					Siltstone: Grey massive some minor fine grained sandstone beds oriented 72° to core axis. Fractures oriented parallel to bedding.
1365	1368½					Mudstone: Black massive, fractures are oriented 86° to core axis, approx. 3 per foot.
1368½	1370					Coal: Black, shiny, hard, some mudstone interbedded. Fractures are oriented 80° to core axis.
1370	1386					Siltstone: Dark grey, massive, some bitumen and coalified fossils at 1384 ft. Calcite present. Fractures oriented 82° to core axis.
1386	1391					Sandstone: Grey, fine grained, massive. Some minor calcite. Fractures are approx. 86° to core axis.
1391	1392					Mudstone: Black, massive.
1392	1395½	1391	1394	424	425	Coal: Hard, black with some mudstone from 1394.6 to 1395.5 ft. Coal has dull lustre. 1m 3'.

Core Size HQ
Hole No. DDH: 1569 Page 18 of 26

40 Scale
Color Plot & Dips Core Casts & Aver.



Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____

Logged By: DM Date: August 30, 1979 Composites: _____

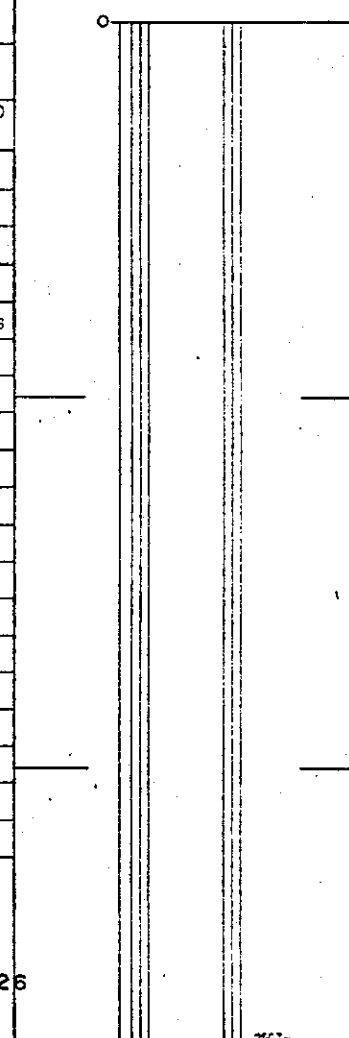
Block: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
1395½	1408					Mudstone: Black massive interbedded from 1395½ to 1400 ft. Bedding is 65° to 72° to core axis. Partings are a few mm to 2 or 3 m. Major fracture orientation 72° to core axis.
1408	1433					Siltstone: Grey siltstone fractured 86° to 90° to core axis. Some interbedded fine grained sandstone from 1412 to 1413 feet. Some minor calcite present. Bedding is oriented 53° to core axis.
1433	1439					Sandstone: Fine grained light grey sandstone sitly lamination 1436 to 1439 ft. with increasing silt with depth. Bedding is 38° to 56° to core axis. Some cross bedding present. A fair amount of calcite infilling along fractures. Calcite infilling is vuggy in places indicating open space filling.
1439	1442					Siltstone: Grey, massive, fractures oriented 47° to core axis.
1442	1453					Sandstone: Fine to medium grained poorly sorted sandstone. Bedding orientation approx. 50° to core axis. Calcite is present generally as infilling in fractures. Slicken sided surface at 1444 ft on fracture oriented 45° to core axis.
1453	1493					Siltstone/Sandstone: Dark grey siltstone with light grey sandstone bedded through the section. The sandstone is fine grained. Bedding changes through the section. Bedding is oriented 46° to core axis from 1453 to 1476 ft. Bedding between 1476 and 1486 ft changes from 38° to 28 to 45. Cross bedding is present with top indicated upward. Bedding is oriented 5° to 10° between 1486 and 1493 ft. Beds are deformed between 1486 and 1489 ft. with silty rip up clasts and interfingered sediments. Between 1489 and 1493 ft. ripple marks are present. Fractures are common

Core Size HQ
 Hole No. DDH. 1569 Page 19 of 26

40 Scale
 Color Plot & Dips
 Cre Classes & Aver.



Diamond Drill Geological Log

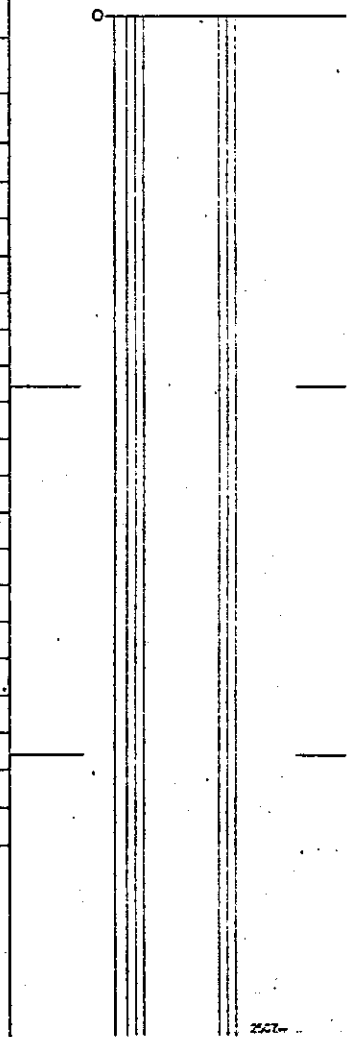


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DM Date: August 30, 1979 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

40 Scale _____
 Color Plot & Dips _____ Ore Classes & Aver. _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
						along bedding and calcite is present in joint and bedding fractures. Small breccia zone is present at 1454 ft. Joint fractures are oriented 66° and 0° to core axis. In some places the calcite is vuggy.
1493	1508					Siltstone: Dark grey massive some fine grained sandstone between 1501 and 1503 ft. with beds oriented 38° to core axis. Fractures between 1444 and 1446 ft as well as 1501 and 1502 st are oriented 10° to core axis and slicken sided calcite is present in fractures.
1508	1520					Sandstone: Fine grained becoming medium grained at 1511 at also quite silty from 1508 to 1511 ft. Bedding orientation to core axis decreases with depth from 25° to 5°. Thus from 1512 to 1517 ft the beds are dipping almost vertically. Massive poorly sorted sandstone from 1517 to 1520 ft. Fractures are dominantly oriented 40° to core axis. Calcite healing in fractures and as stringers.
1520	1533					Siltstone: Dark grey. Some mudstone clasts present between 1520 and 1526 ft. Calcite healing of joint fractures oriented 26° and 40° to core axis. Some fine grained sandstone between 1426 and 1427 feet - sandstone clasts - large 5 cm in diameter. Also interbedded between 1528 and 1531 feet. Beds are oriented 22° to 42° to core axis with beds dipping shallower with depth. Cross beds are present from 1528 to 1529 feet with top indicated upwards.
1533	1602					Sandstone: Medium to fine grained sandstone poorly sorted. Bituminous lamination from 1533 to 1536 ft. Laminations oriented 44° to core axis. Sandstone is otherwise massive with generally clean fractures oriented 50° to core axis. Large mud clasts irregular



Core Size HQ
 Hole No. DDH. 1569 Page 20 of 26

Diamond Drill Geological Log



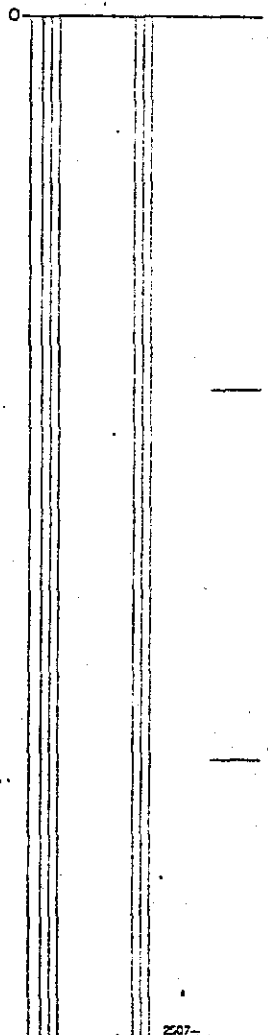
FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: DM Date: August 30, 1979 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To		
							shaped from 1541 to 1542 feet and 1556 to 1558 and 1561 to 1563. Minor calcite is present in fractures.
1602	1626						Siltstone: Medium grey in color. Fairly massive. Calcite deposits between 1620 - 1626'. Fractures orient at 62° to core axis. Beddings run at 77° to core axis. Some carbonaceous infilling in fractures at 1615 - 1618'.
1626	1630						Mudstone/Coal: Interbedded, mudstone is very dark, very soft. Core is entirely broken (NO BEDDING TAKEN).
1630	1646						Sandstone/Siltstone: Interbedded, the siltstone is medium grey, fine grained. The sandstone is medium grey, large grained. Bedding at 1630 is 74° to core axis. The bedding is quite irregular. The fractures are calcite infilled. There are also bands of calcite in the core approx. 1/4 to 1/2" wide. The calcite is very rough. Bedding changes at 1637' to 66° to core axis.
1646	1676						Siltstone/Mudstone: Interbedded, the siltstone is light grey, medium grained. The mudstone is dark grey/black, large grained and very soft. Bedding is quite regular at 83° to core axis. Fractures are calcite filled, and orient along bedding axis.
1676	1686						Mudstone: Very dark grey/black in color. Grain size is medium. Very soft. Bituminous stringers in core at 1684 - 1686'. Bedding is 76° to core axis.
1686	1693	1698	1701	517.5	518.5		Coal: Poor quality, lacks lustre. Quite soft. Bedding is 61° to core axis. 1 m 3'.
1693	1716						Mudstone: Medium grained, dark black, quite soft. Some siltstone interbedded at 1703'. Bedding is 88° to core axis. Fractures orient along this axis. Some carbonaceous infilling in fractures at 1714 - 1716'. Also coal stringers in core.

Core Size HQ
 Hole No. DDH 1569



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

Logged By: **Loriann** Date: **August 30, 1979** Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

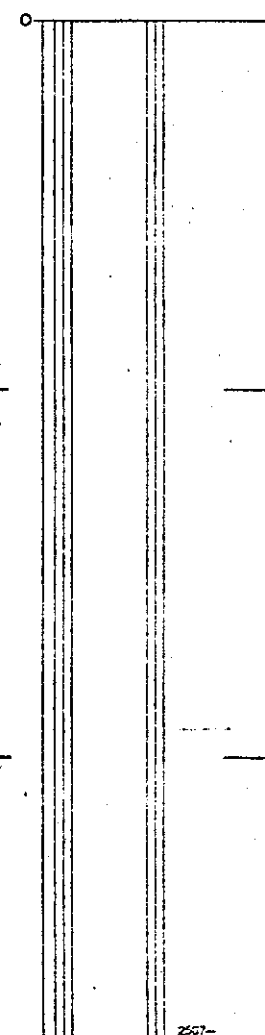
COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
1716	1746					Siltstone: Light grey in color, small grain size. A lot of calcite in core, also in fractures. Calcite stringers at 1725 - 1730', 1739 - 1741'. Bedding is quite irregular. Bedding is 66° to core axis at 1719' and changes at 1726' to 82°. Cross bedding occurs at 1738' with angles of 68° and 79° to core axis.
		1748	1751.5	532.9	533	Coal: 1.1 m 3.5'
1746	1780					Mudstone/Siltstone: Completely broken core. Mudstone is very black and soft. Siltstone is medium grey, quite soft also. Calcite found on core pieces also some iron oxides, near 1774 - 1776'. Broken pieces also have slicken slides. Very polished surfaces.
1780	1840					Mudstone: Completely broken core. Very soft mudstone, lots of calcite on core pieces, also very polished surfaces. Some bituminous infilling on core pieces at 1826 to 1828 feet.
1840	1860					Siltstone: Completely broken core, light grey in color, slicken slides on broken core pieces. Traces of iron oxides on core at 1851'. Calcite on core at 1845'.
1860	1875	1850.5	1867.5	564	569.2	Coal: Very dull, mostly mudstone, bedding is 68° to core axis. 5.2m 17' SEAM -
1875	1888					Mudstone: Medium grey/black, fractures have carbonaceous infilling. Bedding is 74° to core axis. Core is highly fracterous. Some calcite stringers at 1884 - 1887'.
1888	1916.5	1888	1913	575.4	583	Coal: Very dull, lacks lustre, very soft. Core is entirely broken. Traces of calcite at 1901'. Bedding at 1906' is 76° to core axis. Mudstone bands at 1906 - 1906.5', again at 1916 - 1917'. Bedding is quite irregular. 7.6 m 25' SEAM -

Core Size
HQ

Hole No. DDH. 1569 Page 22 of 26

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Diamond Drill Geological Log

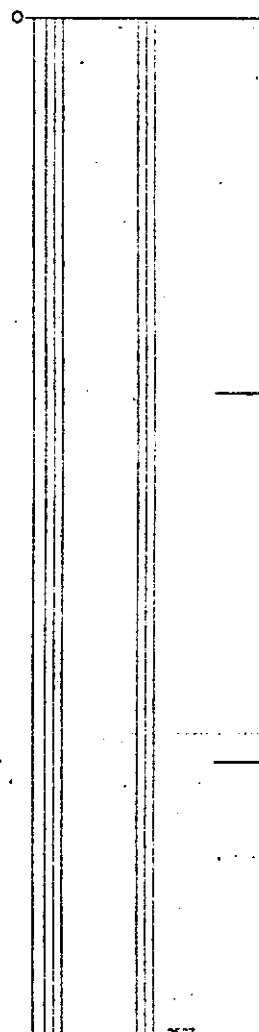


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: **Loriann** Date: **August 30, 1979** Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips | Ore Classes & Avar.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
1916.5	1927					Mudstone: Medium grey/black in color. Large grain size. Bedding is regular at 82° to core axis. Calcite stringers at 1920.5'. Slicken slides appear in fractures, also in gouges in core. Broken core occurs from 1924 - 1927'. Pieces of core have slicken slide surfaces.	
1927	1968					Siltstone: Dark grey in color, large grain size, bedding is very irregular. Crossbedding occurs at 1929 - 1930'. Angles orient at 76° and 63° to core axis. Fractures remain clean until 1948' when they have carbonaceous infilling. Broken core begins at 1954' - 1966'. Surfaces of core pieces have bituminous cover.	
		1967.5	1972.5	599.7	601.3	Coal: 1.6 m 5'	
1968	1977					Coal: Very shiny, high lustre, but very soft. Entirely broken core.	
1977	2006					Mudstone: Very dark black in color. Bituminous stringers running through core. Fractures also have bituminous infillings. Core is quite soft and broken. Bedding remains quite constant at 71° to core axis. Core becomes very soft near the 2000' point.	
2006	2038	2003	2037.5	610.5	621	Coal: Quite shiny and hard. Bedding and fractures are parallel at 83° to core axis, bedding is regular. A band of mudstone at 2030', 10.5 m 34.5' SEAM -	
2038	2041					Mudstone: Medium grey/black, large grain, bedding at 63°, fractures are clean.	
2041	2062	2041.5	2057.5	622.3	627.2	Coal: Quite shiny. Mudstone band at 2042 - 2043'. Quite soft. Bedding at 86° to core axis. 4.9 m 16' Shaley Coal Seam -	
2062	2126					Mudstone: Very dark in color. Core is completely broken. Bituminous covers on pieces of core. (NO BEDDING TAKEN)	
						Core Size HQ	
						Hole No. DDH. 1569 Page 23 of 26	



Diamond Drill Geological Log



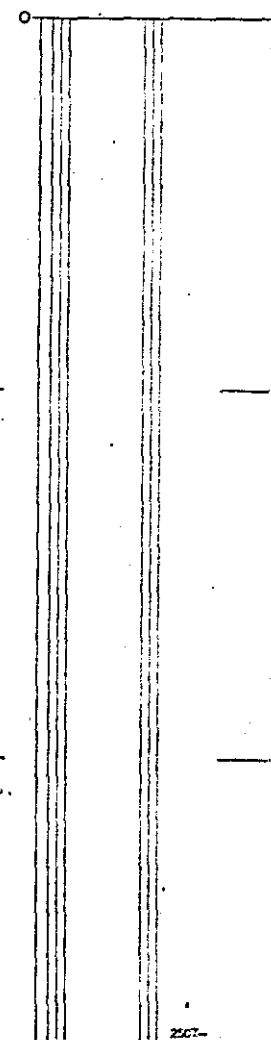
FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann Date: August 30, 1979 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale

Color Plot & Dips Ore Grades & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
2126	2142					Coal/Mudstone: Very dull, highly fracterous. Completely broken core. Mudstone bands 1/2' long at 2129 - 2129.5', 2141 - 2141.5'.
2142	2156					Mudstone: Medium grey in color. Small grained, quite intact. Fractures have bituminous infillings. Bedding remains quite constant at 76° to core axis. Fractures orient at the same angle.
2156	2170					Coal/Mudstone: Quite dull, very soft, core is entirely broken. (NO BEDDING TAKEN). Core pieces of mudstone have bituminous infilling.
2170	2198					Mudstone: Dark grey/black, quite intact. Calcite in fractures in small amounts. Bedding remains regular at 57° to core axis. Calcite stringers at 2176'. Completely broken core at 2177 - 2186'. Bituminous coverings on broken core pieces. Fractures at 2186' are clean, but very rough. Slicken slides on core pieces and in fractures at 2190 - 2196'.
2198	2250					Siltstone: Dark grey in color, small grain size. Minor calcite in fractures at 2200'. . Also calcite stringers in core. Bedding is quite regular at 87° to core axis. Calcite builds up nearer to the 2216'. The bedding remains the same within 2° to core axis. The core is quite intact, approx. 1 fracture per foot. Carbonaceous infilling in fractures at 2248'.
2250	2256					Mudstone/Coal: Mudstone is dominant rock type, some minor coal in bands. Very soft. The core is entirely broken (NO BEDDING TAKEN).
						Core Size HQ
						Hold No. DDH. 1569 Page 24 of 26



Diamond Drill Geological Log

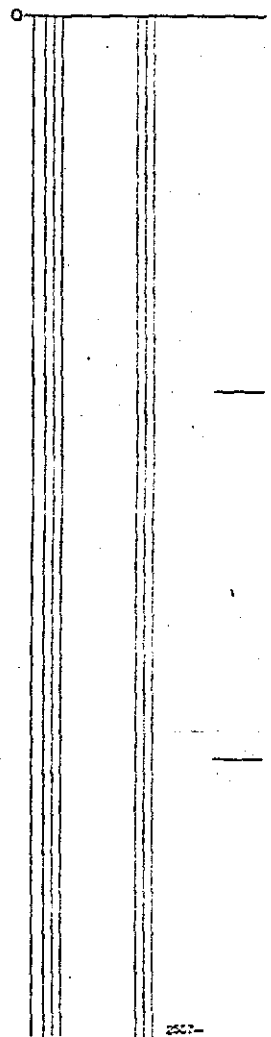


FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann Date: August 30, 1979 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips _____ Ore Classes & Aver. _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
2256	2310					Siltstone/Mudstone: Medium grey, small grained siltstone, mudstone is dark, medium grained. Mudstone bands at 2256 - 2256.5', 2259.5 - 2260'. Minor calcite in fractures throughout core. Bedding is irregular, beginning at 64° to core axis at 2256', it changes to 78° to core axis at 2296'. More calcite build up at 2265.5'. Cross bedding occurring at 2269', angles orienting at 66° and 81° to core axis. Core is quite hard and intact. Some broken core at 2290' but pieces are clean. Slicken slides in fractures at 2306'. Very polished surfaces.
2310	2319.5					Mudstone: Medium grey/black, small grained, very soft. Broken core from 2310 - 2313'. Pieces are quite polished. Bedding at 2313.5' is 61° to core axis. Bituminous infillings incore begins here. Bedding remains constant. Minor calcite on core at 2316'.
2319.5	2324					Coal: High lustre, very black, very soft. Core is entirely broken.
2324	2336					Siltstone/Sandstone: Interbedded siltstone is medium grey, small grained, sandstone is light grey, small grained. Minor calcite in fractures. Core is quite hard, very intact. Also calcite stringers in core. Bedding is irregular, changing from 72° to 84° to core axis.
2336	2346					Mudstone: Medium black, large grained. Minor calcite in fractures, also some iron oxides at 2341'. Very small amount, located in a gouge in the core. Bedding is very irregular. It begins at 88° and changes to 64° to core axis. Core has a gouge (large) at 2344', that contains carbonaceous infillings. Fractures still contain minor calcite.



Core Size HQ
 Hole No. DDH. 1569 Page 25 of 26

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

Logged By: Lorianm Date: August 30, 1979 Composites: _____

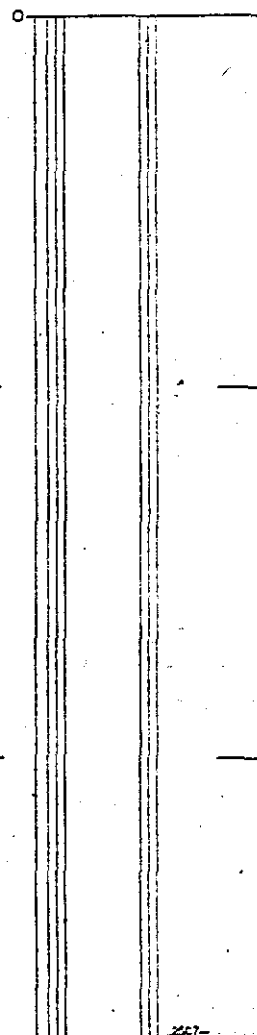
Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
2346	2405					Siltstone: Begins at dark grey, small grained, changing to light grey, small grained at 2364'. Core is quite intact, fractures contain minor calcite intrusions, some calcite in core in the form of stringers. Fractures beginning at 2391' are clean. Traces of calcite disappear also from core. Bedding remains quite regular at 80° to core axis. It changes slightly at 2304' to 77° to core axis.
2405	2438					Siltstone/Sandstone: Medium grey siltstone, small grained, medium grey sandstone, medium grained. Core is quite hard, very intact. Large amounts of calcite in fractures, minor amounts of iron oxides at 2406 - 2417'. Also calcite stringers in core, these are very minor. Bedding is very irregular. It begins at 64° to core axis. At 2420' the bedding folds. The angle changes to 51° to core axis. This occurs again at 2429'. The interbedded sandstone/siltstone at 2436' is at very irregular angles. They vary from 41° to 86° to core axis. Fractures here have minor amounts of calcite.
2438	2506			763.8		Sandstone: Medium to large grain. Light grey in color. Calcite infillings in fracture throughout the length of core. A siltstone band at 2448 - 2448.5'. Large amount of calcite at 2446'. Bedding is quite regular beginning at 77° to core axis and only varies some 3° throughout the core length. Some bituminous laminations at 2477', very minor amounts. Fractures remain quite constant running along the bedding angles.

Core Size _____
End of hole _____
Hole No. DDH. 1569 Page 26 of 26

40 Scale
Color Plot & Dips
Core Classes & Aver.



DIAMOND DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	ACTUAL								REMARKS	
				B TU	WIDTH	M	A	VM	FC	FSI	S		
63	69.5		31078		6.5		18.0				6 1/2		WASHABILITY RECOV. 11.5%
69.5	72.5			12,381		1.0	17.1	26.0	SS.3	6 1/2	0.62		
90	95		31079		5		15.3				4 1/2		
95	95			12,191		0.6	19.0	25.1	SS.3	4 1/2	0.90		
191	196		31080		5		25.0				6 1/2		
196	211		081		15		22.0				7		
211	222		082		11		51.8				3		EQ-10742
222	241	SEAM-13	31080	11,214	20	0.4	24.0	23.4	SS.2	7	0.59		RECOVERY-68.3% WASHABILITY & PETROGRAPHY.
331	336		31083		11		11.6				7		
336	341		084		11		32.0				6		
341	346		085		11		5.1				6 1/2		
346	351		31086		5		10.6				6 1/2		EQ-10672 WASHABILITY & PETROGRAPHY. RECOV. 13.4%
351	361		087		10		30.0				6		
361	371	SEAM-12	31086	12,183	30	0.4	20.1	25.2	SA.3	6 1/2	0.68		
471	486		31088		9		14.8				7 1/2		
486	496		089		10		37.9				2		
496	505		31088	11,352	19	0.5	26.5	22.1	SS.3	4 1/2	0.53		RECOV. 56.6% EQ-10924
505	516		31090		11		32.0				6 1/2		
516	526		091		10		25.3				6		
526	534		31090	10,683	21	0.4	29.1	22.8	AT.1	6 1/2	0.76		RECOV. 70.4% EQ-11228

DIAMOND DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	ACTUAL			A	VM	FC	FSI	S	REMARKS
				BTU	WIDTH	M						
599	557.5		31092		2.5		16.3			7		
601	611		31093		10		10.8			4		
611	621		94		3.0		19.5			4		
621	624.5		95		3.5		38.8			5 1/2		
621	625.5		COMPO	12	527	2.5	18.3	23.0	55.5	4 1/2	0.45	Re-11920 WASHABILITY & PETROGRAPHY. RECOV- 55.3%
635	637		31096		2		34.6			1		
646	656		31097		10		42.7			4 1/2		
656	665		098		5.5		25.2			5		
665	665.5		COMPO	9	440	15.5	36.0	20.5	43.4	5	0.53	Re-110960 RECOVERY- 54.8% WASHABILITY & PETROG.
855	861		31099		6		17.9			7 1/2		
				12	916	6	17.8	26.3	55.5	7 1/2	0.92	WASHABILITY 89.1% RECOV. 6-11528
877	876		31100		10		41.3			4 1/2		
876	881		31176		10		38.8			5		
881	886		77		10		29.7			7		
871	880		COMPO	9	184	15	40.0	20.5	39.2	5 1/2	0.52	44.3% RECOV. OF GHS-15 GAL RECOV.
896	901		31178		15		22.9			7 1/2		
901	911		179		10		28.9			6 1/2		
911	911		COMPO	11	455	15	26.5	23.8	49.5	6 1/2	0.46	74.9% RECOV.
954	963		31180		2.5		39.4			5		
954	963			9	023	6.5	39.7	18.7	42.0	5	0.94	

DIAMOND
DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	ACTUAL		M	A	VH	FC	FSI	S	REMARKS
				BTU	WIDTH							
1030	1046		31181		16'		18.3			6		R ₀ -12218
1030	1046			12,368	16'	0.1	18.5	21.4	60.0	6	0.60	WEARABILITY & PETROGRAPHY RECOV. 75-2%
1060	1065		31182		0.5		27.1			6 1/2		
1175	1176		31183		1		30.6			6 1/2		
1160	1162		31184		2		32.1			5		
1177	1178		31185		1		28.4			6 1/2		
1223	1230		31186		7		11.0			5		
1230	1234		87		4		13.9			1		
1234	1240		88		6'		13.4			7		R ₀ - 1.2226.
1234	1240			13,402	17'	0.2	12.2	21.6	66.0	4 1/2	0.46	" " " RECOV. 90%
1318.9	1319.5		31189		1.5		28.0			2 1/2		
1371	1382		31190		5		34.9			5 1/2		
				9,503	5'	0.2	25.0	17.3	47.0	6	0.61	
1382.5	1401		31191		17.5		48.9			1		

Diamond Drill Geological Log



FORDING RIVER OPERATIONS

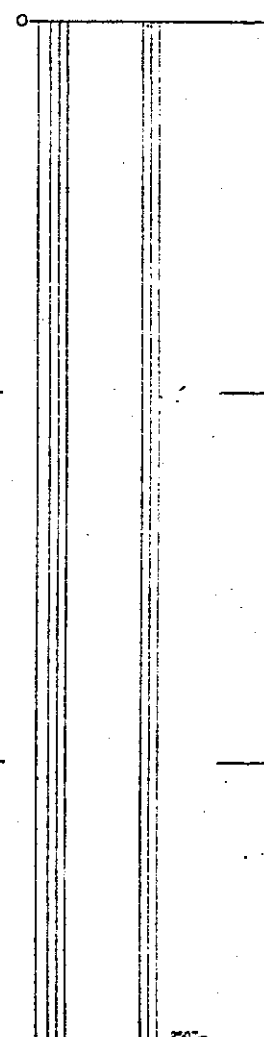
Objective: _____ Sampled: _____
 Logged By: Loriann Date: August 17/79 Composites: _____

Block: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
0	20			0	6	Overburden
20	25					Sandstone/ Mudstone - Interbedded mostly sandstone. Very hard core. A lot of iron oxides are present in fractures. Also slip n' slide is visible on core pieces. Some crossbedding indicated at 24' to 25' very slight. A lot of iron oxides in this area.
25	33					Mudstone: Very soft core. Some sandstone interbedded at 28' - 30'. Calcite banding occurs at 27'. Bands are very thin. Broken core pieces show signs of slip n' slide. Crossbedding occurs at 30'. A lot of iron oxides are present on the core. Fractures in this area are 62 deg to core axis.
33	35					Sandstone: Very light in color. Small grained. Core is very hard. Fractures contain a lot of calcite infilling. A band of siltstone occurs at 34.5'. It is approx. 3" long. Very dark in color, and soft. Calcite banding occurs at 35'. These bands are approx. 1/2" thick.
35	63					Mudstone: Very dark in color. Large grain size. Mudstone is very soft. Iron oxides are present at 35'. Calcite banding occurs at 39-40'. Broken core pieces contains signs of carbonaceous infilling. Fractures after 40' are clear until 45'. Here they contain iron oxides. There is a 1/2 foot length of brecciated core at 45 1/2'. Fractures remain clean through out the rest of this length of mudstone.

40 Scale
 Color Plot & Dips Core Grades & Aves.



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

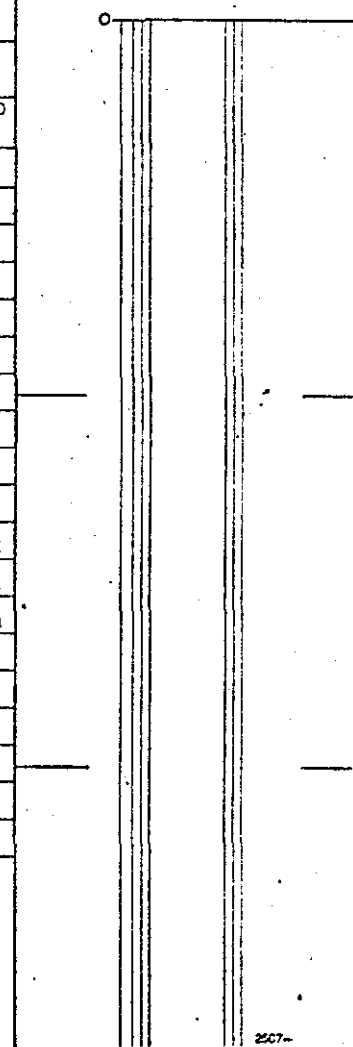
Logged By: **oriann** Date: **August 17/79** Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App.: Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
						Fractures at 59.5' orient at 87 deg.
63	69.5	63	70	19.2	21.3	Coal - Completely broken core. Coal is highly lustrous, very shiny, but very soft. There's some interbedded mudstone at 69'. 2.1m 7'
69.5	73					Mudstone: Very soft. Dark grey/Black in color. Medium grained. Broken core shows signs of carbonaceous infilling. Fractures at 72' orient at 78 deg to core axis.
73	77.5					Siltstone: Medium grey in color, medium grained. Some interbedded sandstone. Fractures contain calcite infilling. Fractures at 75' orient at 61 deg and 193 deg to bedding. It is calcite healed. There is interbedded mudstone at 77.0'.
77.5	90					Mudstone: Dark grey/black in color. Medium grain size. Very soft. A lot of iron oxides present on the core. Fractures at 78' are calcite filled and orient at 86 deg. There is crossbedding occurring with siltstone at 78.5'. Core pieces after 78.5' contain a lot of iron oxides on them. Fractures orient at 78 deg and contain a lot of iron oxides. A lot of broken core occurs from 85 - 90'. All core pieces contain iron oxides. Some traces of carbonaceous infilling occurs at 88.5'.
90	95					Coal: Very dull. Lacus lustre and is very soft. Looks like the footage between 90 - 93' contains a lot of mudstone.
95	104					Mudstone: Very dark grey/black in color. Small grained. Fractures are all clean. Core is very solid

40 Scale
Color Plot & Dips
Core Classes & Aver.



Core Size

Hole No. DDH. 1570

Diamond Drill Geological Log



FORDING RIVER OPERATIONS

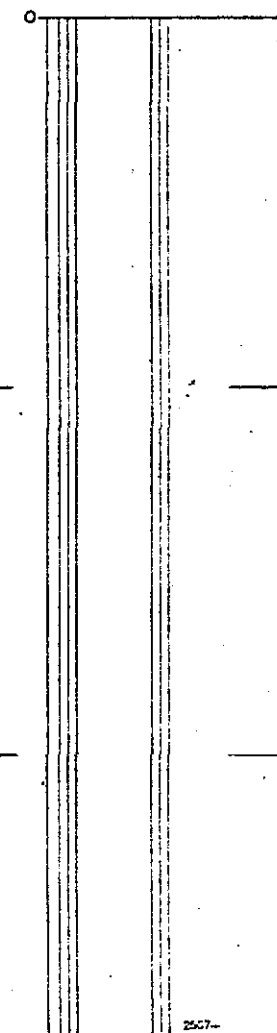
Objective: _____ Sampled: _____
 Logged By: Loriann Date: August 17/79 Composites: _____

Block: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.	RAD. LOG In Ft.	In meters	
From	To	From	To
			Some calcite banding at 99', but the fracture here is clean. It orients at 72 deg. Calcite banding also occurs at 101' and 103.5 feet. The bands are very thin. They don't seem to be along a line of fracture.
104	106		Siltstone: Very light in color. Fracture at 104' contains calcite. It orients at 85 deg. Grain size is small.
106	130.6		Mudstone: Very dark grey/black in color. Fractures are clean. Fractures between 106 - 110' orient at 76 deg to core axis. Signs of iron oxides begin at 111' the fractures here orient at 43 deg to core axis. Broken core pieces also contain signs of iron oxides. Calcite infilling occurs at 113' in 2-J4 type fractures. There is another J4 type fracture at 115.4' that has been healed with iron oxides. Fractures after 115.4' are oriented at 86 deg. The mudstone is very soft around this length. It becomes harder at 120'. The # of fractures per foot also decreases at 120'. Fractures here orient at 77deg they remain clear. Fractures at 125.4 deg are clean, and orient at 90 deg to core axis. This repeats 6 times. A band of calcite occurs at 130.6' it is approx 1/4" in width, all fractures here are clean.
130.6	140.0		Siltstone/ Mudstone - Mostly siltstone with interbedded mudstone. Calcite banding occurs at 131.0' throughout the core length. Fractures are clean.

40 Scale
 Color Plot & Dips Core Classes & Aver.



Diamond Drill Geological Log

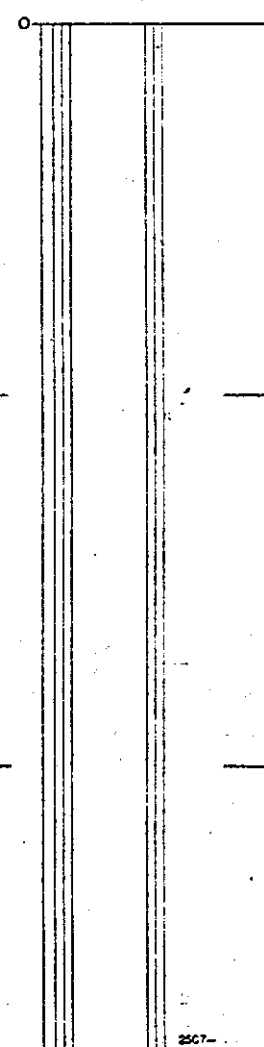


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann Date: August 17/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
							They orient at 77 deg to core axis. The siltstone is light in color. Small grained, while the mudstone is dark in color and medium grained.
140	151						Siltstone: Medium grained light, in color. A band of calcite has healed a J4 fracture The fracture is 90 deg to core axis. Fractures are clean. They orient at 63 deg to core axis. Fractures at 148 deg contain small amounts of calcite. They orient at 78 deg to core axis. They repeat 4 times. Cross bedding, occurs at 150 deg. The bedding changes from 81 deg to core axis to 53 deg to core axis.
151	191						Mudstone: Very dark grey/black color, large grained. The core is soft. Fractures are clean. They orient at 80 deg. Calcite bands occur at 166'. The fractures are clean. A J1 type fracture at 168' contains iron oxides. The fracture orients at 42 deg to core axis and 181 deg to bedding. Fractures from this point on contain iron oxides. A band of siltstone occurs at 170 - 171.5'. It is light grey in color, medium grained. Fractures at 186' orient at 63 deg to core axis and have carbonaceous infilling.
		192	208	58.5	63.4		Coal with 0.6m/2' mudstone at 61.7m 4.9(4.3)m 16(14)' SEAM - 13
		212.5	215.5	64.8	65.8		Coal 1m 3'
191	222						Coal: Very dull fractures orient at 73 deg. Looks like the coal contains alot of mudstone from 191 - 194'. The core is much harder throughout this length. From 194' on the coal is much shinier and very soft. The core is entirely broken from 194' on.

40 Scale
 Color Plot & Dips _____ Core Classes & Aver. _____



Diamond Drill Geological Log

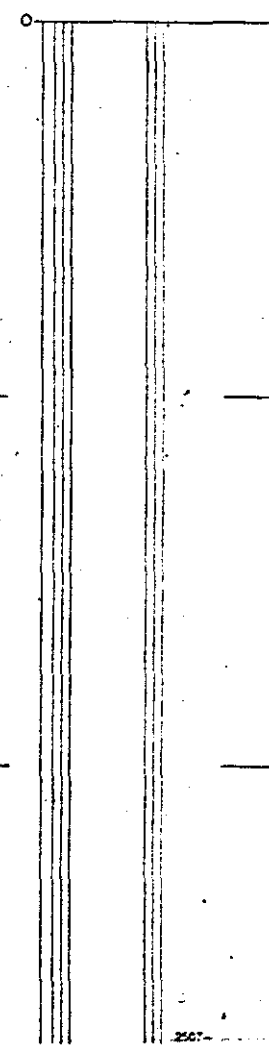


FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Lorian Date: August 17/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip: _____ Length: _____

40 Scale
 Color Plot & Dips Ore Classes & Aver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
222	233					Mudstone: Medium grey/black in color. Large grain size. Bedding is 84 deg to core axis. Calcite is present in fractures at 227'. Some carbonaceous infilling occurring at 230'. There is a siltstone parting at 230.5', which is approx. 10" long.
233	244					Siltstone: Medium/dark in color. Medium grained. Bedding is 48 deg to core axis. A lot of iron oxides are present in fractures and along core. Calcite infillings are also present.
244	327					Sandstone: Medium grey in color, gradually getting darker. Grain size is medium / large. Bedding at 246' is 76 deg to bedding, and changes to 41 deg at the 251' mark. Fractures orient at 64 deg from the 244' - 246'. They are calcite filled. The bedding then again changes at 256' to 79 deg to core axis. Carbonaceous infilling occurs in fractures at 252' and a band of coal occurs at 250', which is approx. 1/2" wide. Core from 261 is clean, some slicken slides are evident at 269'. The grain size of the sandstone increases notably at the 270' mark. Carbonaceous infilling occurs once again beginning at the 270.5' mark. Also bands of carbonaceous infillings also occur. A lot of calcites become evident beginning at 276'. The calcite is in large amounts. Cross bedding occurs at 285.5' changing from 79 deg to 63 deg. A band of mudstone is at 293'. A lot of calcite is still present on the core.
327	331					Mudstone: Very dark in color. Grain size is large and the mudstone is quite soft. The bedding is 86 deg to core axis. A lot of calcites are found in fractures.



Core Size
 Hole No. DDH. 1570 Page 5 of 18

Diamond Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann Date: July 17/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To	
331	359	330.5	358	100.8	109.2	Coal. Very dull, and soft. The coal at 331' looks to contain alot of mudstone. Around the 340' mark the coal becones alot shinier. The bedding (taken at 357' is 66 deg to core axis. Coxe is fairly broken up, except for around 375 - 359' where the fractures orient at 89 deg. 0.7m parting at L02.3m 8.4m (7.7m) 27.5(25)' SEAM - 12
359	386					Midstone: Farily solid, it is medium grain size and dark in color. Fractures are clean. Bedding is 81 deg to core axis. There is a siltstone parting at 372' Broken core then occurs from 377' to 384'. Core pieces are clean.
386	406					Siltstone: Medium grey in color, small grained. Bedding is 64 deg to core axis. Fractures are clean. Broken core from 388 - 391'. Bedding changes at 398' to 83 deg to core axis. Some mudstone banding occuring at 396 - 401'. Bands are approx. 3" wide.
406	409					Midstone: Dark grey/Black in color, small grain size, relatively hard for mudstone. Fractures are clean and orient at 90 deg to core axis. Bedding is parallel to the fractures.
409	431					Sandstone: Right/medium grey in color, medium grain size. Alot of mudstone banding occuring. Bedding is quite consistent running 85 deg to core axis. Fractures are clean. Some calcite banding occuring at 428'. Calcite begins to appear in the fractures at 428'.
431	443					Midstone/Siltstone: Mostly mudstone, very dark in color large grain size. Siltstone is light in color, medium grain size. Alot of calcite appears in the mudstone.

40 Scale
 Color Plot & Dips
 Core Classes & Aver.

Core Size
 Hole No. DDH. 1570
 Page 6 of 18

Diamond Drill Geological Log



FORDING
OPERATION

Objective:				Sampled:			
Logged By: Lorian				Date: August 20/79			
Block:				Sect.:		Place:	
App. Bear:		App. Dip.:		Length:			
COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO					
CORE In Ft.	RAD. LOG In Ft.	In meters					
From	To	From	To	From	To		
						Bedding is 88 deg to core axis.	
443	477					Siltstone: Medium grey in color, medium grain size. Bedding is 85 deg to core axis. Calcite intrusions occurring in the core. Fractures have little calcite in them, they show signs of slicken slide. Mudstone bands occur at 441' the bedding of the mudstone is 73 deg to the core axis. The bedding of the siltstone changes at 449' where it orients at 63 deg to core axis. Another mudstone band again occurs at 449' - 452'. Calcite covers the fractures beginning at 457'. The calcite remains in the fractures until 477'. The bedding remains the same too.	
477	496	476.5	492	145.3	150	Coal: Very dull, lacks lustre. Fairly hard. Some mudstone interbedded at 491'. Bedding is 83 deg to core axis. Alto of broken core occurs. Also mudstone interbedding at 493 - 496'. 4.7m 15.5' SEAM - 11	
496	505					Mudstone: Medium grey in color. Small grain size. Lots of broken core occurring at 497 - 499'. Fractures have carbonaceous infilling. Evidence of slippage begins to occur in the fractures at 500'. Fractures from here on also have calcite infilling. Bedding In 79 deg to core axis.	
505	526	504.5	523	153.7	159.4	Coal: shiny, but very soft. Some mudstone at 506-507'. Core is entirely broken (no bedding taken) Mudstone banding at 524 - 526'. Bedding of the Mudstone is 60 deg to core axis. Two 0.3m partings at 154.4m & 157m 5.7(5.1)m 18.5 (16.5)' SEAM - 11	
526	550					Siltstone/ Mudstone: The siltstone is medium grey small grain size. Lots of calcite in fractures, also calcite banding in the core	

40 Scale
Color Plot & Dips

0

Core Size

Hole No. DDH. 1570

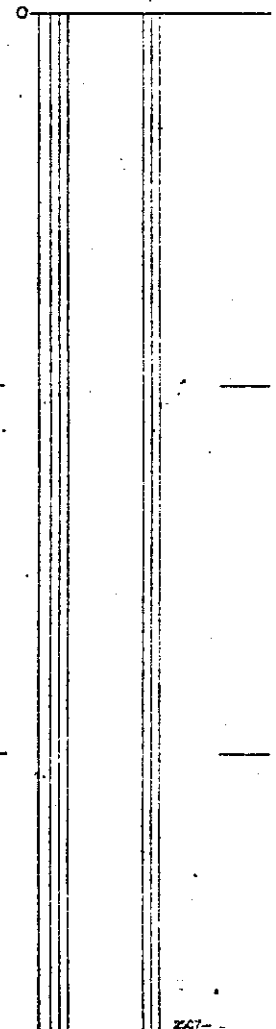
Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:				Sampled:			
Logged By: Loriann				Date: August 20/79			
Block:				Composites:			
Sect.:		Place:		App. Bear:		App. Dip.:	
Length:							
CORE In Ft.		RAD. LOG In. Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
						Mudstone banding occurs at 535' - 538'. (mostly broken core)	
						Bedding is 73 deg to core axis. Cross bedding occurring at 544' from 73 deg to 40 deg to core axis.	
550	551.5					Coal: Very dull, probably contains alot of mudstone. Fairly hard. Bedding is 77 deg to core axis.	
551.5	561					Mudstone: fairly large grain size, very dark in color. Bedding is 70 deg to core axis. Fractures are clean. Some calcite banding occurs at 554'.	
561	568					Sandstone: Medium grey in color, small grain size. Bedding is 68 deg to core axis. Fractures at 562' are calcite filled, and at 566' they become carbonaceous infilled. Some gouge marks at 567'.	
568	601					Mudstone: Very dark in color, medium grain size. Carbonaceous infilling in fractures. Bedding is 77 deg to core axis. Carbonaceous bands appear throughout the core between 570 - 576'. Fractures are clean after 576', some slippage at 582'. Bedding changes at 588' to 61 deg to core axis. Fractures show slicken slides. A band of siltstone occurs at 591.5' - 592'. Some calcite appears through this section. Fractures after 592' have slicken slides. At 598' fractures begin to have carbonaceous infilling.	
601	624.5	600	618	183	188.5	Coal: Very shiny. Some mudstone at 606'. Bedding is 60 deg to core axis. Fractures are clean. The coal becomes very soft after 607'. Some mudstone again at 622'. 5.5m 18' SEAM - 9?	
		622	624	189.5	190	Coal 0.6m 2'	
624.5	635					Mudstone: Very dark black in color. Large grained. Contains alot of calcite in fractures and also through the core.	

49 Scale
Color Plot & Dips
Core Casts & Aver.



Core Size

Hole No. DDH. 1570

Page 8 of 18

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

Logged By: Loriann Date: August 20/79 Composites: _____

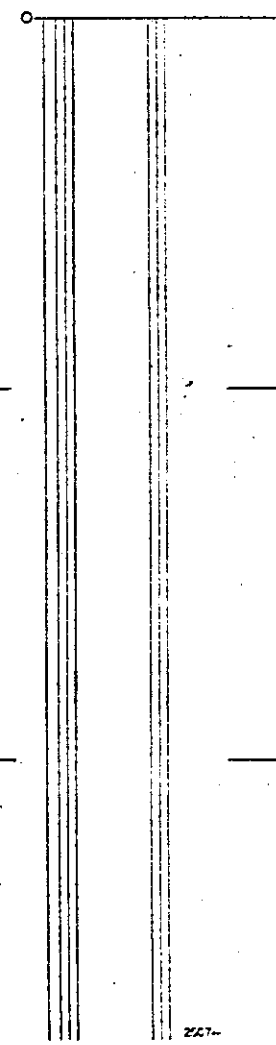
Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.		RAD. LOG In Ft.		In meters		Description
From	To	From	To	From	To	
						The bedding is 89 deg to core axis. Fractures also contain slicken slides. Core becomes very soft at 631'. A lot of broken core occurs.
635	637					Coal/Mudstone: Very dull, very soft. Completely broken core (No Bedding Taken).
637	641					Mudstone: Very dark, medium grain size. Fractures contain slicken slides, also small amounts of calcite. Calcite also running through the core. Bedding is 79 deg to core axis.
641	661.5	648	661	197.5	201.5	Coal: Very shiny and soft. Core is completely broken up. (NO BEDDING TAKEN) 4(3.7)m 13(12)'
661.5	682					Siltstone; Medium grey in color. Small grain size. Bedding is 74 deg to core axis. Fractures contain slicken slides and small deposits of calcite. Mudstone band occurs at 671' approx 6" long. Some carbonaceous banding at 670' very small amount. Bedding changes to 63 deg to core axis at 679.5'. Fractures contain slicken slides.
682	696					Mudstone: Medium grey/black in color. Medium grained. Fractures contain slicken slides. Also at 687' they have carbonaceous infilling. Bedding is 74 deg to core axis. Bedding changes at 692' to 44 deg to core axis. Some siltstone banding occurs here also. A lot of calcite is also found here. Bands of calcite run through the core.

Core Size _____
Hole No. DDH. _____ Page 9 of 18

40' Scale
Color Plot & Dips _____ Ore Classes & Aver. _____



Diamond Drill Geological Log

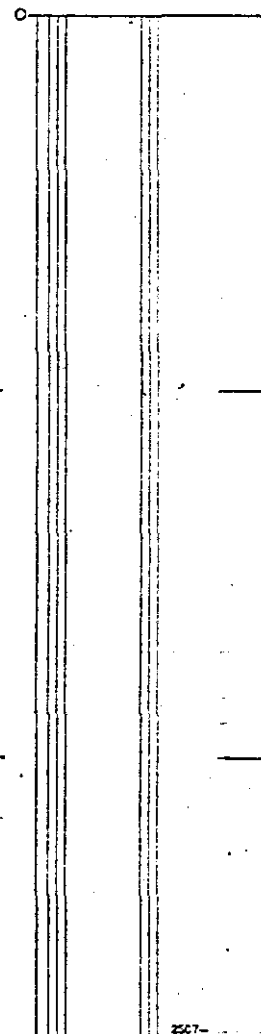


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann Date: August 21/79 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips Ore Grades & A-ver.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
696	701.5						Sandstone: Light grey in color, medium grain size. A lot of calcite is found in the core. Fractures are also calcite filled. Bedding is 71 deg to core axi. some gauge marks are found at 698.5'. They are filled with calcite.
701.5	711						Mudstone: Medium gray / black in color, small grain size. Some calcite in fractures., some slicken slides. Carbonaceous infilling in fractures at 705' - 708'. The bedding is 77 deg to core axis. The mudstone is quite hard.
711	716						Mudstone/Siltstone: The mudstone is dark. Small grained. The siltstone is medium color, small grain size. Calcite bands appear throughout the core. Bedding is 85 deg at 711, and changes to 64 deg at 714'. Calcite fills the fractures.
716	724						Mudstone: Medium grey/ black in color, large grain size. Fractures contain carbonaceous infilling. The bedding here is 78 deg to core axis. The mudstone is quite soft. Carbonaceous bands also appear in the core. These vary for 1/2 - 3/4" wide. Broken core appears from 723' - 724'. The pieces contain signs of carbonaceous infilling.
724	735						Sandstone: Medium grey in color, small grained. Bedding is 53 deg to core axis. Fractures are clean, with signs of slight slippage. Some carbonaceous banding occurs at 731 - 733'. Fracture at 734' have slicken slide.



Core Size
 Hole No. DDH. 1570 Page 10 of 18

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

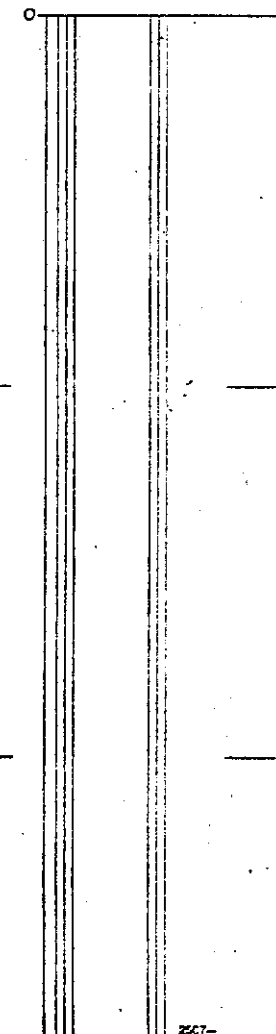
Logged By: Loriann Date: August 21/79 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
DIRECTIONAL SURVEY DONE YES NO

CORE In Ft.	RAD. LOG In Ft.	In meters	
From To	From To	From To	
735	751		Mudstone: Medium grey/black in color, medium grain size. Very hard mudstone, fractures are clean. Bedding is 85 deg to core axis. Some slicken slides at 444.5'. The mudstone becomes very soft 447' - 451'. Fractures are clean. Bedding remains the same.
751	761		Siltstone - Light grey in color. Medium grain size. A lot of carbonaceous banding occurs throughout the core. Fractures contain carbonaceous infilling. Bedding is 75 deg to core axis. Calcite infilling also occurs at 760'. Calcite bands run through the core.
761	782		Mudstone: Medium grey/black. Medium grain size. Some siltstone banding at 762'. Fractures have carbonaceous infilling. There are also calcite stringers running through the core at 764.5'. Bedding is 71 deg to core axis.
782	798		Siltstone: Medium dark grey in color. Grain size is large. Bands of mudstone run through the core at 787 - 789'. The mudstone bands are quite a bit softer than the siltstone. The fractures at 786' have carbonaceous infilling, but at 791' the fractures contain calcite. Cross bedding occurs at 786' with one angle at 60 deg and one at 79 deg to the core axis. Evidence of slippage is evident in the fractures at 793'.

40 Scale
Color Plot & Dips Ore Classes & Ave.



Core Size

Hole No. DDH. 1570

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Diameter Drill Geological Log



FORDING RIVER
OF MOUNTAINS

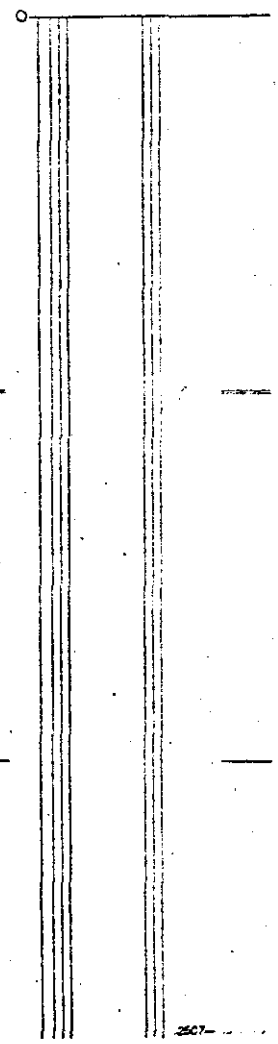
49 Scale

Color Plot & Dips Ore Classes & Aver.

Objective: _____ Sampled: _____
 Logged By: **Loriann** Date: **August 21, 1979** Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
789	816						Sandstone/Mudstone: Sandstone is dark in color, large grain size, the mudstone is dark black/grey in color, small grain size. The mudstone is quite a bit softer than the sandstone. The fractures almost always occur at a mudstone band. The fractures contain slicken slides. The bedding is 90° to the core axis, but changes at 803' to 60° to core axis. Quite a lot of calcite is contained in the core. The fractures at 805-808' contain calcite infilling. Some gouges are evident at 812'. They are calcite filled.
816	828						Mudstone: Very dark grey/black color. Grain size is small. Fractures have slicken slides. Bedding is 74° to core axis. Some siltstone banding occurring at 822-826'. The bands are light in color, and quite hard. Some carbonaceous bands some 1/8th" wide occur at 824'.
828	855						Sandstone: Medium grey in color. Grain size is large. Fractures are clean. The bedding is 85° to core axis. Some bands of calcite appear throughout the core. Some slicken slides beginning at 847'. Core is quite consistent. Bedding remains the same throughout the length of core.
855	861	853.5	859.5	260.1	262		Coal: Very dull, lacks lustre. Core is completely broken. Very soft coal. (NO BEDDING TAKEN) 1.9 m 6' SEAM - 7
861	871						Mudstone: Very dark grey/black in color. Carbonaceous infillings in fractures. Some calcite in core at 864'. Bedding is 86° to core axis. (Medium grain)
871	886	868	885.5	264.6	270		Coal: Quite dull, lacks lustre. Very hard sections. Bedding is 84° to core axis. Some mudstone banding at 877'. Coal begins to get softer at 878.5'. From here on, completely broken



Core Size _____
 Hole No. DDH. 1570 Page 12 of 18

Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

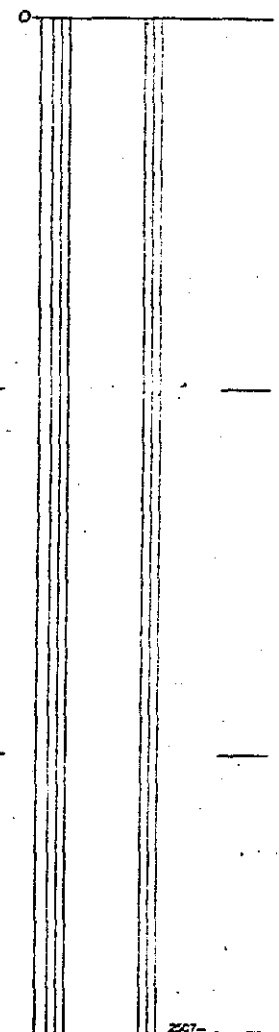
Objective: _____ Sampled: _____
 Logged By: Loriann Date: August 21, 1979 Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 DIRECTIONAL SURVEY DONE YES NO

CORE in Ft.		RAD. LOG in Ft.		In meters		Description
From	To	From	To	From	To	
						core. Partings of 0.6, 0.3 & 0.3 at 265.5, 267 and 269 m respectively. 5.4(4.2)m 17.5(13.5)' SEAM - 7
886	896					Mudstone: Medium grey/black in color. Medium grained. The mudstone is quite hard. Some calcite running through the core at 890'. The fractures are clean. Bedding is 89° to core axis.
896	911	894.5	907.5	272.7	276.7	Coal: Very shiny. High lustre. Quite soft in places. Some mudstone at 910'. Iron oxides found in fractures at 910'. Bedding is 81° to core axis. 0.3m parting at 273.3m 4(3.7)m 13(12)' SEAM - 7
911	915					Mudstone: Very dark grey/black in color. Fractures show slicken slides. Core is quite consistent, quite hard for mudstone. Some carbonaceous infilling at 914'. Bedding is 87° to core axis.
915	926					Siltstone: Very light grey in color. Medium grained. A lot of calcite in the fractures, also calcite banding in the core. Bedding is 56° to core axis. Slicken slides found in fractures at 920'.
926	946					Sandstone: Medium/dark grey in color. Large grained. Bedding is 44° to core axis at 927'. Bands of mudstone appear in the core at 930'. Fractures have calcite and slicken slides in them. Bedding changes to 84° to 88° at 93.1. Cross bedding occurs at 936'. Fractures begin to have carbonaceous infilling. Carbonaceous banding also occurs at 939' - 941'. Bedding again changes to 78° at 940'.
946	954.5					Mudstone: Medium grey/black in color. Small grained. Siltstone band at 947.5'. Bedding is 69° to core axis. Fractures are clean.

40 Scale
Color Plot & Dips Core Classes & Ave.



Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____

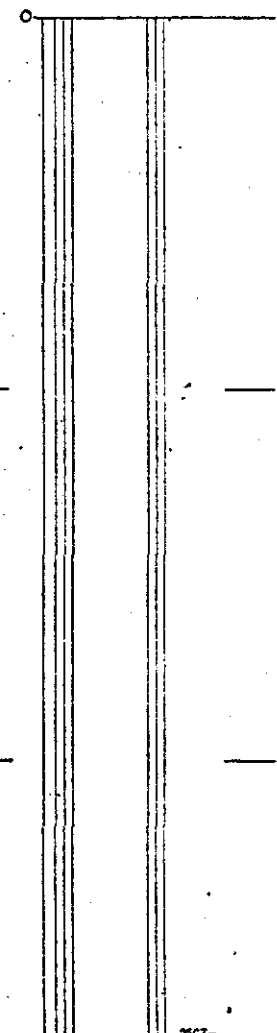
Logged By: Loriam Date: August 22, 1979 Composites: _____

Block: _____ Sect: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft. RAD. LOG In Ft. In meters COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG YES NO
 From To From To From To DIRECTIONAL SURVEY DONE YES NO

CORE In Ft. From	CORE In Ft. To	RAD. LOG In Ft. From	RAD. LOG In Ft. To	In meters From	In meters To	Description
954.5	963	954	957	290.8	291.8	Coal: Low lustre. Quite hard. Looks to contain quite a lot of mudstone. Bedding is 70° to core axis.
693	977					Mudstone: Medium grey/black in color. Grain size is small. Siltstone band at 966'. Bedding is 77° to core axis. Fractures have carbonaceous infilling in fractures. Slicken slides in fractures through the siltstone. Calcite in fractures at 971'. Also calcite bands running through the core. The mudstone becomes softer at 967'. Also a lot of carbonaceous infilling on the core.
977	1020					Siltstone: Medium grey in color. Grain size is also medium. A lot of banding occurs in the core. Bedding is 81° to core axis. A lot of calcite and slicken slides found in fractures. Bedding changes at 989' to 64° to core axis. Carbonaceous infilling occurs in the fractures beginning at 1004'. Calcite bands also appear in the core.
1020	1030					Mudstone: Dark grey/black in color. Grain size is large. Fractures are clean. The bedding is 78° to core axis.
1030	1046	1034.5	1044.5	315.4	318.4	Coal: Very dull, lacks lustre. The coal is quite hard, contains a lot of mudstone at 1033-1035'. 3m 10' SEAM - 5u? Coal from here on is soft, highly fractured (no bedding taken). Mudstone band at 1035-1036' Bedding is 81° to core axis.
1046	1075					Mudstone: Very dark, large grain size. Quite soft. Carbonaceous infilling in fractures. Coal bands appear in the core. Bedding is 80° to core axis. A lot of coal found in the core. (SAMPLE TAKEN)
1075	1076					Coal: Very shiny, very soft - completely broken.

40 Scale
Color Plot & Dips Ore Classes & Aver.



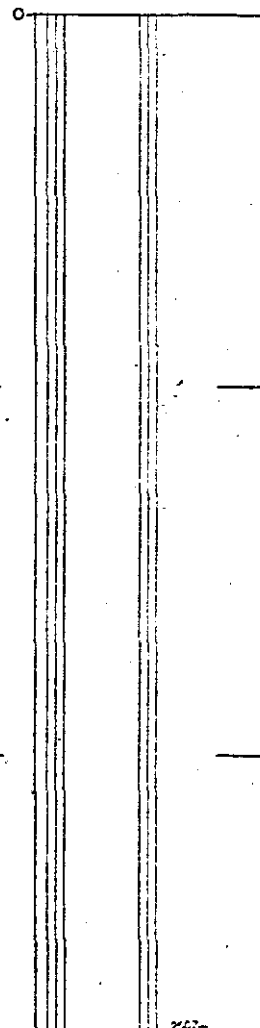
Diamond Drill Geological Log



FORDING RIVER
OPERATIONS

Objective:				Sampled:			
Logged By: Loriann				Date: August 22, 1979			
Sect.:				Place:			
App. Bear:		App. Dip.:		Length:		Composites:	
CORE In Ft.		RAD. LOG In Ft.		in meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
1076	1099					Siltstone: Medium/dark grey in color. Grain size is small. Bedding is 74° to core axis. Calcite bands appear in fractures. Also calcite bands in the core itself. Some slicken slides in fractures at 1088'. Bedding changes at 1089 to 83° to core axis. Mudstone bands occurring at 1089-1094'. The bands are approximately 1" wide to 3" wide. Carbonaceous infilling becoming more prominent towards the 1096' mark.	
1099	1126					Mudstone: Very dark in color, grain size is medium. The bedding is 52° to core axis, and the fractures at the 1099-1103' run parallel to the bedding. All the fractures are clean. Some calcite banding occurs at 1107'. These bands are approximately 1/2" wide. Bedding changes at 1116' to 77° to core axis. The fractures here are all clean. Slicken slides evident in fractures beginning at 1121'. Also some broken core here. Some calcite running through the core at 1124'.	
1126	1137					Siltstone: Dark grey in color. Medium grain size. Fractures are clean. Bedding is 88° to core axis. Very hard.	
1137	1147					Mudstone: Very dark in color. Grain size is small. Fractures are clean. Bedding is 84° to core axis. Core becomes very soft and broken at 1146'. There is slicken slides in the fractures here. Also core is highly fractured.	
1147	1160					Siltstone: Medium/light grey in color. Medium grained. Fractures are clean. Bedding is 80° to core axis. Some carbonaceous infilling in fractures at 1156'. Some calcite banding in the core. Signs of iron oxides found in core at 1157'. These are found in the fractures.	

40 Scale
Color Plot & Dips
Ore Classes & Aver.



Diamond Drill Geological Log

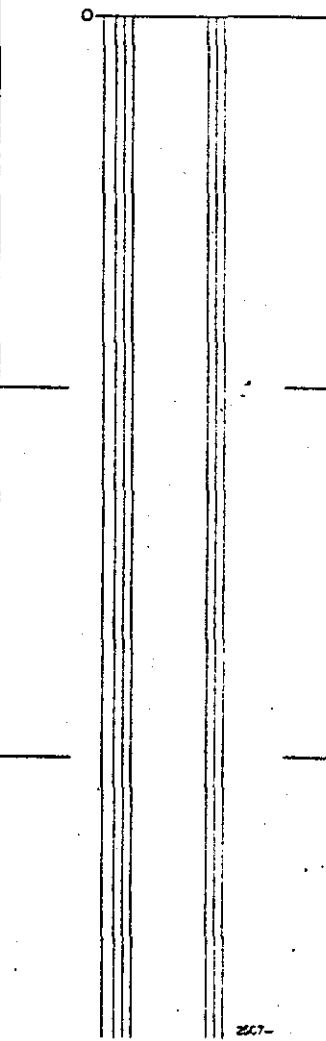


FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: **Loriann** Date: **August 22, 1979** Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

Color Plot & Dips _____ Ore Classes & Aver. _____
 40 Scale _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	DIRECTIONAL SURVEY DONE <input type="checkbox"/> YES <input type="checkbox"/> NO
From	To	From	To	From	To		
1160	1162						Coal: Lacks lustre, highly fractured. Looks to contain a lot of mudstone.
1162	1166						Mudstone: Very dark grey/black in color. Large grain size. Fractures contain carbonaceous infilling. Bedding is 87° to core axis.
1166	1177						Siltstone: Dark grey in color. Grain size is small. Fractures at 1166' have carbonaceous infilling. Towards 1177' slicken slides appear in the fractures. Bedding is 53° to core axis.
1177	1178						Coal: Very dull and very soft. Highly fractured. Some mudstone interbedded at 1178'. Bedding is 73° to core axis.
1178	1190						Mudstone: Very dark grey/black in color. Grain size is medium. The mudstone is quite soft. Carbonaceous infilling appears in the fractures. Some bands of coal appear throughout the core. The coal is very shiny but very soft. Bedding is 49° to core axis. Fractures at 1186' contain slicken slides.
1190	1195						Siltstone: Medium grey in color. Medium grain size. Contains alot of calcite in fractures and also in bands throughout the core. Bedding is 62° to core axis.
1195	1220						Mudstone: Dark grey/black in color. Grain size is small. Fractures are clean till 1199' and then are filled with carbonaceous infilled. Bedding is 80° to core axis. Bands of soft coal appear at 1213'.
1220	1240	1221.5	1236.5	372.4	377		Coal: Very shiny, high lustre. Very soft. Highly fractured. (NO BEDDING TAKEN). Some interbedded mudstone at 1230'. 4.6m 15' SEAM - 5 L ?
1240	1245						Mudstone: Medium grey/black in color. Grain size is small. Fractures contain slicken slides. Bedding is 89° to core axis. Some calcite at 1245' in fracture.



Diamond Drill Geological Log

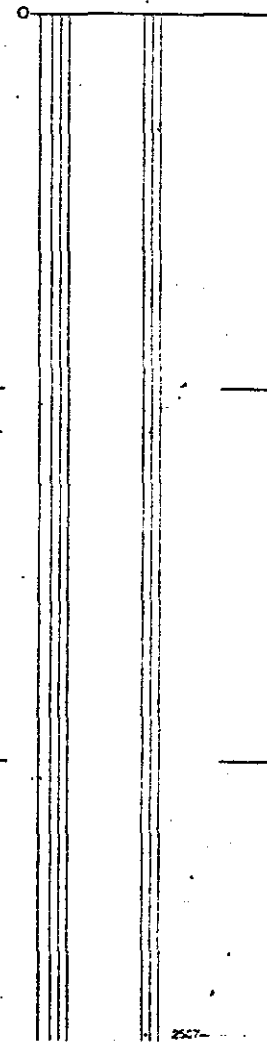


FORDING RIVER
OPERATIONS

Objective: _____ Sampled: _____
 Logged By: Loriann Date: August 23, 1979 Composites: _____
 Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

40 Scale
 Color Plot & Dips
 Ore Classes & Ave.

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
1246	1286						Siltstone: Dark grey in color. Grain size is medium. Mudstone interbedded at 1248.5' Bedding is 90° to core axis. Fractures contain carbonaceous infilling. Cross-bedding occurs at 1248'. Angles at 90° and 73° to core axis. Some carbonaceous banding at 1255'. Fractures here are clean. Carbonaceous infilling becomes evident again at 1280'. Some slicken slides found in fractures at 1275-1280'.
1286	1318.5						Sandstone: Light grey in color. Large grained. Carbonaceous infillings found in fractures at 1286'. Bedding is 85° to core axis. It changes at 1307' to 62° to core axis. Fractures at 1312' contain small amounts of calcite and iron oxides. Carbonaceous bands run through the core at 1316'.
1318.5	1319.5	1317	1319	401.5	402		Coal: Very light in color. Very hard. Bedding is 71° to core axis. Looks to be all mudstone. 0.5 m 2'
1319.5	1336						Mudstone: Very dark in color. Grain size is large. Slicken slides found in fractures. Core is quite soft at 1326'. Fractures orient along the bedding. Bedding is 79° to core axis.
1336	1353						Siltstone: Medium grey in color. Grain size is also medium. Fractures show slicken slides at 1336', and have calcite beginning at 1340'. Bedding is 80° to core axis. Calcite is quite evident in fractures at 1348-1353'.
1353	1372						Sandstone: Light grey in color. Large grain size. Fractures have signs of slicken slides. Bedding is 70° to core axis. Cross bedding occurs at 1367' with angles of 70° and 42° to core axis. There is a lot of calcite in the core at 1356'. Calcite fills the fractures and also bands of calcite approx. 1/2" wide appear on the core.



Diamond Drill Geological Log



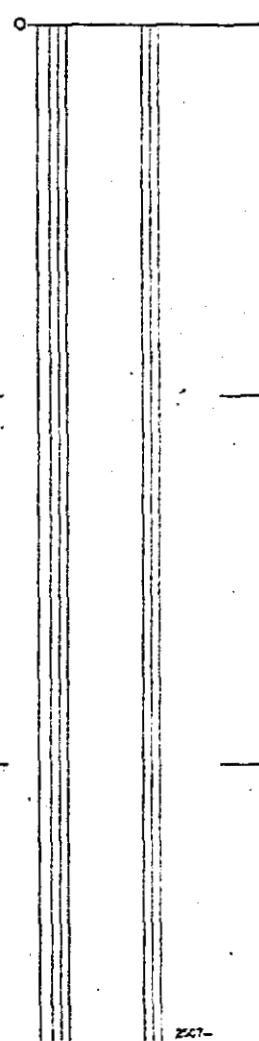
FORDING RIVER OPERATIONS

Objective: _____ Sampled: _____
 Logged By: **Loriam** Date: **August 23, 1979** Composites: _____

Block: _____ Sect.: _____ Place: _____ App. Bear: _____ App. Dip.: _____ Length: _____

CORE In Ft.		RAD. LOG In Ft.		In meters		COAL INTERSECTIONS CORRECTED BY GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
From	To	From	To	From	To	DIRECTIONAL SURVEY DONE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
1372	1377						Mudstone: Dark grey/black in color. Small grain size. Quite hard. Bedding is 81° to core axis. Fractures show signs of slippage.
1377	1382	1379	1386	420.4	422.6		Mudstone: With three bands of coal (0.5m, 0.3m and 0.4m respectively) Coal: High lustre. Highly fractured. The coal is quite soft. Some mudstone at 1377'. Bedding here is 76° to core axis.
1382	1383.5						Mudstone: Medium grey/black in color. Grain size is small. Fractures contain carbonaceous infilling. Bedding is 90° to core axis.
		1388	1393	423.1	424.7		Coal: 1.6 m 5'
13835	1401						Coal: Highly lustre. The coal is quite hard. Bedding is 86° to core axis. Some calcite found in small bands at 1401'.
1401	1406						Mudstone: Dark grey/black in color. Fractures are clean. Bedding is 77° to core axis.
1406	1445						Siltstone: Dark grey in color. Medium grain size. Fractures contain some iron oxides. Mostly the fractures are clean. The bedding at 1406' is 71° to core axis. It changes at 1426' to 90° to core axis. Some calcite found in fractures at 1430'. Also some gouges in core which have been infilled with calcite.
1445	1460	1458		444.3			Sandstone: Medium grey in color. Grain size is medium. Bedding is 87° to core axis. Fractures contain calcite also slicken slides. Broken core occurs at 1441 - 1443' with calcite on broken core pieces. Quite a lot of calcite on core at 1460'.
							End of hole.

