

DRILL CORE LOG

DDH 80 - 1

DRILL CORE LOG

HOLE No. <u>80-1</u>	SHEET No. <u>1 of 35</u>	LOGGED BY <u>JOHN RICKER</u>	Water level = <u>2m=6'7"</u>
DATE BEGUN <u>October 11/80</u>	CORE SIZE <u>NQ</u>	TOTAL DEPTH. <u>536 1/2' 163.5m</u>	COLLAR ELEV. <u>(ca 2305'a.s.l.)</u>
DATE FINISHED <u>October 14/80</u>	COLLAR BEARING _____	CONTRACTOR <u>COATES</u>	<u>702.5m</u>
DATE SAMPLED _____	HOLE ANGLE <u>Vertical</u>	MAP No. <u>Peace River Canyon South.</u>	

[illegible]

DRILL CORE LOG

HOLE No. 80-1 SHEET No. 2 of 35 LOGGED BY JOHN RICKER Water level = 2m = 6'7"
 DATE BEGUN October 11/80 CORE SIZE NQ TOTAL DEPTH 536½' COLLAR ELEV. (ca 2305' a.s.l.)
 DATE FINISHED October 14/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 2								
			31"				bl shale					75-90° sheared (1st 6")			
							1½" of syngenetic								
							pyrite = massive; endurated								
							shale								
						33'								120" 0"	
			23"				calcareous bl shale, silty					parting parallel to bedding			
			8"				grey calcareous silst & bl sh					1 fracture ca 90°			
							(as at 21'-23')								
			9½"				shale					shattered			
			34"				grey calcareous shaly silst								
							(with internal slump struc-								
							tures & shale bands) some fine								
							sandy siltstone near base								
							with blocks of silst and								
							coalified stems in it, giving								
							tops								

T
 V
 fine sandy siltstone
 shale
 siltstone blocks

DRILL CORE LOG

HOLE No. 80-1 SHEET No. 3 of 35 LOGGED BY JOHN RICKER Water level = 2m = 6'7"
 DATE BEGUN October 11/80 CORE SIZE NQ TOTAL DEPTH 536 1/2' COLLAR ELEV. (ca 2305' a.s.l.)
 DATE FINISHED October 14/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 3								
			9 1/2"				same as above								
			2 1/2"				v fine-grey ss								
			34 1/2"				same as for 9 1/2" layer								
						43'									
10 ^c			22 1/2"				grey calcareous shaley silst & minor bl shale								
			6"				dark silst with coal & pyrite (syngenetic)								
							replacing wood in current beds. Later calcite replacing coal								
											calcite				
8 ^p			35 1/2"				grey sandy silst & grey fine ss (occasionally shaley partings all calcareous. Current bedding. Coalified plant stems.								
			60"				grey silst (calcareous) & very fine ss (calcareous)	1	at	75°					

HOLE No. 80-1
DATE BEGUN October 11/80
DATE FINISHED October 14/80
DATE SAMPLED _____

SHEET No. 4 of 35
CORE SIZE NQ
COLLAR BEARING _____
HOLE ANGLE Vertical

LOGGED BY JOHN RICKER
TOTAL DEPTH 536 1/2'
CONTRACTOR COATES
MAP No. Peace River Canyon

Water level = 2m = 6'7" .
COLLAR ELEV. (ca 2305' a.s.l.)

[illegible]

HOLE No. 80-1
DATE BEGUN October 11/80
DATE FINISHED October 14/80
DATE SAMPLED _____

CORE SIZE NO

COLLAR BEARING _____

HOLE ANGLE Vertical

TOTAL DEPTH 536½'

CONTRACTOR COATES

MAP No. Peace River Canyon

COLLAR ELEV. (ca 2305' a.s.l.)

[illegible]

DRILL CORE LOG

HOLE No. 80-1 SHEET No. 6 of 35 LOGGED BY JOHN RICKER Water level = 2m = 6'7"
 DATE BEGUN October 11/80 CORE SIZE NQ TOTAL DEPTH 536½' COLLAR ELEV. (ca 2305' a.s.l.)
 DATE FINISHED October 14/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 7 continued								
	84'	84' ½"	10"	[-1½]			as above								
	84½8½"	85' 6"	11½"	[-2]			endurated (disseminated py-rite), blue black carbomaceous shale & silst.		90°		calcite			shattered	
							Box 8								
	85' 6"	86' 1"	8"	[-1]			same							shattered	
	86' 1"	86' 5½"	4½"	74½"	80-1		fire clay white								
	86' 5½"	87' 2"	8½"		86' 1" to 86' 5½"		blue black carbonaceous shale (very hard)								
	87' 2"	87' 2¾"	¾"	¾"			silty fire clay								
	87' 2¾"	87' 3½"	¾"				blue bl shale								
	87' 3½"	87' 4½"	1¼"	[nearly 1"]			fire clay								
	87' 4½"	87' 7½"	3"				cannel (lightweight soundslike wood) with ¼" band of bright coal								
							80-1								
	87' 7½"	89' 6"	22½"		87' 4½"		alternating dull & bright coal bands.								
	89' 6"	88' 7"	¾"	[nearly 1"]	89' 5½"		Sandy coal								

DRILL CORE LOG

HOLE No. 80-1 SHEET No. 7 of 35 LOGGED BY JOHN RICKER Water level = 2m = 6'7"
 DATE BEGUN October 11/80 CORE SIZE NQ TOTAL DEPTH 536½' COLLAR ELEV. (ca 2305'a.s.l.)
 DATE FINISHED October 14/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE				RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Rec.	Lost
							Box 8 (cont.)						
	89'7"	91'9"	26"				coal (seems close to complete)						
	91'9"	92'1½"	4½"				fine clay, silty				(lower contact?)		
	92'1½"	93'	10½"				coal shattered				(upper contact in place)		
		93'				93'	upper contact				(+4½") → 112½"		
	93' -	93'5½"	5½"				coal (bright) lower contact missing						
	93'5½"	94'5½"	11½" = (call 1")	(+1")			blue-black carbonaceous shale (calc. on partings)						
							Box 9						
	94'5½"	94'9"	3½"				carbonaceous shale						
	94'9"	96'9"	22"	(+2")			laminated bl sh & grey silst (slump structure perme. temporaneous)						
	96'9"	97'6½"	9½"				coal (bright) (contacts: upper & lower OK)						
	97'6½"	98'7"	11½"	(+1")		97'6½"	carbonaceous shale	75°	fracture		& sheared bottom contact parallel to bedding		
	98'7"	99'11½"	15"	(+1½")			laminated bl sh & grey silst						
							(some coaley partings)						
	99'11½"	100'10½"	11"				coal bright upper contact missing lower contact in place					shattered	
	100'10½"	101'2½"	4"			100'10½"	carbonaceous shale bl (with pyrite)						
	101'2½"	101'11"	8"	(+½")			laminated bl sh & grey silst						
	101'11"	101'11½"	½"				coal					shattered	

HOLE No. 80-1
DATE BEGUN October 11/80
DATE FINISHED October 14/80
DATE SAMPLED _____

CORE SIZE NQ

COLLAR BEARING _____

HOLE ANGLE _____ Vertical

TOTAL DEPTH 536½'

CONTRACTOR COATES

MAP No. Peace River Canyon

COLLAR ELEV. (ca 2305' a.s.l.)

[illegible]

DRILL CORE LOG

HOLE No. 80-1 SHEET No. 9 of 35 LOGGED BY JOHN RICKER Water level = 2m = 6'7"
 DATE BEGUN October 11/80 CORE SIZE NQ TOTAL DEPTH 536½' COLLAR ELEV. (ca 2305'a.s.l.)
 DATE FINISHED October 14/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Cooling	Strike	Dip	Rec.	Lost
							Box 10 (cont.)								
						111'								35½"	12½"
			21"				carbonaceous bl shale								
			20½"				bl shale (not calc.) silty							shattered	
			17"				grey sandy siltstone,								
							calcareous, with bl sh partings								
							Box 11								
						117'								58½"	13½"
			22"				mostly black silty shale & minor silst								
			5"				bl carbonaceous shale with coal								
							1/16" to ¼" bands)								
			27½"				bl silty sh with coalified plant fragments & minor carbonaceous shale (sheared at base)								
90°			33"				mostly light grey calc. silst (some calc. silst)								
							(some coaley sh bands up to 1" thick)								
			26"				grey bl. silty shales & minor carbonaceous sh (sheared at mid-point)								

slump structures - unusual folding

DRILL CORE LOG

HOLE No. 80-1 SHEET No. 10 of 35 LOGGED BY JOHN RICKER Water level = 2m = 6'7"
 DATE BEGUN October 11/80 CORE SIZE NQ TOTAL DEPTH 536½' COLLAR ELEV. (ca 2305' a.s.l.)
 DATE FINISHED October 14/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 12 (cont.)								
						127'								113½"	6½"
			6½"				silty bl sh								
			11"				grey shaley silst (calc.)								
			4"				bl sh								
			2"				coal (may be less thick (no contacts visible))							shattered	
			6"				silty bl sh								
16°			36"				grey silst (calc)								
							(sandier towards base)								
			44"				bl sh (silty) (with occasional silt or sand layers)								
							Box 13								
			5½"				shaley silst grading to light grey sandy silst (shale fragments in overlying silts; beds right side up)								
			5½"				silty bl shale								
						137'								(4½")	120½"
			4½"				silty bl shale (cont.)								
			15½"				grey silst (calc) (current beds)								
8-11°			18"				grey silty shale								
			5½"				bl shale, carbonaceous								

DRILL CORE LOG

HOLE No. 80-1

SHEET No. _____ 11 of 35

LOGGED BY JOHN RICKER

Water level = 2m = 6' 7"

DATE BEGUN October 11/80

CORE SIZE NQ

TOTAL DEPTH 536½'

COLLAR ELEV. (ca 2305' a.s.l.)

DATE FINISHED October 14/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE	Vertical
0	0.000
15	0.000
30	0.000
45	0.000
60	0.000
75	0.000
90	0.000
105	0.000
120	0.000
135	0.000
150	0.000
165	0.000
180	0.000

MAP No. Peace River Canyon South.

[illegible]

DRILL CORE LOG

FILE No. 80-1

SHEET No. 12 of 35

LOGGED BY JOHN RICKER

Water level = 2m = 6' 7"

DATE BEGUN October 11/80

CORE SIZE NO

TOTAL DEPTH 536½'

COLLAR ELEV. (ca 2305' a.s.l.)

DATE FINISHED October 14/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South.

[illegible]

DRILL CORE LOG

HOLE No. 80-1 SHEET No. 13 of 35 LOGGED BY JOHN RICKER Water level = 2m = 6'7"
 DATE BEGUN October 11/80 CORE SIZE NQ TOTAL DEPTH 536 1/2' COLLAR ELEV. (ca 2305' a.s.l.)
 DATE FINISHED October 14/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Cooling	Strike	Dip	Rec.	Lost
							Box 16 (cont.)								
			5 1/2"				bl shale (calc)								
			2"				grey silst (calc)								
			20 1/2"				bl shale (calc)								
5°			55"				shaley silst (calc)								
							Box 17								
			15"				bl siltish								
			7 1/2"				bl carbonaceous shale								
	175' 9 1/2"	176' 10 1/2"	13"		80-1 175-4 1/2" to 176' 10 1/2"		7" coal (chewed up) shiny (upper contact ok)							shattered	
							4" coaley shale								
							2" bright coal (chewed up) (no lower contact)							shattered	
							(probably coal lost)							118 1/2"	1 1/2"
			6"				carbo. sh with coaley partings								
			3"				(& possible coal layer 1/2" + bl. carb. sh.)							shattered	
			28 1/2"				bl silty sh (calc) (grey wx)								
			6"				grey silst (calc)								
			22 1/2"				bl sh (calc) & slightly silty sh								
			11 1/2"				silst into sandy silst (calc)								

DRILL CORE LOG

HOLE No. 80-1 SHEET No. 14 of 35 LOGGED BY JOHN RICKER Water level = 2m = 6'7"
 DATE BEGUN October 11/80 CORE SIZE NQ TOTAL DEPTH 536½' COLLAR ELEV. (ca 2305' a.s.l.)
 DATE FINISHED October 14/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 18								
5°			29½"				bl sh & grey silts, calcareous interbeds (¼"-½")								
			12½"				bl shale (slightly calcareous)								
						187'								119½"	½"
			10½"				same								
			13"	13"	80-1 187' 10" ½"	187' 10" ½"	coal (with upper contact) (lower contact missing)								
			2"				carb-sh with coaley partings								
			14"				sh & silst { 5" silst 5" silst 4" carb sh.								
			1½"				coal (shattered) (no contacts visible)				(possible coal loss)	shattered			
			31"				bl sh & coaley shale some silst					shattered			
							(vitrain bands 1/8" up to ½")				(possible coal loss)				
							Box 19								
			24"				bl sh & silty sh with 3" of carbonaceous coaley sh				fractured.				
						196'					(probably coal loss)			96"	12"
			17"				bl sh (grades into silst)								
11°			14½"				silst (grades into fine ss)								
			54½"				mostly fine ss (some coaley partings)								

DRILL CORE LOG

HOLE No. 80-1

DATE BEGUN October 11/80

DATE FINISHED October 14/80.

DATE SAMPLED _____

SHEET No. 15 of 35

CORE SIZE NO

COLLAR BEARING _____

HOLE ANGLE Vertical

LOGGED BY JOHN RICKER

TOTAL DEPTH 536½'

CONTRACTOR COATES

MAP No. Peace River Canyon South

Water level = 2m = 6' 7"

COLLAR ELEV. (ca 2305' a.s.l.)

[illegible]

DRILL CORE LOG

HOLE No. 80-1

DATE BEGUN October 11/80

DATE FINISHED October 14/80

DATE SAMPLED _____

SHEET No. 16 of 35

CORE SIZE NO

COLLAR BEARING _____

HOLE ANGLE Vertical

LOGGED BY JOHN RICKER

TOTAL DEPTH 536½'

CONTRACTOR COATES

MAP No. Peace River Canyon South.

Water level = 2m = 6' 7"

COLLAR ELEV. (ca 2305' a.s.l.)

[illegible]

DRILL CORE LOG

HOLE No. 80-1 SHEET No. 17 of 35 LOGGED BY JOHN RICKER Water level = 2m = 6'7"
 DATE BEGUN October 11/80 CORE SIZE NQ TOTAL DEPTH 536 1/2' COLLAR ELEV. (ca 2305' a.s.l.)
 DATE FINISHED October 14/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 23 (cont.)								
			42 1/2"				same as above								
			7 1/2"				mostly silst								
			11 "				sh								
			4 1/2"				hard bl shale (conchoidal fracture) cherty				shattered				
							Box 24								
			6"				bl hard shale shattered (conchoidal) cherty				shattered				
10°			51"				mostly shale, silty shale (calcareous)								
							(Zone of calcite replacing coalified plants 11 ft bedding 1/2" thick in hairline cracks)				calcite				
						246'								(+ 2 1/2") 122 1/2"	-
	246'	247' 6"	18"				shaley silty 1/2 sh. interbeds								
	247' 6"	248' 11"	17"				sh (lost 7" endurot)								
	248' 11"	249' 2"	3"				shattered coal				shattered				
	249' 2"	249' 4 1/2"	2 1/2"				channel 1/2 endurot carbonaceous sh								
	249' 4 1/2"	249' 11 1/2"	7"				bright 1/2 dull coal (3" shattered)				shattered				
	249' 11 1/2"	250' 1/2"	1"				carbonaceous sh								
	250' 1/2"	250' 1 1/2"	1"				shaley coal								
			6 1/2"				bright 1/2 dull coal layers.								

DRILL CORE LOG

HOLE No. 80-1 SHEET No. 18 of 35 LOGGED BY JOHN RICKER Water level = 2m = 6'7"
 DATE BEGUN October 11/80 CORE SIZE NQ TOTAL DEPTH 536½' COLLAR ELEV. (ca 2305' a.s.l.)
 DATE FINISHED October 14/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 25								
	250'8"	251'4"	(+8")				possibly missing 8" here missing								
	251'4"	253'3½"	23½"				coal								
							(lower contact visible)								
	253'3½"	253'11"	7½"				coaley sh & silst (carbonaceous)								
	253'11"	255'2"	15"				missing				possibly coal				
13°	255'2"	256'	10"				silty shale & some silst								
						256'					probable 8" coal loss from			112"	8"
											main seam				
			73"				shaley silst, silst & minor shale								
							bands; some coaley partings								
							increasing silst toward								
							v. fine ss at base								
							Box 26								
			25"				sh & silty sh								
							(coaley plant debris in 1st 1")								
			21"				grey silst (calcareous) & shaley								
							silst								
						266'								119"	1"
			14½"				silst (into v. fine ss last 1")								
			8½"				silty sh								

DRILL CORE LOG

HOLE No. 80-1 SHEET No. 19 of 35 LOGGED BY JOHN RICKER Water level = 2m = 6'7"
 DATE BEGUN October 11/80 CORE SIZE NQ TOTAL DEPTH 536½' COLLAR ELEV. (ca 2305'a.s.l.)
 DATE FINISHED October 14/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 26 (cont.)								
			19½"				silst, shaley silst								
11°			15½"				v fine ss - silst, shaley silst								
			7½"				v fine ss								
							Box 27								
18°			58"				shaley silst mostly; some								
							shale & a few ½" v. fine ss bands								
						276'								(+3½") 123½"	—
	276'	276'2½"	2½"				grey silst								
	276'2½"	276'11½"	9"				grey sh								
16°	276'11½"	277'1½"	2"				(upper contact ok) COAL								
	277'1½"	277'2"	½"	coal	80-1 276'1½"		coal shattered							possible coal missing	
15°	277'2"	277'4"	2"		F 284'6"		(basal contact ok) coal								
	277'4"	278'	8"				endurated mudstone (pyrite) carbon-								
							aceous to coaley (possibly iron stone								
							lense concretion)								
	278'	280'8½"	32½"				coal (upper contact ok)							possible coal missing	
							some shattered sections								
							(some complete lengths of 3", 4", 7" & 12"								
							Shiny coal - no impurities visible								
							some light & dull bands alternate.								

DRILL CORE LOG

HOLE No. <u>80-1</u>	SHEET No. <u>21 of 35</u>	LOGGED BY <u>JOHN RICKER</u>	Water level = <u>2m=6'7"</u>
DATE BEGUN <u>October 11/80</u>	CORE SIZE <u>NO</u>	TOTAL DEPTH <u>536 1/2'</u>	COLLAR ELEV. <u>(ca 2305'a.s.l.)</u>
DATE FINISHED <u>October 14/80</u>	COLLAR BEARING. <u>Vertical</u>	CONTRACTOR <u>COATES</u>	
DATE SAMPLED <u></u>	HOLE ANGLE <u>Vertical</u>	MAP No. <u>Peace River Canyon South</u>	

[illegible]

DRILL CORE LOG

HOLE No. 80-1 SHEET No. 22 of 35 LOGGED BY JOHN RICKER Water level = 2m=6'7"
 DATE BEGUN October 11/80 CORE SIZE NQ TOTAL DEPTH 536 1/2' COLLAR ELEV. (ca 2305' a.s.l.)
 DATE FINISHED October 14/80 COLLAR BEARING _____ CONTRACTOR COATES _____
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South _____

[illegible]

DRILL CORE LOG

FILE No. 80-1

DATE BEGUN October 11/80

DATE FINISHED October 14/80

DATE SAMPLED _____

SHEET No. 23 of 35

CORE SIZE NQ

COLLAR BEARING _____

HOLE ANGLE Vertical

LOGGED BY JOHN RICKER

TOTAL DEPTH 536½'

CONTRACTOR COATES

MAP No. Peace River Canyon

Water level = 2m = 6'7" .
COLLAR ELEV. (ca 2305' a.s.l.)

COLLAR ELEV. (ca 2305' a.s.l.)

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. <u>80-1</u>	SHEET No. <u>24 of 35</u>	LOGGED BY <u>JOHN RICKER</u>	Water level = 2m = 6'7"
DATE BEGUN <u>October 11/80</u>	CORE SIZE <u>NQ</u>	TOTAL DEPTH <u>536 1/2'</u>	COLLAR ELEV. <u>(ca 2305' a.s.l.)</u>
DATE FINISHED <u>October 14/80</u>	COLLAR BEARING _____	CONTRACTOR <u>COATES</u>	
DATE SAMPLED _____	HOLE ANGLE <u>Vertical</u>	MAP No. <u>Peace River Canyon South</u>	

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE					RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.
							Box 34 (cont.)							
			54 "				bl sh							
	345' 11 1/2 "	346' 1 1/2 "	2 "	12 1/2 "	80-1		shattered sh & bright coal				shattered			
	346' 1 1/2 "	346' 4 1/2 "	3 "		345' 11 1/2 " to		cannel coal (conchoidal, dull)							
	346' 4 1/2 "	347'	7 1/2 "		347'		bright coal (upper contact preserved)							
						347'						(+4") 124 "		
			1 1/2 "				coaley shale							
13°			15 1/2 "				coaley - shaley silst							
							grading to light grey silst;							
							silty sh & shaley silst							
							(laminated 1/8" - 2" bands)							
			51 1/2 "				grey silst & shale bands 1/8" to							
							1/2" increasing shale bands at base.							
			3 "				v fine ss							
			25 1/2 "				grey silst & sh bands							
			22 "				bl sh with grey silst bands at base							
						357'							119"	1'
			13 1/2 "				v fine grey sandstone							

DRILL CORE LOG

FILE No. 80-1

SHEET No. 25 of 35

LOGGED BY JOHN RICKER

Water level = 2m = 6' 7"

DATE BEGUN October 11/80

CORE SIZE NQ

TOTAL DEPTH 536½'

COLLAR ELEV. (ca 2305' a.s.l.)

DATE FINISHED October 14/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. <u>80-1</u>	SHEET No. <u>26</u> of <u>35</u>	LOGGED BY <u>JOHN RICKER</u>	Water level = <u>2m=6'7"</u>
DATE BEGUN <u>October 11/80</u>	CORE SIZE <u>NQ</u>	TOTAL DEPTH <u>536 1/2'</u>	COLLAR ELEV. <u>(ca 2305' a.s.l.)</u>
DATE FINISHED <u>October 14/80</u>	COLLAR BEARING _____	CONTRACTOR <u>COATES</u>	_____
DATE SAMPLED _____	HOLE ANGLE <u>Vertical</u>	MAP No. <u>Peace River Canyon South</u>	_____

[illegible]

DRILL CORE LOG

HOLE No. 80-1

SHEET No. 27 of 35

LOGGED BY JOHN RICKER

Water level = 2m = 6' 7"

DATE BEGUN October 11/80

CORE SIZE NQ

TOTAL DEPTH 536½'

COLLAR ELEV (ca 2305' a.s.l.)

DATE FINISHED October 14/80

COLLAR BEARING

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. <u>80-1</u> DATE BEGUN <u>October 11/80</u> DATE FINISHED <u>October 14/80</u> DATE SAMPLED _____	SHEET No. <u>28</u> of <u>35</u> CORE SIZE <u>NQ</u> COLLAR BEARING _____ HOLE ANGLE <u>Vertical</u>	LOGGED BY <u>JOHN RICKER</u> TOTAL DEPTH <u>536 1/2'</u> CONTRACTOR <u>COATES</u> MAP No. <u>Peace River Canyon South</u>	Water level = 2m = 6'7" COLLAR ELEV. <u>(ca 2305' a.s.l.)</u>
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B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY		
	From	To	Apparent					Joint	Frac.	Freq./m	Cracking	Strike	Dip	Rec.	Lost	
							Box 42.(cont.)									
			15 "				ss fine to med.(cont.)									
	420' 1/2 "	421' 9 "	20 1/2 "	1/2 23 1/2	80-1 420' 1/2 " 1/2 422' -		(top 1" is silty sh & coal)									
								coal, bright clean(almost complete recovery)			70°	fracture				
	421' 9 "	421' 10 "	1 "					carbonaceous sh - cannel								
	421' 10 "	422' -	2 "				coal(bottom missing)& mix									
							carbonaceous shale									
						422' 1								(+ 1/2 ") 50 1/2 "	-	
			4 1/2 "				silty carbonaceous sh									
			9 1/2 "				shaley silst									
			10 "				v. fine ss									
							Box 43									
			29 "				v fine ss									
13°			23 "				grey silst;minor shale									
			30 1/2 "				shale & minor shaley silst									
			1/2 "				crushed shale				crushed					
			1 "				shale carbonaceous									
			3 1/2 "				bright coal									
			6 "				carbonaceous sh & coaley material									
						432' 1								117 1/2 "	2 1/2 "	

DRILL CORE LOG

HOLE No. 80-1 SHEET No. 29 of 35 LOGGED BY JOHN RICKER Water level = 2m = 6'7"
 DATE BEGUN October 11/80 CORE SIZE NQ TOTAL DEPTH 536½' COLLAR ELEV. (ca 2305' a.s.l.)
 DATE FINISHED October 14/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 43(cont.)								
			21"				shaley silst & shale								
							Box 44								
60			41"				mostly shaley silst, dark								
						437'									
			16½"				same (disseminated pyrite in ¼" beds								
							at 9" horizon)								
			28½"				bl shale								
			8"				endurated bl shale (conchoidal								
							fracture) - cherty								
			5"				bl shale (with bright coal bands of								
							1/8")								
			5½"				silty sh, bl.								
			9½"				shaley silst								
							Box 45								
			47"				mostly shaley silst, some v. fine ss								
							at base								
						447'								120"	0"
			9"				v. fine ss								
90			14½"				interbedded v fine ss & sh								
			43½"				shaley silst mostly, with interbeds								

DRILL CORE LOG

HOLE No. 80-1 SHEET No. 30 of 35 LOGGED BY JOHN RICKER Water level = 2m = 6'7"
 DATE BEGUN October 11/80 CORE SIZE NQ TOTAL DEPTH 536½' COLLAR ELEV. (ca 2305' a.s.l.)
 DATE FINISHED October 14/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 45 (cont.)								
							of shale (with some coalified plant debris).								
							Box 46								
			37"				same (last 1½" = silty shale)								
12°	455'5"	455'11"	6"				shaley, bl, sooty coal (upper & lower contact ok)								
	455'11"	456'3"	4"		80-1		coaley shale (& pyrite dissem. = syngenetic)								
	456'3"	457'	9"		455'5" to 457'		coal shattered (bright & dull, banded) (no lower contact)								
						457'									
			26"				bl sh & bl shaley silst								
11°			31"				v fine ss & silst								
			64"				Box 47								
							light grey silst & shaley silst, some shale								
						467'									
	467'	468'9"	21"				same								
	468'9"	470'½"	15½"				bl shale & shaley silst								
	470'½"	472'2½"	2"				grey silstone								

DRILL CORE LOG

HOLE No. 80-1 SHEET No. 31 of 35 LOGGED BY JOHN RICKER Water level = 2m = 6'7"
 DATE BEGUN October 11/80 CORE SIZE NO TOTAL DEPTH 536½' COLLAR ELEV. (ca 2305' a.s.l.)
 DATE FINISHED October 14/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 47(cont.)								
	472'2½"	472'4"	1½"				bl shale								
	472'4"	472'8"	4"				shaley silst(internal depositional slump structure)								
	472'8"	472'8½"	½"				coal								
14°	472'9½"	472'9"	½"				silst								
	472'9"	473'4½"	7½"				bright coal(with silst fragments (20%))								
							Box 48								
	473'4½"	473'6"	1½"				coal(bright)				shattered				
			7"				carbonaceous shale								
			7"				shaley silst								
			31"				light grey silst-v fine ss(current beds) & minor shale								
			25"				light grey silst with shale inter- beds								
						477'								(+4)	124"
			18"				same								
			22½"				v fine ss (current beds)								
							Box 49								
10			78½"				grey v fine ss(some carbonaceous								

DRILL CORE LOG

HOLE No. 80-1 SHEET No. 32 of 35 LOGGED BY JOHN RICKER Water level = 2m = 6'7"
 DATE BEGUN October 11/80 CORE SIZE NQ TOTAL DEPTH 536½' COLLAR ELEV. (ca 2305' a.s.l.)
 DATE FINISHED October 14/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 49 (cont.)								
							material in partings parallel to bedding)								
						487'								119"	1"
			35"				same								
							Box 50								
			22"				same								
			18"				shale & silst alternating								
	493'5½"	495' -	18½"		80-1		coal (upper contact ok)				cleat 70° good				
				22"	493'5½"		bright coal								
					495'3½"	495'								9½"	2½"
	495'	495'3½"	3½"				coal								
	495'3½"	495'5½"	(2½")				missing								
	495'5½"	495'9"	2½"				baked sh, with pyrite								
	495'8"	—	¾"				coal								
	495'8"	496'1"	5"				bl sh (upper 2" baked)								
90	496'1"	497'7"	18"				grey silst, shaley silst								
	497'7"	—	20"				dark shaley silst & dark shale								
			1½"				dark sh								

DRILL CORE LOG

HOLE No. 80-1 SHEET No. 33 of 35 LOGGED BY JOHN RICKER Water level = 2m = 6'7"
 DATE BEGUN October 11/80 CORE SIZE NQ TOTAL DEPTH 536 1/2' COLLAR ELEV. (ca 2305' a.s.l.)
 DATE FINISHED October 14/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE					RECOVERY		
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 51								
	499' 1 1/2"	500' 7 1/2"	18	18"	80-1 499' 1 1/2"		coal (good initial section of 9 1/2".								
					to 500' 7 1/2"		below this is all crushed) - bright, sooty, good coal								
			(3")				missing 3" probably here?								
	500' 7 1/2"	500' 10 1/2"	7"				dark shaley silst								
	501' 2 1/2"	502' 2 1/2"	12"				light grey silst & sh								
9°	502' 2 1/2"	503' 8 1/2"	16"				dark shaley silst								
	503' 9 1/2"	505' -	13 1/2"				bl sh							117"	3"
						505'									
			6 1/2"				bl sh								
	505' 8 1/2"	507'	15 1/2"	15 1/2"	80-1 505' 8 1/2"		coal (top ok)								
					507'		(bottom ?)								
						507'								22"	2"
	507'	508' 9"	21"				bl sh								
							Box 52								
	508' 9"	510' 7"	22"				bl sh (some coaley debris)								
	510' 7"	511' 3"	8"	8"	80-1 510' 7" to 511' 3"		bright coal (top ok) (bottom ?)								
			4 1/2"				bl sh (coaley debris)								
			1/2"				coal								

DRILL CORE LOG

HOLE No. <u>80-1</u>	SHEET No. <u>35 of 35</u>	LOGGED BY <u>JOHN RICKER</u>	Water level = <u>2m=6'7"</u>
DATE BEGUN <u>October 11/80</u>	CORE SIZE <u>NQ</u>	TOTAL DEPTH <u>536½'</u>	COLLAR ELEV. <u>(ca 2305' a.s.l.)</u>
DATE FINISHED <u>October 14/80</u>	COLLAR BEARING _____	CONTRACTOR <u>COATES</u>	
DATE SAMPLED _____	HOLE ANGLE <u>Vertical</u>	MAP No. <u>Peace River Canyon South.</u>	

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 53 (cont.)								
			1/2"	—			coal		crushed						
			15"				bl sh								
60°			16"				bl shaley silst grading to light								
							silst;grading to v. fine ss								
			19"				v fine ss to fine ss (light)								
			5"				cannel (conchoidal, dull)								
						526'							+2 1/2"	122 1/2"	—
	526'	526 1/2'	1/2"	—			cannel with pyrite								
	526' 1/2"	526' 8"	7 1/2"	—			cannel - blocky, shaley								
	526' 8"	527' 1"	5"			90-1	coal (dull)								
				28"		526' 0"	Box 54								
	527' 1"	529'	23"			to 529'	dull coal (1st-7"=shattered) (16" good section)		partly shattered						
			6"				dull carbonaceous sh								
70°			81 1/2"				dark shaley silst, interbedded with shale 1/2"-1/2"								
						536.5	BOTTOM OF HOLE						+2 1/2"	123 1/2"	—

DRILL CORE LOG

DDH 80 - 2

DRILL CORE LOG

HOLE No. 80-2 SHEET No. 1 of 37 LOGGED BY JOHN RICKER Footage measured from Ground level
 DATE BEGUN October 14/80 CORE SIZE NO TOTAL DEPTH 711' 217 m COLLAR ELEV. Ground level = ca 2650' a.s.l.
 DATE FINISHED October 18/80 COLLAR BEARING Vertical CONTRACTOR COATES MAP No. Peace River Canyon South 808 m
 DATE SAMPLED _____ HOLE ANGLE _____

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
	0	20'		20' + 3"	1"										
				27' 7"			overburden								
							Box 1								
			5"				grey silst. (Fe stains)								
			23½"				grey sh. with coaley parting				shattered				
			12"				grey silty sh								
30°			22½"				grey silst - fin ss - bedded				90° rough calcite				
						27'								63"	31"
35°			44"				med grey, ss with coaley part-								
							ings parallel to bedding								
							UNIFORM								
							Box 2								
			44"				same								
						34'								(+4"	84" -
35°			62½"				same								
							Box 3								
			27"				same								
			11½"				grey sh to silty sh								
			18"				grey silst, finely bedded to								
							6" typically; with shaley bands								

to 1" typically

DRILL CORE LOG

HOLE No. 80-2

SHEET No. 2 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE NQ

TOTAL DEPTH 711'

COLLAR ELEV. Ground level = ca 2650' a.s.l.

