EWIN CREEK COAL LICENCES

(260,-263, 2221)

EXPLORATION PROGRESS REPORT

February, 1982

Kootenay Land District
N.T.S. Sheet 82 J/2
Centering approx. - 5,547,350 N, 659, 350 E (UTM).
Held and operated by B.C. Coal Ltd.
For Work Completed Dec., 1981

B.C. COAL LTD.

John A. Huryn
Geologist

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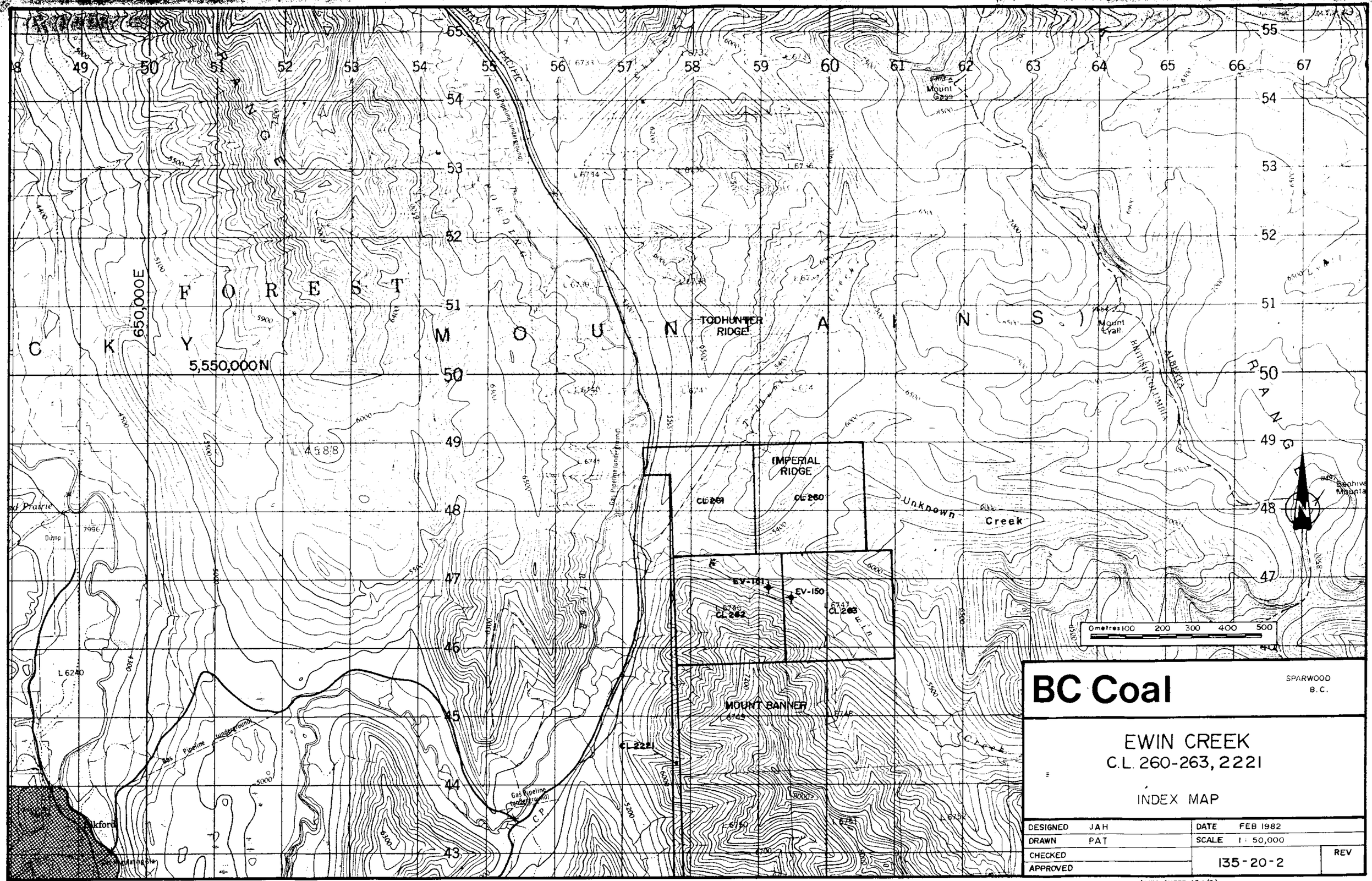


BC Coal

SPARWOOD
B.C.

EWIN CREEK
C.L. 260-263, 2221

INDEX MAP

DESIGNED	JAH	DATE	FEB 1982
DRAWN	PAT	SCALE	1 : 50,000
CHECKED		135-20-2	REV
APPROVED			

(NTS SHEET 82J/2)

FIG 1

INTRODUCTION

Location and Access

The Ewin Creek coal licences (260-263,2221) are located in the Fording River Valley of southeastern British Columbia. They are approximately 11 kilometres northeast of Elkford, B.C. and about 43 kilometres north of Sparwood, B.C. (Fig. 1).

A paved highway, connecting Elkford to the Fording Coal surface mine, and secondary logging roads, allow easy access to the licences. A Crowsnest Forest Products (CNFP) logging road runs along the bottom of the Ewin Creek valley, with exploration roads leading off to the drillholes and adit sites.

Topography, Climate and Vegetation

Ewin Creek has a gradient of about 23 metres per kilometre and flows through the centre of the licences in a flat valley bottom that in places, is up to 400 metres wide. Two streams, Todhunter Creek and Unknown Creek, with gradients of about 38 metres per kilometre flow through the licences into Ewin Creek from the northeast. These creeks drain an area of approximately 80 square kilometres and carry large volumes of water during spring run-off.

Prominent mountains rise sharply from the valley floor. On the south side of Ewin Creek is the north end of Mount Banner which reaches an elevation of about 2,235 metres within the licences, some 680 metres above the valley floor. This slope has ephemeral streams carrying run-off during the spring and early summer. The vegetation is primarily conifer with thick brush undergrowth in the drainages. The top of the ridge is more open grassland with sparse conifers.

Between Unknown Creek and Todhunter Creek is Imperial Ridge reaching an elevation of about 2,045 metres, some 495 metres above the valley floor. The southeast facing slope has few ephemeral streams and is primarily open grassland and deciduous vegetation. The northwest facing slope has some ephemeral streams, and the vegetation is primarily conifer, with thick brush in the drainages.

Other topographic features in the licences include the south end of Todhunter Ridge which is mainly open grassland with deciduous and conifer vegetation at lower elevations. Between Ewin Creek and Unknown Creek there is another ridge reaching an elevation of about 1900 metres in the licences. It is mainly conifer with deciduous vegetation at lower elevations.

The climate and weather conditions in the Ewin Creek area are similar to that of Sparwood and Elkford, having pleasant summers and falls, rainy and wet springs and cold winters with moderate to high amounts of snow.

Utilities

The nearest electrical power source is the Greenhills mine site to the west of Ewin Creek. B.C. Tel maintains a telephone exchange to service Elkford and the mines in the area. A Canadian pacific Railway spur, connecting Sparwood with the Fording Coal operations and the Greenhills mine, runs near the west licence boundary. A natural gas pipeline near the west licence boundary services the Fording Coal mine.

Land Description and Ownership

During February of 1968, Kaiser Resources Ltd., acquired the coal rights on 43, 725 hectares of coal-bearing lands from Crowsnest Industries Ltd. The Ewin Creek licences were part of the acquisition and cover 980 hectares, of which about 63% or 608 hectares are coal-bearing.

In October of 1980 Kaiser Resources Ltd. was acquired by the British Columbia Resources Investment Corporation (B.C.R.I.C.) and in February of 1981 became B.C. Coal Ltd., a member of the B.C. Resources Group.

EXPLORATION WORK

A summary of exploration work completed to date is contained in Table 1. Reports detailing past exploration work are listed in the bibliography.

Exploration Work - 1981

From October 24 to November 12 of 1981 two diamond drillholes were drilled on coal licences 262 and 263. The holes E.V.-150 and E.V.-151 reached depths of 348.8 metres and 391.8 metres respectively. The drill rig used was a Longyear 44 utilizing H.Q. drill rods and a triple-tube wireline core-barrel. The drill used a mud/water drilling fluid with mud tanks set up beside the rig and water pumped from Ewin Creek. The drill is owned and operated by D.W. Coates Enterprises ltd. of Richmond, B.C.

Core samples were collected from both holes and taken to Sparwood where it was logged, photographed and stored. Copies of the lithology logs for E.V.-150 and E.V.-151 are contained in Appendix I and Ia respectively. Strip logs for each hole plotted at 1:1000 scale are contained in a pocket. Coal seams recovered from the drillholes were sampled and taken to the B.C. Coal lab for analysis. The results of the analyses are contained in Appendix II and IIa. Gamma, Neutron and Density logs as well as borehole deviation surveys were done on both holes by Roke Oil Enterprises Ltd. of Calgary, Alberta. Copies of these logs are contained in a pocket. Location surveys for each drillhole were done by B.C. Coal surveyors.

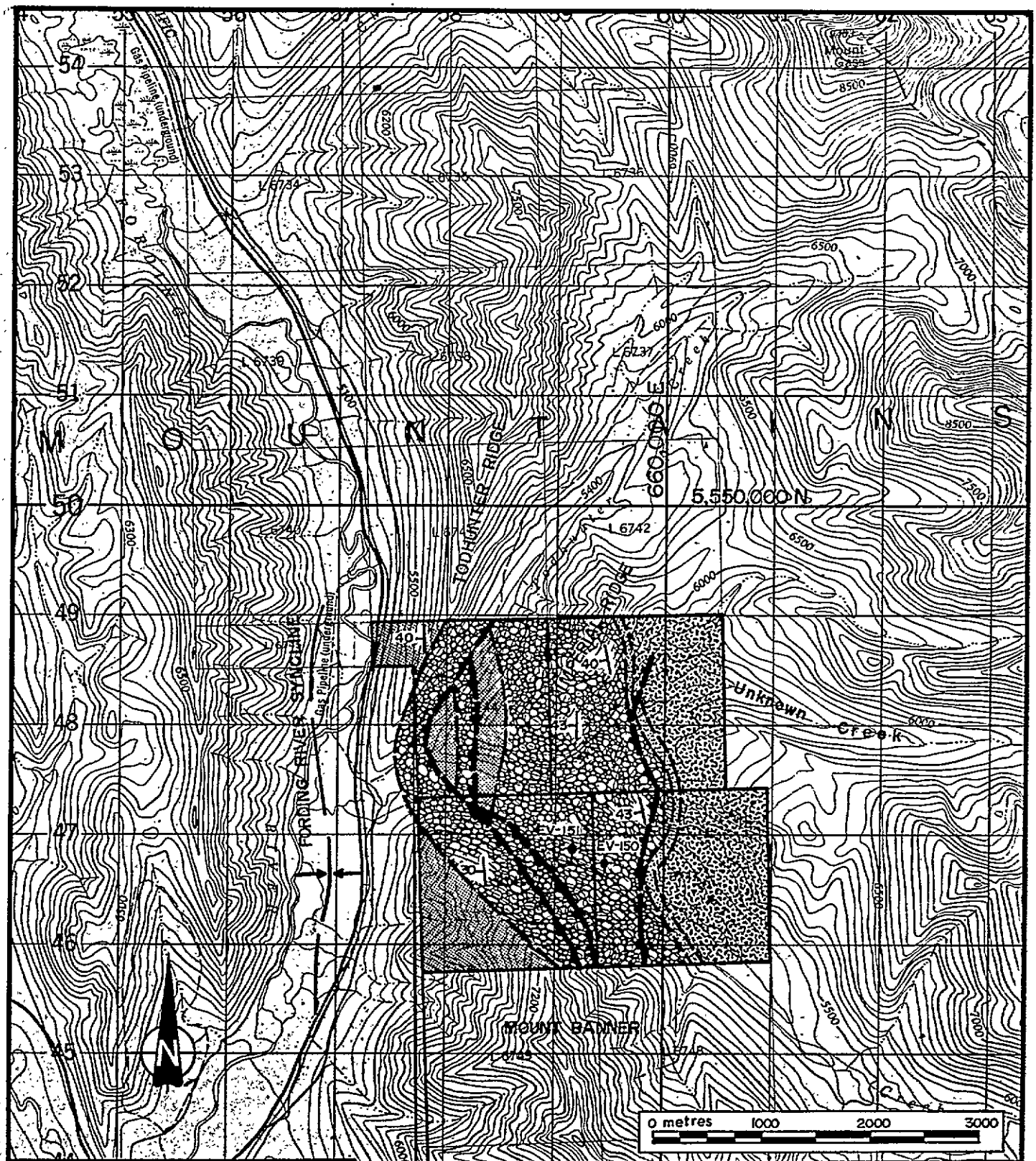
Prior to moving the rig on the licences the access road was upgraded and the drillpads were constructed by dozer. Two D-8H Caterpillar dozers were used in road upgrading, site preparation and rig moving.

RECLAMATION

Reclamation work on the licences included slashing the upgraded access road and slashing and general cleanup of the drillsites. One dozer was used to bury all existing adit portals within the licences.

TABLE 1
SUMMARY OF EXPLORATION WORK COMPLETED

Type of Work	1967	1972	1978	1979	1980	1981
Bulldozer work - Main Access - Sec. Access						
Roads Upgraded					road to adits up-graded	Road to drillsites
Drill Sites						2
Adit Sites				2 Adit sites		
Drilling - Rotary: no of holes - : total metres - Core : no of holes : total metres						2 holes 740.6m
Adits: : no of Adits : total metres					2 adits #28,#29	
Adit Reentry	Six adits re-opened and bulk sampled				81.5 m including X-Cuts.	
Survey			Underhill Eng. Set survey points	Hand Trenches were surveyed	Survey of adits	Survey bore-holes
Geology		Reconaissance mapping on licences 1"-400'	4 months of 1:5000 detailed surface mapping. Coal was hand trenched	Trenching on Tod Hunter ridge Completion of surface mapping 1:5000		Log drill core



Legend

JURASSIC LOWER CRETACEOUS — KOOTENY GROUP

- ELK Fm.
- MIST MOUNTAIN Fm.
- MORRISSEY Fm.
- FERNIE Fm.

- FORMATION CONTACT (PROJECTED)
- THRUST FAULT (PROJECTED)
- SYNCLINE (PROJECTED)

BC Coal

SPARWOOD B.C.

EWIN CREEK
C.L. 260-263,2221
(GEOLOGICAL COMPILATION MAP)

DESIGNED	JAH	DATE	FEB. 1982
DRAWN	PAT	SCALE	1:50,000
CHECKED		135-20-7	REV
APPROVED			

FIG. 2

GENERAL GEOLOGY

Figure 2 is a geologic compilation map of the licences. More detailed geologic data is shown on the 1:5,000 scale surface geology map and cross-sections in a pocket.

Stratigraphy

The major stratigraphic units within the Ewin Creek licences are the Jurassic Fernie Formation and the Jurassic-Cretaceous Kootenay Group.

a) Jurassic-Fernie Formation

Outcrops of the Fernie Formation were observed in the northwest end of Imperial Ridge. No detailed work was conducted on the outcrop. The formation has been described by various authors in other areas.

The lower part of the Fernie Formation is composed of dark grey silty shale which contains thin layers of ankeritic siltstone (Price, 1966).

The upper part is composed of rhythmically interbedded, fine-grained sandstone, siltstone and shale. Sandstones in the upper part are ankeritic or calcareous and are commonly laminated. Beds up to 30 centimetres in thickness occur, but are more commonly 1 to 8 centimetres thick (Jansa, 1972).

b) Jurassic-Cretaceous - Kootenay Group

The Kootenay Group was proposed by Gibson (1979). It is divided into three formations: the Morrissey, the Mist Mountain and the Elk.

(i) Morrissey Formation

The Morrissey Formation is further divided into the lower Weary Ridge Member overlain by the Moose Mountain Member. In E.V.-150 the Morrissey Formation appears in excess of 50 metres thick. Only the upper contact of the Moose Mountain member was mapped, no detailed measurements were done on the formation other than core description. The upper three metres of the member consists of uniform, thickly bedded, clean, coarse-grained quartz-chert sandstone. Below this it becomes more thinly bedded and varies

in grain size. Occasional thin shale bands and carbonaceous stringers occur. In outcrop it is a prominent cliff-forming sandstone on Imperial Ridge. It can be found on the ridge between Ewin and Unknown Creeks and in a drainage on Mount Banner.

(ii) Mist Mountain Formation

The Mist Mountain Formation appears in excess of 700 metres thick on Imperial Ridge and 1100 metres thick on Mount Banner. The anomolous thickness on Mount Banner is due to thrust faulting. The thickness on Imperial Ridge was obtained by projecting the total thickness of the Mount Banner section excluding the effects of faults.

The formation consists of interbedded conglomerate, coarse-to-fine-grained sandstones, siltstone, mudstone and coal. Drawing 135-20-10 shows a correlation between the two drillholes and the Imperial Ridge section.

Conglomerate bands occur as localized zones, usually associated with sandstones. The sandstones vary in thickness from 1 to 20 metres, are coarse-to-fine-grained, are usually cross-bedded and often contain silt and mudstone interbeds. The siltstone beds are usually laminated and show occasional cross-bedding. The mudstones range from grey to black in colour. The darker shades usually have plant detritus preserved along bedding planes. Coal seams of commercial quality and thickness occur within the formation.

(iii) Elk Formation

The contact between the Mist Mountain Formation and the overlying Elk Formation has been placed at the base of the first major sandstone or conglomerate overlying the uppermost major coal seam in the Mist Mountain Formation (Gibson, 1979). On Mount Banner the base of the Elk Formation has been placed at the base of a large sandstone unit above Adit 8 seam. It can be projected up the ridge to the licence boundary and down to Todhunter Ridge and the licence boundary to the north. On Imperial Ridge the contact has been projected on the southwest facing slope. The formation consists of interbedded conglomerate, medium-to-coarse-grained

sandstones with silt and shale interbeds. Thin lenses of needle coal occur in the Elk Formation.

Structure

The Ewin Creek coal licences lie on the east limb of the Fording River syncline. The beds dip between 30 and 50 degrees to the west and strike approximately north-south. Four thrust faults have been projected through the licence area.

Fault 1 (F_1):

A fault zone was intersected by E.V.-150 between 155.6 metres and 180.3 metres and is characterized by zones of angular breccia and healed fractures. By comparing E.V.-150 with E.V.-151 this fault was found to be a thrust dipping to the west approximately 35^{o} and displacing the section some 80 metres. The surface trace has been projected south to the licence boundary and north to the Fernie Formation. Cross-section B-B' illustrates this fault through the drillhole.

Fault 2,3 (F_2, F_3)

These are thrust faults suggested by D. Grieve of the B.C. Ministry of Energy, Mines and Petroleum Resources. They were projected from Mount Banner and help explain the thickening of the Mist Mountain Formation.

They are thought to dip about 45 degrees to the west. F_2 has a projected stratigraphic displacement of 135 metres, F3 has a projected stratigraphic displacement of 50 metres. They are illustrated in sections A-A' and B-B'. The surface trace is shown on the surface geology map.

Fault 4 (F_4)

This fault is also a thrust proposed to explain the thickening of Elk Formation between Todhunter Ridge and Imperial Ridge. It is projected with a west dip and displaces the section some 240 metres stratigraphically. Section C-C' illustrates this fault.

ECONOMIC GEOLOGY

The two drillholes intersected a total of five different major seams. These seams were sampled and a summary of the results for each hole are shown in Tables 2 and 3. The complete lab analyses are shown in Appendix II and IIa. Quality information on the seams from the adits is outlined previous reports listed in the bibliography.

3 Seam

Three seam is the lowest major seam in the section and occurs about 10 metres above the top of the Moose Mountain Member. A comparison of 3 seam in the two drillholes and Imperial Ridge is shown on drawing 135-20-12. The seam has been divided into 3 seam and 3 Lower seam due to a rock split which occurs. In trench G on Imperial Ridge 3 seam is 2.17 metres thick including some thin rock bands. The Imperial Ridge trench locations are shown on the Surface Geology map. The split is 0.89 metres of mudstone and 3L seam is 1.40 metres thick with some thin rock bands. In E.V.-150 3 seam is 3.95 metres thick. The split is 2.42 metres of sandstone and mudstone and 3L seam is 2.49 metres thick in this hole. In E.V.-151 3 seam is 3.56 metres thick with some thin bands of rock. The split is 0.59 metres of mudstone and 3L seam is 3.12 metres including some thin mudstone bands. Three and 3L seams are low volatile bituminous (lvb) coals with a volatile matter (V.M.) on a dry, ash-free (d.a.f.) basis ranging from 19.8-20.8% and a dry, ash-free fixed carbon (F.C. d.a.f.) ranging from 79.4 to 80.2%. The FSI ranges from 6 1/2 to 7 on a clean basis and the reflectance Ro is 1.41 for 3L and 1.45 for 3 seam in E.V.-150. Three seam makes up about 15% of the total estimated reserves for the licences, 45% of this or 33,855,974 tonnes is under less than 750 metres of cover.

4 Seam

Four seam occurs about 37 metres above the top of the Moose Mountain member. Drawing 135-20-13 is a comparison of 4 seam in the two drillholes and Imperial Ridge. In trench F on Imperial Ridge 4 seam is 4.11 metres thick with occasional mudstone bands. In E.V.-150 the seam is 5.64 metres thick. In E.V.-151 it is 4.74 metres thick and appears to have a small rider seam developing in the hanging wall. Four seam is a low volatile bituminous (lvb) coal with a V.M. (d.a.f.) ranging from 20.8 to 21.2% and

an F.C. (d.a.f.) ranging from 78.9-79.2%. The FSI is around 5 and the maximum mean reflectance in oil (Ro) is 1.40. Four seam makes up about 13% of the total estimated reserves and of this about 47% or 29,758,670 tonnes is under less than 750 metres of cover.

5 Seam

Five seam is the thickest seam encountered in the Ewin Creek licences. It occurs about 130 metres above the Moose Mountain Member. Drawing 135-20-14 is a comparison of 5 seam in the two drillholes and Imperial Ridge. Drawing 135-20-11 is a hanging wall structure contour map of 5 seam projected from drillhole and outcrop information. In E.V.-150 the total thickness of 5 seam is 14.63 metres. The upper 2.86 metres has numerous mudstone splits and was sampled separately. In E.V.-151 the total thickness of 5 seam is 15.27 metres with the upper 2.26 metres containing numerous mudstone splits. The thickness decreases to the north and in the two trenches it appears the upper zone of muddy coal encountered in the drillholes has become carbonaceous mudstone. In trench E on Imperial Ridge 5 seam is 10.36 metres thick with a few thin mudstone splits. In trench J on Imperial Ridge the seam is about 8.31 metres thick with some thin mudstone bands. The FSI is 7 and the maximum mean reflectance in oil (Ro) is around 1.32. Five seam is a medium volatile bituminous (m.v.b.) coal with a V.M. (d.a.f.) range between 22.8 and 25.3 and an F.C. (d.a.f.) range of 74.7-77.2%. Five seam makes up about 32% of the total estimated reserves and of this about 48% or 76,564,604 tonnes is under less than 750 metres of cover.

6 Seam

Six seam occurs about 185 metres above the top of the Moose Mountain Member. It was trenched on Imperial Ridge (trench D) and is 4.42 metres thick including a 1.07 metre rock split. The seam appears to pinch out to the south and is less than 1 metre thick when encountered in the two drillholes. The reserves for six seam were calculated for the Imperial block and included the rock split. It makes up about 4% of the total estimated reserves.

7 Seam

Seven seam occurs about 265 metres above the top of the Moose Mountain Member. In trench C on Imperial Ridge it is 4.29 metres thick. In E.V.-151 it is 2.95 metres thick. It makes up about 9% of the total estimated reserves in the licences.

8 Seam

Eight seam is 3.43 metres thick in trench B on Imperial Ridge and 5.30 metres thick in Adit 29. It accounts for about 9% of the total estimated reserves of which 86% or 38,980,000 tonnes is under less than 750 metres of cover.

10 Seam

Ten seam is 5.05 metres thick on Imperial Ridge and 5.12 metres thick in Adit 28. It accounts for about 10% of the total estimated reserves of which about 86% or 86,250,000 tonnes is under less than 750 metres of cover.

Upper Seams

Five seams greater than 1.50 metres thick occur above 10 seam. They each have adits driven in them and range in thickness from 1.77 metres to 3.91 metres. The combined total of estimated reserves for the upper seams accounts for about 4% of the total estimated reserves on the licences.

TABLE 2

COAL QUALITY SUMMARY

D.D.H. E.V. - 150

Seam Intercepts (m)	Seam No.	True Thickness	Core Recovery	Raw Coal		Clean Coal							Heating Value	
				Ash	FSI	Ash	V.M.	V.M. (daf)	F.C.	FSI	S	DDM's	cal/g	Ro
59.60- 62.90	5	2.86		57.8	1	10.4	22.5	25.1	67.1	7	0.52	778.1	7,836	1.24
62.90- 76.49	5	11.77	85.0	17.4	6	8.1	20.4	22.2	71.5	7	0.34	32.7	7,970	1.32
251.49-257.71	4	5.64	71.6	24.5	2	7.7	19.2	20.8	73.1	5	0.42	1.6	7,918	1.44
277.77-282.16	3	3.95	68.1	32.6	2	8.8	18.1	19.8	73.1	6.5	0.51	23.9	7,982	1.45
284.85-287.62	3L	2.49	50.5	14.1	2	7.9	19.2	20.8	72.9	6.5	0.38	60.1	7,995	1.41
293.35-293.90		0.49	100	13.0	7.5	8.3	19.7	21.5	72.0	7.5	0.50	245.2	7,953	1.44
297.04-297.80	M	0.68	76.0	14.4	3.5	7.6	21.7	23.5	70.7	7	0.53	992.4	8,108	1.34

TABLE 3
COAL QUALITY SUMMARY
D.D.H. E.V. - 151

Seam Intercepts	Seam No.	True Thickness	Core Recovery	Raw Coal		Clean Coal						Heating Values	Rō
				Ash	FSI	Ash	V.M. (daf)	V.M.	F.C.	FSI	S	DDM's	cal/g	
7.29- 11.65	8	3.88	42.7	17.7	6.5	6.1	25.3	26.9	68.6	6.5	0.55	9.8	8,056	1.13
17.01- 21.16	8L	3.70	41.9	50.8	5.5	8.5	25.9	28.3	65.6	7	0.62	435.9	7,901	1.13
29.27- 30.18		0.81	100	23.8	6	7.6	25.1	27.2	67.3	7.5	0.94	563.4	7,987	1.17
44.13- 44.88		0.61	65.2	20.4	7	8.7	24.3	26.6	67.0	7.5	0.84		7,861	1.22
64.63- 65.24		0.53	85.0	19.9	7.5	6.1	24.7	26.3	69.2	8	1.07		8,107	1.18
82.20- 85.43	7	2.95	39.6	21.6	6	9.3	22.2	24.5	68.5	7	0.60	175.4	7,657	1.18
97.59- 98.84		1.07	100	15.3	2.5	8.5	20.0	21.9	71.5	3	0.68		7,228	1.22
169.82-170.73	6	0.82	80.0	41.3	4	8.5	21.7	23.7	69.8	8.5	0.81	3.0	7,935	1.16
216.55-218.96	5	2.26		41.4	1.5	8.2	20.2	22.0	71.6	7	0.54	19.7	7,905	1.30
218.96-232.81	5	13.01	81.4	22.9	2.5	8.3	21.5	23.4	70.2	6	0.35	7.3	7,925	1.35
326.92-327.56		0.67	100	37.9	1	6.4	19.2	20.5	74.4	6	0.58		8,154	1.43
328.26-333.45	4	4.74	79.4	19.1	3	7.4	19.5	21.1	73.1	5.5	0.43	7.7	8,009	1.40
353.72-357.62	3	3.56	88.3	32.3	2	9.5	18.6	20.6	71.9	7	0.42	51.8	7,883	1.44
358.26-361.68	3L	3.12	88.4	19.4	7	8.4	21.1	23.0	70.5	8.5	0.55	264.5	7,924	1.44
363.50-364.39		0.72	100	9.8	5.5	6.9	18.7	20.1	74.4	7	0.45		8,123	1.44

COAL RESERVES

The estimated total coal in place reserves for the Ewin Creek licences is about 500 million tonnes. Of this approximately 60% or 300 million tonnes occurs under less than 750 metres of cover. Table 4 shows the breakdown by seam of the reserve estimate. Three, 4 and 5 seams account for about 60% of the total reserves with about 47% of the reserves for each seam occuring under less than 750 metres of cover.

Method of Reserve Estimate

The licences were divided into three blocks and bounded as shown on the surface geology map. The coal seams in each block were bounded by outcrop, 750m coverline, licence boundary or fault boundaries.

The surface area of each seam was measured using the 1:5000 scale map and a planimeter. The vertical thickness was taken from surface measurements or borehole thickness. The area times the vertical thickness gives a volume. The volume is multiplied by Specific Gravity to get tonnes.

S.G. is calculated by the following:

S.G. = 1.250 + 0.011 (% raw ash of seam) (Samuelson, 1981)

This formula was derived by Samuelson as additional work to studies done by Taylor on Ash related to Volume coal conversion. The raw data for Samuelson's derivation was taken from Greenhills samples.

The raw ash data was taken from borehole, adit and trench data.

For the Imperial Block the vertical thicknesses and raw ash was taken from trench data. The seams are bounded by outcrop, the licence boundary and the 750 metre coverline.

For the Valley block the thicknesses were averaged between the drillholes and trenches, the raw ash data was taken from the drillholes for seams they intersected and adits or trenches for the other seams

For the Banner Block the vertical thicknesses and ash data were taken from the drillholes for seams they intersected. The other seam data was taken from adit or trench data.

Classification of Reserves

Proven - Proven reserves are tonnes of coal in place computed from observations (i.e. drill holes, adits outcrops, mine workings, etc.) spaced at intervals of 0.8 km or less in areas of good geological continuity. Seams should be greater than 1.5m thick and under less than 750 metres of cover.

Partially Explored - Partially explored reserves are tonnes of coal in place computed partially from observations spaced at intervals of 0.8 km to 2.4 km apart and partially from reasonable geological projections. Seams should be greater than 1.5 m thick and under less than 750 m of cover.

Projected - Projected reserves are tonnes of coal in place where little direct evidence is available but where geological studies have indicated continuity of the coal bearing measures. Coal seams and seam thicknesses are projected from adjacent areas.

The majority of the reserves in the Ewin Creek licences are considered to be projected. The Banner Block, where the majority of exploration work has occured can be considered as partially explored reserves.

TABLE 4
EWIN CREEK COAL LICENCES PROJECTED RESERVE ESTIMATE
TONNES OF COAL

	Seam No.	Vert. th (m)	S.G. gm/cc	Reserves to 750 m cover	Total Coal In Place
Imperial Block	1	3.84	1.39	5,622,214	14,173,536
	2	2.73	1.41	4,142,421	10,105,604
	3	4.65	1.51	7,569,482	18,129,841
	4	5.73	1.43	9,065,327	20,930,808
	5	13.52	1.50	24,268,576	50,064,209
	6	5.77	1.46	10,648,014	20,169,856
	7	5.60	1.73	12,284,384	21,762,881
	8	4.48	1.63	9,307,787	15,754,244
	10	6.59	1.33	11,091,051	17,707,803
				93,999,256 Total	188,798,780 Total
Valley Block	3	6.59	1.44	11,769,477	15,826,281
	4	5.71	1.49	9,418,247	12,459,747
	5	15.56	1.53	17,783,680	24,901,913
	7	4.42	1.49	5,202,782	5,202,782
	8	5.64	1.44	6,012,014	6,012,014
	10	6.59	1.33	5,896,398	5,896,398
				50,772,598 Total	70,299,135 Total
Banner Block	3	7.56	1.44	14,517,015	39,193,762
	4	5.71	1.49	11,275,096	30,154,126
	5	16.58	1.53	34,512,348	84,892,904
	7	4.42	1.49	19,770,571	19,770,571
	8	5.64	1.44	23,660,251	23,660,251
	10	6.59	1.33	24,510,485	24,510,485
				118,098,860 Total	222,181,200 Total
Upper Seams	Adit #1	3.56	1.38	7,281,998	7,281,998
	Adit #2	1.77	1.45	3,430,770	3,430,770
	Adit #5	2.20	1.41	2,415,583	2,415,583
	Adit #7	3.91	1.41	3,725,477	3,725,477
	Adit #8	2.85	1.48	2,636,251	2,636,251
				19,490,179	19,490,179

Total Reserve Estimate to 750 m cover:
297,817,800 tonnnes

Total Coal In Place Estimate:
500,769,290 tonnes

Conclusions and Recommendations

The two drillholes in the licences indicate there is good quality metallurgical coal of significant volume in the lower part of the Mist Mountain Formation. Seams 3, 4 and 5 seams make up the bulk of the estimated reserves in the area. Five seam is the thickest of the seams in the licences and preliminary quality analysis indicates it to be good metallurgical coal, very much like the 10 seam coal presently being mined at Balmer Operations.

The structural geology of the area is very complex. The present interpretation is based largely upon projection. Further exploration by way of drillholes is required to help understand the structure of the area. An adit in number 5 seam in the Banner Block is recommended to obtain a reliable bulk sample and analysis of this seam. Adits in 3 and 4 seam in the same area would also prove useful in obtaining reliable quality data.

EWIN CREEK C.L. 260-263, 2221

STATEMENT OF COSTS

ON PROPERTY COSTS

Salaries (geologists, supervision, core logging, surveying).	$ 14,830.40
2 D8H Dozers @ $95.76 per hr. (c/w angle blade and ripper) All Found Rate	13,693.68
D.W. Coates Enterprises Ltd. (Contract Drilling)	80,185.68
Roke Oil Ltd. (Contract downhole logging)	4,684.77
Applied Reclamation Costs	3,601.26
Sampling and Testing	8,102.99
Freight (dozer transport)	677.46
Truck Rental (1 for 30 days)	655.00
Radio Communications	53.19
Materials and Supplies	38.63

OFF PROPERTY COSTS

Report Preparation (geological interpretation, drafting, report writing)	6,732.84

TOTAL COSTS $ 133,265.90

R. REGIER
MANAGER, MINES ACCOUNTING

STATEMENT OF QUALIFICATIONS

J.A. Huryn:

B.SC. Geology, University of Calgary
Calgary, Alberta 1979

Practical: 3 summers coal mapping experience as a student and 3 years in coal mapping, structural interpretations, reserve estimation and licence evaluation with Kaiser Resources Ltd. and B.C. Coal Ltd.

BIBLIOGRAPHY

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Samuelson, L.B., — 1973 Ewin Creek Licences Progress Report, March 1973. Kaiser Resources Ltd. Exploration Geology Report.

Samuelson, L.B., — Ash related Volume to Weight Coal Conversion. Additional work to a report of the same title by G. Lynn Taylor, 1982.

Taylor, G.L., 1980 — Ash Related Volume to Weight Coal Conversion.

BC Coal LOG

AREA: Elk Creek HOLE No: EV-150 LOGGED BY: J.A. Huryn DATE: Oct 27/81 PAGE: 1 OF: 19

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D. m	O.B. m	CASING m	WATER LEVEL m	ANG.	AZIM
DDH	EV150	EWNCR	4	05546	06594	1620	CEL	348.8	27.4	27.4	19.4	90	000

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO m.	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
24/10/81.	01/11/81			HQ·33	348.8			FED	ROKY		ROKTAH	

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
	27.4		metres																															
OVB	90		feet.																															
	91																																	
	194			6	SASM						M	2	2			D		0	0	3	0	4	SLSM							62			26	3.2/5	64
			The uni																															
			Weathe																															
			18.8 - 19																															
	9.7																																	
	314				MDSM							7	0			N	L		0	0	2	0												46.	4.4/5.0	88
			Rich																															
			Lower																															
			Lower																															
	139																																62	10/11	91
	413			8	SLSM											L	M		0	0	3	0	2	MDSM							66				
			36.5 - 37																															
			40.6 - 42																															
			Core																															
	1341				CBMD											U			0	0	1	0													
	453				42.2 - 42.4 - Fossils in fractures																															

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BCCoal LOG

AREA: Elkview Crk. HOLE No: EV-150 LOGGED BY: JAH DATE: PAGE: 2 OF: 12

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6 7 8		9 10 11 12		13	14	15 16 17 18	19	20 21	22	23 24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44	45 46	47	48	49	50	51 52	53 54	55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
																														47	6	72	L			
																														52	0	78	M	72	10/10	100
	1 4 5 4																													62	5	63	M			
4	4 7 8		9 6 0				C O A L											0 0 1 0													68		82	10/10	100
					45.3		45.9 - D-C band, blocky																												92	10/10	100
					45.9		46.0 - Coal																														
8					46.0		46.1 - D-C, hard, blocky																												96	3.6/4.0	90
					46.1		46.4 - C, soft, shaly																														
							46.4 - D-C, hard, blocky																												106	10/10	100
							47.2 - Coal																														
12							47.3 - C-D-U hard, banded																														
							47.5 - C-D-U																														
							47.6 - C-D-U, hard,																														
							47.65 - Mdst.																														
							47.8 - C-D-U, hard, banded																														
16																																				
	1 5 4 6																																			
20	5 0 8						C B M D									N		0 0 2 0						2							6 8				
							Broken up unit																														
					48.5		48.5 - Coal, bright, u																								7 1	6	5 9	M			
					48.8		48.8 - Coal, hard, blocky, V																														
24					49.4		49.4 - Coal, soft,																														
					50.6		50.8 - C-soft, shaly																														
	1 6 9 0																																			
28	6 2 0						S L S M						4.5			L M		0 0 4 0						1							6 8				
					Pos		ft																														
					51.8		52.0 - C																														
					Occasional																																
32					The		coal is																														
ANL	DEPTH		REC %		SEAM		RAW: ASH, FSI			CLEAN: FLOAT, MOIST		ASH		V.M.		V.M.(DAF)		F.C.	FSI		SULF		D.D.M.		YIELD		B.T.U.		VERTICAL THICKNESS					

BC Coal LOG

AREA: Ewin Crk HOLE No: EV-150 LOGGED BY: JAL DATE: PAGE: 3 OF: 12

TYPE	HOLE NO.	AREA	G	LAT.	DEP	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE	START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/	/	/											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	MAJOR QUALIFYING MATERIAL: AMOUNT	MINOR QUALIFYING MATERIAL: NAME	MINOR QUALIFYING MATERIAL: AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	ROCK II: TYPE MODIFIER	ROCK II: ROCK NAME	ROCK II: QUALIFYING MATERIAL: NAME	ROCK II: QUALIFYING MATERIAL: AMOUNT	STRUCTURE: FRACTURES: INTENSITY	FRACTURES: PRIMARY JOINT ANGLE	FRACTURES: SECONDARY JOINT ANGLE	FRACTURES: RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT: TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6 7 8		9 10 11	12	13	14	15 16 17 18	19	20	21	22	23	24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44	45	46	47	48	49	50	51	52	53 54 55	56	57	58 59	60	61 62 63	64 65 66	67 68 69
																																8	1	6	6 8	M		10/	
																																9	4	0	6 2	M	116	10	100
	2 1 5 3																															1	0	3	4 5 1	H		9.8/	
4	7 1 6					S	A	S	N	S	L			L	5	3			L N	0 0 5 0							3	3	0						5 9		126	10	98
				62.9'		F		Coa	ly	bra	n	f	ra	ag		fro																1	0	9	2 5 0	M		8.5/	
				63.9 - 64.1				Sli	ck	en	si	de	d			fa	ce		4/	coa	l	a	n	d		be	d	ing		pl	an	e	1	1	7	0 5 2	M	136	10	85
																																1	2	7	8 6 0	L		9.5/	
8																																					145	9.0	106
																																				154	8.8/	97.8
	3 3 4 4																																					9.0	
12	1 2 2 8				88	S	L	S	M					L					L M D	0 0 4 0	2	S	D	S M			4	5	5						5 7		164	10/	100
				79.8 - 80.5				1	st	ri	ng	er	s	of		bri	gh	t		fr	ac	tu	re	d														10	
				80.1 - 80.2				Co		li	ng					fr	ac	tu	re																		174	9.7/	97
				80.4 - 80.6				Sli	ck	en	si	de	d			fa	ce			fr	ac	tu	re															10	
16				80.7 - 80.8				ro	un	de	d					sh	al	e		ro	ck																184	10/	100
																																1	3	6	2 6 2	M			
																																1	4	5	9 5 6	H			
	5 1 6 6 7																															1	5	6	6 5 6	H			
20						S	H	S	M					L	5	3			L N	0 0 6 0							1	2	N						5 8				
				123.1		Co	al		ti	ll	y		fr	ac	tu	re	d																1	6	7	2 6 0	M			
				123.6 - 124.2				Ash		ch	ip	s	-	lo	ng		th	in															1	8	2	0 5 7	M			
				125.5 - 125.7				Clay	ey		si																														
24				occasional		Ca		lc	ul	at	ed		fr	ac	tu	re	s																							
				155.0 - 160.7		Coa	rse		gr	ai	n		Sa	nd	s																									
				Lower		Co	al		se	am		is		sl	ab	by																								
				154.6 - 155.0				+		hi	gh			Sp	ar				Ca	lc	ite		fr	ac	tu	re	s													
28				161.2 -		Flo	at		Co	al									1½" x 1½"																					
32																																									

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal LOG

AREA: Ewin Crk HOLE No: EV-150 LOGGED BY: JAH DATE: 81/10/29 PAGE: 4 OF: 12

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM
DATE	START / FIN. Day, Mo., Year	SIZE		TO / SIZE	TO / SIZE	TO / GEO. LOG	CO.	D. CO.	GEOL.				