40 Scale
Color Plot & Dips Ore Classes & Ave.



Core Size
Hole No. DDH. 1570 Page 18 of 18

Rotary Drill Geological Log



FORDING RIVER OPERATIONS

Objective: _____

Logged By: RR Date: Sept 179

Book: _____ Sect.: _____ Place: Eagle Mt. - Blackwood Pir App. Bear: _____ App. Dip.: _____ Length: _____

LATITUDE: 148 112.7 DEPARTURE: 25 629.6 ELEVATION: 1793.1

Ore Classes & Aver. 0.0

From Ft.	To Ft.	From m.	To m.	INTERSECTIONS TAKEN FROM GAMMA RAY - NEUTRON LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO				TOP OF SEAM	ELEVATION	TTL. TH.	NET TH.
0	2	0	0.6	Overburden							
		0.6	6.6	Sandstone							
		6.6	11.5	Silty sandstone and siltstone							
		11.5	13	Mudstone							
42.5	89.5	13	27.3	Coal	14.3	47'	seam - 4	faulted	4	1780.1	14.3
		27.3	34.3	Mudstone, coal stringers at 29 m							
112.5	120.8	34.3	36.7	Coal	2.4 m	8'	seam - 3		3	1758.8	2.4
		36.7	39	Mudstone							
		39	48.6	Siltstone							
159.5	169.5	48.6	51.6	Coal	3 m	10'	seam - 2		2	1744.5	3
		51.6	53.1	1.5 m / 5' mudstone							
174	180	53.1	54.9	Coal	1.8 m	6'	seam - 1		1	1740	1.8
	199	54.9	60.7	Basal sandstone							
				End of hole				August 13, 1979			

Hole No. RH 1590

Page 1 of 1

Entered BJC

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
				7				CASING / OVERBURDEN											
25				4 Y J1 J1 J3	F F F C	55 85 20 10	155	Repeated three more times Repeated once more											
31			2%	J2 B1 J3 J1 B1 J1	C F F F F F	45 85 10 50 45 90	170 180 170	CALCITE DEPOSITS ALSO REPEATED ONCE MORE											
36			5%	J1 J1 B1 J1	F F F F	25 5 10 5	180	REPEATED FOUR TIMES REPEATED TWICE MORE											
41			2%	J1 B1 B1 J1	F F W F	35 55 85 45	160	REPEATED ONCE											

LOGGED BY: LL
DATE: JUNE 11/79



GEOTECHNICAL LOG

HOLE No. 280

SHEET 1 OF 10

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
46				B4	F	60	150		○○○○	✂										
		0%		B1	C	85	180	REPEATED ONCE TWICE MORE	○○○○											
51		0%		J1	F	20	65	REPEATED THREE MORE TIMES	○○○○											
				J1	F	10			○○○○											
56		20%						NO FRACTURES IN THIS CORE SECTION	○○○○											
61		0%		B1	C	65	180		○○○○											
				J1	F	15	180		○○○○											
				B4	F	70			○○○○											
				J4	F	25		REPEATED ONCE	○○○○											
				J1	F	10		REPEATED FOUR MORE TIMES	○○○○											
66		0%		B3	C	80	80		○○○○											
				J1	F	30	265		○○○○											

LOGGED BY: LL
DATE: JUNE 1/79



GEOTECHNICAL LOG

HOLE No. DDH 280
SHEET 2 OF 16

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
70	0%			B1	C	90	180												
75	0%			B1	W	90	175												
80	2%			J1	W	35		CALCITE INFILLED											
				J4	W	75	180												
				B1	C	85	135												
85	2%			J1	F	32	250												
				B2	C	80													
				J1	F	22	65												
90	0%			B2	F	65		REPEATED ONCE, SEPARATED BY J4											
				B4	F	85													
				J4	C	18													
				J4	C	10													
				J1	W	12	115	REPEATED TWICE											
				J2	C	16													
				J3	C	12													
				J4	F	10	190												
				J4	F	36													
				B4	F	85		BROKEN CORE - IRON INFILLED											

LOGGED BY: KH. L.L.
DATE: _____



GEOTECHNICAL LOG

HOLE No. _____

SHEET 3 OF 16

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
95		2%		J4 B1 B2 J1 B4 B2	C C C W C C	20 85 85 28 80 70	235 85 85 280 80	ANGULAR	0 0 0 0 0 0										
100		9%		A1	F	80			0 0 0 0 0 0										
				J1 J2 B1 B2 J4 J1 J1 J4 J4	F F W W F W F F	60 80 80 75 85 79 22 15 30 15	235 255 105 280 240 280 100 280	REPEATED 3 TIMES REPEATED ONCE INTERSECT EACH OTHER	0 0 0 0 0 0 0 0 0 0										
105		0%		B1 J4 J1 J1 B4	F F F FW C	80 10 12 14 85	280 140		0 0 0 0 0 0 0 0 0										
110		3%		B1 B2 B2 J3 B2 B1 J1	F C F C C C C	80 85 85 2 85 80 55	95	REPEATED ONCE	0 0 0 0 0 0 0										
115		0%		J1 J1 J3 J2 J4	C C C C C	20 90 70 25 9 70 80 55	170 120 80 20	Rough, angular	0 1 0 0 0 0 0 0 0 0										
120		4%		J1 J2 J4 J4 J4 J4 J4	C C W W W W W	80 70 25 9 70 80 55		REPEATED ONCE	1 0 0 0 0 0 0 0 0 0										

LOGGED BY: _____
DATE: _____



GEOTECHNICAL LOG

HOLE No. 280
SHEET 4 OF 16

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT				
	25	50	75								4	3	2	75	50	25	15	10	5		
125	4%			J ₄	C	15															
126	6%			J ₃	C	4	260	REPEATED TWICE REPEATED TWICE REPEATED 4 TIMES AROUND BROKEN CORE REPEATED TWICE	[Hand-drawn log with hatched patterns]												
		B ₁	W	75																	
		J ₁	W	24	35																
		B ₁	B	80																	
131	0%			B ₁	B	80		HARD TO DETERMINE BEDDING REPEATED TWICE REPEATED ONLY REPEATED SEVERAL TIMES FROM 130'	[Hand-drawn log with hatched patterns]												
		B ₂	B	20																	
		B ₃	B	20																	
		B ₄	B	20																	
		B ₅	B	20																	
		B ₆	B	20																	
		B ₇	B	20																	
		B ₈	B	20																	
136	0%			B ₁	B	70		AFTER Breccia section REPEATED SEVERAL TIMES FROM 132-133' REPEATED SEVERAL TIMES REPEATED TWICE REPEATED SEVERAL TIMES REPEATED SEVERAL TIMES	[Hand-drawn log with hatched patterns]												
		B ₂	B	70																	
		B ₃	B	75																	
		B ₄	B	80																	
		B ₅	B	80																	
		B ₆	B	75																	
141	10%			B ₁	B	80		INTERSECT EACH OTHER REPEATED TWICE REPEATED SEVERAL TIMES REPEATED ONCE	[Hand-drawn log with hatched patterns]												
		B ₂	B	80																	
		B ₃	B	70																	
		B ₄	B	85																	

LOGGED BY: LH
DATE: June 4/79



GEOTECHNICAL LOG

HOLE No. 280

SHEET 5 OF

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
145				B ₃	B	85		REPEATED TEN TIMES											
				B ₁	C	85		REPEATED ONCE											
		0%		B ₁	F	75													
				B ₂	C	70													
				B ₃	B	85	180	REPEATED ONCE SIX TIMES											
				B ₃	C	85													
151				B ₃	F	85													
				B ₃	B	80	110												
				B ₃	C	80	290												
		4%		B ₃	C	80	140	HIGHLY ANGULAR											
				B ₃	C	80													
				B ₃	B	76													
				B ₃	C	80													
				B ₃	BW	80	10												
				B ₃	B	80													
156				B ₃	B	80													
				B ₃	C	90		} At 155 feet											
				B ₃	BS	60		REPEATED ONCE											
		6%		B ₃	B	78	90												
				B ₃	B	7	320	AROUND BRECCIATED AREA											
				B ₃	B	70													
				B ₃	B	70													
				B ₃	B	45		REPEATED TWICE											
161				B ₃	BW	80		REPEATED ONCE											
				B ₃	BW	80													
				B ₃	BW	80													
		0%		B ₃	N	80		REPEATED ONCE											
				B ₃	N	80													
				B ₃	C	80													
				B ₃	C	80													
				B ₃	C	75													
166				B ₃	BW	10	165												
				B ₃	W	65	350												
				B ₃	C	85		} Below 166 feet.											
				B ₃	C	85		Angular											
		0%		B ₃	C	70	140												
				B ₃	C	70													
				B ₃	C	80		REPEATED SEVERAL TIMES											
170				B ₃	C	80		AROUND BROKEN CORE											

LOGGED BY: LL, KH
 DATE: _____



GEOTECHNICAL LOG

HOLE No. 280

SHEET 6 OF _____

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
170		0%		J1	C	15	160	REPEATED ONCE THIS REPEATS TWICE											
			B1	C	33														
			J1	C	40	270													
			J1	C	35	150													
176		0%		B4	W	5		REPEATS FOUR TIMES REPEATS BETWEEN JT'S											
			J1	C	15	250													
			B1	C	80														
			J1	C	15	210													
			B1	SS	50														
			B1	C	45														
181		10%		B2	C	75		Repeats twice											
			B1	C	80														
			B2	C	70														
			J1	C	10	160													
			B1	C	60														
			B1	C	70														
186		0%		B1	C	90		Repeats once											
			J1	C	85														
			B1	C	60														
			J1	C	10	160													
			J1	C	10	90													
191		0%		B1	C	75													
			B1	C	78														
			B2	C	85														
195																			

LOGGED BY: L. L.
DATE: _____



GEOTECHNICAL LOG

HOLE No. 80

SHEET 7 OF _____

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
200	0%			B ₂ B ₁ J ₁ B ₁ B ₂ B ₄ B ₂	C B W B B C C	85 75 16 75 75 70 85	195	REPEATED ONCE REPEATED 4 TIMES	0 0 0 0 0 0 0										
205	0%			J ₄ L ₄ B ₁ B ₁ L ₄ B ₂ J ₂	W C B W B W C W	16 8 75 78 70 85 60	225 20	REPEATED TWICE - PARALLEL JOINTS REPEATED ONCE	0 0 0 0 0 0 0										
210	8%			B ₁ B ₁ B ₁ J ₄ B ₁	B B B W B	70 65 60 8 60	80	POLISHED BITUMEN - REPEATED ONCE REPEATED ONCE	0 0 0 0 0 0 0										
215	0%			B ₂ B ₂ B ₁ B ₁ B ₂ B ₁	B B C B B C B	52 70 60 50 60 65 70		POLISHED BITUMEN HIGHLY POLISHED BITUMEN HIGHLY POLISHED POLISHED	0 0 0 0 0 0										
220	4%			J ₁ B ₂ B ₁	B C B	16 60 65		NO BEDDING INTERSECTS J ₁	0 0 0 0										

LOGGED BY: KH
DATE: June 5/79



GEOTECHNICAL LOG

HOLE No. 280
SHEET 8 OF

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
225	8%			J ₁ J ₂ B ₁ B ₁ B ₂	B B B W B W C	60 35 8 75 65 60 80		Poor bedding HIGHLY POLISHED } INTERSECT EACH OTHER HIGHLY POLISHED } POLISHED BITUMEN-REPEATED TWICE REPEATED ONCE											
230	0%			B ₁ B ₂ J ₃	B B C	70 70 40	160												
235	0%			B ₄ B ₁ B ₁ B ₂ B ₁ B ₁	C B B B B B	60 70 78 70 55 55 60		← POLISHED BITUMEN ← POLISHED "											
240	4%			B ₁ J ₄ B ₂ J ₄ B ₁ B ₂ B ₂ J ₁	B F B B B B B B	65 50 60 10 55 75 70 58	190 260 310	← ONLY 1 CM LONG - INTERSECT B ₁ FROM ABOVE REPEATED TWICE POLISHED BITUMEN HIGHLY POLISHED BITUMEN AT 240 FEET.											
	0%			J ₄ B ₁ B ₂ B ₂ B ₄	B, W B B B B	45 80 70 65 70 58	50	THICK COAL INFILLING											

LOGGED BY: KH
DATE: June 5/79



GEOTECHNICAL LOG

HOLE No. 280

SHEET 9 OF

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
				J ₁ B	B	60	35												
				J ₂ B	B	70	55												
				J ₂ B	B	75													
				J ₂ B	B	90													
		0%		J ₂ C	C	30	190												
				B ₁ C	C	60													
				B ₁ C	C	70													
				J ₂ C	C	80													
250				J ₂ W	W	4	190												
				B ₁ C	C	55													
				J ₂ W	W	60	220												
		6%		B ₁ B	B	60		POLISHED BITUMEN											
255				J ₂ B	B	68													
				B ₂ B	B	65													
				B ₁ SS	SS	60													
				B ₁ B	B	55													
		3%		J ₂ B	B	55	260												
				J ₂ B	B	60	60												
260				J ₂ B	B	25	60												
				B ₁ B	B	65													
				J ₂ B	B	40		"Notch" in core.											
265		5%		J ₁ B	B	40													
				B ₁ B	B	75													
				B ₂ C	C	75													
				B ₂ C	C	80													
		0%		B ₁ W	W	70													
				J ₂ W	W	4	90												
				B ₂ C	C	70													

LOGGED BY: KH
DATE: June 5/79



GEOTECHNICAL LOG

HOLE No. 280

SHEET 10 OF

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
	0%																		
275	0%			B ₂ B ₁ J ₄ B ₄ B ₃ B ₁	C C W C SS C	95 88 4 85 65 12	190												
280	0%			B ₂ B ₃ B ₃ B ₁ B ₃ B ₃ B ₃ B ₃ B ₃	C C C B C B C C C	85 70 70 60 65 70 60 83 85		REPEATED ONCE REPEATED ONCE LOOSE COAL											
285	0%			B ₂ B ₂ B ₂ B ₁ B ₂ B ₁ D ₁	B B W B C C	85 80 80 85 80 78		HIGHLY ANGULAR											
290	0%			B ₂ B ₁ J ₄ J ₄ B ₁	C C W B B	72 78 90 10 30 80	200	REPEATED ONCE DISCONTINUED JOINT DUE TO B REAKED BROKEN CORE											
	0%			B ₂ B ₁ B ₁ B ₂ J ₄ J ₄	C C C C W W	70 70 75 88 2 4 6	190 190												

LOGGED BY: KH
DATE: June 5-6/79



GEOTECHNICAL LOG

HOLE No. 280

SHEET 11 OF

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
300	0%			B ₂	C	80	70													
				B ₁	C	80														
				B ₁	B	75														
				B ₂	C	80														
				J ₄	B	8	160													
				J ₄	C	10	90													
305	0%			J ₄	C	3														
				B ₁	B	80														
				B ₂	B	75														
				J ₂	N	45	20													
				B ₂	B	65														
				B ₂	N	70														
310	2%			B ₄	B	80														
				B ₂	C	65														
				B ₃	C	50	30													
				B ₃	C	70														
				B ₂	B	75														
315	0%			J ₄	B	50														
				J ₃	C	5														
				J ₄	B	25														
				J ₄	C	2														
				B ₂	C	50														
				J ₄	B	10														
315				B ₂	B	85		← HIGHLY FRACTURED FROM 314-315 REPEATED SEVERAL TIMES												
				B ₄	B	50														
				B ₂	B	80														
315	2%			J ₄	C	35		REPEATED THREE TIMES REPEATED ONCE REPEATED TWENTY TIMES FROM 318-321 feet												
				B ₂	C	70														
				B ₁	C	80														
				B ₂	C	80														
				B ₂	B	70														

LOGGED BY: KH
DATE: June 6-7/79



GEOTECHNICAL LOG

HOLE No. 280
SHEET 12 OF

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
				U	B	55													
	0%			B ₁	B	80	180	REPEATED TWICE											
				B ₂	B	50													
				B ₃	B	80													
				B ₄	B	10	255												
				B ₁	B	80													
325				B ₂	B	50													
				B ₃	B	30													
	0%			B ₄	B	45		REPEATED 4 TIMES											
				B ₁	B	2													
				B ₂	B	80													
				B ₃	B	25													
				B ₄	B	80													
330				B ₁	B	60	60	REPEATED 8 TIMES FROM 326-330											
				B ₂	B	40		REPEATED ONCE											
				B ₃	B	80		REPEATED ONCE											
	0%			B ₄	B	4		REPEATED ONCE											
				B ₁	B	80													
				B ₂	B	80													
				B ₃	B	80													
				B ₄	B	80													
335				B ₁	B	10	340	REPEATED ONCE											
				B ₂	B	10		REPEATED TWICE											
				B ₃	B	80													
	8%			B ₄	B	10													
				B ₁	B	80		REPEATED ONCE											
				B ₂	B	80		REPEATED TWICE											
				B ₃	B	70													
				B ₄	B	90													
				B ₁	B	35													
				B ₂	B	80													
340				B ₃	B	10	255												
				B ₄	B	80													
				B ₁	B	70													
	10%			B ₂	B	10	270	INTERSECT EACH OTHER											
				B ₃	B	10													
				B ₄	B	10													
				B ₁	B	20													
				B ₂	B	55	190												
				B ₃	B	20													
				B ₄	B	80		REPEATED TWICE											

LOGGED BY: _____
DATE: _____



GEOTECHNICAL LOG

HOLE No. 280
SHEET 13 OF _____

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
350	5%			B ₄ B ₃ B ₂ B ₄ B ₃ B ₁ B ₁	G D D G G G B	20 25 80 70 80 80 85		REPEATED 4 TIMES												
355	0%			J ₁ J ₁ B ₂ B ₁ J ₂ B ₂	B B B G B B	55 30 88 80 70 80	330													
360	0%			B ₄ J ₄ J ₄ B ₂ B ₂ B ₂ 3 ₂	B B B B C B C	70 60 20 86 75 75 70		REPEATED ONCE												
365	0%			3 ₁ B ₁	C C	85 85		REPEATED 13 TIMES												
365	0%			B ₂	C	80		REPEATED 8 TIMES												
	0%			B ₂	C	80		REPEATED TEN TIMES												

SHOULD HAVE HARDNESS OF 2

LOGGED BY: KH
DATE: June 7/79



GEOTECHNICAL LOG

HOLE No. 280
SHEET 14 OF 16

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
			0%																	
375			2%	B ₃ B ₂ B ₁	B C C	80 80 70 90		REPEATED NINE TIMES TO 373 feet POLISHED BITUMEN												
380			2%	B ₁ B ₂ B ₃ B ₄	B W B C	80 20 80 80		POLISHED BITUMEN - SEPERATING SST AND SRTSTONE REPEATED TWICE												
385			0%	B ₁ B ₂ B ₃ B ₄ B ₅ B ₆ B ₇ B ₈ B ₉ B ₁₀	B B B B B W B B W	70 80 75 70 80 10 80 40 0 0	120 100	{ POLISHED BITUMEN REPEATED THREE TIMES REPEATED ONCE												
390			0%	J ₄ B ₃ B ₂ J ₁ B ₁ B ₂	W B B W C C	10 85 75 10 70 90	90 200	REPEATED SEVERAL TIMES ACROSS CORE - Lengths of .5 - 1 feet long												
			0%	B ₂ B ₃ B ₄ B ₅ B ₆ B ₇ B ₈	L C B C B C	70 80 85 80 80 80		ANGULAR - REPEATED once 3 TIMES												

LOGGED BY: KH
DATE: June 8/79



GEOTECHNICAL LOG

HOLE No. 280

SHEET 15 OF 16

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
400	0%			B ₁	SS	70	240 270	REPEATED SEVERAL TIMES FROM 401.5 - 401.8 ANGULAR - REPEATED SIX TIMES ABOUT 18 inches long	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		/	/	/	/	/	/	/		
				B ₁	C	80													
				B ₂	B	70													
				J ₄	W	10													
				J ₄	FW	8													
405	5%			J ₂	B	50	150 170	REPEATED FOUR TIMES POLISHED BITUMINOUS	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		/	/	/	/	/	/	/		
				J ₃	C	8													
				J ₃	B, F	70													
				B ₂	C	50													
				B ₁	B	70													
410							End of Core												
415																			

LOGGED BY: KH
DATE: June 8/79



GEOTECHNICAL LOG

HOLE No. 280

SHEET 16 OF 16



GEOTECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Pipes	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION												
25	B2	55	000	F				4000	460	05				SST	CASING TO 25'
	J1	85	999	F											
	J1	20	999	F											
	J3	10	999	C											
31	J2	45	999	C				2002	475	02				SST	
	B1	85	000	F											
	J3	10	180	F											
	J1	50	999	F											
	B1	45	000	F											
	J1	90	000	F											
36	J1	25	000	F				0054	2512					SST	
	J1	05	000	F											
	B1	40	000	F											
	J1	05	009	F											
41	J1	35	160	F				0024	7505					SST	
	B1	55	000	F											
	B1	85	000	W											
	J1	45	999	F											
	B4	60	000	F											
46	B1	85	000	C				3000	4850	01				SST	
51	J1	20	065	F				4000	4900	02				SST	
	J1	10	099	F											
56								0004	9900					SST	
61	B1	65	000	C				0004	5505					SST	
	J1	15	150	F											
	B4	70	000	F											
	J4	25	999	F											
	J1	10	999	F											
66	B3	80	000	C				0004	6502					SST	
	J1	30	265	F											
71	B1	90	000	C				2000	4750	03				SST	
74	B2														
76	J1	35	999	W				0024	9901					SST	
	J4	75	180	C											
	B1	85	000	C											
81	J1	32	250	F				0024	9903					SST	
	B2	80	000	C											
	J1	22	065	F											
86	B2	65	000	F				0004	8501					SST	
	B4	85	000	F											
	J4	18	999	C											
	J4	10	999	C											
	J1	12	115	W											

DATE Jul 1/79
 LOGGED BY L.L.

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Pitches	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION												
91	J4	10	190	F				0004	85	02		200	SST		
	J4	35	99	F											
	B4	85	00	F											
95	J4	20	235	C				0024	90	02			SST		
	B1	85	00	C											
	B2	80	00	C											
	J1	20	280	W											
	B4	80	00	C											
	B2	70	00	C											
99	B1	80	00	F				0094	75	02			SST		
101	J1	60	235	F				0004	75	03			SST		
	J1	30	255	W			3								
	B1	80	00	F											
	B1	75	00	C											
	J4	25	105	W											
	J1	78	280	W											
	J1	22	240	F											
	J1	15	280	W											
	J4	30	100	F											
	J4	15	280	F											
106	B1	80	00	F				0034	50	04			SST		
	J4	10	99	F											
	J4	12	280	F											
	J1	14	140	EW											
	B4	85	00	C											
111	B1	80	00	F				0004	80	01			SST		
	B2	85	00	C			3								
	B2	02	99	E											
	J1	55	095	C											
	J1	20	99	W											
116	J3	90	99	C		SR		0044	70	02			SST		
	J2	70	170	C											
	J4	25	120	C											
	J1	09	080	W											
	J4	70	020	W											
	J1	50	99	W											
	J1	65	99	W											
	J4	15	99	C											
121	J3	04	260	C				0064	55	06			SST		
	B1	75	00	W											
	J1	24	035	W			2								
	B1	80	00	B			2								
	B1	65	00	W											
	J4	20	170	W											

DATE _____
 LOGGED BY LL/K.H.



GEOTECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No. of Plugs	% CORE LOSS	HARDNESS	R.O.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS	
		ANGLE	DIRECTION													
121	J3	80	999	B												
	J2	70	999	B												
126	B4	70	000	B C			2	000	440	06				SST		
	J3	65	999	B												
	B2	85	000	R												
	J3	85	999	R												
	B1	60	000	C												
	J4	45	999	C												
	J4	25	230	W												
	J3	15	999	C												
131	B1	70	000	B				000	200	20				SHA		
	J3	70	999	B												
	J3	75	999	B												AFTER RECCIA SECTION
	B4	80	000	B												
	J1	60	999	B												
	B1	75	000	B												
	J3	80	999	B												
136	B1	80	000	B				2	010	215	20			SHA		
	B2	70	000	B												
	B1	85	000	B												
141	J3	80	999	B				000	305	20				SLT		
	J3	90	999	B												
	B4	80	000	B			2									
	B4	85	000	B												
	B1	60	000	B												
146	B1	85	000	C F				2	000	220	09			SHA		
	J3	70	999	C												
	J3	80	180	B												
	J4	04	110	F												
	J3	60	290	B												
151	J4	20	140	C B W				3	004	215	09			SHA		
	B2	80	000	C												
	B1	70	000	B												
	J2	80	010	B												
	J4	04	999	B												
	J2	08	999	B												
156	B1	90	000	C				006	230	06				SLT		
	B2	60	000	K												
	B1	78	000	B												
	J4	07	090	B												
	J2	70	320	B												
	B2	70	000	B												
	J1	45	000	B												
	B2	80	000	B			2									
	J1	38	999	W												

DATE June 4/79
 LOGGED BY K.H.

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Planes	% CORE LOSS	HARDNESS	R.O.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION												
161	J1	65	999	BW				000	370	02	SLT				
	B1	80	000	BW			2								
	J1	30	999	W											
	B3	80	999	C											
	B4	75	000	C											
	J4	10	165	BW											
	J1	65	350	W											
166	J4	06	999	C				000	499	03	SST				
	B2	05	000	C											
	J3	70	140	C											
	B4	70	000	C											
	B4	80	000	C											
171	J1	15	160	C				200	455	04	SST				
	B1	75	000	C											
	J1	40	270	C											
	J1	55	150	C											
176	J4	05	999	W				000	450	05	SST				
	J1	15	250	C			4								
	B1	80	000	L											
	J1	15	210	C											
	B1	50	000	K											
	B1	45	000	C											
181	B2	75	000	C				201	0445	07	SST				
	B1	80	000	C											
	B2	70	000	C			2								
	J1	10	160	C											
	B1	60	000	C											
186	B1	90	000	C				000	450	00	SST				
	J1	85	999	C											
	B1	60	000	C											
	J1	10	160	C											
	J1	10	090	C			2								
191	B1	75	000	C				000	480	04	SST				
	B1	78	000	C											
	B2	85	000	C											
196	B2	85	000	C				200	455	03	SST				
	B1	75	000	B											
	J1	16	195	W											
	B1	75	000	B			4								
201	J4	16	999	W				000	465	02	SST				
	J4	08	999	C											
	B1	75	000	BW											
	B1	78	000	BW											
	J1	70	999	B											

DATE June 4/79
 LOGGED BY K.H./L.L.

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Planes	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION												
201	J4	14	225 W				2								
	B2	85	000 C												
	J2	60	020 W				2								
206	B1	70	000 B					008	470	01	SST				
	B1	65	000 B												
	B1	60	000 B												
	J4	08	080 W				2								
	B1	60	000 B												
207	B1	52	000 B					000	485	01	SST				
	B2	70	000 B				2								
	B2	60	000 C B				2								
	B1	50	000 B												
	B2	65	000 C												
216	J1	16	999 B					004	495	01	SST				
	B2	60	000 C												
	B1	65	000 B												
221	J2	60	999 B					008	465	01	SST				
	J4	35	999 B												
	J4	08	999 B												
	B1	75	000 W												
	B1	65	000 B				3								
	B1	60	000 W												
	B2	80	000 C				2								
226	B1	70	000 B				2	000	475	01	SST				
	B2	40	060 C												
231	B4	60	000 C				2	000	480	01	SST				
	B1	70	000 B				2								
	B1	78	000 B												
	B2	55	000 B				2								
236	B1	65	000 B					004	460	01	SST				
	J4	50	190 F												
	B2	60	000 B												
	J4	10	260				3								
	B1	55	000 B												
	B2	75	000 B												
	J1	50	310 B												
	J4	45	050 R W												
241	B1	80	000 B					2000	460	04	SST				
	B1	70	000 B				2								
	B2	65	000 B												
	B4	58	000 B												
	J2	60	035 B												
	J2	70	055 B												

DATE June 5/79
 LOGGED BY K.H.

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Plunges	% CORE LOSS	HARDNESS	R.O.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION												
246	B2	75	000	B				0004		B5	01			SST	
	B2	90	000	B											
	J4	30	190	C											
	B1	60	000	C											
	B1	70	000	C											
	B4	80	000	C											
	J4	04	180	W											
251	B1	55	000	C				0064		B5	01			SST	
	J2	60	220	W											
	B1	60	000	B											
	B4	68	000	B											
256	B2	65	000	B				0034		70	01			SST	
	B1	60	000	K											
	B1	55	000	B											
	J2	55	260	B W											
	J2	60	060	B											
	J2	25	060	B											
261	B1	65	000	B				0054		B5	00			SST	
	J4	40	999	B											
266	B1	75	000	B				0003		75	03			SST	
	B2	75	000	C											
	B2	80	000	C											
	B1	70	000	W			2								
	J4	04	080	W											
271	B2	85	000	C				2000		370	02			SLT	
	B1	88	000	C											
	J4	04	999	W											
	B1	65	000	K											
	J1	12	190	C											
	B1	60	000	C											
276	B1	85	000	C				0003		30	05			SLT	
	B2	70	000	C			5								
	B1	60	000	B											
	B1	65	000	C											
	B1	80	000	B											
281	B1	83	000	B				0003		70	00			SLT	
	B2	85	000	B			2								
	B1	80	000	W B			2								
	B1	78	000	C											
286	B2	72	000	C				0004		75	01			SST	
	B1	75	000	C											
	B1	80	000	C											
	J4	10	200	W											
	J4	30	999	B											

DATE June 5/79
 LOGGED BY K.H.

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of PICKETS	% CORE LOSS	HARDNESS	R.O.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION											
291	B2	70	000C					20004	BS	02		280		
	B1	85	000C											
	B2	88	000C											
	J4	02	190W											
	J4	04	110W											
	J4	08	090C											
	B4	65	000C											
	J4	10	270C											
296	B2	80	000C					30004	BS	01				
	B1	75	000B											
	J4	08	160B											
	J4	10	090C											
301	J4	03	999C					0003	7001					
	B1	80	000B											
	B2	75	000B											
	J2	45	020W											
	B2	65	000B											
	B1	70	000W				2							
306	B4	80	000B					0023	6002					
	B2	65	000C											
	J3	50	030C											
	B1	70	000C											
	B2	75	000B											
311	J4	50	999B					0003	2006					
	J3	05	999C											
	J4	25	999B											
	J4	02	999C											
	B2	50	000C				2							
	J4	10	999B											
	B2	85	000B											
	B2	80	000B				4							
316	J4	35	999C					0022	3508					
	B2	70	000C				2							
	B1	80	000C				3							
	J4	55	999B											
321	B1	80	000B					3000	1350					
	J1	50	180B				2							
	J4	10	255B											
	J2	50	999B											
	B1	86	000B											
325	J1	30	999B					0001	0015					
	J4	45	999B				5							
	J4	02	999B											
	B4	86	000B											

DATE June 5-6/79
 LOGGED BY K.H.



GEOTECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Planes	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION												
325	B4	85	000	R											
	B2	80	000	B											
	J1	60	060	B											
	J4	40	999	B											
330	B1	80	000	B			2	000	100	20			80A		
	J4	04	999	B											
	B4	86	000	B			2								
	B1	80	000	B											
	J4	10	999	B											
	J1	10	340	B											
335	J4	10	999	B				008	100	05			COA		
	B2	80	000	B			3								
	B1	70	000	B											
	J4	35	000	B											
	J1	10	255	B											
340	B1	80	000	B				010	100	20			COA		
	J3	70	999	B											
	J4	10	270	B											
	J4	20	999	B			2								
	J1	55	190	B											
	B2	80	000	B											
345	B4	80	000	B				500	510	520			COA		
	B1	85	000	B			2								
	B4	70	000	B											
350	J1	55	999	B				000	115	20			COA		
	J1	30	999	B											
	B2	88	000	B			2								
	B1	80	000	B			2								
	J2	70	330	B											
355	B4	70	000	B				000	365	07			SHA		
	J4	60	999	B											
	J4	20	999	B											
	B2	86	000	B											
	B2	75	000	B C			2								
	B2	70	000	C											
360	B2	85	000	C				200	030	012			SHA		
362	B2	80	000	C				800	024	502			SHA		
367	B2	80	000	C				900	022	504			SLT		
371	B2	80	000	C				900	022	550			SLT		
	B2	70	000	C											
	B2	90	000	C											
376	B1	80	000	B C				500	248	501			SLT		
	J4	20	999	W											

DATE June 6/79
 LOGGED BY K.H.



GEOTECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Planes	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION									ROCK TYPE		
381	K1	70	000	B		P	P	2	000	4	65	04	SST	
	B1	80	000	B										
	B1	75	000	B				2						
	J4	10	120	W				2						
	J4	40	100	W										
	J4	00	999	W										
386	J4	10	190	W					000	4	50	02	SST	
	B4	85	000	B										
	B2	75	000	B										
	J4	10	200	W				4						
	B1	70	000	C										
	B2	90	000	C										
391	B2	70	000	C					000	4	75	02	SST	
	B2	80	000	C	B			4						
	B2	85	000	B										
396	B1	70	000	K					200	0	46	50	4	SST
	B1	80	000	C										
	J4	04	999	C										
	J4	10	240	W										
401	J2	50	150	B					005	4	70	01	SST	
	J4	08	170	C										
	B2	70	000	B	F			2						
	B2	50	000	C										
	B2	60	000	C				4						
406	END OF HOLE													

DATE June 8/79
 LOGGED BY K.H.

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
0																				
5																				
10																				
15								<i>over burden</i>												
20		8%		J3 B E				VARIOUS angles of fracture												
21				J1	FC	13°	80°	Bdg 20°												
22				J3 C				VARIOUS angles of fracture												
23				B1 W		68°														
24				A1 N		30°														

LOGGED BY: D. M
 DATE: May 25 / 79



GEOTECHNICAL LOG

HOLE No. DDH 285
 SHEET 1 OF 18

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
25																			
		0%		J1	F	42	210												
				J1	FW	35	120												
				J3	C	90													
30				B1	C	64													
				J3	C	90													
		0%		J1	W	28	225												
				J4	F	5	40												
35				J2	F	10	150	IRREGULAR PLANARITY											
				B3	F	80													
				B3	F	80													
				B4	C	90													
		0%		J4	F	10	350												
				J4	F	40	200												
40				J1	F	15	225												
				J1	F	10	210												
				J4	F	15	240												
				J4	F	10	240												
		0%		B4	C	90													
				J4	F	60	210												
45				J4	F	10													
				J4	F	5	200												
				B3	F	85	63												
				J4	F	20													
		0%		J4	F	10													
				J4	C	10													
50				J1	W	75		Cut by J1											
				J1	W	20													

LOGGED BY: KN DG
DATE: May 28/79



GEOTECHNICAL LOG

HOLE No. DDH 285
SHEET 2 OF 18

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
55	0%			J ₁ W 5°																
				B ₂ C 85°																
				J ₃ C 60																
				J ₁ W 8																
				J ₄ W 4			290													
				B ₁ W 85				Should be at 55 55'												
				J ₁ W 12			165													
60	2%			B ₂ C 88																
				J ₃ C 50																
				J ₅ W 10			90													
				J ₃ C 75			205													
				J ₁ W 7				VARIOUS ANGLE OF FRACTURE 90												
				J ₄ W 20				VARIOUS ANGLES OF FRACTURE												
65	0%			J ₃ C 70			70													
				J ₁ C 26																
				B ₁ C 20																
				J ₁ C 40																
70				B ₁ C 55																
				J ₄ W 10																
				B ₂ C 70				Should be at 70'												
				J ₄ C 12			85													
				J ₄ W 8			110													
75				B ₁ C 80																

LOGGED BY: KH DB
DATE: May 28/79



GEOTECHNICAL LOG

HOLE No. DDH 285

SHEET 3 OF 18

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
75																				
80		5%																		
				B, C		80														
				J ₁ W		30	270													
		3%		J ₄ W		10														
				J ₄ W		20														
85				J ₄ W		30														
				J ₄ W		25	140													
				J ₂ C		35														
		4%		J ₂ W		15		} Infilled fractures												
				J ₂ W		15														
				J ₃ W		70														
90				J ₃ C		13	170													
				J ₃ C		4														
		0%		B ₂ E		80		Along J ₃ above												
				B ₂ E		60														
				J ₄ W		5														
95				B ₁ C		85														
				J ₄ W		4														
				J ₁ W		10	140	Should be at 95'												
				J ₁ W		10	140													
		3%		J ₄ W		30														
				J ₁ W		20	190													
100				J ₃ W		2	105	2 foot fracture												

LOGGED BY: K H D G
DATE: May 28 / 79



GEOTECHNICAL LOG

HOLE No. DOH 285

SHEET 4 OF 18

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT											
	25	50	75								4	3	2	75	50	25	15	10	5									
101	3%			B ₁	SS	50		Coal																				
	0%			B ₁		70																						
				J ₁	W	70																						
				J ₁	C	15																						
108				J ₁	W	16																						
				J ₁	C	5																						
				J ₄	W	20																						
				J ₄	W	20																						
110				B ₁	C	65																						
				J ₁	C	25																						
	0%			B ₁	B	85																						
				J ₁	W	5																						
				J ₄	W	5																						
				J ₁	W	10																						
115				J ₁	W	35																						
				J ₁	C	10		Should be at 113'																				
				J ₁	C	75		Should be at 114'																				
	2%			B ₁	C	10																						
				J ₄	W	4																						
				J ₄	C	60																						
				J ₄	C	70																						
120				J ₄	C	70																						
				J ₄	W	10	130																					
				J ₄	W	10																						
				J ₄	W	2																						
	0%			B ₂	C	78		} Before the 120 1/4 feet. J ₄ at 2° inclination 2' long Broken, highly brecciated.																				
				B ₁	C	75																						
				B ₁	C	75																						
				B ₁	C	75																						
125				J ₁	W	10																						

LOGGED BY: R. H. D. G.
 DATE: May 28/79



GEOTECHNICAL LOG

HOLE No. DDH 285

SHEET 5 OF 18

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT				
	25	50	75								4	3	2	75	50	25	15	10	5		
125				B ₁ L ₁ J ₄ B ₂ B ₃ J ₃ B ₁ J ₂ B ₁	C W C C C C C C C	80 15 10 55 70 15 20 70	60 270		0 0 0 0 0 0 0 0 0												
130				J ₁ B ₂ J ₁ J ₄	W C C W	10 85 30 25		Various angle of fracture Calcite filled breccia	0 0 0 0 0 0 0 0 0												
135								COAL													
140																					
145				B ₁ B ₂ J ₃ B ₁ J ₁	B ₁ C C B W	60 60 90 70															
149				J ₁	W	45															
150				B ₁ J ₂ B ₁	W W W	70 50 70															

LOGGED BY: K. W. DG
 DATE: May 28/79



GEOTECHNICAL LOG

HOLE No. DDH 285

SHEET 5 OF 18

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
	9%			J ₁	W	70													
155	0%			J ₁	W	10	60												
				B ₂	W	40													
				B ₃	W	65													
				J ₄	W	15													
				J ₄	W	15													
				B ₂	C	80													
160	0%			B ₃	C	90	30												
				B ₂	C	90													
				B ₁	C	50													
				J ₂	C	60													
				B ₂	C	50													
				B ₂	C	85													
165	20%			J ₁	C	30													
				B ₁	SS	55													
				B ₁	C	55													
				B ₁	C	70													
				J ₃	C	60													
				J ₄	W	10													
170	10%			B ₁	C	70	225												
				B ₁	SS	70													
				J ₁	C	50													
				J ₁	W	50													
				J ₁	SS	50													
				J ₁	W	20													
175	12%			B ₁	C	85	285												
				J ₁	E	20													
				J ₄	W	55													
				B ₁	W	50													
		J ₁	C	20															
		B ₁	SS	60															
		B ₁	C	50															
		B ₁	SS	80															
		J ₄	C	15															
		B ₁	SS	60															
		J ₄	W	4															
		B ₁	C	40															

should be at 160'

*should be at 164 feet
should be at 165 feet
Several J₄ throughout
166' - 168' - calcium filled
Repeated 8 times to 171'*

LOGGED BY: KW. D. G.
DATE: May 28/79



GEOTECHNICAL LOG

HOLE No. DDH 285
SHEET 7 OF 18

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
180				B ₁	SS	50		Repeat 4 times to 176 feet												
				B ₂	SS	85														
				B ₁	SS	50														
				B ₁	SS	60														
				C	W	40														
				C	W	40	85													
				B ₂	N	50														
				B ₁	SS	50														
				B ₁	SS	45														
				B ₁	SS	50														
185				B ₁	SS	50		} to 181' Irregular Fracture												
				C	C	60														
				B ₁	C	60														
				B ₁	N	60														
				B ₁	N	60														
				B ₁	SS	70														
				C	C	20	230	} Repeated 3 times Below 186'												
				B ₁	SS	50														
				B ₁	SS	40														
				C	C	50														
190				B ₁	C	50														
				B ₁	C	30														
				B ₁	SS	50														
				B ₁	C	35	185	} REPEATED TWICE REPEATED 3 TIMES BELOW 191'												
				B ₁	W	35	120													
				B ₁	W	45	185													
				B ₁	C	55														
				B ₁	W	50														
				B ₁	W	55														
195				B ₁	C	7														
				B ₁	C	60	180													
				B ₁	C	50	230													
				B ₂	C	60														
				B ₁	W	40	10													
				B ₁	C	55														
				B ₁	C	8														
				B ₁	C	60	20													
200				B ₁	C	50														

LOGGED BY: D. G. K. H.
DATE: May 29/79



GEOTECHNICAL LOG

HOLE No. RDH 285

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
200				J ₃	C	50													
				B ₁	B	70		Repeated twice											
				B ₁	C	60													
				J ₄	C	4													
				J ₄	C	16	225												
		0%		B ₁	SS	70		REPEATED TWICE											
				B ₁	C	70													
205				J ₄	C	20	180												
				B ₁	C	70													
				J ₁	C	40	165												
				B ₁	W	100													
		0%		J ₄	C	35	165	REPEATED 7 TIMES											
				B ₁	B	73													
210				B ₂	B	80													
				B ₂	B	85													
				B ₁	B	62		REPEATED TWICE											
				B ₁	B	60													
				B ₂	B	75													
		7%		J ₂	W	14													
				J ₂	SSB	75													
215				B ₄	B	60													
				J ₄	C	2		REPEATED TWICE 4 TIMES											
				J ₄	C	60													
				J ₄	C	18	180												
				J ₄	W	37	180	REPEATED 5 TIMES - AT 214 feet											
				B ₁	WB	60		REPEATED 4 TIMES											
				B ₄	C	80													
				J ₄	C	80	140	BY CUTS J ₄											
		0%		J ₄	C	70													
220				J ₄	W	6	260												
				B ₁	C	70													
				B ₁	B	90													
				J ₂	W	14													
				J ₂	B	80		AT 215 feet											
				J ₄	C	15	70	REPEATED 3 TIMES											
				J ₃	C	6													
		0%		J ₃	C	16	310	REPEATED 3 TIMES											
				B ₂	W	60													
				B ₂	W	60		INTERSECT EACH OTHER											
225				B ₂	W	80		REPEATED 4 TIMES											

LOGGED BY: KH
DATE: May 30/79



GEOTECHNICAL LOG

HOLE No. 285
SHEET 9 OF 18

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
225				J ₂ J ₃	C	60	190	REPEATED 3 TIMES REPEATED TWICE AT 225 FEET	0										
	2%			B ₁ B ₂ J ₄ J ₄ J ₄ J ₄ B ₁ B ₂ J ₄	B B C C C C C B C	70 70 60 75 60 50 70 70	185 160 120 120 160	REPEATED 2 AT 228' REPEATED ONCE	0										
	0%			B ₁ B ₂ B ₁ B ₁ J ₄ J ₄ B ₁ B ₂	B B C B B W B B	70 80 80 80 20 55 60 70	255 175	REPEATED 6 TIMES Fibres in joint REPEATED TWICE COAL INFILLING 4/5 way through	0										
235				J ₄ J ₃ J ₄ B ₁ B ₂ J ₃ B ₁	B C C W B B B	80 70 10 70 60 50 85	210 220	HIGHLY ANGULAR Zone of weakness $\frac{2}{3}$ through core	0										
	3%			B ₁ J ₂ J ₁ B ₂ B ₁ B ₂ J ₄ B ₄	W B B B B B B B	15 60 35 60 70 70 0 70	180	AT 240 feet Angular - repeated once REPEATED TWICE ANGULAR REPEATED TWICE	0										
240				B ₄ J ₄ B ₁ B ₁ B ₁ B ₁	B B B B B B	80 30 60 60 60		Broken along vug-like scar & repeated 6 times	0										
245	0%			B ₄ J ₄ B ₁ B ₁ B ₁	B B B B B	80 30 60 60 60			0										
250				B ₄ J ₄ B ₁ B ₁ B ₁	B B B B B	80 30 60 60 60			0										

LOGGED BY: KH
DATE: May 30



GEOTECHNICAL LOG

HOLE No. 285

SHEET 10 OF 18

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
275				C	C	15	240		○											
280	3%			E	E	25	150		○											
						50	210													
						60	90													
						70	90													
						80	60													
40	30																			
285	0%			A	A	60	70		○											
						30	260													
						35	210													
						40	330													
						50	320													
70																				
290	0%			B	B	60			○											
						70														
						60														
						60														
						60														
50																				
295	0%			B	B	60		COAL INFILLING several thick coal infilling	○											
						50														
						70														
						80														
						80														
50																				
300	0%			C	C	20	150		○											
						40	60													
						20														
4				C	C	50	320		○											

LOGGED BY: _____
DATE: _____



GEOTECHNICAL LOG

HOLE No. 285

SHEET 12 OF 18

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
300				↓	C	32	30													
				↓	C	10	240													
				↓	C	50	170													
	0%			↓	C	50														
				↓	C	40														
305				↓	C	20														
				↓	C	20														
				↓	C	25														
				↓	C	30														
				↓	C	65	60	- at 306"												
				↓	B ₁	70														
				↓	B ₁	65														
	0%			↓	B ₁	70														
				↓	B ₁	70														
310				↓	B ₁	35														
				↓	B ₁	60	190													
				↓	B ₁	20	240													
				↓	B ₁	20	300	- at 311												
				↓	B ₁	40														
	0%			↓	B ₁	60		- Calcite infilled												
				↓	B ₁	60		- 15 in a row												
315				↓	B ₁	60		- there are several (3)												
				↓	B ₁	65		- there are 4 from 315 1/2 to 316												
				↓	B ₁	45														
				↓	B ₁	70		- 2 of them in a row												
	0%			↓	B ₁	70														
				↓	B ₁	70		- about 6 by the section												
320				↓	B ₁	70		- 319 to 320'												
				↓	B ₁	60		- hard coal												
				↓	B ₁	70														
				↓	B ₁	60		- mudstone												
				↓	B ₁	50														
				↓	B ₁	50														
				↓	B ₁	30		- siltstone												
				↓	B ₁	25		- several												
325				↓	B ₁	45		- coal												

LOGGED BY: D.G.
 DATE: May 30, 79



GEOTECHNICAL LOG

HOLE No. 285

SHEET 13 OF 18

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
				B ₁	B	70		Section 11 COAL VEIN BETWEEN MUDSTONE BORDERING WITH THE B ₁ S											
330	3%			B ₁ J ₄ J ₂ B ₄ J ₃ B ₄ J ₄ B ₁	SS W B C B C R SS	40 40 35 20 65 30 60 12 60	310 330 180 110	CUT BY B ₄											
335	0%			J ₁ B ₁ B ₁ B ₁ B ₁ J ₁ J ₁ J ₂ J ₂ J ₂ J ₂	SS C C C C C C C C C	80 75 60 45 20 15 70 40 10	140 180	INFILLING - C INCLINATION - 50° REPEATED 4 TIMES } 3 J ₄ 's intersect each other											
340	10%			B ₁ J ₁ B ₃ J ₄ B ₄ J ₂ B ₁ B ₁ B ₄ J ₁	SS C C SS SS SS B B C SS	65 55 65 10 60 65 65 60 70 50	315	REPEATED ONCE SS only $\frac{1}{2}$ through core REPEATED TWICE Broken $\frac{2}{3}$ way through core along bedding plane											
345	12%			B ₄ B ₁ J ₃ J ₃ B ₁ B ₄ B ₁ B ₃ B ₄ J ₁	B B C B B B B B B B	80 75 80 80 60 70 65 60 50 80		REPEATED ONCE TWICE REPEATED 5 TIMES HIGHLY ANGULAR - REPEATED ONCE REPEATED TWICE - COAL							0%				
350	0%			J ₃ B ₁ J ₁ B ₁ J ₄	B B B B B	50 80 70 35 70 36	75	REPEATED 7 TIMES FROM 349'- 349'											

LOGGED BY: D.G.
DATE: _____



GEOTECHNICAL LOG

HOLE No. _____

SHEET 14 OF 28

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
350																				
		0%		B ₁	B	85		REPEATED ONCE												
				J ₁	B	60	200													
				J ₃	B	70		← REPEATED ONCE												
				B ₁	B	80														
				J ₁	B	60	305													
				B ₁	B	70		← REPEATED 10 TIMES												
355				J ₂	B	80														
				B ₁	B	60		REPEATED 9 TIMES												
				J ₂	B	88		ANGULAR												
				J ₁	B	62														
				J ₃	B	80														
		0%		B ₁	B	65		← REPEATED 4 TIMES												
				B ₁	B	80		← REPEATED 2 TIMES												
360				J ₃	B	80														
				J ₄	B	40	320													
				J ₄	B	50		REPEATED ONCE												
				J ₄	B	60														
				B ₁	B	55		REPEATED SEVERAL TIMES FROM 361-362												
		0%		J ₃	B	70		← REPEATED 19 TIMES												
				B ₁	B	70														
365				J ₃	B	10														
				J ₃	B	65														
				J ₄	B	46														
				B ₁	B	50		REPEATED 3 TIMES												
				B ₁	B	65		REPEATED 6 TIMES												
				J ₄	B	60	290													
		0%		B ₂	B	60														
				B ₁	B	75														
370				B ₁	B	55		REPEATED 8 TIMES												
				J ₃	B	80	290													
				B ₁	B	70														
				B ₄	B	78														
		2%		J ₄	B	60	160													
				B ₁	B	95		REPEATED 9 TIMES												
				B ₁	B	80														
375				J ₂	B	60	280	REPEATED ONCE												

LOGGED BY: KH
DATE: May 31/79



GEOTECHNICAL LOG

HOLE No. 285
SHEET 15 OF 18

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT				
	25	50	75							4	3	2	75	50	25	15	10	5		
375																				
				B ₁	C	60	180	- COAL - SFT												
				J ₄	C	10														
				B ₂	C	66				- 5 of these 378' - 379'										
				B ₁	C	70														
				J ₄	C	38														
380			0%	B ₁	C	70		- 10 of these fractures 379 1/2' - 381'												
				J ₄	C	45														
				B ₁	C	70		- Rock highly fractured along beds												
				B ₂	C	60		- 2 of these												
				B ₁	C	76		- 2 of these												
				B ₁	C	80		- 2 of these at 393'												
385			0%	B ₁	C	80		HARDER COAL TO MUDSTONE TO SILTSTONE												
								- 2 of these												
				J ₄	C	50		beds not distinguishable in SILTSTONE												
				J ₄	C	30		- 2 of these												
				B ₁	C	85														
				J ₄	C	10		- 3 haulline fractures												
390			4%	B ₁	C	70		- 2 of these												
				J ₄	C	15		- 1' lens												
				B ₂	C	80														
				J ₄	C	80		- 391'												
				B ₁	C	80		CANT see beds												
				J ₄	C	80														
				B ₁	C	80														
395			0%	B ₁	C	80		- MANY VUGS												
				J ₄	C	80		- 2 of these												
				B ₁	C	80														
				J ₄	C	80														
				B ₁	C	80														
				J ₄	C	80														
				B ₁	C	80														
				J ₄	C	80														
				B ₁	C	80														
400				J ₄	C	30		- MANY VUGS and haulines												
				B ₁	C	50		- 396' at this angle												
				J ₄	C	50		- 5 of these 397' - 398'												
				B ₁	C	50		- MANY VUGS												
				J ₄	C	30		- 2 of these												
				B ₁	C	60														
				J ₄	C	30		- MANY FRACTURES - BROKEN ROCK												

LOGGED BY: D.G.
 DATE: MAY 31/79



GEOTECHNICAL LOG

HOLE No. 285
 SHEET 16 OF 18

DEPTH	% CORE LOSS 25 50 75			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT				
											4	3	2	75	50	25	15	10	5		
400				J4	W	15			○○○○○○												
405	2%			B1	SS	45	180	Repeated 5 times	○○○○○○												
				J4	W	40	160														
410	20%			B1	SS	70	155	Repeated twice more	○○○○○○												
				J1	W	65	165														
415	20%			J1	W	45	165	Repeated three more times	○○○○○○												
				B1	C	25	170														
420	20%			J1	C	65	180	Repeated 3 more times Repeated once more Repeated once more	○○○○○○												
				B1	SS	70	160														
				J1	W	85	90														
425	20%			B1	C	60	165	Repeated twice more Repeated once more	○○○○○○												
				B1	SS	55	190														
430	20%			B2	C	70	180	Repeated once more	○○○○○○												
				B1	W	45	180														
435	19%			J4	W	30	175	Repeated once more	○○○○○○												
				B1	C	45	170														

LOGGED BY: U
DATE: _____



GEOTECHNICAL LOG

HOLE No. 285

SHEET 17 OF 18

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
425				B ₁	C	70													
		5%						<u>CLEAR CORE</u> SANDSTONE											1
430				J ₄	C	5	90												
				B ₁	SS	65		- 2 of these are											
				B ₁	C	75	150	- 5 of these fractures from #31-431											
				J ₄	C	80		- SOME BIOTITE											
		6%		B ₁	C	60		- BROKEN ROCK											3
				J ₄	C	8	270	SANDSTONE											
435				B ₁	C	75													
				J ₄	C	0	180												
440								END OF DRILL HOLE 285											

LOGGED BY: D.G

DATE: MAY 31/79



GEOTECHNICAL LOG

HOLE No. 285

SHEET 18 OF 18

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of PIGS	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION											
20	J3		999	BC				008430			02	SS	285	-various angles of fracture
21	J1	13	080	FC				000430			02	SS		
	J3		999	C										-various angles of fracture
	J1	02	999	W										
	B1	68°	000	W										
26	J1	42	210	F				000499			00	SS		
	J1	35	120	FW										
	J3	90	999	C										
	B1	64	000	C										
31	J3	90	999	C				000480			03	SS		
	J1	28	225	W				0004						
	J4	05	040	F										
	J2	10	150	F										
	B2	80	000	F										
36	B4	90	000	C				000465			03	SS		
	J4	10	350	F										
	J4	40	200	F										
	J1	15	225	F										
	J1	10	210	F										
	J4	15	240	F										
41	J4	10	240	F				000450			02	SS		
	B4	80	000	C										
	B4	85	000	F										
	J4	60	210	F										
	J4	10	999	F										
	J1	05	200	F										
	J1	15	063	F										
46	J4	20	999	FW				000499			02	SS		
	J4	10	999	FC										
	B4	75	000	N										
	J4	05	999	C										
51	J1	05	999	W				000450			002	SS		
	B2	85	000	C										
	J3	60	999	C										
	J1	08	999	W										
	J4	04	999	W										
	J1	10	290	W										
56	J1	12	165	N				002460			002	SS		
	B2	88	000	C										
	J3	50	999	C										
	J1	10	090	W										
	B2	78	000	C										
	J3	25	205	C										

DATE May 28, 1979

LOGGED BY K.H./D.G.

page No. 1

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No. of Fragments	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS	
		ANGLE	DIRECTION													
61	J1	07	999W					0004	9001					SST		various angles
	J4	20	999W													
	J3	70	070C													
66	J1	26	999C					0064	6503					SST		
	B1	70	000C													
	J1	40	999C													
	B1	65	000C													
	J4	10	999W													
71	B2	70	000C					0004	9901					SST		
	J4	12	085C													
	J4	08	110W													
	B1	80	000C													
76	B1	80	000C					0054	9900					SST		
81	J1	30	270W					0034	9001					SST		
	J4	10	999W													
	J1	20	999W													
	J1	25	140W													
86	J2	35	999C					0044	7003					SST		
	J1	15	999W													
	B1	70	000W													
	J1	13	170C													
91	J3	04	999CW					0004	2504					SST		
	B2	80	000C													
	B2	60	000C													
	J4	05	999W													
96	J1	10	140W					0034	3503					SST		
	J1	30	999W													
	J1	20	190W													
	J1	07	105W													
	J3	05	999C													
101	B1	50	000K					0037	4006					COA		
	B1	70	000													
	J1	70	999													
	J1	15	999C													
106	J1	16	999W					0204	1004					SST		
	J1	05	999C													
	J4	20	999W													
	R1	65	000C													
110	T1	25	999C					0004	1300					SST		
	B1	85	000B													
	J1	05	999W													
	J4	10	999W													
	J1	35	999W													

DATE May 28/79

LOGGED BY K.H./D.G.

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Picks	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	NOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION												
115	J1	10	999W					002	4	13	08			SST	
	J4	04	999W												
	B4	60	000C												
	B1	70	000C												
	J1	10	130W												
	J4	02	999W												
120	B2	78	000C					000	3	25	08			SST	
	J1	10	999W												
125	B1	80	000C					000	4	35	06			SST	
	J1	15	060W												
	J4	10	270C												
	B1	55	000C												
	J4	20	999C												
130	J1	10	999W					020	4	00	05			SST	
	B2	85	000C												
	J1	30	999C												
	J4	25	999W												
135								040	1	00	20			COA	
140								040	1	00	20			COA	
142	B1	60	000BW					000	4	10	05			SST	
	B1	90	000B												
	B1	70	000W												
146	J1	45	999W					008	45	00	03			SST	
147	B1	70	000W					008	45	00	03			SST	
	J2		W												
	J1	50	999W												
	B2	70	000W												
151	J1	10	999W					000	4	30	15			SST	
	B2	40	000W												
	B1	65	000W												
	J4	15	000W												
	B1	60	000C												
	B2	70	000C												
156	B1	50	000C					000	4	45	04			SST	
	J2	60	999C												
	B2	85	000C												
	J1	30	030C												
	B1	55	000K												
	B1	70	000C												
161	J3	60	999C					020	4	30	03			SST	
	J4	10	999W												
	B1	70	000CK												
	J1	50	999CWK												
	J1	20	999W												

DATE May 28/79
 LOGGED BY KH/P.G.

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Plugs	% CORE LOSS			HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION														
166	J1	20	22	SC				0	1	0	4	20	04			SST	
	J4	55	99	9W													
	B1	50	00	0WK													
	J1	20	28	5C			8										
171	B1	50	00	0C				0	1	2	3	4	5	0	5	SLT	
	B1	80	00	0K													
	J4	15	88	8C													
	J4	04	99	9W													
	J2	50	99	9KW													
176	B1	85	00	0K				4	0	0	3	3	5	0	3	SLT	
	B1	55	00	0KW													
	J4	40	99	9C													
	J4	40	08	5W													
181	B1	60	00	0KC				3	0	5	3	5	0	2	5	SLT	
186	J1	20	23	0C				0	0	4	3	0	5	5	5	SST	
	B1	50	00	0KC			3										
	J1	40	99	9K													
	J1	50	99	9C													
	J4	30	99	9C													
	J3	35	18	5C			3										
191	B1	70	00	0C				3	0	0	3	5	0	4	5	SLT	
	J1	35	12	0W													
	J4	45	18	5W													
	B2	55	99	9C													
	J4	50	99	9W													
	B1	55	00	0W			3										
	J3	07	99	9C													
	J1	60	18	0C													
	J1	50	23	0C													
196	B2	60	00	0C				0	0	3	7	0	5	5	5	SLT	
	J4	40	01	0W													
	B1	55	00	0C			3										
	J3	08	99	9C													
	J1	60	16	0C													
	J1	50	22	0C													
201	B1	70	00	0B				3	0	0	4	6	5	0	6	SST	
	B1	60	00	0C			2										
	J4	04	99	9C													
	J4	16	22	5C													
	J4	20	18	0C													
206	B1	70	00	0C				0	0	4	5	0	6	5	5	SST	
	J1	40	16	5C			2										
	B1	73	00	0B													
	B2	80	00	0B													

DATE May 28/79
 LOGGED BY K.H./D.G.

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of PILES	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION												
211	B1	68	000B				2	007	440	08				SST	
	B1	60	000B				2								
	B2	75	000BK				2								
	J2	14	999W												
	J4	02	999C												
	J4	18	180C												
216	J1	37	120W				5								
216	B1	60	000WB				4	000	445	04				SST	
	J4	20	140C												
	J4	06	260W												
	B1	70	000C												
	J3	14	000C												
221	J4	15	070C				3	000	450	06				SST	
	J3	06	999C												
	J2	16	310C				3								
	B2	60	000W												
	B1	50	000B				4								
226	J3	03	190C				2								
226	B2	70	000BW				2	002	470	02				SST	
	J1	60	185C												
	J1	75	160												
	J1	60	120				3								
	J1	70	160C												
231	B1	70	000BC				2	000	420	04				SST	
	B2	80	000BC												
	J4	20	225B												
	J4	55	175W												
	B1	60	000B				2								
236	J4	80	999B					000	465	03				SST	
	J3	70	210C												
	J4	10	220C												
	B1	70	000W												
	J3	50	999B												
	B1	85	000B												
241	B1	65	000W					000	445	04				SST	
	J2	60	230B												
	J1	35	050B												
	B2	60	000B												
	B1	70	000B				3								
	J4	00	180B												
246	B4	80	000B					000	460	03				SST	
	J4	30	999B												
	B1	60	000B				3								
	B1	85	000B				3								

DATE May 30/79
 LOGGED BY K.H.

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Pitches	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION									ROCK TYPE		
251	B2	80	000	C				0003	85	02		SHA		
	B2	70	000	B			2							
	J4	15	999	B										
	J1	22	999	W										
	J1	40	999	W										
256	J1	50	999	B				2003	225	03		SHA		
	J1	45	999	B			2							
	J1	20	999	W										
	R1	80	000	C										
	B1	70	999	C										
261	J1	04	999	W				0004	20	07		SST		
	B4	70	000	B			2							
	B1	75	000	BK										
	J4	15	999	C										
	J1	25	999	C										
	J1	40	999	C										
266	J1	20	999	C				0004	25	07		SST		
	J1	60	999	B										
	J1	05	999	C										
	J1	50	999	BK										
	J1	45	999	C										
	J1	03	999	C										
	J1	50	350	C										
	J1	50	180	C										
	J1	40	120	C										
271	J1	03	220	C				0024	80	07		SST		
	J1	60	240	B										
	J1	40	30	BK										
	J1	40	130	C										
	J1	40	150	C										
	J1	40	999	B										
	J1	25	150	C										
	J1	15	240	C										
276	J4	25	150	C				0034	50	01		SST		
	J3	40	210	C										
	J1	60	090	W										
	J1	70	090	W										
	B1	80	000	W										
	J1	40	030	W										
281	J4	60	070	W				0004	65	06		SST		
	J1	30	260	C										
	J2	35	210	C										
	J1	40	330	C										
	J1	50	320	B										

DATE May 30/79
 LOGGED BY D.G.



GEOTECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Planes	% CORE LOSS	HARDNESS	R.O.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS	
		ANGLE	DIRECTION													
281	J1	70	999	BK												
	J4	50	999													
	J1	25	999	C												
	J1	30	999	C												
	B1	60	000	C												
286	J1	70	999	B				00047503						SST		
	B1	60	000	B			3									
	J1	40	999	B												
	J1	80	999	B												
291	J1	60	999	B				00045503						SST		
	J1	50	999	B												
	J4	70	999	B												
	B1	80	000	B												
	B1	60	000	B												
	B1	55	000	B												
296	J4	20	999	C				00045003						SST		
	J1	40	150	C												
	J1	20	060	C												
	J1	50	320	C												
	J1	32	030	C												
301	J4	10	240	C				00045004						SST		
	J4	50	170	C												
	J1	50	999	C												
	J4	40	999	C												
	J1	20	999	C												
	B4	75	000	C												
	J1	30	999	C												
	J1	65	999	C			2									
306	B1	70	000	BK				500045004						SST		
	B1	65	000	B			2									
	J4	35	999	W												
	J4	25	180													
	J1	50	240	F												
	J1	20	300	F												
311	B1	40	000	B				00043005						SST		
	B1	60	000	B												
	J4	60	999	W												
	B1	45	000	BK			4									
	J4	65	999	B												
316	B1	70	000	BK				200047505						SST		
	B1	60	000	B												
	J4	70	999	B			2									
	J1	80	999	B												

DATE May 30/79
 LOGGED BY D.G.

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Pieces	% CORE LOSS	HARDNESS	R.O.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION												
321	J4	50	999W					001	385	03	S&T				
	B1	50	000B				2								
	J1	25	999B												
	J4	04	999B												
	J4	15	999B												
	B1	70	000B												
326	B1	40	000K					003	380	02	S&T				
	J4	40	310W												
	J4	35	330B												
	J2	20	180C												
	B4	65	000B												
	J3	30	999C												
	B4	60	000B				2								
	J4	12	110C												
	J1	50	140C												
	B1	75	000K												
	B1	60	000C												
331	B1	45	000KW					000	355	02	S&T				
	J1	20	180W												
	J3	15	999C												
	J2	20	999C												
	J2	40	999C												
	J2	10	999C												
336	B1	65	000BK					201	0255	04	SHA				
	J3	65	999C												
	J4	10	315K												
	J2	65	999K												
	B4	60	000K				2								
	J1	50	170K												
341	B2	80	000B					201	2100	05	COA				
	B1	75	000B				5								
	J3	60	999C												
	J1	50	999B												
	B1	60	000B												
	B4	70	000B												
	B1	65	000B												
345	J3	50	999B					000	1000	08	COA				
	B2	80	000B												
	B1	70	000B				2								
	J1	35	075B												
348	J4	30	180B					000	1000	12	COA				
351	B2	85	000B					200	0110	12	COA				
	J1	60	200B												
	J3	70	999B												

DATE May 30/79
 LOGGED BY D.G.

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Planes	% CORE LOSS	HARDNESS	R.O.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS	
		ANGLE	DIRECTION													
351	B1	80	000	B												
	J1	60	305	B												
	B1	70	000	B												
	J2	80	999	B												
	B1	60	000	B												
356	J3	88	999	B				000	110	13				COA		
	J1	62	999	B												
	J3	80	999	B			2									
	B1	65	000	B			4									
	B1	80	000	B												
	J4	40	320	B												
361	J4	50	999	B				000	110	15				COA		
	J4	60	999	B												
	B1	55	000	B												
	J3	70	999	B												
	B1	70	000	B			9									
	J3	10	999	B												
	J3	65	999	B												
	J4	40	999	B												
366	B1	50	000	B				000	105	15				COA		
	B1	65	000	B												
	J4	60	280	B												
	B2	60	000	B												
	B1	75	000	B			9									
	J3	80	290	B												
371	B1	70	000	B				200	210	007				COA		
	J4	60	160	B												
	B1	55	000	B												
	B1	80	000	B												
	J2	60	280	B												
376	B1	60	000	C				200	010	000				COA		
	J4	10	180	C												
	B2	70	000	C			9									
	J1	30	999	C												
	J4	45	999	C												
381	B1	70	000	C				200	026	003				SHA		
	B2	60	000	C			2									
	B1	80	000	C												
386	J4	50	999	C				004	250	035				SET		
	J4	30	999	C			2									
	B1	85	000	C												
	J4	10	999	C												
	B1	80	000	C			3									

DATE May 31/79
 LOGGED BY K.H.

