

PR-TREFI 81 (1)A



TREFI COAL PROJECT
GEOLOGICAL REPORT

1981

681

GULF CANADA RESOURCES INC.

COAL DIVISION

CONFIDENTIAL
OPEN FILE

GEOLOGICAL REPORT
GULF CANADA RESOURCES INC.

Peace River

122 coal licences - see figure 2.

TREFFI PROJECT
1981 EXPLORATION PROGRAM

Lat 55° 30'
Long 122° 0'

*5840-5847, 5858-5872,
5975-5981, 5983-5984, 5986-
5987, 5989-6017, 6027, 6046-
6079, 6144-6159, 7213-7220*

D.W. MacFARLANE

November 1981

N.T.S. 93 N.E.

PROJECT SUPERVISOR
A.E. BIENIA
GEOLOGICAL BRANCH
ASSESSMENT REPORT

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1.0 SUMMARY

The Trefi property consists of 35,790 hectares lying south of the Pine River Valley approximately 30 km southwest of the town of Chetwynd in northeast British Columbia. Within the licence block a "resource area" has been determined to contain the best developed coal seams and most potential for resource tonnage. The most promising portion of the resource area lies about 20 km south of the main line of the British Columbia Railway which runs along the Pine River Valley.

The 1981 exploration program consisted of geological mapping and drilling. Four diamond core holes were drilled for a total depth of 1,254 m. Six rotary holes were completed for a total depth of 1,687 m.

No important structural changes were determined during the 1981 program. Along the western edge of the property dips vary considerably but are generally quite steep. Depth of cover over the coal measures builds rapidly to the east-northeast. Dips appear to flatten at depth and become gentle in a series of broad folds. These folds terminate along plunge to the southeast and are replaced with a series of smaller tight folds and small thrust faults at the southern end of the resource area.

No major stratigraphic changes were determined as well. The resource area is underlain by Lower Cretaceous sediments with the Walton member of the Compton Formation containing the Trefi coal measures. Two coal seams of potential economic interest are present, the Caron seam and the Highhat seam. The Caron seam exhibits the greatest lateral extent and best thickness; on the basis of 1981 correlations, the Highhat seam is generally thinner and of limited areal extent. Other thin seams are intermittently present but are of no economic interest.

Inferred in-place tonnages for the two seams are as follows:

	<u>Caron</u>	<u>Highhat</u>
0.5 m to 1.5 m thick	49 222 147	3 139 500
greater than 1.5 m	56 786 951	13 391 300
Totals	106 009 098	16 530 800

The Trefi coal is low to medium volatile bituminous with relatively high calorific values, low ash and low sulphur. Metallurgical properties appear marginal.

On a 1.65 float basis the average quality parameters for the Caron seam are as follows:

(air dried)	
Moisture	0.43
Ash	8.38
VM	22.51
FC	68.68
S	0.45
CV (mj/kg)	32.10

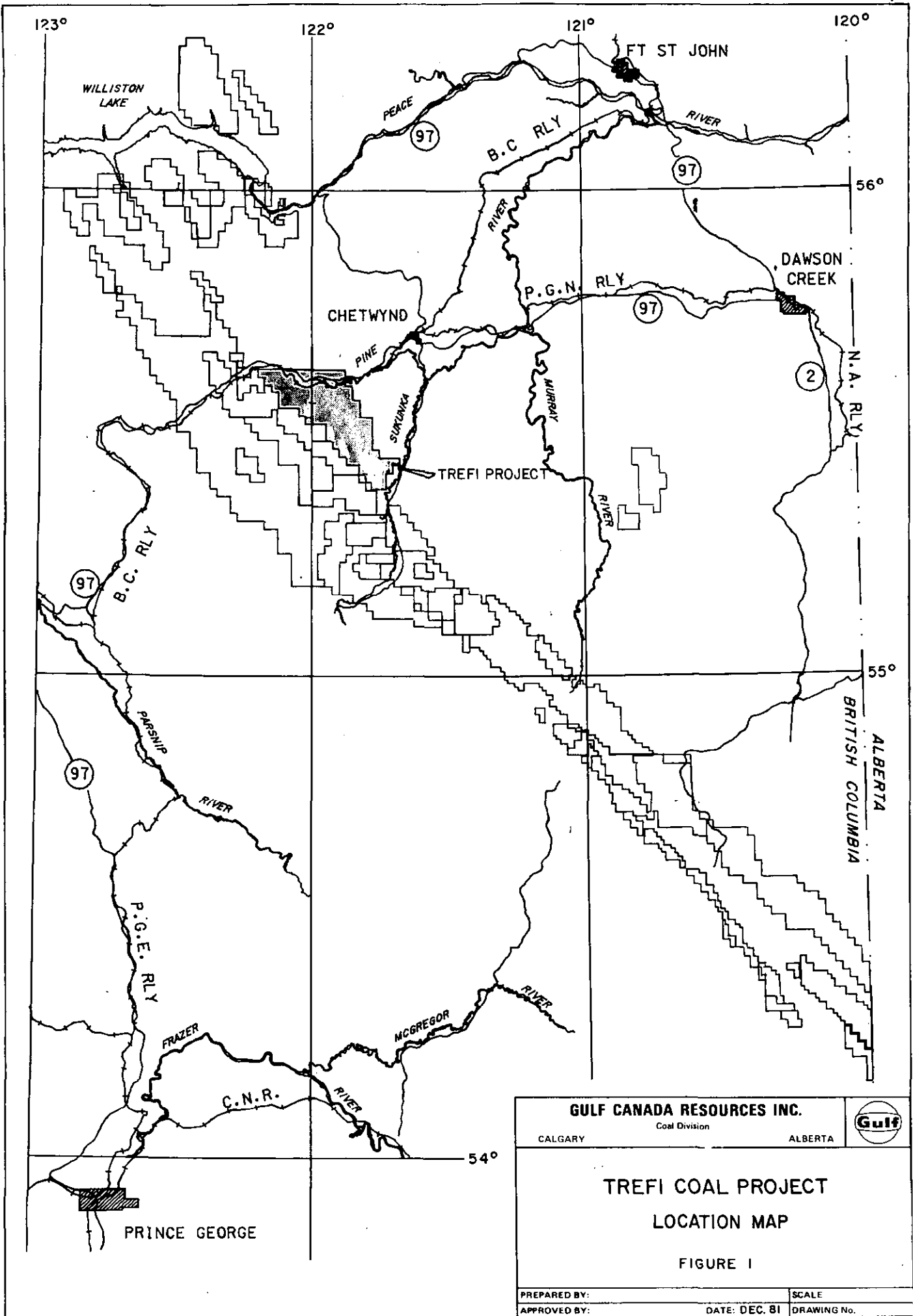
2.0 INTRODUCTION

In 1979 and early 1980 Gulf Canada Resources, under advisement by Dr. J.E. Hughes, acquired 249 coal licences covering 76,313 hectares. These licences were collectively named Trefi and the area referred to as the Trefi coal property. Two additional coal licences along the western boundry and six at the southern end were applied for in late 1980 and early 1981. The total contiguous Trefi property extended from Williston Lake in the north to the Blind Creek - Sukunka River area in the south, a distance of about 80 km.

Reconnaissance drilling and mapping in 1980 indicated an area of thicker, apparently continuous coal south of the Pine River. In the 1980 report this locality was identified as the "resource area". In this area two coal seams were reported to attain local thicknesses of 1.5 to 2.0 metres. In the 1980 report the upper seam was named the Caron seam and the lower one the Highhat seam. Both seams are contained in the Walton member of the Commotion Formation. Figure No. 1 illustrates the general Trefi project location and map No. 1 outlines the resource area as defined by the present study.

North of the Pine River the coal is thin or shaled out. The majority of the licences in this area have been relinquished. Figure 2 outlines the licences presently retained.

The 1981 exploration program was designed to concentrate on the resource area.



123° 122° 121° 120°

WILLISTON LAKE PEACE RIVER FT ST JOHN

B.C. RLY RIVER 97 56°

CHETWYND PINE RIVER P.G.N. RLY DAWSON CREEK

SURUANNA RIVER MURRAY RIVER TREFI PROJECT 2 N.A. RLY

B.C. RLY 97

PARNIP RIVER 97

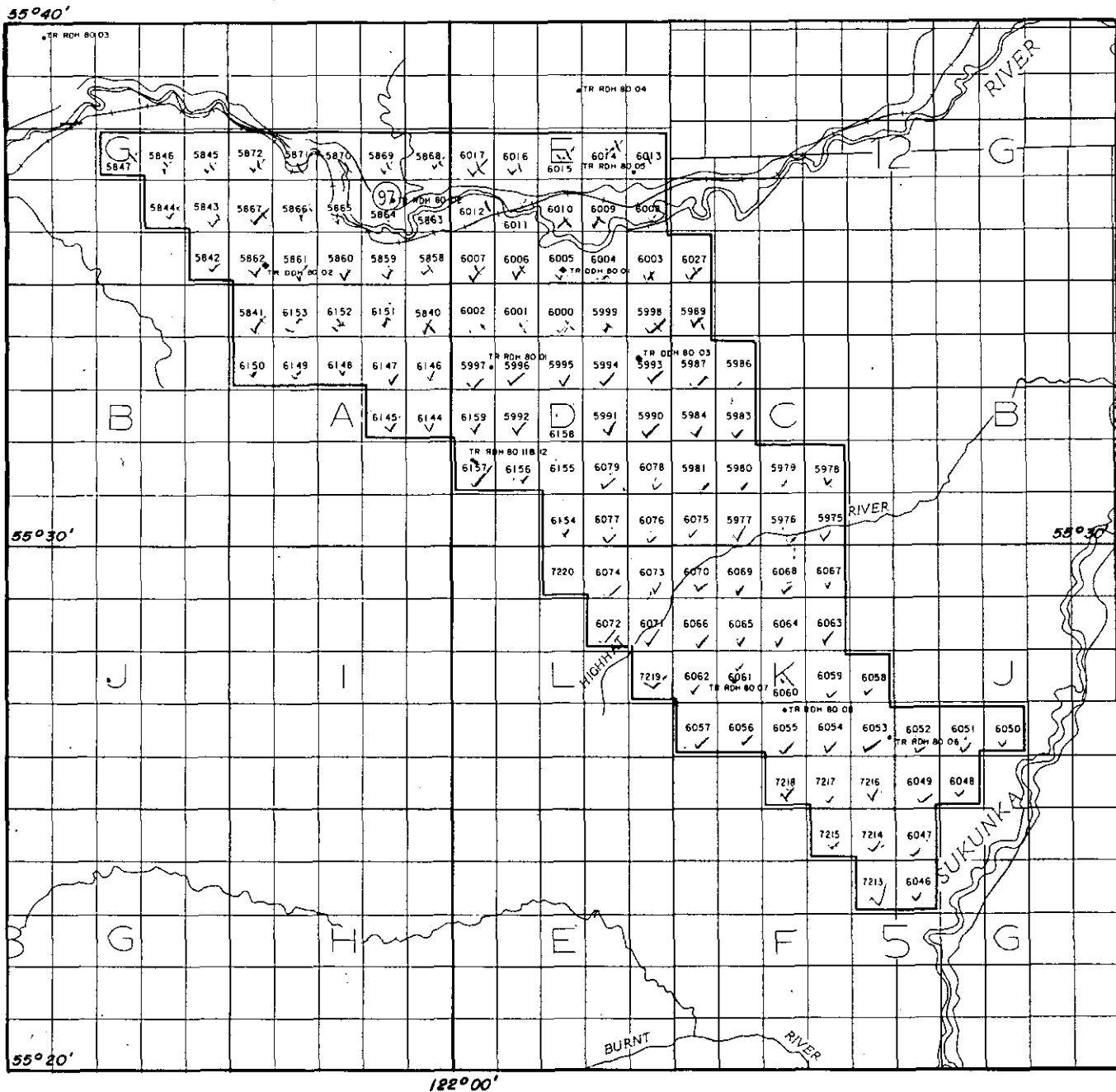
P.G.E. RLY 55° BRITISH COLUMBIA ALBERTA

FRAZER RIVER MCGREGOR RIVER


C.N.R. RIVER 54°

PRINCE GEORGE

GULF CANADA RESOURCES INC.		
CALGARY	Coal Division ALBERTA	
TREFI COAL PROJECT LOCATION MAP		
FIGURE 1		
PREPARED BY:	DATE: DEC. 81	SCALE
APPROVED BY:	DRAWING No.	



2.12 x 1.09
4.97

GULF CANADA RESOURCES INC.		
Coal Division		
CALGARY	ALBERTA	
<h2 style="margin: 0;">1981</h2> <h1 style="margin: 0;">TREFI COAL PROPERTY</h1> <p style="margin: 0;">FIGURE 2</p>		
PREPARED BY:	SCALE	
APPROVED BY:	DATE: DEC. 81	DRAWING No.

2.1 LOCATION AND ACCESS

The 1981 Trefi exploration area is located approximately 30 km southwest of the town of Chetwynd in northeast British Columbia at latitude 55° 30' and longitude 121° 50' (see Figure No. 1). The licences retained after the 1980 exploration program are generally south of the Pine River Valley. Figure No. 2 shows the 1981 licence block. The 1981 resource area is contained within this block and is outlined on Map No. 1.

The southern portion of the property is accessible from Chetwynd via the Sukunka River road and the British Petroleum rig access road along Bluff creek, a distance of about 50 km. The northern portion is accessible along the Hasler creek road which leads off the main Hart Highway about 26 km west of Chetwynd and then along the Westcoast Transmission gas plant road and the Skelly-Getty rig access road for a total distance from Chetwynd of about 40 km. There is no surface access into the central portion of the resource area which lies along the Highhat River.

The Westcoast Transmission Grizzly Valley pipeline runs south from the main gas plant just south of the Pine River Valley through the western edge of the resource area. No surface access is available along the pipeline.

Some limited access is available along seismic cut lines but travel is possible only during the winter season when the low swampy areas are sufficiently frozen.

The main line of the British Columbia Railway runs through the Pine River Valley approximately 20 km north of the southern portion of the resource area.

2.2 PHYSIOGRAPHY

The Trefi property is located along the eastern fringe of the Rocky Mountains foothills. Rivers and creeks have incised into relatively flat lying strata leaving deep valleys and flat topped highlands (see illustration No. 1). The principal drainages are the Pine River in the northern area and the Sukunka River to the east. The Highhat River cuts across the centre of the resource area and drains into the Sukunka.

The topography of the area ranges from 606 metres (2,000 feet) in the Pine River Valley to 1,425 metres (4,700 feet) in the vicinity of Highhat Mountain. In the resource area the average elevation is about 1,242 metres (4,100 feet). Some swamps occur in flat lying, poorly drained areas.

Till cover varies over the property, being deeper in creek and river valleys and thin on the highlands. In hole DDH-81-102 along the western highlands only 10 feet of gravel was present while in hole DDH-81-100 in the Highhat River Valley there was 110 feet of gravel.

The area is generally heavily forested with mature stands of pine and spruce with smaller intermittent areas of poplar, willow and shrubs (see illustrations No. 1,2,3).

2.3 SCOPE AND DESCRIPTION OF WORK

The 1981 field program consisted of two phases:

1. surface mapping
2. drilling
 - a) continuous core diamond
 - b) selected core, rotary

all drill holes were geophysically logged.

The two operations were coordinated simultaneously during the period June 8, 1981, to August 13, 1981. Mapping operations were temporarily suspended during drilling.

2.3.1 SURFACE MAPPING

Geologic traverses were concentrated along the Boulder Creek Member-Walton member contact for control in the coal measures. Some traverses were also run to establish the Hasler Formation-Goodrich Formation contact. Some work was carried out in down section strata (Hulcross, Gates).

All geological data was plotted on 1:10,000 metric maps where coverage was available. 1:25,000 English system maps were used where metric coverage was not available. All data has been compiled onto a 1:20,000 metric map (Map No. 2).

2.3.2 DIAMOND DRILLING

Diamond drilling operations were undertaken by D.W. Coates Enterprises Ltd. A Longyear 44 drill rig was employed on all holes (see illustration No. 4). Overburden was drilled by a 4 3/8" tricone and HW casing set to bedrock. All casing was recovered with the exception of 60 feet left in hole DDH-81-100. Core was recovered by wireline using a standard Longyear barrel. Core recovery was greater than 90% in all cases.

All holes were geophysically logged using the standard gamma-neutron, density-caliper and focused beam resistivity log suite on a vertical scale of 1:100, with an additional expanded scale of 1:40 through the coal seams using the density log. Downhole deviation surveys were run on all holes. All geophysical logging was carried out by Roke Oil Enterprises Ltd. of Calgary, Alberta.

All diamond drill rig moves were accomplished using a Bell 205 helicopter. Moving rig site supplies, crew changes, rig visits and core removal were carried out by a Bell 206 helicopter. All helicopter services were supplied by Northern Mountain Helicopters Ltd. of Prince George, British Columbia.

All holes that intersected potentially mineable underground seams were cemented.

Table 1 lists in detail all diamond drilling data.

2.3.3 ROTARY DRILLING

Rotary drilling operations were carried out by Alberta Southern Exploration Drilling Ltd. of Calgary, Alberta. An air-rotary Cyclone TH-60 equipped with an Ingersoll-Rand screw type compressor, a hydraulic top head drive and a breakout rotary table was employed on all holes (see illustration No. 5). Surface hole was cased by driving 6 inch casing to bedrock. Holes were then completed by drilling ahead with either a six inch button tricone or a 5 1/4 inch hammer bit. Two holes were cored through the coal zone (81-106C and 81-109C) using a standard 5 1/8" O.D. Christensen split-tube core barrel which recovered approximately 3" diameter core. Due to changing coal seam characteristics coal core recovery was poor in 81-106C but 100 percent in both coal and rock in 81-109C (see illustration No. 6).

All rotary holes were geophysically logged using the log suite described in the diamond drill section.

All holes that intersected a coal seam(s) of potentially mineable thickness were cemented.

Table 2 outlines in detail all rotary hole data.

TABLE 1
TREFI DIAMOND DRILLING

Date 1981	Hole No.	Daily		Cumulative		T.D.		Remarks
		ft	m	ft	m	ft	m	
July 10								moving Rig #28 from Goodrich
July 11	81-100	345	104.55	345	104.55			110 ft. overburden
July 12	81-100	400	121.21	745	225.76			
July 13	81-100	60	18.18	805	243.94	805	243.94	
July 14	81-100							bad weather
July 15	81-100							set van Ruth plug - moved to 81-102
July 16	81-102	225	68.18	1030	312.12			10 ft. overburden
July 17	81-102	300	90.91	1330	403.03	525	159.09	
July 18	81-102							rigging up to cement
July 19	81-102							cemented moved to 81-105
July 20	81-105	325	98.48	1655	501.51			80 ft. overburden
July 21	81-105	357	108.18	2012	609.69			
July 22	81-105	100	30.30	2112	639.99	782	236.97	
July 23	81-105							cemented
July 24	81-108	16	4.85	2128	644.84			moved to 81-108 16 ft. overburden
July 25	81-108	399	120.91	2527	765.75			
July 26	81-108	326	98.79	2853	864.54			
July 27	81-108	215	65.15	3068	929.69			
July 28	81-108	239	72.42	3307	1002.11			
July 29	81-108	220	66.67	3527	1068.78			
July 30	81-108	200	60.61	3727	1129.39			
July 31	81-108	200	60.61	3927	1190.00			
Aug. 1	81-108	127	38.48	4054	1228.48			
Aug. 2	81-108	83	25.15	4137	1253.63	2025	613.64	
Aug. 3	81-108							cemented - rigged down - rig released to Goodrich

TABLE 2
TREFI ROTARY DRILLING

Date 1981	Hole No.	Daily		Cumulative		T.D.		Remarks
		ft	m	ft	m	ft	m	
July 15	81-101	960	290.91	960	290.91			71 ft. overburden
July 16	81-101	245	74.24	1205	365.15	1205	365.15	
July 17	81-103	640	193.94	1845	559.09			move to 81-103 25 ft. overburden
July 18	81-103	360	109.09	2205	668.18			
July 19	81-103/104	880	266.67	3085	934.85	1080	327.27	move to 81-104 20 ft. overburden
July 20	81-104/106C	525	159.09	3610	1093.94	925	280.30	move to 81-106C
July 21	81-106C/107	549	166.36	4159	1260.30	489	148.18	cored 475-489 moved to 81-107
July 22	81-107	500	151.52	4659	1411.82			
July 23	81-107	165	50.00	4824	1461.82	1125	340.91	rig released to Windfall
August 5	81-109C	180	54.44	5004	1516.37			rig moved to 81-109C
August 6	81-109C	450	136.36	5454	1652.73	630	190.91	cored 600-630
August 7						.		repairing rig Chetwynd, moved to 81-101
August 8	81-101	115	34.85	5569	1687.58	1320	400.00	deepening 81-101, released rig

2.3.4 PROGRAM OBJECTIVES

The surface geological mapping program was intended to fill in and confirm the geology determined during the previous season.

The drilling and coring program was designed to determine coal seam depth, thickness, continuity and correlation and to obtain selected coal core samples for quality analysis.

The program concentrated on the resource area as generally determined by the 1980 program.

All readily accessible rotary drill areas, except for some minor reconnaissance fill in drilling, have been drilled. Future drilling to determine coal continuity, thickness and quality will necessitate road building and/or helicopter support.

3.0

PREVIOUS WORK

Geological mapping of the Trefi area has been underway for some years by Dr. J.E. Hughes as part of his overall on-going mapping program in the Pine River area. Examination of oil and gas geophysical logs in the area pointed out coal seams of commercial thickness in the Commotion Formation stratigraphically above the coal bearing Gates member.

In 1980 a mapping and drilling program was carried out under the supervision of B.P. Flynn, project supervisor for Gulf Canada Resources Ltd. This program covered the area from the Sukunka River in the southeast to Williston Lake in the north. The program was divided into two phases, the first being a helicopter supported diamond drilling operation in which three HQ holes were drilled for a total footage of 2,112' (640 m).

This phase was supervised by G. Singhai of Singhai International Consultants Ltd., Richmond, British Columbia.

The second phase consisted of twelve rotary drill holes with a total footage of 8,375' (2 538 m). One of these holes (RDH-80-12) was cored through the coal zone to obtain samples for quality determinations. This phase was supervised by C. Carew McFall of Los Altos Hill, California.

In conjunction with the drilling programs, a geologic mapping program was carried out. Mapping was concentrated along the Walton-Boulder Creek contact and along the Hasler-Goodrich contact.

The 1980 program determined that potential coal development of economic interest is confined to the area south of the Pine River. A total resource of 202.5 million tonnes was outlined in seams greater than 1.0 m to a depth of 600 m. Of this total 122.0 million tonnes were reported as occurring in seams greater than 1.5 m in thickness.

4.0 GEOLOGY

4.1 REGIONAL GEOLOGY

The regional setting of the Trefi coal licences is in the outer foothills belt of the Rocky Mountain structural province. The area is generally underlain by Lower Cretaceous Bullhead Group and Ft. St. John Group strata.

The area lies some distance northeast of the main front of structural disturbance caused by the Rocky Mountain Laramide orogeny. As such, dips are relatively steeper along the western edge and flattening into broad folds to the east with some minor local faulting. The folds tend to converge en-echelon and increase in amplitude with attendant thrust faulting in certain areas.

4.2 LOCAL GEOLOGY

The 1981 Trefi coal licences are underlain mainly by Ft. St. John Group rocks. Figure 3 illustrates the stratigraphy related to the property and gives the details of formations and formational members of the Ft. St. John Group.

The structure of the northern portion of the resource area is non-complex, with relatively steep dips to the west opening up into broad gentle folds with some localized faulting. The southern portion of the property, south of Highhat Mountain, becomes somewhat more structurally complex with tighter folding and associated thrust faulting.

4.2.1 STRATIGRAPHY

The 1980 report entitled "Trefi Coal Project, Geological Report, 1980" supplies detailed lithological descriptions of all stratigraphic units relative to the Trefi area.

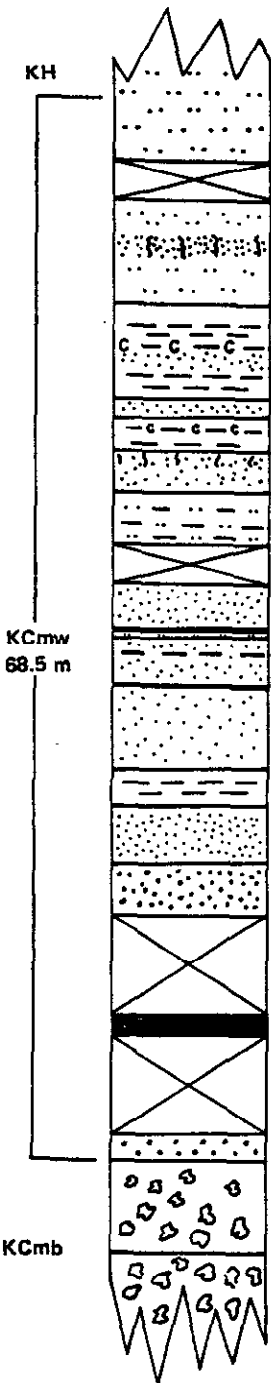
The coal seams of interest are contained in the Walton member (as named by the 1980 program) of the Commotion Formation. This unit is the former member IV of Hughes (1967). It consists of interbedded sandstones, shales, carbonaceous mudstones, thin conglomerates and coal seams. As shown by Figure 3, the Walton member lies at the top of the Commotion Formation immediately below the Hasler Formation. A tentative type section of the Walton is exposed along Walton creek north of the Hart Highway. A columnar section and lithological description is illustrated on Figure 4. The Walton member is recessive and other than the Walton creek section no good outcrop exposure is available.

FIGURE 3

TREFFI PROJECT STRATIGRAPHY

PERIOD	GROUP	FORMATION	THICKNESS LITHOLOGY	
LOWER CRETACEOUS	FORT St. JOHN	CRUISER	210m Mudstone, Siltstone	
		GOODRICH	215m Sandstone, Minor conglomerate, Siltstone, Mudstone	
		HASLER	364 m Mudstone, Siltstone, Thin sandstone	
		COMMOTION	WALTON MEMBER	68 m Siltstone, Sandstone, Carb. mudstone, COAL
			BOULDER CREEK MEMBER	80m Sandstone, Conglomerate, Siltstone
			HULCROSS MEMBER	112 m Siltstone, Mudstone
			GATES MEMBER	225m Sandstone, Conglomerate, Siltstone, Mudstone, COAL
		MOOSEBAR	333m Mudstone, Siltstone	
		CRASSIER	GETHING	350 m Sandstone, Siltstone, Mudstone, COAL

DETAILED STRATIGRAPHY OF WALTON MEMBER



SILTSTONE: LIGHT GREY BROWN, FINELY LAMINATED WITH SOME CONVOLUTE BEDDING OF VERY FINE GRAINED LIGHT GREY SANDSTONE

COVERED INTERVAL

SILTSTONE: MEDIUM GREY, WITH RUSTY ORANGE WEATHERED SURFACE, FINELY LAMINATED WITH COALY ROOTLETS AND SOME INTERBEDDED SANDSTONE: MEDIUM BROWN, VERY FINE GRAINED, WELL SORTED, THINLY BEDDED

ZONE OF INTERBEDDED CLAYSTONE: LIGHT GREY BROWN, SOME CARBONACEOUS CLAYSTONE WITH SOME THIN STRINGER SANDSTONES: BROWN, VERY FINE GRAINED

SANDSTONE: LIGHT BROWN GREY, VERY FINE GRAINED, FINELY LAMINATED, THINLY BEDDED

CLAYSTONE: LIGHT GREY, RECESSIVE, BECOMING CARBONACEOUS NEAR TOP OF UNIT

SANDSTONE: LIGHT GREY, BUFF, VERY FINE GRAINED, MASSIVE, WITH SOME COALY ROOTLETS

CLAYSTONE: BROWN, BUFF, RECESSIVE, SILTY

COAL: BLACK, SHARP UPPER CONTACT, GRADATIONAL LOWER CONTACT IN CARBONACEOUS MUDSTONE

COVERED INTERVAL

COAL: BLACK, SHARP UPPER CONTACT, GRADATIONAL LOWER CONTACT, SOME BRIGHT COAL

SANDSTONE: MEDIUM BROWN, VERY FINE GRAINED, FINELY LAMINATED, THINLY BEDDED

COAL: BLACK, SHARP UPPER CONTACT, GRADATIONAL LOWER CONTACT INTO GREY SILTSTONE

SILTSTONE: GREY BROWN, RECESSIVE

SANDSTONE: GREY/BLACK, VERY FINE GRAINED, FINELY LAMINATED WITH COALY CHIPS

CARBONACEOUS CLAYSTONE: BLACK, VERY COALY IN NATURE

SANDSTONE: MEDIUM GREY/BROWN, FINE GRAINED, WELL SORTED, FINELY LAMINATED,

CROSS-BEDDED, THINLY BEDDED

CLAYSTONE: GREY, FISSILE

SANDSTONE: WHITE, GREY, BUFF GRAINS, MEDIUM/FINE GRAINED, MODERATELY WELL SORTED BECOMING CROSS LAMINATED NEAR TOP OF UNIT

SANDSTONE: WHITE, GREY AND BUFF, COARSELY GRAINED TO GRIT, MODERATE SORTING, WELL CEMENTED, MEDIUM/THINLY BEDDED


COVERED INTERVAL

CARBONACEOUS CLAYSTONE AND COAL

COVERED INTERVAL

SANDSTONE: MEDIUM GREY, COARSELY GRAINED, WELL SORTED, WELL CEMENTED, MASSIVE GRIT/PEBBLE CONGLOMERATE WITH WHITE, GREEN AND GREY, ANGULAR CHERT, WELL CEMENTED, MASSIVE

AS MAPPED ALONG THE GETTY RIG ROAD, NORTH OF THE PINE RIVER
SCALE: 1:500
JULY 05/81

GULF CANADA RESOURCES INC.		
CALGARY	Coal Division	
 TREFI COAL PROJECT DETAILED STRATIGRAPHY FIGURE 4 		
PREPARED BY: KEN SAMSON		SCALE 1:500
APPROVED BY:		DATE: OCT. / 81 DRAWING No.

The Walton member lies conformably on the Boulder Creek Member which Stott (1968) has postulated as being laid down in a transitional beach-barrier environment along the regressive Hulcross Sea. The Walton sediments were probably deposited in an upper delta-alluvial plain environment, within a high energy regime. The Walton member is conformably overlain by the Hasler Formation consisting of marine shales.

4.2.2 STRUCTURE

The dominant structural feature on the Trefi property is the Pine River anticline which lies immediately along the western margin of the property. Along the northeast limb of this feature resistant Boulder Creek Member sandstones and conglomerates outcrop and form northwest-trending ridges. The Walton member is brought to surface as well along this limb but due to the recessive nature of the rocks it is not readily located.

The northeast limb of the Pine River anticline dips rather steeply to the northeast with attitudes ranging from 25° to 45°. At depth along this limb a flexure causes the dips to flatten considerably into the southwest limb of the Hulcross syncline. This feature is generally broad with gentle dips, particularly along the northeast limb. The Hulcross syncline narrows to the southeast and terminates just north of Highhat Mountain.

To the northeast the Hulcross syncline is paired with the Commotion anticline. Dips on the Commotion anticline are relatively gentle. The Commotion anticline terminates north of Highhat Mountain where it converges with the Pine River anticline.

Axial plunge on all folds is to the southeast.

The Trefi property structure as interpreted at present is illustrated in the cross sections contained in Appendix IV.

A fault, tentatively named the Highhat fault, is postulated just west of Highhat Mountain. Poor exposure makes it very difficult to detail this feature with any certainty. Sub-surface investigation will be necessary to positively identify and locate this structure if present.

South of Highhat Mountain the structure becomes somewhat more complex with fold amplitudes increasing and some thrusting taking place. This area has been mapped by Dr. J.E. Hughes and is the subject of a separate report to follow at a later date. Dr. Hughes geological data to date has been generalized and is plotted along with all other Trefi stratigraphic and structural data on Map 2.

4.3 COAL SEAM GEOLOGY

Drilling to date has indicated two coal seams of economic potential in the resource area. Other thin seams are present but are not of any economic importance. All the seams demonstrate considerable lateral variation and definitive correlations are somewhat difficult. The 1980 exploration report named the upper of the two main seams, the Caron seam and the lower one, the Highhat seam. No evidence of these seams has been found in outcrop.

The Trefi coal seams appear to have been deposited in a high energy, inter-distributary, pro-grading deltaic environment. This has resulted in very poor lateral seam continuity due to channel cut-outs, limited depositional areas and non-depositional areas. Detailed coal seam make-up varies greatly both vertically and laterally due to non-organic partings which vary in thickness and areal extent.

Coal zone details are outlined in Table 3 which shows true coal thickness and parting thickness for each drill hole in the resource area.

4.3.1 CARON SEAM

The Caron seam, as named by the 1980 exploration program, is the uppermost economic seam on the Trefi property. It demonstrates the greatest lateral continuity of any of the Trefi seams with the 1.0 m isopach ranging from north of the Highhat River to the southern extent of coal deposition of the property. The eastern edge of deposition demonstrates a somewhat lobate nature indicating adjacent areas of thickening and thinning, possibly due to channelling and inter-distributary deposition in a prograding deltaic environment of relatively high energy.

The Caron seam varies greatly in thickness, from a reported 2.7 metres in hole a-23-D to 0.18 m in hole DDH-81-100. Rapid lateral change in the Caron seam is illustrated in Figure 5 where the coal is shown thinning from 1.3 m with an additional 0.57 m in a shale bottom to 0.86 m of coal about 10 m away. The varying nature of the Caron seam is also illustrated by the geophysical log longitudinal section through the resource area (Appendix III) and isopach map No. 5.

4.3.2 HIGHHAT SEAM

The Highhat seam is of a much more limited area than the Caron seam and attains a marginal economic thickness north of the Highhat River only. It varies greatly in thickness ranging from 1.62 m in hole RDH-80-12 to 0.32 m in hole RDH-81-101.