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6 7 8		9 10 11 12		13	14	15 16 17 18	19 20 21		22 23 24		25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44 45 46		47	48	49	50 51	52 53 54 55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
	19 10				8		SLSM					C	S				L N D	0 0 4 0	2	1	S H S M			3	4	0				6 0		196	4.7 / 5.0	94
							Sandstone																									201	4.5 / 5.0	90
							198.5 - Ca																									208	6.0 / 7.0	86
							186 - Band																									214	4.5 / 6.0	75
	59 10																																		
	19 55						MDSM										N	0 0 2 0												6 0		222	6.3 / 8.0	78.2
							196.9 - 198.6 - C										1 - C															227	5.9 / 5.0	118
	62 03						200.3 - 201.0 - Co										1 t															236	6.5 / 9.0	72.2
	20 63				5		COAL										N	0 0 2 0	5		MDSM			2						6 0		242	5.9 / 6.0	98.3
	13.9						Grade with																												
	14 42						Thin to																												
	25 09		85 0				COAL										H.A														6 0				
							195.7 - 196.0 - Ash										for overall																		
							200.5 - 201.0 - Ash																														
							202.2 - 203.7 - Dull										Dull																		
							- 204.3 - Mud																														
							- 204.8 - Coal										soft Dull																		
							- 205.6 - Coal																														
							Ash - 206.3 - Mud																														
							- 207.0 - Mud																														
							- 208.8 - Coal																														
							- 211.2 - Coal																														
							- 212.2 - Coal																														
							- 212.5 - Rock																														
							- 214.0 - Coal																														
							- 215.4 - Mud																														

Note: - 85% recovery
- 250.9

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal GEOLOG

AREA: Ewin Cck HOLE No: EV-150 LOGGED BY: JAH DATE: PAGE: 5 OF: 19

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE	START	FIN.	Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/	/		/ /											

Line	Depth to end of interval described (4–8)	Rock I characteristics (13–37)	Rock II (38–46)	Structure: footage of C-B angle measurement, tenths, C-B angle, reliability (53–60)	Core footage to (61–63)	Length (64–66)	Core recovery (67–69)
1		215.4 - 218.4 - Mdst.					
2		-220.3 - Cd-V, hard, banded			248	5.2/6.0	86.7
3		-222.2 - Core loss					
4		-222.0 - Cd-V banded and lined			256	7.4/8.0	92.5
5		→ There was a gain in footage. This run has 112% recovery, it makes					
6		up for the low recovery in the previous run.			266.	9.8/10.0	98
7						10	
8		227.0 - 230.9 - Cd-V banded			276	10/10	100
9		-231.0 - C-dull dirty coal					
10		-233.5 - Cd-V hard banded			286	9.8/10	98
11		-233.8 - D-C hard					
12		-238.0 - core loss			295	9.0/9.0	100
13		-241.9 - Cd-V hard banded					
14		-242.0 - Core loss					
15		-242.4 - C-D hard					
16		-245.2 - Cd-V hard banded					
17		-245.3 - Mdst					
18		-247.2 - Cd-V hard broken					
19		-248.0 - Core loss					
20		-248.2 - Core loss					
21		-250.2 - Cd-V, hard banded					
22		-250. - Mdst.					
23		-250.9 - Cd-V, hard banded					
24							
25				2 5 8 4 6 3 L			
26				2 6 6 6 6 1 M			
27	7 9 6 2						
28	2 6 1 2	11 D 5 M C 0 1 N 0 0 2 0	4 6 4 0 5	6 2			
29		251.2 - 251.5 - Coal, broken, dull					
30		Gradational lower contact.					

ANL	DEPTH	REC %	SEAM	RAW ASH / FSI	CLEAN FLOAT / MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal LOG

AREA: Elk Crk. HOLE No: EV-150 LOGGED BY: JAH DATE: 81/10/30 PAGE: 6 OF: 12

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6 7 8		9 10 11 12		13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44 45	46	47	48	49	50 51	52	53 54 55	56 57	58 59	60	61 62 63	64 65 66	67 68 69
																													2 8 2	6 6	9 M		10	
																													2 8 6	8 7	1 M	305	10	100
4	29 32				7		S L S N					L S					L N D	0 0 5 0	3		S A S M			3 2 0					2 9 6	2 6	0 L		10	
																														6 7		316	11	91
																																326	9.9 / 10	99
	29 24																																	
8	29 50				6		M D S N											1 0 0 2	4		C O A L			3						6 7		336	9.7 / 10	97
																													3 0 8 0	6 0	L		10	
	10 44 5 2																												3 1 4 6	6 8	M	346	10	100
12	34 25				7		S L S N					L S					L N D	0 0 5 0	3		S A S M			3 6 0					3 1 8 2	6 4	M		9.8 / 10	
																														6 6		356		98
																													3 3 0 4	6 5	M		9.7 / 10	
																													3 3 7 2	7 1	L	366		97
16																													3 4 7 5	6 6	M		10 / 10	
																																376		100
																													3 5 3 5	7 3	L		9.6 / 10	
																																386		96
20																																		
	13 10																																	
24	40 05						S A S N					L S					L N D	0 0 5 0						1 3 5										
																													3 6 7	7 5	H			
																													3 7 2 8	7 2	M			
28																													3 8 0 4	5 5	L			
																														6 2				
																													3 8 4 0	6 0	M			
32																																		

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal GEOLOG

AREA: Ewin Crk. HOLE No: EV-150 LOGGED BY: JAH DATE: 81/10/30 PAGE: 2 OF: 12

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE	START	FIN. Day, Mo. Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/	/	/ /											

	PRIMARY CONTROL (1–3)	DEPTH TO END OF INTERVAL DESCRIBED (4–8)	RECOVERY % (9–12)	ROCK % OF INTERVAL (13)	ROCK NAME (15–18)	ROCK I CHARACTERISTICS (19–33)	COLOUR MUNSELL SYSTEM (34–37)	ROCK II: ROCK % OF INTERVAL (38)	ROCK II: ROCK NAME (40–43)	FRACTURES (47–52)	FOOTAGE OF C-B ANGLE MEASUREMENT (53–57)	C-B ANGLE (58–59)	RELIABILITY (60)	CORE FOOTAGE TO	LENGTH	CORE RECOVERY
						378.7 7 Thin V. bands					4070	67	M		10	
						379.9					3888	72	M	396	10	100.
						381-382.6 - Thin V-bands					4224	62	L		6.2	
4						382.2 - 382.8 V - Cd. band								403	7.0	88.6
						Occasional thin coaly bands occur in this part.									8.0	
						This sandstone coarsens gradually down section.								411	8.0	100
						391.5 - becomes coarse grained.									9.3	
8						Sharp lower contact - Thin V band. Lam. SLSH/MDSH.								420	9.0	103
															10.2	
														430½	10½	97.1
		13680													4.5	
12		4487		6	SLSN	LZD	0040	4	SASN	464		65		436	5½	81.8
						400.5-411.0 - Muddy zone [illegible] this unit - this zone (coaly)					4279	65	L		4.0	
						material [illegible] bedding [illegible]					4370	68	M	440	4.0	100.
						- this [illegible] the [illegible] is a [illegible] up [illegible]									9.3	
16						the rest [illegible]								450	10.0	93
						428.5-431.5 - Soft deformation in SASN.									6.4	
						435.0 ? Ca vein in healed fracture.								456	6.0	107
						435.2									9.6	
20						438.4-438.6 - Possible small fault. Ca in fractures, appears broken than healed.								466	10.0	96
						Gradational lower contact									9.7	
														476	10	97
		13902													2.2	
24		4560			SASN	L5 41 1 ZL	0050					61		481	5.0	44
						A highly X-bedded sandstone within the above unit.				78624	4512	71	L			
						Abrupt contact with lower unit.					4669	50	L			
28																
		14235														
32		4669		6	SLSN	LZD	0040	4	SASN	58536		61				
						466.9 - Thin Ca veins in healed fractures.										
						Fairly sharp lower contact.										

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal — DEG

AREA: Elk Crk HOLE No: EV-150 LOGGED BY: JAH DATE: 81/11/02 PAGE: 8 OF: 19

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR	MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6 7 8		9 10 11 12		13	14	15 16 17 18	19 20 21		22 23 24		25	26	27	28	29	30 31 32 33		34 35 36 37	38	39	40 41 42 43	44 45 46		47	48	49	50	51	52	53 54 55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
																														4 7 5	5	4 7	17		5.0	
																														4 7 7	5	5 2	17	486	5.0	100
	1 4 7 5 6																													4 8 7	8	7 9	14		9.3	
4	4 8 4 0						S A S M							5 4			L N D		10 0 5 0						4 1	5	5 2				5 9		496	10	93
							L to bed	of	f	i.e.							M ne.		i																9.9	
							477.2 - 477.7 -			Thi		Ca					lo																		506	10	99
							- Cong										476 - 48																		9.7	
8							48 S																											516	10	97
							482.0			Thi		Ca					veins		in																5.4	
							483.0																											522.	8.0	67.5
							483.5 - 484																													
12							483.5 - Sm																													
							Abrupt																									4 9.5	8	6 5	6			
																														5 0	7	2 4	8			
	1 5 5 6																													5 1	4	2 6	1			
16	5 1 0 9				8		S L S M							5 1			N L D		E 0 0 4 0	R		S A S M			9 6 3							5 8				
							485.5 - 486.0 -			Sil		sides																									
							488.6 - 488.8 -			Thi		V-																									
							489.1 - 489.7 -			Thi		l-																									
20							491.0 -			Thi		Ca																									
							494.4 - 494.5 -																															
							496.9 -																															
							497.2 -																															
24							498.7 -																															
							486.9 - 497.3 -																															
	1 5 5 6 4																																			
28	5 1 0 5						BRE M																										5 8			
							Mud																														
							Bedding																														
	1 5 5 6						No																													
32	5 1 5 3						S A S M							5 5			L N I		D 0 5 0														5 8			
							Interbed																														

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BeCal OGG

AREA: EWIN CRK HOLE No: EV-150 LOGGED BY: JAH DATE: 81/4/02 PAGE: 9 OF: 19

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE	START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/	/	/											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL NAME	MAJOR QUALIFYING MATERIAL AMOUNT	MINOR QUALIFYING MATERIAL NAME	MINOR QUALIFYING MATERIAL AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE MAJOR	TEXTURE MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL NAME	QUALIFYING MATERIAL AMOUNT	STRUCTURE: FRACTURES INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6 7 8		9 10 11 12		13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30	31 32 33	34 35 36 37	38	39	40 41 42 43	44 45	46	47	48	49	50	51 52	53 54	55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
																														5 2	2	9	5 0	M		10.3	
																														5 3	6	5	5 5	M	532	10	103
	1 6 5 9 2																													5 4	3	0	6 2	M		9.9	
4	5 5 4 1				F		S L S M					A 5					B M		0 0 3 0	3		M O S M			9 5 0								5 7		542	10	99
								516.2 - 516.8 = Siltst. s/a.																												10		
								516.8 - 517.2 = Sltst. f/a.																												552	10	100
								517.2 - 520.8 = Sltst. f/a.																															
								520.8 - 522.0 = Coal w/																												562	10	100
8								522.0 - 524.0 = Sltst. f/a.																															
								540.3 - 542.0 = Sandy																												572	10	100
								548.2 - 568.6 = Interbd.									V																					
								Grad. lower contact.																												583	10.1 / 11	91.8
12																														5 7 0	7	7 0	L	586	3.0 / 3.0	100
	1 7 8 4 4																																			1.8	
16	5 8 6 0				B		S A S M					F					L D Z		0 0 5 0	2		S L S M			5 5 2 3 0							5 7		588	/ 2.0	9 0
								Highly																													
								564.0 -																													
								564.6 = Thin																														
20								565.0 -																													
								569.0																													
								572.4 - 576.5 = Blu																															
								575.0 - 578.3 = Mod.																															
24								578.3 - 580.0 = Highly																															
								582.2 - 583.0 = Very																															
								583.0 - 586.0 = Mod.																															
28																																					
	1 5 3 4																																				
32	5 9 1 5						8 R Z M																										5 7				
								Hi/ dense																														
								Coal is																														

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal Log

AREA: Elan Crk. HOLE No: EV-150 LOGGED BY: JAH DATE: 21/11/02 PAGE: 10 OF: 19

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE	START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/	/	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS
1 2 3	4 5 6	7 8	9 10	11 12

ROCK I CHARACTERISTICS

ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	MAJOR QUALIFYING MATERIAL: AMOUNT	MINOR QUALIFYING MATERIAL: NAME	MINOR QUALIFYING MATERIAL: AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM
13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30 31 32 33	34 35 36 37

ROCK II

ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	QUALIFYING MATERIAL: AMOUNT
38	39	40 41 42 43	44 45	46

STRUCTURE

FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY
47	48 49	50	51	52 53 54 55 56	57	58 59	60

CORE RECOVERY

CORE FOOTAGE TO	LENGTH	CORE RECOVERY
61 62 63	64 65 66	67 68 69

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

Row 1 (4)
- 568.8 - 597.1 - Rather big [illegible] Lots of Ca-
- Lots of Ca-

Row 4
- 605

Row 5
- 600 7 5 7 M
- 610

Row 6 (8)
- 15 4 18 / 6 0 4 1 — B — S A S N — 3 — D Z L N — 1 1 — 2, S L S M — F 7 5 — 57
- This unit has [illegible] bed. [illegible] fine
- The sands are [illegible] fine [illegible] trained
- 602.6 - 604.1 m [illegible] coarse
- Lower contact [illegible]

Row 8 (12)
- 620

Row 9 (16)
- 15 4 6 / 6 1 2 2 — S L S N — 7 1 — I I N — 0 0 0 0 — F 8 0 1 M — 57
- 607.4 - 608.0 - V- beds in fine [illegible]
- 608.8 - [illegible] - beds [illegible]
- 611.2 - 612.2 - V beds in fine [illegible]
- Moderately [illegible] contact

Row 13 (20)
- 15 9 15 / 6 2 0 4 — S A S N — D Z N — 1 — F 9 6 — 57
- Numerous thin Vitrain bands [illegible] fine [illegible]
- 614.7 - 615.1 - Ca veins in [illegible]
- 618.6 - 618.9 - Slickensided [illegible]
- 619.2 - 620.4 - Highly fractured [illegible] Possibly [illegible] fault
- cavities are [illegible] Ca in [illegible]
- Zone. Lower contact [illegible]

Row 16 (28)

BC Coal LOG

AREA: Elk Col. HOLE No: EV-150 LOGGED BY: JAH DATE: 81/11/03 PAGE: 11 OF: 19

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6	7 8	9 10 11 12		13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44 45	46	47	48	49	50	51 52	53 54	55	56 57	58 59	60	61 62 63	64 65 66	67 68 69
																													63	40	67	H		10.9/11	
																													63	66	58	M	631		99.1
	19 3 0 4																												64	72	69	M		5.0/5.0	
4	63 00				9		SLSM						1			D		0 0 4 0	1		SHSM	1									68		636		100
										Tr. sh.							interbd.																	9.4/10	
								628.2 - Th. U. bench																									646		94.
								- Abrupt Lower cont'd.																											9.6/10	
8																																	656		96
																																	8.4/10	
	19 8 7 0																																666		84
12	16 52 0						SHSM						1			LZM		0 0 5 0						7	6	0	2	0			68		676	9.7/10.	97
								Fine grained																												
								627.0 - 637.5 - Gr. fillg. Frac. Loss.																													
								630.2 - 637.4 - Mod. sand																													
16								637.4 - coal Mod. - Frac. sand																													
								638.7 - 641.9 - Mod. grey Ea. fillg. Frac. Loss. Solutions Fracture Abrupt cont.																													
								641.9 - 646 - Mod. Frac. sand																													
								646 - 652 - Mod. fg. bedded Frac. grained sand																													
20								Abrupt lower cont'd.																													
																													65	20	78	M			
	21 9 1 6																																			
24	16 63 1				6		MDSM									N		0 0 2 0	2		SASM			4								68				
								Sandstone grades to shaley																													
								658.6 - 660.0 - Deformed Sh.																													
								660.3 - 660.9 - Coal - Gd. N. Hard Sharp																													
28								661.9 - 662.3 - Coal - Gd. N. Sharp																													
	20 2 2 3																																			
32	16 66 6						COAL																									61				
								High core loss																													

ANL.	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

AREA: Eva Col. HOLE No: EV-150 LOGGED BY: JAH DATE: 8/11/03 PAGE: 12 OF: 19

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6 7 8		9 10 11 12		13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44 45	46	47	48 49	50	51 52	53 54	55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
								Mostly	basalt						Sl-U,													6 6	7 1	6	1 M		9.2 / 10	
																												6 7	6 7	6	5 M			
	2 5 4 6 5																											6 8	7 6	7	4 L	686	5.2 / 6.0	92
4	6 7 1 1						M D S M									N.		0 0 30												6 3		692	8.7 / 9.0	86.7
								Thin U band of																								701	4.5 / 5.0	96.7
								lower contact								except																706	9.9 / 10	90
	3 1 1 1 9																															716	10 / 10	99
12	6 9 2 7				8	S H S M						1.5 3				D L	Z N		2		S L S M			4 8 9 1	7				7 0		726	9.5 / 10	100
								671.1 - 674.0 -								Light	seal	deformation														736		95
								679.1 - 683.1 -								Thin		laminated																	
								686.6 - 688.2 -								Coal	fine																			
16																																		
	2 1 8 8 3																																	
20	7 1 1 2					M D S M	S 2 1									L M D		0 0 30							S M					7 0				
								Sand																Seam					7 0	4 1	7 6	L			
								709.7 - 711.6 -								Coal													7 0	8 7	7 4	M			
								Gradational	Lower	contact																			7 1	2 7	6 4	L			
24																																		
																												7 1	8 8	6 4	M			
																												7 3	4 7	7 0	M			
	2 2 8 5 3																																	
28	7 2 3 3					S M S M									3	Z N		0 0 50							7 2 0	8 2				7 0				
								Gradational	Lower	Contact																										
32																																		

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal LOG

AREA: Elkview Crk HOLE No: EV-150 LOGGED BY: JAH DATE: 81/4/04 PAGE: 13 OF: 12

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6	7 8	9 10 11 12		13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44 45	46	47	48 49	50	51 52	53 54	55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
																													74	95	64	M			
																													76	95	68	L	746	9.9/10	99
	239	12																											77	44	66	M			
4	784	3					MDSM				M					N		6 5 2 0						4 6	8 5	7				65		756	10/10	100
							726 - 728.7	Gp								Lt brn																	766	9.6/10	96
							731.4 - 731.8																										776	9.9/10	99
8							732.2 - 746	Ca																									786	10/10	100
							746.7 - 746.9																										796	10/10	100
							746.9 - 750																										806	10/10	100
12							750 - 763.6	Ca																									816	9.9/10	99
							763.6 - 769.1																										826	8.9/10	89
							769.1 - 770.0																										833	5.0/7.0	71.4
							770.0 - 775.8																										837	3.0/4.0	75
							775.8 - 782.8																												
							782.8 - 783.5																												
16							Coal Lower contact																												
	247	22																																
	817	28			9		SASM					1 5 3				L N			1	S	L	S	M							65		833	5.0/7.0	71.4
							792.0 - 792.4	Tbn		Ca																								
							Both bedding			joint																								
20							792.0 - Calcites																												
							796.4 - 797.2	Tbn																											
							Upper Lower contact																												
							Thrust Lower Upper																												
							Coal Lower contact																												
24																																		
28																																		
	25 11 9																																	
32	824 9						MDSM									U		0 0 2 0						6 6						65				

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal DEGG

AREA: Ewin Creek HOLE No: EV-150 LOGGED BY: IAH DATE: Nov 5/81 PAGE: 14 OF: 19

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6	7 8	9 10	11 12	13	14	15 16 17 18	19 20	21	22 23 24	25	26	27	28	29	30 31 32 33	34 35	36 37	38	39	40 41 42 43	44 45	46	47	48	49	50	51 52	53 54 55 56	57	58	59	60	61 62 63	64 65 66	67 68 69
	2357	71																															839	2.0/2.0	100
4 S	8453	71	716				CONG																								65		841	0.8/2.0	40
										824.9 - 826.0	-	20	f.																			846	3.8/5.0	76
										826.0 - 827.4	C-B		Mod hard				1																851	5.0/5.0	100.
8										- 830.0	-	Sd - U	coarse				1																861	9.7/10	97
										- 831.0	-	Pebble C	bro. to.				10																866	4.6/5.0	92
										- 833.3		Carb	loss																						
										- 833.6		Sd - U	bro. to.				1																		
										- 834.0	-	Sd	f.				1																		
12										- 834.7		Sd - U	hard				1																		
										836.0	-	Sh	Bl. fiss.																						
										837.0	-	Coal	loss																						
										837.4	-	Sd - U	coarse				1																		
16										838.0	-	C	soft	Lam.																					
										838.5	-	C	hard				1																		
										839.0	-	Sh	soft	bl. fiss.																					
										839.6	-	Sd - U	bands				1																		
20										839.8	-	Sd	f.																						
										- 841.0	-	Carb	loss.																						
										841.7	-	Sh																							
										843.1	-	Sd	minor U				1																		
24										- 844.0	-	C	soft	f.	Lam.																				
										- 844.2	-	Sh																							
										- 844.8	-	C	Lam.	D.	bro. to.																				
										- 845.3		Carb	loss.																						
28										- 846.0		D.	of Coal																						
32																																			

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal GEOLOG

AREA: Ewin Creek HOLE No: EV-150 LOGGED BY: JAH DATE: 8/11/06 PAGE: 15 OF: 19

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE	START	FIN. Day, Mo. Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/	/	/ /											

ROCK I CHARACTERISTICS · ROCK II · STRUCTURE · CORE RECOVERY

DEPTH TO END OF INTERVAL DESCRIBED (4–8)	ROCK % OF INTERVAL (13)	ROCK NAME (15–18)	SORTING / GRAIN SIZE (26–27)	TEXTURE MAJOR → MINOR (30–33)	COLOUR MUNSELL SYSTEM (34–37)	ROCK II ROCK % OF INTERVAL (38)	ROCK II ROCK NAME (40–43)	FRACTURES (47–49)	FOOTAGE OF C-B ANGLE MEASUREMENT (53–57)	C-B ANGLE (58–59)	RELIABILITY (60)	CORE FOOTAGE TO (61–63)	LENGTH (64–66)	CORE RECOVERY (67–69)
									8520	65	L		9.8	
									8594	62	M	876	10.	98
26421									8697	63	M			
8666		MDSM		N	0020			634		64		886	9.6/10	96
									8806	64	L			
									8886	67	L	896	10/10	100
									9015	6.3	M		9.4	
												906	10	94
												916	9.2/10	92
												921.5	3.0/5.5	54.5
26933														
8834	6	SASN	53	ZDL	0040	4	SLSM	450		64				
27777														
9111		MDSM		UN	0020			360		64				
									9075	63	M			

847.1 - 847.7 - Coal [illegible] - V. [illegible]
847.5 - 848.6 - Sandy [illegible]
853.1 - Coal [illegible] [illegible]
853.9 - 854.4 - Numerous [illegible] fractures (Coal [illegible])
858 - 861 - Sandy interbeds
861 - 866 - Numerous coaly V-bands.
Lower contact is abrupt.

871.1 - 871.6 - Some thin V-bands
Grad. Lower Contact.

886.3 - 890.2 - Numerous [illegible] clay and clay [illegible]
- these [illegible] also [illegible] [illegible].
896.6 - 898.5 - Sandy interbeds
908.6 - 909.1 - Sandy [illegible]
909.8 - 910.3 - [illegible] [illegible] soft deformation in sand interbeds
Sharp Lower Contact

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal Core Log

AREA: Fair Crk. HOLE No: EV-50 LOGGED BY: TDH DATE: 81/4/06 PAGE: 16 OF: 19

TYPE	HOLE NO.	AREA	G	LAT.	DEP	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo. Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED		RECOVERY %		ROCK I CHARACTERISTICS																				ROCK II						STRUCTURE											CORE RECOVERY								
					ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL		MINOR QUALIFYING MATERIAL		BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE		COLOUR MUNSELL SYSTEM				ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL		FRACTURES				FOOTAGE OF C-B ANGLE MEASUREMENT	C-B ANGLE		RELIABILITY	CORE FOOTAGE TO	LENGTH	CORE RECOVERY								
	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS				NAME	AMOUNT	NAME	AMOUNT						MAJOR →	MINOR								NAME	AMOUNT	INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION		TENTHS																	
1	2 3	4 5 6 7 8	9 10 11 12		13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40 41 42 43	44	45	46	47	48	49	50	51	52	53 54 55 56	57	58	59	60	61 62 63	64 65 66	67	68	69
		2 6 2 1 6																																							933	10.2 / 11.5	88.7			
3 5		9 2 5 5	6 8 1				COAL																															64	936	2.7 / 3.0	90			
							Core + DEMS 941. 913.3 - Cdy, brn, f-m gr, ss, v. hd, brit, sl carb, bdd, sl sil,																																	941.	3.5 / 5.0	70.			
							914.55 - Crs. gr. hard, mod. well sil,																																							
							914.60 - Mdst, v. hd, mod. well sil,																																							
							915.2 - C-G ss, v. hd, mod. well sil,																																							
							916. - Core loss																																							
							917.0 - Carb mdst, v. hd, well sil,																																							
							919. - Interbedded C-M gr ss, v. hd, well sil, bdd,																																							
							921.5 - Core loss																																							
							922.8 - Core loss																																							
							923.4 - D-M gr ss, v. hd, well sil, bdd,																																							
							923.55 - Mdst,																																							
							925.3 - D-C gr ss, v. hd, well sil, bdd,																																							
							925.5 - D-M gr ss, v. hd, well sil, bdd,																																							
		2 8 4 4 5																																													
		9 3 3 0					SASN						5																																			
							925.5 - 932.0 - Sltst, v. hd, well sil, carb, bdd,																																							
		2 8 4 8 3																																													
		9 3 4 3					MDSN						L																																		
							934.0 - 934.3 - Carbonaceous																																							
		2 8 7 6 2																																													
3 5		9 4 3 4	5 0 5				COAL																																							
							Core + DEMS 934. 934.7 - Sltst, v. hd, well sil, carb, bdd,																																							
							935.7 - C-M gr ss, v. hd, well sil,																																							
							936. - Core loss																																							
							936.6 - Sltst, v. hd, well sil, carb, bdd,																																							
							937.3 - D-M gr ss, v. hd, well sil, bdd,																																							

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal GEOLOG

AREA: Ewin Crk. HOLE No: EV-150 LOGGED BY: JAH DATE: 81/11/10 PAGE: 17 OF: 19

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE	START	FIN. Day, Mo. Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/	/	/ /											

DEPTH TO END OF INTERVAL DESCRIBED (4–8)	RECOVERY % (9–12)	ROCK % OF INTERVAL (13)	ROCK NAME (15–18)	TEXTURE MAJOR → MINOR (30–33)	COLOUR MUNSELL SYSTEM (34–37)	ROCK II ROCK NAME (40–43)	FRACTURES INTENSITY (47)	FOOTAGE OF C-B ANGLE MEASUREMENT (53–57)	C-B ANGLE (58–59)	RELIABILITY (60)	CORE FOOTAGE TO (61–63)	LENGTH (64–66)	CORE RECOVERY (67–69)
											962	9.4/11.0	85.5
29994													
9510		8	MDSN	LN	00302	SASN	6		63				
								9456	60	M			
								9487	67	M			
								9613	61	L			
								9710	63	M			
29073													
9536	462		COAL						63				
29335													
9622		6	MDSN	4	00304	SHSN	4		63				
29390													
9640	1000		COAL						63				

927.3 - 937.7 - D-C [illegible] 47

- 939.5 C-D, [illegible] [illegible] 1.54

- 941.0 : Core loss.

941.0 - 943.4 - Core loss.

The 941-951 run lost all [illegible] DEMS show FU [illegible] to 943.4'. There could have been extra core recovered [illegible] 951 hence the recovery for that run should account for the core loss.

Sandstone occurs as laminae [illegible] distinct [illegible]

944.1 }
944.8 } Slickensided surface along fracture

951.0 - 952.2 - Coal, hard [illegible] broken

- 953.6 - Core loss.

Weakly laminated shale.

955.1 - 956.[illegible] Sandstone + [illegible]

962.[illegible] - 962.[illegible] - [illegible]

ANL	DEPTH	REC %	SEAM	RAW ASH	FSI	CLEAN FLOAT	MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BLUE GOLD LOG

AREA: Elvin Creek HOLE No: EV-150 LOGGED BY: JAH DATE: 8/11/16 PAGE: 18 OF: 19

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6	7 8	9 10	11 12	13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44 45	46	47	48	49	50	51	52	53 54 55 56	57	58	59	60	61 62 63	64 65 66	67 68 69
								962	9	- 964.	0	1	C	1															9 7 4	0	6	4	M		9.8	
	29 7 6	1																											9 8 7	4	6	8	M	973	11.0	89.1
	9 7 4	3					MOSM									L		0 0 30											9 9 4	5	6	6	L		10.2	
																																6	6		984	11.0	92.7
	29 7 5	0																																	994	10/10	100
11.5	9 7 6	8	7 6	0			CA AL																									6	4		997	2.6	86.7
																																			1006.	8.6/9.0	95.6
																																			1016	10/10	100
																																			1026	9.9/10	99
																																			1036	9.7/10	97
	34 3 2	3																																			
20 M.M	1 1 4	4 0					SAM						85			U.		0 0 60			2											60					
								976.8	- 986.1	- Hard,																				10 1 8	3	6	5	M			
								Bedding	planes																					10 2 6	8	6	3	M			
								After	986.1	Fair																				10 3 9	5	5	5	M			
								985.0	- Very																												
								1001.	1 - 1004.																												
								1005.	5 - 1010.																												
								1011.	8 - 1012.																												
								1012.	- 1013.																												
								Fro..	1016	-																												
								1018.	- 1018.																												
									1033.6	-																												
									1034.	- 1034.																												
										1036.0	-																												
								1039.	0 - 1039.																												

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BCCal LOG

AREA: Elkview Creek HOLE No: EV-150 LOGGED BY: JAH DATE: 8/11/16 PAGE: 12 OF: 12

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	MAJOR QUALIFYING MATERIAL: AMOUNT	MINOR QUALIFYING MATERIAL: NAME	MINOR QUALIFYING MATERIAL: AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	QUALIFYING MATERIAL: AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6	7 8	9 10 11	12	13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44 45	46	47	48	49	50	51 52	53 54 55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
								1044.3 - Shale, mid grey, carbon.																					1046	M				8.7/10	87
								1044.3 - 1044.4 - Shale, dk grey																					1056	M				10/10	100
								1044.7 - 1045.3 - Sltst, blocky																					1066	M				9.7/10	97
								1045.4 - 1045.8 - Fracture - c. 23° to c.a.																					1076	M				10/10	100
								After 1046 - coaly, blocky																					1086	M				1.9/2.0	95
								1072.0 - 1075.2 - Occasional stringers of siltst																					1096	M				7.9/2.0	98.8
								1078.0 → Sandy siltst																					1106	M				9.8/10	98
								Grain size increases to fine ss																					1116	M				9.9/10	99
								1082.7 - 1083.1 - Coal, banded, dm bed, 23° to c.a.																					1126	M				9.9/10	99
								1129.1 - 1130.2 - Coarse ss, poor fracture @ 12° to core axis																					1133	M				6.6/7.0	94.3
								1132.2 - Rare 1mm coal stringers																					1134.6	M				1.1/1.5	73.3
								1133.8 - 1134.5 - Siltst, broken, 1mm coal bed @ 23° to c.a.																					1144	M				9.3/9.5	97.9
								After 1134.5 - 1136.5 - Top is darker in colour and med - coarse grained.																											
								1136.5 - 1137.2 - Fdg bed																											
								1144.0 - END OF HOLE.																											