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Pipes	% CORE LOSS	HARDC.	R.Q.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION											
391	J4	20	999W					000	2	30	03	SS	T	
	B1	70	000W											
	B1	80	000C				2							
	J4	03	999C											
	J4	08	999W											
	B1	70	000C											
	J4	10	999W											
	B1	50	000C											
	J1	30	999C											
	J4	40	999C											
	J1	50	999C											
396	J4	50	999C					000	2	20	06	SS	T	
	B1	50	000W				5							
	J1	30	999C											
	B1	60	000WK				2							
	J1	30	999C											
	J1	25	999W											
	J4	15	999W											
401	B1	45	000K					500	2	45	05	SS	T	
	J4	40	160W											
	B1	70	000K											
	J1	65	165W											
406	J1	45	165W					020	4	60	03	SS	T	
	B1	85	000C				3							
411	J1	65	180C					020	4	45	05	SS	T	
	B1	70	000K				3							
	J1	85	090W				2							
	B1	60	000C											
416	B1	55	000K					302	0	48	05	SS	T	
	B2	70	000C				2							
	B1	45	000W											
	J4	30	1175W											
421	B1	45	000C					201	9	49	01	SS	T	
	B1	70	000C											
426	J4	05	090C					005		90	01	SS	T	
	B1	65	000K				2							
431	B1	75	000C					600	6	45	03	SS	T	
	J4	10	150C											
	B1	00	000C											
	B1	60	000C											
	J4	08	270C											
	B1	70	000C											
	J4	00	180C											
436	END OF HOLE													

DATE May 31/79

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT			Hydrostone tstone sandstone Coal
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5	
0-10								0-10' OVER BURDEN												
10-16	5 feet of core loss							BROKEN CORE												
16-21	3 feet of core loss							BROKEN CORE												
21-26	4 feet of core loss							BROKEN CORE												
26-31	4 feet of core loss							BROKEN CORE												

LOGGED BY: Loriana
DATE: July 24, 1979



GEOTECHNICAL LOG

HOLE No. 1250

SHEET 1 OF 19

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORE	HARDNESS 4 3 2	ROCK QUALITY DESIGNATION % 75 50 25			NATURAL FRACTURE FREQUENCY PER FOOT 15 10 5				
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				75	50	25	15	10	5		
31								BROKEN CORE										
	1 foot core loss 20%							BROKEN CORE										
36								BROKEN CORE										
	3 1/2' core loss 70%							BROKEN CORE										
41								BROKEN CORE										
	4' core loss 80%							BROKEN CORE										
46								BROKEN CORE										
	2 core loss 40%							BROKEN CORE										
51								Some iron oxides found on core pieces										
	1 core loss 20%							BROKEN CORE										

LOGGED BY: heriann
DATE: July 24 1979



GEOTECHNICAL LOG

HOLE No. 1250

SHEET 2 OF 19

DEPTH	% CORE LOSS 25 50 75			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION % 75 50 25			NATURAL FRACTURE FREQUENCY PER FOOT 15 10 5		
				TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
56							BROKEN CORE											
	0%			BI C		85												
				BI C		70												
				J1 B		42	125	Broken core										
	0%			BI B		38	repeats twice											
				J1 B		30	243											
	0%			BI C		27												
				BI C		35												
				J1 C		10	90											
				BI C		85		Broken core										
	0%			J1 W		17	180											
				BI W		45												
				BI W		35		calcite on broken core										
	0%			J1 W		25	210											
				BI W		13												
				BI K		35												
				BI K		40		SLIP N' SLIDE IN FRACTURES										

LOGGED BY: Leviann
DATE: July 24 19



GEOTECHNICAL LOG

HOLE No. 1250

SHEET 3 OF 19

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORE	HARDNESS 4 3 2			ROCK QUALITY DESIGNATION % 75 50 25			NATURAL FRACTURE FREQUENCY PER FOOT 15 10 5		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING											
81	0%	J4	W	45	105	A LOT OF CALCITE IN FRACTURES	Broken Core	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	
	2%	B1	W	40														
		B4	W	15														
		J4	W	33	242													
86		B1	W	70														
	0%					Broken Core												
91		B1	K	25		repeats three times												
	0%	J4	W	15	225													
		B1	K	50														
96						Broken Core												
	0%	B1	C	45		Broken Core		[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]	[Diagonal Hatching]
		J1	C	65	121													
		J1	B	50	145													
101		J1	C	35	210													
	0%	B1	W	80														
		B1	B	75														

LOGGED BY: Lariona
DATE: July 24/79



GEOTECHNICAL LOG

HOLE No. 1250

SHEET 4 OF 19

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
106	0%																		
	0%			B1	B	65		Broken Core											
				B1	B	80													
111								Broken Core											
	0%																		
116				B1	B	45		Broken Core											
	0%			B1	B	70													
121				B1	B	60		Broken Core											
	0%			J1	W	30	242												
				J1	W	45	190												
126				B1	W	53		repeats twice											
				B1	W	70													
				B1	K	60													
				B1	K	80													
				B1	W	65													

LOGGED BY: Kerriann
DATE: July 24, 79



GEOTECHNICAL LOG

HOLE No. 1250

SHEET 5 OF 19

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE %	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
131				J4	W	15	221												
				B1	W	57													
		0%		B1	W	25													
				J1	W	30	145												
				B1	W	85													
136				J4	W	15	240												
		0%		B1	W	50													
				J1	W	30	210												
141				B1	W	85		Broken Core											
				B1	W	35													
		0%		B1	W	39													
				B1	W	85													
146				B1	N	35													
				J4	W	10	295												
		0%		B1	C	45		Broken Core											
151				B1	C	30													
				J1	W	75	180												
		0%		J1	W	70	210												
				J4	W	20	225												
				B1	W	80		Broken Core											

LOGGED BY: Kevana
DATE: July 25, 79



GEOTECHNICAL LOG

HOLE No. 1250

SHEET 6 OF 9

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORE	HARDNESS 4 3 2			ROCK QUALITY DESIGNATION % 75 50 25			NATURAL FRACTURE FREQUENCY PER FOOT 15 10 5		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING			75	50	25	15	10	5			
156				BI	W	80												
	1 foot miss	20%						Broken Core										
161		0%		JI	W	60	305	Broken Core										
				BI	W	85												
				BI	B	40												
				BI	B	35												
166								Broken Core										
		0%		JI	W	60	125											
				BI	W	85												
				BI	W	80												
				BI	W	75												
171				BI	W	30												
		0%		BI	B	65		repeats three times										
				BI	B	45												
176				JI	B	30	195											
		0%		BI	W	88												
				BI	W	75												
				BI	W	80		repeats three times										

LOGGED BY: LeMann
DATE: July 25/79



GEOTECHNICAL LOG

HOLE No. 1250

SHEET 9 OF 19

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT						
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING			4	3	2	75	50	25	15	10	5				
181	0%			BI	W	85		Broken Core														
			BI	C	70																	
	0%			J1	C	80	125															
186				BI	C	75		Broken Core														
	0%		BI	C	70																	
			J1	C	25	310																
191			BI	B	80																	
	0%		BI	B	60			Broken Core														
			BI	B	45																	
			J1	B	30	120																
196			J4	B	50	275																
	0%		BI	W	85			Broken Core														
201			BI	W	60																	
	0%		J1	C	30	301																
			J1	W	45																	
			BI	W	65																	

LOGGED BY: Kevin
DATE: July 25/79



GEOTECHNICAL LOG

HOLE No. 1250
SHEET 8 OF 19

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN COREZ	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
206				BI	W	70													
	0%			BI	SS	20		repeats three times											
				BI	W	25													
211				J1	W	13	180												
	0%			J1	W	80	210												
				BI	SS	20													
				BI	SS	40													
216				BI	W	60													
	0%			BI	C	45													
				BI	W	50		Broken Core											
221				J4	W	10	305												
	0%			BI	C	80													
				BI	SS	63		repeats twice											
226				J1	W	25	145												
	0%			J1	C	40	205												
				BI	W	80													

LOGGED BY: Louanna
DATE: July 26/79



GEOTECHNICAL LOG

HOLE No. 1250

SHEET 9 OF 19

DEPTH	% CORE LOSS 25 50 75			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE%	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
231				J1 C		45	200	Broken Core										
	0%		B1 C		35													
			J1 C		20	150												
236				B1	W	80		Broken Core										
	0%																	
241				J1	W	20	190	repeats once										
	0%		J1	W	75	225												
			B1	W	65													
246				B1	SS	60												
	0%		B1	C	70													
			J1	C	85	120												
251								Broken Core										
	0%		B1	C	10	← three of these												

LOGGED BY: Lorriann
DATE: July 26/79



GEOTECHNICAL LOG

HOLE No. 1250
SHEET 10 OF 19

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5	
256				BI	K	80														
	0%			BI	C	35														
				J1	K	40	185													
261				J1	C	10	205													
	0%			BI	C	85														
266				BI	C	70														
	0%			J1	W	55	125													
				BI	W	40		repeats twice												
271				—————				Broken Core												
	0%			—————																
276				—————				Broken Core												
	0%			—————																

LOGGED BY: July 26/79
DATE: Leuann



GEOTECHNICAL LOG

HOLE No. 1250
SHEET 11 OF 19

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No of Planes	% CORE LOSS	HARDNESS	R.Q.D. %	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2		
281	←							0%	1			1	2	COAL	ALL BROKEN CORE
	↓								2					MDS	
284	B1	43		W	PS				2					MDS	
	↓								2	10%	7				
286									2						Broken Core
		B1	80	CARB	PS			0%	2						
	↓	B1	60	K	PS				2	0%	23				
	↓	J1	51 193	W	PS				2						
291									2						
		B1	38	K	PS			0%	2	3%	10				Broken Core
		J1	82 201	K	PR				2					MDS	
		B1	45	W	PR										
296															
								0%	2	0	30				CALCITE BANDING
									2						Broken Core
301		J1	63 182	C	IS				2	20	21				
		B1	87	C	IR			0%	3					SLT	
		B1	16	C	PR				3						
									1					COAL	Broken Core
306															
		B1	60	K	PS				4					SST	
		B1	49	W	IS			0%							
		J1	32 214	K	PR					35	15				
		J1	10 180	C	PR				4						
311															
		B1	35	W	IR			0%	4	53	08				
		B1	81	W	IR				4						
		J1	22 126	C	IR				4						
316									2					MDS	
		B1	80	CARB	PS			0%							
		B1	49	"	PS					46	11				
		J1	30 239	"	PS				2						

DATE July 30/79

LOGGED BY Loriamv

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	NO. OF PISTONS	% CORE LOSS	HARDNESS	R.O.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2		
	B1	45		C	P	S			2			1	250	0	
	B1	26		C	P	S						1	250	0	
321									2			1	250	0	
								0%		99	99	1	250	0	Broken Core
									2			1	250	0	
326												1	250	0	
	J1	83	231	C	I	R			2			1	250	0	
	B1	81		C	I	R		0%	3			1	250	0	S L T
	J1	79	183	C	I	R			3			1	250	0	
												1	250	0	
331									3			1	250	0	
										399	99	1	250	0	Broken Core
									3			1	250	0	
	B1	13		W	I	R		0%				1	250	0	
	B1	63		CARB	P	S			365	23		1	250	0	CALCITE BANDING
				CARB	P	S						1	250	0	
												1	250	0	
336	B1	60		C	I	R			2			1	250	0	M D S
	B1	88		C	I	R						1	250	0	
	J1	41	151	W	I	R			241	17		1	250	0	
												1	250	0	
								0%	2			1	250	0	
												1	250	0	Broken Core
341									2			1	250	0	
	B1	49		W					2			1	250	0	
	B1	55		W				0%	55	11		1	250	0	
									2			1	250	0	
	J4	33	241	W								1	250	0	
346									2			1	250	0	
	B1	61		CARB	P	S						1	250	0	
								0%	2			1	250	0	
	B1	44		CARB	P	S			265	02		1	250	0	
	B1	55		CARB	P	S						1	250	0	
351									2			1	250	0	
	B1	60		C	I	R			2			1	250	0	
								0%	99	01		1	250	0	
	B1	83		C	P	S			2			1	250	0	
	B1	71		W	P	S						1	250	0	

DATE July 30/79
 LOGGED BY Lovanni

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Pieces	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1250			
356	J1	83	191	W	PS			0%	2	7103			↓		
	B1	53		W	PS				2				SLT		
	B1	78		K	PS				3				↓		
361	B1	60		W	PS				3	5205			SLT		
	B1	63		C	PS				2				HDS		
	B1	65		C	PS			0%							
	J1	47	235	C					2						
366	J1	40	291	C	PS					7002					
								0%	2						Broken Core
	B1	89		C	PS				2						Broken Core
371										6903					
	B1	73		W	IR			0%	2						
	J4	21	224	W					2						
													HDS		
376	B1	24		W	IR				2	8901					CALCITE BANDING
	B1	45		W	IR			0%							
	B1	61		W	IR				2						
													HDS		
381	J1	20	140	C	IR				2	7003					
	B1	16		W	IS										
	B1	46	repeats 3 times	W	IR			0%	2						
													HDS		
386	B1	40	repeat 2 times	C					2						
	J1	21	091	C				0%	2						
391	J4	21	090	C	PS			0%	2	5304					
													HDS		

 DATE July 31/79
 LOGGED BY Loriam

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of PILES	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER			ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2	3		
									4					SDS		
									4					SDS		
396								2%	3					SLT	Broken Core	
				W	PS											
									3					SLT		
401									4					SDS		
				W	PS										Broken Core	
								0%	4					SDS		
									2					MDS		
406									4	25	6			BDS	Broken Core	
				C	PS				3							
				W	PR			0%	4					BDS		
				C	TR				2					MDS		
411										90	2					
				C	PR											
				C	PS				2							
				W												
								0%								
									2					MDS		
416										95	1					
				W	TR				2							
								10%	2					MDS		
421										295						
				C	PR				4							
				C	PS				1							
								3%	2					MDS		
426																
				B	PS											
				B	PS				2					MDS		
				B	PR			3%	1					COAL		
				B	PR											
431																
				B	PS				9							
				B												
								0%	1					COAL		
436																
				B	PS				22							

DATE Aug 179

LOGGED BY LLH

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Pieces	% CORE LOSS	HARDNESS	R.O.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2		
									1				1250		
								0%		0	15				
441	B185	repeat 4 times		I R					1						
	Broken Core								1				COAL	Broken Core	
								0%		0	21				
446	B181			B	PS				1				COAL		
	Broken Core								2				MDS		
								0%		0	16				
	Broken Core								2						
451	B164			C	PS								MDS		
	B130			C	PR			0		30	03				
	Broken Core								2					Calcite on broken	
	" "												MDS	core pieces.	
456									2						
	Broken Core														
	Broken Core								1				MDS		
461	Broken Core								1				COAL		
									1				COAL		
									1				MDS		
	Broken Core														
								0							
466									2				MDS		
	B153			B	PR									Calcite banding	
	J144-186			B	PR			0%		75	07		MDS		
									2						
471	B186			C	PS								MDS	repeats 5 more times	
	J135096			B				0%	2	45	11				
476	J131114			C	PR				2	0	05		MDS		
	B166			W	PR			0%							
									2				MDS		

DATE Aug. 9/79
 LOGGED BY LL

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Pieces	% CORE LOSS	HARDNESS	R.Q.D. %	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION									1	2	
481	B1	45		W	PR			0%	3	15	04	SLT		
	J2	33	21	3C	PR								drill induced	
	B2	69		C	PR				3					
486								0%	3	21	08	SLT	Broken core	
	B1	70		W	PS				3					
491	B1	59		C	PS			0%		10	05	SLT	Calcite banding	
	B1	62		W	PR				4			SDS	repeats twice	
	J4	47	97	C	PR									
496	J1	11	09	6C	PS			0%	4	25	03	SDS	repeats twice	
	B1	79		W	PS									
	B1	40		C	PS				4					
501								0%						
	B1	55		C	PS									
	B1	30		C	PS				2			MDS	MUDSTONE BAND	
	J1	81	19	7W	PR									
506								0%	2	55	08	MDS		
	B1	49		W	PR									
	Broken Core		—————						4			SDS	Broken lots of	
	↓	↓	↓	↓	—————							↓	Core calcite on	
511	"	"	"	"				0%	4	75	01	SDS	pieces.	
	B1	88		C	PS				2			MDS	repeats once	
	B1	24		C	PR									
516	J1	16	08	3	PS				2			MDS	} INTERBEDDED	
	Broken Core		—————					0%				MDS		
	↓	↓	↓	↓	—————				1			↓		
	↓	↓	↓	↓	—————							↓		
521	Broken Core		—————					0%	1			MDS		
	Broken Core		—————						2			MDS		

DATE Aug 9/79
 LOGGED BY Loriann

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Pieces	% CORE LOSS	HARDNESS	R.O.D.	Fracture Frequency	HOLE NUMBER	
		ANGLE	DIRECTION									ROCK TYPE	REMARKS
									2			1200	
526	Broken Core							0%				MDS	
	B135			C		IS				20	15	SLT	
	J147	193		C		IR			3			↓	CALCITE BANDING
531	B149			C		IR		0%		40	08	SLT	↓
	B165			SS		IS			3			SLT	↓
536								0%		25	11	↓	
									3			SLT	
	Broken Core											↓	
	"											SLT	
541	"											MDS	
	B182		B			PS		0%	22	0	15	↓	} interbedded with coal
	B175		B			PS			2			MDS	
546	Broken Core							0%	1	99	99	COAL	
	"											↓	
551								0%	1	99	99	↓	
												COAL	
556								0%	1	99	99	↓	Broken Core
												COAL	
561								0%	1	99	99	↓	
												COAL	
566								0%	1	99	99	COAL	
	Broken Core											SLT	

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No. of Pieces	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION									1	2	
		Broken Core											1250	
571								0%	4	3504			S D S	
	B161			C		PR								
	B158			B		PR			4					
576	J443	191		B		IR		0%		2506				
	B165			C		PS			4					↓
581	B158			B		PS		0%		4009				S D S
	B165			B		PS			4					
	J124	187		C		PS								
586	Broken Core							0%		41515				
	↓ ↓ ↓													
	Broken Core													↓
591								0%	4	1020				S D S
	B187			C		IS								
	Broken Core								4					
596	Broken Core							0%		2519				} broken core } pieces have } carbonaceous } infilling.
	" "	" "							4					
	B180			C		IS								S D S
601	Broken Core							0%		1504				
	B137			W		IS			4					
	B189			W		IS								
606	J147	128		W		IR		0%	4	4502				repeats 4 times
	B181			C		PS								
	B185			C		PS			4					
611	B152			C		PS		0%	4					S D S
	END OF													HOLE

DATE Aug 10/79
 LOGGED BY Louann

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	SPEICIA/GOUGE, BROKEN CORE??	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
0								OVERBURDEN											
75	10%			J1	C	40		Broken core			0		0		0	0	0		
			J4	C	33														
			J1	C	25														
			J1	C	61														
			B4	C	84														
80	25%			J1	C	40	Broken core				0								
			B1	C	66		Some wav. evidence				0								
85	40%						Broken core				0								
			J1	C	59						0								
			J4	F	19														
			B1	W	75														
90	0%																		

LOGGED BY: D.G.
 DATE: July 26/79



GEOTECHNICAL LOG

HOLE No. 1251

SHEET 1/1

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	DRECCO GAUGE BROKEN CORE%	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
90	50%			↓1 C		54	Broken core						0						
			↓1 C		39														
95	34%			↓1 B		42	Broken core						0						
			↓4 B		27														
			↓1 B		35														
			↓4 W		43														
100				↓4 B		32	LOST CORE						0						
105	100%																		
110	96%			↓4 B		0	Lost core						0						
115	100%																		

LOGGED BY: D.G
DATE: July 26/79



GEOTECHNICAL LOG

HOLE No. 1251

SHEET _____ OF _____

DEPTH	% CORE LOSS 25 50 75			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA/GOUGE BROKEN COREZZ	HARDNESS 4 3 2			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
				TYPE	INFILLING	INCLINATION						ANGLE TO BEDDING	75	50	25	15	10	5
115	100%						LOST GORE											
120	80%						Broken core LOST CORE											
125	60%						Broken core											
130	100%						LOST CORE											
135	50%						Broken core											
140	20%																	

LOGGED BY: D.G
DATE: July 26/79



GEOTECHNICAL LOG

HOLE No. 1251

SHEET _____ OF _____

DEPTH	% CORE LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRINELL HARDNESS	ROCK QUALITY DESIGNATION %	NATURAL FRACTURE FREQUENCY PER FOOT							
	25	50	75	TYPE	INFILLING	INCLINATION						ANGLE TO BEDDING	4	3	2	75	50	25
140	20%						Broken core											
145	70%			J4	C	67	Broken core											
							Broken core - Lost core											
150	25%			J1	W	49	Broken core											
				J4	C	38												
155	26%			J1	W K	38	Broken core											
				J4	K	35												
160	20%			J1	B	60												
				J1	K	55												
				J1	K	52												
				B1	B	88												
				J1	W	65												
				J1	W	49												
165	0%			J1	C	46	3 of these											
				J4	W	0												
				J1	C	59												
				B1	C	62												
165	0%			B1	C	64												
				J4	W	24												
				J1	W	35												
				B1	K	66												
			J4	W	15													

LOGGED BY: D.G.
DATE: July 26/79



GEOTECHNICAL LOG

HOLE No. 1251

SHEET _____ OF _____

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA/GOUGE BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5	
165	0%			B ₄	C	84														
170	0%			B ₁	W	58														
				J ₁	W	26														
				B ₁	C	67														
175	0%			B ₁	C	65	7 of these													
				J ₁	W	41														
				B ₁	K	65														
				J ₄	W	22														
180	0%			J ₁	C	41														
				J ₁	W	41														
				B ₁	C	81														
				J ₁	C	32														
185	0%			J ₄	W	26	6 of these													
				B ₁	C	77														
				B ₁	B	71														
				J ₄	C	0														
190	0%			J ₁	K	48	1' long													
				J ₄	W	5														
				J ₁	K	45														
				B ₁	K	73														

LOGGED BY: D.G.
DATE: July 26/79



GEOTECHNICAL LOG

HOLE No. 1251

SHEET _____ OF _____

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA/GOUGE BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
190		0%																	
				B ₁	K	59													
				4	E	84													
		0%		4	E	65													
				B ₁	C	66													
195				4	W	43													
				4	E	60													
				B ₁	C	72													
				4	W	39													
		0%		4	W	32													
200				4	C	30													
				B ₁	C	59													
				B ₁	K	49		3 of these											
		0%		4	W	32		3 of these											
205				4	W	22	175												
				4	C	35													
				B ₄	K	70													
		0%		4	W	39													
210				B ₁	C	62													
				4	C	0													
				4	W	35													
		0%		B ₁	C	56		4 of these											
215																			

LOGGED BY: D.G.
DATE: July 27/79



GEOTECHNICAL LOG

HOLE No. 1251

SHEET _____ OF _____

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA/GOUGE BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
215		0%																	
				↓	E		25												
				B ₁	C		70												
		0%		↓	W		28												
220				↓	W		11												
				B ₁	C		64												
				↓	E		44												
225		0%		↓	C		52												
				↓	W		35												
				↓	C		21												
		0%		↓	E		29												
230				↓	W		18	250											
				B ₁	C		59												
				↓	C		43												
		60%		↓	W		25												
				↓	C		45												
235				↓	C		22												
				↓	C		36												
				↓	W		5												
		0%		B ₁	C		81												
				↓	W		29												
240				↓	W		29												
				↓	W		21												

LOGGED BY: D.G.
DATE: July 27/79



GEOTECHNICAL LOG

HOLE No. 1251

SHEET _____ OF _____

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG SRECCIA/GOUGE BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING			4	3	2	75	50	25	15	10	5
240	0%	B ₁	C	65														
245	0%	J ₄	W	28	175													
		B ₁	C	67														
		J ₁	W	32	180													
		J ₄	C	36														
250	30%	J ₁	E	29	180													
		B ₁	C	67														
		J ₄	E	34														
255	0%	J ₁	E	37														
		B ₁	C	71														
		J ₄	E	3														
		J ₄	W	11	140													
260	0%	J ₁	C	21	206													
		B ₁	C	77														
		J ₄	C	48														
		J ₁	E	29														
265	0%	B ₁	C	71														
		J ₄	C	34	240													
		J ₄	W	15														
		J ₁	C	24														
265	0%	J ₄	C	33														
		J ₄	W	0	18" long													
		B ₁	C	50														

LOGGED BY: D. G.

DATE: July 27/79



GEOTECHNICAL LOG

HOLE No. 1251

SHEET _____ OF _____

DEPTH	% CORE LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA/GOUGE BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT				
				TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10	5	
265		0	9																	
270				SLIP	C	70		100												
				C	OK	70		100												
				C		34		100												
						45	160													
275																				

LOGGED BY: D.G.
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GEOTECHNICAL LOG

HOLE No. 1251
 SHEET _____ OF _____

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of pieces	% CORE LOSS	HARNESS	R.Q.D.	Fracture Frequency %	HOLE NUMBER		ROCK TYPE	REMARKS	
		ANGLE	DIRECTION									1	2			
0271	B1	65	999	K	PS				4	70	3	1	2	5	1	Sandstone/Siltstone
	J1	34	220	C	PR				4							↓
	J1	29	195	W	PR				4							
0276	J4	19	150	KW	PS				4	50	2					Sandstone/Siltstone
	B1	69	999	KW	PS				4							↓
	J1	37	180	C	PS				4							
	J1	51	180	C	PS				4							
0281	J1	56	999	W	IR				4	55	3					Sandstone/Siltstone
	J4	19	999	W	IR				4							↓
	B1	69	999	C	PR				4							
	J1	34	210	C	PR				4							
0286	B1	65	949	C	PS				4	69	2					Sandstone/Siltstone
	J1	31	180	W	PS				4							↓
	J1	42	230	C	IR				4							
	J1	30	999	WK	PS				4							
0291	B1	64	994	C	PS				4	40	3					Sandstone/Siltstone
	B1	65	999	K	PS				4							↓
	J1	35	230	KW	IS				4							
	J1	21	160	W	PR				4							
0296	J1	32	075	W	PR				4	14	4					Sandstone/Siltstone
	J4	45	340	C	PS				4							↓
	B1	72	994	C	PS				4							
0301	B1	70	999	C	PS				4	62	3					Sandstone/Siltstone
	J1	38	220	W	PR				4							↓
	J1	35	195	W	PR				4							
0306	B1	70	499	C	PS				4	42	3					Sandstone/Siltstone
	J4	38	494	C	PS				4							
	J1	34	999	C	PS				3					SL+		
0311	J4	49	999	C	PS				3	24	4			SL+		
	J4	24	999	C	PS				3					SL+		
	B1	74	999	C	PS				3					SL+		
0316	J4	00	999	C	PS				3	09	20			SL+		
									0					COA		
																CRUSHED COAL

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DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Pitches	% CORE LOSS	HARNESS	R.O.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2		
0321			CRUSHED					COAL	0	020	020	1251	COA		
								0					COA		
0326	B1	85	999C		PS			50%	0	020	020		COA		
													COA		
0331	B1	79	999K		PS			crushed coal 40%	0	020	020		COA		
													COA		
0335	B1	61	999C		PS			0%	0	020	020		COA		
	J1	58	999W		TR				0				COA		
	J4	00	999W		TR				0				COA		
0338			crushed rock					0	2	020	020		MST		
													MST		
0341			crushed rock + coal					0	1	020	020		MST		
0346	J1	41	999C		PS			20%	0	1320	1320		COA		
	B1	85	999B		PS				0				COA		
	J4	39	999C		PS				0				COA		
0351	J1	51	999C		PS			0	2	0604	0604		MST		
	J1	68	999C		PS				7					Sandstone / Siltstone	
	J1	39	999C		TR				2				MST		
	J1	49	999C		TR				2				MST		
0354	J1	38	999C		PS			0	2	0806	0806		MST		
	B1	60	999B		PS				2				MST		
	J1	27	999W		PR				2				MST		
	J1	51	999C		PR				3				MST		
0359	J1	56	999C		TR			0	3	1408	1408		SLT		
	J1	32	999C		TR				3				SLT		
	B1	76	999W		PS				3				SLT		
	J1	29	999C		PS				3				SLT		
0364	J1	52	999C		PR			0	3	0610	0610		SLT		
	B1	53	999K		PS				2				MST		
	J1	33	999C		PS				2				MST		
0369	J1	50	999W		PS			0	2	1004	1004		MST		
	J1	43	999C		PS				3				SLT		
	B1	61	999W		PS				3				SLT		
	J1	39	999W		PR				3				SLT		
	J1	36	170W		PR				3				SLT		

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GEO TECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Pieces	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION									ROCK TYPE		
0374	J1	48	999	W	PR			0	3	620	3	5	LT	
	B1	76	999	W	PR				3				SL	
	J1	44	999	C	PS				3				SL	
0379	J1	41	999	K	PS			0	2	806	6	M	ST	
	J1	38	999	K	PS				2				MS	
	B1	65	999	C	IR				2				MS	
	J1	45	999	G	PS				2				MS	
0385	J1	24	999	K	PS			5%	3	2920	0	S	LT	
	B1	85	999	C	IR				3				SL	
														crushed coal
0390	B1	54	999	C	PS			35%	0	0620	0	C	OA	Some intact coal
	J1	33	999	C	PS				0				C	OA
	J1	51	999	C	PS				0				C	OA
														crushed coal
0396	J1	48	999	C	PS			0	0	0020	0	C	OA	
														crushed coal
0401	B1	64	999	K	PS			30%	2	0020	0	M	ST	
	J1	43	999	C	PS				2				M	ST
														broken core
0406	J1	31	999	C	PS			0	2	4204	4	M	ST	
	J1	41	899	KW	PS				2				M	ST
	B1	63	999	C	PS				2				M	ST
	J1	54	999	C	PS				2				M	ST
0411	B1	62	999	C	PS			0	3	4803	3	S	LT	
	J1	40	999	W	PS				3				SL	
	J1	42	999	W	PS				3				SL	
	J1	55	999	K	PS				3				SL	
0416	B1	45	999	C	PS			0	2	3404	4	M	ST	
	J1	34	999	C	PS				2				M	ST
0421	J1	42	299	C	PS			0	2	0820	0	M	ST	
	J1	35	999	C	PS				2				M	ST
	B1	73	999	C	IR				2				M	ST
	J1	59	999	C	IR				2				M	ST

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DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of PILES	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER			ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2	3		
0426				crushed coal						0020						
	√	42	4999C		IR			20%	0					COA		
	√	132	999C		IR				0					COA		
0431	B	158	999K		PS			0	0	0020				COA		
	√	138	999K		PS				2					MST		
	√	148	999K		PS				2					MST		
0436	B	176	999KW		PS			0	2	0020				MST		
	√	148	999C		PS				2					MST		
	√	142	999C		PS				2					MST		
0441	√	438	999C		PS			20%	2	0620				MST		
	√	140	999W		PS				2					MST		
	B	178	999C		PS				4					MST		
0446	√	144	210C		PS			0	2	2107				MST		
	√	136	999W		PS				2					MST		
	B	161	999C		PS				2					MST		
	√	155	999C		IR				2					MST		
0451	B	154	999C		PS			0	2	1208				MST		many of these
	√	151	999C		IR				2					MST		
	√	424	999C		PS				2					MST		
	√	140	999C		PS				2					MST		
0456	√	144	999C		PS			0	2	4503				MST		
	√	126	999C		PS				2					MST		
	B	162	999W		PR				2					MST		
0461	B	158	999C		IR			0	2	0905				MST		
	√	410	999C		IR				2					MST		
	√	426	999K		PS				2					MST		
0466	√	437	999KW		PS			0	2	1606				MST		
	B	155	999K		PS				2					MST		
	√	139	999C		IR				2					MST		
0471	B	148	999C		IR			10%	2	2105				MST		
	√	430	999KW		PS				2					MST		
	√	415	999W		IR				2					MST		

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DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of PILES	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS	
		ANGLE	DIRECTION									1	2			
0476	B1	75	999W		PS	S		0	3	150	6	1	2	5	1	Silt/Sand
		↓144	999WK		PS	S			3							↓
		↓400	999C		IR	R			3							
		↓136	999W		IR	R			3							
		↓130	999C		PS	S			3							
0481	B1	75	999C		PS	S		0	3	290	4					Silt/Sand
		↓130	170C		PS	S			3							↓
		↓124	999C		PS	S			3							
0486	B1	47	499C		PS	S		0	3	320	4	S	L	T		
		↓140	999W		IR	R			3			S	L	T		
		↓121	999C		PS	S			3			S	L	T		
		↓141	999KW		PS	S			3			S	L	T		
0491	B1	63	999K		PS	S		5%	3	0020		S	L	T		
		↓145	999C		IR	R			3			S	L	T		
		↓433	999C		IR	R			3			S	L	T		Broken core
0496	J1	40	999C		IR	R		0	2	020		M	S	T		Broken core
0501	Broken core							50%	0	0020		C	O	A		
0506	J1	44	5999C		PR	R		30%	0	0020		C	O	A		
		↓137	999C		PS	S			0			C	O	A		Broken core
		B464	999C		PS	S			0			C	O	A		core
0511	B1	52	999C		PS	S		60%	2	1420		M	S	T		Broken core
		↓432	999C		IR	R			2			M	S	T		- core loss
0516	B1	51	999C		IR	R		20%	0	20		C	O	A		S of Here
		↓410	999C		IR	R			0			C	O	A		Broken core
0521	B1	66	999C		IR	R		0	2	0606		M	S	T		
		↓159	999C		IR	R			2			M	S	T		
		↓431	999C		IR	R			2			M	S	T		
		↓733	999W		IR	R			2			M	S	T		
		B164	999B		PS	S			2			M	S	T		
0526	J1	41	7999C		PS	S		0	2	1004		M	S	T		
		B145	499C		PS	S			2			M	S	T		
		↓136	999C		IR	R			2			M	S	T		
		B142	499K		PS	S			2			M	S	T		

DATE Aug 1/79
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DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Pieces	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2		
0531	J1	49	999	C	IR			10%	200	06		1251	MST		
	V1	42	999	K	PS				2				MST		
	B8	40	999	C	IR				2				MST		
0536	B1	63	999	K	PS			3%	212	05			MST	6 of these	
	J1	46	999	W	IR				2				MST	Broken Core	
	J1	32	999	W	IR				2				MST		
0541	J4	41	999	C	IR				200	04			MST		
	J1	35	999	KW	PS			25%	2				MST		
	J1	44	999	W	PS				2				MST		
	B1	47	999	C	PS				2				MST		
0545	B1	57	999	C	PS			50%	200	20			MST	3 of these broken core	
0549	J1	46	999	K	PS				200	20			MST		
	B1	67	999	K	PS			3%	2				MST	Broken core	
	J1	36	999	K	PS				2				MST		
0554	B1	57	999	C	PS				321	06			S LT		
	J4	31	999	W	IR			0%	3				S LT		
	J1	46	180	C	PS				3				S LT		
	J1	25	999	C	PS				3					Silt/Sand	
	J1	39	999	C	IR				3					Silt/Sand	
0559	J1	49	999	C	IR				306	20				Silt/Sand	
	B1	54	999	C	PS			20%	3					Broken core	
	J1	45	999	W	PS				3					Silt/Sand	
	J4	24	999	B	IR				3					Silt/Sand	
0565	J1	44	999	C	PS				220	06			MST		
	B1	65	999	C	PS			0	2				MST		
	J1	50	200	W	PS				2				S LT		
	J4	33	230	S	PS				3				S LT		
0570	J4	36	999	C	PS				336	04				Silt/Sand	
	J1	30	150	W	PR				3					Silt/Sand	
	J1	44	030	W	PS			0	3					Silt/Sand	
	B1	62	999	C	PS				3					Silt/Sand	
	J4	04	999	C	IR				3					Silt/Sand	

DATE Aug 8/79

LOGGED BY D.G

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No. of Piles	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2		
0575	J4	04	999W		IR				3	2306		1	251		2 feet long
	B1	61	999C		PS		0		3						Silt/Sand
	J1	50	999C		PS				3						Silt/Sand
	J4	00	999W		IR				3						Silt/Sand
	J1	34	999W		IR				3						Silt/Sand
0580	B1	44	999C		PS		0		3	3003					Silt/Sand
	J4	25	999C		IR				3						Silt/Sand
	J4	27	999B		IR				3						
0583	J4	26	999C		PS		0		3	3603					
	B1	64	999K		PS				3						
	J1	28	210W		PS				3						
	J1	52	999W		PS				3						4 of these
0588	B1	60	999K		PS		0		3	2204					
	J1	54	999KW		PS				3						
	J1	46	165C		IR				3						
0591	J1	26	280W		PS				3	2603					
	J1	33	170C		PR				3						
	J1	36	999K		PS		5%		3						
	J1	37	999W		PR				3						Silt/Sand
	J1	45	230C		PR				3						
	B4	38	999C		PR				3						
0596	J4	36	999W		PR				3	0604					
	J1	27	999W		PS				3						
	J4	21	999WK		PS		5%		3						
	J1	25	999W		PS				3						
	J4	16	999W		PR				3						
0601	B1	52	999K		PS		0		3	1305					
	J1	42	999KW		PS				3						
	J1	33	999W		PS				3						
	J1	38	999W		PS				3						3 of these
0606	B1	56	999WK		PS		0		3	5202					
	J1	41	999K		PS				3						
	J1	39	999C		IR				3						
	J1	41	909C		IR				3						

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DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Planes	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2		
0611	B1	45	999	K	PS			0	4	27	04				4 of these Silt/Sand
	√4	31	999	W	IR				4						Silt/Sand
	√4	63	999	KW	IR				4						Silt/Sand
0616	B4	40	999	W	IR			0	4	16	05				Silt/Sand
	B1	40	999	K	PS				4						↓
	√4	00	999	W	IR				4						
	√4	32	999	W	IR				4						
0621	B1	64	999	K	PS				4	18	04				Silt/Sand
	√1	36	999	W	IR				4						↓
	√1	60	180	C	IR			0	4						
	√1	32	210	W	PS				4						
	B1	34	999	C	PS				4						Bedding change
0626	√4	48	999	C	PS				4	06	05				Silt/Sand
	√1	44	999	C	IR			0	3			SS+			↓
	B1	62	999	K	FF				3			SS+			
0631	B1	77	999	C	IR				4	42	03				Silt/Sand
	√1	42	999	K	PS			0	4						5 of these
	√4	30	999	KW	IR				4						Silt/Sand
0636	√4	45	999	K	PS				4	24	04				Silt/Sand
	√4	37	999	K	PS				4						↓
	B1	62	999	C	IR			0	4						
	√4	28	999	C	IR				4						
0641	B1	49	999	C	IR				4	44	02				Silt/Sand
	√1	36	130	C	IR			0	4						Silt/Sand
	√4	38	999	C	PS				2			SL+			
	√1	34	999	W	IR				2			SL+			
0646	B1	55	999	C	PS				4	11	07				Silt/Sand
	√4	14	999	C	PS			0	4						Silt/Sand
	√1	32	170	C	IR				4						Silt/Sand
0651	√1	44	999	C	IR				4	08	08				Silt/Sand
	B1	64	999	C	PS			0	2			MS+			
	√1	43	999	C	PS				2			MS+			
	√4	49	999	C	PS				2			MS+			

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DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Pieces	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		REMARKS	
		ANGLE	DIRECTION									1	2		
0656	J	46	999	C	PS			20%	2	14	20	1	2	MST	
	J	38	999	K	PS				2					MST	
	B	56	999	B	IR				1					COA	
0661	B	175	999	B	IR			0	1	00	20			COA	
	J	44	999	B	IR				1					COA	
	Broken core														
0666	J	415	999	B	IR			27%	1	00	20			COA	
	B	60	999	C	IR				1					COA	
	Broken core														
0671	B	55	999	C	IR			0	2	18	20			MST	
	J	42	999	C	IR				2					MST	
	J	36	999	K	PS				2					MST	
	J	47	999	K	PS				2					MST	
0676	B	57	999	B	PS			0	2	19	06			MST	5 of these
	J	42	999	K	PS				3					SLT	
	J	36	999	C	IR				2					MST	
														MST	
0681	J	435	999	KW	IR			0	2	21	06			MST	
	J	46	999	K	PS				2					MST	
	B	52	999	C	PS				2					MST	3 of these
	J	42	999	B	IR				2					MST	
0686	J	436	999	C	IR			0	2	28	05			MST	
	B	72	999	C	PS				2					MST	
	J	46	999	C	IR				2					MST	
	J	32	999	C	PS				2					MST	
0691	B	164	999	C	IR			0	3	50	03			SLT	
	J	436	999	W	PS				3					SLT	3 of these
0696	J	42	999	K	PS			0	2	26	05			MST	3 of these
	B	52	999	C	IR				2					MST	
	J	40	999	W	IR				2					MST	
	J	10	999	W	PS				2					MST	
0701	J	400	999	W	IR			0	4	30	04				Silt/Sand
	J	40	999	KW	PS				4						Silt/Sand
	B	72	999	W	PS				4						Silt/Sand
	J	39	999	K	PS				4						4 of these Silt/Sand

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DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No. of Pipes	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2		
0706	√	1	29999W		IR				239	03		1	2	MS+	
	√	4	22999K		PS			○	2					MS+	
	√	14	49999K		PS			○	2					MS+	
	B	18	19999C		PS				2					MS+	
0711	B	1	74999K		PS				226	03				MS+	
	√	4	36999K		PS				2					MS+	
	√	4	29999KW		IR			○	2					MS+	
	√	1	37999W		IR				2					MS+	
0716	√	4	21999WK		IR				213	05				MS+	
	√	1	39999WK		IR			○	2					MS+	
	B	16	09999K		PS				2					MS+	
0721	B	16	19999K		PS				222	04				MS+	7 of these
			Broken cone					○	2					MS+	
0726	√	1	36999C		IR				474	01					Silt/Sand
	B	16	79999C		PS				4						4 of these
0731	√	1	36999C		PS				451	02					2 of these Silt/Sand
	√	1	44999C		PS			○	4						Silt/Sand
	B	14	89999C		PS				4						Silt/Sand
0736	√	1	39999W		PS				236	03				MS+	
	√	1	29999C		PS			○	2					MS+	3 of these
	√	4	46999C		PS				2					MS+	
	B	17	49999C		PS				2					MS+	
0741	√	1	34999K		PS				420	04					Silt/Sand
	B	16	69999C		PS			○	4						Silt/Sand
	√	4	50999C		PS				2					MS+	
0746	√	1	36999C		PS				000	20				COA	
	√	1	40999C		PS			○	0					COA	
			Broken cone						0					COA	
0751	B	17	19999C		PS				000	20				COA	4 of these
			Broken cone					○	0					COA	
0756	B	16	99999C		PS				000	20				COA	
	√	4	35999C		PS			○	0					COA	
			Broken cone						0					COA	

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DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No. of PIECES	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION											
0761				NO				0						
0766	B1	66	999	KW	PS			10%	0	00	20	COA		12 of these
				Broken Core								COA		
0771	B1	62	999	KW	PS				2	00	20	MST		
		129	999	KW	PS			0	2			MST		
		439	999	W	IR				4					Silt/Sand
				Broken Core					4					Silt/Sand
0775	J1	46	999	C	PS				4	00	20			Silt/Sand
		135	999	W	PS			0	4					Silt/Sand
		405	999	W	IR				4					Silt/Sand
	B1	65	999	W	PS				4					Silt/Sand
0780	B1	08	999	W	PS				4	00	20	SS+		7 of these
		152	999	C	PR			0	4			SS+		
		436	999	W	IR				4			SS+		
		160	999	K	PS				4			SS+		
0782	J4	12	200	C	IR				4	00	20	SS+		
	B1	78	999	C	PS			0	4			SS+		
		129	999	C	IR				4			SS+		
		416	999	C	IR				4			SS+		
0786	B1	65	999	C	PS				4	30	06			Sand/Silt
	J1	31	130	C	IK				4					Sand/Silt
	B1	78	999	W	PS			0	4					Sand/Silt
	J1	46	030	W	PS				4					Sand/Silt
	B1	66	999	K	PS				4					Sand/Silt
	J1	62	999	C	PS				3			SL+		
	J1	49	999	C	PS				3			SL+		
0791	J1	50	999	W	PS				3	00	20	SL+		
	J4	31	999	W	IR			0	3			SL+		
	B1	66	999	C	PS				2			MST		10 of these
	J4	32	999	KW	PS				2			MST		
0796	J1	45	999	C	IR			0	2	10	20	MST		
	B1	75	999	C	IR				2			MST		6 of these
	J4	47	999	K	PS				2			MST		

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DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Planes	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION									1	2	
0801	B1	71	999	KW	IR			20%	2	00	20	1	251	
		√420	999	K	PS				2					
				Broken core					2					
0806	B4	71	999	K	PS			0	2	08	20			
				Broken core					2					
0811	J1	39	999	K	PS			15%	2	00	20			
				Broken core					2					
0816	√1	32	999	B	IR				0	00	20			
	B1	72	999	B	IR			10%	0					
	√420	999	B	IR					0					
				crushed coal					0					
0821	B4	76	999	C	IR			20%	0	00	20			
	√155	999	C	PS					0					
				crushed coal					0					
0826	B1	63	999	K	PS			0	2	00	20			
	√446	999	C	IR					2					
	√432	999	K	PS					2					
0831	√446	999	K	PS				0	2	28	05			
	√400	999	K	PS					2					
	B1	66	999	K	PS				2					6 of these
0836	√430	999	W	PS					4	48	04			Silt/Sand
	√136	999	C	IR					4					Silt/Sand
	√429	999	KW	TR					4					
	√146	190	W	PR					4					2 of these
0841	√142	999	W	PS				25%	4	35	03			
	√130	999	C	PR					4					
	B1	58	999	C	PS				4					
0846	√408	999	C	PR					4	16	04			Silt/Sand
	B1	62	999	C	PS				4					
	√431	999	WK	TR					4					

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DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Pipes	% CORE LOSS	HARNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2		
0851	V1	52	999	C	PS				4	26	04				Silt/Sand
	V1	46	999	KW	PS			○	4						
	V1	44	390	W	PS				4						5 of Rose
	B1	64	999	W	PS				4						
0856	V1	31	999	W	PS				4	27	04				Silt/Sand
	V1	33	999	W	PS				4						
	V1	22	999	W	PS			○	4						
	V1	26	999	W	PS				4						
	V1	47	999	W	PS				4						
	V1	39	999	W	PS				4						
	B1	71	999	W	PS				4						Silt/Sand
0861	V1	42	999	W	IR				2	00	06			MS+	
	B1	53	999	W	IR			○	2					MS+	100% Rose
	V1	46	999	W	IR				2					MS+	
	V4	27	999	C	PR				2					MS+	
0866	V1	49	999	C	PS				3	50	06			SL+	
	V1	49	999	W	IR			○	3					SL+	
	V4	14	999	W	IR				3					SL+	
	V4	09	999	WK	IR				3					SL+	
	B1	62	999	W	IR				3					SL+	
0871	V1	44	999	K	PS				3	20	04			SL+	
	V1	60	999	W	IR			○	3					SL+	
	V1	81	999	W	IR				3					SL+	
	B4	43	999	K	PS				3					SL+	
0876	B1	61	999	C	PS				4	22	04			SS+	3 of Rose
	V1	36	999	C	IR				4					SS+	
	V1	31	180	C	IR			○	4					SS+	2 of Rose
	V1	42	150	C	IR				4					SS+	
	V1	36	195	C	PR				4					SS+	
0881	V1	45	210	C	PR				4	26	04			SS+	4 of Rose
	V1	34	999	C	PR			○	4					SS+	
	B1	65	999	C	PR				4					SS+	
0886	B1	61	999	C	PR				4	30	05			SS+	
	V1	52	190	W	PR				4					SS+	
	V4	22	999	W	IR			○	4					SS+	
	V1	42	140	W	PR				4					SS+	
	V1	28	130	C	PS				4					SS+	

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DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Pieces	% CORE LOSS	HARNESSES	R.Q.D.	Fracture Frequency	HOLE NUMBER			ROCK TYPE		REMARKS
		ANGLE	DIRECTION									1	2	3	1	2	
0891	↓	4	29220	C	PS				4	00	20	SS	SS	+			
	↓	4	06999	C	IR		○		4			SS	SS	+			Broken core
	B	4	69999	K	PS				4			SS	SS	+			
0896	B	1	65999	K	PS				4	63	02	SS	SS	+			
	↓	1	50265	C	PR		○		4			SS	SS	+			2 of these
	↓	1	57150	C	IR				4			SS	SS	+			
	↓	1	50010	C	IR				4			SS	SS	+			
0901	↓	1	60130	C	IR				4	84	02	SS	SS	+			
	B	1	51999	C	IR		○		4			SS	SS	+			
	↓	1	38150	C	IR				4			SS	SS	+			
	↓	1	42220	C	IR				4			SS	SS	+			
0906	↓	4	11999	C	PS				4	19	04	SS	SS	+			
	↓	1	34999	C	IR		○		4			SS	SS	+			
	↓	1	32180	C	IR				4			SS	SS	+			
	↓	1	50145	C	PR				4			SS	SS	+			
0911	↓	1	36190	C	PR				4	40	04	SS	SS	+			
	↓	1	35999	K	PS				4			SS	SS	+			
	↓	1	34999	C	PR		○		4			SS	SS	+			3 of these
	B	1	62999	C	PS				4			SS	SS	+			3 of these
	↓	1	41310	C	PR				4			SS	SS	+			
0916	↓	1	37180	C	PR				4	51	02	SS	SS	+			
	↓	1	52999	C	IR				4			SS	SS	+			2 of these
	↓	1	40180	C	IR		○		4			SS	SS	+			
	B	1	78999	K	PS				4			SS	SS	+			
	↓	1	37030	C	PR				4			SS	SS	+			2 of these
	↓	1	44020	C	PR				4			SS	SS	+			
0921	↓	1	36190	C	PR				4	33	03	SS	SS	+			
	B	1	69999	C	PR				4			SS	SS	+			
	↓	1	26030	C	PR		○		4			SS	SS	+			
	↓	1	40050	C	IR				4			SS	SS	+			
	↓	1	46999	C	PR				4			SS	SS	+			2 of these
	↓	1	48310	C	PR				4			SS	SS	+			
0926	B	1	52999	C	PR				4	59	02	SS	SS	+			
	↓	4	28999	C	IR		○		4			SS	SS	+			
	↓	1	48240	C	PR				4			SS	SS	+			
	↓	1	41080	C	IR				4			SS	SS	+			
	↓	1	38320	C	PR				4			SS	SS	+			

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DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of PIECES	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									12	51		
0966	J	152	999	K	PS	S			3	43	04	12	51	SL+	
	B	169	999	C	PS	S			3					SL+	4 of Rese.
	J	151	999	K	PS	S	0		3					SL+	
	J	140	999	K	PS	S			3					SL+	
	J	440	999	C	PS	S			3					SL+	
	J	420	999	C	PS	S			3					SL+	
0971	J	134	999	C	PS	S			3	27	20			SL+	
	B	158	999	C	IR	S	0		3					SL+	
		Broken core - crushed											Mud/coal		
0976		crushed core										230	00020		Mud/coal
0981		crushed core										0	0000		Mud/coal
END OF HOLE															

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DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of PICTS	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION											
0931	V	124	310	C	PR				4	26	04	SS	+	
	B	173	999	K	PS				4			SS	+	
	V	404	190	E	IR			0	4			SS	+	
	V	146	999	C	PR				4			SS	+	
	V	138	999	C	IR				4			SS	+	
	V	144	070	C	IR				4			SS	+	
0936	B	157	999	C	TR				4	57	02	SS	+	
	V	141	210	W	PS			0	4			SS	+	
	V	130	180	C	PS				4			SS	+	
	B	154	999	B	IR				4			SS	+	- 3rd floor
0941	V	145	999	W	TR				4	46	02	SS	+	
	V	132	999	W	IR			0	4			SS	+	
	V	142	990	C	IR				4			SS	+	
	V	138	180	B	PR				4			SS	+	
0946	V	146	020	C	PR				4	25	03	SS	+	
	V	135	015	C	PS				4			SS	+	
	V	139	999	C	IK			0	4			SS	+	3rd floor
	V	133	999	C	DR				4			SS	+	
	V	127	190	C	PR				4			SS	+	
	B	164	999	C	IR				4			SS	+	
0951	B	158	999	K	PS				4	67	01	SS	+	
	V	131	220	C	PR			0	4			SS	+	
	V	154	195	C	PR				4			SS	+	
	V	143	999	K	PS				4			SS	+	
0956	V	154	999	C	PS				4	86	02	SS	+	
	B	152	999	C	PR				4			SS	+	
	V	155	999	K	PS			0	4			SL	+	
	V	135	999	W	PS				3			SL	+	
0961	V	151	999	C	PR				3	22	04	SL	+	
	B	158	999	K	PS				3			SL	+	4th floor
	V	139	999	B	PS			0	3			SL	+	
	V	146	999	C	IR				3			SL	+	
	V	131	999	W	PS				3			SL	+	

DATE Aug 14/79

LOGGED BY D.G.

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5	
5																				
10				J1	F	12	195	REPEATED TWICE	[Diagonal hatching]	[Diagonal hatching]										
			J2	F	15															
			B2	C	70															
			B4	C	70															
			B1	C	75															
			J2	C	30	155														
15																				
	0%			B4	C	80														
				B1	C	75														
				B1	C	71														
				B1	C	74														
				B4	P	76														
				B1	C	77														
				B2	C	79														
20				J1	W	26	35													
	8%			J4	W	13	150													
				B4	C	78														
				B4	C	75														
				J4	C	17	195													
				B2	C	72														

K14
July 10/79

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DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
	8%			B1 B4 B1 J4 B1 J1	C C W W C C	75 70 80 18 85 35	325	REPEATED TWICE											
30	0%			B4 B2 B1 J4 B2	C C C C C	70 72 75 10 78	125	REPEATED ONCE REPEATED TWICE REPEATED TWICE											
35	0%			B4 B2 B1 B2 J3 J4	C C C C C C	82 75 60 75 5 22	150 165	REPEATED ONCE REPEATED TWICE REPEATED ONCE											
40	5%			J2 B2 J4 B4 J1 B2 B1	C C W C C C W	55 72 18 75 25 72 80	62 215	REPEATED TWICE REPEATED 4 TIMES											
45	0%			B4 J4 B1 J1 B2 J1	C C C C C F	65 58 80 42 78 22	240 195 225												

LOGGED BY: KH
DATE: July 10



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 2 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
	25	50	75	J4 B4 B2 B1 B1 J4 B2	C C C C C C C	20 20 70 77 80 10 75	105	REPEATED TWICE ANGULAR - REPEATED 4 TIMES											
55				J4 B2 B1	B C B	40 80 70	300	REP. TWICE REP. SEVERAL TIMES											
60				B2 E2	B B	78 80		REPEATED SEVERAL TIMES "											
65				J4 B2	B B	40 80		REPEATED SEVERAL TIMES " " "											
70				B2	B	80													
				J1 B2	B B	32 71		REPEATED SEVERAL TIMES "											

LOGGED BY: KA

DATE: JULY 10/79



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 3 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
80	8%			B ₂	B	80		REP. 2											
				J ₂	B	50													
				J ₁	B	57	145												
				J ₁	BW	35		REPEATED SEVERAL TIMES											
				B ₂	B	80													
85	4%			J ₃	C	60		REPEATED 4 TIMES											
				B ₂	B	75													
				B ₂	C	60		REP. 2											
				B ₂	B	80		REP. 3											
				B ₄	B	80													
90	0%			J ₄	BW	28		REP. 2											
				B ₁	B	85													
				J ₁	BW	80	40												
				J ₄	BW	38													
				B ₂	B	82													
				B ₂	B	80													
				J ₄	B	70													
95	36%			B ₁	B	80													
				J ₄	BW	8													
				B ₄	BW	50													
				J ₂	W	50													
				J ₄	C	30													
				J ₄	SS	35	35												
				B ₂	B	80		REPEATED 2											

LOGGED BY: _____
DATE: _____



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 4 OF

DEPTH	% FINE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	SPECIA TESTS BROKEN CORES	SHADED FROM LEFT			SHADED FROM ROCK LEFT			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	FILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
		0%		B ₁ J ₄ B ₂ B	SS W B B	25 3 80 40	135 160												
105		0%		J ₁ B ₂ J ₂	SS B C	55 80 40	92	REPEATED 15 TIMES REP 1											
110		0%		J ₄ B ₂ B ₁ J ₂	W B BW BW	55 65 80 70		REP. ONCE											
115	///	25%		B ₁ J ₄ J ₄ J ₁	B W W W	80 20 50 18 30	250 100												
120		5%		J ₁ B ₂ J ₄ J ₄ J ₄ B ₂	C C W, B W, B W C	53 80 10 10 55 80	90 85 265	B											
		0%		B ₂ J ₄	B B	80 85	325	REPEATED SEVERAL TIMES											

LOGGED BY: KH
DATE: July 11/79



GEOTECHNICAL LOG

HOLE No. 1257

SHEET 5 OF

DEPTH	FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	% CORE LOSS 25 50 75	TYPE	INFILLING	INCLINATION			ANGLE TO BEDDING	4	3	2	75	50	25	15	10
130	12%	J ₁ B ₂ J ₂ J ₃ J ₄ B ₂ C	B B W W W W C	45 78 38 22 22 75	100 175 180	REP. ONCE REP. 5									
135	0%	B ₁ B ₂ B ₁ J ₄ J ₃	C W B C C	85 65 78 42 70	210										
140	0%	J ₂ B ₂ J ₄ B ₂ J ₄ J ₃	C C W B W B	62 83 18 80 50 80	40	REP. ONCE REP SEVERAL TIMES									
145	60%	J ₄ J ₄ B ₁	C C B	70 21 70	160	REP ONCE 3 TIMES REP									
	0%	J ₁ B ₁ J ₄	B B W	70 55 70 6	175	REP. SEVERAL TIMES									

LOGGED BY: KIA
DATE: JULY 11/79



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 6 OF

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
155	20%	J ₄ C 58 180 J ₄ W 12 170 B ₁ B 70 B ₂ C 80 B ₂ B 80		REP. SEVERAL TIMES															
160	20%	J ₂ B 40 40 B ₂ B 80 J ₄ C 40 190		REP. TWICE REP. SEVERAL TIMES															
165	7%	J ₁ W 35 J ₂ W 30 J ₁ W 32 B ₁ B 72 340 B ₁ C 80		REP. ONCE															
170	40%	J ₃ C 65 50 B ₁ C 80 J ₂ W 40 155 J ₄ B 38																	
	18%	B ₂ B 82 J ₄ C 20																	

LOGGED BY: KH
 DATE: JUNE JULY 11/75



GEOTECHNICAL LOG

HOLE No. 1259

SHEET 7 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
180	5%			B ₂	K	80		REP SEV TIMES (12-15)											
				J ₂	W	18													
				B ₂	B	80		REP SEV TIMES (8-10)											
185	0%			B ₁	B	80		} 50 of these											
				B ₂	C	80													
190	0%			J ₄	B	40													
				J ₄	B	10	195												
				B ₂	C	82													
				J ₄	W	18													
				J ₄	C	25													
				J ₁	W	20	95												
				B ₂	C	70													
195	0%			J ₄	W	22	340												
				J ₁	W	12	350												
				J ₄	W	26		REPEATED ONCE											
				B ₁	SS	80													
				B ₂	C	80													
	0%			J ₂	W	22	305												
				B ₂	C	82													
				B ₁	B	80													
				J ₄	C	25	290												
				J ₄	W	4													
				B ₂	C	80		ABOUT 18" LONG											

LOGGED BY: KH
DATE: July 11/79



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 8 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
205	0%			J ₁ B ₂ J ₁	C C C	29 75 29	180 180 180	REP. 4 REP. 4 TIMES											
210	0%			B ₂ J ₁ J ₄ J ₄ B ₂	C W W W C	75 12 55 18 70	260 290	REP. ONCE											
215	0%			J ₄ B ₄ B ₁ B ₂ J ₄	B W C B W	35 75 78 85 4	140	REP. ONCE REP. ONCE REP. 4 TIMES											
220	0%			B ₂ J ₄ J ₄ J ₂ J ₁ B ₂	B B W C W C	80 30 7 30 2 85	20 165 280	REP. 4 TIMES											
230	0%			B ₂ J ₁ B ₄ J ₄ J ₄ J ₃	B C C W W C	90 40 80 4 10 50	215 60	REP. TWICE REP. TWICE REP. ONCE REP. ONCE											

LOGGED BY: KH

DATE: JULY 1979



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 9 OF

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA OR BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION % 75 50 25			NATURAL FRACTURE FREQUENCY PER FOOT 15 10 5		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
230	0%			B ₄ B ₂ C C C C K C C	C C C C C C C C	85 80 18 70 13 4 8	110 260	REP. TWICE											
235	0%			J ₂ B ₂ J ₂ J ₂ J ₄	C C C C C	2 18 17 30 4	115												
240	0%			J ₄ J ₄ J ₄ J ₄ J ₂	W C W C	2 2 17 80	258 200 240	REP. ONCE											
245	4%			B ₂ J ₄ J ₄ J ₁	B W B B, W	82 40 8 7		REP. 11 TIMES											
	7%			J ₁ B ₂ J ₂ J ₃ B ₂	B B W B B	55 75 37 45 75	300												

LOGGED BY: KIA
DATE: JULY 12/19



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 10 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
255		7%		B ₁ J ₄ C B ₂ B	C W C B B	80 77 77 70 60	230	REP. 2 REP 10 TIMES	11.000.1.										
260		60%		B ₁	B	80		REPEATED SEVERAL TIMES											
265		25%		B ₂ J ₄	B B	80 40		REPEATED SEVERAL TIMES											
270		22%		B ₂ J ₁	B B	75 50	60	REPEATED 22 TIMES											
		30%		B ₂	B	75		REP. SEV. TIMES											

LOGGED BY: KH
DATE: July 12-13/79



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 10 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BERECIA EM BROKEN COPEL	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
	0%			B ₄ B ₂ J ₄	B B B	65 77 64	105												
280	0%			B ₂ B ₁ J ₁ B ₂	B B B B	80 72 47 80	210	REP. 2 REP. 4 REP. 3											
285	0%			J ₄ B ₁ B ₂ B ₄ B ₁ J ₁	B B B B B B	37 78 75 81 78 30	310	RED 3 TIMES											
290	0%			B ₁ J ₂ J ₂ B ₁	B B _w B B	72 40 34 78	180												
295	0%			J ₂ J ₂ B ₂ B ₁ B ₁ J ₄	B _w B _w B B B W	32 16 84 80 76 4	300	REP. 1											
	0%			B ₁ S ₁	B B _w	90 18	335	RED 7 TIMES											

LOGGED BY: KA
DATE: July 16/79



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 11 OF

%	FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA FILL BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75	TYPE				INFILLING	INCLINATION	ANGLE TO BEDDING	4	3	2	75	50	25	15
10%																	
0%				J ₄ W 18 B ₂ C 70 B ₂ B 76 S ₂ B 82	REP. ONCE REP. 2												
0%				J ₄ W 35 B ₂ B 76 J ₂ W 36 J ₂ W 76	REP. 3 ANGULAR - REP. 4.												
0%				J ₂ B 39 B ₄ B 82 J ₄ W 30 J ₂ W 30 J ₂ W 19 J ₂ W 30	REP. 2 REP. 3 BED 1 REP. 2												
15%				B ₄ B 70 B ₂ C 68 J ₁ W 29	ANGULAR REP. ONCE												
0%				B ₂ B 72 J ₂ B.W 31 B ₂ C 78													

LOGGED BY: KIT
DATE: JULY 16/79



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 12 OF

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
	0%																		
330	0%			B ₂ W 87				REP. 5 TIMES											
				J ₂ W 36			165	REP. 4 TIMES											
				J ₄ W 5			210												
335	0%			B ₂ B 77				REP. TWICE											
				J ₂ W 60															
				J ₁ SS 55															
				J ₂ C 40				REP. ONCE											
				J ₁ W 25			155												
				J ₄ C 20			120	REP. ONCE											
				J ₂ B 47			130	REP. ONCE											
340	0%			J ₄ C 79			155												
				B ₂ B 72															
				B ₄ C 70				REP TWICE											
				J ₃ C 55															
				B ₄ C 80															
				B ₂ W 80															
				B ₂ B 72				REP. TWICE											
345	0%			S ₂ B,W 48			150	REP 4 TIMES											
				B ₂ C 68				REP TWICE											
				B ₂ B 68				REP 10											
				S ₄ B 5			165												
				B ₂ B 70															
				B ₁ B 70															
				J ₄ B 55			240												
				J ₄ B 12			180												
				B ₂ B 68				REP. SEV. TIMES											

LOGGED BY: KN
DATE: JULY 16/79



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 13 OF

	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
			0%																
355			0%	B ₁ J ₁ B ₂	B B B	90 20 48 86	350	REP. SEV. TIMES											
360			0%	B ₁ B ₂ B ₂	B B B	76 65 70		REP. 5 TIMES REP. 4 TIMES											
365			0%	J ₃ J ₃ B ₂ B ₂ B ₂ J ₄	B W B C B C	50 40 68 80 78 35	115	REP. 6 TIMES											
370			4%	B ₁ B ₂ B ₂ B ₂ B ₁ B ₁	SS B C B B B	68 80 70 80 76 88		REP. 4 REP. 2											
			0%	J ₂ B ₁ J ₁ B ₂ B ₂	B B W C B	6 76 21 70 74	197	REP. 5 TIMES ALONG J ₁ REP. ONE											

LOGGED BY: _____

DATE: _____



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 14 OF _____

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA AND BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
320	0%			B ₂ B ₂	A A	30 90		REP 1 REP 1 REP 2											
				J ₄ B ₂ J ₁ J ₄ J ₄ J ₁	W C W W W SS	15 74 19 8 21 60	150 190 185	REP 2											
385	0%			J ₄ J ₁	W W	5 36	216 180												
340	0%			J ₄ B ₂ J ₄ B ₄ J ₄	B B C W W	30 96 30 55 50	145 145												
395	0%			B ₂ J ₂ J ₄ B ₂ J ₄ S ₄ J ₄	C W W B B C C	42 17 4 70 26 22 47	120 246 180 235	REP. 1											
	0%			J ₄ B ₂ J ₄ B ₄ B ₂	W B W C C	5 80 14 65 80	65 185	REP. 1 REP 2 REP 4 TIME											

LOGGED BY: RH
DATE: JULY 16/79



GEOTECHNICAL LOG

HOLE No. 1252
SHEET 15 OF

DEPTH	% CORE LOSS 25 50 75			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
				B ₂	B	70												
				B ₂	C	80												
				B ₁	B	74												
				J ₁	B	55												
				J ₄	B _W	34												
405	0%			B ₄	B	80												
				B ₁	B _W	65												
				B ₂	B	70												
				J ₄	C	14												
				J ₂	C	18	25											
				J ₂	W	10	255											
				J ₄	W	4												
410	0%			J ₄	W	44	165											
				J ₃	C	30	300											
				J ₂	C	30	300											
411				J ₄	W	14	75											
				J ₂	W	37	300											
				B ₂	B	74												
				J ₄	C	30												
				J ₂	B	11	200											
				B ₂	C	77												
415	0%			J ₂	C	14	180											
				J ₄	C	40	27											
				J ₄	W	14												
				J ₄	W	10	225											
				J ₂	C	42	105											
				J ₂	C	28	180											
				B ₂	C	70												
420	0%			B ₁	B	70												
				J ₄	W	16	185											
				B ₂	C	80												
				B ₂	B	76												
				J ₄	B _W	14												
				B ₂	C	18												
				J ₁	SS	62												
				B ₁	B	80												

LOGGED BY: RT
DATE: July/79



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 16 OF

DEPTH	% CORE LOSS 25 50 75			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT				
				TYPE	INFILLING	INCLINATION			ANGLE TO BEDDING	4	3	2	75	50	25	15	10	5	
430	0%			B ₂ B ₂ B ₂ B ₂	B B B B	70 70 80 68	REP. 3 REP. 9 REP. 10												
435	0%			B ₂ J ₁ B ₁ B ₁	C B B B	78 11 60 70	170 REP. 2 REP. 2 REP. SEVERAL TIMES												
440	14%			B ₂	B	80	REP. SEV. TIMES												
445	2%			B ₂ J ₁	B B	70 30	REP. ONE												
	0%			J ₁ B ₁ B ₂	B B B	60 80 80	REP. 3 REP. 7												

LOGGED BY: KH
 DATE: July 19/79



GEOTECHNICAL LOG

HOLE No. 1252
 SHEET 17 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
455	0%			B ₁ S ₄	B ₂ W	70 14	210	REP 4											
				B ₂ S ₄	B ₁ W	68 10	120												
460	0%			J ₄ B ₂	W	22 73		REP. 1											
				B ₂ S ₄	B ₂ W	3 79		REP 2											
465	0%			J ₃ J ₄	B W	30 14													
				B ₁ B ₂	B ₁ W	78 32		REP 2											
470	0%			B ₄ S ₄	L W	68 25	70	REP 1											
				S ₄	W	3	235												
	0%			J ₄ B ₁	W W	16 55	120												
				B ₂ B ₂	W B	70 78		REP 5 TIMES											
				B ₂	B ₁ W	78 78		REP 12 TIMES											

LOGGED BY: KH
DATE: JULY 17/8



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 18 OF

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
				B ₁	B ₁	18													
				B ₄	B	76													
				B ₂	B	76													
		0%		J ₄	B _w	10	240												
				J ₁	B _w	48													
480				B ₂	B _w	75	30												
				B ₂	B	70													
				J ₁	W	18	275												
				J ₂	B	75													
		0%		J ₄	B _w	14													
				J ₄	W	10	90												
				J ₄	B	28													
				J ₂	B	24													
485				J ₄	B	22	225												
		0%		J ₄	B	34		REP. 1											
				B ₂	B	80		REP. 2											
				B ₁	B	85													
		0%		J ₂	B _w	20	162												
				B ₂	B	82													
490		0%		B ₁	C	33	265												
				B ₂	B _w	72		REP 10 TIMES											
				J ₄	B _w	14													
		0%		J ₂	W	20	120	REP ONCE											
				B ₂	C	85		REP 5											
				J ₄	C	10													
495				J ₄	W	5	145												
		0%		J ₄	B _w	36	210												
		0%		J ₄	W	20	95												
				B ₂	C	70		REP 5											

LOGGED BY: RH
DATE: JULY 17/79



GEOTECHNICAL LOG

HOLE No. 1282

SHEET 19 OF

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
	0%			W		15	210	REP 2											
	0%			W		15	165	REP 4											
	0%			W		48													
				B		16	130												
				B		81		REP. 4											
				BV		40	140												
505				W		20		REP. 2											
				W		85		REP 4											
				C		81													
				W		24	150												
				C		22													
				W		4													
510	0%			W		20	320												
				W		9	165												
				C		32	190												
				W		4	190												
				W		2	200												
				W		20		REP 1											
				C		80		REP 8.											
515	0%			SS		44	321	REP 1											
				B		72		REP 2											
				C		85													
				B		54													
				B		82		REP. 5 TIMES											
520	0%			B		80		REP. TWICE											
				B		80		REP. 4											
				B		78													
	0%			B		45	117	REP 2											
				B		90		REP SEVERAL TIMES											

LOGGED BY: KH
DATE: July 18/79



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 20 OF

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
530	12%			B ₂ J ₄	B B	80 50	60	REP. SEVERAL TIMES											
535	30%			B ₂ J ₄ J ₂ B ₂	B C C C	80 14 32 82	170	REP. 2											
540	17%			B ₂ J ₄ G ₂ J ₂ J ₃ J ₂ B ₄	B B B, W B C B W	72 22 40 81 33 52 21	300	EASILY FRACTURED ROCK calcite Healed											
545	0%			J ₄ J ₄	B B	6 22		REP ONE REP. 4 EASILY FRACTURED ROCK											
	0%			J ₄ B ₂ B ₄ B ₂ J ₁ B ₁	W B C B, W W B	10 78 70 70 16 65	340 170	REP. 1											

LOGGED BY: KN
DATE: JULY 18/79



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 21 OF

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN COREZ	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
				B ₂	C	80		REP 8											
555	5%			J ₁	B	4	210	REP 2											
				B ₂	C	65													
				J ₂	D	22	250												
				J ₂	B	30		REP 3											
560	0%			J ₃	C	10		REP 10 TIMES											
				B ₂	B	75													
				J ₄	B	28	210	REP 2											
				B ₁	B	35		REP 1											
				J ₂	C	32													
565	0%			J ₄	W	26		REP 2											
				J ₁	B	52		REP 1											
				J ₁	C	38	255	REP 1											
				B ₂	B	70													
				J ₃	C	36													
570	0%			B ₂	C	30	140	REP. 1											
				B ₂	C	70													
	0%			J ₃	C	22													
				J ₄	C	31	60												
				B ₁	C	70		REP. 5 TIMES											
				J ₂	C	30	130												

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LOGGED BY: K/K
DATE: July 18/79



GEOTECHNICAL LOG

HOLE No. 1257

SHEET 27 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING						75	50	25	15	10	5
				J ₄	C	14												
	10%			B ₄	B	70												
580				B ₄	C	70												
	88%																	
585																		
	0%																	
				J ₂	C	40	200	REP 1										
	0%			J ₂	C	40	150	REP 1										
590				B ₄	B	70												
				J ₂	B	4												
				J ₁	C	54		REP. 2										
				B ₁	C	68												
	0%			B ₄	C	71												
				J ₄	W	26	170											
				J ₄	B	48	180											
595				J ₃	C	48												
				B ₂	B	70		REP 2										
				J ₇	C	47	175	REP 3										
				B ₄	B	70												
	0%			J ₄	C	20	170	REP 2										
				B ₁	B	50		REP. 1										
				J ₂	B	41	180	REP 1										
				J ₁	B	41	167	REP 1										
				B ₁	B	70		REP 2										

LOGGED BY: KM
DATE: July 18-19/79



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 23 OF

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
				J4	L	26	37												
630	0%			B1	C	51	175	REP 2											
				B1	C	60													
				B1	C	45													
635	0%			J4	B	9	330	REP 1											
				J4	B	19	320												
				J2	C	32													
				B4	C	78													
				B1	C	70													
				J4	C	17	160												
640	0%			J4	C	42	325	REP 1											
				B4	C	66	186												
				J4	C	10													
				B2	C	64													
				B1	C	62													
				B4	C	78		REP 7											
				B4	C	78		REP ONCE											
645	0%			B2	C	70		REP ONCE											
				B1	C	74		REP ONCE											
				B2	B	80		REP 5											
				J4	W	24	180												
				J2	C	24	60												
				J4	W	40	220												
				B1	B	70													

LOGGED BY: EH
DATE: JULY 19/79



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 25 OF

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
655	20%			B ₄	K	4	336	REP. 2 REP. 1	[Diagonal hatching]										
				B ₄	C	46	325												
				B ₁	C	80													
				B ₁	W	80													
660	10%			B ₁	K	54		REP. 1 REP. 9 TIMES	[Diagonal hatching]										
				B ₁	C	55													
				B ₁	B	70													
				B ₂	B	70													
665	0%			B ₂	B	80		REP. 3 REP. 3	[Diagonal hatching]										
				B ₄	B	76													
				B ₁	K	76													
				B ₁	B	76													
670	0%			F ₁	C	52	265	REP. 2	[Diagonal hatching]										
				B ₂	C	76													
670	0%			B ₄	C	80		ALONG MINOR FAULT REP. TWICE	[Diagonal hatching]										
				B ₁	C	27	75												
				B ₁	C	72													
				B ₁	B	26	180												
				B ₁	K	27													
				B ₂	C	25	258												
B ₂	C	77																	
B ₄	W	77																	
B ₁	C	78																	
B ₁	K	78																	

LOGGED BY: RIT
DATE: July 20/79



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 26 OF

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION % 75 50 25			NATURAL FRACTURE FREQUENCY PER FOOT 15 10 5		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
680	0%			J ₃ C 70 J ₂ C 80 B ₂ C 80 J ₂ C 79 B ₂ C 71 K 32	265 85 175 240	REP 4 REP 2													
685	0%			B ₃ C 70 B ₁ C 78 J ₄ C 18 B ₁ C 72 B ₄ C 74 J ₄ W 4 B ₁ C 79	220 150														
690	0%			R ₁ C 74 J ₄ W 24 B ₁ C	155	REP 9													
695	12%			J ₄ W 12 J ₄ C 33 B ₄ C 70 J ₄ W 20 J ₄ C 29 J ₄ K 20 B ₂ C 34 L ₁ K 60 B ₁ B 79 B ₄ K 78 J ₄ W 19 B ₁ C 80 B ₁ C 80	335 65 100	REP 2 REP 7 REP 1 REP 2 REP 7													

LOGGED BY: KA
DATE: JULY 26/79



GEOTECHNICAL LOG

HOLE No. 1258

SHEET 27 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
	0%			B ₁	C	78													
	0%			B ₂	B	47	170	REP 9											
	0%			B ₁	B	70													
705	0%			B ₁	C	74		REP 4											
				B ₁	W	24	170												
				B ₁	W	47													
				B ₁	W	30													
				B ₁	W	30	120												
				B ₁	B	80		REP 3											
	0%			B ₁	B	74													
710	0%			B ₁	B	4	180	REP 6											
				B ₁	B	78													
				B ₂	B	80		REP 2											
715	12%																		
720	50%																		
	0%																		

LOGGED BY: KH
 DATE: July 19, 23/79



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 28 OF

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
730	3%			J ₁ B ₁ B ₂	B B B	18 40 84		J REP 8											
735	0%																		
740	6%			J ₁ B ₂ J ₃ B ₂ J ₂ B ₄	C B C B B B	34 68 12 74 38 65	335												
745				J ₂ B ₄ B ₁ J ₂ B ₂ J ₂	B B B B K K	60 68 68 24 72 30	42	REP. 3 REP. 3											
				J ₁ J ₁ B ₁ B ₂ B ₂	B B B B B	24 58 76 70 44	30	REP 2 REP 2 REP 4											

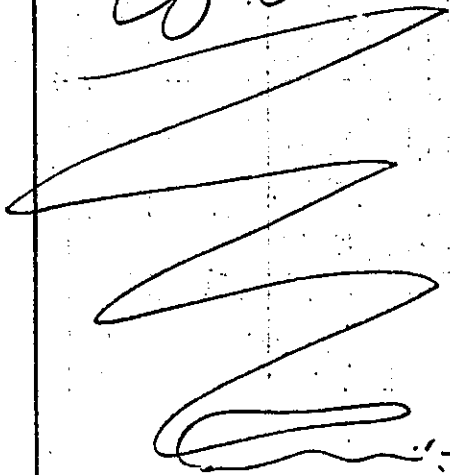
LOGGED BY: KH
DATE: JULY 23/79



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 29 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
				4	2	6	32.5				/ / / /	/ / / /	/ / / /						
755								<p>End of Core</p> 											
760																			
765																			
770																			

LOGGED BY: K/A
DATE: JULY 23/79



GEOTECHNICAL LOG

HOLE No. 1257
SHEET 30 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING			4	3	2	75	50	25	15	10	5
20								OVERBURDEN										
25	5%			B ₁ ↓	W	82		3 of these										
				B ₁ ↓	W	80		2 of these										
				C ↓		30												
				C ↓		26												
				B ₁ ↓	C	82		3 of these										
				C ↓		0												
				B ₁ ↓	B	82												
				C ↓		0												
				B ₁ ↓	B	74		4 of these										
				B ↓	B	25												
	15%			B ↓	B	60		2 of these										
				B ↓	B	70		2 of these										
				B ↓	B	60		5 of these										
				B ↓	B	46												
				B ↓	B	64												
35	0%			C ↓		40												
				B ₁ ↓	B	80												
				B ↓	B	84												
				B ↓	B	85												
				C ↓		60												
				C ↓		23												
				B ₁ ↓	C	88												

LOGGED BY: D.G.
DATE: July 16/79



GEOTECHNICAL LOG

HOLE No. 1253
SHEET 1 OF 25

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
35	0%			F	C	25													
40	0%			F	C	10	220	4 of these											
				F	C	14													
				F	C	18													
				F	C	20													
				F	C	26													
45	0%			F	C	10	2 of these	3 of these	2 of these										
				F	SS	12													
				F	C	16													
				F	E	22													
				F	C	38													
50	0%			F	C	30	135												
				F	C	35													
				F	C	24													
				F	SS	74													
				F	W	0													
55	0%			F	C	60	340	Broken core	2 of these	Broken core									
				B	B	79													
60	50%			F	W	10	210	Broken core	3 of these										
				F	W	12													
				B	SS	78													

LOGGED BY: D.G
 DATE: July 16/79



GEOTECHNICAL LOG

HOLE No. 1253

SHEET 2 OF 25

DEPTH FEET	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
60	50%																		
61	50%			B ₁	SS	36		2 of these Broken core ↓											
62				B ₁	SS	77													
63				B ₁	SS	8	66												
64	0%			B ₁	SS	50		2 of these 4 of these											
65				B ₁	SS	80													
66				B ₁	SS	46													
67				B ₁	SS	46													
68				B ₁	SS	46													
69				B ₁	SS	46													
70				B ₁	SS	46													
71				B ₁	SS	62													
72				B ₁	SS	73													
73				B ₁	SS	40													
74				B ₁	SS	65													
75				B ₁	SS	38													
76				B ₁	SS	32													
77				B ₁	SS	45													
78				B ₁	SS	79		3 of these											
79				B ₁	SS	5													
80				B ₁	SS	37													
81				B ₁	SS	71													
82				B ₁	SS	46		Broken core											
83				B ₁	SS	5													
84				B ₁	SS	58													
85				B ₁	SS	65													
86				B ₁	SS	70		4 of these Broken core											
87				B ₁	SS	48													
88				B ₁	SS	70		Broken core 3 of these											
89				B ₁	SS	30													
90				B ₁	SS	87		5 of these											

LOGGED BY: D.G.
 DATE: July 16/79



GEOTECHNICAL LOG

HOLE No. 1253

SHEET 3 OF 25

DEPTH	% CORE LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
85				B ₁	C	85	3 of these											
		39%		B ₂	C	85	3 of these											
				L4	C	20												
				L1	C	68												
90				L4	C	50												
		12%		B ₁	C	82	5 of these											
				L4	C	3												
				L4	C	11												
				L4	C	5												
				B ₄	C	80												
95				B ₁	C	80												
		9%		L1	C	22												
				L1	C	37												
				L1	C	68												
				L1	C	40												
				L1	C	12												
				B ₄	C	25												
				B ₄	C	80												
100				L1	C	50												
				L1	C	47												
				L1	C	55												
		0%		L1	C	55												
				L1	C	30												
				L1	C	27												
				B ₁	C	88												
105				B ₁	C	62												
				L1	C	88												
				L1	C	27												
				L1	C	43												
				B ₁	C	80	4 of these											
		0%		L4	C	10												
				L4	C	14												
				L4	C	77												
110				L4	C	5												
				B ₄	C	84												