DATE FINISHED October 18/80

COLLAR BEARING

CONTRACTOR COATES

DATE SAMPLED

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 3 (cont.)								
						44'								119"	1"
			16"				same as above								
			36"				shaley silst. increasing shale								
			6 1/2"				brownish mudstone, carbonaceous								
						49'								58 1/2"	1 1/2"
							Box 4								
			3"				shale, carbonaceous								
			26"				silst. - shaley								
			46"				silst incr. shale bands								
28°			20 1/2"				carb. fine ss - med ss								
							with coaly partings								
						57'								95 1/2"	1/2"
			14"				med ss								
							Box 5								
			18"				med ss (water leak)				limonite				
			23"				grey shale to silty sh								

DRILL CORE LOG

HOLE No. 80-2

SHEET No. 3 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE NO

TOTAL DEPTH 711'

COLLAR ELEV.

DATE FINISHED October 18/80

COLLAR BEARING

CONTRACTOR COATES

Ground level = ca 2650' a.s.l.

DATE SAMPLED

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 5 (cont.)								
			38 1/2"				light grey silst changing to								
27°							silty shale								
	65' 9 1/2"	67'	26 1/2"		80-2 65' 9 1/2"	67'	coal bright & dull; pure looking somewhat sooty.				channel parallel to bedding				
							slickensided-like surface, glossy on fracture <i>planes</i>				(mostly complete core)				
							upper contact good								
							lower contact missing								
						67'									
			5 1/2"				mudstone-sh (coaly partings)							120"	0"
							Box 6								
			3 1/2"				same (coaly partings)								
			12"				grey silst - v fine ss								
			14"				mudst - shale <i>again</i>								
			18 1/2"				grey silst.								
			35 1/2"				shale-mudst again-bright coal				calcite				
							(vitrain) filling 1/8" gaps								
							along bedding usually.								

DRILL CORE LOG

HOLE No. 80-2 SHEET No. 4 of 37 LOGGED BY JOHN RICKER Footage measured from Ground level
 DATE BEGUN October 14/80 CORE SIZE NO TOTAL DEPTH 711' COLLAR ELEV. Ground level = ca 2650'a.s.l
 DATE FINISHED October 18/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 6 (continued)								
			2½"	—			cannel (upper & lower contacts OK)								
			2"	—			coal (bright & dull-splinters.)								
							(lower contact not clear)								
						75'								93½"	2½"
			3"				dark shale								
38			17½"				shaley silst								
							Box 7								
			2"				same								
						77'								22½"	1½"
			109½"				grey silst & shaley silst								
							(jointing near the angle of								
							the drill hole—could this be	*95°							
							the water conduit?)								
							Box 8								
			7½"				same		45°		quartz & calcite				
			ca 7"				sheared (coal partings) coaley								
							shale								

DRILL CORE LOG

HOLE No. 80-2

SHEET No. 5 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE NO

TOTAL DEPTH 711'

COLLAR ELEV.

DATE FINISHED October 18/80

COLLAR BEARING

CONTRACTOR COATES

Ground level = ca 2650'a.s..

DATE SAMPLED

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Cooling	Strike	Dip	Rec.	Lost
							Box 8 (cont.)								
						87'									
	87'	87'10"	10"				brown shaley mudstone with bright coaley partings near 87' marker							(+4") 124"	-
	87'10"	89'2"	16"				silst - sandy silt - silt sh								
	89'2"	90'6"	16"				grey sh - shaley mudstone								
	90'6"	91'	6"		80-2/ 90'6" to 91'	91'	coal (bright-dull; sooty)								
		39 1/2"					sh - mudst. silty mudst								
30°		5"					v fine ss								
							Box 9								
		27 1/2"					same v fine - fine ss								
						97'								115"	5"
		84"					same								
20°							micaceous; se. icite partings								
							parallel to bedding								

DRILL CORE LOG

HOLE No. 80-2 SHEET No. 6 of 37 LOGGED BY JOHN RICKER Footage measured from Ground level
 DATE BEGUN October 14/80 CORE SIZE NO TOTAL DEPTH 711' COLLAR ELEV.
 DATE FINISHED October 18/80 COLLAR BEARING CONTRACTOR COATES Ground level = ca 2650'a.s.
 DATE SAMPLED HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 10								
						104'								84"	0
			36"				-same ss to med grain	80°	85°	(1set)					
							-coaley slickensides & sericite								
							parallel to bedding locally								
							- silicified fractures (irregular)				+ calcite				
						107'								36"	0
25°			75½"				-same ss								
							Box 11								
			49"				-same ss								
						117'								(+4½")	124½" -
30°	117'	117½"	½"				-coal (bright (lower contact OK)								
	117½"	120'6"	41½"				some ss (coaley partings in-								
							crease)								
	120'6"	120'9"	3"				silt								
	120'9"	121'10"	11"				coal (alternating dark & light				(shattered core; some granular)				
							sooty slightly; pure looking								
							Box 12								
			trace				lower contact of coal								

DRILL CORE LOG

HOLE No. 80-2 SHEET No. 7 of 37 LOGGED BY JOHN RICKER Footage measured from Ground level
 DATE BEGUN October 14/80 CORE SIZE NO TOTAL DEPTH 711' COLLAR ELEV. ?
 DATE FINISHED October 18/80 COLLAR BEARING CONTRACTOR COATES Ground level = ca 2650'a.s..
 DATE SAMPLED HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 12 (cont.)								
			6"				mudstone, shaley coaley								
							partings parallel to bedding. Brownish								
			46"				grey silst & v fine ss.								
			7½"				mudstone brownish (with								
							coaley partings and bright								
							mirror-like slickensides								
							parallel to bedding)								
						127'								115"	4½"
			23"				silst								
			7"				mudstone, brownish-coaley partings								
							partings								
			21½"				silst								
							Box 13								
			68½"				mostly silst grey, & some								
							silty mudstone							120"	0
							2"-3"; some fine ss								
						137'									
			45"				mostly silst; increasingly								
							shaley								

DRILL CORE LOG

HOLE No. 80-2 SHEET No. 8 of 37 LOGGED BY JOHN RICKER Footage measured from Ground level
 DATE BEGUN October 14/80 CORE SIZE NQ TOTAL DEPTH 711' COLLAR ELEV. Ground level = ca 2650'a.s.l.
 DATE FINISHED October 18/80 COLLAR BEARING Vertical CONTRACTOR COATES MAP No. Peace River Canyon South
 DATE SAMPLED _____ HOLE ANGLE Vertical

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 14								
			5"				same shaley silst								
			9"				fine ss								
20°			32"				shaley silst. <i>laminated</i>								
							grey fine silst <i>increasingly sandy towards base</i>								
						147'							(+3"	123"	
			32 1/2"				fine to med grey ss (iron oxide - <i>water seep along basal boundary - see Box 15</i>)								
							Box 15								
			7"				(basal) rusty stain, same ss	75°	-good plane						
							pale brown wx mudstone to 2 1/2"								
						151'								46 1/2"	1 1/2"
			23 1/2"				bl shaley mudstone & shale	shearing	irreg.						
							slidensided coal partings								
							some minor coal to 1/2"								
			41"				dark silst and minor ss								
						157'								64 1/2"	7 1/2" *
							(<i>*probably mudstone & coal missing</i>)								

DRILL CORE LOG

HOLE No. 80-2

SHEET No. 9 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE NO

TOTAL DEPTH 711'

COLLAR ELEV. Ground level = ca 2650' a.s.l.

DATE FINISHED October 18/80

COLLAR BEARING

CONTRACTOR COATES

DATE SAMPLED

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 15(cont.)								
32			27"				same silst. - more light grey								
							Box 16								
			97"				same; some ss up to 2"	✓							
						167'									
			15"				silst.(continued)								
							Box 17								
30			88½"				silst mainly(none of the rx have								
							calcareous cement)								
							jointing	✓							
			2"				coaley silst	60°							
	175 10 1/2	175' 11 1/2"	1"				coal								
	175 11 1/2	176' 5 1/2"	6"				cannel coal/mudstone								
	176 5 1/2	177'	6 1/2"				mudstone								
						177'									
			6"				mudstone							119"	-

HOLE No. 80-2

SHEET No. 10 of 37

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE _____ NO _____

TOTAL DEPTH 711'

COLLAR ELEV. _____
Ground level = ca 2650' a.s..

DATE FINISHED October 18/80

COLLAR BEARING

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-2 SHEET No. 11 of 37 LOGGED BY JOHN RICKER Footage measured from Ground level
 DATE BEGUN October 14/80 CORE SIZE NO TOTAL DEPTH 711' COLLAR ELEV. 5
 DATE FINISHED October 18/80 COLLAR BEARING _____ CONTRACTOR COATES Ground level = ca 2650'a.s.l.
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 20(cont.)								
							sheared mudstone(with brilliant								
							coaley reflecting surface)at								
							marker								
			2"				sheared mudstone								
			28"				dark silst(&v fine to fine,light								
							grey,ss = lesser)								
							Box 21								
30°			8½"				fine grey ss								
						207'								(2½")38½"	
			25"				same								
			28"				bl sh to bl silty sh; coaley partings								
			10"				grey silst								
			1"				coal								
			33"				bl sh - bl silty sh - bl silst								
25°			10½"				grey silst								

60° ← curved surface = limonitic.
 (Fe oxide water seeps)
 calcite on others

DRILL CORE LOG

HOLE No. 80-2 SHEET No. 12 of 37 LOGGED BY JOHN RICKER Footage measured from Ground level
 DATE BEGUN October 14/80 CORE SIZE NO TOTAL DEPTH 711' COLLAR ELEV. Ground level = ca 2650'a.s.l.
 DATE FINISHED October 18/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 22								
			5"				grey silst								
						217'							(+3)	123"	-
			66½"				grey silst mostly								
30			2"				bl sh								
	222' 6½"	222' 10"	3½"				coal bright								
	222' 10"	222' 11½"	1½"		80-2		coaley mudstone - shale								
	222' 11½"	223' 1½"	2"	(13" +)	222' 6½"		coal bright shattered (mostly fragments & powder)								
	223' 1½"	224' 9½"	18" *	(4' 10" 3 1/4")	to 225' 3½"		missing segment (mashed up coal?) *								
	224' 9½"	225' 3½"	6"				coal, bright (blocky) (shattered)								
	225' 3½"	225' 8"	4½"				coaley mudstone								
	225' 8"	227' -	16"				grey silst								
						227'								102"	18" *
							Box 23								
	227' -	228' 2"	14"				fine grey ss	45°		2	quartz				
	228' 2"	230' 11"	33"		80-2		grey silst & dark shale bands	83°			planar, limonite film				
	230' 11"	231' 8"	9"	9"	230' 11"		dull coal with bright streaks:								
					231' 8"		silty; partly cannel - impure (possible to add 2" missing core here see p. 13)								
			5½"				silty mudstone with								
							coalified plant stems								
30			54½"				grey silst & v fine ss	70°			limonite				

DRILL CORE LOG

HOLE No. 80-2

SHEET No. 13 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE NO

TOTAL DEPTH 711'

COLLAR ELEV. _____
Ground level = ca 2650' a.s.l.

DATE FINISHED October 18/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 24								
			2"				grey silst & v fine ss (cont.)								
						237'			75°		limonite			118"	2"
30°			106"				same; a few coaley partings								
							Box 25								
			15"				same (min ^{or} ss)				sheared top 1"				
						247'						(+1")	121"	-	
			95½"				same (min ^{or} ss)								
							coaley streaks parallel to bedding planes irregular in places dark silst mainly								
							Box 26								
30°			26½"				same (coaley debris in 1st 2", top) increasing fine grey silst & v fine ss								
						257'						(+2)"	122"	-	

DRILL CORE LOG

HOLE No. 80-2

SHEET No. 14 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE NO

TOTAL DEPTH 711'

COLLAR ELEV. _____
Ground level = ca 2650' a.s..

DATE FINISHED October 18/80

COLLAR BEARING _____

CONTRACTOR COATES

Ground level = ca 2650' a.s.l.

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 26 (cont.)								
			49½"				grey silst, shaley silst								
			36"				fine grey ss (10")								
							Box 27								
			22"				shaley - silty - mudstone								
							plant debris								
20*			11"				fine grey ss								
						267'								118½"	1½"
			24"				fine grey ss (cont) & siltsst		75°						
			3"				grey sh								
			2"				coaley mudstone								
			1½"				med ss (doesn't seem to fit here)	*							
			3"				coaley mudstone								
			43½"				fine grey silst								
							Box 29								
			37½"				grey shale, silty shale & minor								
							fine grey siltstone (coalified								
							stems in bedding plane, minor)								
						277'		*	(coal missing					114½"	5½"
									possible up to 5½)						

DRILL CORE LOG

HOLE No. 80-2

SHEET No. 15 of 37

LOGGED BY _____ JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE NO

TOTAL DEPTH 711'

COLLAR ELEV. _____
Ground level = ca 2650' a.s.l.

DATE FINISHED October 18/80

COLLAR BEARING

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-2

SHEET No. 16 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE NO

TOTAL DEPTH 711'

COLLAR ELEV. _____
Ground level = ca 2650' a.s.l.

DATE FINISHED October 18/80

COLLAR BEARING

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

HOLE No. 80-2

HOLE No. 80-2

SHEET No. 17 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE _____ NO _____

TOTAL DEPTH 711'

COLLAR ELEV. _____
Ground level = ca 2650' a.s.l.

DATE FINISHED October 18/80

COLLAR BEARING:

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

HOLE No. 80-2

HOLE No. 80-2

SHEET No. 18 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE NO

TOTAL DEPTH 711'

COLLAR ELEV. _____
Ground level = ca 2650' a.s.l.

DATE FINISHED October 18/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 35 (cont.)								
			21½"				same shaley grey silst								
							and bl silty sh								
							Box 36								
			28½"				bl silty sh								
32°			72½"				fine grey sandstone								
							vuggy fracture with qtz and calcite x/s (box 37 too)	→	35°						
							2nd fracture direction (box 37 too)	→	55-60°	1-2/m	with lim/calcite				
						356'							+2½"	122½"	—
			12"				fine ss grey (slightly calcareous)								
							Box 37								
			109½"				same ss								
							two fracture sets - (see Box 36)								
							: shattered, core								
							Box 38								
			1"				same ss								
						366'							+2½"	122½"	—

DRILL CORE LOG

HOLE No. 80-2

SHEET No. 19 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE NO

TOTAL DEPTH 711'

COLLAR ELEV. _____
Ground level = ca 2650' a.s.

DATE FINISHED October 18/80

COLLAR BEARING

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-2 SHEET No. 20 of 37 LOGGED BY JOHN RICKER Footage measured from Ground level
 DATE BEGUN October 14/80 CORE SIZE NO TOTAL DEPTH 711' COLLAR ELEV. Ground level = ca 2650'a.s..
 DATE FINISHED October 18/80 COLLAR BEARING Vertical CONTRACTOR COATES
 DATE SAMPLED HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 40 (cont.)								
						307'								119"	1"
			25"				med ss								
			49"				bl brown, coaley-carbonaceous, shaley mudstone (less carb debris towards base)								
							Box 41								
			22"				same								
	395'	396'1"	13"	—	80-2 395' 1/4" 396'1"		coal (bright) (sooty) (pure) (upper contact seems ok) shattered lower contact not there.								
	396'1"	397' —	(11) *				(probable missing interval) *								
						397'								109"	11" *
	397' —	401' 1/2"	48 1/2"				mudstone-shaley mudstone								
27°	401' 1/2"	402' 9 1/2"	21"	—	80-2 401' 1/4" to 402' 9 1/2"		cannel coal & mudstone with bright layers of thin coal (up to 3" apprx. total) laminations & mudstone light weight conchoidal fracture								
			5 1/2"				grey silst								
			1"				grey - brown mudstone								

DRILL CORE LOG

HOLE No. 80-2 SHEET No. 21 of 37 LOGGED BY JOHN RICKER Footage measured from Ground level

DATE BEGUN October 14/80 CORE SIZE NO TOTAL DEPTH 711' COLLAR ELEV. Ground level = ca 2650'a.s.l.

DATE FINISHED October 18/80 COLLAR BEARING Vertical CONTRACTOR COATES

DATE SAMPLED HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 42								
			6 "				grey brown mudstone								
			1 "				coal								
			3 "				coaley mudstone								
			39 1/2 "				shaley mudstone, silty mudstone								
						407'	surplus = shattered rks → (+5 1/2 ") 125 1/2 "								
			3 "				same								
			3 1/2 "				laminae; calcite bands alternate with coal for 1" underlain by coaley mudstone 2 1/2 "								
			13 1/2 "				silty shaley mudstone grading to dark silst								
25°			18 1/2 "				light silst (fractured)								
			5 "				brecciated light silst fragments in shaley matrix (intraformational)								
			22 "				light grey silst (even upper contact)								
									85°		limonite/calcite				
									30°		curved - torsion?				
							Box 43								
			34 1/2 "				same & grading to dark shaley silst in bottom 1'								

DRILL CORE LOG

HOLE No. 80-2

SHEET No. 22 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE NO

TOTAL DEPTH 711'

COLLAR ELEV. _____
Ground level = ca 2650' a.s.l.

DATE FINISHED October 18/80

COLLAR BEARING:

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

HOLE No. 80-2

SHEET No. 23 of 37

Footage measured
from Ground level

CORE SIZE NO

COLLAR ELEV. _____
Ground level = ca 2650' a.s.l.

COLLAR BEARING _____

CONTRACTOR COATES

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. <u>80-2</u>	SHEET No. <u>24 of 37</u>	LOGGED BY <u>JOHN RICKER</u>	Footage measured from Ground level
DATE BEGUN <u>October 14/80</u>	CORE SIZE <u>NO</u>	TOTAL DEPTH <u>711'</u>	COLLAR ELEV. <u> </u>
DATE FINISHED <u>October 18/80</u>	COLLAR BEARING <u> </u>	CONTRACTOR <u>COATES</u>	Ground level = ca 2650'a.s.l.
DATE SAMPLED <u> </u>	HOLE ANGLE <u>Vertical</u>	MAP No. <u>Peace River Canyon South</u>	

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE					RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.
							Box 46(cont.)							
			14½"				grey shaley silst							
			46 "				grey silst							
						447'							71½"	½"
			37 "				grey silst grading to fine ss and then alternating bands							
							Box 47							
			19½"				same; increasing shale							
			24 "				bl shale, coaley partings							
	453'4½"	454'9"	16½"		{ 86-2 453'4½" to 454'9"		coaley mudstone & coal							
	454'9"	455'8"	11 "				coaley sandstone (med)							
	455'8"	457' -	16 "				ss, med, grey							
						457'							(+3½")	23½"
			17½"				same							
			8½"				shaley mudstone							
							Box 48							
			30 "				same							

DRILL CORE LOG

HOLE No. 80-2

SHEET No. 25 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE NO

TOTAL DEPTH 711'

COLLAR ELEV. Ground level = ca 2650'a.s.l.

DATE FINISHED October 18/80

COLLAR BEARING Vertical

CONTRACTOR COATES

DATE SAMPLED

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 48(cont.)								
			16"				grey silst,shaley								
			5"				coaley sh calcite & on								
							cracks								
							sub parallel to bedding								
26			41"				silty sh/mudst								
							into silst								
						467'								118"	2"
			23"				mostly grey silst								
							Box 49								
			18"				same								
			50"				bl shale (plant debris);								
							minor dark silst								
			28"				grey silst								
						477'								119"	1"
			14 1/2"				same								
							Box 50								
			10"				same								
30			97"				pale grey fine ss								
							(current bedding, tops up)								

fracture
60° dip opposite bedding

DRILL CORE LOG

HOLE No. 80-2 SHEET No. 26 of 37 LOGGED BY JOHN RICKER Footage measured from Ground level

DATE BEGUN October 14/80 CORE SIZE NO TOTAL DEPTH 711' COLLAR ELEV. Ground level = ca 2650' a.s.l.

DATE FINISHED October 18/80 COLLAR BEARING Vertical CONTRACTOR COATES

DATE SAMPLED Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Fract.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 50 (cont.)								
						487'								(+13) 121 1/2"	—
			4 1/2"				same								
							Box 51								
25°			114 1/2"				same								
							- cavities with quartz xls.								
							- silicified irregular fractures								
							Box 52								
						497'								119"	1"
			48"				medium ss								
							and fine ss (coaley laminating in								
							one 3" sector)								
						501'								48"	0
			4"				med ss								
			60"				mudstone - argillite grading to								
							grey siltstones								
							Box 53								
			13"				grey silst								
						507'							(+5) 77"	—	
							grey silst mainly								
			101 1/2"				(shales to 9")								

DRILL CORE LOG

HOLE No. 80-2

SHEET No. 27 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE NO

TOTAL DEPTH 711'

COLLAR ELEV. _____

DATE FINISHED October 18/80

COLLAR BEARING

CONTRACTOR COATES

Ground level = ca 2650' a.s.l.

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. <u>80-2</u>	SHEET No. <u>28 of 37</u>	LOGGED BY <u>JOHN RICKER</u>	Footage measured from Ground level
DATE BEGUN <u>October 14/80</u>	CORE SIZE <u>NO</u>	TOTAL DEPTH <u>711'</u>	COLLAR ELEV. <u> </u>
DATE FINISHED <u>October 18/80</u>	COLLAR BEARING <u> </u>	CONTRACTOR <u>COATES</u>	Ground level = ca 2650'a.s.l.
DATE SAMPLED <u> </u>	HOLE ANGLE <u>Vertical</u>	MAP No. <u>Peace River Canyon</u>	South <u> </u>

[illegible]

DRILL CORE LOG

HOLE No. 80-2 SHEET No. 29 of 37 LOGGED BY JOHN RICKER Footage measured from Ground level
 DATE BEGUN October 14/80 CORE SIZE NO TOTAL DEPTH 711' COLLAR ELEV. Ground level = ca 2650'a.s.l.
 DATE FINISHED October 18/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 58								
13 ^o			11 1/2"				coaley sandstone with some calcite in fractures(irreg)& qtz								
						554'								86 1/2"	—
			8 1/2"				same ss;less coalified debris								
			9 1/2"				grey silst;a few shaley bands & silty shale(up to 6"); a few light grey,current bedded,bands of v fine ss;								
							1-1/4" coaley layer;								
							silty shale in last 6".								
							Box 59								
16 ^o			23 "				silty shale - coalified debris some (1/4" band of bright vitrain)								
						564'								122"	—
			13 "				shaley silst(coaley debris) & light grey silst								
			13 "				coaley shale								
			7 "				coaley mudstone								
			5 "				very coaley mudstone (1" coal ±)								
			16 "				coaley mudstone								

DRILL CORE LOG

HOLE No. 80-2 SHEET No. 30 of 37 LOGGED BY JOHN RICKER Footage measured from Ground level
 DATE BEGUN October 14/80 CORE SIZE NQ TOTAL DEPTH 711' COLLAR ELEV. Ground level = ca 2650' a.s.l.
 DATE FINISHED October 18/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 59 (cont.)								
			5"				v. coaley mudstone								
						569'								59"	1"
			5"				coaley mudstone & coal/-								
							bright slickensides)								
			2 1/2"				mudstone - shaley								
			5"				shaley silst: transition to ↓								
			17"				light grey silst.								
							Box 60								
			20"				grey silst								
20°			42"				med grey ss. -				rough near vertical				
							coaley partings with coal								
							laminae parallel to bedding								
						577'									
			42 1/2"				same								
							Box 61								
			80 1/2"				same (Leaching?)								
						587'	white salt crusts on fracture (not calcareous) →	55°	roughly opposite to dip of bedding				(43")	123"	
			9"				same (more shattered) to finer grain.								

DRILL CORE LOG

HOLE No. 80-2

SHEET No. 31 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE NO

TOTAL DEPTH 711'

COLLAR ELEV. _____
Ground level = ca 2650'a.s.

DATE FINISHED October 18/80

COLLAR BEARING: . . .

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-2

SHEET No. 32 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE NO

TOTAL DEPTH 711'

COLLAR ELEV. _____

DATE FINISHED October 18/80

COLLAR BEARING: _____

CONTRACTOR COATES

Ground level = ca 2650' a.s.l.

DATE SAMPLED _____

HOLE ANGLE _____ Vertical

MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 63								
			99"				grey silst & increasing fine ss								
						607'								119 ¹¹ / ₂	1 ¹¹ / ₂ "
			11"				ss, medium-grain								
							Box 64								
25°			95"				med grey ss (cont.)								
							coaley partings - a few (slicken-								
							sided); ^{ss} grading to coarsess in places;								
							lots of carbonaceous debris 20-8+								
							in coarse fraction + qtz + feldspar;								
							a few silst bands,								
			15"				S.S to conglomerate (subround to								
							round) fragments to 3/8" (30-40%)								
							in sandstone matrix 2 conglomerate								
							layers 4" ^{each} over 15" thickness								
							pebbles of silst								
						617'								(+1)"	121"

DRILL CORE LOG

HOLE No. 80-2

SHEET No. 33 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE _____ NO _____

TOTAL DEPTH 711'

COLLAR ELEV. _____
Ground level = ca 2650' a.s.

DATE FINISHED October 18/80

COLLAR BEARING:

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE _____ Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-2

SHEET No. 34 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE NO

TOTAL DEPTH 711'

COLLAR ELEV. Ground level = ca 2650'a.s.

DATE FINISHED October 18/80

COLLAR BEARING Vertical

CONTRACTOR COATES

DATE SAMPLED

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 68								
			26"				same to fine								
						647'								120"	0
			31½"				medium ss (massive)	*60°	1-2		(Dips opposite direction to that of bedr.)				
			56"				coarse ss uniform (massive)								
							(grains to 2mm roughly) some								
							medium grained.								
							Box 69								
			22"				coarse ss (2-6mm grains)				(qtz filling)				
							some medium bands (3")				with eroded out (labeled?) can't see in bedding plane.				
			12"				medium ss								
						657'								+1½"	12½"
			35½"				same								
			7"				pebbly ss [size to 3-5mm]								
			6"				med ss								
			2½"				pebbly ss								
			26"				med ss								

DRILL CORE LOG

HOLE No. 80-2 SHEET No. 35 of 37 LOGGED BY JOHN RICKER Footage measured from Ground level
 DATE BEGUN October 14/80 CORE SIZE NO TOTAL DEPTH 711' COLLAR ELEV. Ground level = ca 2650'a.s.
 DATE FINISHED October 18/80 COLLAR BEARING Vertical CONTRACTOR COATES MAP No. Peace River Canyon South
 DATE SAMPLED HOLE ANGLE Vertical

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 70								
17°			44½"				fine - med ss, grey, massive								
						667'						(+1½")	121½"	—	
			66½"				fine massive ss								
			1½"				chewed up silst								
							Box 71								
			55½"				med ss								
						677'						(+3")	123"	—	
15°			55½"				light grey, fine - med, ss (bedded)								
							Vugs of quartz (fine)								
							pyrite and carbonaceous partings								
							parallel to bedding, slickensides								
							in pyrite.								
							Box 72								
			9"				same								
			55½"				pebbly ss - cs ¹ (5-10mm pebbles)	ca 70°			pyrite xls in fractures & canites				
						687'								120"	0"
			5"				same								
			47"				massive, med grey ss								

DRILL CORE LOG

HOLE No. 80-2

SHEET No. 36 of 37

LOGGED BY JOHN RICKER

Footage measured
from Ground level

DATE BEGUN October 14/80

CORE SIZE NO

TOTAL DEPTH 711'

COLLAR ELEV. _____
Ground level = ca 2650' a.s.l.

DATE FINISHED October 18/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE					RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.
							Box 73							
			44 "				medium ss to pebbly							
							medium ss, & massive, grey							
15°			19 "				fine grey ss, bedded							
			10 "				fine grey ss, massive							
						697'						+5"	125"	—
			40½ "				same (very uniform - no bedding)							
							Box 74							
			15 "				same							
			36 "				pebbly ss — <i>cs</i> !							
			29½ "				fine to v. fine grey ss							
						707'						+1"	121"	—
			5½ "				same							
			2½ "				pebbly <i>cs</i> !							
			1 "				fine ss							
			7 "				pebbly <i>cs</i> !							
			6 "				fine ss							

DRILL CORE LOG

HOLE No. 80-2 SHEET No. 37 of 37 LOGGED BY JOHN RICKER Footage measured
DATE BEGUN October 14/80 CORE SIZE NO TOTAL DEPTH 711' COLLAR ELEV. from Ground level
DATE FINISHED October 18/80 COLLAR BEARING _____ CONTRACTOR COATES Ground level = ca 2650' a.s.
DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

DDH 80 - 3

DRILL CORE LOG

HOLE No. 80-3 SHEET No. 1 of 23 LOGGED BY JOHN RICKER
 DATE BEGUN October 18/80 CORE SIZE NQ TOTAL DEPTH 446' 130 m COLLAR ELEV. Ground level
 DATE FINISHED October 22/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2390' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South 728 m

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Cooling	Strike	Dip	Rec.	Lost
	0'						overburden & highly wx bedrock								
							Box 1								
							{ weathered, crumbly, shattered bedrock: silst - shale								
	22' 3 1/2"	24' —	20 1/2"												
	to **					24'									
35°	strike on surface		58 1/2"	approx.			fine grey silst, slightly calcar- eous, limonite stains throughout rk								
							at 27" deep-in from fracture.								
							and at 40° parallel to bedding (1" l. micritic layered)								
							silty shale bands to 2" rk shatt- ered in places								
						29'								58 1/2"	1 1/2"
35°			23 1/2"				same								
							with silty shale bands to 2"								
			9 1/2"	approx			silty shale (chewed up)								
							Box 2								
			19"				shale								
			41 1/2"				shaley silst								
						37'								93"	3"

350' NE of DHH - 30-3
 Outcrops * 120/45 SW
 jointing * 120/70 SW;
 Cleat: 120/NE, 030/75 SE
 Not plotted on section

* fracture calcite
 45° Dips opposite bedding (= NE)

DRILL CORE LOG

HOLE No. 80-3 SHEET No. 2 of 23 LOGGED BY JOHN RICKER
 DATE BEGUN October 18/80 CORE SIZE NQ TOTAL DEPTH 446' COLLAR ELEV. Ground level
 DATE FINISHED October 22/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2390' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 2 (cont.)								
			25 1/2 "				grey silst with shaley laminae to v fine ss								
							weathered in 2nd 1" section of								
							rubbly disintegrating				fracture calcareous				
							oxidized limonite stain								
							below 1" ± 18"-20" wx too; then fresh								
							for last 5"								
25°			22 1/2 "				fresh fine ss, grey, (current bed)								
							not calcareous		35°		calcareous fracture				
							Box 3								
			53 "				fine ss (not calcareous)								
							fracture								
			6 1/2 "				silty sh (not calcareous)								
						47'									
			50 "				silty shale								
							Box 4								
			28 1/2 "				grey sh								

calcareous

Dip →

75°

(opposite to dip of bedding)
(upper contact - probable core lost here)

calcite on fracture surface

10 1/2' 12 1/2'

DRILL CORE LOG

HOLE No. 80-3 SHEET No. 3 of 23 LOGGED BY JOHN RICKER
 DATE BEGUN October 18/80 CORE SIZE NQ TOTAL DEPTH 446' COLLAR ELEV. Ground level
 DATE FINISHED October 22/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2390' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 4								
	53'8"	56'	28"		80-3/ 53'8" / # 56'	coal	alternating dull & bright (=cleated) (upper contact ok) shattered core; crumbly in places (could be missing lower contact) add missing core 1 1/2" *					Little Mogul coal seam. (ca 32" on surface true thickness outcrop nearby)			
	56'	57'	12"	(1 1/2")			coaley shale							11 1/2"	1 1/2" *
	57'	60'1"	37"			57'	coaley shale								
	60'1"	60'4"	3"				shattered coal (contact = upper good)								
	60'4"	63'4 1/2"	36 1/2"		80-3 60'1" / 66'3 1/2"		Box 5					Mogul seam (ca 77" on surface true thickness outcrop nearby)			
	63'4 1/2"	64'3 1/2"	11"				(good lower contact) bright & dull coal (pure) (cleated)								
	64'3 1/2"	66'3 1/2"	24"				coalified mudst crumbly coal (wx 1/2" = good upper contact) with bluish copper stain on cleat. shattered probable lower contact in- tact					calcite			
				(+4")			probable core loss								
				4 1/2"			coaley shale (probable core loss)							116"	4"
						67'	probable core loss								

DRILL CORE LOG

HOLE No. 80-3

SHEET No. 4 of 23

LOGGED BY JOHN RICKER

DATE BEGUN October 18/80

CORE SIZE NQ

TOTAL DEPTH 446'

COLLAR ELEV. Ground level.

DATE FINISHED October 22/80

COLLAR BEARING _____

CONTRACTOR COATES

(ca 2390' a.s.l.)