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal Log

AREA: Elk Creek HOLE No: EV-151 LOGGED BY: J.A. Hurlow DATE: 91/11/17 PAGE: 1 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D. m	O.B. m	CASING m	WATER LEVEL m	ANG.	AZIM
DDH	EV151	ELKCR	4	5546876	659152	1619.16	CEL	391.77	1.52	8.84	19.40	090	000

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
02/11/81	11/11/81	HQ-3	391.77					GED	IOKY	R	OKJAH	

1 PRIMARY CONTROL	2	3	4 DEPTH TO END OF INTERVAL DESCRIBED	5	6	7	8 TENTHS	9 RECOVERY %	10	11	12 TENTHS	13 ROCK % OF INTERVAL	14 TYPE MODIFIER	15 ROCK NAME	16	17	18	19 MAJOR QUALIFYING MATERIAL NAME	20	21 AMOUNT	22 MINOR QUALIFYING MATERIAL NAME	23	24 AMOUNT	25 BED THICKNESS	26 SORTING	27 GRAIN SIZE	28 SPHERICITY	29 ROUNDNESS	30 TEXTURE MAJOR	31	32 MINOR	33	34 COLOUR MUNSELL SYSTEM	35	36	37
					1	5	3	metres																												
4 D	V	B			5	0	Feet																													
					1	0	1																													
					1	3	9							S	S	S	M																			
8																		Sparse pinpoint																		
																		Thin coal bands																		
																		Thin poor to fair pinpoint																		
12																		Micrograin																		
					1	1	6																													
					3	2	3		4	2	7																									
16																																				
																		Coal																		
																		Mudstone																		
20																		23.9 - 24.0																		
																		25.3 - Coal																		
																		25.6 - Coal																		
																		26.0 - Coal																		
24																		27.5 - Coal																		
																		28.9 - Coal																		
																		31.0 - Coal																		
																		31.2 - Coal																		
28																		31.8 - Coal																		
																		34.6 - Coal																		
																		36.0 - Coal																		
																		36.2 - Coal																		
32																		36.8 - Coal																		
																		38.0 - Coal																		
																		38.4 - Coal																		

38 ROCK % OF INTERVAL	39 TYPE MODIFIER	40 ROCK II ROCK NAME	41	42	43	44 QUALIFYING MATERIAL NAME	45	46 AMOUNT	47 STRUCTURE FRACTURES INTENSITY	48 PRIMARY JOINT ANGLE	49 SECONDARY JOINT ANGLE	50	51 RELATION	52	53 FOOTAGE OF C-B ANGLE MEASUREMENT	54	55	56	57 TENTHS	58 C-B ANGLE	59	60 RELIABILITY
									9										6	3		
																			6	3		

CORE RECOVERY CORE FOOTAGE TO	LENGTH	CORE RECOVERY
7	1.0 / 7.	14.3%
10	1.4 / 3.0	46.7
13	2.0 / 3.0	66.7
15	1.8 / 2.0	90
19	3.7 / 4.0	92.5
21	1.4 / 2.0	70
22	0.7 / 1.0	70
23	0.9 / 1.0	90
27½	3.3 / 4.5	73.3
31	1.4 / 3.5	40.
36	1.6 / 5.0	32
38	0.8 / 2.0	40
40	1.2 / 2.0	60
46	3.4 / 6.0	56.7
51	4.7 / 5.0	94

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal Geology

AREA: EWIN CREEK HOLE No: EV-151 LOGGED BY: JAH DATE: 81/11/17 PAGE: 2 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	MAJOR QUALIFYING MATERIAL: AMOUNT	MINOR QUALIFYING MATERIAL: NAME	MINOR QUALIFYING MATERIAL: AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	QUALIFYING MATERIAL: AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6	7 8	9 10	11 12	13	14	15 16 17 18	19	20	21	22 23 24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44 45	46	47	48 49	50	51 52	53 54 55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
	170	1																														54½	3.3/3.5	94.3
	558						SLSW										LZ	0 0 3 0						9						6 3		57½	1.2/3.0	40
							Highly Broken																									59	0.9/1.5	60
							Light grey																									63½	2.7/4.5	60
							Interbed																									65	0.5/1.5	33.3
	216	1					Becomes																									71	2.6/6.0	43.3
	694		419				COAL																							6 3		76	4.5/5.0	90
							HW																									83	5.4/7.0	77.1
							FW																											
							Seam																											

ANL.	DEPTH	REC %	SEAM	RAW: ASH	RAW: FSI	CLEAN: FLOAT	CLEAN: MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

KDI - EYDI - 0

BC Coal GEOLOG

AREA: Ewin Creek HOLE No: EV-151 LOGGED BY: JAH DATE: 81/11/17 PAGE: 3 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE	START	FIN.	Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/	/		/ /											

DEPTH TO END OF INTERVAL DESCRIBED (4–8)	RECOVERY % (9–12)	ROCK % OF INTERVAL (13)	ROCK NAME (15–18)	ROCK I CHARACTERISTICS / REMARKS (19–)	TEXTURE MAJOR → MINOR (30–33)	COLOUR MUNSELL SYSTEM (34–37)	ROCK II ROCK % OF INTERVAL (38)	ROCK II ROCK NAME (40–43)	FRACTURES (47–49)	FOOTAGE OF C-B ANGLE MEASUREMENT (53–57)	C-B ANGLE (58–59)	RELIABILITY (60)	CORE FOOTAGE TO (61–63)	LENGTH (64–66)	CORE RECOVERY (67–69)
										533	68	L		9.5	
2922										703	63	L	92	9.0	105.5
960										1050	57	L		1.0	
		8	MDSN		DLN	00222	2	SDSN	740		63		96	4.0	25
				Sam... [illegible] interbeds										3.0	
				71.4 - 71.7 - [illegible]									99	3.0	100
				76.0 - 79.0 - S[illegible] [illegible]										5.9	
				85.7 - 86.5 - [illegible]									106	7.0	84.3
				Dark, [illegible] unit.										8.0	
3016													114	8.0	100
990	1000		COAL											4.8	
				96.0 - 97.8 - [illegible]							63		119	5.0	96
				- 97.95 - [illegible]											
				- 98.8 - [illegible]											
				- 99.0 - [illegible]											
3524															
1156		9	MDSN		NL	00261		SASN	9						
				101.5 - 102.7 - [illegible]							63				
				103.6 - Root [illegible]						1136	65	M			
				107 - 109 - Very [illegible] Sam.						1222	60	L			
				111.6 - 111.8 - [illegible]											
3552															
1165			COAL												
				[illegible]							63				

ANL	DEPTH	REC %	SEAM	RAW ASH	FSI	CLEAN FLOAT	MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BCCoal LOG

AREA: Ewin Creek HOLE No: EV-151 LOGGED BY: JAH DATE: 81/11/17 PAGE: 4 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6 7	8	9 10 11	12	13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44 45	46	47	48	49	50 51	52	53 54 55 56	57	58	59	60	61 62 63	64 65 66	67 68 69
																																		126	6.3 / 7.0	90
4	142	4					140.5 M										N/A	00 00 00						2 3 5						6	1		132	5.5 / 6.0	91.7
							Occasional							Sandy		Moderate													1 3 3 6	5 5	L		139	7.0 / 7.0	100
8							146.5-149- Mudst																											142	2.0 / 3.0	66.7
							137.5-137.8- Carbonaceous																											145	1.8 / 3.0	60
							133.9-Coa																											147	1.2 / 2.0	60
12							126.7-130.8- Bioturbated																											153	6.5 / 6.0	108
	144 16																															160	6.0 / 7.0	85.7
16	149				B	C	BHD										N	00 00 00		C	OAL									6	1			
							140.5 - 141.0 - Coa																													
							- 142.0 - Mudst																													
20							Numerous thin																													
24	147 2		6.52			C	OAL																											
							HW. from Core																										6	1			
							F.W. from Core																													
							142 - 143 - Core loss																													
28																																		
							144 - 147 - Mudst,																													
							= 146 - Coal																													
							= 147 - 150 - Coal																													
32							= 150 - 153 - Mudst																													

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

AREA: Elan Creek HOLE No: EV-151 LOGGED BY: JAH DATE: 81/11/17 PAGE: 3 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM
DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.	
/ /	/ /												

ROCK I CHARACTERISTICS | ROCK II | STRUCTURE | CORE RECOVERY

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL NAME	MAJOR QUALIFYING MATERIAL AMOUNT	MINOR QUALIFYING MATERIAL NAME	MINOR QUALIFYING MATERIAL AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II ROCK % OF INTERVAL	ROCK II TYPE MODIFIER	ROCK II ROCK NAME	ROCK II QUALIFYING MATERIAL NAME	ROCK II QUALIFYING MATERIAL AMOUNT	FRACTURES INTENSITY	FRACTURES PRIMARY JOINT ANGLE	FRACTURES SECONDARY JOINT ANGLE	FRACTURES RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	FOOTAGE OF C-B ANGLE MEASUREMENT TENTHS	C-B ANGLE	C-B ANGLE RELIABILITY	CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6 7 8		9 10 11 12		13	14	15 16 17 18	19 20 21		22 23 24		25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44 45 46		47	48	49	50 51 52	53 54 55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
																												150		258	L			
	42.6 5																											152		268	M	170	9.4/10	94
4	1629						HOSM.										ML	0020										163	7	644	L			
								149.7-151.9 - Sand,																9	6	0	2	5			61		177	6.8/7.0	97.1
								Gradation																									7.0		
	63 4																															184	7.0/7.0	100.
8	2080						SASM.					1.53					DZN	0040						9	6	9	2	7			61		193	8.4/9.0	93.3
								Kupcosis M.																				170	5	5	L			
								Host bed																				179	5	461	L	203	9.6/10	96
								184.2-184.4																				202	8	676				
								184.8-185.																								213	9.7/10	97
								188.8-189.2 -																								220	7.0/7.0	100.
								Host Coals																								226	5.7/6.0	95
								193.0-197.5 - Rock																										
								199.5-208.0 - Rock																										
								Grade in to																										
	6 4 6 5																																	
24	2120						CBM										N	0025						8	6	8				61				
																												212	7	668	M			
	6 5 2 4																																	
28	2140		850				COAL																								61			
								HW. Taken for core. Re. A high recovery.																											
								This Does Not																										
								212.0-212.7 - C																										
32								- 213.0 - Lost.																										
								- 214.0 Coal, mud,																										

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal LOG

AREA: Elan Creek HOLE No: E.V.-151 LOGGED BY: JAH DATE: 81/04/12 PAGE: 6 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6	7 8	9 10	11 12	13	14	15 16 17 18	19	20	21	22	23	24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44	45	46	47	48	49	50	51 52	53 54	55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
																																				236	10/10	100
4	227	9			8		MDSM											N.L.		0 0 2 0	2		SAS N				8 6 4	3 0					6	1		246	8.9/10	89
								Sego is fair																												256	10/10	100
8								224.3 - Ca																												266	10/10	100
																																				272	2.3/6.0	38.3
12	229	6	100				COAL																									6	6			276	0.7/4.0	17.5
								Intercept taken from Core																						2	3	1	0	6	8	H	281	4.3/5.0	86
								DOES NOT																						2	4	5	3	6	5	M			
16								227.9 - 228.0 = DC,																						2	5	7	3	6	5	L			
								-228.0 = Coal with high																															
								-229.0 = Coal, no																															
20								-229.25 = Rock																															
								-229.6 = Coal, hard																															
24	250						MDSM			M								L		0 0 2 0							7 6 4					6	6					
								Occasional		thin																													
28								249.5 - 249.7 = Coal,																															
								Good coal																															
32	269	6			8		SASM											LDN		0 0 4 2	2		MDSK				5 6 4					6	6					
								Numerous		bioturbated								zone														2	6	6	4	6	8	L			

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal LOG

AREA: Ewin Creek HOLE No: EV-151 LOGGED BY: JAH DATE: 81/11/18 PAGE: 7 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO	T.D.	Q.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6 7 8		9 10 11 12		13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44 45	46	47	48	49	50	51	52	53 54 55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
																																			286	3.5 / 5.0	70
4	295		396				COAL																									66		296	8.7 / 10.0	87
																																		306	8.5 / 10	85
8																																		316	8.7 / 10.	87
																																		323	6.0 / 7.0	85.7
12																																				
16	291		0				CBMD									N		0020													59				
20																																			
24	829		2610				COAL																									59				
28																																			
32	302		201		8		WASH									NL		0020													59				

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal LOG

AREA: Ewin Creek HOLE No: EV-151 LOGGED BY: JAH DATE: 81/11/23 PAGE: 8 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM.

DATE	START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /		/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED		RECOVERY %		ROCK I CHARACTERISTICS																			ROCK II						STRUCTURE										CORE RECOVERY		
								MAJOR QUALIFYING MATERIAL		MINOR QUALIFYING MATERIAL					TEXTURE		COLOUR MUNSELL SYSTEM									QUALIFYING MATERIAL		FRACTURES														
		TENTHS		TENTHS	ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	NAME	AMOUNT	NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	MAJOR → MINOR							ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	NAME	AMOUNT	INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6	7 8	9 10 11	12	13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30 31 32 33	34 35	36	37	38	39	40 41 42 43	44 45	46	47	48	49	50	51	52	53 54 55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
	9 8 8 11																																		333.	11.3 / 10	113.
4	3 2 4 2		10 0	0			COAL																										59	343	10 / 10	100.
									3	19 1 - 3																											
								N-1		F																									353	9.8 / 10	98
8								3.20	1 -	3																									364	9.2 / 11.0	83.6
										3																											
									1	3																											
12									1 -	3																											
16	10 2 4 4																																			
	3 3 6 0						MDSM																													
20																																				
24	11 1 6 5																																			
	3 6 5 9						SASM																													
28																																				
32	13 1 9 10																																			
	4 3 2 7						SASM																													
AIVL	DEPTH		REC %		SEAM	RAW ASH	FSI	CLEAN FLOAT ASH	MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.		YIELD	B.T.U.	VERTICAL THICKNESS																		

BC Coal LOG

AREA: Elk Creek HOLE No: EV-151 LOGGED BY: JAH DATE: 81/11/23 PAGE: 2 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	MAJOR QUALIFYING MATERIAL: AMOUNT	MINOR QUALIFYING MATERIAL: NAME	MINOR QUALIFYING MATERIAL: AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	QUALIFYING MATERIAL: AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6 7 8		9 10 11 12		13	14	15 16 17 18	19	20	21	22 23 24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44	45	46	47	48	49	50	51	52	53 54	55	56	57	58	59	60	61 62 63	64 65 66	67 68 69
								375.4 - 377.9 - Va																						3	8	3	0	7	4	M		10/10	
								385.3 - 386.1 - Co																						4	0	5	7	5	8	L	374		
								387.1 - 387.2 - Co																						4	1	3	5	6	7	M		10/10	100
4								391.8 → Co																													384		
																																						10/10	100
								400.3 - 402.5 - Co																													394		
								401 - 402 - Va																														10/10	100
8								404.0 - 404.1 - Va																													404	9.7/10	97
								408.3 - 409.2 - Co																													415	9.7/11.0	85.5
								414.6 - 415.1 - Va																													425	9.5/10	95
12								419.6 - Co. bent in Core																													435	9.8/10	98
								420.5 - 422.9 - Va																													441	5.9/6.0	98.3
								425.3 - 430.1 - Va																													446	4.5/5.0	90
								Scour																													456	9.5/10	95
16								Lower contact is a break.																													466	9.6/10	96.
	1 3 4 1 6																																						
	4 4 0 1					M	D S M	5 2 1									L M	0 0 3 0							7							6 4					
																															4 2 6 9 6 4			M			
	1 4 1 4 6																														4 3 5 5 6 8			L	476	9.9/10	99
24	4 6 3 8					S A S M						5 6	7 5	N			0 0 4 0							8						4 5 8 0 5 5			L			
								This coal rests on Va																									6 4						
								Roof of Va is a fine																						4 6 3 5 6 8			M			
								447.2 - 450.7 - Interbedded Va																						4 6 8 7 6 0			M			
28								456 - 460 - No core																															
								460 - 463.8 Va																															
								Abrupt lower contact																															
	1 4 4 2 7																																						
32	4 7 3 2				6	S A S M						5 3					L	0 0 4 0 4			S 2 5 M				6							6 4					
								Interbedded Va + Sand & Sltst.																															

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal LOG

AREA: Elk Creek HOLE No: EV-151 LOGGED BY: JAH DATE: 84/11/24 PAGE: 10 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	Q.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE	START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/	/	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6 7 8		9 10	11 12	13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30 31 32 33	34 35	36	37	38	39	40 41 42 43	44 45	46	47	48	49	50	51	52	53 54 55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
							Granular																									4 7 6	2	5 4	L		9.7/10	
	1 4 8 1																															4 8 1	5	7 0	L	486		97
4	4 8 5	5					SASM							S			DM																6	2		496	9.5/10	95
							This unit has a highly																														506	9.7/10	97
							478.0-478.5 - Fine																														516	9.7/10	97
							478.5-480 - Coal																														526	4.0/10	90
							480-480.5 - Thin																																
							480.5-482.5 - Thin																																
							482.5-483.6 - Rippled																																
							483.6 - Granular																																
							484-484.8 - High																																
							Abrupt change																																
							Probably a channel																																
	1 4 9 0																																						
20	4 8 9 0						MUDSTONE										U																6	2				
							Different facies																																
	1 5 7 2 0																																						
24	5 1 6 2						SASM							B	4	9	3 U	M															6	2				
							489.0-496.9 - High																																
							Numerous fine																																
							496.9-506.0 - 10%																																
28							in the zone.																																
							506.5-507.4 - Rippled																																
							507.4-510.1 - Siltstone																																
							below fining																																
32							515.0-516.4 - Coaly																																
							Sharp base																																

ANL	DEPTH	REC %	SEAM	RAW: ASH	FSI	CLEAN: FLOAT	MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal LOG

AREA: Elko Creek HOLE No: EV-151 LOGGED BY: TAH DATE: 81/11/24-C PAGE: 11 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE	START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
	/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	MAJOR QUALIFYING MATERIAL: AMOUNT	MINOR QUALIFYING MATERIAL: NAME	MINOR QUALIFYING MATERIAL: AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	QUALIFYING MATERIAL: AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6 7	8	9 10 11	12	13	14	15 16 17 18	19	20 21	22	23 24	25	26	27	28	29	30	31 32 33	34 35 36 37	38	39	40 41 42 43	44	45 46	47	48	49	50	51 52	53 54	55 56	57	58	59	60	61 62 63	64 65 66	67 68 69
																														5	3 4	3	7 4	L			
	1 7 1 5																																		536	10 / 10.	100
4	5 3 6 1				9		MDSM					A					B		0 9 3 0 1			S A S M			6 2 6 2 1							6 5		546	9.7 / 10	97.
							Sass. pebbles fs. grey int.																													552.	5.4 / 2.0	90.
	1 6 4 1						Fract. Lower cont.																															
8	5 6 0 1						S M S M										L D U	D D 4 D							2 7 0							6 3		556	2.5 / 4.0	62.5
							Wavy bedding, int. to f.s.																													559	2.0 / 3.0	66.7
	1 6 7 0						sandstone lens.																															
12	5 5 7 0						M C S M										W N	0 0 2 0						9									6 5		566	6.4 / 7.0	91.4
							Thick fracture surfaces are [illegible]																								5 4 B 9		6 0 L				
							5560 - 5570 left core.																															
16																																					
	1 7 1 0																																				
20	6 5 5 6 0 0		8 0 0				F A E																										6 5				
							M.L. from core										E R U																				
							Th. from O'hole																															
24							557.0 - 557.6 - Cdy. U. Hd. bands																															
							- 553.6 - M.S.																															
							- 557.9 - Cdy. U.																															
							- 558.0 - M.S.																															
28							- 558.3 - D. U. Hard																															
							- 558.5 - Rare																															
							- 559.0 - Cdy. U. bands																															
							- 559.6 - L. S.																															
							- 560.0 - D. U. Hard bands																															
32							Top N.M. [illegible]																															
							Hard c. lens																															

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal GEOLOG

AREA: Ewin Creek HOLE No: EV-151 LOGGED BY: JAH DATE: 81/11/24. PAGE: 12 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE	START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/	/	/ /											

Line	DEPTH TO END OF INTERVAL DESCRIBED (4-7)	TENTHS (8)	ROCK % OF INTERVAL (13)	ROCK NAME (15-18)	ROCK I CHARACTERISTICS / REMARKS (19-33)	COLOUR MUNSELL SYSTEM (34-37)	ROCK II ROCK % OF INTERVAL (38)	ROCK II ROCK NAME (40-43)	ROCK II QUALIFYING MATERIAL (44-46)	INTENSITY / PRIMARY JOINT ANGLE (47-49)	FOOTAGE OF C-B ANGLE MEASUREMENT (53-56)	TENTHS (57)	C-B ANGLE (58-59)	RELIABILITY (60)	CORE FOOTAGE TO (61-63)	LENGTH (64-66)	CORE RECOVERY (67-69)
1											577	3	57	M			
2											583	8	56	M	576.	10/10	100
3	1 7 5 0	5									586	3	66	M			
4	584	0		SASN	3 1 L M,	0050			1	5 6 4			62		586	10/10	100.
5					Numerous healed fractures	[illegible]		in the	[illegible]		592	2	60	M			
6					570-573.3 - Silty Sand.						607	1	56	M	596	9.3/10	93.
7					573.3-576.3 - Mottled zone						617	0	69	M			
8					Grades into Silty										606	9.0/10	90
10															616	10/10	100
11	1 8 2 5	0															
12	598	6	7	SLSN	L D N	0042	3	SASN		5			62		626	9.6/10	96
13					596.0-598.6 - High Sed [illegible]	[illegible]											
14					Fairly abrupt lower con[tact]										636	9.1/10	91.
15	1 9 7 4	1															
16	647	5		SASN.	4 7 5 9 3 L N D	0050				3 6 7			62		646	9.4/10	94
17					611.1-611.6 - Occasional rip-up clasts	[illegible]					626	6	74	M.			
18					616.2-619.0 - Typically [illegible]	[illegible]		[illegible]	planes		634	4	56	L	656	10/10	100
19					623.2-623.5 - Mud rip-up clasts						644	2	58	M.			
20					624.6-626.2 - Coal [illegible] along	bedding		planes.							661	6.0/5.0	120
21					627.5-631.2 - Numerous	[illegible]		[illegible]	[illegible]								
22					636.0-636.8 - Very coarse [illegible]										666.	4.5/5.0	90
23					640.0-641.8 - Sh. band.												
24					642.9-643.[illegible] - Sh. band												
25					644.0-64[illegible] - Becomes very coarse			[illegible]									
26					646.9 - Large Mud clasts in grain [illegible]	bed											
27					Abrupt lower contact.												
31	2 0 1 5	9															
32	662	2	9	MDSN	L	0022	1	SASN					62				
33					Sasn occurs as occasional laminated	[illegible]		interbeds			656	6	61	M			
34											662	6	68	L			

ANL.	DEPTH	REC %	SEAM	RAW ASH / FSI	CLEAN FLOAT / MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal GEOLOG

AREA: Ewin Creek HOLE No: EV-151 LOGGED BY: JAH DATE: 81/11/25 PAGE: 13 OF: 23

Line	Sample	Depth to end of interval	Recovery %	Rock % of interval	Rock name	Sorting	Grain size	Texture	Colour (Munsell)	Rock II %	Rock II name	Fractures	Footage of C-B angle measurement	C-B angle	Reliability
1													667	69	L
4	2 0 3 6 7	668.1			SASM	5	3	L	0040			2		70	
8	2 6 9 1 5	686.0		6	SLSM			L	0030	4	SASM	466	1	70	
20	2 1 6 6 5	710.3		8	MDSM			L	0020	2	SASM	667		70	
21													686.3	74	L
22													695.2	68	L
28	2 7 2 F 1	763.6	81.4		COAL									70	

Abrupt Lower Contact.

Gradational lower contact.

Sasn occurs as occasional interbeds, and usually has minor ripple bedding.

671.3 } Gypsum ½cm thick
672.2 } Some thin veins also.

673.7 - 673.9 - Two thin Cy [illegible] in healed fractures

Becomes muddy near end of [illegible]

Sasn occurs as [illegible] bed.

692.6 - 697.2 - Sandy zone - [illegible]

Mdsn becomes darker & more carbonaceous near bottom.

H.W. taken from core due to high recovery in that run

Thickness of coal from Expanded DEN log

710.3 - 710.7 - Bone broken up, some [illegible] bands

- 710.8 - Mdsn,

- 711.6 - Coal, Hard bonded

Core footage to	Length	Core recovery
676	10/10	100
686.	9.9/10	99
696.	10/10.	100.
706	9.7/10	97
716	9.4/10	94
718	2.0/2.0	100
721	2.1/3.0	70
723	1.0/2.0	50

ANL DEPTH REC % SEAM RAW ASH FSI CLEAN FLOAT MOIST ASH V.M. V.M.(DAF) F.C. FSI SULF D.D.M. YIELD B.T.U. VERTICAL THICKNESS

BC Coal Log

AREA: Elk Creek HOLE No: EV-151 LOGGED BY: JAH DATE: 91/11/25 PAGE: 14 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	MAJOR QUALIFYING MATERIAL: AMOUNT	MINOR QUALIFYING MATERIAL: NAME	MINOR QUALIFYING MATERIAL: AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	QUALIFYING MATERIAL: AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6 7 8		9 10 11 12		13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44 45	46	47	48	49	50 51 52	53 54 55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
							716.6 – 721.9																											
																																726½	2.7/3.5	77.1
4					7	10	3	7	2																							732	3.7/5.5	67.3
																																736	3.3/4.0	82.5
																																741	4.9/5.0	98
8																																		
12																																		
16																																		
20																																		
24																																		
28																																		
32																																		

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal LOGG

AREA: Ewin Creek HOLE No: EW-151 LOGGED BY: JAH DATE: 81/11/25 PAGE: 15 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE	START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/	/	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6	7 8	9 10 11	12	13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44 45	46	47	48	49	50	51	52	53 54	55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
								736.0	740.9	Cd-V	Hard																							746	4.3/5.0	86
									741.0	Lost																							751	4.5/5.0	90
									742.3	Cl-V	hard																						756	2.9/5.0	58
									745.2	C-f	rippled																						761	4.3/5.0	86
									749.5	Cd-V	Hard, bands																						766	5.0/5.0	100
									750.5	Cd-V	Hard, ba																						776	9.6/10	96
									751.0	Lost																							786	9.5/10	95
									752.7	D-C	Numerous										Rocks up												796	9.7/10	97
									753.9	Lost	up, mai																									
									756.0	Lost																										
									757.7	Cd-V	hard, bands																									
									758.6	Lost																										
									760.2	Cl-V	Hard, Ba																									
									760.3	Lost																										
									761.0	Lost																										
									761.1	Mylo-																										
									763.3	Cd-V	Hard, bands																									
									763.6	Cl-V	Broken up																									
								DENS TA & Coa									F.W.																			
	2 3 4 4 5																																			
	776 9 0						C BM D									N		0 0 1 0						9							7 0					
								768.6 - 769.2		Cd	hard																				7 7 3 3 6 6 6					
																															7 7 7 9 7 4 2					
	2 3 2 5 5																																			
	784 1				B		S A S N									L D		0 0 4 0 2			M D S M			6 6 6							7 0					
								Stage Lower		C	lost																										
	2 4 6 6 2																																			
	789 9						C BM D C	O I								N		0 0 1 0						9							7 0					
								784.1 - 784.5		Cd	Gd - V																										
								Numerous			bands																										

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal LOG

AREA: Elan Creek HOLE No: EV-151 LOGGED BY: JAH DATE: 81/4/26 PAGE: 16 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6	7 8	9 10 11	12	13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44 45	46	47	48	49	50	51 52	53 54 55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
								Fairly sharp bottom																											
	247	51																														806	9.9/10	99
4	279	87					SASM							S			L E	2 0 4 2						2						6	6		816	9.9/10	99
																													7 9	7 0	6	7	M			
	257	80																											8 2	0 2	6	8	L	826	10/10	100
8	045	56			R		SLSM										L D	0 0 3 0	2		S A S M			5					8 2	5 3	6	7	M			
								Bld. p - 8 2 2 . 2 - Sharp Ac																								6	6		836	10/10	100
								Fissile sandy shale interbeds																					8 3 0	6 6	6	M				
								8 2 2 . 2 - 8 3 1 . 0 - Fg. to sg.																					8 3 3	9 6	9	L	846	9.8/10	98
12								8 3 7 . 3 - 8 3 9 . 0 - Sltst. dk. gy.																					8 4 8	6 6	4	M				
								8 4 0 . 2 - Thin V fg. sst.																										856	10.0/10	100
								8 4 0 . 5 -																					8 5 4	8 6	4	M				
								Becomes sandy																					8 5 6	4 6	6	M	866	9.5/10	95
16								Sandstone is fg. to vfg.																					8 6 2	5 6	2	M				
																																876	9.8/10	98
																																886	9.9/10	99
20	293	88					SASM					87		59	3	L	N D	Z 0 0 0												6	6		896	9.5/10	95
								Thin sandy interbeds																												
								8 4 4 . 1 -																												
24								8 4 5 . 6 - 8 5 6 . 9 - Fg. sst.																												
								8 5 6 . 9 - 8 6 7 . 2 - Mod. fg. sst.																												
								8 6 9 . 8 - 8 8 3 . 2 -																					8 7 4	3 7	0	M				
								8 8 6 . 9 - 8 9 1 . 1 - Mod. fg. sst.																												
28								8 8 6 . 2 - 8 9 1 . 1 - Mod. fg. sst.																												
								8 8 6 . 4 - 8 9 4 . 1 -																												
								8 7 2 . 8 - 8 8 4 . 0 -																												
								8 8 3 . 7 - 8 9 0 . 1 -																												
								8 8 9 . 1 - 8 9 0 . 3 -																												
32								8 8 3 . 2 - 8 9 2 . 9 -																												
								- 8 9 3 . 6 -																												
								8 9 4 . 4 - 8 9 6 . 3 -																												

ANL	DEPTH	REC %	SEAM	RAW: ASH	FSI	CLEAN: FLOAT	MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BOREHOLE LOG

AREA: Ewin Creek HOLE No: EV-151 LOGGED BY: JAH DATE: 8/14/26 PAGE: 1 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	MAJOR QUALIFYING MATERIAL: AMOUNT	MINOR QUALIFYING MATERIAL: NAME	MINOR QUALIFYING MATERIAL: AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM

ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	QUALIFYING MATERIAL: AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal LOG

AREA: Ewin Creek HOLE No: EV-151 LOGGED BY: JAH DATE: 81/11/30 PAGE: 18 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo. Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6	7 8	9 10	11 12	13	14	15 16 17 18	19	20	21	22	23	24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44	45	46	47	48	49	50	51	52	53 54 55 56	57	58	59	60	61 62 63	64 65 66	67 68 69
	3 2 6 9 3																																						
	1 0 7 2 3						N D S M										L		0 0 1 0																			
4								Overburden		Thin Talc							Laminae																						
	3 2 7 7 6																																						
	1 0 7 4 4	1 0 0	0				C O A L																																
8								Mudstone		calc.				C M			DEN		1 6																				
								Tr. fossil																																
								1072.3	-	1073.7				C			U	Lam																				
12									-	1073.8				M			U																						
									-	1074.3				D			U	Nod	1 N																				
	3 2 8 3 6																																						
	1 0 7 6 7						M D S N										N		0 0 2 0																			
16																																							
	3 3 3 11 5																																						
20	1 0 9 3 7		7 9	4			C O A L																																
								1075.0	-	1075.3				C			U	Sam																				
	Mud	stone	Coal					1075.3		1076.1																														
	D.I							1076.1	-	1077.7				Lam																										
24									-	1077.8				D			U																								
	1								-	1079.0																														
									-	1082.0				M			U	Lam																						
28									-	1084.0				L																										
									-	1084.4				C																										
									-	1085.8				C																										
									-	1085.9				C																										
32									-	1086.5				C																										
									-	1088.0				C																										

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal GEOLOG

AREA: Ewin Creek HOLE No: EV-151 LOGGED BY: JAH DATE: 81/11/30 PAGE: 19 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE	START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /	/ /											

Line	PRIMARY CONTROL (1-3)	DEPTH TO END OF INTERVAL DESCRIBED (4-7) / TENTHS (8)	RECOVERY % (9-11) / TENTHS (12)	ROCK I: ROCK % OF INTERVAL (13)	TYPE MODIFIER (14)	ROCK NAME (15-18)	QUALIFYING MATERIAL / BED THICKNESS (19-25)	SORTING / GRAIN SIZE (26-28)	TEXTURE MAJOR → MINOR (30-33)	COLOUR MUNSELL SYSTEM (34-37)	ROCK II: ROCK % OF INTERVAL (38)	ROCK NAME (40-43)	FRACTURES INTENSITY / JOINT ANGLES (47-52)	FOOTAGE OF C-B ANGLE MEASUREMENT (53-56) / TENTHS (57)	C-B ANGLE (58-59)	RELIABILITY (60)	CORE FOOTAGE TO (61-63)	LENGTH (64-66)	CORE RECOVERY (67-69)
							1088.0 - 1088.7 - C, [illegible]												
							-1091.1 - Cd - V. Hard, banded. -										1111	9.7/10	97
							-1091.3 - [illegible]												
4							-1092.5 - Cd - V. Hard banded.										1116	5.0/5.0	100
							-1092.8 - C - V. [illegible] banded												
							-1093.1 - Cd - V. hard, banded										1126	10/10	100
							-1093.7 - C soft, broken up										1136.	8.8/10.	88
8																			
																	1146	9.8/10	98
		34043																	
12		11166		9		MDSM			M	0020	1	SHSM	562						
															69				
							Seam occurs as occasional interbeds							11086	65	M			
							1093.7 - 1094.5 - Highly broken up							11184	70	L			
							-1095.0 - Lost core							11234	72	L			
16							1095.3 - 1095.7 Coal broken up												
							1097.4 - 1098.2 - Coal, mostly V. broken up												
							1104.4 } V-spars												
							1105.5 }												
20							Grad. lower contact												
		34380																	
24		11244				SHSM		53	LN	0040			565						
															69				
														11252	24	L			
														11270	24	M			
		34471																	
28		11308				CBMD	C02C21			0020					24				
	MNM.						This zone shows high deformation. CB's 's of 24" Very numerous Ca veins. Also lots of coal spars. Possibly a fault zone or slump features												
32																			

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal LOG

AREA: Ewin Creek HOLE No: EV-151 LOGGED BY: JAH DATE: 81/11/30 PAGE: 20 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED		RECOVERY %		ROCK I CHARACTERISTICS																					ROCK II						STRUCTURE									CORE RECOVERY		
		TENTHS		TENTHS	ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL		MINOR QUALIFYING MATERIAL		BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE		COLOUR MUNSELL SYSTEM			ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL		FRACTURES				FOOTAGE OF C-B ANGLE MEASUREMENT.		C-B ANGLE	RELIABILITY	CORE FOOTAGE TO	LENGTH	CORE RECOVERY
								NAME	AMOUNT	NAME	AMOUNT						MAJOR → MINOR								NAME	AMOUNT	INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION		TENTHS							
1 2 3	4 5 6	7 8	9 10 11	12	13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30 31	32	33	34 35	36	37	38	39	40 41 42 43	44 45	46	47	48	49	50	51	52	53 54 55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
	X																																	1 1 3 5 0	6	0 L		9.4	
	3 5 3 7	2																																1 1 3 9 1	6	6 L	1156	10.	94
4 3 5	1 1 6 0	2					MDSM					L					NL	D	0	0 2	0					1		3	7	0				1 1 5 1 2	7	4 M		9.6	
																																			6	6	1166	10.	96.
							1130.8 - 1132.7 - Rock: very																												1 1 5 8 8	6	8 M		5.9	
							1137.0 - 1137.6 - Ti																															1173	7.0	84.3
							1148.5 - 1148.6 - Rock: very																															1179	5.5 / 6.0	94.7
							Thin bedded interbedded C																															1186	6.2 / 7.0	88.6
	3 5	7 6																																						
12 3 5	1 1 7 3	0	8 8 3				COAL																													6	6			
							NW. rock with																																		
							The coal from																																		
16							1160.9 - 1160.9 - 0 - 11 Hard																																		
							- 1164.0 - 0 - 12 Soft																																		
							- 1166.2 - 12 Dull Hard																																		
							- 1164.3 - 12 Bri																																		
							- 1165.8 - 12 Dull hard band																																		
20							- 1166.0 - Coal																																		
							- 1167.9 - 12 - 4 High																																		
							- 1169.1 - 11½ -																																		
							- 1171.9 - 12 -																																		
24							- 1173.0 - Coal																																		
	3 5	6 5																																						
28	1 1	7 5	1				MDSM										N		0	0 2	0															6	6			
	3 5	1 1	6 5																																						
32 3 5	1 1	8 6	3	8 8 4			COAL																													6	6			
							NW. - FL. Thin core																																		

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal LOG

AREA: Ewin Creek HOLE No: EV-151 LOGGED BY: JAH DATE: 81/12/01 PAGE: 21 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6	7 8	9 10 11	12	13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44 45	46	47	48	49	50	51	52 53 54 55 56	57	58 59	60	61 62 63	64 65 66	67 68 69
								1175.1	- 1175.35	- Bo																							9.2	
									- 1175.8	- Bo																					1196	10	92
									- 1175.8	- Bo																					1206	9.9	99
4									- 1176.	- C																						10.	
									- 1176.7	- C																					1216	8.0	80
									- 1177.5	- C																						10	
									- 1178.2	- C																					1222	4.1	68.5
8									- 1178.3	- Bo																						6.0	
									- 1178.5	- C																							
									- 1179.0	- C																							
									- 1181.5	- C																							
12									- 1182.	- C																							
									- 1183.9	- C																							
									- 1184.2	- C																							
									1185.2	- C																							
16									- 1186.0	- C																							
									- 1186.	- C																							
20	3 6 3 6 0						M D S N											0 0 0 0							5 6 B						6 6			
	1 1 9 2 6							N82.0 - 1191.6		Sand		Sl.		M															1 1 9 0 4 6		8	M			
																													1 2 0 4 5 6		0	M			
	3 6 4 3 9																																	
24	1 1 9 5 2		1 0 0 0				C O A L																								6 6			
								HW from core				TR		from		DEN																			
								1192.6 - 1195.		Mdst				Sd-V																					
								No lost		1195.2 - 1196.0																									
28																																		
	3 4 7 2 9																																	
32	1 2 0 4 7				8		M D S N									L		0 0 3 3 2			S A S N			3 5 5						6 6			
								Sandstone core								Laminae		1 2 0																	

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BCCoal OLOG

AREA: Eric Creek HOLE No: EV-151 LOGGED BY: JAH DATE: 01/12/01 PAGE: 22 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE	START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/	/	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED	TENTHS	RECOVERY %	TENTHS	ROCK I CHARACTERISTICS: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL: NAME	AMOUNT	MINOR QUALIFYING MATERIAL: NAME	AMOUNT	BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE: MAJOR → MINOR	COLOUR MUNSELL SYSTEM	ROCK II: ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL: NAME	AMOUNT	STRUCTURE: FRACTURES: INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION	FOOTAGE OF C-B ANGLE MEASUREMENT	TENTHS	C-B ANGLE	RELIABILITY	CORE RECOVERY: CORE FOOTAGE TO	LENGTH	CORE RECOVERY
1 2 3	4 5 6 7 8		9 10 11 12		13	14	15 16 17 18	19 20 21		22 23 24		25	26	27	28	29	30 31 32 33	34 35 36 37	38	39	40 41 42 43	44 45	46	47	48	49	50 51	52	53 54 55 56	57	58	59	60	61 62 63	64 65 66	67 68 69
																																		1233	9.7 / 11	82.7
4	1 2 0 6 5		7 2 2				C O A L																								66		1238.	4.1 / 5.0	92
								Rock. fro.		conv.		Tb.	fro.	—	De-																				
								1204.7	-	1206.9	=	Cg-V.		Local		Local																				
8									=	1206.0	-	Lo.		V.																						
									=	1205.1	-	Cg-V.		Local.																						
									=	1206.7	=	Rock.																								
	3 7 1 4 1																																		
12	1 2 2 1 5						D I S M											C O A L													66				
								Rock. fro.		core		from		1204.7	-	1206.9	=	Cg-V.		Local		Local														
								Lo.		V.																										
16								Rock. fro.		1206.0	-	1206.7	=	Rock.																						
								1208.6	-	1212.5	=	Lost		core																						
	3 7 3 4 1																																		
20	1 2 2 4 8						S A S M							7 S			M														66				
								Numerous		fine		veins		in		fractures																				
	3 7 6 4 3																																		
24	1 2 3 4 7						D I S M											C O A L													66				
								1234.3	-	1235.7	=	Light		colored		clay		shale																		
								Dense		material																										
28	3 7 6 7 4																																		
	1 2 3 5 7						C O A L																								66				
								1234.7	-	1235.5	=	Cg-V.		Local																						
									=	1235.7	-	Bone																								
								Sharp		lower		con.		Lo.																						
32																																			

ANL	DEPTH	REC %	SEAM	RAW: ASH	FSI	CLEAN: FLOAT	MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

BC Coal LOG

AREA: _____ HOLE No: _____ LOGGED BY: _____ DATE: _____ PAGE: 23 OF: 23

TYPE	HOLE NO.	AREA	G	LAT.	DEP.	ELEV.	DRILL CO.	T.D.	O.B.	CASING	WATER LEVEL	ANG.	AZIM

DATE START	FIN. Day, Mo., Year	SIZE	TO	SIZE	TO	SIZE	TO	GEO. LOG	CO.	D.	CO.	GEOL.
/ /	/ /											

PRIMARY CONTROL	DEPTH TO END OF INTERVAL DESCRIBED		RECOVERY %		ROCK I CHARACTERISTICS																		ROCK II						STRUCTURE														CORE RECOVERY		
		TENTHS		TENTHS	ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	MAJOR QUALIFYING MATERIAL		MINOR QUALIFYING MATERIAL		BED THICKNESS	SORTING	GRAIN SIZE	SPHERICITY	ROUNDNESS	TEXTURE		COLOUR MUNSELL SYSTEM				ROCK % OF INTERVAL	TYPE MODIFIER	ROCK NAME	QUALIFYING MATERIAL		FRACTURES					FOOTAGE OF C-B ANGLE MEASUREMENT			C-B ANGLE		RELIABILITY	CORE FOOTAGE TO	LENGTH	CORE RECOVERY			
								NAME	AMOUNT	NAME	AMOUNT						MAJOR → MINOR									NAME	AMOUNT	INTENSITY	PRIMARY JOINT ANGLE	SECONDARY JOINT ANGLE	RELATION		TENTHS										
1 2 3	4 5	6 7	8	9 10	11 12	13	14	15 16 17 18	19 20	21	22 23	24	25	26	27	28	29	30 31	32	33	34 35	36	37	38	39	40 41 42 43	44 45	46	47	48	49	50	51	52	53 54	55	56	57	58	59	60	61 62 63	64 65	66	67	68	69
																																										1246	7.6 / 8.0		95		
4	11 12	8 5	0				S	A S	H				L	8	5	7	3	L U			0 0	6	0						2	2	3			7	1					1256	9.7 / 10		97		
								1235.7 - 1236.0		C A			S					coal																												
								1236.0 - 1236.2		S a								clay																													
								1236.2 - 1243.6		C a								coal																													
8								1243.6 - 1246.3		S a								coal																													
								1246.3 - 1248.9		D a			S					silty																													
								1270.3 - 1270.7		S																																				
12								1285.0 - E.O.H.																																							
16																																														
20																																														
24																																														
28																																														
32																																														

ANL	DEPTH	REC %	SEAM	RAW ASH	RAW FSI	CLEAN FLOAT	CLEAN MOIST	ASH	V.M.	V.M.(DAF)	F.C.	FSI	SULF	D.D.M.	YIELD	B.T.U.	VERTICAL THICKNESS

The proximate analyses, washability tests and petrographic examinations of the coal seams sampled from diamond drillholes E.V.-150 and E.V.-151 were performed in the B.C. Coal Ltd. laboratory located in Sparwood, British Columbia.