TABLE NO. 3
COAL SEAM DATA SHEET
1980-1981 DRILL HOLES

Caron Seam C
Highhat Seam H
Caron Rider CR
Linklater L

Hole No.	Elev. (m)	Coal Zone Intersection	Seam	Apparent Thickness (m)	Coal	Rock	Apparent Thickness Correction	True Seam Thickness	True Coal Thickness
DDH-80-01	710	170.28-171.16	C	0.88	0.88	-	1.00	0.88	0.88
		180.50-180.70	L	0.20	0.20	-	-	0.20	0.20
DDH-80-02	926	195.15-195.65	CR	0.50	0.50	-	0.939	0.47	0.47
		214.93-215.44	C	0.51	0.51	-	-	0.48	0.48
DDH-80-03	808	No Coal							
RDH-80-01	775	286.14-286.94	C	0.80	0.80	-	0.887	0.71	0.71
		294.65-295.08	L	0.43	0.43	-	-	0.38	0.38
		304.02-304.94	H	0.64	0.36	0.28	-	0.57	0.32
RDH-80-06	1060	No Coal							
RDH-80-07	1250	183.97-184.54	CR	0.57	0.57	-	1.00	0.57	0.57
		188.53-190.50	C	1.97	1.97	-	-	1.97	1.97
RDH-80-08	1153	145.59-148.30	C	2.71	1.87	0.84	1.00	2.71	1.32
RDH-80-11	832	108.98-111.20	C	2.22	1.70	0.52	1.00	2.22	1.70
		116.10-116.82	L	0.72	0.72	-	-	0.72	0.72
		122.55-124.48	H	1.93	1.93	-	-	1.93	1.93
RDH-80-12	832	107.42-109.52	C	2.10	1.74	0.36	1.00	2.10	1.74
		114.41-115.03	L	0.62	0.62	-	-	0.62	0.62
		120.85-122.47	H	1.62	1.62	-	-	1.62	1.62

TABLE NO. 3 con't
 COAL SEAM DATA SHEET
 1980-1981 DRILL HOLES

Caron Seam C
 Highhat Seam H
 Caron Rider CR
 Linklater L

Hole No.	Elev. (m)	Coal Zone Intersection	Seam	Apparent Thickness (m)	Coal	Rock	Apparent Thickness Correction	True Seam Thickness	True Coal Thickness
DDH-81-100	923	218.25-218.43	C	0.18	0.18	-	1.00	0.18	0.18
		223.60-224.21		0.61	0.41	0.20	-	0.61	0.41
		228.84-229.13	L	0.29	0.29	-	-	0.29	0.29
DDH-81-101	887	363.20-363.63		0.43	0.43	-	0.976	0.42	0.42
		368.51-369.20		0.71	0.48	0.23	-	0.70	0.47
		377.00-377.13		0.13	0.13	-	-	0.13	0.13
DDH-81-102	1380	118.77-119.33	CR	0.56	0.56	-	0.654	0.41	0.41
		121.20-123.63	C	2.43	2.43	-	-	1.69	1.69
		128.43-129.00	L	0.57	0.57	-	-	0.40	0.40
		136.66-137.84	H	1.18	1.18	-	-	0.83	0.83
RDH-81-103	1054	303.14-305.91	C	1.77	1.77	-	0.676	0.77	0.77
RDH-81-104	1233	260.82-261.84	CR	0.42	0.42	-	1.00	0.42	0.42
		263.28-265.72	C	2.44	2.44	-	-	2.44	2.44
RDH-81-105	971	204.48-206.85	C	2.37	1.84	0.53	0.878	2.34	1.82
		213.87-215.31	L	1.43	0.51	0.92	-	1.43	0.51
RDH-81-106C	1153	144.48-145.34	C	0.86	0.86	-	1.00	0.86	0.86
RDH-81-107	1297	120.65-121.22	CR	0.57	0.57	-	0.771	0.44	0.44
		130.80-131.76	C	0.96	0.96	-	-	0.74	0.74
RDH-81-108	1204	592.80-594.50	C	1.70	1.40	0.30	0.912	1.68	1.39
		608.42-609.38	H	0.96	0.96	-	-	0.96	0.95
RDH-81-109C	1250	184.54-184.96	CR	0.42	0.42	-	1.00	0.42	0.42
		187.94-190.24	C	2.30	2.30	-	-	2.30	2.30

TABLE NO. 3 con't
 COAL SEAM DATA SHEET
 OIL AND GAS HOLES

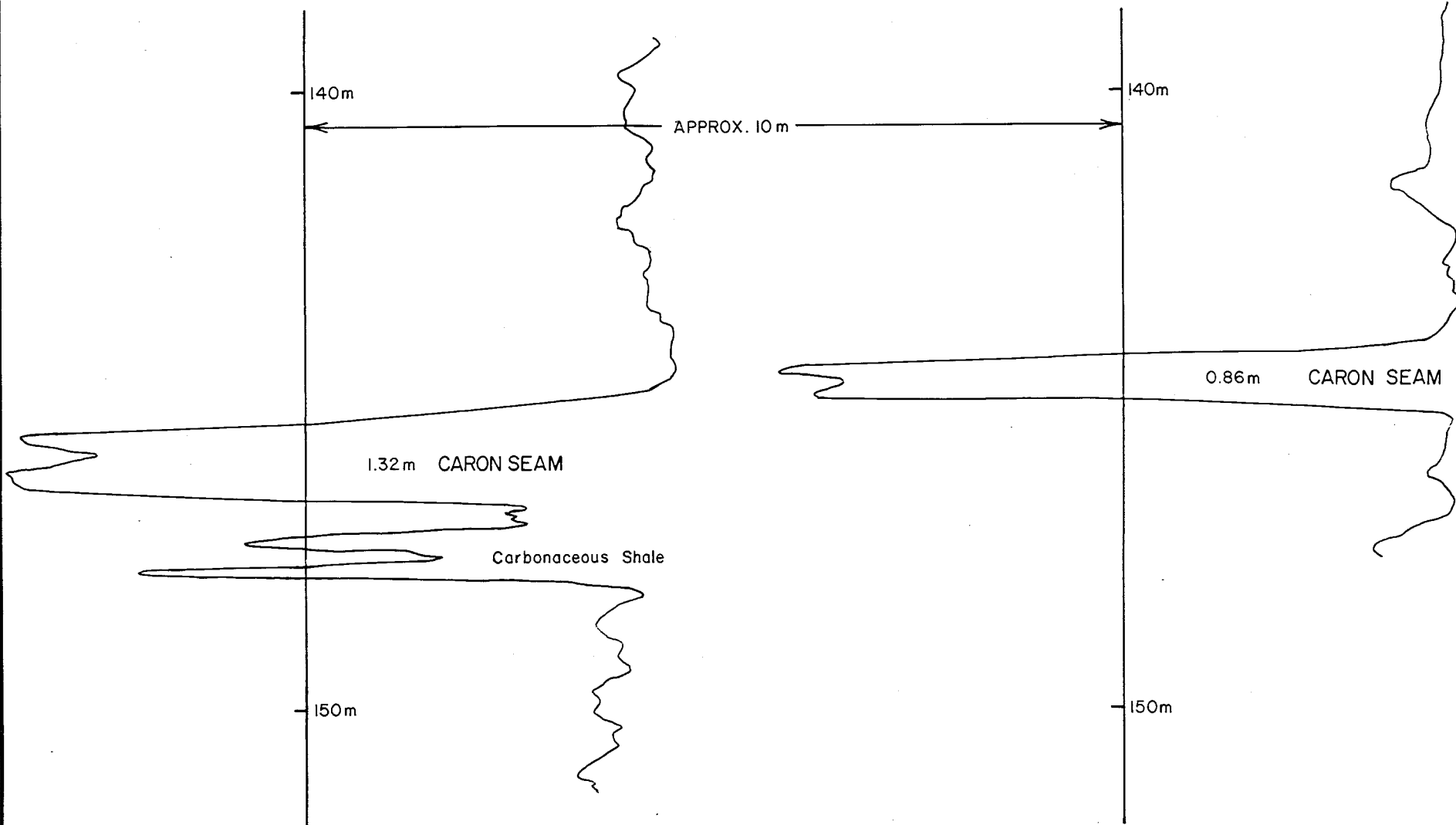
Caron Seam C
 Highhat Seam H

Linklater L

Hole No.	Elev. (m)	Coal Zone Intersection	Seam	Apparent Thickness (m)	Coal	Rock	Apparent Thickness Correction	True Seam Thickness	True Coal Thickness
93P/5 c-31-K	1051.5	Hole is cased to below KCmb							
93P/5 c-29-C	1242.0	No significant coal							
93P/12 a-23-D	1264.0	725.60-728.30	C	2.70	2.70	0.00	1.000	2.70	2.70
		733.50-734.60	L	1.10	1.10	0.00		1.10	1.10
		737.16-738.53	H	1.37	1.37	0.00		1.37	1.37
93P/5 d-78-K	1115.0	Data not released until one year after hole is completed approx. September, 1982							

RDH 80-08

RDH 81-106C



GULF CANADA RESOURCES INC.

Coal Division

CALGARY

ALBERTA



TREFI COAL PROJECT
1981
COMPARISON OF CARON SEAM
HOLES 80-08-81-106C

FIGURE 5

PREPARED BY: D.W. MacFarlane

SCALE 1: 100

APPROVED BY:

DATE: NOV. 81

DRAWING No.

The variable nature of the Highhat seam and its limited depositional extent are illustrated in the longitudinal section (Appendix III) and the isopach map (Map No. 6).

4.3.3 OTHER SEAMS

Several other thin seams are found on the Trefi property within the resource area. Due to their thinness and extremely limited lateral development these seams are of no economic interest. To aid in general correlation procedures two of these small coal seams have been tentatively named the Caron Rider seam and the Linklater seam in Table 3 and on the longitudinal section (Appendix III).

4.4 COAL QUALITY

4.4.1 SAMPLING

In all diamond drill holes continuous core was obtained and logged in detail (see core descriptions, Appendix V). Core recovery through coal seams was acceptable in all cases, being in excess of 90% and as high as 100% in some cases. All intercepted coal seams 1.0 m or greater in thickness were sampled for analysis. In seams where considerable vertical variation existed, individual plys were sampled and analyzed separately.

All core was boxed, labelled, palletted and stored at the core shed in Chetwynd, B.C.

Two 1980 rotary holes, 80-07 and 80-08, were used as pilot holes and core holes drilled adjacent to them. In core hole 81-106C, drilled adjacent to 80-08, the Caron seam thinned rapidly (see Figure No. 5.). In hole 81-109C, drilled adjacent

to hole 80-07, excellent coal core was recovered (see illustration No. 6). This core was recovered using a diamond bit for the entire run.

Due to the limited developments of the Highhat seam only two samples were collected; one from hole DDH-81-102 and one from DDH-81-108.

Four samples were collected from the Caron seam in holes DDH-81-102, DDH-81-105, DDH-81-108 and RDH-81-109C.

All coal seams were sampled as outlined in the coal seam data sheets contained in Appendix V.

4.4.2 ANALYSIS

All core samples were analyzed as quickly as possible after recovery. In one instance (DDH-81-102) a thin seam was collected in its entirety and analyzed as a composite based on mining thickness. In all other cases individual samples were collected from distinct plies making up the seam based on density log interpretations and macroscopic examination of the core.

For each coal sample from each seam ply a proximate analysis with calorific value, sulphur and FSI was performed on the raw coal. A summary of these analytical results is shown in Table 4.

For those cores where individual plies had been collected an arithmetic weighted average, based on length and specific gravity for each ply, was carried out to determine the raw coal quality for each seam as mined. These results are outlined in Table 5.

TABLE NO. 4
SUMMARY OF ANALYSES
HEAD SAMPLE-RAW COAL-AIR DRIED BASIS

Hole No.	Sample No.	Lab No.	Moist	Ash	V.M.	F.C.	Calorific Value Btu/lb	Value MJ/KG	S	S.G.	F.S.I.
DDH-81-102	4351 C	22048	1.06	10.90	20.90	67.14	13117	30.50	0.26	1.39	1.0
	4352 H	22048	0.71	9.64	24.92	64.73	13688	31.83	1.04	1.36	2.0
DDH-81-105	4353 C	22097	0.80	12.08	21.66	65.46	13276	30.88	0.52	1.41	1.0
	4354 C	22097	0.90	30.35	18.45	50.30	10404	24.20	0.30	1.54	1.0
	4355 C	22097	0.74	7.42	25.00	66.84	14067	32.72	0.39	1.36	2.0
	4356 C	22097	0.92	46.77	14.84	37.47	7463	17.36	0.28	1.73	0.0
	4357 C	22097	0.74	7.21	22.73	69.32	14067	32.72	0.39	1.37	1.0
	4358 C	22097	0.72	16.09	26.40	56.79	11367	26.44	0.27	1.49	1.0
	4359 C	22097	0.72	6.56	24.77	67.95	14136	32.88	0.36	1.35	1.0
DDH-81-108	4360 C	22188	0.91	12.83	21.82	64.44	13005	30.25	0.45	1.40	1.0
	4361 C	22188	0.77	76.56	8.43	14.24	2880	6.70	0.10	2.21	0.0
	4362 C	22188	0.82	10.09	21.84	67.25	13289	30.91	0.51	1.39	1.0
	4363 H	22188	0.89	17.06	25.24	56.81	12334	28.69	0.26	1.44	1.5
RDH-81-109C	4364 C	22234	0.99	5.40	20.86	72.75	14127	32.86	0.54	1.34	1.0
	4365 C	22234	0.73	13.21	23.17	62.89	12515	29.11	0.26	1.42	1.0
	4366 C	22234	0.73	6.05	27.43	65.79	14140	32.89	0.44	1.33	7.0

C - Caron Seam
H - Highhat Seam

TABLE NO. 5
TREFI 1981 COAL COMPOSITE SAMPLES
WEIGHTED ARITHMETIC AVERAGE

Drill Hole No.	Coal Intercepts (m)	Moisture (ADB)	Ash	V.M.	F.C.	S	Btu/lb	MJ/kg
DDH-81-102	112.20-123.63	1.06	10.90	20.90	67.14	0.26	13,117	30.50
	136.66-137.84	0.71	9.64	24.92	64.73	1.04	13,688	31.88
DDH-81-105	204.48-206.85	0.79	17.00	22.19	60.02	0.37	12,344	28.70
DDH-81-108	592.80-594.50	0.83	26.01	18.74	54.43	0.40	10,830	25.18
	608.42-609.38	0.89	17.06	25.24	56.81	0.26	12,340	28.69
RDH-81-109C	187.94-190.24	0.88	7.23	22.76	69.13	0.46	13,785	32.05

Holes DDH-81-105, DDH-81-108 and RDH-81-109C were physically composited and subjected to the tests outlined in Figure 6. Composited samples from holes DDH-81-105 and DDH-81-108 were subjected to sink float separation at a S.G. of 1.65. The composite sample from RDH-81-109C was not separated as the raw coal ash was below 10.0%.

A summary of the analyses carried out on the composited raw coal is shown in Table 6. It can be seen that the values compare rather well with the values determined by weighted arithmetic average as shown in Table 5.

Table 7 summarizes all analytical values on 1.65 S.G. float for holes DDH 81-105 and DDH 81-108 and on raw coal for RDH 81-109C. It can be seen that the recorded parameters are fairly consistent. Noticeable variations, such as the ash values as shown in the raw coal composites in Table 6, are probably due to non-organic seam splits caused by depositional action.

The non-organic material appears to be relatively easily removed to obtain a good low ash, high calorific value product. In areas where the non-organic material is contained in thin splits or is close to organic material, such as in hole RDH-81-109C, it appears that the coal would be an acceptable product as mined.

Petrographic analyses run on core obtained from hole RDH 80-12 are contained in Appendix VII.

TABLE NO. 6
SUMMARY OF ANALYSES AIR DRIED
RAW COAL COMPOSITE SAMPLES CARON SEAM

Drill Hole Number	Moist	Ash	V.M.	F.C.	Btu/lb	MJ/kg	S	HGI
DDH-81-105	0.66	17.61	21.62	60.11	12279	28.56	0.35	55.0
DDH-81-108	0.64	28.46	18.08	52.82	10482	24.38	0.38	53.0
RDH-81-109C	0.79	7.78	22.66	68.77	13749	31.98	0.32	58.0

FIGURE NO. 6
ANALYTICAL FLOW CHART

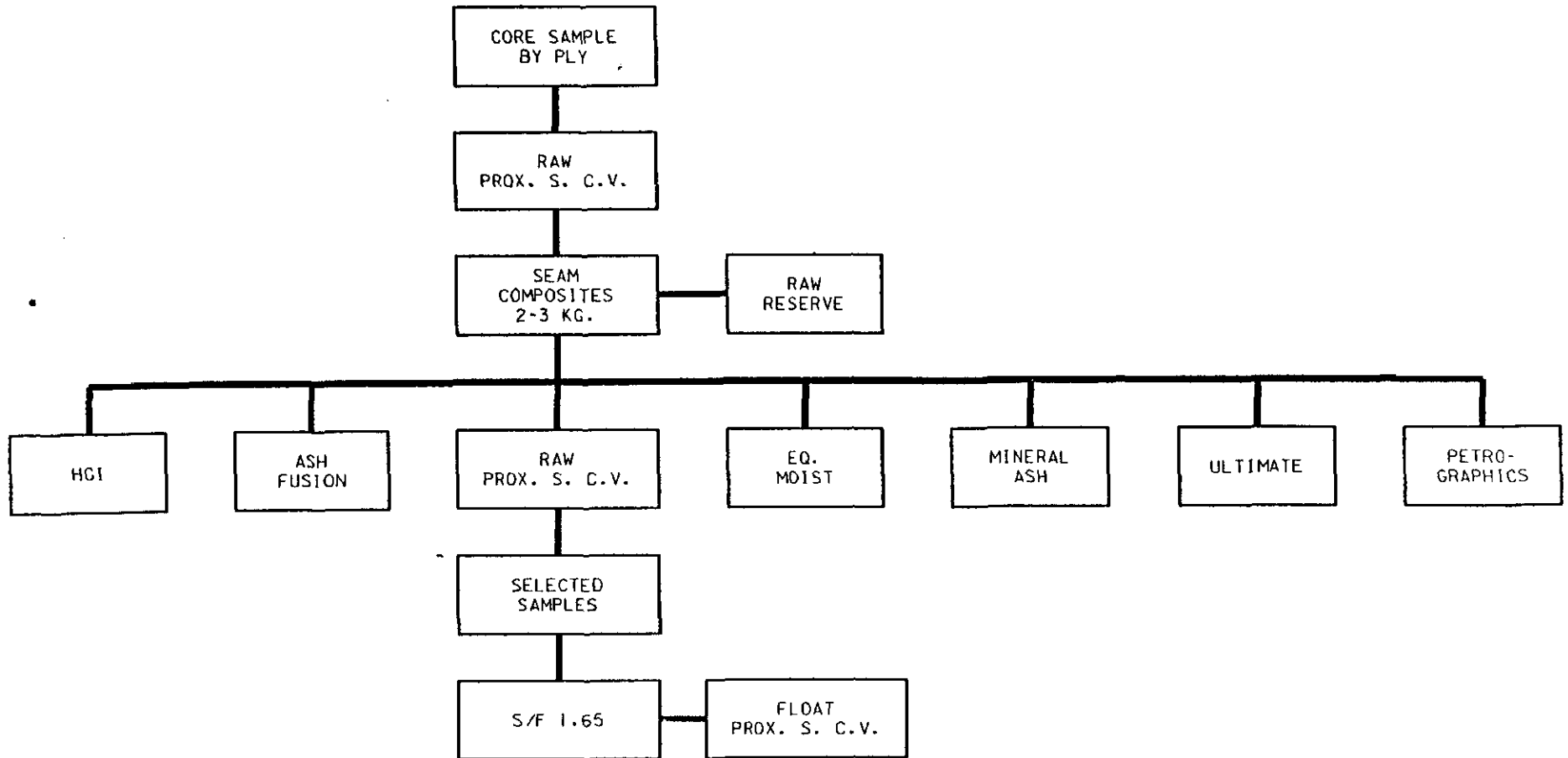


TABLE NO. 7
SUMMARY OF ANALYSES
COMPOSITE SAMPLES
CARON SEAM

Hole No.	DDH-81-105 1.65 Float	DDH-81-108 1.65 Float	RDH-81-109C Raw
Yield	83.81	76.63	
Moist (eq)	1.4	1.6	2.1
Moist (a.d.)	0.42	0.44	0.79
Ash	9.09	7.66	7.78
VM	22.52	22.51	22.66
FC	67.97	69.39	68.77
S	0.40	0.51	0.32
C.V. Btu/lb (a.d.)	13732	13869	13749
KJ/kg (a.d.)	31.94	32.26	31.98
CI	TR	TR	TR
HGI	55.0	53.0	58.0
Ultimate (a.d.)			
Moist	.66	.64	.79
Ash	17.61	28.46	7.78
C	75.37	61.41	83.46
H	3.71	3.18	5.17
O	1.46	5.14	1.63
N	.84	.79	.85
S	.35	.38	.32
Ash Fusion			
Oxidizing (F°)			
ID	2348	+2650	2284
H=W	2398	+2650	2318
H=1/2 W	2448	+2650	2323
FT	2493	+2650	2333
Reducing			
ID	2314	+2650	2194
H=W	2383	+2650	2234
H=1/2 W	2433	+2650	2239
FT	2473	+2650	2254
Ash Analysis			
S ₁ O ₂	54.49	70.96	33.00
Al ₂ O ₃	20.12	18.30	15.74
TiO ₂	.80	1.03	.56
Fe ₂ O ₃	3.76	1.57	7.29
CaO	9.73	1.57	25.75
MgO	1.98	.98	4.15
Na ₂ O	.85	.62	1.05
K ₂ O	1.65	1.63	.30
P ₂ O ₅	1.05	.56	1.95
SO ₃	3.92	.53	7.98
(undetermined)	-1.65	-.2.25	-2.23

5.0 RESOURCES

The majority of the resources in the Trefi property are contained in the Caron seam as correlated by this study. The small areal extent of the Highhat seam greatly limits resources for this seam.

Due to the widespread nature of coal seam data all resources for the Trefi property are reported as inferred at this time.

5.1 DESCRIPTION OF RESOURCE AREA

The overall Trefi resource area was divided into a number of smaller areas in order to facilitate calculations. Tonnages for both the Caron seam and the Highhat seam for each resource area were calculated separately for portions greater than 1.5 m seam thickness and for the portions from 0.5 m to 1.5 m thickness. All calculations were taken to 600 m cover.

Map No. 1 shows the general resource area and the Caron seam individual resource areas.

5.2 METHODS OF RESOURCE CALCULATIONS

Isopach maps were drawn at a scale of 1:20,000 for both the Caron seam and the Highhat seam (Maps No. 5 and 6). A structure contour map (SCM) was drawn on the footwall of the Caron seam (Map No.4). Utilizing the SCM and the base topographic map a cover map for the Caron seam was constructed (Map No. 7).

Average seam thickness was determined by using a grid overlay with 2.0 cm intersections. The individual resource areas were laid out on the overlay and each area planimetered to the 1.5 m isopach, between the 0.5 m to the 1.5 m isopachs and to the 600 m cover line.

The area in square metres (m^2) was determined and multiplied by the average seam thickness which resulted in the coal volume in cubic metres (m^3) for each area. This figure multiplied by a specific gravity of 1.3 g/cc gave metric tons in-place.

Due to the inferred status of the resources and a paucity of sub-surface control no attempt has been made to correct the reported resources for dip. In those coal areas along the northeast limb of the Pine River anticline in-place tonnages will be increased by some factor dependent on the dip. Until better sub-surface structural control is achieved it is sufficient to realize that the tonnage will be greater than determined in plan.

Resources have been determined only to the 600 m cover line. A fairly substantial resource in the Caron seam lies under cover in excess of 600 m and likewise a smaller resource tonnage is similarly situated in the Highhat seam.

5.3 CARON SEAM RESOURCES

The Caron seam has been correlated over the greatest areal extent of any of the coal seams on the Trefi property. All the Caron seam resources have been reported as inferred due to the scattered nature of the available seam data. Inferred Caron seam resources greater than 1.5 m in thickness are reported as 56,786,951 metric tons. From 1.5 m to a lower limit of 0.5 m seam thickness the reported inferred resources are 49,222,147 metric tons. Total Caron seam inferred resources to 600 m cover are 106,009,098 metric tons.

Detailed Caron seam resources are outlined in Table 8.

TABLE 8

CARON SEAM
INFERRED RESOURCES

Greater Than 1.5 m Isopach

RESOURCE AREA	AREA M ²	AVG. COAL THICKNESS (m)	VOLUME m ³	METRIC TONS IN-PLACE S.G.1.3
1	5800000	2.00	11600000	15080000
2	3920000	1.90	7448000	9682400
3	984000	1.87	1840080	2392104
4	1019000	1.71	1742490	2265237
5	436000	1.50	654000	850200
6	1200000	1.76	2112000	2745600
7	5690000	1.88	10697200	13906360
8	4290000	1.65	7078500	9202050
9	340000	1.50	510000	663000
Sub Total				<u>56786951</u>

0.5 to 1.5 m Isopach

1	3210000	0.96	3081600	4006080
2	2720000	0.85	2303840	2994992
3	2420000	0.90	2178000	2831400
4	2160000	1.23	2656800	3453840
5	3460000	1.00	519000	674700
6	1510000	1.04	1570400	2041520
7	3610000	1.03	3718300	4833790
8	1660000	1.33	2207800	2870140
9	5230000	0.89	4654700	6051110
10	9815000	0.85	8342750	10845575
11	8500000	0.78	6630000	8619000
Sub total				<u>49222147</u>

Total

106009098

5.4 HIGHHAT SEAM RESOURCES

The Highhat seam achieves only very limited areal extent on the Trefi property. Inferred Highhat seam resources greater than 1.5 m in thickness are reported as 3,139,500 metric tons. From 1.5 m to a lower limit of 0.5 m seam thickness the inferred resources are reported as 13,391,300 metric tons. Total inferred resources for the Highhat seam to a cover of 600 m are 16,530,800 metric tons.

Detailed Highhat seam resources are outlined in Table 9.

TABLE 9

HIGHHAT SEAM
 INFERRED RESOURCES
 Greater Than TO 1.5 m ISOPACH

RESOURCE AREA	AREA M ²	AVG. COAL THICKNESS (m)	VOLUME m ³	METRIC TONS IN-PLACE S.G.1.3
1	1610000	1.5	2415000	<u>3139500</u>
Sub Total				3139500
0.5 to 1.5 m Isopach				
1	2140000	0.77	16478000	2142140
2	3060000	1.00	3060000	3978000
3	7080000	0.79	5593200	<u>7271160</u>
Sub Total				13391300
Total				<u>16530800</u>

6.0 CONCLUSIONS AND RECOMMENDATIONS

The only potential in the Trefi block is in the area south of the Pine River Valley and along the western margin of the property. Within this potential general resource area the Caron seam is the best developed seam and shows most promise in the southwestern portion where it appears to be better quality, thicker and under less depth of cover.

The Highhat seam is much more poorly developed and appears to be deposited only in a limited area north of the Highhat River.

It is postulated that the Trefi coal seams have been deposited in an inter-distributary, high energy deltaic environment which has resulted in rapidly changing lateral continuity and highly varying seam make-up.

Preliminary coal quality analyses performed on a limited number of samples indicate that a reasonably high quality thermal coal product can be expected from the Caron seam. Some select areas may be able to produce an acceptable mine run product such as indicated by the core from hole RDH-81-109C. High ash volumes in some raw coal samples appear to be due to the presence of non-organic partings and can be removed with relatively high yield to produce a clean low ash, low sulphur, high calorific value coal.

In-place tonnages for the resource area are inferred due to the limited number of widely scattered data points and the highly variable depositional nature of the seams.

The depth of cover over the coal seams accumulates very rapidly to the east-northeast.

No economical surface mining potential exists on the property. All coal would have to be won by underground methods. Seam thicknesses are economically marginal and the lack of reasonable lateral seam continuity, as presently indicated, would greatly reduce recoverable tonnages and increase mining problems.

More exploration would be necessary to prove reserves and confidently outline a potential mining area if present.

All existing readily accessible rotary drill areas have been drilled other than some reconnaissance in-fill and all future drilling will require road building and/or helicopter support.

Any future exploration and drilling should be concentrated on the Caron seam in the southwest portion of the resource area with a view towards proving a small underground resource and determining general quality parameters in the area.

Drilling should be carried out along northeast-southwest lines so as to best determine the areal extent and development of the Caron seam.

Several reconnaissance holes should be drilled in the large area north of the Highhat River along the Hasler Creek road to determine the extent of development of the Caron and Highhat seams in this area.

One or two reconnaissance holes should be located in the six southern licences acquired in 1981 to determine the presence of any coal seam(s). If no economic coal is present these licences should be dropped.

Selected licences to the north and east of the resource area should be dropped.

REFERENCES

- Hughes, J.E. (1967) - Geology of the Pine Valley, Mount Wabi to Solitude Mountain, Northeastern British Columbia, Bulletin No. 52, Dept. of Mines and Petroleum Resources.
- Stott, D.F. (1968) - Lower Cretaceous Bullhead and Fort St. John Groups, Between Smoky and Peace Rivers, Rocky Mountain Foothills, Alberta and British Columbia, Bulletin No. 152, G.S.C.
- G.C.R.I. (1980) - Trefi Coal Project, Geological Report, 1980

APPENDIX V

DATA SOURCE RECORD SHEETS

and

CORE DESCRIPTIONS

GCRI - COAL DIVISION - DATA SOURCE RECORD

PROJECT: TRF BLOCK: DATA SOURCE: DDH81100

HISTORY

DY MO YR DY MO YR
 START DATE: 11/07/81 END DATE: 13/07/81 OPERATOR: GULF CANADA RES.
 CONTRACTOR: COATES DRILLING GEOLOGIST: MacFARLANE SURVEYOR: CADASTER
 REMARKS: _____

LOCATION

PROVINCE: B.C. ELEVATION: 923.0
 UTM ZONE: NORTH: 6150387.60 EAST: 572298.70
 LAT&LONG LATITUDE: 55°29'46.2" LONGITUDE: 121°51'20.3"
 DLS-ALTA NORTH: EAST: LSD: SEC: TWP: RGE: MER:
 NTS-BC NORTH: EAST: QUAD: UNIT: BLK: K ST: 93 MUS: P MS: 5

DIMENSIONS AND ORIENTATION

LENGTH: 245.00 INCLINATION: -90.0 AZIMUTH:
 SIZE WIDTH: 9.6 SIZE HEIGHT:
 ROOF STRIKE: DIP: FLOOR STRIKE: DIP:

DRILL HOLE STATUS

CASING DEPTH: CEMENTED: PLUGGED: X PEIZOMETERS INSTALLED:
 AQUIFER DEPIHS: 171.2 LOST CIRCULATION DEPIHS:
 360'

GEOPHYSICAL LOGGING

	LOG RUN	SCALE 1	SCALE 2	DIGITIZED	TRUE THICKNESS	OPEN HOLE	THRU RODS	TOOL NUMBER
GAMMA	X	1:100	:	--	--	--	X	125A004
NEUTRON	X	1:100	:	--	--	--	X	125A004
DENSITY	X	1:100	:	--	--	X	X	247AS
CALIPER	X	1:100	:	--	--	X	--	785
FE-SHORT	X	1:100	:	--	--	X	--	9
FE-LONG		:	:	--	--	--	--	
DIRECTIONAL DIPMETER	X	:	:	--	--	X	--	
	--	:	:	--	--	--	--	

GCRI - COAL DIVISION - DATA SOURCE RECORD

PROJECT: TRF BLOCK: ___ DATA SOURCE: RDH81101

HISTORY

 DY MO YR DY MO YR
 START DATE: 15/07/81 END DATE: 17/07/81 OPERATOR: GULF CANADA RES.
 CONTRACTOR: ALBERTA SOUTHERN GEOLOGIST: MacFARLANE SURVEYOR: CADASTER
 REMARKS: RIG OUT OF PIPE 1200'. WILL DEEPEN WHEN PIPE AVAILABLE.
 HOLE DEEPENED AUG. 8/81.