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-3 SHEET No. 5 of 23 LOGGED BY JOHN RICKER
 DATE BEGUN October 18/80 CORE SIZE NQ TOTAL DEPTH 446' COLLAR ELEV. Ground level
 DATE FINISHED October 22/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2390' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Cooling	Strike	Dip	Rec.	Lost
							Box 8								
	89'2"	91'4"	22"				silty shale								
	91'4"	91'10"	6"				shale (crumbly)								
	91'10"	92'9½"	11½"	7 11½"	80-3 91'10"- 92'4½"		coal (almost complete) (good upper contact) (lower contact missing) (chewed up bottom 3")								
	92'9½"	93'10½"	13"				crumbly mudst (coaley)								
			31"				banded silst/shale								
			16"				silty sh								
							bl shale					(+5½")	125½"	—	
						97'									
			9½"				bl shale								
							Box 9								
30°			94½"				grey silst - v fine ss (minor) crumbly in places coaley shale	80° - fracture (possible core loss here)							
			8"												
						107'									
			12½"				grey silst & v fine ss						112"	8"	

DRILL CORE LOG

HOLE No. 80-3 SHEET No. 6 of 23 LOGGED BY JOHN RICKER
 DATE BEGUN October 18/80 CORE SIZE NQ TOTAL DEPTH 446' COLLAR ELEV. Ground level
 DATE FINISHED October 22/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2390' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 10								
			19 "				(fine ss) ^{but} mostly minor silst								
			7 "				shaley silst grading to sh								
			16 "				shattered shale								
							probably missing core								
							slightly carbonaceous								
			32 "				silty shale								
	115' 1 1/2"	115' 10"	9 1/2 "		80-3 115' 1/2"		bright & dull coal (sooty)								
					to 115' 10"		(upper contact good)								
							(lower contact probably ok)								
							(cleat)								
	115' 10"	117' 1"	14 "				coaley mudst with pyrite								
						117'								110	10
	117' 1"	118' 1"	12 "				coal (rubbly)								
					80-3		no lower contact, possibly, no upper								
					117' 1/4"		contact (shattered).								
					118' 6"										
							Box 11								
	118'	118' 6"	6 "				coal (shattered) (possibly missing lower end)								
	118' 6"	118' 11 1/2"	(+ 5 1/2")				possibly missing segment (see p. 7)								
	118' 11 1/2"	119' 1 1/2"	2 "				coaley shale								

DRILL CORE LOG

HOLE No. 80-3 SHEET No. 7 of 23 LOGGED BY JOHN RICKER
 DATE BEGUN October 18/80 CORE SIZE NQ TOTAL DEPTH 446' COLLAR ELEV. Ground level
 DATE FINISHED October 22/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2390' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 11 (cont.)								
	119' 1 1/2"	121' 1 1/2"	24"				" 2' missing core" (drillers comment) - (possibly shale & possibly coal.)								
	121' 1 1/2"	122' 7 1/2"	17 1/2"				coaley shale								
	122' 8"	123' 8"	12"				silty shale								
20°-25°	123' 8"	127' -	41"				grey silst; some shaley silst; some fine ss								
						127'								90 1/2"	29 1/2"
			31 1/2"				grey fine ss & grey silst								
							Box 12								
			27 1/2"				light grey silst mostly								
			19"				grey silty shale								
			21"				grey silst mostly								
			20"				bl grey silty sh								
						137'								119"	1"
	137'	137' 6"	6"				bl sh								
	137' 6"	137' 7"	1"				coaley sh								
	137' 7"	137' 9"	2"				bright coal (shattered-possible loss)								
	137' 9"	138' 6"	9"				cannel coal								
	138' 6"	138' 8 1/2"	2 1/2"				coaley sh								

25' 2" } 80-3
 137' 7" }
 to 139' 8 1/2"

DRILL CORE LOG

HOLE No. 80-3 SHEET No. 8 of 23 LOGGED BY JOHN RICKER
 DATE BEGUN October 18/80 CORE SIZE NQ TOTAL DEPTH 446' COLLAR ELEV. Ground level
 DATE FINISHED October 22/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2390' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 13								
	138' 8 1/2"	139' 8 1/2"	12"				shattered cannell & coaley sh							32 1/2"	3 1/2"
	139' 8 1/2"	140' -	(+3 1/2") *				missing interval *								
						140'									
			13"				coaley shale (with 1/8" vitrain bands)								
			8"				bl shaley silst								
			67"				grey silst banded (shaley partings)								
						147'								(+4) 88"	—
			7"				shaley silst, light grey								
							Box 14								
			77 1/2"				grey silst & shaley silst								
			24 1/2"				bl silty sh								
			6"				coaley sh								
						157'								115"	5"
			2"	—			coal upper contact good								
							Box 15								
			6 1/2"	—			bright dull coal								
							pyrite on surfaces								
							no lower contact (coal missing possibly)								

DRILL CORE LOG

HOLE No. 80-3 SHEET No. 10 of 23 LOGGED BY JOHN RICKER
 DATE BEGUN October 18/80 CORE SIZE NQ TOTAL DEPTH 446' COLLAR ELEV. Ground level
 DATE FINISHED October 22/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2390' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 17								
			1/2"	—			coal (continued) (shattered bright)								
							lower contact ok								
			7"				coaley silst								
							Box 18								
20°			6"				silst grey (to v fine ss minor)								
							(not calcareous)								
						187'								109'	11"
			29"				same								
			10"				shaley silst & sh								
			27"				light grey silst								
			2"	—			shattered shaley coal								
							(no upper contact)								
			6"	—			coaley shale								
			2"				coal								
			1"				coaley shale								
			3"				coaley silst & pyrite								
			15"				grey silst (to v fine ss minor)								
							Box 19								
			25 1/2"				same								
						197'								(+1 1/2") 120 1/2"	—

DRILL CORE LOG

HOLE No. 80-3 SHEET No. 11 of 23 LOGGED BY JOHN RICKER
 DATE BEGUN October 18/80 CORE SIZE NQ TOTAL DEPTH 446' COLLAR ELEV. Ground level
 DATE FINISHED October 22/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2390' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 19 (cont.)								
			62"				pale grey silst & v fine ss								
							(current bedded)								
			1/2"				mud								
			24 1/2"				shaley silst & shale bands								
							(up to 1/2")								
							Box 20								
			6"				same shattered rk								
						205'							(+1")	93"	-
			10"				shattered silst								
			1/2"				Hard coal (rounded, pebble-like)								
							dull lustre -								
			(+13 1/2")				"hole very tight lost core coal & moisture"-drillers comment								
							(stuck bit in hole & shut down)								
						207'								10 1/2"	13 1/2" *
							DRILLERS: Fished; put in cement (N/M -								
							calcareous) & rebores hole to 207'								
							begin again at 207'								
				16"											
			12"	approx			shattered hard mudst - argillite								

DRILL CORE LOG

HOLE No. 80-3

SHEET No. 12 of 23

LOGGED BY JOHN RICKER

DATE BEGUN October 18/80

CORE SIZE NO

TOTAL DEPTH 446'

COLLAR ELEV. Ground level.

DATE FINISHED October 22/80

COLLAR BEARING _____

CONTRACTOR COATES

(ca 2390' a.s.l.)

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-3 SHEET No. 13 of 23 LOGGED BY JOHN RICKER
 DATE BEGUN October 18/80 CORE SIZE NQ TOTAL DEPTH 446' COLLAR ELEV. Ground level
 DATE FINISHED October 22/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2390' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 23 (cont.)								
			41 1/2"				light grey silst (current bedded)	NOT CALCULATED							
							(-v fine ss)								
25°			44"				fine - ss - some carbonaceous part-								
							ings								
			1 1/2"				grey silst								
						243'								119 1/2"	1 1/2"
							Box 24								
			11"				silty sh								
			10"				bl sh (carbonaceous debris)								
			6"				coaley sh								
			1 1/2"	—			? coal (chewed up) no upper contact								
							lower contact ok								
			1 1/2"				coaley shale (pulverized)								
			2"				coaley shale								
			2 1/2"	—			coal (upper & lower contact)								
			28"				shale & silty sh & silst bands								
25°			41 1/2"				grey silst								

SHALES ARE SHATTERED - drilling too fast?
 65° (2 sets dipping opposite directions)

DRILL CORE LOG

HOLE No. 80-3

SHEET No. 14 of 23

LOGGED BY JOHN RICKER

DATE BEGUN October 18/80

CORE SIZE NO

TOTAL DEPTH 446'

COLLAR ELEV. Ground level
(ca 2390' a.s.l.)

DATE FINISHED October 22/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-3

SHEET No. 15 of 23

LOGGED BY JOHN RICKER

DATE BEGUN October 18/80

CORE SIZE NO

TOTAL DEPTH 446'

COLLAR ELEV. Ground level
(ca 2390' a.s.l.)

DATE FINISHED October 22/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-3

SHEET No. 16 of 23

LOGGED BY JOHN RICKER

DATE BEGUN October 18/80

CORE SIZE NO.

TOTAL DEPTH 446'

COLLAR ELEV. Ground level
(ca 2390' a.s.l.)

DATE FINISHED October 22/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-3

SHEET No. 17 of 23

LOGGED BY JOHN RICKER

DATE BEGUN October 18/80

CORE SIZE NO

TOTAL DEPTH 446'

COLLAR ELEV. Ground level
(ca 2390' a.s.l.)

DATE FINISHED October 22/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-3 SHEET No. 18 of 23 LOGGED BY JOHN RICKER
 DATE BEGUN October 18/80 CORE SIZE NQ TOTAL DEPTH 446' COLLAR ELEV. Ground level
 DATE FINISHED October 22/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2390' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 35								
			9½"				silty sh								
			15½"				shaley mudst, carbonaceous								
						347'							(+4)"	136"	—
			5"				mudstone grading to silst								
20°			84"				grey silst - current beds								
							to v. fine ss, & ve. shale								
							Box 36								
			38½"				same		65°						
						357'							(+2½)"	122½"	—
			4"	—			coal (shattered-chewed up) (no								
							contacts)								
			5"				silty sh								
			34½"				dark shaley silst (banded)								
							alternates light grey with dark,								
							mostly dark layers.								
			5½"				mudstone								
			4½"	—			coal (top & bottom contact) (excellent recovery)								
			1"				mudstone, coaley								
			17"				carbonaceous mudstone								

DRILL CORE LOG

HOLE No. 80-3

SHEET No. 19 of 23

LOGGED BY JOHN RICKER

DATE BEGUN October 18/80

CORE SIZE NO

TOTAL DEPTH 446'

COLLAR ELEV. Ground level
(ca 2390' a.s.l.)

DATE FINISHED October 22/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-3

SHEET No. 20 of 23

LOGGED BY JOHN RICKER

DATE BEGUN October 18/80

CORE SIZE NO

TOTAL DEPTH 446'

COLLAR ELEV. Ground level_____

DATE FINISHED October 22/80

COLLAR BEARING _____

CONTRACTOR COATES

(ca 2390' a.s.l.)

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-3 SHEET No. 21 of 23 LOGGED BY JOHN RICKER
 DATE BEGUN October 18/80 CORE SIZE NQ TOTAL DEPTH 446' COLLAR ELEV. Ground level
 DATE FINISHED October 22/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2390' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 42								
			27 1/2"				bl shale & silty sh								
			3"				coaley sh								
			11"				shale								
			20 1/2"				shaley silst & sh								
						415'								(+1 1/2)"	96 1/2"
			3 1/2"				silty sh								
			1 1/2"				coalified sh/mudst								
			26"				silty sh								
			1 1/2"				coalified sh								
			4"	—			coal (no contacts)								
			1 1/2"				coalified sh								
			12"				silty sh								
							Box 43								
20°			23"				grey silst								
			4"				grey shale								
			5"	—			mudst & sheared carbonaceous mudst pulverized								& coal?
			7"				carbonaceous mudst								
			2"	—			splintery bright coal								

DRILL CORE LOG

HOLE No. 80-3

SHEET No. 23 of 23

LOGGED BY JOHN RICKER

DATE BEGUN October 18/80

CORE SIZE NO.

TOTAL DEPTH 446'

COLLAR ELEV. Ground level
(ca 2390' a.s.l.)

DATE FINISHED October 22/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

DDH 80 - 4

DRILL CORE LOG

HOLE No. 80-4 SHEET No. 1 of 21 LOGGED BY JOHN RICKER
 DATE BEGUN October 22/80 CORE SIZE NQ TOTAL DEPTH 517' 158m COLLAR ELEV. Ground level
 DATE FINISHED October 25/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2300' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South 701m

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Cooling	Strike	Dip	Rec.	Lost
	0'	151'3½"	overburden												
			11" approx.				Box 1 pebbly silty material (outwash)								
						117'	assorted pebbles (some cored stones) (outwash)								
			6½"			127'	assorted pebbles (some cored stones)								
			outwash deposit												
	151'3½"	154'9½"	42"				calcareous bl shale mostly, some								
							calcareous debris, some fine grey								
							silst (calcareous).								
	154'9½"	156'—	14½"		80-4 154'9½" 156'—	156'	coal (upper contact good) (lower contact/shattered)								
						156'								56½"	?
			27½"				shattered shale - minor coal streaks (½")								
							papery - parts readily								
							(non-calcareous)								
			39"				Box 2 same - minor silst, coal streaks occasional								

DRILL CORE LOG

MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE					RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.
							Box 2(cont.)							
							lower contact - trace coal on it							
						163'							66½"	17½"
	163' -	163'½"	½"	—			coal grains							
	163'½"	163'3"	2½"	—			bright coal							
	163'3"	163'6"	3"				silty shale dark (calcareous)							
	163'6"	163'9"	3"				shattered shale							
	163'9"	165'6"	21"				hard grey silst with :							
							calcite veinlets ; calcareous ; trace pyrite							
	165'6"		2"	15"	80-4		coaley silty cannel							
			3½"		165'6"		coal (shattered)							
			1"		to		cannel-coaley shale							
			3"		166'4"		crushed coal							
	166'4"		1½"				shaley silst (minor coal traces)							
			(5") 1"				← Coal missing probably *							
			3½"				same							
						167'							43½"	5½"
5°			26"				shaley silst							

DRILL CORE LOG

HOLE No. 80-4

SHEET No. 3 of 21

LOGGED BY JOHN RICKER

DATE BEGUN October 22/80

CORE SIZE NQ

TOTAL DEPTH 517'

COLLAR ELEV. Ground level
(ca 2300' a.s.l.)

DATE FINISHED October 25/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE					RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Cooling	Strike	Dip	Rec.
							Box 3							
5°			95½"				grey silst (some v fine ss) not calcareous	650	2					
						177'								
			15"				same							
							Box 4							
			66½"				same							
5°			14½"				shaley silst (shale bands to ½")							
			26½"				silty shale banded							
						107'							121½"	
	187'-	187'4"	4"				same							
							Box 5							
	187'4"	193'1"	69"				shale mostly							
							(coaley partings in lower 13")							
	193'1"		3½"				core 3½" whole (upper contact ok)							
			½"				shale (coaley)							
			2"			80-4 193'1"	coal shattered (loss coal possible)							
			1"			194'6"	shale (coaley)							

DRILL CORE LOG

HOLE No. 80-4

SHEET No. 4 of 21

LOGGED BY JOHN RICKER

DATE BEGUN October 22/80

CORE SIZE NQ

TOTAL DEPTH 517'

COLLAR ELEV. Ground level :
(ca 2300' a.s.l.)

DATE FINISHED October 25/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE					RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.
							Box 5 (cont.)							
			5"				coal shattered (coal loss poss. 4/5)							
			3 1/2"				coaley shale							
		194' 6"	2"				coal (coal loss poss. 4/5)							
			6 1/2'				coaley/mudstone trace dissem. py.							
			2"				shale							
20			13 1/2"				shaley silst; dark, calcareous.							
						197'							11 1/2"	8"
							Box 6							
			41"				same grey silst.							
							shaley, calcareous,							
			41"				shale & silty shale							
			30"				grey silstone again (calcareous)							
							Box 7							
			10 1/2"				grey shaley silst grading to bl.							
							shale							
						207'							(+2 1/2")	±22 1/2"
	207'	207' 10"	10"				same bl shale (slightly endurated in							
							bottom 3")							
	207' 10"	212' 10 1/2"	60 1/2"				coal: 12" shattered							
							(clean looking) 7 1/2" whole							

DRILL CORE LOG

HOLE No. 80-4 SHEET No. 5 of 21 LOGGED BY JOHN RICKER
 DATE BEGUN October 22/80 CORE SIZE NQ TOTAL DEPTH 517' COLLAR ELEV. Ground level
 DATE FINISHED October 25/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2300' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Cooling	Strike	Dip	Rec.	Lost
							Box 7 (cont.)								
							3" shattered								
							↓ 32½" in 6 pieces								
							↓ 5½" shattered								
							4" mashed up with shaley bits - a								
							pulverized melange, at 55"-59" mark (lower contact out)								
			3½"				coaley mudstone								
5°			26½"				grey silst banded shaley, calcareous								
							Box 8								
			10½"				grey silst								
						217'								111"	9"
	217'	217½"	½"				shale ½"								
	217½'		17½"				coal clean								
			1"				silty coal								
			5½"				calcareous carbonaceous silst								
			½"				coal								
			½"				carbonaceous shale (fossil wood)								
			2"				coal (slightly silty)								
			39½"				coal clean								

DRILL CORE LOG

HOLE No. 80-4

SHEET No. 6 of 21

LOGGED BY JOHN RICKER

DATE BEGUN October 22/80

CORE SIZE NQ

TOTAL DEPTH 517'

COLLAR ELEV. Ground level
(ca 2300'a.s.l.)

DATE FINISHED October 25/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 8 (cont.)								
			4"				endurated bl shale/cannel almost								
			7"				clean coal								
			9"				shattered clean coal (possible coal loss here)								
			9½"				coal		85		irregular coal. also well-developed cleat				
		255'5"	4½"				rich coaley silst								
							Box 9								
			14"				grey silst - shaley								
						227'								115"	5"
			35½"				grey shaley silst; banded								
						230'								35½"	1½"
6°			38"				same								
						233'								(+2)	38"
			24"				two feet lost coal" (driller's current)								
			20½"				bl silty shale								
							Box 10								
			73"				same								
						243'								93½"	26½"
5°			39½"				same								
							silty sh								

DRILL CORE LOG

HOLE No. <u>80-4</u>	SHEET No. <u>7</u> of <u>21</u>	LOGGED BY <u>JOHN RICKER</u>
DATE BEGUN <u>October 22/80</u>	CORE SIZE <u>NQ</u>	TOTAL DEPTH <u>517'</u>
DATE FINISHED <u>October 25/80</u>	COLLAR BEARING _____	COLLAR ELEV. <u>Ground level</u> (ca 2300' a.s.l.)
DATE SAMPLED _____	HOLE ANGLE <u>Vertical</u>	CONTRACTOR <u>COATES</u>
		MAP No. <u>Peace River Canyon</u> South

[illegible]

HOLE No. 80-4 SHEET No. 8 of 21 LOGGED BY JOHN RICKER
DATE BEGUN October 22/80 CORE SIZE NQ TOTAL DEPTH 517' COLLAR ELEV. Ground level
DATE FINISHED October 25/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2300'a.s.l.)
DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-4 SHEET No. 9 of 21 LOGGED BY JOHN RICKER
 DATE BEGUN October 22/80 CORE SIZE NQ TOTAL DEPTH 517' COLLAR ELEV. Ground level
 DATE FINISHED October 25/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2300' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 15 (cont.)								
	284'	288'5"	53"				dark black shaley silst (shattered at basal 5")								
	288'5"	289'1"	9"	9"	288'5"	289'1"	shattered coal (& cannel 1 1/4" at top of coal seam)				coal missing possibly.				
			33 1/2"				grey silst banded & shaley (coaley shale with pyrite in 1st 2" next to contact with coal)								
							Box 16								
			15 1/2"				same								
						294'									
			27"				same							111"	9"
			13"				dark, shaley, silst								
90°			30"				dark shale & shaley silst								
			28 1/2"				light grey silst & v fine ss								
							Box 17								
			29"				same								
						305'								129 1/2"	2 1/2"
80°			31"				light grey silst & v fine ss								
			4"				shale (mashed)								
			51"				light grey silst & v fine ss								

DRILL CORE LOG

HOLE No. 80-4 SHEET No. 10 of 21 LOGGED BY JOHN RICKER
 DATE BEGUN October 22/80 CORE SIZE NQ TOTAL DEPTH 517' COLLAR ELEV. Ground level
 DATE FINISHED October 25/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2300' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 18								
			37½"				(shale bands up to 6") shaley silst, grey (uniform).								
						315							(+3½")	123½"	
0020			41"				same								
			1½"				grey shale								
			3½"				coaley mudstone								
			11"				carbonaceous shaley mudstone								
			19"				grey silst shaley & minor shale								
							Box 19								
			47½"				same, (shaley partings)								
							a/s o coaley partings to ¼"								
			3½"				light grey silst (current bedded) and fine ss								
5 ⁰ 10 ⁰			32"			326'	same, alternating with grey shaley silst							127"	5"
			32½"				light grey silst (- current bedded) & v. fine ss								

DRILL CORE LOG

HOLE No. 80-4 SHEET No. 11 of 21 LOGGED BY JOHN RICKER
 DATE BEGUN October 22/80 CORE SIZE NQ TOTAL DEPTH 517' COLLAR ELEV. Ground level
 DATE FINISHED October 25/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2300' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 20								
5°			5½"				fine grey silst. fossil fern(?) leaf - carbonaceous partings								
							not calcareous (hard)								
			10½"				bl shale carbonaceous								
			14"				grey silst, ^{minor} min. f. ss, ^{minor} min. shale								
			6"				shale								
			18"				fine grey silst (hard)		850	1		pyrite ½	white salts.		
			2½"				shale dark								
						336'								(+1) 121"	—
			11"				same changing to silty sh								
			44½"				shaley silst ^{to} fine grey silst								
							(more shaley silst)								
							Box 21								
			21"				carbonaceous, coaley, silty & shale								
							mudstone								
			6½"				grey silst, v fine ss with coaley								
							partings								
			34½"				fine ss								
						346'								117½"	2½"
	346' -	346' 4½"	4 1/2"				same								
	346' 4½"		4 1/2"				bright coal (2 cleat faces at 90°)								

DRILL CORE LOG

HOLE No. 80-4 SHEET No. 12 of 21 LOGGED BY JOHN RICKER
DATE BEGUN October 22/80 CORE SIZE NQ TOTAL DEPTH 517' COLLAR ELEV. Ground level
DATE FINISHED October 25/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2300' a.s.l.)
DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS	SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE					RECOVERY	
	From	To	Apparent				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.
						Box 21 (cont.)							
			1 1/2 "	80-4		coaley shale							
		347' 4 1/2 "	6 "	346' 4 1/2 "	347' 4 1/2 "	coal shattered (possibly missing coal here)							
			13 1/2 "			bl shale							
						partly carbonaceous (shattered) to							
						silty sh at basal 1"							
P			22 "			grey silst & fine ss grey							
						Box 22							
80			28 "			same							
					353'							80"	4"
			8 "			same							
			40 "			shaley silst banded							
			14 "			silty shale							
			2 1/2 "			shattered shale & coal (missing coal probably)							
			21 "			(silty bl shale) shaley silst							

DRILL CORE LOG

HOLE No. 80-4 SHEET No. 13 of 21 LOGGED BY JOHN RICKER
 DATE BEGUN October 22/80 CORE SIZE NQ TOTAL DEPTH 517' COLLAR ELEV. Ground level
 DATE FINISHED October 25/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2300' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
			81"				Box 23 shaley silst (continued) banded. some endurated shale								
						367'								166 1/2"	1 1/2"
60°			31"				grey silstone - shaley								
10°			81"				Box 24 grey silst - shaley (up to 3" separated by shale; light grey sections) <i>Sandy</i>								
			2"				coal (bright & dull)								
			1"				coaley mudst								
			3"				silty shale								
						377'								118"	2"
			27 1/2"				grey shaley silst								
			7"				Box 25 light grey silst								
			2 1/2"				coal (dull)								
			10 1/2"				endurated shale carbonaceous				calcite veinlets pyrite				

DRILL CORE LOG

MOLE No. 80-4

SHEET No. 15 of 21

LOGGED BY JOHN RICKER

DATE BEGUN October 22/80

CORE SIZE NQ

TOTAL DEPTH 517'

COLLAR ELEV. Ground level :
(ca 2300' a.s.l.)

DATE FINISHED October 25/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE _____ Vertical

MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Cooling	Strike	Dip	Rec.	Lost
							Box 27								
			78 1/2"				grey v fine ss & silst; shaley								
							partings; current bedding.								
6°			33 1/2"				grey fine ss; current bedding.								
						407'							(+3 1/2")	123 1/2"	—
							Box 28								
			115'				same								
							Box 29								
			6 1/2"				grey fine ss to silst (shaley								
							partings)						(.1 1/2")	121 1/2"	—
						417'									
	417'	417' 11"	11"				banded grey shaley silst								
	417' 11"	418' 6"	7"				endurated bl shale-coaley (up to 1/4								
							coal) pyrite in basal 1/2"								
	418' 6"	419' 11"	17"	17"	80-4		coal (partly shattered) (bottom 6" seem silty)								
			(+4 1/2") *		418' 6" to 419' 11"		(missing segment +4 1/2" *)								
			8 1/2"				endurated bl shale (carbonaceous)								
						421'									
4°	421'	424' 1 1/2"	18 1/2"				shaley silst (grey)						43 1/2"	4 1/2"	*

DRILL CORE LOG

HOLE No. <u>80-4</u>	SHEET No. <u>16 of 21</u>	LOGGED BY <u>JOHN RICKER</u>	
DATE BEGUN <u>October 22/80</u>	CORE SIZE <u>NQ</u>	TOTAL DEPTH <u>517'</u>	COLLAR ELEV. <u>Ground level</u>
DATE FINISHED <u>October 25/80</u>	COLLAR BEARING _____	CONTRACTOR <u>COATES</u>	<u>(ca 2300' a.s.l.)</u>
DATE SAMPLED _____	HOLE ANGLE <u>Vertical</u>	MAP No. <u>Peace River Canyon South</u>	

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE					RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.
							Box 29.(cont.)							
			18"				grey silty shale to dark carbonaceous shale at base							
	424' 1/2"	424' 11 1/2"	11"	11"	80-4 424' 1/2" to 424' 11 1/2"		coal (upper contact good) Sample includes a fracture of shale contact.							
			11 1/2"				shale							
			5 1/2"				grey shaley silst							
							Box 30							
			14"				grey silst							
						427'							68 1/2"	3 1/2"
	427'	428' 2"	14"				same							
			19"				silty sh							
	428' 2"		35 1/2"		80-4 428' 2" to 432' 4"		bl coal (upper contact ok)							
							clean, firm							
							cleat	90°						
							(some shale fragments up to 1":)							
							clean seems fairly complete							
							top contact ok; bottom of section							
							shattered.							
			5 1/2"				coaley - carbonaceous mudstone							
			(-2")*				too much coal probably*							
						433'							* 11" (+2)	74" -

DRILL CORE LOG

HOLE No. 80-4

SHEET No. 17 of 21

LOGGED BY JOHN RICKER

DATE BEGUN October 22/80

CORE SIZE NQ

TOTAL DEPTH 517'

COLLAR ELEV. Ground level
(ca 2300' a.s.l.)

DATE FINISHED October 25/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-4 SHEET No. 19 of 21 LOGGED BY JOHN RICKER
DATE BEGUN October 22/80 CORE SIZE NQ TOTAL DEPTH 517' COLLAR ELEV. Ground level
DATE FINISHED October 25/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2300' a.s.l.)
DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-4 SHEET No. 20 of 21 LOGGED BY JOHN RICKER
 DATE BEGUN October 22/80 CORE SIZE NQ TOTAL DEPTH 517' COLLAR ELEV. Ground level
 DATE FINISHED October 25/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2300' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 37 (cont.)								
5°			11"				coaley shale								
						495'								11"	1"
	495'	497' 2 1/2"	26 1/2"				bl shale (basal 2 1/4' endurated carbonaceous shale)								
	497' 2 1/2"		34 1/2"		80-4		coal (shattered)								
					497' 2 1/2"		dull (& bright) cleated								
					500' 3"		Box 38								
						500'								(+1) 61	—
		500' 3"	2"				coal								
			(4 1/2")			502'	lost 22" of coal							2"	(22")
			3"				endurated chert, silst, fragments of rk								
			4"				endurated sh (chert) with carbonaceous debris								
			1"				coal loose (Post core here)								
			1"				endurated sh loose (Post core here)								
			42 1/2"				grey silst - shaley								
						507'								51 1/2"	8 1/2"
			29 1/2"				grey silst - shaley								
			26"				banded grey silst with current bedding								

HOLE No. 80-4 SHEET No. 21 of 21 LOGGED BY JOHN RICKER
 DATE BEGUN October 22/80 CORE SIZE NQ TOTAL DEPTH 517' COLLAR ELEV. Ground level
 DATE FINISHED October 25/80 COLLAR BEARING _____ CONTRACTOR COATES (ca 2300' a.s.l.)
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

DDH 80 - 5

DRILL CORE LOG

HOLE No. 80-5 SHEET No. 1 of 27 LOGGED BY JOHN RICKER
 DATE BEGUN October 25/80 CORE SIZE NQ TOTAL DEPTH 513 ft. 156 m COLLAR ELEV. ca 2300' 701 m
 DATE FINISHED October 27/80 COLLAR BEARING - CONTRACTOR COATES Ground level
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
	0	46 feet		46 feet			overburden								
							Box 1								
			8 1/2 "				alluvium from Mt. Johnson								
60			29 1/2 "				silst & fine ss (calcareous)								
50	54' 10 1/2 "	55' 1 "	2 1/2 "	13 1/2 "	80-5/ 54' 10 1/2 "		fireclay? & coal dust								
	55' 1 "	56' -	11 "		to 56'		coal (loose bits = 1" each, rounded like pebbles)				(coal missing probably)				
						56'								43 "	0 "
		40 1/2 "					weathered silst - crumbly								
		23 "					fine ss; shaley partings								
							Box 2								
		59 "					fine ss-current bedded mostly =calcareous								
						66'								(+2 1/2 ")	122 1/2 "
80		56 1/2 "					same								
							Box 3								
		60 1/2 "					shale, silst & v. fine ss- calcareous								
						76'								117 "	3 "
60		53 "					same								

DRILL CORE LOG

HOLE No. 80-5 SHEET No. 2 of 27 LOGGED BY JOHN RICKER
 DATE BEGUN October 25/80 CORE SIZE NQ TOTAL DEPTH _____ COLLAR ELEV. ca 2300'
 DATE FINISHED October 27/80 COLLAR BEARING - CONTRACTOR COATES Ground level
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 4								
	76'	76'11 1/2"	11 1/2"				Carbonaceous silty shale								
	76'11 1/2"	77'11 1/2"	12"		80-5/ 76'11 1/2"	78'4 1/2"	papery shale & coal mix (mashed up)								
							petroliferous odour								
	77'11 1/2"	78'9 1/2"	10"				"missing"-drillers comment								
			3 1/2"				papery coalified shale								
90°			17"				grey silst, calcareous								
						85'								97"	11"
			21"				silty shale, (not calcareous)								
70°			15"				light grey silst - v. fine ss								
							(calcareous)								
			29 1/2"				silty shale (not calcareous)								
							Box 5								
60°			18"				bl shale/mudstone								
	92'4"	93'-	8"		80-5/ 92'4"	93'3 1/2"	silty coal (shattered)-good								
							cleat /clean								
	93'-	93'3 1/2"	3 1/2"			93'	(shattered) coal							91 1/2"	4 1/2"
			14"				bl shale								
			2 1/2"				coaley shale								
			7 1/2"				coal with 2" of shale fragments								

DRILL CORE LOG

HOLE No. 80-5 SHEET No. 3 of 27 LOGGED BY JOHN RICKER
 DATE BEGUN October 25/80 CORE SIZE NQ TOTAL DEPTH _____ COLLAR ELEV. ca 2300'
 DATE FINISHED October 27/80 COLLAR BEARING - CONTRACTOR COATES Ground level
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Cooling	Strike	Dip	Rec.	Lost
							Box 5 (cont.)								
			11"				papery shale & coaley shale							38½"	11½"
						97'									
			6"				bl shale-carbonaceous <i>mineral streaks</i>								
50°			25½"				silty shale grading to shaley								
			13"				silst & minor grey silst to								
							v fine ss								
							Box 6								
			4½"				grey shaley silst								
			½"				bl sh, carbonaceous								
	103'4"	104'2"	10"	10"	80-5/1034" to 104'2"		coal (dirty) silty (?)								
	104'2"	104'8"	6"				carbonaceous mudstone (brownish)								
	104'8"	107'	28"				shaley silst							103½"	4½"
60°			54½"			107'	fine grey silst & fine ss								
							(current beds)								
							Box 7								
60°			64½"				same								
			1"				shaley silst, bl								
						117'								120"	0
			46½"				same								

DRILL CORE LOG

HOLE No. 80-5

SHEET No. 4 of 27

LOGGED BY JOHN RICKER

DATE BEGUN October 25/80

CORE SIZE NQ

TOTAL DEPTH _____

COLLAR ELEV. ca 2300'

DATE FINISHED October 27/80

COLLAR BEARING _____

CONTRACTOR COATES

Ground level

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-5

SHEET No. 5 of 27

LOGGED BY JOHN RICKER

DATE BEGUN October 25/80

CORE SIZE NQ

TOTAL DEPTH _____

COLLAR ELEV. ca 2300'

DATE FINISHED October 27/80

COLLAR BEARING _____

CONTRACTOR COATES

Ground level ..