A Geisler Plastometer was used in conducting fluidity tests on the samples. A Ruhr dilatometer was used for the dilatation tests.

PRINTED 00/09/82

DRILL HOLE: EV130 (CORE) SEAM INTERCEPT 13.81- 14.57 INTCPT THICKNESS 0.76 TRUE THICKNESS 0.70 M
VERTICAL THICKNESS -0.76 DIP ANGLE 22 LATITUDE 3946736.970 M DEPARTURE 659171.970 M ELEVATION 1614.190 M
RECEIVED: 00/00/00 WEIGHT 0.00 KG MOISTURE 0.0 % COMPLETE: 00/00/00
HH MM YY COMPOSITE: RECOVERY 94.0 % HH MM YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	0.00	0.00
ASH %	0.00	0.00
V.M. %	0.00	0.00
F.C. %	0.00	0.00
F.S.I.		
% TOTAL SULF.	0.00	0.00
% P2O5 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	0.	0.
V.M. % (DAF)		0.0

* (-1/8'+0 COAL FLOATED AT 1.50 S.G.)

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4'+ 28M	0.0	0.0	0.0	0.0
-28M + 60M	0.0	0.0	0.0	0.0
-60M + 0	0.0	0.0	0.0	0.0

GIESELER PLASTICITY; DATE RUN 00/00/00

START	DC	0.0
FUSION TEMP.	DC	0.0
MAX FLUID TEMP.	DC	0.0
FINAL FLUID TEMP.	DC	0.0
SOLIDIFICATION TEMP.	DC	0.0
MELTING RANGE	DC	0.0
MAXIMUM FLUIDITY DD/M		

DILATATION (RUHR) DATE RUN 00/00/00

II - SOFT. TEMP.	DC	0.0
III - MAX. CONTRACTION TEMP.	DC	0.0
IIII - MAX. DILATATION TEMP.	DC	0.0
CONTRACTION	%	0.0
DILATATION	%	0.0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES TYPE	%	REACTIVE COMPONENTS		INERT COMPONENTS	
0	0.0	TOTAL VITRINOID	0.0	INERT SF. (1/2)	0.0
0	0.0	REACTIVE SF. (1/2)	0.0	MICRINOIDS	0.0
0	0.0	EXINOID & RESIN	0.0	FUSINOIDS	0.0
0	0.0			MINERAL MATTER	0.0
0	0.0	TOTAL REACTIVES	0.0	TOTAL INERTS	0.0
0	0.0				
0	0.0				

MAX. MEAN REFL. OF VITRINOIDS (RO) 0.00
BAL. INDEX -0.00 STRENGTH INDEX 0.00 PRED. COKE STAB. INDEX 0.00

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0) -1/4'+28M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

(0.0) -28M+60M

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

(0.0) -60M+ 0

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(100.0) -1/8'+ 0	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

FROTH CELL TEST

(0.0) -28M+60M	FROTH	0.0	0.0		0.0	0.0
	TAILINGS	0.0	0.0		0.0	0.0

FROTH CELL TEST

(0.0) -60M+ 0	FROTH	0.0	0.0		0.0	0.0
	TAILINGS	0.0	0.0		0.0	0.0

NOTES:

DRILL HOLE: EV150 (CORE) SEAM S.S — INTERCEPT 39.60- 62.90 INTCPT THICKNESS 3.30 TRUE THICKNESS 2.86 ft
VERTICAL THICKNESS 3.30 DIP ANGLE 30 — LATITUDE 3514734.970 N DEPARTURE 637471.970 E ELEVATION 1355.000 ft
RECEIVED: 00/00/00 (MM DD YY) — WEIGHT 0.00 KG MOISTURE 0.0 % COMPLETE: 00/00/00
COMPOSITE: RECOVERY 0.0 % (MM DD YY)

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100.00	20.40
ASH %	57.80	10.40
V.M. %	12.40	22.50
F.C. %	29.80	67.10
F.S.I.	1	7
% TOTAL SULF.	0.27	0.52
% P2O5 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	0.	7836.
V.M. % (DAF)		29.4

* (-1/8'+0 COAL FLOATED AT 1.50 S.G.)

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	398.0
FUSION TEMP.	DC	418.0
MAX FLUID TEMP.	DC	452.0
FINAL FLUID TEMP.	DC	483.0
SOLIDIFICATION TEMP.	DC	492.0
MELTING RANGE	DC	65.0
MAXIMUM FLUIDITY DD/M		778.1

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	402.0	
TII - MAX. CONTRACTION TEMP.	DC	442.0	
TIII - MAX. DILATATION TEMP.	DC	462.0	
CONTRACTION	%	18.0	
DILATATION	%	88.0	

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4'+ 28M	89.9	70.5	89.9	70.5
-28M + 60M	6.3	27.8	96.2	67.7
-60M + 0	3.8	28.9	100.0	66.2

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES

TYPE	%
9	0.7
10	2.1
11	11.0
12	35.9
13	15.9
14	3.4

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	69.0	INERT SF. (1/2)	9.8
REACTIVE SF. (1/2)	9.9	MICRINOIDS	2.3
EXINOID & RESIN	0.2	FUSINOIDS	2.9
		MINERAL MATTER	5.9
TOTAL REACTIVES	79.1	TOTAL INERTS	20.9

MAX. MEAN REFL. OF VITRINOIDS (RO) 1.24
BAL. INDEX 0.87 STRENGTH INDEX 5.97 PRED. COKE STAB. INDEX 63.80

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(89.9)	FLT.	1.30	4.0	2.9	7-1/2	4.0	2.9	43.4
-1/4'+28M		1.40	6.2	10.3	6-1/2	10.2	7.4	46.1
		1.50	3.1	20.9	3	13.3	11.9	40.4
		1.60	4.4	30.7	1-1/2	19.7	16.1	34.9
		1.70	3.8	39.3	1	23.5	19.8	
	SINK	1.70	76.5	86.1	NC	100.0	70.5	
(6.3)	FLT.	1.30	38.0	2.2	7-1/2	38.0	2.2	75.0
-28M+60M		1.40	16.0	7.2	7	54.0	3.7	37.1
		1.50	10.7	15.4	2	64.7	5.6	21.2
		1.60	4.6	25.9	1	69.3	7.0	10.1
		1.70	2.7	36.4	1	72.0	8.1	
	SINK	1.70	28.0	78.4	NC	100.0	27.2	
(3.8)	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
-60M+ 0		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(100.0)	FLT.	1.30	6.3	2.8	7-1/2	6.3	2.8	44.9
-1/8'+ 0		1.40	6.5	7.8	7	12.8	5.3	42.8
		1.50	3.7	14.9	5	16.5	8.3	36.5
		1.60	5.3	22.8	2	21.8	11.5	35.1
		1.70	4.7	31.0	1	25.5	14.7	
	SINK	1.70	71.5	82.8	NC	100.0	63.4	

FROTH CELL TEST

(6.3)	FROTH	0.0	0.0		0.0	0.0
-28M+60M	TAILINGS	0.0	0.0		0.0	0.0

FROTH CELL TEST

(3.8)	FROTH	83.3	19.2	7	83.3	19.2
-60M + 0	TAILINGS	16.7	77.4	NC	100.0	28.9

NOTES:

PRINTED 02/07/82

DRILL HOLE: EV150 (CORE) SEAM S,S INTERCEPT 62,90- 76,49 INTCPT THICKNESS 13,59 TRUE THICKNESS 11,77 M
VERTICAL THICKNESS 13,59 DIP ANGLE 30 LATITUDE 554736,970 M DEPARTURE 639471,970 M ELEVATION 1565,100 M
RECEIVED: 00/00/00 WEIGHT 0,00 KG MOISTURE 0,0 % COMPLETE: 00/00/00
MM DD YY COMPOSITE: RECOVERY 65,0 % MM DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100,00	71,80
ASH %	17,40	8,10
V,M, %	19,10	20,40
F,C, %	63,50	71,50
F,S,I,	6	7
% TOTAL SULF,	0,26	0,34
% P2O5 (PHOSPHATE)	0,00	0,00
GROSS CAL, VALUE BTU/LB	6982,	7970,
V,M, % (DAF)		23,1

* (-1/8'+0 COAL FLOATED AT 1,50 S,G,)

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT,%	ASH%	CUMULATIVE WT,%	CUMULATIVE ASH%
-1/4'+ 28M	87,4	22,6	87,4	22,6
-28M + 60M	7,3	11,2	94,7	21,7
-60M + 0	5,3	13,2	100,0	21,4

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	406,0
FUSION TEMP,	DC	436,0
MAX FLUID TEMP,	DC	459,0
FINAL FLUID TEMP,	DC	478,0
SOLIDIFICATION TEMP,	DC	496,0
MELTING RANGE	DC	42,0
MAXIMUM FLUIDITY DD/M		32,7

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT, TEMP,	DC	414,0
TII - MAX, CONTRACTION TEMP,	DC	453,0
TIII - MAX, DILATATION TEMP,	DC	483,0
CONTRACTION	%	14,0
DILATATION	%	-16,0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 1352

V-TYPES

TYPE	%
11	2,7
12	20,6
13	26,1
14	1,9
0	0,0
0	0,0

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	54,3	INERT SF, (1/2)	15,3
REACTIVE SF, (1/2)	15,3	MICRINOIDS	3,5
EXTINOID & RESIN	0,1	FUSINOIDS	7,0
		MINERAL MATTER	4,5
TOTAL REACTIVES	69,7	TOTAL INERTS	30,3

MAX, MEAN REFL, OF VITRINOIDS (RO) 1,32
BAL, INDEX 1,58 STRENGTH INDEX 3,43 PRED, COKE STAB, INDEX 60,70

WASHABILITY (WT,%) AND SIZE — DATE RUN 00/00/00

		S,G,	DIRECT % WT,	DIRECT % ASH	FSI	CUM, % WT,	CUM, % ASH	+/- ,1 S,G,
(87,4) -1/4'+28M	FLT,	1,30	12,1	2,1	8-1/2	12,1	2,1	42,5
		1,40	28,8	6,6	7	40,9	5,3	43,4
		1,50	13,0	15,3	1-1/2	53,9	7,7	15,3
		1,60	1,7	27,9	1	55,6	8,3	11,9
		1,70	9,8	36,6	1	65,4	12,5	
	SINK	1,70	3,7	63,7	NC	69,1	15,3	
(7,3) -28M+60M	FLT,	1,30	0,0	0,0		0,0	0,0	0,0
		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	
(5,3) -60M+ 0	FLT,	1,30	0,0	0,0		0,0	0,0	0,0
		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

WASHABILITY (WT,%) AND SIZE — DATE RUN 00/00/00

		S,G,	DIRECT % WT,	DIRECT % ASH	FSI	CUM, % WT,	CUM, % ASH	+/- ,1 S,G,
(100,0) -1/8'+ 0	FLT,	1,30	27,6	2,6	8	27,6	2,6	53,4
		1,40	24,6	2,0	4 1/2	52,2	2,3	52,6
		1,30	18,7	14,4	1	70,9	5,5	32,7
		1,60	8,2	26,6	1	79,1	7,7	13,9
		1,70	3,2	39,6	1	82,3	8,9	
	SINK	1,70	17,7	69,4	NC	100,0	19,6	

FROTH CELL TEST

(7,3) -28M+60M	FROTH	0,0	0,0	0,0	0,0
	TAILINGS	0,0	0,0	0,0	0,0

FROTH CELL TEST

(5,3) -60M+ 0	FROTH	93,9	11,6	7	93,9 11,6
	TAILINGS	6,1	71,2	NC	100,0 15,2

NOTES:

PRINTED 02/07/82

DRILL HOLE: EV150 (CORE) SEAM INTERCEPT 202.16- 203.23 INTCPT THICKNESS 1.07 TRUE THICKNESS 0.94 M
VERTICAL THICKNESS 1.07 DIP ANGLE 29 LATITUDE 3546736.970 M DEPARTURE 639471.970 M ELEVATION 1425.840 M
RECEIVED: 00/00/00 WEIGHT 0.00 KG MOISTURE 0.0 % COMPLETE: 00/00/00
MM DD YY COMPOSITE: RECOVERY 0.0 % MM DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	0.00	0.00
ASH %	0.00	0.00
V.M. %	0.00	0.00
F.C. %	0.00	0.00
F.S.I.		
% TOTAL SULF.	0.00	0.00
% P205 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	0.	0.
V.M. % (DAF)		0.0

* (-1/8'+0 COAL FLOATED AT 1.50 S.G.)

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	0.0
FUSION TEMP.	DC	0.0
MAX FLUID TEMP.	DC	0.0
FINAL FLUID TEMP.	DC	0.0
SOLIDIFICATION TEMP.	DC	0.0
MELTING RANGE	DC	0.0
MAXIMUM FLUIDITY DD/M		

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	0.0
TII - MAX. CONTRACTION TEMP.	DC	0.0
TIII - MAX. DILATATION TEMP.	DC	0.0
CONTRACTION	%	0.0
DILATATION	%	0.0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4'+ 28M	0.0	0.0	0.0	0.0
-28M + 60M	0.0	0.0	0.0	0.0
-60M + 0	0.0	0.0	0.0	0.0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES TYPE	%
0	0.0
0	0.0
0	0.0
0	0.0
0	0.0
0	0.0

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	0.0	INERT SF. (1/2)	0.0
REACTIVE SF. (1/2)	0.0	MICRINOIDS	0.0
EXINOID & RESIN	0.0	FUSINOIDS	0.0
		MINERAL MATTER	0.0
TOTAL REACTIVES	0.0	TOTAL INERTS	0.0

MAX. MEAN REFL. OF VITRINOIDS (RO) 0.00
SAL. INDEX 0.00 STRENGTH INDEX 0.00 PRED. COKE STAB. INDEX 0.00

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0) -1/4'+28M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(100.0) -1/8'+ 0	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0) -28M+60M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

FROTH CELL TEST

(0.0) -28M+60M	FROTH	0.0	0.0	0.0	0.0
	TAILINGS	0.0	0.0	0.0	0.0

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0) -60M+ 0	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

FROTH CELL TEST

(0.0) -60M + 0	FROTH	0.0	0.0	0.0	0.0
	TAILINGS	0.0	0.0	0.0	0.0

NOTES:

PRINTED 02/09/82

DRILL HOLE: EV150 (CORE) SEAM 4,5 | INTERCEPT 251,49- 257,71 | INTCPT THICKNESS 6,22 | TRUE THICKNESS 5,64 M
VERTICAL THICKNESS 6,22 | DIP ANGLE 25 | LATITUDE 5546736,970 M | DEPARTURE 659471,970 M | ELEVATION 1376,310 M
RECEIVED: 00/00/00 (MM DD YY) | WEIGHT 0,00 KG | MOISTURE 0,0 % | COMPLETE: 00/00/00 (MM DD YY)
CONPOSITE: | RECOVERY 71,6 %

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100,00	73,60
ASH %	24,50	7,70
V.M. %	16,10	19,30
F.C. %	59,40	73,10
F.S.I.	2	5
% TOTAL SULF.	0,43	0,42
%.P2O5 (PHOSPHATE)	0,00	0,00
GROSS CAL. VALUE BTU/LB	0,	7918,
V.M. % (DAF)		21,3
% (-1/8'+0 COAL FLOATED AT 1,50 S.G.)		

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	419,0
FUSION TEMP.	DC	450,0
MAX FLUID TEMP.	DC	459,0
FINAL FLUID TEMP.	DC	469,0
SOLIDIFICATION TEMP.	DC	485,0
MELTING RANGE	DC	19,0
MAXIMUM FLUIDITY DD/M		1,6

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	421,0
TII - MAX. CONTRACTION TEMP.	DC	470,0
TIII - MAX. DILATATION TEMP.	DC	470,0
CONTRACTION	%	-16,0
DILATATION	%	-16,0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4'+ 28M	77,7	26,1	77,7	26,1
-28M + 60M	11,8	15,3	89,5	24,7
-60M + 0	10,5	15,8	100,0	23,7

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES

TYPE	%
9	0,5
10	2,8
11	0,9
12	0,9
13	7,9
14	33,2

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	46,2	INERT SF. (1/2)	19,9
REACTIVE SF. (1/2)	20,0	MICRINOIDS	3,2
EXINOID & RESIN	0,0	FUSINOIDS	6,4
		MINERAL MATTER	4,3
TOTAL REACTIVES	66,2	TOTAL INERTS	33,8

MAX. MEAN REFL. OF VITRINOIDS (RO) 1,44
BAL. INDEX 2,38 STRENGTH INDEX 6,31 PRED. COKE STAB. INDEX 59,60

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(77,7) -1/4'+28M	FLT.	1,30	16,7	4,2	7-1/2	16,7	4,2	77,3
		1,40	44,9	12,6	1-1/2	61,6	10,5	72,5
		1,50	12,9	18,9	1	74,5	11,9	21,3
		1,60	4,1	26,8	1	78,6	12,7	6,5
		1,70	1,1	33,7	1	79,7	13,0	
	SINK	1,70	20,3	77,8	NC	100,0	26,1	
(11,8) -28M+60M	FLT.	1,30	25,0	1,5	7-1/2	25,0	1,5	60,7
		1,40	29,5	5,3	6-1/2	54,5	3,6	62,1
		1,50	26,3	11,3	1-1/2	80,8	6,1	36,7
		1,60	6,7	23,5	1	87,5	7,4	10,0
		1,70	2,3	35,2	1	89,8	8,1	
	SINK	1,70	10,2	66,9	NC	100,0	14,3	
(10,5) -60M+ 0	FLT.	1,30	0,0	0,0		0,0	0,0	0,0
		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(100,0) -1/8'+ 0	FLT.	1,30	23,7	1,9	7-1/2	23,7	1,9	69,4
		1,40	30,9	6,0	2	54,6	4,2	60,3
		1,50	17,2	13,6	1	71,8	6,5	28,7
		1,60	6,5	25,9	1	78,3	8,1	10,9
		1,70	1,5	35,6	1	79,8	8,6	
	SINK	1,70	20,2	80,5	NC	100,0	23,1	

FROTH CELL TEST

(11,8) -28M+60M	FROTH	0,0	0,0	0,0	0,0	
	TAILINGS	0,0	0,0	0,0	0,0	

FROTH CELL TEST

(10,5) -60M+ 0	FROTH	95,3	13,1	6	95,3	13,1
	TAILINGS	4,7	71,4	NC	100,0	15,8

NOTES:

DRILL HOLE: EV150 (CORE) SEAM I,S | INTERCEPT 277,77- 282,16 | INTCPT THICKNESS 4,39 | TRUE THICKNESS 3,85 M
VERTICAL THICKNESS 4,39 | DIP ANGLE 26 | LATITUDE 5946736,970 M | DEPARTURE 629471,970 M | ELEVATION 1530,259 M
RECEIVED: 00/00/00 | WEIGHT 0,00 KG | MOISTURE 0,0 % | COMPLETE: 00/00/00
HH DD YY | COMPOSITE: | RECOVERY 68,1 %

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100,00	64,60
ASH %	32,60	8,60
V.M. %	15,20	18,10
F.C. %	52,20	73,10
F.S.I.	2	6-1/2
% TOTAL SULF.	0,39	0,51
% P2O5 (PHOSPHATE)	0,00	0,00
GROSS CAL. VALUE BTU/LB	0,	7982,
V.M. % (DAF)		22,6
% (-1/8'+0 COAL FLOATED AT 1,50 S.G.)		

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4'+ 28M	84,6	32,5	84,6	32,5
-28M + 60M	8,7	15,5	93,3	30,9
-60M + 0	6,7	15,4	100,0	29,9

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	411,0
FUSION TEMP.	DC	437,0
MAX FLUID TEMP.	DC	466,0
FINAL FLUID TEMP.	DC	483,0
SOLIDIFICATION TEMP.	DC	493,0
MELTING RANGE	DC	46,0
MAXIMUM FLUIDITY DD/M		23,9

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	421,0
TII - MAX. CONTRACTION TEMP.	DC	464,0
TIII - MAX. DILATATION TEMP.	DC	484,0
CONTRACTION	%	12,0
DILATATION	%	-12,0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 4057

V-TYPES

TYPE	%
12	0,6
13	12,1
14	26,5
15	16,0
0	0,0
0	0,0

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	55,2	INERT SF. (1/2)	16,5
REACTIVE SF. (1/2)	15,5	MICRINOIDS	4,1
EXINOID & RESIN	0,0	FUSINOIDS	2,7
		MINERAL MATTER	5,0
TOTAL REACTIVES	71,7	TOTAL INERTS	28,3

MAX. MEAN REFL. OF VITRINOIDS (RO) 1,45
BAL. INDEX 2,06 STRENGTH INDEX 6,67 PRED. COKE STAB. INDEX 57,20

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(84,6) -1/4'+28M	FLT.	1,30	10,2	3,4	7-1/2	10,2	3,4	63,9
		1,40	33,1	9,3	1-1/2	43,3	7,9	70,2
		1,50	14,5	13,1	1	57,8	10,3	31,0
		1,60	6,5	29,5	1	64,3	12,4	14,7
		1,70	3,5	36,4	1	67,8	13,6	
	SINK	1,70	32,2	72,2	NC	100,0	32,5	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(100,0) -1/8'+ 0	FLT.	1,30	16,5	1,9	7-1/2	16,5	1,9	56,7
		1,40	24,4	6,6	6	40,9	4,7	61,9
		1,50	20,2	13,4	1	61,1	7,6	37,3
		1,60	6,7	23,3	1	67,8	9,1	15,3
		1,70	4,3	36,0	1	72,1	10,7	
	SINK	1,70	27,9	75,2	NC	100,0	28,7	

(8,7) -28M+60M	FLT.	1,30	27,5	1,6	7-1/2	27,5	1,6	71,8	FROTH CELL TEST				
		1,40	35,6	3,8	5-1/2	63,1	3,8	60,6					
		1,50	17,7	13,5	1	80,8	5,9	25,9					
		1,60	5,1	25,8	1	85,9	7,1	8,1	(8,7)	FROTH	0,0	0,0	0,0 0,0
		1,70	2,0	37,7	1	87,9	7,8		-28M+60M	TAILINGS	0,0	0,0	0,0 0,0
	SINK	1,70	12,1	71,1	NC	100,0	15,5						

(6,7) -60M+ 0	FLT.	1,30	0,0	0,0		0,0	0,0	0,0	FROTH CELL TEST				
		1,40	0,0	0,0		0,0	0,0	0,0					
		1,50	0,0	0,0		0,0	0,0	0,0					
		1,60	0,0	0,0		0,0	0,0	0,0	(6,7)	FROTH	94,8	12,8	5 94,8 12,8
		1,70	0,0	0,0		0,0	0,0		-60M + 0	TAILINGS	5,2	63,7	NC 100,0 15,4
	SINK	1,70	0,0	0,0		0,0	0,0						

NOTES:

PRINTED 02/09/82

DRILL HOLE: EV150 (CORE) SEAM #3L | INTERCEPT 284.85- 287.62 | INTCPT THICKNESS 2.77 | TRUE THICKNESS 2.49 M
VERTICAL THICKNESS 2.77 | DIP ANGLE 26 | LATITUDE 3546736.970 M | DEPARTURE 659471.970 M | ELEVATION 1343.150 M
RECEIVED: 00/00/00 | WEIGHT 0.00 KG | MOISTURE 0.0 % | COMPLETE: 00/00/00
HH DD YY | COMPOSITE: | RECOVERY 50.5 % | HH DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100.00	81.30
ASH %	14.10	7.90
V.M. %	17.90	19.20
F.C. %	68.00	72.90
F.S.I.	2	6-1/2
% TOTAL SULF.	0.37	0.38
% P2O5 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	7388.	7995.
V.M. % (DAF)		20.6
% (-1/8'+0 COAL FLOATED AT 1.50 S.G.)		

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	412.0
FUSION TEMP.	DC	436.0
MAX FLUID TEMP.	DC	463.0
FINAL FLUID TEMP.	DC	486.0
SOLIDIFICATION TEMP.	DC	478.0
MELTING RANGE	DC	50.0
MAXIMUM FLUIDITY DD/M		60.1

DILATATION (RUHR) , DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	423.0
TII - MAX. CONTRACTION TEMP.	DC	472.0
TIII - MAX. DILATATION TEMP.	DC	498.0
CONTRACTION	%	5.0
DILATATION	%	10.0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4'+ 28M	77.3	18.8	77.3	18.8
-28M + 60M	13.2	10.2	90.5	17.5
-60M + 0	9.5	11.8	100.0	17.0

PETROGRAPHIC DATA , DATE COMPLETED 00/00/00 , PELLET NUMBER 1958

V-TYPES

TYPE	%
10	0.6
11	1.2
12	4.1
13	16.3
14	29.5
15	7.0

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	58.9	INERT SF. (1/2)	14.4
REACTIVE SF. (1/2)	14.5	MICRINOIDS	3.1
EXINOID & RESIN	0.0	FUSINOIDS	4.6
		MINERAL MATTER	4.5
TOTAL REACTIVES	73.4	TOTAL INERTS	26.6

MAX. MEAN REFL. OF VITRINOIDS (RO) 1.41
BAL. INDEX 1.57 STRENGTH INDEX 6.42 PRED. COKE STAB. INDEX 63.60

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(77.3) -1/4'+28M	FLT.	1.30	14.9	3.0	7-1/2	14.9	3.0	77.3
		1.40	51.0	9.2	1-1/2	65.9	7.8	76.2
		1.50	13.8	12.6	1	79.7	9.7	20.9
		1.60	4.0	28.6	1	83.7	10.6	6.2
		1.70	1.3	35.5	1	85.0	11.0	
	SINK	1.70	15.0	11.7	NC	100.0	11.1	
(13.2) -28M+60M	FLT.	1.30	46.9	1.6	7-1/2	46.9	1.6	84.4
		1.40	32.3	7.1	6-1/2	79.2	3.8	46.3
		1.50	11.1	17.3	1-1/2	90.3	5.5	14.3
		1.60	2.3	27.5	1	92.6	6.1	3.7
		1.70	1.2	38.4	1	93.8	6.5	
	SINK	1.70	6.2	65.5	NC	100.0	10.2	
(9.5) -60M+ 0	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(100.0) -1/8'+ 0	FLT.	1.30	27.3	1.9	7-1/2	27.3	1.9	60.3
		1.40	31.2	6.7	6-1/2	58.5	4.5	53.6
		1.50	20.8	14.9	1	79.3	7.2	28.4
		1.60	6.7	30.9	1	86.0	9.0	7.9
		1.70	1.0	39.4	1	87.0	9.4	
	SINK	1.70	3.0	62.2	NC	90.0	11.2	

FROTH CELL TEST

		DIRECT WT.	DIRECT ASH		CUM. WT.	CUM. ASH
(13.2) -28M+60M	FROTH	0.0	0.0		0.0	0.0
	TAILINGS	0.0	0.0		0.0	0.0
(9.5) -60M + 0	FROTH	93.9	8.3	S	93.9	8.3
	TAILINGS	6.1	10.8	NC	100.0	8.5

NOTES:

PRINTED 02/09/82

DRILL HOLE: EV150 (CORE) SEAM INTERCEPT 289.94- 290.73 INTCPT THICKNESS 0.79 TRUE THICKNESS 0.79 FT
VERTICAL THICKNESS 0.79 DIP ANGLE 27 LATITUDE 5046736.970 N DEPARTURE 659471.970 E ELEVATION 1333.000 M
RECEIVED: 00/00/00 WEIGHT 0.00 KG MOISTURE 0.0 % COMPLETE: 00/00/00
MM DD YY COMPOSITE: RECOVERY 46.2 % MM DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	0.00	0.00
ASH %	0.00	0.00
V.M. %	0.00	0.00
F.C. %	0.00	0.00
F.S.I.		
% TOTAL SULF.	0.00	0.00
% P2O5 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	0.	0.
V.M. % (DAF)		0.0

% (-1/8'+0 COAL FLOATED AT 1.50 S.G.)

GIESELER PLASTICITY, DATE RUN 00/00/00

START	GC	0.0
FUSION TEMP.	GC	0.0
MAX FLUID TEMP.	GC	0.0
FINAL FLUID TEMP.	GC	0.0
SOLIDIFICATION TEMP.	GC	0.0
MELTING RANGE	GC	0.0
MAXIMUM FLUIDITY DD/M		

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	GC	0.0
TII - MAX. CONTRACTION TEMP.	GC	0.0
TIII - MAX. DILATATION TEMP.	GC	0.0
CONTRACTION	%	0.0
DILATATION	%	0.0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4'+ 28M	0.0	0.0	0.0	0.0
-28M + 60M	0.0	0.0	0.0	0.0
-60M + 0	0.0	0.0	0.0	0.0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES

TYPE	%
0	0.0
0	0.0
0	0.0
0	0.0
0	0.0

REACTIVE COMPONENTS	
TOTAL VITRINOID	0.0
REACTIVE SF. (1/2)	0.0
EXINOID & RESIN	0.0
TOTAL REACTIVES	0.0

INERT COMPONENTS	
INERT SF. (1/2)	0.0
MICRINOIDS	0.0
FUSINOIDS	0.0
MINERAL MATTER	0.0
TOTAL INERTS	0.0

MAX. MEAN REFL. OF VITRINOIDS (RO) 0.00
BAL. INDEX 0.00 STRENGTH INDEX 0.00 PRED. COKE STAB. INDEX 0.00

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0.0) -1/4'+28M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(100.0) -1/8'+ 0	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0.0) -28M+60M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

FROTH CELL TEST

(0.0) -28M+60M	FROTH	0.0	0.0		0.0	0.0
	TAILINGS	0.0	0.0		0.0	0.0

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0.0) -60M+ 0	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

FROTH CELL TEST

(0.0) -60M + 0	FROTH	0.0	0.0		0.0	0.0
	TAILINGS	0.0	0.0		0.0	0.0

NOTES:

PRINTED 02/09/82

DRILL HOLE: EV150 (CORE) SEAM INTERCEPT 293.35- 293.90 INCPT THICKNESS 0.55 TRUE THICKNESS 0.49 M
VERTICAL THICKNESS 0.55 DIP ANGLE 27 LATITUDE 3546736.970 N DEPARTURE 659471.670 M ELEVATION 1334.650 M
RECEIVED: 00/00/00 WEIGHT 0.00 KG MOISTURE 0.0 % COMPLETE: 00/00/00
HH DD YY COMPOSITE: RECOVERY 100.4 % HH DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100.00	87.50
ASH %	13.00	8.30
V.M. %	15.60	19.70
F.C. %	68.40	72.00
F.S.I.	7-1/2	7-1/2
% TOTAL SULF.	0.47	0.50
% P205 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	7599.	7953.
V.M. % (DAF)		21.4

* (-1/8'+0 COAL FLOATED AT 1.50 S.G.)

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	412.0
FUSION TEMP.	DC	434.0
MAX FLUID TEMP.	DC	469.0
FINAL FLUID TEMP.	DC	492.0
SOLIDIFICATION TEMP.	DC	500.0
MELTING RANGE	DC	58.0
MAXIMUM FLUIDITY DD/M		245.2

DILATATION (RUHR) DATE RUN 00/00/00

II - SOFT. TEMP.	DC	418.0
III - MAX. CONTRACTION TEMP.	DC	448.0
IIII - MAX. DILATATION TEMP.	DC	494.0
CONTRACTION	%	23.0
DILATATION	%	58.0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4'+ 28M	0.0	0.0	0.0	0.0
-28M + 60M	0.0	0.0	0.0	0.0
-60M + 0	0.0	0.0	0.0	0.0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 1354

V-TYPES

TYPE	%
11	1.3
12	1.3
13	10.0
14	36.0
15	17.3
16	0.7

REACTIVE COMPONENTS

TOTAL VITRINOID	66.6
REACTIVE SF. (1/2)	11.3
EXINOID & RESIN	0.0
TOTAL REACTIVES	77.9

INERT COMPONENTS

INERT SF. (1/2)	11.3
MICRINOIDS	1.6
FUSINOIDS	4.3
MINERAL MATTER	4.7
TOTAL INERTS	22.1

MAX. MEAN REFL. OF VITRINOIDS (RO) 1.44
BAL. INDEX 2.14 STRENGTH INDEX 6.60 PRED. COKE STAB. INDEX 61.00

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0) -1/4'+28M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(100.0) -1/8'+ 0	FLT.	1.30	29.3	1.6	7-1/2	29.3	1.6	66.5
		1.40	34.5	7.0	7	63.8	4.5	61.5
		1.50	24.5	16.6	2	88.3	7.9	32.0
		1.60	6.2	31.0	1	94.5	9.4	8.0
		1.70	1.5	47.3	1	96.0	10.0	
	SINK	1.70	4.0	64.9	XC	100.0	12.2	

		S.G.	DIRECT WT.	DIRECT ASH	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0) -28M+60M	FLT.	1.30	0.0	0.0	0.0	0.0	0.0
		1.40	0.0	0.0	0.0	0.0	0.0
		1.50	0.0	0.0	0.0	0.0	0.0
		1.60	0.0	0.0	0.0	0.0	0.0
		1.70	0.0	0.0	0.0	0.0	
	SINK	1.70	0.0	0.0	0.0	0.0	

FROTH CELL TEST

		DIRECT WT.	DIRECT ASH	CUM. WT.	CUM. ASH
(0.0) -28M+60M	FROTH	0.0	0.0	0.0	0.0
	TAILINGS	0.0	0.0	0.0	0.0

		S.G.	DIRECT WT.	DIRECT ASH	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0) -60M+ 0	FLT.	1.30	0.0	0.0	0.0	0.0	0.0
		1.40	0.0	0.0	0.0	0.0	0.0
		1.50	0.0	0.0	0.0	0.0	0.0
		1.60	0.0	0.0	0.0	0.0	0.0
		1.70	0.0	0.0	0.0	0.0	
	SINK	1.70	0.0	0.0	0.0	0.0	

FROTH CELL TEST

		DIRECT WT.	DIRECT ASH	CUM. WT.	CUM. ASH
(0.0) -60M + 0	FROTH	0.0	0.0	0.0	0.0
	TAILINGS	0.0	0.0	0.0	0.0

NOTES:

PRINTED 02/09/92

DRILL HOLE: EV150 (CORE) SEAM N — INTERCEPT 297.04- 297.80 — INCPT THICKNESS 0.76 — TRUE THICKNESS 0.68 M
VERTICAL THICKNESS 0.76 — DIP ANGLE 26 — LATITUDE 5546736.970 N — DEPARTURE 659471.970 E — ELEVATION 1330.960 M
RECEIVED: 00/00/00 (HH DD YY) — WEIGHT 0.00 KG — COMPOSITE: — MOISTURE 0.0 % — RECOVERY 76.0 % — COMPLETE: 00/00/00 (HH DD YY)

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100.00	85.30
ASH %	14.40	7.60
V.M. %	18.90	21.70
F.C. %	66.70	70.70
F.S.I.	3-1/2	7
% TOTAL SULF.	0.48	0.53
% P2O5 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	7437.	8108.
V.M. % (DAF)		22.1

* (-1/8'+0 COAL FLOATED AT 1.50 S.G.)

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	387.0
FUSION TEMP.	DC	413.0
MAX FLUID TEMP.	DC	457.0
FINAL FLUID TEMP.	DC	491.0
SOLIDIFICATION TEMP.	DC	494.0
MELTING RANGE	DC	78.0
MAXIMUM FLUIDITY DD/M		992.4

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	392.0
TII - MAX. CONTRACTION TEMP.	DC	430.0
TIII - MAX. DILATATION TEMP.	DC	483.0
CONTRACTION	%	22.0
DILATATION	%	129.0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4"+ 28M	0.0	0.0	0.0	0.0
-28M + 60M	0.0	0.0	0.0	0.0
-60M + 0	0.0	0.0	0.0	0.0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 1356

V-TYPES TYPE	%
11	1.2
12	13.6
13	32.0
14	14.8
0	0.0
0	0.0

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	61.6	INERT SF. (1/2)	12.7
REACTIVE SF. (1/2)	12.8	MICRINOIDS	2.9
EXINOID & RESIN	0.0	FUSINOIDS	5.7
		MINERAL MATTER	4.3
TOTAL REACTIVES	74.4	TOTAL INERTS	25.6

MAX. MEAN REFL. OF VITRINOIDS (RO) 1.34
BAL. INDEX 1.36 STRENGTH INDEX 5.86 PRED. COKE STAB. INDEX 64.20

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0.0) -1/4"+28M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	
(0.0) -28M+60M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	
(0.0) -60M+ 0	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(100.0) -1/8"+ 0	FLT.	1.30	25.8	1.2	7-1/2	25.8	1.2	65.7
		1.40	35.8	6.2	7	61.6	4.1	60.0
		1.50	20.5	14.5	2	82.1	6.7	39.4
		1.60	8.0	27.0	1	90.1	8.5	12.5
		1.70	3.7	39.6	1	93.8	9.7	
	SINK	1.70	6.2	66.1	NC	100.0	13.2	

FROTH CELL TEST

(0.0) -28M+60M	FROTH	0.0	0.0		0.0	0.0
	TAILINGS	0.0	0.0		0.0	0.0

FROTH CELL TEST

(0.0) -60M + 0	FROTH	0.0	0.0		0.0	0.0
	TAILINGS	0.0	0.0		0.0	0.0

NOTES:

PRINTED 02/09/82

DRILL HOLE: EV151	(CORE) SEAM: 8,S		INTERCEPT	7,29-	11,65	INTCPT THICKNESS	4,36	TRUE THICKNESS	3,66 M
VERTICAL THICKNESS	4,36	DIP ANGLE	27	LATITUDE	0346676,139 M	DEPARTURE	659132,139 M	ELEVATION	1411,870 M
		RECEIVED:	00/00/00	WEIGHT	0,00 KG	MOISTURE	0,0 %	COMPLETE:	00/00/00
			HH DD YY	COMPOSITE:		RECOVERY	42,7 %		HH DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8" X 0	100,00	81,10
ASH %	17,70	6,10
V.M. %	23,20	25,30
F.C. %	59,10	68,60
F.S.I.	6-1/2	6-1/2
% TOTAL SULF.	0,58	0,55
% P2O5 (PHOSPHATE)	0,00	0,00
GROSS CAL. VALUE BTU/LB	7750,	8056,
V.M. % (DAF)		28,2
* (-1/8"+0 COAL FLOATED AT 1,50 S.G.)		