LOCATION

 PROVINCE: B.C. ELEVATION: 887.0
 UTM ZONE: ___ NORTH: 6153764.20 EAST: 565542.90
 LAT&LONG LATITUDE: 55°31'38.9" LONGITUDE: 121°57'42.3"
 DLS-ALTA NORTH: ___ EAST: ___ LSD: ___ SEC: ___ TWP: ___ RGE: ___ MER: ___
 NTS-BC NORTH: 53.7 EAST: 65.6 QUAD: ___ UNIT: ___ BLK: D ST: 93 MUS: P MS: 12

DIMENSIONS AND ORIENTATION

LENGTH: 367.3 INCLINATION: -90.0 AZIMUTH: ___
 SIZE WIDTH: 12.7 SIZE HEIGHT: ___
 ROOF STRIKE: ___ DIP: ___ FLOOR STRIKE: ___ DIP: ___

DRILL HOLE STATUS

CASING DEPTH: ___ CEMENTED: X PLUGGED: ___ PEIZOMETERS INSTALLED: ___
 AQUIFER DEPTHS: ___ LOST CIRCULATION DEPTHS: ___

GEOPHYSICAL LOGGING

	LOG RUN	SCALE 1	SCALE 2	DIGITIZED	TRUE THICKNESS	OPEN HOLE	THRU RODS	TOOL NUMBER
GAMMA	X	1:100	: ---	---	---	X	---	125A004
NEUTRON	X	1:100	: ---	---	---	X	---	125A004
DENSITY	X	1:100	: ---	---	---	X	---	422AS
CALIPER	X	1:100	: ---	---	---	X	---	785
FE-SHORT	X	1:100	: ---	---	---	X	---	9
FE-LONG		:	: ---	---	---		---	---
DIRECTIONAL	X	1:100	: ---	---	---	X	---	---
DIPMETER		:	: ---	---	---		---	---

GCRI - COAL DIVISION - DATA SOURCE RECORD

PROJECT: TRF BLOCK: DATA SOURCE: DDHB1102

HISTORY

DY MO YR DY MO YR
 START DATE: 16/07/81 END DATE: 18/07/81 OPERATOR: GULF CANADA RES.
 CONTRACTOR: COATES DRILLING GEOLOGIST: MacFARLANE SURVEYOR: CADASTER
 REMARKS: _____

LOCATION

PROVINCE: B.C. ELEVATION: 1380.0
 UTM ZONE: NORTH: 6150000.70 EAST: 568139.10
 LAT&LONG LATITUDE: 55°29'35.9" LONGITUDE: 121°55'17.6"
 DLS-ALTA NORTH: EAST: LSD: SEC: TWP: RGE: MER:
 NTS-BC NORTH: EAST: QUAD: UNIT: BLK: L ST: 93 MUS: P MS: 5

DIMENSIONS AND ORIENTATION

LENGTH: 59.00 INCLINATION: -70.0 AZIMUTH:
 SIZE WIDTH: 9.6 SIZE HEIGHT:
 ROOF STRIKE: DIP: FLOOR STRIKE: DIP:

DRILL HOLE STATUS

CASING DEPTH: CEMENTED: X PLUGGED: PEIZOMETERS INSTALLED:
 AQUIFER DEPTHS: LOST CIRCULATION DEPTHS:

GEOPHYSICAL LOGGING

	LOG RUN	SCALE 1	SCALE 2	DIGITIZED	TRUE THICKNESS	OPEN HOLE	THRU RODS	TOOL NUMBER
GAMMA	X	1:100	: _____	-	-	-	X	125A004
NEUTRON	X	1:100	: _____	-	-	-	X	125A004
DENSITY	X	1:100	1:40 _____	-	-	X	X	247AS
CALIPER	X	1:100	: _____	-	-	X	-	785
FE-SHORT	X	1:100	1:40 _____	-	-	X	-	9
FE-LONG	-	: _____	: _____	-	-	-	-	_____
DIRECTIONAL DIPMETER	X -	: _____	: _____	- -	- -	X -	- -	_____ _____

GCRI - COAL DIVISION - DATA SOURCE RECORD

PROJECT: TRF BLOCK: ___ DATA SOURCE: RDH81103

HISTORY

 DY MO YR DY MO YR
 START DATE: 17/07/81 END DATE: 19/07/81 OPERATOR: GULF CANADA RES.
 CONTRACTOR: ALBERTA SOUTHERN GEOLOGIST: MacFARLANE SURVEYOR: CADASTER
 REMARKS: _____

LOCATION

 PROVINCE: B.C. ELEVATION: 1054.0
 UTM ZONE: _____ NORTH: 6143464.90 EAST: 574837.90
 LAT&LONG LATITUDE: 55°26'01.0" LONGITUDE: 121°49'02.3"
 DLS-ALTA NORTH: _____ EAST: _____ LSD: _____ SEC: _____ TWP: _____ RGE: _____ MER: _____
 NTS-BC NORTH: _____ EAST: _____ QUAD: _____ UNIT: _____ BLK: K ST: 93 MUS: P MS: 5

DIMENSIONS AND ORIENTATION

LENGTH: 329.00 INCLINATION: -90.0 AZIMUTH: _____
 SIZE WIDTH: 12.7 SIZE HEIGHT: _____
 ROOF STRIKE: _____ DIP: _____ FLOOR STRIKE: _____ DIP: _____

DRILL HOLE STATUS

CASING DEPTH: 7.9 CEMENTED: _____ PLUGGED: _____ PEIZOMETERS INSTALLED: _____
 AQUIFER DEPTHS: _____ LOST CIRCULATION DEPTHS: _____

GEOPHYSICAL LOGGING

LOG RUN	SCALE 1	SCALE 2	DIGITIZED	TRUE THICKNESS	OPEN HOLE	THRU RODS	TOOL NUMBER
GAMMA	X 1:100	_____	---	---	X	---	125A004
NEUTRON	X 1:100	_____	---	---	X	---	125A004
DENSITY	X 1:100	1:40	---	---	X	---	247AS
CALIPER	X 1:100	_____	---	---	X	---	785
FE-SHORT	X 1:100	1:40	---	---	X	---	9
FE-LONG	_____	_____	---	---	---	---	_____
DIRECTIONAL	X	_____	---	---	X	---	_____
DIPMETER	_____	_____	---	---	---	---	_____

GCRI - COAL DIVISION - DATA SOURCE RECORD

PROJECT: TRF BLOCK: ___ DATA SOURCE: RDH81104

HISTORY

 DY MO YR DY MO YR
 START DATE: 19/07/81 END DATE: 20/07/81 OPERATOR: GULF CANADA RES.
 CONTRACTOR: ALBERTA SOUTHERN GEOLOGIST: MacFARLANE SURVEYOR: CADASTER
 REMARKS: _____

LOCATION

 PROVINCE: B.C. ELEVATION: 1233.0
 UTM ZONE: ___ NORTH: 6147413.50 EAST: 572769.00
 LAT&LONG LATITUDE: 55°28'09.8" LONGITUDE: 121°50'56.3"
 DLS-ALTA NORTH: ___ EAST: ___ LSD: ___ SEC: ___ TWP: ___ RGE: ___ MER: ___
 NTS-BC NORTH: ___ EAST: ___ QUAD: ___ UNIT: ___ BLK: K ST: 93 MUS: P MS: 5

DIMENSIONS AND ORIENTATION

LENGTH: 281.00 INCLINATION: -90.0 AZIMUTH: ___
 SIZE WIDTH: 13.3 SIZE HEIGHT: ___
 ROOF STRIKE: ___ DIP: ___ FLOOR STRIKE: ___ DIP: ___

DRILL HOLE STATUS

CASING DEPTH: 5.5 CEMENTED: ___ PLUGGED: ___ PEIZOMETERS INSTALLED: ___
 AQUIFER DEPTHS: ___ LOST CIRCULATION DEPTHS: ___

GEOPHYSICAL LOGGING

	LOG RUN	SCALE 1	SCALE 2	DIGITIZED	TRUE THICKNESS	OPEN HOLE	THRU RODS	TOOL NUMBER
GAMMA	X	1:100	:	---	---	X	---	125A004
NEUTRON	X	1:100	:	---	---	X	---	125A004
DENSITY	X	1:100	1:40	---	---	X	---	247AS
CALIPER	X	1:100	:	---	---	X	---	785
FE-SHORT	X	1:100	1:40	---	---	X	---	9
FE-LONG		:	:	---	---		---	
DIRECTIONAL	X	:	:	---	---	X	---	
DIPMETER		:	:	---	---		---	

GCRI - COAL DIVISION - DATA SOURCE RECORD

PROJECT: TRF BLOCK: ___ DATA SOURCE: DDH81105

HISTORY

DY MO YR DY MO YR
 START DATE: 20/07/81 END DATE: 22/07/81 OPERATOR: GULF CANADA RES.
 CONTRACTOR: D.W. COATES GEOLOGIST: MacFARLANE SURVEYOR: CADASTER
 REMARKS: _____

LOCATION

PROVINCE: B.C. ELEVATION: 971.0
 UTM ZONE: _____ NORTH: 6149328.20 EAST: 571077.70
 LAT&LONG LATITUDE: 55°29'12.6" LONGITUDE: 121°52'30.8"
 DLS-ALTA NORTH: _____ EAST: _____ LSD: _____ SEC: _____ TWP: _____ RGE: _____ MER: _____
 NTS-BC NORTH: _____ EAST: _____ QUAD: _____ UNIT: _____ BLK: K ST: 93 MUS: P MS: 5

DIMENSIONS AND ORIENTATION

LENGTH: 237.30 INCLINATION: -90.0 AZIMUTH: _____
 SIZE WIDTH: 9.6 SIZE HEIGHT: _____
 ROOF STRIKE: _____ DIP: _____ FLOOR STRIKE: _____ DIP: _____

DRILL HOLE STATUS

CASING DEPTH: _____ CEMENTED: X PLUGGED: _____ PEIZOMETERS INSTALLED: _____
 AQUIFER DEPTHS: _____ _____ LOST CIRCULATION DEPTHS: _____ _____

GEOPHYSICAL LOGGING

	LOG RUN	SCALE 1	SCALE 2	DIGITIZED	TRUE THICKNESS	OPEN HOLE	THRU RODS	TOOL NUMBER
GAMMA	X	1:100	:	---	---	X	---	125A004
NEUTRON	X	1:100	:	---	---	X	---	125A004
DENSITY	X	1:100	1:40	---	---	X	---	247AS
CALIPER	X	1:100	:	---	---	X	---	785
FE-SHORT	X	1:100	1:40	---	---	X	---	9
FE-LONG		:	:	---	---		---	
DIRECTIONAL DIPMETER	X	:	:	---	---	X	---	
	---	:	:	---	---	---	---	

GCRI - COAL DIVISION - DATA SOURCE RECORD

PROJECT: TRF BLOCK: ___ DATA SOURCE: RDH81106c

HISTORY

DY MO YR DY MO YR
 START DATE: 20/07/81 END DATE: 22/07/81 OPERATOR: GULF CANADA RES.
 CONTRACTOR: ALBERTA SOUTHERN GEOLOGIST: MacFARLANE SURVEYOR: CADASTER
 REMARKS: _____

LOCATION

PROVINCE: B.C. ELEVATION: 1153.0
 UTM ZONE: _____ NORTH: 6144933.30 EAST: 575206.40
 LAT&LONG LATITUDE: 55°26'48.6" LONGITUDE: 121°48'39.9"
 DLS-ALTA NORTH: _____ EAST: _____ LSD: _____ SEC: _____ TWP: _____ RGE: _____ MER: _____
 NPS-BC NORTH: _____ EAST: _____ QUAD: _____ UNIT: _____ BLK: K ST: 93 MUS: P MS: 5

DIMENSIONS AND ORIENTATION

LENGTH: 148.90 INCLINATION: -90.0 AZIMUTH: _____
 SIZE WIDTH: 14.0 SIZE HEIGHT: _____
 ROOF STRIKE: _____ DIP: _____ FLOOR STRIKE: _____ DIP: _____

DRILL HOLE STATUS

CASING DEPTH: _____ CEMENTED: _____ PLUGGED: _____ PEIZOMETERS INSTALLED: _____
 AQUIFER DEPTHS: _____ _____ LOST CIRCULATION DEPTHS: _____ _____

GEOPHYSICAL LOGGING

	LOG RUN	SCALE 1	SCALE 2	DIGITIZED	TRUE THICKNESS	OPEN HOLE	THRU RODS	TOOL NUMBER
GAMMA	X	1:100	:	---	---	X	---	125A004
NEUTRON	X	1:100	:	---	---	X	---	125A004
DENSITY	X	1:100	:	---	---	X	---	247AS
CALIPER	X	1:100	:	---	---	X	---	785
FE-SHORT	X	1:100	1:40	---	---	X	---	9
FE-LONG		:	:	---	---		---	
DIRECTIONAL	X	:	:	---	---	X	---	
DIPMETER		:	:	---	---		---	

GCRI - COAL DIVISION - DATA SOURCE RECORD

PROJECT: TRF BLOCK: ___ DATA SOURCE: RDH81107

HISTORY

DY MO YR DY MO YR
 START DATE: 21/07/81 END DATE: 23/07/81 OPERATOR: GULF CANADA RES.
 CONTRACTOR: ALBERTA SOUTHERN GEOLOGIST: MacFARLANE SURVEYOR: CADASTER
 REMARKS: _____

LOCATION

PROVINCE: B.C. ELEVATION: 1297.0
 UTM ZONE: ___ NORTH: 6146244.20 EAST: 572877.30
 LAT&LONG LATITUDE: 55°27'31.9" LONGITUDE: 121°50'51.2"
 DLS-ALTA NORTH: . EAST: . LSD: ___ SEC: ___ TWP: ___ RGE: ___ MER: ___
 NTS-BC NORTH: . EAST: . QUAD: ___ UNIT: ___ BLK: K ST: 93 MUS: P MS: 5

DIMENSIONS AND ORIENTATION

LENGTH: 341.00 INCLINATION: -90.0 AZIMUTH: .
 SIZE WIDTH: 12.7 SIZE HEIGHT: .
 ROOF STRIKE: ___ DIP: ___ FLOOR STRIKE: ___ DIP: ___

DRILL HOLE STATUS

CASING DEPTH: 1.8 CEMENTED: ___ PLUGGED: ___ PEIZOMETERS INSTALLED: ___
 AQUIFER DEPTHS: . . LOST CIRCULATION DEPTHS: . .

GEOPHYSICAL LOGGING

	LOG RUN	SCALE 1	SCALE 2	DIGITIZED	TRUE THICKNESS	OPEN HOLE	THRU RODS	TOOL NUMBER
GAMMA	X	1:100	:	---	---	X	---	125A004
NEUTRON	X	1:100	:	---	---	X	---	125A004
DENSITY	X	1:100	:	---	---	X	---	247AS
CALIPER	X	1:100	1:40	---	---	X	---	785
FE-SHORT	X	1:100	1:40	---	---	X	---	9
FE-LONG	---	:	:	---	---	---	---	---
DIRECTIONAL	X	:	:	---	---	X	---	---
DIPMETER	---	:	:	---	---	---	---	---

GCRI - COAL DIVISION - DATA SOURCE RECORD

PROJECT: TRF BLOCK: ___ DATA SOURCE: DDH81108

HISTORY

 DY MO YR DY MO YR
 START DATE: 24/07/81 END DATE: 02/08/81 OPERATOR: GULF CANADA RES.
 CONTRACTOR: COATES DRILLING GEOLOGIST: MacFARLANE SURVEYOR: CADASTER
 REMARKS: _____

LOCATION

 PROVINCE: B.C. ELEVATION: 1204.0
 UTM ZONE: _____ NORTH: 6151687.30 EAST: 566932.10
 LAT&LONG LATITUDE: 55°30'31.0" LONGITUDE: 121°56'24.9"
 DLS-ALTA NORTH: _____ EAST: _____ LSD: _____ SEC: _____ TWP: _____ RGE: _____ MER: _____
 NTS-BC NORTH: _____ EAST: _____ QUAD: _____ UNIT: _____ BLK: K ST: 93 MUS: P MS: 5

DIMENSIONS AND ORIENTATION

LENGTH: 617.00 INCLINATION: -90.0 AZIMUTH: _____
 SIZE WIDTH: 9.6 SIZE HEIGHT: _____
 ROOF STRIKE: _____ DIP: _____ FLOOR STRIKE: _____ DIP: _____

DRILL HOLE STATUS

CASING DEPTH: _____ CEMENTED: X PLUGGED: _____ PEIZOMETERS INSTALLED: _____
 AQUIFER DEPTHS: _____ LOST CIRCULATION DEPTHS: _____

GEOPHYSICAL LOGGING

	LOG RUN	SCALE 1	SCALE 2	DIGITIZED	TRUE THICKNESS	OPEN HOLE	THRU RODS	TOOL NUMBER
GAMMA	X	1:100	: _____	---	---	---	X	125A004
NEUTRON	X	1:100	: _____	---	---	---	X	125A004
DENSITY	X	1:100	1:40	---	---	X	X	247AS
CALIPER	X	1:100	: _____	---	---	X	---	785
FE-SHORT	X	1:100	1:40	---	---	X	---	9
FE-LONG		:	: _____	---	---	---	---	---
DIRECTIONAL	X	: _____	: _____	---	---	X	---	---
DIPMETER	---	: _____	: _____	---	---	---	---	---

GCRI - COAL DIVISION - DATA SOURCE RECORD

PROJECT: TRF BLOCK: ___ DATA SOURCE: RDH81109c

HISTORY

 DY MO YR DY MO YR
 START DATE: 05/08/81 END DATE: 06/08/81 OPERATOR: GULF CANADA RES.
 CONTRACTOR: ALBERTA SOUTHERN GEOLOGIST: MacFARLANE SURVEYOR: CADASTER
 REMARKS: _____

LOCATION

 PROVINCE: B.C. ELEVATION: 1250.0
 UTM ZONE: ___ NORTH: 6145981.50 EAST: 573577.50
 LAT&LONG LATITUDE: 55°27'23.0"LONGITUDE: 121°50'11.6"
 DLS-ALTA NORTH: . EAST: . LSD: . SEC: . TWP: . RGE: . MER: . MS: 5
 NTS-BC NORTH: . EAST: . QUAD: . UNIT: . BLK: K ST: 93 MUS: P MS: 5

DIMENSIONS AND ORIENTATION

LENGTH: 191.70 INCLINATION: -90.0 AZIMUTH: .
 SIZE WIDTH: 12.7 SIZE HEIGHT: .
 ROOF STRIKE: . DIP: . FLOOR STRIKE: . DIP: .

DRILL HOLE STATUS

CASING DEPTH: . CEMENTED: X PLUGGED: . PEIZOMETERS INSTALLED: .
 AQUIFER DEPTHS: . . LOST CIRCULATION DEPTHS: . .

GEOPHYSICAL LOGGING

	LOG RUN	SCALE 1	SCALE 2	DIGITIZED	TRUE THICKNESS	OPEN HOLE	THRU RODS	TOOL NUMBER
GAMMA	X	1:100	: _____	--	--	X	--	125A004
NEUTRON	X	1:100	: _____	--	--	X	--	125A004
DENSITY	X	1:100	1:40 _____	--	--	X	--	247AS
CALIPER	X	1:100	: _____	--	--	X	--	785
FE-SHORT	X	1:100	1:40 _____	--	--	X	--	9
FE-LONG		:	: _____	--	--		--	_____
DIRECTIONAL	X	:	: _____	--	--	X	--	_____
DIPMETER		:	: _____	--	--		--	_____

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

PAGE 1

PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	0.00	33.40	33.40			OVERBURDEN	NO CORE.
	33.40	33.44	0.04			OVERBURDEN	
*	33.44	33.98	0.54			MUDSTONE	SLTY.DK.GY SLTY MUDST DK GY W/THIN INTBS OF SST; L T GY VFG CONVOL BDG WITH CALCT FILLED F RAC AT BASE.
*	33.98	34.36	0.38			MUDSTONE	SLTY.DK.GY AS ABOVE WITH CALCITE FILLED FRACTURE A T BASE AGAIN.
*	34.36	36.01	1.65			MUDSTONE	SLTY.DK.GY SLTY MUDST DK GY W/THIN INTBS OF SST, L T GY VFG CONVOL BDG BASAL CONTACT WITH SKS.
*	36.01	36.07	0.06			MUDSTONE	SLTY.DK.GY CORE INTACT AND BLOCKY FOR BOX 1.
	36.07	38.03	1.96			MUDSTONE	SLTY.DK.GY BASAL CONTACT WITH MARKER.
	38.03	38.81	0.78			MUDSTONE	DK.GY MUDST DK GY W/OCCASIONAL INTBS OF SST L T GY; VFG CONVOL BDG; CORE INTACT AND B LOCKY FOR BOX 2.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

PAGE 2

PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH	DEPTH	INTRVAL	SAMP. SEAM		LITHOLOGY	DESCRIPTION
	FROM	ID	THICK.	ID	ID		
*	38.81	41.06	2.25			SILTSTONE	DK.GY SLTST, DK GY W/OCCASIONAL SST LT GY FVG CONVOL BDG BASAL CONTACT W/MARKER BLUC K.
*	41.06	41.53	0.47			MUDSTONE	SLTY.DK.GY SLTY MUDST W/SST LT GY VFG; CONVOL BDG; BASAL CONTACT WITH MINOR SKS.
	41.53	41.63	0.10			MUDSTONE	SLTY.DK.GY END OF BOX 3 - CORE INTACT.
*	41.63	43.34	1.71			SILTSTONE	DK.GY SLTST DK GY W/SST LT GY VFG; CONVOL BDG ; OCCASIONAL MINOR SKS; BASAL CONTACT W ITH SPECKLES OF PYRITE.
*	43.34	44.19	0.85			SILTSTONE	DK.GY AS ABOVE (EXCEPT FOR PYRITE).
	44.19	44.43	0.24			SILTSTONE	DK.GY AS ABOVE (NO PYRITE, NO SKS); END OF BOX 4; CORE INTACT TO BLOCKY.
	44.43	47.03	2.60			SILTSTONE	DK.GY SLTST DK GY WITH THIN INTERBEDS OF SS - LT GY, VFG, CONVOLUTED BEDDING AND SOME XBDG.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	47.03	47.06	0.03			SANDSTONE	VFG.WEL.M.GY.THNB
	47.06	47.19	0.13			SILTSTONE	DK.GY SLTST DK GY WITH THIN INTERBEDS OF SS; LT GY VFG; CONVOLUTED BDG; END OF BOX 5 ; CORE INTACT.
	47.19	47.65	0.46			SANDSTONE	SLTY.VFG.WEL.LT.GY SS LT GY; INTERBEDDED WITH SLTST - DK G Y; CONVOL BDG.
	47.65	47.91	0.26			SILTSTONE	SSY.DK.GY SLTST DK GY W SS - LT GY; VFG; CONVOL B DG; XBDG.
*	47.91	49.53	1.62			SILTSTONE	DK.GY SLTST - DK GY WITH INTERBEDDED SS - LT GY; VFG.
	49.53	50.13	0.60			SILTSTONE	DK.GY AS ABOVE; NO PYRITE; END OF BOX 6; CORE INTACT.
	50.13	50.28	0.15			SILTSTONE	DK.GY SLTST - DK GY WITH SS - LT GY; VFG; CON VOL BEDS; BOTTOM CONTACT MARKER BLOCK.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	50.28	53.05	2.77			SILTSTONE	DK.GY AS ABOVE; END OF BOX 7; CORE INTACT.
	53.05	53.37	0.32			SILTSTONE	DK.GY AS ABOVE.
	53.37	55.98	2.61			SILTSTONE	DK.GY AS ABOVE WITH OCCASIONAL MINOR SKS; END OF BOX 8; CORE INTACT.
	55.98	56.45	0.47			SILTSTONE	DK.GY AS ABOVE.
	56.45	58.86	2.41			SILTSTONE	DK.GY AS ABOVE; END OF BOX 9; CORE INTACT.
	58.86	59.54	0.68			SILTSTONE	DK.GY AS ABOVE.
*	59.54	61.71	2.17			SILTSTONE	DK.GY AS ABOVE; END OF BOX 10; CORE INTACT.
	61.71	62.58	0.87			SILTSTONE	DK.GY SLTST - DK GY WITH INTERBEDDED; SS - LT GY; VFG; CONVOL BOG; SOME XBDG; PL FRA G.

* DENOTES MEASURED BCA

82/02/10

GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: ,XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	62.58	64.62	2.04			SILTSTONE	DK.GY AS ABOVE WITH OCCASIONAL WORM BURROWS AND NO SKS; END OF BOX 11; CORE INTACT.
*	64.62	65.59	0.97			SILTSTONE	DK.GY AS ABOVE; SOFT SED DEFORMATION AT .57 M .
	65.59	67.43	1.84			SILTSTONE	DK.GY AS ABOVE; VERY THIN DISCONTINUOUS COAL; PYRITIZED WORM BURROWS; SKS; END OF BOX X 12; CORE INTACT.
	67.43	68.59	1.16			SILTSTONE	DK.GY SLTST - DK GY WITH INTERBEDDED SS - LT GY; VFG; CONVOL SDG; MINOR PL FRAG AND SKS.
	68.59	70.30	1.71			SILTSTONE	DK.GY AS ABOVE; END OF BOX 13; CORE INTACT.
	70.30	71.54	1.24			SILTSTONE	DK.GY AS ABOVE.
	71.54	73.15	1.61			SILTSTONE	DK.GY AS ABOVE; END OF BOX 14; CORE INTACT.
	73.15	74.16	1.01			SILTSTONE	DK.GY AS ABOVE.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH INTRVAL ID	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	74.16	74.64	0.48			SANDSTONE	SLTY.VFG.WEL.LT.GY.XBDG SS - LT GY; VFG; CONVOL BDG; XBDG; MINO R SKS.
	74.64	74.73	0.09			SANDSTONE	SLTY.VFG.WEL.LT.GY.XBDG AS ABOVE.
	74.73	76.07	1.34			SILTSTONE	DK.GY SLTST - DK GY WITH INTERBEDDED SS - LT GY; VFG; CONVOL BDG; SOME XBDG; WORM BU RROWS; END OF BOX; CORE INTACT.
	76.07	77.71	1.64			SILTSTONE	DK.GY AS ABOVE WITH MINOR SKS.
	77.71	78.96	1.25			SILTSTONE	DK.GY AS ABOVE; END OF BOX 16; CORE INTACT.
	78.96	79.87	0.91			SILTSTONE	DK.GY AS ABOVE.
*	79.87	80.74	0.87			SANDSTONE	SLTY.VFG.WEL.LT.GY.XBDG SS - LT GY; VFG; XBDG; WITH INTERBEDDED GY - BWN SLTST; CONVOL BDG.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	80.74	81.76	1.02			SILTSTONE	DK.GY SLTST - DK GY WITH INTERBEDDED; SS - LT GY; VFG; XBDG; MINOR SKS; PYRITIZED WO OD FRAGMENT; END OF BOX 17; SLIGHTLY BR OKEN CORE.
*	81.76	83.85	2.09			SILTSTONE	BWN SLTST - BWN-GY WITH INTBD SS - LT GY; V FG; CONVOL BDG; XBDG; WKMBUR.
	83.85	83.94	0.09			SILTSTONE	BWN AS ABOVE; ONE SECTION OF BOX EMPTY (MIS SING CORE IN BOX 19).
	83.94	86.85	2.91			SILTSTONE	BWN AS ABOVE WITH PL FRAG; CORE INTACT; COL OR: BWN-GY.
	86.85	86.88	0.03			SILTSTONE	BWN AS ABOVE; COLOR: BWN-GY.
	86.88	89.72	2.84			SILTSTONE	BWN AS ABOVE; CORE INTACT; COLOR: BWN-GY.
	89.72	89.88	0.16			SILTSTONE	BWN AS ABOVE; COLOR: BWN-GY.
	89.88	91.33	1.45			SILTSTONE	BWN AS ABOVE WITH LESS SS; COLOR: BWN-GY.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH INTRVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	91.33	91.80	0.47			SANDSTONE	VFG.WEL.LT.GY.LAM.XBDG SS - LT GY; VFG; XBDG WITH BWN-GY SLTST INTERBEDDED.
*	91.80	92.46	0.66			SILTSTONE	BWN.BRKN SLTST - BWN-GY WITH INTERBEDDED; SS - L T GY; VFG; CONVOL BDG; MINOR XBDG AND S KS; COLOR BRN-GY.
	92.46	92.81	0.35			SILTSTONE	BWN AS ABOVE; COLOR: BWN-GY.
	92.81	95.25	2.44			SILTSTONE	BWN AS ABOVE WITH PL FRAG; CORE INTACT; COL OR: BWN-GY
	95.25	95.74	0.49			SILTSTONE	BWN AS ABOVE WITH VERY THIN COAL LAYER(2 MM); COLOR: BWN-GY.
	95.74	98.07	2.33			SILTSTONE	BWN SLTST - BWN-GY WITH INTERBEDDED SS - LT GY; VFG; CONVOL BDG; MINOR SKS AND PL FRAG; CORE INTACT; COLOR: BWN-GY.
	98.07	98.87	0.80			SILTSTONE	BWN AS ABOVE; COLOR: BWN-GY.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	98.87	100.96	2.09			SILTSTONE	BWN AS ABOVE; CORE INTACT; COLOR: BWN-GY.
	100.96	101.89	0.93			SILTSTONE	BWN AS ABOVE; COLOR: BWN-GY.
	101.89	103.73	1.84			SILTSTONE	BWN AS ABOVE; CORE INTACT; COLOR: BWN-GY.
	103.73	104.80	1.07			SILTSTONE	BWN AS ABOVE; COLOR: BWN-GY.
	104.80	106.36	1.56			SILTSTONE	BWN AS ABOVE; CORE INTACT; COLOR: BWN-GY.
*	106.36	107.89	1.53			SILTSTONE	DK.GY SLTST - DK GY WITH INTERBEDDED OF SS - LT GY; VFG; CONVOL BDG; SOME XBDG.
	107.89	109.09	1.20			SILTSTONE	DK.GY AS ABOVE; CORE INTACT.
	109.09	110.88	1.79			SILTSTONE	DK.GY AS ABOVE WITH PYRITE BLEBS.
	110.88	111.89	1.01			SILTSTONE	DK.GY AS ABOVE; NO PYRITE; CORE INTACT.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: D0H81100

BCA	DEPTH FROM	DEPTH INTERVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	111.89	113.91	2.02			SILTSTONE	DK.GY AS ABOVE WITH COALY FRAG AND A CALCITE VEIN IN SS.
	113.91	114.56	0.65			SILTSTONE	DK.GY AS ABOVE; NO CALCITE; CORE INTACT.
	114.56	116.88	2.32			SILTSTONE	DK.GY AS ABOVE.
	116.88	117.29	0.41			SILTSTONE	DK.GY AS ABOVE; CORE INTACT.
	117.29	119.99	2.70			SILTSTONE	DK.GY AS ABOVE.
	119.99	120.15	0.16			SILTSTONE	DK.GY AS ABOVE; CORE SPLIT LENGTH WISE.
	120.15	122.96	2.81			SILTSTONE	DK.GY AS ABOVE; CORE INTACT.
	122.96	123.08	0.12			SILTSTONE	DK.GY AS ABOVE.
	123.08	125.70	2.62			SILTSTONE	DK.GY AS ABOVE; CORE INTACT.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

<u>BCA</u>	<u>DEPTH FROM</u>	<u>DEPTH TO</u>	<u>INTRVAL THICK.</u>	<u>SAMP. ID</u>	<u>SEAM ID</u>	<u>LITHOLOGY</u>	<u>DESCRIPTION</u>
	125.70	125.79	0.09			SILTSTONE	DK.GY AS ABOVE.
	125.79	128.57	2.78			SILTSTONE	DK.GY AS ABOVE; CORE INTACT.
	128.57	128.92	0.35			SILTSTONE	DK.GY AS ABOVE WITH MINOR SKS.
	128.92	131.34	2.42			SILTSTONE	DK.GY SLTST - DK GY WITH VERY THIN INTERBEDDED D SS - LT GY; VFG; CONVOL BDG; MINOR PY RITE.
	131.34	132.08	0.74			SILTSTONE	DK.GY AS ABOVE.
	132.08	134.14	2.06			SILTSTONE	DK.GY AS ABOVE; CORE INTACT.
	134.14	135.29	1.15			SILTSTONE	DK.GY AS ABOVE WITH PYRITE BLEB.
	135.29	137.02	1.73			SILTSTONE	DK.GY AS ABOVE WITH COALY FRAG; CORE INTACT.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	137.02	138.49	1.47			SILTSTONE	DK.GY SLTST - DK GY WITH VERY THIN INTERBEDDED D SS - LT GY; VFG; CONVOL BDG; COALY FR AG.
*	138.49	139.91	1.42			SILTSTONE	DK.GY AS ABOVE WITH MINOR SKS; CORE INTACT.
	139.91	141.31	1.40			SILTSTONE	DK.GY AS ABOVE; NO SKS.
	141.31	142.76	1.45			SILTSTONE	DK.GY AS ABOVE; CORE PARTIALLY SPLIT.
	142.76	144.46	1.70			SILTSTONE	DK.GY AS ABOVE.
	144.46	145.64	1.18			SILTSTONE	DK.GY AS ABOVE; CORE INTACT.
	145.64	147.57	1.93			SILTSTONE	DK.GY AS ABOVE.
	147.57	148.40	0.83			SILTSTONE	DK.GY AS ABOVE WITH MINOR SKS; CORE INTACT.
	148.40	150.72	2.32			SILTSTONE	DK.GY AS ABOVE; NO SKS.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH INTRVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	150.72	151.17	0.45			SILTSTONE	DK.GY AS ABOVE; CORE INTACT.
	151.17	153.88	2.71			SILTSTONE	DK.GY AS ABOVE WITH SKS AND COALY PARTINGS; C ORE BROKEN IN COALY INTERVAL.
	153.88	156.74	2.86			SILTSTONE	DK.GY SLTST - DK GY WITH THIN INTERBEDDED OF SS - LT GY; VFG; CONVOL BDG.
	156.74	157.03	0.29			SILTSTONE	DK.GY AS ABOVE.
	157.03	159.59	2.56			SILTSTONE	DK.GY AS ABOVE WITH MINOR SKS; BLOCKY CORE.
	159.59	160.16	0.57			SILTSTONE	DK.GY AS ABOVE; NO SKS.
	160.16	162.40	2.24			SILTSTONE	DK.GY AS ABOVE; BLOCKY CORE.
	162.40	163.31	0.91			SILTSTONE	DK.GY AS ABOVE.
	163.31	165.33	2.02			SILTSTONE	DK.GY AS ABOVE WITH COALY AND PYRITIZED FRAG; BLOCKY CORE.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
*	165.33	166.37	1.04			SILTSTONE	DK.GY AS ABOVE; NO COALY OR PYRITIZED FRAG.
	166.37	168.22	1.85			SILTSTONE	DK.GY AS ABOVE; MINOR PYRITE; BLUCKY CORE.
	166.22	169.48	1.26			SILTSTONE	DK.GY AS ABOVE.
	169.48	170.92	1.44			SILTSTONE	DK.GY AS ABOVE WITH COALY FRAGS AND PYRITE; B LUCKY CORE.
*	170.92	172.50	1.58			SILTSTONE	SSY.DK.GY SLTST - DK GY; SANDY WITH INTERBEDDED O F SS - LT GY; VFG; CONVOL BDG; XBDG.
	172.50	172.80	0.30			SILTSTONE	SSY.DK.GY AS ABOVE WITH SKS AND COALY FRAGS; CONT ACT WITH KCMW.
	172.80	172.94	0.14			CGL	SSY.LT.GY CGL - LT GY; POORLY SORTED SUB-ANGULAR TO SUB-ROUNDED CHERT GRAINS; SIL; WELL CEMENTED UPPER CONTACT WITH KH.
	172.94	173.24	0.30			CLYST	M.GY CLYST - M GY; BROKEN CORE; MINOR SKS.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	173.24	173.46	0.22			MUDSTONE	DK.GY MUDST - DK GY WITH PL FRAG; COALY FRAG; PYRITE; SKS; BROKEN CORE.
	173.46	174.53	1.07			MUDSTONE	CARB.DK.GY MUDST - DK GY; CARB WITH PL FRAG; PYRIT E.
	174.53	175.14	0.61			MUDSTONE	M.GY MUDST LT GY; WITH COALY FRAG.
	175.14	175.87	0.73			MUDSTONE	M.GY AS ABOVE.
	175.87	176.07	0.20			MUDSTONE	DK.GY MUDST - DK GY; SKS; COALY FRAG; CORE IN TACT TO BLOCKY.
	176.07	176.28	0.21			MUDSTONE	DK.GY AS ABOVE WITH PYRITE AND SMALL COAL LEN S.
	176.28	176.57	0.29			SILTSTONE	M.GY SLTST - M GY; WITH PL FRAG; COALY FRAG AND SKS.
	176.57	177.49	0.92			MUDSTONE	SLTY.DK.GY MUDST - DK GY; SLTY; WITH COALY FRAG; P YRITE; SANDY AT BASE.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	177.49	177.94	0.45			SANDSTONE	MG.WEL.LT.GY.MAS SS - LT GY; M GR AT TOP GRADING TO FGR AT BASE; INTERBEDDED WITH VERY THIN CAR B. MATERIAL CONTAINING PL FRAG; GRAIN S IZE: FG.
	177.94	178.11	0.17			MUDSTONE	SLTY.DK.GY MUDST - DK GY; SLTY; WITH COALY FRAGS A ND PL FRAG.
	178.11	178.95	0.84			MUDSTONE	M.GY MUDST - M GY WITH COAL FRAG; PL FRAG; S KS; CORE INTACT.
	178.95	179.30	0.35			MUDSTONE	SLTY.DK.GY MUDST - DK GY; SLTY WITH PYRITIZED PL F RAG; COALY FRAG AND SKS.
	179.30	179.39	0.09			COAL	C-5.BLK SMALL SEAM OF DIRTY COAL.
	179.39	179.53	0.14			COAL LOSS	
	179.53	180.28	0.75			MUDSTONE	DK.GY MUDST - DK GY WITH PL FRAG; SKS; FEW SA NDY INTERBEDDED AND SMALL COAL LENSES.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

<u>BCA</u>	<u>DEPTH FROM</u>	<u>DEPTH TO</u>	<u>INTRVAL THICK.</u>	<u>SAMP. ID</u>	<u>SEAM ID</u>	<u>LITHOLOGY</u>	<u>DESCRIPTION</u>
	180.28	180.71	0.43			SANDSTONE	VFG.WEL.LT.GY SS - LT GY; VFG; CONVOL BDG; WITH INTER BEDDED SLTST - DK GY; SKS.
	180.71	181.38	0.67			MUDSTONE	DK.GY MUDST - DK GY WITH PL FRAG; COAL FRAG; PYRITE; SKS.
	181.38	181.97	0.59			MUDSTONE	DK.GY AS ABOVE; CORE BLOCKY AND BROKEN.
	181.97	182.19	0.22			SILTSTONE	M.GY SLTST - M GY PL FRAG; COALY FRAG.
	182.19	182.41	0.22			SANDSTONE	VFG.WEL.M.GY SS - M GY; VFG; COALY FRAG.
	182.41	182.72	0.31			SILTSTONE	M.GY SLTST - M GY; PL FRAG.
	182.72	184.30	1.58			MUDSTONE	DK.GY MUDST - DK GY; PL FRAG; COAL FRAG; PYRI TE.
	184.30	184.45	0.15			SILTSTONE	DK.GY SLTST - DK GY; COAL FRAG; PL FRAG.
	184.45	184.90	0.45			SILTSTONE	DK.GY AS ABOVE; CORE INTACT.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH INTRVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	184.90	185.07	0.17			SANDSTONE	VFG.WEL.LAM.XBDG SS - LT GY; VFG.
	185.07	186.47	1.40			SANDSTONE	FG.WEL.LT.GY.LAM.XBDG SS - LT GY; FG WITH INTERBEDDED OF DARK GREY SLTST.
	186.47	187.45	0.98			SANDSTONE	PBL.PR.LT.GY.MAS SS - LT GY; POORLY SORTED; PBL TO FG; T HIN COAL LENS.
	187.45	187.72	0.27			SANDSTONE	PBL.PR.LT.GY.THNB AS ABOVE; NO COAL; CORE INTACT; GRAIN S IZE: FG.
	187.72	188.90	1.18			SANDSTONE	PBL.PR.LT.GY.THNB AS ABOVE; GRAIN SIZE: FG.
	188.90	189.50	0.60			CGL	PBL.PR.LT.GY.MAS CGL - LT GY; POORLY SORTED; CHERT PBL; WELL CEMENTED; SIL; SUB-ANGULAR TO SUB- ROUNDED PEBBLES; COAL LENSES; SHARP BOT TOM CONTACT.
	189.50	190.29	0.79			MUDSTONE	CARB.BLK MUDST - BLK; CARB; THIN COALS THROUGHOU T.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	190.29	190.52	0.23			SILTSTONE	DK.GY SLTST - DK GY; COAL FRAG; PL FRAG.
	190.52	190.72	0.20			SILTSTONE	DK.GY AS ABOVE; CORE INTACT.
	190.72	191.43	0.71			SILTSTONE	M.GY SLTST; M GY PL FRAGS; CONVOL BDG; COAL FRAGS.
	191.43	192.53	1.10			MUDSTONE	CARB.DK.GY MUDST; DK GY; PLANT FRAGS; SKS; COAL FR AGS.
	192.53	192.83	0.30			MUDSTONE	DK.GY SKS.
	192.83	193.50	0.67			SANDSTONE	FG.LT.GY SKS; SOME CALCITE; CONVOL BDG; CARBONACEOUS INTBEDS (VERY THIN); CORE INTACT; SST BROKEN.
	193.50	194.34	0.84			SANDSTONE	FG.LT.GY AS ABOVE - WELL SORTED.
	194.34	194.50	0.16			SANDSTONE	VFG.LT.GY SST - LT GY; CONVOL BDG; VERY THIN CARB UNACEOUS INTERBEDS.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	194.50	194.62	0.12			COAL	C-4.BLK
	194.62	194.79	0.17			MUDSTONE	DK.GY.MAS MUDST - DK GY; COALY FRAGS; PLANT FRAGS ; PYRITE.
	194.79	194.95	0.16			SILTSTONE	SSY.DK.GY PLANT FRAGMENTS.
	194.95	195.26	0.31			MUDSTONE	DK.GY PLANT FRAGMENTS.
*	195.26	196.36	1.10			SANDSTONE	VFG.LT.GY SST; LT GY; CONVOL BDG CALCAREOUS; V.F. INTERBEDS OF CARB MUDST; SOME X-BEDS; SOME SOFT SED DEFORMATION; OCCASIONAL M UDST INTERBED WITH PLANT AND COAL FRAGM ENTS; CORE INTACT EXCEPT AT COAL.
	196.36	196.41	0.05			SANDSTONE	VFG.LT.GY AS ABOVE WITH MUDST INTERBEDS.
	196.41	196.88	0.47			SANDSTONE	VFG.LT.GY SST; LT GY; CALCAREOUS; INTERBED WITH T HIN MUDST; FEW COAL AND PLANT FRAGMENTS