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-5

SHEET No. 6 of 27

LOGGED BY JOHN RICKER

DATE BEGUN October 25/80

CORE SIZE NQ

TOTAL DEPTH _____

COLLAR ELEV ca 2300'

DATE FINISHED October 27/80

COLLAR BEARING _____

CONTRACTOR COATES

Ground level ..

DATE SAMPLED _____

HOLE ANGLE _____ Vertical

MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE					RECOVERY	
	From	To	Apparent					Joint	Fract.	Freq./m	Coating	Strike	Dip	Rec.
							Box (cont.) #10							
			2½"				bl shale (slightly calcareous)							
						147'							119½"	1½"
5°	147'	148' 8½"	20½"				same							
	148' 8½"	148' 11½"	3"				cannel							
	148' 11½"	149' 2"	2½"				coal	(shattered)	(missing coal)					
	149' 2"	149' 7"	5"				coal							
	149' 7"	151' 2½"	(19½")				missing interval							
10°	151' 2½"	153'	21½"	56½"	80-5'		Box 11							
					148' 11½"		coal (clean)	(some shattered)						
					to 153' 2"		4")							
							2½")	continuous pieces of						
							5")	coal	(with slurry of drilling mud)					
							5")							
							cleat; well-developed							
						153'							52½"	19½"
	153'	153' 2"	2"				coal (loose block)							
			(9")				missing interval							
			2"				coaley shale	(shattered)	possible loss					
			4"				coaley shale	90°	irregular fracture					

DRILL CORE LOG

HOLE No. 80-5

SHEET No. 8 of 27

LOGGED BY JOHN RICKER

DATE BEGUN October 25/80

CORE SIZE NO

TOTAL DEPTH _____

COLLAR ELEV. ca 2300'

DATE FINISHED October 27/80

COLLAR BEARING _____

CONTRACTOR COATES

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 12 (cont.)								
	163'9½"	164'	(2½")				(coal loss)							9½"	2½"
						164'									
	164'	164'3"	3"				coal (mashed)								
	164'3"	164'5"	2"	19"	80-5/ 165' 4" to 165' ½"		shale (mashed)								
	164'5"	165'1½"	8½"				coal (fairly complete (no lower contact))								
			4"				shaley silst								
			21½"				silst & v fine ss massive (not calcareous)								
							shaley toward base								
5°			51½"				shaley silst								
							Box 13								
8°			9½"				shaley silst								
			16"				bl shale							116"	16"
						175'									
2°			88"				bl shale & bl silty shale								

HOLE No. <u>80-5</u>	SHEET No. <u>9 of 27</u>	LOGGED BY <u>JOHN RICKER</u>	
DATE BEGUN <u>October 25/80</u>	CORE SIZE <u>NQ</u>	TOTAL DEPTH _____	COLLAR ELEV. <u>ca 2300'</u>
DATE FINISHED <u>October 27/80</u>	COLLAR BEARING <u>-</u>	CONTRACTOR <u>COATES</u>	<u>Ground level</u>
DATE SAMPLED _____	HOLE ANGLE <u>Vertical</u>	MAP No. <u>Peace River Canyon South</u>	

[illegible]

DRILL CORE LOG

HOLE No. 80-5

SHEET No. 10 of 27

LOGGED BY JOHN RICKER

DATE BEGUN October 25/80

CORE SIZE NQ

TOTAL DEPTH _____

COLLAR ELEV ca 2300'

DATE FINISHED October 27/80

COLLAR BEARING -

CONTRACTOR COATES

Ground level

DATE SAMPLED _____

HOLE ANGLE _____ Vertical

MAP No. Peace River Canyon South

[illegible]

HOLE No. <u>80-5</u>	SHEET No. <u>11 of 27</u>	LOGGED BY <u>JOHN RICKER</u>
DATE BEGUN <u>October 25/80</u>	CORE SIZE <u>NQ</u>	TOTAL DEPTH _____ COLLAR ELEV. <u>ca 2300'</u>
DATE FINISHED <u>October 27/80</u>	COLLAR BEARING <u>-</u>	CONTRACTOR <u>COATES</u> <u>Ground level</u>
DATE SAMPLED _____	HOLE ANGLE <u>Vertical</u>	MAP No. <u>Peace River Canyon South</u>

[illegible]

DRILL CORE LOG

HOLE No. 80-5

DATE BEGUN October 25/80

DATE FINISHED October 27/80

DATE SAMPLED _____

SHEET No. 12 of 27

CORE SIZE _____ NQ

COLLAR BEARING _____

HOLE ANGLE Vertical

LOGGED BY JOHN RICKER

TOTAL DEPTH ...

CONTRACTOR **COATES**

MAP No. Peace River Canyon South

COLLAR ELEV. ca 2300'
Ground level

B.C. N.	UNIT		THICKNESS	SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent				Joint	Frac.	Freq./m	Cooling	Strike	Dip	Rec.	Lost
						Box 18 (cont.)								
	226'	226'9"	9"	80-5		coal (shattered partly) (probable loss)								
			1 1/2"	225' 11"		bl coaley sh (vitrain streaks)								
			1 1/2"	226' 9"		coaley silst " "								
			1 1/2"			coaley bl sh " "								
5°			34 1/2"			dark shaley silst & light grey silst (increasing especially toward base), banded sequence.								
						Box 19								
			51"			same (increasingly shaley silst bands at base)								
			18 1/2"			bl shale mainly								
					236'								116"	4"
			13 1/2"			fine silts to v fine ss (minor sh) current bedded								
			31"			fine ss with shaley & coaley portions								
						Box 20								
10°			78"			med ss carbonaceous partings (current bedding)								
					246'								(+2 1/2) 122 1/2"	

DRILL CORE LOG

HOLE No. 80-5

DATE BEGUN October 25/80

DATE FINISHED October 27/80

DATE SAMPLED _____

SHEET No. 13 of 27

CORE SIZE NQ

COLLAR BEARING _____

HOLE ANGLE Vertical

LOGGED BY JOHN RICKER

TOTAL DEPTH _____

CONTRACTOR COATES

MAP No. Peace River Canyon South

COLLAR ELEV. ca 2300'
Ground level

[illegible]

DRILL CORE LOG

HOLE No. 80-5 SHEET No. 14 of 27 LOGGED BY JOHN RICKER
 DATE BEGUN October 25/80 CORE SIZE NQ TOTAL DEPTH _____ COLLAR ELEV. ca 2300'
 DATE FINISHED October 27/80 COLLAR BEARING - CONTRACTOR COATES Ground level
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 23								
			2"				shale								
6°			96"				shaley silst & minor silty							116"	4"
						277'									
			19"				same but increase silstone - grey; less shaley silst								
							Box 24								
5°			93½"				pale grey silst; minor v fine ss, current bedding.								
						286'								(+4½") 108"	-
5°			15½"				same								
							Box 25								
5°-8°			55½"				same								
			24½"				grey silst - v fine ss								
			27½"				shaley silst								
							(more shale at base)								
						296'								(+2") 123"	-
			6"				same								

DRILL CORE LOG

HOLE No. 80-5

DATE BEGUN October 25/80

DATE FINISHED October 27/80

DATE SAMPLED _____

SHEET No. 15 of 27

CORE SIZE NQ

COLLAR BEARING _____

HOLE ANGLE Vertical

LOGGED BY JOHN RICKER

TOTAL DEPTH _____

CONTRACTOR COATES

MAP No. Peace River Canyon South

COLLAR ELEV. ca 2300'
Ground level

[illegible]

DRILL CORE LOG

HOLE No. 80-5 SHEET No. 16 of 27 LOGGED BY JOHN RICKER
 DATE BEGUN October 25/80 CORE SIZE NQ TOTAL DEPTH _____ COLLAR ELEV. ca 2300'
 DATE FINISHED October 27/80 COLLAR BEARING - CONTRACTOR COATES Ground level
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 28								
6°			14"				banded shaley silst								
			40"				bl shale (conchoidal fracture)								
							endurated (minor coal 1/4")								
7°			45 1/2"				banded shaley silst, grey								
			12 1/2"				v fine ss mostly								
			6"				shaley silst								
							Box 29								
			6"				shaley silst								
11°			30 1/2"			327'	same, banded, minor current bedding							(+4)" 124"	—
			1"				coalified shaley silst								
			32"				bl silty sh								
			26 1/2"				grey banded shaley silst								
9°			1"				bl shale								
	334'7"	335'	5"				coal (clean moderate lustre, cleated)								
	335'	335'4 1/2"	4 1/2"				endurated sh, silty sh carbonaceous								
							(upper contact ok) (lower contact probably)								
	335'4 1/2"	335'11 1/2"	7"				coal-clean, moderate lustre, cleated								

DRILL CORE LOG

HOLE No. 80-5

DATE BEGUN October 25/80

DATE FINISHED October 27/80

DATE SAMPLED _____

SHEET No. 17 of 27

CORE SIZE NQ

COLLAR BEARING _____

HOLE ANGLE Vertical

LOGGED BY JOHN RICKER

TOTAL DEPTH _____

CONTRACTOR COATES

MAP No. Peace River Canyon, South

COLLAR ELEV. ca 2300'
Ground level

[illegible]

DRILL CORE LOG

HOLE No. 80-5 SHEET No. 19 of 27 LOGGED BY JOHN RICKER
 DATE BEGUN October 25/80 CORE SIZE NQ TOTAL DEPTH _____ COLLAR ELEV. ca 2300'
 DATE FINISHED October 27/80 COLLAR BEARING - CONTRACTOR COATES Ground level
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 33 (cont.)								
	366'4"	367'					brown mudstone, carbonaceous, some coaley laminae								
						367'								122"	—
			9"				mostly sh, shaley mudstone								
			31½"				grey shaley silst								
			12"				shale								
	371'4½	371'9½	5"				coal (upper contact probably ok)								
	371'9½	372'—	(2½)"			372'								57½"	2½" *
	372'	372'4"	4"				coal (lower contact possibly ok)								
			(4½)"				missing coal probable.								
			5½"				shale (carbonaceous)								
							Box 34								
8°			19½"				light grey silst-v. fine ss (not calcareous)								
			26½"				bl silty sh & sh								
						377								55½"	4½" *
	377'	378'4½	16½"		80-5 377'4½ 378'4½"		coal (upper & lower contacts)								
			(11½")				(7½"=piece mostly shattered)								
			2"				probably missing coal (see p. 20)								
							coaley shale								
14° (locally)			52½'				banded silty shale & light grey								
							silst - v fine ss								

DRILL CORE LOG

HOLE No. 80-5 SHEET No. 20 of 27 LOGGED BY JOHN RICKER
 DATE BEGUN October 25/80 CORE SIZE NQ TOTAL DEPTH _____ COLLAR ELEV. ca 2300'
 DATE FINISHED October 27/80 COLLAR BEARING - CONTRACTOR COATES Ground level
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 35								
7-10°			37½"				same								
						387'								108½"	11½"
			23½"				same								
			9½"				shale								
			1½"				coaley sh								
			3½"				sh								
			9½"				coaley sh - cannel								
			4"	—			coal (no contacts) (shattered)								
			4½"				coaley shale								
			3½"				shale								
			3"				coaley sh - coal								
						393'								62½"	9½"
							Box 36								
			1½"	—			coal (no lower contact)								
			5½"				cannel								
3°			21"				shaley silst & silty shale lenses								
			3"				coaley sh								
			1"	—			coal								
			1"				coaley sh								

DRILL CORE LOG

HOLE No. 80-5

SHEET No. 22 of 27

LOGGED BY JOHN RICKER

DATE BEGUN October 25/80

CORE SIZE NQ

TOTAL DEPTH _____

COLLAR ELEV. ca 2300'

DATE FINISHED October 27/80

COLLAR BEARING _____

CONTRACTOR COATES

Ground level ..

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-5 SHEET No. 23 of 27 LOGGED BY JOHN RICKER
 DATE BEGUN October 25/80 CORE SIZE NQ TOTAL DEPTH _____ COLLAR ELEV. ca 2300'
 DATE FINISHED October 27/80 COLLAR BEARING - CONTRACTOR COATES Ground level
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 40 (cont.)								
						433'									
	433' -	433' 1 1/2"	1 1/2"				same								
	433' 1 1/2"	437' 11"	57 1/2"				silty shale & bl shale								
	437' 11"	438' 2 1/2"	3 1/2"				cannel								
	438' 2 1/2"	438' 4"	1 1/2"				silty coal								
	438' 4"	440' 2"	22"				coal, clean, dull lustre (probably coal loss in middle of seam (contacts look ok)								
	440' 2"	441' 1"	(11)"				(add missing interval probably coal) (X)								
	441' 1"	441' 9"	8"				coalified sh								
							Box 41								
	441' 9"	443'	15"				sh (some coal laminae)							109"	11" (X)
						443'									
	443' -	443' 9"	9"				same								
	443' 9"	444' 2 1/2"	5 1/2"			*	cannel								
	444' 2 1/2"	447' 4"	37 1/2"			90-5 444' 1 1/2"	coal (good run) clean (upper contact good)								
	447' 4"	448' 1/2"	8 1/2"			to 448' 1/2"	silty coal & coal (shattered)								
			(16 1/2")				"add missing interval, probably coal - see p. 24)								
			1 1/2"				shaley silst with coaley partings								
			30 1/2"				grey shaley silst								
70			7"				light grey (current bedded) silst								

* Includes 1" of original cannel.

HOLE No. 80-5
DATE BEGUN October 25/80
DATE FINISHED October 27/80
DATE SAMPLED _____

SHEET No. 24 of 27

CORE SIZE NQ

TOTAL DEPTH _____

COLLAR BEARING

CONTRACTOR COATES

Ground level

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-5

SHEET No. 25 of 27

LOGGED BY JOHN RICKER

DATE BEGUN October 25/80

CORE SIZE _____ NQ

TOTAL DEPTH

COLLAR ELEV ca 2300'

DATE FINISHED October 27/80

COLLAR BEARING _____

CONTRACTOR COATES

Ground level ..

DATE SAMPLED _____

HOLE ANGLE Vertical

MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-5 SHEET No. 26 of 27 LOGGED BY JOHN RICKER
 DATE BEGUN October 25/80 CORE SIZE NQ TOTAL DEPTH _____ COLLAR ELEV. ca 2300'
 DATE FINISHED October 27/80 COLLAR BEARING - CONTRACTOR COATES Ground level
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Cracking	Strike	Dip	Rec.	Lost
							Box 45 (cont.)								
			20"				grey shaley silst								
6°			38"				light grey silst to v fine ss (current bedded)								
			11½"				banded grey shaley silst & grey silty shale								
							Box 46								
			5"				same								
			7"				bl, endurated shale, blocky								
			5"				cannel								
			(+ 9½")			493'	probably missing coal ← (shattered) coal							86½"	9½"
			1"												
			3½"				bl endurated shale								
8°			19"				bl silty shale & grey silst (banded)								
			11"				bl shale								
9°	496'3"	497'10½"	19½"				coal (good section) (upper contact good)								
	497'10½"	498'	1½"				silty coal								
	498'	498'4½"	(4½)"			498'	missing interval probably coal							55½"	4½"
	493'4½"	498'7"	2½"			496'3"	fire clay								
	498'7"	499'9½"	14½"			497'9½"	coal (shattered into 3" to 1" blocks)								
			9"				missing coal probably (see p. 27)								
			6½"				bl shale (papery, coaley)								

DRILL CORE LOG

HOLE No. 80-5 SHEET No. 27 of 27 LOGGED BY JOHN RICKER
 DATE BEGUN October 25/80 CORE SIZE NQ TOTAL DEPTH _____ COLLAR ELEV. ca 2300'
 DATE FINISHED October 27/80 COLLAR BEARING - CONTRACTOR COATES Ground level
 DATE SAMPLED _____ HOLE ANGLE Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 46 (cont.)								
			1"				coal								
			1"				coaley bl sh								
			6"				grey silty sh								
			2"				grey silst								
							Box 47								
6°			8½"				same								
			3"				shattered shale (coal ¼")								
							(petroliferous odour)								
			6½"				grey silty shale								
						503'								51"	9"
			54½"				shale grey								
6°			35"				light grey silst; shaley								
							silst; & silty shale at base								
			7"				silty sh & sh								
							Box 48								
			20½"				same								
*			6"				shaley silst								
↓						513'	bottom of <u>HOLE 80-5.</u>						(+3)"	123"	—
↓															

* bedding nearly horizontal, not clear.

DRILL CORE LOG

DDH 80 - 6

80-6

Core destroyed in mishap:

Box 14	-	16½"
Box 18	-	all
Box 27	-	11" disturbed/7" destroyed/4"
Box 28	-	12"
Box 36	-	27½"
Box 46	-	1½"
Box 47	-	42"
Box 50	-	all
Box 52	-	all
Box 37	-	all

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 1 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

[illegible]

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 2 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	Adjusted				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
				<i>Adjusted</i>			Box 2 (cont.)								
			17½"	(-½")			fine light grey silst (calcareous), massive.								
			2"				grey shale (calcareous)								
							Box 3								
12°			27½"	(-1")			same								
			21½"	(-1")			bl shale (not calcareous)								
						37'							(+4")	124"	-
			5'				bl shale (not calcareous)								
			4'	(+3½")			coaley carbonaceous shale								
			4"				grey shale								
15°			32'	(+5")			grey silst & shale & shaley silst (calcareous)								
							Box 4								
12°			32½"	(+5")			same (calcareous)								
			12"				grey shale								
						47'								106½"	13½"
	47'	49' 1"	25"				bl blue shale (conchoidal fracture & endurated) (& minor grey shale)								
	6' 16"	49' 1"	50' -	11"	80-6 49' 1" 50'	50' -	coal (contact upper - good)								
							(5" & 3" & 2" pieces of shattered bits; not complete)								

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 3 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES _____
DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South _____

[illegible]

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 4 of 31 LOGGED BY JOHN RICKER at ca 2450' a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 5 (cont.								
			3"				coaley silst (shattered)								
				(+12")			add missing footage								
			4"				shaley silst								
10°			32½"				light grey silst (minor shale)								
							shaley silst								
							Box 6								
90°			46½"				same								
						67'								86"	12" *
			48"				same								
			15½"				shaley silst dark & shale/banded								
							laminated								
				(+9½")			add missing footage (source unknown)								
							Box 7								
15°			48"				silty shale & mostly bl shale								
						77'								111½"	9½" *
22°			20½"	(-½")			same with 1" sandy layer								
			11"	(-½")			carbonaceous bl shale								
			13"	(-½")			shaley silst; dark grey								
			17½"	(-1")			bl shale with silst bands (3" & 1½")								

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 5 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 8								
			6½"				bl shale								
			36"	(-2)"			grey shaley silst & light grey silst								
			14½"	(-1)"			coaley shale(some coal) (broken)								
						87'							(+6½)"	126½"	
			5½"				coaley shale/shale								
10°			19½"	(-1)"			grey shaley silst & light grey silst								
			15"	(-½)"			blue black endurated shale								
			11½"				grey shaley silst								
			35"	(-1½)"			grey silty shale								
8°			23½"	(-1)"			v fine ss & silst light grey(calc)								
							(with shaley layer to 3", mostly ½"								
							or less)								
			14½"	(-½)"			grey silty shale(calcareous)								
						97'							(+4½)"	124½"	
	97' -	98' -	12"				grey silty shale-bl shale(not calc)								
	98' -	98' 2"	2"				cannel								
	98' 2"	98' 5½"	3½"				coal shattered at contact								
9°			20"				long segment(bright coal-good cleat)								
							Box 10								
			4"				long segment continuous coal								

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 6 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 10 (cont.)								
		66"	4"				shattered section coal								
			5"		80-6		coaley shale								
9°			13"		98'2"		almost complete segment coal								
			3½"		103'8"		coaley clay								
			8"				shattered coal (coal loss probable, here) *								
		103'8"	5"				coal complete (no lower contact)								
				(+4)"*			add missing footage (probably coal)								
						104'								80"	4" *
			8"				grey shaley silst (not calcereous)								
11°			39½"				light grey silst (not calcereous)								
			13½"				light grey silst & v. fine ss, (not calcereous) current bedding								
				(+6)"(+)			add missing footage (unknown source)								
							Box 11								
			3"				grey shaley silst								
			24½"				light grey silst (slightly calc)								
			13½"				grey shaley silst								
			11½"				light grey silst (slightly calc) to v. fine ss								
						114'								114'	6" (+)
8°	114'	117'6"	42"				same, increasing shaley silst at base								

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 7 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 11(cont.)								
	117'6"	117'7"	1"				coaley shale								
	117'7"		6 1/2"				coal-good upper contact								
6'			6 1/2"				coal-3 segments(possible loss between them)								
							Box 12								
			4"		80-6		(1 1/2" & 2 1/2" shattered) coal								
6'			18 1/2"		117'7" 4"		complete section of coal								
			2 1/2"		123'2"		silty coal(no upper contact; contact ok lower)								
			6 1/2"				coaley silst(contacts ok)								
			6"				coal(complete segment) (no bottom contact)								
			2 1/2"				coal(shattered) (no bottom contact)								
			7 1/2"				cannel(no bottom contact)								
			3"				shattered coal								
		123'2"	3 1/2"				coal segment								
			(+10")			124'	add missing footage, probably coal							110	10"
	124' -	124'7"	7"				coaley shale								
12'	124'7"	124'11 1/2"	4 1/2"				bl shale								
	124'11 1/2"	125'3"	3 1/4"				coaley shale								
	125'3"	125'11 1/2"	8 1/2"		80-6		coal(good upper contact)								
	125'11 1/2"	126'4 1/2"	5"		125'11 1/2" - 126'4 1/2"		shattered coal & coaley shale								
			(+1 1/2")				add missing footage, probably coal								

(Add 1/2")
(adjustment)

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 8 of 31 LOGGED BY JOHN RICKER at ca 2450' a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 12 (cont.)								
			2 1/2"				silty shale								
			20"				light grey silst mostly								
							Box 13								
			16 1/2"				grey silst (same) (not calcereous)								
			51"				grey shaley silst & shale interbedded								
							(incr. shale at base)								
						134'								118 1/2"	1 1/2"
			9"				same								
			36"				bl shale (minor silty shale partly)								
				(+5)			add missing footage: probably black sh	(*)							
							Box 14								
90			82"				bl shale								
						145'								127'	5" (*)
			7"				bl shale								
			1"				coaley sh								
			1/2"				coal (1/2-1/2")								
			1/2"				calcareous bl coaley sh								
			2"				coal								
			5 1/2"				coaley silst								
			1"				coaley sh								

Not calcareous

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 9 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Cracking	Strike	Dip	Rec.	Lost
							Box 14 (cont.)								
			9"				grey shaley silst								
			2"				white v fine ss (current-bedded)								
			3½"				grey silst								
			28"				Box 15 light grey silst (partly shaley)								
9°			54½"				grey shaley silst (mostly) (+ ¼" coal bed)								
			2½"				bl shale								
			(+3)"				add missing footage, source unknown								
						155								117"	3"
			6"				bl shale								
			17½"				endurated bluish-bl sh (conchoidal fracture)								
							Box 16								
			5½"				blue-bl sh (conchoidal fracture) endurated								
			3"				bl sh								
			4"				coaley shattered (minor coaley sh & coaley silst)								
			(+1½)"				add missing footage probably coaley silst or sh								
			7"				bl shale								
			42½"				v fine light grey ss - silst with shaley silst bands								
8°			18"				shaley grey silst with sh bands mostly grey sh								
			13"				mostly grey sh.								

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 10 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
						165'								118 1/2"	1 1/2"
			21"	(-1 1/2")			same								
							Box 17 (not calcereous)								
			9"	(-1/2")			same								
			3"				carbonaceous sh								
			1 1/2"				coal (upper contact ok) (no lower								
							contact) (possible loss)								
			2 1/2"				light grey silst								
			trace				fireclay (&pyrite at contact with								
							silst)								
			3"				coal (shattered)								
			11 1/2"	(-1 1/2")			carbonaceous sh, some coaley laminations.								
							grading to silty sh								
			9"	(-1/2")			grey shaley silst with sh laminae								
90			66"	(3 1/2")			light grey silst-current bedded								
							minor carbonaceous partings								
						176'								(+6 1/2") 126 1/2"	
			7"				same								

4 1/2" core
destroyed

2" core
destroyed

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 11 of 31 LOGGED BY JOHN RICKER at ca 2450' a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE					RECOVERY		
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 18(not calcereous)								
			55½"				same but shaley bands increase								
			47"				to ¼"-½"(still minor)								
							grey shaley silst minor light grey								
	all						silst(¼"-½")								
90	core		2"				carbonaceous shale								
90	destroyed		8"	—			coal(good lower contact upper)								
							(but shattered middle)								
						186'								119½"	½"
							Box 19(not calcereous)								
	186'	189'10½"	46½"				mostly bl shale(minor sh silst)								
							(pyrite disseminated) with endur-								
							ated shale segment(-pyrite ?) of 5'								
	189'10½"	190'	1½"		80-6		endurated blue bl shale-borders on:								
	190'-	190'2"	2"	14"	190½"		cannel(2")								
11°	190'2"	191'2"	12"		191½"		coal(both contacts good;shattered								
							section of 2")								
							missing footage, probably coal								
110			6"	(+2)			bl shale								
			48"				shale & alternating light grey silst(mosHg)								
							1"½" 5"½" //								

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 12 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 20								
			2"				same								
						196'								118"	2'
11 ⁶			46"				shaley silst & shale bands								
							increasing shale at base (17")								
			26"				fine grey silst, shaley in places								
			15½"				light grey silst (current bedded)								
							minor fine ss								
			21½"				fine ss mainly (grading to light								
							silst. at base)								
							Box 21 (not calcareous)								
			22½"				fine grey ss								
						207'								131½"	½"
			90"				same - current bedded in pl.								
							but mainly massive.								
							shaley fragments (angular - ¼" - ½"								
							near base) (some with platy white								
							mineral borders (tabular sheets, x(5))								
							(not calcareous) (1/4 too hard / n.g. & v.m.; H=3+)								
							Box 22 (not calcareous)								
			15"				same								

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 13 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 22 (cont.)								
			7½"				bl shale								
			7½"				shaley silst								
11°						217'								120"	0
			29"				light grey silst - shaley								
			18"				silty shale								
			13½"				light grey shaley silst								
			7"				bl shale								
			2"				endurated bl shale								
			3"				carbonaceous mudstone (coaley)								
			2"				bl shale								
			9"				bl shaley silst								
							Box 23								
			36"				same with inte bedded shale (to ½")								
						227'								119½"	½"
12°			44"				same								
						231'								44"	4"
			31"				same								
			5"				light grey silst (current-bedded)								
				(+4")			missing footage-probably silst.								

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 14 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
			35"				Box 24 shaley dark silst (& light grey silst interbedded = minor $\frac{1}{4}$ " to $\frac{1}{2}$ " laminae)							71"	1"
			9"			237'	same								
			37"	(-1)			mostly light grey silst								
			33"	(-1)			interbedded shaley silst & minor light grey silst (as above)								
							Box 25								
11°			44½"	(-1½)			same but about equal proportions of each (as above)								
						247'							(+3½)"	123½"	—
			65"				same but increased $\frac{7}{8}$ " light grey silst to >50%								
							Box 26								
			20"				shattered - fractured light grey silst.				fracture ca 90°				
						254'							(+1)"	85"	—
			14"	(-2)"			same fractured & shattered grey silst				fracture ca 90°				
						255'							(+2)"	14"	—

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 15 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 26 (cont.)								
			29½"				shaley silst grey & light grey silst								
							interbedded (½"-¼" bands) equal amounts.								
6°			17½"		80-6 257' 11" to 259'		light grey silst (light) & v fine ss								
							(minor bands (to ¼" of shaley silst								
							dark)								
	257' 11"	259' -	13"				coal (bright) (upper contact ok) (shat-								
							tered fragments) (no lower contact)								
	259' -	259' ½"	(½)"	⊗			additional ⊗								
	259' ½"	260' -					carbonaceous shale								
						260'								59½"	½"
			½"				bl carbonaceous shale								
			1"				bl shale								
			6½"				fine ss grey with shaley partings								
							Box 27 (not calcereous)								
			13"				grey silst with shaley silst (1 band=6")								
			17"				fine ss								
11°			42½"				grey silst interbedded with shaley silst								

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 16 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES _____
DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South. _____

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Cooling	Strike	Dip	Rec.	Lost
							Box 27(cont.)								
						267'								80½"	3½"
			18½"				grey silst - shaley silst mostly								
			3 "				endurated bl shale								
			2½"	(+1½")			coal (upper contact ok) (no lower contact)	(BRIGHT,	GOOD CLEAT)						
			1½"				coaley shale								
			4 "				coal (upper contact ok) (lower contact ok)	(BRIGHT	GOOD CLEAT)						
			1½"				coaley shale & endurated bl sh								
			10 "				dark grey shaley silst								
							Box 28								
			59 "				same								
			18½"				endurated bl sh								
						277'								118½"	1½"
			15½"				same								
			1"	(+2½")			coal & coaley sh								
			21"				dark shaley silst								
							Box 29								
			43"				dark shaley silst & light grey silst banded								
			11"				fine ss with shaley partings ↑								
			26"				same as above but shaley at base								
						287'								117½"	2½"

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 17 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 29 (cont.)								
			5 1/2"				same								
			25 1/2"	(-1)"			fine ss with shaley partings & bands								
							Box 30								
			34"	(-1)"			grey silty sh & shaley silst								
			23'	(-1/2)"			banded shale & silst (light grey) --								
							very fine ss (1/4" bands)								
11°	294' 1 1/2"	295' 6"	16 1/2"		80-6 294' 1 1/2"		coal (upper contact fine)			65° cleat					
					to 295' 6"		continuous section of it (lower								
							contact not clear)								
10°	295' 6"	297'	18"				carbonaceous (with pyrite -) shaley								
							grey silst, coaley parting								
						297'								(+2 1/2") 122 1/2"	
			17 1/2"				same shaley grey silst								
							Box 31								
			13"				same								
			34 1/2"				v. fine massive grey ss & bedded								
							v. fine ss								
			22 1/2"				silst & grey sh interbedded (1/4" - 1/2")								
			27"				light grey silst mainly								
							calcareous)								

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 18 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 31 (cont.)								
6°			6"				shaley silst mainly (laminated)								
						307'							(+1/2)"	120 1/2"	—
			9"				shaley silst mainly (laminated)								
							Box 32								
			28"				same - light grey colour								
			29"				shaley silst dark & shale banded but								
							shaley units greater up to 3";								
							silst = laminae to 1/2"								
			1 1/2"				carbonaceous sh								
			4 1/2"				grey silst - v fine ss								
			1"	—			coal - (upper contact good)								
			1/2"				silst (contacts good)								
			5"	—			coal (no lower contact)								
			1 1/2"				carbonaceous sh								
			(1/2")				coaley debris (loose)								
			4 1/2"				endurated carbonaceous shale 1/4								
							minor coal strands								
			5 1/2"				shaley silst & shale-banded 1/2"-1/4"								
9°			21 1/2"				mainly v fine ss (tops up) current-bedded; grey								

pyrite on bedding planes

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 19 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 32 (cont.)								
			9 1/2"				v. fine ss & shaley silst interbedded (1"-1 1/2")								
							Box 33								
						317'								120"	0
			24 1/2"				same								
						319'								(+1/2') 2 1/2"	—
10°	319'	319'6"	6"				same								
10°	319'6"	324' 1/2"	54 1/2"				fine grey ss massive								
	324' 1/2"	325'8 1/2"	20"				v. fine ss/grey silst-interbedded with grey shaley silst (shaley silst in- crease towards base)								
	325'8 1/2"	326'	3 1/2"				Coal & silst or shale interbeds: (Coal silst impurity)								
	326' —	326'2 1/2"	2 1/2"	25 1/2"	80-6 325'8 1/2"		coal (shattered) (contacts ok)								
					to 328'2"		Box 34								
	326'2 1/2"	327'	7 1/2"	(+2) 28			coal massive chunks								
						327'								94"	2" 28
6°	327'	328'2"	14"				coal (8 1/2" of this muddy with pyrite) (lower contact probable)								
11°	328'2"	328'11"	9"				bl shale pyrite (at top)								

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 20 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 34 (cont.)								
	328' 11"	332' 1/2"	37 1/2"				grey shaley silst (calcareous) inc-								
							creasing to silty shale at base								
	332' 1/2"	333' -	1 1/2"				coaley sh								
11°	333' -	333' 11"	11"	11"	80-6 333' 11"	333' 11"	coal (good upper contact)								
							(coal) (lower contact good)								
			14 1/2"				grey silty shale								
			10 1/2"				light grey silst & silty shale inter-								
							bedded 1/2" - 1/4"								
			4"				grey silty sh								
							Box 35								
			19"				bl shale & grey silty sh								
						337'								120"	0
	337'	337' 12"	2"				bl endurated shale								
11°	337' 12"	338' 5 1/2"					coal (solid) good upper contact								
			15 1/2"				1/2", 3", loose, 5" piece (possible loss)								
			5 1/2"				coaley sh & carbonaceous sh & bl sh								
			12"				shaley silst & v fine ss/grey silst								
			3"				v fine ss grey								
12°			57"				shaley silst & grey silst interbedded								

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 21 of 31 LOGGED BY JOHN RICKER at ca 2450' a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coating	Strike	Dip	Rec.	Lost
							Box 36								
	2 1/2" core destroyed		6 1/2"				bl silty sh								
			9"				grey silst & v fine ss								
			3"				endurated coaley shale								
			6"				coal								
	core destroyed		1 1/2"				endurated coaley sh								
						347'								(+1)" 121"	
	core destroyed		4 1/2"				bl endurated sh - some coaley laminae								
	5" core destroyed		22 1/2"	(-1/2)			bl sh endurated								
	core destroyed		1"				bl sh (silty?)								
	"	"	1"				bl sh, carbonaceous/coaley								
	"	"	2 1/2"	—			coal								
	"	"	1 1/2"	—			cannel								
			3 1/2"				endurated bl coaley mudst - sh								
			6 1/2"	—			laminated coal & cannell								
11°	8" core destroyed		37"	(-1 1/2)			bl shale (silty)								
11°			1"				endurated bl shale								
	core destroyed						Box 37								
			7 1/2"				same								
	core destroyed		22 1/2"	(-1/2)			laminated bl sh & light grey silst								
							1/2"-1/2" ba								

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 22 of 31 LOGGED BY JOHN RICKER at ca 2450' a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 37 (cont.)								
	destroyed core		1 1/2"	—			coal (shattered)								
	destroyed core		5"				endurated carbonaceous sh								
			1"	—			coal								
			1/2"				(carbonaceous) sh bl (loss ?) (upper								
							& lower contact ok)								
			2"				bl shale								
	destroyed core		1/2"	—			coal shattered (loss ?) (upper contact ok)								
						357'								(+2 1/2") 122 1/2"	—
			23 1/2"	(-1/2)"			grey silty sh; one 4" section in the								
							calcite replaces fragments in a breccia								
			26"	(-1/2)"			grey silty sh & light grey silst (calc)								
							interbedded (1/2")								
			7 1/2"				fine grey ss (calcareous)								
			10"				grey silty sh & light grey silst								
							Box 38								
			19"				v fine ss & shaley silst (not calcareous)								
			36"	(-1)"			fine ss) not calcareous								
						367'								(+2)" 122"	—
			9"				fine ss " "								
			1"				bl sh								

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 23 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 38(cont.)								
			36 1/2"	(-2')			v fine grey ss/silst & shaley silst								
							(minor)								
			6"				silty bl shale								
			7"				endurated bl shale								
							Box 39								
	371'11 1/2"	372'6"	6 1/2"				endurated bl sh & cannel								
	372'6"	372'7"	1"				coal								
	372'7"	372'7 1/2"	1/2"				endurated bl sh								
110	372'7 1/2"	374'11"	27 1/2"				coal (continuous section (upper contact good) (no lower contact)								
			5"				cannel-bl shale (coaley in places)								
							endurated								
			23"	(-1')			shaley grey silst & shale up to 1"; typically 1/2" - 3/4" or laminations.								
						377'								(+3)	123"
			44"	(-1')			same								
							Box 40								
9"			29"	(-1 1/2')			same								
			20 1/2"				bl shale								
			3"				coal (crumbly) - almost powdery (Top contact ok; No BASAL contact)								

* Sample includes 1/2" cannel from the overlying 1/2" unit.

