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BW-BOWRON RIVER 7(1).1

Geological Report

BOWRON RIVER COAL

Cariboo District, British Columbia

by

Richard E. Kucera, Ph.D.

Prepared for Bethlehem Copper Corporation Ltd.

November 4, 1971

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INTRODUCTION

Northern Coal Mines Limited holds 36 coal licenses on the lower Bowron River, extending for a distance of approximately 13 miles from Purden Creek to Grizzly Bear Creek. The area lies 35 miles east of Prince George and is accessible by gravel road south of Highway 16. The Bowron River valley in this area is flat-bottomed, $1\frac{1}{2}$ to 2 miles wide, and lies at an elevation of approximately 2,400 feet: valley sides rise to summits of about 4,000 feet.

In 1971 Bethlehem Copper Corp. Ltd. investigated the stratigraphy and structure of the coal-bearing rocks and completed a programme of surface diamond drilling with 5 holes totalling 7, 474 feet. Drill cores and logs furnished by Northern Coal Mines were also studied.

STRATIGRAPHY

Most of the area is covered by 50 to 180 feet of overburden and outcrops are limited only in the banks of the river. Most of the information has been obtained from detailed mapping of isolated rock exposures for a distance of 23 miles along the river and an examination of nearly 22,000 feet of drill cores and logs.

Basement Rocks

Rocks of the Slide Mountain group (Mississippian age?) crop out along the slope above the valley floor and have been penetrated by drill holes in the Bowron River basin. They include argillite, chert, flow

breccia, greenstone and some limestone. According to Campbell (1968) the Slide Mountain group in areas to the south are neither schistose nor greatly deformed. This is also true for this area, except that the steeply dipping dark grey limestone encountered on the east bank of the Bowron River at the mouth of Tenaskli Cr. is probably involved in a fault zone.

Massive grey tuffaceous sandstone cut by carbonate stringers and veins has been encountered in diamond drill holes WL-1A, WL-4, DDH-24, DDH-71-5, DDH-71-4 and DDH-71-2. Because of its intimate association with overlying Tertiary sediments, it is suggested that volcanic activity may have been contemporaneous with the initial sedimentation of coal bearing strata.

Coal-Bearing Sedimentary Series

A thick sedimentary series overlies the Slide Mountain group and has been dated by Rouse (U.B.C.) as mid-Tertiary age. Diamond drill hole 71-3, the deepest hole on the property, penetrated 2,200 feet (true thickness) of shale, sandstones, breccias and coal beds in the lower part.

Breccia

Breccias are up to 200 feet thick and consist of angular fragments of chert, green volcanics, quartzite, limestone, shale and coal fragments in a medium to coarse-grained matrix. Some of the fragments are up to 6 inches long but more commonly are 1 to 2 inches long. There is rapid and

abrupt graded bedding within fine-grained breccia zones that grade up into coarse-grained sandstone, whereas some of the breccias are in sharp contact with underlying sandstone and shale units. Breccias are darker in colour below the major coal zone in DDH-71-1, DDH-71-2, DDH-71-3 than above, due to a predominance of dark limestone pebbles and shale fragments in a dark matrix.

The thick breccia sequence in DDH-71-3 at depths of 937 to 1,138 feet contain pebbles with long axes that lie in a downslope direction which suggests that the direction of transport was in an east-west direction. One foot of breccia in this drill hole at a depth of 290 feet is radioactive with readings of 4 to 5 times background count.

A detailed examination of the outcrop on the west side of the Bowron River, 500 feet south of the Northern Coal camp reveals the lenticular nature of breccia units which pinch out from 3 feet thickness to extinction in a lateral distance of 20 feet. Minor imbricate structures suggest that transport of fragments was from the south (see stratigraphic section).

Sandstone

These units are light grey to brown to dark grey, very fine to coarse-grained and contain coal partings and abundant carbonaceous stringers and streaks. Graded bedding and fine-laminations are quite common, especially at depths of 594 to 620 feet in DDH-71-3 and 967 to 1,300 in DDH-71-4. Some of the sandstones are cross-bedded below the major coal zone in

DDH-71-1 at 1,500 feet depth.