LOGGED BY: P.G.
DATE: July 16/79



GEOTECHNICAL LOG

HOLE No. 1253
SHEET 4 OF 25

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE%	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5	
110	0%			E		30														
115	0%			E		30	190	3 of these	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	
						32														
						33														
						34														
						35														
						36														
						37														
						38														
						39														
						40														
120	0%			E		40	190	2 of these	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]
						41														
						42														
						43														
						44														
						45														
						46														
						47														
						48														
						49														
125	0%			E		50	190	5 of these	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]
						51														
						52														
						53														
						54														
						55														
						56														
						57														
						58														
						59														
130	0%			E		60	190	3 of these	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]
						61														
						62														
						63														
						64														
						65														
						66														
						67														
						68														
						69														
135	5%			E		70	190	3 of these	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]
						71														
						72														
						73														
						74														
						75														
						76														
						77														
						78														
						79														
80																				

LOGGED BY: D. G
DATE: July 17/79



GEOTECHNICAL LOG

HOLE No. 1253

SHEET 5 OF 25

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
135	5%	F	Z	15															
140	5%	F	Z	38 46 40 30 32 36 31 85 12 30	160 340 150 20														
145	0%	F	Z	36 22 19 40 32 72 32 30		Broken core													
150	70%	F	Z	28 70 24	30 220	Broken core													
155	0%	F	Z	42 48 25 38 50 44 42		Broken core							0%						
160	16%	F	Z	14 30 74 45 42 50 32 75 42 38		Broken core							0%						

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GEOTECHNICAL LOG

HOLE No. 1253
SHEET 6 OF 25

2 of these

DEPTH	% CORE LOSS 25 50 75			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
160	16%			B	35													
165	0%			B	35													
				B	32													
				B	28													
				B	26													
				B	24													
				B	20													
				B	20													
170	0%			B	35													
				B	32													
				B	28													
				B	26													
				B	24													
				B	30													
				B	14													
175	0%			B	20													
				B	20													
				B	20													
				B	28													
				B	15													
				B	28													
				B	15													
180	0%			B	87													
				B	30													
				B	28													
				B	40													
				B	68													
				B	17													
				B	20													
185	0%			B	79													
				B	80													
				B	12													
				B	13													
				B	10													

3 of these
2 of these

2 of these

5 of these
2 of these

Broken core

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GEOTECHNICAL LOG

HOLE No. 1253

SHEET 7 OF 25

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
185	0%			B ₁	C	28		3 of these	[Graphic Log Symbols]										
			B ₁	C	87														
			4	C	18														
			4	C	10														
190	0%			4	C	20		3 of these	[Graphic Log Symbols]										
			4	C	40														
			4	C	19	170													
			4	C	17	170													
			4	C	15	250													
			4	C	15														
			4	C	12														
			4	C	64	190													
			4	C	16														
			4	C	54														
195	0%			B ₁	C	72		6 of these	[Graphic Log Symbols]										
			B ₁	C	64														
			4	C	16														
			4	C	54														
			4	C	85														
			4	C	81														
			4	C	30														
			4	C	30														
200	0%			SS		62		3 of these	[Graphic Log Symbols]										
			B ₁	C	65														
			B ₁	C	88														
			B ₁	C	42														
			4	C	63														
			4	C	22														
			B ₁	C	84														
			B ₁	C	80		3 of these	[Graphic Log Symbols]											
			B ₁	C	26	170													
			4	C	39	180													
			4	C	39														
205	0%							INTACT core											
			B ₁	C	87			3 of these	[Graphic Log Symbols]										
			4	C	23														
			B ₁	C	80			3 of these.	[Graphic Log Symbols]										
			4	C	62														
210	0%			4	C	62													

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GEOTECHNICAL LOG

HOLE No. 1253
SHEET 8 OF 25

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
210				J	C	9	150	Broken CORE											
	40%			#	C	20													
				4	C	20													
				4	C	5													
215				H	E	16		Broken core 1' long Broken core 8 of them 6 of these											
	0%			4	E	3													
				4	C	49													
				4	C	46													
				4	C	15													
				4	C	13													
220				E	C	57													
	0%			4	C	20													
				4	C	87													
				4	C	10													
				4	C	67													
				4	C	32													
225				4	C	30													
	0%			4	C	18													
				4	C	47													
				4	C	84													
				4	C	8													
230				B	C	80													
	7%			4	C	40													
				4	C	15													
				4	C	10													
				4	C	86													
				4	C	15													
235				4	C	14													
				4	C	20													
				4	C	12													

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DATE: July 18, 79



GEOTECHNICAL LOG

HOLE No. 1253

SHEET 9 OF 25

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
235				B ₁	C	90													
				B ₁	C	89													
				B ₁	C	5													
				B ₁	C	89													
240				B ₁	C	90													
				B ₁	C	86	2 of these												
				B ₁	C	40													
245				B ₁	C	85	6 of these												
				B ₁	C	16													
				B ₁	C	63													
				B ₁	C	88	2 of these												
				B ₁	C	30													
				B ₁	C	68													
250				B ₁	C	85	2 of these												
				B ₁	C	4													
				B ₁	C	48													
				B ₁	C	48													
				B ₁	C	75													
				B ₁	C	0													
255				B ₁	C	85	7 of these	COAL											
				B ₁	C	0													
				B ₁	C	70	2 of these												
				B ₁	C	50													
260				B ₁	SS	62													
				B ₁	C	35													
				B ₁	C	85	5 of these	COAL											

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GEOTECHNICAL LOG

HOLE No. 1253

SHEET 10 OF 25

DEPTH	% CORE LOSS 25 50 75			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
260		0%					3 of these											
							2 of these											
							4 of these											
		0%					2 of these											
							3 of these											
265							4 of these											
							2 of these											
		7%					5 of these											
270							12 of these											
							3 of these											
		0%					CRUSHED COAL											
							5 of these											
275							CRUSHED COAL											
							CRUSHED COAL											
							2 of these											
		0%					CRUSHED											
280							2 of these											
							CRUSHED COAL											
							6 of these											
285		12%																

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GEOTECHNICAL LOG

HOLE No. 1253

SHEET 11 OF 25

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
285	12%			4	B	27													
	0%			4	B	70		crushed coal											
				4	B	89													
290				4	C	46													
				4	C	87													
				4	C	12													
				4	C	32													
295				4	C	62		crushed coal											
				4	C	71													
	0%			4	SS	62													
				4	SS	34													
				4	SS	60													
				4	C	87													
				4	C	32													
				4	C	62													
300				4	C	16													
				4	C	63		2 of these											
	0%			B	C	80													
				4	C	18													
				B	C	73		5 of these											
				4	C	6													
				B	C	89		4 of these											
				4	C	4													
				4	C	3		1' long											
				B	C	89		3 of these											
305	11%			J	SS	67													
				J	SS	71													
				4	C	14													
				B	C	89		4 of these											
				4	C	80													
	20%			B	B	87													
				4	C	44													
				B	C	86		7 of these											
				4	C	50													
310				4	C	69		2 of these											

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GEOTECHNICAL LOG

HOLE No. 1253
SHEET 12 OF 25

DEPTH	% CORE LOSS 25 50 75			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
310	20																	
	390						3 of them											
315							2 of these											
							6 of these											
	0%																	
320																		
	0%						2 of these											
325							2 of these											
	0%						Broken core											
330							3 of these											
							Broken core											
							2 of these											
335	0%																	

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GEOTECHNICAL LOG

HOLE No. 1253
 SHEET 13 OF 25

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
335	0%																		
340	0%																		
345	0%																		
350	0%							3 of these											
355	0%							Broken core											
360	0%							2 of these Broken core 2 of these											
								3 of these											

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GEOTECHNICAL LOG

HOLE No. 1253

SHEET 14 OF 25

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
360			0%																
				B ₁	C	80													
				B ₁	C	69													
				B ₁	C	58													
			0%	B ₁	C	0													
				B ₁	C	10													
365				B ₁	C	52		Broken core											
				B ₁	C	80		5 of these											
			0%	B ₁	C	40													
				B ₁	C	38													
370				B ₁	C	86		2 of these											
				B ₁	C	28	70												
				B ₁	C	12													
				B ₁	C	21													
			30%	B ₁	C	24													
				B ₁	C	35													
375				B ₁	C	32													
				B ₁	C	80		4 of these											
				B ₁	C	70													
				B ₁	C	15													
			12%	B ₁	C	75													
				B ₁	C	18	25												
				B ₁	C	20													
				B ₁	C	22													
				B ₁	C	24		3 of these											
				B ₁	C	27		3 of these											
				B ₁	C	19													
			0%	B ₁	C	20													
				B ₁	C	0													
385				B ₁	C	87		8 of these											

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DATE: July 20/79



GEOTECHNICAL LOG

HOLE No. 1253

SHEET 15 OF 25

DEPTH	% CORE LOSS 25 50 75			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
				TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10	5
385	0%			B ₁ C		87	Very intact core	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]		
			B ₁ C		87														
390	0%			B ₁ B		80													
				B ₁ C		88	Intact core	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]		
	10%			B ₁ C		89													
				B ₁ C		88													
395				B ₁ C		88													
				B ₁ B		72	3 more of these	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]		
	6%			B ₁ K		83	6 of these												
400				J ₄ D		8	7 of these												
				J ₁ C		42	18 of these	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]		
	0%			B ₁ B + K		85													
				J ₄ K		35													
405				J ₁ K		60													
							Broken core	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]		
				B ₁ B		83	Broken core												
	0%			J ₄ B		48	12 of these												
410				J ₄ B		21	Broken core												
				J ₄ B		36	Broken core	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]		

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 DATE: July 20 / 79



GEOTECHNICAL LOG

HOLE No. 1253

SHEET 6 OF 25

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE%	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT			
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5	
410	0%																			
				B ₁	B	89		3 of these												
				J ₁	B	31														
	0%			J ₁	B	47														
				J ₁	B	40														
				J ₁	B	25														
415				J ₁	B	38		Broken core												
				J ₁	B	72														
				B ₁	B	84		10 of these												
	0%			J ₁	B	30														
				J ₁	B	50														
				J ₁	B	67		5 of these												
420				J ₁	B	45		3 of these												
				J ₁	B	32		Broken core												
				B ₄	B	73		14 of these												
								Broken core												
	24%			J ₁	B	21														
425								Broken core												
				J ₄	B	4														
				B ₁	B	70		5 of these												
	30%							Broken core												
430				J ₁	B	47														
				J ₁	B	45														
				J ₁	B	51														
				B ₁	B	81		4 of these												
	10%			J ₄	B	8		Broken core												
435				J ₁	B	61														

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DATE: July 20, 79



GEOTECHNICAL LOG

HOLE No. 1253

SHEET 17 OF 25

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION % 75 50 25			NATURAL FRACTURE FREQUENCY PER FOOT 15 10 5		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
435	10%	↓	K	72															
			B ₁	C	83		3 of these												
	0%		↓	C	0														
			B ₁	C	87		3 of these												
440			B ₁	C	85														
			↓	C	26														
			B ₁	B	82		5 of these												
	10%		B ₁	B	86		2 of these												
445			↓	B	10														
			↓	C	15														
	0%		B ₁	C	90		5 of these												
			B ₁	B	87		3 of these												
			B ₁	C	87		3 of these												
450			↓	↓	↓														
			B ₁	C	88		3 of these												
	5%		B ₁	K	87		2 of these												
			↓	C	60														
455			↓	C	0														
			B ₁	K	88		2 of these												
			B ₁	K	88														
	0%		↓	C	60														
			↓	C	10														
			B ₁	C	14														
460			↓	C	84														
			↓	W	21														

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DATE: July 20 1979



GEOTECHNICAL LOG

HOLE No. 1253

SHEET 18 OF 25

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
460			0%	V	B	40													
				B1	K	87		2 of these											
				V	C	62													
			0%	V	E	52													
				V	E	43													
465				V	E	51													
				V	E	27													
				V	E	14													
				V	E	22													
			0%	B1	A	81													
				V	C	19													
				V	C	9													
				V	C	0													
470				B1	C	89		2 of these											
				B1	C	86		2 of these											
				B1	C	81													
				V	E	16													
			10%	B1	C	79													
				B1	C	80		2 of these											
				V	C	32													
475				B1	C	81													
				V	E	12													
				B1	B	36		3 of these											
				V	C	61		Broken core											
				V	C	70		Broken core											
				V	B	71													
480			15%	B1	C	85													
				V	C	69													
				V	C	18													
				B1	C	80													
				V	C	20													
			0%	B1	K	77													
				B1	K	75		Broken core											
				V	B	30													
485				B1	B	77		3 of these											

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DATE: July 23/79



GEOTECHNICAL LOG

HOLE No. 1253

SHEET 19 OF 25

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
485	0%			45		38		2 of these											
490	10%			45		41		4 of these											
495	0%			B ₁		81		2 of these											
500	0%			B ₁		67		at 496'											
505	0%			B ₁		70		2 of these											
510	0%			B ₁		66		Broken core:											

LOGGED BY: D.G.
DATE: July 23/79



GEOTECHNICAL LOG

HOLE No. 1253
SHEET 20 OF 25

DEPTH	% CORE LOSS 25 50 75			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
				TYPE	INFILLING	INCLINATION			ANGLE TO BEDDING	4	3	2	75	50	25	15	10	5
510		0%																
		5%	B ₁	C	87		2 of these											
515			B ₁	C	81		3 of these											
		0%	B ₁	C	13													
520			B ₁	C	18	200 150	5 of these											
		0%	B ₁	C	24													
525			B ₁	C	82													
		0%	B ₁	C	35													
530			B ₁	C	40		2 of these											
		0%	B ₁	C	88		2 of these											
535			B ₁	C	170		2 of these											

LOGGED BY: D.G.
DATE: July 23/79



GEOTECHNICAL LOG

HOLE No. 1253

SHEET 21 OF 25

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
535	0%			B ₁	K	72													
				B ₁	K	81	150	2 of these											
	0%			B ₁	K	89	150												
540				B ₁	K	80		2 of these											
				B ₁	C	81		5 of these											
				B ₁	C	80		5 of these											
				B ₁	C	15													
	0%			B ₁	C	69													
				B ₁	C	11													
545				B ₁	C	15													
				B ₁	C	20		2 of these											
				B ₁	C	80													
				B ₁	C	3													
				B ₁	C	20													
	0%			B ₁	K	18													
				B ₁	C	85													
				B ₁	C	41													
550				B ₁	C	52													
				B ₁	K	25													
				B ₁	K	28		3 of these											
				B ₁	K	81													
				B ₁	C	21	30												
				B ₁	C	20	40												
				B ₁	K	35	195	3 of these											
	0%			B ₁	C	71													
				B ₁	C	8													
555				B ₁	C	30													
				B ₁	C	44													
				B ₁	C	65													
				B ₁	C	41													
				B ₁	C	0	170	1' long											
	0%			B ₁	C	30		2 of these											
				B ₁	C	70													
				B ₁	C	65		2 of these											
				B ₁	C	88													
560				B ₁	C	31	165												

LOGGED BY: D. G.
DATE: July 24/79



GEOTECHNICAL LOG

HOLE No. 1253

SHEET 22 OF 25

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
560	0%			B1	C	72		2 of these	000										
565	0%			C	C	40	250 85	2 of these	000										
				C	C	20													
				C	C	30													
				C	C	38													
570	0%			C	C	40	200	broken core	000										
				C	C	15													
				C	C	180													
				C	C	0													
575	0%			C	C	28	80	broken core	000										
				C	C	10													
				C	C	13													
				C	C	5													
580	0%			C	C	10	2 of these	broken core	000										
				C	C	81													
				C	B	62													
				C	B	12													
585	0%			C	C	3	2 of these	broken core	000										
				C	C	25													
				C	C	80													
				C	C	18													

LOGGED BY: D.G.
 DATE: July 24/79



GEOTECHNICAL LOG

HOLE No. 1253
 SHEET 23 OF 25

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING			4	3	2	75	50	25	15	10	5
585	0%			B	B	50		2 of these										
				B	B	82		3 of these										
	10%			B	C	8												
				B	C	10												
				B	C	80		2 of these										
				B	C	12												
590				B	C	35		2 of these										
				B	C	21												
				B	C	88												
				B	C	80												
				B	C	3		broken core										
	15%			B	C	22												
				B	C	71												
595				B	C	86												
				B	C	12		Breccia										
				B	B	4												
				B	B	60												
	0%			B	B	81		3 of these										
				B	B	61												
600				K		55		Broken core - crushed coal										
								Breccia										
								crushed coal										
	0%							CRUSH COAL										
605				B		28												
				B		20												
	0%							Broken CORE - crushed coal										
610																		

LOGGED BY: M. J. ... D.G.

DATE: July 24/79



GEOTECHNICAL LOG

HOLE No. 1253

SHEET 24 OF 25

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA/GOUGE BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
610	0%			J4	C	10		Broken core								0%			
615	40%			J1	C	66		Broken core								0%			
				J1	C	20													
				J4	C	10		Broken core											
620	40%			J1	C	40		2 of these Broken core											
				J1	C	38													
				J4	C	25													
				B1	W	71													
625	0%			J1	W	31		Broken core 2 of these											
				J1	W	5													
				J1	C	35													
630								END OF HOLE											

LOGGED BY: D.G.
DATE: July 25/79



GEOTECHNICAL LOG

HOLE No. 1253
SHEET 25 OF 25



GEOTECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No. of Planes	% CORE LOSS	HARNESS	R.O.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2		
0017	B	75	999C		PS				5	32	05	1	254	SLT	7 of these
		44	999C		PS				3					SLT	
		43	999F		PS				3					SLT	
		41	999F		PS				3					SLT	
0021	B	61	999C		PS				3	79	01			SLT	- 2 of these
		13	999F		IR				4					SS+	
		14	999F		IR				4					SS+	
		43	999C		IR				4					SS+	
0026	B	24	010F		IR				4	73	01			SS+	
		64	999C		PS				4					SS+	
		49	340C		IR				1					SS+	
0031	B	21	150C		IR				4	64	01			SS+	
		77	999C		PR				4					SS+	2 of these
		40	999C		PS				4					SS+	
		41	2010W		PR				4					SS+	
		61	999B		PS				4					SS+	
0036	B	67	999C		PS				4	41	04			SS+	- 8 of these
		41	2210C		PS				4					SS+	2' long
		38	999C		IR				4					SS+	
0041	B	69	999K		PS				4	12	03			SS+	4 of these
		40	999C		PR				4					SS+	
		12	4150G		DR				4					SS+	
		41	5180C		PR				4					SS+	
		43	1999F		IR				4					SS+	
0044	B	66	999C		PR				4	41	05			SS+	
		42	4999C		IR				4					SS+	
		63	999K		PS				4					SS+	
		40	2210C		PR				4					SS+	
		22	220C		PR				4					SS+	
		41	8190C		IR				4					SS+	
		41	5240C		IR				4					SS+	
0049	B	25	999W		PR				4	20	01			SS+	2 of these
		17	8999C		PS				4					SS+	

DATE Aug 16/79

LOGGED BY D.G



GEOTECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	REGR.	% CORE LOSS	HARDNESS	R.O.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION								1	2		
0051	B1	61	999C	C	PR				22	0	1	254	SS+	3 of Rese
		41	0150C	C	PR								SS+	
		12	9999C	C	PR		0		4				SS+	
		40	0999C	C	PR				4				SS+	
		41	8499C	C	PS				4				SS+	
0056	√	42	8999B	B	IR				4	15	06		SS+	
		13	5999C	C	IR		0		4				SS+	
		B1	48999C	C	PR				4				SS+	
		40	0999C	C	PS				4				SS+	
0060	√	40	6999C	C	PS				3	5	70	3	SL+	
		B1	80999C	C	PR				3				SL+	
		41	6999C	C	PR		0		3				SL+	
		B1	75999K	K	PS				3				SL+	
		42	6999C	C	PR				3				SL+	
0065	B1	84	999C	C	PR		40%		4	2	50	2	SS+	4 of Rese
		43	2999C	C	IR				4				SS+	
0070	B1	86	999C	C	PS				3	4	40	3	SL+	
		13	0999C	C	PS				3				SL+	
		13	1999C	C	PS		0		3				SL+	- 2 of Rese - one has cracks w/ infilling
		13	9999C	C	PS				3				SL+	
		40	7999C	C	PS				3				SL+	
0074	√	12	5999C	C	PS				3	5	50	2	SL+	
		B1	70999C	C	PS		0		3				SL+	3 of Rese
		11	28999KB	B	DS				3				SL+	
0079	B1	76	999C	C	PS		50%		4	5	00	1		Sand/Silt
0081	√	13	6999C	C	PS				4	6	40	1		Sand/Silt
		12	5120C	C	PS		0		4					Sand/Silt
		B1	86999C	C	PS				4					2 of Rese
0086	√	42	0999C	C	PS		0		4	7	70	1		
0091	B1	68	999C	C	PS		0		4	7	80	2		4 of Rese
		43	3999C	C	PR				4					Sand/Silt

DATE Aug 16/79

LOGGED BY D.L.

GEOTECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No. of Pieces	% CORE LOSS	R.Q.D.	REMARKS	HOLE NUMBER	
		ANGLE	DIRECTION								1	2
											ROCK TYPE	REMARKS
0096	B1	71	999	C	PS			0	36902		Silt	5 of Rese
0101	J1	34	170	C	PR			0	47101			Sand/Silt
	J1	31	225	W	PR				4			
	B1	70	999	C	PR				4			2 of Rese
0106	B1	75	999	C	PS			0	47701			6 of Rese
	J1	33	185	W	PS				4			
	J4	14	999	C	PS				4			SAND/Silt
0111	J1	28	160	C	PS				44402			
	J4	09	150	C	PS				4			
	B1	77	999	C	PS			0	4			2 of Rese
	J1	11	185	W	PS				4			
	J4	12	170	C	PR				4			
0176	B1	88	999	C	PS			0	48901			4 of Rese Sand/Silt
0181	B1	70	999	C	PS				46702			3 of Rese Silt/Sand
	J4	14	999	C	PS			0	4			2 of Rese
	J4	20	999	C	PS				4			
0126	B1	72	999	C	PS			0	48501			3 of Rese
0131	B1	74	999	C	PS			0	49001			6 of Rese silt/sand
	J4	50	999	C	PS				4			
0136	B1	70	999	C	PS				43203			10 of Rese
	B1	70	999	K	PS			0	4			2 of Rese
	J1	26	999	W	PR				4			silt/sand
0141	B1	65	999	C	PS			0	38501		Silt	3 of Rese
	B1	65	999	K	PS				3		Silt	4 of Rese
0146	B1	80	999	C	PR			0	36102		Silt	5 of Rese
	J1	21	999	C	PS				3		Silt	
0151	B1	70	999	C	PR			0	37001		Silt	
	J1	21	999	C	PS				3		Silt	
	J1	22	999	C	PR				3		Silt	

DATE Aug 16/79

LOGGED BY D.I.

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION								1	2	
0156	B1	82	999C		PS		0	369	01	SLT	1	254	4 of these
0161	B1	80	999C		PS		0	349	01	SLT			8 of these
0166	B1	80	999C		PS		0	352	01	SLT			5 of these
0171	J4	00	999C		PS		0	368	01	SLT			
	B1	75	999C		PS		0	3		SLT			
	J1	52	999C		PS		0	3		SLT			2 of these
0176	B1	70	999C		PS		0	240	02	MST			5 of these
	J4	12	999C		PS		8%	2		MST			
	J4	14	999C		PS								
0181	B1	70	999C		PS		0	249	02	MST			3 of these
	J1	23	999W		PS		0	2		MST			
	J4	15	999W		IR			2		MST			
0186	J4	16	999W		PS		0	248	02	MST			
	B1	76	999C		PS			2		MST			6 of these
0191	B1	72	999C		PR			252	02	MST			5 of these
	J4	34	999C		PS		0	2		MST			
	J4	20	999C		PS			2		MST			
0196	B1	70	999C		PS		0	232	03	MST			9 of these
0201	B1	70	999B		IR			233		MST			5 of these
	J4	14	999B		IR		0	2		MST			
	J1	50	999BK		PR			2		MST			
0206	B1	75	999B		IR		0	100		COA			5 of these
	J1	63	999K		PS		0	1		COA			
	Broken core												
0211	J1	51	999B		IR			100	20	COA			
	J4	34	999B		IR		40%	1		COA			
	B1	68	999B		PS			1		COA			
0216	J1	36	999C		PS			117	20	COA			2 of these
	J1	44	999C		PS		15%	1		COA			
	J1	49	999B		IR			1		COA			
	J1	34	999B		IR			1		COA			

DATE Aug 16/79

LOGGED BY D.G.

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No. of Pieces	% CORE LOSS	HARDNESS	R.O.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2		
0221	J1	51	999B		IR				1	0020		COA			
	B1	77	999B		PR		0		1			COA		7 of these	
	J1	32	999B		PS				1			COA			
0226	B1	69	999K		PS				1	0020		COA		1	
	B1	69	999C		PS		0		1			COA		6 of these	
	J1	62	999K		PS				1			COA			
	J4	58	999K		PS				1			COA			
0231	B1	82	999K		PS				2	0020		MST		3 of these	
	J1	43	999B		ER		0		2						
	J4	51	999B		PS				1					crushed coal	
0236	B1	68	999B		PS				1	0620		COA		3 of these	
	J1	44	999B		PS		20%		1			COA			
	J4	50	999B		PS				1			COA			
	J1	38	999C		PS				1			COA			
0241	B1	51	999C		PS				1	0606		COA		10 of these	
	J1	46	999C		PS		10%		1			COA		2 of these	
	J1	26	999C		PS				1			COA			
0246	B1	73	999K		PS				2	0008		MST			
	B1	72	999C		PS		20%		2			MST		6 of these	
	J1	63	999C		PS				2			MST			
0251	J4	20	999W		IR				2	1205		MST			
	J1	60	999C		IR		0		2			MST			
	B1	67	999S		PS				2			MST		7 of these	
0256	B1	79	999C		PS				2	3403		MST		8 of these	
	B1	77	999B		PS		0		2			MST		2 of these	
0261	B1	80	999C		PS				2	5102		MST		5 of these	
	J4	24	999W		IR		0		2			MST			
0266	J4	22	999C		PS										
	B1	81	999C		PS									5 of these	
	J4	00	999W		PS										

DATE Aug 16/79

LOGGED BY T. K.



GEOTECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	NO. OF PLIES	% CORE LOSS	R.O.D.	FRACTURE FREQUENCY	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION								1	2		
0271	B282	090	C		PS			000	336	04			SLS	11
	B275	799	B		PS								MDS	3
	J104	999	W		TR								SST	1
0276	B280	999	C		PS			000	244	11			MDS	15
	J234	999	C		PS									2
	J219	999	W		PS									2
	J160	999	B		PS									1
	Some broken Rock													
0281	T114	999	W		PR			000	236	08			MDS	2
	B282	999	C		PS								SLS	13
	J179	999	C		PS								SST	6
0286	B272	999	C		PR			000	346	04			MDS	15
	J165	999	W		PR								SLS	2
	Some broken Rock													
0291	J209	999	C		PS			000	214	09			SLS	3
	B284	999	C		PS								COA	20
	Some broken Coal													
0296	B275	999	C		PS			020	346	03			SLS	5
	J240	999	C		PS									3
	J216	999	C		PS									1
	B180	999	B		PS									1
	J202	999	C		PS									1
0301	B282	999	C		PS			024	326	06			SLS	25
	J262	999	W		PS								SST	2
	Some broken rock													
0306	J143	850	W		PS			000	364	02			SLS	
	B270	999	C		PS								SST	
	B181	999	BW		PS									
0311	J252	999	C		PS			000	354	03			SLS	1
	J140	180	W		PS									1
	B274	999	C		PS									8
	J104		C		PS									1
0316	B286	999	C		PS			000	344	08			COA	4

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DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	R.C.G.	% CORE LOSS	R.O.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION							1	2		
	J2	46	999	C	PS	0					1254	SLS	4
	J1	3	150W		PR								1
	<i>Some broken coal.</i>												
0321	J1	50	999	C	PS	26	243	10				SLS	3
	B2	76	999	B	PS							COA	20
0326	B2	74	999	B	PS	74	100	20				COA	10
	<i>crushed coal</i>												
0331	J2	22	799	B	PS	0.5	100	20				COA	4
	J2	4	999	B	PS								6
	B2	8	211	B	PS								15
	<i>crushed coal</i>												
0336	J2	60	999	B	PS	0	100	20				COA	9
	J2	4	299	B	PS								5
	<i>crushed coal</i>												
0341	J2	46	999	B	PS	0	100	20				COA	10
	J2	59	999	B	PS								8
	<i>crushed coal</i>												
0346	B2	77	499	B	PS	0.6	100	20				COA	20
	J2	40	999	B	PS								6
	<i>crushed + broken coal</i>												
0351	J5	114	999	W	PS	0.3	32	14				SLS	10
	B2	78	999	B	PS								18
	J2	39	999	B	PS								8
0356	B2	86	099	C	PS	0.3	26	20				SLS	6
	J2	11	999	C	PR							SST	3
	J2	24	0	10W	PR								2
	<i>broken rock</i>												
	<i>fault zone at 358</i>												
0361	B2	79	099	C	PS	0.3	24	20				SLS	4
	J1	56	999	W	PS								1
	<i>BROKEN ROCK</i>												
0366	B2	85	999	C	PS	0.3	24	08				SLS	30
	J1	06	09	W	PS								5



GEO TECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No. of Pieces	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2		
0371	J1	6	999C		PS			03		40	04	SLS	1	SLS	4
	B2	84	999C		PS										11
0376	Broken core														
	J1	29	999C		PS			010		300	018	SLS		SLS	5
	B2	86	999C		PS										5
0381	J2	54	999C		PS			000		352	11	SLS		SLS	4
	B2	78	999C		PS										8
	BROKEN CORE														
0386	B2	74	999C		PS			000		330	12	SLS		SLS	16
	J1	36	999B		PS										1
	J1	19	999W		PS										3
0391	J2	45	999C		PS			022		308	05	SLS		SLS	4
	B2	85	999C		PS										12
0393	B2	80	999B		PS			000		200	30	COA		MDS	
0397	B2	80	999B		PS			000		100	30	COA			
	crushed coal														
0401	B2	55	999B		PS			066		100	30	COA			
	crushed coal														
0406	B2	80	999B		PS			020		100	20	COA			
	crushed coal														
0411	B2	82	999B		PS			040		100	40	COA		MDS	
	crushed coal														
0416	B2	82	999B		PS			026		100	20	MDS		COA	
	crushed coal														
0417	B2	81	999B		PS			030		200	30	MDS		COA	8
	crushed coal														
0421	B2	84	999C		PS			092		160	09	MDS		COA	15
	some crushed coal														
0426	J2	24	999C		PS			00		64	05				1
	B2	78	999C		PS										10

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GEOTECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No. of Pieces	% CORE LOSS	HARDNESS	R.Q.D.	FREQU. FREQU.	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2		
0461	√4	04	245	W	FR				4	14	03				Silt/Sand ↓
	√1	27	999	W	PR				4						
	√1	43	999	W	PS				4						
	B1	37	999	W	PR				4						
	√1	55	999	W	PR				4						
0466	B1	52	999	W	IR				4	18	04				Silt/Sand ↓
	√1	44	999	W	PS				4				SS+		
	√1	22	999	W	PS				4				SS+		
	√1	49	030	C	PS				4				SS+		
	√1	40	999	C	IR				4				SS+		
0471	√4	29	999	C	IR				4	20	04				3 of these
	B1	72	999	B	PS				4				SS+		
	√1	28	330		PS				4				SS+		
	√1	27	330		IR				4				SS+		
	√1	48	999	C	PR				4				SS+		
0475	√1	40	999	C	PS				4	22	06				3 of these
	√1	39	200	C	PS				4				SS+		
	B1	50	999	C	PS				4				SS+		
	√1	34	999	C	PS				4				SS+		
	√1	41	230	C	PR				4				SS+		
	√1	38	350	C	PR				4				SS+		
0481	√1	32	999	C	PR				4	13	08				SS+
	√1	36	999	C	PS				4				SS+		
	√1	41	999	C	PR				4				SS+		
	B1	64	999	C	PS				4				SS+		
0486	B1	79	999	C	PR				4	24	03				SS+
	√1	50	350	C	PS				4				SS+		
	√1	53	999	C	PR				4				SS+		
	√4	00	999	W	PR				4				SS+		
	√4	33	999	W	PS				4				SS+		
0491	√1	41	190	C	PS				4	43	03				SS+
	√4	26	200	C	PR				4				SS+		
	√4	15	190	C	PR				4				SS+		
	B1	80	999	B	PS				4				SS+		
	√4	31	999	C	PS				4				SS+		

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DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No. of Pieces	% CORE LOSS	WATERNESS	R.O.D.	Pressure	Stratigraphy	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION										1254		
	J 1	75	090	W	P	R									1
0431	B 1	74	499	B	PS			000	3	84		1	SL	S	5
	J 1	21	999	W	PS				3				SL	T	2
	J 1	56	999	B	PS				3				SL	T	3
0436	J 1	42	999	W	PS				3	440	3		SL	T	
	B 2	67	999	C	PS				3				SL	T	
	B 1	67	999	C	PS				3				SL	T	
	J 4	36	999	W	PK				3				SL	T	2 of these
	J 4	33	999	WK	PS				3				SL	T	
0441	J 4	26	999	WK	PS				3	004			SL	T	
	J 4	28	999	W	PR				3				SL	T	
	J 4	10	999	W	PR				3				SL	T	
	J 4	14	999	WK	PS				3				SL	T	
	B 1	71	999	C	PS				3				SL	T	
	J 4	33	999	C	PS				3				SL	T	
0446	J 4	36	999	KW	PS				3	120	5		SL	T	
	J 1	42	999	KW	PS				3				SL	T	
	J 4	22	999	KW	PS				3				SL	T	
	J 1	32	999	W	PS				3				SL	T	
	B 1	85	999	K	PS				3				SL	T	
0451	J 4	40	999	W	PS				3	240	3		SL	T	
	J 4	27	999	W	PS				3				SL	T	
	J 1	42	999	W	PR				3				SL	T	
	J 1	13	999	W	PS				3				SL	T	
	J 4	48	999	K	PS				3				SL	T	
	J 1	51	999	W	PS				3				SL	T	
	J 1	35	185	W	PS				3				SL	T	
	J 1	43	999	W	PS				3				SL	T	
0456	J 1	56	999	K	PS				4	290	2		SS	T	
	J 1	27	030	W	PS				4				SS	T	
	B 1	67	999	C	PS				4				SS	T	
	J 4	34	210	W	PS				4				SS	T	
	J 4	33	180	WK	PS				4				SS	T	heavy carbonate

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DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No. of Pieces	% CORE LOSS	HATCHES	R.Q.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION									1	2	
0496	J4	23	999C		PS				4	12	20	SS	T	
	J1	45	140C		PR				4			SS	F	
	B1	79	999C		PS		0		4			SS	F	
	J1	40	180C		PS				4			SS	F	
	J1	35	999C		PS				4			SS	F	
	J1	27	170C		PS				4			SS	F	
0501	J1	40	999C		PS				4	07	20	SS	T	
	B1	73	999B		PR		0		4			SS	T	7 of these
			Broken core						4			SS	T	
0506	B1	57	999B		PR				4	12	20	SS	T	
	B1	85	999B		PR		0		4			SS	F	
			Broken core						4			SS	F	
0511	J4	00	999C		PS				3	35	03	SL	T	
	J4	11	999C		PR		0		3			SL	T	
	B1	86	999C		PS				3			SL	T	3 of these
0516	J1	45	999C		TR				3	53	03	SL	T	
	B1	84	999C		PS		0		3			SL	T	
	J4	04	999C		PS				3			SL	T	7 of these
0521	B1	73	999C		PS				4	42	03			6 of these Silt/Sand
	J1	38	999C		PR		0		4					
	J4	22	999C		PS				4					→ ↓
0526	B1	78	999K		PS				3	14	04	SL	T	3 of these
	J1	46	999W		PS		20%		3			SL	T	
	J4	11	999C		PS				3			SL	T	
	J1	60	999C		PS				3			SL	T	
0531	B1	70	999K		PS				2	17	07	MS	T	6 of these
	J1	40	999WK		PS				2			MS	T	
	J1	38	099K		PS		0		2			MS	T	
	J1	25	799K		PS				2			MS	T	Silt/Sand
0536	J4	34	999K		PS				4	07	06			
	J4	15	999W		PS		0		4					
	J1	51	999W		PR				4					
	B1	62	999K		PS				4					4 of these ↓

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DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	RECON.	No. of pieces	% CORE LOSS	H.A.S.C.A.E.E.	R.O.D.	Feature	Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION										1	2		
0541	J1	49	499	K	PS				2	21	06		MST			
	J4	00	999	C	IR		①		2				MST			
	B1	62	999	W	PS				2				MST			
	B1	61	994	C	PR				2				MST			2 of these
0546	J1	46	499	C	PR				2	06	20		MST			
	B1	61	999	C	PS				2				MST			4 of these
	J1	35	999	C	PS		①		2				MST			
	J1	54	999	C	IR				2				MST			
							crushed coal		①				COA			
0551							crushed coal		①	00	20		COA			
0556							crushed coal		①	00	20		COA			
0561							crushed coal		①	00	20		COA			
0566							crushed coal		①	00	20		COA			
0571							crushed coal		①	00	20		COA			
0576							crushed coal		①	00	20		COA			
0581							crushed coal		①	00	20		COA			
0586							crushed coal		①	00	20		COA			
0591							crushed coal		①	00	20		COA			
0596	J2	54	999	B	PS				0	00	20		COA			6
							crushed coal									
0601	J2	70	999	B	PS				0	100	20		COA			15
	J2	30	999	BW	PS											4
							crushed coal									
0606	J2	25	999	C	PS				1	42	16		SL5			1
	B1	63	999	B	PS											6
	J1	11	99	W	PS											
							crushed rock									
0611	J1	00		B	PR				1	83	20		SL5			1
	J1	21		W	PS											8
	J1	43		BW	PS											3

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LOGGED BY D.G

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Pieces	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION									1	2	
				Broken crushed			Rock						1254	
0616	J1	30	999W		PS			041815				SST		8
	B2	76	999C		PS									3
	J1	03	999W		PS									1
				Broken core										
0621	J1	19	999C		PS			0644008				SST		5
	B2	76	999C		PS									8
	J1	36	999C		PS									3
	J1	05	999C		PR									3
0626	J1	42	999C		PS			0043218				SST		4
	J1	00	999C		PS									1
	B2	63	999C		PS									6
	J2	24	999C		PR									1
				Broken core										
0631	J2	32	999W		PR			0040720				SST		4
				crushed (Broken core)										
0634	J2	20	799W		PS			0041220				SST		3
				crushed + Broken core										
0641	J2	52	999C		PS			0032620				SST		5
	J3	00	999C		PR									
0646	J2	37	999C		PS			5000020				SST		2
	B2	68	999R		PS									
				crushed + Broken core										
0651	J2	45	999W		PS			0030020				SST		5
	B2	71	999C		PS									6
	J3	00	999C		PR									1
				crushed + Broken core										



GEOTECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	NO. OF PIECES	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2		
32	B	280			PR	3		5%	3	95	1		5	SST	
					FPR	1									
34	B	275			PR	1									
	B	285			PS	2		0%	3	80	5		5	SST	
35	B	240			BPR	4					2				
	B	250	190		PR	3		0%	2	80				5	SST
41	B	274			DR	3									MDS
	B	275			PS	5		0%	1	25	5			COA	
	B	108	235		PS	1									
46	T	108	235	W	AS	1									
	F	207	120	W	AS	1		0%	2	24	2			5	SST
	T	402			AS	3									
51	T	402													
	B	270			PR	6			3	48	7			5	SST
	B	262		W	PR	3		0%							
56	B	108	190	W	PS	2									
	B	248			PS	1								4	
	B	285			PS	2									
	B	282			PR	2		0%	1	6				MDS	
	B	121	74	W	PS	2									
	B	408	205	W	AS	2									Discontinue at 61'
61	B	281		B	PS	6			2		2			5	SST
	B	105	105		PR	1		0%		50				5	SST
	B	278			PS	2									MDS
66	B	284		B	PS	1					10				MDS
	B	282		B	PR	7								COA	BROKEN CORE
71	B	278		B	PR	4			1		0				COA
	B	284		B	PR	9									
	B	151		C	PS	1									MDS
76	B	224	210	B	PR	1				42					
	B	284		B	PR	3		0%	2	22	4				MDS
	B	272		B	PR	7									SST
	B	126		B	PS	2									

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LOGGED BY

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH. No. of Plates	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION										
81	B282					1 R1							
	J404					PS1						545	
	J224	140				PR	0	340				557	
	J414	315				PR							
	J781					PS3							
86	J412					PS							
	J410					PS1							
	J406					PS1							
	J220	060		WR		PR						557	
	R287			E		PS1		420		6			
	T224	210		W		PR	0						
	B131	055		W		PR3							
91	R276			C		PR							
	J313					PR1							
	R282											557	
	J710	145						317				857	
96	R282												
	R264					PS9						MI5	
	J404					PS1	0	220		6		545	REPLACEMENT
101	J404					PS1						COA	
	R282					PR2						557	
	J252	310				PS1	0	212		10		MI5	REPLACEMENT
	B174					PS4						COA	
106	J414	110		W									
	R280					PS1							
	R278					PS2	0	10		14		COA	
111	R282					PS2							
	J265	256				PS1	20%	1		9		COA	
	R284					PS5							
	J248	175				PS5							
116	J416	135				PS2	12%	2	00	11		545	
	B282					PR9						MI5	

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LOGGED BY YH

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No of Pieces	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		REMARKS	
		ANGLE	DIRECTION									ROCK TYPE			
	B	277		B	PR	8								COA	HILLY BROKEN
121	B	282		B	PR	9								MDS	
	B	182		B	PS	1								COA	
	B	479		B	PS	3	0%	2	12%	13				MDS	
	J	403		W	PS	1								S LT	
	B	268		B	PR	1									
126	J	224			IR	2									
	B	482			PR	2									
	B	479			PS	3		3							
	J	408	130		PS	1	0%		48%	2				S LT	
	J	104	175		PS	1									
	B	482			PR	3									
	B	178			PS	1									
131	J	402			PS	2		3							BROKEN CORE
	J	416	140		PS	2	0%		0	10				S LT	
	B	269			PR	1									
														S LT	
136	B	282			PS	2	0%	3	49%	13				S ST	BROKEN CORE FOR 3'
	J	302	155	W	PS	1									
141	J	418	145	W		1									
	J	1103	50	W	PS	1								S LT	
	J	460			PS	1	0%	3		7				S ST	
	J	227		W	PR	2	21%		21%						
	B	179		B	PS	5									
	J	403	090	W	PR	1									
	J	424	172	W		3									
	J	219		W	PS	2								S LT	
														S ST	
146	B	476			PS	2									
	J	424	345		PS	1	0%	3	33%	9					
	J	411	175		PS	1									
	B	474			PR	3									
151	J	405	260	W	PR	1								S LT	
	J	416			PS	1	0%	3	0	7				S ST	
	J	173			PS	2									
	J	402	265	W	PR	1									

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LOGGED BY KH

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of Pieces	% CORE LOSS	HARDNESS	R.O.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION									D D 1 2 5 5		
												ROCK TYPE		
	B	270			PR	3								
156	B	274			PR	2								
	B	273			PS	1	0	2	75%		1	SLT		
	J	407	145	W		6								
161	B	284			PS	1							MDS	
	J	224	215		PS	3	0	2	70%		2	SLT		
	B	284			PR	3								
													MDS	
166	B	277			PR	3		3	82%		1	SLT		
	J	324			IR	1	0							
	J	411	165			1								
													SLT	
171	B	268			PR	3	0	3	65%		4	SS		
	J	122	180		PS	7								
	B	209			IR	3								
176	J	125	210		PR	2							SLT	
	B	269			PR	2	0	3	54%		4	SS		
	B	272			PR	3								
181	B	164		WK	PR	1							SLT	
	J	216	190	W	PS	4	0	3	70%		4	SS		
	B	174		K	PS	1								
	J	404	230	W	PR	1								
186	B	162		K	PS	2							SLT	
	B	267			PS	2	0	3	78%		3	SS		
	J	424	218	W		3								
	B	172		K	PS	2								
191	J	424	220	W	PS	4							SS	
	B	272			PR	3	0	4	73%		2	SLT		
	J	222	185	W	PR	3								
196	B	272			PR	1								
	J	420	245	W		4	0	3	80%		1	SLT		
	B	176			PS	2							SS	
	B	177			PS	3								
201	B	270			PR	7	0	3	83%		1	SLT		

DATE KH
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GEOTECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No of Planes	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION									1	2	
206	J1	19	1S5		P	S	1					1001252		
	B2	74			P	R	2	0		375			SLT	
	A2	80			P	R	3							
	R2	78			P	R	2							
211	J4	19	225	W	P	R	2							
	B2	82			B	R	4	223	80°		3		SLT	
	B1	76			P	S	5							
216	J2	41		B	P	S	1							
	J1	27		BW	P	R	1							
	-	26		B	P	R	3	0		342%			SLT	
	B1	70		B	P	S	4						MDS	
	J3	26	030		P	R	1							
221	B1	82			D	S	2	5%		242%	5%		SLT MDS	
	B2	84		BW	P	R	5							
225	B2	85		B	D	S		30%	1	0			COA HIGHLY BROKEN	
230	B2	84		P	P	S		53%	1	0			COA HIGHLY BROKEN	
235	B2	84		B	D	S		0	1	0			COA HIGHLY BROKEN	
240	B2	83		B	D	S		0	1	0			COA HIGHLY BROKEN	
245	B2	83		B	P	S	8			0			COA HIGHLY BROKEN	
	J1	46	348		P	S	3	6%	1					
250	KT2	11	095	W	I	R	1						SLT	
	B2	76		B	P	R	9	0		312%	8			
	J4	07	250		P	S	1							
255	B2	83		B	P	R	8							
	B1	81		BK	P	S	3	0		275%			MDS	
	R2	86		A	P	R	9							
260	B1	86		B	P	S	1							
	B2	87		B	P	R	5							
	J1	82	170	B	P	S	1							
	J4	26	175		P	S	1	0		322%			MDS	
	B2	85		B	P	R	9							

DATE AUG 15/79

LOGGED BY KH

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No. of Planes	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									001255			
265	B	275			A	DR	4								
		73	50		A	IR	2								
	B	180			A	PR	1	11%	2	42%	8	MDS	BROKEN CORE AT 270'		
	B	283				PR	3					COA			
	J	410				IR	1								
	J	421	180		W	IS	1								
271	J	104	310	B		PR	3						COA		
	J	133	145	B		PS	1	0%	2	8%	16	MDS			
	B	177		B		PS	1					COA			
	B	280		B		PS	6						BROKEN CORE 273'		
276	J	244		B		PR	3	0%	2	0	20	MDS	BROKEN CORE 276'		
279	B	284		B		PR	4	0%	3	70%	2				
281	B	480		B		IS	2		3	76%	4	SLT			
	B	280		B		PR	5					MDS			
	J	420	230	W		PS	1	0							
	B	275				PR	8					SLT			
285	J	409	190												
	J	14	290			PS	2								
	B	276		B		PR	3	0	3	35%	2	SLT			
	B	478				PS	2								
	J	403	180	W		PS	1								
291	J	414		W		PS	4								
	B	166		B		PS	3	0	3	67%	3	SLT	HIGHLY POLISHED		
	J	407	305			PR	2								
291	B	182				PS	2								
	J	221		B		PR	2	12%	3	90%	3	SLT			
	B	280		B		PR	6								
301	B	270		B		PR	1								
	J	407	130	W		IR	1	0		63%	3	SLT			
	J	416	300			IR	1								
	B	286		B		PR	4								
306	B	275		B		PR	5					2	MDS		
	B	279		B		PR	5	0		0%		COA			

DATE AUG 16/99

LOGGED BY RH



GEOTECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH.	No. of PILES	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									101	1055		
	J181	165		R	PS4				1	7				LOA	
	B240			R	PS4										
31.5.5	B276				PS3									MDS	
	J138	350			PS2									MDS	
	J211	345			PR1		0		2	36	5			LOA	
	B282			R	PR2										
	J458			R	PR1										
														SLT	
32.0	T227				PR1										
	T217				PS1		0		3	70%	2				
	T327			R											
	B270			R	RR2										
														SLT	
325.5	B283			R	PR2		0		3	61%					
	T406	085		R	PS1										
	B277				PR2										
330.5	B284			R	PR2		0		2	30%	5				
	J444	300		R	PR2									MDS	
	B180			R	PS1										
335.5	B286				PS2										
	J143	055		RW			0		2	50%	3			MDS	
	T404				PS1										
	B284			R	PR2										
														MDS	
340.5	B276			R	PR2				3	70%	2			SLT	
	J414	350			PR1		0								
	B275				PR2									MDS	
														SLT	
345.7	J406				PS1		0		3	0	4			MDS	HIGHLY BROKEN
	J406	235			PS9									<LT	
	B279														
35.5	J100	100			PS2				3						
	R251				PS3		0		0		3			SET	
	B284				PS9										
35.6	B284				PR9		0		2	20%	2			MDS	
	J277	025			PS3									SLT	

DATE AUG 16/79

LOGGED BY KLI



GEO TECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No of Pieces	% CORE LOSS	MAGNETIC	R.O.D.	PRESSURE	TEMP.	HOLE NUMBER		REMARKS	
		ANGLE	DIRECTION										1	2		
361		J322			L	P	2									
		J407			P	P	4			30			3	5	LT	LARGE 134J42
		B282			P	P	2									
		B280			P	P	2									
365		J318			L	S	1	0		347			3	5	LT	
		J317	300		L	R	2									BROKEN CORE 368-1'
371	J	J713			P	R	2									BROKEN CORE 371-2
		J403			L	R	3	0		30			5	5	LT	ABOUT 1' LONG
		B486			P	S	2									
376	B	B285		B	P	R	1	0		3			1	5	LT	
		B282			P	S	4			75					M/S	
		J208	240		P	R	1									
381	B	B280			P	R	4	0		300			1	5	LT	
															M/S	
386	B	B281		B	P	S	5	0		3100			1	5	LT	
															M/S	
391	B	B176		B	P	S	1									
		B474		B	P	R	2									
		T425	097	W	P	R	1								5	LT
		B282		B	P	R	1								M/S	
		B180		B	P	S	1	0		357			4			
		B282		B	P	R	1									
		T156	165	B	K	P	S	1							5	ST
		B279		B	P	R	5									
		J715	305		P	S	1									
396	B	B176		B	P	S	2									
		B182		B	P	S	3	0		470			3	5	ST	
		T444	205	B	P	R	3									
		B472		B	P	R	2									
401	B	B282		B	P	R	1									
		T166	105	B	P	S	1									
		B280		B	P	R	2	0		457			3	5	ST	
		B161		B	P	S	1									
		B281		B	P	R	3									
		T304	115	W	P	R	3									

DATE AUG 16/79

GEOTECHNICAL LOG - CODING FORM



DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUN.	No. of PLATES	% CORE LOSS	HANDLES	R.O.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION									ROCK TYPE		
406	B2	76		B	P	AS6	0		4	85	1	SS		
411	B2	80		B	P	AS3								MUCH BIT/SR/NGERS
	B2	70		B	P	AS1	0		4	75	1	SS		
	B2	64		B	P	AS1								
416	B2	72		B	P	AS	0		4	60	1	SS		
	J5	10	215	W	P	AS1								
421	B1	72		B	P	AS1								SS
	B2	80		B	P	AS3	0		3	45	2	M		AS
	B2	86				AS1								SS
	B2	81		B	P	AS7								M
426	B1	88		B	P	AS1	0		3	50	1	S		LT
	J2	10	175			IS2								
	J4	13	170	W		AS1								M
431	B2	82				AS8	0		2	62	2	S		LT
	J4	0	180			AS1								
	B2	75		A	P	AS2								
436	B2	79				AS6	0		7	90	1	M		AS
441	B2	79				AS7	0		2	96	1	M		AS
446	B2	79				AS1								
	B2	14	270			AS1								S
	B2	84				AS1	0		3	42	2			
	B2	82				AS7								
	J3	15	345			AS2								
451	J2	15	300	W		AS7	0		3	58	2	S		LT
	B1	89				AS1								
	B2	86				AS5								
	J4	11												
450	B1	87		B		AS1								
	J4	12	100	W		AS2								S
	B2	84				AS4	0		3	50	2	M		AS
	J1	16	250	W		AS1								

DATE Aug 16/79

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	PLUGS	% CORE LOSS	HARDNESS	R.Q.D.	FESSIF	FESSIF	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION										D01255		
													ROCK TYPE		
461		27											SLT		
	B284				PR4			0		390			MDS		
466	B286				PR4			0		392			SLT		
471	B286				PR4			0		295			SLT		
													MDS		
476	B286				PR5			0		388			SLT		
481	B281				PR6								SLT		
	B186				PS1			0		360			2MDS		POLISHED BIT-HEA'
	J409	140			PS1										
486	B286				PR4			0		396			SLT		
491	B286				PR4			0		383			3SLT		
	B279				PR2								MDS		
496	B286				PR8			0		290			2MDS		
501	B280				PR2										
	J129	210		BK	PS1			0		283			1MDS		
	B279				PR1										
	J373	270			FR1										
506	B278				PR7			0		270			2MDS		
511	B282				PR9			0		10			20COA		FRACTURED SEV. TIMES
516	J210	260		B	PR2			0		10			COA		"
	B281			B	PR										
521	B281			B	PR			0		10			COA		"
	J409	260		B	DA										
526	B281			B	PR			0		10			COA		"
	J410	255		B	PR3										
531	B281			B	PR			0		10			COA		"
	J454	300													

DATE _____

GEOTECHNICAL LOG - CODING FORM

COAL LIMITED

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No. of Pieces	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									101	255		
536	J	42	175	B	PR	1		0	1	15	20	COA			
	J	226													
	B	40		B	PR										
541	R	79			PS	8									
	J	56	112	P	PR	1						5	COA		
	B	285		B	PR	8	0		1	34					
	B	288		B	PR	7									
546	T	412	515	B	PR	1									
	B	285		A	PS	4									
	B	284		B	PR	3	0		1	13	11	COA			
	J	44		B	PS	2									
	B	33		B	PR	1									
551	R	71		B	PR	8									
	B	230	332		PR	2									
	B	281		A	PR	8	0		1	0		8	COA		
	B	176		B	PS	4									
	T	242		B	PR	1									
556	T	252	265	B	PR	1							COA		
	B	169		A	PR	3							MDS		
	T	413	225		PS	2	0		2	38		6	MDS		
	B	284		A	PR	6									
	B	285		B	PS	7									
	T	423	682	B	PR	1									
561	R	40		A	PS	1									
	T	159		B	PS	1								MDS	
	T	144	145	B	PR	1	0		2	56	4				
	B	286		P	PS	1									
	B	278		B	PS	1									
	T	40	170	B	PR	3									
566	R	282			PR	4									
	B	272			PS	1	0		3	50	3	5	CT		
	B	244			PR	1									
	T	108	140	W	PS	4								REMARKS CORE 570-575	
571	R	23			PS	1									
	B	284			PR	3									
	T	15	140	W	PS	1									
	B	206	275		PR	2									

DATE Aug 17/79

LOGGED BY KH

page No. 11



JONAS
COAL LIMITED

GEOTECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH. PLATE	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		REMARKS
		ANGLE	DIRECTION										
	A264				PR2		0		214	2			
476	B882			B	PR2		0		387	1			
	5416	145		W	PS2								
581	A175				PS2								
	7116				PS2		0		225	4			BROWN FROM 582-3
	7226				PR3								
586	A169			B	PS1								
	5224			B	PS3								
	7434	070			PS1								MDS
	7416	345		W	PS1		0		348	4			SCT
	B270			A	PR1								
	3484			W	DR2								
	7335				IR1								
541	T426	105		W	PR2		0		368	2			MDS SCT
	B176				PR2								
	7126	225		W	IR1								
596	T132	145		W	PS1								
	0132	145		W	PS1								
	7229	305			PS1		0		227	2			MDS
	7124	180		W	PS1								
	B186				PS2								
601	T404			W	PS1								MDS
	R282			B	PR1		0		205	4			SCT
	7121	125		B	PS2								
	B274				PR2								
606	B284				PR9		0		342	5			MDS
	7141			B	WPR5								
611	T409	245		W	PR1								
	B482				PR2								
	B276			B	PR6		0		212	4			MDS
	7162	000		S	PS1								
	7117	072		W	PS3								

DATE _____

GEOTECHNICAL LOG - CODING FORM



DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No of Pieces	% CORE LOSS	MATCHES	R.Q.D.	Pressure	Temp	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION													
616	B1	71		C	P	S		0%	2	12			4	MDS		
	B4	66			P	S										
621								2%	1						COAL	
626								0%	1							
631								0%	1							
636								0%	1							Broken Core
	B1	60		B	P	S										
641								0%	1							Very soft
646								0%	1							
651								0%	1							
	B1	63		B	P	S										
656								0%	1							

DATE Aug 7/79

LOGGED BY kminn

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No of Pieces	% CORE LOSS	HANDLES	R.O.D.	FEET/FE	METERS	HOLE NUMBER 1 2 5	
		ANGLE	DIRECTION										ROCK TYPE	REMARKS
									3				SLT	
661	Broken Core								1				COAL	Bedding is 76° to core axis.
	↓													
666	B1 24			B	PS			0%	1					Bedding is 53.41° to core axis
	Broken Core													↓
	↓								1				COAL	
671								0%	2				MDS	Bedding is 57° to core axis
676								0%	2					
		B1 73		SS	PR									↓
		B1 34		SS	PR				2				MDS	
681	Broken Core							0%	1				COAL	Bedding is 69° to core axis
686								0%	1					
691								0%	1					
														↓
696								0	1				COAL	Bedding is
		B1 74		W	PS				4	10	23		S DS	80° to core
									4				S DS	axis
													S DS	
701	B1 45			W	FS			0	4	05	21		S DS	
													S DS	

DATE AUG 17/79

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	NO OF PLATES	% CORE LOSS	HARDNESS	R.Q.D.	Fracture Frequency	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2		
	J1	41	061	W	PR				4						
	B1	71		WSS											
	Broken Core														
706	"	"	"					0		99	99			SDS	
	"	"	"						4						
	B1	47		W	PR									SDS	
	J1	52	061	W	PR										lots of calcite
	Broken Core														
711	J1	62	083	W	PR			0		299	99			MDS	Bedding is 88° to core axis
	J1	41	104	W	PR										repeats once
	B1	53		B	PS										
	Broken Core														
716	B1	64		W	PS			0		320	06			SLT	Bedding is 79° to core axis. -gouge in core 3" long
	B1	88		W	PS										
	Broken Core														
	J1	37	100	W	PS				3					SLT	Bedding is
721	J1	45	096	W	PS			0		115	04			MDS	90° to core axis.
	Truns for 2".														
	B1	65		W	PS										
									1					MDS	
726	B1	78		C	PS			0		45	02				
									1					MDS	Bedding is
	B1	72		B	PS				4					SDS	61° to core axis.
731	B1	63		C	PS			0		30	05				
	J1	41	123	C	PS										
									4					SDS	
	B1	82		C	PS			0		40	02				
736	J1	35	110	W	PS										
	B1	74		W	PS					4				SDS	repeats twice
741	B1	73		C	PS			0		20	14				
	Broken Core														
									4					SDS	
746	Broken Core														
								0		99	99				

DATE _____



GEOTECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	No. of Pieces	% CORE LOSS	MARKINGS	R.Q.D.	Fracture Frequency	HOLE NUMBER			ROCK TYPE	REMARKS
		ANGLE	DIRECTION									1	2	3		
	Broken Core															
751	J141	104	B	PS				0		4502				SDS	Bedding is 51° to core axis	
	B188		C	PS					4					SDS		
756	B173		B	PS				0		4003				SDS	Bedding is 82° to core axis	
	B165		B	PS												
	B144		B	PS					4					SDS		
761	J432	146	W	PS				0		3207						
	B182		B	PS												
	B145		B	PS					4					SDS		
	J166	192	B	PS												
766	B172		B	PS				0		4505				SDS	A lot of carbonaceous infilling in gouges in core.	
	T185	033	B	PS					4							
	B466		B	PS												
771	B175		B					0		650A					Repeats once	
	Broken Core								4					SDS		
	B166		B													
776	Broken Core							0								
	J441	144	W													
	B196		B						4					SDS	Repeats twice	
	J175	095	C													
781	B176		CPS1							49901				SS7		
	B265		CPR1													
786	J433	345	CPR1													
	J108	295	CPR3					0		4304						
	B178		BPS1											SS7	Bituminous Stringer	
	J411	140														
	B462		BPS1													

DATE

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUGH	NO. OF PIECES	% CORE LOSS	HARDNESS	R.Q.D.	FRESHNESS	HOLE NUMBER		ROCK TYPE	REMARKS
		ANGLE	DIRECTION									001255			
	J	66		C	L	RI									
	J3	19	193	B	A	RI								SST	
	B1	77		K	E	S3								COA	
801				B				000	100	50				COA	Small Chips, Highly Crushed
805								022	100	50				COA	"
807	J1	32		B				9020	100	50				COA	"
808								026	100	50				COA	"
811	J1	34		B				4000	100	50				COA	"
816								020	100	50				COA	"
821	B1	77		B	PS			000	100	50				COA	"
826	B1	79		B	PS			000	100	50				COA	"
831	B1	72		B	PS			000	100	50				COA	"
	J1	29		B	PS	2									
836	S	124		B	PS	4		000	100	50				COA	"
	B1	72		B	PS										
841	J2	45		B	PR	3		000	100	50				COA	"
	B1	59		B	PR										
846	J1	36		B	PR	1								COA	"
	B1	82		B	PS	1		100	01						
	J1	41	030	B	PR	1				1220					
	J3	32	185		PR	1								MDS	"
	J2	54	225	B	PS	3									
	J1	38			PR	2									
	B1	41			PS	3									
851								100							No Core
856	B1	64		B	PS	30		032	000	30				MDS	Highly Broken

DATE AUG 19/79

LOGGED BY KH



GEOTECHNICAL LOG - CODING FORM

DEPTH	TYPE	ORIENTATION		INFILLINGS	FORM	ROUN.	No. of Plates	% CORE LOSS	HARDNESS	R.Q.D.	Pressure Prelim	HOLE NUMBER				ROCK TYPE	REMARKS		
		ANGLE	DIRECTION																
85	9.5	J 2	47	B	LR	2													
		B 2	79	B	PR	1	000	200	10									BROKEN CORE MOSTLY	
		J 1	13	255	B	PS	2												
		J 2	42		B	IS	3												
85	4.5	J 3	20		L	LR	5	000	200	08								BROKEN CORE MOSTLY	
		J 1	22	185	C	PS	1												
		J 1	34	215	C	PR	3												
87	7.1	J 1	26	130	B	DA	1												
		B 4	60			PS	2												
		T 4	30	195		PS	2	005	480										
		B 1	61		B	PS	2												
		J 2	24	195	B	PR	2	000	400									BROKEN CORE 874.5-88	
87	6							000	400	15								BROKEN CORE THROUGHOUT	
88	0	J 1	42			PR	4												
		B 1	78			PR	1												
		T 9	20	270			1	000	410	08									
		J 1	48	175		PR	3											BROKEN CORE 884-885	
		J 2	38																
88	5	J 1	29		C	PS	1	000	400	20								BROKEN AND COUKED THROUGHOUT	
		B 1	50		K	PS	1											IS THAT SPOILED WATER	
89	0	J 4	29	330	C	PS	20	000	400	20								BROKEN AND COUKED	
		B 2	52		C	PR	1												
89	3	J 4	23		C	PR	4	020	4										
		B 2	52		C	LR	4			00	20							MOSTLY BROKEN	
89	2.5							000	400	20									BROKEN CORE
89	9	B 1	72		C	PR	8	000	310	00								COAL FROM 897-898	
89	4	B 2	70		F	PR	6												
		J 4	15	265	C	PR	2												
		J 1	29	170	C	PR	2												
		B 1	70		C	PS	2												
		J 2	170	15	C	PS	2												
END OF LOG																			

DATE Aug 21/79

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
0 - 15								<i>overburden</i>												
15 - 20		%		J ₁ F B ₁ F J ₃	F F	32° 80°	120°	VARIOUS - Broken core - with iron staining												
20 - 25		%		B ₁ F J ₂ C	F C	78° 0°														

LOGGED BY: _____
DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 1 OF

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
25																				
		10%		B, B	B	62°														
				J, C	C	28°														
				J, W	W	70°														
30				J, C	C	11°														
				J, C, B	B	VARIOUS		BROKEN CORE												
				B, B	B	70°														
		0%		J, C	C	30°														
35																				
				J, W	W	30°	180°													
				J, W	W															
				B, C	C	72°														
40				J, C	C	90°														
				B, C	C	72°														
				J, B	B	46°														
				J, B	B	54°														
45				J, W	W	3°														
		0%		B, C	C	80°														
50																				

LOGGED BY: DTM
DATE: _____



GEOTECHNICAL LOG

HOLE, No. 1256

SHEET 2 OF _____

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
50																			
			60%					Broken core - numerous angles of fracture											
55			7%	B ₁ J ₁ J ₂	C W C	75° 10° 3°													
60			18%	B ₁ J ₁	B C	62° 34°													
65			0%	J ₁ J ₃	C C	50° 90°		some broken core with numerous angles of fracture											
70				B ₁ J ₁	C C	80° 40°													
75			12%	J ₁ B ₁	C C	21° 83°													

LOGGED BY: DTM
DATE: June 9, 1979



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 3 OF

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
75	0%			B ₁ C	C	80°													
80	0%			J ₁ C	C	5°													
85	0%			B ₁ B	B	78°		some broken core numerous angles of fracture											
				J ₁ C	C	20°													
90	0%			J ₁ C	C	60°	180°												
				B ₁ C	C	80°	260°												
				J ₄ W	W														
95	0%			J ₁ B	B	32°	100°												
				J ₁ W	W	15°	220°												
100	0%			J ₁ W	W	23°													
				B ₁ C	C	78°													
				R ₁ B	B	73°													

LOGGED BY: DTM
DATE: June 8/79



GEOTECHNICAL LOG

HOLE No. 1256
SHEET 4 OF

DEPTH FEET	% CORE LOSS 5 50 75	FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG REGULAR BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION % 75 50 25	NATURAL FREQUENCY PER FOOT 15 10 5
		TYPE	INFILLING	INCLINATION			ANGLE TO BEDDING	1	3		
100											
105		44%	B, J ₁	B, C	70° 8°	some broken core					
110	20%		B ₂	B	22°						
115	2%		B ₁ , J ₁	C, C, B.W	80° 23° 60°						
120	2%		B ₁ , J ₁	C, C	70° 25°	some broken core					
125	0%		J ₁ , B ₁	W, C	5° 75°	some broken core					

LOGGED BY: JDM
DATE: _____



GEOTECHNICAL LOG

HOLE No. 1286

SHEET 5 OF _____

DEPTH (FEET)	PERCENT LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	SPECTRA DATA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION (%)			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	1	3	2	75	50	25	15	10
125							broken core											
130				J ₁	C	8°												
				J ₁	C	85°												
135				B ₁	C	70°												
				S ₁	C	20°	160°											
140				B ₁	C	82°												
				J ₁	C	26°	270											
145				B ₁	C	82°												
				J ₂	C	0°												
150				B ₁	C	85°												

LOGGED BY: _____

DATE: _____



GEOTECHNICAL LOG

HOLE No. _____

SHEET 6 OF _____

DEPTH (ft)	% CORE LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	CORRECTION	CORRECTION	CORRECTION	ROCK QUALITY DESIGNATION	REMARKS
	25	50	75	TYPE	INCLIN.	INCLINATION							
150												75 50	
155				B ₁	B	85°							
				J ₁	C	5°							
160				B ₁	B	87°	Broken core						
				J ₁	B	50°							
165				J ₁	B	42°	Broken core						
				B ₁	B	80°							
				J ₁	B	28°							
170				J ₁	B	62°	Broken core						
				J ₁	B	45°							
				B ₁	B	85°							
175				J ₁	C	63°							
				B ₁	B	84°							

LOGGED BY: _____
 DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 7 OF _____

DEPTH (ft)	% CORE LOSS			FRACTURES					DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN COPIES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	DIRECTION	INCLINATION	ANGLE TO BEDDING	4				3	2	75	50	25	15	10	5	
175																				
180		0%		J ₁ C	B ₁ C	8°														
				B ₂ C	B ₂ C	83°														
				J ₄ W																
185		0%		B ₁ C	B ₁ C	82°														
				J ₁ B	J ₁ B	45°														
				J ₄ W																
190		0%		B ₁ C	B ₁ C	87°														
				J ₁ C	J ₁ C	8°														
				B ₁ B	B ₁ B	80°														
				G ₄ W	G ₄ W	20°														
				G ₁ W	G ₁ W	43°	320°													
195		0%		B ₁ C	B ₁ C	82°														
				B₁ C																
200		0%		B ₁ C	B ₁ C	83°														

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 DATE: June 24/79



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 8 OF

DEPTH	FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA FILL BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT			
	% CORE LOSS	TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10	5
200																	
205	4%	B ₁ B ₁ J ₁	B B C	60° 70° 50°													
210	6%	A ₁ J ₁	C C	85° 15°	220°												
215	0.4%	J ₁	B	40°													
220	15%	J ₁ J ₄ J ₁ B ₁	W W W B	40° 3° 5° 60°	210°												
225	6%	J B ₁	C C	9° 70°													Broken core

LOGGED BY: JYM
DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 9 OF _____

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA MATERIAL BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
225																			
				J ₁	W	9°		Broken core											
230																			
				J ₁	W	45°													
				B ₁	C	12°													
235				B ₁	W	27°													
				J ₁	C	27°													
				J ₁	C	13°	140°												
				A	C	82°													
240				G ₁	C	68°	210°												
				J ₁	W	98°													
				B ₁	C	68°													
245																			
				J ₁	C	40°													
				A	C	80°													
250				34	W	7°													

LOGGED BY: DTM
DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 10 OF _____

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING			4	3	2	75	50	25	15	10	5
250	0%			B ₁ C	C	55°												
				B ₁ C	C	85°												
				S ₁ W	W	7°												
255																		
				J ₁ C	C	50°												
				B ₁ C	C	75°												
				S ₃ C	C	90°												
260				S ₁ C	C	60°	290°											
	16%			J ₁ B ₁ C	C	60°	230°											
				B ₁ C	C	70°												
				B ₁ C	C	80°												
				B ₁ C	C	90°												
265	0%																	
				S ₁ B	B	60°												
				B ₁ B	B	82°												
270																		
	16%			B ₁ B	B	75°-80°												
275																		

LOGGED BY: JYM

DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 11 OF

DEPTH	% CORE LOSS	FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	HARDNESS	ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT					
		TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
275	25 50 75																
280	70%	B ₁	B	80°													
	12%	B ₁	B	76°													
285	20%	J ₂	B	47°													
		B ₂	B	72° → 79°													
290	10%	B ₂	C	74°													
		J ₂	C	45°													
		J ₁	W	0°													
		J ₂	C	45°													
295	5%	J ₁	W	57°	10° - 235° - 240°	4 pps/ft.											
		B ₂	C	83°													
		J ₄	W														
300	6%	B ₁	C	80°													

LOGGED BY: _____
 DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 12 OF _____

DEPTH (FEET)	FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA / % G/A BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	% CORE LOSS 25 50 75	TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
300		J ₁	W	17°												
305	87%	B ₁ J ₁ J ₁ J ₁	C C C W	70° 8° 30° 17°												
310	34%	A J ₁	C C	78° 8°												
315	10%	J ₁ B ₁ J ₁	C C W	17° 80° 20°												
320	37%	J ₁ B ₁ J ₄	C C N	55° 78° 20°												
325	%	J ₁ B ₁ J ₁ J ₁	C C C C	9° 78° 52° 70°												

LOGGED BY: _____
DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 13 OF _____

DEPTH (m)	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORES	HARDNESS 4 3 2			ROCK QUALITY DESIGNATION			NATURAL FRAC. DIRECTION		
				TYPE	INCL. ANG.	INCLINATION	ANGLE TO BEDDING						75	50	25	15	10	5
325																		
330		0%		J ₂ C	62°													
				J ₂ E	12°													
335		0%		J ₁ C	12°			Broken core various angles										
				J ₁ C	62°													
				B ₁ C	80°													
				J ₁ C	35													
340		46%		J ₁ W	2°													
				J ₁ C	12°													
				B ₁ C	78													
345		0%		B ₁ C	80°													
				J ₁ C	23°													
				J ₄ W														
350		0%		B ₁ C	80°													
				J ₁ W	23°													
				B ₁ B	76													

LOGGED BY: _____
 DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 4 OF _____

DEPTH	% CORE LOSS	FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN COBBLES	HARDNESS	ROCK QUALITY DESIGNATION %	NATURAL FRACTURE FREQUENCY PER FOOT
		TYPE	INFILLING	INCLINATION						
350										
355	0%	J, C		22°						
		B, C		70°						
		J, C		30°						
360	12%	J, C		0°						
		J, C		10°						
		B, C		80°						
365	0%	B, C		80°						
		J, W		8°						
370	0%	B, C		40°						
		J, C		15°						
375	0%	B, C		84°						
		J, C		10°						

LOGGED BY DVM
 DATE July 29 1979



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 15 OF 15

DEPTH (ft)	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
375																			
380																			
385																			
390																			
395																			
400																			

LOGGED BY: D. J. Miller
 DATE: July 29



GEOTECHNICAL LOG

(HOLE No) 1256

DEPTH (FEET)	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG EFFECTIVE BROKEN CORE (%)	HARDNESS 4 3 2			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING						75	50	25	15	10	5
400																		
405				J ₂ B		30°												
				B ₁ B		78°												
				J ₂ B		42°												
				J ₂ B		55°												
410				J ₂ B		66°												
				B ₁ C		82°												
				J ₁ W		22°												
415				J ₃ C		90°												
				J ₂ C		8°												
				B ₂ B		80°												
420				B ₁ C		18°												
				J ₁ C		21°												
				J ₁ W		14°												
425				B ₂ B		82°												
				B ₂ C		70° → 82°												
				J ₁ C		13°												

LOGGED BY: DTM
 DATE: June 29/79



GEOTECHNICAL LOG

HOLE No. 1256
 SHEET 17 OF

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA % BROKEN COFED	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
425																			
	0%			B ₂ C		72-85													
430				J ₁ B		54°													
				B ₁ B		82°													
				J ₂ B		55°													
435	14%			G ₂ B		24°													
				B ₁ B		70-90°													
	0%			J ₁ W		20°													
440				J ₁ W		5°													
				B ₁ B		80-90°													
445	0%																		
				J ₁ B		65°													
				J ₁ W		15°													
450	0%			B ₂ C		70°													