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 24 of 31 LOGGED BY JOHN RICKER at ca 2450' a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 40 (cont.)								
			24 1/2"	(-1/2)"			shaley silst grey								
			1"				bl shale								
						387'							(+2)"	122"	-
			3"				bl shale								
			9 1/2"				silty shale/shaley silst								
			22"	(-1/2)"			fine grey ss & shaley silst banded (calcareous) ↗								
							Box 41								
			45 1/2"	(-1)"			same								
14°			14 1/2"				shaley silst dark mostly								
			27 1/2"	(-1/2)"			silty shale grey								
						397'							(+2)"	122"	-
	397'	399'	24"				silty shale grey & shale								
							Box 42								
	399'	399' 9"	9"				endurated bl shale (coaley)								
	399' 9"	399' 11"	2"			80-6	coal								
	399' 11"	399' 11 1/2"	1/2"	26 1/2"		399' 9" to	shale, coaley								
	399'	400' 1/2"	1"			401' 11 1/2"	coal								
		400'	1"				shale, coaley								
		401' 11 1/2"	22"				coal mostly shattered								

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 25 of 31 LOGGED BY JOHN RICKER at ca 2450' a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY Box 42 (cont.)	STRUCTURE					RECOVERY		
	From	To	Apparent					Joint	Frac.	Freq./m	Cooling	Strike	Dip	Rec.	Lost
				[+ 11 1/2']			Add missing core here - probable								
			1 "				bl shale coaley								
						403'								60 1/2	11 1/2
	403'	403' 4"	4 "				coaley shale & carbonaceous								
			27 1/2 "	(-1 1/2) *			bl shale								
			31 "	(-1 1/2) *			silty shale grey - bl								
			7 1/2 "				shaley silst grey								
							Box 43								
			17 "	(-1) *			same (some v fine ss)								
5 °			2 1/2 "				silty shale								
			2 "				bl shale								
	410' 3 1/2 "	410' 5 1/2 "	2 "				coalified bl shale								
	410' 5 1/2 "	412' 7 1/2 "	26 "				coal (no upper contact) (lower contact ok)								
						80-6	some shattering-but mostly continuous								
	412' 7 1/2 "	413' "	4 1/2 "	69 "		410' 3 1/2 "	coaley mudst (carbonaceous too)								
						to 416' 1/2 "								(+4*) 124 "	—
	413' "	413' 5 "	5 "				same								
	413' 5 "	414' 3 1/2 "	10 1/2 "				coal shattered (no contacts)								
	414' 3 1/2 "	415' 1 1/2 "	9 "				coal 1 piece								
	415' 1 1/2 "	415' 7 "	6 1/2 "				coal 1 piece								

DRILL CORE LOG

HOLE No. <u>80-6</u>	SHEET No. <u>26 of 31</u>	LOGGED BY <u>JOHN RICKER</u>	at ca 2450'a.s.l.
DATE BEGUN <u>October 27/80</u>	CORE SIZE <u>NQ</u>	TOTAL DEPTH <u>502'</u>	COLLAR ELEV. <u>(Ground level)</u>
DATE FINISHED <u>October 29/80</u>	COLLAR BEARING _____	CONTRACTOR <u>COATES</u>	
DATE SAMPLED _____	HOLE ANGLE <u>90° Vertical</u>	MAP No. <u>Peace River Canyon South</u>	

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE					RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Cooping	Strike	Dip	Rec.
							Box 43 (cont.)							
	415'7"	415'10"	3"				coal shattered (no lower contact)							
	415'10"	416'1 1/2"	2 1/2"				coaley mudst							
			6"				mudst (slightly coaley)							
			3"				shattered coal (no contacts)							
				(+2 1/4")	*		(probable coal loss 2 1/2")							
						417'							45 1/2"	* 2 1/2"
			3 1/2"				grey silty shale (some coaley laminae)							
							Box 44							
			118 1/2"	(-4)"	⊕		grey silst (pale) to v fine ss (current							
10'-15'							bedded) minor shaley silst & a few	70° 80°	1/m	2 fracture with opposing dips.				
							coaley or carbonaceous partings							
							Box 45							
			2"				same							
						427'							⊕ (+4) 124'	-
			31 1/2"	(-1)"			same							
10'			32"	(-1)"			shaley silst with shale bands (1/4"-1/2")							
			35 1/2"	(-1)"			silty shale mostly							

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 27 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES _____
DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South. _____

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE					RECOVERY	
	From	To	Apparent					Joint	Frac.	Freq./m	Cooling	Strike	Dip	Rec.
							Box 45							
17°	434' 10"	435' 8 1/2"	10"	10"	80-6 434' 10 1/2" to 435' 8 1/2"		coal (upper contact & lower contact ok) shattered in middle well cleated, shiny coal looks pure splintery coal, bluish black. dark bluish bl shale (endurated) = coaley shale							
	435' 8 1/2"	436'	3 1/2"				Box 46							
	436' -	436' 4 1/2"	4 1/2"				same as above							
	436' 4 1/2"	437' -	7 1/2"	(- 1/2)"			same as below							
						437'	↓						(+ 4 1/2)"	124 1/2"
6°			41"	(+1)"			interbedded grey shaley silst & bl silty shale (laminae to 1/2" units 1/2") endurated bl shale							
	1/2" core destroyed →		12"											
			49"	(+1)"			grey silty sh & v fine grey ss/ silst (shaley at top) sanding at base)							
	4" core destroyed →		15 1/2"	(+ 1/2)"			Box 47							
							same							
						447'								
12°			10"				shaley silst - grey						117 1/2"	2 1/2"

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 28 of 31 LOGGED BY JOHN RICKER at ca 2450' a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE					RECOVERY		
	From	To	Apparent					Joint	Frac.	Freq./m	Cooling	Strike	Dip	Rec.	Lost
							Box 47(cont.)								
	[Core destroyed]		6 1/2 "				dark endurated shale								
	[11" destroyed core]		13 1/2 "				shaley silst mainly								
	[20 1/2 " destroyed core]		70 "				fine grey silst & v fine ss								
							current bedded mostly minor shaley								
10°							silst; minor fine ss								
							Box 48								
			4 "				v fine light grey ss								
11°			15 "				shaley silst grey & light grey silst								
							interbedded								
						457'								119 "	1 "
	457'	457'7"	7 "				same								
	457' "	458'3"	8 "				dark blue bl endurated & shale								
							coaley & carbonaceous								
	458'3"	458'7"	4 "		80-6		dull coal(cannel minor) cleat								
					458'3"		(shattered)								
	458'7"	458'9 1/2 "	2 1/2 "		to		bright coal - cleat good(shattered)								
	458'9 1/2 "	459'2 1/2 "	5 "		459'7"		dull coal(cannel min)cleat(shattered)								
	459'2 1/2 "	459'7"	4 1/2 "				bright coal-cleat good(shattered base)								
							possible missing section add here(see p.29)								
			7 1/2 "				endurated blue bl sh-coaley & carbonaceous								

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 29 of 31 LOGGED BY JOHN RICKER at ca 2450'a, s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY		
	From	To	Apparent					Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost	
5-11°			19 "				laminated banded shale & grey shaley silst									
			9½ "				silty shale grading to grey & bl endurated shale									
	462' 10½ "		28 "	47 "	90-4 462' 10½ " to 466' 4½ "		dull coal (continuous seam) banded with bright coal (little if any loss) (pure looking) (clean)									
							Box 49									
12°		466' 4½ "	14 "				coal dull/bright, good section (looks complete)									
	466' 4½ "	466' 10 "	5½ "				coaley shale									
	466' 10 "	467'	2 "				silty sh									
						467'								109 "	11 "	
			6½ "				same									
			42½ "	(+1) "			dark grey silst & shaley silst mostly									
			41½ "	(+1) "			light grey sandy silst mostly; current bedded									
							Box 50									
	core destroyed		27½ "				same									
						477'								118 "	2 "	
	core destroyed		12 "				same									

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 30 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 50 (cont.)								
						478'								12"	0
	core destroyed		14"	(-2)"			same								
						479'								(+2) 14"	-
	core destroyed		26 3/4"				same								
							v fine ss at base								
	core destroyed		16"				bl shale								
Variable up to 150	core destroyed		15"				grey silst grading to silty shale at base								
							Box 51								
			22"				bl shale								
	485' 7 3/4"	485' 9 1/2"	1"				coal (bright)								
	485' 8 1/2"	486' 1 1/2"	5"				cannel (shattered)								
	486' 1 1/2"	486' 6 3/4"	5"				coal bright & dull (broken)								
	486' 6 3/4"	487' -		(+5 1/2")			probable core loss								
						487'								90 1/2	5 1/2
			3"				coaley shale (shattered broken)								
			4 1/2"				shale								

NOT CALCULATED

DRILL CORE LOG

HOLE No. 80-6 SHEET No. 31 of 31 LOGGED BY JOHN RICKER at ca 2450'a.s.l.
 DATE BEGUN October 27/80 CORE SIZE NQ TOTAL DEPTH 502' COLLAR ELEV. (Ground level)
 DATE FINISHED October 29/80 COLLAR BEARING _____ CONTRACTOR COATES
 DATE SAMPLED _____ HOLE ANGLE 90° Vertical MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To	Apparent	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
							Box 51 (cont.)								
			3"				endurated coaley shale								
10°			6½"				fine - med ss								
			6½"				shaley silst grading to								
			50½"				light grey silst & v fine ss								
							current beds								
							Box 52								
10°			32"				same								
			14"				same with increasing laminated.								
						497'								119"	1"
10°			15"	(-1½)"			same								
			5"				dark grey silty shale/shaley silst								
			13½"	(-1½)"			same as								
			32½"	(-3)"			same as								
						502'	end of hole BOTTOM OF HOLE							66"	

COALE
 DESTROYED

STRATIGRAPHIC LOG

COALBED CREEK

DRILL CORE LOG

FILE No. _____

SHEET No. 1 of 2

LOGGED BY JOHN RICKER

STRATIGRAPHIC SECTION

COALBED CREEK - STRATIGRAPHIC SECTION

MAP No. Peace River Canyon South

[illegible]

$$15' 6'' = 186'$$

$$186'' \div 12 = 15' 6''$$

DRILL CORE LOG

HOLE No. _____ SHEET No. 2 of 2 LOGGED BY JOHN RICKER STRATIGRAPHIC SECTION

COALBED CREEK - STRATIGRAPHIC SECTION

MAP No. Peace River Canyon South

B.C. N.	UNIT		THICKNESS		LITHOLOGY	STRUCTURE					
	From	To		True		Joint	Frac.	Freq./m	Cracking	Strike	Dip
	15' 6"	19' 6"		48"	shattered sh						
10°	19' 6"	21' 8"		26"	brownish wx, grey silst; platy to massive (calcareous).					140°	10° SW
	21' 8"	21' 10 1/2"		2 1/2"	dark grey - bl silty sh						
	21' 10 1/2"	22' 3"		4 1/2"	carb. papery bl shale						
	22' 3"	23' 6"		15"	blocky shale (blue grey)						
	23' 6"	23' 8 1/2"		2 1/2" (-3")	fine clay (cream color)						
	23' 8 1/2"	24' 2 1/2"		6"	grey shale blocky (blue grey)						
	24' 2 1/2"	24' 3 1/2"		1"	fine clay						
	24' 3 1/2"	24' 4 1/2"		1"	papery carbonaceous shale						
	24' 4 1/2"	24' 5 1/2"		1"	fine clay (cream color)						
	24' 5 1/2"	24' 7 1/2"		2"	cannel trace to - ? on top						
	24' 7 1/2"	26' 5 1/2"		22"	coal						
	26' 5 1/2"	26' 6 1/2"		3/4" - 1"	sandy silst (calcareous)						
	26' 6 1/2"	28' 11 1/2"		29"	coal (main seam)						
	28' 11 1/2"	29' 5"		5 1/2"	silst grey platy (possibly fine ss) (carbonaceous debris) (calcareous)						
	29' 5"	30' 4"		11"	coal (cleated) bright (vitrain at base of seam)						
					grey silst with fossil wood (carbonaceous) (calcareous)						
	BASE OF SECTION										
	RIVER - COAL BED CREEK										

$$\begin{array}{r} 30' 4" \\ - 15' 6" \\ \hline = 14' 10" = 178" \\ \checkmark \end{array}$$

178"

[compare with DDH-80-1]

STRATIGRAPHIC LOG

NW RING ROAD

101E NW RING ROAD, MT.
JOHNSON

101E NoNW RING ROAD, MT.

SHEET No. 1 of 6

LOGGED BY JOHN RICKER

STRATIGRAPHIC SECTION

NW RING ROAD, MT. JOHNSON-STRATIGRAPHIC SECTION

MAP No. Peace River Canyon South

[illegible]

1915 ✓

✓ 19'5" total pl

DRILL CORE LOG

HOLE No. NW RING ROAD, MT. JOHNSON

SHEET No. 2 of 6

LOGGED BY JOHN RICKER

STRATIGRAPHIC SECTION

NW RING ROAD, MT. JOHNSON-STRATIGRAPHIC SECTION

MAP No. Peace River Canyon South

STRATIGRAPHICALLY
TOP

UNIT	THICKNESS	MARKER	LITHOLOGY	STRUCTURE					
From	To	True		Joint	Proc.	Freq./m	Coating	Strike	Dip
19' 5"	25' 5"	72" = (6' ca)	bl shale-argillite, to platey shaley silst	at top					
25' 5"	25' 10"	5"	good coal (splinters)						
25' 10"	26' 10"	12"	bl shale (papery)						
26' 10"	28' 4"	18"	massive silst						
28' 4"	34' 10"	78"	(increasing shale at top) grey shattered silst & shaley silst mostly						
34' 10"	39' 4"	54"	massive limonitic silst						
39' 4"	40' 5"	13"	grey platey shale						
40' 5"	41' 6"	12"	cannel or highly wx coal						
41' 5"	41' 8"	3"	shaley silst - shale						
41' 8"	42' 2"	6"	silst, massive & platey						
42' 2"	42' 3 1/2"	1 1/2"	shale						
42' 3 1/2"	42' 9"	5 1/2"	coal-splintery grey (cannel ?)						
42' 9"	46' 2"	41"	papery, grey-bl, shale						
46' 2"	50' 7"	53"	coal clean, blocky; good cleat = 170°/65°E // 050°/70°NW						
50' 7"	50' 7 1/2"	1/2"	silty shale						
50' 7 1/2"	51' 6 1/2"	11"	massive silst (limonite surface)						
51' 6 1/2"	51' 11 1/2"	5"	coal (at expense of platey sh) (varies to 9" thick)						
51' 11 1/2"	53' 2 1/2"	15"	platey shale & shaley silst (minor)						
			carbonaceous, a few coaley lenses up to 1/2" (over 3" at most)						

53' 2 1/2"
-19' 5"
= 33' 9 1/2"

405 1/2" page 2 total
= 33' 9 1/2"

✓

✓

DRILL CORE LOG

HOLE No. NW RING ROAD, MT. JOHNSON

SHEET No. 3 of 6

LOGGED BY JOHN RICKER

STRATIGRAPHIC SECTION

NW RING ROAD, MT. JOHNSON-STRATIGRAPHIC SECTION

MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		MARKER	LITHOLOGY	STRUCTURE							
	From	To		True			Joint	Frac.	Freq./m	Coaling	Strike	Dip		
↑ TO R STRATIGRAPHICALLY	53' 2 1/2"	55' 2 1/2"		24"	→ (2')	covered interval								
	55' 2 1/2"	60' 2 1/2"		60"	→ (5'ca)	platey silst & massive silst (2"-6" beds)								
	60' 2 1/2"	62' 2 1/2"		24"		massive silst (limonite surface)								
	62' 2 1/2"	64' 2 1/2"		24"		shaley silst & silty shale								
	64' 2 1/2"	64' 6 1/2"		4"		carbonaceous shale (platey)								
	64' 6 1/2"	65' 8 1/2"		14"		shaley silst								
	65' 8 1/2"	66' 1 1/2"		4"		shale								
	66' 1 1/2"	66' 5 1/2"		5"		coal								
						splintery pencilly fragments, (weathered coal(?))								
	66' 5 1/2"	67' 11 1/2"	25 1/2"	18"	← ←	dull grey cannel (shattered) (light weight, but not like coal)								
	67' 11 1/2"	68' —		1 1/2"		coaley shale								
	68' —	68' 2"		2"		coal (lensing to 4" thick)								
	68' 2"	68' 6"		4"		coaley shale								
	68' 6"	68' 10"		4"		grey platey silst (coaley partings)								
68' 10"	73' 10"		60"	(ca 5')	massive silst, brown wx-grey fresh surface (carbonaceous upper few inches)									
73' 10"	76' 4"		30"		massive ss current bedding; limonitic orange wx.									

Totals on p. 4

101 E NoNW RING ROAD, MT.
JOHNSON

LOGGED BY JOHN RICKER

NW RING ROAD, MT. JOHNSON-STRATIGRAPHIC SECTION

→ TOP STRATEGICALLY

[illegible]
$$\begin{array}{r} 91^{\circ} 2'' \\ -53^{\circ} 21\frac{1}{2}'' \\ \hline 37^{\circ} 11\frac{1}{2}'' \\ \checkmark \end{array}$$

$455\frac{1}{2}" = 37'11\frac{1}{2}"$ Totals pp 3 & 4
✓

DRILL CORE LOG

OLE No NW RING ROAD, MT. JOHNSON

SHEET No. 5 of 6

LOGGED BY JOHN RICKER

STRATIGRAPHIC SECTION

NW RING ROAD, MT. JOHNSON-STRATIGRAPHIC SECTION

MAP No. Peace River Canyon South

C.N.	UNIT		THICKNESS	MARKER	LITHOLOGY	STRUCTURE						Dip	Strike
	From	To	True			Joint	Frac.	Freq./m	Coaling	Strike	Dip		
	91' 2"	104' 2"	156"	(13')	massive (shattered) silst & sandy silst (shale to 2" layers)								
	104' 2"	105' 4"	14"		dark, platy silty shale to argillite								
	105' 4"	107' -	20"	-	coal								
	107' -	107' 5"	5"		carbonaceous sh (1/4" coaley lenses)								
	107' 5"	107' 8 1/2"	3 1/2"	-	coal								
	107' 8 1/2"	108' 8 1/2"	12"		grey - bl shaley silst								
	108' 8 1/2"	123' 10 1/2"	ca 180"	(15')	platy silst & shale laminae, some massive sandy silst to 6"								
	123' 8 1/2"	124' 3 1/2"	7"		papery shale								
	124' 3 1/2"	124' 7 1/2"	4-5"	-	coal								
	124' 7 1/2"	125' 3 1/2"	8"	465 paces marker	platy sh (carbonaceous at top) minor ironstone concretions								
	125' 3 1/2"	125' 8 1/2"	5"		grey silst, brown wx, shattered								
	125' 8 1/2"	129' 2 1/2"	42"		massive ss, lense-like, current bedded							155°	30° SW Bedding in place
	129' 2 1/2"	132' 11 1/2"	45"		platy silst & shale;								
					shattered silst (a few ironstone concretions at contact)								
	132' 11 1/2"	134' 2 1/2"	15-16"	-	coal; sooty - powdering wx								
	134' 2 1/2"	136' 6 1/2"	28"		bl platy shale, carbonaceous upper contact								
	136' 6 1/2"	144' 1/2"	ca 90"		mostly platy grey silst, brown wx								
					road outcrop continues but disturbed							165°	40° SW Bedding in place

144' 1/2"
- 91' 2"
52' 10 1/2"

634 1/2" = 52' 10 1/2" Totals p. 5

✓

DRILL CORE LOG

OLE No. NW RING ROAD, MT. JOHNSON

SHEET No. 6 of 6

LOGGED BY JOHN RICKER

STRATIGRAPHIC SECTION

NW RING ROAD, MT. JOHNSON-STRATIGRAPHIC SECTION

MAP No. Peace River Canyon South

B.C.N.	UNIT		THICKNESS		SAMPLE NUMBER	MARKER	LITHOLOGY	STRUCTURE						RECOVERY	
	From	To		True				Joint	Frac.	Freq./m	Coaling	Strike	Dip	Rec.	Lost
						→ 40 paces ← marker									
	144' 1/2"	145' 2"		13 1/2"			massive ss, brown wx, grey fs. (intermittent outcrop)								
	145' 2"	165' 2"		ca 240" (ca 20')			covered interval								
	165' 2"	169' 2"		48"			shaley silst - massive								
	169' 2"	171' 3"		25"			mostly sh & shaley argillite & minor silst bands with concretions lensing up to 12" long)								
	171' 3"	172' 10"		19"			platey silst & massive fine ss (to 10")								
	172' 10"	176' 6"		44"			bands of massive silst, sandy silst & minor ss (orange limonite wx)								
	176' 6"	177' 3"		9"			platey shaley argillite (light grey wx; dark grey on fs)								
	177' 3"	177' 7 1/2"		4 1/2"			massive, brown, v fine, sandy silst - up to 2" layers of fine ss								
	177' 7 1/2"	182' 10 1/2"		63"			shattered silst (minor shaley argillite) brown wx, grey fs. (1" shale at base)								
	182' 10 1/2"	183' 8 1/2"		10"-11"			coal-banded, well-developed cleat (weathered to a powder).								
	183' 8 1/2"	184' 11 1/2"		15"			shattered shaley argillite, minor silst with coaley lenticular bands up to 1"								
	184' 11 1/2"	185' 4 1/2"		5"			massive silst (yellow limonite surface, not calcareous) mostly 1/2"								
	185' 4 1/2"	185' 6"		1 1/2"			shale, carbonaceous								
	185' 6"	185' 11"		5"			coal								
	185' 11"	193' 5"		90"			thin bedded to laminated (grey fs) silst, pale (not calcareous)								
							rusty brown wx; with shaley partings - grey wx.								
							overburden extensive to 3000' contour, only scattered								
							minor outcrops								

193' 5"
- 144' 1/2"
49' 4 1/2"
✓

592 1/2" = 49' 4 1/2"
✓

Totals p. 6

TOP STRATIGRAPHICALLY

STRATIGRAPHIC LOG

SW RING ROAD

DRILL CORE LOG

HOLE No. SW RING ROAD, MT. JOHNSON

SHEET No. 1 of 6

LOGGED BY JOHN RICKER

STRATIGRAPHIC SECTION

SW RING ROAD, MT. JOHNSON - STRATIGRAPHIC SECTION

MAP No.

Peace River Canyon South

C.N.	UNIT		THICKNESS		MARKER	LITHOLOGY	STRUCTURE					
	From	To		True			Joint	Proc.	Freq./m	Coating	Strike	Dip
						TOP OF STRATIGRAPHIC SECTION						
						(end of outcrop - overburden -						
	0' -	20' -		240" ~ (20' +)	Top of Δ II	massive silst & platey silst.					150°	30° SW
	20' -	20' 8"		$[6" + 10"] = 8"$		coal (disturbed by modern vegetation roots)						
	20' 8"	23' 2"		30" ~ (2 1/2')		massive grey silst						
	23' 2"	27' 2"		48" ~ (4')		shattered silst						
	27' 2"	28' 8"		18" ~ (1 1/2')	Δ II	silst - massive						
	28' 8"	30' -		16"		platey sh, brownish, silty						
	30' -	30' 1"		1"		carbonaceous sh						
	30' 1"	33' 1"		36" ~ (3')		brown grey silty sh & papery shale						
	33' 1"	35' -		$[22' + 24'] = 23' (avg)$		coal (weathered) varies in thickness to 18"				hematitic ironstone lenses and are 1" - 2" thick.	bulges down to	
	35' -	38' -		36" ~ ca (3' +)	Base of Δ II	brown-grey platey silst						
	38' -	63' -	ca	300" ~ ca (25' - 30')		overburden						
	63' -	87' -		288" ~ (24')		platey brown wx silst (long outcrop - dips flatten)						
	87' -	97' -	ca	120" ~ ca (5' - 10')		overburden						
						(top of section at outcrop 12)						
	97' -	107' -		120" ~ (10')	Top of Δ I	massive sand & silst (orange wx), current bedded,						
	107' -	110' -		36" ~ (3')		platey to massive silst (orange wx) to shaly silst.						
	110' -	110' 3"		3"		shaly silst (bl), orange wx.						

$1323" \div 12" = 110' 3"$

p. 1 Totals

Top Stratigraphically

DRILL CORE LOG

OLE No. SW RING ROAD, MT. JOHNSON

SHEET No. 2 of 6

LOGGED BY JOHN RICKER

STRATIGRAPHIC SECTION

SW RING ROAD, MT. JOHNSON - STRATIGRAPHIC SECTION

Peace River Canyon South

MAP No.

N.	UNIT		THICKNESS		MARKER	LITHOLOGY	STRUCTURE					
	From	To		True			Joint	Frac.	Freq./m	Coating	Strike	Dip
	110'3"	111'4"	13"	13"		coal (vitrain at base)						
	111'4"	114'5"	37"		Base of A2	massive sandy carbonaceous silst				(fossil stems & leaves)	130°	40° SW (in place)
	114'5"	114'9"	4" to 4 1/2"			coal (shaley at top 1")				carbonaceous partings		
	114'9"	114'11'	2"			brownish mudst - coaley						
	114'11'	115'7"	8"			silst & shaley silst interbedded (current bedding)						
	115'7"	115'11'	4"			papery coaley shale						
	115'11'	127'11'	144"	(12')	Base of A1	platey & massive silst & ss (to base of O.C.13)						
	127'11'	147'11'	ca 240"	(20' ca)		overburden						
	147'11'	153'11'	72"			weathered massive silst with shaley partings every 3"-6"						
	153'11'	155'10"	23"			coal - sooty, platey, highly weathered						
	155'10"	156'2"	4"			shale						
	156'2"	160'6"	52"			massive fine ss & silst (orange wx)				platey near top & coaley fracture laminae		
	160'6"	164'6"	48"			grey shaley silst with concretions					130°	30° SW
	164'6"	165'2"	8"			grey shale						
	165'2"	165'9"	7" to 7 1/2"			coal (vitrain band at top) 2"						
	165'9"	170'9"	60"			shaley silst - shaley partings especially at top						
	170'9"	175'3"	54"			grey shale (yellow wx)						
	175'3"	175'7"	4"			coaley, sooty, sh						

Top Stratigraphically

175'7"
-110'3"
65'4"
✓

784" ÷ 12 = 65'4"

✓

Totals p. 2

DRILL CORE LOG

HOLE No. SW RING ROAD, MT. JOHNSON

SHEET No. 3 of 6

LOGGED BY JOHN RICKER

STRATIGRAPHIC SECTION

SW RING ROAD, MT. JOHNSON - STRATIGRAPHIC SECTION

Peace River Canyon South

MAP No.

C.N.	UNIT		THICKNESS		MARKER	LITHOLOGY	STRUCTURE					
	From	To		True			Joint	Frac.	Freq./m	Coaling	Strike	Dip
	175'7"	195'1"		234" ~	19'6"	platey grey silst & shaley silst (shaley at top)						
	195'1"	195'4"		3"		platey grey shale (grading to shaley silst above)						
	195'4"	196'11"		19" ~	to 20"	coal vitrain (ironstone hematitic concretions lenses near base (1/2" x 3/4") at top especially in upper 3"						
	196'11"	198'5"		18"		platey grey shale with coaley partings to 1/2" (lenses up to 6" length)						
	198'5"	211'5"		156" ~	(13')	platey silst; fine-bedded to massive; fine ss 3" - 5"; shaley partings; massive beds at top.						
	211'5"	223'5"		144" ~	(12' ca)	overburden (includes large slump blocks of silst)						
	223'5"	227'2"		45"		platey silst with shaley partings; current bedding.					115°	40° SW bedding
	227'2"	235'2"		96" ~	(8' ca)	overburden (pebbly silst)						
	235'2"	238'4"		38"		platey brown wx silst (white salts coat surface)					120°	40° SW bedding
	238'4"	256'4"		216" ~	(18')	same, platey shale grey, bl; minor shaley silst as below						
	256'4"	257'4"		12"		highly wx pulverized shale (from rock unit above & below)						
	257'4"	263'6"		74"		platey shale grey-bl; minor shaley silst						
	263'6"	265'1"		19"		massive fine ss						
	265'1"	274'7"		114" ~	(9 1/2')	platey grey - bl shaley silst (pale orange wx)					145°	35° SW bedding

Top stratigraphically

$$\begin{array}{r} 274'7" \\ - 175'7" \\ \hline 99'0" \end{array}$$

$$1188" \div 12 = 99' \quad \checkmark / p. 3 Totals$$

DRILL CORE LOG

HOLE No. SW RING ROAD, MT. JOHNSON

SHEET No. 4 of 6

LOGGED BY JOHN RICKER

STRATIGRAPHIC SECTION

SW RING ROAD, MT. JOHNSON - STRATIGRAPHIC SECTION

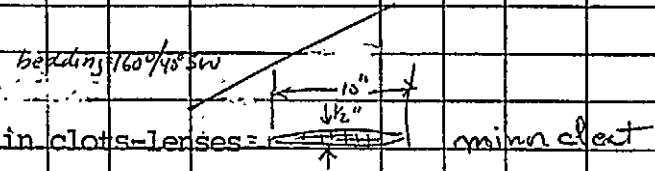
MAP No.