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	408,0
FUSION TEMP.	DC	430,0
MAX FLUID TEMP.	DC	458,0
FINAL FLUID TEMP.	DC	466,0
SOLIDIFICATION TEMP.	DC	487,0
MELTING RANGE	DC	38,0
MAXIMUM FLUIDITY DD/M		9,8

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	413,0
TII - MAX. CONTRACTION TEMP.	DC	455,0
TIII - MAX. DILATATION TEMP.	DC	485,0
CONTRACTION	%	12,0
DILATATION	%	-12,0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4")

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4"+ 28M	0,0	0,0	0,0	0,0
-28M + 60M	0,0	0,0	0,0	0,0
-60M + 0	0,0	0,0	0,0	0,0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 1559

V-TYPES TYPE	%
10	20,9
11	34,1
12	5,7
13	1,9
14	0,6
0	0,0

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	63,2	INERT SF. (1/2)	12,3
REACTIVE SF. (1/2)	12,4	MICRINOIDS	1,7
EXINOID & RESIN	0,7	FUSINOIDS	6,2
		MINERAL MATTER	3,5
TOTAL REACTIVES	76,3	TOTAL INERTS	23,7

MAX. MEAN REFL. OF VITRINOIDS (RO) 1,13
BAL. INDEX 0,83 STRENGTH INDEX 4,39 PRED. COKE STAB. INDEX 60,30

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0,0)	FLT.	1,30	0,0	0,0		0,0	0,0	0,0
-1/4"+28M		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(100,0)	FLT.	1,30	37,0	2,1	7	37,0	2,1	39,3
-1/8"+ 0		1,40	30,3	5,6	5	69,3	3,6	47,3
		1,50	10,5	14,7	1	79,8	5,1	17,0
		1,60	4,2	29,1	1	84,0	6,3	7,5
		1,70	2,3	42,2	1	86,3	7,2	
	SINK	1,70	13,7	78,8	NC	100,0	16,6	

(0,0)	FLT.	1,30	0,0	0,0		0,0	0,0	0,0	
-28M+60M		1,40	0,0	0,0		0,0	0,0	0,0	
		1,50	0,0	0,0		0,0	0,0	0,0	
		1,60	0,0	0,0		0,0	0,0	0,0	
		1,70	0,0	0,0		0,0	0,0		
	SINK	1,70	0,0	0,0		0,0	0,0		

FROTH CELL TEST

(0,0)	FROTH		0,0	0,0		0,0	0,0	0,0	
-28M+60M	TAILINGS		0,0	0,0		0,0	0,0	0,0	

(0,0)	FLT.	1,30	0,0	0,0		0,0	0,0	0,0	
-60M+ 0		1,40	0,0	0,0		0,0	0,0	0,0	
		1,50	0,0	0,0		0,0	0,0	0,0	
		1,60	0,0	0,0		0,0	0,0	0,0	
		1,70	0,0	0,0		0,0	0,0		
	SINK	1,70	0,0	0,0		0,0	0,0		

FROTH CELL TEST

(0,0)	FROTH		0,0	0,0		0,0	0,0	0,0	
-60M + 0	TAILINGS		0,0	0,0		0,0	0,0	0,0	

NOTES:

DRILL HOLE: EV151 (CORE) SEAM #3L INTERCEPT 17.01- 21.16 INTCPT THICKNESS 4.15 TRUE THICKNESS 3.70 M
VERTICAL THICKNESS 4.15 DIP ANGLE 27 LATITUDE 5546676.130 M DEPARTURE 659152.130 M ELEVATION 1602.150 M
RECEIVED: 00/00/00 WEIGHT 0.00 KG MOISTURE 0.0 % COMPLETE: 00/00/00
MM DD YY COMPOSITE: RECOVERY 41.9 % MM DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100.00	35.00
ASH %	50.80	8.50
V.M. %	16.10	25.90
F.C. %	33.10	65.60
F.S.I.	5-1/2	7
% TOTAL SULF.	0.41	0.62
% P2O5 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	0.	7701.
V.M. % (DAF)		32.7

% (-1/8'+0 COAL FLOATED AT 1.50 S.G.)

GIESELER PLASTICITY: DATE RUN 00/00/00

START	DC	398.0
FUSION TEMP.	DC	416.0
MAX FLUID TEMP.	DC	451.0
FINAL FLUID TEMP.	DC	480.0
SOLIDIFICATION TEMP.	DC	485.0
MELTING RANGE	DC	64.0
MAXIMUM FLUIDITY DD/M		435.9

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	399.0
TII - MAX. CONTRACTION TEMP.	DC	440.0
TIII - MAX. DILATATION TEMP.	DC	430.0
CONTRACTION	%	22.0
DILATATION	%	62.0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4"+ 28M	0.0	0.0	0.0	0.0
-28M + 60M	0.0	0.0	0.0	0.0
-60M + 0	0.0	0.0	0.0	0.0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 1560

V-TYPES

TYPE	%
9	1.3
10	18.5
11	39.3
12	6.0
13	2.0
0	0.0

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	67.1	INERT SF. (1/2)	10.5
REACTIVE SF. (1/2)	10.7	MICRINOIDS	2.7
EXINOID & RESIN	0.3	FUSINOIDS	3.8
		MINERAL MATTER	4.9
TOTAL REACTIVES	78.1	TOTAL INERTS	21.9

MAX. MEAN REFL. OF VITRINOIDS (RO) 1.13
BAL. INDEX 0.75 STRENGTH INDEX 4.37 PRED. COKE STAB. INDEX 59.80

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0)	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
-1/4"+28M		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(100.0)	FLT.	1.30	15.0	2.7	7-1/2	15.0	2.7	61.7
-1/8"+ 0		1.40	11.3	7.7	7	26.3	4.8	43.1
		1.50	7.0	15.0	4-1/2	33.3	7.0	28.7
		1.60	4.0	24.1	3	37.3	8.8	21.6
		1.70	5.2	41.7	1	42.5	12.8	
	SINK	1.70	57.5	81.9	NC	100.0	52.5	

		S.G.	DIRECT WT.	DIRECT ASH	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0)	FLT.	1.30	0.0	0.0	0.0	0.0	0.0
-28M+60M		1.40	0.0	0.0	0.0	0.0	0.0
		1.50	0.0	0.0	0.0	0.0	0.0
		1.60	0.0	0.0	0.0	0.0	0.0
		1.70	0.0	0.0	0.0	0.0	
	SINK	1.70	0.0	0.0	0.0	0.0	

FROTH CELL TEST

(0.0) -28M+60M	FROTH	0.0	0.0	0.0	0.0
	TAILINGS	0.0	0.0	0.0	0.0

		S.G.	DIRECT WT.	DIRECT ASH	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0)	FLT.	1.30	0.0	0.0	0.0	0.0	0.0
-60M+ 0		1.40	0.0	0.0	0.0	0.0	0.0
		1.50	0.0	0.0	0.0	0.0	0.0
		1.60	0.0	0.0	0.0	0.0	0.0
		1.70	0.0	0.0	0.0	0.0	
	SINK	1.70	0.0	0.0	0.0	0.0	

FROTH CELL TEST

(0.0) -60M+ 0	FROTH	0.0	0.0	0.0	0.0
	TAILINGS	0.0	0.0	0.0	0.0

NOTES:

PRINTED 02/07/82

DRILL HOLE: EV151 (CORE) SEAM | INTERCEPT 29.27- 30.18 INTCPT THICKNESS 0.91 | TRUE THICKNESS 0.81 M
VERTICAL THICKNESS 0.71 DIP ANGLE 27 | LATITUDE 5546076.130 M | DEPARTURE 659132.130 M | ELEVATION 1587.890 M
RECEIVED: 00/00/00 | WEIGHT 0.00 KG | MOISTURE 0.0 % | COMPLETE: 00/00/00
MM DD YY | COMPOSITE: | RECOVERY 100.0 % | MM DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100.00	72.10
ASH %	23.80	7.60
V.M. %	21.20	25.10
F.C. %	55.00	67.30
F.S.I.	6	7-1/2
% TOTAL SULF.	0.72	0.94
% P2O5 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	0.	8056.
V.M. % (DAF)		27.8

* (-1/8'+0 COAL FLOATED AT 1.50 S.G.)

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4'+ 28M	0.0	0.0	0.0	0.0
-28M + 60M	0.0	0.0	0.0	0.0
-60M + 0	0.0	0.0	0.0	0.0

DIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	388.0
FUSION TEMP.	DC	416.0
MAX FLUID TEMP.	DC	452.0
FINAL FLUID TEMP.	DC	462.0
SOLIDIFICATION TEMP.	DC	489.0
MELTING RANGE	DC	66.0
MAXIMUM FLUIDITY DD/M		463.4

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	393.0
TII - MAX. CONTRACTION TEMP.	DC	434.0
TIII - MAX. DILATATION TEMP.	DC	473.0
CONTRACTION	%	24.0
DILATATION	%	122.0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00. PELLET NUMBER 0

V-TYPES	%
9	2.3
10	4.1
11	35.6
12	31.9
0	0.0
0	0.0

REACTIVE COMPONENTS	
TOTAL VITRINOID	75.9
REACTIVE SF. (1/2)	7.4
EXINOID & RESIN	0.6
TOTAL REACTIVES	83.9

INERT COMPONENTS	
INERT SF. (1/2)	7.4
MICRINOIDS	1.0
FUSINOIDS	3.3
MINERAL MATTER	4.4
TOTAL INERTS	16.1

MAX. MEAN REFL. OF VITRINOIDS (RO) 1.17
BAL. INDEX 0.55 STRENGTH INDEX 4.45 PRED. COKE STAB. INDEX 58.70

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT. %	DIRECT ASH %	FSI	CUM. WT. %	CUM. ASH %	+/- .1 S.G.
(0.0)	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
-1/4'+28M		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

		S.G.	DIRECT WT. %	DIRECT ASH %	FSI	CUM. WT. %	CUM. ASH %	+/- .1 S.G.
(0.0)	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
-28M+60M		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

		S.G.	DIRECT WT. %	DIRECT ASH %	FSI	CUM. WT. %	CUM. ASH %	+/- .1 S.G.
(0.0)	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
-60M+ 0		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT. %	DIRECT ASH %	FSI	CUM. WT. %	CUM. ASH %	+/- .1 S.G.
(100.0)	FLT.	1.30	39.9	2.9	8	39.9	2.9	73.0
-1/8'+ 0		1.40	18.4	7.9	7	58.3	4.5	37.9
		1.50	11.9	18.6	3-1/2	70.2	6.7	23.3
		1.60	6.7	29.3	3-1/2	76.9	8.8	12.1
		1.70	3.0	41.6	1	79.9	10.1	
	SINK	1.70	20.1	70.5	NC	100.0	22.2	

FROTH CELL TEST

		DIRECT WT. %	DIRECT ASH %	CUM. WT. %	CUM. ASH %
(0.0) -28M+60M	FROTH	0.0	0.0	0.0	0.0
	TAILINGS	0.0	0.0	0.0	0.0

FROTH CELL TEST

		DIRECT WT. %	DIRECT ASH %	CUM. WT. %	CUM. ASH %
(0.0) -60M+ 0	FROTH	0.0	0.0	0.0	0.0
	TAILINGS	0.0	0.0	0.0	0.0

NOTES:

PRINTED 02/02/82

DRILL HOLE: EV151 (CORE) SEAM | INTERCEPT 35.24- 35.52 INTCPT THICKNESS 0.28 TRUE THICKNESS 0.23 M
VERTICAL THICKNESS 0.28 DIP ANGLE 27 | LATITUDE 5546876.130 M DEPARTURE 639152.130 M ELEVATION 1383.920 M
RECEIVED: 00/00/00 | WEIGHT 0.00 KG MOISTURE 0.0 % COMPLETE: 00/00/00
HH DD YY | COMPOSITE: RECOVERY 0.0 % HH DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	0.00	0.00
ASH %	0.00	0.00
V.M. %	0.00	0.00
F.C. %	0.00	0.00
F.S.I.		
% TOTAL SULF.	0.00	0.00
% P2O5 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	0.	0.
V.M. % (DAF)		0.0
% (-1/8'+0 COAL FLOATED AT 1.50 S.G.)		

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	0.0
FUSION TEMP.	DC	0.0
MAX FLUID TEMP.	DC	0.0
FINAL FLUID TEMP.	DC	0.0
SOLIDIFICATION TEMP.	DC	0.0
MELTING RANGE	DC	0.0
MAXIMUM FLUIDITY DD/M		

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	0.0
TII - MAX. CONTRACTION TEMP.	DC	0.0
TIII - MAX. DILATATION TEMP.	DC	0.0
CONTRACTION	%	0.0
DILATATION	%	0.0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4'+ 28M	0.0	0.0	0.0	0.0
-28M + 60M	0.0	0.0	0.0	0.0
-60M + 0	0.0	0.0	0.0	0.0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES

TYPE	%
0	0.0
0	0.0
0	0.0
0	0.0
0	0.0

REACTIVE COMPONENTS

TOTAL VITRINOID	0.0
REACTIVE SF. (1/2)	0.0
EXINOID & RESIN	0.0
TOTAL REACTIVES	0.0

INERT COMPONENTS

INERT SF. (1/2)	0.0
MICRINOIDS	0.0
FUSINOIDS	0.0
MINERAL MATTER	0.0
TOTAL INERTS	0.0

MAX. MEAN REFL. OF VITRINOIDS (RO) 0.00
BAL. INDEX 0.00 STRENGTH INDEX 0.00 PRED. COKE STAB. INDEX 0.00

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT. %	DIRECT ASH	FSI	CUM. WT. %	CUM. ASH	+/- .1 S.G.
(0.0)	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
-1/4'+28M		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT. %	DIRECT ASH	FSI	CUM. WT. %	CUM. ASH	+/- .1 S.G.
(100.0)	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
-1/8'+ 0		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

(0.0)	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
-28M+60M		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

FROTH CELL TEST

(0.0)	FROTH					0.0	0.0	
-28M+60M	TAILINGS					0.0	0.0	

(0.0)	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
-60M+ 0		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

FROTH CELL TEST

(0.0)	FROTH					0.0	0.0	
-60M + 0	TAILINGS					0.0	0.0	

NOTES:

DRILL HOLE: EV151 (CORE) SEAM INTERCEPT 41,15- 44,80 INCPT THICKNESS 0,70 TRUE THICKNESS 0,61 M
VERTICAL THICKNESS 0,70 DIP ANGLE 29 LATITUDE 5542876,130 N DEPARTURE 659152,130 M ELEVATION 1574,980 M
RECEIVED: 00/00/00 WEIGHT 0,00 KG MOISTURE 0,0 % COMPLETE: 00/00/00
HH DD YY COMPOSITE: RECOVERY 65,2 % HH DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8" X 0	100,00	72,09
ASH %	20,40	8,70
V.M. %	20,60	24,30
F.C. %	59,00	67,00
F.S.I.	7	7-1/2
% TOTAL SULF.	0,80	0,84
% P2O5 (PHOSPHATE)	0,00	0,00
GROSS CAL. VALUE BTU/LB	0,	7361,
V.M. % (DAF)		25,9

* (-1/8"+0 COAL FLOATED AT 1,50 S.G.)

GIESELER PLASTICITY, DATE RUN 00/00/00

START	GC	0,0
FUSION TEMP.	GC	0,0
MAX FLUID TEMP.	GC	0,0
FINAL FLUID TEMP.	GC	0,0
SOLIDIFICATION TEMP.	GC	0,0
MELTING RANGE	GC	0,0
MAXIMUM FLUIDITY DD/M		

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	GC	399,0
TII - MAX. CONTRACTION TEMP.	GC	431,0
TIII - MAX. DILATATION TEMP.	GC	474,0
CONTRACTION	%	22,0
DILATATION	%	101,0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4")

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4" + 28M	0,0	0,0	0,0	0,0
-28M + 60M	0,0	0,0	0,0	0,0
-60M + 0	0,0	0,0	0,0	0,0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES

TYPE	%
9	0,7
10	2,1
11	16,0
12	48,2
13	3,2
14	0,7

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	72,9	INERT SF, (1/2)	7,7
REACTIVE SF, (1/2)	7,7	MICRINOIDS	2,3
EXINOID & RESIN	0,0	FUSINOIDS	4,4
		MINERAL MATTER	5,0
TOTAL REACTIVES	80,6	TOTAL INERTS	19,4

MAX. MEAN REFL. OF VITRINOIDS (RO) 0,00
SAL. INDEX 0,74 STRENGTH INDEX 4,77 PRED. COKE STAB. INDEX 61,90

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0,0) -1/4"+28M	FLT.	1,30	0,0	0,0		0,0	0,0	0,0
		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(100,0) -1/8"+ 0	FLT.	1,30	36,8	2,7	8	36,8	2,7	65,4
		1,40	17,9	8,9	7-1/2	54,7	4,9	33,4
		1,50	14,2	17,2	4	68,9	7,4	28,0
		1,60	7,2	28,4	2	76,1	9,9	17,6
		1,70	3,5	38,7	1	83,6	11,3	
	SINK	1,70	16,4	64,0	NC	100,0	20,3	

(0,0) -28M+60M

		S.G.	DIRECT % WT.	DIRECT % ASH	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
	FLT.	1,30	0,0	0,0	0,0	0,0	0,0
		1,40	0,0	0,0	0,0	0,0	0,0
		1,50	0,0	0,0	0,0	0,0	0,0
		1,60	0,0	0,0	0,0	0,0	0,0
		1,70	0,0	0,0	0,0	0,0	
	SINK	1,70	0,0	0,0	0,0	0,0	

FROTH CELL TEST

		DIRECT % WT.	DIRECT % ASH	CUM. % WT.	CUM. % ASH
(0,0) -28M+60M	FROTH	0,0	0,0	0,0	0,0
	TAILINGS	0,0	0,0	0,0	0,0

(0,0) -60M+ 0

		S.G.	DIRECT % WT.	DIRECT % ASH	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
	FLT.	1,30	0,0	0,0	0,0	0,0	0,0
		1,40	0,0	0,0	0,0	0,0	0,0
		1,50	0,0	0,0	0,0	0,0	0,0
		1,60	0,0	0,0	0,0	0,0	0,0
		1,70	0,0	0,0	0,0	0,0	
	SINK	1,70	0,0	0,0	0,0	0,0	

FROTH CELL TEST

		DIRECT % WT.	DIRECT % ASH	CUM. % WT.	CUM. % ASH
(0,0) -60M + 0	FROTH	0,0	0,0	0,0	0,0
	TAILINGS	0,0	0,0	0,0	0,0

NOTES:

PRINTED 02/09/82

DRILL HOLE: EV151 (CORE) SEAM | INTERCEPT 64.63- 65.24 | INTCPT THICKNESS 0.61 | TRUE THICKNESS 0.53 M
VERTICAL THICKNESS 0.61 | DIP ANGLE 27 | LATITUDE 5546874.130 M | DEPARTURE 639152.130 M | ELEVATION 1354.530 M
RECEIVED: 00/00/00 | WEIGHT 0.00 KG | MOISTURE 0.0 % | COMPLETE: 00/00/00
MM DD YY | COMPOSITE: | RECOVERY 85.0 % | MM DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100.00	77.90
ASH %	19.90	6.10
V.M. %	20.90	24.70
F.C. %	59.20	69.20
F.S.I.	7-1/2	8
% TOTAL SULF.	0.90	1.07
% P2O5 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	6974.	811.
V.M. % (DAF)		26.1

* (-1/8'+0 COAL FLOATED AT 1.50 S.G.)

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	0.0
FUSION TEMP.	DC	0.0
MAX FLUID TEMP.	DC	0.0
FINAL FLUID TEMP.	DC	0.0
SOLIDIFICATION TEMP.	DC	0.0
MELTING RANGE	DC	0.0
MAXIMUM FLUIDITY DD/M		

DILATATION (RUHR) - DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	405.0
TII - MAX. CONTRACTION TEMP.	DC	438.0
TIII - MAX. DILATATION TEMP.	DC	471.0
CONTRACTION	%	17.0
DILATATION	%	93.0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4"+ 28M	0.0	0.0	0.0	0.0
-28M + 60M	0.0	0.0	0.0	0.0
-60M + 0	0.0	0.0	0.0	0.0

PETROGRAPHIC DATA - DATE COMPLETED 00/00/00 PELLET NUMBER 1561

V-TYPES

TYPE	%
9	0.8
10	5.3
11	35.6
12	34.3
	0.0
0	0.0

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	76.2	INERT SF. (1/2)	8.0
REACTIVE SF. (1/2)	8.1	MICRINOIDS	1.4
EXINOID & RESIN	0.0	FUSINOIDS	2.7
		MINERAL MATTER	3.6
TOTAL REACTIVES	84.3	TOTAL INERTS	15.7

MAX. MEAN REFL. OF VITRINOIDS (RO) 1.18
BAL. INDEX 0.54 STRENGTH INDEX 4.48 PRED. COKE STAB. INDEX 59.00

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0)	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
-1/4"+28M		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(100.0)	FLT.	1.30	31.0	2.1	8	31.0	2.1	76.7
-1/8"+ 0		1.40	14.7	8.4	8	45.7	3.5	30.9
		1.50	11.9	10.7	9-1/2	77.5	5.4	20.2
		1.60	5.2	27.4	1	83.0	7.0	9.6
		1.70	2.7	40.5	1	85.7	8.0	
	SINK	1.70	14.3	74.6	HC	100.0	17.3	

		S.G.	DIRECT WT.	DIRECT ASH	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0)	FLT.	1.30	0.0	0.0	0.0	0.0	0.0
-28M+60M		1.40	0.0	0.0	0.0	0.0	0.0
		1.50	0.0	0.0	0.0	0.0	0.0
		1.60	0.0	0.0	0.0	0.0	0.0
		1.70	0.0	0.0	0.0	0.0	
	SINK	1.70	0.0	0.0	0.0	0.0	

FROTH CELL TEST

		WT.	ASH	CUM. WT.	CUM. ASH
(0.0) -28M+60M	FROTH	0.0	0.0	0.0	0.0
	TAILINGS	0.0	0.0	0.0	0.0

		S.G.	DIRECT WT.	DIRECT ASH	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0)	FLT.	1.30	0.0	0.0	0.0	0.0	0.0
-60M+ 0		1.40	0.0	0.0	0.0	0.0	0.0
		1.50	0.0	0.0	0.0	0.0	0.0
		1.60	0.0	0.0	0.0	0.0	0.0
		1.70	0.0	0.0	0.0	0.0	
	SINK	1.70	0.0	0.0	0.0	0.0	

FROTH CELL TEST

		WT.	ASH	CUM. WT.	CUM. ASH
(0.0) -60M + 0	FROTH	0.0	0.0	0.0	0.0
	TAILINGS	0.0	0.0	0.0	0.0

NOTES:

PRINTED 02/07/82

DRILL HOLE: EV151 (CORE -) SEAM — INTERCEPT 69.48- 70.00 — INTCPT THICKNESS 0.52 — TRUE THICKNESS 0.48 M
VERTICAL THICKNESS 0.32 — DIP ANGLE 24 — LATITUDE 3546876.130 N — DEPARTURE 659132.139 W — ELEVATION 1549.889 M
RECEIVED: 00/00/00 (MM DD YY) — WEIGHT 0.00 KG — MOISTURE 0.0 % — COMPLETE: 00/00/00
COMPOSITE: — RECOVERY 100.0 % (MM DD YY)

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/2' X 0	0.00	0.00
ASH %	0.00	0.00
V.M. %	0.00	0.00
F.C. %	0.00	0.00
F.S.I.		
% TOTAL SULF.	0.00	0.00
% P2O5 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	0.	0.
V.M. % (DAF)		0.0

* (-1/8'+0 COAL FLOATED AT 1.50 S.G.)

GIESELER PLASTICITY; DATE RUN 00/00/00

START	DC	0.0
FUSION TEMP.	DC	0.0
MAX FLUID TEMP.	DC	0.0
FINAL FLUID TEMP.	DC	0.0
SOLIDIFICATION TEMP.	DC	0.0
MELTING RANGE	DC	0.0
MAXIMUM FLUIDITY DD/M		

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	0.0
TII - MAX. CONTRACTION TEMP.	DC	0.0
TIII - MAX. DILATATION TEMP.	DC	0.0
CONTRACTION	%	0.0
DILATATION	%	0.0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4' + 28M	0.0	0.0	0.0	0.0
-28M + 60M	0.0	0.0	0.0	0.0
-60M + 0	0.0	0.0	0.0	0.0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES TYPE	%
0	0.0
0	0.0
0	0.0
0	0.0
0	0.0

REACTIVE COMPONENTS	
TOTAL VITRINOID	0.0
REACTIVE SF. (1/2)	0.0
EXINOID & RESIN	0.0
TOTAL REACTIVES	0.0

INERT COMPONENTS	
INERT SF. (1/2)	0.0
MICRINOIDS	0.0
FUSINOIDS	0.0
MINERAL MATTER	0.0
TOTAL INERTS	0.0

MAX. MEAN REFL. OF VITRINOIDS (RO) 0.00
BAL. INDEX 0.00 STRENGTH INDEX 0.00 PRED. COKE STAB. INDEX 0.00

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0.0) -1/4'+28M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0.0) -28M+60M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0.0) -60M+ 0	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(100.0) -1/8'+ 0	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

FROTH CELL TEST

		DIRECT % WT.	DIRECT % ASH	CUM. % WT.	CUM. % ASH
(0.0) -28M+60M	FROTH	0.0	0.0	0.0	0.0
	TAILINGS	0.0	0.0	0.0	0.0

FROTH CELL TEST

		DIRECT % WT.	DIRECT % ASH	CUM. % WT.	CUM. % ASH
(0.0) -60M+ 0	FROTH	0.0	0.0	0.0	0.0
	TAILINGS	0.0	0.0	0.0	0.0

NOTES:

DRILL HOLE: EV151 (CORE) SEAM 7,8 | INTERCEPT 82,20- 85,43 | INTCPT THICKNESS 3,23 | TRUE THICKNESS 2,95 M
VERTICAL THICKNESS 3,23 | DIP ANGLE 24 | LATITUDE 5546876,136 M | DEPARTURE 659152,130 M | ELEVATION 1036,960 M
RECEIVED: 00/00/00 (HH DD YY) | WEIGHT 0,00 KG | MOISTURE 0,0 % | COMPLETE: 00/00/00
COMPOSITE: | RECOVERY 39,6 % | HH DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100,00	74,90
ASH %	21,60	9,30
V.M. %	21,00	22,20
F.C. %	57,40	68,50
F.S.I.	6	7
% TOTAL SULF.	362,00	0,60
% P2O5 (PHOSPHATE)	0,00	0,00
GROSS CAL. VALUE BTU/LB	7281,	7657,
V.M. % (DAF)		26,8

* (-1/8'+0 COAL FLOATED AT 1,50 S.G.)

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	403,0
FUSION TEMP.	DC	423,0
MAX FLUID TEMP.	DC	456,0
FINAL FLUID TEMP.	DC	481,0
SOLIDIFICATION TEMP.	DC	492,0
MELTING RANGE	DC	58,0
MAXIMUM FLUIDITY DD/M		175,4

DILATATION (RUHR) DATE RUN 00/00/00

II - SOFT. TEMP.	DC	410,0
III - MAX. CONTRACTION TEMP.	DC	433,0
IIII - MAX. DILATATION TEMP.	DC	482,0
CONTRACTION	%	18,0
DILATATION	%	28,0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4' + 28M	0,0	0,0	0,0	0,0
-28M + 60M	0,0	0,0	0,0	0,0
-60M + 0	0,0	0,0	0,0	0,0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 1562

V-TYPES		REACTIVE COMPONENTS		INERT COMPONENTS	
TYPE	%	TOTAL VITRINOID	55,5	INERT SF. (1/2)	13,5
10	6,5	REACTIVE SF. (1/2)	13,6	MICRINOIDS	4,5
11	30,3	EXINOID & RESIN	0,6	FUSINOIDS	7,0
12	15,5			MINERAL MATTER	5,3
13	2,7	TOTAL REACTIVES	69,7	TOTAL INERTS	30,3
14	0,5				
0	0,0				

MAX. MEAN REFL. OF VITRINOIDS (RO) 1,18
BAL. INDEX 1,23 STRENGTH INDEX 4,54 PRED. COKE STAB. INDEX 59,30

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0,0)	FLT.	1,30	0,0	0,0		0,0	0,0	0,0
-1/4'+28M		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0,0)	FLT.	1,30	0,0	0,0		0,0	0,0	0,0
-28M+60M		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0,0)	FLT.	1,30	0,0	0,0		0,0	0,0	0,0
-60M+ 0		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(100,0)	FLT.	1,30	24,6	3,3	8	24,6	3,3	56,6
-1/8'+ 0		1,40	23,1	8,1	6	47,7	5,6	57,5
		1,50	25,4	14,0	2-1/2	73,1	8,5	40,5
		1,60	8,7	27,5	1	81,8	10,6	13,3
		1,70	2,5	38,6	1	84,3	11,4	
	SINK	1,70	15,7	82,2	NC	100,0	22,5	

FROTH CELL TEST

		DIRECT WT.	DIRECT ASH	CUM. WT.	CUM. ASH
(0,0) -28M+60M	FROTH	0,0	0,0	0,0	0,0
	TAILINGS	0,0	0,0	0,0	0,0

FROTH CELL TEST

		DIRECT WT.	DIRECT ASH	CUM. WT.	CUM. ASH
(0,0) -60M + 0	FROTH	0,0	0,0	0,0	0,0
	TAILINGS	0,0	0,0	0,0	0,0

NOTES:

DRILL HOLE: EV15: (CORE) SEAM: INTERCEPT 83,72- 89,21 INTCPT THICKNESS 0,49 TRUE THICKNESS 0,42 M
VERTICAL THICKNESS 0,49 DIP ANGLE 31 LATITUDE 5546076,130 M DEPARTURE 659152,130 M ELEVATION 1330,440 M
RECEIVED: 00/00/00 WEIGHT 0,00 KG. MOISTURE 0,0 % COMPLETE: 00/00/00
MM DD YY COMPOSITE: RECOVERY 100,0 % MM DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	0,00	0,00
ASH %,	0,00	0,00
V.M. %	0,00	0,00
F.C. %	0,00	0,00
F.S.I.		
% TOTAL SULF.	0,00	0,00
% P2O5 (PHOSPHATE)	0,00	0,00
GROSS CAL. VALUE BTU/LB	0,	0,
V.M. % (DAF)		0,0
% (-1/8'+0 COAL FLOATED AT 1,50 S.G.)		

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	0,0
FUSION TEMP.	DC	0,0
MAX FLUID TEMP.	DC	0,0
FINAL FLUID TEMP.	DC	0,0
SOLIDIFICATION TEMP.	DC	0,0
MELTING RANGE	DC	0,0
MAXIMUM FLUIDITY DD/M		

DILATATION (AUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	0,0
TII - MAX. CONTRACTION TEMP.	DC	0,0
TIII - MAX. DILATATION TEMP.	DC	0,0
CONTRACTION	%	0,0
DILATATION	%	0,0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4'+ 28M	0,0	0,0	0,0	0,0
-28M + 60M	0,0	0,0	0,0	0,0
-60M + 0	0,0	0,0	0,0	0,0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES

TYPE	%
0	0,0
0	0,0
0	0,0
0	0,0
0	0,0
0	0,0

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	0,0	INERT SF. (1/2)	0,0
REACTIVE SF. (1/2)	0,0	MICRINOIDS	0,0
EXINOID & RESIN	0,0	FUSINOIDS	0,0
		MINERAL MATTER	0,0
TOTAL REACTIVES	0,0	TOTAL INERTS	0,0

MAX. MEAN REFL. OF VITRINOIDS (RO) 0,00
BAL. INDEX 0,00 STRENGTH INDEX 0,00 PRED. COKE STAB. INDEX 0,00

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0,0) -1/4'+28M	FLT.	1,30	0,0	0,0		0,0	0,0	0,0
		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(100,0) -1/8'+ 0	FLT.	1,30	0,0	0,0		0,0	0,0	0,0
		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0,0) -28M+60M	FLT.	1,30	0,0	0,0		0,0	0,0	0,0
		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

FROTH CELL TEST

(0,0) -28M+60M	FROTH	0,0	0,0	0,0	0,0
	TAILINGS	0,0	0,0	0,0	0,0

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0,0) -60M+ 0	FLT.	1,30	0,0	0,0		0,0	0,0	0,0
		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

FROTH CELL TEST

(0,0) -60M + 0	FROTH	0,0	0,0	0,0	0,0
	TAILINGS	0,0	0,0	0,0	0,0

NOTES:

PRINTED 02/09/82

DRILL HOLE: SV15: (CORE) SEAM | INTERCEPT 97.59- 98.84 | INTCPT THICKNESS 1.25 | TRUE THICKNESS 1.07 M
VERTICAL THICKNESS 1.25 | DIP ANGLE 31 | LATITUDE 5346876.130 M | DEPARTURE 657152.130 M | ELEVATION 1521.570 M
RECEIVED: 00/00/00 MM DD YY | WEIGHT 0.00 KG | COMPOSITE: | MOISTURE 0.0 % | RECOVERY 100.0 % | COMPLETE: 00/00/00 MM DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100.00	92.30
ASH %	15.30	8.50
V.M. %	18.60	20.00
F.C. %	66.10	71.50
F.S.I.	2-1/2	3
% TOTAL SULF.	0.60	0.68
% P2O5 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	7160.	7228.
V.M. % (DAF)		22.0
% (-1/8'+0 COAL FLOATED AT 1.50 S.G.)		

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4'+ 28M	0.0	0.0	0.0	0.0
-28M + 60M	0.0	0.0	0.0	0.0
-60M + 0	0.0	0.0	0.0	0.0

GIESELER PLASTICITY, DATE RUN 00/00/00

START	GC	0.0
FUSION TEMP.	GC	0.0
MAX FLUID TEMP.	GC	0.0
FINAL FLUID TEMP.	GC	0.0
SOLIDIFICATION TEMP.	GC	0.0
MELTING RANGE	GC	0.0
MAXIMUM FLUIDITY DD/M		

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	GC	0.0
TII - MAX. CONTRACTION TEMP.	GC	0.0
TIII - MAX. DILATATION TEMP.	GC	0.0
CONTRACTION	%	0.0
DILATATION	%	0.0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 1563

V-TYPES

TYPE	%
10	3.4
11	12.2
12	16.0
13	7.6
14	3.0
0	0.0

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	42.2	INERT SF. (1/2)	18.4
REACTIVE SF. (1/2)	18.5	MICRINOIDS	4.3
EXINOID & RESIN	0.0	FUSINOIDS	11.7
		MINERAL MATTER	4.9
TOTAL REACTIVES	60.7	TOTAL INERTS	39.3

MAX. MEAN REFL. OF VITRINOIDS (RO) 1.22
BAL. INDEX 2.04 STRENGTH INDEX 4.71 PRED. COKE STAB. INDEX 50.50

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0) -1/4'+28M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

(0.0) -28M+60M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

(0.0) -60M+ 0	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(100.0) -1/8'+ 0	FLT.	1.30	22.6	2.4	8	22.6	2.4	83.5
		1.40	34.9	6.7	2-1/2	57.7	5.0	62.9
		1.50	22.3	15.3	1	80.0	7.9	34.3
		1.60	8.9	27.7	1	88.9	9.9	12.0
		1.70	2.0	41.7	1	90.9	10.6	
	SINK	1.70	9.1	71.1	NC	100.0	16.1	

FROTH CELL TEST

(0.0) -28M+60M	FROTH	0.0	0.0		0.0	0.0
	TAILINGS	0.0	0.0		0.0	0.0

FROTH CELL TEST

(0.0) -60M+ 0	FROTH	0.0	0.0		0.0	0.0
	TAILINGS	0.0	0.0		0.0	0.0

NOTES:

PRINTED 02/07/82

DRILL HOLE: EW151 (CORE) SEAM: 6,8 | INTERCEPT: 169,82- 170,73 | INTCPT THICKNESS: 0,91 | TRUE THICKNESS: 0,82 M
VERTICAL THICKNESS: 0,91 | DIP ANGLE: 25 | LATITUDE: 5046876,130 M | DEPARTURE: 659152,130 M | ELEVATION: 1449,340 M
RECEIVED: 00/00/00 | WEIGHT: 0,00 KG | MOISTURE: 0,0 % | COMPLETE: 00/00/00
HH DD YY | COMPOSITE: | RECOVERY: 60,0 % | HH DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8" X 0	100,00	37,40
ASH %	41,30	8,50
V.M. %	17,10	21,70
F.C. %	75,60	69,80
F.S.I.	4	6-1/2
% TOTAL SULF.	0,53	0,81
% P2O5 (PHOSPHATE)	0,00	0,00
GROSS CAL. VALUE BTU/LB	0,	7935,
V.M. % (DAF)		18,4

* (-1/8"+9 COAL FLOATED AT 1,50 S.G.)