LOGGED BY: DTM
DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 18 OF _____

DEPTH	FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	% CORE LOSS	TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
450																
455	0%	J ₁ C		8°	Some broken core various angles.	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]	[Hatched]
		B ₁ C		70°												
460	0%	B ₂ C		78°												
		J ₂ C		20°												
465	0%	J ₂ B		45°												
		B ₂ B		78°												
470	6%	J ₂ B		60°												
		B ₂ B		80°												
475	0%	B ₂ B		82°												
		J ₁ C		5°												

LOGGED BY: DTM
 DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 19 OF _____

DEPTH	CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING			4	3	2	75	50	25	15	10	5
475																		
480	0%			J ₁ C		33°												
				J ₂ C		5°												
				B ₁ C		80°												
485		2%		J ₁ C		38°												
				B ₂ C		78°												
490		2%		B ₂ C		82°												
				J ₂ C		57°												
495	0%			J ₂ C		62°												
				B ₂ C		76°												
500	0%			B ₂ C		80°												
				J ₂ C		5°												

DRAWN BY: DTM
DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 20 OF _____

DEPTH	% CORE LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	DIP/SLIP	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
500																		
505	0%			J ₂ C		50°		Broken core										
			B ₂ C		82°													
510			30%	B ₂ C		80°	Broken core											
			J ₂ C		45°													
515	0%			J ₂ C		42°	Broken core											
			B ₂ C		80°													
			J ₁ C		10°													
			J ₁ C		8°													
			B ₂ C		70°													
520	0%			J ₂ C		20°	Broken core											
			J ₂ C		0°													
525	0%			J ₂ W		11°	Broken core											
			B ₂ C		80°													

LOGGED BY: DTM
 DATE: July 4/79



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 21 OF

DEPTH FEET	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
525		0%		B ₂ C		12°													
				B ₂ C		80-90°													
				S ₁ W		12°													
530		8%		B ₂ C		78°													
				J ₄ W															
				J ₁ C		40°													
535		5%		B ₂ C		75-78°													
				J ₄ W															
				S ₁ W		18°													
540		0%		B ₂ C	N	0°													
				B ₂ C		65°													
545		0%		B ₂ B		65°													
				J ₄ W															
550		2%		B ₂ B		65°													
				S ₁ C		5°	250°												
				J ₄ W															
				S ₁ C		1°	180°												
				S ₂ C		10°	230°												

LOGGED BY: D.H.
 DATE: July 4/79



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 22 OF

DEPTH (ft)	% CORE LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION			ANGLE TO BEDDING	4	3	2	75	50	25	15	10
550																	
555	2%			B ₁ J ₁ S ₁	B C B	80° 10° 56°											
560	0%			B ₂ *	C *	82° "	Some broken core										
565	0%			B ₂ J ₁ S ₁	C C W	80° 14° 5°											
570	0%			B ₁ J ₁ J ₁	B W C	82° 14° 0°											
575	0%			J ₁ B ₂	C C	8° 82°											

LOGGED BY: P. J. H.
DATE: July 4/79



GEOTECHNICAL LOG

HOLE No. 1286

SHEET 23 OF

DEPTH FEET	% CORE LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA FILL BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	FILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
575																		
580		7	10	B ₂ C		80°												
				S ₁ C		8°												
				S ₁ C		48°												
585		0	9	B ₂ C		80°												
				S ₂ C		50°												
				S ₂ C		8°												
590		0	5	B ₂ C		20-90°												
				S ₁ C		3°												
595		0	0	B ₂ C		18°												
				B ₂ C		70-90°												
600		0	8	B ₂ C		70-80°												
				S ₃ C		90°												
				S ₂ C		0°												
				S ₂ C		5°												

LOGGED BY: DTM
DATE: July 4/79



GEOTECHNICAL LOG

HOLE No. 1286

SHEET 24 OF

DEPTH FEET	CORE LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN COHESIVE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75	TYPE	INFILLING	INCLINATION			ANGLE TO BEDDING	4	3	2	75	50	25	15	10	5
600																		
605		0		B ₂	B	60°												
610		27%		B ₂ B ₂	C	0° 75-90°												
615		0%		B ₂ B ₂	C	60° 80°												
620		2%		B ₂ B ₂	C	80° 0°												
625		50%		B ₂	C	80-90°												
630				B ₂ B ₂	C	70-90°												

LOGGED BY: DTM
DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 25 OF _____

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
625				B ₂	B	60°													
630	0%			B ₂	C	70-70°													
635	0	8%		B ₂	B	70-70°													
				U ₂	C	58													
				B ₂	C	78°													
640		4%		U ₂	C	50°													
				B ₂	C	84°													
				B ₂	C	130°													
				U ₂	C	20°													
645			0%	B ₂	C	70°													
				U ₂	B	20°													
				B ₂	C	82°													
				B ₂	C	28	180°												
				B ₂	C	25°													
650	0%			B ₂	C	82°													
				B ₂	C	25°													

LOGGED BY: DTM
DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 26 OF _____

DEPTH	% CONE LOSS 25 50 75			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	SPECCIA #11 BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION 75 50 25	NATURAL FRACTURE FREQUENCY PER FOOT 15 10 5		
				TYPE	FILLING	INCLINATION				ANGLE TO BEDDING	4	3		2	15	10
650				O ₂ C		53°										
655	0%			B ₂ C		72°-77°										
				J ₂ B		50°										
660	10%			B ₂ C		70°-80°										
				O ₃ C		90°										
665	18%			B ₂ B		70										
				J ₂ B		15										
				J ₂ B		50										
				J ₂ B		90										
670	18%			J ₂ B		65°										
				B ₂ B		80°										
675	0%			O ₃ B		90°										
				O ₂ B		55°										
				O ₂ B		63°										

LOGGED BY: DTM
 DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 27 OF _____

DEPTH (ft)	% CORE LOSS	FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	SPECIFIC GRAVITY	WATER CONTENT (%)	SHRINKAGE (%)	UNSATURATED SWELLING (%)	ROCK QUALITY DESIGNATION	NATURAL FRACTURE PERCENTAGE
		TYPE	FILLING	INCLINATION								
675	34%	J ₂	B	48°	Some broken, crushed core							
680	20%	B ₂ J ₂	B	82° 58°	" " "							
685	15%	B ₂ B ₂	B	63° 76°	" " "							
690	17%	B ₂ J ₂	B	80° 52°	" " "							
	10%	J ₂ B ₂	B	32° 80°	" " "							
695	0%	B ₂ J ₂	B	80° 28°	Broken core							
700		B ₂	B	78°								

LOGGED BY: PTM
 DATE: July 5/79



GEOTECHNICAL LOG

HOLE No. 1256
 SHEET 28 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
700	32	7																	
705		4	1/2	B ₂	B	23°													
				B ₂	B	82°													
				G ₂	B	60°													
710		0	0	S ₂	B	52°													
				B ₁	B	82°													
				G ₂	B	60°													
715		0	0	B ₂	B	82-90°													
				G															
				S ₂	C	60°													
720		0	0	B ₁	W	70													
				B ₂	C	80-90													
				S ₂	C	23°													
725		0	0	B ₂	C	80-90°													

LOGGED BY: DTM
DATE: July 5/79



GEOTECHNICAL LOG

HOLE No. 1256
SHEET 29 OF

DEPTH	% CORE LOSS			FRACTURES					DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	4				3	2	75	50	25	15	10	5	
725																				
730			0%	J ₁	C	16°														
				B ₂	C	78°														
735			5%	G ₄	W															
				B ₂	C	88°														
				B ₃	W	76°														
				J ₂	C	16°														
740			8%	B ₂	C	80°														
				B ₁	W	80°														
				J ₂	C	60°														
745			0%	J ₁	W	5°														
				G ₃	C	0°														
				B ₂	C	82°														
750				B ₂	C	82°														
				B ₁	B	78°														

LOGGED BY: DTM
DATE: July 5 / 79



GEOTECHNICAL LOG

HOLE No. 1256
SHEET 30 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
750																			
755			29%	B ₂ C	80°														
760			0%	B ₂ B B ₂ C	80° 80° 80°														
765			0%	B ₂ B B ₂ C J ₂ C	80° 80° 15°														
770			0%	B ₁ B B ₂ C	80° 80°														
775			0%	B ₂ C J ₁ W J ₁ C	80° 22° 2°														

LOGGED BY: DTH
 DATE: July 5/79



GEOTECHNICAL LOG

HOLE No. 1256
 SHEET 31 OF

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA OR BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION % 75 50 25			NATURAL FRACTURE FREQUENCY PER FOOT 15 10 5		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
775				B ₂	C	80°													
	0%			B ₁	B	78-80°													
780				B ₂	B	80°													
	0%			J ₂	B	44°													
785				J ₂	B	53 → 60°													
	0%			J ₂	B	20°													
				B ₂	B	78-82°													
790				J ₂	B	30°													
	0%			B ₂	B	80°													
795				J ₂	B	27°													
	0%			B ₂	B	80°													
800																			

LOGGED BY: DTM
DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 32 OF _____

DEPTH	% CORE LOSS 25 50 75			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA LINES BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
800																			
	9%			B ₂ B		77°													
				J ₂ B		43°													
				J ₂ B		62°													
805				G ₂ A		23°													
	0%			B ₂ B		78-13°													
810																			
	10%			J ₂ C		37°													
				J ₂ C		60°													
815				B ₂ C		80°													
	8%			B ₂ C		80°													
				J ₂ C		50°													
820																			
	0%			B ₂ B		70-80°													
				J ₂ B		50°													
825				J ₂ B		10°													

LOGGED BY: DJM
DATE: July 6/79



GEOTECHNICAL LOG

HOLE No. W56

SHEET 33 OF

DEPTH	% CORE LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
82.5																		
	8%			J ₁ W		60°												
				B ₁ W		70°												
				B ₂ C		80°												
830																		
	0%			B ₁ W		80°												
				B ₂ C		80°												
835							some completely broken core											
	0%			J ₁ C		20°												
				J ₄ W														
				B ₂ B		80°												
840				J ₁ C		60°												
				B ₂ C		80°												
	0%			J ₁ C		30°												
				J ₃ C		0°												
				B ₂ C		80°												
845							some completely broken core											
	8%			J ₁ B		50°												
				J ₁ B		80°												
850																		

LOGGED BY: DTM
 DATE: July 6/79



GEOTECHNICAL LOG

HOLE No. 1256
 SHEET 34 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	SPECIAL BROCKIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
850	25	50	75																
	0%			B ₂ B	B	80°													
				J ₂ B	B	75°													
855																			
				J ₂ B	B	40°													
	0%			J ₂ B	B	50°													
860																			
				J ₁ W	W	60°													
	0%			S ₂ C	C	14°													
				S ₁ W	W	17°													
865				B ₁ W	W	82°													
				B ₂ C	C	80°													
	0%			B ₁ W	W	75°													
				J ₁ W	W	17°													
870				J ₂ C	C	13°													
				B ₂ C	C	81°													
875	0%																		

LOGGED BY: DM
 DATE: July 6 1979



GEOTECHNICAL LOG

HOLE No. 1256
 SHEET 38 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
875																			
880		8%		B ₂ J ₁ J ₁	C W B	8° 20° 45°	160° 100°												
885		0%		B ₂ J ₂	C C	80° 60°													
890		0%		J ₂ J ₂ B ₂ O ₃	C C C C	22° 10° 80° 60°	150°												
895		0%		B ₂ J ₂	C C	80° 0°													
900		6%		B ₂ J ₁ J ₂	C W C	80° 30° 80°													

LOGGED BY: DTM
DATE: July 6 79



GEOTECHNICAL LOG

HOLE No. 1256
SHEET 36 OF

DEPTH	% CORE LOSS	FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA & BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
		TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING			4	3	2	75	50	25	15	10	5	
900	6%	J ₃ C		0°													
		B ₂ C		80°													
		B ₄ B		70°													
905		J ₁ W		170°	180°												
	6%	B ₂ C		80°	90°												
		J ₂ C		10°	120°												
910																	
	9%	B ₁ B		83°													
		J ₂ C		50°		Broken core various angles of fracture											
915																	
	0%	J ₂ C		30°		Broken core numerous angles of fracture											
		J ₂ C		50°													
		J ₁ B		30°													
		J ₃ C		90°													
920																	
	0%	J ₂ C		60°													
		J ₂ C		0°													
925	8%																

LOGGED BY: DTM
 DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256
 SHEET 37 OF _____

DEPTH	% CORE LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
925				J ₂	C	4°	110°											
				J ₂	C	0°												
				J ₂	C	70°	30°											
				J ₂	C	15°	180°											
930	0%			J ₂	C	0°		Completely broken core numerous angles										
				B ₂	C	80°												
	0%			J ₂	C	30°	130°											
				J ₁	N	5°												
935																		
	4%			B ₂	B	70°												
				J ₂	C	70°												
940																		
	0%			J ₂	C	18°		Some Broken core numerous angles of fracture										
				B ₁	B	80°												
				J ₂	B	60°												
945				J ₁	C	12°												
	0%			J ₁	C	18°		Some Broken core numerous angles of fracture										
				J ₂	C	40°												
950				B ₂	B	30°												

LOGGED BY: DTM
DATE: _____



GEOTECHNICAL LOG

HOLE No. 7256

SHEET 38 OF _____

DEPTH (ft)	POCKET LOSS (%)	FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION (%)			NATURAL FRACTURE FREQUENCY PER FOOT		
		TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
950	0%	J1 B		60°	Broken core - various angles of fracture	[Hand-drawn core log showing a vertical column with various fracture patterns]	[Hatched area]									
955	0%	B2 B		22°												
960	0%	J1 C		18°												
965	36%															
970	0%															
975	5% 60%															

LOGGED BY: _____
 DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 39 OF _____

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CODE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
975																				
980		5%																		
985		1%																		
990		8%																		
996							84%													
1000							10%													

LOGGED BY: _____
 DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 40 OF _____

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
1000	25	50	75																
1005																			
1010																			
1015																			
1020																			
1025								crushed core											

36%

22°

J₂ C 18°
J₂ C 78°

10%

J₂ C 21°
J₂ C 45°

LOGGED BY: _____
DATE: _____



GEOTECHNICAL LOG

HOLE No. 1286

SHEET 41 OF _____

DEPTH	% CORE LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
1025		0%		J ₂	C	60°	crushed core											
1030																		
1035		46%		J ₂	B	45°	Broken core numerous angles of fracture											
1040		0%		J ₁	B	24												
				J ₁	C	52												
				J ₁	C	46												
1045				J ₁	C	70°												
				J ₁	W	32°												
				J ₁	B	68°												
1050				J ₁	W	40°												
				B ₂	B	80°												
				B ₂	C	35°												
				J ₂	C	55°												
				B ₂	C	0°												

LOGGED BY: _____
DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256
SHEET 42 OF _____

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
1050																			
1055		0%		B2 B J2 C		80° 32°		numerous fracture	60°										
1060		0%		J1 C J1 W J2 C J3 C		40° 40° 60° 0°		Broken core - many fractures numerous orientations											
1065		0%		B1 B J4 C		64° 0-20°		Broken core, many J4 fractures.											
1070		0%		B1 B J4 C J2 C		60° 22° 5°		completely broken core - numerous angles of fracture											
1075								END of Hole											

LOGGED BY: _____
DATE: _____



GEOTECHNICAL LOG

HOLE No. 1256

SHEET 43 OF _____

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
								OVERBURDEN											
								START OF CORE											
20	8%			B ₂	C	85													
				B ₁	C	25	120												
				B ₁	A	70													
				B ₁	A	10	310	2 of these											
	0%			B ₁	A	80		2 of these											
				B ₁	A	20		2 of these											
25				B ₁	A	75													
				B ₁	A	15	120												
				B ₁	A	20													
				B ₁	A	10	330	3 of these (1 is open)											
				B ₁	A	70													
				B ₁	A	85		3 of these											
	0%			B ₁	A	30		3 of these											
				B ₁	A	75		2 ft long											
				B ₁	A	20		4 of these											
30				B ₁	A	70													
				B ₁	A	65		2 ft long											
				B ₁	A	15	180												
				B ₁	A	90		3 of these											
				B ₁	A	20	270	2 of these (1 ft long)											
				B ₁	A	35													
	0%			B ₁	A	80													
				B ₁	A	35													
				B ₁	A	20													
35				B ₁	A	85		5 of them											
				B ₁	A	70		2 of these											
				B ₁	A	20	270												
				B ₁	A	85		3 of these											
	0%			B ₁	A	10													
				B ₁	A	26													
				B ₁	A	20													
40				B ₁	A	15		2 of these											
				B ₁	A	15		2 of these											

Bedding Not well defined

LOGGED BY: D. G
 DATE: JUNE 1 / 79



GEOTECHNICAL LOG

HOLE No. 1257
 SHEET 1 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
40		0%		B ₁ B ₁ B ₁ B ₁	C C C C	85 85 70 75	120	11 of these 40 1/2' to 42 1/2' 5 of these											
45		0%		B ₁	C	85		17 of these fractures from 46' to 50' in Siltstone											
50		0%		B ₁	C	85		15 of these fractures between 50' and 55'											
55		0%		J ₄ J ₄	F F	40 20	40 120												
60		0%		J ₄ B ₁ J ₁ B ₁	C C C C	20 85 12 85	210 220	4 of these											
65		0%		J ₄ B ₁ J ₁ B ₁ J ₁	C C C C C	20 45 85 10 80 25 30	120 160	2 of these 6 of these 2 of these 2 of these											

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GEOTECHNICAL LOG

HOLE No. 1257
SHEET 2 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
											4	3	2	75	50	25	15	10	5
65				B ₁ B ₁ C	C C C	70 85 85 25 15 3 85	120 165	MUDSTONE - BRECCIA											
70				B ₁ B ₁ B ₁ J ₁ J ₃	C B B B C	70 85 70 50 4	80°	18 of these from 71' to 75'											
75				B ₁ B ₁	B B	85 85		- COAL!											
80				B ₁ J ₄ B ₁	B B B	65 4 70		4 of these 77' to 78' 6 of these - Broken											
85				B ₁ J ₄ J ₁ J ₁ J ₁ J ₁ J ₁ J ₁ J ₁ B ₁ B ₁ B ₂ B ₁	B B B B B B B B B B B B B	80 50 30 45 50 25 70 50 4 85 80 25 70 80		6 of these from 81 to 86 3 of these Bedding planes 3 parallel fractures not seen 4 of these											
90				B ₁ B ₂ B ₁	B B C B	85 80 25 70 80		at 80' - 4 of these 3 of these 12 of these											

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DATE: June 1 / 79



GEOTECHNICAL LOG

HOLE No. 1257
SHEET 3 OF 39

DEPTH	% CORE LOSS 25 50 75			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
											4	3	2	75	50	25	15	10	5
90	4%			B ₄	B	15													
				B ₁	B	80	85°	6 of these 91' - 92½'											
	3%			B ₁	B	80	85°	4 of these 92½' to 96'											
95																			
				B ₁	B	85		4 of these											
	0%			B ₄	B	80													
				B ₁	B	15													
				B ₁	B	10													
100				B ₁	B	10													
				B ₁	B	35		3 of these											
				B ₁	B	50													
				B ₁	B	85													
				B ₃	C	4													
	0%			B ₂	C	80													
				J ₁	W	30	180°												
105				B ₁	B	65													
				B ₁	B	63		occurs twice more											
	16%			J ₁	B	15	120°												
				B ₄	C	90													
				J ₁	C	10	70°												
				B ₁	W	80		Occurs again - a lot of carbonaceous (B) infilling occurs between fractures											
110																			
				J ₁	W	50	190	occurs again at 112.5'											
	20%			J ₁	W	45	180	calcite healing											
				B ₄	W	85													
115				B ₁	C	80													

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DATE: JUNE 1/79



GEOTECHNICAL LOG

HOLE No. 1257
SHEET 4 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
115				B1	C	85		Occurs again at 116; but inclination is 75°											
	0%			B1	SS	85		Pyrite deposit											
				J1	W	8	270												
				J1	C	35	120												
				B1	C	90		Occurs two more times											
-120				B1	C	85		Occurs once again at 120.5'											
	6%			B1	C	88													
				B3	C	80													
				B1	C	85													
				J1	C	25	120												
				B1	C	83													
				B3	C	80													
-125				B1	C	80		Occurs twice again at inclinations of 90° and 85°											
	3%			B1	B	55													
				B2	B	85													
				B2	B	70													
				B2	B	85													
-130								ALL COAL											
	0%																		
-135				B1	C	85													
	0%			B1	C	80													
137.5				B1	B	87													
	0%			B1	B	83													
				B1	B	75		REPEATS FIVE MORE TIMES											
140																			

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DATE: JUNE 5/79



GEOTECHNICAL LOG

HOLE No. 1257

SHEET 5 OF 39

DEPTH	% CORE LOSS 25 50 75			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
											4	3	2	75	50	25	15	10	5
140				J1	W	40	120												
				J1	W	30	150												
	0%			B1	C	86													
				J3	C	8	160												
				B1	C	70													
145				B1	W	65		ALSO SHOWS EVIDENCE OF SS											
				B1	SS	80		OCCURS AGAIN AT 147'											
	0%			J4	SS	20	60												
				J1	SS	15	85												
				B1	W	70													
150				B1	SS	75													
				B1	SS	65													
	6%			J4	C	30	240												
				B1	SS	78		OCCURS AGAIN AT 155'											
				B1	B	65													
155				B1	C	85													
				B1	SS	80													
	0%			B1	SS	73		REPEATS FIVE TIMES											
				B1	SS	75													
160					SS														
				B1	SS	90		OCCURS NINE TIMES											
	0%			B1	SS	65													
165																			

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DATE: _____



GEOTECHNICAL LOG

HOLE No. 1257

SHEET 6 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
66				B1	SS	75		OCCURS 4 TIMES OCCURS TWICE											
	0%			B1	C	80													
				B1	SS	85													
				B1	C	81													
70				J1	W	35	120	B1 C 85 - OCCURS TWICE B1 B 70 - OCCURS 4 TIMES J1 B 40 CONTINUED											
	0%			J1	C	15	160												
				J1	C	40	125												
				J1	C	30	35												
				B1	W	90													
				B1	C	85													
75				B1	C	75		OCCURS AGAIN AT 178.5											
				J1	B	35	120												
				B1	C	85													
				B1	C	70													
80				B1	C	85		OCCURS AGAIN AT 184'											
	0%			B1	SS	80													
				J1	C	70	60												
				B1	SS	85													
85				J1	C	25	150	- 9 of these to 185' to 187'. - 2 of these at 188' Bedding too fine											
	0%			B1	C	80													
				J1	C	10													
				B1	C	85													
190				B1	C	W	85												
				B1	C	15													
				J1	C	30													

LOGGED BY: LL
DATE: _____



GEOTECHNICAL LOG

HOLE No. 1257

SHEET 7 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
190		0%		B ₁	C	90		2 of these											
		5%		B ₁	C	90		4 of these to 193'											
				B ₁	C	80													
195				B ₁	B	85													
		10%		B ₁	B	85		Carbonaceous partings. Broken Rock											
				C	C	25													
-200				B ₁	C	75		Breccia - coal											
		20%		B ₁	B	70		COAL - Broken Breccia											
				B ₁	B	80													
-205		50%		B ₁	B	60		midstone 2 of these Breccia											
								COAL	Bedding Not easily variable										
-210		40%		B ₁	B	70		Broken Rock - coal Breccia											
		30%		B ₁	B	80		4 of these Broken COAL											
				B ₁	SS	80		2 of these Broken Rock											
215		0%		C	C	60		large fractures about 1' long Broken Rock											
				C	C	50													
				C	C	25													
				C	C	30													
						300													
						250													

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 DATE: June 6 / 78



GEOTECHNICAL LOG

HOLE No. 1257
 SHEET 8 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT				
	25	50	75								4	3	2	75	50	25	15	10	5		
215		0%	0%																		
220		0%	0%	J4	E	30		2 of these													
				J4	E	25		Highly fractured J4 W 15 > 2 ft long these fractures at 220'													
				J4	E	30															
				J4	E	30															
				J4	E	30															
			J4	E	30																
225		0%	0%	J4	E	0		- Breccia MANY ↓ fractures													
				J4	E	25		2 of these													
				J4	E	30		2 of these													
				J4	E	30		2 of these													
				J4	E	30		2 of these													
230		0%	0%	J4	E	25		2 of these													
				J4	E	20		2 of these													
				J4	E	20		2' long													
				J4	E	20		2' long - cut by 2 B ₂ W at 80°													
				J4	E	20	180	2 of these													
235		0%	0%	J4	E	20		2 of these													
				J4	E	25		Bedo mat													
				J4	E	10		2 of these easily seen													
				J4	E	30		Broken rock													
				J4	E	30		1' long													
240		0%	0%	J4	E	40		- Breccia							0%						
				J4	E	30		- Breccia													
				J4	E	5		- 1' long													
				J4	E	10		- Broken Rock													
				J4	E	20		- rhombic calcite crystals.								0%					

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DATE: June 6/79



GEOTECHNICAL LOG

HOLE No. 1257
SHEET 9 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
											4	3	2	75	50	25	15	10	5
	25	50	75																
240			0%	R ₁	C	90	100						0%						
			0%	B ₂ B ₁ C ₁ C ₂ C ₃ C ₄ C ₅ C ₆ C ₇ C ₈ C ₉	C C SS SS SS C C C C C	85 80 80 80 85 8 0 90		3 of these Breccia 2 of these											
245			0%	B ₁ C ₁ C ₂ C ₃ C ₄ C ₅ C ₆ C ₇ C ₈ C ₉	C C C C C C C C C C	2 80 2 2 90 50 4 5 80	120	= 1 1/2' long 2 of these Broken Section 2 of these 2 of these				0%							
250			0%	B ₁ B ₂ C ₁ C ₂ C ₃ C ₄ C ₅ C ₆ C ₇ C ₈ C ₉	W W W C C C C C C C	70 80 80 75 25 5 40 80	5° 180 210 300	the fracture is about 3' long, the rock is broken up											
255			30%	B ₁ B ₂ C ₁ C ₂ C ₃ C ₄ C ₅ C ₆ C ₇ C ₈ C ₉	C C C C C C C C C C	85 85 20 30		- some pyrite 2 of these											
260			0%	B ₁ C ₁ C ₂ C ₃ C ₄ C ₅ C ₆ C ₇ C ₈ C ₉	C C C C C C C C C C	80 5		3 of these 1' lens											
265			0%	B ₁ C ₁ C ₂ C ₃ C ₄ C ₅ C ₆ C ₇ C ₈ C ₉	SS W B C C C C C C C	80 10 80 30 20 20 0		2 of these Broken Rock											

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DATE: June 7/79



GEOTECHNICAL LOG

HOLE No. 1257
SHEET 10 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
											4	3	2	75	50	25	15	10	5	
265		0%																		
				44	C	20		2 of these												
		0%		44	C	40		2 of these												
				44	C	20														
				44	C	50														
270				44	C	50		2 of these												
		0%		44	C	80	150	Broken Rock.												
				44	C	80														
275				B1	SS	80		Broken Rock												
				44	C	40														
		0%		B2	C	30	180													
				44	C	40														
				44	C	15														
				44	C	20	150													
				44	C	20		2 of these												
280				44	C	35														
				44	C	35		2 of these												
		0%		44	C	80		6 of these												
				44	C	50		Broken Rock.												
				44	C	50		2 of these												
				44	C	80		Broken Rock												
285				B1	C	85														
				B1	C	90														
		0%		44	C	5		2 of these												
				B1	C	85		5 of these 287 to 289'												
				44	C	20	120	Bedding Not Visible												
290				44	C	20														

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 DATE: June 7/79



GEOTECHNICAL LOG

HOLE No. 1257
 SHEET 11 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
290		0	0					Broken 3 of these Rock 2 ft long Broken 2 of these											
295		0	0					BROKEN Rock 1 ft long 5 of these											
300		0	0					BROKEN CORE											
305		0	0				300	8 of these Broken Rock COAL											
310		15	0	B1	B	85		BRECCIA											
		0	0	B1 B1 B1	B B B	85 10 15 40		2 of these 2 of these from 311 to 316' IN COAL											
315								BRECCIA											

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DATE: June 8, 79



GEOTECHNICAL LOG

HOLE No. 1251

SHEET 12 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
315	0%			41	B	40													
	0%			B ₁	B	75		4 of these											
	0%			B ₁	SS	70		3 of these											
	0%			B ₁	B	75		10 of these to	COAL										
	0%			41	B	40		321'											
320				41	B	40													
				41	B	30													
				41	B	50													
				41	B	50													
	0%			B ₁	B	80		2 of these											
	0%			B ₁	B	40		COAL											
	0%			B ₁	B	40		Heavily											
	0%			B ₁	B	40		bedded											
325				B ₁	B	20													
				B ₁	B	80		14 of these from											
				B ₁	B	80		323' to 326'											
	0%			41	B	60													
	0%			B ₁	B	80		30 of these from											
	0%			41	B	20		322' to 331'	COAL										
330				41	B	20		Core is highly broken											
				41	B	20		- B ₁ are distributed throughout											
				41	B	20		section											
	0%			B ₁	B	80		19 of these distributed											
	0%			41	B	50		231' and 336'											
	0%			41	SS	0													
	0%			B ₁	B	80													
335				41	B	80													
				41	B	80													
	0%			B ₁	C	80		SILTSTONE											
	0%			B ₁	B	85													
	0%			B ₁	SS	85													
	0%			B ₁	B	80		3 of these											
	0%			B ₁	W	60													
	0%			B ₁	W	85													
340				41	W	20	230	BRECCIA											

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DATE: June 11/79



GEOTECHNICAL LOG

HOLE No. 1257
SHEET 13 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG.	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
365	3%			4	0	0														
370	0%			4	0	0	190	break between sandstone and calcstone												
375	0%			4	0	0	210	3 of these												
380	0%			4	0	0	380	2 of these												
385	0%			4	0	0	220	4 of these 380' to 381'												
390	0%			4	0	0	310	4 of these 382' to 383'												
395	0%			4	0	0	310	6" long												
398	0%			4	0	0	310	7 of these 385' to 386'												
398	0%			4	0	0	310	15 of these 390' to 391'												

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DATE: June 12/79



GEOTECHNICAL LOG

HOLE No. DDH 1257
SHEET 15 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
390		0%		B	B	70													
		5%		B	B	75		10 of these 391' to 392'						0%					
		5%		B	B	40		BRACCIA COAL											
395				B ₁	B	85		5 of these 394' to 395'											
				B ₂	C	10		BROKEN ROCK											
				B ₁	B	75		2 of these											
				B ₂	B	75		2 of these											
		0%		B ₁	B	40		2 of these											
400				B ₁	C	15		1 foot long											
				B ₂	C	15		2 of these											
				B ₁	C	90		3 of these 401' to 402 1/2'											
		0%		B ₂	C	20	390												
				B ₁	C	5													
				B ₂	C	15	210												
405				B ₁	C	10		8" long											
				B ₂	C	85													
				B ₁	C	85													
				B ₂	C	85													
				B ₁	C	80		3 of these 406' to 407'											
				B ₂	C	0													
410		5%		B ₁	C	60		3 of these 408' to 409'											
				B ₂	C	80													
				B ₁	C	15													
				B ₂	C	15													
				B ₁	C	15													
				B ₂	C	15													
				B ₁	C	45		at 411'											
				B ₂	C	80													
				B ₁	C	15													
				B ₂	C	10													
415		3%		B ₁	C	5													
				B ₂	C	60		2 of these											

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DATE: June 12/79



GEOTECHNICAL LOG

HOLE No. DD4 1251
SHEET 16 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
415		3%		B ₁	C	85		3 of these 415 1/2' to 416'											
				B ₁	C	85													
				B ₁	C	85		3 of these											
		0%		B ₁	C	85		3 of these											
420				B ₁	C	80													
				B ₁	C	20													
				B ₁	C	85		8" long											
				B ₁	C	85		3 of these											
425		0%		B ₁	C	80		6 of these 424' to 426'											
				B ₁	C	20													
				B ₁	C	85													
		0%		B ₁	C	10													
				B ₁	C	30													
430				B ₁	C	85		2 of these											
				B ₁	C	85		2 of these											
				B ₁	C	85		5 of these 431' - 432'											
				B ₁	C	25													
		0%		B ₁	C	50		2 of these											
435				B ₁	C	50													
				B ₁	C	80													
				B ₁	C	55													
		0%		B ₁	C	45		2 of these											
				B ₁	C	55													
440				B ₁	C	50													

LOGGED BY: D.G
DATE: June 12/79



GEOTECHNICAL LOG

HOLE No. DDH 1257

SHEET 17 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
440	0%							2 of these											
	25%							2 of these 2 of these - to 441'					0%						
								Breccia											
445	35%							Breccia											
								Breccia					0%						
	6%							1' long											
450	55%							Breccia					0%						
								2 of these											
	0%							5 of these evenly spaced 454'-456'											
455																			
								2 of these											
460	4%																		
465	5%																		

LOGGED BY: D.G.
DATE: June 13 / 79



GEOTECHNICAL LOG

HOLE No. DDH/257
SHEET 18 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
465	5%																		
470	0%						50												
475	0%						200 350 170	2 more of these SANDSTONE											
480	6%						at 476'												
485	3%						2 of these	SILTSTONE											
490	3%						2 of these 1' LONG	SILTSTONE											

LOGGED BY: D.G
 DATE: June 13/79



GEOTECHNICAL LOG

HOLE No. 224 1251
 SHEET 19 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
490	3%			SS	SS	80													
	0%			SS	SS	80		2 of these 1' long											
495				SS	SS	80		2 of these											
	0%			SS	SS	80		2 of these											
				SS	SS	80		2 of these											
500				SS	SS	80		3 of these											
	0%			SS	SS	80		2 of these											
505				SS	SS	80													
	6%			SS	SS	80		INTACT CORE											
510				SS	SS	80													
	0%			SS	SS	80		5 of these to 516'											
515				SS	SS	80													

LOGGED BY: D.G.
DATE: June 13/79



GEOTECHNICAL LOG

HOLE No. DDH 1257
SHEET 20 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
515	0%			↓	↓	↓													
				B ₁	C	40		3 of these 516' to 517'											
	0%			B ₁	C	25													
				B ₁	C	40													
				J ₄	C	30													
				J ₄	C	0													
520								INTACT CORE											
				J ₁	W	25		1' long											
				B ₁	SS	85		2 of these											
				J ₁	C	30													
	0%			B ₁	SS	85													
				J ₁	C	30													
				B ₁	C	80													
525				J ₁	C	50													
				B ₁	C	85		7 of these 525' to 526'											
				B ₁	B	80													
				J ₄	C	10													
	0%			B ₁	B	80													
				J ₃	C	5													
				J ₁	B	70													
530				J ₁	B	70													
				J ₁	C	70													
				J ₁	C	70													
				B ₁	C	85		2 of these											
	6%			J ₄	C	8		1' long coal											
				B ₁	B	80													
535				B ₁	B	80													
				B ₁	B	80													
				B ₁	B	80													
				B ₁	B	80													
				B ₁	B	80													
				J ₄	B	0		12 of these 536 to 538'											
	0%							VUGS											
				B ₁	B	86		6 of these 538' to 541'											
540				J ₄	B	60													

LOGGED BY: D. G.
DATE: June 15/79



GEOTECHNICAL LOG

HOLE No. ^{DDH} 1257
SHEET 21 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
540		0%		V	↓	↓														
		0%		J ₁	SS	60		4 of these 541' to 542' 2 of these												
				J ₄	SS	80														
				J ₁	SS	85														
				J ₄	SS	10														
545				J ₁	SS	5														
				J ₄	SS	5														
				J ₁	SS	5														
				J ₄	SS	0		546'												
		0%		B ₁	B	85		11 of these 546' to 551' evenly spaced												
550				J ₄	C	15														
		0%						BRECCIA												
								BRECCIA												
555		50%		J ₁	C	70														
				B ₁	C	80														
				J ₄	SS	25														
		0%		J ₁	C	50		BRECCIA												
				J ₁	C	40		BRECCIA												
560		0%		B ₁	B	80		INTACT CORE												
				B ₁	C	85		4 of these 561' to 566' regular spacing												
		0%		J ₁	C	60														
565				J ₄	C	0														

LOGGED BY: D.G.
DATE: June 15 / 79



GEOTECHNICAL LOG

HOLE No. DDH 1257
SHEET 22 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
565		0%		1	1	1													
				B ₁	C	85													
				B ₁	C	85													
		6%		L ₁	C	10													
				L ₁	C	0													
570				L ₁	C	20													
				L ₁	C	40													
				L ₁	C	85		2 of these											
				L ₁	C	15													
		0%		B ₂	C	80													
				B ₁	C	80		3 of these 572' to 573'											
575				L ₄	W	10	220												
				L ₁	C	25													
				B ₁	B	85		2 of these											
				L ₄	W	10		1' long											
		0%		L ₄	W	5													
				B ₁	C	85		5 of these 579' to 581'											
580				L ₃	C	0													
				L ₁	C	15													
				L ₁	C	20													
				L ₄	W	5													
				B ₁	W	30	170												
		0%		L ₁	W	85													
				L ₁	W	30													
				L ₄	C	0													
585				B ₁	W	85													
				L ₁	C	25													
				L ₁	C	40													
				L ₁	C	85		3 of these 585' to 586'											
				L ₁	C	60													
				B ₁	W	90													
		0%		L ₁	W	10		2 of these											
				L ₁	W	90		3 of these											
590				L ₁	W	70													
				L ₁	W	85													
				L ₁	W	85													

LOGGED BY: D.G
DATE: June 15/79



GEOTECHNICAL LOG

HOLE No. ^{DDH} 1257
SHEET 23 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
615	0	0	0	B	B	85	85	At 615'												
				B	B	80	80	BRECCIA 615' to 616'												
				B	B	75	75	2 of these												
				B	B	70	70	4 of these												
				B	B	65	65	14 of these 617' to 621'												
620				B	B	60	60	2 of these												
				B	B	55	55	BRECCIA												
				B	B	50	50	BRECCIA												
				B	B	45	45	8 of these 622½ to 626'												
625				B	B	40	40	2 of these												
				B	B	35	35	at 626'												
				B	B	30	30	2 of these												
				B	B	25	25	3 of these												
				B	B	20	20	2 of these												
630				B	B	15	15	4 of these												
				B	B	10	10	2 of these												
				B	B	5	5	BRECCIA												
				B	B	0	0	2 of these												
				B	B	0	0	BRECCIA 630½ to 631'												
				B	B	0	0	2 of these												
635				B	B	0	0	2 of these												
				B	B	0	0	2 of these												
				B	B	0	0	2 of these												
				B	B	0	0	BRECCIA												
				B	B	0	0	2 of these												
				B	B	0	0	BRECCIA												
				B	B	0	0	4 of these												
				B	B	0	0	BRECCIA												
640				B	B	0	0	17 of these from 637' to 641'												
				B	B	0	0	2 of these												

LOGGED BY: D. G
DATE: June 19 1979



GEOTECHNICAL LOG

HOLE No. DDH 1257

SHEET 25 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE (%)	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
640			0%	B ₁	SS	85														
			0%	B ₁	C	85		4 of these & of these → to 646'												
645			0%	B ₁	SS	85		Breccia												
			0%	B ₁	SS	85														
			0%	B ₁	SS	85														
650			0%	B ₁	SS	85		2 of these												
			0%	B ₁	SS	85		1' long												
			0%	B ₁	SS	85														
655			0%	B ₁	SS	85														
			0%	B ₁	SS	85		2 of these												
			0%	B ₁	SS	85														
660			0%	B ₁	SS	85		Intact core												
			5%	B ₁	SS	85		1' long												
			5%	B ₁	SS	85		1' long												
665			5%	B ₁	SS	85		2 of these												

LOGGED BY: D.G
DATE: June 19/79



GEOTECHNICAL LOG

HOLE No. 1257
SHEET 26 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
665		50																		
				B ₁	C	80		2 of these at 666'												
				B ₁	C	85														
				B ₁	C	20														
670		0		B ₁	C	20														
				B ₁	C	15		2 of these Breccia												
				B ₁	C	15														
				B ₁	C	10		2 of these												
				B ₁	C	35														
				B ₁	C	10														
675		0		B ₁	C	80		2 of these Breccia												
				B ₁	C	80		8" long												
				B ₁	C	80														
				B ₁	C	80														
				B ₁	C	80														
680		0		B ₁	C	80		2 of these												
				B ₁	C	80		2 of these AT 676'												
				B ₁	C	80														
				B ₁	C	80														
				B ₁	C	85														
				B ₂	C	85		INTACT												
				B ₂	C	30														
685		0		B ₂	C	85		2 of these												
				B ₁	B	70														
				B ₁	C	20														
				B ₁	C	85														
				B ₁	C	60	330													
				B ₁	C	80														
690		0		B ₁	C	80		9 of these 689' to 691'												
				B ₁	C	80														
				B ₁	C	0														

LOGGED BY: D.G.
DATE: June 19/79



GEOTECHNICAL LOG

HOLE No. DDH 1257

SHEET 27 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
690	0%																		
695	100%							10 feet of core missing											
700																			
705	0%			J4 D4 D4 D4 J4 J4 D4 J4 C	C C C C C C C C C	10 5 0 5 10 85 0		3 of these 2 of these											
710	0%			B1 B1 B1 J4 B1 B1 B1 B1 B1 C	C C C C C C C C C C	85 75 85 70 60 85 80 95		2 of these 4 of these											
715	0%			B1 J4 J4 B1	C C C SS	85 0 15 85		12 of these											

LOGGED BY: D.G
DATE: June 20 1979



GEOTECHNICAL LOG

HOLE No. 3DH 1257
SHEET 28 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
715	0%																		
				B		85													
				B		20													
	0%			B		80													
				B		80		2 of these											
				B		20													
720				B		80													
				B		20													
				B		80		at 721'											
				B		20													
	0%			B		80													
725				B		20													
				B		80		2 of these											
				B		80		3 of these											
				B		80		10 of these 723' to 726'											
				B		50		2 of these at 726'											
				B		40		breccia											
	3%			B		80													
				B		80		7 of these 728' to 731'											
730				B		80		8 of these 728' to 731'											
				B		40		2 of these breccia											
				B		50		breccia											
				B		85		7 of these spaced through 731' to 736'											
	3%			B		40													
735				B		50													
				B		85													
				B		40													
				B		50													
				B		60													
				B		80													
				B		40													
				B		30		7 of these 736' to 741'											
				B		85													
	5%			B		20													
				B		10													
				B		80													
740				B		50		2 of these											

LOGGED BY: D. G.
DATE: June 21/79



GEOTECHNICAL LOG

HOLE No. DDH 1257
SHEET 29 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
740		5%						2 of these							0%				
745		0%						2 of these 3 of these 744' to 748'							0%				
750		0%						2 of these 2 of these 2 of these 2 of these											
755		5%						6 of these MUDSTONE											
760		0%						2 of these 2 of these BRECCIA											
765		0%						2 of these BRECCIA 4 of these											

LOGGED BY: D. L.
DATE: June 21/79



GEOTECHNICAL LOG

HOLE No. D34 1257
SHEET 30 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT				
	25	50	75								4	3	2	75	50	25	15	10	5		
765	0%			J4	C	5															
770	0%			B ₁	SS	80		2 of these 18" lenses 3 of these 769' to 771'													
				J4	C	80															
				B ₁	B	80															
				J4	C	0															
				J4	C	0															
775	0%			J4	C	20		2 of these BRECCIA 4 of these 774' to 775' BRECCIA													
				B ₁	C	85															
				J4	C	0															
				B ₁	C	80															
				J4	C	0															
780	12%			J4	C	5		BRECCIA													
				B ₁	C	80															
				J4	C	0															
				B ₁	C	80															
				J4	C	80															
785	14%			J4	C	10	180	BRECCIA													
				B ₁	C	10	100														
				J4	C	0															
				B ₁	C	80															
				J4	C	0															
790	7%			J4	C	50		BRECCIA - Broken CORE													
				B ₁	C	85															
				J4	C	60															
				J4	C	40															
				J4	C	50															

LOGGED BY: D.G
DATE: June 22/79



GEOTECHNICAL LOG

HOLE No. DDH 1257
SHEET 31 OF 39

FRACTURES

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT				
	25	50	75								4	3	2	75	50	25	15	10	5		
790		7%						Breccia			0			0							
795	0%			B	B	80		2 of these													
				B	B	80															
				B	B	80		Breccia													
				B	B	80		4 of these													
800	0%			B	B	80															
				B	B	80		18" long													
				B	B	80		2 of these													
				B	B	80															
805	0%			B	B	80		2 of these													
				B	B	80															
				B	B	80		Broken core													
				B	B	80															
810	5%			B	C	80															
				B	C	80															
				B	C	80															
815	0%			B	C	80															
				B	C	80															
				B	C	80															
				B	C	80															

LOGGED BY: D.G.
 DATE: June 22 / 79



GEOTECHNICAL LOG

HOLE No. DDH 1257
 SHEET 32 OF 39

DEPTH FEET	% CORE LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
815		0%		B ₁ J ₄	C	80	2 of these											
820		7%		B ₂ J ₄ J ₄ B ₁ J ₄ B ₁	C	80 20 30 85 5 85	3 of these Broken core 2 of these 1' long											
825		0%		B ₁ J ₁ J ₄ B ₁ B ₁	C	85 50 60 80 80												
830		0%		B ₂ B ₁ B ₁ B ₂	C	85 85 85 85												
835		0%		B ₂ " " B ₁ B ₁ B ₁ B ₂	C	85 " " 85 85 85 85	2 of these											
840		0%		J ₄ B ₄ J ₄ J ₄	C	25 85 0 10												

LOGGED BY: D. G.
DATE: June 22/79



GEOTECHNICAL LOG

HOLE No. ^{D84} 1257
SHEET 33 OF 39

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	ORIENTATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
840		0%	0%	4	SS	40													
		0%		4	SS	5	170	Two columns from 842' to 844'											
845		5%		4	C	80													
				4	C	15	290												
				4	C	90	120												
				4	SS	40	130												
		7%		4	C	85													
				4	C	60	270												
850				4	C	12	210												
				4	SS	0	100												
				4	SS	20	240												
				4	C	20	130	851'											
				4	C	30	170												
		0%		4	C	10	240												
				4	C	25	220												
855				4	C	0	190												
				4	C	20	160												
				4	C	85													
				4	C	25	135												
		0%		4	C	5	70												
860				4	B	5	160	Intact core											
				4	B	3													
				4	B	5													
				4	B	75		6 of these 862' to 866'											
		0%		4	SS	30	160												
				4	W	20	140												
865				4	W	15													

LOGGED BY: D. G.
DATE: June 22/79



GEOTECHNICAL LOG

HOLE No. DB# 1257
SHEET 34 OF 39

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA	BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING					4	3	2	75	50	25	15	10	5	
865			0%																		
870			0%	E		5	180														
				C		10	130														
				E		25	140														
				E		25	210														
				B		85															
				C		70															
				B		5	100	1' long													
				C		50	250														
				C		10	130	18' long													
				C		85															
875			0%	C		0	130	Breccia													
				B		20															
				B		10															
				B		26															
				B		10															
				B		26															
				B		10															
				B		70															
				B		80															
				B		5	80														
880			0%	C		30	40														
				C		25	120														
				C		20	150														
				C		85															
				E		45															
				E		5															
				C		70															
				C		85															
				E		10															
				C		10															
885			0%	C		80															
				C		10															
				C		10															
				C		10															
890			0%	C		70															
				E		20															
				E		90															
				W		30															
				C		70															
				B		60															

LOGGED BY: D.G
DATE: June 25, 1979

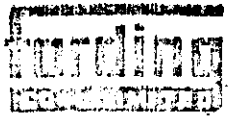


GEOTECHNICAL LOG

HOLE No. DDH 1257
SHEET 35 OF 39

DEPTH	% CURVE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN COPE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
890			0%	B ₁	B	70		BRECCIA											
				J ₁	C	60		Breccia - Broken coal											
895			0%	J ₁	C	60		Broken coal											
				J ₁	C	60		BRECCIA											
				B ₁	SS	70		Breccia Broken coal											
				J ₁	SS	60		4 of these at 897'											
				J ₄	C	70		4 of these											
900			0%	J ₁	SS	60													
				J ₄	SS	0		Breccia Broken coal											
				J ₁	SS	40		3 of these											
905			15%					BRECCIA - CRUSHED COAL											
910			5%					BRECCIA - CRUSHED COAL											
915			5%					Breccia COAL - CRUSHED											

LOGGED BY: D. G.
 DATE: June 25, 1949



GEOTECHNICAL LOG

HOLE No. DDH 1257
 SHEET 36 OF 39

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
915	50%							CRUSHED COAL							0%				
	0%							CRUSHED COAL							0%				
920	0%							CRUSHED COAL							0%				
	0%							CRUSHED COAL							0%				
925	20%							CRUSHED COAL							0%				
	13%							CRUSHED COAL							0%				
930								CRUSHED COAL							0%				
	10%			11 W 15				Broken core							0%				
				14 C 4				Broken core											
935				14 C 5				Broken core											
				14 C 10				- Broken core											
	3%			14 C 10															
				01 SS 85				10 of these from 938' to 941'											
940				14 C 0				18" long											
				14 C 10															
				14 C 5															

LOGGED BY: D.G
DATE: June 25/79



GEOTECHNICAL LOG

HOLE No. DDH 1257

SHEET 37 OF 39

DEPTH	% CORE LOSS 25 50 75			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BERCOIA BZ BROKEN CORES	HARDNESS			ROCK QUANTITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
965			0%	B1	SS	85												
				SS	C	85	4 of these											
			3%	SS	C	85												
				SS	C	85												
970				SS	C	30	broken core											
				SS	C	140												
				SS	C	300												
				SS	C	85	2 of these, at 971'											
				SS	C	15	120											
			0%	SS	C	15	140											
				SS	C	10												
975				SS	C	85												
				SS	C	15	330											
				SS	C	15	180											
				SS	C	200	150											
				SS	C	10		at 976'										
				SS	C	20	170											
			0%	SS	C	50	150											
				SS	C	80												
				SS	C	80												
980				SS	C	20	300											
				SS	C	80												
				SS	C	5	130											
				SS	C	80												

LOGGED BY: D.G.
 DATE: June 26/79



GEOTECHNICAL LOG

HOLE No. DDH 1257
 SHEET 39 OF 9

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG		HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING		4	3	2	75	50	25	15	10	5		
								0-45 CASING											
46	5%							BROKEN CORE											
	0%																		
51																			
								repeats twice											
	0%																		
55																			
	0%																		
61																			
	0%							BROKEN CORE											

LOGGED BY: haviann
DATE: July 4/79



GEOTECHNICAL LOG

HOLE No. 1258

SHEET 1 OF 1

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN COPIES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
66		0%		J1	W	50	65	repeats once											
			BI	N	75														
71		0%		J1	W	10	150												
76		0%		J1	C	10	290												
		0%		BI	C	80													
81		0%		BI	C	75		repeats twice											
		0%		BI	C	60													
86		0%		J1	C	15	165												
		0%		BI	50														
		0%		BI	65														
		0%		BI	75														

LOGGED BY:
DATE:



GEOTECHNICAL LOG

HOLE No. 1253
SHEET 2 OF

DEPTH	% CORE LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG BREGGIA BROKEN CORES	HARDNESS 4 3 2	ROCK QUALITY DESIGNATION % 75 50 25	NATURAL FRACTURE FREQUENCY PER FOOT 15 10 5
	25	50	75	TYPE	INFILLING	INCLINATION					
91				B1	W	75					
				B1	W	80					
				J1	W	10	185				
92				B1	W	80					
				B1	W	80					
				J1	W	10	195				
				J4	W	25	110				
101				B1	W	65					
				B1	W	75					
106				B1	W	80					
				J1	W	10	95				
				J1	W	25	115				
111				J1	W	35	215				
				B1	F	75					

LOGGED BY: Lawson
DATE: July 31, 49



GEOTECHNICAL LOG

HOLE No. 1258

SHEET 3 OF

HOLE NO.	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA OR BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
110				BI	F	75													
		0%		J1	F	10	35												
				J1	F	25	180												
121				BI	F	80		repeats once											
		0%		BI	F	65													
126				BI	F	75		ALL BROKEN CORE											
				BI	C	90													
		0%		J1	F+W	30	60												
				BI	W	85		repeats twice											
131				BI	W	90													
				BI	B	85													
		0%		BI	B	90													
				BI	B	85													
136								BROKEN CORE											
		0%																	

LOGGED BY: KEWON
DATE: July 3/79



GEOTECHNICAL LOG

HOLE No. 1258
SHEET 4 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BREGIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
141				J1	B	20	115												
		0%		J1	B	25	90												
146				B1	B	55													
				B1	B	85													
		2%		J1	W	30	150	repeats once											
				B1	W	60													
				B1	W	85													
151				B1	SS	85		repeats twice											
		0%		B1	W	90													
				B1	W	65													
156				J1	W	30	110												
		0%		B1	W	90													
				J1	W	45	90												
161				J1	W	10	225												
		0%		B1	W	85													

LOGGED BY: Lohann
DATE: July 6/79



GEOTECHNICAL LOG

HOLE No. 1258

SHEET 5 OF

DEPTH	% CORE LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS 4 3 2	ROCK QUALITY DESIGNATION % 75 50 25	NATURAL FRACTURE FREQUENCY PER FOOT 15 10 5
	25	50	75	TYPE	INFILLING	INCLINATION						
166				B1	W	75						
	0%			B1	W	90	BROKEN CORE					
171				B1	W	65						
	0%			J1	W	60	130 Traces of iron oxides found in broken core					
176							BROKEN CORE					
	0%			J1	W	10	90					
				B1	B	75						
				B1	B	90						
181				B1	B	85						
				B1	B	90						
				B1	B	85	repeats twice					
186				J1	B	30	180					

LOGGED BY: Louiana
DATE: July 6/79



GEOTECHNICAL LOG

HOLE No. 1258
SHEET 6 OF

DEPTH	% CORE LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION			ANGLE TO BEDDING	4	3	2	75	50	25	15	10
191																	
		0%		B1	B	90		repeats once									
196				B1	B	50											
				B1	B	70											
		0%		B1	C	70											
				B1	C	85											
201				B1	W	85											
		0%		B1	N	60											
				B1	W	85											
206				B1	N	55											
		0%						Broken Core									
211																	
		0%		B1	B	85											

LOGGED BY: Louann
DATE: July 6/79



GEOTECHNICAL LOG

HOLE No. 1258

SHEET 7 OF

DEPTH	% CORE LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION			ANGLE TO BEDDING	4	3	2	75	50	25	15	10
216				B1	B	60											
				B1	B	75											
221				J1	B	25	90										
				J1	W	25	270										
				J4	W	10	300										
226				B1	W	90											
				J1	C	50	115										
				B1	W	85											
231				B1	W	85											
				B1	C	90											
				J1	W	25	155										
236				B1	C	85											
				J1	W	50	115										

LOGGED BY: Diann
DATE: July 6/79



GEOTECHNICAL LOG

HOLE No. 1258

SHEET 8 OF

DEPTH	% CORE LOSS 25 50 75			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
				TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
241				BI F		80												
			0%															
246				J1 F		25	175											
			0%	BI F		80	Lots of iron oxides											
				BI F		35												
251				BI F		65												
			0%	BI F		80	Lots of iron oxides											
				J1 F		35	170											
256				BI F		85												
			0%	BI F		80												
261				J4 C		20	160											
			0%				BROKEN CORE											

LOGGED BY: Adriann
DATE: July 6/79



GEOTECHNICAL LOG

HOLE No. 1258
SHEET 9 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
266				B1	F	80		repeats once											
	0%			J1	F	35	125												
				B1	F	90													
271				B1	F	75													
	0%							BROKEN CORE											
276				B1	B	90													
	0%			B1	B	85													
281				B1	B	90													
	0%			B1	B	85													
286				B1	B	90													
	0%			B1	C	90													
				B1	C	85													
				J1	C	40	125												

LOGGED BY: Deanna
DATE: July 6/79



GEOTECHNICAL LOG

HOLE No. 1258

SHEET 10 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORES	HARDNESS: 4 3 2	ROCK QUALITY DESIGNATION % 75 50 25	NATURAL FRACTURE FREQUENCY PER FOOT 15 10 5
				TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING					
291								BROKEN CORE				
	0%											
				J1	C	35	195					
296				B1	B	90		repeats three times				
				B1	B	75						
	0%			J1	B	55	230					
301				B1	B	90		repeats twice				
	0%			B1	B	65						
				B1	B	85						
306				J4	B	55	160					
	0%			B1	B	85						
311				B1	B	90						
	0%			B1	W	90		SILTSTONE BAND →				
				B1	C	85						

LOGGED BY: Quinn
DATE: July 9/79



GEOTECHNICAL LOG

HOLE No. 1258
SHEET 11 OF

CORRECTION	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
316		0%						BROKEN CORE											
				B1	B	60		repeats once											
321		0%						Broken core											
				B1	B	50													
326				B1	B	85													
		0%		B1	C	25													
				B1	C	75													
				B1	B	80													
331				B1	F	40													
		0%		B1	F	85													
336				J1	F	25	150												
		0%		B1	C	80													
				B1	C	70		repeats once											

LOGGED BY: Louann
DATE: July 9/79



GEOTECHNICAL LOG

HOLE No. 125B

SHEET 12 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
341																			
		0%						BROKEN CORE											
346																			
		2%																	
351																			
		0%						repeats once											
356																			
		0%																	
361																			
		0%																	

LOGGED BY: Louanna
DATE: July 9/79



GEOTECHNICAL LOG

HOLE No. 1258

SHEET 13 OF

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
366				B1 C	80														
	0%			J1 W	45	160													
371				B1 C	75														
	0%			J1 C	25	170													
376				B1 C	90														
	0%			B1 B	75														
				B1 B	90														
381								Broken Core											
	0%																		
386																			
	0%			B1 B	75														

LOGGED BY: Lawson
DATE: July 9/79



GEOTECHNICAL LOG

HOLE No. 1252

SHEET 14 OF

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
391				BI	W	75													
	0%			BI	W	90													
				J1	W	10	175												
396				BI	W	75													
	0%			BI	W	80													
401				BI	W	85													
	0%			J1	W	25	225												
				BI	W	80													
406				BI	W	75													
	0%			BI	B	90		repeats twice											
				BI	B	75													
411				J1	B	25	190												
	0%			BI	C	85		Broken core											
				BI	C	90													

LOGGED BY: Lawan
 DATE: July 9/79



GEOTECHNICAL LOG

HOLE No. 1258

SHEET 15 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
416				B1	W	85													
	0%			J1	W	15	195												
				B1	W	90													
421								Broken Core											
	2%			B1	B	90													
				B1	B	85													
426				B1	W	85													
	0%			B1	W	90													
431				J1	W	35	275												
	0%			B1	W	85													
				B1	C	90													
				B1	W	75													
436				J1	W	55	90												
				J1	W	35	110												
				B1	C	85													
				B1	C	90													

LOGGED BY: Leviann
DATE: July 9/79



GEOTECHNICAL LOG

HOLE No. 1258

SHEET 16 OF

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
441				B1	C	0		END OF HOLE											

LOGGED BY: dejiann
DATE: July 9/79



GEOTECHNICAL LOG

HOLE No. 1258

SHEET 17 OF

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT				
	25	50	75								4	3	2	75	50	25	15	10	5		
				J4	F	4															
55		0%		B1	F	80		REPEATED THREE TIMES													
				B1	C	85															
				J4	W	10	150														
				B4	F	95															
				B2	C	75															
				B1	F	85															
60		2%		B2	B	85		← REPEATED THREE TIMES													
				B4	B	75															
				J1	F	55															
				B1	F	80															
				B2	C	80															
				J3	C	65															
				J1	F	40	295														
65		0%		J4	C	8		REPEATED ONCE ON OTHER SIDE OF CORE HIGHLY ANGULAR													
				B2	C	80															
				B2	B	80															
				B2	C	80															
				J3	C	15															
				B4	C	85															
				B2	B	65		ABOUT 1' LONG - THROUGH BROKEN													
				J4	W	8															
70		8%		J4	F	8	150	← REPEATED 12 TIMES													
				B4	F	70															
				J4	W	12	190														
				J4	W	30	310														
				J1	F	40	330														
				B2	F	85															
				J4	C	50		REPEATED 4 TIMES													
				B2	B	85															
				B2	C	85															
				B2	B	85		REPEATED SEVEN TIMES POLISHED BITUMEN REPEATED TWICE													
				J1	B	40	30														
				B2	B	90															
				B1	B	96															
		0%		B1	B	80															

LOGGED BY: KH
DATE: JUNE 11/79



GEO TECHNICAL LOG

HOLE No. 1259

SHEET 2

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
				B ₁	B ₁	85		IMMEDIATELY BEFORE BROKEN CORE											
				J ₄	C	3		REPEATED THREE TIMES											
				B ₂	B	85													
				J ₄	F	50	240												
			0%	B ₁	B	85													
				J ₄	F _B	4													
				B ₂	F _B	85		POLISHED BITUMEN											
40				J ₂	B	60		REPEATED ONCE											
				B ₂	B	75													
				B ₁	C	70													
			3%	B ₁	B	85		REPEATED SEVERAL TIMES											
				J ₄	B	16		THROUGHOUT SECTION											
85				J ₄	B	15	75												
				J ₄	B	5													
			0%	B ₁	B	85		REPEATED SEVERAL TIMES											
90								THROUGHOUT SECTION											
				B ₁	B	85													
			0%	B ₁	C	75		REPEATED SEVERAL TIMES											
95								THROUGHOUT SECTION											
								IN SANDSTONE											
				B ₁	B	80													
				J ₄	W	6	195												
				B ₄	B	70													
			10%	J ₄	W	3	225	ABOUT TWO FEET LONG											
				B ₂	B	30													
				B ₂	B	30													

LOGGED BY: KH

DATE: June 11/79



GEOTECHNICAL LOG

HOLE No. 1259

SHEET 3

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT				
	25	50	75								4	3	2	75	50	25	15	10	5		
130	0%			B ₁	C	80	190														
				J ₄	W	10		BELOW 126 FEET REPEATED ONCE													
				B ₄	C	85															
				B ₁	C	2															
				B ₁	C	80		REPEATED ONCE TWICE													
				J ₄	B	65	170	REPEATED ONCE													
135	0%			B ₄	B	10	170														
				B ₄	B	80		REPEATED ONCE													
				B ₁	B	85	160	REPEATED ONCE													
				J ₄	C	4		REPEATED ON OPPOSITE SIDE OF CORE													
				B ₄	B	80		POLISHED BITUMEN													
				J ₄	B	85	←	REPEATED ELEVEN TIMES TO 134'													
140	6%			J ₄	C	40		POLISHED BITUMEN													
				J ₄	B	45	290														
				B ₂	B	80															
				J ₄	SS	60		REPEATED TWICE													
				B ₄	B	90		REPEATED TWICE													
				J ₄	B	50		BELOW 136 FEET													
145	0%			J ₄	C	8	150														
				J ₄	C	6															
				B ₄	B	85															
				B ₁	B	85		REPEATED THREE TIMES													
				B ₁	SS	89															
				J ₄	C	2	160														
145	0%			J ₄	W	15															
				J ₄	W	8															
				B ₂	C	70															
				B ₄	B	70	110	REPEATED TWICE } BELOW 141 feet.													
				J ₄	C	10		REPEATED ONCE													
				B ₁	B	80	150														
145	0%			J ₄	W	10															
				J ₄	W	8															
				B ₂	C	70															
				B ₁	C	80	150														
				J ₄	W	4															
				S ₂	C	80	230														

LOGGED BY: KH
DATE: JUNE 12/79



GEOTECHNICAL LOG

HOLE No. 1259

SHEET 5

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
155	0%			B ₂ B ₃ J ₁ B ₁ B ₁	A E C C B	85 80 78 70	215	REPEATED SEVEN TIMES FROM 155-156'											
160	0%			B ₄ B ₂ B ₄	B B B	70 80 70		REPEATED 4 TIMES REPEATED 3 TIMES FROM 156-158' After Broken Core											
165	0%			B ₄ J ₃ B ₁ J ₃ B ₂ J ₁	B B B B B B	80 20 82 70 80 50		HIGHLY ANGULAR ← REPEATED 25 TIMES FROM 163-166 FEET											
170	0%			B ₁ B ₃ B ₁ B ₄ B ₁	B B B B B	80 85 85 80 86	30	REPEATED ONCE											
	0%			J ₃ J ₂ B ₁ B ₄ B ₂ B ₁	C B _W B _W W F W	60 65 80 80 80 80		REPEATED ONCE REPEATED ONCE											

LOGGED BY: KN
DATE: JUNE 12/79



GEOTECHNICAL LOG

HOLE No. 1259
SHEET 6

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75								4	3	2	75	50	25	15	10	5	
				B ₂	C	80														
205		0%		B ₂ B ₂ B ₂ B ₂ B ₁ C ₁	C W C F W	85 80 80 85 75 12	115													
210		12%		B ₁ B ₂ B ₄ C ₁ B ₂ B ₁ B ₂	B C C B W C C C	85 85 85 10 80 83 80	100	REPEATED ONCE												
215		6%		B ₂ C ₁ C ₁ B ₁ B ₂ B ₂ B ₂ C ₁ C ₁	C C B C R B C W	87 0 80 80 85 70 80 4	130	REPEATED TWICE												
		0%		C ₁ C ₁ C ₁ B ₁	C B C	50 60 70	150 310	REPEATED ONCE REPEATED ONCE												
220		25%		J ₄ C ₁ C ₁ C ₁ C ₁ C ₁ C ₁	S C C W C C	13 85 15 8 80 25	100 190													
		0%		J ₁ C ₁ C ₁	B C C	10 12 70	140 170													

LOGGED BY: KM
DATE: JUNE 13/79



GEOTECHNICAL LOG

HOLE No. 1259

SHEET 8 OF

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
				B ₁	C	78		REPEATED ONCE	o										
		0%		B ₂	C	80			o										
				B ₁	C	10	165		o										
				B ₂	C	85		REPEATED ONCE	o										
230		0%		B ₂	C	80		33" of core in this section	o										
				B ₂	C	88			o										
				B ₄	N	0	155	ABOUT 18" LONG	o										
				B ₄	C	50	60		o										
				B ₁	B	70			o										
		0%		B ₂	B	80			o										
				B ₂	C	80		REPEATED TWICE	o										
235				B ₁	B	70			o										
				B ₂	B	88			o										
				B ₁	B	88	305		o										
				B ₂	C	75			o										
				B ₁	N	85		REPEATED TWICE	o										
				B ₁	B	75		REPEATED TWICE	o										
		4%		B ₁	B	80		REPEATED SEVERAL TIMES BELOW 236	o										
				B ₁	B	80		REPEATED SIX TIMES FROM 236-237	o										
				B ₁	B	32		REPEATED 3 TIMES	o										
				B ₁	C	70			o										
240				B ₁	C	85		REPEATED TWICE	o										
				B ₁	C	83		SHOULD BE MUDSTONE	o										
				B ₁	C	70			o										
				B ₁	C	80	110	REPEATED SIX TIMES	o										
				B ₁	B	80		REPEATED 4 TIMES	o										
				B ₂	B	80			o										
				B ₂	B	85			o										
		0%		B ₁	B	85		REPEATED 9 TIMES	o										
				B ₁	B	85			o										
245				B ₁	B	85			o										
				B ₄	B	70	260		o										
				B ₂	B	80			o										
				B ₂	B	85			o										
				B ₂	B	70			o										
				B ₂	B	65			o										
		0%		B ₂	B	85		REPEATED SEVERAL TIMES TILL END OF SECTION	o										



LOGGED BY: KL
DATE: JUNE 13/79



GEOTECHNICAL LOG

HOLE No. 1259
SHEET 9 OF

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
				J4	B	50	205	REPEATED ONCE											
255		0%		J3 B1 B1	B B B	60 80 60		REPEATED TWICE REPEATED SEVERAL TIMES ALONG BROKEN CORE											
260		0%		B2 J2 J4 J4 B2 J2 B4 B4	B B C C W B W	70 45 30 30 88 75 85 0	200	REPEATED SEVEN TIMES REPEATED ONCE TWICE											
265		0%		J4 B1 B2 B2 J4 B1 B2	B B B B C B B	30 80 75 80 10 80 85	190	{ BELOW 261 feet REPEATED SIX TIMES REPEATED NINE TIMES REPEATED ONCE											
		0%		B4 J1 B1 J1	C C C C	80 45 80 8	220	REPEATED SEVERAL TIMES											
270		0%		B2 J1 B4 J4 B2	C C C C C	85 60 80 10 40	250	REPEATED THREE TIMES REPEATED BELOW 271'											
				J3 J1 J3	C C C	45 4 70	150	OVER 3' LONG PERPENDICULAR TO LARGE J1 REPEATED SEVERAL TIMES											

LOGGED BY: KH
DATE: JUNE 13/79



GEOTECHNICAL LOG

HOLE No. 1259

SHEET 10 OF

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
280	8%			J ₁	B	30		REPEATED ONCE REPEATED SEVERAL TIMES TO 281' REPEATED ONCE											
				B ₂	B	25													
				B ₃	B	45													
				B ₄	B	20													
				J ₂	B	50	300												
J ₄	B	40	190																
285	0%			J ₁	B	40	190	REPEATED TWICE " " REPEATED SEVERAL TIMES TILL 286 FEET. IN MUDSTONE - REPEATED TWICE											
				B ₂	B	85													
				B ₃	B	75													
				J ₄	B	10	185												
				B ₂	B	75													
B ₄	B	85																	
290	0%			J ₁	C	4		1/2 way through to J ₄ - repeated SEVERAL TIMES REPEATED ONCE " " REPEATED ONCE											
				B ₄	C	80													
				B ₂	B	85													
				B ₂	C	80													
				B ₂	B	90													
				B ₃	C	90													
				B ₄	B	85													
B ₂	B	85																	
295	20%			J ₄	C	8	270	REPEATED TWICE REPEATED 5 TIMES											
				B ₁	B	85													
				J ₃	C	75													
				B ₁	C	85													
				J ₄	SS	60													
				B ₄	B	90													
B ₁	B	85																	
	0%			J ₄	C	10	160	HIGHLY ANGULAR REPEATED ONCE											
				B ₄	B	77													
				B ₂	C	80													
				J ₃	C	60													
				B ₂	B	70													
				B ₂	C	75													

LOGGED BY: KN
DATE: JUNE 15/79



GEOTECHNICAL LOG

HOLE No. 1259
SHEET 11 OF

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
305	0%			B ₄ B ₄ B ₄ J ₄ B ₂ J ₃ B ₂ J ₃	C C C C C C C C	20 75 75 8 20 15 80 10	165 290	REPEATED 20 TIMES											
310	5%			B ₄ B ₁ B ₁ B ₂ B ₁	C B C C B	80 80 80 75 80		REPEATED 11 TIMES IN COAL TO 311'											
315	0%			J ₁ B ₂ J ₄ J ₁ B ₁ J ₁	B B B C B C	75 98 70 35 85 45	170 180	REPEATED SEVERAL TIMES FROM 311-312'											
320	3%			B ₁ J ₂ J ₁ B ₂ J ₂	C C B B B	70 52 42 78 70	120 120 10	REPEATED ONCE											
	0%			S ₁ J ₄ B ₂	C W B C	70 10 50 85	155 260	REPEATED 4 TIMES											
	20%			J ₃ B ₁ B ₄ J ₄	C C C C	5 20 25 40		REPEATED ONCE											

LOGGED BY: KH
DATE: JUNE 15/79



GEOTECHNICAL LOG

HOLE No. 1259

SHEET 12 OF

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
	20%			B ₁ B ₂ B ₃ B ₄	C B B B	10 60 80 60	30	REPEATED SEVERAL TIMES IN CORE INTERSECT EACH OTHER											
330	10%			B ₁ B ₂ B ₃ B ₄	B B C C	70 80 90 70	140	REPEATED TWICE											
335	0%			B ₁ B ₂ B ₃ B ₄	W W C W	70 70 80 40	35	REPEATED TWICE. VERY THICK CALCITE REPEATED SEVERAL TIMES THROUGH BROKEN CORE.											
340	6%			B ₁ B ₂ B ₃ B ₄	C C B C W	15 80 30 70 80 75 80 60	20	REPEATED TWICE											
345	3%			B ₁ B ₂ B ₃ B ₄	W C B B B	75 80 78 80 78 10	140	REPEATED 6 TIMES TO 344'											
	0%			B ₁ B ₂ B ₃ B ₄	B C C C B E	80 80 85 85 85 80		REPEATED TWICE REPEATED ONCE											

LOGGED BY: KA

DATE: JUL 15 1979



GEOTECHNICAL LOG

HOLE No. 1259

SHEET 13 OF 15

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
	0%			W	W	W	W	REPEATED BRICE REPEATED BRICE	0.										
355								End of Hole											

LOGGED BY: K/H
DATE: JULIE 15/79



GEOTECHNICAL LOG

HOLE No. 1259
SHEET 14 OF

DEPTH (ft)	% CORE LOSS			TYPE	INFILLING	INCLINATION (°)	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA OR BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			SANDSTONE SL. STONE MUDSTONE COAL
	25	50	75								4	3	2	75	50	25	15	10	5	
								0-27 OB.												
30	0%			BI	F	90		repeated 4 times	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]
				BI	W	70		repeats once												
				JI	C	50	180													
35	0%			BI	W	70		repeats once	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]
				BI	W	80														
				BI	W SS	50														
40	0%							ALL BROKEN CORE	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	
				BI	W	85														
				JI	F	20	210													
45	0%			JI	F	10	150		[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]
				BI	F	85		repeats once												
				BI	F	85														
	2%			BI	F	85			[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]	[Hatched Area]
				BI	F	90		repeats three times												
				JI	F	20	165													

LOGGED BY: A. J. Mann
 DATE: June 28/79

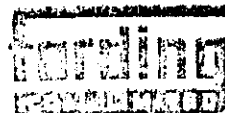


GEOTECHNICAL LOG

HOLE No. 1260
 SHEET 1 OF 15

DEPTH (FEET)	FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	HARDNESS	ROCK QUALITY DESIGNATION %	NATURAL FRACTURE FREQUENCY PER FOOT
	TYPE	INFILLING	INCLINATION					
51				ALL CORE IS BROKEN			0%	
56				repeated once				
				Lots of iron oxides through out this section			0%	
61								
66				Lots of IRON OXIDES				
				repeats once				
71				repeats once				
				repeats three more times				