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	196.68	197.08	0.20			MUDSTONE	DK.GY.MAS
	197.08	197.19	0.11			SANDSTONE	FG.LT.GY.LAM CALCAREOUS.
	197.19	197.80	0.61			MUDSTONE	DK.GY
	197.80	197.95	0.15			COAL	C-6.BLK VERY DIRTY, HARD, BONEY.
	197.95	198.10	0.15			COAL LOSS	
	198.10	198.92	0.82			MUDSTONE	SLTY.DK.GY PL FRAGMENTS; COALY FRAGMENTS.
	198.92	199.29	0.37			SANDSTONE	VFG.LT.GY CONVOL BDG; CAL; INTERBED WITH SSSY SILT STONE; CORE INTACT EXCEPT COAL.
	199.29	199.34	0.05			SANDSTONE	VFG.LT.GY AS ABOVE.
	199.34	199.69	0.35			SILTSTONE	DK.GY

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	199.69	200.70	1.01			SILTSTONE	DK.GY
	200.70	202.05	1.35			MUDSTONE	DK.GY SKS; SOME COALY FRAGMENT; CORE INTACT T O BLOCKY.
	202.05	202.69	0.64			MUDSTONE	DK.GY
	202.69	204.96	2.27			MUDSTONE	DK.GY PYRITE; CORE INTACT.
	204.96	205.70	0.74			SILTSTONE	DK.GY
*	205.70	205.91	0.21			SANDSTONE	FG.LT.GY.VTHNB INTERBED OF LIGHT GREY AND MEDIUM GREY SS; SLIGHTLY CALCAREOUS.
	205.91	206.53	0.62			SANDSTONE	FG.LT.GY.MAS SLIGHTLY CALCAREOUS.
	206.53	207.58	1.05			SANDSTONE	FG.LT.GY.VTHNB X-BEDDED; INTERBEDS OF LIGHT GREY AND M EDIUM GREY SS; OCCASIONAL COALY LAM.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	207.58	207.82	0.24			SANDSTONE	FG.LT.GY.MAS SLIGHTLY CALCAREOUS; CORE INTACT.
	207.82	207.99	0.17			SANDSTONE	PBLY.CG.PR.LT.GY WITH THIN INTERBED OF FG SS; LIGHT GREY AND VERY THIN INTERBED OF COALY MATERI AL.
	207.99	208.41	0.42			SANDSTONE	MG.PR.LT.GY.THNB MEDIUM GREY SS WITH THIN BEDS OF COARSE R AND FINER SANDS AND OCCASIONAL MUDSTO NE CLASTS AND COALY FRAGMENTS; CAL.
	208.41	209.19	0.78			SANDSTONE	MG.MOD.LT.GY.LAM WITH COALY FRAGMENTS AND THIN COALY PAR TINGS; SKS; CAL.
	209.19	209.72	0.53			SANDSTONE	MG.MOD.LT.GY.MAS WITH COALY FRAGMENTS; THIN COALY PARTIN GS; MINOR PYRITE; CAL.
	209.72	209.87	0.15			CGL	VFG.PR.LT.GY.MAS WITH COALY FRAGMENTS; MINOR PYRITE; CAL .
*	209.87	210.70	0.83			SANDSTONE	MG.WEL.LT.GY.VTHNB WITH COALY FRAGMENTS; VERY THIN COALY L AYERS; CORE INTACT; CAL.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH INTRVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	210.70	211.16	0.46			SANDSTONE	MG.WEL.LT.GY.VTHNB AS ABOVE.
	211.16	212.41	1.25			SANDSTONE	MG.WEL.LT.GY.VTHNB AS ABOVE.
*	212.41	213.59	1.18			BREC	PR.DK.GY MATRIX;SS; LIGHT GREY; FG; WELL SORTED; CAL CLASTS; MUDST DARK GREY; LAM; CG T O SMALL COBBLE CLASTS APPEAR TO BE RIP- UP CLASTS; CORE INTACT.
	213.59	214.31	0.72			BREC	PR.DK.GY AS ABOVE.
	214.31	215.18	0.87			BREC	PR.DK.GY AS ABOVE.
	215.18	215.41	0.23			SANDSTONE	FG.WEL.LT.GY.MAS
	215.41	216.51	1.10			BREC	PR.DK.GY AS ABOVE WITH OCCASIONAL PL FRAGMENTS; CORE INTACT.
	216.51	216.64	0.13			BREC	PR.DK.GY AS ABOVE.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	216.64	217.38	0.74			SANDSTONE	FG.PR.LT.GY.XBDG WITH OCCASIONAL MUDST CLASTS; CAL.
	217.38	218.14	0.76			SANDSTONE	FG.PR.LT.GY.XBDG AS ABOVE WITH OCCASIONAL COALY LAYERS; SKS.
	218.14	218.64	0.50			MUDSTONE	CARB.DK.GY WITH THIN COAL LENSES; PL FRAGMENTS; MI NOR PYRITE; SKS.
	218.64	219.17	0.53			SANDSTONE	FG.WEL.M.GY.LAM.XBDG WITH SOME CONVOL BDG AND VERY THIN INTE RBED OF CARB MUDST; CORE INTACT EXCEPT FOR CARBONACEOUS MUDST.
	219.17	219.32	0.15			SANDSTONE	FG.MOD.LT.GY.LAM WITH COALY FRAGMENTS.
	219.32	219.43	0.11			SANDSTONE	CARB.FG.WEL.LT.GY LIGHT GREY SS WITH VERY THIN COALY INTE RBED.
	219.43	219.96	0.53			SANDSTONE	MG.WEL.LT.GY.LAM WITH COALY FRAGMENTS.
	219.96	220.38	0.42			SANDSTONE	FG.WEL.LT.GY.MAS WITH PL FRAGMENTS.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	220.38	221.43	1.05			SANDSTONE	FG.WEL.LT.GY.MAS AS ABOVE.
	221.43	221.64	0.21			SANDSTONE	FG.WEL.LT.GY.LAM
*	221.64	221.87	0.23			SANDSTONE	FG.WEL.M.GY.MAS WITH THIN COALY INTERBED AND PL FRAGMENT TS.
	221.87	222.13	0.26			SANDSTONE	FG.MOD.LT.GY.LAM.XBDG WITH OCCASIONAL MUDST CLASTS; CORE INTA CT.
	222.13	222.29	0.16			SANDSTONE	FG.MOD.LT.GY.LAM.XBDG AS ABOVE.
	222.29	223.56	1.27			MUDSTONE	DK.GY MUDST DARK GREY WITH INTERBEDS OF SS; V FG; LIGHT GREY; CONVOL BDG; PL FRAGMENT S; COALY FRAGMENTS.
	223.56	223.70	0.14			MUDSTONE	DK.GY AS ABOVE.
	223.70	223.78	0.08			COAL	C-5.BLK WITH MINOR PYRITE.
	223.78	223.90	0.12			COAL LOSS	

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDHB1100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	223.90	224.20	0.30			MUDSTONE	CARB.DK.GY.MAS WITH PL FRAGMENTS; COALY FRAGMENTS.
	224.20	224.33	0.13			COAL	C-5.BLK
	224.33	224.85	0.52			MUDSTONE	DK.GY.MAS WITH PL FRAGMENTS AND THIN INTERBED OF COAL.
	224.85	225.01	0.16			SANDSTONE	VFG.WEL.M.GY WITH COALY FRAGMENTS; THIN COAL LENS; S KS; CONVOL BDG.
	225.01	225.09	0.08			MUDSTONE	CARB.DK.GY WITH VERY THIN COALY INTERBED; CORE INT ACT.
	225.09	225.85	0.76			MUDSTONE	LT.GY WITH THIN COAL LENSES; PL FRAGMENTS.
	225.85	225.96	0.11			SANDSTONE	VFG.MOD.LT.GY.LAM WITH INTERBED OF MUOST AND CARBONACEOUS MATERIAL; CONVOL BDG; PL FRAGMENTS.
	225.96	226.11	0.15			SILTSTONE	M.GY WITH PL FRAGMENTS.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	226.11	226.50	0.39			MUDSTONE	DK.GY.MAS WITH PL FRAGMENTS.
	226.50	226.57	0.07			MUDSTONE	DK.GY.MAS WITH PLANT FRAGMENTS
	226.57	227.50	0.93			SILTSTONE	M.GY.SSD SLTST WITH INTERBED OF SS; LIGHT GREY T O M.G. TO F.G.; COALY FRAGMENTS; PL FRA GMENTS.
	227.50	227.77	0.27			SANDSTONE	MG.WEL.LT.GY.LAM CGRE INTACT.
	227.77	227.98	0.21			SANDSTONE	MG.WEL.LT.GY.LAM
	227.98	228.80	0.82			MUDSTONE	DK.GY.MAS WITH PL FRAGMENTS; COALY FRAGMENTS.
	228.80	228.90	0.10			COAL	C-6.BLK
	228.90	229.00	0.10			CUAL LOSS	
	229.00	229.25	0.25			SILTSTONE	DK.GY WITH PL FRAGMENTS; COALY FRAGMENTS.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	229.25	229.87	0.62			MUDSTONE	SLTY.M.GY WITH PL FRAGMENTS; COALY FRAGMENTS.
	229.87	230.58	0.71			SILTSTONE	M.GY.MAS WITH COALY FRAGMENTS; CORE INTACT EXCEPT COAL.
	230.58	231.71	1.13			SILTSTONE	SSY.M.GY WITH FEW INTERBEDS OF FG; SS.
*	231.71	232.96	1.25			SANDSTONE	SLTY.M.GY.LAM.XBDG WITH SOME PL FRAGMENTS; SKS; CALCITE VEINS.
	232.96	233.11	0.15			SANDSTONE	SLTY.VFG.PR.M.GY.LAM.XBDG AS ABOVE.
	233.11	233.29	0.18			SANDSTONE	FG.MOD.M.GY.LAM CORE INTACT.
	233.29	233.96	0.67			SANDSTONE	FG.PR.M.GY.LAM WITH SKS; QUARTZ VEIN; MINOR CALCITE; GRADATIONAL CONTACTS.
	233.96	234.54	0.58			SANDSTONE	MG.WEL.LT.GY.MAS COARSENING DOWNWARD.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	234.54	235.40	0.86			SANDSTONE	CG.WEL.LT.GY.MAS BOTTOM CONTACT THIN LAYER OF COALY MATERIAL.
	235.40	235.47	0.07			SANDSTONE	MG.MOD.LT.GY WITH COALY INTERBEDS; CONVOL BDG.
	235.47	235.99	0.52			SANDSTONE	MG.WEL.LT.GY.MAS
	235.99	236.05	0.06			SANDSTONE	MG.WEL.LT.GY.MAS CORE INTACT.
	236.05	238.91	2.86			SANDSTONE	CG.LT.GY.MAS WITH OCCASIONAL CARBONACEOUS LAYER; CORE INTACT.
	238.91	239.06	0.15			SANDSTONE	CG.WEL.LT.GY.MAS
	239.06	239.26	0.20			SANDSTONE	CG.WEL.LT.GY.MAS
	239.26	240.60	1.34			CGL	GRAN.FR.LT.GY.MAS SLIGHTLY FINER TOWARDS TOP; SHARP BOTTOM CONTACT WITH SS.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81100

<u>BCA</u>	<u>DEPTH FROM</u>	<u>DEPTH TO</u>	<u>INTRVAL THICK.</u>	<u>SAMP. ID</u>	<u>SEAM ID</u>	<u>LITHOLOGY</u>	<u>DESCRIPTION</u>
	240.60	241.75	1.15			SANDSTONE	CG.WEL.LT.GY.MAS WITH THIN COALY LAYER; CORE INTACT.
	241.75	242.14	0.39			SANDSTONE	CG.WEL.LT.GY.MAS
	242.14	242.71	0.57			SANDSTONE	CG.WEL.LT.GY.MAS WITH THIN COALY LAYERS AND OCCASIONAL M UDST CLASTS; SLIGHTLY FINING DOWNWARDS.
	242.71	244.08	1.37			SANDSTONE	CG.PR.LT.GY.LAM WITH FEW COAL FRAGMENTS.
	244.08	244.33	0.25			CGL	GRAN.PR.LT.GY.MAS COARSENS INTO CGL THEN FINES INTO M.GR. SS; THIN COALY LAYERS; SKS.
*	244.33	244.57	0.24			SANDSTONE	MG.WEL.LT.GY.LAM CORE INTACT.
	244.57	245.25	0.68			SANDSTONE	MG.WEL.LT.GY.LAM CORE INTACT.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

PAGE 1

PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	0.00	3.05	3.05			OVERBURDEN	OVERBURDEN - NO CORE.
	3.05	4.25	1.20			SILTSTONE	DK.GY WTRD - RUST, CORE VBRKN, AS ABOVE, END OF BOX 1.
	4.25	4.90	0.65			SILTSTONE	DK.GY WTRD RUST, BRKN CORE WITH INTBD SS - LTGY, VFG.
	4.90	6.26	1.36			SILTSTONE	
	6.26	6.98	0.72			SILTSTONE	END OF BOX 2, BRUKEN CORE.
	6.98	7.53	0.55			CORE LOSS	(ROCK) AT 0.55M.
*	7.53	10.17	2.64			SILTSTONE	DK.GY WITH INTBD - SS - LTGY, VFG. SOME RUST WITH ON BRKNSURFACES, SKS, END OF BOX 3, BROKEN CORE.
	10.17	11.81	1.64			SILTSTONE	DK.GY WITH SS INTBD - LT GY, VFG, SOME MUDST, SOME CONVOL BDG.
	11.81	12.98	1.17			SILTSTONE	DK.GY AS ABOVE, NO MUDST. END OF BOX 4, BLOCK Y CORE.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

<u>ECA</u>	<u>DEPTH FROM</u>	<u>DEPTH TO</u>	<u>INTRVAL THICK.</u>	<u>SAMP. ID</u>	<u>SEAM ID</u>	<u>LITHOLOGY</u>	<u>DESCRIPTION</u>
*	12.98	15.17	2.19			SILTSTONE	AS ABOVE WITH SKS.
	15.17	15.85	0.68			SILTSTONE	AS ABOVE, END OF BOX 5, BRKN.
	15.85	17.89	2.04			SILTSTONE	DK.GY WITH SS INTBD - LT GY, VFG, MNR SKS, CO NVOL BDG.
	17.89	18.58	0.69			SILTSTONE	AS ABOVE, END OF BOX 6, CORE BLOCKY.
*	18.58	21.13	2.55			SILTSTONE	AS ABOVE.
	21.13	21.38	0.25			SILTSTONE	AS ABOVE, END OF BOX 7, CORE BLOCKY.
	21.38	22.32	0.94			SILTSTONE	AS ABOVE.
	22.32	24.18	1.86			SILTSTONE	AS ABOVE, END OF BOX 8, CORE BLOCKY.
	24.18	25.30	1.12			SILTSTONE	AS ABOVE.
	25.30	26.96	1.66			SILTSTONE	AS ABOVE, END OF BOX 9, CORE INTACT.
*	26.96	28.36	1.40			SILTSTONE	AS ABOVE.
	28.36	29.81	1.45			SILTSTONE	AS ABOVE WITH MNR PYR. END OF BOX 10, C ORE INTACT.
	29.81	30.76	0.95			SILTSTONE	AS ABOVE, NO PYR.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	30.76	32.11	1.35			SILTSTONE	AS ABOVE, END OF BOX 11, CORE INTACT.
	32.11	33.88	1.77			SILTSTONE	DK.GY WITH SS INTBD - LT.GY., VFG, CONVOL BDG
	33.88	35.07	1.19			SILTSTONE	AS ABOVE, WITH OCCASIONAL COALY FRAG, E ND OF BOX 12, CORE INTACT.
	35.07	37.11	2.04			SILTSTONE	AS ABOVE WITH SKS.
	37.11	38.04	0.93			SILTSTONE	AS ABOVE WITH PYR BLEBS, END OF BOX, CO RE INTACT.
	38.04	40.21	2.17			SILTSTONE	AS ABOVE, WITH MNR CALC ALONG SKS.
	40.21	40.87	0.66			SILTSTONE	AS ABOVE, END OF BOX.
	40.87	42.20	1.33			CORE LOSS	CORE INTACT (ROCK).
	42.20	44.60	2.40			SILTSTONE	SSY.DK.GY WITH SS INTBD, LT.GY., VFG, CONVOL BDG, PL FRAG, PYR, SKS, SOME XBDG IN SS INT BDS.
	44.60	45.09	0.49			SANDSTONE	SLTY.DK.GY WITH SS INTBDS, LT.GY., VFG, CONVOL BDG , SKS WITH QUARTZ AND PYR, END OF BOX, CORE INTACT.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: ODH81102

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
*	45.09	46.50	1.41			SANDSTONE	AS ABOVE.
	46.50	46.54	0.04			SANDSTONE	CG.PR.LT.GY TOP OF KCMW, SHARP CONTACT.
	46.54	47.56	1.02			SANDSTONE	SLTY.VFG.M.GY WITH SSY INTERVALS, SKS, THIN CALC LAYE R.
	47.56	47.82	0.26			MUDSTONE	DK.GY WITH SKS, PYR, COALY FRAG.
	47.82	47.96	0.14			MUDSTONE	DK.GY WITH SKS, PL FRAG.
	47.96	48.16	0.20			CORELUSS	END OF BOX 16, FRACTURED CORE, CORE LOS S ROCK.
	48.16	48.51	0.35			MUDSTONE	DK.GY AS ABOVE.
	48.51	49.96	1.45			SILTSTONE	DK.GY WITH PL FRAGS, COALY FRAG, PYR, SKS.
	49.96	50.53	0.57			SILTSTONE	M.GY END OF BOX 17, BRKN TO INTACT CORE.
	50.53	50.65	0.12			SILTSTONE	SSY.M.GY

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	50.65	51.65	1.00			SILTSTONE	M.GY.MAS
	51.65	52.38	0.73			SANDSTONE	FG.LT.GY WITH MUDST INTBD, MGY CONVOL BDG. COALY FG, SKS.
	52.38	52.58	0.20			MUDSTONE	CLYY.M.GY WITH SKS.
	52.58	53.06	0.48			MUDSTONE	DK.GY WITH COALY FG, SKS. END OF BOX 18, INTA CT CORE.
	53.06	53.31	0.25			MUDSTONE	DK.GY WITH SKS, COALY FGS, PYR.
	53.31	54.23	0.92			MUDSTONE	CARB.DK.GY WITH COAL PARTINGS, SKS, PYR. SOME BKN C-6 COAL, SHRD.
	54.23	55.47	1.24			SILTSTONE	M.GY WITH SS INTBD, LT.GY, VFG, CONVOL BDG, SKS, COALY FGS, PL FRAG, PYR.
	55.47	55.72	0.25			SILTSTONE	M.GY WITH PL FRAG, COALY FR, PYR, SKS. END O F BOX 19, INTC EXC.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	55.72	55.93	0.21			CORE LOSS	COALY SEGMENTS (ROCK).
	55.93	56.64	0.71			MUDSTONE	M.GY WITH PL FRAG, COALY FRAG.
	56.64	57.38	0.74			MUDSTONE	DK.GY WITH PL FRAG, COALY FRAG, CALC IN SLTST CLASTS.
	57.38	57.55	0.17			COAL	C-5.BLK HIGHLY SHRD.
	57.55	57.90	0.35			MUDSTONE	CARB.DK.GY COALY PARTINGS, SHRD, PL FRAGS, SKS.
	57.90	58.88	0.98			SANDSTONE	FG.MOD.M.GY COARSER AT TOP, INTBD WITH COALY MATERI AL, CONVUL BDG, SKS. END OF BOX 20, INT C EXC COAL (VBRKN).
	58.88	59.59	0.71			MUDSTONE	DK.GY PL FRAGS, SSS INTBDS AT TOP, LT GY, VFG , CONVUL BDG, SKS, PYR.
	59.59	60.13	0.54			MUDSTONE	DK.GY AS ABOVE.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. TO	SEAM TO	LITHOLOGY	DESCRIPTION
	60.13	61.64	1.51			SILTSTONE	M.GY SS INTBD, LT GY, VFG TO FG. CONVOL BDG. COALY PL FRAGS, SKS. END OF BOX 21 INT C.
*	61.64	62.64	1.00			MUDSTONE	SLTY.DK.GY SS INTBD, LT GY, VFG. CONVOL BDG, SKS, CALC SKS SURFACE.
	62.64	63.18	0.54			MUDSTONE	SLTY.DK.GY AS ABOVE WITH CALC VEINS.
	63.18	63.38	0.20			SANDSTONE	MG.WEL.LT.GY SKS, PYR. END OF BOX 22, BLKY TO INTC.
	63.38	63.95	0.57			SANDSTONE	MG.WEL.LT.GY SKS. XBDG.
	63.95	64.51	0.56			CGL	PBL.PR.LT.GY GRN SIZE FROM MED SS TO MED PBL.
	64.51	65.62	1.11			CGL	PBL.PR.LT.GY AS ABOVE WITH COALY FRAGS, SKS.
	65.62	66.42	0.80			MUDSTONE	DK.GY.MAS COALY PL FRAGS, END OF BOX 23 - CORE BL KY TO INTC.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

ECA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	66.42	68.04	1.62			MUDSTONE	DK.GY WITH SKS, PL FRAGS.
	68.04	68.69	0.65			MUDSTONE	DK.GY WITH SKS, COALY FRAGS.
	68.69	69.19	0.50			MUDSTONE	CARB.DK.GY CORE VBRKN, SKS, COALY PARTINGS, SHRD, END OF BOX 24 - CORE BRKN AND BLKY.
	69.19	70.87	1.68			MUDSTONE	DK.GY WITH PL FRAGS, COAL FRAGS, SHRD, SKS, P YR, COAL PARTINGS.
	70.87	71.00	0.13			SST	SLTY.FG.WEL.M.GY PL FRAGS, COALY FRAGS.
	71.00	71.63	0.63			SILTSTONE	M.GY COAL FRAGS, SKS. END OF BOX 25 - CORE B LKY.
*	71.63	73.89	2.26			SILTSTONE	SSY WITH INTBDS OF SS, LT GY, VFG AND MUDST DK GY, PL FRAGS, COAL FRAGS, COAL PART INGS, SKS, PYR.
	73.89	74.41	0.52			SILTSTONE	SSY.DK.GY AS ABOVE, END OF BOX 26 - CORE INTG.

* DENOTES MEASURED bCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH31102

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	74.41	76.97	2.56			SILTSTONE	SSY.M.GY WITH COALY FRAGS, SKS, PL FRAGS.
	76.97	77.20	0.23			SILTSTONE	SSY.M.GY AS ABOVE, END OF BOX 27 - CORE INTC.
	77.20	80.00	2.80			SILTSTONE	M.GY MNR SKS.
	80.00	80.59	0.59			SILTSTONE	SSY.M.GY COALY FRAGS, PL FRAGS, INTBD.
	80.59	80.77	0.18			SST	SLTY.LT.GY INTBD WITH SLTST, PYR, PL FRAGS.
*	80.77	82.62	1.85			SILTSTONE	DK.GY INTBD WITH SST; LTGY, VFG, CONVOL BDG, PL FRAGS, SHEAR ZONE WITH SKS 16CM FROM BEGINNING OF INTERVAL. END OF BOX 29 - CORE INTC. EXCEPT SHR.
	82.62	82.88	0.26			SILTSTONE	DK.GY AS ABOVE WITH SOME MNR CALC FILLED FRAC TS AT BOTTOM CONT.
	82.88	84.00	1.12			SILTSTONE	CLYY.DK.GY.THNB

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH ESOM	DEPTH ID	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	84.00	84.80	0.80			MUDSTONE	DK.GY MNR SKS, COALY FRAGS.
	84.80	85.32	0.52			SILTSTONE	SSY.M.GY TRACE COALY PL FRAGS. CORE INTO AND BRK N.
	85.32	85.83	0.51			SILTSTONE	SSY.M.GY AS ABOVE.
	85.83	86.97	1.14			SILTSTONE	DK.GY
	86.97	87.76	0.79			SST	SLTY MNR PL FRAGS. MNR SKS. CORE INTO.
*	87.76	88.68	0.92			SST	SLTY AS ABOVE WITH SHR ZONE 18CM FROM TOP OF BOX.
	88.68	89.08	0.40			SST	VFG.LT.GY CONVOL BDG, RIP-UP CLASTS, SLTY TOWARDS BASE.
	89.08	89.38	0.30			SST	VFG.M.GY.MAS

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	89.38	90.44	1.06			SST	VFG.LT.GY COALY FRAGS, SHR, SKS, RIP-UP CLASTS NE AR TOP OF INTERVAL - CORE INTAC TO BRKN
	90.44	90.84	0.40			CORE LOSS	ROCK.
	90.84	91.37	0.53			SST	VFG.LT.GY AS ABOVE WITH COALY BLEB AT BASE, MNR S KS.
	91.37	92.37	1.00			NONE	AS ABOVE; SHEAR ZONE (MAJOR) CORE BADLY BRKN.
	92.37	92.95	0.58			SST	VFG.LT.GY AS ABOVE, MNR SHEAR, CORE BRKN.
	92.95	93.48	0.53			SILTSTONE	DK.GY SHEAR ZONE .16M FROM TOP OF INT. COALY FRAGS, BL FRAGS. CORE BADLY BRKN.
	93.48	95.56	2.08			SILTSTONE	M.GY SKS, COALY FRAGS, PL FRAGS.
	95.56	96.02	0.46			SST	VFG.LT.GY INTBD SLTST, CONVOL BDG, COALY NEAR BAS E.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH FRM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	96.02	96.14	0.12			COAL	C-5 HIGHLY SHEARED.
	96.14	96.34	0.20			CORE LOSS	ROCK.
	96.34	96.48	0.14			COAL	C-5 INTCT TO SHEARED, BECOMING MUDDY AT BAS E.
	96.48	98.98	2.50			SILTSTONE	M.GY SOME COALY PL FRAGS.
	98.98	99.13	0.15			SILTSTONE	M.GY AS ABOVE - CORE INTG.
	99.13	101.87	2.74			SILTSTONE	M.GY SOME MNR COALY LENSES.
	101.87	101.95	0.08			SILTSTONE	M.GY AS ABOVE.
	101.95	104.49	2.54			SILTSTONE	M.GY MNR COALY ROOTLETS.
	104.49	106.32	1.83			SILTSTONE	M.GY MNR SKS, MNR COALY PARTINGS, SHEARED AT BASE, MNR CALC.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	106.32	107.36	1.04			MUDSTONE	M.GY 13 CM SHEAR ZONE AT TOP, PL FRAGS, SKS. BRKN.
	107.36	107.86	0.50			CORE LOSS	(ROCK).
	107.86	108.21	0.35			MUDSTONE	M.GY AS ABOVE, LT GY, VFG, MAS SS AT BASE.
*	108.21	109.75	1.54			SST	VFG.LT.GY CONVOL BDG NEAR BASE, MNR SKS.
	109.75	110.56	0.81			SILTSTONE	SSY.M.GY COALY FRAGS, MNR SKS - CORE INTC.
	110.56	110.87	0.31			SILTSTONE	SSY.M.GY AS ABOVE, CALC INFILL.
	110.87	111.37	0.50			SST	VFG.LT.GY.MAS CALC INFILL FRAC.
	111.37	112.90	1.53			SILTSTONE	M.GY.BRKN INTBD WITH SST LTGY VFG; AS ABOVE; SOME COALY FRAGS, MNR SKS.
*	112.90	113.26	0.36			SILTSTONE	M.GY AS ABOVE.

* DENOTES MEASURED BCA

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PROJECT: 1RF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. TO	SEAM ID	LITHOLOGY	DESCRIPTION
*	113.26	114.22	0.96			SST	VFG.LT.GY CONVOL BDG, MNR SKS, CALC INFILL.
	114.22	115.58	1.36			SILTSTONE	SSY.M.GY MNR COALY PARTINGS, MNR CALC INFILLS.
	115.58	115.78	0.20			SILTSTONE	SSY.M.GY AS ABOVE.
	115.78	117.36	1.58			SILTSTONE	M.GY SSY NEAR TOP, LOWER 50CM HIGHLY SHRD. S KS.
	117.36	118.00	0.64			MUDSTONE	DK.GY COALY PARTING MNR., COALY AT BASE.
	118.00	118.08	0.08			COAL	C-5.BLK HIGHLY SHRD.
	118.08	118.24	0.16			MUDSTONE	CARB.DK.GY SKS, CORE BRKN.
*	118.24	118.77	0.53			MUDSTONE	CARB.DK.GY HIGHLY SHRD, SKS.
	118.77	118.97	0.20		CARON RIDER	COAL	C-5.BLK HIGHLY SHRD, SKS.
	118.97	119.33	0.36		CARON RIDER	CORE LOSS	(COAL).

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	119.33	119.51	0.18			MUDSTONE	CARB.BLK HIGHLY SHRD, MANY COALY PARTINGS.
	119.51	119.70	0.19			MUDSTONE	BLK 6CM C-6 COAL AT TOP, BECOMING ASHY FOR REMAINDER OF INTERVAL, PULV AND HIGHLY SHRD.
	119.70	119.80	0.10			MUDSTONE	CARB.BLK MNR COAL PARTINGS.
	119.80	120.55	0.75			SILTSTONE	SSY.M.GY MNR COAL FRAGS.
*	120.55	121.20	0.65			SILTSTONE	SSY.M.GY MNR COAL FRAGS.
*	121.20	121.27	0.07	04351	CARON	COAL	C-5.BLK SHRD, SKS, METALLIC LUSTRE, BLOCKY. CDR E BLKY AND BRKN.
	121.27	121.64	0.37	04351	CARON	COAL	C-5.BLK HIGHLY SHRD, METALLIC LUSTRE, BLOCKY.
	121.64	122.17	0.53	04351	CARON	COAL	C-6.BLK HIGHLY SHRD, ASHY.
	122.17	122.77	0.60	04351	CARON	COAL	C-5.BLK BADLY BRUKEN, ASHY NEAR TOP.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	122.77	123.57	0.80	04351	CARON	COAL	C-5.BLK HIGHLY SHRD, BADLY BRKN, MNR DIRTY PART INGS THROUGHOUT, AS ABOVE METALLIC LUST RE, DIRTY BASE.
	123.57	123.63	0.06	04351	CARON	COAL LOSS	
	123.63	124.12	0.49			MUDSTONE	M.GY COALY PARTINGS AT TOP, MNR SKS, CORE VB RKN, BLKY.
	124.12	124.97	0.85			MUDSTONE	M.GY AS ABOVE.
	124.97	126.22	1.25			SST	VFG.LT.GY SLTY IN PART, CONVOL BDG MNR COALY FRAG S NEAR BASE. SKS, CALC FILLED FRACS.
*	126.22	126.56	0.34			SST	VFG.LT.GY.THNB COALY PARTINGS, INTBDS MGY SLTST.
	126.56	126.70	0.14			SST	VFG.LT.GY.THNB AS ABOVE.
*	126.70	127.28	0.58			SST	VFG.LT.GY.THNB AS ABOVE.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	127.28	128.17	0.89			SILTSTONE	M.GY.MAS MNR SKS.
	128.17	128.80	0.63			MUDSTONE	DK.GY.LAM INTBD SST -VFG, LT GY, VTHNB, NUMEROUS SKS, SOME COALY FRAGS, PARTINGS AT BASE , CORE BBRKN.
	128.80	129.06	0.26		LINKLATTER	COAL	C-5.BLK METALLIC LUSTRE, SHRD, NUMEROUS DIRTY P ARTINGS.
	129.06	129.29	0.23			SILTSTONE	M.GY.MAS COALY FRAGS - CORE BRKN TO INTC.
	129.29	129.99	0.70			SILTSTONE	M.GY AS ABOVE BUT BECOMING LIGHTER AT BASE, FEWER COALY FRAGS.
	129.99	131.44	1.45			SILTSTONE	M.GY.MAS SOME COALY ROOTLETS, NUMEROUS SKS, WITH 44CM SHR ZONE 40CM FROM TOP.
	131.44	131.94	0.50			SILTSTONE	SSY.M.GY.XBDG CONVOL BDG, MNR COALY FRAGS.
*	131.94	132.19	0.25			SILTSTONE	WITH INTBD SST MGR. LT GY AT TOP AND SS T VFG LT GY THROUGHOUT, SOME SKS. CONVO L BDG. CORE BRKN.