GIESELER PLASTICITY, DATE RUN 00/00/00

START	GC	417,0
FUSION TEMP.	GC	442,0
MAX FLUID TEMP.	GC	459,0
FINAL FLUID TEMP.	GC	471,0
SOLIDIFICATION TEMP.	GC	493,0
MELTING RANGE	GC	29,0
MAXIMUM FLUIDITY DD/M		3

DILATATION (RUHR), DATE RUN 00/00/00

TI - SOFT. TEMP.	GC	418,0
TII - MAX. CONTRACTION TEMP.	GC	445,0
TIII - MAX. DILATATION TEMP.	GC	463,0
CONTRACTION	%	2,0
DILATATION	%	-2,0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4")

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4"+ 28M	0,0	0,0	0,0	0,0
-28M + 60M	0,0	0,0	0,0	0,0
-60M + 0	0,0	0,0	0,0	0,0

PETROGRAPHIC DATA, DATE COMPLETED 00/00/00, PELLET NUMBER 1504

V-TYPES

TYPE	%
7	1,0
8	2,5
9	2,5
10	6,6
11	14,7
12	23,6

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	50,9	INERT SF, (1/2)	16,1
REACTIVE SF, (1/2)	16,1	MICRINOIDS	3,7
EXINOID & RESIN	0,0	FUSINOIDS	8,1
		MINERAL MATTER	4,7
TOTAL REACTIVES	67,0	TOTAL INERTS	33,0

MAX. MEAN REFL. OF VITRINOIDS (RO) 1,16
BAL. INDEX 1,45 STRENGTH INDEX 1,45 PRED. COKE STAB. INDEX 56,10

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0,0) -1/4"+28M	FLT.	1,30	0,0	0,0		0,0	0,0	0,0
		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(100,0) -1/8"+ 0	FLT.	1,30	12,2	2,5	8-1/2	12,2	2,5	53,2
		1,40	13,4	6,5	7	25,6	4,6	44,9
		1,50	8,2	14,5	5	33,8	7,0	34,9
		1,60	8,6	24,7	1	42,4	10,6	29,7
		1,70	5,7	36,6	1	48,1	13,7	
	SINK	1,70	51,9	73,6	NC	100,0	44,8	

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0,0) -28M+60M	FLT.	1,30	0,0	0,0		0,0	0,0	0,0
		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

FROTH CELL TEST

		WT.	ASH	CUM. WT.	CUM. ASH
(0,0) -28M+60M	FROTH	0,0	0,0	0,0	0,0
	TAILINGS	0,0	0,0	0,0	0,0

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0,0) -60M+ 0	FLT.	1,30	0,0	0,0		0,0	0,0	0,0
		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

FROTH CELL TEST

		WT.	ASH	CUM. WT.	CUM. ASH
(0,0) -60M + 0	FROTH	0,0	0,0	0,0	0,0
	TAILINGS	0,0	0,0	0,0	0,0

NOTES:

DRILL HOLE: EV151 (CORE) SEAM S,S | INTERCEPT 216,55- 218,96 | INTCPT THICKNESS 2,41 | TRUE THICKNESS 2,26 M
VERTICAL THICKNESS 2,41 | DIP ANGLE 20 | LATITUDE 5346876,130 M | DEPARTURE 659102,130 M | ELEVATION 1402,610 M
RECEIVED: 00/00/00 (MM DD YY) | WEIGHT 0,00 KG | COMPOSITE: | MOISTURE 0,0 % | RECOVERY 0,0 % | COMPLETE: 00/00/00 (MM DD YY)

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100,00	43,80
ASH %	41,40	8,20
V,M, %	14,40	20,20
F,C, %	44,20	71,60
F,S,I,	1-1/2	7
% TOTAL SULF,	0,44	0,54
% P2O5 (PHOSPHATE)	0,00	0,00
GROSS CAL, VALUE BTU/LB	0,	7905,
V,M, % (DAF)		24,6

* (-1/8'+0 COAL FLOATED AT 1,50 S,G,)

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	418,0
FUSION TEMP,	DC	439,0
MAX FLUID TEMP,	DC	465,0
FINAL FLUID TEMP,	DC	481,0
SOLIDIFICATION TEMP,	DC	494,0
MELTING RANGE	DC	48,0
MAXIMUM FLUIDITY DD/M		19,7

DILATATION (RUHR) DATE RUN 00/00/00

II - SOFT, TEMP,	DC	416,0
III - MAX, CONTRACTION TEMP,	DC	445,0
IIII - MAX, DILATATION TEMP,	DC	445,0
CONTRACTION	%	7,0
DILATATION	%	-7,0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT,%	ASH%	CUMULATIVE WT,%	CUMULATIVE ASH%
-1/4"+ 28M	0,0	0,0	0,0	0,0
-28M + 60M	0,0	0,0	0,0	0,0
-60M + 0	0,0	0,0	0,0	0,0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES TYPE	%
0	0,0
0	0,0
0	0,0
0	0,0
0	0,0

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	0,0	INERT SF, (1/2)	0,0
REACTIVE SF, (1/2)	0,0	MICRINOIDS	0,0
EXINOID & RESIN	0,0	FUSINOIDS	0,0
		MINERAL MATTER	0,0
TOTAL REACTIVES	0,0	TOTAL INERTS	0,0

MAX, MEAN REFL, OF VITRINOIDS (RO) 0,00
BRL, INDEX 0,00 STRENGTH INDEX 0,00 PRED, COKE STAB, INDEX 0,00

WASHABILITY (WT,%) AND SIZE — DATE RUN 00/00/00

		S,G,	DIRECT % WT,	DIRECT % ASH	FSI	CUM, % WT,	CUM, % ASH	+/- ,1 S,G,
(0,0)	FLT,	1,30	14,4	3,2	7-1/2	14,4	3,2	64,2
-1/4"+28M		1,40	19,2	8,9	2-1/2	33,6	6,5	51,8
		1,50	7,9	20,1	1	41,5	9,1	24,3
		1,60	4,8	32,6	1	46,3	11,5	20,7
		1,70	6,0	44,3	1	52,3	15,3	
	SINK	1,70	47,7	71,4	NC	100,0	42,0	

WASHABILITY (WT,%) AND SIZE — DATE RUN 00/00/00

		S,G,	DIRECT % WT,	DIRECT % ASH	FSI	CUM, % WT,	CUM, % ASH	+/- ,1 S,G,
(100,0)	FLT,	1,30	17,5	2,2	8	17,5	2,2	61,7
-1/8"+ 0		1,40	14,3	6,6	5	31,8	4,2	48,5
		1,50	10,7	14,3	1	42,5	6,7	31,5
		1,60	5,5	22,4	1	48,0	8,5	17,5
		1,70	3,5	33,8	1	51,5	10,2	
	SINK	1,70	48,5	70,4	NC	100,0	39,4	

		S,G,	DIRECT % WT,	DIRECT % ASH	FSI	CUM, % WT,	CUM, % ASH	+/- ,1 S,G,
(0,0)	FLT,	1,30	44,3	1,8	9	44,3	1,8	78,0
-28M+60M		1,40	19,9	6,3	7	64,2	3,3	38,0
		1,50	11,4	15,6	1-1/2	75,6	5,1	18,7
		1,60	4,0	25,5	1	79,6	6,1	8,1
		1,70	2,7	37,6	1	82,3	7,2	
	SINK	1,70	17,7	67,1	NC	100,0	17,8	

FROTH CELL TEST

(0,0)	FROTH	0,0	0,0		0,0	0,0
-28M+60M	TAILINGS	0,0	0,0		0,0	0,0

		S,G,	DIRECT % WT,	DIRECT % ASH	FSI	CUM, % WT,	CUM, % ASH	+/- ,1 S,G,
(0,0)	FLT,	1,30	0,0	0,0		0,0	0,0	0,0
-60M+ 0		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

FROTH CELL TEST

(0,0)	FROTH	0,0	0,0		0,0	0,0
-60M + 0	TAILINGS	0,0	0,0		0,0	0,0

NOTES:

DRILL HOLE: EV151 (CORE) SEAM 5,6 INTERCEPT 218,71 - 232,81 INTCPT THICKNESS 13,80 TRUE THICKNESS 13,02 M
VERTICAL THICKNESS 13,85 DIP ANGLE 20 LATITUDE 5346876,130 N DEPARTURE 657152,150 N ELEVATION 1400,200 M
RECEIVED: 00/00/00 WEIGHT 0,00 KG MOISTURE 0,0 % COMPLETE: 00/00/00
HH DD YY COMPOSITE: RECOVERY 81,4 % HH DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100,00	69,00
ASH %	22,90	8,30
V.M. %	17,60	21,50
F.C. %	59,50	70,20
F.S.I.	2-1/2	6
% TOTAL SULF.	0,27	0,35
% P2O5 (PHOSPHATE)	0,00	0,00
GROSS CAL. VALUE BTU/LB	0,	7925,
V.M. % (DAF)		22,8

* (-1/8'+0 COAL FLOATED AT 1,50 S.G.)

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	422,0
FUSION TEMP.	DC	440,0
MAX FLUID TEMP.	DC	467,0
FINAL FLUID TEMP.	DC	482,0
SOLIDIFICATION TEMP.	DC	493,0
MELTING RANGE	DC	42,0
MAXIMUM FLUIDITY DD/M		73

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	418,0
TII - MAX. CONTRACTION TEMP.	DC	463,0
TIII - MAX. DILATATION TEMP.	DC	483,0
CONTRACTION	%	11,0
DILATATION	%	-11,0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT,%	ASH%	CUMULATIVE WT,%	CUMULATIVE ASH%
-1/4'+ 28M	87,1	22,0	87,1	22,0
-28M + 60M	8,1	12,2	95,2	21,2
-60M + 0	4,8	14,4	100,0	20,8

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES

TYPE	%
11	1,6
12	7,9
13	29,9
14	11,0
15	2,1
0	0,0

REACTIVE COMPONENTS

TOTAL VITRINOID	32,5
REACTIVE SF. (1/2)	15,9
EXINOID & RESIN	0,0
TOTAL REACTIVES	68,4

INERT COMPONENTS

INERT SF. (1/2)	15,9
MICRINOIDS	4,3
FUSINOIDS	6,7
MINERAL MATTER	4,7
TOTAL INERTS	31,6

MAX. MEAN REFL. OF VITRINOIDS (RO) 1,35
BAL. INDEX 1,87 STRENGTH INDEX 3,84 PRED. COKE STAB. INDEX 60,30

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT, %	DIRECT ASH	FSI	CUM. WT, %	CUM. ASH	+/- ,1 S.G.
(87,1) -1/4'+28M	FLT.	1,30	14,3	3,9	7	14,3	3,9	69,2
		1,40	41,9	9,7	1-1/2	56,2	8,2	68,2
		1,50	13,5	19,1	1	69,7	10,3	25,0
		1,60	6,8	26,9	1	76,5	11,8	14,2
		1,70	4,7	33,0	1	81,2	13,0	
	SINK	1,70	18,8	60,5	NC	100,0	22,0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT, %	DIRECT ASH	FSI	CUM. WT, %	CUM. ASH	+/- ,1 S.G.
(100,0) -1/8'+ 0	FLT.	1,30	22,0	2,2	?	22,0	2,2	62,2
		1,40	25,6	6,7	3-1/2	47,6	4,6	55,7
		1,50	17,8	14,7	1-1/2	65,4	7,6	32,2
		1,60	6,8	25,9	1	72,2	9,1	14,3
		1,70	4,3	33,2	1	76,5	10,5	
	SINK	1,70	23,5	69,8	NC	100,0	24,4	

		S.G.	DIRECT WT, %	DIRECT ASH	FSI	CUM. WT, %	CUM. ASH	+/- ,1 S.G.
(8,1) -28M+60M	FLT.	1,30	41,4	2,0	9	41,4	2,0	79,2
		1,40	30,7	6,9	6	72,1	4,1	48,5
		1,50	13,4	15,7	1-1/2	85,5	5,9	19,1
		1,60	4,0	28,2	1	89,5	6,9	6,0
		1,70	1,5	36,1	1	91,0	7,4	
	SINK	1,70	9,0	61,4	NC	100,0	12,2	

FROTH CELL TEST

		WT, %	ASH
(8,1) -28M+60M	FROTH	0,0	0,0
	TAILINGS	0,0	0,0
		0,0	0,0

		S.G.	DIRECT WT, %	DIRECT ASH	FSI	CUM. WT, %	CUM. ASH	+/- ,1 S.G.
(4,8) -60M+ 0	FLT.	1,30	0,0	0,0		0,0	0,0	0,0
		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

FROTH CELL TEST

		WT, %	ASH				
(4,8) -60M + 0	FROTH	92,3	10,7	6-1/2		92,3	10,7
	TAILINGS	7,7	58,3	NC		100,0	14,4

NOTES:

DRILL HOLE: EV151 (CORE) SEAM | INTERCEPT 326.92- 327.56 INTCPT THICKNESS 0.64 TRUE THICKNESS 0.58 M
VERTICAL THICKNESS 0.64 DIP ANGLE 24 | LATITUDE 5546076.130 M DEPARTURE 659152.130 M ELEVATION 1392.240 M
RECEIVED: 00/00/00 | WEIGHT 0.00 KG MOISTURE 0.0 % COMPLETED: 00/00/00
MM DD YY | COMPOSITE: RECOVERY 100.0 % MM DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100.00	44.00
ASH %	37.90	6.40
V.M. %	14.20	19.20
F.C. %	47.90	74.40
F.S.I.	1	6
% TOTAL SULF.	0.39	0.58
% P2O5 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	0.	8154.
V.M. % (DAF)		22.9

* (-1/8'+0 COAL FLOATED AT 1.50 S.G.)

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	0.0
FUSION TEMP.	DC	0.0
MAX FLUID TEMP.	DC	0.0
FINAL FLUID TEMP.	DC	0.0
SOLIDIFICATION TEMP.	DC	0.0
MELTING RANGE	DC	0.0
MAXIMUM FLUIDITY DD/M		

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	410.0
TII - MAX. CONTRACTION TEMP.	DC	456.0
TIII - MAX. DILATATION TEMP.	DC	456.0
CONTRACTION	%	14.0
DILATATION	%	-14.0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4'+ 28M	0.0	0.0	0.0	0.0
-28M + 60M	0.0	0.0	0.0	0.0
-60M + 0	0.0	0.0	0.0	0.0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES

TYPE	%
12	1.5
13	8.9
14	35.0
15	3.9
0	0.0
0	0.0

REACTIVE COMPONENTS

TOTAL VITRINOID	49.3
REACTIVE SF. (1/2)	17.5
EXINOID & RESIN	0.0
TOTAL REACTIVES	66.8

INERT COMPONENTS

INERT SF. (1/2)	17.4
MICRINOIDS	3.7
FUSINOIDS	8.4
MINERAL MATTER	3.7
TOTAL INERTS	33.2

MAX. MEAN REFL. OF VITRINOIDS (RO) 1.43
BAL. INDEX 2.46 STRENGTH INDEX 6.55 PRED. COKE STAB. INDEX 59.00

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0) -1/4'+28M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(100.0) -1/8'+ 0	FLT.	1.30	12.8	1.7	8-1/2	12.8	1.7	62.5
		1.40	19.7	5.8	2	32.5	4.2	58.1
		1.50	10.5	13.6	1	43.0	6.5	28.8
		1.60	4.5	27.0	1	47.5	8.4	17.3
		1.70	4.5	37.9	1	52.0	11.0	
	SINK	1.70	48.0	78.3	NC	100.0	43.3	

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0) -28M+60M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

FROTH CELL TEST

		WT.	ASH	CUM. WT.	CUM. ASH
(0.0) -28M+60M	FROTH	0.0	0.0	0.0	0.0
	TAILINGS	0.0	0.0	0.0	0.0

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0) -60M+ 0	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

FROTH CELL TEST

		WT.	ASH	CUM. WT.	CUM. ASH
(0.0) -60M + 0	FROTH	0.0	0.0	0.0	0.0
	TAILINGS	0.0	0.0	0.0	0.0

NOTES:

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DRILL HOLE: EV151 (CORE) SEAM 4,5 INTERCEPT 328,26- 333,45 INTCPT THICKNESS 5,19 TRUE THICKNESS 4,74 M
VERTICAL THICKNESS 5,19 DIP ANGLE 24 LATITUDE 5546876,130 M DEPARTURE -659152,130 M ELEVATION 1270,960 M
RECEIVED: 00/00/00 WEIGHT 0,00 KG MOISTURE 0,0 % COMPLETED: 00/00/00
MM DD YY COMPOSITE: RECOVERY 79,4 % MM DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100,00	76,60
ASH %	19,10	7,40
V.M. %	16,40	19,39
F.C. %	64,50	73,10
F.S.I.	3	3-1/2
% TOTAL SULF.	0,39	0,43
% P2O5 (PHOSPHATE)	0,00	0,00
GROSS CAL. VALUE BTU/LB	8894,	8009,
V.M. % (DAF)		20,3
% (-1/2'+0 COAL FLOATED AT 1,50 S.G.)		

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	414,0
FUSION TEMP.	DC	440,0
MAX FLUID TEMP.	DC	467,0
FINAL FLUID TEMP.	DC	480,0
SOLIDIFICATION TEMP.	DC	493,0
MELTING RANGE	DC	40,0
MAXIMUM FLUIDITY DD/M		7,7

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	417,0
TII - MAX. CONTRACTION TEMP.	DC	439,0
TIII - MAX. DILATATION TEMP.	DC	459,0
CONTRACTION	%	17,0
DILATATION	%	-17,0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES

TYPE	%
9	0,5
10	2,0
12	6,8
13	12,4
14	18,8
15	8,9

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	49,4	INERT SF. (1/2)	18,9
REACTIVE SF. (1/2)	19,0	MICRINOIDS	3,3
EXINOID & RESIN	0,0	FUSINOIDS	5,3
		MINERAL MATTER	4,1
TOTAL REACTIVES	68,4	TOTAL INERTS	31,6

MAX. MEAN REFL. OF VITRINOIDS (RO) 1,40
BAL. INDEX 2,06 STRENGTH INDEX 6,15 PRED. COKE STAB. INDEX 59,50

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4'+ 28M	0,0	0,0	0,0	0,0
-28M + 60M	8,2	9,6	8,2	9,6
-60M + 0	6,4	10,8	14,6	10,1

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0,0) -1/4'+28M	FLT.	1,30	12,5	2,8	7-1/2	12,5	2,8	76,7
		1,40	51,9	8,2	2-1/2	64,4	7,2	76,2
		1,50	12,1	18,7	1	76,5	9,0	20,6
		1,60	5,2	29,8	1	81,7	10,3	8,9
		1,70	2,3	36,3	1	84,0	11,0	
	SINK	1,70	16,0	76,1	NC	100,0	21,4	
(8,2) -28M+60M	FLT.	1,30	50,5	1,5	9	50,5	1,5	79,0
		1,40	24,4	6,8	4-1/2	74,9	3,2	39,9
		1,50	13,4	13,7	1	88,3	4,8	18,4
		1,60	4,0	21,9	1	92,3	5,7	6,9
		1,70	2,5	36,4	1	94,8	6,5	
	SINK	1,70	5,2	66,2	NC	100,0	9,8	
(6,4) -60M+ 0	FLT.	1,30	0,0	0,0		0,0	0,0	0,0
		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(100,0) -1/8'+ 0	FLT.	1,30	23,1	1,6	9	23,1	1,6	61,1
		1,40	28,6	4,4	4	51,7	3,0	55,1
		1,50	20,9	11,0	1	72,6	5,3	34,4
		1,60	8,2	21,3	1	80,8	7,0	14,2
		1,70	3,8	31,4	1	84,6	8,1	
	SINK	1,70	15,4	70,8	NC	100,0	17,7	

FROTH CELL TEST

(8,2) -28M+60M	FROTH	0,0	0,0		0,0	0,0	
	TAILINGS	0,0	0,0		0,0	0,0	

FROTH CELL TEST

(6,4) -60M + 0	FROTH	61,0	7,4	7	61,0	7,4	
	TAILINGS	39,0	16,0	3-1/2	100,0	10,8	

NOTES:

DRILL HOLE: EV151 (CORE) SEAM 3,3 | INTERCEPT 353,72- 357,62 | INTCPT THICKNESS 3,90 | TRUE THICKNESS 3,76 M
VERTICAL THICKNESS 3,90 | DIP ANGLE 24 | LATITUDE 5046876,130 M | DEPARTURE 639152,130 M | ELEVATION 1263,460 M
RECEIVED: 00/00/00 (MM DD YY) | WEIGHT 0,00 KG | MOISTURE 0,0 % | COMPLETE: 00/00/00
COMPOSITE: | RECOVERY 88,3 %

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100,00	60,60
ASH %	32,30	9,50
V.M. %	14,50	18,60
F.C. %	53,20	71,90
F.S.I.	2	7
% TOTAL SULF.	0,31	0,42
% P2O5 (PHOSPHATE)	0,00	0,00
GROSS CAL. VALUE BTU/LB	0,	7883,
V.M. % (DAF)		21,4

* (-1/8'+0 COAL FLOATED AT 1,50 S.G.)

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	416,0
FUSION TEMP.	DC	431,0
MAX FLUID TEMP.	DC	468,0
FINAL FLUID TEMP.	DC	486,0
SOLIDIFICATION TEMP.	DC	300,0
MELTING RANGE	DC	52,0
MAXIMUM FLUIDITY DD/M		31,8

DILATATION (SUHR) DATE RUN 00/00/00

II - SOFT. TEMP.	DC	417,0
III - MAX. CONTRACTION TEMP.	DC	462,0
IIII - MAX. DILATATION TEMP.	DC	477,0
CONTRACTION	%	15,0
DILATATION	%	5,0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4'+ 28M	83,1	33,8	83,1	33,8
-28M + 60M	9,1	17,9	92,2	32,2
-60M + 0	7,8	19,0	100,0	31,2

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES

TYPE	%
11	0,5
12	1,1
13	6,8
14	32,0
15	12,1
0	0,0

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	52,5	INERT SF. (1/2)	13,6
REACTIVE SF. (1/2)	15,7	MICRINOIDS	4,7
EXINOID & RESIN	0,0	FUSINOIDS	6,2
		MINERAL MATTER	5,3
TOTAL REACTIVES	68,2	TOTAL INERTS	31,8

MAX. MEAN REFL. OF VITRINOIDS (RO) 1,44
BAL. INDEX 2,42 STRENGTH INDEX 6,65 PRED. COKE STAB. INDEX 59,40

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(83,1)	FLT.	1,30	11,7	3,4	7-1/2	11,7	3,4	63,7
-1/4'+28M		1,40	30,9	9,9	2	42,6	8,1	69,8
		1,50	15,8	19,9	1	58,4	11,3	31,6
		1,60	5,5	29,4	1	63,9	12,9	12,7
		1,70	3,0	39,5	1	66,9	14,1	
	SINK	1,70	33,1	73,8	NC	100,0	33,8	

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(9,1)	FLT.	1,30	37,2	2,3	8	37,2	2,3	71,8
-28M+60M		1,40	24,2	7,8	6-1/2	61,4	4,3	43,2
		1,50	12,7	13,9	1-1/2	74,1	6,1	24,4
		1,60	8,2	22,1	1	82,3	7,7	13,3
		1,70	3,2	28,7	1	85,5	8,5	--
	SINK	1,70	14,5	73,2	NC	100,0	17,9	

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(7,8)	FLT.	1,30	0,0	0,0		0,0	0,0	0,0
-60M+ 0		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(100,0)	FLT.	1,30	0,0	0,0		0,0	0,0	0,0
-1/8'+ 0		1,40	0,0	0,0		0,0	0,0	0,0
		1,50	0,0	0,0		0,0	0,0	0,0
		1,60	0,0	0,0		0,0	0,0	0,0
		1,70	0,0	0,0		0,0	0,0	
	SINK	1,70	0,0	0,0		0,0	0,0	

FROTH CELL TEST

(9,1)	FROTH	0,0	0,0		0,0	0,0	
-28M+60M	TAILINGS	0,0	0,0		0,0	0,0	

FROTH CELL TEST

(7,8)	FROTH	51,1	12,5	6	51,1	12,5	
-60M + 0	TAILINGS	48,9	25,7	4	100,0	19,0	

NOTES:

DRILL HOLE: EV151 (CORE) SEAM 83L INTERCEPT 358.26- 361.68 INTCPT THICKNESS 3.42 TRUE THICKNESS 3.12 M
VERTICAL THICKNESS 3.42 DIP ANGLE 24 LATITUDE 5546876.130 N DEPARTURE 639152.130 M ELEVATION 1260.900 M
RECEIVED: 00/00/00 WEIGHT 0.00 KG MOISTURE 0.0 % COMPLETE: 00/00/00
HH DD YY COMPOSITE: RECOVERY 68.4 % HH DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100.00	0.00
ASH %	19.40	8.40
V.M. %	18.50	21.10
F.C. %	62.10	70.50
F.S.I.	7	8-1/2
% TOTAL SULF.	0.37	0.53
% P2O5 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	6785.	7924.
V.M. % (DAF)		23.0
% (-1/8'+0 COAL FLOATED AT 1.50 S.G.)		

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	397.0
FUSION TEMP.	DC	439.0
MAX FLUID TEMP.	DC	461.0
FINAL FLUID TEMP.	DC	487.0
SOLIDIFICATION TEMP.	DC	493.0
MELTING RANGE	DC	57.0
MAXIMUM FLUIDITY DD/M		264.5

DILATATION (RUHR) DATE RUN 00/00/00

II - SOFT. TEMP.	DC	413.0
VII - MAX. CONTRACTION TEMP.	DC	451.0
VIII - MAX. DILATATION TEMP.	DC	467.0
CONTRACTION	%	18.0
DILATATION	%	3.1

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4"+ 28M	85.6	21.2	85.6	21.2
-28M + 60M	8.5	0.0	94.1	19.3
-60M + 0	5.9	11.9	100.0	18.8

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES

TYPE	%
12	4.9
13	9.8
14	41.9
15	12.6
16	0.7
0	0.0

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	69.9	INERT SF, (1/2)	10.1
REACTIVE SF, (1/2)	10.1	MICRINOIDS	2.7
EXINOID & RESIN	0.0	FUSINOIDS	2.5
		MINERAL MATTER	4.7
TOTAL REACTIVES	80.0	TOTAL INERTS	20.0

MAX. MEAN REFL. OF VITRINOIDS (RO) 1.44
BAL. INDEX 1.26 STRENGTH INDEX 6.73 PRED. COKE STAB. INDEX 65.09

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(85.6)	FLT.	1.30	17.0	2.9	7-1/2	17.0	2.9	68.7
-1/4"+28M		1.40	39.7	10.2	6	56.7	8.0	69.0
		1.50	17.2	20.7	4-1/2	73.9	11.0	27.3
		1.60	5.4	32.2	2	79.3	12.4	10.4
		1.70	3.2	39.6	1	82.5	13.5	
	SINK	1.70	17.5	57.8	NC	100.0	21.2	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(100.0)	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
-1/8"+ 0		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

(8.5)	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
-28M+60M		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

FROTH CELL TEST

(8.5) -28M+60M	FROTH	0.0	0.0	0.0	0.0
	TAILINGS	0.0	0.0	0.0	0.0

(5.9)	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
-60M+ 0		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

FROTH CELL TEST

(5.9) -60M + 0	FROTH	66.5	8.4	7-1/2	66.5	8.4
	TAILINGS	33.5	18.8	6	100.0	11.9

NOTES:

PRINTED 02/09/82

DRILL HOLE: EV151 (CORE) SEAM
VERTICAL THICKNESS 0.79 DIP ANGLE 24
RECEIVED: 00/00/00 (MM DD YY)
INTERCEPT 363.60- 364.39 INTCPT THICKNESS 0.79 TRUE THICKNESS 0.72 M
LATITUDE 5946876.130 N DEPARTURE 659152.130 N ELEVATION 1255.560 M
WEIGHT 0.00 KG MOISTURE 0.0 % COMPLETE: 00/00/00
COMPOSITE: RECOVERY 100.0 % (MM DD YY)

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	100.00	89.30
ASH %	9.80	6.90
V.M. %	17.30	18.70
F.C. %	72.70	74.40
F.S.I.	6-1/2	7
% TOTAL SULF.	0.58	0.45
% P2O5 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	7913.	8123.
V.M. % (DAF)		19.4

* (-1/8'+0 COAL FLOATED AT 1.50 S.G.)

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	0.0
FUSION TEMP.	DC	0.0
MAX FLUID TEMP.	DC	0.0
FINAL FLUID TEMP.	DC	0.0
SOLIDIFICATION TEMP.	DC	0.0
MELTING RANGE	DC	0.0
MAXIMUM FLUIDITY DD/M		

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	407.0
TII - MAX. CONTRACTION TEMP.	DC	449.0
TIII - MAX. DILATATION TEMP.	DC	468.0
CONTRACTION	%	21.0
DILATATION	%	19.0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4'+28M	0.0	0.0	0.0	0.0
-28M + 60M	0.0	0.0	0.0	0.0
-60M + 0	0.0	0.0	0.0	0.0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES

TYPE	%
12	0.5
13	8.7
14	41.8
15	3.3
0	0.0
0	0.0

REACTIVE COMPONENTS		INERT COMPONENTS	
TOTAL VITRINOID	54.3	INERT SF. (1/2)	17.1
REACTIVE SF. (1/2)	17.2	MICRINOIDS	3.4
EXINOID & RESIN	0.0	FUSINOIDS	4.1
		MINERAL MATTER	3.9
TOTAL REACTIVES	71.3	TOTAL INERTS	28.5

MAX. MEAN REFL. OF VITRINOIDS (RO) 1.44
BAL. INDEX 1.99 STRENGTH INDEX 0.00 PRED. COKE STAB. INDEX 62.00

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(0.0) -1/4'+28M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

(0.0) -28M+60M

FLT.	1.30	0.0	0.0		0.0	0.0	0.0
	1.40	0.0	0.0		0.0	0.0	0.0
	1.50	0.0	0.0		0.0	0.0	0.0
	1.60	0.0	0.0		0.0	0.0	0.0
	1.70	0.0	0.0		0.0	0.0	
SINK	1.70	0.0	0.0		0.0	0.0	

(0.0) -60M+ 0

FLT.	1.30	0.0	0.0		0.0	0.0	0.0
	1.40	0.0	0.0		0.0	0.0	0.0
	1.50	0.0	0.0		0.0	0.0	0.0
	1.60	0.0	0.0		0.0	0.0	0.0
	1.70	0.0	0.0		0.0	0.0	
SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT WT.	DIRECT ASH	FSI	CUM. WT.	CUM. ASH	+/- .1 S.G.
(100.0) -1/8'+ 0	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

FROTH CELL TEST

(0.0) -28M+60M	FROTH	0.0	0.0		0.0	0.0
	TAILINGS	0.0	0.0		0.0	0.0

FROTH CELL TEST

(0.0) -60M+ 0	FROTH	0.0	0.0		0.0	0.0
	TAILINGS	0.0	0.0		0.0	0.0

NOTES:

PRINTED 00/00/00

DRILL HOLE: EV151 (CORE) SEAM
VERTICAL THICKNESS 0.55 DIP ANGLE 24
RECEIVED: 00/00/00 WEIGHT 0.00 KG
MM DD YY COMPOSITE:

INTERCEPT 367.29- 367.84 INTCPT THICKNESS 0.55 TRUE THICKNESS 0.50 M
LATITUDE 9546876.139 M DEPARTURE 457152.130 M ELEVATION 1251.970 M
MOISTURE 0.0 % COMPLETE: 00/00/00
RECOVERY 72.2 % MM DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	0.00	0.00
ASH %	0.00	0.00
V.M. %	0.00	0.00
F.C. %	0.00	0.00
F.S.I.		
% TOTAL SULF.	0.00	0.00
% P2O5 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	0.	0.
V.M. % (DAF)		0.0
% (-1/8'+0 COAL FLOATED AT 1.50 S.G.)		

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	0.0
FUSION TEMP.	DC	0.0
MAX FLUID TEMP.	DC	0.0
FINAL FLUID TEMP.	DC	0.0
SOLIDIFICATION TEMP.	DC	0.0
MELTING RANGE	DC	0.0
MAXIMUM FLUIDITY DD/M		

DILATATION (AUAR) DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	0.0
TII - MAX. CONTRACTION TEMP.	DC	0.0
TIII - MAX. DILATATION TEMP.	DC	0.0
CONTRACTION	%	0.0
DILATATION	%	0.0

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4"+ 28M	0.0	0.0	0.0	0.0
-28M + 60M	0.0	0.0	0.0	0.0
-60M + 0	0.0	0.0	0.0	0.0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES TYPE	%
0	0.0
0	0.0
0	0.0
0	0.0
0	0.0

REACTIVE COMPONENTS	
TOTAL VITRINOID	0.0
REACTIVE SF. (1/2)	0.0
EXINOID & RESIN	0.0
TOTAL REACTIVES	0.0

INERT COMPONENTS	
INERT SF. (1/2)	0.0
MICRINOIDS	0.0
FUSINOIDS	0.0
MINERAL MATTER	0.0
TOTAL INERTS	0.0

MAX. MEAN REFL. OF VITRINOIDS (RO) 0.00
BAL. INDEX 0.00 STRENGTH INDEX 0.00 PRED. COKE STAB. INDEX 0.00

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0.0) -1/4"+28M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(100.0) -1/8"+ 0	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0.0) -28M+60M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

FROTH CELL TEST

(0.0) -28M+60M	FROTH	0.0	0.0		0.0	0.0
	TAILINGS	0.0	0.0		0.0	0.0

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0.0) -60M+ 0	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

FROTH CELL TEST

(0.0) -60M + 0	FROTH	0.0	0.0		0.0	0.0
	TAILINGS	0.0	0.0		0.0	0.0

NOTES:

DRILL HOLE: EV151 (CORE) SEAM M INTERCEPT 376.43- 376.74 INTCPT THICKNESS 0.31 TRUE THICKNESS 0.28 M
VERTICAL THICKNESS 0.31 DIP ANGLE 24 LATITUDE 5046876.130 M DEPARTURE 659152.130 M ELEVATION 1242.730 M
RECEIVED: 00/00/00 WEIGHT 0.00 KG MOISTURE 0.0 % COMPLETE: 00/00/00
MM DD YY COMPOSITE: RECOVERY 0.0 % MM DD YY

PROXIMATE ANALYSIS (DRY BASIS)

	RAW	%CLEAN
% OF 1/8' X 0	0.00	0.00
ASH %	0.00	0.00
V.M. %	0.00	0.00
F.C. %	0.00	0.00
F.S.I.		
% TOTAL SULF.	0.00	0.00
% P2O5 (PHOSPHATE)	0.00	0.00
GROSS CAL. VALUE BTU/LB	0.	0.
V.M. % (DAF)		0.0

% (-1/8'+0 COAL FLOATED AT 1.50 S.G.)

SCREEN ANALYSIS (COAL CRUSHED TO 1/4')

SIZE	WT.%	ASH%	CUMULATIVE WT.%	CUMULATIVE ASH%
-1/4'+ 28M	0.0	0.0	0.0	0.0
-28M + 60M	0.0	0.0	0.0	0.0
-60M + 0	0.0	0.0	0.0	0.0

GIESELER PLASTICITY, DATE RUN 00/00/00

START	DC	0.0
FUSION TEMP.	DC	0.0
MAX FLUID TEMP.	DC	0.0
FINAL FLUID TEMP.	DC	0.0
SOLIDIFICATION TEMP.	DC	0.0
MELTING RANGE	DC	0.0
MAXIMUM FLUIDITY DD/M		

DILATATION (RUHR) DATE RUN 00/00/00

TI - SOFT. TEMP.	DC	0.0
TII - MAX. CONTRACTION TEMP.	DC	0.0
TIII - MAX. DILATATION TEMP.	DC	0.0
CONTRACTION	%	0.0
DILATATION	%	0.0

PETROGRAPHIC DATA DATE COMPLETED 00/00/00 PELLET NUMBER 0

V-TYPES TYPE	%	REACTIVE COMPONENTS		INERT COMPONENTS	
0	0.0	TOTAL-VITRINOID	0.0	INERT SF. (1/2)	0.0
0	0.0	REACTIVE SF. (1/2)	0.0	MICRINOIDS	0.0
0	0.0	EXINOID & RESIN	0.0	FUSINOIDS	0.0
0	0.0			MINERAL MATTER	0.0
0	0.0	TOTAL REACTIVES	0.0	TOTAL INERTS	0.0
0	0.0				
0	0.0				

MAX. MEAN REFL. OF VITRINOIDS (RO) 0.00
BAL. INDEX 0.00 STRENGTH INDEX 0.00 PRED. COKE STAB. INDEX 0.00

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(0.0) -1/4'+28M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	
(0.0) -28M+60M	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	
(0.0) -60M+ 0	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

WASHABILITY (WT.%) AND SIZE — DATE RUN 00/00/00

		S.G.	DIRECT % WT.	DIRECT % ASH	FSI	CUM. % WT.	CUM. % ASH	+/- .1 S.G.
(100.0) -1/8'+ 0	FLT.	1.30	0.0	0.0		0.0	0.0	0.0
		1.40	0.0	0.0		0.0	0.0	0.0
		1.50	0.0	0.0		0.0	0.0	0.0
		1.60	0.0	0.0		0.0	0.0	0.0
		1.70	0.0	0.0		0.0	0.0	
	SINK	1.70	0.0	0.0		0.0	0.0	

FROTH CELL TEST

(0.0) -28M+60M	FROTH	0.0	0.0		0.0	0.0
	TAILINGS	0.0	0.0		0.0	0.0

FROTH CELL TEST

(0.0) -60M+ 0	FROTH	0.0	0.0		0.0	0.0
	TAILINGS	0.0	0.0		0.0	0.0

NOTES:

B.C. COAL LTD.

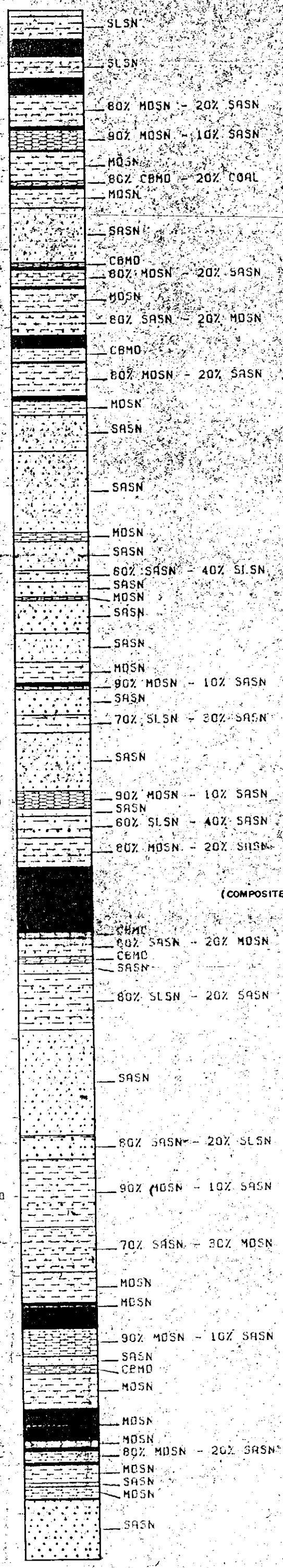
HOLE NUMBER = EV151

LATITUDE= 5546876.124 DEPARTURE= 659152.124

VERTICAL SCALE= 1 CM TO 1000 C COMPLETED= 81-11-11

GEOLOGIST = JAH MEASUREMENT IN METRIC

TOP ELEV = 1619.16



SEAM	RAW ASH	RAW FSI	CLEAN ASH	CLEAN FSI	VM (daf)	FC	DDM	cal/gm	Rō
8	17.7	6.5	6.1	6.5	26.9	68.6	9.8	8,056	1.13
8L	50.8	5.5	8.5	7	28.3	65.6	435.9	7,901	1.13
7	21.6	6	9.3	7	24.5	68.5	175.4	7,657	1.18
6	41.3	4	8.5	8.5	23.7	69.8	3.0	7,935	1.16
(COMPOSITE) 5	25.6	2	8.3	6.5	23.2	70.4	7.3	7,922	1.35
4	19.1	3	7.4	5.5	21.1	73.1	7.7	8,009	1.40
3	32.3	2	9.5	7	20.6	71.9	51.8	7,883	1.44
3L	19.4	7	8.4	8.5	23.0	70.5	264.5	7,924	1.44

TOTAL DEPTH = 391.77

BC Coal SPARWOOD B.C.

EWIN CREEK C.L.260-263,2221
DIAMOND DRILLHOLE EV-151

DESIGNED JAH	DATE FEB, 1982
DRAWN PAT	SCALE AS NOTED ABOVE
CHECKED	135-20-9
APPROVED	

B.C. COAL LTD.