Contorted bedding in some of the drill cores is interpreted as penecontemporaneous slump structures. In some cases, the sandstones show the effect of being squeezed and slumped by impact of breccia pebbles.

A scintillometer survey of rocks along the Bowron River, 500 feet south of Northern Coal camp revcals that fine-grained sandstones 5 to 10 feet below the upper coal zone are radioactive with readings up to 7 times background count (see detailed stratigraphic section).

Shales

Shales range from gray to black and brown in colour and contain thin sandstone and breccia zones, carbonaceous stringers and coal partings. Dense and black shales are found associated with coal beds in DDH-71-1. Graded bedding within shale units is quite obvious. Shales at depths of 306 to 967 feet and below 1,200 feet in DDH-71-4 are finely laminated and appear to be cyclic in character. A thin pyrite zone occurs in DDH-71-4 at a depth of 949 feet. Slump structures occur in DDH-71-1 at 400, 432-449, 740-857 and 1067-1069 feet depth; also in DDH-71-2 at 804-815, and in DDH-71-4 at depths of 245-267, 282-304 and 335 feet.

Distinctly brown shales occur within 200 feet of the top of the major coal zone in WL-1A, WL-5, WL-7, WL-9, DDH-71-4, DDH-71-3 and DDH-71-2 and therefore can be used for correlation purposes.

Coal

Most of the drill cores show a distinct coal zone in the basal 250

feet of section with a vertical thickness ranging from 60 feet in DDH-71-4 to 200 feet in DDH-71-3. Refer to vertical sections A-A' to G-G'.

The behavior of the coal zone is quite variable. Individual coal beds and interbedded sandstones and shales do not maintain their thicknesses for any great distance. Within 1,500 feet of their first appearing, individual coal beds may have become separated by as much as 100 feet of sediment. Because of this fact, individual coal seams can not be traced from drill hole to drill hole.

The thickness of the coal seams and the thickness of interbedded sediments are closely related seam properties and probably was determined largely by the degree of subsidence taking place during the accumulation of peat in the Bowron River basin. Seam splitting takes place so that within the same stratigraphic limits, seams away from the basin margin become fewer in number and individually thicker with a corresponding decrease in amount of sediment (DDH-71-1). Toward the margin of the basin, seams are thin and often contain an appreciable amount of sediment (WL-3 and WL-4).

Figure 1

Major Caol Zone Penetrated by Drill Hole

Drill Hole	Depth	Dip	Combined Coal Thickness	Other Sediments	Thickest Coal Bed
DDH-71-1	1,384 - 1,453	25°	40	29	5
DDH-71-2	Upper 1140-1171	25°	12	19	5
	Lower 1258-1284	25°	17	9	4
			Upper 12 feet of lower seam contains 2 feet total shale		
DDH-71-3	Upper 2081-2146	20°	15	51	2
	Lower 2220-2261	20°	21	21	2.5
DDH-71-4	1720-1767	38°	11	36	2
	The following is based on logs by Dr. Black for Northern Coal.				
WL-1A	Upper 995-1039	15°	15	29	
	Lower 1097-1150	15°	21	32	
WL-2	957-1102	20°	39	106	
WL-3	815-881	20°	32	34	
WL-5	523-559	45°	32	34	
WL-6	777-809	45°	32	0?	
WL-7	1778-1810	25°	24	8	
WL-9	540-571	45°	26	5	
DDH-11	49-91	45°	28	14	
DDH-19	127-162	40°	28	7	
DDH-31	221-290	35°	22	57	

According to Commercial Testing and Engineering Co. the coals in DDH-71-1, DDH-71-2 and DDH-71-3 is similar to anthracite in appearance but high in volatile matter. Core DDH-71-1 contains several resin blebs from 1,435 down. The mineral matter-free BTU ranges from 13,500 to 13,900. If the coal is not oxidized its ranking according to ASTM is High Volatile B Bituminious. Residue from the volatile determination indicates the coal has caking properties but is non-swelling.