LOGGED BY: Loman
DATE: June 28, 19



GEOTECHNICAL LOG

HOLE No. 1260
SHEET 2 OF 15

DEPTH (FEET)	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA OR BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	20	50	75								4	3	2	75	50	25	15	10	5
76		0%		B1 F		45													
		0%		J4 C		30	190												
				B1 B		10													
				B1 F		40		repeats three times											
81				J1 C		80	210	repeats four times											
		30%		B1 C		15													
				J1 B		80	165												
				B1 F		35		repeats once											
86		0%						ALL BROKEN CORE						0%					
91		0%		B1		80		repeats twice at angles of 75°, 60°											
				B1 F		55													
				J1 W		40	195												
96		2%		B1 C		40													
				J1 F		10	235	repeats three times											
				J1 W		21	165												

LOGGED BY: Levan
DATE: June 28/89



GEOTECHNICAL LOG

HOLE No. 1260

SHEET 3 OF 15

DEPTH (ft)	DIP (%)	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	ERECTOR BEAMS (BROKE & COEFF)	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
									4	3	2	75	50	25	15	10	5	
101	2%	BI	C	90		repeats once												
106	0%	J1	W	40	90	repeats four times												
		JA	W	10	185													
		BI	SS	90														
		BI	F	75														
111		BI	F	60														
116	0%	J1	W	10	85	repeats once at 80°												
		J1	W	20	60													
		BI	F	75														
121	0%	BI	W	80														
		BI	W	60														
	50%	BI	C	65		repeats twice												
	2%	BI	W	50														
		BI	C	80														
		JA	C	10	160													

LOGGED BY: Lorann
 DATE: June 29, 79



GEOTECHNICAL LOG

HOLE No. 1260
 SHEET 4 OF 15

HOLE NO.	% CORE LOSS	FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	SECTION OF BROKEN CORE	HARDNESS	ROCK QUALITY DESIGNATION %	NATURAL FRACTURE FREQUENCY PER FOOT
		TYPE	FILLING	INCLINATION						
126	2%	BI	F	60	repeats twice					
		BI	W	70						
131	3%	BI	W	85	repeats twice					
		J4	W	55						180
		BI	W	80						
		J1	C	10						130
136	0%	BI	W	70	BROKEN CORE					
		BI	B	65						
		BI	C	80						
		BI	F	65						
141	0%	J1	F	25	180					
		BI	F	70						
146	0%	BI	W	80	BROKEN CORE					
		J1	W	20						85
		J1	SS	40						80
		BI	W	85						
		J4	W	60	95	repeats three times				
		BI	W	70						

LOGGED BY: hewson
DATE: June 29/79



GEOTECHNICAL LOG

HOLE No. 1260
SHEET 5 OF 15

FRACTURES

% CORE LOSS
25 50 75

TYPE
INFILLING
INCLINATION
ANGLE TO BEDDING

DESCRIPTION AND REMARKS

GRAPHIC LOG
BRECCIA
BROKEN CORE

HARDNESS
4 3 2

ROCK QUALITY DESIGNATION
%
75 50 25

NATURAL FRACTURE FREQUENCY PER FOOT
15 10 5

151

0%

J1 10 180
J1 15 205
J4 W 25 270

156

B1 F 30
B1 F 70
B1 SS 85

repeats twice, 80° & 85°

161

B1 SS 70
B1 F 60
B1 F 85
J1 SS 40 210

BROKEN CORE

166

BROKEN CORE
J1 35 120
B1 C 85
J1 C 20 90
B1 SS 80
B1 C 85
B1 SS 60
B1 SS 75

BROKEN CORE

171

J1 W 10 60
J1 W 10 85
B1 W 85

repeats once
repeats twice at 60° + 75°

LOGGED BY: Leian
DATE: June 29/79



GEOTECHNICAL LOG

HOLE No. 1260
SHEET 6 OF 15

HOLE NO.	% CORE LOSS	FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS	ROCK QUALITY DESIGNATION %	NATURAL FRACTURE FREQUENCY PER FOOT			
		TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING							4	3	2
176	0%	BI JI JI JA	W B W W	70 0 35 10	260 90 245									
181	0%	BI JI BI	C W W	75 40 80	210									
186	0%	JI JI	C W	15 30	240 110	BROKEN CORE								
191	0%	BI BI JI BI	C C W C	60 60 20 85	150									
196	0%					ALL BROKEN CORE S+S VISIBLE ON SOME PIECES OF CORE								

LOGGED BY houcarr
DATE June 29/79



GEOTECHNICAL LOG

HOLE No. 1260

SHEET 7 OF 15

DEPTH	% CORE LOSS			TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING	DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORES	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75								4	3	2	75	50	25	15	10	5
201								ALL BROKEN CORE											
206		0%		BI	B	50													
211		0%		BI	C	60													
				Ji	SS	20	150												
				Ji	SS	25	160	BROKEN CORE											
211				BI	SS	55		BROKEN CORE											
				BI	W	70		BROKEN CORE											
		0%		BI	SS	60													
216				BI	W	70		BROKEN CORE											
		2%		BI	SS	80		BROKEN CORE											
				BI	SS	65		repeats twice											
				BI	B	80													
221				BI	W	65		repeats twice											
				BI	W	80													
				BI	SS	85													
				BI	SS	50													

DRILLED BY: Heenan
DATE: July 3/79



GEOTECHNICAL LOG

HOLE No. 1260

SHEET 8 OF 15

DEPTH	% CORE LOSS			PARAMETERS			DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT			
	25	50	75	TYPE	INFILLING	INCLINATION			ANGLE TO BEDDING	4	3	2	75	50	25	15	10	5
226				BI	B	80		repeats once.										
	0%			BI	B	80												
				J1	B	25	180											
				BI	B	65												
231								ALL BROKEN CORE										
	0%																	
236																		
	0%																	
241				J1	C	30	190	repeats once										
	0%			BI	C	90												
				BI	C	85												
				BI	C	90												
246				BI	C	85												
	0%			J4	C	40	125											
				BI	W	85												
				J1	W	35	90											
				BI	C	80												

DESIGNED BY: July 31, 79
DATE: delian



GEOTECHNICAL LOG

HOLE No. 1260

SHEET 9 OF 15

DEPTH	% CORE LOSS	FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
		TYPE	INFILLING	INCLINATION				ANGLE TO BEDDING	4	3	2	75	50	25	15	10
251	0%	BI	C	85	BROKEN CORE											
		BI	W	90												
256	0%	BI	W	80	A LOT OF CALCITE											
		BI	W	90												
		BI	W	65												
		BI	W	50												
		BI	W	60												
261		BI	W	55	A LOT OF CALCITE											
		JT	W	10												120
266					BROKEN CORE											
		JT	W	25												100
271		BI	W	60	Repeats three times											
		BI	W	80												
		BI	W	75	Repeats once											

LOGGED BY: July 31/79
 DATE: Heuam



GEOTECHNICAL LOG

HOLE No. 1260

SHEET 10 OF 15

DEPTH	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING				4	3	2	75	50	25	15	10	5
276				J1	W	15	210	A lot of calcite in this fracture.											
	0%		J1	W	10	135													
			B1	W	80														
			B1	W	80														
281				J1	W	30	185	ALL BROKEN CORE A LOT OF CALCITE DEPOSIT ON CORE.											
	0%																		
286				J1	W	15	150	ALL BROKEN CORE											
291				B1	SS	60		repeats twice											
	0%		B1	W	55														
			J1	W	10	60													
			J1	W	30	95													
			J1	W	15	85													
			B1	SS	85														
			J1	W	35	110													
			J1	W	10	230													
296				J1	W	15	170												

LOGGED BY: W. A. ...
 DATE: July 2/79



GEOTECHNICAL LOG

HOLE No. 1260
 SHEET 11 OF 15

DEPTH (ft)	% CORE LOSS			FRACTURES			DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION %			NATURAL FRACTURE FREQUENCY PER FOOT		
	25	50	75	TYPE	INFILLING	INCLINATION			ANGLE TO BEDDING	4	3	2	75	50	25	15	10
301																	
		2%		B4	C	10	210										
				B1	W	60											
306				B1	W	85											
		0%		B1	W	90											
				B1	W	65											
311																	
		0%		B1	B	90											
316																	
		0%															
321																	
		0%															

LOGGED BY: July 4/79
 DATE: 1/1/79 duann



GEOTECHNICAL LOG

HOLE No. 1260

SHEET 12 OF 15

326	FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG BRECCIA BROKEN CORE	HARDNESS 4 3 2	ROCK QUALITY DESIGNATION % 75 50 25	NATURAL FRACTURE FREQUENCY PER FOOT 15 10 5
	% CORE LOSS 25 50 75			ANGLE TO BEDDING					
	TYPE	INFILLING	INCLINATION						
	0%				ALL BROKEN CORE				
331									
	4%								
336									
	0%				repeats four times				
341									
	0%			170	repeats four times				
					repeats twice				
346					repeats three times				
	0%								

LOGGED BY: Koison
DATE: July 4/59



GEOTECHNICAL LOG

HOLE No. 1260

SHEET 13 OF 15

NO. CORE LOSS	FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS			ROCK QUALITY DESIGNATION			NATURAL FRACTURE FREQUENCY PER FOOT						
	25	50	75	TYPE				INCLINING	INCLINATION	ANGLE TO BEDDING	4	3	2	75	50	25	15	10	5	
351				J1 J1 B1 B1	C C W C	10 80 70 90	165 90													
	0%							repeats three times												
356				B1 B1 B1 J1	C C C C	80 65 80 15														
	0%																			
361								CORE IS COMPLETELY BROKEN												
	0%																			
366																				
	0%																			
371																				
	5%																			

LOGGED BY: Loison
DATE: July 4/77



GEOTECHNICAL LOG

HOLE No. 1260
SHEET 14 OF 15

	% CORE LOSS			FRACTURES				DESCRIPTION AND REMARKS	GRAPHIC LOG	BRECCIA BROKEN CORE	HARDNESS 4 3 2	ROCK QUALITY DESIGNATION %	NATURAL FRACTURE FREQUENCY PER FOOT
	25	50	75	TYPE	INFILLING	INCLINATION	ANGLE TO BEDDING						
376								BROKEN CORE					
				7H									
			89%					BROKEN CORE					
381				B1	C	85							
				B1	C	70							
				B1	C	80		repeats three times					
				J1	C	15	165						
386				B1	C	85							
				B1	C	90							
				B1	C	90		BROKEN CORE / CALCITE					
391				B1	C	85							
								END OF HOLE					
396													

LOGGED BY: July 4/79
 DATE: Richard



GEOTECHNICAL LOG

HOLE No. 1260

SHEET 15 OF 15

K-Fording River 72(4)B

GEOLOGICAL BRANCH
ASSESSMENT REPORT

00 324

APPENDIX 3

ii) PETROGRAPHIC ANALYSES

REFLECTANCE DATA

SAMPLE No	MEAN MAX.	V - TYPES														VM%	ASH	SUL.
		CCP No	REFLECTANCE	V-7	V-8	V-9	V-10	V-11	V-12	V-13	V-14	V-15	V-16	V-17	V-18			
PET#269 DDH 1570 CCP-80-021 31083-87 30' / 33'	1.0672			6	25	19										-	7.2	0.64
PET#277 DDH 1570 31186-88	1.2926					1	27	21	1							-	9.2	0.46
CCP-80-022 37' / 1223																		
PET#283 DDH 1568 31127-33	1.0546			9	30	11										-	9.2	0.52
CCP-80-023 33' / 100'																		
PET#284 DDH 1568 31135-37	1.0784			4	29	16	1									-	4.5	0.58
CCP-80-024 16' / 200'																		
PET#292 DDH 1569 27451	1.0268			12	37	1										-	7.5	0.82
CCP-80-025 11.5' / 44.5'																		
PET#294 DDH 1569 27456	1.0102			19	28	3										-	3.8	0.52
CCP-80-026 10' / 443.5'																		
PET#295 DDH 1569 27458-59	1.0262		1	12	31	6										-	3.8	0.46
CCP-80-027 22' / 598'																		

MACERAL DATA

SAMPLE No	VITRINITE	EXINITE	SEMIFUSINITE	MACRINITE	MICRINITE	FUSINITE	MINERAL MATTER	REACTIVES %	INERTS %	COMPOSITIONAL	BALANCE INDEX	STRENGTH INDEX	PREDICTED COKE STABILITY	APPROX. JIS	DRUM INDEX
CCP No															
PET#269 DDH 1570 31083-87	67.82	1.92	22.41	0.38	1.34	2.68	3.45	76.72	23.28	0.76	4.06	56	92		
CCP-80-021 30'/331'															
PET#277 DDH 1570 31186-88	56.08	-	34.66	0.79	1.59	3.17	3.70	66.66	33.34	1.75	5.16	57	92		
CCP-80-022 37'/1223'															
PET#283 DDH 1568 31127-33	64.68	3.83	20.85	0.85	1.70	3.62	4.47	74.95	25.05	0.83	3.96	54.5	91		
CCP-80-023 33'/100'															
PET#284 DDH - 1568 31135-37	70.48	1.27	21.01	0.64	1.69	2.97	1.91	78.22	21.78	0.70	4.03	54.5	91		
CCP-80-024 16'/200'															
DDH 1569															
PET#292 27451	72.42	2.95	16.21	0.84	2.31	1.89	3.37	79.99	20.01	0.61	3.73	48	91		
CCP-80-025 11.5'/44.5'															
PET#294 DDH 1569 27456	67.81	5.23	20.32	-	1.01	2.41	3.22	80.66	19.34	0.59	3.72	47.6	91		
CCP-80-026 10'/443.5'															
PET#295 DDH 1569 27453-59	66.19	3.22	24.55	0.60	1.61	1.41	2.41	77.77	22.23	0.71	3.81	51	91		
CCP-80-027 22'/598'															

REFLECTANCE DATA

copy

SAMPLE No CCP No	MEAN MAX. REFLECTANCE	V - TYPES														VM%	ASH	SUL.	
		V-7	V-8	V-9	V-10	V-11	V-12	V-13	V-14	V-15	V-16	V-17	V-18	V-19					
PET#269 ¹⁵⁷⁰ CCP-80-021 ³¹⁰⁸³⁻⁸⁷	1.0672			6	25	19											-	7.2	0.64
PET#277 ¹⁵⁷⁰ SEAM-12 ³¹¹⁸⁶⁻¹⁸⁸ CCP-80-022 ²⁷¹⁰¹²³	1.2926					1	27	21	1								-	9.2	0.46
PET#283 ¹⁵⁶⁸ ³¹¹²⁷⁻¹³³ CCP-80-023 ^{43 @ 100}	1.0546			9	30	11											-	9.2	0.52
PET#284 ¹⁵⁶⁸ ³¹¹³⁵⁻¹³⁷ CCP-80-024 ^{10 @ 200}	1.0784			4	29	16	1										-	4.5	0.58
PET#292 ¹⁵⁶⁹ SEAM-19 ²⁷⁴⁵¹ CCP-80-025 ^{115 @ 200}	1.0268			12	37	1											-	7.5	0.82
PET#294 ¹⁵⁶⁹ ²⁷⁴⁵⁶ CCP-80-026 ^{10 @ 200}	1.0102			19	28	3											-	3.8	0.52
PET#295 ¹⁵⁶⁹ ²⁷⁴⁵⁹⁻⁴⁵⁹ CCP-80-027 ^{22 @ 500}	1.0262		1	12	31	6											-	3.8	0.46

Lee - Can you tell me what holes & seams these petrographs are for?

Richard

CASCADE COAL PETROGRAPHY LIMITED

REFLECTANCE DATA

SAMPLE No CCP No	MEAN MAX. REFLECTANCE	V - TYPES														VM%	ASH	SUL.
		V-7	V-8	V-9	V-10	V-11	V-12	V-13	V-14	V-15	V-16	V-17	V-18	V-19				
#284-15396 CCP-79-182	1.2758					5	30	10	4	1					25	7.6	0.44	
#284-26015-016 CCP-79-183 R-7	1.3474					-	8	35	5	2					24	9.0	0.60	
#284. 26017 CCP-79-184 R-5	1.3672					-	7	28	14	1					23	8.2	0.40	
#284. 26021 CCP-79-185 R4 Up	1.4390					-	1	10	35	4					21	7.4	0.58	
#284. 26022 R4 Low CCP-79-186	1.4388					-	-	14	25	11					21	8.8	0.50	
#284. 26023 R4 Up CCP-79-187	1.4842					-	-	6	21	22	1				20	7.6	0.58	
#284. 26024 R4 Low CCP-79-188	1.4934					-	-	3	24	18	5				19	6.8	0.48	
RH#1565-30212-214 CCP-79-201 @584	1.3502					-	6	37	9	-	-				23	18.9	0.52	
RH#1567-29836-842 CCP-79-202 75% 14 @ 37	1.2300				1	14	29	5	1	-	-				26	14.4	0.74	
RH#1567-29860-866 CCP-79-203 55%	1.3062					-	22	23	5	-	-				24	17.2	0.39	

TB

CASCADE COAL PETROGRAPHY LIMITED

MACERAL DATA.

SAMPLE No	VITRINITE	EXINITE	SEMIFUSINITE	MACRINITE	MICRINITE	FUSINITE	MINERAL MATTER	REACTIVES %	INERTS %	COMPOSITIONAL BALANCE INDEX	STRENGTH INDEX	PREDICTED COKE STABILITY	APPROX. JIS DRUM INDEX
CCP No													
#284-15396 CCP-79-182	55.58	-	35.45	1.09	1.97	3.94	1.97	65.80	34.20	1.77	5.04	56	92
#284-26015-016 CCP-79-183	55.89	-	34.98	1.14	1.90	2.47	3.61	66.57	33.43	2.01	5.71	57.5	92
#284-26017 CCP-79-184	52.56	-	36.40	1.02	1.64	3.88	4.49	64.64	35.36	2.27	5.85	57.5	90
#284-26021 CCP-79-185	55.14	-	36.01	0.82	1.65	3.49	2.88	66.26	33.74	3.35	6.86	54	90
#284-26022 CCP-79-186	62.07	-	26.60	0.94	2.64	3.21	4.53	70.67	29.33	2.10	6.61	61.4	92
#284-26023 CCP-79-187	50.95	-	37.98	0.76	1.53	4.19	4.58	63.79	36.21	3.23	6.65	54.5	92
#284-26024 CCP-79-188	57.21	-	31.53	0.67	2.03	4.50	4.05	67.89	32.11	2.79	6.82	57.5	92
RH#1565-30212-214 CCP-79-201	48.04	-	33.18	1.58	2.48	4.29	10.38	59.16	40.84	2.79	5.59	51.5	90
RH#1567-29836-842 CCP-79-202	51.64	-	25.19	1.14	1.91	2.67	7.44	69.62	30.38	1.35	4.75	60	90
RH#1567-29860-866 CCP-79-203	45.03	-	38.19	0.44	1.55	5.96	8.83	57.40	42.60	2.73	5.10	49	92

CASCADE COAL PETROGRAPHY LIMITED

MACERAL DATA

SAMPLE No
CCP No

VITRINITE
EXINITE
SEMIFUSINITE
MACRINITE
MICRINITE
FUSINITE
MINERAL MATTER
REACTIVES %
INERTS %
COMPOSITIONAL
BALANCE INDEX
STRENGTH INDEX
PREDICTED COKE
STABILITY
APPROX. JIS
DRUM INDEX

RH#1567-30426-432 CCP-79-204	48.73	-	23.23	1.26	2.02	3.28	21.46	61.22	38.78	2.35	5.28	52.5	92

REFLECTANCE DATA

SAMPLE No CCP No	MEAN MAX. REFLECTANCE	V - TYPE 5													VM%	ASH	SUL.		
		V-7	V-8	V-9	V-10	V-11	V-12	V-13	V-14	V-15	V-16	V-17	V-18	V-19					
RH-1237.29414-424 CCP-79-065	0.9558		2	41	7												33	10.0	0.58
RH-1238 29404-412 CCP-79-066	0.9328		9	36	5												33	6.0	0.46
RH-1239 29435-443 CCP-79-067	0.9199		13	36	1												33	9.1	0.46

CASCADE COAL PETROGRAPHY LIMITED

MACERAL DATA.

SAMPLE No	VITRINITE	EXINITE	SEMIFUSINITE	MACRINITE	MICRINITE	FUSINITE	MINERAL MATTER	REACTIVES %	INERTS %	COMPOSITIONAL BALANCE INDEX	STRENGTH INDEX	PREDICTED COKE STABILITY	APPROX. JIS DRUM INDEX
RH-1237 29414-424 CCP-79-065	71.76	3.16	8.19	1.58	1.84	3.43	10.02	81.48	18.52	0.58	3.52	42	89
RH-1238 29404-412 CCP-79-066	69.71	4.36	14.94	1.04	1.45	2.90	5.60	80.88	19.12	0.61	3.43	41	89
RH-1239 29435-443 CCP-79-067	69.54	4.75	13.39	1.29	1.94	2.59	6.48	79.95	20.05	0.66	3.39	41	89

REFLECTANCE DATA

SAMPLE No CCP No	MEAN MAX. REFLECTANCE	V - TYPES														VM%	ASH	SUL.	
		V-7	V-8	V-9	V-10	V-11	V-12	V-13	V-14	V-15	V-16	V-17	V-18	V-19					
DDH#1568-31127- SEAM 2 133 SE EAGLE CCP-80-031	1.0475			8	35	4	2	1										9.2	0.52
DDH#1568-31196- SEAM 7 197 SE EAGLE CCP-80-032	1.3214						2	14	27	7								6.8	0.27
RH#1605-32926-930 SEAM 2 BIC BLACKWOOD CCP-80-033	1.3690						-	5	31	14								9.3	0.34
RH#1605-32931-932 SEAM 1 BIC BLACKWOOD CCP-80-034	1.3918							1	25	23	1							8.7	0.36
#9SEAM 1.50 Float CCP-80-035	1.2598						5	32	13									9.3	0.38

MACERAL DATA.

SAMPLE No CCP No	VITRINITE	EXINITE	SEMIFUSINITE	MACRINITE	MICRINITE	FUSINITE	MINERAL MATTER	REACTIVES %	INERTS %	COMPOSITIONAL BALANCE INDEX	STRENGTH INDEX	PREDICTED COKE STABILITY	APPROX. JIS DRUM INDEX
DDH#1568-31127-133 CCP-80-031	76.73	3.35	11.83	0.39	1.18	2.17	4.34	83.33	16.67	0.49	3.79	47	90
DDH#1568-31196-197 CCP-80-032	54.19	-	37.42	0.86	1.51	2.58	3.44	66.44	33.56	1.91	5.53	58.2	92
<i>BJC</i> RH#1605-32926-930 <i>Seam 2</i> CCP-80-033	57.78	-	33.81	0.72	1.43	2.68	3.58	67.92	32.08	1.96	5.95	59	92
<i>BJC</i> RH#1605-32931-932 <i>Seam 1</i> CCP-80-034	56.70	-	34.55	0.81	1.22	3.05	3.66	66.29	33.71	2.28	6.21	58.6	92
#9 seam 1.50 float CCP-80-035	63.06	1.55	26.11	0.77	1.55	2.71	4.26	72.65	27.35	1.24	5.00	62	92

REFLECTANCE DATA

SAMPLE No CCP No	MEAN MAX. REFLECTANCE.	V - TYPES													VM%	ASH	SUL.	
		V-7	V-8	V-9	V-10	V-11	V-12	V-13	V-14	V-15	V-16	V-17	V-18	V-19				
1570-31080-081 SEAM-13 CCP-80-001 20' at 191'	1.0742			1	36	13										-	8.4	0.62
1570-31088-089 SEAM-11u CCP-80-002 19' at 477'	1.0924				25	25										-	8.5	0.60
1570-31090-091 SEAM-11 CCP-80-003 21' at 605'	1.1228			1	10	37	2									-	7.2	0.84
1570-31093-095 SEAM-9?	1.1940				1	24	25									-	8.2	0.40
CCP-80-004 23.5' at 601'	1.0960			1	24	24	1									-	8.2	0.78
1570-31097-098 CCP-80-005 15.5' at 646'	1.1528				7	32	11									-	6.3	0.74
1570-31099-100 & 31176- 177, 31178-179 SEAM-7 CCP-80-006 855-911' 6'+15'+15'	1.2218					16	29	5								-	13.5	0.76
1570-31181 CCP-80-007 16' at 1030'	1.2468					8	38	4								-	7.4	0.56
1568-31147-148 SEAM-9 CCP-80-008 14' at 517'	1.2672					7	29	13	1							-	7.4	0.44
1568-31150 & 31192-193 SEAM-7 CCP-80-009 31' at 617'	1.3840						3	26	21							-	7.7	0.56
1568-31198-199 SEAM-4? CCP-80-010 30.5' at 1196'																		

REFLECTANCE DATA

SAMPLE No CCP No	MEAN MAX. REFLECTANCE.	V - TYPES													VM%	ASH	SUL.
		V-7	V-8	V-9	V-10	V-11	V-12	V-13	V-14	V-15	V-16	V-17	V-18	V-19			
1568-31200&31151-153 SEAM - 4? 7' & 28/30' CCP-80-011 1377'-1447'	1.2852				1	31	16	2							-	6.6	0.52
1569-27453 SEAM-12 CCP-80-012 17' at 232'	1.0584			9	27	14									-	5.4	0.62
1569-27461 CCP-80-013 20' at 755'	1.1180				17	31	2								-	9.2	0.80
1569-27463-464 CCP-80-014 37' at 947'	1.1674				5	30	15								-	8.0	0.62
1569-27465 CCP-80-015 15.5' at 1122.5'	1.2302				1	17	25	7							-	7.2	0.73
1569-27469 CCP-80-016 17' at 1299.5'	1.3488					1	7	31	11						-	7.1	0.63
1569-31155-158 & 23' & 21' 27475 CCP-80-017 1852'-1917'	1.3218							13	35	2					-	10.4	0.77
1569-31160-162 CCP-80-018 29' at 2006'	1.3750							5	25	20					-	7.7	0.64
RH. 13-4 & 13-10. 32535-47 & 32514-24 CCP-80-019 TAYLOR PIT	1.0144			19	27	4									-	9.9	0.48
Richard Dean Sample #32546-47 1m. CCP-80-020 TAYLOR PIT S-13-4	0.9968		6	17	22	5									-	9.8	0.56

MACERAL DATA

SAMPLE No	VITRINITE	EXINITE	SEMIFUSINITE	MACRINITE	MICRINITE	FUSINITE	MINERAL MATTER	REACTIVES %	INERTS %	COMPOSITIONAL BALANCE INDEX	STRENGTH INDEX	PREDICTED COKE STABILITY	APPROX. JIS DRUM INDEX
CCP No													
1570-31080-081 SEAM-13	67.58	3.79	21.05	0.63	1.47	2.53	2.95	79.96	23.04	0.74	4.01	54.6	92
CCP-80-001 20' at 191'													
1570-31088-089 SEAM-11u	62.22	2.26	27.10	0.82	1.85	2.67	3.08	72.24	27.76	0.97	4.18	58	92
CCP-80-002 19' at 477'													
1570-31090-091 SEAM-II	76.94	3.35	12.79	0.63	1.26	1.47	3.56	84.01	15.99	0.50	4.27	55	92
CCP-80-003 21' at 505'													
1570-31093-095 SEAM-9?	49.34	1.04	32.64	1.04	1.57	4.18	10.18	64.89	35.11	1.58	4.45	53.5	92
CCP-80-004 23.5' at 601'													
1570-31097-098	63.82	5.29	20.27	0.92	1.61	2.07	5.99	76.90	23.10	0.76	4.18	57	92
CCP-80-005 15.5' at 646'													
1570-31099-100&31176-177 SEAM-7	68.43	1.69	21.61	0.84	1.69	1.91	3.81	77.47	22.53	0.79	4.49	60.5	92
CCP-80-006 6' 15' + 15' 855'-911'													
1570-31181	58.32	1.53	29.06	1.15	1.91	3.25	4.78	67.43	32.47	1.48	4.68	56.8	92
CCP-80-007 16' at 1030'													
1568-31147-148 SEAM-9	52.08	0.44	39.56	0.66	1.09	3.52	2.64	64.66	35.84	1.75	4.63	52.8	92
CCP-80-008 14' at 517'													
1568-31150&31192-193 SEAM-7	58.53	0.79	31.35	0.99	2.18	2.58	3.57	69.37	30.63	1.46	4.99	60.2	92
CCP-80-009 31' at 617'													
1568-31198-199 SEAM-4?	56.92	-	33.75	1.01	2.02	2.27	4.03	67.95	32.05	2.05	6.14	60	92
CCP-80-010 30.5' at 1196'													

CASCADE COAL PETROGRAPHY LIMIT

MACERAL DATA

SAMPLE No CCP No	VITRINITE	EXINITE	SEMIFUSINITE	MACRINITE	MICRINITE	FUSINITE	MINERAL MATTER	REACTIVES %	INERTS %	COMPOSITIONAL BALANCE INDEX	STRENGTH INDEX	PREDICTED COKE STABILITY	APPROX. JIS DRUM INDEX
1568-31200&31151-153 7' & 23' CCP-80-011 1377-1447'	57.66	0.75	30.62	1.32	2.08	3.02	4.54	69.20	30.80	1.54	5.12	60	92
1569-27453 SEAM-12 CCP-80-012 17' at 232'	63.34	2.65	26.88	0.41	1.22	1.83	3.66	75.40	24.60	0.82	4.00	55	92
1569-27461 CCP-80-013 20' at 755'	60.72	2.40	29.26	0.80	1.20	1.60	4.01	71.96	28.04	1.01	4.29	60	92
1569-27463-464 CCP-80-014 37' at 947'	65.12	2.22	23.79	0.40	1.81	1.21	5.44	76.02	23.98	0.88	4.54	61.3	92
1569-27465 CCP-80-015 15.5' at 1122.5'	53.70	0.95	36.43	0.76	1.71	2.66	3.79	66.58	33.42	1.54	4.68	56	92
1569-27469 CCP-80-016 17' at 1299.5'	56.67	-	35.28	0.91	1.46	2.19	3.47	68.04	31.96	1.89	5.82	59.6	92
1569-31155-158&27475 21' & 23' CCP-80-017 1852'-1917'	70.38	-	20.39	0.64	1.29	2.36	4.93	76.44	23.56	1.16	5.65	65+	94
1569-31160-162 CCP-80-018 29' at 2006'	43.48	-	51.15	0.51	1.28	2.05	1.53	64.69	35.31	2.32	5.98	54	92
RH. 513-4&513-10. -32535-47 & 32514-24 CCP-80-019 TAYLOR PIT	70.65	4.66	16.91	0.34	0.52	2.59	4.32	79.95	20.05	0.62	3.75	48.5	90
Richard Dean Sample # 1m. 32546-47 CCP-80-020 TAYLOR PIT	72.25	4.66	16.39	0.37	0.93	1.68	3.71	80.88	19.12	0.58	3.65	47	90

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APPENDIX 3

iii) GIESELER FLUIDITY AND DILATATION TESTS

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F O R D I N G C O A L L T D .
D R I L L H O L E L I S T I N G R E P O R T

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DRILLHOLE 1226 HOLE TYPE RHDW LATITUDE 149468.0 DEPARTURE 20901.7 ELEVATION 1901.4
DIP 90.0 AZIMUTH 0.0 DEPTH 75.6 OVERBURDEN 8.5 INPUT DATE 21/09/79 NO. OF SEAMS 1

SEAM NAME	SEAM TOP	SEAM BOT	PARTINGS	SAMPLE ID	SAMPLE TOP	SAMPLE BOT	RAW ASH %	RAW VM %	RAW FC %
K	63.3	68.5	0.0	CCMPD	64.3	68.5	16.3	30.5	52.6
RAW M %	RAW FSI	RAW BTU	RAW S %	YIELD %	TAIL ASH %	REJECT ASH %	CLEAN ASH %	CLEAN VM %	CLEAN FC %
0.6	7.0	12644	0.46	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
CLEAN M %	CLEAN FSI	CLEAN BTU	CLEAN S %	REACTIVES %	INERTS %	REFLECTNCE	BAL INDEX	STRNG INDX	STAB INDEX
-1.0	-1.0	-1	-1.00	81.33	18.67	0.9136	0.61	3.32	39.00
START TEMP	MAX TEMP	FINAL TEMP	MAX FLUID	SOFT TEMP	CON TEMP	DIL TEMP	CONTRCTION	DILATATION	HARDGROVE
422	461	-1	78	362	426	452	27	64.0	69.0
V7 %	V8 %	V9 %	V10 %	V11 %	V12 %	V13 %	V14 %	V15 %	V16 %
-1.0	36.0	56.0	8.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
V17 %	SiO2 %	Al2O3 %	Fe2O3 %	TiO2 %	P2O5 %	CaO %	MgO %	SO3 %	Na2O %
-1.0	63.94	20.35	4.36	1.50	0.60	2.80	1.36	1.87	0.53
K2O %	VITRINOID %	REACT SEMI	EXIN RESIN	INERT SEMI	MIC MAC %	FUSINOIDS %	MIN MAT %	SEMI FUS	EXTRA2
1.39	72.25	-1.00	4.68	-1.00	3.70	3.51	3.12	12.74	-1.00

***** N O T E : M I S S I N G C O D E I S - 1 . 1 F O R D I L A T A T I O N A N D - 1 F O R A L L O T H E R V A R I A B L E S . *****

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D R I L L H O L E 1 2 2 5 H O L E T Y P E R H D W L A T I T U D E 1 4 9 3 0 7 . 0 D E P A R T U R E 2 1 0 0 6 . 6 E L F V A T I O N 1 9 0 2 . 5

D I P 9 0 . 0 A Z I M U T H 0 . 0 D E P T H 1 5 2 . 5 O V E R B U R D E N 2 . 4 I N P U T D A T E 2 8 / 0 9 / 7 9 N O . O F S E A M S 2

SEAM NAME	SEAM TOP	SEAM BOT	PARTINGS	SAMPLE ID	SAMPLE TOP	SAMPLE BOT	RAW ASH %	RAW VM %	RAW FC %
K	49.5	56.2	0.0	CMPO	49.7	57.0	11.9	30.6	56.7
I	108.0	110.5	0.0	CMPO	108.8	110.0	13.6	30.3	55.5

RAW M %	RAW FSI	RAW BTU	RAW S %	YIELD %	TAIL ASH %	REJCT ASH%	CLEAN ASH%	CLEAN VM %	CLEAN FC %
0.8	7.0	-1	0.58	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
0.6	7.5	-1	0.58	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0

CLEAN M %	CLEAN FSI	CLEAN BTU	CLEAN S %	REACTIVES%	INERTS %	REFLECTNCE	BAL INDEX	STRNG INDX	STAB INDEK
-1.0	-1.0	-1	-1.00	82.38	17.62	0.9218	0.56	3.31	37.60
-1.0	-1.0	-1	-1.00	-1.00	-1.00	-1.0000	-1.00	-1.00	-1.00

START TEMP	MAX TEMP	FINAL TEMP	MAX FLUID	SOFT TEMP	CON TEMP	DIL TEMP	CONTRCTION	DILATATION	HARDGROVE
430	465	502	78	362	426	461	28	55.0	64.0
-1	-1	-1	-1	-1	-1	-1	-1	-1.1	-1.0

V7 %	V8 %	V9 %	V10 %	V11 %	V12 %	V13 %	V14 %	V15 %	V16 %
-1.0	34.0	56.0	10.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0

V17 %	SiO2 %	AL2O3 %	FE2O3 %	TiO2 %	P2O5 %	CaO %	MGO %	SO3 %	NA2O %
-1.0	61.60	26.12	3.22	1.81	0.46	1.68	1.13	0.31	0.47
-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0

K2O %	VITRINOID%	REACT SEMI	EXIN RESIN	INERT SEMI	MIC MAC %	FUSINOIDS%	MIN MAT %	SEMI FUS	EXTRA2
1.51	73.53	-1.00	5.25	-1.00	3.78	3.15	2.94	11.34	-1.00
-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

***** N O T E: M I S S I N G C O D E I S - 1 . 1 F O R D I L A T A T I O N A N D - 1 F O R A L L O T H E R V A R I A B L E S . *****

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 DRILLHOLE LISTING REPORT

DRILLHOLE 1224 HOLE TYPE RHDW LATITUDE 148996.4 DEPARTURE 21091.1 ELEVATION 1906.2
 DIP 90.0 AZIMUTH 0.0 DEPTH 131.1 OVERBURDEN 1.7 INPUT DATE 31/12/79 NO. OF SEAMS 3

SEAM NAME	SEAM TOP	SEAM BOT	PARTINGS	SAMPLE ID	SAMPLE TOP	SAMPLE BOT	RAW ASH %	RAW VM %	RAW FC %
K	21.9	28.5	0.0	CCMP0	21.9	28.7	6.2	32.4	60.5
I	65.5	69.5	0.0	CCMP0	66.8	69.8	10.4	30.6	58.4
HMI	124.3	126.0	0.0	CCMP0	124.7	126.5	27.1	26.2	46.2

RAW M %	RAW FSI	RAW BTU	RAW S %	YIELD %	TAIL ASH %	REJCT ASH%	CLEAN ASH%	CLEAN VM %	CLEAN FC %
0.9	7.0	14166	0.53	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
0.6	7.5	-1	0.54	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
0.5	5.0	11874	0.72	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0

CLEAN M %	CLEAN FSI	CLEAN BTU	CLEAN S %	REACTIVES%	INERTS %	REFLECTNCE	BAL INDEX	STRNG INDX	STAB INDEX
-1.0	-1.0	-1	-1.00	79.64	20.36	0.9400	0.66	3.49	43.50
-1.0	-1.0	-1	-1.00	-1.00	-1.00	-1.0000	-1.00	-1.00	-1.00
-1.0	-1.0	-1	-1.00	-1.00	-1.00	-1.0000	-1.00	-1.00	-1.00

START TEMP	MAX TEMP	FINAL TEMP	MAX FLUID	SOFT TEMP	CON TEMP	OIL TEMP	CONTRCTION	DILATATION	HARDGROVE
423	460	-1	347	373	434	470	27	32.0	70.0
-1	-1	-1	-1	-1	-1	-1	-1	-1.1	-1.0
-1	-1	-1	-1	-1	-1	-1	-1	-1.1	-1.0

V7 %	V8 %	V9 %	V10 %	V11 %	V12 %	V13 %	V14 %	V15 %	V16 %
-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0

V17 %	SiO2 %	AL2O3 %	FE2O3 %	TiO2 %	P2O5 %	CaO %	MgO %	SO3 %	NA2O %
-1.0	59.62	24.76	4.15	1.69	1.11	2.52	0.96	1.17	0.50
-1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
-1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

K2O %	VITRINOID%	REACT SEMI	EXIN RESIN	INERT SEMI	MIC MAC %	FUSINOIDS%	MIN MAT %	SEMI FUS	EXTRA2
1.54	72.20	-1.00	3.28	-1.00	2.25	5.94	3.48	12.84	-1.00
-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

**** N O T E : MISSING CODE IS -1.1 FOR DILATATION AND -1 FOR ALL OTHER VARIABLES. ****

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DRILLHOLE 1223 HOLE TYPE RHDW LATITUDE 149108.2 DEPARTURE 20997.3 ELEVATION 1917.3
DIP 90.0 AZIMUTH 0.0 DEPTH 72.8 OVERBURDEN 2.8 INPUT DATE 21/09/79 NO. OF SEAMS 1

SEAM NAME	SEAM TOP	SEAM BOT	PARTINGS	SAMPLE ID	SAMPLE TOP	SAMPLE BOT	RAW ASH %	RAW VM %	RAW FC %
K	53.3	58.6	0.0	CMPO	54.9	59.1	13.6	31.2	54.6
RAW M %	RAW FSI	RAW BTU	RAW S %	YIELD %	TAIL ASH %	REJCT ASH%	CLEAN ASH%	CLEAN VM %	CLEAN FC %
0.6	7.0	12644	0.46	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
CLEAN M %	CLEAN FSI	CLEAN BTU	CLEAN S %	REACTIVES%	INERTS %	REFLECTNCE	BAL INDEX	STRNG INDX	STAB INDX
-1.0	-1.0	-1	-1.00	80.95	19.05	0.9346	0.62	3.40	41.00
START TEMP	MAX TEMP	FINAL TEMP	MAX FLUID	SOFT TEMP	CON TEMP	DIL TEMP	CONTRCTION	DILATATION	HARDGROVE
432	460	-1	201	368	431	455	27	19.0	73.0
V7 %	V8 %	V9 %	V10 %	V11 %	V12 %	V13 %	V14 %	V15 %	V16 %
-1.0	26.0	60.0	14.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
V17 %	SiO2 %	Al2O3 %	Fe2O3 %	TiO2 %	P2O5 %	CaO %	MgO %	SO3 %	Na2O %
-1.0	61.44	27.03	3.29	1.03	1.22	1.96	0.80	0.68	0.63
K2O %	VITRINOID%	REACT SEMI	EXIN RESIN	INERT SEMI	MIC MAC %	FUSINOIDS%	MIN MAT %	SEMI FUS	EXTRA2
2.11	74.02	-1.00	3.74	-1.00	2.95	3.54	2.76	12.99	-1.00

***** N O T E: MISSING CODE IS -1.1 FOR DILATATION AND -1 FOR ALL OTHER VARIABLES. *****

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D R I L L H O L E L I S T I N G R E P O R T

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DRILLMOLE 1222 HOLE TYPE RHDW LATITUDE 149130.3 DEPARTURE 20393.9 ELEVATION 1937.7

DIP 90.0 AZIMUTH 0.0 DEPTH 91.1 OVERBURDEN 5.5 INPUT DATE 21/09/79 NO. OF SEAMS 1

SEAM NAME	SEAM TOP	SEAM BOT	PARTINGS	SAMPLE ID	SAMPLE TOP	SAMPLE BOT	RAW ASH %	RAW VM %	RAW FC %
K	81.5	86.5	0.0	CMPO	81.7	86.0	5.2	32.2	61.5
RAW M %	RAW FSI	RAW BTU	RAW S %	YIELD %	TAIL ASH %	REJCT ASH%	CLEAN ASH%	CLEAN VM %	CLEAN FC %
1.1	7.0	14536	0.56	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
CLEAN M %	CLEAN FSI	CLEAN BTU	CLEAN S %	REACTIVES%	INERTS %	REFLECTNCE'	BAL INDEX	STRNG INDX	STAB INDX
-1.0	-1.0	-1	-1.00	81.59	18.41	0.9430	0.58	3.45	41.20
START TEMP	MAX TEMP	FINAL TEMP	MAX FLUID	SOFT TEMP	CON TEMP	DIL TEMP	CONTRCTION	DILATATION	HARDGROVE
424	458	-1	66	363	429	461	29	41.0	73.0
V7 %	V8 %	V9 %	V10 %	V11 %	V12 %	V13 %	V14 %	V15 %	V16 %
-1.0	18.0	62.0	20.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
V17 %	SI02 %	AL2O3 %	FE2O3 %	TIO2 %	P2O5 %	CAO %	MGO %	SO3 %	NA2O %
-1.0	61.30	27.03	3.22	1.47	1.02	2.52	0.83	1.10	0.51
K2O %	VITRINOID%	REACT SEMI	EXIN RESIN	INERT SEMI	MIC MAC %	FUSINOIDS%	MIN.MAT %	SEMI FUS	EXTRA2
1.00	72.15	-1.00	5.82	-1.00	4.30	4.05	3.03	10.63	-1.00

***** N O T E : M I S S I N G C O D E I S - 1 . 1 F O R D I L A T A T I O N A N D - 1 F O R A L L O T H E R V A R I A B L E S . *****

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DRILLHOLE 1221 HOLE TYPE RHDW LATITUDE 148569.5 DEPARTURE 21168.2 ELEVATION 1908.1

DIP 90.0 AZIMUTH 0.0 DEPTH 140.5 OVERBURDEN 2.1 INPUT DATE 31/12/79 NO. OF SEAMS 4

SEAM NAME	SEAM TOP	SEAM BOT	PARTINGS	SAMPLE ID	SAMPLE TOP	SAMPLE BOT	RAW ASH %	RAW VM %	RAW FC %
K	18.3	23.8	0.0	CCMPO	18.3	23.8	12.3	32.7	54.3
J	32.6	35.4	0.0	CCMPO	32.3	35.7	23.1	29.0	47.4
I	66.0	73.8	0.0	CCMPO	63.3	73.2	9.8	31.0	58.2
HMI	129.5	131.4	0.0	CCMPO	132.3	133.5	23.8	26.5	49.0

RAW M %	RAW FSI	RAW BTU	RAW S %	YIELD %	TAIL ASH %	REJCT ASH%	CLEAN ASH%	CLEAN VM %	CLEAN FC %
0.7	7.0	-1	0.63	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
0.5	6.5	-1	0.50	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
1.0	7.0	-1	0.43	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
0.7	6.0	-1	0.62	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0

CLEAN M %	CLEAN FSI	CLEAN BTU	CLEAN S %	REACTIVES%	INERTS %	REFLECTNCE	BAL INDEX	STRNG INDX	STAB INDEX
-1.0	-1.0	-1	-1.00	80.33	19.67	0.9216	0.65	3.36	40.80
-1.0	-1.0	-1	-1.00	-1.00	-1.00	-1.0000	-1.00	-1.00	-1.00
-1.0	-1.0	-1	-1.00	-1.00	-1.00	-1.0000	-1.00	-1.00	-1.00
-1.0	-1.0	-1	-1.00	-1.00	-1.00	-1.0000	-1.00	-1.00	-1.00

START TEMP	MAX TEMP	FINAL TEMP	MAX FLUID	SCFT TEMP	CON TEMP	DIL TEMP	CONTRCTION	DILATATION	HARDGROVE
430	468	496	363	365	420	459	29	49.0	74.0
-1	-1	-1	-1	-1	-1	-1	-1	-1.1	-1.0
-1	-1	-1	-1	-1	-1	-1	-1	-1.1	-1.0
-1	-1	-1	-1	-1	-1	-1	-1	-1.1	-1.0

V7 %	V8 %	V9 %	V10 %	V11 %	V12 %	V13 %	V14 %	V15 %	V16 %
-1.0	32.0	60.0	8.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0

V17 %	SI02 %	AL2O3 %	FE2O3 %	TIO2 %	P2O5 %	CAO %	MGO %	SO3 %	NA2O %
-1.0	61.84	25.56	2.65	1.52	1.14	1.82	1.23	0.58	0.46
-1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
-1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
-1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

K2O %	VITRINDIO%	REACT SEMI	EXIN RESIN	INERT SEMI	MIC MAC %	FUSINOIDS%	MIN MAT %	SEMI FUS	EXTRA2
2.08	71.59	-1.00	-1.00	4.34	2.76	3.55	4.14	13.61	-1.00
-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

***** NOTE: MISSING CODE IS -1.1 FOR DILATATION AND -1 FOR ALL OTHER VARIABLES. *****

BJ006

FORDING COAL LTD.
DRILLHOLE LISTING REPORT

DATE: 23/04/80

PAGE 1 OF 1

DRILLHOLE 1220 HOLE TYPE RHDW LATITUDE 148598.4 DEPARTURE 21012.3 ELEVATION 1936.4

DIP 90.0 AZIMUTH 0.0 DEPTH 127.7 OVERBURDEN 5.5 INPUT DATE 11/04/80 NO. OF SEAMS 3

SEAM NAME	SEAM TOP	SEAM BOT	PARTINGS	SAMPLE ID	SAMPLE TOP	SAMPLE BOT	RAW ASH %	RAW VM %	RAW FC %
K	67.7	72.7	0.0	COMPO	68.0	72.8	12.4	31.7	55.4
J	81.7	84.7	0.0	COMPO	82.0	84.4	20.0	28.6	50.7
I	116.3	121.3	0.0	COMPO	116.7	121.0	13.1	29.7	56.2
RAW M %	RAW FSI	RAW BTU	RAW S %	YIELD %	TAIL ASH %	REJCT ASH%	CLEAN ASH%	CLEAN VM %	CLEAN FC %
0.5	0.5	13241	0.62	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
0.7	6.5	11898	0.68	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
1.0	7.0	13491	0.53	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
CLEAN M %	CLEAN FSI	CLEAN BTU	CLEAN S %	REACTIVES%	INERTS %	REFLECTNCE	BAL INDEX	STRNG INDX	STAB INDEX
-1.0	-1.0	-1	-1.00	70.59	29.41	0.9310	1.09	3.47	44.75
-1.0	-1.0	-1	-1.00	-1.00	-1.00	-1.0000	-1.00	-1.00	-1.00
-1.0	-1.0	-1	-1.00	-1.00	-1.00	-1.0000	-1.00	-1.00	-1.00
START TEMP	MAX TEMP	FINAL TEMP	MAX FLUID	SOFT TEMP	CON TEMP	DIL TEMP	CONTRCTION	DILATATION	HARDGROVE
425	461	493	23	363	431	461	27	39.0	-1.0
-1	-1	-1	-1	-1	-1	-1	-1	-1.1	-1.0
-1	-1	-1	-1	-1	-1	-1	-1	-1.1	-1.0
V7 %	V8 %	V9 %	V10 %	V11 %	V12 %	V13 %	V14 %	V15 %	V16 %
-1.0	28.0	58.0	14.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
V17 %	SI02 %	AL203 %	FE203 %	TIO2 %	P205 %	CAO %	MGO %	SO3 %	NA20 %
-1.0	56.60	24.00	5.58	1.67	2.49	4.20	1.36	1.72	0.54
-1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
-1.0	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
K20 %	VITRINOID%	REACT SEMI	EXIN RESIN	INERT SEMI	MIC MAC %	FUSINOIDS%	MIN MAT %	SEMI FUS	EXTRA2
1.48	53.57	-1.00	6.75	-1.00	2.38	3.97	4.96	28.37	-1.00
-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

***** NOTE: MISSING CODE IS -1.1 FOR DILATATION AND -1 FOR ALL OTHER VARIABLES. *****

CLIENT: FORDING COAL LTD.

March 7, 1979

SAMPLE: RH1221 (27076-084) and RH1225 (27423-25, 27376-384)
received March 2, 1979

LAB. NO.	SAMPLE IDENTIFICATION	H.G.I.
2784 SEAM-K	RH 1221 (27076-084)	74 BJC
2785 SEAM-K	RH 1225 (27423-25, 27376-384)	64 BJC

DILATATION					
LAB. NO.	S.T.	M.D.T.	M.C.	M.D.	G. NO.
2784	365	459	29%@428°C	49	1.030 BJC
2785	362	461	28%@426°C	55	1.041 BJC

ULTIMATE ANALYSIS							
LAB. NO.	H2O%	C%	H%	N%	S%	ASH%	O% by diff.
2784	0.61	77.54	5.06	1.48	0.48	8.95	5.88
2785	0.89	79.65	5.12	1.52	0.56	6.04	6.22

ASH FUSION TEMPERATURES					
LAB. NO.	ATMOSPHERE	I.D.T.	S.T.	H.T.	F.T.
2784	OXIDIZING	2760	2800+		
	REDUCING	2400	2800	2800+	
2785	OXIDIZING	2780	2800+		
	REDUCING	2640	2800+		

MINERAL ANALYSIS OF ASH											
LAB. NO.	SiO2	Al2O3	TiO2	Fe2O3	CaO	MgO	Na2O	K2O	P2O5	SO3	Undet.
2784	61.84	25.56	1.52	2.65	1.82	1.23	0.46	2.08	1.14	0.58	-1.12 BJC
2785	61.60	26.12	1.81	3.22	1.68	1.13	0.49	1.51	0.46	0.31	-1.67 BJC

NB Analyses are on "as received" basis

Birtley Coal
& Minerals Testing

A DIVISION OF GREAT WEST STEEL INDUSTRIES LTD

OPEN FILE

APPENDIX 3

COAL ANALYSES

- i) Proximate Analyses; Sulphur, FSI and Calorific Value Determinations
- ii) Petrographic Analyses
- iii) Gieseler Fluidity and Dilatation Tests

FOR THIS ANALYSIS DATA, REFER TO CONFIDENTIAL
COAL ANALYSIS FILE.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

00 324

APPENDIX 3

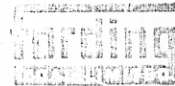
i, PROXIMATE ANALYSES; SULPHUR, FSI AND CALORIFIC VALUE DETERMINATIONS

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	DEPTH	M.	A.	VM	FC	FBI	S	REMARKS
FROM	TO												
321	327 ⁵		28 838			6.5		16.0			4		
327 ⁵	332		839			4.5		14.2			5		
332	337		840			5		9.3			4		
337	347		841			10		8.4			6		
347	353		842			6		31.7			4		
353	356 ⁵		28 843			3.5		53.1			1		
321	353	SEAM - R4	GMPO.			32	0.6	16.2	20.3	62.9	4/12	0.40	WASHABILITY RECOV. 92.1%

DIAMOND DRILL SAMPLING RECORD

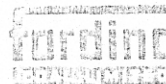


IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
FROM	TO												
134	142.5	PART SEAM - R5	28 826			0.5		25.6			1		
						0.5	0.3	25.8	18.7	52.2	1	0.38	WASHABILITY RECOV. 65.1%
336	341		28 827			5		55.0			1		
341	350		828			0		13.0			5 1/2		
350	355		829			5		11.0			3		
355	360		830			5		7.4			4 1/2		
360	364.5		831			4.5		9.4			4 1/2		
364.5	369		832			4.5		6.6			7		
369	373		833			4		38%			4 1/2		
373	378		834			5		17.6			6 1/2		
378	382		28 835			4		42.0			2		
341	378	SEAM - R4	COMPO			37	0.6	14.1	20.7	64.6	5	0.33	WASHABILITY RECOV. 93%

Geological Department
 Logging
 Records

DDH- 285		LOCATION - TURNBULL					
TOTAL DEPTH - 139.9m		LOGGED BY -		DATE - JAN 21/79			
SEAM	RAD. LOG INTERSECTIONS		THICKNESS	CORE INTERSECTIONS		(CON. REAMS)	
	FROM	TO		FROM	TO	THICKNESS CORE	ACTUAL CORE RECOVERED
PART {	40.1	40.9	.8	40.1	40.9	.8	100%
R-5 {	41.8	43.6	1.8	41.8	43.6	1.8	100%
PART {	104.7	114.6	9.9	104.7	113.1	8.4	84.8
R-4 {	114.6	115.6	1	114.6	115.6	1	100%

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	DEPTH	H	A	VM	FC	PSI	S	REMARKS
FROM	TO												
108	119		30252			11'		29.0			6 1/2	0	
108	119				10,202	11'	0.5	28.8	25.6	45.1	6 1/2	0.90	WASHABILITY RECOV. 66.5%
145	197		30253			2		30.7			6		
156.5	166		30254			9.5		13.7			6 1/2	0	
156.5	166				12,991	9.5	0.8	14.1	28.8	56.3	6 1/2	0.66	" " " RECOV. 92.3%
271	280	SEAM - I	30255			9		9.8			7		
271	280				13,635	9	1.0	10.0	21.2	57.8	7	0.66	" " " RECOV. 97.2% @ 2° do ASH.
280	284		30256			4		58.2			1		
302	306		30257			3		15.7			7		
428	432		30258			4		16.6			6 1/2		
432	436.5		30259			4.5		12.4			7 1/2		
436.5	441.5		30260			5.0		7.6			7		
428	441.5	SEAM - H	CAMP		13,499	13.5	0.8	11.7	28.5	59.0	7	0.50	" " " RECOV. 97.7% @
441	446		30261			5		7.3			7 1/2		
					13,941	5	1.2	7.3	28.3	48.2	7 1/2	0.44	
459	461		30262			2		37.1			4 1/2		

DIAMOND DRILL SAMPLING RECORD



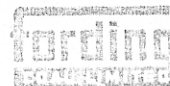
IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	DEPTH	M	A	VM	PC	FBI	S	REMARKS
FROM	TO												
517	521		30263			4		9.0			712	6	
						4	1.2	5.8	22.6	60.3	712	0.78	
544	548		30264			4		19.2			6		
548	559		30265			11		30.4			7		
559	566		30266			7		12.4			7		
566	570		30267	?		4							
544	566	SEAM - G	COMPO		11.923	22	10	22.2	24.9	51.9	7	0.62	WASHABILITY. RECV. TO B. S. J.

DIAMOND DRILL SAMPLING RECORD



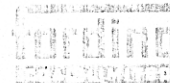
IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	FBI	S	REMARKS
FROM	TO												
317	321		30408	4				5.3			6 1/2		
321	326		409	5				11.4			6		
326	335		410	9				62.9			1		
337	336	SEAM - F	COMP.			9'	0.9	8.4	24.4	66.3	6 1/2	0.55	WASHABILITY
341	348	SEAM - F LWP. PART.	30411	7		7'	0.9	11.9			6 1/2		(317-326' + 341-348')
								11.9	23.5	62.7	6 1/2	0.62	RECOV. 84.5%
388	396		30412	8				6.1			6		
396	401		413	5				21.4			6 1/2		
388	401	SEAM - f1	COMP.			13'	0.9	12.2	22.3	64.6	6	0.56	WASHABILITY
424	431		30414	7		7'		21.8			5		RECOV. - 81 1/2%
							0.5	22.5	22.1	55.4	5	1.10	
496	501		30415	5				24.2			5		
501	511		416	10				34.8			1		
496	511	SEAM - Eu.	COMP.	1		15'	0.5	31.1	21.5	46.9	2 1/2	0.42	RECOV. 54.3%
516	521		30417	5				50.3			1		
658	666		30418	8				11.9			7		
666	671		419	5				19.2			7		
658	671		COMP.			13'	0.6	15.1	22.5	61.8	7	0.54	RECOV. 87.9%

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	PSI	S	REMARKS	
FROM	TO													
745	751		30420	6		1 1/2"		29.5			6 1/2			
751	756		421	5				16.0				2 1/2		
756	761		422	3				9.4				2 1/2		
761	764		423	3				1.0				1 1/2		
745	764	SEAM - D.	COMPO.			19"	0.4	22.7	19.6	57.1	3	0.32	WASHABILITY RECON. 72.4%	
814	821		30424	7				17.5			2 1/2			
821	825		425	4				17.5			5 1/2			
814	835		COMPO.			11"	0.6	17.9	19.4	62.1	3	0.42	" "	
													RECON. 70.9%	
976	981		30267			5"		67.2			1		AUG 15 '79	

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	DEPTH	M	A	VM	FC	PSI	S	REMARKS
FROM	TO												
60	69		29656			9		13.0			6		
69	72.5		657			3.5		10.6			7		
72.5	78		658			5.5		45.4			2 1/2		
60	72.5		COMP			12.5	1.0	12.0	25.4	41.6	6	0.40	
60	78	SEAM-F	COMP			18	0.7	22.6	23.0	53.7	5 1/2	0.25	WASHABILITY, 55.2% RECOVERY.
120.5	127		29659			6.5		17.8			7		
			29659				0.7	17.4	23.1	55.8	7	0.60	WASHABILITY.
154	157		29660			3		35.4			3		
173	175.5		29661			2.5		30.0			5		
256	260		29662			4		19.5			7		
260	264		663			4		17.1			5		
264	271		664			7		37.4			4 1/2		
271	275.5		665			4.5		41.8			1		
286	271	SEAM-EV.	COMP	0		15	1.1	27.2	20.2	51.5	6	0.32	WASHABILITY RECOV. 63.4%
280	281		29666			1		21.8			1		
286	290		29667			4		52.5			1 1/2		
345	347		29668			1.5		22.6			2 1/2		
347	358		29671			11		16.1			7		
358	361		29672			3		74.8			1/2		
361	362		29673			1		67.1			0		

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	JLDPH	M	A	VM	FC	FSI	S	REMARKS
FROM	TO												
345 ⁵	350	SEAM - E1.	COMPO.			12.5	0.6	16.8	22.7	53.5	6	0.30	WASHABILITY RECOV. 59.1%
431 ⁵	442		29674			10.5		21.2			3		
442	447		29675			5		SAMPLE LOST			5		
447	453		30401			6		12.1					
431 ⁵	453	SEAM - D.		5		21.5	0.8	17.7	20.8	60.7	4	0.30	" "
517	521		30402			4		SAMPLE LOST			5		
521	526 ⁵	SEAM DL	30403			5.5		17.1			5		
			30403		13.55		0.7	16.8	21.6	60.9	5	0.38	RECOV. 78.7%
723	729 ⁵	SEAM - B.	30404			6.5		39.8			3		" "
			30404		12.406	6.5	0.2	40.3	17.5	42.0	2 1/2	0.30	
732 ⁵	733 ⁵		30405			1		37.4			4 1/2		
711 ⁵	714		30406			2.5		55.0			1		
715 ⁵	717		30407			1.5		68.3			1/2		

DIAMOND DRILL SAMPLING RECORD

MINING
RECORDS

IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	PCI	S	REMARKS
FROM	TO												
26	31		29669 29669			5	0.5	32.7 22.7	19.0	41.8	3 1/2 3 1/2	0.46	WASHABILITY RECOV. 59.3%
77	82		29670			5							
253	258		30377			5		19.4			5		
258	266		378			5		15.9			6 1/2		
266	271.5		379			5		38.5			4 1/2		
272	281		30380			5		62.8			1		
283	271.5	SEAM - EU	COMPO.			18.5	0.6	23.4	20.4	55.6	5 1/2	0.24	" " RECOV. 76.2%
292	304		30381 30381			12	0.5	24.2 24.1	20.5	50.9	6	0.34	RECOV. 77.1%
401	406		30382			5		24.8			5		
406	411		383	0		5		13.4			5		
411	416		384			5		9.8			2		
416	421		385			5		16.1			3		
421	426		386			5		11.5			1		
426	431		387			5		15.5			1 1/2		
431	436		30388			5		20.4			3 1/2		
401	436	SEAM - D	COMPO.			28	0.7	15.9	20.2	63.2	2 1/2	0.30	WASHABILITY " " RECOV. 85.5%

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	PSI	S	REMARKS
FROM	TO												
415	480		30389			5'		54.6			1		
483	490	REAM - DL →	30390			7'		20.4			2		
			30390			7'	0.7	20.2	21.3	57.8	2 1/2	0.38	WASHABILITY REC'D. 57.8%
596	602	P. Adp →	30391			6'		35.1			1		
602	610		30392			8'		78.4			0		
596	610		30391			6'	0.7	35.3	12.2	47.8	1	0.20	

DIAMOND DRILL SAMPLING RECORD



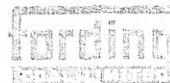
IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL S. T. U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
FROM	TO												
202	206		30268			4		10.5			7		
206	211		269			10		14.3			7		
211	216		270			10		25.8			4 1/2		
216	221		271			10		18.3			6 1/2		
221	227		30 272			8		36.4			6 1/2		
227	227	SEAM - E.	COMPO.			24.5	0.6	22.7	21.4	55.3	6 1/2	0.36	UNUSABILITY
232	236		30273			4		9.7			6		
236	241		274			10		14.3			6 1/2		
241	246		30 275			5		9.9			6 1/2		
246	246	SEAM - EL.	COMPO.			14	0.9	11.4	22.6	65.1	6 1/2	0.32	

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	PSI	S	REMARKS
FROM	TO												
322	331		31101			9'		11.4			3 1/2		
331	340		102			9'		11.5 ✓			2 ✓		
340	346		103			6'		9.9			4		
332	346	SEAM - D.	CONFO.			2.4	0.9	13.5	20.8	66.0	3	0.26	WASHDRIFT
393 1/2	396 1/2		31104			3'		49.1			1 1/2		
402	416		31105			14'		35.5			1 1/2		
402	416	SEAM - DL				14'	0.8	26.0	17.0	46.4	1 1/2	0.40	" "
549	565		31106			16'		17.9			2 1/2		
565	583		107			18'		6.5			5 1/2		
583	588		108			5'		7.2 ✓			2 ✓		
588	597		109			9'		11.0			6 1/2		
597	601		110			4'		75.8			1 1/2		
549	597	SEAM - B	CONFO.			48'	0.8	10.9	20.2	68.1	4 1/2	0.26	" "

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
FROM	TO												
66	71		31001			5		23.3			6		
71	76		002			5		60.6			11/2		
76	71		→ 31001			5	0.6	22.9	23.3	53.2	6	0.66	
108	111		31003			3		64.1			1		
111	113.5		004			2.5		35.7			5		
113.5	115.5		005			2		6.0			7 1/2		
111	115.5		COMPO			4.5	0.4	23.0	23.6	53.0	7	1.38	
118.5	121		31006			2.5		25.4			6 1/2		
225	228.5		31007			2.5		57.9			1		
228.5	237		008			3.5		16.9			4		
237	241		009			4		13.8			6 1/2		
241	245.5		010			4.5		26.9			3		
245.5	250.6		011			5.1		18.0			7		
250.6	256.5	SEAM - F	COMPO			2.2	0.5	18.4	22.7	58.4	4 1/2	0.34	UNRELIABILITY
274	276		31012			2		28.4			4 1/2		RECON. 80% of
310	315.5		31013			5.5		26.5			5 1/2		
310	315.5		31013			5.5	0.5	26.9	21.0	51.6	5 1/2	0.90	
511	513		31014			2		82.7			0		
513	517.5		015			4.5		23.6			6		
517.5	522.5		016			5		25.5			6 1/2		

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
FROM	TO												
5225	5275		31017			5		11.9			6 1/2		
5275	5325		018			5		17.8			6 1/2		
5325	5375		019			5		34.9			6 1/2		
5375	542		020			5		17.6			4		
542	547		021			4 1/2		15.1			5 1/2		
547	551		022			4		14.4			6 1/2		
551	556		023			5		67.5			1		
513	551	SEAM - E	COMPO.			32	0.5	20.4	21.6	ST 5	6	0.34	UNSTABILITY RECOVERY - 81% Sjo.
620	631		31024			11		42.3			2		
631	641		025			10		8.9			3 1/2		
620	641	SEAM - D	COMPO.			21	0.5	26.8	17.6	SS 1	2 1/2	0.26	RECOVERY - 74% Sjo.
790.5	796		31111			55		17.0			1		
796	813		112			17		9.4			5 1/2		
813	828		113			15		9.0			5 1/2		
828	842		114			14		8.2			6		
842	848		115			6		19.8			1		
795	848	SEAM - B	COMPO.			ST 5	0.7	11.5	20.1	GT 7	4 1/2	0.30	RECOVERY - 99% Sjo. FOR 9.2% ASH.
899.5	902		31116			2.5		11			7		

DIAMOND DRILL SAMPLING RECORD



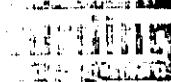
IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	WIDTH	H	A	VM	FC	GSI	S	REMARKS
FROM	TO												
108	111		29501		14,520	3	0.9	4.7 4.4	27.9	66.6	7 1/2 7 1/2	0.82	
156	158		29502			2		23.0			7 1/2		
162.5	166		29503		11,927	3.5	0.6	15.8 16.1	26.4	56.9	7 1/2 7	1.04	
214	216		29504			2		16.8			7		
277	281		29524			4		62.3			1		
283	287		29525		11,886	4	0.8	20.5 21.0	23.7	54.5	6 1/2 6 1/2	0.74	
382	396		29505			14		14.7			2 1/2		
396	406.4		29506			10.4		24.6			6		
382	406.4	SEAM - F	COMPO			2.4	0.6	19.7	23.3	56.4	4	0.66	WASHABILITY RECOV. 84.8%
432	435.4		29507			3.4		27.7			6		
464	466		29509			2		10.5			6		
622	624		29523			2		56.9			2		

DIAMOND DRILL SAMPLING RECORD



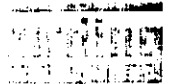
IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	FBI	S	REMARKS
FROM	TO												
663	675		29512			12		15.6			6		
675	691		513			16		34.1			3 1/2		
691	702		29514			11		12.3			5 1/2		
663	702	SEAM - E	COMPO			39 ¹	0.6	21.8	22.5	55.1	5 1/2	0.32	WASHABILITY RECOV - 77.2%.
781	800		29515			19		12.8			3 1/2		
800	812		29516			12		9.8			2 1/2		
781	812	SEAM - D	COMPO			31 ⁺	0.8	11.9	20.1	67.2	3	0.30	" " RECOV. 93.4%.
819	822		29517			3		13.2			3		
823	825		29518			2		38.9			3 1/2		
845	846		29519			1		33.5			2		
956	972		29520			15.5		11.2			3 1/2		
972	1009		521			37		7.3			5 1/2		
1009	1020		29522			11		17.5			2 1/2		
956	1020	SEAM - B	COMPO			63 ⁵	0.8	10.4	20.9	67.9	4	0.32	" " RECOV. 98.0% FOR 9% ASH.