*/DENDTES MEASURED 9CA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	132.19	132.41	0.22			CORE LOSS	ROCK.
*	132.41	132.67	0.26			SST	SLTY.FG.LT.GY.THNB SOME SKS.
	132.67	133.80	1.13			SILTSTONE	M.GY THIN LAM OF SST, LT GY, VFG, NUMEROUS N ODULES, PYRITIC, CALCAREOUS SKS AND CAL C VEINING 20CM FROM TOP.
	133.80	135.11	1.31			SILTSTONE	M.GY.MAS WITH MUD CRACKS THROUGHOUT BECOMING LTG Y AT BASE, NUMEROUS SKS, SOME CALC FILL ED FRACS. CORE INTC.
	135.11	135.24	0.13			SILTSTONE	M.GY SOME COALY FRAGS, SKS.
	135.24	135.29	0.05			COAL	C-6.BLK PULVR, ASHY, BONE.
	135.29	135.81	0.52			SILTSTONE	M.GY SOME COALY FRAGS, SKS.
	135.81	136.66	0.85			SILTSTONE	M.GY AS ABOVE, SOME COALY PARTINGS.
	136.66	137.09	0.43	04352	HIGHHAT	COAL	C-5.BLK SHRD, BBRKN TO PULVR AT BASE.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	137.09	137.26	0.17	04352	HIGHHAT	COAL	C-6.BLK BONEY, DIRTY, SHRD.
	137.26	137.39	0.13	04352	HIGHHAT	COAL	C-6.BLK AS ABOVE.
	137.39	137.74	0.35	04352	HIGHHAT	COAL	C-5.BLK METALLIC LUSTRE, PYR VEINS, SHRD, CORE BRKN TO PULVERIZED AT BASE.
	137.74	137.80	0.06	04352	HIGHHAT	COAL LOSS.	
	137.80	137.84	0.04	04352	HIGHHAT	COAL	C-5.BLK AS ABOVE.
	137.84	138.16	0.32			SILTSTONE	BLK.MAS NUMEROUS COALY PARTINGS, SSY AT BASE.
*	138.16	138.65	0.49			SST	FG.LT.GY WITH MNR SLTST INTBDS NEAR TOP. MNR SKS .
	138.65	139.25	0.60			SST	FG.LT.GY AS ABOVE, SOME COALY PARTINGS.
*	139.25	140.57	1.32			SILTSTONE	DK.GY.MAS CORE INTC.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	140.57	141.57	1.00			SILTSTONE	DK.GY.MAS WITH MNR SSY INTBDS LT GY AT BASE.
	141.57	142.92	1.35			SILTSTONE	M.GY.THNB WITH SSY INTBDS LT GY, VFG THROUGHOUT.
	142.92	143.29	0.37			SILTSTONE	M.GY.MAS MNR SKS, MNR SCATTERED PBLs.
*	143.29	143.54	0.25			SILTSTONE	M.GY.MAS AS ABOVE, GRADING INTO CG PBLs - POORLY SORTED.
	143.54	144.04	0.50			CGL	GRAN.MOD.LT.GY.MAS CHERT CONGL, GRAIN SUPPORTED. SOME MG S ST, SILICIOUS.
	144.04	145.42	1.38			CGL	GRAN.MOD.LT.GY.MAS AS ABOVE WITH SOME MNR CALC FILLED FRAC S.
	145.42	146.06	0.64			SILTSTONE	DK.GY.MAS SHRD, SKS, CORE INTO TO BRKN.
	146.06	147.10	1.04			SILTSTONE	LT.GY.MAS SOME SKS, CORE BRKN.
*	147.10	147.33	0.23			SILTSTONE	DK.GY.MAS AS ABOVE.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	147.33	148.93	1.60			SILTSTONE	DK.GY.MAS OCCASIONAL INTBDS SST, VFG, LTGY, MNR C ALC FILLED FRACS. CORE BRKN TO INTC.
	148.93	150.20	1.27			SILTSTONE	BLK WITH VERY OCCASIONAL SST PHASES LT GY, VFG, PYRITIFEROUS, MNR SKS.
	150.20	151.32	1.12			SILTSTONE	BLK AS ABOVE, SHEAR ZONE .49 FROM TOP.
	151.32	151.68	0.36			CGL	GRAN.MOD.LT.GY.MAS CHERT, GRAIN SUPPORTED, SLTY AT TOP SOM E FG PHASES. CORE BRKN.
	151.68	153.27	1.59			CGL	GRAN.MOD.LT.GY.MAS AS ABOVE.
	153.27	154.33	1.06			CGL	GRAN.MOD.LT.GY.MAS AS ABOVE. CORE INTC.
	154.33	156.03	1.70			CGL	GRAN.MOD.LT.GY.MAS AS ABOVE.
	156.03	157.03	1.00			CGL	GRAN.MOD.LT.GY.MAS AS ABOVE - CORE INTC.
	157.03	157.93	0.90			CGL	GRAN.MOD.LT.GY.MAS AS ABOVE.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81102

BCA	DEPTH FROM	DEPTH INTRVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	157.93	159.48	1.55			CGL	GRAN.MOD.LT.GY.MAS AS ABOVE.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	0.00	24.40	24.40			OVERBURDEN	NO CORE.
	24.40	26.09	1.69			SILTSTONE	DK.GY.THNB WITH INTBD SS, LT GY, VFG, CONVOL BDG, RUST WEATHERING ON FRACTURE SURFACES.
	26.09	26.87	0.78			SILTSTONE	DK.GY.THNB AS ABOVE - CORE BRKN.
*	26.87	29.04	2.17			SILTSTONE	DK.GY.THNB AS ABOVE - NO WEATHERING.
	29.04	29.79	0.75			SILTSTONE	DK.GY AS ABOVE - CORE BLKY.
*	29.79	32.04	2.25			SILTSTONE	DK.GY.THNB AS ABOVE.
	32.04	32.61	0.57			SILTSTONE	DK.GY.THNB AS ABOVE - CORE BRKN.
*	32.61	34.91	2.30			SILTSTONE	DK.GY.XBDG AS ABOVE.
	34.91	35.48	0.57			SILTSTONE	DK.GY AS ABOVE, MNR SKS. CORE BRKN.
	35.48	38.03	2.55			SILTSTONE	DK.GY AS ABOVE, MNR PYR CRYSTALS, NU SKS.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	38.03	38.23	0.20			SILTSTONE	DK.GY AS ABOVE - NO PYR - CORE BROKEN.
*	38.23	41.14	2.91			SILTSTONE	DK.GY WITH INTBD SS, LT GY, VFG, CONVOL BDG, WORM BURROWS, PYR BLEBS, MNR SKS, CORE INTACT.
*	41.14	43.95	2.81			SILTSTONE	DK.GY.THNB AS ABOVE, NO SKS, CORE BLKY.
	43.95	44.12	0.17			SILTSTONE	DK.GY.THNB AS ABOVE.
	44.12	46.77	2.65			SILTSTONE	DK.GY.XBDG AS ABOVE, SKS, SMOKEY QTZ CRYSTALS. COR E BLKY.
	46.77	47.20	0.43			SILTSTONE	DK.GY WITH INTBD SS, LT GY, VFG, CONVOL BDG.
*	47.20	49.62	2.42			SILTSTONE	DK.GY AS ABOVE, WORM BURROW, PYR - CORE BLKY.
	49.62	50.18	0.56			SILTSTONE	DK.GY AS ABOVE, NO WORM BURROWS.
*	50.18	51.50	1.32			SILTSTONE	DK.GY AS ABOVE, GREATER % OF INTBD SST.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH INTRVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	51.50	52.24	0.74			SILTSTONE	DK.GY AS ABOVE - CORE BRKN.
	52.24	54.95	2.71			SILTSTONE	DK.GY.THNB.XBDG INTBDD SS LT GY, VFG, CONVOL BDG, SKS, PYR BLEB, TOP OF BOX BLKY, BOTTOM 1/2 O F BOX VBRKN WITH CHIPS MIXED WITH DRILL ERS MUD.
*	54.95	57.67	2.72			SILTSTONE	DK.GY AS ABOVE - SOME SILTST BECOMING MUDDY - NO PYR - CORE BRKN.
	57.67	57.75	0.08			SILTSTONE	DK.GY AS ABOVE BADLY SHEARED.
	57.75	57.86	0.11			SILTSTONE	DK.GY AS ABOVE - BADLY SHEARED.
*	57.86	60.43	2.57			SILTSTONE	DK.GY AS ABOVE, PYR, SKS, SMOKEY QTZ CRYSTALS , WRMBURS - CORE BLKY EXCEPT FOR SHEARI NG AT TOP OF BOX.
	60.43	60.81	0.38			SILTSTONE	DK.GY INTBDD SST - LT GY, VFG, CONVOL BDG.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

<u>BCA</u>	<u>DEPTH FROM</u>	<u>DEPTH TO</u>	<u>INTRVAL THICK.</u>	<u>SAMP. ID</u>	<u>SEAM ID</u>	<u>LITHOLOGY</u>	<u>DESCRIPTION</u>
*	60.81	63.22	2.41			SILTSTONE	DK.GY AS ABOVE, PYR, SKS, SMOKE QTZ CRYSTAL FILL - CORE BRKN.
	63.22	63.96	0.74			SILTSTONE	DK.GY AS ABOVE, IN GENERAL BECOMING MUCH SANDIER - NO QTZ OR PYR.
	63.96	66.08	2.12			SILTSTONE	DK.GY AS ABOVE, QTZ CRYSTALS.
	66.08	67.03	0.95			SILTSTONE	DK.GY AS ABOVE WRMBURS, SKS, NO QTZ CRYSTALS.
	67.03	67.28	0.25			SILTSTONE	DK.GY AS ABOVE.
	67.28	67.66	0.38			SILTSTONE	FG.WEL.M.GY.MAS
	67.66	68.90	1.24			SILTSTONE	DK.GY.THNB INTBD SST LT GY, VFG, COME CONVOL BDG, SKS, PYR, WRMBURS, INCR NO. OF SST BEDS - CORE BLKY.
*	68.90	70.16	1.26			SILTSTONE	DK.GY.XBDG AS ABOVE WITH PYR BLEBS, MNR SKS, NO WRMBURS.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	70.16	71.80	1.64			SILTSTONE	DK.GY AS ABOVE - BECOMING MUDDIER - CORE BLKY
*	71.80	73.36	1.56			SILTSTONE	DK.GY INTBD SST, LT GY, VFG, CONVOL BDG, MNR SKS, PYR.
	73.36	74.62	1.26			SILTSTONE	DK.GY AS ABOVE - CORE BLKY TO INTC.
*	74.62	76.40	1.78			SILTSTONE	DK.GY AS ABOVE.
	76.40	77.40	1.00			SILTSTONE	DK.GY AS ABOVE, SOME QTZ CRYSTALS-CORE INTC.
	77.40	79.51	2.11			SILTSTONE	DK.GY AS ABOVE BECOMING LESS SANDY, WRMBURS.
*	79.51	80.26	0.75			SILTSTONE	DK.GY AS ABOVE - CORE INTC.
*	80.26	82.65	2.39			SILTSTONE	DK.GY INTBD SST, LT GY, VFG, CONVOL BDG, MNR SKS, PYR, WRMBURS.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	82.65	83.11	0.46			SILTSTONE	DK.GY AS ABOVE WITH FEWER INTBDS OF SST. CORE INTC.
	83.11	85.75	2.64			SILTSTONE	DK.GY.XBDG AS ABOVE - QTZ CRYSTALS.
*	85.75	85.99	0.24			SILTSTONE	DK.GY AS ABOVE - CORE INTC.
*	85.99	88.82	2.83			SILTSTONE	DK.GY.XBDG AS ABOVE WITH QTZ VEINS, WRMBURS, NO SK S. - CORE INTC.
	88.82	91.67	2.85			SILTSTONE	DK.GY INTBD SS; LTGY; VFG; CONVAL BDG; SOFTSE D DET; END OF BOX - CORE INTACT.
	91.67	91.80	0.13			SILTSTONE	DK.GY AS ABOVE
*	91.80	94.46	2.66			SILTSTONE	DK.GY AS ABOVE; W PYR BLEBS; END OF BOX - COR E INTACT.
	94.46	94.84	0.38			SILTSTONE	DK.GY INTBD SS; LTGY; VFG; CONVOL BDG; MINOR PYRITE.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	94.84	97.19	2.35			SILTSTONE	DK.GY AS ABOVE; END OF BOX CORE BLOCKY
	97.19	97.94	0.75			SILTSTONE	DK.GY.XBDG AS ABOVE; MINOR PYR
	97.94	99.99	2.05			SILTSTONE	DK.GY AS ABOVE; END OF BOX CORE INTCT
*	99.99	100.97	0.98			SILTSTONE	DK.GY AS ABOVE; NO PYR
	100.97	102.71	1.74			SILTSTONE	DK.GY AS ABOVE; PL FRAGS; END OF BOX CORE INT CT
	102.71	103.94	1.23			SILTSTONE	DK.GY AS ABOVE; NO PL FRAGS
	103.94	105.42	1.48			SILTSTONE	DK.GY AS ABOVE; COAL FRAG; END OF BOX CORE BL KY
*	105.42	106.96	1.54			SILTSTONE	DK.GY INTBD SS; LTGY; VFG; CONVUL BDG; SS BED S BECOMING NOTICABLY THINNER.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	106.96	108.03	1.07			SILTSTONE	DK.GY AS ABOVE; MINOR SKS; END OF BOX-CORE BLKY
	108.03	109.92	1.89			SILTSTONE	DK.GY AS ABOVE; W SOME INTBDS OF MUDST; SILTY ; DK GY; NO SKS
	109.92	110.76	0.84			SILTSTONE	DK.GY AS ABOVE; END OF BOX-CORE BLKY
	110.76	112.85	2.09			SILTSTONE	DK.GY AS ABOVE;
	112.85	113.51	0.66			SILTSTONE	DK.GY AS ABOVE; END OF BOX-CORE BLKY TO INTC
*	113.51	115.89	2.38			SILTSTONE	DK.GY AS ABOVE; MINOR SKS; QTZ CRYSTALS.
	115.89	116.38	0.49			SILTSTONE	DK.GY AS ABOVE; NO SKS; NO QTZ CRYSTALS; END OF BOX-CORE BLKY.
	116.38	119.07	2.69			SILTSTONE	DK.GY AS ABOVE; MINOR SKS; QTZ FILL; END OF B OX CORE BLKY

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	119.07	121.82	2.75			SILTSTONE	DK.GY INTBD WITH VTHNB SS; LT GY; VFG; CONVOL BDG; MINOR SKS; END OF BOX-CORE BLKY T O INTE
	121.82	122.20	0.38			SILTSTONE	DK.GY AS ABOVE; CALCITE FILLED FRAC; BECOMING MUDDY AT BASE.
*	122.20	124.53	2.33			SILTSTONE	DK.GY AS ABOVE W COALY FRAGS; SKS; NO CALCITE ; END OF BOX- CORE BLKY TO INTE
	124.53	125.24	0.71			SILTSTONE	DK.GY AS ABOVE; MINOR SKS; QTZ CRYSTALS
	125.24	127.27	2.03			SILTSTONE	DK.GY AS ABOVE; SKS; SOME QTZ CRYSTALS; END OF BOX-CORE BRKN TO BLKY
	127.27	128.13	0.86			SILTSTONE	DK.GY AS ABOVE; QTZ FILLED; GETTING MUDDIER T OWARDS BOTTOM; END OF BOX-CORE BLKY TO INTE
	128.13	130.11	1.98			SILTSTONE	AS ABOVE: QUARTZ FILLED; GETTING MUDDIE R TOWARDS BOTTOM; END OF BOX- CORE BLKY TO INTE.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. TO	SEAM TO	LITHOLOGY	DESCRIPTION
*	130.11	131.16	1.05			SILTSTONE	DK.GY AS ABOVE
*	131.16	132.88	1.72			SILTSTONE	DK.GY AS ABOVE; NO QTZ; FEW WORM BURROWS; END OF BOX-CORE BLKY
	132.88	134.20	1.32			SILTSTONE	DK.GY INTBDD W VTHNB SST; LT GY; VFG; CONVOL BDG
	134.20	135.56	1.36			SILTSTONE	DK.GY AS ABOVE; W SOME MUOST INTERVALS; SKS; END OF BOX-CORE BLKY
*	135.56	137.18	1.62			SILTSTONE	DK.GY AS ABOVE; NO SKS
	137.18	138.28	1.10			SILTSTONE	DK.GY AS ABOVE; MINOR SKS; END OF BOX-CORE BLKY
	138.28	140.29	2.01			SILTSTONE	DK.GY AS ABOVE; MINOR SKS
	140.29	140.93	0.64			SILTSTONE	DK.GY AS ABOVE; MINOR SKS; COAL FRAGS; END OF BOX-CORE BLKY

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	140.93	142.61	1.68			SILTSTONE	DK.GY INTBDD VTHNB SST LT GY VFG CONVOL BDG
	142.61	143.00	0.39			SILTSTONE	DK.GY AS ABOVE; END OF BOX-CORE BLKY
	143.00	145.65	2.65			SILTSTONE	DK.GY AS ABOVE
	145.65	145.84	0.19			SILTSTONE	DK.GY AS ABOVE; END OF BOX-CORE BLKY
*	145.84	148.68	2.84			SILTSTONE	DK.GY.XBDG AS ABOVE; W SOME THICKER SS BEDS; PRY; WORM BURROWS; W THIN COAL PARINGS; SOFT SED DEF; SED STRUX SOME XBDG
	148.68	151.45	2.77			SILTSTONE	DK.GY.XBDG VTHIN INTBDD SS LT GY VFG; CONVOL BDG; FEW SST BDS GETTING THICKER; PRY; MINOR SKS; END OF BOX-CORE BLKY
	151.45	151.83	0.38			SILTSTONE	DK.GY AS ABOVE
	151.83	152.07	0.24			SILTSTONE	DK.GY AS ABOVE

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	152.07	154.50	2.43			CORELOSS	DK.GY CORE LOSS(ROCK)-PROBABLY IN FIRST 75M OF HOLE
	154.50	154.69	0.19			SILTSTONE	DK.GY INTBD SS MGR LT GY; POORLY SORTED; RIP UP CLASTS; SKS
	154.69	154.91	0.22			SILTSTONE	DK.GY INTBEDD W SS; VFG LTGY;SKS; PYR; COALY FRAGS
	154.91	156.64	1.73			SILTSTONE	M.GY.MAS SKS; END OF BOX-CORE INTACT.
	156.64	156.91	0.27			SILTSTONE	CLYY.M.GY.MAS
	156.91	157.42	0.51			SILTSTONE	M.GY.MAS COALY FRAGS
	157.42	159.17	1.75			SILTSTONE	SSY.M.GY COALY FRAGS THROUGHOUT; COALY PARTING AT BOTTOM
	159.17	159.23	0.06			SANDSTONE	FG.WEL.M.GY COAL FRAGS; END OF BOX-CORE INTO

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH INTRVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	159.23	159.36	0.13			SANDSTONE	VFG.WEL.M.GY COAL FRAGS
	159.36	159.92	0.56			SANDSTONE	M.GY COALY FRAGS; MUDDY AT TOP
*	159.92	161.12	1.20			SANDSTONE	VFG.LT.GY SKS; COALY FRAGS
	161.12	161.67	0.55			SILTSTONE	SSY.DK.GY COALY FRAGS; SKS
	161.67	161.86	0.19			SANDSTONE	VFG.WEL.LT.GY SKS; FAULT GOUGE VUGGY; END OF BOX-CORE INTC
	161.86	162.14	0.28			SANDSTONE	VFG.WEL.LT.GY COALY FRAGS; SKS; VUGGY; QTZ CRYSTALS; CONVOL BDG
	162.14	163.04	0.90			SILTSTONE	SSY.M.GY.MAS COALY PL FRAGS
	163.04	163.49	0.45			SILTSTONE	M.GY.MAS PL FRAGS
	163.49	163.81	0.32			SANDSTONE	VFG.WEL.LT.GY INTBD SLTST; MGY CONVOL; BDE COALY FRAG S

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	163.81	164.57	0.76			SILTSTONE	SSY.M.GY SOME INTBDD SST LTGY VFG; CONVOL BDG; S KS; QTZ; CROSS STRATIFIED; COALY PLANT FRAGS; END OF BOX- CORE INTACT.
	164.57	164.87	0.30			SILTSTONE	SSY.M.GY AS ABOVE; SSY AT BASE
	164.67	164.99	0.12			SILTSTONE	SSY.M.GY AS ABOVE
	164.99	165.98	0.99			SANDSTONE	MG.PR.LT.GY.XBDG SKS; COALY FRAGS; OCCASIONAL LTBRN CLAY CLASTS; OCCASIONAL VTHNB CARB LAYERS; SOME INTBD SLTST DK GY
	165.98	166.04	0.06			CGL	PBL.PR COALY PARTINGS; CLYY QTZ; CHERT SKS
	166.04	166.10	0.06			MUDSTONE	CARB.LT.BLK COALY PARTINGS
	166.10	166.14	0.04			COAL	C-6.DK.BLK
	166.14	166.30	0.16			CORELOSS	CORE LOSS (COAL)
	166.30	166.71	0.41			SILTSTONE	DK.GY.MAS SKS

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	166.71	167.33	0.62			SANDSTONE	VFG.LT.GY SOFT SED DEF; INTBDS OF SLTST; DK GY
	167.33	167.42	0.09			SILTSTONE	DK.GY INTBDS OF SS; LTGY VFG COALY FRAGS; SKS ; END OF BOX CORE INTACT EXCEPT AT COAL Y AREA WHICH IS BRKN
	167.42	167.47	0.05			SILTSTONE	DK.GY AS ABOVE
	167.47	168.00	0.53			SILTSTONE	DK.GY.MAS COALY FRAGS; SKS
	168.00	168.79	0.79			SILTSTONE	SSY.M.GY COALY FRAGS
	168.79	169.11	0.32			SLTST	DK.GY.MAS COALY FRAGS
	169.11	169.37	0.26			MUDSTONE	CARB.BLK AS ABOVE; SKS
	169.37	170.25	0.88			MUDSTONE	DK.GY COALY FRAGS
	170.25	171.51	1.26			SILTSTONE	M.GY.MAS COALY FRAGS; SKS

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	171.51	171.95	0.44			SILTSTONE	SSY.M.GY.MAS.SSD CALC FILLED FRACS; MUDST AND SSY CLASTS
	171.95	172.19	0.24			SANDSTONE	FG.LT.GY INTBDD SLTST DK GY CONVOL BDG; COALY FR AGS
*	172.19	172.97	0.78			SANDSTONE	FG.LT.GY.SSD AS ABOVE; SED STRUX SSD AND XBDG
	172.97	173.07	0.10			SILTSTONE	DK.GY.SSD COALY FRAGS - DIAPRIC SS; END OF BOX - CORE INTCT
	173.07	173.91	0.84			SILTSTONE	M.GY.SSD AS ABOVE; SKS
	173.91	174.04	0.13			SANDSTONE	MG.WEL.LT.GY.SSD
	174.04	174.47	0.43			SILTSTONE	DK.GY.SSD COALY FRAGS; FEW INTBDS SST; LT GY; FG
	174.47	175.19	0.72			SANDSTONE	FG.WEL.LT.GY.SSD OCCASIONAL CARB PARTINGS; SLTST INTBDS; DK GY; SLIGHTLY CALCAREOUS
	175.19	175.60	0.41			SILTSTONE	M.GY.SSD SST LT GY FG - DYKES - SKS; PL FRAGS

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	175.60	175.71	0.11			COAL	C-4.BLK
	175.71	175.81	0.10			MUDSTONE	CARB.BLK SKS COALY FRAGS
	175.81	175.90	0.09			COAL	C-6.BLK SKS; END OF BOX EXCEPT COAL-BRKN
	175.90	176.10	0.20			CORELOSS	CORE LOSS (COAL)
	176.10	178.37	2.27			SILTSTONE	DK.GY.MAS COALY FRAG; SKS; COAL PARTINGS PYR
	178.37	178.94	0.57			SILTSTONE	DK.GY.MAS COAL FRAGS; SKS; END OF BOX CORE BLKY T O BRKN; ROCK MOD MUDDY
	178.94	179.34	0.40			MUDSTONE	SLTY.DK.GY.MAS COAL FRAGS SKS
	179.34	180.86	1.52			SILTSTONE	M.GY.MAS AS ABOVE
	180.86	180.90	0.04			MUDSTONE	CARB.BLK
	180.90	181.08	0.18			COAL	C-5.BLK BLOCKY

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

<u>BCA</u>	<u>DEPTH FROM</u>	<u>DEPTH TO</u>	<u>INTRVAL THICK.</u>	<u>SAMP. ID</u>	<u>SEAM ID</u>	<u>LITHOLOGY</u>	<u>DESCRIPTION</u>
	181.08	181.28	0.20			MUDSTONE	CARB.BLK SKS; COAL FRAGS AND PARTINGS
	181.28	181.38	0.10			COAL	C-6 BRKN SHRD DIRTY
	181.38	181.44	0.06			CORELOSS	CARB.BLK COALY FRAGS AND PARTINGS
	181.44	181.60	0.16			COAL	CORE LOSS (COAL)
	181.60	181.81	0.21			SANDSTONE	FG.WEL.LT.GY AS ABOVE; WITHN CARB; END OF BOX-CURE I NTC; COAL BRKN AND SHRD
	181.81	182.20	0.39			SANDSTONE	FG.WEL.LT.GY.XBDG AS ABOVE
	182.20	182.55	0.35			SILTSTONE	DK.GY WITHN SSY INTBDS; QTZ CRYSTALS; MINOR SK S.
	182.55	183.69	1.14			SANDSTONE	VFG.WEL.LT.GY.XBDG INTBDS OF M-FG; LTGY;SS AND INTBDS OF S LTST DK GY CONVOL BDG; COALY FRAGS; MIN OR SKS; QTZ CRYSTALS; CALCITE FILLED FR ACTURES.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
*	183.69	184.09	0.40			SILTSTONE	DK.GY INTBDS OF SST LT GY; VFG MG; SSD AT TOP ; COAL FRAGS SKS
	184.09	184.53	0.44			MUDSTONE	DK.GY SKS; COAL FRAGS; PYR; W MG LT GY SS VER TICAL FILL BY SSD
	184.53	184.73	0.20			MUDSTONE	DK.GY AS ABOVE W COAL PARTINGS; END OF BOX-CO RE BLKY
	184.73	187.08	2.35			MUDSTONE	CARB.DK.GY.MAS ABUNDANT COALY PL FRAGS AND COAL PARTIN GS; SKS SLTY NEAR BASE
	187.08	187.47	0.39			SANDSTONE	SLTY.MG.WEL.LT.GY INTBDS OF SLTST MUDDY DK GY; COAL PARTI NGS; CARB PARTINGS AND PL FRAGS; END OF BOX-CORE BLKY
	187.47	187.87	0.40			SANDSTONE	SLTY.MG.WEL.LT.GY AS ABOVE; MINOR SKS
*	187.87	189.33	1.46			SANDSTONE	MG.WEL.XBDG INTBDS OF CARB MUDST; COALY PARTINGS AN D FRAGS; SKS.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	189.33	190.36	1.03			SANDSTONE	MG.WEL.LT.GY.VTHNB.XBDG CALCAREOUS (SLIGHTLY) END OF BOX CORE B LKY TO INTC
	190.36	190.53	0.17			SANDSTONE	MG.WEL.LT.GY.VTHNB.XBDG AS ABOVE
	190.53	190.60	0.07			SANDSTONE	LT.GY.VTHNB.XBDG AS ABOVE; WITH VTHNB CARB INTERBEDS.
	190.60	193.21	2.61			SANDSTONE	LT.GY.VTHNB.XBDG CALCAREOUS; OCCASIONAL CARB PARTINGS SK S OCCASIONAL MUDST CLAST; END OF BOX-CO RE INTC
	193.21	193.52	0.31			SANDSTONE	MG.WEL.LT.GY.VTHNB.XBDG AS ABOVE; NUMEROUS CARB PARTINGS.
	193.52	195.42	1.90			SANDSTONE	MG.WEL.LT.GY.VTHNB.XBDG AS ABOVE W CARB PARTINGS
	195.42	196.09	0.67			SANDSTONE	VCG.PR.LT.GY.MAS COALY PARTINGS; SHRD(SKS); END OF BOX-CO ORE INTC
	196.09	196.54	0.45			SANDSTONE	VCG.PR.LT.GY.MAS AS ABOVE W OCCASIONAL CLAY CLAST ESPECI ALLY AT BASE

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
*	196.54	198.43	1.89			SANDSTONE	MG.PR.LT.GY.MAS COALY PARTINGS; COARSENING DOWN TO VCG POORLY SORTED SS W CLAY CLASTS AND SMAL L CHERT PBL
	198.43	198.89	0.46			SANDSTONE	FG.WEL.LT.GY.THNB W OCCASIONAL CLAY CLASTS; END OF BOX-CO RE INTO
	198.89	199.23	0.34			SANDSTONE	FG.WEL.LT.GY.MAS
	199.23	199.57	0.34			SANDSTONE	FG.WEL.LT.GY.XBDG SKS
	199.57	199.70	0.13			SANDSTONE	FG.WEL.XBDG SKS
	199.70	200.29	0.59			SANDSTONE	FG.WEL.LT.GY.VTHNB BANDS OF CLAY PEBBLES AND SILTY INTBDS; SKS; SLIGHTLY CALCAREOUS
	200.29	200.46	0.17			SILTSTONE	M.GY VTHN INTBS SST LT GY VFG
	200.46	200.54	0.08			SANDSTONE	FG.WEL.LT.GY W SLTST RIP UP CLASTS

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
*	200.54	200.69	0.15			SILTSTONE	M.GY INBDD SS FG LT GY CONVOL BEDG PT FRAGS
*	200.69	201.74	1.05			SANDSTONE	FG.LT.GY.VTHNB W SLTY RIP UP CLAST AT TOP AND OCCASION AL ONES THROUGHOUT; END OF BOX-CORE INT ACT
	201.74	201.86	0.12			SANDSTONE	FG.LT.GY.VTHNB AS ABOVE RIP UP CLASTS AT BOTTOM; COAL FRAGS
	201.86	202.59	0.73			SILTSTONE	DK.GY.MAS W PYR; COAL FRAGS COAL PARTINGS; SKS
	202.59	204.48	1.89			MUDSTONE	DK.GY.MAS COALY PARTINGS; COAL FRAGS; MINOR SKS; BECOMING COALY AT BASE
	204.48	204.52	0.04		CARON	COAL	C-4.BLK VBRKN; END OF BOX-CORE INTC EXCEPT COAL
	204.52	204.88	0.36	04353	CARON	COAL	C-6.BLK BONEY; SPL INCL .03 FROM BOX 64
	204.88	205.13	0.25	04354	CARON	MUDSTONE	CARB.BLK BONEY; STONEY

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	205.13	205.74	0.61	04355	CARON	COAL	C-5 27 FROM BOTTOM IS MARKER; FEW VITRAIN BANDS
	205.74	206.02	0.28	04356	CARON	MUDSTONE	CARB. BLK SKS; COAL FRAGS; VERY BONEY AT BASE
	206.02	206.24	0.22	04357	CARON	COAL	C-5 BONEY TOP 5CM - REST C5
	206.24	206.48	0.24	04358	CARON	COAL	C-6. BLK COAL AT BASE C-5
	206.48	206.79	0.31	04359	CARON	COAL	C-5 MOSTLY C5 SOME C6 AT TOP; BANDS OF BONEY COAL-DULL BRIGHT
	206.79	206.85	0.06	04359	CARON	COAL	C-4 HIGHER VITRAIN COAL ; SHARP BOTTOM CONTACT
	206.85	207.32	0.47			MUDSTONE	SLTY. BLK COAL FRAGS; COALY PARTINGS; END OF BOX 65-CORE INTACT; COAL SAMPLED JULY 24/81
	207.32	207.58	0.26			MUDSTONE	SLTY. BLK COAL FRAGMENTS

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDHB1105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	207.58	207.72	0.14			MUDSTONE	SLTY.BLK COAL FRAGS
	207.72	207.86	0.14			COAL	C-5.BLK OCCASIONAL THIN ASH SPLITS AT TOP; METALLIC LUSTRE; BECOMING MOR VITREOUS AT BASE; MINOR PYR
	207.86	207.96	0.10			CORELOSS	CORE LOSS (COAL)
*	207.96	209.31	1.35			SILTSTONE	DK.GY W MINOR SANDY PHASES AT TOP AND MINOR COALY PARTINGS AT BASE
	209.31	209.93	0.62			SANDSTONE	SLTY.VFG.WEL.LT.GY.LAM BEDDING LAMINATED W OCCASIONAL SSD
	209.93	210.13	0.20			MUDSTONE	SLTY.M.GY OCCASIONAL COALY FRAGS
	210.13	210.23	0.10			COAL	C-6.BLK PULVERIZED
	210.23	210.38	0.15			MUDSTONE	CARB.BLK COALY LAM THROUGHOUT; END BOX 66
	210.38	210.48	0.10			SILTSTONE	DK.GY COALY LENSES THROUGHOUT; MASSIVE

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
*	210.48	211.62	1.14			SILTSTONE	DK.GY SANDY PARTS; MASSIVE OCCASIONAL; COALY PARTINGS AT BASE
	211.62	212.68	1.06			SANDSTONE	SLTY.VFG.WEL.M.GY OCCASIONAL SILTY INTERBEDS; FINELY LAM SOME SSD
	212.68	212.97	0.29			SILTSTONE	SSY.M.GY MASSIVE TO FINELY LAMINATED; END OF BOX 67; CORE GROUND BY DRILLERS
	212.97	213.21	0.24			SILTSTONE	SSY.M.GY AS ABOVE
	213.21	213.64	0.43			MUDSTONE	BLK MASSIVE; MINOR PYRITE; OCC'L PL FRAG
	213.64	213.78	0.14			MUDSTONE	BLK AS ABOVE
	213.78	214.16	0.38	LINKLATTER		COAL	C-5.BLK BONEY AT TOP; GRADATIONAL LOWER CONTACT . SEAM SAMPLED BY GSC.
	214.16	214.44	0.28	LINKLATTER		CORELOSS	CORE LOSS (ROCK)
	214.44	214.92	0.48	LINKLATTER		MUDSTONE	BLK COALY FRAG THROUGHOUT MASSIVE

* DENOTES MEASURED BCA

82/02/10

GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105.