Stratigraphic Variations

The sediments are characterized by sharp, vertical, lithological variations in more than one scale. Facies change in the horizontal direction is also highly characteristic, particularly in the coarser beds. This finds its extreme development in breccias which cut fine-grained sandstone and shales.

The lower part of the sedimentary series in the southern portion of the basin is composed of shale. The shale sequence is approximately 800 feet thick in DDH-71-3 (vertical section C-C'), 1,000 feet in WL-7 (vertical section D-D') and 770 feet in DDH-71-4 (vertical section G-G' and E-E'). But even in this predominantly shale facies a wedge of breccia, 200 feet thick, occurs in DDH-71-3 and pinches out before it reaches WL-7, a distance of 2.600 feet to the southwest (vertical section G-G'). Cyclic or rhythmic laminated horizons in these shales bespeak of lacustrine deposition especially in the area south of Northern Coal camp.

The shale facies changes into coarse clastics toward the north, so that drill cores from WL-1A, WL-2, WL-3, WL-4, and DDH-71-2 are composed predominantly of sandstone and breccia (vertical section F-F' and G-G').

The breccia sequence in the upper part of the sedimentary series is approximately 800 feet thick in DDH-71-3 and 400 feet in DDH-71-1. The upper part of the sequence is not exposed and its total thickness is unknown. There is little doubt that fragments contained in the sedimentary breccia were derived from Slide Mountain rocks that outcrop on nearby slopes. A coarsening of facies in the stratigraphic record in a northeast direction suggest a principal source area in that direction. The random distribution of fragments, graded bedding, and imbricate structure suggests transportation in the form of channel deposits as well as mudflows, giving rise to turbidity currents in the deeper portion of depositional basin.

The long term subsidence of the basin must be accompanied by uplift of the supply areas and this necessarily involves crustal deformation, since the coal-forming conditions in the Bowron River basin becomes less and less obvious in upward vertical succession, while the percentage of coarse-clastics tends to rise.

Extent of Coal-bearing Rocks

Examination of outcrops along the Bowron River extending from Grizzly Bear Creek northward to Highway 16 near Purden Creek reveals that

the southern portion of the area is underlain by rocks of the Slide Mountain group (green volcanics, phyllites, and quartzites) and the southern limit of sedimentary strata occur along the west side of the valley ½ mile northwest of the confluence of Swamp Creek and Bowron River, approximately 2 miles south of the Northern Coal camp. Refer to the Photogeological Map. This suggests that the coal-bearing rocks in the Bowron River basin is far less extensive than was previously postulated by Black (1967) and others.

The rocks exposed northwest of the Northern Coal camp at various places along the Bowron River is composed dominantly of coarse breccias and sandstones. Cores from drill holes WL-1A, WL-2, WL-3 and WL-4 show not only a pinch-out of coal seams in a northwest direction but also a thinning of the sediments as the basin floor rises in the same direction (vertical section F-F'). These facts seem to discount the possibility of encountering anything but thin discontinuous coal seams at depth in areas northwest of DDH-WL-4.

STRUCTURAL GEOLOGY

The Tertiary rocks occupy a linear basin oriented northwesterly, 10 miles long and approximately 1½ miles wide. In gross aspect, the structure appears to be a graben that has been downdropped in relation to Slide Mountain group rocks that crop out on both sides of the Bowron River valley. The east side of the graben is interpreted as a fault, inferred from aerial photographs by the relatively straight escarpment, composed of green volcanics, quartzite and black limestone. Throughout

most of its length the fault line is largely buried by Pleistocene and Quaternary alluvium along the Bowron River. Eastward dipping sedimentary breccias exposed on the east side of the river, 1¼ miles northwest of Tenaskli Creek is thought to lie within 500 feet of the fault line. Steeply dipping limestone at the mouth of Tenaskli Creek is probably a slice of Slide Mountain group associated with the fault that lies just west of this outcrop.