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	DEPTH	H	A	VM	PC	FBI	J	REMARKS
FROM	TO												
70.5	74					2.5							
76	81		8814			5.0		11.4			8		
81	86		8812			5.0		40.0			4		
86	91		8813			5.0		81.8			0		
76	86		COMP.			10	0.8	25.9	23.8	49.5	6 1/2	0.64	WASHABILITY RECOV. 68.6%
130	135		28836			5		11.2			7		
			28836			2.5	0.9	11.0	26.0	62.1	7	0.76	RECOV. 53.8
136	138.5		28837			2.5		67.7			1		
198	203		28844			5		42.4			4 1/2		
203	212		845			9		44.0			4 1/2		
198	212		COMP.			14	0.5	43.5	19.5	36.5	4 1/2	0.68	RECOV. 43.4
310	316		28846			6		17.7			3		
316	321		847			5		16.0			3 1/2		
321	326		848			5		15.0			6		
326	335		28849			9		16.3			6		
310	335	SEAM - F	COMP.			25	0.9	16.6	23.5	59.0	5	0.22	RECOV. 26.7%
356	360		19170			4		51.2			1		

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	DEPTH	H	A	VM	PC	FST	S	REMARKS
FROM	TO												
389	396		19171			7		42.3			3 1/2		
534	536.5		19175			2.5		72.7			1/2		
538	542		8811			4		70.6			1		
594	597		8819			3		66.8			1		
599	606		8820			7		30.1			7		
606	611		8821			5		8.7			7		
611	616		8822			5		17.8			6 1/2		
616	621		28126			5		34.2			6 1/2		
621	626		127			5		31.2			3		
626	631		128			5		12.4			6 1/2		
631	639		28129			8		34.9			7		
595	639	SEAM - E	COMPO.			40	0.7	24.7	21.9	52.5	7	0.32	WASHABILITY RECOV. TO 6%
726	731		28130	0		5		19.5			6 1/2		
731	736		131			5		11.6			5		
736	746		132			10		12.0			3		
746	756		28133			10		14.3			2 1/2		
758	765		28134			7		36.2			1		
726	765		COMPO.			37/39	10	18.0	21.0	60.0	3	0.30	11 11

DIAMOND DRILL SAMPLING RECORD



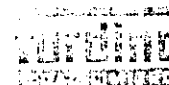
IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	DEPTH	R	A	VM	FC	F.I	S	REMARKS
FROM	TO												
781	791		28135			10	0.3	34.5			1		WASHABILITY
			28135					34.6	17.2	47.9	1	0.40	RECOV 51%
888	891		28136			3		50.8			1		
899	906		28137			7		57.7			1		
906	911		138			5		39.0			1		
911	916		139			5		35.2			1/2		
916	920		140			4		58.8			1		
920	926		141			6.5		46.6			1/2		
926	930		28142			4		31.0			2		
906	916		COMPO.			10	0.3	37.3	17.1	45.3	2 1/2	0.30	WASHABILITY
926	930		28142			4	0.4	31.1	17.6	50.9	2	0.30	
				0									

DIAMOND DRILL SAMPLING RECORD



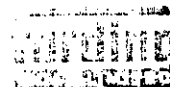
IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	WIDTH	H	A	VM	PC	ML	S	REMARKS
FROM	TO												
61	64		→ 28143		14.601	3	16	4.7 4.6	30.6	57.2	6.12 6.12	0.62	
125	125		→ 28144		12.651	3.5	13	13.5 13.1	30.9	54.7	5 4.12	0.60	
136	137		28145			1		54.2			1		
276	281		29651			5		13.9			7		
281	283		29652			12		17.8			7		
276	283	SEAM-K.	COMP			17	0.9	16.0	32.0	51.1	7	0.50	WASHABILITY RECOVERY-85.8%
321	323.5		29653			2.5		55.0			1		
379	389		→ 29654		13.055	9.5	12	19.7 19.5	29.3	50.9	7.12 7	0.66	WASHABILITY RECOV. 81.3%
420	422.5		29655			2.5		3.8			7.12		

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
FROM	TO												
81.5	90		28850			8.5		35.6			4 1/2		
90	94.5		19167			4.5		45.6			4 1/2		
94.5	90		28850		12,156	8.5	0.7	36.0	24.7	30.6	5	0.48	WASHABILITY RECOVERY: 14.6%
112	116.5		19168			4.5		57.5			1		
141.5	146.5		19169			5		32.3			5 1/2		
			19169		10,168		0.8	31.9	25.7	41.6	5	0.60	
240.5	246		19172			5.5		3.3			7		
246	252		19173			5		7.0			7 1/2		
252	258		19174			4		13.7			7		
240.5	253	SEAM - K	COMP.			17.5	1.0	8.1	32.7	58.2	7	0.38	RECV. 90.8% 8.7% Ash
275	279		8815			4		23.8			6		
279	283		8816			4		21.1			7 1/2		
283	285.5		8818			2.5		14.6			7		
275	285.5		COMP.			10.5	0.9	20.2	28.2	50.7	7	0.82	RECV. 76.3%
326	328		8817			2							

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	ESI	S	REMARKS
FROM	TO												
23A	237		2950B			3'		52.8			2		
312	326		29510			14'		3.8			7		
326	331		29511			5'		6.8			6 1/2		
312	331	SEMI-K	COMPO			19'	1.1	4.4	32.3	62.6	7	0.40	WASHABILITY RECOV. 98.9% For 4% Ash

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	PSI	S	REMARKS
FROM	TO												
42	46		31 126		13853	4'	0.8	8.9	27.1	63.1	4	0.83	
100	106		31 127			6		19.8			6 1/2		
106	111		128			S		12.8			7 1/2		
111	116		129			S		32.4			5		
116	121		130			S		-			-		
121	126		131			S		30.6			6 1/2		
126	131		132			S		41.6			5		
131	133		31 133			2		32.2			4 1/2		Ro-1.0546
100	133		COMPO.		10,904	28/33	0.5	27.8	24.5	47.2	6 1/2	0.50	WASHOR. & PETROG. RECV. - 60.4%
193	196		31 134			3		20.6			7		
200	206		31 135			6		5.4			7 1/2		
206	211		136			S		8.2			7		
211	216		137			S		5.2			7 1/2		Ro-1.0784
200	216		COMPO.		14,376	16	0.7	6.4	27.4	65.5	7 1/2	0.69	WASHOR. & PETROG. 99.5% RECV. FOR 6.4% ASH.
316	321		31 138			5		6.2			7		
321	326		139			S		13.4			7		
326	331		140			S		15.4			6		
316	331				12,662	15'	0.6	12.1	24.3	63.0	7	0.57	" " "

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
FROM	TO												
348	356		31141			8		30.5			6 1/2		
356	360		142			4 1/2		24.2			6 1/2		
360	366		143			5 1/4		27.8			5 1/2		
366	371		144			5		29.0			6 1/2		
371	376		31145			5		37.8			5		
380	376		COMPO.		9992	25	0.4	21.7	21.0	46.9	6 1/2	0.87	W.C.M.A.S. 2 P.P.P.O.G. RECOVERY - 53 1/2%
443	444		31146			1		51.4			4		
517	521		31148			4		16.8			3 1/2		
521	531		31147			10		22.2			3		
533	536		31149			3		45.0			1 1/2		
517	531	SEAM-5	COMPO.		11,933	14	0.4	20.2	22.0	57.4	3	0.46	RO - 1.2468 " " " " RECOVERY - 81.5%
617	628		31150			11		20.6			5		
628	644		31192			16		20.6			5 1/2		
644	648		31193			4		21.6			6		
617	648	SEAM-7			12,102	31	0.5	20.4	20.9	58.2	5	0.37	RO - 1.2672 " " " " RECOVERY - 73.5%
661	665		31194			4.5		36.4			6		
					9195	4.5	0.4	36.5	17.4	45.7	6	0.53	
783	786		31195			3		13.6			7		
					13,284	2	0.5	14.0	23.9	61.6	7	0.58	

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	PSI	S	REMARKS	
FROM	TO													
1143	1153	80-10	31196			10		12.8			5		R ₀ 1.3214	
1153	1167		31197			14		10.6			5 1/2			
1143	1167		COMPO.		13591	24	0.4	11.9	21.3	66.4	5 1/2	0.28	WASHAB. & PETROG. 76' RECOV.	
1126	1206	S	31198			10		30.0			6			
1206	1226		31199			20.5		29.6			4 1/2		R ₀ - 1.2840.	
1126	1226	SEAM - A 7	COMPO.		10.111	30.5	0.4	30.0	18.8	50.8	4 1/2	0.48	RECOVERY - 66.4%	
1377	1384	80-011	31200			7		14.6			7			
1377	1384					13.117	7	0.4	14.7	23.6	6.3	7	0.47	WASHABILITY. RECOVERY - 91.9%
1417	1425		31151			8		26.4			2 1/2			
1425	1435		152			10		19.6			6 1/2			
1437	1447		31153			10		31.5			6 1/2			
1417	1447		COMPO.		11.48228	30	0.4	25.8	20.6	53.2	6	0.46	WASHABILITY RECOVERY - 69.5% PETROGRAPHY 1377-34 + 1417-47 R ₀ - 1.2052	

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	PSI	S	REMARKS
FROM	TO												
44.5	56	SEAM - 13	27451		10,983	11.5	0.6	24.2	24.1	50.7	6 1/2	0.67	WASHA. & PETRG. RECOVERY - 62.3%
70.5	71		27452			0.5		46			8		
232	249	SEAM - 12	27453		13290	17	0.5	11.8	28.0	59.5	7 1/2	0.56	RECOVERY - 82.6% WASHA. & PETRG.
283	286		27454			3		37.4			5 1/2		
441	443.5		27455			2.5		23.0			6 1/2		
443.5	453.5		27456		13,412	10	0.8	10.2	31.8	57.1	7	0.52	RECOVERY - 57.1%
453.5	460		27457			6.5		41.6			4 1/2		

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET.	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
FROM	TO												
598	606		27459			8'		16.8			6 1/2		
606	620		27458			14'		10.2			7 1/2		
555	625		COMP.		13.75	22	0.7	13.0	22.0	58.3	7	0.55	RECOVERY - 68% RECOVERED 60' do
734	735		27460			1.5		6.8			7		
755	775	SEAM - ?	27461		10.718	20'	0.5	27.6	22.5	49.6	3 1/2	0.42	RECOVERY - 68% " " " RE - 1.180.
931	936	PA. of S. E. S. B. T. U.	27462		9.641	5'	0.6	9.2	27.8	62.3	6	0.80	
947	960		27464			13'		19.8			7		
960	984		27463			24'		34.2			6		
947	984				10.437	37	0.5	28.5	21.4	46.2	7 1/2	0.52	RE - 1.1274 " " " RECOVERED 60' do

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET.	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	PSI	S	REMARKS
FROM	TO												
1122 ⁵	1138		27465		8924	15 ⁵ 15 ⁵	0.4	31.0 31.2	18.7	49.7	6 6	0.48	R-12302 WASHABILITY & PETROG. SPEC. 82-190
1188 ⁵	1199		27466		11240	10 ⁵ 10 ⁵	0.5	26.0 25.8	21.0	52.7	7 1/2 7 1/2	0.77	WASHABILITY SPEC. 82-190
1217	1275		27467			8'		61.6			1 1/2		
1266	1271		27468			5'		42.8			3		
1283	1286 ⁵		27472			3 ⁵		54.6			2 1/2		
1299 ⁵	1316 ⁵		27469		12721	17' 17	0.6	15.8 16.0	21.3	62.1	4 1/2 4 1/2	0.51	R-12302 WASHABILITY & PETROG. SPEC. 82-190

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET.	ACTUAL B. T. U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
FROM	TO												
1368	1370		27470			2'		23.8			2		
1392	1400		27471			8'		56.5			1		
1686	1693		27474			7'		28.8			6 1/2		
					9778	7	0.3	24.2	18.6	46.9	6 1/2	0.52	WASHABILITY RECEV. 32.907
1852	1860	PO-017	31155			8'		31.2			6		
1860	1870		27475			10'		25.0			6 1/2		
1870	1875		31154			5'		60.2			1		WASHABILITY & PETROGRAPHY
1882	1875				9228	7.3	0.4	33.4	28.5	37.3	6 1/2	0.71	RECEV. 31.1
1896	1902		31156			6'		15.6			6 1/2		21' & 23' COMBINED
1902	1911		31157			9'		12.4			7		PO-13218
1911	1917		31158			6'		22.0			7		
1896	1917				12.912	21'	0.5	16.4	23.4	59.7	7	0.95	RECEV. 74.67
1967	1976		31159			9'		48.0			1		

DIAMOND DRILL SAMPLING RECORD



IN FEET		DESCRIPTION	SAMPLE NUMBER	SHORTS FEET	ACTUAL S. T. U.	WIDTH	M	A	VM	FC	PSI	S	REMARKS
FROM	TO												
2006	2015	40' - 0.1'	31160			9'		18.4			1		
2015	2025		31161			10'		14.4			1		
2025	2035		31162			10'		17.2			1		
2035	2041		31163			6'		53.5			1		
2041	2045				12.452	29'	0.6	16.9	20.6	61.9	1	0.53	RD-12750. WASHABILITY & PETRO. RECOV. 36.9% RECOV. CHECKED JAN 30 '80.
2045	2048		31164			1'		40.6			1		
2048	2059		31165		90.79	11'	0.2	36.9	17.5	41.7	4 1/2	0.52	WASHABILITY RECOV. 15.2%
2130	2136		31166			6'		50.8			5 1/2		
2319	2324		27973		10.385	4.5	0.3	29.2	18.0	49.6	7 1/2	0.56	

DIAMOND DRILL SAMPLING RECORD



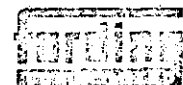
FROM	TO	DESCRIPTION	SAMPLE NUMBER	ACTUAL			VM	FC	FSI	S	REMARKS	
				BTU	WIDTH	M						
63	69.5		31078	12,381	6.5	1.0	18.0	24.0	55.3	6 1/2	0.62	WASHABILITY RECOV-77.5%
90	95		31079	12,191	5	0.6	19.3	25.1	53.3	4 1/2	0.90	
196	211	SEAM-13	31080		15		25.0			6 1/2		
211	222		ORL				22.0			7		
191	211		COMPO	11,214	20	0.4	24.0	23.4	52.2	7	0.55	RO-10742 WASHABILITY & PETROGRAPHY.
331	336	SEAM-12	31083		15		11.6			7		
336	341		ORL				32.0			6		
341	346		ORL				5.1			6 1/2		
346	351	SEAM-12	31086		10		10.6			6 1/2		
351	361		ORL				30.0			6		
351	361		COMPO	12,123	30	0.4	20.1	25.2	54.3	6 1/2	0.68	RO-10672 WASHABILITY & PETROGRAPHY. RECOV-19.4%
477	486	SEAM-12	31088		9		14.8			7 1/2		
486	496		ORL				37.9			2		
477	486		COMPO	11,352	19	0.5	24.5	22.1	50.9	4 1/2	0.53	" " RECOV-56.6%
505	516	SEAM-12	31090		11		32.0			6 1/2		
516	526		ORL				25.3			6		
505	526		COMPO	10,658	21	0.4	29.1	22.8	47.7	6 1/2	0.76	" " RECOV-70.4% RO-11228

DIAMOND DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	ACTUAL BTU	WIDTH	M	A	VM	FC	FSI	S	REMARKS	
549	551.5		31092		2.5		16.3			7			
601	611		31093 94 95 COMPO		10'		10.8			4			
611	621				10'		19.5			4			
621	624.5				3.5		38.8			5 1/2			
601	624.5		COMPO	12	527	20.5	0.2	18.3	23.0	58.5	4 1/2	0.45	RECOVERY - 1.1920 MINERALOGY & PETROGRAPHY RECOV. - 55.3%
635	637		31096		2		34.6			1			
646	656		31097 098 COMPO		10'		42.7			4 1/2			
656	661.5				5.5		25.2			6			
661	664				9	140	18.5	0.1	36.0	20.5	43.4	5	0.53
855	861		31099		6'		17.9			7 1/2			
					12	916	6'	0.4	17.8	26.3	55.5	7 1/2	0.92
871	876		31100 31176 77 COMPO		10'		41.3			4 1/2			
876	881					10'		32.8			5		
881	886					10'		29.7			7		
871	886				9	184	15'	0.3	40.0	20.5	39.2	5 1/2	0.52
896	901		31178 179 COMPO		5'		22.9			7 1/2			
901	911					10'		28.9			6 1/2		
911	911				11	455	15'	0.2	26.5	23.8	49.5	6 1/2	0.44
954.5	963		31180		8.5		35.4			5			
				9	023	8.5'	0.1	35.2	18.7	42.0	5	0.94	

DIAMOND
ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	ACTUAL		M	A	VI	FC	FSI	S	REMARKS
				BTU	WIDTH							
1030	1046		31181		16'		18.3			6		Rd-12218
1030	1046			12,368	16'	0.1	18.5	21.4	60.0	6	0.60	VELOCITY 8 4 INCHES PER MIN RECORD TO 2 1/2
1060	1065		31182		0.5		27.1			6 1/2		
1175	1176		31183		1		30.6			6 1/2		
1160	1162		31184		2		32.7			5		
1177	1178		31185		1		28.4			6 1/2		
1222	1230		31186		7		11.0			5		
1230	1234		87		4		13.9			1		
1234	1240		88		6'		13.4			7		Rd- 1.20926.
1234	1240		COMPO	13,406	17'	0.2	12.2	21.4	66.0	4 1/2	0.46	" " " RECORD TO 30.8.
1318.5	1319.5		31189		1.5		28.0			2 1/2		
1371	1382		31190		5'		34.9			5 1/2		
1371	1382			9,508	5'	0.2	25.0	17.8	47.0	6	0.61	
1383.5	1401		31191		17.5		48.9			1		

ROTARY DRILL SAMPLING RECORD

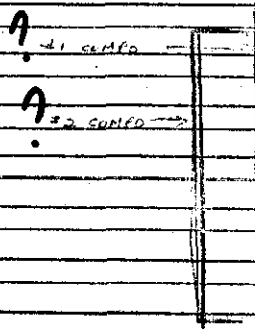


FROM	TO	DESCRIPTION	SAMPLE NUMBER	B.T.U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
11	13		29076		2		21.7			1		
13	15		077		2		26.0			0		
15	17		078		2		53.1			0 1/2		
17	19		079		2		38.0			0		
19	21		080		2		61.2			0		
21	23		081		2		74.2			2 1/2		
23	25		082		2		11.3			1		
25	27		083		2		17.5			1		
27	29		084		2		7.7			1/2		
29	31		085		2		11.6			1/2		
31	33		086		2		13.8			1 1/2		
33	35		087		2		24.8			1/2		
35	37		088		2		17.2			1/2		
37	39		090		2		26.9			1/2		
11	39			10,661							0.32	
61	63		29091		2		45.1			1 1/2		
63	64		092		2		74.0			1/2		
107	109		29093		2		28.6			5 1/2		
109	111		094		2		13.7			6 1/2		
111	113		095		2		36.3			6		
						0.4	24.1	21.5	52.0		0.44	
295	297		29096		2		29.4			6		
297	299		097		2		37.2			4 1/2		
299	301		098		2		46.9			2 1/2		
301	303		099		2		50.4					

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
433	435		29005		2		53.0			1		
435	437		006		2		77.2			0		
4						0.5	22.7	21.1	57.1	A	0.40	
441	443		29007		2		38.1			3		
443	445		008		2		28.0			6		
4					2	0.4	32.23	18.1	48.7	2.12	0.32	
579	581		29009		2		12.3			1		
581	583		010		2		13.4			2 1/2		
583	585		011		2		19.9			2 1/2		
585	587		012		2		9.5			1 1/2		
587	589		013		2		18.0			2		
589	591		014		2		16.0			2 1/2		
591	593		015		2		10.7			2		
593	595		016		2		12.2			6		
595	597		017		2		13.0			1 1/2		
597	599		018		2		6.1			3		
599	601		019		2		9.7			5 1/2		
601	603		020		2		3.6			7		
603	605		021		2		66.0			1		
605	607		022		2		46.5			1		
607	609		023		2		34.7			1 1/2		
581	603				2	0.7	12.4	21.3	65.6	2 1/2	0.28	
579	609				2	0.7	21.4	16.2	58.1	2	0.28	



ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	DT. U. (Actual)	WIDTH	H	A	VM	PC	PSI	S	REMARKS
79	81		28988		drill		38.0			6		
81	83		28989				55.7			6		
83	85		28990				47.7			3 1/2		
85	86		991				79.3			1 1/2		
108	110		28992		drill		11.2			7		
110	112		993				9.4			7		
112	114		994				10.6			7		
114	116		995				35.8			5 1/2		
119	121		28996		drill		25.8			7		
121	123		28997				11.5			7 1/2		
123	125		28998				12.4			6 1/2		
125	127		28999				10.8			6		
127	129		29000				12.4			5 1/2		
129	130		27826				9.5			6		
108	130	COMPO.		12,751	9/22	0.5	15.8	28.1	55.6	6 1/2	0.44	
157	159		27827		2							
210	212		27828		drill		58.3			6 1/2		
212	214		8329				28.5			2 1/2		
214	216		830				29.5			6		
216	218		831				16.0			6 1/2		
218	220		832				7			8		
220	222		833				13.9			6 1/2		

ROTARY DUCT SAMPLING RECORD

DEPTH	COMPLETION	SAMPLE NUMBER	GT.U. (Actual)	WIDTH	H	A	VM	RD	WT	S
222 227		27834		2		58.5			2 1/2	
210 222	COMPO.			12	1.0	21.8	26.2	51.0	6 1/2	0.58
226 234	COMPO.	27835		8	0.7	25.6			6	
		27836				15.0			6 1/2	
		27837				7.0			8	
		27838				13.9			6 1/2	
		27839				44.3			3 1/2	
210 234	COMPO.			22.24	0.8	21.9	26.4	51.0	6	0.60
350 352	COMPO.	27840		2	0.5	23.0	24.8	51.4	6	0.60
		27841				31.2			4	
		27842				47.0			5 1/2	
		27843				55.1			2	
						63.0			1	
330 352		27840		2	0.5	31.6	22.6	45.3	4 1/2	0.52

ROTARY DITTO SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	H	A	VM	PC	PSI	S	REMARKS
76	78		29959		1 1/2		13.2			4		
78	80		960		1 1/2		33.4			4		
80	82		961		1 1/2		13.2			6		
82	84		962		1 1/2		72.4					
76	82	COMPO.			6	0.8	20.2	25.4	53.6	5 1/2	0.56	
80	94		29963		2 1/2		34.0			5		
81	81		970		2 1/2		15.0			7		
81	83		965		2 1/2		15.4			7		
89	100		966		2 1/2		15.6			7 1/2		
100	102		967		2 1/2		20.7			6 1/2		
102	104		968		2 1/2		51.5			3 1/2		
82	102	COMPO.			10	0.8	10.3	26.0	53.9	7	0.48	
149	151		29919		1 1/2		15.7			7 1/2		
151	153		970		1 1/2		7.4			7 1/2		
153	155		971		1 1/2		9.8			7		
155	157		972		1 1/2		16.4			7		
149	157	COMPO.			8	0.2	12.1	28.3	53.7	7	0.52	
199	201		29973		2		23.2			7		
208	212		29974		2 1/2		33.7			4 1/2		
239	241		29975		2 1/2		26.7			6 1/2		
241	243		29970		2 1/2		15.5			6 1/2		

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE RUBBER	DT.U. (Actual)	WIDTH	H	A	VM	PC	PSI	S	REMARKS
245	245		29902		4-1							
245	247		903		4-1		14.8			SAMPLE LOST.		
247	251		904		4-1		46.2			3 1/2		
251	253		905		4-1		12.5			1		
253	255		906		4-1		16.5			5 1/2		
253	253		907		4-1		48.8			6		
239	253				4-1	0.8	22.2	23.9	53.5	4 1/2	0.50	
259	261		29908		4-1		28.1			6		
261	263		909		4-1		30.6			6		
263	265		910		4-1		13.9			7		
265	267		911		4-1		7.7			8		
267	269		912		4-1		20.4			7 1/2		
269	271		913		4-1		64.6			1		
259	269	COMPO.			10	0.8	21.3	24.9	53.5	7	0.60	
275	277		29914		2		63.8			0		
398	400		29915		2		45.2			2		
400	401		916		1		21.4			7		
403	405		29917		2		19.1			7		
405	407		918		2		49.9			2		
400	405	COMPO.			3 1/2	0.7	20.6	27.1	51.6	7	0.72	

ROTARY DIGITAL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	H	A	VM	NO	WGT	D	REMARKS
37	39		27769				565			2 1/2		
39	41		27970				20.9			6 1/2		
41	43		971				30.0			7		
43	45		972				39.8			6		
45	47		973				66.2			0		
47	49		974				77.2			1		
49	51		975				33.3			6 1/2		
51	53		27926				7.6			7 1/2		
53	55		976				16.4			7		
55	57		978				9.0			7 1/2		
57	59		929				8.3			7 1/2		
59	61		930				5.1			8		
61	63		931				missing					
63	65		COMPO			0.6	24.4	23.6	51.4	6 1/2	0.41	
136	138		27932				43.7			4 1/2		
138	140		933				12.2			7		
140	142		934				27.5			6		
142	144		935				11.9			7		
144	146		936				23.9			6 1/2		
146	148		937				42.4			5		
148	149		COMPO			0.7	19.0	23.8	56.5	6 1/2	0.55	
149	151		COMPO			0.6	27.3	22.5	49.4	6	0.56	
151	153		27938				8.9			7 1/2		
153	155		939				27.4			6 1/2		
155	157		COMPO			0.8	18.4	26.5	54.7	7	0.60	
227	229		27940				48.0			1		
229	231		941				21.6			7 1/2		
231	233		942				13.0			7 1/2		
233	235		943				8.8			7 1/2		

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K3

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	GT. U. (Actual)	WIDTH	H	A	VM	PC	PSI	S	REMARKS
233	237		27944		#3		21.5			5		
235	239		945				47.7			2		
237	241		946				33.3			6		
239	243		947				23.4			4 1/2		
241	245		948				10.4			7 1/2		
243	247		949				9.7			7 1/2		
245	249		950				47.5			3		
247	251		29263				18.1			3		
249	253		264				26.6			4 1/2		
251	255		265				30.4			6		
253	257		266				38.9			5		
255	259		267				13.3			7		
257	261		268				30.8			5		
259	263		269				26.4			3 1/2		
261	265		270				67.2			1		
263	267		271			-			-			
265	269		272			-			-			
267	271		273			-			-			
269	273		COMPO.			0.8	21.3	26.4	51.5	6	0.48	
271	275		COMPO.			0.7	29.9	24.0	45.4	5 1/2	0.68	
273	277		COMPO.			0.7	26.0	24.8	48.5	5 1/2	0.55	
275	279		13549			46.5			3 1/2			
277	281		0									
279	283											
281	285		13550				44.8			2		
283	287		13747				47.0			3 1/2		
285	289		13748				59.6			1 1/2		
287	291											
289	293											
291	295		13749				24.5			6		
293	297		750				8.8			6 1/2		
295	299		15850									

CALC. AVE. 27 2/3% A.
 FOR 230-263
 LAB. EXCLUDED
 2' (#29263)

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	DT. U. (Actual)	WIDTH	H	A	VM	WC	MT	S	REMARKS
585	587		13671		2 1/2"		12.9			7/2		
587	589		672		2 1/2"		28.4			2		
589	591		673		2 1/2"		24.7			1		
591	593		674		2 1/2"		40.8			2		
593	595		675		2 1/2"		62.3			1		
579	591				10 1/2"	0.7	20.3	22.2	56.8	4 1/2		0.46. 2' SAMPLE LOST.
600	602		28146		2 1/2"		26.7			1		
602	604		28147		2 1/2"		8.7			2		
604	606		148		2 1/2"		7.8			3 1/2		
606	608		149		2 1/2"		9.3			2 1/2		
608	610		150		2 1/2"		47.8			1 1/2		
610	612		27876		2 1/2"		40.0			1		
612	614		877		2 1/2"		24.4			4 1/2		
614	616		878		2 1/2"		14.8			1		
616	618		879		2 1/2"					1		
618	620		880		2 1/2"					1		
600	616		COMP.		16"	0.7	22.3	21.0	56.0	2		0.30
			0									

ROTARY DRILL SAMPLING RECORD

DATE OF RECORD
 TIME OF RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	B.T.U. (Actual)	WIDTH	H	A	VM	MC	PCI	B	REMARKS
160	162		28958		1 1/2		10.3			1/2		
162	164		459		1 1/2		30.9			5 1/2		
164	166		960		1 1/2		13.5			1		
166	168		961		1 1/2		38.2			1		
168	170		962		1 1/2		27.2			1		
170	172		963		1 1/2		29.2			1		
172	174		964		1 1/2		15.2			1 1/2		
174	176		965		1 1/2		-			1 1/2		
176	178		966		1 1/2		25.8			1 1/2		
178	180		967		1 1/2		-			-		
180	182		968		1 1/2		11.5			1		
182	184		969		1 1/2		51.7			1		
184	187		970		1 1/2		68.1			1		
160	182		COMPQ		18/22	0.6	21.7	20.6	57.1	3	0.44	A SAMPLE LOST

ROTARY DRILL SAMPLE RECORD

TO	DESCRIPTION	SAMPLE NUMBER	BTU (Actual)	WIDTH	R	A	VM	WC	WT	S	REMARKS
248	250	28971		2 1/2		19.0			4 1/2		
250	252	972				17.2			2 1/2		
252	254	973				31.4			4 3/4		
254	256	974				59.2			112		
256	258	975				26.5			6		
258	260	28976				61.2			1		
260	262	977									
262	260	COMPO.		10/12	0.5	31.5	18.8	49.2	3 1/2		0.46.2' SAMPLE LOST.
349	351	28982		2 1/2		17.5			4		
351	353	983				23.0			1 1/2		
353	355	984				20.5			1		
355	357	985				20.0			4		
357	359	986				29.5			2		
359	361	987				44.6			3 1/2		
361	359	COMPO.		10	0.3	22.5	20.3	56.9	3		0.53

ROTARY DDT, SAMPLING RECORD

Forlin
FOR LINCOLN

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VM	PO	PMI	S	REMARKS
30	32		29601		2		19.5			7		
32	34		29602		2		16.6			7		
34	36		603		2		11.0			7		
36	38		604		2		9.7			4		
38	40		605		2		45.3			7		
40	42		606		2		30.4			3 1/2		
42	44		607		2		59.5			1		
30	42	CEMPO		12,180	12'	0.6	21.7	26.0	51.7	6 1/2	0.78	
81	83		29608		2		78.0			1 1/2		
83	85		609		2		74.7			1 1/2		
204	206		29610		2		81.8			0		
206	208		611		2		19.5			5		
208	210		612		2		46.4			1 1/2		
206	208		29611	12,653	2	0.4	19.7	22.3	57.6	5	0.52	
213	215		29613		2		48.4			3		
215	217		614		2		72.0			1 1/2		
217	219		615		2		45.7			1		
223	225		29616		2		25.1			3		
225	227		617		2		50.9			1 1/2		
223	225		29616		2	0.6	25.4	20.2	53.8	3	0.36	
242	244		29618		2		24.0			2 1/2		
244	246		29619		2		40.3			1 1/2		

NOTARY DRILL SAMPLING RECORD

10/1/50

LOG #	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WT/PI	H	A	VM	NO	WT	S	REMARKS
255	257		29620		2		68.4			1/2		
242	244		29618		2	0.3	24.5	20.2	55.0	2 1/2	0.56	
260	262		29621		2		46.3			2 1/2		
262	264		622		2		23.5			3		
264	266		623		2		22.4			1		
266	268		624		2		22.0			3 1/2		
268	270		625		2		50.5			1/2		
262	268	COMPO.			6	0.4	22.8	20.4	56.4	2 1/2	0.54	
337	339		29801		2		32.9			1		
339	341		802		2		37.2			1		
341	343		803		2		18.5			2 1/2		
343	345		804		2		17.3			5		
345	347		805		2		30.5			3 1/2		
347	349		806		2		40.9			1/2		
349	351		807		2		62.2			1/2		
337	347	COMPO.			10	0.6	27.7	19.5	52.2	2 1/2	0.40	
359	361		29808		2		35.7			1		

ROTARY DISTRICT HAMILTON RECORD

MEMBER'S NAME
 ADDRESS
 CITY

FROM	TO	DESCRIPTION	SAMPLE NUMBER	B.T.U. (Actual)	WTR	M	A	VM	NO	NET	N	REMARKS
20	22		29555		2		80.6			1		
22	24		556		2		42.5			4		
24	26		557		2		72.1			0		
26	28		558		2		78.9			0		
28	30		559		2		83.9			0		
127	129		29560		2		10.5			7		
129	131		561		2		7.6			6 1/2		
131	133		562		2		12.7			7		
133	135		563		2		7.0			7		
135	137		564		2		NO	COMP.				
137	139		565		2		7.7			5		
139	141		566		2		11.4			2 1/2		
141	143		567		2		16.8			2 1/2		
143	145		568		2		10.9			2 1/2		
145	147		569		2		26.8			2		
147	149		570		2		9.4			5		
149	151		571		2		14.1			6 1/2		
127	151	COMP.		13.410	22/24	0.2	12.0	25.7	62.1	5	0.50	
153	155		29572		2		56.7			1		
155	157		573		2		80.8			0		
157	158		574		1		14.8			5 1/2		
160	162		29575		2		23.5			6 1/2		
162	164		29576		2		9.2			7		
160	164	COMP.		12.841	4	0.4	16.0	24.3	59.3	6 1/2	0.60	

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	DT. U. (Actual)	WIDTH	H	A	VM	PO	WGT	U	REMARKS
222	224		29577		12		62.6			7/2		
224	226		578		12		12.8			7		
226	228		579		12		38.6			6 1/2		
228	230		580		12		14.3			7 1/2		
230	232		581		12		6.2			7		
232	234		582		12		8.8			7		
234	236		583		12		31.4			5		
236	237		584		12		11.4			7/2		
224	236	COMPO		12,751	12'	0.3	12.5	22.5	55.7	7	0.64	
294	296		29585		12		14.6			7		
296	298		586		12		9.3			6 1/2		
298	300		587		12		19.5			6 1/2		
300	302		588		12		27.1			7 1/2		
302	304		589		12		35.9			5 1/2		
294	304	COMPO		12,089	10'	0.4	20.9	25.1	53.6	7	0.73	
307	309		29590		12		50.0			7		
309	311		391		12		67.9			7		
422	424		29592		12		41.8			7		
424	426		593		12		22.6			6 1/2		
426	428		594		12		64.0			7		
449	451		29595		12		16.7			6 1/2		
451	453		596		12		35.0			3		
453	455		597		12		30.9			7 1/2		
455	457		598		12		30.5			7 1/2		
457	459		599		12		65.1			7		

NOTARY PUBLIC, HAMPDEN COUNTY

RECORDS SECTION
 1000 STATE STREET
 HAMPDEN, MA 01902
 TEL: 541-846-1182

FROM	TO	DESCRIPTION	SAMPLE NUMBER	WT. U. (Actual)	W/PTM	M	A	VM	W	W/L	N	REMARKS
18	20		29989		2		18.5			0		
20	22		950				57.5			0		
22	24		29514		2		13.6			6		
24	26		527				33.1			6		
26	28		528				21.1			6 1/2		
28	30		529				49.9			3		
30	32		530				37.0			6		
32	34		531				10.1			7		
34	36		532				6.3			6 1/2		
36	38		533				27.8			6 1/2		
22	38	COMPO		11,461	16	0.5	24.4	26.4	48.7	6 1/2	0.71	
126	128		29534		2		8.3			1 1/2		
128	130		29535		2		10.0			7		
130	131		536				30.4			5 1/2		
126	131	COMPO		13020	5	0.6	15.8	28.6	55.0	6 1/2	0.82	
158	160		29537		2		30.4			6 1/2		
160	162		538				33.2			6 1/2		
162	164		539				41.1			6		
158	164	COMPO		5373	6	0.3	35.2	25.3	39.2	6 1/2	0.55	
257	259		29540		2		7.3			7 1/2		
259	261		341				16.9			6 1/2		
261	263		542				42.6			4		
263	265		343				11.0			6 1/2		
265	267		344				19.8			5 1/2		
267	269	COMPO		545			7.0			7 1/2		
269	271		546				8.9			7		

NOTARY PUBLIC SAMPLES RECORD

1982

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIPPT	H	A	VM	MG	SGI	S	REMARKS
329	337		29547		2		19.7			7 1/2		
329	331		29547	12,293	2	0.5	19.0	25.6	54.9	7 1/2	0.68	
257	271	COMPO.		12,757	14	0.5	16.6	26.1	56.8	6 1/2	0.45	
378	380		29548		1		71.9			1		
385	387		29549		2		37.0			4 1/2		
387	389		550		2		44.2			2 1/2		
385	387		29549	9563	2	0.4	36.6	22.1	40.9	4 1/2	0.64	

ROTARY WIRE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	D.T.U. (Actual)	WIDTH	M	A	VM	NO	PSI	S	REMARKS
110	112		29919				46.8			3		
112	114		920				10.4			7 1/2		
114	116		921				9.9			7 1/2		
116	118		922				9.4			7 1/2		
118	120		923				57.8			2 1/2		
120	122	COMPO	924				12.6			7 1/2		
122	124		925				34.4			4 1/2		
124	126		926				7.6			7 1/2		
126	128		927				11.7			7		
128	130		928				7.7			7 1/2		
130	132		929				4.5			7		
132	134		930				49.4			4		
112	132	COMPO		12.753	20	0.3	16.2	27.1	55.8	6 1/2	0.46	
180	182		29931				16.6			7		
182	184		932				12.7			7		
184	186	COMPO	933				16.6			7		
186	188		934				48.4			4 1/2		
180	186	COMPO		12.906	6	0.3	15.4	27.4	56.9	7	0.76	
246	248		29935				16.0			7		
248	250		936				8.3			6 1/2		
250	252		937				9.2			6		
252	254	COMPO	938				7.8			6 1/2		
254	256		939				8.4			6 1/2		
256	258		940				12.9			4 1/2		
246	258	COMPO		13.668	12	0.6	10.5	26.1	62.8	6 1/2	0.56	
300	302		29941				46.0			4		
302	304		942				26.0			7 1/2		
304	306		943				7.5			7		
306	308	COMPO	944				12.3			7 1/2		

29942-645

ROTARY DRILL SAMPLING RECORD

PROPERTY OF THE
 UNITED STATES
 GEOLOGICAL SURVEY
 WASHINGTON, D. C.

FROM	TO	DESCRIPTION	SAMPLE NUMBER	B.T.U. (Actual)	WEIGHT	H	A	VM	MC	SGT	S	REMARKS
308	310		29943		2		81.3			67a		
302	310	COMP.		12,690	8	0.5	17.1	265	555	7	0.88	
475	477		29946	1	212		66.6			27a		
477	479		29947				74.4			7a		
479	481		29948				73.6			1		

ROTARY DRILL SAMPLING RECORD

DATE	TO	DESCRIPTION	SAMPLE NUMBER	DT.U. (Actual)	WIDTH	N	A	VM	WC	SGT	S	REMARKS
138	140		28183				66.0			1/2		
140	142		184				31.0			6		
142	144		185				20.9			7		
144	146		186				14.2			7		
146	148		187									
148	150	COMPO.	188									
150	152		189				15.4			4 1/2		
152	154		190				12.3			5		
140	154	COMPO.			12 1/4	0.4	20.0	22.7	56.9	6	0.47	
157	159		28191				55.0			1		
159	161		192				63.3			1		
161	163		193				32.0			2 1/2		
163	165		194				47.1			1		
165	167		195				10.6			6 1/2		
167	169	COMPO.	196				28.2			6 1/2		
169	171		28197				62.9			1/2		
171	173		197				53.1			1		
173	175		198				32.3			3		
175	177	COMPO.	199				25.3			5		
177	179		200				41.9			3		
179	181		201			0.5	18.2	22.5	58.4	6	0.33	
181	183		28202			0.4	29.6	20.9	49.1	3 1/2	0.30	
183	185		203				71.2			1		
185	187		204				14.4			1/2		
			205				48.1			4 1/2		
							35.6			5 1/2		
211	213		28206									
213	215		207				50.5			1/2		
215	217		208				26.3			3		
217	219		209				65.5			1		
							60.5			1/2		

ROTARY WELL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	WCU (Actual)	WDEPTH	H	A	VP	INJ	WGT	S	REMARKS
219	227		28210		22		75.3			0		
221	223		211		21		81.6			3 1/2		
223	225		212		20		61.0			1/2		
225	227		213		20		18.3			5		
227	229		214		20		49.9			1/2		
225	227		28213		2	0.4	18.0	21.0	60.0	4 1/2	0.62	
284	285		28215		2		81.5			0		

2/10 1961

ROTARY DRILL SAMPLING RECORD

NO.	NO.	DESCRIPTION	SAMPLER NUMBER	BTU (Actual)	DEPTH	M.	A	VM	PS	WT	S
21	23		28216		2		13.3			6	
	24		217		2		34.2			6	
	25		218		2		49.9			3	
	26		219		2		79.5			0	
	27		220		2		45.8			2 1/2	
	28		221		2		21.0			2 1/2	
	29		222		2		20.7			3	
	30		223		2		9.3			6	
	31		224		2		14.5			6 1/2	
	32		225		2		73.1			0	
21	25		COMPO.		4	0.6	24.0	22.2	53.2	6	0.46
31	39		COMPO.		8	0.6	16.8	23.2	59.4	4 1/2	0.52
51	53		28226		2		43.5			6	
53	54		227		2		73.7			1/2	
96	98		28228		2		16.0			3 1/2	
98	100		229		2		15.5			1 1/2	
100	102		230		2		13.7			5 1/2	
102	104		231		2		53.0			1	
104	106		232		2		20.0			6 1/2	
106	108		233		2		16.7			7 1/2	
108	110		234		2		54.2			2	
110	112		235		2		60.7			1	
112	114		235		2		71.1			1	
96	108		COMPO.		12	0.5	22.6	21.6	55.3	4 1/2	0.62
134	136		28237		2		24.6			3	
136	138		238		2		30.1			4 1/2	

ROTARY CORE SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BTU (Actual)	WATER	D	A	VM	MO	WGT	W	REMARKS
132	140		28239		2		33.4			5 1/2		
140	142		240		2		58.3			2 1/2		
142	143		241		2		54.4			2		
134	140		COMPO.		6	0.4	29.1	20.2	50.3	4 1/2	0.94	
180	182		242		2		39.5			3 1/2		
182	184		243		2		68.6			6		
184	186		244		2		24.6			3		
186	188		245		2		16.0			1		
188	190		246		2		16.3			1 1/2		
190	192		247		2		19.2			2 1/2		
192	194		248		2		31.2			3 1/2		
194	196		249		2		12.2			3		
196	198		250		2		14.9			5 1/2		
198	200		28277		2		15.2			6		
200	202		398		2		22.6			3		
202	204		399		2		22.4			3		
204	206		200		2		20.7			1 1/2		
206	208		29247		2		23.1			1 1/2		
208	210		248		2		SAMPLE LOST					
210	212		249		2		22.0			1 1/2		
212	214		250		2		69.1			6		
214	212		COMPO.		26	0.6	20.4	21.0	53.0	2 1/2	0.54	
216	218		28011		2		29.2			6 1/2		
218	220		012		2		23.2			6		
220	222		013		2		53.2			1		
216	220		COMPO.		4	0.6	26.3	20.9	52.2	6	0.43	
288	290		28014		2		77.0			1/2		
290	292		015		2		11.6			3		

ROTARY DRILL SAMPLE RECORD

DEPTH	DEPTH	SAMPLE NUMBER	BT U (Actual)	WIDTH	H	A	VM	WD	WZ	B
490	492	29221		APP-20010		53.5			1/2	
492	494	222				29.1			1/2	
494	496	223				49.2			1	
496	498	224				35.3			1 1/2	
498	500	225				21.6			4 1/2	
500	502	20550				42.1			3 1/2	
492	502	COMPO.		10'	0.5	35.4	20.8	43.3	2	0.44
644	646	29951		APP-20010		25.8			1	
646	648	952				24.1			5	
648	650	953				35.8			5 1/2	
650	652	954				34.0			2	
652	654	955				59.4			1	
654	656	956				26.9			7	
656	658	957				35.1			0	
644	656	COMPO.		12'	0.5	34.2	17.5	47.8	2 1/2	0.56
661	663	29958		2		76.7			1	

ROTARY PILE SAMPLING RECORD

Sample No.	Depth (ft)	Sample Number	BT.U. (Actual)	Wedge	N	A	VS	PC	SIT	U
292	294	28015		0-0		15.1			7	
293	295	017				19.0			6	
294	296	018				39.4			4	
295	297	019				22.2			7	
296	298	020				61.1			1	
297	299	021				73.5			0	
298	300	COMPO.		0-0	0.7	24.7	26.4	27.2	21.2	0.24
372	374	28022		0-0		29.3			1	
373	375	023				53.3			1	
374	376	024				27.9			4 1/2	
375	377	025				40.1			3 1/2	
376	378	23206				57.4			2	
377	379	027				35.5			1 1/2	
378	380	028				28.3			1	
379	381	029				30.9			1 1/2	
380	382	020				24.0			2 1/2	
381	383	021				36.6			2 1/2	
382	384	022				24.6			2	
383	385	023				17.7			1 1/2	
384	386	024				20.6			1 1/2	
385	387	025				32.0			1 1/2	
386	388	026				21.2			1	
387	389	027				27.4			1	
388	390	028				29.8			3 1/2	
389	391	COMPO.		0-0	0.6	29.7	18.0	SIT	11/2	0.44
390	392	COMPO.		0-0	0.7	33.5	17.4	AS4	11/2	0.22
391	393	29219				68.0			1	
392	394	220				34.3			1/2	

292 294
 293 295
 294 296
 295 297
 296 298
 297 299
 298 300
 299 301
 300 302
 372 374
 373 375
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 375 377
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 379 381
 380 382
 381 383
 382 384
 383 385
 384 386
 385 387
 386 388
 387 389
 388 390
 389 391
 390 392
 391 393
 392 394

ROTARY DRILL SAMPLING RECORD

DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VM	PC	%SI	S	REMARKS
63	29881		2		54.6			1 1/2		
65	882		2		46.3			1 1/2		
67	883		2		56.7			1/2		
69	884		2		25.4			1/2		
71	885		2		30.6			1/2		
73	886		2		14.9			1/2		
75	887		2		28.3			1/2		
77	888		2		36.3			0		
79	889		2		33.3			2		
81	890		2		29.3			3		
83	891		2		21.4			2		
85	892		2		12.3			0		
89	COMP.		18	07	26.5	18.5	54.3	1	0.40	
194	29893		2		75.1			0		
208	29894		2		72.2			1/2		
210	29895		2		56.3			1		
312	29896		2		21.1			6		
314	29897		2		SAMPLE LOST.					
316	29898		2		15.8			3		
318	29899		2		37.3			1/2		
320	29900		2		45.2			1/2		
322	29901		2		11.3			7 1/2		
324	29902		2		11.7			6 1/2		
326	29903		2		18.6			6		
328	29904		2		26.0			1 1/2		
330	29905		2							
332	29906		2							
314	COMP.		16 1/2	0.6	23.6	15.6	56.2	3 1/2	0.34	

ROTARY DRILL SAMPLING RECORD

NO	DESCRIPTION	SAMPLE NUMBER	WT. U. (Actual)	WIDTH	H	A	VM	NO	POI	D	...
335	337	29980		2		75.6			4 1/2		
357	359	29981		2		85.5			0		
372	374	29982		2		31.5			6		
374	376	983				31.3			6 1/2		
376	378	984				31.3			6 1/2		
378	380	985				46.0			5		
380	382	986				SAMPLE LOST.			4		
382	384	987				37.6			6 1/2		
384	386	988				29.9			7		
386	388	989				26.5			7		
388	390	990				25.4			7		
390	392	991				25.0			6 1/2		
392	394	992				33.5			6		
394	396	993				20.5			7 1/2		
396	398	994				17.2			7 1/2		
398	400	995				18.5			7		
400	402	996				23.3			7		
402	404	997				58.7			1		
404	406	998				56.0			1 1/2		
406	408	999				19.6			6 1/2		
408	410	1000				23.4			7		
372	410	COMPO		36/38	OS	31.1	18.5	49.5	6	0.46	

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	N	A	VM	FC	FSI	S	REMARKS
24	26		30037		2		23.8		6.2			
26	28		40		2		16.2		7			
28	30		41		2		21.6		6			
30	32		42		2		24.2		7.2			
32	32		COMPED		5	0.8	22.7	23.1	53.7	6	0.48	
36	38		30043		0		20.2		2.2			
38	40		44		2		21.8		1			
40	42		45		2		47.2		1			
42	44		46		2		20.2		0			
44	46		47		2		6.0		0			
51	53		200 48		2		47.8		2			
53	55		49		2		43.2		2.2			
55	57		50		2		61.2		1			
57	59		30951		2		55.4		1			
59	61		52		2		67.6		1			
61	63		53		2		76.8		2			
69	71		30954		2	76.2			2			
71	72		955		2							
108	110		30956		2	32.0			4			
110	112		957		2	54.8			1.2			

ROTARY DRILL SAMPLING RECORD

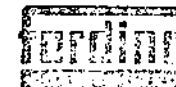
FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
636	638		27567		2		66.2					
638	642		27568		4		58.8			12		
642	644		27569		2		33.0			6		
		PAK-5 EST	27570		1	0.4	33.2	17.7	43.7	6	0.32	
658	660		27570		2		71.0					
660	662		571		2		71.4			1/2		
662	664		572		2		74.0			1/2		
664	666		573		2		72.3			1/2		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT. U. (Actual)	WIDTH	K	A	VN	FC	PSI	S	REMARKS
449	451											
451	453		30706		2		30.8			1		
453	455		707		2		29.3			1		
455	457		708		2		61.0			1		
457	459		709		2		35.8			3		
459	461		711		2		-			-		
461	463		712		2		10.0			-		
463	465		713		2		32.4			1		
465	467		714		2		39.1			1		
467	469		715		2		57.2			2		
469	471		716		2		45.9			1		
471	472		717		2		31.9			1		
			30718		1		30.6			1/2		
471	472		CEMPO		21	0.4	39.8	18.8	410	112	0.36	
527	529		30719				4.8			1		
529	531		720				46.2			1		
531	533		721				27.8			1		
533	535		30722				36.0			1		

ROTARY DRILL SAMPLING RECORD



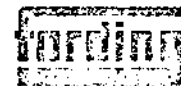
FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VM	FC	PSI	S	REMARKS
78	80		30723		2		58.6			2 1/2		
80	81		724		1		97.8			0		
110	112		30725		2		12.0			5		
112	114		30727		2		17.6			3 1/2		
114	116		30752		2		19.9			1 1/2		
116	117		30753		2		55.1			1 1/2		
117	120		30754		2		70.4			1		
119	116		COMPO		6	0.3	16.2	22.5	61.0	5 1/2	0.54	
132	134		30755		2		33.6			1 1/2		
134	136		756		2		24.8			3 1/2		
136	137		757		2		29.8			1		
137	138		30758		2		51.8			1		
137	136		COMPO		4	0.2	24.6	21.0	49.2	3 1/2	0.60	
196	198		30759		2		37.0			4		
198	200		760		2		31.5			1		
200	202		761		2		27.7			2		
202	204		762		2		26.2			4 1/2		
204	206		763		2		35.0			1 1/2		
206	208		764		2		11.7			5 1/2		
208	210		765		2		4.7			4 1/2		
210	212		766		2		2.4			1		
213	215		30767		2		31.0			5		
215	217		768		2		36.0			5		
217	219		769		2		37.6			1		
		WELLS - SW	COMPO		10	0.4	30.3	19.3	50.0	3 1/2	0.40	WELLS - SW

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	H	A	VN	FC	FSI	S	REMARKS
298	300		30770		2		43.9			1/2		
300	302		771		2		36.4			1/2		
302	304		772		2		26.8			6		
304	306		773		2		20.6			2		
306	308		774		2		25.9			7		
308	310		775		2		75.5			1		
310	312		776		2		25.8			1		
300	309	SEAM - EL	COMP		8	0.5	28.5	19.8	50.8	4	0.42	
318	320		30777		2		31.0			1		
320	322		778		2		12.5			1		
322	324		779		2		18.9			13		
324	326		780		2		14.8			23		
326	328		781		2		25.9			1		
328	330		782		2		22.4			1		
330	332		783		2		15.2			23		
332	334		784		2		22.0			2		
334	336		785		2		21.2			0		
336	339	SEAM - D	COMP		16	0.5	18.2	18.7	62.6	1 1/2	0.32	
432	434		30786		2		15.4			1		
434	436		787		2		7.8			1		
436	438		788		2		27.1			1		
438	440		789		2		22.2			2		
440	442		790		2		16.8			1		
434	440	SEAM - DL	COMP		6	0.5	26.7	22.5	49.9	1 1/2	0.42	

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	K	A	VN	FC	FSI	S	REMARKS
91	92		30793		2		410			5		
92	94		30794		2		75			712		
94	96		795		2		145			612		
101	102		61150		6	06	213	214	507	612	030	
122	124		30796		2		238			1		
124	126		797		2		181			312		
126	128		798		2		203			4		
128	130		799		2		131			3		
130	130		61150		8	06	150	211	507	4	035	

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	N	A	VM	PC	PSI	S	REMARKS
40	42		29120		2		52.7			1		
42	44		121		2		23.4			5 1/2		
44	46		122		2		23.3			5 1/2		
46	48		123		2		65.4			1		
48	50		124		2		25.1			5		
50	52		125		2		11.5			5		
52	54		29126		2		8.1			5 1/2		
54	56		127		2		6.3			5		
56	58		128		2		26.2			5 1/2		
58	60		129		2		24.2			5		
60	62		130		2		26.3			5 1/2		
62	64		131		2		24.1			5 1/2		
42	64	SEAM - F. COMP.			2	0.8	23.9	2.8	53.8	5 1/2	0.52	
84	86		29132		2		24.2			2		
86	88		133		2		11.3			6 1/2		
88	90		134		2		23.7			5		
90	92		135		2		69.5			1 1/2		
92	94	SEAM - F. COMP.		10.152	1	0.6	19.9	26.6	52.9	4 1/2	0.46	
112	114		29136		2		10.2			4 1/2		
114	116		137		2		4.7			5		
116	118		138		2		33.3			5		
118	120		139		2		64.2			1		
112	118	SEAM - F. COMP.		12.032	1	0.6	19.1	22.0	58.3	5	0.56	
135	137		29140		2		18.6			5 1/2		
137	139		141		2		46.3			3 1/2		
135	141		29140		2	0.6	18.8	23.8	56.8	7	0.70	

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VN	PC	WT	S	REMARKS
225	227		29142				23.5			5		
227	229		143				10.8			5 1/2		
229	231		144				19.2			2 1/2		
231	233		145				23.1			3		
233	235		146				18.6			3 1/2		
235	237		147				22.5			3 1/2		
237	239		148				45.8			3 1/2		
239	241		29149				7.8			1/2		
241	243		150				52.4			1		
243	245		151				41.4			3 1/2		
245	247		152				12.2			3		
247	249		153				59.7			1		
249	251		154				82.5			0		
251	253		155				27.2			1		
253	255		156				74.8			1/2		
255	257		157				75.8			1/2		
257	259		158				58.6			1		
259	261		159				55.0			1		
261	267											
267	271	SEAM - EU			12	0.8	20.2	21.5	57.3	4 1/2	0.36	
		COMPS COMPS			22	0.6	31.5	20.8	47.9	2 1/2	0.32	
400	402		29160				43.5			1/2		
402	404		161				15.4			2 1/2		
404	406		162				16.1			2 1/2		
406	408		163				10.9			2		
408	410		164				12.0			2		
410	412		165				9.7			2		
412	414		166				13.7			4 1/2		
414	416		167				15.7			1 1/2		
416	418		168				19.7			1		
418	420		169				10.2			1 1/2		
420	422		170				10.8			2 1/2		
422	424		171				17.8			1 1/2		

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BL.U. (Actual)	WIDTH	M	A	VM	WC	PSI	S	REMARKS
424	426		29172		2		83.0			0		
484	484	EXAM. D. COMPO			22	S	13.8	20.6	65.1	1 1/2	0.36	
484	486		29173		2		37.5			3		
489	491		29174		2		10.5			1		
491	493		29175		2		25.1			2		
493	495		176		2		12.5			1 1/2		
495	497		177		2		21.1			1		
497	499		178		2		69.7			1 1/2		
499	501		179		2		81.5			0		
484	484	EXAM. D. COMPO			31	0.6	17.8	21.4	60.2	1 1/2	0.40	
310	312		29180		2		30.0			1 1/2		
312	314		181		2		12.5			3		
314	316		182		2		31.3			2 1/2		
316	318		183		2		13.8			5		
318	320		184		2		14.8			7		
320	322		185		2		54.2			1 1/2		
322	324		186		2		76.4			0		
649	651	EXAM. EL. COMPO	29187		10	0.7	21.0	20.3	53.0	4	0.42	
651	653		188		2		30.3			1 1/2		
653	655		189		2		37.7			1 1/2		
655	657		190		2		26.5			3 1/2		
657	659		191		2		22.8			2 1/2		
659	661		192		2		20.5			2 1/2		
661	663		193		2		33.5			1 1/2		
663	665		194		2		22.3			2 1/2		
					2		24.5			2		

ROTARY DRILL SAMPLING RECORD

NO.	FO.	DEPTH FEET	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VM	FC	SGT	S	REMARKS
665	667		29195		2		12.7			2 1/2		
666	669		196				17.7			5		
667	671		197				17.8			2 1/2		
668	673		198				14.3			2		
669	675		199				14.5			1 1/2		
670	677		200				9.5			4 1/2		
671	679		27901				8.5			5		
672	681		602				11.7			5		
673	683		603									
674	685		604									
675	687		605				20.7			1 1/2		
676	689		606				12.5			3 1/2		
677	691		607				16.8			5 1/2		
678	693		608				14.3			2		
679	695		609									
680	697		610				12.8			5		
681	699		611				17.8			5		
682	701		612				14.5			1 1/2		
683	703		613				24.9			1 1/2		
684	705		614				2.3			1		
685	707		615				16.6			1 1/2		
686	709		616									
687	711		617				9.7			4		
688	713		618				21.7			3 1/2		
689	715		619				14.0			3		
690	717		620				13.7			4		
691	719		621				14.5			5 1/2		
6-15	719	250 AM - 13			62/70*	0.6	18.5	19.4	61.5	3	0.28*	31 SAMPLES LOST.

ROTARY LOGS SAMPLES RECORDED



FROM	TO	DESCRIPTION	SAMPLE NUMBER	DT U. (Actual)	WIPER	H	A	VR	PO	PSI	D	INITIALS
172	176	SEAM - E	28058		2		32.8			5 1/2		
176	180		28059		2		18.0			3 1/2		
180	181		28060		2		10.7			6 1/2		
181	184		28061		2		14.2			4 1/2		
184	186		28062		2		57.1			1		
186	189		28063		2		42.4			1 1/2		
189	190		28064		2		28.2			1		
190	192		28065		2		18.2			3		
192	194	28066		2		37.5			6			
176	194	SEAM - E COMPO.			18	0.5	28.1	19.9	51.5	412	0.38	
194	197		28067		2		17.2			1 1/2		
197	198		28068		2		52.3			3		
198	201		28069		1		62.8			1		
201	202		28070		2		50.0			1 1/2		
202	204		28071		2		47.7			3 1/2		
204	206											
227	229	SEAM - EL	28072		2		29.5			1 1/2		
229	231		28073		2		10.8			5		
231	233		28074		2		13.6			6		
233	235		28075		2		22.5			6		
235	237		27876		2		12.6			7		
237	239		27877		2		40.2			5 1/2		
239	240		27878		1		67.4			1		
227	239	SEAM - EL COMPO.			12	0.5	21.3	21.0	57.2	5	0.50	
340	341	SEAM - D	27879		2		69.7			1/2		
341	344		27880		2		32.7			3 1/2		
344	346		27881		2		23.2			1		

Jan 5

ROTARY DRILL LOGGING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	RT.U. (Actual)	DEPTH	H	A	VI	SO	ROT	S	REMARKS
340	346	SEAM - D	27882		2		10.7			7		
346	350		27883		2		41.7			2 1/2		
350	352		27884		2		18.7			3 1/2		
352	354		27885		2		10.1			3		
354	356		27886		2		9.5			1		
356	358		27887		2		10.7			2		
358	360		27888		2		15.6			3		
360	362		27889		2		14.4			4		
362	364		27890		2		10.9			1		
364	366		27891		2		11.2			2 1/2		
366	368	27892		2		9.9			3 1/2			
368	370	27893		2		18.5			3			
342	370	SEAM - D. COMPO.			28	0.5	17.4	20.2	61.9	3	0.46	
362	363	?	27894		2		53.5			11		
409	411	SEAM - DL	27895		2		44.3			1		
411	417		27896		2		15.4			5		
417	419		27897		2		14.9			2 1/2		
419	421		27898		2		77.1			0		
421	423		27899		2		71.7			1/2		
415	419	SEAM - DL COMPO.			4	0.6	15.7	20.9	62.8	3 1/2	0.28	
521	521	SEAM - B	27900		2		17.6			2		
521	523		28101		2		18.1			5		
523	525		28102		2		22.1			3 1/2		
525	527		28103		2		11.9			2 1/2		
527	529		28104		2		12.8			4 1/2		
529	531											

ROTARY DRILL LOGGING RECORD

Logging
RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	VI/VIH	W	A	VS	FC	SP	S	REMARKS
539	541	SEAM - A/B	28105		2		12.7				3	
541	543		28106		2		9.3				4	
543	545		28107		2		7.9				2	
545	547		28108		2		5.3				2 1/2	
547	549		28109		2		10.4				5 1/2	
549	551		28110		1		5.0				2 1/2	
551	552		28111		1		5.3			1/2		
552	551	SEAM - B. COMPO.			22	07	13.4	20.5	65.4	3 1/2	0.34	

ROTARY DRILL SAMPLING RECORD.

NO.	NO.	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VM	PC	WT	J	REMARKS
208	210		27844		2		33.8			1		
210	212		845		2		30.3			3		
212	213		846		2		15.3			1 1/2		
208	212		COMP		4'	0.4		13.2	22.8	2	0.36	
214	216		27847		2		26.9			2 1/2		
216	218		848		2		20.7			3		
218	220		849		2		9.3			1 1/2		
214	218		COMP		4'	0.4	24.0	19.1	56.5	2 1/2	0.42	
221	223		27850		2		39.1			3 1/2		
223	225		851		2		15.1			5 1/2		
243	245		27852		2		10.9			6		
245	247		853		2		12.6			7		
247	249		854		2		19.5			6 1/2		
249	251		855		2		16.1			5 1/2		
251	253		856		2		10.6			7		
253	254		27857		1		24.3			7		
243	254		COMP		11'	0.7	16.1	22.6	20.8	6 1/2	0.30	
342	344		27858		2		27.0			4 1/2		
344	346		859		2		35.3			3 1/2		
346	348		860		2		14.4			6		
348	350		861		2		19.3			9		
350	352		862		2		13.5			3		
352	354		863		2		11.3			5 1/2		
354	356		864		2		8.5			2 1/2		
356	358		865		2		12.5			2 1/2		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT. U. (Actual)	WIDTH	N	A	VM	PC	FSI	S	REMARKS
358	360		27866		2		18.8			4 1/2		
360	362		867		2		13.2			1		
362	364		868		2		12.6			3 1/2		
364	366		869		2		14.3			3 1/2		
366	368	CE SH.	27870		2		34.0			3		
368	370		Compo	1	2.6	0.8	15.5	15.2	6.5	3 1/2	0.26	
414	416	CE SH.	27871		2		36.9			3 1/2		
420	422		27872		2		16.0			2		
422	424		873		2		15.3			5 1/2		
424	426		874		2		16.1			1 1/2		
426	428	CE SH.	27875		2		38.6			1 1/2		
428	430		Compo		5	0.5	21.7	5.2	5.5	2 1/2	0.26	
534	536		28051		2		19.0			1 1/2		
536	538		052		2		14.6			2		
538	540		053		2		25.2			1 1/2		
540	542		054		2		44.9			1		
542	544		055		2		68.7			1		
544	546	CE SH.	28056		2		76.5			1		
546	548		Compo		6	0.6	14.2	15.7	6.3	1 1/2	0.24	
614	616		28057		2		38.9			3 1/2		

ROTARY DRILL SAMPLE RECORD

Core No.	To	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WEIGHT	N	A	VM	FC	MSI	S	REMARKS
229	31		27622		2		13.7			7 1/2		
31	33		623		2		55.6			1/2		
228	230		27624		2		17.4			6 1/2		
230	232		625		2		20.8			3		
232	234		626		2		17.1			5		
234	236		627		2		16.0			6 1/2		
236	238		628		2		27.8			4 1/2		
228	238		Compo.		10	0.4	20.0	21.0	58.4	5	0.34	SAMPLES LOST BY LAB. Nov. 579
240	243		27629		2		25.1			5 1/2		
243	245		630		2		54.5			1		
245	247		631		2		24.2			1 1/2		
247	249		632		2		70.4			1		
249	251		633		2		34.4			1 1/2		
251	253		634		2		41.8			1 1/2		
253	255		635		2		66.1			1		
255	257		636		2		75.8			1		
257	259		637		2		46.1			3 1/2		
241	252		Compo.		12	0.6	42.0	15.5	41.9	2	0.22	SAMPLES LOST BY LAB. Nov 579.
288	290		27638		2		13.2			4		
290	292		638		2		11.1			5 1/2		
292	294		640		2		41.2			1 1/2		
294	296		641		2		61.9			1		
296	298		642		2		17.6			7		
298	300		643		2							
288	300				10 1/2	0.5	28.7	15.7	51.1	4	0.30	2 SAMPLE LOST.

ROTARY SHELL SAMPLING RECORD

DESCRIPTION	SAMPLE NUMBER	DTU (Actual)	WIDTH	N	A	VB	VC	VT	S	REMARKS
382 384	27644		2		26.7			3		
383 385	645		2		29.7			2		
384 386	646		2		21.1			2		
385 387	647		2		12.8			2		
386 388	648		2		36.9			1		
387 389	649		2		15.9			2		
388 390	650		2		18.8			2		
396 398	27651		2		13.6			1		
398 400	652		2		18.5			2		
400 402	653		2		14.9			2		
402 403	27654		1		56.9			1		
402 402	COMPO		20	0.5	20.4	19.5	59.6	2	0.34	
450 452	27655		2		68.4			1		
453 455	27656		2		20.7			1		
455 457	657		2		17.5			2		
457 459	658		2		41.0			1		
459 461	659		2		15.1			1/2		
459 457	COMPO		1	0.5	19.7	20.7	59.1	1 1/2	0.28	
467 469	27660		2		25.4			1		
577 579	27661		2		18.3			2		
579 581	662		2		22.7			2		
581 583	663		2		18.6			2		
583 585	664		2		18.5			1 1/2		
585 587	27665		2		11.7			5 1/2		
587 589	666		2		10.0			3		

ROTARY DRILL SAMPLING RECORD



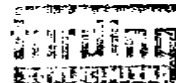
FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	H	A	VM	FC	PSI	S	REMARKS
589	591		27 667		2		10.1			6 1/2		
591	593		668		2		17.2			6 1/2		
593	595		669		2		17.1			6		
595	597		670		2		13.3			2		
597	599		671		2		22.7			5		
599	601		672		2		15.1			5		
601	603		673		2		14.4			7		
603	605		674		2		30.7			3 1/2		
605	607	CE SA.	675		2		46.9			2 1/2		
607	609	" "	676		2		39.0			2		
517	521		6-MS		2 1/2	0.4	17.3	20.3	62.0	4	0.28	

ROTARY DRILL LOGGING REPORT

DATE: 11/10/54
 HOLE NO.: 1194

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	H	A	VM	FC	WGT	S	REMARKS
209	211		27677		2		19.3			6		
211	213		27678		2		21.0			4		
213	215		27679		2		20.4			4		
215	217		27680		2		20.3			6		
217	218	SEAM - E	27681		2		12.1			5 1/2		
218	219		27682		2		42.2			5		
219	221		27683		2		46.1			2 1/2		
221	223		27684		2		56.2			1 1/2		
223	225		27685		2		43.6			4		
225	227		27686		2		22.1			2 1/2		
227	229		27687		2		15.7			1 1/2		
229	231		27688		2		11.4			7		
231	233		27689		2		34.0			5 1/2		
233	235		27690		2		53.4			1		
235	237	C & Sh	27691		10	0.6	19.7	22.4	57.3	5 1/2	0.32	
237	239		COMPO		6	0.7	19.1	23.0	57.2	4 1/2	0.26	
239	241		COMPO		28	0.5	29.9	19.7	49.9	4	0.32	
241	243	C & Sh	27692		2		78.0			1/2		
243	245		27693		2		31.0			3 1/2		
245	247	SEAM - D	27694		2		31.0			2		
247	249		27695		2		30.5			6 1/2		
249	251		27696		2		15.2			7		
251	253		27697		2		15.8			4 1/2		
253	255		27698		2		2.3			2 1/2		
255	257		27699		2		13.1			3 1/2		
257	259		27700		2		2.2			1 1/2		
259	261		27701		2		22.0			1/2		
261	263		27702		2		12.6			1		
263	265		27703		2		19.1			1 1/2		
265	267	27704		2		22.5			1			
			27705		2		14.7			1 1/2		

ROTARY BITUMEN SAMPLING RECORD



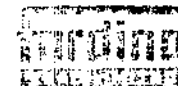
FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Gravim)	WIDTH	M	A	VM	FC	FCI	S	REMARKS	
347	349	SEAM - O	27706		2		15.9			1/2			
349	351		27707		2		11.9			1/2			
351	353		27708		2		11.1				3		
353	355		27709		2		73.5				1/2		
355	357		CONF.	1	32'	0.7	17.4	19.9	62.0	2	0.29		
401	404	C & Sh	27710		2	?	30.1			1			
404	406		27711		2		54.1			1/2			
406	407		27712		1		75.9				1/2		
410	412	SEAM - M - OL	27713		2		24.9			2			
412	414		27714		2		15.5			2			
414	416		C & Sh	27715		2		15.4			2 1/2		
416	418			27716		2		72.1			1		
418	420		" "	27717		2		81.5			0		
423	424		" "	27718		1		47.1			0		
424	425		CONF.		6'	0.8	18.2	21.8	59.2	2	0.36		
510	510	SEAM - B	27719		2		27.1			1			
510	512		27720		2		24.1			3			
512	514		27721		2		25.2			1			
514	516		27722		2		16.6				2 1/2		
516	518		27723		2		16.2				4		
518	520		C & Sh	27724		2		22.5			1		
520	520		" "	27725		2		45.0			1		
520	522		CONF.		10'	0.4	21.3	19.8	58.5	2 1/2	0.25		

ROTARY WELL LOG RECORD

WELL NO. 105
DATE 10/1/54

FROM	TO	DESCRIPTION	SAMPLE NUMBER	DT. U. (Actual)	DEPTH	W	A	VH	SP	PER	S	REMARKS
203	205	SEAM - EU	28112		2		12.6			5%		
205	207		28113		2		28.3			5%		
207	209		28114		2		15.8			6		
209	211		28115		2		15.1			7		
211	213		28116		2		25.4			5%		
213	215		28117		2		30.3			4%		
215	217		28118		2		28.1			5%		
217	219		28119		2		47.2			1%		
219	221		28120		2		45.2			3		
223	225		28121		2		44.0			5%		
203	217	COMPO.			14	0.5	23.0	21.7	SS1	6	0.40	
231	233	SEAM - EL	28122		2		31.5			1		
233	235		28123		2		11.4			5		
235	237		28124		2		13.4			7		
237	239		28125		2		22.8			4%		
239	241		28076		2		14.2			6		
241	243		28077		2		10.3			6%		
243	245		28078		2		22.0			5%		
245	247		28079		2		47.7			5%		
247	249	28080		1		53.4			1%			
231	245	COMPO.			14	0.6	18.3	22.3	SS8	5.12	0.29	
251	253	SEAM - O	28081		2		12.0			1%		
253	255		28082		2		10.3			2%		
255	257		28083		2		32.0			4%		
257	259		28084		2		11.8			4%		
259	261		28085		2		9.7			3		

ROTARY WELL LOGGING RECORD



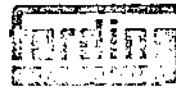
FROM	TO	DESCRIPTION	SAMPLE NUMBER	RT.U. (Actual)	DEPTH	W	A	VII	VI	NOTE	REMARKS
317	319		28086		2		11.1			1/2	
319	321		28087		2		13.1			2 1/2	
321	323	SEAM - O	28088		2		15.9			1 1/2	
323	326		28089		2		18.8			2	
326	327		28090		2		20.8			1 1/2	
327	329		28091		2		18.1			1 1/2	
329	331		28092		2		17.1			1	
331	333		28093		2		18.0			2 1/2	
333	335		28094		2		11.7			1/2	
335	337		28095		2		12.0			1/2	
307	335	COMPO.			28	0.8	15.9	20.4	63.1	3	0.32
385	387		28096		2		38.3			2	
387	389	SEAM	28097		2		51.1			2	
392	395		28098		2		35.9			2	
395	397		28099		2		17.6			2 1/2	
397	399	DL	28100		2		58.3			1	
402	409		28176		2		66.1			1	
393	397	COMPO.			A	0.5	27.1	20.0	52.4	2	0.35
507	510		28177		2		27.9			2 1/2	
510	512	SEAM - B	28178		2		35.3			1	
512	514		28179		2		27.3			2 1/2	
514	516		28180		2		30.6			3 1/2	
516	518		28181		2		32.8			2 1/2	
518	519		28182		2		38.1			1/2	
506	516	COMPO.			10	0.6	27.0	17.0	52.2	2	0.25

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT. U. (Actual)	WIDTH	H	A	VN	FC	PSI	S	REMARKS
139	141		30601		2		13.7			6 1/2		
141	143		602		2		16.2			4 1/2		
143	145		603		2		27.6			5 1/2		
145	147		604		2		15.0			7		
147	149		605		2		16.2			6		
149	151		606		2		53.4			1 1/2		
151	153		607		2		46.3			5		
153	155		608		2		20.6			4 1/2		
155	157		609		2		12.7			5 1/2		
157	159		610		2		16.8			6		
159	161		611		2		17.6			5 1/2		
161	163		612		2		23.9			3 1/2		
163	165		613		2		21.2			6		
165	167		614		2		39.7			5		
167	169		615		2		47.1			5		
169	171		616		2		43.7			6		
171	173		617		2		28.5			7		
173	175		618		2		64.8			1		
175	177		619		2		24.0			1		
177	179		620		2		74.3			0		
179	181		621		2		41.6			1		
181	183		622		2		13.5			7		
183	185		623		2		7.7			5 1/2		
185	187		624		2		11.9			6 1/2		
187	189		30625		2		11.2			7 1/2		
189	191		30975?		2							
191	193	SPERM. E.	6000		2	0.6	27.5	20.0	65.9	5	0.34	Oct. 31. Result
193	195		6000		2	0.6	23.5	20.0	53.9	5	0.34	
195	197		30976		2		18.7			12		
197	199	SPERM. E. SAND STAIN	6000		5	0.7	11.6	22.6	65.1	6 1/2	0.32	
201	203		30977		2			31.5		2 1/2		
203	205		478		2			20.7		4		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VN	FC	PSI	S	REMARKS
276	276		30979		2		10.9			7		
276	277		980		2		16.7			6		
276	276		981		2		24.6			4 1/2		
276	278		982		2		17.6			3		
276	280		983		2		9.8			1 1/2		
276	282		984		2		15.9			1		
276	284		985		2		15.3			1		
276	286		986		2		23.8			1		
276	288		987		2		23.2			1		
276	290		988		2		21.2			1		
276	292		989		2		13.3			1 1/2		
276	294		990		2		70.9			1/2		
276	296		30991		2		82.1			0		
297	297	297-300	30992		2	0.5	19.1	20.9	59.5	2	0.28	
300	300		30993		2		44.3			1		
300	304		30994		2		16.2			3		
339	341		30995		2			16.1		1		
346	348		30996		2			63.5		1/2		
348	350		997		2			22.3		1		
348	352		998		2			16.8		4		
352	354		999		2			56.5		1		
354	356		31000		2			69.8		1/2		
357	357	357-360	31001		1	0.5	19.9	19.6	60.0	1	0.38	

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	N	A	VM	FC	PSI	S	REMARKS
356	357		30801		2		686			1/2		
468	470		30802		2		28.0			2		
470	472		803	1	2		22.4			5 1/2		
472	474		804		2		36.8			3 1/2		
474	476		805		2		22.4			2 1/2		
476	478		806		2		18.2			4		
478	480		807		2		26.9			2		
480	482		808		2		21.2			1 1/2		
482	484		809		2		20.8			1 1/2		
484	486		810		2		27.3			3		
486	488		811		2		16.6			3		
488	490		812		2		17.3			4		
490	492		813		2		16.2			5 1/2		
492	494		814		2		12.4			3		
494	496		815		2		13.1			4		
496	498		816		2		12.9			6 1/2		
498	500		817		2		13.6			4 1/2		
500	502		818		2		10.4			6		
502	504		819		2		7.9			4		
504	506		820		2		9.0			5		
506	508		821		2		8.7			2		
508	510		822		2		11.9			6		
510	512		823		2		9.2			6 1/2		
512	514		824		2		12.7			6		
514	516		825		2		18.8			2		
516	518		30826		2		11.2			3		
518	520		827		2		13.9			5		
520	522		828		2		21.9			2		
522	524		829		2		17.9			3		
524	526		830		2		50.4			1		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT. U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
252	254		26726		2		187			7		
254	256		727		2		251			5 1/2		
256	258		728		2		184			6 1/2		
258	260		729		2		278			6		
260	262		730		2		51.9			4 1/2		
262	264		731		2		54.8			2		
264	266		732		2		28.1			6 1/2		
266	268		733		2		15.2			1 1/2		
268	270		734		2		47.7			4		
270	272		735		2		25.1			7		
272	274		736		2		60.3			1		
274	276		737		2		70.7			1 1/2		
276	278		738		2		18.8			1 1/2		
278	280		739		2		16.3			6 1/2		
280	282		740		2		12.3			7 1/2		
282	284		741		2		26.6			4 1/2		
284	286		742		2		11.7			7		
286	288		743		2		10.9			7 1/2		
288	290		744		2		25.5			6 1/2		
290	292		745		2		73.4			1 1/2		
292	294				2		29.4	21.1	53.4	6 1/2	0.36	
294	296				2		17.7	21.4	50.3	5	0.26	
296	298				2		29.4	19.8	50.4	5	0.36	
298	300				2		62.4			7		
300	302		26746		2		16					
302	304		747		2		15.2			7		
304	306		748		2		13.9			2 1/2		
306	308		749		2		8.6			4		
308	310		750		2		19.2			1		
310	312		26701		2		19.1			2 1/2		
312	314		702		2		16.4			4		
314	316		703		2		13.9			3		
316	318		704		2		7.8			2		
318	320		705		2		16.9					
320	322		706		2							

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
392	392		26707		2		10.8			25		
392	394		708		2		33.7			5		
		COMPO			22	0.4	15.7	19.6	22.6	3	0.23	
412	414		26709		2		14.1			1		
414	416		710		2		41.1			1		
416	418		711		2		67.1					
425	427		26712		2		32.3			2		
427	429		713		2		13.0			4		
429	431		714		2		22.1			1		
431	433		715		2		55.0					
	431				6	0.5	22.1	20.6	56.8	2	0.41	
544	546		26716		2		65.3			1/2		
546	548		717		2		30.8			4		
548	550		718		2		42.2			1		
			26717		2	0.5	31.1	18.4	42.8	4	0.32	

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VM	FC	PSI	S	REMARKS
50	52		26638		2		24.4			2		
52	54		639		2		9.1			7		
54	55	C & S.	640		1		24.3			7		
		GRAND			5	0.4	19.5	22.4	57.7	5 1/2	0.8	
250	260		26641		2		22.5			6		
260	262		642		2		11.5			6 1/2		
262	264		643		2		25.1			5 1/2		
264	266		644		2		21.7			4 1/2		
266	268		645		2		45.4			4 1/2		
268	270		646		2		22.0			7		
270	272		647		2		9.0			4 1/2		
272	274		648		2		23.7			4		
274	276		649		2		29.0			6		
276	278		26650		2		11.7			3		
278	280		26676		2		30.1			6 1/2		
280	282		677		2		32.4			6 1/2		
282	284		678		2		51.6			3 1/2		
284	286		679		2		69.7			1		
286	288		680		2		22.8			2 1/2		
288	290		681		2		11.5			6		
290	292		682		2		11.5			6		
292	294		683		2		21.4			5 1/2		
294	296		684		2		17.4			5 1/2		
296	298		685		2		7.9			7		
298	300		686		2		12.9			7		
300	302		687		2		69.0			1		
302	304		688		2		79.3			1/2		
		GRAND			47	0.5	24.0	22.6	5.4	5	0.30	

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	ST.U. (Actual)	WIDTH	M	A	VM	FC	PSI	S	REMARKS
385	387		26689		2		37.8			1		
387	389		690		2		14.3			6 1/2		
389	391		691		2		15.1			3		
391	393		692		2		9.1			3 1/2		
393	395		693		2		10.1			3		
395	397		694		2		10.4			3		
397	399		695		2		8.4			3		
399	401		696		2		13.4			2 1/2		
401	403		697		2		25.0			2		
403	405		698		2		9.7			2 1/2		
405	407		699		2		7.5			1 1/2		
407	409		700		2		14.9			2 1/2		
409	411		26651		2		16.7			2 1/2		
411	413		652		2		9.6			2 1/2		
413	415		653		2		67.6			1		
		COMP			2 1/2	0.8	14.0	10.8	65.4	3	0.25	
426	428		26654		2		25.5			1 1/2		
428	430		26655		2		47.2			1 1/2		
		COMP			2	0.3	25.2	18.2	56.3	112	0.30	
442	445		26656		2		17.6			1		
445	448		657		2		19.8			2 1/2		
		COMP			4	0.5	19.0	18.7	61.8	112	0.37	
541	543		26658		2		31.5			5		
543	545		659		2		13.2			6		
545	547		660		2		12.2			2		
547	549		661		2		8.3			2 1/2		
549	551		662		2		5.5			7		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
551	553		26663		2		8.9			6 1/2		
553	555		664		2		9.1			7		
555	557		665		2		6.1			6 1/2		
557	559		666		2		7.8			6 1/2		
559	561		667		2		10.8			3 1/2		
561	563		668		2		9.4			3		
563	565		669		2		12.8			5 1/2		
565	567		670		2		11.1			6		
567	569		671		2		12.1			1 1/2		
569	571		672		2		10.9			1		
571	573		673		2		15.1			1		
573	575	Comp			32	0.7	12.0	2.2	6.2	3	0.26	
657	659		26674		2		NO	SAMPLE				
668	669		26675		1		25.7			4 1/2		

8011-102-5

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT. U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
91	93		26719		2		21.8			4		
93	95		720		2		10.3			7		
95	97		721		2		47.7			4 1/2		
31	33	COMPOSITE			4	2 1/2	16.5	23.1	55.5	5	0.73	
279	281		26722		2		24.5			6 1/2		
281	283		723		2		32.1			6 1/2		
283	285		724		2		34.5			6		
285	287		725		2		25.2			6 1/2		
287	289		28576		2		6.2			6		
289	291		577		2		20.4			6 1/2		
291	293		578		2		15.3			1 1/2		
293	295		579		2		25.2			7		
295	297		580		2		21.2			6 1/2		
297	299		581		2		37.3			4 1/2		
299	301		582		2		14.4			6 1/2		
301	303		583		2		21.1			5 1/2		
303	305		584		2		13.2			6 1/2		
305	307		585		2		21.2			7		
307	309		586		2		51.1			3 1/2		
309	310		587		2		36.6			1 1/2		
329	332	COMPOSITE			25	0.5	22.4	22.6	54.5	6 1/2	0.12	
332	333		28588		2		73.3			1 1/2		
337	339		28589		2		26.4			5 1/2		
339	341		590		2		31.0			5		
341	343		591		2		17.1			6 1/2		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT. U. (Actual)	WIDTH	M	A	VM	FO	FSI	S	REMARKS
393	395		28592		2		19.2			1 1/2		
395	397		593		2		20.4			2 1/2		
397	399		594		2		24.0			0		
399	401		595		2		35.7			1/2		
401	403		596		2		28.2			1		
403	405		597		2		40.0			1		
405	407		598		2		11.5			3		
407	409		599		2		12.9			1 1/2		
409	411		600		2		16.1			3 1/2		
411	413		601		2		13.5			6		
413	415		602		2		12.8			3 1/2		
415	417		603		2		14.5			2		
417	419		604		2		57.2			1		
421	427	30-M-D	COMPOSITE		30	0.3	26.0	15.5	54.2	2	0.22	
421	423		28605		2		61.2			0		
423	425		606		2		48.2			2		
425	427		607		2		43.4			1		
441	443		28608		2		19.7			1		
443	445		609		2		33.8			1 1/2		
445	447		610		2		No					
447	449		COMPOSITE		4	0.4	27.1	18.4	54.1	1	0.54	
554	556		28611		2		39.0			1		
556	558		612		2		14.8			2		
558	560		613		2		23.3			1		
560	562		614		2		32.6			2		
562	564		615		2		21.6			4 1/2		

8011-110-1

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT. U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
564	566		28676		2		41.3			1		
566	568		617		2		21.6			1 1/2		
568	570		618		2		21.6			1 1/2		
570	572		619		2		14.4			3 1/2		
572	574		620		2		14.6			4 1/2		
574	576		621		2		No	SAMPLE				
576	578		622		2		11.2			2 1/2		
578	580		623		2		11.4			2 1/2		
580	582		624		2		11.5			5 1/2		
582	584		625		2		72.5			1 1/2		
584	586	SCALE - B	COMPOSITE		26'	2.5	20.1	20.0	5.2%	2.12	0.12	

SCALE 1:100

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
64	66		27291		2		13.1			7		
66	68		292		2		22.6			6 1/2		
68	70		27293		2		29.5			6		
71	73		27294		2		5.1			7 1/2		
64	73	COMPO.		12343	3/9	1.0	17.9	31.5	49.6	6 1/2	0.62	
80	82		27295		2		36.2			6		
132	134		27296		2		67.0			1		
134	136		297		2		32.5			6		
136	138		298		2		37.1			5		
138	140		299		2		53.7			2		
134	138	COMPO.		9373	4	0.9	35.0	24.6	39.5	5 1/2	0.66	

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BTU	ACTUAL	WIDTH	H	A	VM	FC	FSI	S	REMARKS
132	134		27268			2		9.0			7		
134	136		269			2		13.5			7		
136	138		270			2		16.0			7 1/2		
138	140		27271			2		45.2			4		
132	138	COMPO.		13,609		6	0.6	12.6	33.7	53.1	7	0.69	
145	147	C & Sn.	27272			2		44.5			4 1/2		
203	205		27273			2		70.3			1/2		
205	207		27274			2		53.6			1		
274	277		27275			3		38.6			3 1/2		
277	281		27276			2		35.3			4 1/2		
281	283		27277			2		24.7			5		
274	283	COMPO.		10,043		7 1/2	0.3	33.0	26.1	40.6	4 1/2	0.59	≠ PETROGRAPHY
360	363		27278			2		19.8			7 1/2		
363	364		279			2		15.4			8		
364	366		280			2		14.0			7		
366	368		27281			2		16.6			8		
360	368	COMPO.		10,139		8	0.3	16.4	30.4	52.9	7 1/2	0.67	
468	470		27282			2		72.4			1/2		

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. ACTUAL	WIDTH	M	A	VM	FC	FSI	S	REMARKS
37	39		27401		2		42.5			2 1/2		
39	41		402		2		29.9			6		
41	43		403		2		20.7			6 1/2		
43	44		27405		1		43.6			3		
45	48	CMPC		13,120	4	0.6	22.5	30.1	44.0	6	0.67	
46	48		27404		2		4.5			7 1/2		
46	48		27404	14,400	2'	0.7	4.5	36.5	53.3	7 1/2	0.66	
55	57	CE SH.	27406		2		66.7			1		
57	59	" "	27407		2		35.3			5		
99	101	CE SH.	27408		2		33.7			6 1/2		
101	103		409		2		31.2			5		
103	105		27410		2		62.4			1		
99	103	CMPC		10,350	4	0.4	32.4	27.6	39.6	6	0.65	
223	227		27326		4		3.5			8		
227	229		327		2		4.8			7		
229	231		328		2		6.9			5		
231	233		329		2		42.7			2 1/2		
233	235		330		2		18.4			7		
235	237		331		2		9.2			8		
237	239		332		2		4.4			8		
239	240		27333		2		76.8			0		
223	239	CMPC		13,241	16	0.5	12.4	31.7	55.4	6 1/2	0.62	PETROGRAPHY
245	247		27334		2		5.0			8		
247	249		335		2		22.3			7		
249	251		27336		2		59.2			1 1/2		
245	249	CMPC		13,401	4	0.6	13.6	31.4	54.4	7 1/2	0.63	

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. ACTUAL	WIDTH	M	A	VM	FC	FSI	S	REMARKS
259	261		27337		2		69.3			1		
261	262		27338		1		80.8			0		
265	271	SEAM I	27339		2		28.4			6 1/2		
271	273		340		2		21.2			6 1/2		
273	275		341		2		14.4			7		
275	277		342		2		15.5			7		
277	279		343		2		43.5			4		
279	281		27344		2		73.4			12		
289	297	COMPO.		11,898	2	0.7	20.0	28.6	50.7	6 1/2	0.68	PETROGRAPHY
311	313		27345		2		68.4			1		
373	375		27346		2		64.8			1 1/2		
387	389	SEAM I	27347		2		11.3			7 1/2		
389	391		348		2		7.8			7		
391	393		349		2		7.6			7		
393	395		27350		2		3.6			8		
395	397		27351		2		4.7			7 1/2		
397	399		352		2		42.2			4		
399	401		353		2		12.6			7		
399	401		354		2		60.6			1		
399	401	COMPO.	27355		2		80.9			0		
399	397			13,491	1.4	1.0	13.1	29.7	56.2	7	0.58	PETROGRAPHY.

