

11-11-56  
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Loss River Coal

copies to LP Faggart  
M.H. Kelly

6 March 1956

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The coal seams have been sampled by 9 trenches and one rotary drill hole. Quality tests were on trench samples and are summarized on the attached sheet.

Trenching shows good continuity along strike. Seams dip  $25^{\circ}$  to  $40^{\circ}$  to the southwest based on surface exposures. This dip is confirmed by the one drill hole. Considering the great strike length developed (300m) and the modest dip extent expected (50m) it is not unreasonable to extrapolate to the reserves anticipated. Within the area of proposed mining there are no drill holes to confirm the down dip extent of coal.

A program of 4-40m long HQ drill holes would be prudent to confirm depth extent before stripping. Such a program would cost about \$25,000 and would provide additional samples away from the zone of surface oxidation. Such a program is not essential however since it seems most unlikely that the coal pinches out so rapidly with depth and unoxidized coal would show better results than the trench samples.

COAL QUALITY:

Coal samples for analyses were collected from coal seam exposures in the 1981 bulldozer trenches. Analytical work was carried out by Birtley Coal and Minerals Testing Limited of Calgary, Alberta. Samples were subjected to proximate, sulphur, and heating value determinations. The Birtley Lab report is included as Table 2 of this report.

The rank (A.S.T.M.) of both seams, consistant for all samples, lies very close to the medium volatile bituminous-low volatile bituminous boundary, with the dry, mineral-matter-free fixed carbon percentages falling in the narrow range of 73.7% to 79.4%. The A.S.T.M. rank boundary between medium and low volatile bituminous coal is at a D.M.M.F. fixed carbon percentage of 78.0%.

The fuel ratio (F.C./vol.) of the 1981 trench samples ranges from 2.9 to 3.7.

On an air-dried basis, the average analysis of each seam is as follows:

	<u>Moisture</u> (%)	<u>Ash</u> (%)	<u>cal/gm</u>	<u>Btu/lb</u>
Upper Seam	3.6	6.5	6,971	12,547
Lower Seam	3.9	8.1	6,737	12,127

PROJECT: COAL SAMPLES Received August 24, 1981

RAW COAL ANALYSIS , air dried basis

LAB NO	SAMPLE I.D.	ADM%	MOIST%	ASH%	VOL%	F.C.%	S%	C.V. Cal/gm	EQUIL. MOIST%
8967	TR3 US	5.4	2.7	9.8	19.4	68.1	0.21	6876	5.7
8968	TR4 US	3.3	2.9	5.5	19.8	71.8	0.22	7239	6.4
8969	TR5 US	5.5	2.7	4.3	20.6	72.4	0.18	7329	6.3
8970	TR6 US	6.2	2.7	3.8	20.7	72.8	0.18	7233	8.2
8971	TR7 US	11.5	2.4	8.7	21.8	67.1	0.21	6703	6.6
8972	TR8 US	8.0	8.0	6.9	21.6	63.5	0.17	6444	5.8
8973	TR2 LS	3.0	4.0	7.4	20.2	68.4	0.20	7014	12.0
8974	TR3 LS	9.6	6.1	10.1	22.8	61.0	0.15	6143	12.3
8975	TR5 LS	5.9	3.8	8.3	21.7	66.2	0.18	6617	8.8
8976	TR6 LS	7.5	3.9	8.6	21.9	65.6	0.17	6467	8.1
8977	TR8 LS	6.7	3.2	8.3	19.1	69.4	0.20	6914	6.1
8978	TR9 LS	5.9	2.4	5.7	19.4	72.5	0.19	7267	5.0