Peace River Canyon South

B.C. N.	UNIT		THICKNESS		MARKER	LITHOLOGY	STRUCTURE					
	From	To		True			Joint	Frac.	Freq./m	Coaling	Strike	Dip
	274'7"	275'7"		12"		massive ss						
	275'7"	279'7"		48"	(ca 4')	covered interval						
	279'7"	281'1 1/2"		18 1/2"		platey grey silst.						
	281'1 1/2"	283'10 1/2"		33"		dull, (rubby) coal basal part has granular vitrain clots-lenses						
	283'10 1/2"	284'4 1/2"		6"		carbonaceous shale						
	284'4 1/2"	289'4 1/2"		60"	(ca 5')	overburden						
	289'4 1/2"	289'6 1/2"		2"		trace silst; platey, grey, massive						
	289'6 1/2"	319'6 1/2"		360"	(ca 30')	covered interval (pebbly silst, - 20% rounded pebbles & boulders)						
	319'6 1/2"	320'6 1/2"		12"	(ca) 1'	massive brown wx silst						
	320'6 1/2"	324'6 1/2"		48"		grey silst-rusty weathering with ironstone concretions grading down to shaley silst						
	324'6 1/2"	326'5 1/2"		23"		platey bl shale, bl to light grey wx; grading up to silty sh						
	326'5 1/2"	327'3"		9 1/2"-10"		coal - cleated, dark, clean						
	327'3"	330'8"		41"		rusty wx, platey shale, bl fs.						
	330'8"	331'1 1/2"		5 1/2"-4 1/2"		coal-good cleat, dull, clean						
	331'1 1/2"	331'3 1/2"		2"		grey shale with pale yellow coating ;						
						minor coaley partings						

331'3 1/2"
274'7"
56'8 1/2"
✓

680 1/2" ÷ 12" = 56'8 1/2" / p. 4 Totals



DRILL CORE LOG

OLE No. SW RING ROAD, MT. JOHNSON

SHEET No. 5 of 6

LOGGED BY JOHN RICKER

STRATIGRAPHIC SECTION

SW RING ROAD, MT. JOHNSON - STRATIGRAPHIC SECTION

MAP No.

Peace River Canyon South

C.N.	UNIT		THICKNESS		MARKER	LITHOLOGY	STRUCTURE							
	From	To	True				Joint	Frac.	Freq./m	Coaling	Strike	Dip		
Starts rapidly top	331' 3 1/2"	331' 5 1/2"	2"-6"	thick	↖	(with drag folds) ^{2"-6"} lensing over distance of 5' exposure of basal unit					130°	35° SW	Baldwin	
	331' 5 1/2"	338' 8 1/2"	87"			papery carbonaceous shale (sooty); drag folds; slightly coaly								
	338' 8 1/2"	342' 1 1/2"	40"			coaley & carbonaceous shale-sheared looking with coal lenses up to 3' long x 2"								
	342' 1 1/2"	342' 11 1/2"	11"			grey silst platey & massive to 1'								
						black shale								
						missing interval possibly a few inches of coal								
	342' 11 1/2"		23"			weathered sooty coal								
			48" ±	8"	Magnetite seam	vitrain coal lense (but ironstone lenses in up to 3 1/2" x 12")								
				6"		weathered coal								
				8"		pulverized weathered shaley coal								
		346' 11 1/2"		3"		coaley shale - with coaley lenses								
		346' 11 1/2"	347' 5 1/2"	6"		shaley silst								
	347' 5 1/2"	358' 5 1/2"	ca. 132" (about 11')			overburden								
	358' 5 1/2"	362' 10 1/2"	53"			platey silst to massive silst with ironstone concretion - shattered								
	362' 10 1/2"	363' 7 1/2"	9"			platey grey shale ^(basal) & silty shale (higher in section)								

363' 7 1/2"
- 351' 3 1/2"
32' 4"

388" ÷ 12 = 32' 4" ✓

p. 5 Total

DRILL CORE LOG

HOLE No. SW RING ROAD, MT. JOHNSON

SHEET No. 6 of 6

LOGGED BY JOHN RICKER

STRATIGRAPHIC SECTION

SW RING ROAD, MT. JOHNSON - STRATIGRAPHIC SECTION

Peace River Canyon South

MAP No.

H.C. N.	UNIT		THICKNESS		MARKER	LITHOLOGY	STRUCTURE					
	From	To		True			Joint	Frac.	Freq./m	Cooling	Strike	Dip
↑	363' 7 1/2"	364' 11 1/2"	"	16"		Coal with coaley silst - iron ^{stone} concretions - silty lense - like 6' long up to 5" thick.						
↑	364' 11 1/2"	365' 11 1/2"	"	12"		bl shale carbonaceous						
	365' 11 1/2"	368' 6 1/2"	"	31"		platey silst - shaley silst						
	368' 6 1/2"	370' 1 1/2"	"	18"		platey shale (top silty sh & silst)						
	370' 1 1/2"	370' 5 1/2"	"	5"		coal (bright)						
	370' 5 1/2"	371' 3 1/2"	"	10"		platey shale bl						
	371' 3 1/2"	372' 3 1/2"	"	12"		shattered & massive silst						
	372' 3 1/2"	372' 9 1/2"	"	6"		bl shale						
	372' 9 1/2"	382' 9 1/2"	"	120"	(ca 10')	limonitic silst. massive 3" to 1" segments & shaley plate silst						
	382' 9 1/2"	383' -	"	2 1/2"		carbonaceous shale						
	383' -	383' 8"	"	8"		cannel or highly weathered coal						
	383' 8"	384' 3"	"	7"		carbonaceous shale						
	384' 3"	384' 8"	"	5"		coal bright (splinters)						
	384' 8"	388' 9"	"	49"		carbonaceous shale - grey - bl						
	388' 9"	389' 3"	"	6"+		sooty coal (base not visible)						
				307 1/2" = 25' 7 1/2"	✓							
						covered: BASE OF STRATIGRAPHIC SECTION						
	309' 3"					silty m ^a trix with						
	-363' 7 1/2"					well rounded pebbles & boulders 10 - 20%						
	25' 7 1/2"											

Totals p. 6

OPEN FILE

CINNABAR PEAK MINES LTD.
MINE DEVELOPMENT DRILLING PROGRAM
1980
PEACE RIVER CANYON COAL PROPERTY
Volume 2 of 2

Licences: 3407 to 3444
Land District: Peace River
NTS: 93-0/16
Latitude: 55°55'N
Longitude: 122°05'W
Owner/Operator: Cinnabar Peak Mines Ltd.
Consultant: L.C.G. Nichols Consulting Ltd.
Authors: John Ricker & L.C.G. Nichols, P.Eng., P.Geol
Date of Field Work: October - November 1980
Submission Date: February 1981

CONFIDENTIAL
BRANCH
ASSESSMENT REPORT

00 575

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Appendix A - Drill Logs & Stratigraphic Logs

Drill Core Logs DDH 80-1
Drill Core Logs DDH 80-2
Drill Core Logs DDH 80-3
Drill Core Logs DDH 80-4
Drill Core Logs DDH 80-5
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Stratigraphic Logs <u>Coalbed Creek</u>
Stratigraphic Logs <u>NW Ring Road</u>
Stratigraphic Logs <u>SW Ring Road</u>

Volume 2

Appendix B - Laboratory Analyses of Selected Coal Samples

Raw Coal Analysis
Float-Sink Tests
Analysis of Float-Sink Products

Appendix C (in plastic pockets)

Stratigraphic Section DDH 80-1
Stratigraphic Section DDH 80-2
Stratigraphic Section DDH 80-3
Stratigraphic Section DDH 80-4
Stratigraphic Section DDH 80-5
Stratigraphic Section DDH 80-6

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Volume 2 continued

Stratigraphic Section Coalbed Creek

Stratigraphic Section NW Ring Road

Stratigraphic Section SW Ring Road

MAP 1 Peace River Canyon Property 1980 Program
 (in plastic pocket)

FIGURE 1 Index Map

APPENDIX B

Laboratory Analyses of Selected Coal Samples

Raw Coal Analysis

Float-Sink Tests

Analysis of Float-Sink Products

Raw Coal Analysis

L.C.G. NICHOLS CONSULTING LTD.

ATTN: L. Nichols

LORING LABORATORIES LTD

CERTIFICATE of COAL TESTING

Page # 1

FILE NO.: 20763

DATE: January 6, 1981

SAMPLE NO.	IDENTIFICATION	SAMPLE TYPE	% RECOVERY			REC'D % H ₂ O	% H ₂ O	% VCL MATTER	% ASH	% FIXED CARBON	% S	BTU /LB.	F.S.I.	
			SINK	FLOAT										
87' 1/2" - 93' 5 1/2" 26.6 - 28.5 m	✓ 80-1	Raw Coal			As Received	4.97	-	22.23	20.05	52.75	.53	11,196	2 1/2	TITAN
					Air Dried	-	1.06	23.14	20.88	54.92	.55	11,657		
					Dry Basis	-	-	23.39	21.10	55.51	.56	11,782		
248' 11" - 253' 3 1/2" 75.8 - 77.2 m	✓ 80-1	Raw Coal			As Received	2.98	-	22.10	21.72	53.20	.71	11,300	5	TITAN
					Air Dried	-	0.93	22.57	22.18	54.32	.73	11,539		
					Dry Basis	-	-	22.78	22.39	54.83	.74	11,647		
276' 11 1/2" - 284' 6" - (318') 84.4 m - 84.7 m	✓ 80-1	Raw Coal			As Received	1.67	-	39.48	41.44	17.41	.24	4,371	1	Analysis indicated carbonates present FALLS
					Air Dried	-	0.54	39.93	41.92	17.61	.24	4,421		
					Dry Basis	-	-	40.15	42.15	17.70	.24	4,445		
(318') - 276' 11 1/2" - 284' 6" 84.7 m - 86.7 m	✓ 80-1	Raw Coal			As Received	3.01	-	24.19	6.51	66.29	.62	13,847	5 1/2	FALLS
					Air Dried	-	0.78	24.75	6.66	67.81	.63	14,165		
					Dry Basis	-	-	24.94	6.71	68.35	.63	14,276		
420' 1/2" - 422" 128.0 - 128.6 m	✓ 80-1	Raw Coal			As Received	2.17	-	21.62	21.89	54.32	1.08	11,530	6 1/2	
					Air Dried	-	0.72	21.94	22.21	55.13	1.10	11,701		
					Dry Basis	-	-	22.10	22.37	55.53	1.11	11,786		
526' 8" - 529' 160.4 - 161.2 m	✓ 80-1	Raw Coal			As Received	2.65	-	19.50	6.55	71.30	.75	13,902	1 1/2	
					Air Dried	-	0.85	19.86	6.67	72.62	.76	14,159		
					Dry Basis	-	-	20.03	6.73	73.24	.77	14,280		
53' 8" - 56' 16.5 m - 17.1 m LITTLE SEAM	✓ 80-3	Raw Coal			As Received	3.84	-	21.57	6.92	67.67	.92	13,526	1 1/2	MOSEL
					Air Dried	-	0.96	22.22	7.13	69.69	.95	13,931		
					Dry Basis	-	-	22.44	7.20	70.36	.96	14,066		

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FILE NO.: 20763

Page # 2

DATE: January 6, 1981

SAMPLE NO.	IDENTIFICATION	SAMPLE TYPE	% RECOVERY			REC'D % H ₂ O	% H ₂ O	% VOL MATTER	% ASH	% FIXED CARBON	% S	BTU /LB.	F.S.I.	
			SINK*	FLOAT										
60'1"-66'3 1/2" 18.3 - 20.2 m MOGUL SEAM	✓ 80-3	Raw Coal			As Received Air Dried Dry Basis	3.89 - -	- 0.98 -	26.55 27.35 27.62	16.47 16.97 17.14	53.09 54.70 55.24	.78 .80 .81	11,027 11,361 11,473	1 1/2	mojed
137'7"-139'8 1/2" 41.9 - 42.6 m	✓ 80-3	Raw Coal			As Received Air Dried Dry Basis	2.68 - -	- 0.96 -	15.48 15.75 15.90	28.43 28.93 29.21	53.41 54.36 54.89	.75 .76 .77	10,430 10,614 10,717	1 1/2	
207'10"-212'10 1/2" 63.3 - 64.9 m	✓ 80-4	Raw Coal			As Received Air Dried Dry Basis	5.64 - -	- 1.01 -	24.46 25.66 25.92	9.49 9.96 10.06	60.41 63.37 64.02	.87 .93 .94	12,879 13,511 13,649	7 1/2	
217'1 1/2"-225'5" 66.2 - 68.7 m	✓ 80-4	Raw Coal			As Received Air Dried Dry Basis	3.75 - -	- 0.96 -	24.15 24.85 25.09	18.26 18.79 18.97	53.84 55.40 55.94	.52 .54 .55	11,240 11,566 11,678	3 1/2	
428'2"-432'4" 130.5 - 131.9 m GETTING SEAM	✓ 80-4	Raw Coal			As Received Air Dried Dry Basis	4.61 - -	- 1.07 -	21.01 21.79 22.03	22.39 23.22 23.47	51.99 53.92 54.50	.88 .91 .92	10,754 11,153 11,274	1 1/2	
491'10 1/2"-494'1 1/2" 150.0 - 150.6 m LITTLE SEAM	✓ 80-4	Raw Coal			As Received Air Dried Dry Basis	3.89 - -	- 0.95 -	21.93 22.60 22.82	10.64 10.97 11.08	63.54 65.48 66.10	.72 .74 .75	12,977 13,374 13,502	2 1/2	LITTLE MOGUL
76'11 1/2"-78'9 1/2" 23.5 - 24.0 m	✓ 80-5	Raw Coal			As Received Air Dried Dry Basis	6.35 - -	- 1.56 -	9.53 10.02 10.18	71.85 75.53 76.73	12.27 12.89 13.09	1.20 1.26 1.28	2,528 2,657 2,699	0	



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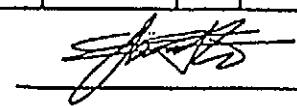
CERTIFICATE of COAL TESTING

FILE NO.: 20763

Page # 3

DATE: January 6, 1981

SAMPLE NO.	IDENTIFICATION	SAMPLE TYPE	% RECOVERY			REC'D % H ₂ O	% H ₂ O	% VCL MATTER	% ASH	% FIXED CARBON	% S	BTU /LB.	F.S.I.	
			SINK	FLOAT										
148'11 $\frac{1}{2}$ "-153'2" 45.4-46.7m TITAN SEAM	/80-5	Raw Coal			As Received Air Dried Dry Basis	4.46 - -	- 1.10 -	22.13 22.91 23.16	9.86 10.21 10.32	63.55 65.78 66.52	.63 .65 .66	12,940 13,395 13,544	2	
157'-160'1" 47.9-48.8m FALL SEAM	/80-5	Raw Coal			As Received Air Dried Dry Basis	9.78 - -	- 1.07 -	23.32 25.57 25.85	5.54 6.07 6.14	61.36 67.29 68.01	.55 .60 .61	12,841 14,081 14,233	4 $\frac{1}{2}$	
364'3"-366'4" 111.0-111.7m GETTING SEAM	/80-5	Raw Coal			As Received Air Dried Dry Basis	2.90 - -	- 0.84 -	21.78 22.24 22.43	5.03 5.14 5.18	70.29 71.78 72.39	.80 .82 .83	14,111 14,410 14,532	1 $\frac{1}{2}$	
409'2"-411'6" 124.7-125.4m	/80-5	Raw Coal			As Received Air Dried Dry Basis	3.06 - -	- 0.88 -	19.79 20.24 20.42	3.49 3.57 3.61	73.66 75.31 75.97	.77 .79 .80	14,184 14,503 14,632	1 $\frac{1}{2}$	
444'1 $\frac{1}{2}$ "-448'1 $\frac{1}{2}$ " 135.4-136.8m MOGUL SEAM	/80-5	Raw Coal			As Received Air Dried Dry Basis	3.10 - -	- 0.79 -	22.21 22.74 22.92	10.24 10.48 10.56	64.45 65.99 66.52	.81 .83 .84	13,009 13,319 13,425	1 $\frac{1}{2}$	
496'3"-499'9 $\frac{1}{2}$ " 151.3-152.3m	/80-5	Raw Coal			As Received Air Dried Dry Basis	4.58 - -	- 0.88 -	20.79 21.60 21.79	15.89 16.51 16.66	58.74 61.01 61.55	.57 .59 .60	11,778 12,235 12,344	2	with 24.
56'11 $\frac{1}{2}$ "-58'10" 17.4-17.9m	/80-6	Raw Coal			As Received Air Dried Dry Basis	4.03 - -	- 0.73 -	32.79 33.92 34.17	26.95 27.88 28.09	36.23 37.47 37.74	.91 .94 .95	9,015 9,325 9,394	8	



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Page # 4

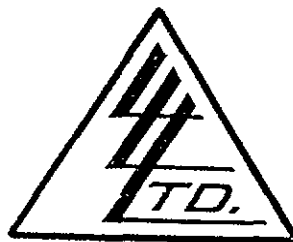
FILE NO.: 20763

DATE: January 6, 1981

SAMPLE NO.	IDENTIFICATION	SAMPLE TYPE	% RECOVERY			REC'D % H ₂ O	% H ₂ O	% VCL MATTER	% ASH	% FIXED CARBON	% S	BTU /LB.	F.S.I.	
			SINK	FLOAT										
98'2"-103'8" 29.9-31.6 m TITAN SEAM	80-6	Raw Coal			As Received Air Dried Dry Basis	2.94 - -	- 1.06 -	22.79 23.23 23.48	11.75 11.98 12.11	62.52 63.73 64.41	.87 .89 .90	12,962 13,213 13,355	5½	7.4
117'7"-123'2" 35.8-37.5 m FALL SEAM	80-6	Raw Coal			As Received Air Dried Dry Basis	2.92 - -	- 0.83 -	26.39 26.96 27.19	16.93 17.29 17.43	53.76 54.92 55.38	.60 .61 .62	11,303 11,546 11,643	3½	
325'9½"-328'2" 99.3-100.0 m	80-6	Raw Coal			As Received Air Dried Dry Basis	2.89 - -	- 0.87 -	22.52 22.99 23.19	16.50 16.84 16.99	58.09 59.30 59.82	1.89 1.93 1.95	12,054 12,305 12,413	2½	
372'5½"-374'11" 113.5-114.3 m	80-6	Raw Coal			As Received Air Dried Dry Basis	2.98 - -	- 0.92 -	19.13 19.54 19.72	3.57 3.65 3.68	74.32 75.89 76.60	.89 .91 .92	14,100 14,399 14,533	2	
399'9"-401'11½" 121.4-122.5 m LITTLE SEAM	80-6	Raw Coal			As Received Air Dried Dry Basis	2.55 - -	- 1.03 -	20.46 20.78 21.00	11.19 11.36 11.48	65.80 66.83 67.52	.91 .92 .93	12,962 13,164 13,301	1½	
410'3½"-416'½" 125.1-126.8 m MOGUL SEAM	80-6	Raw Coal			As Received Air Dried Dry Basis	3.82 - -	- 0.96 -	26.08 26.86 27.12	16.59 17.08 17.25	53.51 55.10 55.63	.76 .78 .79	10,928 11,253 11,362	2	Mogul.
462'10½"-466'1½" 141.1-142.2 m	80-6	Raw Coal			As Received Air Dried Dry Basis	2.68 - -	- 1.00 -	22.04 22.42 22.65	5.68 5.78 5.84	69.60 70.80 71.51	.70 .71 .72	13,752 13,989 14,130	1½	6.16 m/V

Float-Sink Tests

To: L.C.G. NICHOLS CONSULTING LTD.,
Box 14, Site 38, RR # 4,
Sherwood Park, Alberta T8A 3K4



File No. 20763
Date January 6, 1981
Samples Raw Coal

ATTN: L. Nichols

Certificate of
ASSAY of
LORING LABORATORIES LTD.

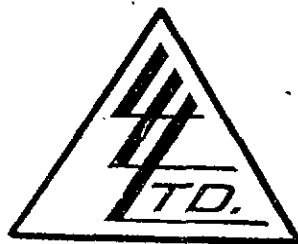
Page # 5

SAMPLE No.	Wt % 1.40 Flt	Wt % 1.50 Flt	Wt % 1.60 Flt	Wt % 1.60 Sink
<u>"Air Dried Basis"</u>				
<u>80-1</u>				
276'11 $\frac{1}{2}$ "-284'6"-A	17.25	2.08	1.55	79.12
276'11 $\frac{1}{2}$ "-284'6"-B	85.78	2.94	3.64	7.64
420'1 $\frac{1}{2}$ "-422'0"	66.50	4.30	2.55	26.65
526'8"-529'	80.30	12.22	4.59	2.89
<u>80-3</u>				
53'8"-56'	86.75	6.55	2.50	4.20
<u>80-4</u>				
491'10 $\frac{1}{2}$ "-494'1 $\frac{1}{2}$ "	72.64	13.63	4.65	9.08
<u>80-5</u>				
76'11 $\frac{1}{2}$ "-78'9 $\frac{1}{2}$ "	5.25	1.86	1.11	91.78
148'11 $\frac{1}{2}$ "-153'2"	81.00	10.20	3.53	5.27
157'0"-160'1"	92.02	4.36	0.90	2.72
364'3"-366'4"	94.29	2.08	1.44	2.19
496'3"-499'9 $\frac{1}{2}$ "	65.00	11.93	4.95	18.12
409'2"-411'6"	96.03	2.53	0.50	0.94
I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES				

Rejects Retained one month.
Pulps Retained one month
unless specific arrangements
made in advance.

Assayer

To: L.C.G. NICHOLS CONSULTING LTD.,
Box 14, Site 38, RR # 4,
Sherwood Park, Alberta T8A 3K4



File No. 20763
Date January 6, 1981
Samples Raw Coal

ATTN: L. Nichols

Certificate of
ASSAY of
LORING LABORATORIES LTD.

Page # 6

SAMPLE No.	Wt % 1.40 Flt	Wt % 1.50 Flt	Wt % 1.60 Flt	Wt % 1.60 Sink
<u>80-6</u>				
410'3 $\frac{1}{2}$ "-416'1 $\frac{1}{2}$ "	64.99	1.84	0.58	32.59
462'10 $\frac{1}{2}$ "-466'1 $\frac{1}{2}$ "	84.88	7.56	2.59	4.97
372'5 $\frac{1}{2}$ "-374'11"	93.25	3.70	0.48	2.57
56'1 $\frac{1}{2}$ "-58'10"	47.62	5.79	2.63	43.96
<p>I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES</p>				

Rejects Retained one month.

Pulps Retained one month
unless specific arrangements
made in advance.

Assayer

Analysis of Float-Sink Products

L.C.G. NICHOLS CONSULTING LTD.

BOX 14, SITE 38, RR #4, SHERWOOD PARK, ALBERTA T8A 3K4 (403) 467-1870

Mine Development Drilling Program
For 1980 At The
Peace River Canyon Coal Property
British Columbia

C.L.# 3407-3444

April 22, 1981

Cinnabar Peak Mines Ltd.,
10549 110th Street,
Edmonton, Alberta
T5H 3C6

Attention: Mr. E. Lipsett,
Managing Director

Dear Mr. Lipsett,

Re: Mine Development Drilling Program for 1980 at
the Peace River Canyon Coal Property, British
Columbia

Attached to this letter report are the results of further
laboratory test work completed at Loring Laboratories,
Calgary, on selected case samples of coal which were taken
during the 1980 drilling program.

These data represent the completion of the program and this
letter report the conclusion of the documentation of the
work we initially detailed in my 2 volume report of
February 6, 1981 to Cinnabar Peak Mines Ltd.

The Laboratory data includes moisture ash sulphur and
FSI data on selected individual float product samples (+1.40
and cumulative 1.5).

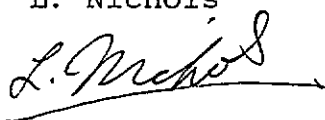
To complete the documentation of the project, I have attached
original sepias (in rolled form), for all figures, maps and
selections as included in the February report.

Six copies of the letter report are enclosed for your convenience.

I trust that you will find this data satisfactory.

Yours sincerely,

L. Nichols

A handwritten signature in dark ink, appearing to read 'L. Nichols', with a horizontal line drawn underneath it.

L.C.G. NICHOLS CONSULTING LTD.

BOX 14, SITE 38, RR #4, SHERWOOD PARK, ALBERTA T8A 3K4 (403) 467-1870

April 22, 1981

Loring Laboratories Ltd.
629 Beaverdam Rd. N.E.
Calgary, Alberta.
T2K 4W2
Attn: Mr. Anders

Dear Mr. Anders:

Re: Cinnabar Peak Mines Ltd. - Coal Analyses

This letter on behalf of my client, authorizes you to proceed with follow-up assay work on the drill core samples at your laboratory, as soon as possible.

Please note that there was a discrepancy in the core sample numbers and these should be changed to read as follows:

Sample number: 276'11½"-284'6"A should read: 276'11½"-278'
276'11½"-284'6"B should read: 278'284'6"

Assays are requested for sulphur and ash on the individual float samples as follows:

80-1
278'-284'6" Ash and Sulphur on the 1.4 and 1.5 ft. samples
420'½"-422' " " " " " " " " " "
526'8"-529' " " " " " " " " " "

80-3
53'8"-56" " " " " " " " " " "

80-4
491'10½"-494'1½" " " " " " " " " " "

80-5
148'11½"-153'2" " " " " " " " " " "
157'-160'1" " " " " " " " " " "
364'3"-366'4" " " " " " " " " " "
496'3"-499'9½" " " " " " " " " " "
409'2"-411'6" " " " " " " " " " "

80-6
410'3½"-416'½" " " " " " " " " " "
462'10½"-466'4½" " " " " " " " " " "
372'5½"-374'11" " " " " " " " " " "
56'½"-58'10" " " " " " " " " " "

Total of 28 ash and 28 sulphur analyses.

- 2 -

In addition, an F.S.I. analysis of each of the above samples should be run on a physically combined sample of the float products for a total of 14 analyses.

Yours sincerely,

L. Nichols

L.C.G. NICHOLS CONSULTING LTD.

cc: E. Lipsett, Director
Cinnabar Peak Mines Ltd.
P. Appleby

L.C.G. NICHOLS CONSULTING LTD.

BOX 14, SITE 38, RR #4, SHERWOOD PARK, ALBERTA T8A 3K4 (403) 467-1870

L.C.G. NICHOLS CONSULTING LTD.

LORING LABORATORIES LTD

ATTN: L. Nichols

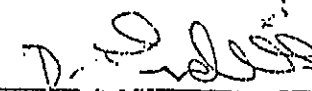
CERTIFICATE of COAL TESTING

Page # 4

FILE NO. 20994

DATE February 10, 1981

SAMPLE NO.	IDENTIFICATION	SAMPLE TYPE	% RECOVERY			REC'D % H ₂ O	% H ₂ O	% VOL MATTER	% ASH	% FIXED CARBON	% S	BTU LB.	F.S.I.	
			SINK	FLOAT										
		Cumulative 1.50 Flt			Air Dried Dry Basis		.76 -		7.26 7.32		1.07 1.08		9	



SAMPLE NO.	IDENTIFICATION	SAMPLE TYPE	% RECOVER:			REC'D % H ₂ O	% H ₂ O	% VOL MATTER	% ASH	% FIXED CARBON	% S	BTU LB.	F.S.I.	
			SINK	FLOAT										
409'2"-411'6"	80-5	+1.40 Flt			Air Dried Dry Basis		.91 -		3.19 3.22		.75 .76			
		Cumulative 1.50 Flt			Air Dried Dry Basis		.91 -		3.22 3.25		.72 .73		1½	
410'3½"-416'1½"	80-6	+1.40 Flt			Air Dried Dry Basis		.89 -		2.14 2.16		.78 .79			
		Cumulative 1.50 Flt			Air Dried Dry Basis		.81 -		2.23 2.25		.77 .78		2½	
462'10½"-466' 4½"	80-6	+1.40 Flt			Air Dried Dry Basis		.82 -		3.30 3.33		.74 .75			
		Cumulative 1.50 Flt			Air Dried Dry Basis		.74 -		3.67 3.70		.71 .72		1½	
372'5½"-374' 11½"	80-6	+1.40 Flt			Air Dried Dry Basis		.94 -		2.42 2.44		.86 .87			
		Cumulative 1.50 Flt			Air Dried Dry Basis		.74 -		2.61 2.63		.83 .84		2	
56'½"-58'10"	80-6	+1.40 Flt			Air Dried Dry Basis		.70 -		7.00 7.05		1.06 1.07			

D. E. Oles

SAMPLE NO.	IDENTIFICATION	SAMPLE TYPE	% RECOVERY			REC'D % H ₂ O	% H ₂ O	% VOL MATTER	% ASH	% FIXED CARBON	S	STU LB	F.S.I.
			SINK	FLOAT									
148'11 $\frac{1}{2}$ "-153'2"	80-5	Cumulative 1.50 Flt			Air Dried Dry Basis		.69 -		7.36 7.41		.73 .74		2 $\frac{1}{2}$
		+1.40 Flt			Air Dried Dry Basis		.96 -		6.18 6.24		.65 .66		
		Cumulative 1.50 Flt			Air Dried Dry Basis		.80 -		7.52 7.58		.62 .62		2
157'-160'1"	80-5	+1.40 Flt			Air Dried Dry Basis		1.00 -		3.70 3.74		.60 .61		
		Cumulative 1.50 Flt			Air Dried Dry Basis		.86 -		4.01 4.04		.62 .63		5
		+1.40 Flt			Air Dried Dry Basis		.81 -		3.06 3.08		.82 .83		
164'3"-366'4"	80-5	Cumulative 1.50 Flt			Air Dried Dry Basis		.79 -		3.10 3.12		.80 .81		1 $\frac{1}{2}$
		+1.40 Flt			Air Dried Dry Basis		.92 -		4.72 4.76		.65 .66		
		Cumulative 1.50 Flt			Air Dried Dry Basis		.86 -		5.50 5.55		.63 .64		2



SAMPLE NO.	IDENTIFICATION	SAMPLE TYPE	RECORD		WET DRY BASIS	WET DRY BASIS	VOL. MATTER	ASH	FIXED CARBON	S	BTU LB.	F.S.
			SINK	FLOAT								
278'-284' 6"	80-1	+1.40 Flt			Air Dried	.68		3.51	.63			
		Dry Basis				-		3.53	.63			
		Cumulative			Air Dried	.79		3.55	.62			5½
		1.50 Flt			Dry Basis	-		3.58	.62			
420' ½"-422'	80-1	+1.40 Flt			Air Dried	.59		4.41	1.22			
		Dry Basis				-		4.44	1.23			
		Cumulative			Air Dried	.71		5.05	1.22			7½
		1.50 Flt			Dry Basis	-		5.09	1.23			
526' 8"-529'	80-1	+1.40 Flt			Air Dried	.64		3.42	.76			
		Dry Basis				-		3.44	.76			
		Cumulative			Air Dried	.77		4.22	.71			1½
		1.50 Flt			Dry Basis	-		4.25	.72			
53' 8"-56'	80-3	+1.40 Flt			Air Dried	.96		3.29	.95			
		Dry Basis				-		3.32	.96			
		Cumulative			Air Dried	.79		4.18	.89			1½
		1.50 Flt			Dry Basis	-		4.21	.90			
491' 10 ½"-494' 1½"	80-4	+1.40 Flt			Air Dried	.74		6.31	.76			
		Dry Basis				-		6.36	.77			

D. Nichols

APPENDIX C

Stratigraphic Section DDH 80-1

Stratigraphic Section DDH 80-2

Stratigraphic Section DDH 80-3

Stratigraphic Section DDH 80-4

Stratigraphic Section DDH 80-5

Stratigraphic Section DDH 80-6
In plastic pocket

Stratigraphic Section Coalbed Creek

Stratigraphic Section NW Ring Road

Stratigraphic Section SW Ring Road
In following plastic pocket

APPENDIX C

Stratigraphic Section DDH 80-1

Stratigraphic Section DDH 80-2

Stratigraphic Section DDH 80-3

Stratigraphic Section DDH 80-4

Stratigraphic Section DDH 80-5

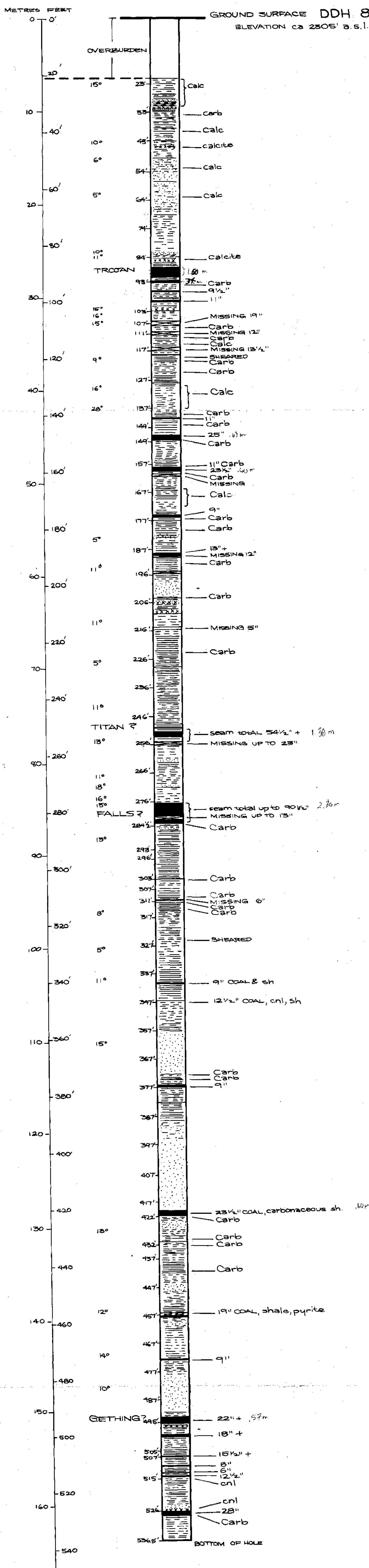
Stratigraphic Section DDH 80-6
In plastic pocket

Stratigraphic Section Coalbed Creek

Stratigraphic Section NW Ring Road

Stratigraphic Section SW Ring Road
In following plastic pocket

575



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PEACE RIVER CANYON PROPERTY

LEGEND

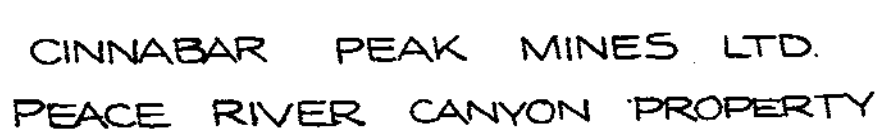
- thick
thin coalseams
- shale
- siltstone
- sandstone
- missing interval (position approximate)
- xxx pyrite
- f.c. fire clay
- carb carbonaceous, or coaley debris present in rock
- calc calcareous
- cnl cannel
- 7° dip of strata
- 137' drill marker
- TITAN? seam name
- THICKNESSES OF SELECTED SEAMS INDICATED.
TOTAL MAY INCLUDE PARTINGS & CANNEL.
REFER TO DRILL LOGS.