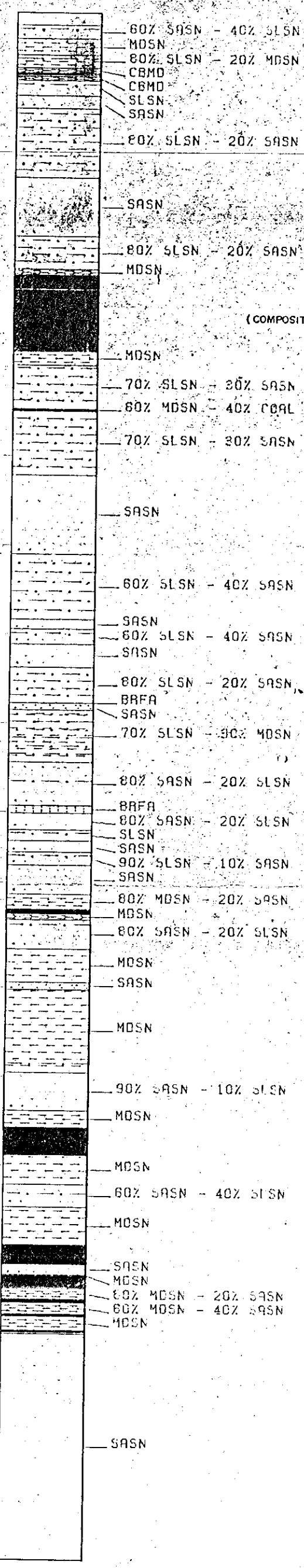
HOLE NUMBER EV150

LATITUDE= 5546736.937 DEPARTURE= 659471.968

VERTICAL SCALE= 1CM TO 1000 C COMPLETED= 81-11-1

GEOLOGIST = JAH MEASUREMENTS IN METRIC

TOP ELEV = 1628.00



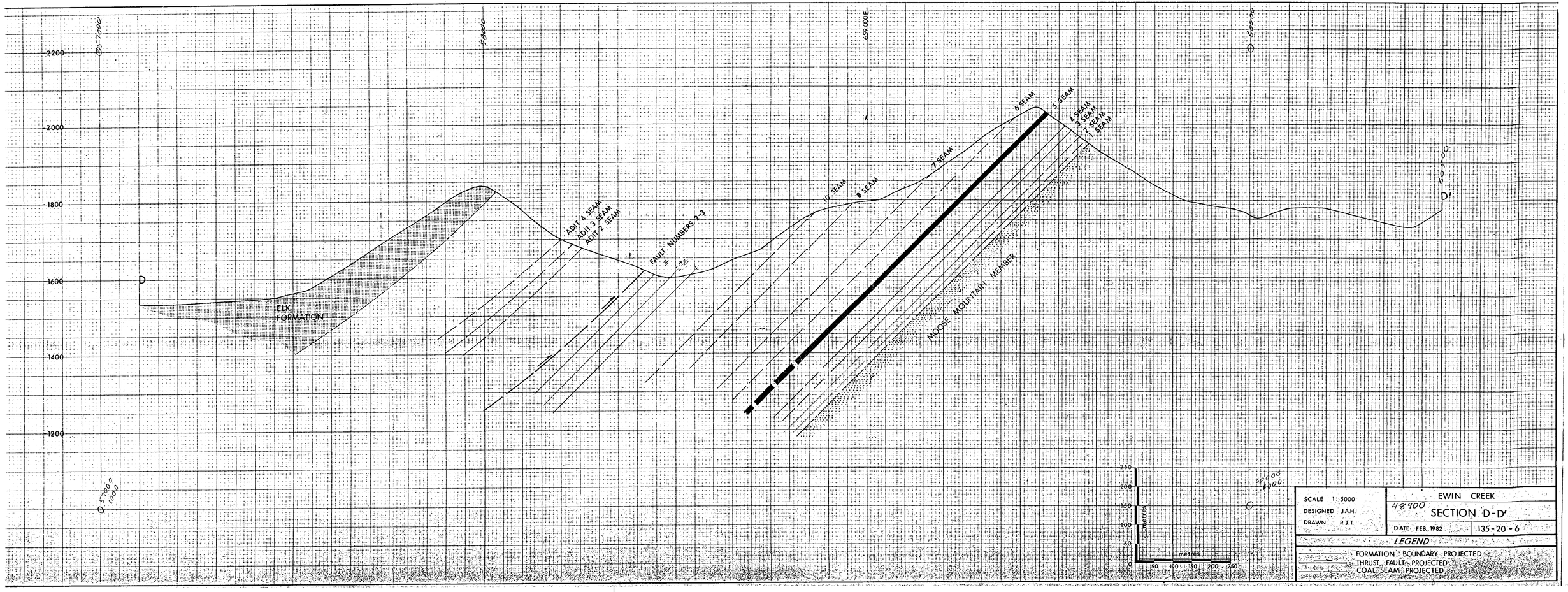
SEAM	RAW ASH	RAW FSI	CLEAN ASH	CLEAN FSI	CLEAN VM (daf)	CLEAN FC	CLEAN DDM	CLEAN cal/gm	CLEAN Rō
(COMPOSITE)	5	25.3	6	8.5	7	24.4	70.6	32.7	7,944	1.32
	4	24.5	2	7.7	5	20.8	73.1	1.6	7,918	1.44
	3	32.6	2	8.8	6.5	19.8	73.1	23.9	7982	1.45
	3L	14.1	2	17.9	6.5	20.8	72.9	60.1	7995	1.41

TOTAL DEPTH = 348.78

BC Coal SPARWOOD B.C.

EWIN CREEK C.L.260-263,2221
DIAMOND DRILLHOLE EV-150

DESIGNED JAH	DATE FEB, 1982
DRAWN PAT	SCALE AS NOTED ABOVE
CHECKED	135-20-8
APPROVED	

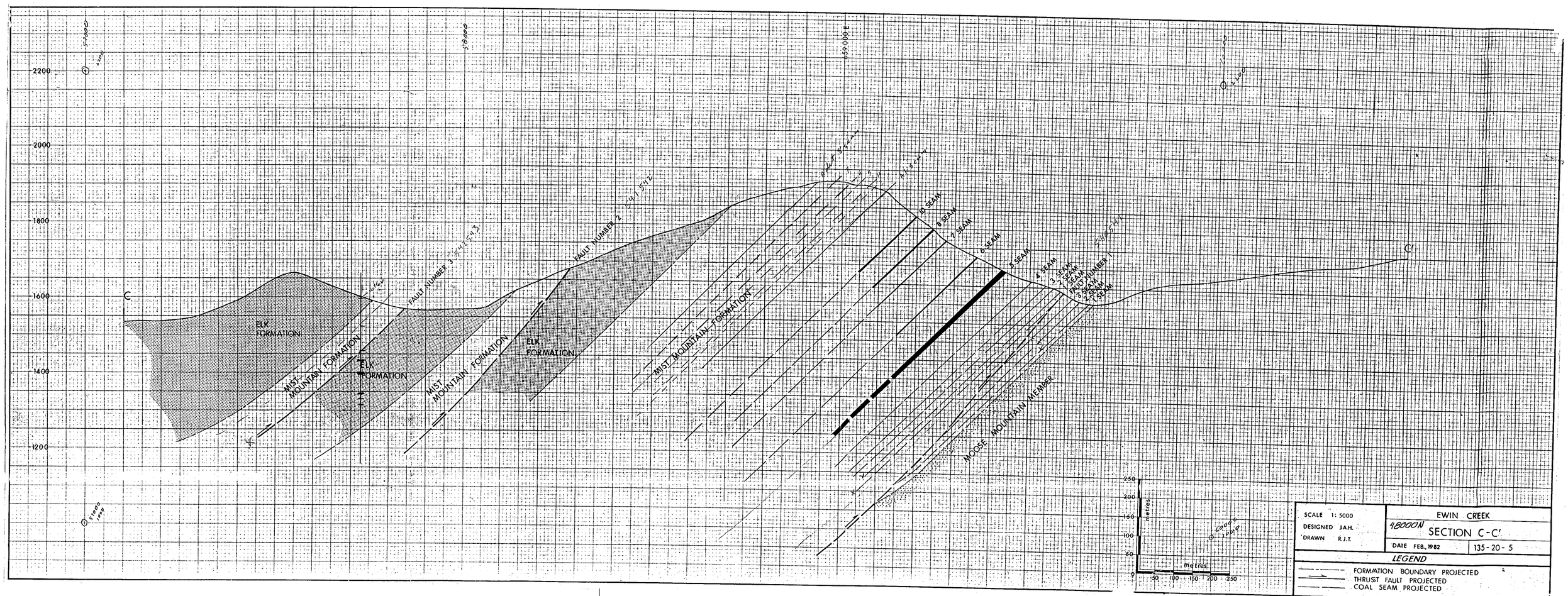


SCALE 1: 5000
DESIGNED J.A.H.
DRAWN R.J.T.

EWIN CREEK
48900
SECTION D-D'
DATE FEB., 1982
135 - 20 - 6

LEGEND

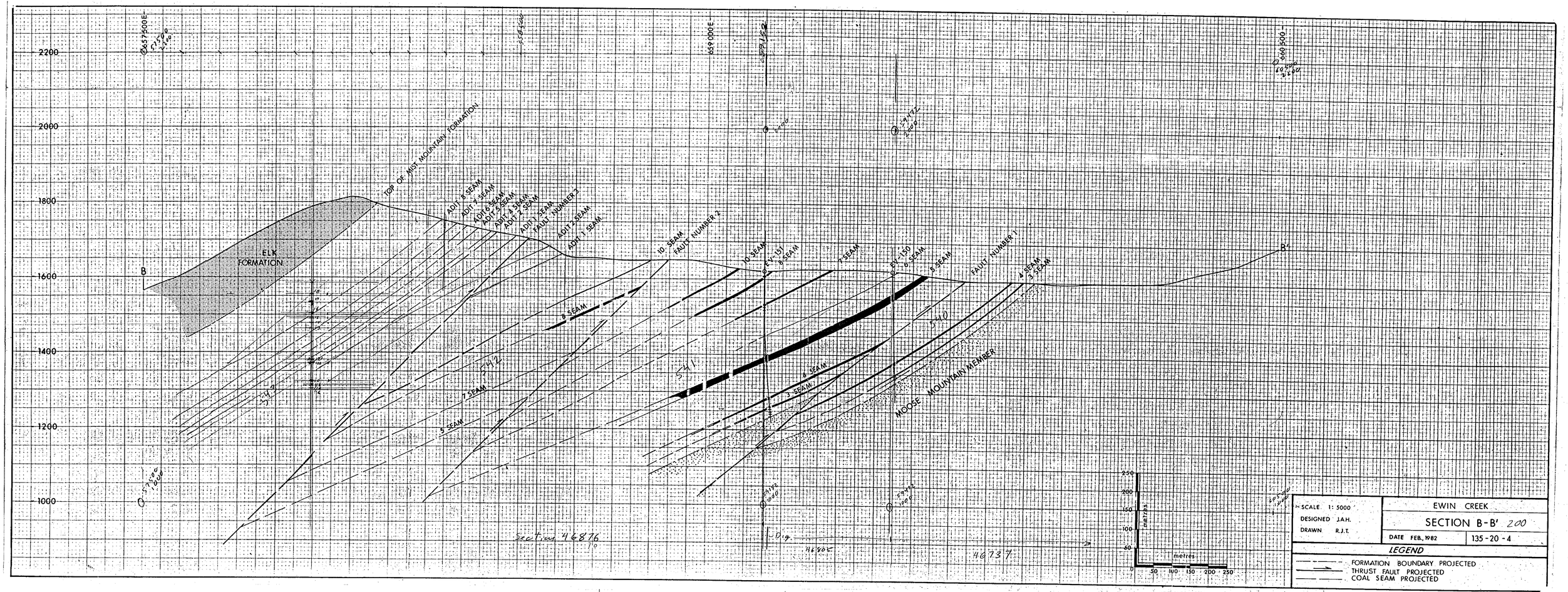
FORMATION BOUNDARY PROJECTED
THRUST FAULT PROJECTED
COAL SEAM PROJECTED



SCALE 1: 5000	EWIN CREEK
DESIGNED J.A.H.	480000N SECTION C-C'
DRAWN R.J.T.	DATE FEB., 1982 — 135-20-5

LEGEND

- FORMATION BOUNDARY PROJECTED
- THRUSIT FAULT PROJECTED
- COAL SEAM PROJECTED


2200
2000
1800
1600
1400
1200
1000
B
B'
TOP OF MIST MOUNTAIN FORMATION
ELK FORMATION
ADIT 5 SEAM
ADIT 4 SEAM
ADIT 6 SEAM
ADIT 5 SEAM
ADIT 4 SEAM
ADIT 3 SEAM
ADIT 2 SEAM
ADIT 1 SEAM
FAULT NUMBER 3
ADIT 2 SEAM
ADIT 1 SEAM
10 SEAM
FAULT NUMBER 2
11 SEAM
8 SEAM
7 SEAM
6 SEAM
5 SEAM
FAULT NUMBER 1
4 SEAM
3 SEAM
8 SEAM
7 SEAM
5 SEAM
6 SEAM
3 SEAM
MOOSE MOUNTAIN MEMBER
5-10
5-11
5-12
5-13
5-14
5-15
5-16
5-17
5-18
5-19
5-20
5-21
5-22
5-23
5-24
5-25
5-26
5-27
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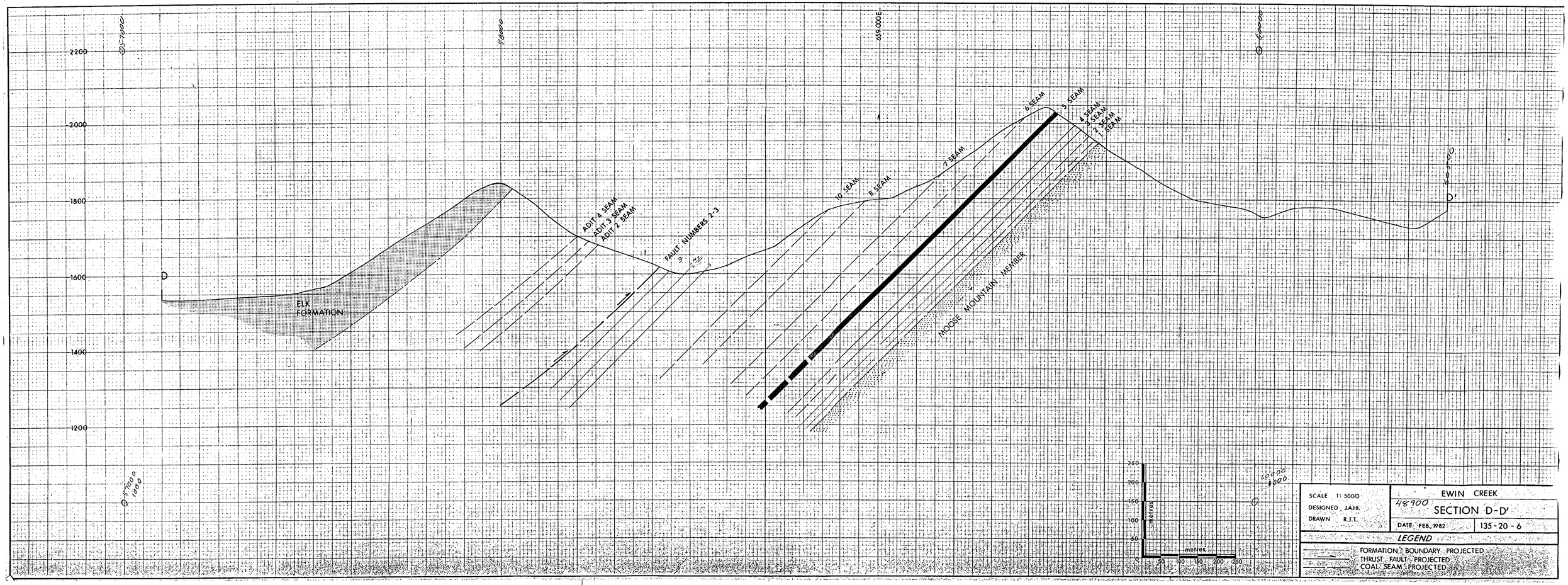
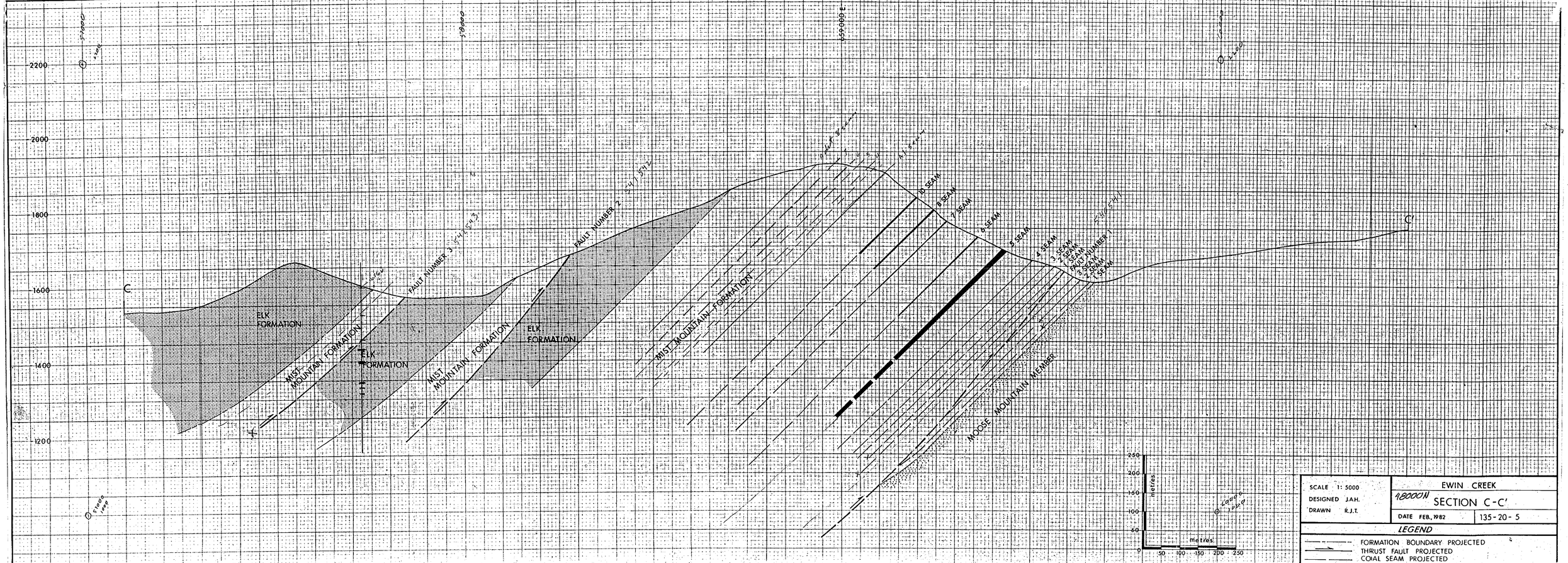
5-44
5-45
5-46
5-47
5-48
5-49

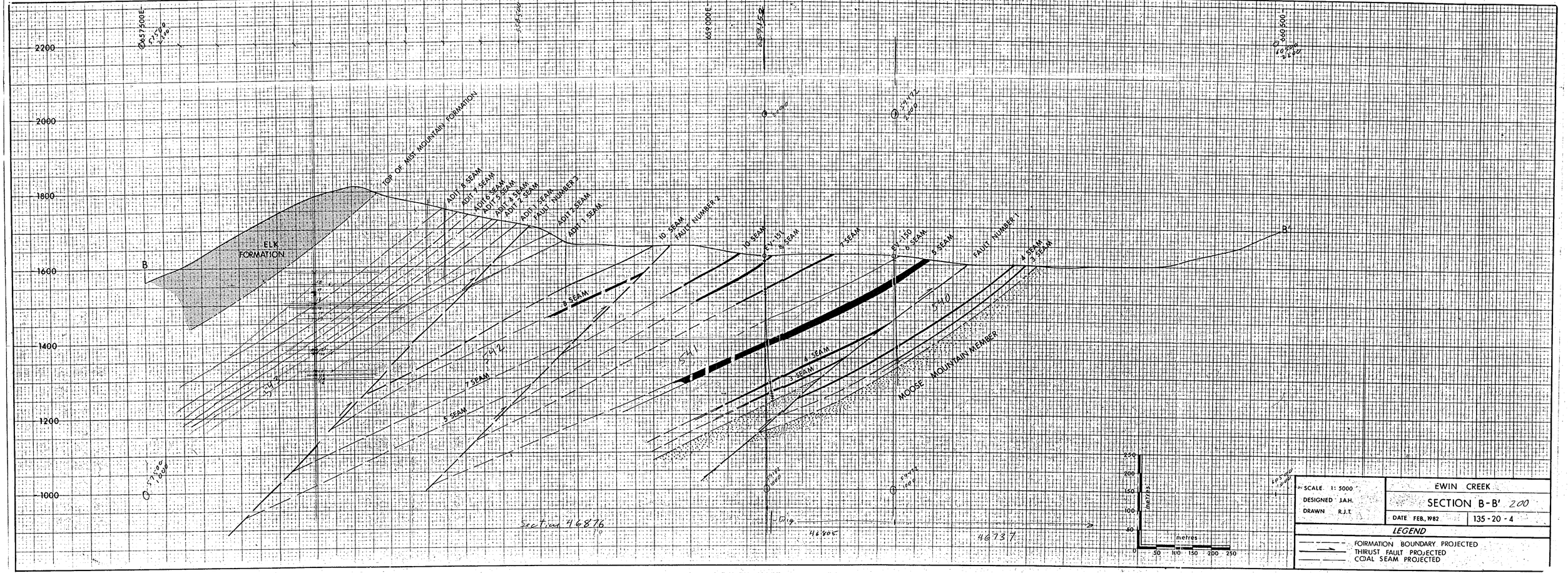

D 5700 N
5400 E
658000 E
D'
2200
2000
1800
1600
1400
1200
D
D'
ELK FORMATION
ADIT 4 SEAM
ADIT 3 SEAM
ADIT 2 SEAM
FAULT NUMBERS 2-3
10 SEAM
8 SEAM
7 SEAM
6 SEAM
5 SEAM
4 SEAM
3 SEAM
2 SEAM
1 SEAM
MOOSE MOUNTAIN MEMBER
metres
0
50
100
150
200
250
SCALE 1: 5000
DESIGNED J.A.H.
DRAWN R.J.T.
48900
EWIN CREEK
SECTION D-D'
DATE FEB., 1982
135 - 20 - 6
LEGEND
FORMATION BOUNDARY PROJECTED
THRUST FAULT PROJECTED
COAL SEAM PROJECTED



SCALE 1: 5000	EWIN CREEK
DESIGNED J.A.H.	480000N
DRAWN R.J.T.	SECTION C-C'
	DATE FEB., 1982
	135-20-5

LEGEND

FORMATION BOUNDARY PROJECTED
THRUST FAULT PROJECTED
COAL SEAM PROJECTED



SCALE 1: 5000
DESIGNED J.A.H.
DRAWN R.J.T.

EWIN CREEK

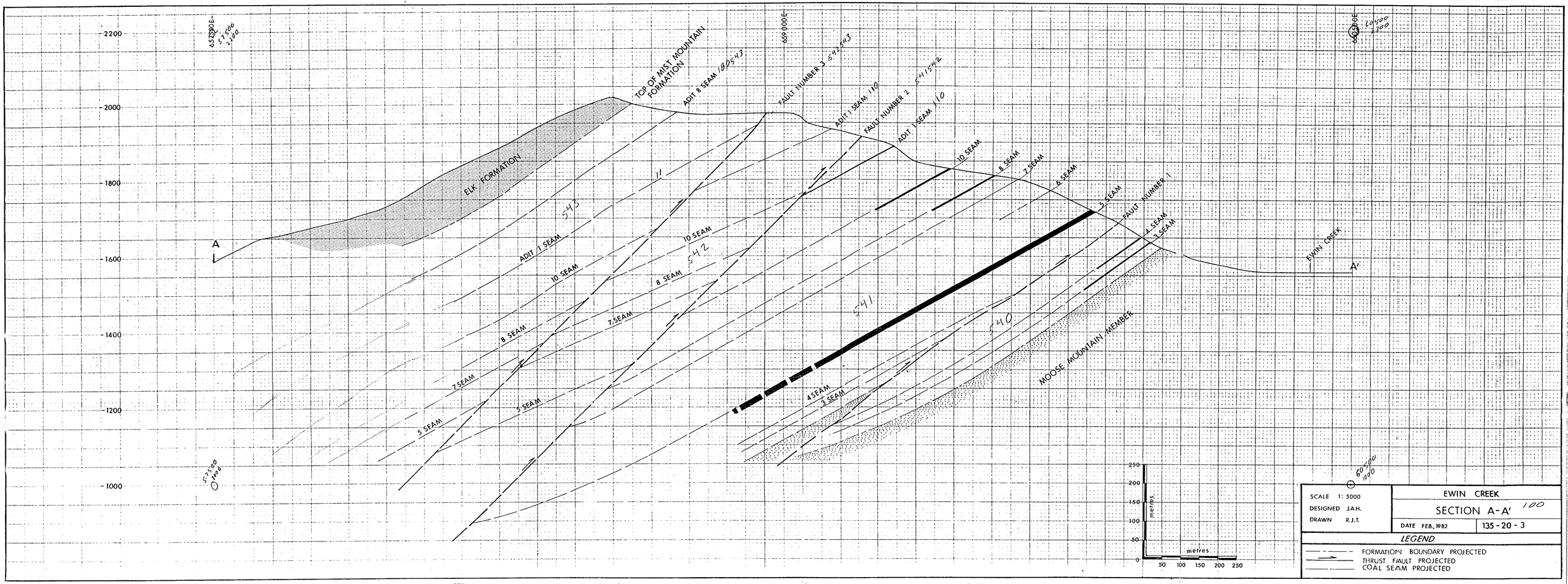
SECTION B-B' 200

DATE FEB., 1982

135 - 20 - 4

LEGEND

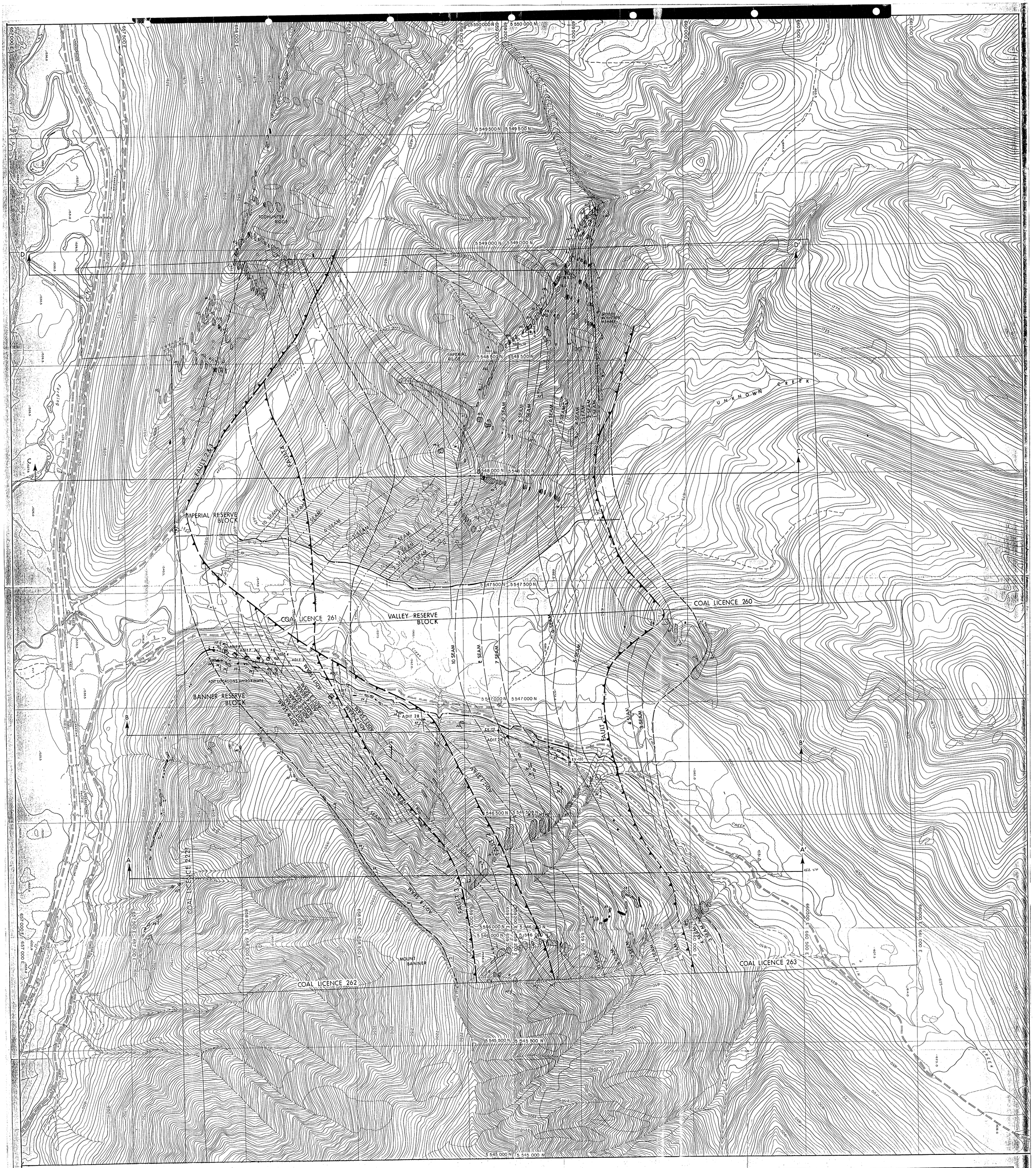
FORMATION BOUNDARY PROJECTED
THRUST FAULT PROJECTED
COAL SEAM PROJECTED



SCALE 1: 5000	EWIN CREEK
DESIGNED J.A.H.	SECTION A-A' 100
DRAWN R.J.T.	DATE FEB., 1982 | 135 - 20 - 3

LEGEND

- FORMATION BOUNDARY PROJECTED
- THRUST FAULT PROJECTED
- COAL SEAM PROJECTED



LEGEND

- LICENCE BOUNDARY
- FORMATION BOUNDRIES PROJECTED
- THRUST FAULT PROJECTED
- SEAM TRACE PROJECTED
- RESERVE BLOCK BOUNDARIES
- 750 METRE COVER LINE PROJECTED

0 metres 200 400 600 800 1000

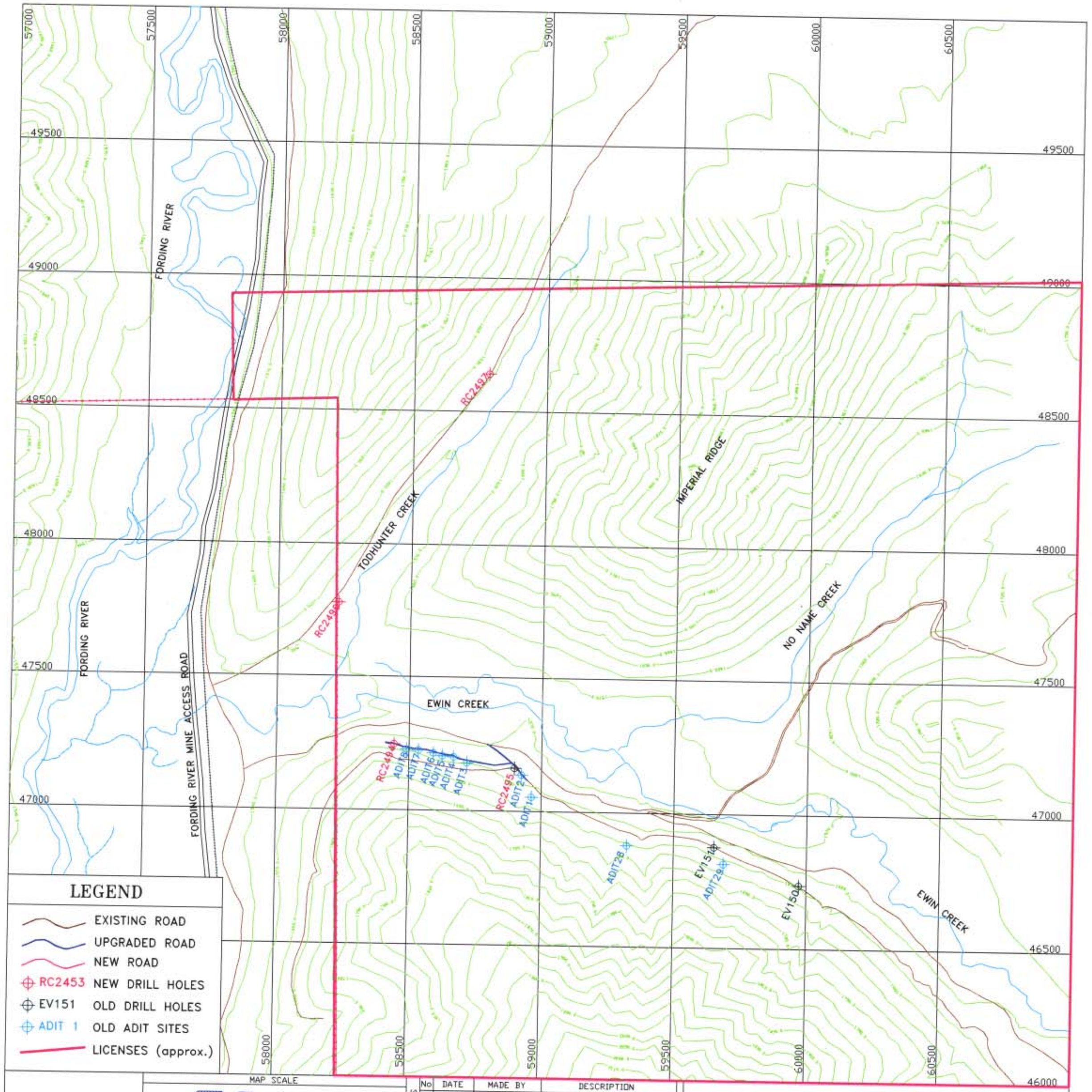
1 Cm = 50 metres

B C Coal — SPARWOOD B.C.

EWIN CREEK C.L. 260 - 263, 2221

SURFACE GEOLOGY

DESIGNED J.A.H.	DATE FEB., 1982
DRAWN R.J.T.	SCALE 1: 5000
CHECKED	135-20-1
APPROVED	


57000
57500
58000
58500
59000
59500
60000
60500
49500
49000
48500
48000
47500
47000
46500
46000
FORDING RIVER
TODHUNTER CREEK
IMPERIAL RIDGE
NO NAME CREEK
EWIN CREEK
FORDING RIVER MINE ACCESS ROAD
RC2496
RC2497
RC2494
RC2495
ADIT1
ADIT2
ADIT4
ADIT5
ADIT6
ADIT7
ADIT8
EV151
EV150
ADIT29
LEGEND
EXISTING ROAD
UPGRADED ROAD
NEW ROAD
RC2453 NEW DRILL HOLES
EV151 OLD DRILL HOLES
ADIT 1 OLD ADIT SITES
LICENSES (approx.)
MAP SCALE
Fording COAL LIMITED
0 100 200 300 400 500 600 700
REVISIONS
No DATE MADE BY DESCRIPTION
1
2
3
4
5
DATE DRAWN BY CHECKED APPROVED
11-21-96 LBS LBS
FORDING EWIN CREEK LICENSES
WORK COMPLETED 1996
MAP INDEX NUMBER SCALE DRAWING NUMBER
765c 1:10000 s:\geo\exp\ewin\ewwork1

EV - 150

5 SEAM

MUDSTONE
0.132 COAL
0.237 MDSN
0.185 COAL
0.713 MDSN
0.185 COAL
0.396 MDSN
0.316 COAL
0.158 MDSN
0.343 COAL
0.186 MDSN
2.40 COAL
0.264 MDSN
7.60 COAL
0.026 MDSN
1.48 COAL

1.16 / 2.85
11.48 / 11.77

EV-151

5 SEAM

0.143 COALY MUDSTONE
0.229 COAL
0.086 COALY MUDSTONE
0.602 COAL
0.258 MDSN
0.143 COAL
0.115 MDSN
2.378 COAL
0.229 MDSN
1.40 COAL
0.043 MDSN
0.072 COAL
0.029 MDSN
0.573 COAL
0.057 MDSN
6.53 COAL
0.029 MDSN
0.688 COAL
0.029 MDSN
0.201 COAL
0.029 MDSN
0.716 COAL
CBMD

1.58 / 2.21
12.56 / 13.00

TRENCH J
IMPERIAL RIDGE

5 SEAM

1.14 COAL
0.09 CBMD
0.28 COALY MUDSTONE
3.16 COAL
0.08 MDSN
0.90 COAL
0.03 MDSN
0.10 MUDDY COAL
1.12 COAL
0.04 MDSN
0.28 MUDDY COAL
1.02 COAL
CBMD

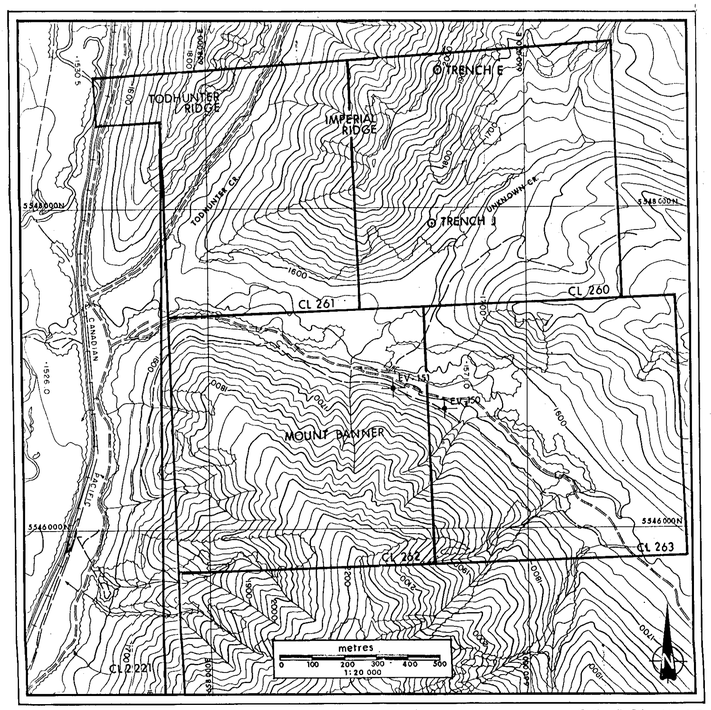
7.72 / 8.24

TRENCH E
IMPERIAL RIDGE

5 SEAM

CBMD
4.25 COAL
0.03 FE CONCRETION
3.10 COAL
0.13 MDSN
0.31 COAL
0.08 MDSN
2.46 COAL
MDSN

10.12 / 10.36



LOCATION MAP

LEGEND

- COAL
- COALY MUDSTONE
- CARBONACEOUS MUDSTONE
- MUDSTONE
- IRON CONCRETION

0 0.5 1.0 1.5 2.0 metres

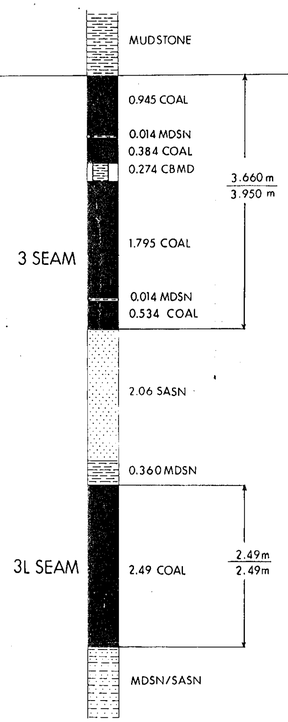
B C Coal

SPARWOOD B. C.