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	214.92	214.95	0.03		LINKLATTER	COAL	C-5.BLK PULVERISED
	214.95	215.71	0.76			MUDSTONE	SLTY.BLK.MAS OCCASSIONAL COALY PARTINGS
	215.71	216.05	0.34			SILTSTONE	M.GY MASSIVE; END OF BOX 68-CORE BADLY BROKE N.
	216.05	218.36	2.31			SILTSTONE	M.GY MASSIVE
	218.36	218.88	0.52			SILTSTONE	M.GY OCC'L COALY PARTINGS W OCC'L SSY INTERB EDS TOWARD BASE; END OF BOX 69; CORE IN TACT
	218.88	218.99	0.11			SILTSTONE	DK.GY AS ABOVE
	218.99	220.57	1.58			SILTSTONE	SSY.M.GY OCC'L COAL PARTINGS THROUGHOUT; SSY INT ERBEDS (LT GY VFG) VERY THINLY BEDDED; MORE SSY TOWARDS BASE
	220.57	221.34	0.77			SANDSTONE	FG.WEL.LT.GY OCC'L SLTY INTERBEDS; VERY THINLY BEDDE D; OCC'L COAL FRAGS

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH ERGM	DEPTH ID	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
*	221.34	221.62	0.28			SANDSTONE	MG.MUD.LT.GY.THNB THINLY BEDDED; OCC'L COARSE PHASE; END BO 70 ; CORE INTACT
	221.62	224.39	2.77			SANDSTONE	CG.WEL.LT.GY WELL SORTED W COARSER PHASES; OCC'L BRO WN CLAY RIP-UP CLASTS; MINOR COALY PART INGS; XBD MASSIVE; END BOX 71; CORE INT ACT
	224.39	225.35	0.96			SANDSTONE	CG.WEL.LT.GY AS ABOVE
	225.35	225.51	0.16			SANDSTONE	MG.WEL.LT.GY W ABUNDANT COALY PARTINGS
	225.51	226.07	0.56			SANDSTONE	CG.WEL.LT.GY OCC'L GRITTY BANDS - MASSIVE TO THINLY BEDDED
	226.07	226.47	0.40			CONGLOMERATE	SSY.PR.LT.GY GRIT CONGL; COARSER GRAIN GRANULES; WIT H OCCASIONAL RIP UP CLASTS AND COALY PA RTINGS.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	226.47	227.14	0.67			SANDSTONE	MG.MOD.LT.GY W OCC'L COARSE SAND PHASES; ABUNDANT CO ALY PARTINGS THROUGHOUT; MASSIVE OCC'L MUDST RIP UP; CLASTS AT BASE; END BOX 7 2; CORE INTACT; MINOR XBDG
	227.14	227.38	0.24			SANDSTONE	MG.WEL.LT.GY AS ABOVE
	227.38	227.62	0.24			SANDSTONE	MG.MOD.LT.GY AS ABOVE
	227.62	227.83	0.21			CONGL	SSY.PR.LT.GY OCC'L COALY PARTINGS THROUGHOUT; MASSIV E
	227.83	228.21	0.38			SANDSTONE	MG.MOD.LT.GY.XBDG OCC'L PEBBLE BAND; OCC'L COALY BEDDING
*	228.21	228.42	0.21			SANDSTONE	MG.MOD.LT.GY W ABUNDANT COALY LENSES THROUGHOUT
	228.42	228.90	0.48			SANDSTONE	MG.WEL MASSIVE W COALY PARTINGS
	228.90	229.57	0.67			SANDSTONE	VFG.MOD.LT.GY VERY COARSE SS BECOMING FINER GRAINED T OWARDS BASE; MASSIVE COALY PARTINGS TOW ARD BASE

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	229.57	229.99	0.42			SANDSTONE	MG.WEL.M.GY MASSIVE - END OF BOX 73; CORE INTACT
*	229.99	230.12	0.13			SANDSTONE	MG.WEL.M.GY AS ABOVE
	230.12	230.46	0.34			SANDSTONE	CG.MOD.LT.GY.THNB
	230.46	230.94	0.48			SANDSTONE	VCG.MOD.LT.GY.THNB OCC'L COALY PARTINGS AND MUDST RIP UP CLASTS.
	230.94	231.90	0.96			SANDSTONE	MG.PR.LT.GY W OCC'L COARSE SAND PHASE; ABUNDANT MUDST RIPUP CLASTS
	231.90	232.55	0.65			MUDSTONE	CARB.BLK MASSIVE W OCC'L COALY PARTINGS THROUGHOUT; END WALTON MEMBER; MINOR SHEARING; ROCK MOD ALSO SLTY
	232.55	232.70	0.15			CONGL	SSY.GRAN.MOD.M.GY GRAIN SUPPORTED WELL CEMENTED W OCC'L COALY PARTINGS BECOMING HIGHLY CARB AT TOP; END BOX 74-CORE INTACT
	232.70	233.35	0.65			CONGL	SSY.GRAN.MOD.M.GY GRAIN SUPPORTED WELL CEMENTED.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81105

BCA	DEPTH FROM	DEPTH INTRVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	233.35	235.37	2.02			CONGL	SSY.GRAN.MOD.M.GY MASSIVE; GRAIN SUPPORTED WELL CEMENTED; W OCC'L COARSE GRAIN PHASES THROUGHOUT ; END BOX 75-CORE INTACT
	235.37	235.48	0.11			CONGL	SSY.GRAN.MOD.M.GY AS ABOVE
	235.48	237.23	1.75			CONGL	SSY.GRAN.MOD.M.GY AS ABOVE. END OF HOLE

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

PAGE 1

PROJECT: TRF BLOCK: XX DATA SOURCE: RDH81106

BCA	DEPTH FROM	DEPTH INTRVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
*	144.00	147.00	3.00	00000		SILTSTONE	SSY.M-DK.GY.MAS MINOR CARB SPECKS; TRACE COALY PARTINGS ; HIGHLY SHRD; ABUNDANT SLICKENSIDES; C ALCITE FILLED FRACTURES; CORE VBRKN TO SHATTERED; BECOMING BLOCKY TOWARDS BASE (CARB MUDST INTERBEDS) CORE RECOVERY< 5 0%.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

PAGE 1

PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	0.00	5.50	5.50			OVERBURDEN	NO CORE.
	5.50	5.83	0.33			SANDSTONE	MG.MOD.LT.GY CALC BLEBS
	5.83	6.39	0.56			SANDSTONE	MG.MOD.LT.GY CALC BLEBS; SLTST CLASTS.
	6.39	8.08	1.69			SANDSTONE	FG.MOD.LT.GY CONVOLUTE; CROSS BEDDING; CALCAREOUS; V THIN INTERBEDS CARBONACEOUS MATERIAL
63	8.08	8.16	0.08			SANDSTONE	FG.MOD.GY AS ABOVE; V MINOR SKS; END BOX 1. CORE BRKN AND BLKY
63	8.16	8.42	0.26			SANDSTONE	FG.MOD.GY SKS; CONVOL BDG
	8.42	9.30	0.88			MUDSTONE	DK.GY.MAS MASSIVE
	9.30	9.84	0.54			MUDSTONE	DK.GY.MAS MASSIVE CONTAINS FOSSIL (PELECYPOD) CAL CITE FILLING; CLAY INTERVALS
	9.84	10.30	0.46			SANDSTONE	FG.PR.M.GY PYRITE BLEBS; SKS; THIN CARB LAYERS; EN D BOX 2; CORE BADLY BROKEN

* DENOTES MEASURED BCA

82/02/10

GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	10.30	10.41	0.11			SANDSTONE	FG.PR.M.GY AS ABOVE
	10.41	10.77	0.36			SANDSTONE	MG.MOD.GY CALCAREOUS SS; MASSIVE
*	10.77	13.12	2.35			SANDSTONE	MG.MOD.LT.GY CALCAREOUS; SOME V THIN CARB LAYERS; EN D BOX 3; CORE INTACT
	13.12	13.78	0.66			SANDSTONE	MG.MOD.LT.GY.XBDG CARB BED IN SS
*	13.78	15.99	2.21			SANDSTONE	MG.MOD.LT.GY.XBDG SKS; PL FRAGS; (COALIFIED) FEW CARB LAY ERS; PYR BLEBS; CALC BLEBS; CALC SS; EN D BOX 4; INTACT CORE
	15.99	16.78	0.79			SANDSTONE	MG.WEL.LT.GY.XBDG CALCITE PYRITE
	16.78	18.90	2.12			SANDSTONE	MG.WEL.LT.GY.XBDG AS ABOVE; END OF BOX 5; CORE INTACT
	18.90	19.97	1.07			SANDSTONE	FG.WEL.LT.GY CALCITE; SLTST CLASTS NEAR BASE; MINOR SKS;

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	19.97	21.14	1.17			SILTSTONE	DK.GY GRADING INTO SANDY SILTSTONE; FEW THIN INTERBEDS OF MUDSTONE IN BASE; SANDY SI LT INTBDS BEFORE CHANGING TO SANDY SILT (MSV) MINOR PYRITE
	21.14	21.78	0.64			SANDSTONE	FG.LT.GY CALCITE SS; CALCITE POCKETS; END OF BOX 6; CORE BLKY TO INCT
	21.78	22.94	1.16			SANDSTONE	FG.WEL.LT.GY.MAS MASSIVE; CALCITE VEINS AND BLEBS
	22.94	23.32	0.38			SANDSTONE	FG.WEL.LT.GY AS ABOVE
	23.32	24.60	1.28			MUDSTONE	SLTY.FG.WEL.DK.GY INTBD SS; LT GY VFG CONVOL BDG AND XBDG ; SKS; PYR; CALC SS END BOX 7 CORE INTA CT TO BKN
	24.60	25.90	1.30			MUDSTONE	SLTY.DK.GY.MAS AS ABOVE; WITH CALCITE VEINS; FOSSIL
*	25.90	27.47	1.57			MUDSTONE	SLTY.DK.GY.MAS AS ABOVE; PYR BLEBS; END BOX 8; CORE IN TACT

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH ESDM	DEPTH IQ	INTRVAL THICK.	SAMP. IQ	SEAM IQ	LITHOLOGY	DESCRIPTION
	27.47	28.85	1.38			MUDSTONE	SLTY.DK.GY AS ABOVE WITH INTERBEDS SS; SOME XBDG; IN SAND PYR
	28.85	30.32	1.47			MUDSTONE	SLTY.DK.GY AS ABOVE; FOSSILS; END OF BOX 9; CORE B LKY
	30.32	31.23	0.91			SILTSTONE	DK.GY INTERBEDS OF LT GY SS; SS COARSENING AT BASE TO M.G.
	31.23	31.30	0.07			SANDSTONE	MG.PR.M.GY CLASTS OF SLTST; SMALL PEBBLE SIZE CLAS TS; CALC VEINS
	31.30	31.42	0.12			MUDSTONE	DK.GY.MAS SKS; MASSIVE
	31.42	31.99	0.57			SANDSTONE	FG.WEL.LT.GY.XBDG CALC FILLED FRACS
	31.99	32.04	0.05			MUDSTONE	DK.GY.MAS
	32.04	32.15	0.11			SILTSTONE	DK.GY.MAS MINOR SKS

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH INTRVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	32.15	32.64	0.49			SANDSTONE	FG.LT.GY.MAS COAL FRAGS AT BASE
	32.64	33.05	0.41			SANDSTONE	FG.LT.GY INTBD WITH DK GY SLTST; CONVOL BDG; CAL C VEINS; MINOR SKS; CALCITE AND SLTST C LASTS AT BASE; END OF BOX 10; CORE BRKN
	33.05	33.15	0.10			SANDSTONE	FG.LT.GY BOTTOM INTBD WITH DK GY SLTST CONVOL BD G
	33.15	33.33	0.18			SILTSTONE	DK.GY.MAS
	33.33	33.69	0.36			SANDSTONE	FG.LT.GY.XBDG PL FRAGS; CALC FILLED FRACS
	33.69	34.43	0.74			SANDSTONE	FG.WEL.LT.GY TOP INTBD WITH SLTST CALC VEINS; V THIN CARB INTERBDS VEINGS OF CALC FILLED FR ACS; THIS INTERVAL BADLY BRKN
*	34.43	35.55	1.12			SANDSTONE	FG.LT.GY.XBDG CALCITE FILLED CRACKS; SKS; SLTST INTER BED WITH SKS; PYR ON SKS SURFACES; END OF BOX; CORE BROKEN

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	35.55	35.81	0.26			ROCK LOSS	CORE LOSS ROCK
	35.81	37.07	1.26			SANDSTONE	FG.WEL.LT.GY CALC FILLED CRACKS; SKS; MINDR PYR; BAD LY BROKEN
	37.07	38.24	1.17			SANDSTONE	FG.WEL.LT.GY AS ABOVE; END OF BOX 12; CORE BBRKN
	38.24	39.98	1.74			SANDSTONE	FG.WEL.LT.GY.MAS AS ABOVE
	39.98	41.10	1.12			SANDSTONE	FG.WEL.LT.GY.MAS AS ABOVE; SOME XBDG END OF BOX 13; CORE INTACT
	41.10	42.98	1.88			SANDSTONE	FG.WEL.LT.GY CALC CRACKS
	42.98	43.75	0.77			SANDSTONE	FG.LT.GY AS ABOVE
*	43.75	43.96	0.21			SANDSTONE	FG.MOD.M.GY CARB; ABUNDANT COAL FRAGS; END BOX 14; CORE INTACT
	43.96	44.05	0.09			SANDSTONE	FG.MOD.M.GY AS ABOVE

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDHB110B

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	44.05	44.13	0.08			MUDSTONE	DK.GY CALC VEININGS
	44.13	44.60	0.47			SANDSTONE	FG.LT.GY.XBDG CALC VEINING.
	44.60	44.83	0.23			SILTSTONE	DK.GY INTERBEDS OF VFG; LTGY SS; CONVOL BDG; SKS.
	44.83	45.64	0.81			SANDSTONE	FG.PR.LT.GY SOME CALC VEINS; SOME XBDG
62	45.64	45.97	0.33			SANDSTONE	VFG.BLK ABUNDANT COAL FRAGS; SKS
63	45.97	46.02	0.05			SANDSTONE	VFG.BLK AS ABOVE
	46.02	46.76	0.74			SANDSTONE	FG.LT.GY.MAS SKS; END OF BOX 15; CORE INTACT TO BRKN
*	46.76	49.11	2.35			SANDSTONE	FG.WEL.LT.GY CARB INTERBEDS; SOME XBDG
64	49.11	49.53	0.42			SANDSTONE	MG.WEL.GY AS ABOVE

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FRLM	DEPTH INTRVAL TO THICK.	SAMP. SEAM ID ID	LITHOLOGY	DESCRIPTION
	49.53	51.69 2.16		SANDSTONE	MG.MOD.LT.GY.VTHNB V THIN INTERBEDS; CARB MATRIX; PL FRAG; BASE SKS
	51.69	52.08 0.39		SANDSTONE	MG.MOD.LT.GY SLTST CLASTS; COAL PARTICLES; END OF BOX X 17; COREBRKN
	52.08	53.71 1.63		SANDSTONE	MG.MOD.LT.GY SLTST CLASTS; FEW V THIN SLTST BEDS; CA LC VEINS MINOR THIN CARB INTBDS TOWARDS BASE; PYR; 0.09 M FROM BASE COAL PARTI NG WITH CALC VEINING
63	53.71	53.78 0.07		MUDSTONE	CARB.BLK CARBONACEOUS MUD; COAL FRAGS
	53.78	54.51 0.73		SANDSTONE	FG.PR.LT.GY COAL FRAGS; INTERBDS OF SLTY SAND; LAYE RS OF CARB
	54.51	54.82 0.31		SANDSTONE	FG.LT.GY.XBDG CARB LAYERS, COAL FRAGS, MINOR SKS. END OF BOX 18 CORE BLOCKY TO BRKN; (CORE LU SS ROCK)
	54.82	55.02 0.20		CORELOSS	ROCK.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
* 62	55.02	56.72	1.70			SANDSTONE	FG.WEL.LT.GY.LAM.XBDG SKS CALCAREOUS MATRIX
62	56.72	57.28	0.56			SANDSTONE	FG.WEL.LT.GY.LAM.XBDG PL FRAGS, CALCAREOUS MATRIX
	57.28	57.72	0.44			SANDSTONE	CG.LT.GY.LAM FOSSILIFEROUS - CALCITE FILLED FOSSILS. END OF BOX 19, CORE BLKY.
61	57.72	58.27	0.55			SANDSTONE	MG.LT.GY.LAM AS ABOVE
61	58.27	59.77	1.50			SANDSTONE	FG.LT.GY SKS, VTHN CARB LAYERS
60	59.77	60.44	0.67			SANDSTONE	FG.LT.GY AS ABOVE, COALY FRAGS, END OF BOX - CUR E BLKY
60	60.44	62.40	1.96			SANDSTONE	MG.LT.GY.LAM.XBDG FEW VTHNB CARB LAYERS, MINOR SKS
* 59	62.40	63.24	0.84			SANDSTONE	MG.PR.LT.GY MICACEOUS, MINOR SKS, END OF BOX 21 - C ORE INTC.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
* 60	63.24	65.50	2.26			SANDSTONE	VFG.WEL.LT.GY.LAM.XBDG WELL CEMENTED, CALC MATRIX, FEW VTHNB C ARB LAYERS
62	65.50	66.10	0.60			SANDSTONE	VFG.WEL.LT.GY.LAM WELL CEMENTED, CALC MATRIX END OF BOX - CORE INTG.
* 64	66.10	68.67	2.57			SANDSTONE	FG.WEL.LT.GY.LAM SCATTERED FEW PL FRAGS NEAR BASE
65	68.67	68.95	0.28			SANDSTONE	FG.WEL.LT.GY.LAM AS ABOVE, END OF BOX 23 - CORE INTG.
66	68.95	70.83	1.88			SANDSTONE	FG.WEL.LT.GY.LAM FINING TOWARDS BASE, SHARP BASAL CONTACT
	70.83	71.74	0.91			SILTSTONE	DK.GY W INTBDS; FOSSIL IMPRINTS; END OF BOX-C ORE BLKY TO INTG.
68	71.74	74.14	2.40			SILTSTONE	DK.GY.MAS W INTBDS OF SS, LT GY, VFG,XBDD, TRACE FOSSILS, SS BEDS THICKER AND MORE FREQU ENT NEAR BASE
* 69	74.14	74.55	0.41			SILTSTONE	DK.GY.MAS AS ABOVE

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	68	74.55	74.65	0.10		ROCK LOSS	(CORE LOSS ROCK)
*		74.65	77.34	2.69		SILTSTONE	CLYY.DK.GY W INTBDS SS, LT GY, VFG, LAM AND XBDD, CONVOL BDG, PYR BLEBS, PL FRAGS, END OF BOX - CORE INTC
	65	77.34	77.56	0.22		SANDSTONE	FG.WEL.LT.GY.LAM TRACE FOSSILS
	66	77.56	80.17	2.61		SILTSTONE	DK.GY.SSD W INTBDS SS LT GY, VFG, LAM, CONVOL BDG , VTHNB TO THNB, COAL FRAGS, PL.FRAGS T RACE CALCIFIED FOSSILS, PYRITE BLEBS (U P TO .06 X .02M) END OF BOX - CORE BLKY , (CORE LOSS)(ROCK),
		80.17	80.37	0.20		CORELOSS	ROCK.
	68	80.37	80.65	0.28		SILTSTONE	DK.GY AS ABOVE
*		80.65	83.07	2.42		SILTSTONE	DK.GY.MAS W INTBDS SS, LT GY, VFG, CONVOL BDG, PL FRAGS, COALY FRAGS, END OF BOX - CORE B LKY
		83.07	83.17	0.10		CORELOSS	ROCK.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	70	83.17	83.81	0.64		SILTSTONE	DK.GY.MAS AS ABOVE
*	70	83.81	85.97	2.16		SILTSTONE	DK.GY.MAS.XBDG AS ABOVE - NO COALY FRAGS. END OF BOX - CORE INTC.
	68	85.97	86.90	0.93		SILTSTONE	DK.GY.MAS AS ABOVE
	67	86.90	88.56	1.66		SILTSTONE	DK.GY.MAS AS ABOVE - FEWER SS BEDS AT BASE - FEW ISOLATED CLAY CLASTS
		88.56	88.61	0.05		MUDSTONE	DK.GY CONTAINS SMALL PBL SIZE CHERT PEBBLES
	66	88.61	88.66	0.05		CGL	PBLY.LT.GY CHERT CLASTS
	66	88.66	88.82	0.16		SANDSTONE	MG.WEL.LT.GY CONTAINS MUDST CLASTS, CALCAREOUS MATRI X
*	65	88.82	90.04	1.22		SANDSTONE	FG.WEL.LT.GY.LAM FEW MUDST RIP-UP CLASTS
	67	90.04	90.60	0.56		SANDSTONE	FG.WEL.LT.GY.LAM

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

<u>BCA</u>	<u>DEPTH FROM</u>	<u>DEPTH TO</u>	<u>INTRVAL THICK.</u>	<u>SAMP. ID</u>	<u>SEAM ID</u>	<u>LITHOLOGY</u>	<u>DESCRIPTION</u>
67	90.60	90.94	0.34			CGL	PBL.PR.LT.GY.MAS CHERT PEBBLES, WELL CEMENTED, SUB-ROUND
68	90.94	91.67	0.73			SANDSTONE	FG.WEL.LT.GY.LAM
70	91.67	93.17	1.50			SANDSTONE	FG.LT.GY.LAM INTBDD WITH SS DK GY, FG, MICACEOUS
* 73	93.17	94.46	1.29			SANDSTONE	FG.LT.GY.LAM INTBDD WITH SLIST, DK GY, END OF BOX - CORE INTC.,.
71	94.46	96.27	1.81			SANDSTONE	FG.WEL.LT.GY.LAM
* 69	96.27	97.30	1.03			SANDSTONE	FG.WEL.LT.GY.LAM END OF BOX 33 - CORE INTC.
* 65	97.30	99.41	2.11			SANDSTONE	FG.WEL.LT.GY.LAM
66	99.41	100.10	0.69			SANDSTONE	FG.WEL.LT.GY.LAM

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	68 100.10	102.48	2.38			SANDSTONE	FG.WEL.LT.GY.LAM
	69 102.48	102.82	0.34			SANDSTONE	FG.WEL.LT.GY.LAM END OF BOX 35 - CORE INTC.
	70 102.82	105.56	2.74			SANDSTONE	FG.WEL.LT.GY.LAM MINOR XBDG, MINOR LAM, END OF BOX 36 - CORE INTC.
	72 105.56	107.09	1.53			SANDSTONE	FG.WEL.LT.GY.MAS AS ABOVE
*	73 107.09	108.40	1.31			SANDSTONE	FG.WEL.LT.GY.XBDG W INTBDS SLST, M.GY, NUMEROUS ZONES OF SSD MINOR CONVOL BDG. END OF BOX 37 - C ORE INTC.
	72 108.40	108.57	0.17			SANDSTONE	FG.WEL.LT.GY.XBDG AS ABOVE
	71 108.57	110.82	2.25			SANDSTONE	FG.WEL.LT.GY AS ABOVE
	70 110.82	111.24	0.42			SANDSTONE	FG.WEL.LT.GY.VTHNB LAM, END OF BOX 36 - CORE INTC.
	69 111.24	112.12	0.88			SANDSTONE	FG.WEL.LT.GY.VTHNB LAM.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
* 69	112.12	112.33	0.21			SILTSTONE	M.GY.MAS SOME LAM
69	112.33	112.57	0.24			SANDSTONE	FG.WEL.LT.GY.LAM MINOR XBDG
69	112.57	112.64	0.07			SILTSTONE	DK.GY.MAS
69	112.64	112.77	0.13			SANDSTONE	SLTY.VFG.LT.GY.LAM
69	112.77	112.89	0.12			SILTSTONE	M.GY.MAS CALC FILLED FRAGMENTS
69	112.89	114.10	1.21			SANDSTONE	VFG.MOD.LT.GY.LAM W INTBDS MGY SLTST THROUGHOUT, SOME SSD , END OF BOX - CORE INTC.
69	114.10	114.34	0.24			SANDSTONE	VFG.MOD.LT.GY.LAM AS ABOVE
69	114.34	114.57	0.23			SANDSTONE	VFG.LT.GY.LAM
69	114.57	114.63	0.06			SANDSTONE	VFG.LT.GY.LAM

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

<u>BCA</u>	<u>DEPTH FROM</u>	<u>DEPTH TO</u>	<u>INTRVAL THICK.</u>	<u>SAMP. ID</u>	<u>SEAM ID</u>	<u>LITHOLOGY</u>	<u>DESCRIPTION</u>
69	114.63	116.61	1.98			SILTSTONE	SSY.M.GY.MAS OCCASIONAL SSY INTBDS, ABUNDANT SSD, CORE FRACTURED
	116.61	116.80	0.19			SILTSTONE	SSY.M.GY.MAS MINOR INTBDS OF SS, VFG, SOME CONVOL BDG, SOME SSD END OF BOX - CORE BRKN
	116.80	117.00	0.20			ROCK LOSS	(CORE LOSS ROCK)
	117.00	117.81	0.81			SILTSTONE	SSY.M.GY.MAS AS ABOVE
	117.81	118.40	0.59			SILTSTONE	SSY.M.GY.MAS AS ABOVE
	118.40	118.59	0.19			SANDSTONE	VFG.MOD.LT.GY.LAM
	118.59	119.15	0.56			SILTSTONE	SSY.M.GY.MAS MINOR INTBDS OF SS, VFG, LT GY, SOME CONVOL BDG., SOME SSD
	119.15	119.89	0.74			SANDSTONE	FG.MOD.LT.GY FINELY LAMINATED W INTBDS; SILTST, M GY, MINOR CONVOL BDG, END OF BOX - CORE INT C

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	119.89	120.99	1.10			SANDSTONE	FG.MOD.LT.GY AS ABOVE
	120.99	121.49	0.50			SANDSTONE	
*	121.49	122.69	1.20			SANDSTONE	VFG.WEL.M.GY V.F.LAM., SOME XBDG, SOME SSD, MINOR FR ACTURES, END OF BOX - CORE INTC
	122.69	122.86	0.17			SANDSTONE	VFG.WEL.M.GY AS ABOVE
	122.86	123.02	0.16			SILTSTONE	SSY FINELY, LAM, MAS PYR. BLEB, TRACE COALY FRAGMENTS
	123.02	123.19	0.17			SANDSTONE	VFG.WEL.LT.GY.LAM CALC FILLED FRAGMENT
	123.19	124.05	0.86			SILTSTONE	SSY.M.GY.MAS
	124.05	124.94	0.89			SILTSTONE	M.GY.MAS W THNB INTBDS OF SS LTGY, VFG, F. LAM
	124.94	125.32	0.38			SANDSTONE	FG.LT.GY.MAS TRACE SKS, SOME SSD, BUFF - LIGHT GREY.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	125.32	125.54	0.22			SILTSTONE	SSY.M.GY.MAS LAM. TOWARDS BASE, END OF BOX - CORE BL KY TO INTC.
*	125.54	125.72	0.18			SILTSTONE	SSY.M.GY.MAS AS ABOVE, MINOR CALCITE FILLED FRACTURE S
	125.72	127.16	1.44			SILTSTONE	M.GY.MAS SOME SSD W INTBDS , VFG, LT GY, SS, LAM S, VTHNB MUDST, DK GY - BLK, CALCITE IN FILL
	127.16	128.42	1.26			SILTSTONE	M.GY.MAS AS ABOVE - NO MUDST INTBDS, END OF BOX - CORE INTC.
	128.42	128.89	0.47			SILTSTONE	M.GY.MAS AS ABOVE
	128.89	129.60	0.71			SILTSTONE	M.GY.MAS W SOME THNB OF MG, LT GY, S + P SS WELL SORTED TRACE CARB FRAGMENTS
	129.60	129.90	0.30			SANDSTONE	MG.WEL.M.GY.MAS S + P W NUMEROUS RIP-UP CLAST CLAY

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH INTRVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	129.90	130.18	0.28			SILTSTONE	M.GY ABUNDANT SS, LY GY, MG INTBDS, MINOR SS D
	130.18	131.32	1.14			SILTSTONE	M.GY AS ABOVE W NUMEROUS SS, LT GY, VFG LAM INTBDS
*	131.32	133.16	1.84			SILTSTONE	SSY.M.GY.MAS W THN INTBDS SS LT GY VFG, F. LAM, SOME SSD, CALC INFILL FRAC.
	133.16	134.18	1.02			SILTSTONE	SSY.M.GY.MAS AS ABOVE, END OF BOX 46 - CORE INTC
	134.18	136.36	2.18			SILTSTONE	SSY.M.GY.MAS AS ABOVE, MINOR SKS, CORE BRKN
	136.36	137.11	0.75			SILTSTONE	SSY.M.GY.MAS SOME SSD, MINOR SS, LT GY, MG, F.LAM IN TBDS, END OF BOX - CORE BRKN
	137.11	138.23	1.12			SILTSTONE	SSY.M.GY.MAS AS ABOVE, BECOMING SSY TOWARDS THE BASE
	138.23	138.70	0.47			SANDSTONE	SLTY.MG.MOD.LT.GY.MAS S+P SLTY MINOR PHASES NEAR BASE, CALC FILLED FRACS

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LCG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
*	138.70	139.10	0.40			SANDSTONE	MG.MUD.LT.GY.MAS W INTBDS M GY SLTST MAS SOME CONVOL BDG , SOME SSD
	139.10	139.44	0.34			SILTSTONE	M.GY.MAS TRACE SSY INTBDS
	139.44	139.57	0.13			SANDSTONE	CG.PR.M.GY.MAS NUMEROUS CLAY RIP-UP CLASTS
	139.57	140.02	0.45			SANDSTONE	FG.WEL.LT.GY.MAS CALC INFILLED FRAC - CORE BRKN, END OF BOX 48 - CORE INTC.
	140.02	142.55	2.53			SANDSTONE	FG.WEL.LT.GY.MAS AS ABOVE WITH MINOR COALY FRAG.
	142.55	142.93	0.38			SANDSTONE	FG.WEL.M.GY.VTHNB WITH THIN CARBONACOUS LAMINATIONS AND S LTST RIP-UP CLASTS, COALY FRAGS AND PL FRAGS. END OF BOX 49 - CORE INTACT
	142.93	143.12	0.19			SANDSTONE	M.GY.MAS AS ABOVE
	143.12	143.69	0.57			SILTSTONE	M.GY.THNB W INTBD OF SS MGY VFG, SKS, CALC FILLED FRAGS

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	143.69	143.83	0.14			SANDSTONE	MG. MOD. LT. GY. MAS OCCASIONAL SSSY INTBD NEAR TOP LT GY, MG , TRACE COALY FRAGS BECOMING SSSY TOWARD S BASE, LT GY F.G. POORLY SORTED, SKS, CALC. FILLED FRAC.
	143.83	144.00	0.17			SANDSTONE	SLTY. VFG. LT. GY. MAS CALC FILLED FRAC., END OF BOX 50 - CORE INTACT
	144.00	144.48	0.48			SILTSTONE	SSY. DK. GY WITH THIN INTBD OF SS, LT GY, VFG, CONV OLUTED BDG, GETTING SLTY TOWARDS BASE
	144.48	145.48	1.00			SILTSTONE	DK. GY. MAS WITH CALC INFILLING ALONG LAM SKS, CARB , LAYER AT BASE
	145.48	146.05	0.57			SILTSTONE	SSY. DK. GY WITH INTBD OF SS, LT GY, FG, CONVOLUTED BDG, BECOMING SLTY AT BASE
	146.05	146.07	0.02			CARB. MUD	BLK WITH MUDST, LAM, SKS
	146.07	146.23	0.16			MUDSTONE	DK. GY. MAS BECOMING SLTY AT BASE; SKS.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	146.23	146.57	0.34			SILTSTONE	DK.GY.MAS
	146.57	146.82	0.25			SILTSTONE	DK.GY INTBD OF SS, LT GY, VFG, MINOR SSD, MIN OR COAL FRAGS, BECOMING SSY AT BASE. EN D OF BOX 51 - CORE BLKY
	146.82	146.89	0.07			SILTSTONE	DK.GY AS ABOVE
	146.89	147.79	0.90			SANDSTONE	FG.PR.LT.GY CALC W INTBD OF SLTST DKGY, CONVOL BDG A ND MG SS; LTGY; CALC FRAC; COAL FRAG, A ND THIN COALY LAYERS; MINOR SKS. SKS
	147.79	148.17	0.38			SILTSTONE	DK.GY INTBD OF SS, LT GY, VFG, CONVOLUTE BDG, PL FRAGS AND FOS SHELL IMPRINTS
	148.17	149.67	1.50			SILTSTONE	DK.GY.MAS WITH CALCIFIED SHELL FRACS
	149.67	149.96	0.29			SILTSTONE	DK.GY.MAS
	149.96	151.04	1.08			SILTSTONE	DK.GY.MAS WITH CALCIFIED SHELL FRACS, MINOR SKS

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	151.04	151.10	0.06			MUDSTONE	CARB.BLK BRKN;SHRD, SKS
	151.10	152.54	1.44			SANDSTONE	FG.LT.GY.MAS TOP 0.19 CONTAINING COAL FRAG, SAND CGA RSENING TOWARDS BASE. END OF BOX - CORE BLKY
	152.54	153.97	1.43			SANDSTONE	MG.PR.LT.GY.MAS MINOR SKS
	153.97	156.43	2.46			SANDSTONE	MG.PR.LT.GY.MAS AS ABOVE, SAME XBDG. END OF BOX 54 - CO RE BLKY INTC.
*	156.43	157.02	0.59			SANDSTONE	MG.PR.LT.GY.MAS AS ABOVE
	157.02	158.36	1.34			SANDSTONE	FG.LT.GY CARB LAYERS, FINELY LAM., SOME XBDG
	158.36	159.27	0.91			SANDSTONE	FG.LT.GY SSD, CARB LAYERS, MINOR SKS. END OF BOX 55 - CORE INTC
	159.27	160.09	0.82			SANDSTONE	FG.LT.GY AS ABOVE

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	160.09	161.59	1.50			SANDSTONE	FG.LT.GY AS ABOVE, SOME XBDG, CARB LAYERS AT BASE
	161.59	162.23	0.64			SANDSTONE	FG.LT.GY.MAS END OF BOX 56 - CORE INTC.
	162.23	163.08	0.85			SANDSTONE	FG.PR.LT.GY.MAS MINOR COAL FRAGS
	163.08	165.13	2.05			SANDSTONE	FG.PR.LT.GY.MAS AS ABOVE, END OF BOX - CORE INTC.
*	165.13	166.21	1.08			SANDSTONE	FG.PR.LT.GY.MAS AS ABOVE
	166.21	167.75	1.54			SANDSTONE	FG.PR.M.GY.LAM SOME XBDG
	167.75	168.03	0.28			SILTSTONE	DK.GY.MAS WITH COALY FRAGS, END OF BOX
	168.03	169.20	1.17			SILTSTONE	DK.GY WITH INTED OF SS, VFG, LT GY, CONVOLUTE BDG

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDHB1108

BCA	DEPTH FROM	DEPTH INTRVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	169.20	170.92	1.72			SILTSTONE	DK.GY WITH INTBD SS FG, LT GY, LAM, SOME XBDG , CONVOLUTE BDG, MINOR PL FRAGS. END OF BOX 59 - CORE BRKN
	170.92	172.26	1.34			SILTSTONE	DK.GY WITH INTBD OF SS, LT GY, VFG, CONVOLUTE BDG, SOME MINOR SSD, MINOR PL FRAGS.
	172.26	173.68	1.42			SILTSTONE	DK.GY AS ABOVE, WITH CALC FILLED FRAC. END OF BOX 60 - CORE INTC.
	173.68	175.29	1.61			SANDSTONE	SLTY.FG.PR.LT.GY WITH INTBD OF SLTST, DK GY, CONVOLUTE B DG, XBDG, SOME SSD
	175.29	176.40	1.11			SILTSTONE	DK.GY WITH INTBD SS LT GY, VFG, CONVOLUTED BD G, XBDG, MINOR SKS. END OF BOX 61 - COR E BLKY
	176.40	178.30	1.90			SILTSTONE	DK.GY AS ABOVE, WITH PL FRAGS
	178.30	179.16	0.86			SILTSTONE	DK.GY WITH MAS PYR BLEB. END OF BOX 62 - CORE INTACT.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH INTRVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	179.16	181.30	2.14			SILTSTONE	DK.GY.MAS WITH MINOR INTBD OF SS VFG LTGY, CONVOLU TE BDG, SKS AND CALC FILLED FRAC, MINOR PYR THROUGHOUT
	181.30	181.95	0.65			SILTSTONE	DK.GY WITH INTBD SS LT GY VFG, CONVOLUTED BDG , PL FRAGS, SKS W ASSOCIATED CALC FILLE D FRAC. END OF BOX 63 - CORE INTACT
*	181.95	184.42	2.47			SILTSTONE	DK.GY MINOR SKS, CALC FILLING, V. THIN SS INT ERBEDS, CONVOL BDG
	184.42	184.75	0.33			SILTSTONE	DK.GY AS ABOVE, END OF BOX 64 - CORE INTACT
	184.75	187.40	2.65			SILTSTONE	DK.GY INTERBEDS OF SS, LT GY, SKS, CONVOL BDG , 0.4M SHEARED ZONE. END OF BOX 65 - CO RE BBRKN TO INTACT
*	187.40	190.13	2.73			SILTSTONE	DK.GY AS ABOVE, SOME XBDG IN SS PYR BLEBS, EN D OF BOX 66 - CORE INTACT
	190.13	190.44	0.31			SILTSTONE	DK.GY AS ABOVE W MINOR COALY FRAGS