L.C.G. NICHOLS CONSULTING LTD.

GEOLOGY : JOHN RICKER
DRAFTING I.T.J.S.

JANUARY 1981

SEE MAP 1 FOR EXACT LOCATION

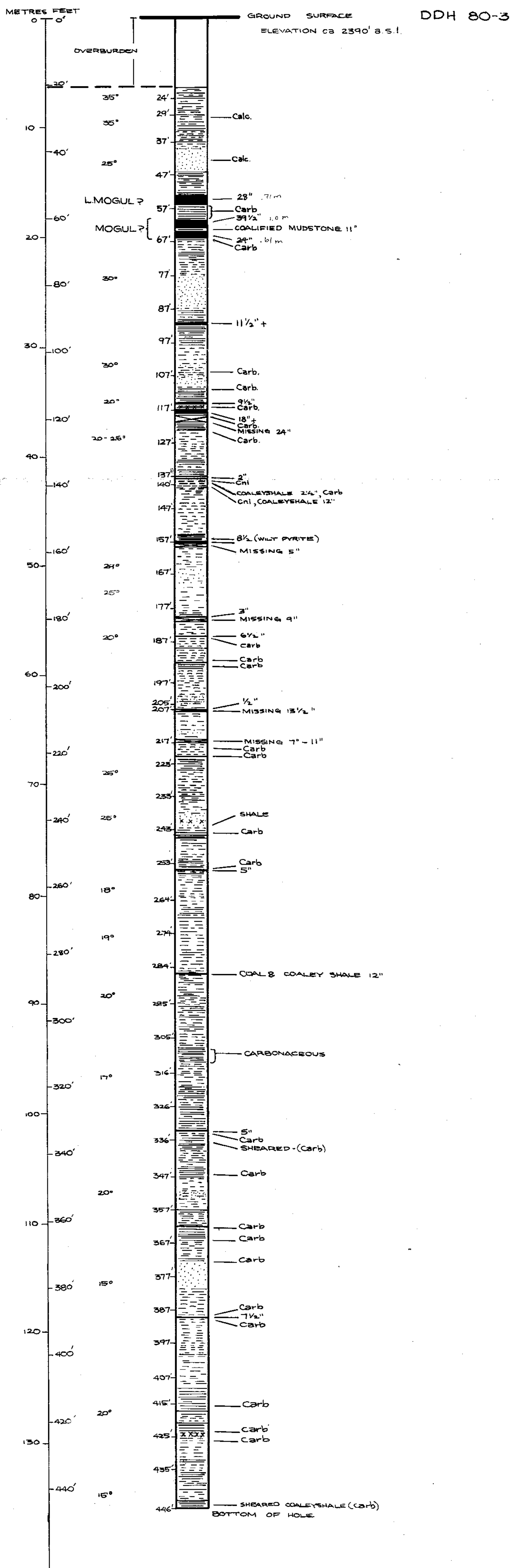


THICKNESSES OF SELECTED SEAMS INDICATED.
TOTAL MAY INCLUDE PARTINGS & CANNEL.
REFER TO DRILL LOGS.

- LCG. NICHOLS CONSULTING LTD.

JANUARY 1981

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LEGEND

	thick coalseams	THICKNESSES OF SELECTED SEAMS INDICATED. TOTAL MAY INCLUDE PARTINGS & CANNEL. REFER TO DRILL LOGS.
	thin coalseams	
	shale	
	siltstone	
	sandstone	
	missing interval (position approximate)	
xxx	pyrite	
f.c.	fire clay	
carb	carbonaceous, or coaley debris present in rock	
calc	calcareous	
cni	cannel	
7°	dip of strata	
137'	drill marker	
TITAN?	seam name	

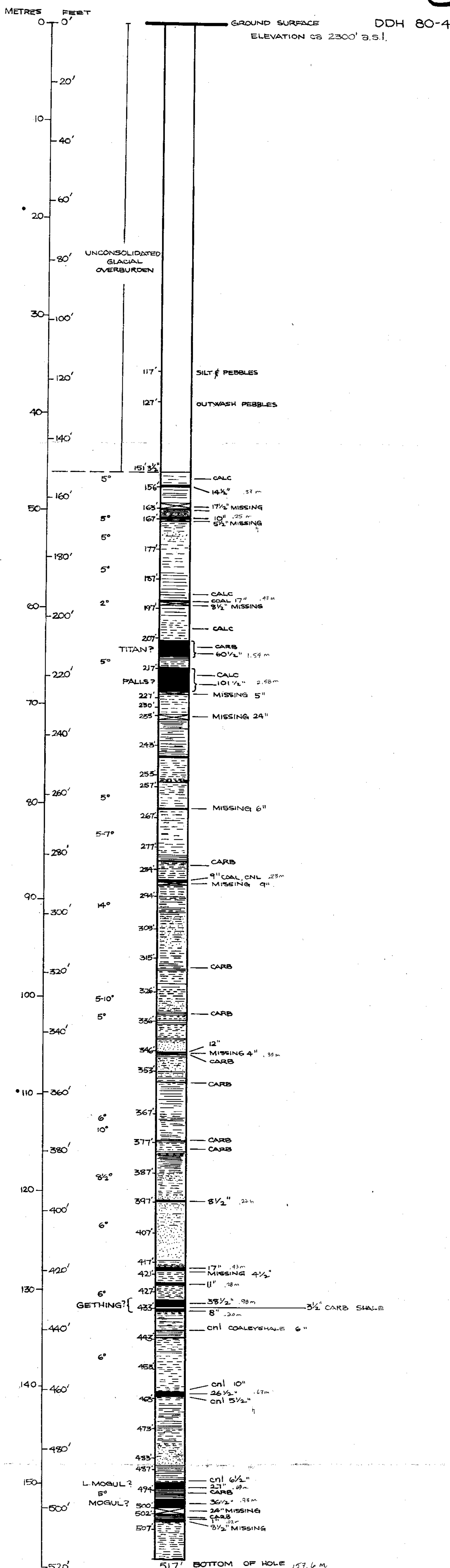
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GEOLOGY : JOHN RICKER

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JANUARY 1981

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LEGEND

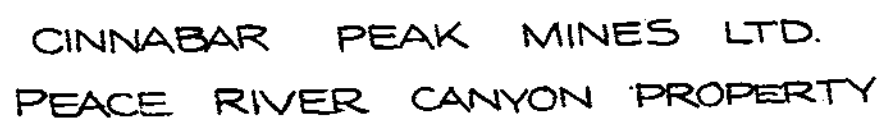
- thick
thin
coalseams
shale
siltstone
sandstone
missing interval (position approximate)
- xxx pyrite
f.c. fire clay
carb carbonaceous, or coaley debris present in rock
calc calcareous
cnl cannel
7° dip of strata
137' drill marker
TITAN? seam name
- THICKNESSES OF SELECTED SEAMS INDICATED.
TOTAL MAY INCLUDE PARTINGS & CANNEL.
REFER TO DRILL LOGS.

L.C.G. NICHOLS CONSULTING LTD.

GEOLOGY : JOHN RICKER
DRAFTING I.T.J.S.

JANUARY 1981

SEE MAP 1 FOR EXACT LOCATION



THICKNESSES OF SELECTED SEAMS INDICATED.
TOTAL MAY INCLUDE PARTINGS & CANNEL.
REFER TO DRILL LOGS.

siltstone

siltstone

sandstone

Abstract

xxx

pyrite

f.c.

Fire clay

carbonaceous, or coaley debris
present in rock

calc

calcareous

cni

cannel

70

dip of strata

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. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 84

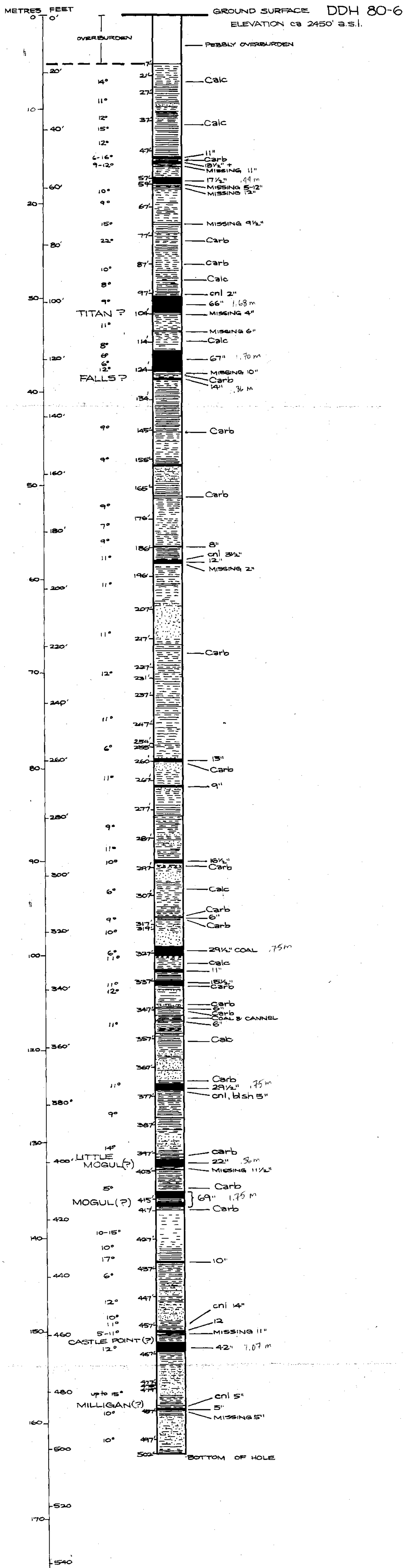
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SECRET

GEOLOGY : JOHN RICKER
DRAFTING : J. S.

JANUARY 1981

575



CINNABAR PEAK MINES LTD.
PEACE RIVER CANYON PROPERTY

LEGEND

| | | | |
|--------|-------|--|--|
| | thick | coalseams | THICKNESSES OF SELECTED SEAMS INDICATED. |
| | thin | | TOTAL MAY INCLUDE PARTINGS & CANNEL. |
| | | shale | REFER TO DRILL LOGS. |
| | | siltstone | |
| | | sandstone | |
| | | missing interval (position approximate) | |
| xxx | | pyrite | |
| f.c. | | fire clay | |
| carb | | carbonaceous, or coaley debris present in rock | |
| calc | | calcareous | |
| cni | | cannel | |
| 7° | | dip of strata | |
| 137' | | drill marker | |
| TITAN? | | seam name | |

L.C.G. NICHOLS CONSULTING LTD.

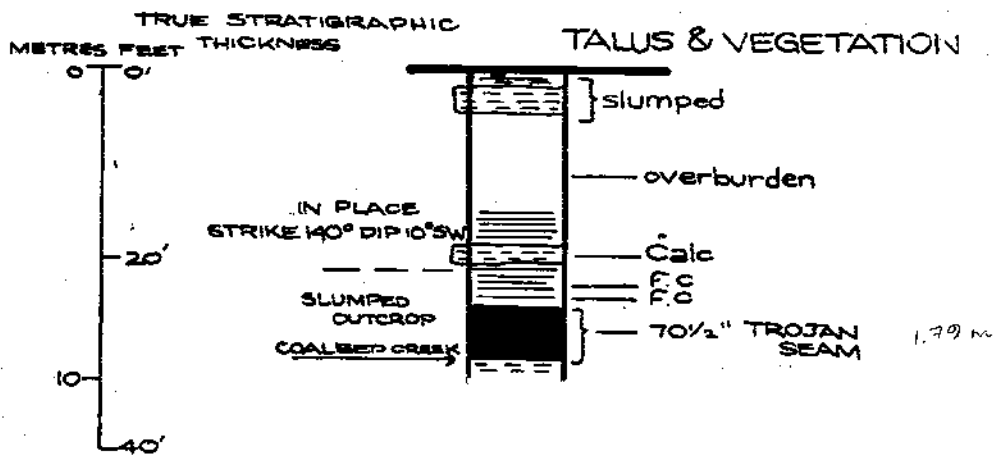
GEOLOGY : JOHN RICKER
DRAFTING I.T.J.S.

JANUARY 1981

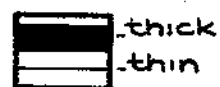
SEE MAP 1 FOR EXACT LOCATION

575

COALBED CREEK-STRATIGRAPHIC SECTION



CINNABAR PEAK MINES LTD.
PEACE RIVER CANYON PROPERTY

LEGEND

thick
thin coal seams

THICKNESSES OF SELECTED SEAMS INDICATED.
TOTAL MAY INCLUDE PARTINGS & CANNEL.
REFER TO DRILL LOGS.



shale



siltstone



sandstone



missing interval (position approximate)

xxx

pyrite

f.c.

fire clay

carb

carbonaceous, or coaley debris
present in rock

calc

calcareous

cni

cannel

7°

dip of strata

137'

drill marker

TITAN?

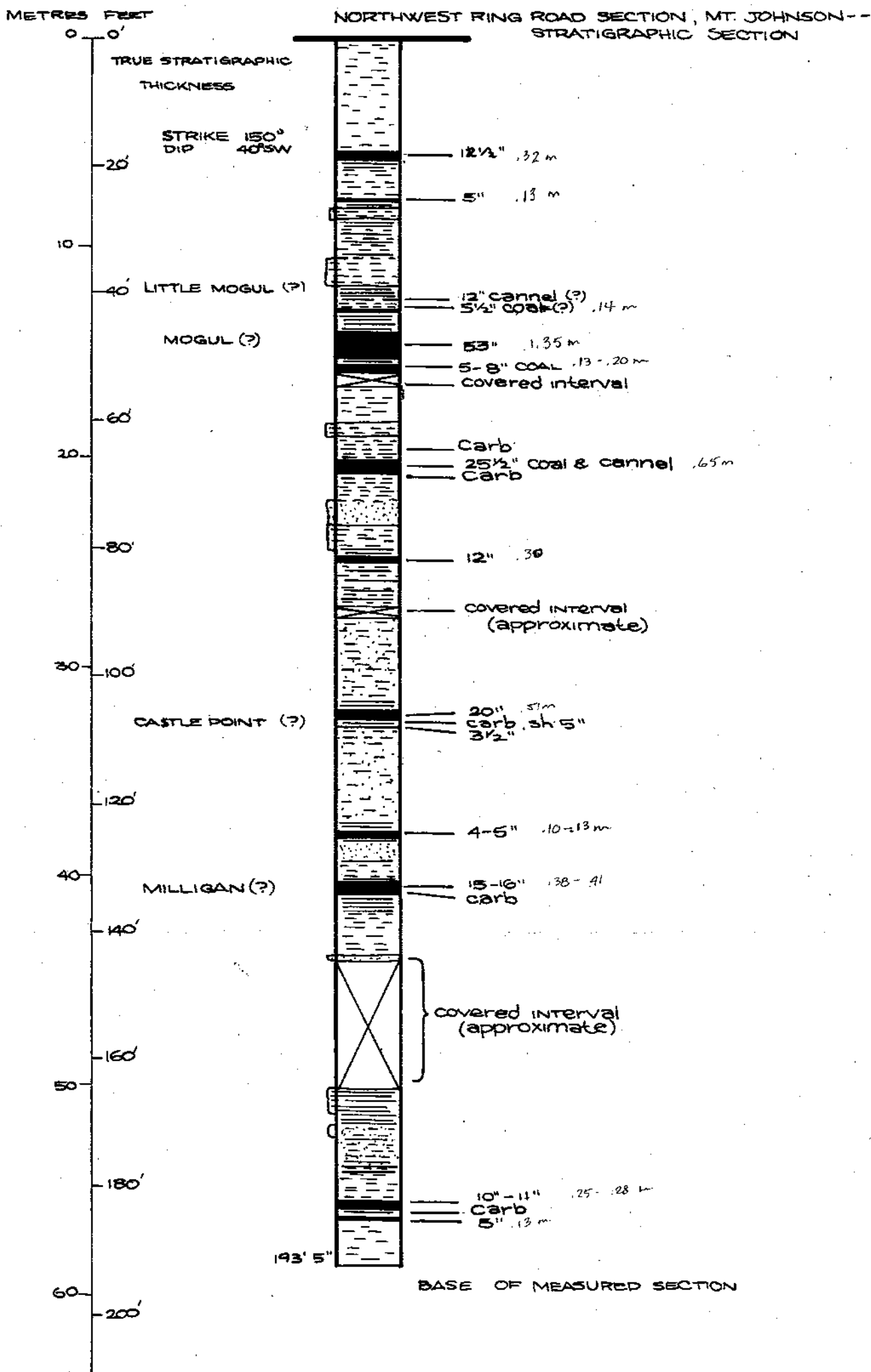
seam name

L.C.G. NICHOLS CONSULTING LTD.

GEOLOGY : JOHN RICKER
DRAFTING I.T.J.S.

JANUARY 1981

575



CINNABAR PEAK MINES LTD.
PEACE RIVER CANYON PROPERTY

LEGEND

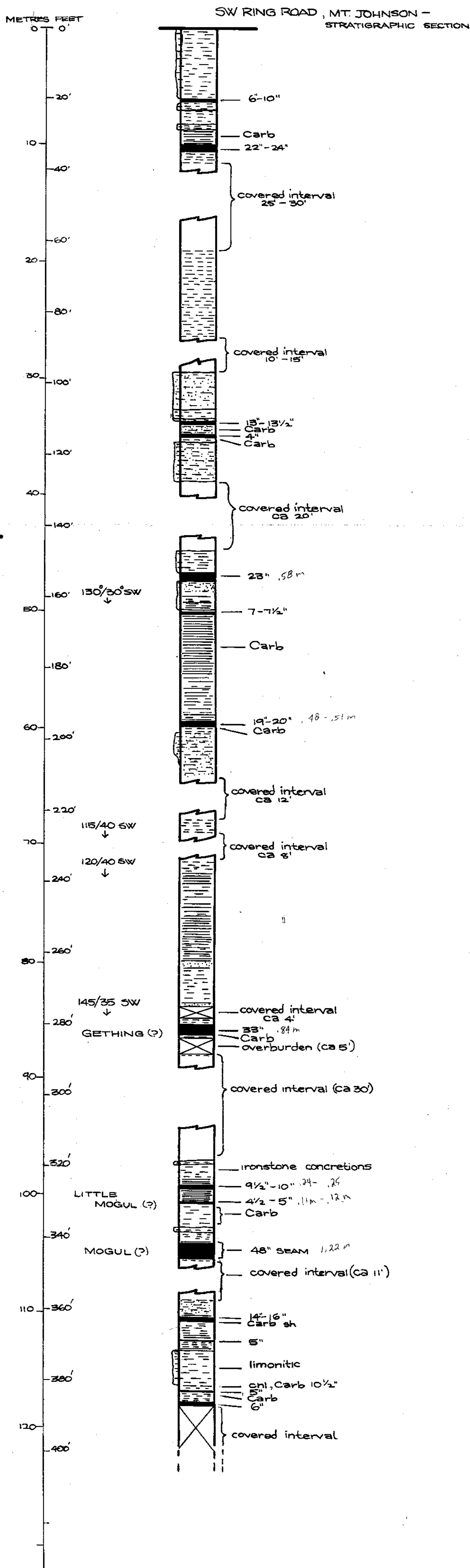
| | | | |
|--------|--|-----------|--|
| | thick | coalseams | THICKNESSES OF SELECTED SEAMS INDICATED. TOTAL MAY INCLUDE PARTINGS & CANNEL. REFER TO DRILL LOGS. |
| | thin | | |
| | shale | | |
| | siltstone | | |
| | sandstone | | |
| | missing interval (position approximate) | | |
| xxx | pyrite | | |
| f.c. | fire clay | | |
| carb | carbonaceous, or coaley debris present in rock | | |
| calc | calcareous | | |
| cni | cannel | | |
| 7° | dip of strata | | |
| 137' | drill marker | | |
| TITAN? | seam name | | |

L.C.G. NICHOLS CONSULTING LTD.

GEOLOGY : JOHN RICKER
DRAFTING I.T.J.S.

JANUARY 1981

575



CINNABAR PEAK MINES LTD.
PEACE RIVER CANYON PROPERTY

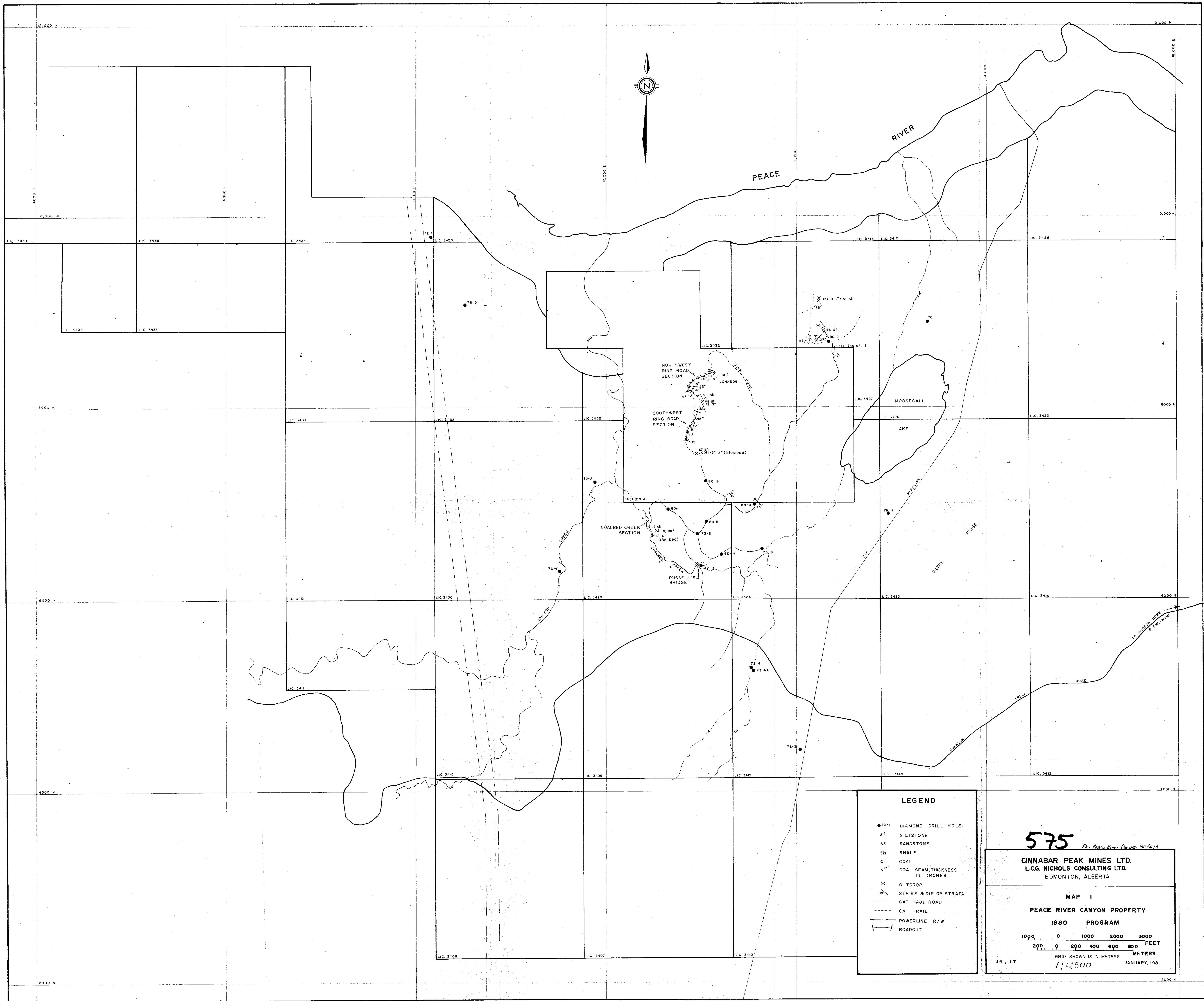
LEGEND

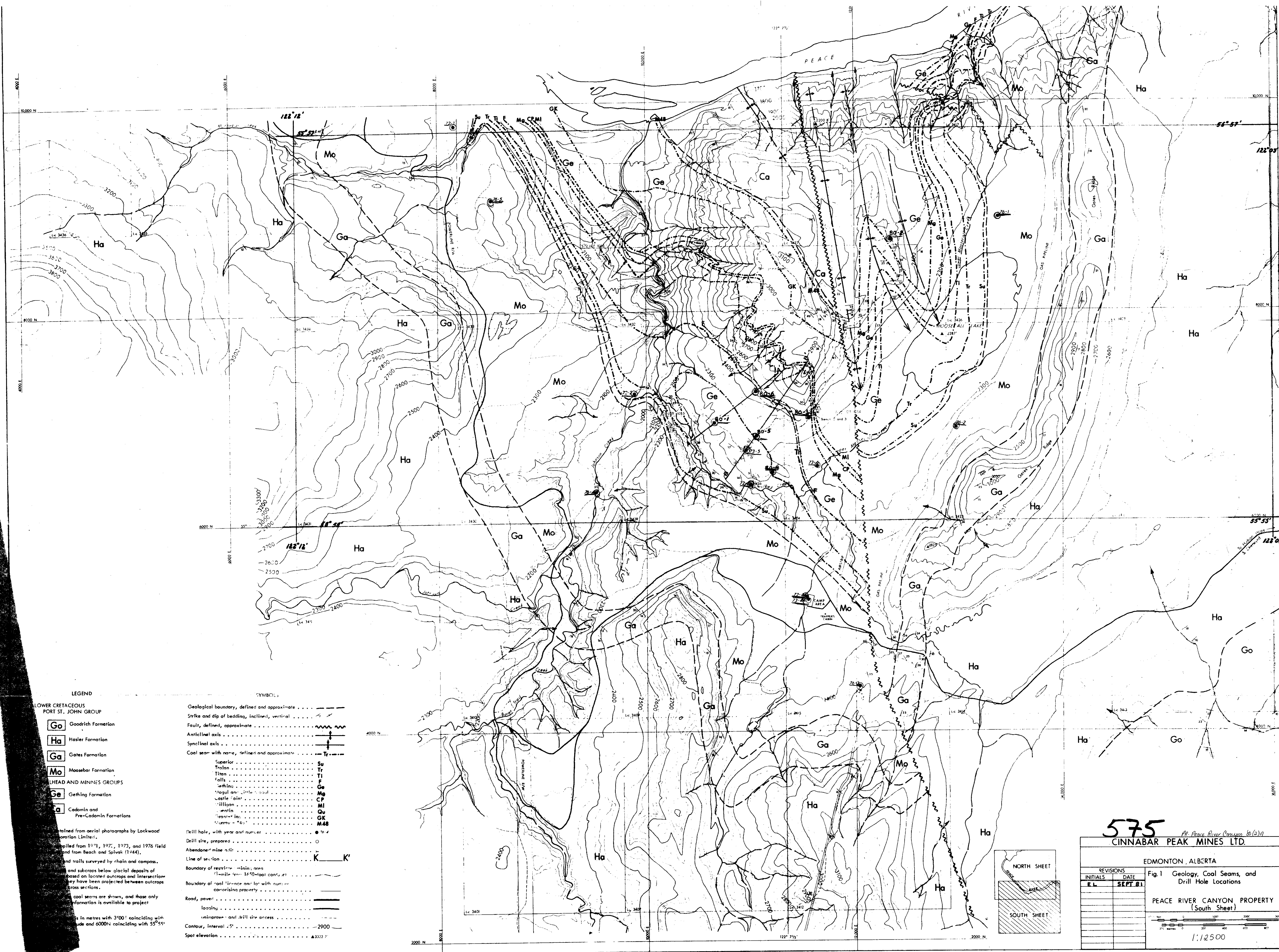
| | | | |
|--------|--|-----------|--|
| | thick | coalseams | THICKNESSES OF SELECTED SEAMS INDICATED.
TOTAL MAY INCLUDE PARTINGS & CANNEL.
REFER TO DRILL LOGS. |
| | thin | | |
| | shale | | |
| | siltstone | | |
| | sandstone | | |
| | missing interval (position approximate) | | |
| xxx | pyrite | | |
| f.c. | fire clay | | |
| carb | carbonaceous, or coaley debris present in rock | | |
| calc | calcareous | | |
| chl | cannel | | |
| 7° | dip of strata | | |
| 137' | drill marker | | |
| TITAN? | seam name | | |

L.C.G. NICHOLS CONSULTING LTD.

GEOLOGY : JOHN RICKER
DRAFTING I.T.J.S.

JANUARY 1981





LEGEND

LOWER CRETACEOUS
PORT ST. JOHN GROUP

Go Goodrich Formation

Ha Hasler Formation

Ga Gates Formation

Mo Moosebar Formation

HEAD AND MINNES GROUPS

Ge Gething Formation

Ca Cadomin and
Pre-Cadomin Formations

Obtained from aerial photographs by Lockwood
Corporation Limited.

Compiled from 1971, 1972, 1973, and 1976 field
work and from Beach and Spivak (1944).

and trails surveyed by chain and compass.

and subcrops below glacial deposits of
based on looter outcrops and intersection
they have been projected between outcrops
cross sections.

coal seams are shown, and those only
information is available to project

is in metres with 3'00" coinciding with
4000 and 6000N coinciding with 55°55'

SYMBOLS

Geological boundary, defined and approximate

Strike and dip of bedding, inclined, vertical

Fault, defined, approximate

Anticline axis

Synclinal axis

Coal seam with name, defined and approximate

Superior Su

Trojan Tr

Titan TI

Falls F

Gething Ge

Moosebar Mo

Castle Point CP

Milligan MI

Quaternary Qu

Gething GK

M48 M48

Drill hole, with year and number

Drill site, prepared

Abandoned mine shaft

Line of section K—K'

Boundary of restricted mining area
(1/4 mile from 1650-foot contour)

Boundary of coal licence area for with number
conveying property

Road, paved

loosing

unimproved and drill site access

Contour, interval 25' 2900

Spot elevation

575

PEACE RIVER CANYON 50(3)71

CINNABAR PEAK MINES LTD.

EDMONTON, ALBERTA

Fig. 1 Geology, Coal Seams, and
Drill Hole Locations

PEACE RIVER CANYON PROPERTY
(South Sheet)

1:12500

| REVISIONS | |
|-----------|---------|
| INITIALS | DATE |
| EL | SEPT 81 |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

NORTH SHEET

SOUTH SHEET

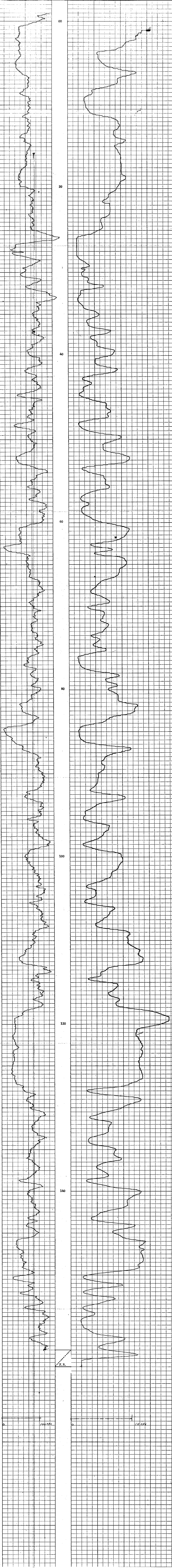
PEACE RIVER AREA 80 (2717) 80-1

GAMMA RAY NEUTRON LOG

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

| | | |
|------------------------|------------------|-----------------------------|
| FILE NO. | COMPANY | GEMMAAL PEAK |
| LOG SEC | WELL | 80-1 |
| TYPE | ROE | |
| W | M | |
| LOCATION | FIELD | PEACE RIVER CANTON PROPERTY |
| PROVINCE | BRITISH COLUMBIA | |
| GROUND LEVEL | | |
| Permanent Datum | | |
| Log Measured from | | |
| Wm Depth Measured from | | |
| Run No. | ONE | |
| Date | 17 OCT 1980 | |
| First Reading | 161 | |
| Last Reading | 0 | |
| Footnote Logged | 161 | |
| Depth Reached | 161.3 | |
| Depth Dilute | 161.5 | |
| Calving Rate | 11.4 | |
| Fluid Type | WATER | |
| Liquid Level | 8 | |
| Mud Dam | NR | |
| Run @ | 95 & 45° F | |
| Operating Time | 1 HOUR | |
| Truck No. | 132 | |
| Recorded by | SM | Witnessed By |
| | KICHER | |



ROKE

Oil Enterprises Ltd. Calgary, Alberta

FILE NO.