M

REV. - 11-10-54

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U.	WIDTH	N	A	VN	FC	FSI	S	REMARKS
60	62		27076		2		34			7 1/2		
62	64		017		2		27			8		
64	66		018		2		26			7 1/2		
66	68		019		2		47			7 1/2		
68	70	SEAM - K	080		2		57			7 1/2		
70	72		081		2		37.5			4		
72	74		082		2		7.4			7 1/2		
74	76		083		2		26.2			7		
76	78		27084		2		18.9			7		
60	78	SEAM - K	GENPC		18	0.7	12.3	32.7	54.3	7	0.63	PETROGRAPHY
95	97		27085		2		65.6			1		
106	108		27086		2		30.3			6 1/2		
108	110	SEAM - J	087		2		25.8			6		
110	112		088		2		19.4			6 1/2		
112	114		089		2		17.1			7 1/2		
114	116		27090		2		47.8			4		
116	118		GENPC		8	0.5	23.1	29.0	47.4	6 1/2	0.50	
117	119		27091		2		63.3			1		
157	159		27092		2		42.0			4 1/2		
159	161		27093		2		78.8			0		
215	217	PART SEAM - I	27094		2		47.2			1		
217	219		095		2		28.6			6		
219	221		27096		2		14.3			8		
221	222		27097		1		69.8			1		
217	221		GENPC		4	0.7	21.5	30.4	47.4	7	0.46	

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U.	WIDTH	N	A	VM	FC	FSI	S	REMARKS
22A	226	S F M I	27098		2		21.3			6 1/2		
226	228		099		2		9.1			6		
228	230		27100		2		7.7			7 1/2		
230	232		27251		2		7.6			7 1/2		
232	234		252		2		6.6			7 1/2		
234	236		253		2		3.7			8		
236	238		254		2		0.5			6 1/2		
238	240		255		2		12.0			7		
240	242	27256		2		55.5			2			
274	276	COMP.			16'	10	9.8	31.0	58.2	7	0.43	
424	426		27257		2	0.9	22.2	26.3	50.6	7.7	0.60	
426	428		258		2		69.3			1		
428	430		259		2		79.9			0		
430	432		260		2	0.5	29.7	23.3	46.5	4.4	0.38	
432	434		261		2		68.0			1		
434	436	Hw 1	262		2		31.9			4 1/2		
436	438		263		2		15.5			7 1/2		
438	440		264		2		54.1			3 1/2		
440	442		265		2		48.8			2 1/2		
442	444		27266		2		58.2			2		
434	436	COMP.			4'	0.7	23.8	26.5	49.0	6	0.62	

1011-210-5

ROTARY DRILL SAMPLING RECORD

SAMPLED FEB 14

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BTU ACTUAL	WIDTH	M	A	VM	FC	FSI	S	REMARKS
36	38		27411		2		24.5	✓		0	✓	Checked.
39	41		27412		2		67.2			1		
186	188		27413		2		76.4			1/2		
188	190		414		2		35.5			5 1/2		
190	192		27415		2		25.8			4		
236	238		27312		2		48.7			4		
238	240											
268	270		27313		2		4.2			6 1/2		
270	272		27314		2		3.5			7 1/2		
272	274		27315		2		3.9			7		
274	276		27316		2		5.0			8		
276	278		27317		2		3.5			7 1/2		
278	280		27318		2		11.1			7 1/2		
280	282		27319		2		6.3			7 1/2		
282	284		27320		2							
284	286		27321		2		54.1			3		
286	288	CESH.	27322		2		60.0			2 1/2		
268	282	COMPO.		14, 536	14	1'	5.2	32.2	6.5	7	0.56	

27313-27319 - K

REC-100-C

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BTU ACTUAL	WIDTH	N	A	VM	FC	PSI	S	REMARKS
25	27		27366		2		7.9			2 1/2		
27	28		27367		1		50.0			3 1/2		
123	125		27368		2		73.0			4 1/2		
125	127		369		2		19.1			6 1/2		
127	129		370		2		23.6			8		
129	130		27371		1		37.1			8		
125	126			12,544	5 1/2	0.5	26.4	28.5	55.2	6	0.82	
176	178		27372		2		47.1			1		
178	180		373		2		47.5			2 1/2		
180	182		374		2		25.6			4 1/2		
182	184		27375		2		5.1			7 1/2		
184	186		27476		2		5.6			8		
186	188		477		2		15.8			8		
188	190		478		2		9.4			7		
190	192		479		2		5.4			7		
192	194		27480		2		28.5			7		
194	197			12,644	1 1/2	0.6	13.6	31.2	54.6	7	0.46	
195	197		27481		2		39.3			4 1/2		
197	199		27482		2		60.4			1		
209	211		27483		2		57.8			1		
211	213		27484		2		54.7			1		
213	215		485		2		49.5			2 1/2		
215	217		27486		2		40.3			3		
217	219		27487		2		42.0			3 1/2		

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	ST. U.	ACTUAL WIDTH	M	A	VM	PC	PSI	S	REMARKS
142	144		27448		2		74.7			1		
206	208		27449		2		24.9			6 1/2		
208	210		27450		2		5.9			8		
210	212		27323		2		76.9			1/2		
206	210	COMPO.		12,832	4	0.8	15.3	29.8	54.1	7	0.56	
217	219		27324		2		42.0			5 1/2		
219	221		27325		2		15.6			7 1/2		
221	223		27354		2		7.9			7 1/2		
223	225		357		2		6.2			7 1/2		
225	227		358		2		5.0			8		
227	229		359		2		14.8			7		
229	231		27360		2		37.0			4 1/2		
219	229	COMPO.			10	0.6	10.4	30.6	58.4	7 1/2	0.54	
217	231	COMPO.			1							
256	258		27361	13,268	14	0.5	18.8	27.0	53.7	7	0.50	
					2		65.7			1		
409	411		27362		2		15.2			7		
411	413		363		2		33.5			5 1/2		
413	415		27364		2		33.6			3 1/2		
409	415	COMPO.		11,874	6	0.5	27.1	26.2	46.2	5	0.72	
A22	A24	C. E. SH.	27365		2							NO SAMPLE

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U.	ACTUAL	WIDTH	N	A	VM	FC	FSI	S	REMARKS
21	23	C & S.	27426			2		46.8			3		
58	60		27427			2		40.9			3 1/2		
60	62		428			2		12.0			7		
62	64		429			2		15.2			6 1/2		
60	64	COMPO.	27430	12.761		2		52.3			2		
						4'	0.8	15.7	31.9	51.6	6 1/2	0.73	
72	74		27431			2		4.0			5		
74	76		432			2		13.0			5		
76	78		433			2		2.2			8 1/2		
78	80		434			2		8.3			7		
80	82		435			2		5.7			7		
82	84		436			2		4.3			7		
84	86		437			2		7.1			7 1/2		
86	88		438			2		11.0			7		
88	90		439			2		4.6			8		
92	92		440			2		8.5			7 1/2		
92	94	COMPO.	27441			2		4.4			7 1/2		
72	94			14.166		22	0.9	6.2	32.4	60.5	7	0.58	
97	99		27442			2		32.7			5 1/2		
110	112		27443			2		34.3			4 1/2		
112	114		444			2		62.0			1		
114	116		445			2		49.0			1 1/2		
116	118		446			2		20.2			7		
118	120		447			2		45.0			4		
112	118		27444	12.139		2	0.6	20.2	27.6	51.6	7	0.68	

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
48	50		27416		2		3.4			7 1/2		
69	71		27417		2		36.7			4		
71	73		418		2		31.1			4 1/2		
93	95	CE SH.	27419		2		71.8			0		
151	153		27420		2		54.6			1 1/2		
153	155		27421		2		19.4			7		
161	163		27422		2		46.0			1		
163	165		423		2		14.7			6		
165	167		424		2		8.8			7		
167	169		27425		2		5.2			7 1/2		
169	171		27426		2		11.9			7 1/2		
171	173		377		2		3.4			7 1/2		
173	175		378		2		6.8			7 1/2		
175	177		379		2		5.1			7 1/2		
177	179		380		2		8.0			8		
179	181		381		2		11.0			7 1/2		
181	183		382		2		6.5			7		
183	185		383		2		37.5			6 1/2		
185	187		27384		2		30.0			6 1/2		
185	187	SEAM - K			2A	0.8	11.9	30°C	56.7	7	0.58	PETROGRAPHY & COMPLETE ANALYSIS ON WASHED PRODUCT
199	201		27385		2		58.8			1		
201	203		27386		2		63.2			1		
357	359		27387		2		14.1			8		

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U.	ACTUAL	WIDTH	M	A	VM	FC	FSI	S	REMARKS
36	38		27395			2		12.0			1		
38	39		27396			1		60.4			0		Checked
114	116		27397			2		13.7			3		
167	169		27398			2		24.1			5 1/2		
169	171		399			2		13.9			6 1/2		
171	173		27400			2		15.1			5 1/2		
167	173	COMPO		12,544		6	0.6	17.4	30.5	5.1	6	0.82	
207	209		27301			2		46.1			2		
209	211		302			2		37.5			3		
211	213		303			2		25.1			6 1/2		
213	215		304			2		19.0			7 1/2		
215	217		305			2		12.7			6 1/2		
217	219		306			2		27.1			6		
219	221		307			2		3.6			8		
221	223		308			2		4.2			8		
223	225		309			2		21.3			7 1/2		
225	227		310			2		81.0			0		
227	229	CE Sh.	27311			2		24.4			6 1/2		
231	235	COMPO		12,644		14	0.6	16.3	30.5	52.6	7	0.46	PETROGRAPHY
236	238		27312			2		AS7			4		

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
46	48	} <i>BA</i>	29435		2		9.4			7		
48	50		436		2		10.2			6 1/2		
50	52		437		2		10.3			6 1/2		
52	54		438		2		9.5			7 1/2		
54	56		439		2		7.0			6 1/2		
56	58		440		2		7.5			7		
58	60		441		2		7.5			7 1/2		
60	62		442		2		7.0			7		
62	64	CE SH.	29443		2		20.5			6		
46	64			12,272	13	1.2	9.7	22.6	50.5	7	0.55	Perongisamy (FLUIDITY TEST REPO.)
77	79		29444		2		55.5			2 1/2		
79	81	CE SH.	445		2		53.7			2		
81	83	" "	29446		2		67.1			1		
94	96		29447		2		21.2			6		
96	98		448		2		29.4			6		
98	99		29449		1		44.0			4 1/2		
94	98	GNPC		11,148	4	0.9	25.5	28.1	45.5	6 1/2	0.88	
105	107		29450		2		13.4			7		
107	108		451		1		45.8			3 1/2		
157	159		29452		2		21.4			6 1/2		
159	161		453		2		18.9			6		
157	161	GNPC		11,209	4	1.0	19.9	27.0	52.1	6	0.60	
226	228		29454		2		35.1			4		
228	229		455		2		66.8			1		

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
231	233		29456		2		16.6			7		
233	235		457		2		23.1			5 1/2		
235	237		458		2		11.6			7 1/2		
237	239		459		2		31.5			4 1/2		
239	241		29460		2		18.6			6		
241	241	CMPO.		11.376	10	10	20.7	28.5	49.8	6	0.58	
244	246	CE SH.	29461		2		37.5			4 1/2		
246	248		462		2		41.7			2 1/2		
248	250	" "	463		2		74.0			1 1/2		
250	252		464		2		45.3			3 1/2		
266	268		29465		2		9.9			5		
268	270		466		2		7.3			7		
270	272		467		2		7.9			7		
272	274		29468		2		26.1			5 1/2		
276	276	CMPO.		13.233	8	1.3	13.1	27.4	58.2	6 1/2	0.58	

ROTARY DRILL SAMPLING RECORD

From	To	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	K	A	VM	FC	PER	S	REMARKS
319	321											
321	323		27501		2		46.9					
323	325		509		2		24.2			2 1/2		
325	327		502		2		33.4			7		
327	329		503		2		15.4			5 1/2		
329	331		27504		2		16.0			6 1/2		
331	333		505		2		23.3			2 1/2		
333	335		506		2		18.6			3 1/2		
335	337		507		2		19.5			7		
337	339		508		2							
339	341		510		2		37.8			5 1/2		
341	343		511		2		51.7			1		
343	345		512		2		11.5			4 1/2		
345	347		513		2		8.1			6 1/2		
347	349		514		2		23.8			6		
349	351		515		2		12.8			5 1/2		
351	353		516		2		17.4			7 1/2		
353	355		517		2		11.5			7 1/2		
355	357		518		2		24.8			1		
321	358		27519		2		63.6					
						32.34	0.6	22.5	21.4	55.7	5 1/2	0.32
440	442											
442	444		27520		2		20.8					
444	446		521		2		12.8			6		
446	448		522		2		9.8			6 1/2		
448	450		27523		2		9.7			3		
450	452		524		2		9.7			5 1/2		
452	454		27525		2		11.8			3 1/2		
			26601		2		10.5			5		
										4 1/2		

ROTARY DRILL SAMPLING RECORD

Date: _____

From	To	DESCRIPTION	SAMPLE NUMBER	BT. U. (Actual)	WIDTH	N	A	VM	MC	PST	S	REMARKS
454	456		26602		2		16.8			4		
456	458		26603		2		9.9			2 1/2		
458	460		604		2		11.5			2		
460	462		605		2		13.8			5		
462	464		606		2		8.8			2 1/2		
464	466		607		2		41.6			1 1/2		
466	468		608		2		49.0			1 1/2		
468	470		609		2		11.2			2 1/2		
470	472		610		2		43.8			1		
472	474		26611		2		41.1			3		
470	470				30	0.6	16.7	19.9	62.8	3 1/2	0.30	
495	497		26613		2		32.8			1		
497	499		614		2		17.1			1 1/2		
499	501		615		2		39.7			1		
501	503	P. 2. Sh.	26616		2		67.7			1		
495	501				6	0.5	30.2	16.7	52.4	1	0.40	
554	556		26617		2		32.1			2		
556	558		618		2		16.1			3 1/2		
558	560		619		2		34.3			1 1/2		
560	562		620		2		13.0			2		
562	564		621		2		15.1			3		
564	566		622		2		9.9			7		
566	568		623		2		12.7			6 1/2		
568	570		624		2		12.4			4 1/2		
570	572		26625		2		13.9			2		
572	574		626		2		11.1			7		
574	576		627		2		13.0			6 1/2		
576	578		628		2		12.9			6		
578	580		629		2		52.7			1		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	ST.U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
684	685				2A	0.6	16.8	20.6	60.0	4	0.24	
684	686		26630		2		46.7			1		
686	688		631		2		38.7			1		
688	690		632		2		18.7			6		
690	692	CS SH.	26633		2		67.5			1		
697	699		26634		2		44.7			1		
699	701		26635		2		35.9			1 1/2		
705	707		26636		2		35.4			2 1/2		
707	708		26637		1		40.3			4		

REC-110-C

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
83	85		27525		2		16.9			5 1/2		
85	87		526		2		9.7			2		
87	89		527		2		7.8			5 1/2		
89	91		528		2		21.8			5 1/2		
91	93		529		2		19.6			3 1/2		
93	95		27600		2		5.7			6		
95	97		27526		2		8.3			7 1/2		
97	99		527		2		23.5			6 1/2		
99	101		528		2		13.5			5 1/2		
101	103		529		2		9.4			7 1/2		
103	105		27530		2		18.8			7		
105	107	COMPO.			22	0.7	14.0	23.8	41.5	5 1/2	0.46	
126	128		27531		2		35.1			4		
171	173		27532		2		35.1			3 1/2		
173	175		533		2		21.8			5 1/2		
175	177		27534		2		38.6			4 1/2		
177	179	COMPO.			6	0.4	31.3	21.8	46.0	4 1/2	0.76	
288	290		27535		2		49.2			3		
290	292		536		2		42.9			1 1/2		
292	294		537		2		15.9			3		
294	296		538		2		28.7			3		
296	298		539		2		14.7			5		
398	400		540		2		32.2			6		
400	402		541		2		17.4			7 1/2		
402	404		542		2		50.0			1 1/2		
404	406		543		2		14.0			5 1/2		
406	408		544		2		10.1			5 1/2		
408	410		545		2		20.9			6		
410	412		27546		2		22.0			5		

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
A12	A14		27547		2		15.5			7		
A14	A16		548		2		31.4			6 1/2		
A16	A18		27549		2		74.9			1/2		
		CONDS			24	0.7	22.9	21.1	55.3	5 1/2	0.36	
A95	A97		27550		2		44.6			2		
A97	501		27551		4		16.5			6		
501	503		552		2		16.7			3		
503	505		553		2		12.8			3 1/2		
505	507		554		2		10.0			3 1/2		
507	509		555		2		14.1			6		
509	511		556		2		10.9			4 1/2		
511	513		557		2		17.4			3		
513	515		558		2		8.9			1 1/2		
515	517		559		2		13.2			1 1/2		
517	519		560		2		15.7			3 1/2		
519	521		561		2		10.7			2		
521	523		27562		2		17.4			6		
		COND.			20	0.8	14.0	20.7	64.5	3 1/2	0.25	
527	529		27563		2		18.8			2 1/2		
529	531		564		2		36.6			1		
531	533		27565		2		56.9			1		
		COND.			4	0.5	26.0	13.7	52.3	2	0.30	
550	552		27566		2		51.8			1		

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
66	68		28851		2		36.0			3 1/2		
68	69		28852		1		66.5			1		
73	75		28853		2		22.9			5 1/2		
75	77		854		2		21.6			6		
77	79		28855		2		4.9			6		
79	81		856		2		27.8			6		
81	83		857		2		3.2			6		
83	85		858		2		7.7			7		
85	87		859		2		9.2			7 1/2		
87	89		860		2		4.2			7		
89	91		861		2		19.5			7		
91	93		28862		2		28.4			6 1/2		
125	135	SEAM-K.	COMP.	13 022	20	0.6	14.1	30.7	54.0	6 1/2	0.55	
136	138		28863		2		27.5			7		
140	142		28864		2		21.7			6		
142	143		28865		1		54.7			2		
188	190	CE SH.	28866		2		26.1			6		
190	192	CE SH.	867		2		15.8			7 1/2		
192	193		28868		1		57.9			3		
193	192		COMP.	12 348	4	0.7	21.0	29.8	43.5	7	0.55	
283	285	CE SH.	28869		2		58.8			1		
291	293		28870		2		34.8			6		

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
295	297		28871		2		19.8			6		
297	299		872		2		14.4			7		
299	301		873		2		42.1			4		
301	303		874		2		61.2			1		
303	305		875		2		49.8			2		
305	307		876		2		29.6			5 1/2		
307	309		877		2		55.2			1		
309	311		878		2		37.2			4 1/2		
311	312	CE SH.	28879		1		69.0			1		
295	299		COMPO.	12.193	4'	0.6	17.4	29.4	52.4	6 1/2	0.48	
295	311		COMPO.	5.001	16'	0.4	3	20.4	40.7	3 1/2	0.50	
330	332		28880		2		23.2			6 1/2		
332	334		881		2		10.2			6 1/2		
334	336		882		2		14.5			7		
336	338		883		2		12.9			7 1/2		
338	340		884		2		18.7			7		
340	342		28885		2		27.4			6 1/2		
459	461	SEAM - I	COMPO.	11.677	12'	0.4	17.9	27.9	53.8	7	0.48	
459	461		28886		2		70.3			1		
523	525		28901		2		10.0			2		
525	527		902		2		23.0			5 1/2		
527	529		903		2		15.5			6		
529	531		904		2		13.6			6 1/2		
531	533		905		2		37.6			6		
533	535		906		2		67.2			1		
535	537		907		3		75.3			1		
537	539		28908		2		63.6			2 1/2		
523	539		COMPO.	11.952	10'	0.5	20.1	26.4	53.0	5 1/2	0.40	

ROTARY DRILL SAMPLING RECORD

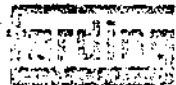
FROM	TO	DESCRIPTION	SAMPLE NUMBER	AT.U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
304	306	C&SN	28895		2		67.2			1		
315	317		28896		2		30.6			5 1/2		
320	322		28897		2		15.3			6		
322	324		828		2		13.5			7		
322	324	COMPO		12 660	1'	1'	14.5	30.0	53.5	6 1/2	0.58	
335	337		28898		2		31.0			5		
337	339		28900		2		37.6			3 1/2		
339	341		28926		2		43.3			3 1/2		
341	343		927		2		63.0			1		
348	370		28928		2		18.5			5 1/2		
370	372		929		2		14.6			6 1/2		
372	374		930		2		13.7			7		
374	376		28931		2		12.5			7		
376	378		28932		3		74.3			1		
378	376	COMPO		12 590	2'	10'	15.2	28.0	55.3	6 1/2	0.64	

ROTARY DITTO SAMPLING RECORD

1940
 1941
 1942
 1943
 1944
 1945
 1946
 1947
 1948
 1949
 1950

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WTDPH	H	A	VM	DC	PSI	S	REMARKS
52	54		28933		2		37.5			5 1/2		
63	65		28934		2		21.3			6		
65	67		935		2		13.2			6 1/2		
67	69	C & Sh.			2							
63	67	COMPO.		12.137	4	1.2	17.6	32.0	49.2	6 1/2	0.58	
190	192		28937		2		79.1			0		
204	206		28938		2		43.7			4 1/2		
335	337		28939		2		37.2			4 1/2		
337	339		940		2		25.2			6		
339	341		941		2		66.4			1		
342	344		942		2		26.2			3 1/2		
344	346		943		2		8.7			7 1/2		
346	348		944		2		7.3			7 1/2		
348	350		28945		2		61.2			1		
355	348	COMPO.		10.467	12 1/3	0.8	28.8	27.1	42.3	5	0.56	
369	371		28946		2		61.4			1 1/2		
378	380		28947		2		50.5			2 1/2		
408	410		28948		2		33.5			6		
410	412		949		2		38.0			4		
412	414		28950		2		28.6			6 1/2		
414	416		27 577		2		34.7			6		
416	418		27 578		2		81.7			0		
403	418	COMPO.		9.776	3	0.7	57.0	26.6	39.2	1 1/2	0.90	
					2		33.5			5 1/2		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT. U. (Actual)	WIDTH	H	A	VM	PC	PSI	S	REMARKS
427	429		27519		2		57.0			1 1/2		
429	431		580		2		35.8			6		
431	433		581		2		14.8			6 1/2		
433	435		582		2		40.7			3		
435	437		583		2		14.8			6 1/2		
437	439		27584		2		64.5			1		
439	441	COMPO.		10 230	8	0.6	26.8	25.6	47.0	5 1/2	0.68	
441	443		27585		2		45.3			4 1/2		
483	485		27586		2		17.0			5 1/2		
485	487		587		2		19.3			6 1/2		
487	489		588		2		53.2			2		
489	491		589		2		16.8			6 1/2		
491	493		27590		2		29.3			6 1/2		
493	495	COMPO.		10 337	10	0.8	27.4	25.6	46.2	6	0.60	
584	586		27591		2		18.2			7		
586	588		592		2		10.5			6		
588	590		593		2		12.3			6		
590	592		27594		2		33.0			6 1/2		
592	594	SEMI - I	COMPO.	11 232	8	1.0	19.0	27.9	52.1	6 1/2	0.62	

ROTARY DRILL SAMPLE RECORD

NO. 1000
 DATE
 TIME

WT.	To	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VM	PC	PSI	S	REMARKS
54	56		30544		2		36.6			5		
56	58		545		2		69.0			1		
254	256		30546		2		49.6			2		
256	258		547		2		34.8			2 1/2		
258	260		548		2		14.3			7		
260	262		549		2		16.8			3		
262	264		550		2		14.8			6		
264	266		30726		2		12.6			4 1/2		
266	268		727		2		10.4			6 1/2		
268	270		728		2		22.2			5		
270	272		729		2		8.8			7 1/2		
272	274		730		2		19.6			5 1/2		
274	276		731		2		11.2			4		
276	278		732		2		14.8			6		
278	280		733		2		22.0			4 1/2		
280	282		734		2		14.6			7		
282	284		735		2		12.2			8		
284	286		736		2		80.8			1 1/2		
286	288		737		2		69.6			1		
288	290	SEAM - E	COMP.		28	0.5	16.8	22.9	55.8	5 1/2	0.24	
359	361		30738		2		52.0			1 1/2		
361	363		739		2		42.8			1		
363	365		740		2		40.6			5 1/2		
365	367		741		2		23.6			5 1/2		
367	369		742		2		15.4			5 1/2		
369	371		743		2		13.0			4 1/2		
371	373		744		2		14.2			4		
373	375		745		2		32.0			2		

ROTARY DRILL SAMPLE RECORD

NO.	DESCRIPTION	SAMPLE NUMBER	BT.U (Actual)	WIDTH	H	A	VA	IN	NET	G	REMARKS
375		30746		1		13.8			5		
377		747		1		17.6			2 1/2		
379		748		1		36.0			1		
381		749		1		9.4			4 1/2		
383		750		1		15.4			3		
385		30576		1		16.8			3 1/2		
387		577		1		13.6			3 1/2		
389		578		1		11.0			2 1/2		
391		579		1		68.4			1		
393		580		1		82.6			0		
365	SEAM - D.	COMPO		26	0.6	17.8	20.4	61.2	3	0.24	
414		30581		1		42.0			1		
416		582		1		17.0			3		
418		583		1		66.8			1		
420		584		1		64.8			1		
422		585		1		78.8			1/2		
416	SEAM - DL.	30582		2	0.6	17.2	19.5	62.7	3	0.46	
		0									

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	N	A	VM	FC	FSI	S	REMARKS
44	46		30667		2		156			4 1/2		
46	48		668		2		229			6 1/2		
48	50		669		2		543			1		
258	260		30670		2		454			3 1/2		
260	262		671		2		301			4 1/2		
262	264		672		2		409			4		
264	266		673		2		335			3		
266	268		674		2		510			3 1/2		
268	270		675		2		508			1		
270	272		30676		2		276			4		
272	274		677		2		163			4 1/2		
274	276		678		2		278			6		
276	278		679		2		177			4		
278	280		680		2		426			4 1/2	?	
280	282		681		2		350			5 1/2		
282	284		682		2		667			1		
284	286		683		2		792			0		
286	288		684		2		324			1		
288	290		685		2		78			6		
290	292		686		2		121			7		
292	294		687		2		214			2 1/2		
294	296		688		2		204			6		
296	298		689		2		144			7 1/2		
298	300		690		2		548			1 1/2		
300	302		691		2		702			1 1/2		
260	282	SEAM - E.	COMP.		22	0.4	307	151	453	4	0.22	
286	298	SEAM - EL	COMP.		12	0.5	182	220	593	5	0.31	

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
380	382		30692		2		47.7			1		
382	384		643		2		20.9			2		
384	386		644		2		18.2			5 1/2		
386	388		645		2		17.1			6		
388	390		646		2		9.6			3		
390	392		647		2		9.3			2 1/2		
392	394		648		2		11.9			2		
394	396		649		2		14.0			4		
396	398		700		2		13.8			4 1/2		
398	400		30876		2		8.3			2		
400	402		877		2		—			—		
402	404		878		2		22.1			2		
404	406		879		2		8.8			5 1/2		
406	408		880		2		47.4			1		
408	410		881		2		81.9			0		
410	412		882		2		—			—		
432	406	COMP.			2 1/2	0.7	15.1	20.6	63.6	3 1/2	0.54	
423	425		30883		2		62.6			1		
425	427		884		2		58.9			—		
434	436		30885		2		50.9			1		
436	438		886		2		33.0			1		
438	440		887		2		37.0			1		
440	442		888		2		67.2			0		
443	445		30889		2		50.7			1 1/2		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
539	541		30890		2		4.2			2		
541	543		891		2		16.6			2 1/2		
543	545		892		2		8.4			4		
545	548		893		2		80.0			0		
541	545	SEAM - B	CONF.		4	0.5	13.0	20.7	65.8	3	0.40	
653	655		30894		2		51.3			1		
655	657		895		2		14.2			1		
657	659		896		2		16.0			5		
659	661		897		2		38.1			5 1/2		
661	662		898		1		41.4			6		
655	662	SEAM - A	CONF.		7	0.5	27.7	18.7	53.1	4 1/2	0.36	
666	668		30899		2		22.6			5		
668	670		900		2		55.7			1		
673	675		30851		2		18.5			6 1/2		
675	677		852		2		46.3			1		
681	683		30853		2		23.9			6		
683	685		854		2		18.4			6		
681	685	SEAM - A			4	0.4	21.6	21.1	56.9	6	0.40	COULD BE 1' SAMPLE 683-684

ROTARY DRILL SAMPLING RECORD



FECH	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	H	A	VM	PC	PSI	S	REMARKS
166	168		30832				26.3			5 1/2		
168	170		833				27.9			6		
170	172		834				18.0			2 1/2		
172	174		835				32.0			5 1/2		
174	176		836				26.3			5		
176	178		837				30.8			6 1/2		
178	180		838				27.7			6 1/2		
180	182		839				5.2			5		
182	184		840				21.8			5 1/2		
184	186		841				17.0			7 1/2		
186	188		842				11.9			6 1/2		
188	190		843				19.5			7		
190	192		844				15.6			7		
192	194		845				57.3			1 1/2		
194	196		846				14.7			2 1/2		
196	198		847				8.5			7		
198	200		848				11.1			6 1/2		
200	202		849				12.2			7 1/2		
202	204		850				46.1			1		
204	206		30626				6.8			2 1/2		
206	208		637				11.4			7		
208	210		638				66.4			1		
210	212		639				78.0			0		
166	203	SEAM - E	CONTRO		42	05	20.8	22.9	55.8	5 1/2	0.32	
301	303		30630				35.4			6		
303	305		631				33.0			2		
305	307		632				39.8			1		
307	309		633				46.0			2 1/2		
309	311		634				16.8			1		
311	313		635				16.6			4		
313	315		636									

REV. 8100-6

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT. U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
315	317		30637		2		39.6			1		
317	319		638		2		14.4			3		
319	321		639		2		—			—		
321	323		640		2		53.8			1 1/2		
323	325		641		2		—			—		
325	327		642		2		49.6			1 1/2		
327	329		643		2		15.4			3		
301	329	SEAM-D			22.28	0.3	32.6	19.0	AB.1	2	0.24	6 SAMPLE LOST
339	341		30644		2		32.6			1 1/2		
341	343		645		2		54.8			1		
343	345		646		2		15.4			4		
353	356		30647		2		18.4			1		
356	359		30648		3		69.2			1		
459	461		30649		2		19.6			2		
461	463		650		2		36.8			1		
463	465		651		2		13.0			1		
465	467		652		2		22.6			1		
467	469		653		2		20.0			1 1/2		
469	471		654		2		13.6			2 1/2		
471	473		655		2		12.0			1 1/2		
473	475		656		2		9.6			1 1/2		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	G.T.U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
475	477		657		2		14.2			2		
477	479		658		2		11.4			2		
479	481		659		2		14.7			2 1/2		
481	483		660		2		8.2			6		
483	485		661		2		10.5			1 1/2		
485	487		662		2		10.4			5 1/2		
487	489		663		2		11.3			7		
489	491		664		2		16.6			3 1/2		
491	493		665		2		74.3			12		
493	495		666		2		67.1			1		
489	491	SEAM - B	GENPO.		32	0.7	150	19.8	64.5	2 1/2	0.48	

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	N	A	VN	FC	FSI	S	REMARKS
166	168		832				26.3			5 1/2		
168	170		833				27.9			6		
170	172		834				18.0			2 1/2		
172	174		835				32.5			5 1/2		
174	176		836				26.5			5		
176	178		837				30.8			6 1/2		
178	180		838				21.7			6 1/2		
180	182		839				6.2			5		
182	184		840				21.8			5 1/2		
184	186		841				17.0			7 1/2		
186	188		842				11.6			6 1/2		
188	190		843				19.5			7		
190	192		844				15.6			7		
192	194		845				57.3			1 1/2		
194	196		846				14.7			2 1/2		
196	198		847				8.5			7		
198	200		848				11.1			6 1/2		
200	202		849				12.2			7 1/2		
202	204		850				46.1			1		
204	206		30626				6.8			7 1/2		
206	208		627				11.4			7		
208	210		628				66.4			1		
210	212		629				78.0			0		
164	203	SEAM - E	CONRO		42	0.5	20.8	22.9	55.8	5 1/2	0.32	
301	303		30630				35.4			6		
303	305		631				33.0			2		
305	307		632				39.8			1		
307	309		633				46.0			2 1/2		
309	311		634				16.8			1		
311	313		635				16.6			4		
313	315		636									

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	B.T.U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
315	317		30637		2		30.6			1		
317	319		638		2		14.4			3		
319	321		639		2		---			---		
321	323		640		2		53.8			112		
323	325		641		2		---			---		
325	327		642		2		49.6			112		
327	329		643		2		19.4			3		
301	329	SEAM-D			2228	0.3	32.6	19.0	AB	2	0.24	6 SAMPLE LOST
339	341		30644		2		32.6			112		
341	343		645		2		54.8			1		
343	345		646		2		19.4			4		
353	356		30647		2		18.4			1		
356	359		30648		3		69.2			1		
459	461		30649		2		19.6			2		
461	463		650		2		36.8			1		
463	465		651		2		13.0			1		
465	467		652		2		22.6			1		
467	469		653		2		20.0			112		
469	471		654		2		13.6			212		
471	473		655		2		12.0			112		
473	475		656		2		9.6			112		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
475	477		30651		2		14.2			2		
477	479		658				11.4			2		
479	481		659				14.7			2 1/2		
481	483		660				10.2			6		
483	485		661				10.8			1 1/2		
485	487		662				10.4			5 1/2		
487	489		663	1			11.3			7		
489	491		664				16.0			3 1/2		
491	493		665				74.3			1 1/2		
493	495		666				67.1			1		
489	491	SEAM-B	COMP.		32	07	150	198	645	2 1/2	0.48	

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
37	40		28350		3		24.1			1		
40	42		28351		2		41.9			1		
47	50		28352		3		68.8			1/2		
60	65		28353		MIN		30.6			3		
65	70		354		MIN		12.0			3 1/2		
70	75		355		MIN		13.5			6		
75	80		356		MIN		11.5			5 1/2		
80	85		357		MIN		13.5			4		
85	90		28358		5		22.8			5		
		SEAM-4	COMP		30'	0.5	17.1	20.8	61.6	4 1/2	0.36	

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	N	A	VM	FC	FSI	S	REMARKS
55	57		30513		2		8.2			2		
57	59		514		2		9.6			5 1/2		
59	61		515		2		7.0			7 1/2		
61	63		516		2		7.4			6		
63	65		517		2		15.6			6 1/2		
65	67		518		2		11.0			6		
67	69		519		2		9.6			5 1/2		
69	71		520		2		10.2			5 1/2		
71	73		521		2		5.8			6		
73	75		522		2		4.4			7		
75	77		523		2		9.6			2		
77	79		524		2		9.8			6 1/2		
79	81		30525		2		6.8			7 1/2		
81	83		30526		2		26.6			6 1/2		
83	85		527		2		14.4			7		
55	228	TRAIL - 1	COMP		30	0.7	10.7	21.4	67.2	5 1/2	0.34	
154	156		30528		2		18.8			7		
156	158		529		2		19.6			6		
158	160		530		2		17.2			4 1/2		
160	162		531		2		17.8			6 1/2		
154	162		COMP		8	0.4	18.5	22.6	58.5	6	0.36	
226	228		30532		2		22.4			3 1/2		
228	230		533		2		22.4			6		
230	232		534		2		19.0			3		
232	234		535		2		39.6			1 1/2		
234	236		536		2		28.6			6		
236	238		30537		2		44.6			2 1/2		
226	236	TRAIL - 2	COMP		10	0.3	28.0	17.7	54.0	4	0.36	

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
271	273		30528		2		15.0			6		
273	275		539		2		14.8			7		
275	277		540		2		18.2			6		
277	279		541		2		10.0			6 1/2		
279	281		30542		2		8.6			7 1/2		
271	281	TEAM - 2	CONMO		10	0.5	13.4	23.4	62.4	6 1/2	0.34	
297	301	TEAM - 1	30543		4		17.6			7		
			30542			0.5	17.8	21.3	60.4	7	0.46	

REV. 1-10-54

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	ST.U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
24	26		29040		2		53.0			3		
26	28		041		2		59.0			2		
30	32		29042		2		77.3			1/2		
67	69		29043		2		64.6			1		
69	71		044		2		36.9			1		
81	83		29045		2		62.2			1		
83	85		046		2		13.0			5		
85	87		047		2		13.8			6 1/2		
87	89		048		2		14.5			7		
89	90		049		2		8.9			7 1/2		
83	90	COMPO		13.533	7	0.6	12.9	22.9	63.6	7	0.42	

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	GT.U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
462	464		29051		2		72.1			1/2		
549	551		29052		2							
551	553		053				73.6			0		
553	555		054				31.9			1		
555	557		055				15.5			0		
557	559		056				9.6			0		
559	561		057				10.4			1/2		
561	563		058				7.0			0		
563	565		059				10.2			7		
565	567		060				6.1			7		
567	569		061				13.1			2 1/2		
569	571		062				4.9			1 1/2		
571	573		063				58.7			1		
573	575		064				25.0			5		
575	577		065				8.3			7		
577	579		066			64.7			1			
579	581		067			62.9			1			
						85.0			0			
551	567	MAIN SEAM - R4		13,310	16'	0.7	13.4	21.2	64.7	4 1/2	0.26	
551	575	TOTAL SEAM - R4		11630	24'	0.5	20.4	19.9	53.2	4	0.26	

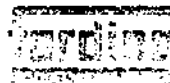
ROTARY DRILL SAMPLING RECORD

Welding

SAMPLED MAY 24-30

LOG	TR	DESCRIPTION	SAMPLE NUMBER	BTU (Actual)	WIDTH	M	A	VM	MC	PSI	S	REMARKS
80	82		28951		2							
82	83		28952		1		20					
86	88		28953		2							
100	102		28954		2							
102	104		255		2							
104	106		956		2							
106	107		28957		1							
532	534		29024		2		10.8			5		
534	536		025		2		29.4			1 1/2		
536	538		026		2		11.6			2		
538	540		027		2		18.5			3		
540	542		028		2		8.8			5		
542	544		029		2		11.6			2 1/2		
544	546		030		2		4.0			6 1/2		
546	548		031		2		11.7			1 1/2		
548	550		032		2		7.0			6		
550	552		033		2		8.9			7		
552	554		034		2		9.4			3 1/2		
554	556		035		2		12.8			6 1/2		
556	558		29036		2		65.5			1		
559	561		29037		2		34.0			4 1/2		
561	563		038		2		15.0			5		
563	564 ?		29039		1 ?		9.6			6 1/2		
532	556	SEAM - R+	COMPO		24	0.5	12.4	19.6	67.5	3 1/2	0.29	
559	564		COMPO		5	0.5	20.0	19.0	60.5	5 1/2	0.44	

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	ST.U. (Actual)	WIDTH	M	A	VN	FC	ROI	S	REMARKS
56	58		29068		2		46.7			1		
67	69		29069		2		13.3			7		
69	70		070		1		47.5			5 1/2		
79	81		29071		2		13.2			6		
81	83		072		2		10.8			6 1/2		
83	85		073		2		17.2			6 1/2		
85	87		074		2		14.7			6 1/2		
79	87	SEAM-1		13.263	8	0.5	14.5	22.2	62.8	7	0.45	
259	261		29075		2		68.7			1/2		
266	268		29101		2		61.8			1		
268	270		102		2		70.8			0		
288	290		29103		2		73.2			1/2		
334	336		29104		2		45.1			3 1/2		
336	338		105		2		63.5			1		
511	513		29106		2		22.1			5 1/2		
54												
549	551		29107		2		59.9			1		
551	553		108		2		82.2			1/2		
553	555		109		2		29.8			3 1/2		
555	557		110		2		27.6			5 1/2		
557	559		111		2		34.2			2		
559	561		112		2		30.3			4 1/2		
561	563		113		2		60.1			1/2		
563	565		114		2		76.0			1/2		

V.P.S.
R.A.

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U.	WIDTH	H	A	VM	FC	FSI	S	REMARKS
15	20		28543		5		17.7			1		
20	25		S44		5		20.6			2		
25	30		S45		5		16.2			3 1/2		
30	35		S46		5		13.2			2		
35	40		S47		5		15.0			3		
40	44		28548		4		22.1			4 1/2		
15	44	SEAM - A	COMPO.		25	0.8	17.7	20.4	6.1	2 1/2	0.32	
160	165		28549		5		51.4			1		

ROTARY DRILL SAMPLING RECORD

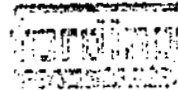
FROM	TO	DESCRIPTION	SAMPLE NUMBER	at.u.	WIDTH	M	A	VM	FC	FSI	S	REMARKS
20	25		28532		S		107			6		
25	30		533		S		7.8			5 1/2		
30	35		534		S		12.2			5		
35	40		535		S		10.8			6		
40	45		536		S		10.9			6		
45	50		28537		S		12.5			6 1/2		
20	50	SEAM-A	COMP.		30	07	111	207	67.5	5 1/2	0.32	
140	145		28538		S							
145	150		539		S							
150	153		28540		S							
190	195		28541		S							
195	200		28542		S							

ROTARY DRIE, SAMPLE RECORD

NO. 1000000000
 DATE

NO.	TO	DESCRIPTION	SAMPLE NUMBER	B.T.U. (Actual)	WEIGHT	H	A	VM	PC	WET	S	REMARKS
3	5		27817				9.2			0		
5	9		818				6.9			0		
7	11		819				14.7			0		
9	13		820				27.3			0		
11	15		821				10.9			0		
13	17		822				9.4			0		
15	19		823				27.7			0		
17	21		825				23.5			0		
19	23		824				13.1			0		
21	25		27951				19.0			0		
23	27		952				21.7			0		
25	27		953				47.8			0		
3	25	B.T.U. & S.	COMPO	10,714	22		16.6	AVE		0	0.40	
162	164		27954		2		16.2			7 1/2		
164	166		955		2		54.9			2		
170	172		27956		2		12.9			7		
172	174		957		2		22.8			7		
170	174		COMPO	13,361	4	11	17.6	25.7	55.6	6 1/2	0.64	
179	181		27958		2		13.6			7		
290	292		27959		2		21.6			7 1/2		
292	294		960		2		9.6			7 1/2		
294	296		961		2		11.4			7		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	H	A	VM	PC	PSI	D	REMARKS
296	298		27962		2		12.7			4		
298	300		963		2		16.5			2		
300	302		964		2		36.4			4		
302	304		965		2		63.9			1		
290	302		COMPO	12.965	12'	0.9	17.6	25.4	56'	5 1/2	0.56	
353	355		27966		2		29.2			6		
355	357		967		2		68.7			1		
402	404		27968		2		35.6			5		

ROTARY DITCH SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	DT.U. (Actual)	WIDTH	H	A	VM	BC	MSI	S	REMARKS
42	44		27757		2		7.5			8		
44	46		758		2		7.7			7 1/2		
46	48		759		2		13.7			7 1/2		
48	50		760		2		16.9			6		
50	52		761		2		11.3			7 1/2		
52	54		762		2		14.1			7 1/2		
54	56		763		2		37.2			5		
56	58		764		2		6.9			7 1/2		
58	60		765		2		47.4			4 1/2		
60	62		766		2		41.6			4		
62	64		767		2		13.3			7 1/2		
64	66		768		2		31.0			6 1/2		
42	65		COMPO	11,756	23	0.6	21.1	26.9	51.4	7	0.54	
68	70		27769		2		32.6			3		
119	121		27770		2		24.9			6		
121	122		27771		2		50.1			3 1/2		
127	129		27772		2		29.2			5 1/2		
129	131		773		2		15.2			6 1/2		
131	133		27776		2		57.1			1		
127	131		COMPO	10,596	A	0.6	22.0	31.1	45.9	6	0.48	
134	136		27777		2		6.6			7 1/2		
136	138		778		2		9.6			7		
138	140		779		2		44.6			5 1/2		
134	138		COMPO	13,303	A	1.1	8.4	29.9	60.6	7 1/2	0.60	

ROTARY DRILL SAMPLING RECORD

LOG NO.	TR	DEPTH	DESCRIPTION	SAMPLE NUMBER	DT.U. (Actual)	WEIGHT	H	A	VM	PC	PSI	G	REMARKS
146	148			27780		2		25.5			4		
148	150			781		2		18.5			5 1/2		
150	152			782		2		66.1			3 1/2		
146	150			COMPO	11 752	4	0.6	22.2	24.8	52.4	5	0.66	
159	161			27783		2		9.2			6 1/2		
161	163			784		2		8.0			8		
163	165			785		2		25.0			6 1/2		
159	165			COMPO	13 013	6	0.8	14.5	28.8	55.3	7	1.14	
174	176			27786		2		24.2			5 1/2		
253	255			27787		2		24.1			5 1/2		
				27787	11 452		0.2	23.3	26.2	50.3	5 1/2	0.48	

ROTARY DRILL SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	Q.T.U. (Actual)	WIPPIE	M	A	VM	MC	PSI	S	REMARKS
75	77		27129		10'		29.1			5		
77	79		720		10'		19.6			6 1/2		
79	81		731		10'		15.2			6 1/2		
81	83		732		10'		7.1			7		
83	85		733		10'		9.3			7		
85	87		734		10'		17.1			7		
87	89		735		10'		47.1			5		
89	91		736		10'		18.0			7		
91	93		737		10'		30.6			6		
93	95		738		10'		59.4			1		
95	97		739		10'		32.5			6 1/2		
97	99		740		10'		34.2			6 1/2		
75	99		COMP	10,856	2A	0.6	26.2	25.0	AB ²	6	0.48	
187	189		27349		2		26.0			6		
195	197		27901		2		8.5			7 1/2		
197	199		902		2		29.3			5 1/2		
195	199			11,954	4'	0.7	19.2	27.1	53.0	6 1/2	1.18	
234	236		27903		2		66.9			1/2		
236	238		904		2		62.8			1/2		
265	267		27905		2		63.0			1		
267	268		906		2		78.5			0		
299	301		27907		2		9.3			6 1/2		
301	303		908		2		10.4			7		
303	305		909		2		53.0			3		

ROTARY DIRT SAMPLING RECORD

FROM	TO	DESCRIPTION	SAMPLE THICKNESS	HT. U. (Actual)	WIDTH	R.	A.	VM	WC	WGT	S	REMARKS
305	307		27910		2		70.4			1		
299	303		COMPO	13.609	4	0.8	102	32.3	56.6	7	0.70	
315	317		27911		2		31.8			6 1/2		
323	324		27912		1		67.5			1		
589	591		27913		2		17.2			6 1/2		
591	593		27914		2		7.9			7		
593	595		27915		2		14.1			7		
595	597		916		2		32.3			6		
597	599		917		2		59.8			1		
599	601		COMPO	12.196	4	0.8	18.1	28.9	52.2	6 1/2	0.54	
601	603		27918		2		50.6			3		
603	605		919		2		48.1			3		
605	607		920		2		62.4			1		
607	609		921		2		12.2			7 1/2		
609	611		922		2		55.2			2 1/2		
611	613		923		2		51.3			3		
613	615		924		2		61.9			1 1/2		
656	658		27925		2		24.1			6		
659	661		27774		2		18.8			3		
661	663		775		2		8.6			7		

ROTARY DRILL SAMPLING RECORD

NO. 1560

DATE	TO	DESCRIPTION	SAMPLE NUMBER	HT. U. (Actual)	WIDTH	H	A	VM	MC	OST	SI	REMARKS
663	665		27751				10.3			6		
665	667		752				7.9			7		
667	669		753				48.0			3		
669	671		754				56.4			2 1/2		
671	673		755				40.3			3 1/2		
673	675		756				54.2			1		
659	667		CEMPO		8	07	11.8	27.8	59.7	6	068.	

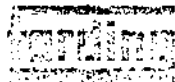
ROTARY DRILL SAMPLE RECORD

FROM	TO	DESCRIPTION	SAMPLE NUMBER	WT. U. (Actual)	WIDTH	H	A	VM	MC	WGT	S	REMARKS
52	54		27788		2							
54	56		789				20.8			7		
56	58		790				8.5			7		
58	60		791				20.7			6 1/2		
60	62		792				31.4			6 1/2		
62	64		793				10.3			7		
64	66		794				34.0			5 1/2		
66	68		795				80.7			2 1/2		
54	66	COMPO.		11,353	12'	0.7	21.4	25.7	52.2	6 1/2	0.54	
76	78		27796		2		42.5			4 1/2		
84	86		27797		2		19.9			6		
86	88		27798		2		11.8			7 1/2		
88	89		799		1		44.7			4 1/2		
84	88	COMPO.		12,292	4'	0.7	16.2	29.0	54.1	7	0.98	
177	179		27800		2		28.3			3		
179	181		801		2		13.4			7		
181	183		802		2		61.6			2		
177	181	COMPO.		10,445	4'	0.8	20.5	24.4	53.5	4 1/2	0.60	
187	189		2803		2		25.5			7 1/2		
189	191		804		2		45.3			3 1/2		
191	193		805		2		54.5			2		
193	195		806		2		18.1			6 1/2		
195	197		807		2		8.5			7		
197	199		808		2		4.9			7 1/2		
199	201		809		2		11.8			7		
201	203		810		2		6.2			7 1/2		

ROTARY DREDGE SAMPLING RECORD

NO.	TO	DESCRIPTION	SAMPLE NUMBER	HT. U. (Actual)	WIDTH	H	A	VM	NO	WT	SI	REMARKS
203	205		27811		2		76			7		
205	207		812				10.2			7		
207	209		813		2		9.5			7		
209	211		814		2		49.3			1		
193	209	COMPO.		13.514	16"	0.9	10.1	31.5	57.5	7		0.54
297	299		27815		2		6.2			8		
297	299		27815	14.342	2	1.2	6.3	32.4	59.9	8		0.82
408	410		27816		2		49.5			4		

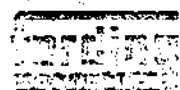
ROTARY LOGGING SAMPLE LOG RECORD



LOG	TD	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VN	FC	PSZ	S	REMARKS
13	15		29233		2		48.7			0		
15	17.0		234		2.5		10.5			1/2		
17.5	20		235		2.5		6.6			1/2		
20	22.5		236		2.5		11.9			1/2		
22.5	25		237		2.5		18.1			2 1/2		
25	27.5		238		2.5		33.9			2 1/2		
27.5	30		239		2.5		26.3			5 1/2		
30	32.5		240		2.5		18.9			6		
32.5	35		241		2.5		45.7			3		
35	37.5		242		2.5		4.9			3 1/2		
37.5	39		29243		1.5		49.4			3 1/2		
20	32.5	COMPO.		11338	12.5	1.2	22.2	25.5	51.1	4	0.46	
15	32.5	COMPO.										
68	74		29244		6		78.2			0		
121	124		29245		3		50.7			2 1/2		
130	133		29246		3		29.6			4 1/2		
			29246	10289		0.8	30.0	26.0	43.2	5	0.56	

29234-240
ACTUAL BT.U.
11732

ROTARY DRILL SAMPLING RECORD



JUN. 20 '79.

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	H	A	VM	PC	MSI	S	REMARKS
22	25		28151		U		60			6 1/2		
25	30		152		U		77			7		
30	35		153		U		137			7		
35	40		154		U		228			7 1/2		
40	45		28155		U		320			6		
22	45	COMPO.		12,455	2 3/4	0.8	160	27.7	SS5	7	0.60	
82	85		28156		U		137			7		
85	90		157		U		529			3 1/2		
90	95		158		U		513			2		
95	100		28159		U		564			2		
22	85		28156	12,966	3	1.0	141	28.9	SS60	7	1.68	

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT. U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
131	133		30356		2		17.4			7		
133	135		357		2		19.0			6 1/2		
135	137		358		2		29.2			5 1/2		
137	139		359		2		12.4			7		
139	141		360		2		33.3 ✓			6 1/2 ✓		
131	141				10	0.4	22.5	21.7	54.4	6 1/2	0.18	
155	156		30361		1		53.3 ✓			3 ✓		
168	170		30362		2		25.0			2		
170	172		363		2		11.0			5		
172	174		364		2		28.4			1		
174	176		365		2		34.2			1		
176	178		366		2		30.4			1 1/2		
178	180		367		2		18.4			2		
180	182		368		2		21.6			5 1/2		
182	184		369		2		9.6			6 1/2		
184	186		370		2		8.0			4 1/2		
186	188		371		2		12.2			1 ✓		
188	190		372		2		12.6			6 1/2		
190	192		373		2		5.4			7		
192	194		374		2		17.8			6		
194	196		30375		2		5.0			3 1/2		
196	198		30376		2		11.0 ✓			1 ✓		
198	200		327		2		9.4			1		
200	201		328		1		42.2			1		
201	203		329		2		13.0			5		
203	205		330		2		12.6			6 1/2		
205	207		331		2		27.2			4		
207	209		332		2		28.6			4		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT. U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
209	211		30333		2		18.4			5		
211	213		334		2		21.4			6 1/2		
213	215		335		2		38.8			5		
215	217		30336		2		56.0			1		
219	221		30337		2		54.4			1		
221	223		338		2		24.4			2		
223	225		339		2		29.8			2		
225	227		340		2		42.4			1		
168	215		COMPO		47	0.4	19.0	21.3	59.3	41/2	0.40	PETROGRAPHY N.A. 15
221	225		COMPO		4	0.4	27.4	23.9	48.3	2	0.42	SAMPLES DISCARDED BY LAB.
255	257		30341		2		67.6			0		
257	259		342		2		12.4			6 1/2		
259	261		343		2		53.4			1		
261	263		344		2		27.8			1		
263	264		30345		1		26.8			1		
257	264		COMPO		7	0.4	29.8	18.8	51.0	2	0.46	
267	269		30346		2		45.8			3		
269	270		347		1		49.0			3		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
432	434		30248		2		24.4			4		
434	436		349		2		60.6			1		
436	438		350		2		33.3			5		
438	440		30201		2		18.0			7		
440	442		202		2		25.2			2 1/2		
442	444		203		2		12.5			3		
444	446		204		2		10.4			2 1/2		
446	448		30205		2		37.6			3		
432	448		COMPO.		16'	0.3	28.1	18.3	53.3	3	0.5%	PETROGRAPHY (REFLECTANCE Group) N.A.
457	459		30206		2		35.0			6		AS SAMPLES DISCARDED By LAB.
559	561		30207		2		19.8			6 1/2		
561	562		208		1		43.2			1		
578	580		30209		2		54.4			1		
580	582		210		2		45.4			1		
582	584		211		2		50.5			2 1/2		
584	586		212		2		27.8			1 1/2		
586	588		213		2		15.5			1		
588	590		214		2		11.0			5 1/2		
590	592		30215		2		45.6			2 1/2		
594	590		COMPO.		4	0.5	18.3	20.0	6.2	2.12	0.54	Re-1-3502 " "
606	608		30216		2		54.6			2 1/2		

ROTARY DRILL SAMPLING RECORD



SAMPLED
JUN 19 1979

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
20	22		30444		2		19.3			0		
22	24		445		2		8.9			0		
24	26		446		2		20.9			0		
26	28		447		2		8.8			0		
28	30		448		2		9.8			0		
30	32		449		2		10.9			0		
32	34		30450		2		17.5			0		
34	36		30451		2		26.1			0		
36	38		452		2		12.2			1/2		
38	40		453		2		13.0			1/2		
40	42		454		2		7.2			0		
42	44		455		2		10.7			1/2		
44	46		456		2		18.3			1/2		
46	48		457		2		7.6			1/2		
48	50		458		2		7.1			2		
50	52		459		2		6.6			1 1/2		
52	54		460		2		19.4			1		
54	56		461		2		7.5			1		
56	58		462		2		6.7			1 1/2		
58	60		463		2		14.4			1		
60	62		464		2		9.7			1		
62	64		30465		2		18.4			1		
20	64		COMPO	12,861	44	0.9	13.1	21.9	64.1	1/2	0.44	
77	79		30466		2		23.3			5 1/2		PETROGRAPH
79	81		467		2		31.4			1 1/2		REFLECTANCE
81	83		468		2		29.2			1 1/2		ONLY
83	85		469		2		9.9			1 1/2		(20-64 +
85	87		470		2		10.6			4 1/2		77-91)
87	89		471		2		9.4			2 1/2		N.A. AS
89	91		472		2		14.1			1		LAB DISCAR
91	92		30473		1		56.4			0		SAMPLES
77	91		COMPO		14	0.8	18.6	21.2	59.4	3	0.44	

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT. U. (Actual)	WIDTH	M	A	VM	FC	FSI	S	REMARKS
122	124											
124	126		30474		2		32.5			1		
126	127		30475		2		29.8			5		
122	126		COMP		4	0.4	30.5	19.0	49.7	3	0.62	
157	159		30476		2		32.5			4 1/2		
159	161		30477		2		50.8			7		
222	224		30478		2		26.8			1		
224	226		479		2		23.9			3 1/2		
226	228		480		2		29.2			2 1/2		
228	230		481		2		44.5			2 1/2		
230	232		482		2		25.4			6		
232	234		483		2		50.1			3 1/2		
234	236		484		2		-			-		
236	238		30485		2		-			-		
222	232		COMP		10	0.3	29.6	21.1	49.0	3	0.30	PETROG. - REFLE
287	289		30486		2		15.2			6 1/2		CLANK ONLY
289	291		487		2		37.8			1		N.A. AS
291	293		488		2		19.7			7		LAB DISCARD
293	295		489		2		39.1			3		SAMPLES
295	297		490		2		16.7			6 1/2		
297	299		30491		2		18.2			7		
287	299		COMP		12	0.5	24.1	20.5	54.5	5	0.54	" "
310	312		30492		2		40.3			1		
517	519		30493		2		52.6			1/2		
519	521		494		2		57.0			0		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT. U. (Actual)	WIDTH	H	A	VM	FC	PSI	S	REMARKS
521	523		30495		2		—			—		
613	615		30351		2		22.1			7		
615	617		352	1	2		40.4			1		
617	619		353		2		55.9			1/2		
619	621		354		2		47.3			1		
621	623		355		2		53.2			1		
623	627		COMPO		4	0.2	31.6	17.5	50.7	4	0.44	PETROG. - REFLECTANCE ONLY N.A. ASI LAB DISCARDED SAMPLES

ROTARY DRILL SAMPLING RECORD



SAMPLED
JULY 16 '79

FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT. U. (Actual)	WIDTH	M	A	VM	FC	PSI	S	REMARKS
19	21		29826		2		67.8			0		
43	45		29827		2		47.8			4		
65	67		29828		2		27.4			6		
67	69		29		2		21.8			5 1/2		
69	71		830		2		41.6			5		
71	73		31		2		50.0			3 1/2		
73	74		32		2		63.0			1		
65	71		COMPO.		6	0.4	30.0	22.6	47.0	5 1/2	0.78	
79	81		29833		2		33.4			4 1/2		
81	82		34		2		60.8			2		
151	153		29835		2		47.2			3		
153	155		836		2		24.7			6 1/2		
155	157		837		2		14.4			7 1/2		
157	159		838		2		11.0			7 1/2		
159	161		839		2		10.0			3 1/2		
161	163		840		2		13.2			3		
163	165		841		2		18.4			7		
165	167		842		2		18.4			5 1/2		
167	169		843		2		60.4			1		
153	167	AG - 50.9m	COMPO.		14	0.4	14.7	23.1	61.8	6	0.70	RO-12300 PETROG. REFLECTANCE ONLY.

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT. U. (Actual)	WIDTH	M	A	VM	FC	PSI	S	REMARKS
216	218		29844		2		74.7			0		
218	220		845		2		60.1			1/2		
220	222		846		2		30.9			1/2		
222	224		847		2		52.9			1/2		
220	222		29846		2	0.4	31.4	20.0	48.2	1/2	0.64	
231	233		29848		2		42.7			4 1/2		
233	235		849		2		39.8			3		
235	237		850		2		43.3			3		
237	239		29851		2		62.3			1 1/2		
251	253		29852		2		56.4			1 1/2		
254	256		29853		2		34.7			5 1/2		
256	258		854		2		45.6			3 1/2		
258	260		855		2		62.3			1		
254	256		29852		2	0.5	34.3	19.3	45.9	4 1/2	0.70	
263	265		29856		2		26.9			4		
279	281		29857		2		67.6			1/2		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	DT.U. (Actual)	WIDTH	H	A	VM	FC	FSI	S	REMARKS
297	299		29858		2		67.1	*		1/2		
299	301		859		2		75.0			0		
317	319	pet } 40' 6" - 100' 9" M	29860		2		31.8	*		1/2		
319	321		861		2		32.3			1/2		
321	323		862		2		21.7			2		
323	325		29863		2		14.6			3/2		
325	327		864		2		12.7			1/2		
327	329		865		2		18.3			1		
329	331		866		2		13.1			2 1/2		
331	333		867		2		no sample			-		
333	335	29868		2		47.7			2			
335	336	869		1		50.4			3 1/2			
337	338	40' 6" - 100' 9" M	COMPO		14'	0.5	21.0	20.3	58.2	2	0.40	Ro-13062 PETROG. REFLECTANCE ONLY
460	462		29870		2		28.1			6		
462	464		871		2		25.4			5 1/2		
464	466		872		2		59.3			1/2		
466	468		873		2		44.6			3 1/2		
468	470		874		2		56.4			1 1/2		
460	464		COMPO		4	0.4	25.0	20.5	54.1	5 1/2	0.60	
488	490		29875		2		51.2			1		
490	492		30426		2		31.1			4		
492	494		427		2		28.5			1 1/2		
494	496		428		2		31.6			4		
496	498		429		2		36.3			3 1/2		
498	500		430		2		20.1			2		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	N	A	VM	FC	FSI	S	REMARKS
500	502	201.5 - 202.0	30431		2		15.2			6		
502	504		432		2		38.3			5		
504	506		433		2		71.9			2		R ₀ - 1.325%
490	504	149.4 - 153.6 m.	COMPO.		14	5.4	28.4	19.3	51.9	3	0.38	PETROG. REFLECTANCE OM
513	515		30434		2		67.4			1		
661	663	201.5 - 202.0	30435		2		27.6			1		
663	665		436		2		32.3			2		
665	667		437		2		63.7			2		
661	665	201.5 - 202.0	COMPO.		4	0.4	31.4	12.1	50.1	1	0.58	PETROGRAPHY REFLECTANCE OM
743	745	201.5 - 202.0	30438		2		56.5			6		N.A. AS LAB
745	747		439		2		62.0			1		DISCARDED
747	749		440		2		42.7			56		SAMPLES
749	751		441		2		64.5			1		
751	753		442		2		83.4			0		
753	754		443		2		87.8			0		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	N	A	VM	FC	FSI	S	REMARKS
47	49		30555		2		24.4			6 1/2		
49	51		856		2		9.4			6 1/2		
51	53		857		2		11.6			7 1/2		
53	55		858		2		15.2			6 1/2		
55	57		859		2		5.4			7 1/2		
57	59		860		2		12.0			6		
59	61		861		2		10.0			1 v		
61	63		862		2		8.4 v			2 1/2 v		
63	65		863		2		7.6 v			2 1/2 v		
65	67		864		2		9.6 v			2 1/2 v		
67	69		865		2		4.2			6 v		
69	71		866		2		9.4 v			1 v		
71	73		867		2		6.6			7 v		
73	75		868		2		9.2			7 1/2 v		
75	77		869		2		11.6			6 1/2 v		
77	79		870		2		8.6			8 v		
79	81		871		2		19.6			6 1/2 v		
81	83		872		2		9.0			3 v		
83	85		873		2		8.8			6 1/2 v		
85	87		874		2		10.6			3		
87	89		30505		2		9.2			6 1/2		
89	91		30501		2		12.8			7 1/2		
91	93		502		2		42.6 v			7 1/2		
93	95		30503		2		69.0			1		
97	91	SEAM - 4	COMP		AA	0.5	10.8	20.8	67.9	5 1/2	0.52	
97	98		30504		1		66.0			1		

ROTARY DRILL SAMPLING RECORD



FROM	TO	DESCRIPTION	SAMPLE NUMBER	BT.U. (Actual)	WIDTH	M	A	VM	FC	PSI	S	REMARKS
117	119		30505		2		27.0			4		
119	120		506		1		31.0			4		
117	120	SEAM 3	COMPO		3	0.4	29.0	19.0	51.6	4	0.40	
162	164		30507		2		10.2			7		
164	166		508		2		14.4			7 1/2		
166	168		509		2		12.6			6		
168	170		510		2		9.4			7		
162	170	SEAM - 2	COMPO		3	0.3	11.8	21.9	66.0	7	0.30	
176	178		30511		2		15.4			6 1/2		
178	180		512		2		10.2			6 1/2		
176	180	SEAM 1	COMPO		4	0.5	12.8	23.1	63.6	6 1/2	0.40	