## METROGRAPHIC SAMPLES PREPARED:

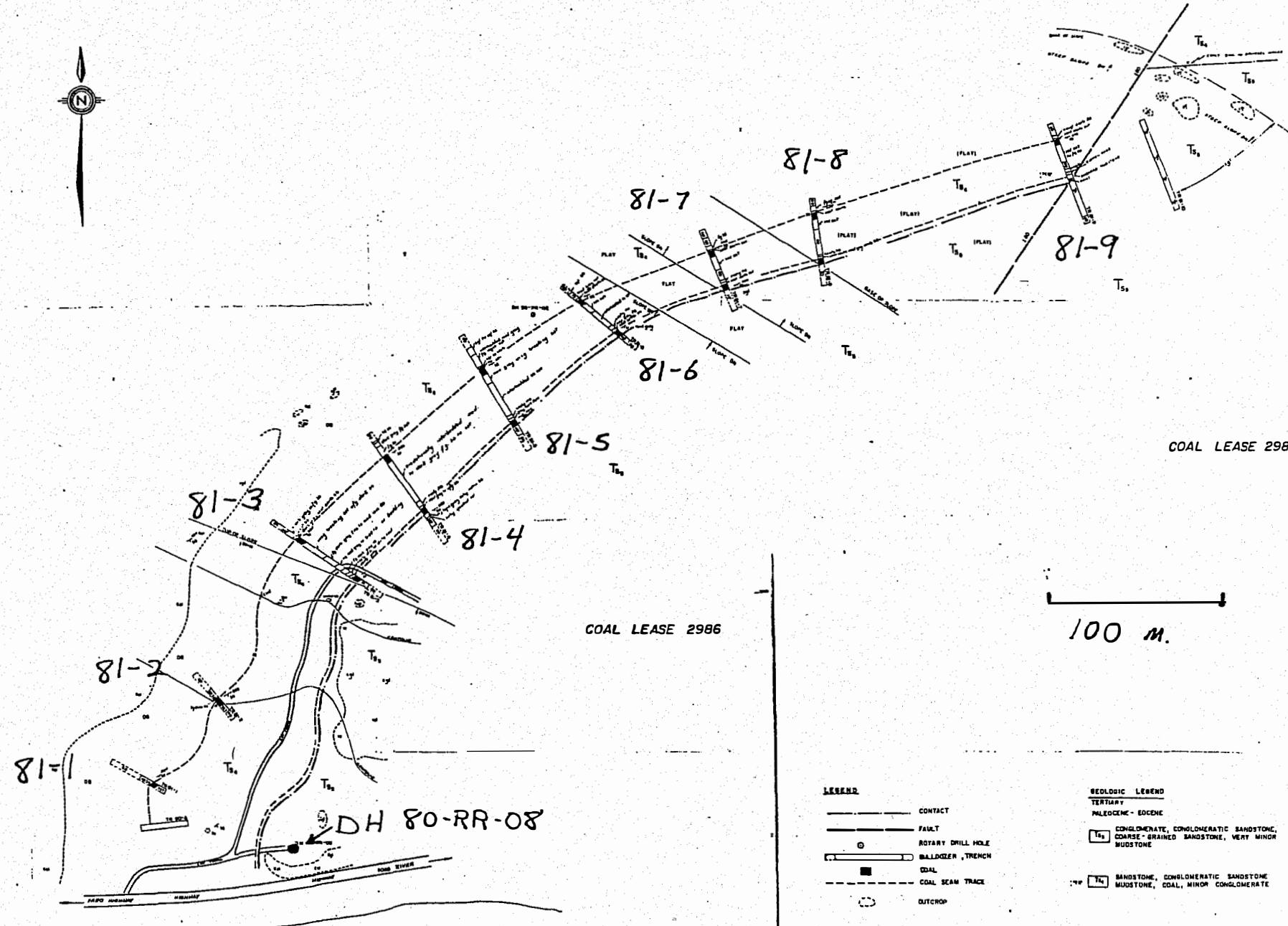
<u>No.</u>	<u>D.M.M.F.</u>	<u>F.C.%</u>	<u>RANK</u>
8967	78.7		m-lvb
68	78.9		m-lvb
69	78.2		m-lvb
8970	78.2		m-lvb
71	76.3		m vb
72	75.2		m vb
73	77.9		m vb
74	73.7		m vb
75	76.0		m vb
76	75.8		m vb
77	79.1		lvb

Birtley Coal  
& Minerals Testing



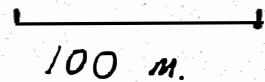
COAL LEASE 2986

COAL LEASE 2986



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LEGEND

- CONTACT
- - - FAULT
- ROTARY DRILL HOLE
- BALDWIN, TRENCH
- COAL
- - - COAL SEAM TRACE
- OUTCROP
- MS MUDSTONE
- EST SILTSTONE
- SS SANDSTONE
- Cmp ss CONGLOMERATIC SANDSTONE
- Cpl CONGLOMERATE

GEOLOGIC LEGEND

- TERTIARY
- PALEOCENE - EOCENE
- T<sub>8a</sub> CONGLOMERATE, CONGLOMERATIC SANDSTONE, COARSE-GRAINED SANDSTONE, VERY MINOR MUDSTONE
- T<sub>8b</sub> SANDSTONE, CONGLOMERATIC SANDSTONE, MUDSTONE, COAL, MINOR CONGLOMERATE