COMPANY

WELL

LOCATION

FIELD

PROVINCE

GROUND LEVEL

DATE

LIST READING

FORGE LOGGED

DEPTH REACHED

DEPTH OFFER

CASING DIKKE

FLUID TYPE

MIN. DIAM.

RM @ °C

OPERATING TIME

TRUCK NO.

STANDARD PEAK

80-1

PEACE RIVER CANYON PROPERTY

HANTISH, CALGARY

17 OCT 1980

11.5

148.5

163.5

11.5

WATER

NO

95 @ 45° F

1 HOUR

130

ONE SECTION

ST-SES

SEA DEPS-CAL

SEA

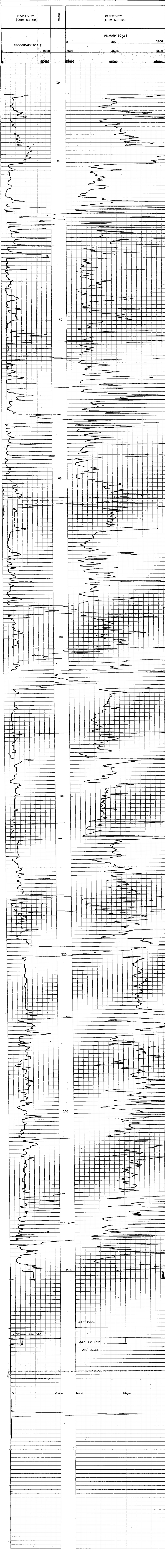
ABOVE PERM. DEPTH

NETTIC

575

Alta. Peace River (Canadian Rockies) No. 80-1

FOCUSED BEAM LOG 20 CM



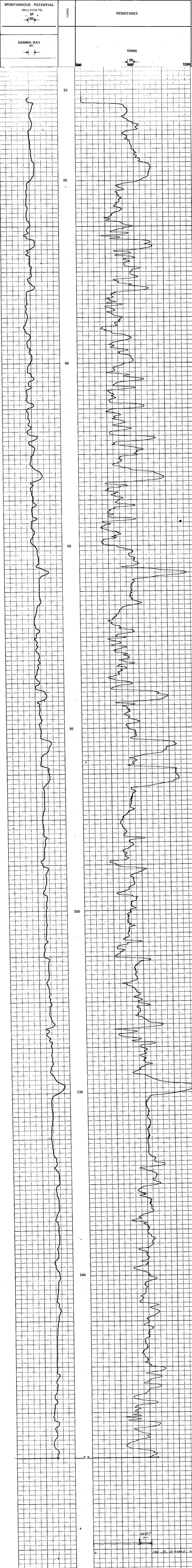
At Peace River (Bu. 117, 8.8.78) 80-1

ROKE

— RESISTANCE LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

| | | |
|--------------------------|-----------------------------|---------------------|
| FILE NO. | COMPANY | CINNAMAR PEAK |
| WELL | 80-1 | |
| LOCATION | | |
| FIELD | PEACE RIVER CANYON PROPERTY | |
| PROVINCE | BRITISH COLUMBIA | OTHER SERVICES |
| PERMANENT DATUM | GROUND LEVEL | GRN. DENS-CAL, ETL. |
| LOG MEASURED FROM | ABOVE PERM. DATUM | K. B. |
| WELL DEPTH MEASURED FROM | | CSC |
| | | GL. |
| | | NETRIC |
| DATE | ONE | |
| DATE | 17 OCT 1980 | |
| LAST READING | 11.5 | |
| FOOTAGE LOGGED | 148.5 | |
| DEPTH REACHED | 160 | |
| DEPTH DRIER | 163.5 | |
| CASING ROPE | 11.5 | |
| FLUID TYPE | WATER | |
| LIQUID LEVEL | 8 | |
| WELL DIAM. | NQ | |
| RTM @ 0 | 95 @ 45° F | |
| OPERATING TIME | 1 HOUR | |
| TRUCK NO. | 132 | |
| RECORDED BY | STM | WITNESSED BY |
| | ROCHER | |



ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.

COMPANY

WELL

LOCATION

FIELD

PROVINCE

Other Services

Permanent Datum

Log Measured from

Well Depth Measured from

SEC

RSE

M

80-3

PEACE RIVER CANYON PROPERTY

BRITISH COLUMBIA

SP-RS3

DEMS-CAL, FBI

TOP OF CASING

0.2 M Above From Datum

G.L.

METRIC

Run No.

Date

First Reading

Last Reading

Footage Logged

Depth Reached

Casing Bore

Casing Driller

Fluid Type

Liquid Level

Mm. Perm.

Rm @

Operating Time

Track No.

1 NOV 1980

135

0

135

135.7

135.5

20

30

1 HOUR

106

EQUIPMENT DATA

GAMMA RAY

NEUTRON

RUN NO.

TOOL MODEL NO.

DIAMETER

DETECTOR MODEL NO.

TYPE

LENGTH

DISTANCE TO N. SOURCE

ONE

125

3.2 CM

SCINTILLATION

10 CM

2 M

RUN NO.

LOG TYPE

TOOL MODEL NO.

DIAMETER

DETECTOR MODEL NO.

TYPE

LENGTH

SOURCE MODEL NO.

SERIAL NO.

SPACING

TYPE

STRENGTH

ONE

NEUTRON/NEUTRON

125

3.2 CM

PROPORTIONAL

15 CM

MRC-N-SS-W

265

43 CM

AmBe

3 CURIES

GENERAL

HOIST TRUCK NO.

INSTRUMENT TRUCK NO.

TOOL SERIAL NO.

106

106

125 A011

GENERAL

DEPTHS

SPEED

T.C.

SENS

ZERO

API G. R. UNITS

T. C.

SENS

ZERO

API N. UNITS

FROM

TO

M / MIN

SEC.

SETTINGS

DIV. L OR R

PER LOG DIV.

SEC.

SETTINGS

DIV. L OR R

PER LOG DIV.

1

0

135

4

3

500

0

17

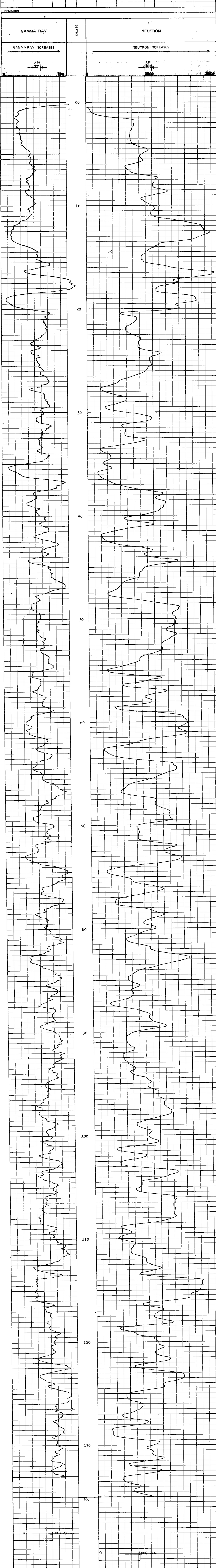
3

5K

0

180

REMARKS



ROKE

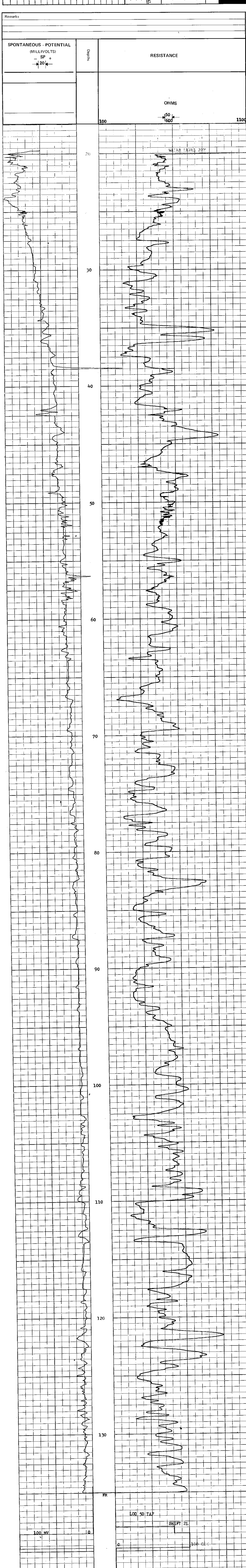
OIL ENTERPRISES LTD. CALGARY, ALBERTA

- RESISTANCE LOG

Ad. Deane River (21401 to (3*)19*(2))

100

| | | |
|--------------------------|----------------|-----------------------------|
| FILE NO. | COMPANY | CLINTAR PLAK |
| STD | WELL | 80-3 |
| SEC | LOCATION | |
| TWP | FIELD | PEACE RIVER CANYON PROPERTY |
| RGE | | |
| W. | | |
| | PROVINCE | BRITISH COLUMBIA |
| Permit No. | GROUND LEVEL | ENV. |
| Log Measured from | TOP OF CASTING | 0.2 M |
| Well Depth Measured from | | Atmos Perm. Datum |
| Run No. | ONE | |
| Date | 1 NOV 1980 | |
| First Reading | 135 | |
| Last Reading | 20 | |
| Footage Logged | 115 | |
| Depth Reached | 135.4 | |
| Depth Driller | 135.9 | |
| Casing Roke | | |
| Casing Driller | | |
| Fluid Type | WATER | |
| Liquid Level | 20 | |
| Mix. Depth | NQ | |
| Rm @ 0 | | |
| MDP FISH | 460 FTMS | |
| Operating Time | 0.7 HOURS | |
| Track No. | 106 | |
| GEN FBL DENIS-CL | K.B. | |
| | CSG | |
| | GL | |
| METRIC | | |
| Other Services: | | |



11-Roke River (64410 83710 *3) 12-3

ROKE

FOCUSED BEAM LOG 20 CM

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO. COMPANY CINCINNAR PEAK

WELL 80-3

LOCATION

FIELD PEACE RIVER CANYON PROPERTY

PROVINCE BRITISH COLUMBIA

Log Measured from TOP OF CASTING 0.2 M Above Beam Datum

Well Depth Measured from

Run No. ONE

Date 1 NOV 1980

Full Reading 133

Left Reading 20

Forage Logged 115

Depth Reached 135.7

Depth Driller 135.9

Casing Role

Casing Driller

Fluid Type MUD / WATER

Liquid Level 20

Min. Diam. NQ

Rm @ ° C 20.4 OHMS @ 25 ° C

Operating Time 1 HOUR

Truck No. 100

Recorded By FJANAZ

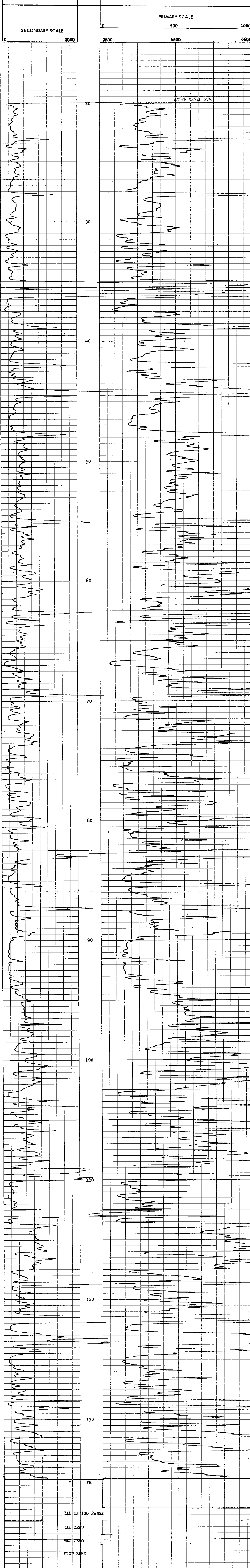
Witnessed By RICHER

575

Remarks FBL # 4 CURRENT RANGE HIGH MUDFISH RESISTANCE 460 OHMS

7 ELECTRODE SONDE 20 CM BEAM WIDTH 100 CM ARRAY

PRIMARY 50 OHM/DIV SECONDARY 200 OHM/DIV



ROKE

SIDEWALL DENSLOG
CALIPER

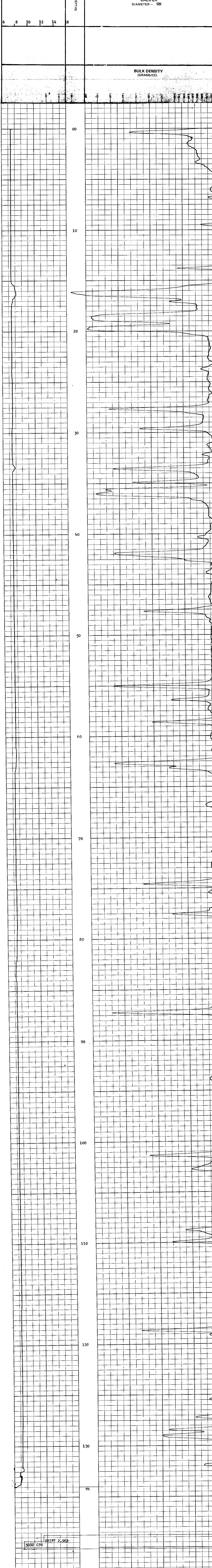
Oil Enterprises Ltd. Calgary, Alberta

FILE NO. COMPANY CINNAMAR PEAK
WELL 80-3
LOCATION
FIELD
PROVINCE BRITISH COLUMBIA
Permanent Datum
Log Measured from TOP OF CASING 0.2 M Above Perm. Datum
Well Depth Measured from
OTHER SURVEYS
GRN. 2BL. ST-RES
K.B.
CSG
G.L.
METRIC
Run No. ONE
Date 1 NOV 1980
Final Reading 134
Last Reading 0
Footage Logged 134
Depth Reached 135.4
Casing Rake 15.5
Fluid Type WATER
Liquid Level 20
Min. Depth
Operating Time 1 HOUR
Truck No. 106
Recorded By KIRMAN
Witnessed By RITCHIE

| GENERAL | | | | GAMMA RAY | | | | SIDEWALL DENSLOG | | | |
|---------|--------|-----|-----------------|--------------|------------------|---------------------|--------------------------------|------------------|------------------|---------------------|----------|
| RUN NO. | DEPTHS | | 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 | CPS/ DIV |
| | FROM | TO | | | | | | | | | |
| 1 | 0 | 134 | 6 | | | | | 0.5 | 5K | 2.96 R | 158.13 |

REMARKS

DENSITY # 422AS
CALIPER # 776



SHIFT 2.96R

5000 CPS

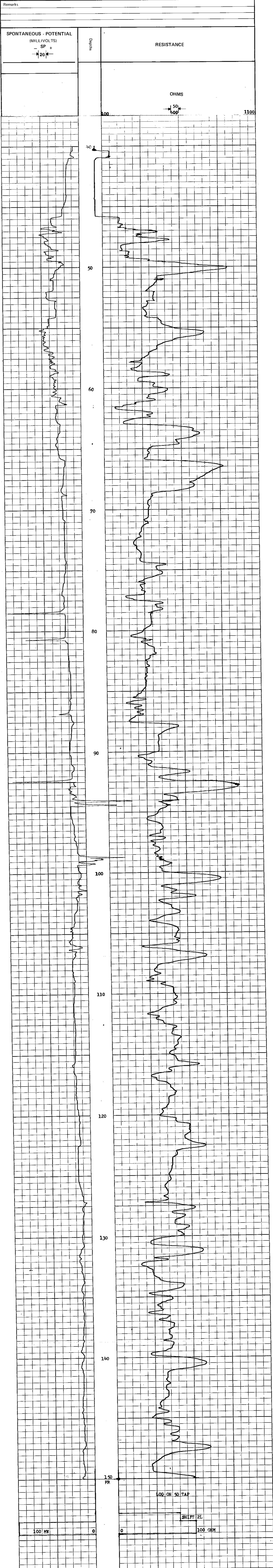
Peace River (200m to 519 ft) 80.4

ROKE

— RESISTANCE LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

| | | |
|----------------|--------------------------|-----------------------------|
| FILE NO. | COMPANY | CINNAMAR PEAK |
| LSD | WELL | 80.4 |
| SEC | LOCATION | |
| TWP | FIELD | PEACE RIVER CANTON PROPERTY |
| RGE | PROVINCE | BRITISH COLUMBIA |
| M | Other Services: | GRN DENS-CAL, PBL |
| | Permanent Datum | GROUND LEVEL |
| | Log Measured from | TOP OF CASING |
| | 0.1 M | Above Perm. Datum |
| | Well Depth Measured from | |
| | | K.B. |
| | | CSG |
| | | G.L. |
| | | METRIC |
| Run No. | ONE | |
| Date | 2 NOV 1980 | |
| First Reading | 150 | |
| Last Reading | 40 | |
| Footage Logged | 110 | |
| Depth Reached | 151 | |
| Depth Driller | 157.6 | |
| Casing Roke | 45.8 | |
| Fluid Type | MUD / WATER | |
| Liquid Level | 7 | |
| Min. Diam. | NQ | |
| Rm @ 0 | | |
| MUD FISH SUS | 600 OHMS | |
| Operating Time | 0.5 HOURS | |
| Truck No. | 106 | |
| Recorded By | PIBANZ | Witnessed By |
| | | RICHER |



Al. Peace River (Dev. 12) 8/31/17 2014

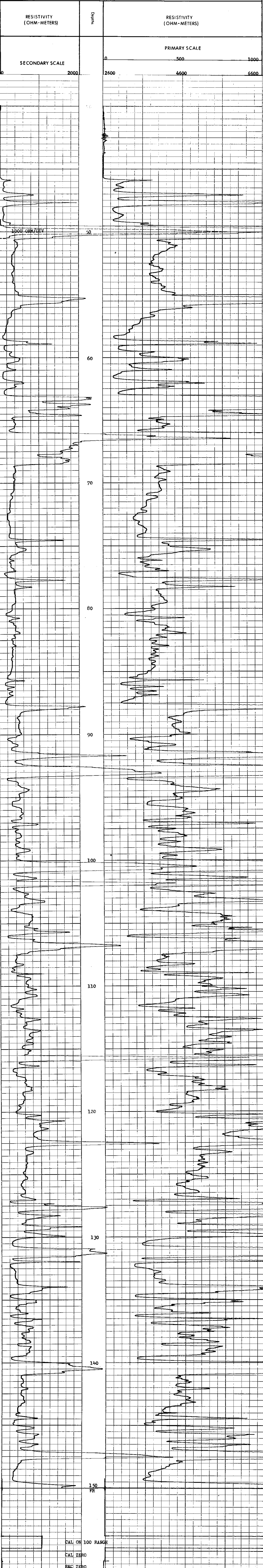
ROKE

FOCUSED BEAM LOG 20 CM

OIL ENTERPRISES LTD. CALGARY, ALBERTA

| | | |
|---------------------------|-------------------|---------------------------------------|
| FILE NO. | COMPANY | CINNAMAR PEAK |
| LSO | WELL | 80-4 |
| SEC | TWP | |
| RGE | RGE | |
| W | LOCATION | |
| | FIELD | PEACE RIVER CANYON PROPERTY |
| | PROVINCE | BRITISH COLUMBIA |
| | GROUND LEVEL | SP-RIS |
| | | DENS-CAL, GRN |
| Permanent Datum | Log Measured from | TOP OF CASTING 0.1 M Above Perm Datum |
| Well Depths Measured from | | G.L. METRIC |
| Run No. | ONE | |
| Date | 2 NOV 1980 | |
| Last Reading | 150 | |
| Footage Logged | 110 | |
| Depth Reached | 151 | |
| Depth Driller | 157.6 | |
| Casing Role | 45.8 | |
| Casing Driller | 45.7 | |
| Fluid Type | MUD / WATER | |
| Liquid Level | 7 | |
| Min. Dam. | N2 | |
| Rm @ °C | 11.9 OHMS @ 25 | |
| Operating Time | 0.7 HOURS | |
| Truck No | 106 | |
| Recorded By | PRIDANZ | Witnessed By RICHIER |

| | | | | | | | |
|---------|---------|----|-----------------|-----------|--------------------|---------|----------|
| Remarks | FBL # | 4 | CURRENT RANGE | HIGH | MUDFISH RESISTANCE | 600 | OHMS |
| | | 7 | ELECTRODE SONDE | 20 | CM BEAM WIDTH | 100 | CM ARRAY |
| | PRIMARY | 50 | OHM/DIV | SECONDARY | 200 | OHM/DIV | |



ROKE

SIDEWALL DENSILOG

CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO. COMPANY CINNABAR PEAK

WELL 80-4

LOCATION

FIELD PLACE KIVER CANYON PROPERTY

PROVINCE BRITISH COLUMBIA

GROUND LEVEL

Log Measured from TOP OF CASING 0.1 M Above Pipe Datum

Well Depth Measured from

Other Services

GEN. EST. SP. RES.

K.B.

CSG

GL

REMARKS

ROD No. ONE

Date 2 NOV 1980

Est. Reading 0

Footage Logged 150

Depth Reached 151

Casing Roller 157.6

Casing Roller 45.8

Fluid Type MUD / WATER

Liquid Level 7

Mud. Diam. M

Operating Time 1 HOUR

Truck No. 106

Recorded By PJBANZ

Witnessed By RIGIER

| GENERAL | | | GAMMA RAY | | | SIDEWALL DENSILOG | | | | | |
|---------|--------|-----|-------------|-----------|----------------|-------------------|-----------------------------|-----------|----------------|------------------|---------|
| RUN NO. | DEPTHS | | 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 | CPS/DIV |
| | FROM | TO | | | | | | | | | |
| 1 | 0 | 46 | 6 | | | | | 0.5 | 5K | 2.86R | 74.59 |
| | 46 | 150 | 6 | | | | | 0.5 | 5K | 2.96R | 158.13 |

REMARKS

DENSITY # 422AS

CALIPER # 776

CALIPER DIAMETER - CM

DEPTHS

BULK DENSITY (GRAMS/CC)

00

10

20

30

40

50

60

70

80

90

100

110

120

130

140

150 FR

SHIFT 2.86R

1000 CPS

SHIFT 2.86R

5000 CPS

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO. COMPANY CINCINNATI PEAK

WELL 80-5

LOC

LOCATION

FIELD PEACE RIVER CANYON PROPERTY

PROVINCE BRITISH COLUMBIA

Log Measured from TOP OF CASTING 0.2 M F. Above Perm. Datum

Well Depths Measured from

Run. No. ONE

Date 2 NOV 1980

First Reading 150

Last Reading 0

Footage Logged 151

Depth Reached 151.4

Casing Depth 151.3

Fluid Type WATER

Min. Depth 106

Operating Time 1 HOUR

Tool No. 106

575

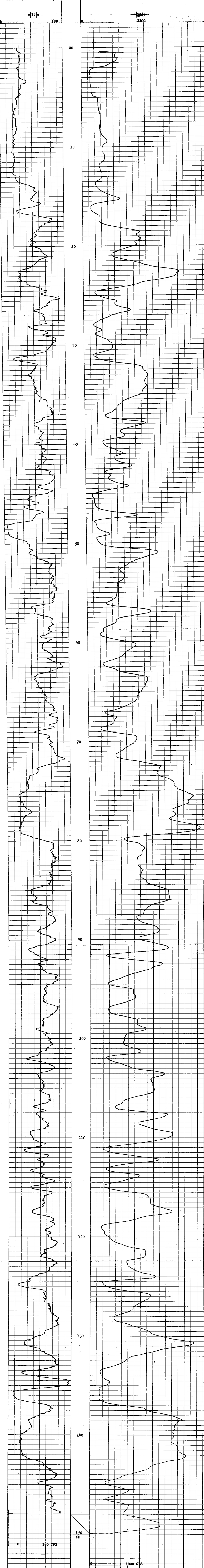
EQUIPMENT DATA

| GAMMA RAY | | | | NEUTRON | | | |
|-----------------------|---------------|----------|--------|--------------------|-----------------|----------------|----------|
| RUN NO. | ONE | RUN NO. | ONE | LOG TYPE | NEUTRON/NEUTRON | TOOL MODEL NO. | 125 |
| TOOL MODEL NO. | 125 | DIAMETER | 3.2 CM | DETECTOR MODEL NO. | PROPORTIONAL | LENGTH | 15 CM |
| DETECTOR MODEL NO. | SCINTILLATION | TYPE | 10 CM | SOURCE MODEL NO. | MRC-N-SS-W | SERIAL NO. | 265 |
| TYPE | SCINTILLATION | SPACING | 43 CM | TYPE | AmBe | STRENGTH | 3 CURTES |
| LENGTH | 2 M | | | | | | |
| DISTANCE TO N. SOURCE | | | | | | | |
| GENERAL | | | | | | | |
| HOIST TRUCK NO. | 106 | | | | | | |
| INSTRUMENT TRUCK NO. | 106 | | | | | | |
| TOOL SERIAL NO. | 125 A011 | | | | | | |

LOGGING DATA

| GAMMA RAY | | | | NEUTRON | | | |
|---------------|-----|------------------------------|-----|------------------------------|-----|------------------|----|
| RUN NO. | 1 | DEPTHS | 0 | SENS | 500 | T. C. SEC. | 3 |
| FROM | 0 | TO | 150 | ZERO DIV. L OR R | 0 | SENS SETTINGS | 5K |
| SPEED M / MIN | 4 | T. C. SEC. | 3 | API G. R. UNITS PER LOG DIV. | 17 | ZERO DIV. L OR R | 0 |
| SENS SETTINGS | 500 | API G. R. UNITS PER LOG DIV. | 17 | API N. UNITS PER LOG DIV. | 180 | | |

REMARKS



Recorded By: RUDANZ

Witnessed By: RITCHIE

16.166 Ave Canada 8 (S.M. X.1) 80-5

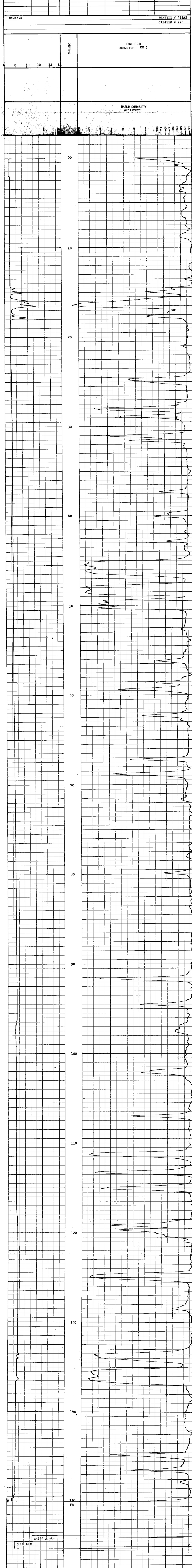
ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG
CALIPER

575

| | | |
|---------------------------|---------|-----------------------------|
| FILE NO. | COMPANY | CINNAMAR PEAK |
| LSD | WELL | 80-5 |
| SEC | LOC | |
| W | LOC | |
| M | FIELD | PLACE RIVER CANYON PROPERTY |
| PROVINCE BRITISH COLUMBIA | | |
| GROUND LEVEL | | |
| Log Measured from | | |
| Well Depth Measured from | | |
| Run No. | DATE | 2 NOV 1980 |
| First Reading | | 0 |
| FRONTAGE LOGGED | | 150 |
| Depth Reached | | 151 |
| Depth Driller | | 156.4 |
| Casing Rate | | 14.3 |
| Casing Driller | | |
| Fluid Type | | MUD / WATER |
| Liquid Level | | 2 |
| Min. Depth | | NR |
| Operating Time | | 1 HOUR |
| Truck No. | | 106 |
| Recorded By | | PUBANZ |
| Witnessed By | | RECHER |



Peace River Canyon 10/17/90 50-5

ROKE

FOCUSED BEAM LOG 20 CM

OIL ENTERPRISES LTD. CALGARY ALBERTA

FILE NO.

COMPANY

WELL

SEC

TYPE

RGE

W

M

LOCATION

FIELD

PEACE RIVER CANYON PROPERTY

PROVINCE

BRITISH COLUMBIA

GROUND LEVEL

Elev

Log Measured from

TOP OF CASING

0.2 M Above Perm. Datum

Well Depth Measured from

GL

METRIC

Other Services

SP-KES

GRU DENS-CAL

K B

CSG

GL

METRIC

Run No.

ONE

Date

2 NOV 1980

First Reading

10

Footage Logged

140

Depth Readings

151

Depth Driller

14.3

Coring Rate

14.3

Fluid Type

MUD / WATER

Liquid Level

2

Mud Dam

NO

Run @ ° C

14.3 OHMS @ 25

Operating Time

1 HOUR

Track No.

105

Recorded By

RYBANZ

Witnessed By

ROCHER

Remarks

FBI #

4

CURRENT RANGE

HIGH

MUDFISH RESISTANCE

340

OHMS

ELECTRODE SONDE

20

CM BEAM WIDTH

100

CM ARRAY

PRIMARY

50

OHM/DIV

SECONDARY

200

OHM/DIV

RESISTIVITY (OHM-METERS)

PRIMARY SCALE

0

500

1000

RESISTIVITY (OHM-METERS)

SECONDARY SCALE

0

2000

Depths

0

20

30

40

50

60

70

80

90

100

110

120

130

140

150

160

170

180

190

200

210

220

230

240

250

260

270

280

290

300

310

320

330

340

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ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FOCUSED BEAM LOG 20 CM

80-6

FILE NO. COMPANY CINNAMAR PEAK

WELL 80-6

LOCATION

FIELD PEACE RIVER CANTON PROPERTY

PROVINCE BRITISH COLUMBIA

GROUND LEVEL

Log Measured from TOP OF CASING 0.3 M Above Perm. Datum

Well Depth Measured from

Run No. ONE

Date 1 NOV 1980

First Reading 132

Last Reading 39

Footage Logged 113

Depth Reached 152.9

Depth Driller 153

Casing Hole 6.1

Casing Driller MUD / WATER

Fluid Type 39

Liquid Level NO

Min. Diam. 17.2 OHS @ 25

Rm @ ° C

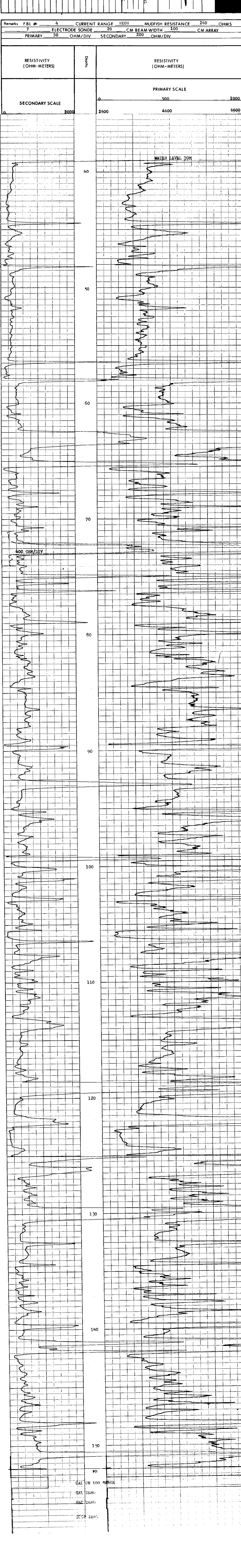
Operating Time 0.9 HOURS

Truck No 106

Recorded By PYRANZ

Witnessed By RICHER

| | | | | | | | |
|---------|-------|---|-----------------|------|--------------------|-----------|-------------|
| Remarks | FBI # | 4 | CURRENT RANGE | HIGH | MUDFISH RESISTANCE | 260 | OHMS |
| | 7 | | ELECTRODE SONDE | 20 | CM BEAM WIDTH | 100 | CM ARRAY |
| | | | PRIMARY | 50 | OHM/DIV | SECONDARY | 200 OHM/DIV |



16 Peace River Division Section 4(a) S0-6

ROKE

SIDEWALL DENSILOG

CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

| | | |
|-------------------------|-------------------------|-----------------------------|
| FILE NO. | COMPANY | CINSMAR PEAK |
| LOG SEC | WELL | 80-6 |
| LOG TYPE | LOCATION | |
| LOG NO. | FIELD | PEACE RIVER CANTON PROPERTY |
| PROVINCE | BRITISH COLUMBIA | Other Services: |
| Log Measured from | GROUND LEVEL | GR. ELL. SE-RES |
| Log Depth Measured from | TOP OF CASING | CSG |
| | 0.1 M Above Perm. Datum | G.L. |
| | | METRIC |
| Run No. | ONE | |
| Date | 1 NOV 1960 | |
| First Reading | 152 | |
| Last Reading | 0 | |
| Footage Logged | 152.5 | |
| Depth Reached | 153 | |
| Casing Roller | 6.2 | |
| Casing Driller | 6.1 | |
| Fluid Type | MUD / WATER | |
| Liquid Level | | |
| Mud Depth | NO | |
| Operating Time | 1 HOUR | |
| Track No. | 106 | |

Recorded By: RIBANIZ Witnessed By: KUCHER