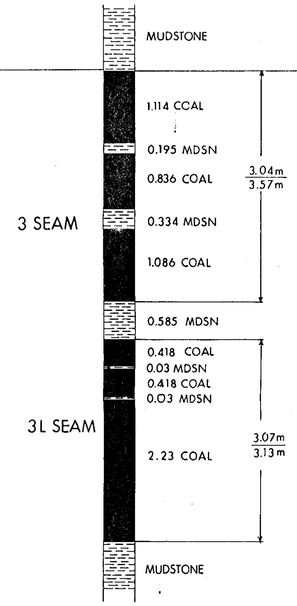
EWIN CREEK
CL 260 - 263, 2221
5 SEAM CORRELATION CHART

DESIGNED J.A.H.	DATE JAN, 1982
DRAWN R.J.T.	SCALE 1: 50
	135-20-14

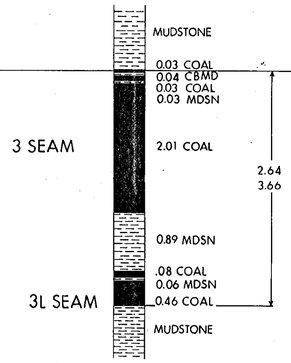
EV-150



EV-151



TRENCH G
IMPERIAL RIDGE



LOCATION MAP

LEGEND

- COAL
- COALY MUDSTONE
- CARBONACEOUS MUDSTONE
- MUDSTONE
- IRON CONCRETION

0 0.5 1.0 1.5 2.0 metres

BC Coal

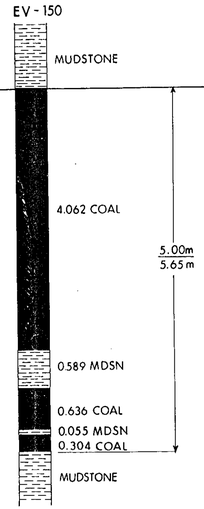
SPARWOOD B.C.

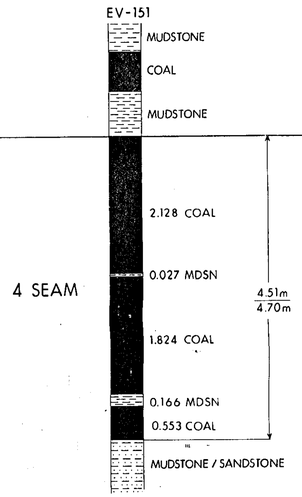
EWIN CREEK

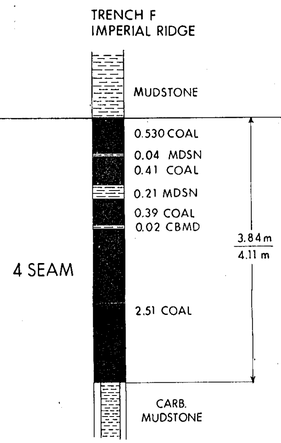
CL 260 - 263, 2221

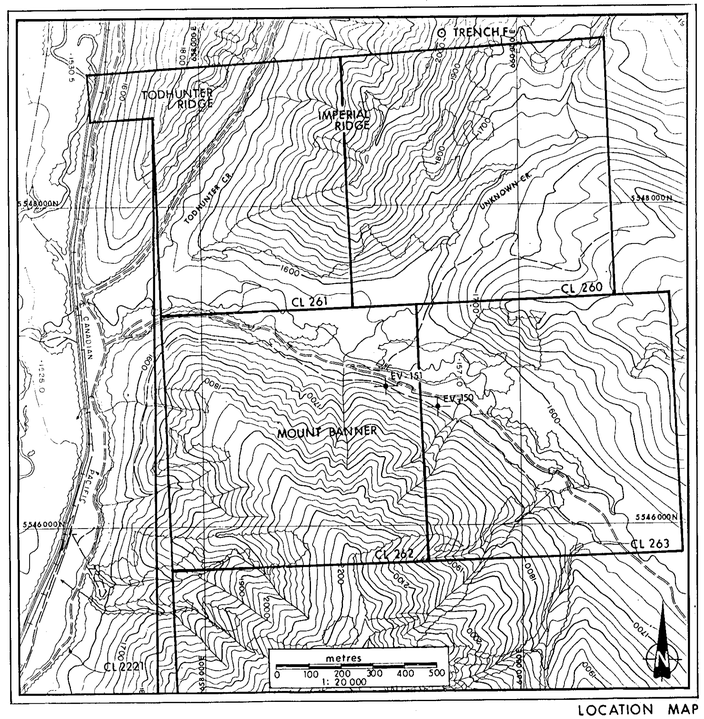
3 SEAM CORRELATION CHART

DESIGNED J.A.H.	DATE JAN., 1982
DRAWN R.J.T.	SCALE 1: 50
CHECKED	135-20-12
APPROVED	









LOCATION MAP

LEGEND

- COAL
- COALY MUDSTONE
- CARBONACEOUS MUDSTONE
- MUDSTONE
- IRON CONCRETION

0 0.5 1.0 1.5 20 metres

B C Coal

SPARWOOD B. C.

EWIN CREEK
CL 260 - 263, 2221
4 SEAM CORRELATION CHART

DESIGNED J.A.H.	DATE JAN., 1982
DRAWN R.J.T.	SCALE 1: 50
	135 - 20 - 13

657 000 E
658 000 E
659 000 E
660 000 E
661 000 E
661 500 E

5549 000 N
5548 000 N
5547 000 N
5546 000 N

D
D'
C
C'
B
B'
A
A'

EV-151
EV-150

5 SEAM OUTCROP

0 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900

0 100 200 300 400 500 600 700 750 800 900 1000 1100 1200 1300 1400 1500 1600 1700

0 100 200 300 400 500 600 700 750 800 900 1000 1100 1200 1300 1400 1500 1600 1700

0 100 200 300 400 500 600 700 750 800 900 1000 1100 1200 1300 1400 1500 1600 1700

F1 F2 F3 F4

0metres 100 200 300 400
1 Cm = 50m

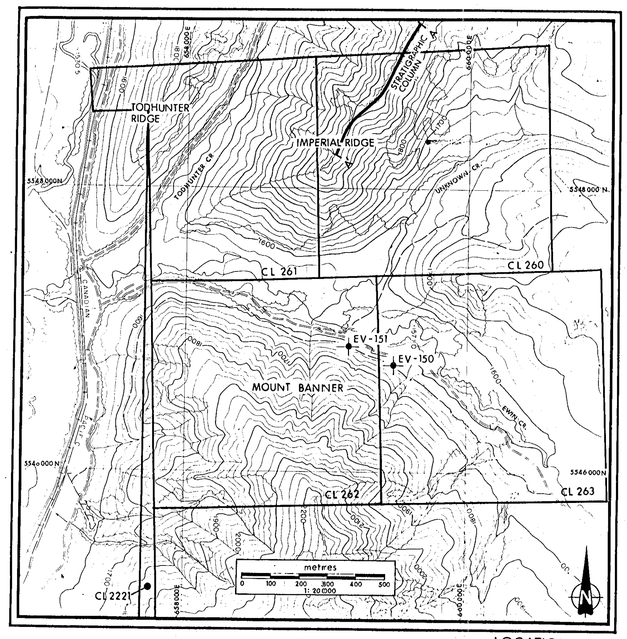
LEGEND

- 1700 — HW STRUCTURE CONTOUR SHOWING ELEVATION
- 750 — 750 m COVER LINE
- THRUST FAULT UPPER CONTACT
- THRUST FAULT LOWER CONTACT

B C Coal SPARWOOD B.C.

No. 5 SEAM
HANGING WALL STRUCTURE CONTOURS
EWIN CREEK COAL LICENCES

DESIGNED J.A.H.	DATE JAN., 1982
DRAWN R.J.T.	SCALE 1: 5000
	135 - 20 - 11



LOCATION MAP

EV-151

EV-150

IMPERIAL RIDGE
STRATIGRAPHIC COLUMN

A'

No. 10 SEAM
TRENCH A

No. 8 SEAM
TRENCH B

No. 7 SEAM
TRENCH C

MIST MOUNTAIN
FORMATION

No 6 SEAM
TRENCH D

No 5 SEAM
TRENCH E

MIST MOUNTAIN
FORMATION

THRUST FAULT APPROXIMATELY
80 METRES DISPLACEMENT
DIPPING TO THE WEST

No 4 SEAM
TRENCH F

No. 3 SEAM
TRENCH G

TRENCH H
TRENCH I

A

MOOSE MOUNTAIN
MEMBER

MORRISSEY
FORMATION

MOOSE
MOUNTAIN MEMBER

MORRISSEY
FORMATION

MOOSE MOUNTAIN
MEMBER

MORRISSEY FORMATION

0 10 20 30 40 50 metres

N

BC Coal SPARWOOD B.C.

EWIN CREEK C.L. 260 – 263, 2221
STRATIGRAPHIC COMPARISON CHART

DESIGNED JAH	DATE JAN., 1982
DRAWN RJT	SCALE VERT. 1:1000
CHECKED	135-20-10
APPROVED	

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA.

GAMMA RAY NEUTRON LOG

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY B.C. COAL LIMITED
WELL EV 150
LOCATION EWIN CREEK
FIELD UPPER ELK VALLEY
PROVINCE BRITISH COLUMBIA
Other Services: DENS, DIR
Permanent Datum GROUND LEVEL Elev.
Log Measured from GROUND LEVEL Above Perm. Datum
Well Depths Measured from GROUND LEVEL
K.B.
CSG
G.L.
250 METRIC

Run. No.	ONE
Date	1 NOV 1981
First Reading	348M
Last Reading	0
Footage Logged	348
Depth Reached	348.7
Depth Driller	348.7
Casing Roke	3
Casing Driller	3.1
Fluid Type	MUD/WATER
Liquid Level	19.4
Min. Diam.	HQ
Rm @	
Operating Time	2 HR
Truck No.	37

Recorded By FERGUSON
Witnessed By HURYN

EQUIPMENT DATA

GAMMA RAY	
RUN NO.	ONE
TOOL MODEL NO.	
DIAMETER	32MM
DETECTOR MODEL NO.	
TYPE	SCINTILLATION
LENGTH	10CM
DISTANCE TO N. SOURCE	2M
GENERAL	
HOIST TRUCK NO.	37
INSTRUMENT TRUCK NO.	37
TOOL SERIAL NO.	GRN125A009

NEUTRON	
RUN NO.	ONE
LOG TYPE	NEUTRON/NEUTRON
TOOL MODEL NO.	
DIAMETER	32MM
DETECTOR MODEL NO.	
TYPE	PROPORTIONAL
LENGTH	15CM
SOURCE MODEL NO.	MRC-N-SS-W
SERIAL NO.	265
SPACING	43CM
TYPE	AmBe
STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	19	4	3	100	0	15	3	1000	0	300
ONE	19	348	4	3	100	0	15	3	500	0	150

REMARKS

ROKE

COMPANY: ROKE PETROLEUMS LTD.
WELL: 102/16-27-026-05W4/0
FIELD: BIGGAR
PROV. OR STATE: ALBERTA

Other Services: CBL-VDL-GR
Permanent Datum: G.L.
Log Measured From: K.B.
Drilling Measured From: K.B.

Elev.	K.B.	2227		
	D.F.			
	G.L.	2223		

Date	1-Jul-82			
Run No.	ONE			
Depth-Driller	1520			
Depth-Logger	1522			
Bottom Logged Interval	1520			
Top Logged Interval	1000			
Type Fluid in Hole	WATER			
Salinity, PPM Cl	1000			
Density				
Level	FULL			
Max. Rec. Temp. Deg. F.	100			
Equip. No. & Location	2227	1521		
Recorded By	D. HOLLINGER			
Witnessed By	MR. BOYD			

Run No.	Bit From	To	Size
ONE	SURF.	1522	7 7/8"

Run No.	Casing Driller	Casing Logger	Bit Size	Type Fluid in Hole	Density
ONE	8 5/8" @ 1000	1000	7 7/8"	WATER	

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	1	LOG TYPE	NEUTRON/NEUTRON
TOOL SERIAL NO.	329E	TOOL MODEL NO.	1
DETECTOR MODEL NO.		TOOL SERIAL NO.	329D
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10CM	TYPE	PROPORTIONAL
DISTANCE TO SOURCE	36	LENGTH	10CM
		SOURCE MODEL NO.	MNCN-83-59
SERIAL NO.		SERIAL NO.	332
ASSOC TRUCK NO.	27	STRENGTH	5 CURIES
INSTRUMENT CELLS NO.	27		Am/Be
TOTAL SERIAL NO.	CEB1256SDV		5 CURIES

LOGGING DATA

GENERAL						GAMMA RAY			NEUTRON			
Run No.	SECTION	SPEED	T.C.	SENS.	ZERO	API G. R. UNITS		P.C.	SENS.	ZERO	API N. UNITS	
	FROM	TO	FT/MIN	SEC.	SETTING	A. U.	A. U.	SETTING	SETTING	SETTING	API N. UNITS	
ONE	0	25	30	3	300	0	15	3	1000	0	210	
ONE	25	301	4	3	300	0	15	3	1000	0	197	

REMARKS

GAMMA RAY

GAMMA RAY INCREASES

API UNITS

0 150

NEUTRON

NEUTRON INCREASES

API UNITS

1000 0

1520

10

20

30

40

50

60

70

80

90

100

110

120

130

140

150

160

170

180

190

200

210

220

230

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270

280

290

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310

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770

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790

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810

820

830

840

850

860

870

880

890

900

910

920

930

940

950

960

970

980

990

1000

1010

1020

1030

1040

1050

1060

1070

1080

1090

1100

1110

1120

1130

1140

1150

1160

1170

1180

1190

1200

1210

1220

1230

1240

1250

1260

1270

1280

1290

1300

1310

1320

1330

1340

1350

1360

1370

1380

1390

1400

1410

1420

1430

1440

1450

1460

1470

1480

1490

1500

1510

1520

GAMMA RAY

NEUTRON

T.D.

(GR-LAS)

(NEUTRON-LAS)

CGC

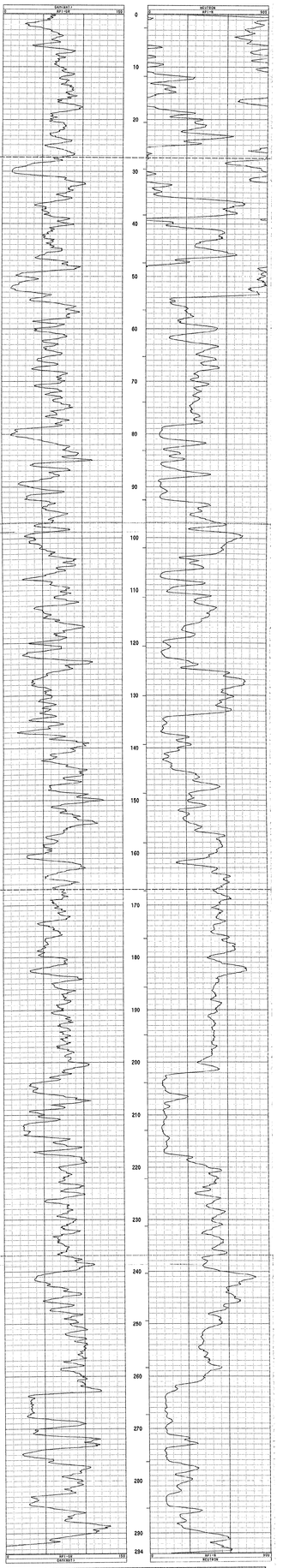
Century GEOPHYSICAL CORP.

GAMMA-NEUTRON

COMPANY	: FORDING GREENHILLS	OTHER SERVICES:	
WELL	: BC # 2494	9067	
LOCATION/FIELD	: SITE # 3	9805	
COUNTY	: ELKFORD	9030	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	
DATE	: 09/24/96	PERMANENT DATUM : G.L.	ELEVATIONS
DEPTH DRILLER	: 294	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 294.10	LOG MEASURED FROM: G.L.	DF :
LOG TOP	: -1.60	DRL MEASURED FROM: G.L.	GL :
CASING DRILLER	: 12	LOGGING UNIT : 9067	
CASING TYPE	: STEEL	FIELD OFFICE : CALGARY	
CASING THICKNESS: .65		RECORDED BY : S MC NEIL	
BIT SIZE	: 19.9	BOREHOLE FLUID : AIR	FILE : ORIGINAL
MAGNETIC DECL.	: 19	pH :	TYPE : 9067A
MATRIX DENSITY	: 2.65	RM TEMPERATURE :	LOG : 4
FLUID DENSITY	: 1.10	MATRIX DELTA T :	PLOT : GREEN 1
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T :	THRESH:
REMARKS	:		

HOLE ANGLE 60 DEGREES

9067 , 9812 RUN THROUGH THE RODS , 9803 , 9830 RUN OPEN HOLE



CGC

Century GEOPHYSICAL CORP.

GAMMA-NEUTRON

COMPANY	: FORDING GREENHILLS	OTHER SERVICES:	
WELL	: PC # 3495	9867	
LOCATION/FIELD	: STEL # 4	9855	
COUNTY	: ELKFORD	9838	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP :	RANGE :	

DATE	: 09/26/96	PERMANENT DATUM	: G.L.	ELEVATIONS	
DEPTH DRILLER	: 313	ELEV. PERM. DATUM:		KB	:
LOG BOTTOM	: 313.28	LOG MEASURED FROM:	G.L.	DF	:
LOG TOP	: 1.68	DRL MEASURED FROM:	G.L.	GL	:
CASING DRILLER	: 45	LOGGING UNIT	: 9083		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS: .65		RECORDED BY	: S MC NEIL		

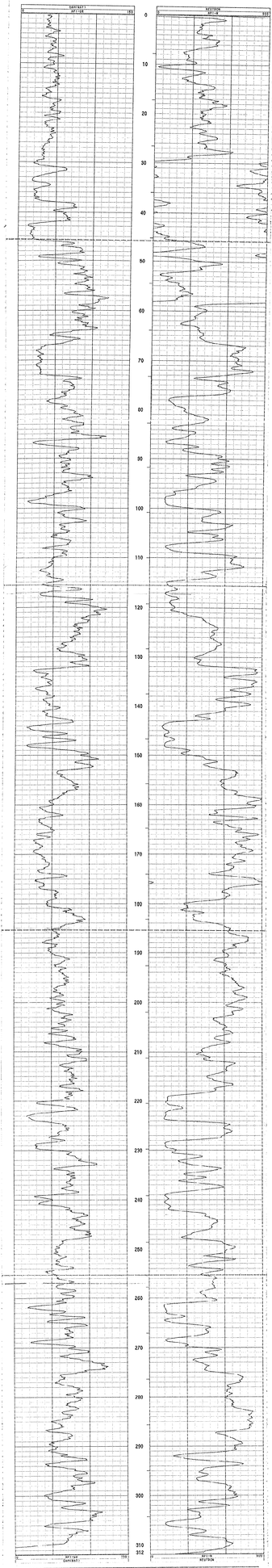
BIT SIZE	: 13.9	BOREHOLE FLUID	: AIR	FILE	: ORIGINAL
MAGNETIC DECL.	: 19	PH	:	TYPE	: 9867A
MATRIX DENSITY	: 2.65	RM TEMPERATURE	:	LOG	: 8
FLUID DENSITY	: 1.10	MATRIX DELTA T	:	PLOT	: GREEN 1
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	:	THRESH:	

WITNESSES :

HOLE ANGLE 60 DEGREES

9867 , 8NLC RUN THROUGH THE RODS , 9855 , 9838 RUN OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



PC 3495 09/26/96 K17

Century GEOPHYSICAL CORP.

GAMMA-NEUTRON

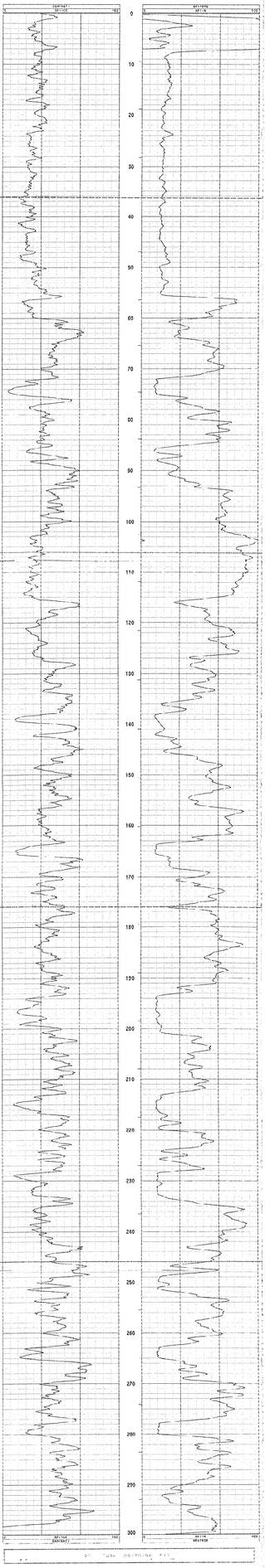
COMPANY	: FORDING COALFIELDS	OTHER SERVICES:	
WELL	: WC # 3496	9867	
LOCATION/FIELD	: SEC # 2	9855	
COUNTY	: ELKFORD	9838	
STATE	: BRITISH COLUMBIA		
SECTION	: TOWNSHIP	: RANGE	:
RUN	: ONE/ONE/ONE	PERMANENT DATUM : G.L.	ELEVATIONS
DEPTH DRILLER	: 300	ELEV. PERM. DATUM:	KB :
LOG BOTTOM	: 300.18	LOG MEASURED FROM: G.L.	DF :
LOG TOP	: -1.08	DRL MEASURED FROM: G.L.	GL :
CASING DRILLER	: 54	LOGGING UNIT	: 9685
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY
CASING THICKNESS: .05		RECORDED BY	: S MC NEIL
BIT SIZE	: 13.5	PRIMARY FLUID	: SW FILE : ORIGINAL
MAGNETIC DECL.	: 19	RM	: TYPE : 9867A
MATRIX DENSITY	: 2.65	RM TEMPERATURE	: MIN. : 0
FLUID DENSITY	: 1.10	MATRIX DELTA T	: FLOT : GREEN I
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	: THICK:

REMARKS

HOLE ANGLE 0# DEGREES

9867 , 9832 RUN THROUGH THE 9085 , 9855 , 9838 OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS



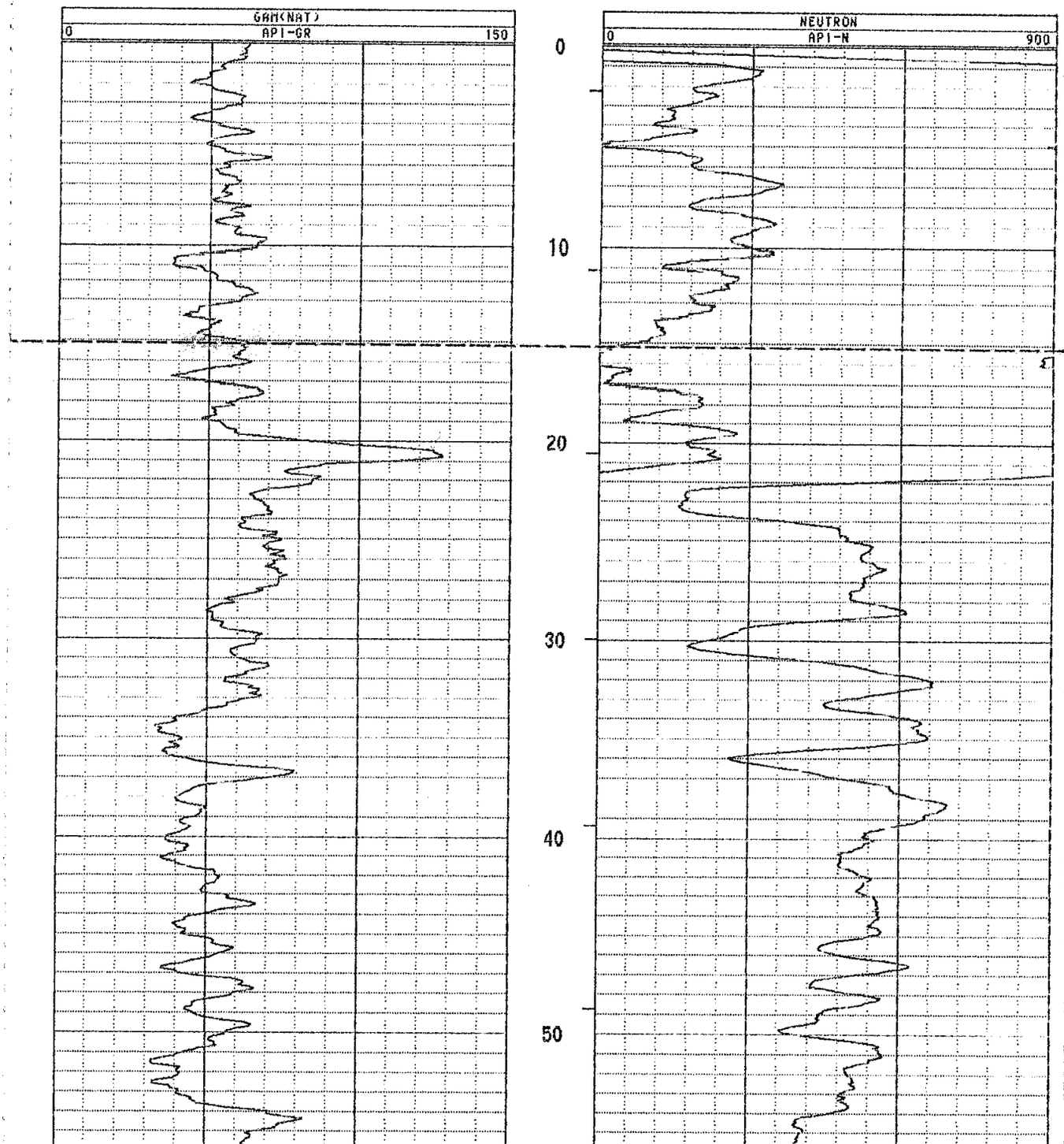
Century GEOPHYSICAL CORP.

GAMMA-NEUTRON

COMPANY	: FORDING GREENHILLS			OTHER SERVICES:	
WELL	: RC # 2497			9067	
LOCATION/FIELD	: SITE # 1			9055	
COUNTY	: ELKFORD			9030	
STATE	: BRITISH COLUMBIA				
SECTION	:	TOWNSHIP	:	RANGE	:
DATE	: 10/03/96	PERMANENT DATUM	: G.L.	ELEVATIONS	
DEPTH DRILLER	: 282	ELEV. PERM. DATUM:		KB	:
LOG BOTTOM	: 202.00	LOG MEASURED FROM:	G.L.	DF	:
LOG TOP	: -1.20	DRL MEASURED FROM:	G.L.	GL	:
CASING DRILLER	: 24	LOGGING UNIT	: 9603		
CASING TYPE	: STEEL	FIELD OFFICE	: CALGARY		
CASING THICKNESS	: .65	RECORDED BY	: S MC NEIL		
BIT SIZE	: 13.3	BOREHOLE FLUID	: AIR	FILE	: ORIGINAL
MAGNETIC DECL.	: 19	RM	:	TYPE	: 9067A
MATRIX DENSITY	: 2.65	RM TEMPERATURE	:	LOG	: 2
FLUID DENSITY	: 1.10	MATRIX DELTA T	:	PLOT	: GREEN 1
NEUTRON MATRIX	: SANDSTONE	FLUID DELTA T	:	THRESH:	
REMARKS	:				

9067 , 0012 RUN THROUGH THE RODS , 9055 , 9030 RUN OPEN HOLE

ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS


GAM(NAT)
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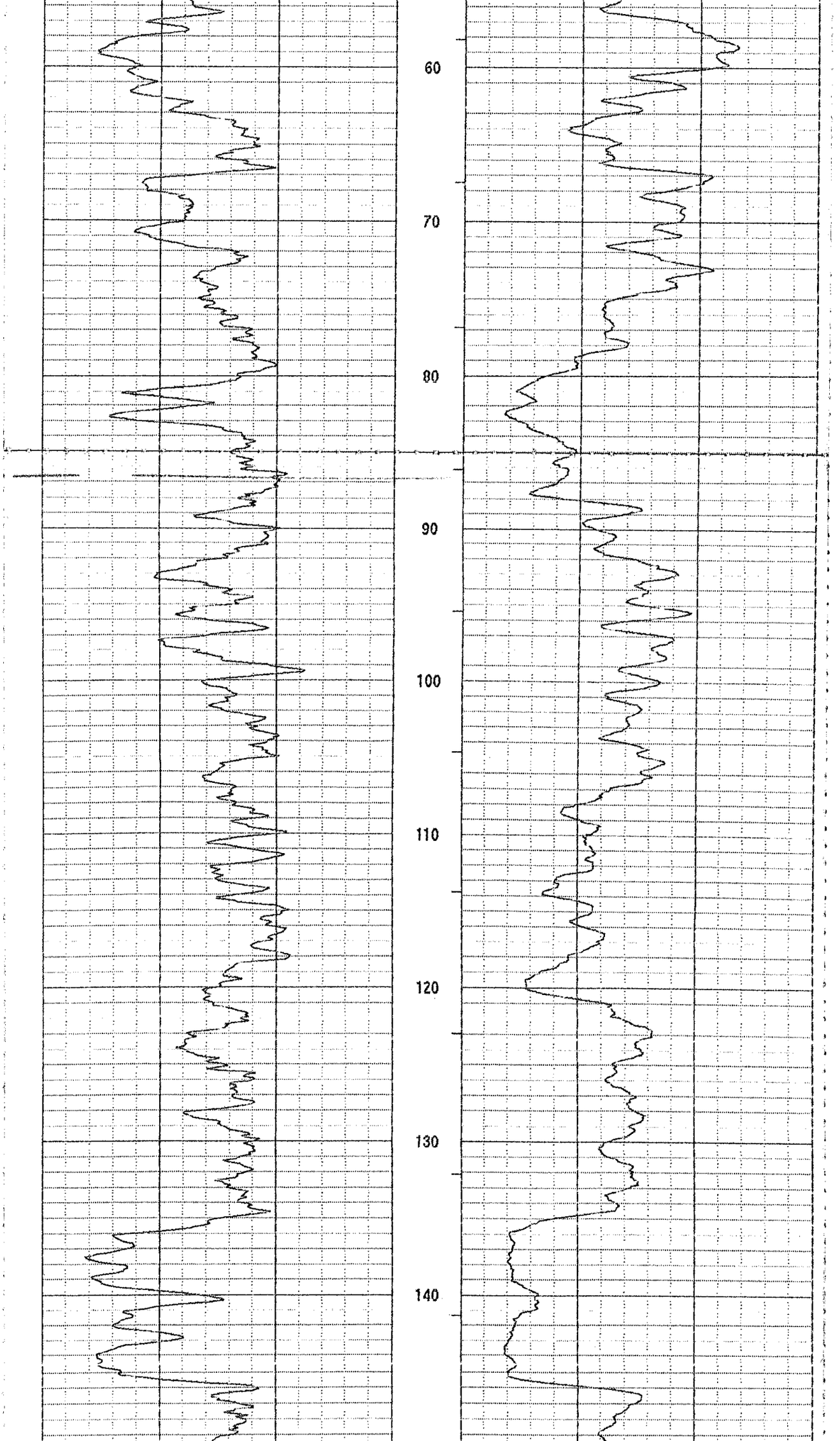
API-GR
150
0
10
20
30
40
50
NEUTRON
0
API-N
900


60
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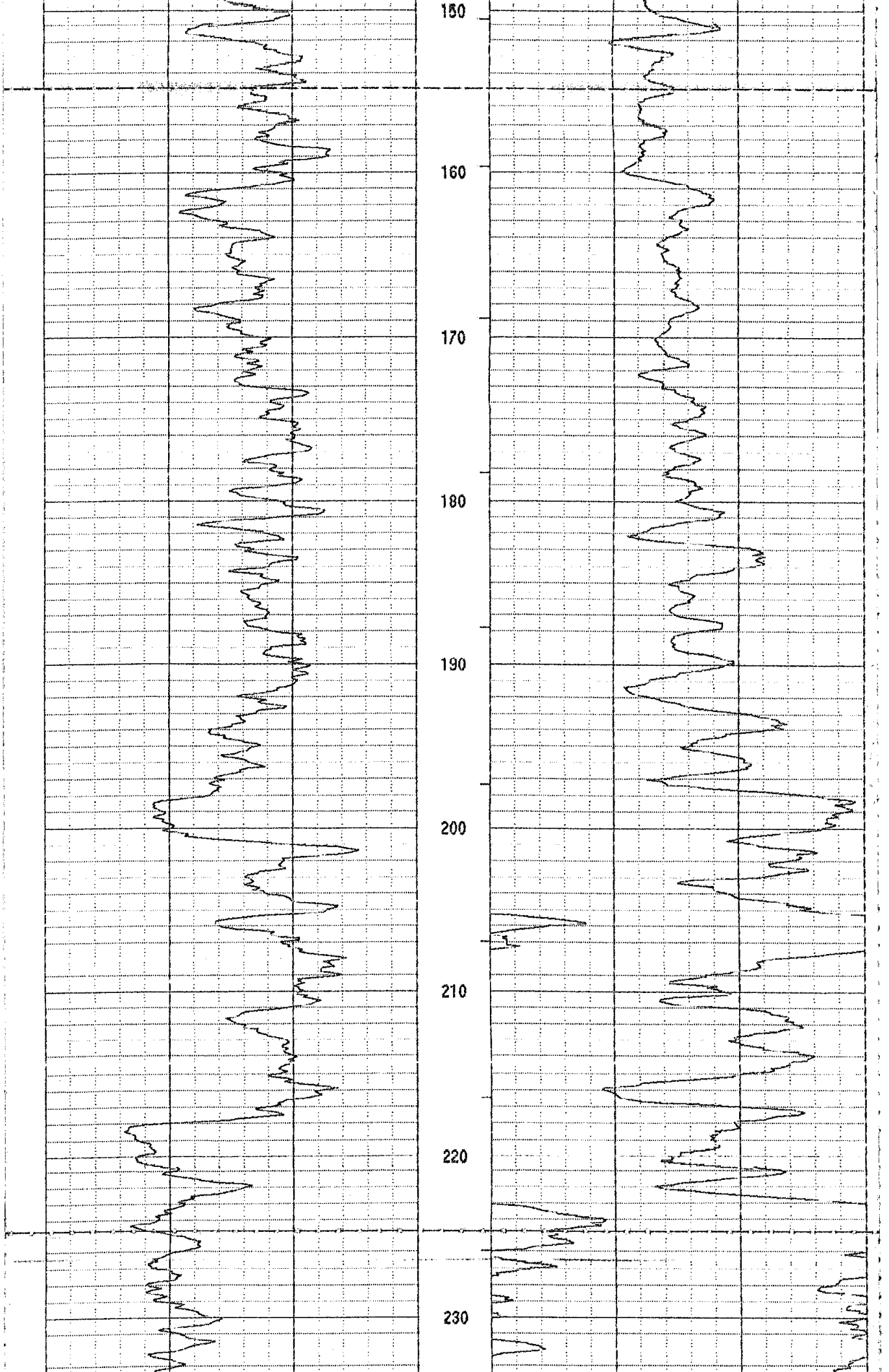
80
90
100
110
120
130
140


150
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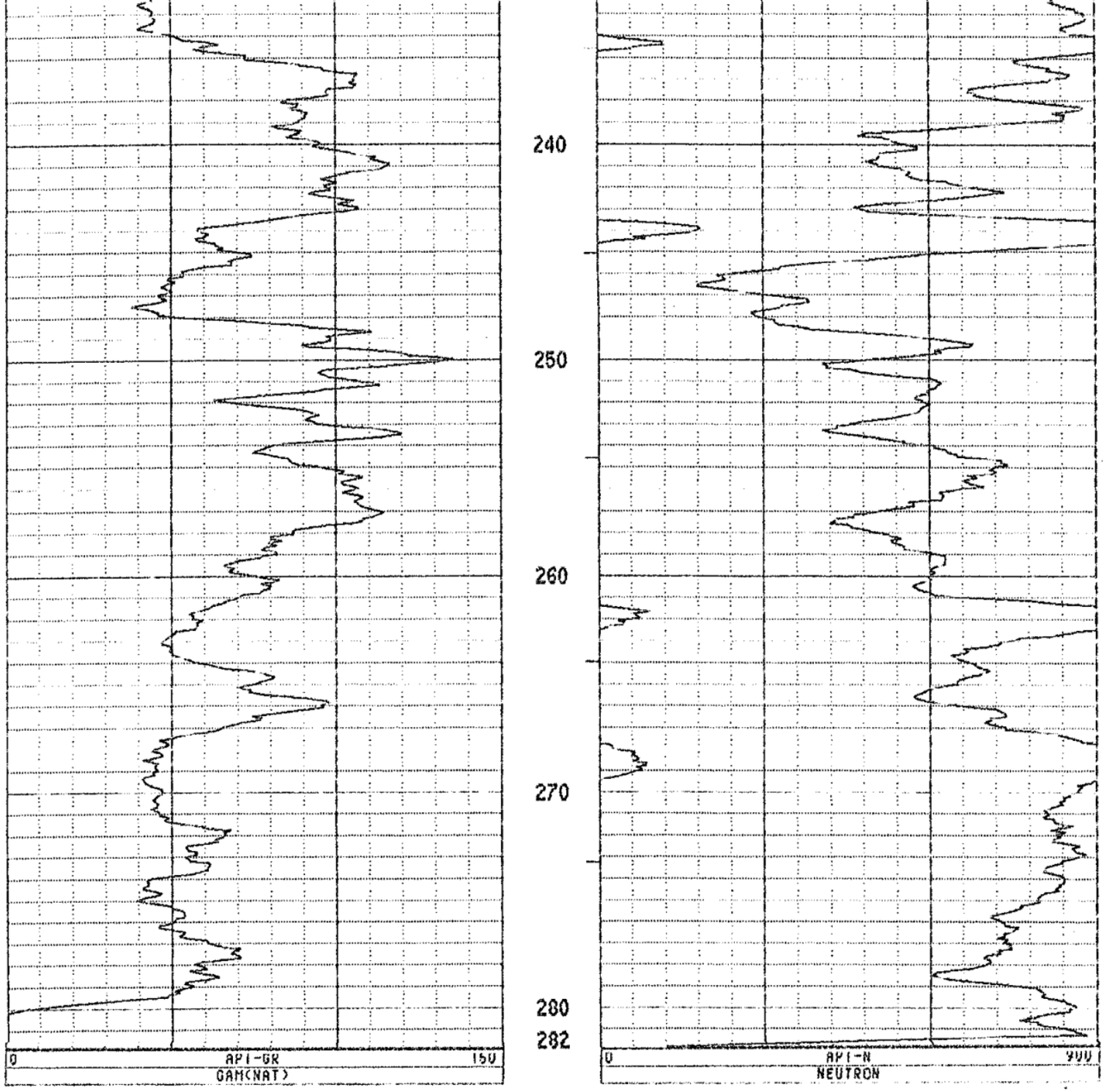

PP 2497 10/03/96 512