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	190.44	192.86	2.42			SILTSTONE	DK.GY AS ABOVE, FEWER SAND INTERBEDS. END OF BOX 67 - CORE INTACT
	192.86	193.42	0.56			SILTSTONE	DK.GY AS ABOVE
*	193.42	195.71	2.29			SILTSTONE	DK.GY AS ABOVE, MINOR PYR BLEBS. END OF BOX 6 8 - CORE INTACT
	195.71	196.44	0.73			SILTSTONE	DK.GY AS ABOVE
	196.44	198.45	2.01			SILTSTONE	DK.GY AS ABOVE, VERY LITTLE SAND PRESENT, PL FRAGS, END OF BOX 69 - CORE INTACT
	198.45	199.48	1.03			SILTSTONE	DK.GY AS ABOVE, MINOR PL FRAGS
	199.48	201.18	1.70			SILTSTONE	DK.GY AS ABOVE, MINOR COAL, PL FRAGS, NO SKS, END OF BOX 70 - CORE INTACT
	201.18	202.20	1.02			SILTSTONE	DK.GY AS ABOVE

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	202.20	203.93	1.73			SILTSTONE	DK.GY AS ABOVE, END OF BOX 71
	203.93	205.23	1.30			SILTSTONE	DK.GY PYR BLEBS, INTERBED SS PL FRAGS
	205.23	206.68	1.45			SILTSTONE	DK.GY AS ABOVE, W COAL FRAGS, END OF BOX 72 - CORE INTACT
*	206.68	208.29	1.61			SILTSTONE	DK.GY AS ABOVE,
	208.29	209.47	1.18			SILTSTONE	DK.GY AS ABOVE, END OF BOX 73 - CORE INTACT
	209.47	212.00	2.53			SILTSTONE	DK.GY AS ABOVE
	212.00	212.05	0.05			SANDSTONE	SLTY.DK.GY TRANSITION BETWEEN SLTST AND SS, CONTAIN SOME MUDST RIP-UP CLASTS, LT GY W IN TERBEDS OF DK GY, SANDY SLTST, OCC'L RIP -UP CLASTS, OCC'L BENDS OF V.C.G., SS, SK S PL FRAGS, CALC FILLING. END OF BOX-CORE INTC

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDHB1108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	212.05	213.16	1.11			SANDSTONE	MG.PR.LT.GY WITH INTERBEDS OF DKGY SSY SLTST; OCCAS IONAL RIP UP CLASTS; OCCASIONAL BANDS O F VCG SS; SKS; PL FRAGS; CALCITE FILLIN GS; CORE INTACT.
	213.16	213.27	0.11			SANDSTONE	MG.PR.LT.GY AS ABOVE
	213.27	213.66	0.39			SANDSTONE	CG.PR.M.GY.MAS COMPENTENT SILICEOUS SS, OCCASIONAL COA LY PARTINGS AND SLTST PEBBLES.
	213.66	215.08	1.42			SILTSTONE	SSY.DK.GY W OCC'L LT GY SS INTERBEDS PL FRAGS COA LY FRAGS; CONVOL BEDDING.
*	215.08	215.93	0.85			SILTSTONE	SSY.DK.GY AS ABOVE END OF BOX 75 CORE INTACT
	215.93	216.96	1.03			SILTSTONE	SSY.DK.GY AS ABOVE
	216.96	217.02	0.06			MUDSTONE	DK.GY COALY FRAGS SOME INTBD SAND
	217.02	217.06	0.04			SANDSTONE	MG.WEL.LT.GY COALY PARTINGS SKS

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: UDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	217.06	217.48	0.42			SANDSTONE	MG.WEL.M.GY.LAM.SSD TOP HALF BDG IS MASSIVE COALY; FRAGS SILICEOUS.
	217.48	217.71	0.23			SANDSTONE	FG.WEL.M.GY.SSD W INTERBDS DK GY SLTST CONVOL BDG. SOME PL FRAGS. MINOR SKS
	217.71	218.21	0.50			SANDSTONE	FG.WEL.M.GY.SSD COALY FRAGS; CONVOL BDG.
	218.21	218.75	0.54			SANDSTONE	FG.WEL.M.GY.SSD AS ABOVE TO FEW SLTST INTBDS END OF BOX 76, CORE INTACT.
	218.75	218.91	0.16			SILTSTONE	DK.GY INTBD TO FG; LTGY SS; CONVOL BDG. COALY FRAGS.
	218.91	219.26	0.35			SILTSTONE	DK.GY.MAS COALY FRAGS.
*	219.26	221.26	2.00			SANDSTONE	FG.WEL.LT.GY TO INTBDS OF DK GY SLTST SOME SLTST RIP-UP CLASTS. LAM AND CONVOL BDG WORM BURROWS. SKS. COALY FRAGS
	221.26	221.52	0.26			SANDSTONE	VFG.WEL.LT.GY AS ABOVE END BOX 77 CORE INTACT.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDHB1108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	221.52	221.81	0.29			SANDSTONE	MG.WEL.LT.GY AS ABOVE
	221.81	221.88	0.07			SANDSTONE	CG.PR.M.GY W MUDSTONE RIP-UP CLASTS; COALY FRAGS.
	221.88	222.08	0.20			SANDSTONE	FG.WEL.LT.GY.LAM ONE THIN BAND OF MUDST CLASTS COALY FRAGS.
	222.08	224.23	2.15			SANDSTONE	FG.WEL.M.GY CALC CEMENT. W INTBD SLTST CARB. PARTING GS. ONE MUDST CLAST. LAM AND CONVOL BDG . COALY FRAGS. OCC'L MUDSTONE CLASTS EN D AT BOX 78. CORE INTACT.
	224.23	224.30	0.07			SANDSTONE	FG.MOD.LT.GY.LAM AS ABOVE
	224.30	224.46	0.16			SILTSTONE	DK.GY W INTBDS SS; LT GY F.G. V. THNBD A CONV OLUTED.
*	224.46	226.67	2.21			SANDSTONE	FG.MOD.LT.GY.LAM SOME XBDG INTBD SLTST, DG GY CONVOL BDG ; VTHIN CARB LAYERS PL, FRAGS.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. TO	SEAM TO	LITHOLOGY	DESCRIPTION
	226.67	226.92	0.25			SANDSTONE	VFG.MOD.DK.GY.MAS PL FRAGS MINOR COAL FRAGS MINOR SKS. EN D OF BOX 79 CORE INTACT.
	226.92	229.14	2.22			SILTSTONE	DK.GY INTBD W SS LT.GY. V.F.G. TO F.G. LAM. S OME XBDG. CONVOL BDG. PL FRAGS.
	229.14	229.76	0.62			SILTSTONE	DK.GY AS ABOVE END BOX 80. CORE BLOCKY.
*	229.76	232.26	2.50			SILTSTONE	DK.GY AS ABOVE W COAL FRAGS
	232.26	232.62	0.36			SILTSTONE	DK.GY AS ABOVE END OF BOX 81 CORE BLOCKY.
	232.62	233.31	0.69			SILTSTONE	DK.GY AS ABOVE SOME SSD.
	233.31	233.50	0.19			SANDSTONE	FG.WEL.LT.GY.LAM V. THIN CARB LAYERS
	233.50	235.37	1.87			SILTSTONE	DK.GY TO INTBDS SS LT GY V.F.G. TO FG; CONVOL BDG. SOME SSD. COAL FRAG PL FRAGS. END BOX 82 CORE INTACT.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	235.37	236.62	1.25			SILTSTONE	DK.GY AS ABOVE
	236.62	238.27	1.65			SILTSTONE	DK.GY AS ABOVE; SOME XBDG IN SS; MINOR SKS; END OF BOX 83. CORE BLOCKY.
	238.27	239.36	1.09			SILTSTONE	DK.GY AS ABOVE
	239.36	239.67	0.31			SILTSTONE	DK.GY.MAS PL FRAGS.
*	239.67	241.11	1.44			SILTSTONE	DK.GY TO INTBD SS; LTGY; FG; CONVOL XBDG. SOME V. THIN CARB LAYERS. PL FRAGS. COAL FR AGS. END OF BOX 84 CORE INTACT.
	241.11	242.55	1.44			SILTSTONE	DK.GY.MAS AS ABOVE
	242.55	242.72	0.17			SANDSTONE	FG.WEL.LT.GY.MAS SILICEOUS MATRIX
	242.72	243.24	0.52			SANDSTONE	FG.WEL.LT.GY.MAS SILICEOUS MATRIX

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	243.24	243.94	0.70			SILTSTONE	DK.GY INTBDS OF V.F.G. SS LT GY. CONVOL BDG. PL FRAGS. COAL FRAGS. PYR. END OF BOX 8 5. CORE INTACT.
	243.94	245.73	1.79			SILTSTONE	DK.GY AS ABOVE
	245.73	246.71	0.98			SILTSTONE	DK.GY.MAS AS ABOVE TO COAL FRAGS; NO PYR; END OF BOX 86; CORE INTACT.
	246.71	248.59	1.88			SILTSTONE	DK.GY.MAS AS ABOVE TO MASSIVE; PYR BLEB
	248.59	249.62	1.03			SILTSTONE	DK.GY.MAS AS ABOVE; MINOR PYR END OF BOX 87 CORE INTACT
	249.62	251.74	2.12			SILTSTONE	DK.GY.MAS AS ABOVE.
	251.74	252.54	0.80			SILTSTONE	DK.GY.MAS AS ABOVE MINOR PYR. END OF BOX 88 CORE INTACT
	252.54	254.73	2.19			SILTSTONE	DK.GY.MAS AS ABOVE

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	254.73	255.39	0.66			SILTSTONE	DK.GY.MAS AS ABOVE END OF BOX CORE BLOCKY.
	255.39	255.91	0.52			SILTSTONE	DK.GY.MAS AS ABOVE
	255.91	258.21	2.30			SILTSTONE	DK.GY.MAS FEW INTERBDS SS LT GY.F.G. CONVOL BDG. PL FRAGS COAL FRAGS END OF BOX; .90 COKE BLOCKY.
*	258.21	259.31	1.10			SILTSTONE	DK.GY.MAS AS ABOVE SOME XBDG.
	259.31	260.46	1.15			SILTSTONE	DK.GY.MAS AS ABOVE
	260.46	261.08	0.62			CONGL	PBL.PR.DK.GY.MAS GRAIN SIZE VARIES FROM SS TO LARGE CHER T PEBBLES. SUB ROUNDED CLASTS MATRIX ME DIUM GRAIN SALT AND PEPPER SS END OF BU X, CORE BLOCKY
	261.08	261.41	0.33			CONGL	PBL.DK.GY.MAS AS ABOVE TO SKS, MINOR SHEARING CALCITE FILLED FRACTURES SORTING VFG

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	261.41	262.28	0.87			CONGL	PBL.PR.M.GY.MAS GRAIN SIZE M.G. SAND TO MEDIUM PEBBLES; W OCC'L SLTST LAYERS GRADUAL FINING SE QUENCE DOWNHOLE
	262.28	262.98	0.70			SANDSTONE	CG.PR.LT.GY.MAS SOME INTBDS SLTSTB-M. BROWN TO DK GY. S HEARED. SKS. BECOMING SLTY AT BASE.
	262.98	263.04	0.06			SILTSTONE	DK.GY.MAS V.THIN BD C.G. SS LT GY. AT BASE.
	263.04	263.79	0.75			SILTSTONE	M.GY INTBDS OF SS. V.F.G. LT GY CONVOL BDG. MINOR PL. FRAGS END OF BOX 92. CORE VER Y BLOCKY.
*	263.79	264.08	0.29			SILTSTONE	M.GY AS ABOVE
	264.08	266.51	2.43			SILTSTONE	DK.GY.MAS INTBD SS. LT GY V.F.G.CONVOL BCG. END O F BOX 93 CORE INTACT.
	266.51	267.19	0.68			SILTSTONE	DK.GY.MAS AS ABOVE

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	267.19	269.28	2.09			SILTSTONE	DK.GY.MAS AS ABOVE. MINOR XBDG. END BOX 94. CORE INTACT.
	269.28	270.27	0.99			SILTSTONE	DK.GY.MAS AS ABOVE
	270.27	272.09	1.82			SILTSTONE	DK.GY.MAS AS ABOVE END OF BOX 95 CORE BLOCKY TO I NTACT
*	272.09	273.28	1.19			SILTSTONE	DK.GY.MAS AS ABOVE COALY FRAGS.
	273.28	274.91	1.63			SILTSTONE	DK.GY.MAS AS ABOVE MINOR PYR. END OF BOX 96 CORE INTACT
	274.91	276.32	1.41			SILTSTONE	DK.GY.MAS AS ABOVE
	276.32	277.78	1.46			SILTSTONE	DK.GY.MAS AT ABOVE SOME XBDG N SS. END OF BOX 97. CORE INTACT.
	277.78	279.28	1.50			SILTSTONE	DK.GY.MAS AS ABOVE

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	279.28	280.59	1.31			SILTSTONE	DK.GY.MAS AS ABOVE END OF BOX 98 CORE INTACT
	280.59	282.32	1.73			SILTSTONE	DK.GY.MAS AS ABOVE NO XBDG.
*	282.32	283.40	1.08			SILTSTONE	DK.GY.MAS AS ABOVE END OF BOX 99 CORE INTACT
	283.40	285.39	1.99			SILTSTONE	DK.GY.MAS AS ABOVE FEW INTBDS SS. LT GY F.G. CONV OL BDG. PL. FRAGS
	285.39	286.17	0.78			SILTSTONE	DK.GY.MAS AT ABOVE END OF BOX 100. CORE INTACT
	286.17	288.44	2.27			SILTSTONE	DK.GY.MAS AS ABOVE
	288.44	289.00	0.56			SILTSTONE	DK.GY.MAS AS ABOVE TO PYR.
	289.00	291.47	2.47			SILTSTONE	DK.GY.MAS AS ABOVE TO SOME V.F.G. SS INTBDS, LT. BROWN. MINOR PYR
	291.47	291.82	0.35			SILTSTONE	DK.GY.MAS FEW INTBDS OF SS, F.G. LT GY CONVOL BDG . MINOR PYR. END BOX 102, CORE INTACT.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH8-1108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	291.82	294.51	2.69			SILTSTONE	DK.GY.MAS AS ABOVE
	294.51	294.71	0.20			SILTSTONE	DK.GY.MAS AS ABOVE TO PYR. END BOX 103, CORE INTA CT.
*	294.71	297.56	2.85			SILTSTONE	DK.GY.MAS SOME INTBDS OF LT GY SS. MINOR XBDG. EN D OF BOX 104 CORE INTACT.
	297.56	300.48	2.92			SILTSTONE	DK.GY.MAS TO INTBDS OF SS LT GY F.G. CONVOL BDG. PYR. END OF BOX 105 CORE INTCT.
	300.48	300.60	0.12			SILTSTONE	DK.GY.MAS AS ABOVE
*	300.60	303.16	2.56			SILTSTONE	DK.GY.MAS AS ABOVE END OF BOX 106 CORE INTACT
	303.16	303.64	0.48			SILTSTONE	DK.GY.MAS AS ABOVE. FRACTURED.
	303.64	306.06	2.42			SILTSTONE	DK.GY.MAS AS ABOVE MINOR PL FRAGS. END BOX 107 CO RE BLOCKY

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	306.06	306.64	0.58			SILTSTONE	DK.GY.MAS AS ABOVE
	306.64	308.96	2.32			SILTSTONE	DK.GY.MAS AS ABOVE TO SOME INTBD SS LT GY, M.GY. SAND FILLED CRACKS COALY FRAGS. END OF BOX 108< CORE BLOCKY.
	308.96	309.67	0.71			SILTSTONE	DK.GY.MAS AS ABOVE SOME SSD MINOR SKS.
	309.67	310.06	0.39			CONGL	PR.LT.GY.MAS MEDIUM CHERT PEBBLES TO M.G. SS SUB ROU NDED PEBBLES. SILICEOUS MATRIX GRADING INTO SS. M.G. LT GY. POORLY SORTED INTB D TO SLTST. SKS. SMOKEY QTZ IN CRACKS
	310.06	311.77	1.71			SILTSTONE	DK.GY INTBD TO SS LT. GY F.G. CONVOL. MINOR P L, COAL FRAGS. SKS. END BOX 109 CORE BR OKEN TO BLOCKY.
	311.77	312.75	0.98			SILTSTONE	DK.GY AS ABOVE NO SKS.
	312.75	314.65	1.90			SILTSTONE	DK.GY AS ABOVE END OF BOX 110 CORE BLOCKY.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	314.65	315.75	1.10			SILTSTONE	DK.GY AS ABOVE CALCITE FILLED CRACKS TO V. TH IN CARB LAYERS. SKS. MINOR PYR.
	315.75	317.62	1.87			SILTSTONE	DK.GY TO INTBDS SS LT GY. V.F.G. AND M.G. CON VOL BDG; .05M BAND OF SILICEOUS "STARS" , LIKELY CAVED AS A RESULT IF SKS MOVEM ENT. END OF BOX CORE BLOCKY
	317.62	318.84	1.22			SILTSTONE	DK.GY TO INTBDS OF SS LT. GY. V.F.G. CONVOLUT E BEDDING PL. FRAGS COALY FRAGS.
	318.84	320.50	1.66			SILTSTONE	DK.GY.MAS AS ABOVE PL FOSSIL. END OF BOX 112. CUR E BLOCKY.
	320.50	321.93	1.43			SILTSTONE	DK.GY.MAS AS ABOVE
	321.93	323.40	1.47			SILTSTONE	DK.GY.MAS AS ABOVE TO CALC FILLED CRACKS SKS. END OF BOX 113. CORE IS BLOCKY.
	323.40	324.88	1.48			SILTSTONE	DK.GY.MAS AS ABOVE TO MINOR PYR.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	324.88	326.27	1.39			SILTSTONE	DK.GY.MAS AS ABOVE END OF BOX 114 CORE BLOCKY.
	326.27	328.00	1.73			SILTSTONE	DK.GY.MAS AS ABOVE
	328.00	329.09	1.09			SILTSTONE	DK.GY.MAS AS ABOVE END OF BOX 115. CORE INTACT
	329.09	331.01	1.92			SILTSTONE	DK.GY.MAS AS ABOVE, MINOR SKS
	331.01	331.94	0.93			SILTSTONE	DK.GY.MAS AS ABOVE TO FEW INTERBEDS OF SS LT GY F .G. MINOR SKS. END OF BOX 116. CORE BRK N TO BLKY
	331.94	334.16	2.22			SILTSTONE	DK.GY.MAS AS ABOVE
	334.16	334.78	0.62			SILTSTONE	DK.GY.MAS AS ABOVE END OF BOX 117 CORE BLOCKY.
	334.78	337.24	2.46			SILTSTONE	DK.GY.MAS AS ABOVE MINOR PYR.
	337.24	337.58	0.34			SILTSTONE	DK.GY.MAS AS ABOVE. END OF BOX 118. CORE BLOCKY

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH INTRVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	337.58	340.29	2.71			SILTSTONE	DK.GY.MAS FEW INTBDS OF SS LT.GY. V.F.G. CONVOLUT E BDG. PL FRAGS, COAL FRAGS. END BOX 11 9. CORE BRKN
	340.29	341.60	1.31			SILTSTONE	DK.GY.MAS AS ABOVE
	341.60	343.10	1.50			SILTSTONE	DK.GY.MAS AS ABOVE END OF BOX 120 CORE BLOCKY.
	343.10	344.55	1.45			SILTSTONE	DK.GY.MAS AS ABOVE
	344.55	345.85	1.30			SILTSTONE	DK.GY.MAS AS ABOVE END OF BOX 121, CORE BLOCKY.
	345.85	346.28	0.43			SILTSTONE	DK.GY.MAS AS ABOVE
	346.28	348.61	2.33			SILTSTONE	DK.GY.MAS AS ABOVE END OF BOX 122 CORE INTACT.
	348.61	349.27	0.66			SILTSTONE	DK.GY.MAS AS ABOVE TO MINOR SKS.
	349.27	351.41	2.14			SILTSTONE	DK.GY.MAS AS ABOVE END OF BOX 123 CORE INTACT.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. TO	SEAM ID	LITHOLOGY	DESCRIPTION
	351.41	352.32	0.91			SILTSTONE	LT.GY.MAS AS ABOVE
	352.32	354.26	1.94			SILTSTONE	LT.GY.MAS AS ABOVE END OF BOX 124 CORE INTACT
	354.26	355.44	1.18			SILTSTONE	DK.GY.VTHNB AS ABOVE TO SKS.
	355.44	357.03	1.59			SILTSTONE	DK.GY.VTHNB AS ABOVE TO INTBDS OF C.G. LT GY SS. PY R. END OF BOX 125 CORE BLOCKY.
	357.03	358.50	1.47			SILTSTONE	DK.GY.VTHNB V. THIN INTERBEDS OF SS LT GY V.FG, SOM E XBDG. PL. FRAGS
	358.50	359.90	1.40			SILTSTONE	DK.GY.VTHNB MINOR SKS AS ABOVE. END BOX 126. CORE I NTACT
	359.90	361.57	1.67			SILTSTONE	DK.GY.VTHNB AS ABOVE SOME SS INTBDS LT GY F.G. XBDG
	361.57	362.75	1.18			SILTSTONE	DK.GY.VTHNB AS ABOVE. END BOX 127. CORE INTACT

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	362.75	364.63	1.88			SILTSTONE	DK.GY.VTHNB AS ABOVE. INCREASING NUMBER OF SS INTBD S. SOME SSD.
*	364.63	365.63	1.00			SILTSTONE	DK.GY.VTHNB AS ABOVE MINOR SKS END BOX 128, CORE IN TACT.
	365.63	367.65	2.02			SILTSTONE	DK.GY.VTHNB AS ABOVE. NO SKS
	367.65	369.78	2.13			SILTSTONE	DK.GY.VTHNB AS ABOVE TO PYR.
	369.78	370.52	0.74			SILTSTONE	DK.GY.VTHNB INTBD TO SS LT GY FINE GR. XBDG END UF BOX 130 CORE INTACT
	370.52	372.74	2.22			SILTSTONE	DK.GY W INTBDD SS LT GY VFG CONVUL BDG. MINOR SKS.
	372.74	373.31	0.57			SILTSTONE	DK.GY AS ABOVE WITH PLANT FRAGMENTS; CORE BLK Y.
*	373.31	375.84	2.53			SILTSTONE	DK.GY AS ABOVE W MINOR PL. FRAGS

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	375.84	376.21	0.37			SILTSTONE	DK.GY AS ABOVE W CALC FILLED FRAC. END OF BOX -CORE INTR.
	376.21	378.60	2.39			SILTSTONE	DK.GY W INTBDD SS LT GY VFG CONVOL BDG SOME X BDG IN SS MINOR SKS
	378.60	378.69	0.09			MUDSTONE	SLTY.M.GY W VTHN BDS OF SS.
	378.69	378.74	0.05			SILTSTONE	DK.GY INTBD. W SS LT GY VFG, CONVOL BDG
	378.74	379.12	0.38			SILTSTONE	DK.GY AS ABOVE W MASSIVE PYR BLEB, SOME SSD E ND OF BOX 133-CORE BLKY TO INTC.
	379.12	381.89	2.77			SILTSTONE	DK.GY AS ABOVE;W PYR BLEBS;WRM BURROWS, XBDG IN SS, COALY PL FRAGS, MINOR SKS, SANDI ER NEAR TOP. END OF BOX-CORE BLKY
	381.89	381.96	0.07			SILTSTONE	DK.GY W INTBDS SS LT GY VFG. XBDG IN SS, CONV AL BDG OF BEDS

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	381.96	384.36	2.40			MUDSTONE	DK.GY.VTHNB AS ABOVE W MINOR SKS 0.07 M SS BED LT G Y FG AT BASE
	384.36	384.45	0.09			SILTSTONE	M.GY.MAS
	384.45	384.82	0.37			SILTSTONE	DK.GY W INTBDD SS LT GY VFG, CONVOL BDG, ALSU INTBUS OF MUDST DK GY, MAS, END OF BOX -CORE BLKY
	384.82	385.36	0.54			SILTSTONE	DK.GY AS ABOVE
	385.36	387.23	1.87			SILTSTONE	SSY.DK.GY AS ABOVE W XBDG IN SS; SOME WRMBUR.
	387.23	387.60	0.37			SILTSTONE	SSY.DK.GY AS ABOVE W MINOR SKS
*	387.60	388.07	0.47			SILTSTONE	SSY.DK.GY AS ABOVE
*	388.07	390.12	2.05			SILTSTONE	DK.GY W INTBDD SS LT GY VFG CONVOL BDG, XBDG IN SS PYR END OF BOX-CORE BLKY

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	390.12	390.66	0.54			SILTSTONE	DK.GY.MAS AS ABOVE-NO PYR.
	390.66	393.00	2.34			SILTSTONE	DK.GY INTBD SS LT GY, VFG, CONVOL BDG, SOME I NTBDS OF DK GY MUDST, MINOR SKS END OF BOX-CORE BLKY
	393.00	393.13	0.13			SILTSTONE	DK.GY AS ABOVE
	393.13	393.67	0.54			SILTSTONE	SSY.M.GY.VTHNB.SSD W MANY INTBDS OF SS LT GY, VFG, CONVOL BDG, SKS, WRMBURROWS
	393.67	395.77	2.10			SILTSTONE	SSY.M.GY.VTHNB.SSD AS ABOVE W QTZ CRYSTALS; CORE INTACT.
	395.77	396.47	0.70			SILTSTONE	SSY.M.GY.VTHNB.SSD AS ABOVE W CALC FILLED FRAC SS BEDS BET TER DEFINED.
	396.47	396.77	0.30			SILTSTONE	DK.GY.VTHNB.SSD W MANY INTBDS SS H GY VFG CONVOL BDG, X BDG IN SS MINOR SKS

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	396.77	397.57	0.80			SILTSTONE	DK.GY.VTHNB.SSD AS ABOVE, W CALC FILLED FRAC MINOR PL F RAGS, MINOR SLUMPING END OF BOX 140 COR E BLKY
	397.57	398.84	1.27			SILTSTONE	DK.GY.SSD W INTBDS OF SS LT GY VFG CONVOL BDG, SO ME INTBDS OF MUDST DK GY, SOME XBDG IN SS, SKS
	398.84	400.31	1.47			SILTSTONE	DK.GY.VTHNB AS ABOVE-BECOMING LESS SSY END OF BOX C ORE BLKY
*	400.31	401.82	1.51			SILTSTONE	DK.GY.VTHNB W INTBDD SS LT GY VFG. CONVOL BDG, SOME XBDG IN SS, SOME DK GY MUDST INTBDS; M INDR SKS
	401.82	403.07	1.25			SILTSTONE	DK.GY AS ABOVE; CORE BLKY.
	403.07	403.13	0.06			SILTSTONE	DK.GY AS ABOVE
	403.13	404.92	1.79			SILTSTONE	SSY.M.GY.SSD W INTBDD SS LT GY VFG CONVOL BDG, XBDG IN SS, MINOR PYR, MINOR SKS FEW WRM BUR ROWS.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	404.92	405.85	0.93			SILTSTONE	SSY.M.GY AS ABOVE; CORE BLKY.
	405.85	407.57	1.72			SILTSTONE	DK.GY W INTBDD SS-LTGY VFG, CONVOL BDG, XBDG IN SS MINOR SKS,
	407.57	407.79	0.22			SILTSTONE	DK.GY WITH INTERBEDDED SS; LTGY, VFG WITH CON VOL BEDDING; XBDG IN SS; MINOR SKS.
	407.79	408.71	0.92			SILTSTONE	AS ABOVE OCCASIONAL PL FRAGS END OF BOX - CORE INTC.
*	408.71	410.85	2.14			SILTSTONE	DK.GY AS ABOVE W WRMBURROWS
	410.85	411.51	0.66			SILTSTONE	DK.GY AS ABOVE; CORE INTACT.
	411.51	413.94	2.43			SILTSTONE	DK.GY AS ABOVE W MINOR PYRITE, PL FRAGS,
	413.94	414.34	0.40			SILTSTONE	DK.GY AS ABOVE, END OF BOX 146 CORE INTACT
	414.34	416.98	2.64			SILTSTONE	DK.GY AS ABOVE W SOME SSD, SNO PYR BLEB

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	416.98	417.12	0.14			SILTSTONE	DK.GY AS ABOVE NO SKS PYR OR XBDG END OF BOX 147.
*	417.12	419.93	2.81			SILTSTONE	DK.GY.WRMBU TO INTBD SS-LT GY, VFG, XBDG, CONVOL BD G, SKS, SOME PL.FRAGS, END OF BOX 148, CORE INTACT
	419.93	420.00	0.07			SILTSTONE	DK.GY AS ABOVE
	420.00	422.53	2.53			SILTSTONE	DK.GY AS ABOVE END OF BOX, CORE BLOCKY TO INT ACT
	422.53	423.06	0.53			SILTSTONE	DK.GY AS ABOVE
	423.06	424.32	1.26			SILTSTONE	DK.GY AS ABOVE
	424.32	425.36	1.04			SILTSTONE	SSY.M.GY.SSD TO INTBD. OF SS-LT GY, CONVOL BDG, SOME XBDG, SOME WRMBUR, MINOR PYR, CALCITE FILLED CRACK, PL FRAGS, END OF BOX 150, CORE INTACT.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	425.36	426.12	0.76			SILTSTONE	SSY.M.GY.VTHNB.SSD AS ABOVE W MINOR SKS
*	426.12	426.74	0.62			SILTSTONE	DK.GY W INTBD SS- LT GY, VFG, CONVOL BDG, PL. FRAGS, FEWER SS INTBDS.
	426.74	428.14	1.40			SILTSTONE	DK.GY AS ABOVE W SOME XBGD;MORE SS INTBDS, CO AL FRAGS, MINOR SKS, END OF BOX 151, CO RE BLOCKY
	428.14	429.16	1.02			SILTSTONE	DK.GY AS ABOVE
	429.16	431.02	1.86			SILTSTONE	DK.GY AS ABOVE W FEWER SS INTBDS MINOR PYR, N O SKS, END OF BOX, CORE INTACT
	431.02	432.16	1.14			SILTSTONE	DK.GY W INTBD SS-LT GY, VFG, CONVOL BDG, SOME XBGD, MINOR PYR, PL. FRAGS, SOME SSD
	432.16	432.89	0.73			SILTSTONE	DK.GY AS ABOVE
	432.89	433.92	1.03			SILTSTONE	DK.GY AS ABOVE W FEWER SS INTBDS, END OF BOX 153, CORE INTACT. TO BLOCKY

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH ID	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	435.92	435.23	1.31			SILTSTONE	DK.GY AS ABOVE W PYR, COALY FRAGS.
	435.23	436.79	1.56			SL;TST	DK.GY AS ABOVE, AMOUNT OF SS INCREASING, END OF BOX, CORE BLOCKY
	436.79	438.29	1.50			SILTSTONE	SSY.M.GY W INTBD OF SS-LT GY; VFG, CONVOL BDG, X BDG, PL. FRAG, COALY FRAGS.
	438.29	439.73	1.44			SILTSTONE	SSY.M.GY AS ABOVE W SKS, MINOR CALCITE, MINOR SS D, END OF BOX 155, CORE INTACT
*	439.73	441.43	1.70			SILTSTONE	SSY.M.GY AS ABOVE, NO CALCITE
	441.43	442.62	1.19			SILTSTONE	SSY.M.GY AS ABOVE END OF BOX 156, CORE INTACT.
	442.62	444.47	1.85			SILTSTONE	SSY.DK.GY AS ABOVE
	444.47	445.55	1.08			SILTSTONE	SSY.DK.GY AS ABOVE W PYR, END OF BOX, CORE INTACT

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	445.55	447.52	1.97			SILTSTONE	SSY.DK.GY AS ABOVE
	447.52	448.41	0.89			SILTSTONE	SSY.DK.GY.VTHNB AS ABOVE WITH OUT AS MUCH CONVOL BDG; E ND OF BOX CORE INTACT
	448.41	449.84	1.43			SILTSTONE	SSY.DK.GY.VTHNB W INTBDS OF SS LT GY. V.F.G. CONVOL. BD G. PYR. PL FRAGS.
*	449.84	450.55	0.71			SILTSTONE	DK.GY.VTHNB AS ABOVE. NO PYR.
	450.55	451.24	0.69			SILTSTONE	DK.GY.VTHNB AS ABOVE W SOME XBDG IN SS MINOR COAL F RAGS. END OF BOX 159 CORE BLOCKY.
	451.24	451.71	0.47			SILTSTONE	DK.GY W INTBDS OF SS LT.GY. V.F.G. XBDG. PYR. PL. FRAGS
	451.71	451.73	0.02			MUDSTONE	DK.BRN SHEARED ZONE. SKS.
	451.73	453.61	1.88			SILTSTONE	DK.GY W INTBDS SS LT GY V.F.G. CONVOL. BDG. X BDG IN SS. MINOR SSD. SKS. PYR. PL. FRA GS.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	453.61	454.09	0.48			SILTSTONE	DK.GY AS ABOVE. NO PYR. END OF BOX 160. CORE BLOCKY TO INTACT
	454.09	454.29	0.20			SANDSTONE	VFG.MOD.LT.GY.LAM TO INTBDS OF DK. GY SLTST. CONVOL. LAM, XBDG IN SS,
	454.29	456.63	2.34			SILTSTONE	DK.GY TO INTBDS SS LT.GY; VFG CONVOL BDG; XBD G IN KK; SKS; PL FRAGMENTS.
	456.63	456.87	0.24			SILTSTONE	DK.GY AS ABOVE. END OF BOX 161 CORE BLOCKY
*	456.87	459.72	2.85			SILTSTONE	DK.GY AS ABOVE W CALC FILLED FRACS END OF BOX - CORE BLKY
	459.72	462.49	2.77			SILTSTONE	DK.GY.VTHNB AS ABOVE; CORE BLKY.
	462.49	462.76	0.27			SILTSTONE	DK.GY AS ABOVE, W FEWER SS INTBDS
	462.76	465.30	2.54			SILTSTONE	DK.GY INTBDD SS LT GY VFG, LAM AS WELL AS XBD G SOME CONVOL BDG, PYR, PL FRAGS END OF BOX 164 CORE BLKY

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	465.30	465.82	0.52			SILTSTONE	SSY.M.GY W INTBDS LT GY, VFG SS SOME XBDG CONVOL BDG, PYR, PL. FRAGS
	465.82	468.00	2.18			SILTSTONE	DK.GY AS ABOVE W MINOR SKS END OF BOX-CORE BL KY
	468.00	468.85	0.85			SILTSTONE	DK.GY AS ABOVE W COALY FRAGS, MUDST RIP-UP CL ASTS, NO PYR.
	468.85	470.83	1.98			SILTSTONE	DK.GY W INTBDS SS LT GY VFG, SOME XBDG, CONVOL L BDG PL FRAGS, COALY FRAGS END OF BOX 166-CORE BLKY
	470.83	471.87	1.04			SILTSTONE	DK.GY AS ABOVE W PYR NO COALY FRAGS
	471.87	473.60	1.73			SILTSTONE	DK.GY AS ABOVE W NO PL FRAGS END OF BDC-CORE BLKY TO INTC.
	473.60	474.89	1.29			SILTSTONE	DK.GY AS ABOVE LAM, NO XBDG MINOR MUDST RIP-U P CLASTS.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	474.89	476.45	1.56			SILTSTONE	DK.GY.VTHNB AS ABOVE W FEW PL FRAGS NO PYR. END OF BOX-CORE BLKY TO INTC
	476.45	477.97	1.52			SILTSTONE	DK.GY W FEW INTBDS SS LT GY VFG CONVOL BDG, P YR. SKS
	477.97	479.24	1.27			SILTSTONE	DK.GY AS ABOVE W COAL FRAGSD, MINOR MUDST RIP -UP CLASTS END OF BOX-CORE BLKY
	479.24	481.00	1.76			SILTSTONE	DK.GY W INTBDS SS LT GY VFG CONVOL BDG, SOME XBDG IN SS SOME SSD
	481.00	482.11	1.11			SILTSTONE	DK.GY.MAS AS ABOVE, MINOR PL FRAGS END OF BOX-COR E INTC.
	482.11	483.31	1.20			SILTSTONE	DK.GY AS ABOVE W PL. FRAGS, COAL FRAGS, PYRIT ISED FRAGS
	483.31	484.19	0.88			SILTSTONE	DK.GY AS ABOVE W FEWER SS INTBDS END OF BOX-C ORE BLKY TO INTC