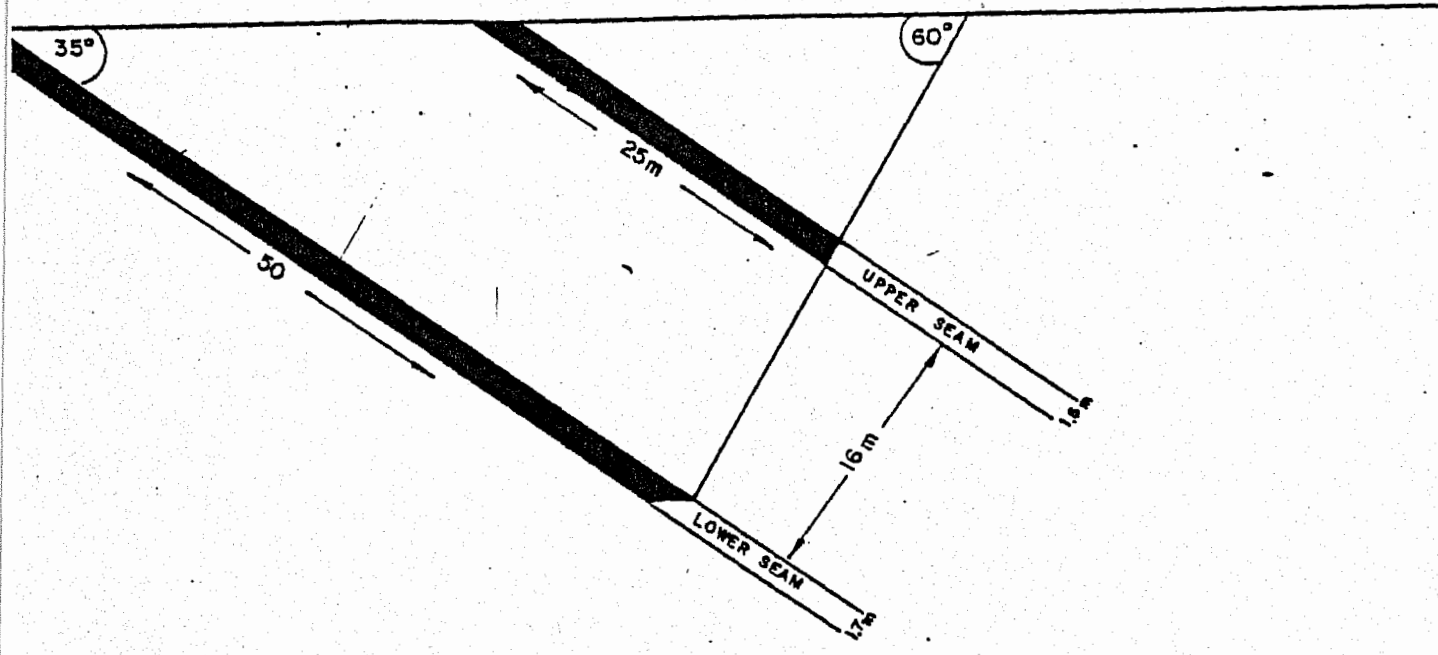
N.B. PACE COMPASS CONTROL ONLY

CYPRUS ANVIL MINING CORPORATION  
 ROSS RIVER COAL PROJECT  
 YUKON TERRITORY

The two coal seams, designated the Lower Seam (L.S.) and Upper Seam (U.S.), maintained a relatively constant thickness and stratigraphic separation throughout the full trenched strike distance, as tabulated below.

<u>Trench</u>	<u>L.S. Thickness</u>		<u>U.S. Thickness</u>		<u>Strat. Separation</u>	
	<u>(m)</u>	<u>Dip</u>	<u>(m)</u>	<u>Dip</u>	<u>(m)</u>	
TR-A (1980)	1.7	30°				
81-1	1.5	25°				
81-2	1.8	25°				
81-3	1.7	30°	1.8	30°	16.0	
81-4	1.7	30°	1.5	30°	16.5	
81-5	1.9	32°	1.7	30°	16.5	
81-6	1.7	32°	1.6	31°	13.0	
81-7	1.8	35°	1.6	36°	12.0	
81-8	1.8	34°	1.7	34°	13.0	
81-9	1.7	43°			14.0	
average	1.76 m		average 1.65 m		average 14.4 m	

SCALE  
1:500



Coal (tonnes) / metre-strike length =

thickness (m) x strike (1 m) x dip length (m) x density

Lower Seam            1.7            x            1            x            50            x            1.4 = 119

Upper Seam            1.6            x            1            x            25            x            1.4 = 56

175 tonnes

For 515 m strike length, total reserve = 175 x 515 m = 90,125 tonnes

Waste Stripping/metre of strike length : 785 m<sup>3</sup>

stripping Ratio       $\frac{785 \text{ m}^3}{175 \text{ tonnes}} = 4.5 \text{ m}^3/\text{tonne}$

mining Life             $\frac{90,000 \text{ tonnes}}{18,000 \text{ tonnes/year}} = 5 \text{ year Faro coal supply}$

40 RR 08

Lower Seam

Section of Ross River Coal Seam (lower)