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDHB1108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	484.19	486.36	2.17			SILTSTONE	DK.GY AS ABOVE W MINOR PYR
*	486.36	487.05	0.69			SILTSTONE	DK.GY W FEW INTBDS SS LT GY VFG CONVOL BDG, P L FRAGS, PYR END OF BOX CORE BRKN AND B LKY
	487.05	489.35	2.30			SILTSTONE	DK.GY.MAS AS ABOVE
	489.35	489.89	0.54			SILTSTONE	DK.GY AS ABOVE W MINOR PYR END OF BOX-CORE IN TC.
	489.89	492.46	2.57			SILTSTONE	DK.GY AS ABOVE W MINOR SKS MINOR PL FRAGS
	492.46	492.81	0.35			SILTSTONE	DK.GY AS ABOVE
	492.81	495.47	2.66			SILTSTONE	DK.GY AS ABOVE
	495.47	495.67	0.20			SILTSTONE	DK.GY AS ABOVE END OF BOX CORE INTACT
	495.67	498.54	2.87			SILTSTONE	DK.GY AS ABOVE END OF BOX 176, CORE INTACT

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: UDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	498.54	501.46	2.92			SILTSTONE	DK.GY.MAS AS ABOVE CORE INTACT, END OF BOX 177
	501.46	501.54	0.08			SILTSTONE	DK.GY AS ABOVE
*	501.54	504.41	2.87			SILTSTONE	DK.GY AS ABOVE, END OF BOX 178, CORE INTACT
	504.41	504.67	0.26			SILTSTONE	DK.GY W INTBDS-SS-LT GY, VFG CONVOL, MINOR PL .FRAGS.
	504.67	507.35	2.68			SILTSTONE	DK.GY.MAS AS ABOVE, END OF BOX, CORE INTACT
	507.35	507.59	0.24			SILTSTONE	DK.GY AS ABOVE
*	507.59	510.25	2.66			SILTSTONE	DK.GY AS ABOVE, END OF BOX 180, CORE INTACT
	510.25	510.75	0.50			SILTSTONE	DK.GY AS ABOVE
	510.75	513.15	2.40			SILTSTONE	DK.GY AS ABOVE W XBDG IN SS END OF BOX, CORE INTACT

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	513.15	513.71	0.56			SILTSTONE	DK.GY AS ABOVE
	513.71	515.97	2.26			SILTSTONE	DK.GY AS ABOVE END OF BOX 182, CORE BLOCKY
	515.97	516.94	0.97			SILTSTONE	DK.GY AS ABOVE
	516.94	518.75	1.81			SILTSTONE	DK.GY.MAS AS ABOVE, END OF BOX, CORE FRACTURED
	518.75	519.97	1.22			SILTSTONE	DK.GY AS ABOVE WITHOUT XBDG
	519.97	521.45	1.48			SILTSTONE	DK.GY AS ABOVE END OF BOX, CORE BLOCKY
	521.45	522.98	1.53			SILTSTONE	DK.GY AS ABOVE W MINOR SKS
*	522.98	524.28	1.30			SILTSTONE	DK.GY.MAS AS ABOVE W MINOR XBDG IN SS AND NO SKS; END OF BOX, CORE BLOCKY
	524.28	526.05	1.77			SILTSTONE	DK.GY W INTBD SS - LT GY, VFG, CONVOL BDG, MI NOR SSD, PYR BLEB, MINOR SKS, MINOR PL. FRAGS.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
*	526.05	527.04	0.99			SILTSTONE	DK.GY.MAS AS ABOVE, END OF BOX, CORE INTACT
	527.04	529.02	1.98			SILTSTONE	DK.GY AS ABOVE, W COALY FRAGS
	529.02	529.90	0.88			SILTSTONE	DK.GY AS ABOVE, W MINOR PYR, NO COALY FRAGS, END OF BOX, CORE INTACT
	529.90	532.05	2.15			SILTSTONE	DK.GY AS ABOVE, W CALCITE FILLED FRACTURES, S ANDY PHASE IN LOWER .2 M
*	532.05	532.79	0.74			SILTSTONE	DK.GY AS ABOVE, SANDY PHASE ENDS, MINOR XBDG IN SS INTBDS, NO SKS, END OF BOX 188, C ORE INTACT
	532.79	535.09	2.30			SILTSTONE	DK.GY.MAS W INTBD SS - LY GY, VFG, CONVOL BDG, MI NOR SSD, MINOR SKS, PL. FRAGS, MINOR PY R.
	535.09	535.60	0.51			SILTSTONE	DK.GY AS ABOVE, END OF BOX, CORE INTACT

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH INTRVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	535.60	538.12	2.52			SILTSTONE	DK.GY W SS INTBDS, CONVOL BDG, WORM BURROWS, MINOR PYR, SOME SSD, MINOR SKS
	538.12	538.35	0.23			SILTSTONE	DK.GY AS ABOVE, END OF BOX, CORE INTACT
	538.35	539.11	0.76			SILTSTONE	DK.GY AS ABOVE
*	539.11	539.67	0.56			SANDSTONE	VFG.WEL.LT.GY.XBDG CONVOL BEDDING W INTBDS OF DK GY, SLTST , SKS
	539.67	539.80	0.13			SILTSTONE	SSY.M.GY.MAS MINOR PYR, MINOR SKS, SOME INTBD SS AT TOP, LT GY, VFG, 2CM BAND OF CONGL NEAR BASE. SHARP CONTACT WITH WALTON MEMBER (KCMW) END HASLER.
	539.80	540.06	0.26			SILTSTONE	DK.GY SOME INTERBEDDED SS AT TOP; LTGY, VFG; 2 CM BAND OF CONGL NEAR BASE; SHARP CON TACT WITH WALTON MEMBER.
	540.06	542.40	2.34			ROCK LOSS	(CORE LOSS)(ROCK) (THROUGHOUT, HASLER)

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81106

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	542.40	543.41	1.01			SILTSTONE	SSY-LT.GY SKS, SHARP CONTACT WITH HASLER, (KH), EN D OF BOX 191, CORE BROKEN. ROCK CONTINU ES LT. BR. CRYTALS (UNIDENTIFIED)
	543.41	543.50	0.09			SILTSTONE	SSY-LT.GY AS ABOVE, LOTS OF SKS
	543.50	544.68	1.18			MUDSTONE	GY MINOR PYR, COALY FRAGS, PL FRAGS,
	544.68	546.11	1.43			SILTSTONE	GY BROWN, SKS, LT BR CRYSTALS, END OF BOX 192. CORE SHEARED (1ST HALF) AND INTACT (2ND HALF)
	546.11	546.18	0.07			SILTSTONE	M.GY AS ABOVE
	546.18	546.48	0.30			SILTSTONE	M.GY.MAS MINOR SKS.
	546.48	546.53	0.05			SILTSTONE	M.GY W COAL FRAGS, PL FRAGS
	546.53	548.73	2.20			SILTSTONE	M.GY W MANY SKS, PLENTIFUL COALY FRAGS, PL F RAGS, OCC'L COALY PARTING, W OCC'L MUDS TONE RIP-UP CLASTS

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	548.73	548.96	0.23			SILTSTONE	SSY.LT.GY W COALY FRAGS, END OF BOX 193, CORE BLU CKY
	548.96	549.15	0.19			SILTSTONE	SSY.LT.GY W SOME SSD
	549.15	549.72	0.57			SANDSTONE	VFG.LT.GY W INTBDS SLTST DK.GY, COMPETENT SS.
	549.72	550.37	0.65			SILTSTONE	SSY.DK.GY W INTBD SS, LT GY, FILLED HIGH ANGLE FR ACTURES, SKS, OCC'L COALY PARTING
	550.37	550.46	0.09			SANDSTONE	LT.GY W INTBD SLTST M GY. CONVOL BDG, SOME SK S, COAL FRAGS, FEW WURM BURROWS
	550.46	551.81	1.35			SILTSTONE	M.GY SKS, COALY FRAGS & PARTINGS, OCC'L MUDS TONE CLASTS, OCC'L SANDY INTERVALS. END OF BOX 194, CORE BLOCKY
	551.81	552.13	0.32			SANDSTONE	SLTY.VFG.LT.GY W COALY PART, SLTY INTBDS, OCC'L MUDSTO NE, LT BR.,

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH INTRVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	552.13	552.42	0.29			SILTSTONE	SSY.DK.GY OCC'L SSY SEGMENTS, SKS, QTZ CRYSTAL; C OALY FRAGS; COALY PARTINGS.
	552.42	552.76	0.34			SANDSTONE	FG.PR.M.GY COALY FRAGS, QTZ FILLINGS
	552.76	553.02	0.26			SANDSTONE	FG.PR.M.GY AS ABOVE
	553.02	554.10	1.08			SILTSTONE	DK.GY HIGHLY SHEARED, LOTS OF SKS, COALY FRAG S; PARTINGS
	554.10	554.41	0.31			SANDSTONE	FG.M.GY.MAS END OF BOX 195, CORE BADLY BROKEN
	554.41	554.52	0.11			ROCK LOSS	CORE LOSS (ROCK)
	554.52	554.91	0.39			SANDSTONE	SLTY.M.GY EXTREMELY CONVOL BDG. COAL FRAGS
	554.91	555.34	0.43			SANDSTONE	FG.WEL.M.GY W OCC'L COALY PARTINGS AND SLTST INTBDS , CONVOL BDG FRACTURES
	555.34	555.44	0.10			SANDSTONE	FG.WEL.LT.GY AS ABOVE W SKS, XBDG

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	555.44	555.83	0.39			SANDSTONE	MG.PR.LT.GY.MAS FRACTURED, QTZ SS
	555.83	556.08	0.25			SANDSTONE	MG.PR.LT.GY.LAM AS ABOVE, COALY PARTINGS OR BASE
	556.08	557.11	1.03			SANDSTONE	CG.PR.LT.GY.LAM GTZ SS, OCC'L VFG LAMINATIONS, LOTS OF FRACTURES, SKS, GOUGE MATERIAL IN CRACK S. END OF BOX 196, CORE BADLY BROKEN.
	557.11	557.21	0.10			ROCK LOSS	CORE LOSS (ROCK)
	557.21	557.28	0.07			SANDSTONE	MG.PR.LT.GY.LAM AS ABOVE
	557.28	557.84	0.56			SANDSTONE	MG.PR.LT.GY VERY POORLY SORTED. W SMALL PEBBLES OF GTZ AND CHECT, AS WELL AS CLAY, SLTST C LASTS, ROCK FLOUR IN FRACTURES. COALY P ARTINGS - MINOR SKS BADLY FRACTURED
	557.84	557.97	0.13			SANDSTONE	MG.PR.M.GY QTZ, OCC'L CHERT GRANULES, BADLY BROKEN
	557.97	558.99	1.02			SANDSTONE	MG.PR.M.GY AS ABOVE, EXTREMELY FRACTURED, SOME XBD G

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

<u>BCA</u>	<u>DEPTH FROM</u>	<u>DEPTH TO</u>	<u>INTRVAL THICK.</u>	<u>SAMP. ID</u>	<u>SEAM ID</u>	<u>LITHOLOGY</u>	<u>DESCRIPTION</u>
	558.99	559.73	0.74			CONGL	PBL CHERT PEBBLES, W M.G., LT GY., SS MATRI X SUPPORTED, SKS FRACTURES, OCC'L COALY FRAGS
	559.73	559.85	0.12			SILTSTONE	M.GY SKS, END OF BOX 197, CORE BADLY BROKEN, SHEARED
	559.85	560.52	0.67			SILTSTONE	M.GY W OCC'L COALY FRAGS
	560.52	561.14	0.62			SILTSTONE	M.GY EXTREMELY SHEARED
	561.14	561.83	0.69			SILTSTONE	M.GY MINOR SKS, OCC'L COALY FRAGS, PARTINGS, OCC'L MUDSTONE CLASTS
	561.83	562.03	0.20			SILTSTONE	DK.GY FOSSILIFEROUS, SKS
	562.03	562.08	0.05			MUDSTONE	CARB.BLK
	562.08	562.20	0.12			COAL	C-6.BLU PULVERIZED, SHEARED

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	562.20	562.26	0.06			MUDSTONE	CARB.BLU
	562.26	562.39	0.13			SILTSTONE	DK.GY LOTS OF COAL FRAGS, PL FRAGS, SKS, END OF BOX 198. CORE IS SHEARED TO BROKEN
	562.39	562.97	0.58			SILTSTONE	DK.GY AS ABOVE
	562.97	563.50	0.53			SILTSTONE	M.GY SANDY TOWARDS BOTTOM, COALY FRAGS, SKS
	563.50	563.96	0.46			SILTSTONE	DK.GY COALY FRAGS, SOME SANDY PARTINGS
	563.96	564.33	0.37			SANDSTONE	SLTY.M.GY W SANDY SLTST INTBDS, COAL PARTINGS, CO AL FRAGS, SSD FRACTURES
	564.33	564.63	0.30			COAL	C-6.BLK SHEARED, SOME SKS, VERY THIN VITRAIN BA NDS
	564.63	565.00	0.37			SILTSTONE	DK.GY.MAS COALY FRAGS, CARB NEAR TOP, END OF BOX 199. CORE BLOKY TO BROKEN

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	565.00	565.57	0.57			SILTSTONE	DK.GY AS ABOVE, SKS
	565.57	565.94	0.37			SANDSTONE	SLTY.VFG.WEL.LT.GY COALY FRAGMENTS, SKS, SOME QTZ FILLING
	565.94	566.23	0.29			MUDSTONE	CARB.BLK COALY FRAGS, COALY PARTINGS, MINOR SKS
	566.23	567.40	1.17			SILTSTONE	M.GY COALY FRAGS, FEW SANDY INTERVALS, SKS
	567.40	567.43	0.03			MUDSTONE	CARB.BLK
	567.43	567.77	0.34			SILTSTONE	M.GY COALY FRAGS, PARTINGS, SKS. END OF BOX 200. CORE BLOCKY
	567.77	567.97	0.20			SILTSTONE	M.GY AS ABOVE, SLIGHTLY CARB AT BASE
	567.97	568.25	0.28			SILTSTONE	SSY.DK.GY COAL FRAGS, SLIGHTLY CARB AT BASE
*	568.25	568.67	0.42			SANDSTONE	VFG.LT.GY LAMINATED W SOME XBDG CALC

* DENTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	568.67	569.40	0.73			SILTSTONE	SSY.DK.GY.MAS PL. FRAGS, MASSIVE, SOME COALY FRAGS, C ALC.
	569.40	569.59	0.19			SANDSTONE	FG.WEL.LT.GY INTERBEDDED SLTST, COALY FRAGS, CONVOL B DG, CALCAREOUS
	569.59	569.69	0.10			SILTSTONE	SSY.DK.GY CONVOL BDG, SKS, COALY FRAGS
	569.69	570.18	0.49			SANDSTONE	FG.WEL.LT.GY.XBDG COALY FRAGS, OCC'L SILTY INTERBEDS
	570.18	570.23	0.05			SILTSTONE	M.GY
	570.23	570.50	0.27			SANDSTONE	FG.WEL.M.GY COALY FRAGS, END OF BOX 201, CORE INTAC T.
	570.50	571.48	0.98			SANDSTONE	FG.WEL.M.GY.XBDG W INTBD DK TD M.GY SLTST, M.BR. SLTST. SOME CONVOL BDG. WORM BURROWS, COALY PA RTINGS, CALCAREOUS
	571.48	572.48	1.00			SILTSTONE	M.GY COALY FRAGS, CARB PARTINGS, SKS, MINOR PYR.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	572.48	572.77	0.29			MUDSTONE	CARB.BLK COALY PARTINGS
	572.77	573.40	0.63			SILTSTONE	M.GY SKS, PL. FRAGS, COALY FRAGS, END OF BOX 202, CORE BLOCKY.
	573.40	573.50	0.10			ROCK LOSS	CORE LOSS (ROCK)
	573.50	573.64	0.14			SILTSTONE	SSY.M.GY.MAS COALY FRAGS
	573.64	573.72	0.08			SILTSTONE	SSY.M.GY.MAS AS ABOVE
	573.72	574.30	0.58			SILTSTONE	DK.GY.MAS COALY FRAGS, SKS
	574.30	575.76	1.46			SILTSTONE	M.GY MINOR SKS, FEW COALY FRAGS,
	575.76	576.27	0.51			SILTSTONE	SSY.M.GY COALY FRAGS, SKS. END OF BOX 203. CORE BLOCKY
	576.27	576.37	0.10			ROCK LOSS	CORE LOSS (ROCK)
	576.37	576.66	0.29			SILTSTONE	SSY.M.GY AS ABOVE

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	576.66	576.81	0.15			SANDSTONE	SLTY.FG.M.GY.MAS AS ABOVE
	576.81	576.99	0.18			SANDSTONE	SLTY.FG.M.GY.MAS AS ABOVE
*	576.99	577.36	0.37			SANDSTONE	MG.WEL.LT.GY.MAS COALY FRAGS; PARTINGS, CLAC.
	577.36	577.88	0.52			SANDSTONE	MG.WEL.LT.GY.XBDG MORE COALY PARTINGS TOWARDS BASE, CALC
	577.88	577.96	0.08			SANDSTONE	SLTY.MG.WEL.DK.GY CALC.
	577.96	578.72	0.76			MUDSTONE	CARB COALY PARTINGS;FRAGS, SKS
	578.72	579.12	0.40			SILTSTONE	DK.GY.MAS COALY FRAGMENTS. END OF BOX 204. CORE 1 NTACF
	579.12	579.75	0.63			SILTSTONE	DK.GY.MAS AS ABOVE
	579.75	580.35	0.60			SILTSTONE	DK.GY

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	580.35	580.72	0.37			SILTSTONE	CARB. DK. GY COALY FRAGS; PARTINGS
	580.72	581.19	0.47			SILTSTONE	M. GY COALY FRAGMENTS
	581.19	581.47	0.28			SANDSTONE	SLTY. LT. GY CONVOL BDG.
	581.47	581.83	0.36			SILTSTONE	M. GY OCC'L BROWN MUDST CLASTS, SLIGHTLY CARB , 3CM BAND LOCATED .01M FROM END OF BOX . END OF BOX 205. CORE BLOCKY
	581.83	581.93	0.10			ROCK LOSS	CORE LOSS (ROCK)
	581.93	582.06	0.15			SILTSTONE	LT. GY AS ABOVE
	582.06	582.26	0.18			SILTSTONE	SSY. LT. GY
	582.26	582.74	0.48			SILTSTONE	M. GY SOME PL. FRAGS
	582.74	582.81	0.07			SILTSTONE	M. GY AS ABOVE

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	582.81	583.03	0.22			SANDSTONE	FG.LT.GY SSD, CONVOL. BDG. INTBDS OF M.GY. SILT. CALC.
	583.03	583.22	0.19			SANDSTONE	MG.PR.LT.GY W BANDS OF CLAY CLASTS, CALC. CALCITE F ILLED FRACTURES
	583.22	583.60	0.38			SILTSTONE	SSY.DK.GY OCC'L PL. FRACS., SS INTERBEDS
	583.60	584.07	0.47			SANDSTONE	MG.WEL.LT.GY.LAM CALC. W OCC'L SLTST AND COALY PARTINGS. CALCITE FILLED FRACTURE AT HIGH ANGLE
	584.07	584.67	0.60			SILTSTONE	M.GY OCC'L SS INTBD, COALY FRAGS. END OF BOX 206. CORE BLOCKY
	584.67	584.77	0.10			ROCK LOSS	CORE LOSS (ROCK)
	584.77	585.34	0.57			SILTSTONE	M.GY AS ABOVE
	585.34	585.91	0.57			SILTSTONE	SSY.M.GY COALY FRAGS
	585.91	585.98	0.07			SILTSTONE	M.GY FEW COALY FRAGS.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	585.98	587.48	1.50			SILTSTONE	M.GY AS ABOVE, END OF BOX 207. CORE BLOCKY
	587.48	587.58	0.10			ROCK LOSS	CORE LOSS (ROCK)
	587.58	587.91	0.33			SILTSTONE	M.GY W FEW COALY PARTINGS
	587.91	588.18	0.27			SILTSTONE	SSY.LT.GY SOME SSD
	588.18	588.31	0.13			SILTSTONE	M.GY
	588.31	588.76	0.45			SANDSTONE	SLTY.MG.WEL.LT.GY CONVOL. BDG. COALY PARTINGS
	588.76	589.00	0.24			SILTSTONE	SSY.M.GY
	589.00	590.16	1.16			SILTSTONE	DK.GY CARB FRAGS, MUDSTONE CLASTS, SKS BADLY BROKEN CORE END OF BOX 208. CORE BROKEN
	590.16	590.90	0.74			ROCK LOSS	CORE LOSS (ROCK)
	590.90	591.35	0.45			SILTSTONE	DK.GY AS ABOVE

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	591.35	591.70	0.35			MUDSTONE	CARB.BLK
	591.70	592.30	0.60			MUDSTONE	CARB.BLK COAL PARTINGS, EXTREMELY BROKEN SKS
	592.30	592.64	0.34			SILTSTONE	M.GY SKS
	592.64	592.80	0.16			MUDSTONE	CARB.BLK
	592.80	593.20	0.40	04360	CARDN	COAL	C-5.BLK BOTTOM .14M OF INTERVAL IS C-4 COAL. TO P .28 IS C-5 CALCITE. END OF BOX 209. C ORE SHEARED
	593.20	593.34	0.14	04361	CARDN	MUDSTONE	CARB.BLK SPLIT IN SEAM, SKS BROKEN
	593.34	593.50	0.16		CARDN	ROCK LOSS	CORE LOSS (ROCK)
	593.50	593.61	0.11	04362	CARDN	COAL	C-6.BLK BROKEN, SKS
	593.61	593.81	0.20	04362	CARDN	COAL	C-5.BLK CALC., CALCITE INCLUSIONS BROKEN

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	593.81	593.91	0.10	04362	CARON	COAL	C-6.BLK BADLY BROKEN, BONEY COAL
	593.91	594.00	0.09	04362	CARON	COAL	C-4.BLK CALCITE ALONG FRACTURES, INCLUSIONS, SK S SHATTERED
	594.00	594.12	0.12	04362	CARON	COAL	C-5.BLK
	594.12	594.48	0.36	04362	CARON	COAL	C-6.BLK SHATTERED, BOTTOM PART PULVERIZED. CALC ITE ALONG FRACTURES
	594.48	594.50	0.02	04362	CARON	COAL	C-5.BLK
	594.50	594.64	0.14			SILTSTONE	DK.GY W COALY FRAGS; PARTINGS, MINOR CALCITE
	594.64	595.47	0.83			SANDSTONE	SLTY.VFG.LT.GY W DK.GY. SLTST INTBDS, LAM, BDG, COALY FRAGS, CORE IS SPLIT, CALCITE ALONG FRA CTURE SURFACES

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	595.47	595.77	0.30			SANDSTONE	SLTY.VFG.LT.GY AS ABOVE. END OF BOX 210. CORE BASLY BR OKEN, TO PULVERIZED
	595.77	595.89	0.12			ROCK LOSS	CORE LOSS (ROCK)
	595.89	596.15	0.26			SANDSTONE	SLTY.VFG.LT.GY AS ABOVE W INTBDS OF SLTST
	596.15	596.49	0.34			SANDSTONE	SLTY.VFG.LT.GY CONVOL BDG, COALY FRAGS
	596.49	597.49	1.00			SILTSTONE	SSY.M.GY CONVOL. BDG. OCC'L INTBDS VFG. SS, COAL Y FRAGS.
	597.49	598.62	1.13			SANDSTONE	SLTY.MG.LT.GY CONVOL. BDG. OCC'L INTBDS MGY SLTST, SS D, COALY FRAGS., MINOR SKS, MINOR CALCI TE FILLED FRACTURES. END OF BOX 211. CO RE BLOCKY
	598.62	599.87	1.25			SILTSTONE	SSY.DK.GY CONVOL. BDG. OCC'L THIN SS INTBDS, COAL Y PARTINGS, FRAGS, HIGH ANGLE FRACTURES
	599.87	600.55	0.68			SANDSTONE	FG.LT.GY W OCC'L INTBDS, COALY PARTINGS, FRAGS, CONVOL. BDG.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	600.55	601.54	0.99			MUDSTONE	DK.GY POSSIBLY MINOR SHELL FRAGS, SOME COALY FRAGS, SILTY TOWARDS BOTTOM. END OF BOX 212. CORE BLOCKY TO BRUKEN
	601.54	601.72	0.18			SILTSTONE	DK.GY PL; COALY FRAGS
	601.72	601.95	0.23			SILTSTONE	DK.GY AS ABOVE
	601.95	602.04	0.09			ROCK LOSS	CORE LOSS (ROCK)
	602.04	602.35	0.31			MUDSTONE	CARB.BLK W SS INTBDS NEAR BOTTOM
	602.35	602.42	0.07		LINKLATTER	COAL	C-6.BLK
	602.42	602.48	0.06		LINKLATTER	MUDSTONE	CARB.BLK
	602.48	602.62	0.14		LINKLATTER	COAL	C-6.BLK SOME SKS
	602.62	602.85	0.23		LINKLATTER	MUDSTONE	CARB.BLK OCC*L SS INTBD

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	602.85	602.92	0.07		LINKLATTER	COAL	C-6.BLK
	602.92	603.04	0.12		LINKLATTER	MUDSTONE	CARB.BLK SKS, COALY PARTINGS
	603.04	603.77	0.73			SILTSTONE	DK.GY OCC'L COALY PARTINGS
	603.77	604.27	0.50			MUDSTONE	CARB.BLK MANY PL. FRAGS, COALY FRAGS, PARTINGS, FOSSILS. END OF BOX 213. CORE BLOCKY TO BROKEN
	604.27	604.61	0.34			MUDSTONE	CARB.BLK AS ABOVE
	604.61	605.67	1.06			MUDSTONE	CARB.BLK AS ABOVE, OCC'L COALY PARTINGS
	605.67	606.44	0.77			MUDSTONE	DK.GY
	606.44	607.18	0.74			MUDSTONE	CARB.BLK SOME SKS, COALY FRAGS; PARTINGS, LESS C ARB IN TOP HALF. END OF BOX 214, CORE B LOCKY

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	607.18	607.50	0.32			MUDSTONE	CARB.BLK AS ABOVE
	607.50	607.73	0.23			MUDSTONE	CARB.BLK AS ABOVE
	607.73	608.09	0.36			SILTSTONE	SSY.DK.GY COALY FRAGS; PARTINGS
	608.09	608.23	0.14			SANDSTONE	SLTY.FG.PR.M.GY SKS, CALCITE FILLED FRACTURES, OCC'L CO ALY FRAGMENTS
	608.23	608.42	0.19			ROCK LOSS	CORE LOSS (ROCK)
	608.42	609.36	0.94	04363	HIGHHAT	COAL	C-5.BLK CALCITE INCL. SKS SHEARED
	609.36	609.38	0.02		HIGHHAT	ROCK LOSS	CORE LOSS (ROCK)
	609.38	609.55	0.17			MUDSTONE	CARB.BLK COALY FRAGS; PARTINGS
	609.55	609.76	0.21			SANDSTONE	SLTY.VFG.LT.GY W INTBD MGY. SLTST, COALY FRAGMENTS, CO NVOL. BDG.
	609.76	609.96	0.20			SILTSTONE	DK.GY MANY SKS

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	609.96	610.06	0.10			SANDSTONE	FG.LT.GY W V. THIN INTBDS OF SLTST AND CARB PART INGS. CONVOL. BDG. END OF BOX 215. CORE BLOCKY
*	610.06	610.56	0.50			SANDSTONE	FG.LT.GY AS ABOVE, W COALY FRAGS
	610.56	610.60	0.04			SILTSTONE	DK.GY
	610.60	611.68	1.08			SILTSTONE	DK.GY OCC'L COALY FRAGS, MINOR SKS
	611.68	612.29	0.61			MUDSTONE	CARB.BLK SKS
	612.29	612.89	0.60			SILTSTONE	DK.GY COALY FRAGS, MAS. END OF BOX 216. CORE BLOCKY
	612.89	613.00	0.11			SILTSTONE	DK.GY AS ABOVE
	613.00	613.50	0.50			SILTSTONE	SSY.DK.GY PL. FRAGS, COALY FRAGS., MINOR SKS
	613.50	613.64	0.14			SANDSTONE	SLTY.FG.PR.DK.GY W SMALL CHERT GRANULES, SKS

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	613.64	613.69	0.05			SANDSTONE	SLTY.FG.PR.DK.GY AS ABOVE
	613.69	613.80	0.11			CONGL	PBL.DK.GY SMALL CHECT PEBBLE CONGL. V.F.G. SS MAT RIX, MATRIX SUPPORTED
	613.80	613.93	0.13			SANDSTONE	FG.PR.M.GY OCC'L CHERT PEBBLES, COALY PARTINS, THI N SLTST INTBDS, THIN SMALL PEBBLE LAYER S, CONGL BASE, CONVOL.BDG.
	613.93	614.25	0.32			SILTSTONE	DK.GY OCC'L COALY FRAG, FEW CHERT PEBBLES TOW ARDS TOP
	614.25	614.51	0.26			MUDSTONE	CARB.DK.GY PL. FRAGS, COALY FRAGS,
	614.51	614.97	0.46			SILTSTONE	DK.GY PL.FRAGS, SKS
	614.97	615.22	0.25			SANDSTONE	FG.M.GY THIN INTBDS OF SLTST AND CARB PARTINGS. NUMEROUS THIN COALY PARTINGS AT BASE, CONVOL. BDG. RUST COLORED CARB.

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	615.22	615.33	0.11			SILTSTONE	SSY.DK.GY SANDIER TOWARDS BASE, COALY PARTINGS, COALY FRAGS,
	615.33	615.46	0.13			CONGL	PBL.PR.M.GY CHERT PEBBLES CONGL. FINE GRAIN SS MATR IX, CHERT PEBBLES WHITE, GREEN, BEIGE, WELL ROUNDED
	615.46	615.59	0.13			SANDSTONE	SLTY.MG.PR.DK.GY NUMEROUS CHERT PEBBLES, COALY PARTINGS, MINOR SKS, END OF BOX 217. CORE BLOCKY
	615.59	615.65	0.06			SANDSTONE	SLTY.MG.PR.DK.GY AS ABOVE
	615.65	615.90	0.25			SANDSTONE	MG.PR.LT.GY.MAS SILICEOUS, NUMEROUS CHERT PEBBLES UP TO 7MM DIAMETER, MINOR PYR, SILTY TOWARDS TOP, MINOR SKS
	615.90	616.19	0.29			SANDSTONE	SLTY.VFG.PR.DK.GY CONVOL.BDG. SKS, PL. FRAGS, INTBDS OF S SY SILT CALC. FILLED FRACTURES
	616.19	616.29	0.10			SANDSTONE	FG.PR.LT.GY OCC'L CHERT PEBBLES, ESP. NEAR BOTTOM, SILICEOUS THIN SLTST NR TOP

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: DDH81108

BCA	DEPTH FROM	DEPTH INTRVAL TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	616.29	616.70	0.41			SANDSTONE	SLTY.FG.M.GY W INTBDS OF SLTST, CONVOL. BDG., COALY PARTINGS. END OF BOX 218. CORE BLOCKY. END OF HOLE TRF/DDH81108

* DENTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: RDH81109

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	182.30	182.73	0.43			SILTSTONE	DK.GY.MAS TRACE COALY PARTINGS.
	182.73	183.19	0.46			MUDSTONE	BLK.MAS MINOR COALY PARTINGS, MINOR SKS.
	183.19	183.78	0.59			SILTSTONE	SSY.M.GY.MAS MINOR COALY PARTINGS NEAR TOP. END OF B OX 1, CORE INTACT.
	183.78	184.18	0.40			SILTSTONE	SSY.M.GY.MAS AS ABOVE.
	184.18	184.54	0.36			SILTSTONE	CLYY.M.GY.MAS BECOMING DK GY TOWARDS BASE, MINOR COAL Y PARTINGS NEAR BASE, SHARP CONTACT WIT H COAL.
	184.54	184.96	0.42		CARON RIDER	COAL	C-5.BLK MINOR SKS, BECOMING ASHY TOWARDS BASE, SHARP BASAL CONTACT.
	184.96	185.20	0.24			SILTSTONE	DK.GY.MAS SLIGHTLY CARB NEAR TOP. END OF BOX 2, C ORE INTACT.
*	185.20	186.65	1.45			SILTSTONE	M.GY.MAS COALY AND PLANT FRAGS, FEW CLAYEY PEBBL ES NEAR BASE. END OF BOX, CORE INTACT.

* DENOTES MEASURED BCA

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GULF CANADA RESOURCES INC. - COAL DIVISION - DRILL CORE LOG

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PROJECT: TRF BLOCK: XX DATA SOURCE: RDH81109

BCA	DEPTH FROM	DEPTH TO	INTRVAL THICK.	SAMP. ID	SEAM ID	LITHOLOGY	DESCRIPTION
	186.65	187.63	0.98			SILTSTONE	SSY.LT.GY.MAS COALY FRAGS.
	187.63	187.72	0.09			SILTSTONE	LT.GY.MAS BECOMING COALY TOWARDS BASE, DARKENS TO BLACK TOWARDS BASE, MINOR CALCITE FILL ED FRACTURE.
	187.72	187.94	0.22			CORE LOSS	(ROCK)
	187.94	189.25	1.31	04364	CARDN	COAL	C-5.BLK.MAS METALLIC LUSTRE;HARD;MINOR CALCITE IN F RACTURE;CALCITE VEIN;OCCASIONAL STRINGE RS OF C-3 NEAR BASE.
	189.25	189.75	0.50	04365	CARDN	COAL	C-6.BLK.MAS METALLIC LUSTRE, V.HARD WITH NUMEROUS A SHY ZONES THROUGHOUT. CALCITE INFILLED FRACTURES WITH MINOR C-3 THIN COALY LEN SES.
*	189.75	190.14	0.39	04366	CARDN	COAL	C-4.BLK.MAS WITH THIN SPITS OF C-5 THROUGHOUT, META LLIC LUSTRE, HARD. SHARP BASAL CONTACT, CALCITE INFILL FRACTURES.
	190.14	190.24	0.10		CARDN	CORE LOSS	COAL

* DENOTES MEASURED BCA

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PROJECT: TRF BLOCK: XX DATA SOURCE: RDH81109

<u>BCA</u>	<u>DEPTH FROM</u>	<u>DEPTH TO</u>	<u>INTRVAL THICK.</u>	<u>SAMP. ID</u>	<u>SEAM ID</u>	<u>LITHOLOGY</u>	<u>DESCRIPTION</u>
	190.24	190.57	0.33			MUDSTONE	CARB.BLK.MAS MINOR COAL LENSES THROUGHOUT, MINOR SKS , MINOR CALCITE INFILLS.
	190.57	191.46	0.89			SANDSTONE	MG.WEL.LT.GY.THNB.XBDG WITH SLTY INTERBDS THROUGHOUT, MINOR CO ALY ROOTLETS. MINOR SKS. MINOR CALC. EN D OF CORE RUN.