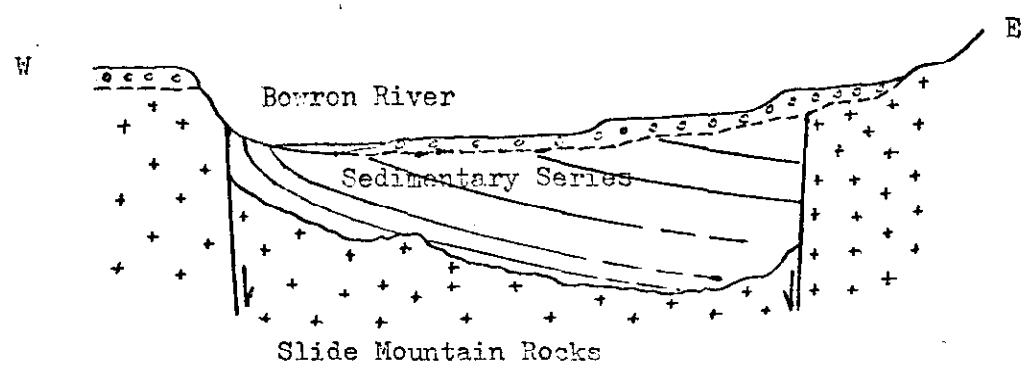
The fault contact on the west side of the Bowron River graben has been observed in only one place. In the area 1½ miles southeast of Northern Coal camp, thin-bedded dark shales are in contact with eastward dipping green volcanics of the Slide Mountain group. The shales are overturned steeply toward the west near the fault but in a distance of 100 feet, dip 50 to 60° eastward under the Bowron River. Refer to the vertical section of this fault in the Photogeologic Map. The fault can be traced to the south on the aerial photographs to a point just north of Tsus Creek, where it is completely obscurred by glacial and fluvial deposits. Toward the northwest, the fault is manifest as an exhumed fault-line scarp, especially in the area southwest of Northern Coal camp.

The Bowron River graben has been traced from Purden Creek southeastward for a distance of approximately 10 miles where it is cut off by a northeast-southwest-trending fault near the mouth of Tsus Creek (on Photogeologic Map).

Along the western edge of the graben, the sedimentary series dip from 20 to 60° eastward. A local reversal of dip does occur along the Bowron River 1 mile northeast of the mouth of Taspai Creek where breccias dip as much as 70° westward. With the exception of this one outcrop, the writer has not seen any evidence to suggest that the coal-bearing rocks within the graben reverse their eastward dip beneath the Bowron River valley.

Figure 2

Generalized Cross-Section
Bowron River Graben



Structure Contour Map

Structural contours drawn at the top of the major coal zone penetrated by drill in the Bowron River valley discloses that the sedimentary rocks dip 40 to 60° eastward in the southern portion of the area whereas the strata north of Northern Coal camp dips about 40° eastward decreasing to about 20° toward the northeast.

Figure 3

Depths to Top of Major Coal Zone

Drill Hole			
	WL - 1A	WL-7	DDH-71-1
	995	1778	1380
	WL-2	WL-9	DDH-71-2
	1040	540	1235
	WL-3	DDH-11	DDH-71-3
	845	50	2110
	WL-5	DDH-19	DDH-71-4
	523	128	1720
	WL-6	DDH-31	
	775	220	

Because of the elevation of the major coal zone in DDH-71-2 at 1,144 feet is not consistent with an extension of a 20° dip of the coal zone in WL-1A (1,371 feet), it is postulated that a northwest-trending fault lies between DDH-71-2 and WL-1A with the east side upthrown approximately 400 feet. Refer to the Structural Contour Map and vertical section A-A'.

CONCLUSIONS

1. Based on drill core examination and detailed mapping in the field, the limits of the coal basin are more restricted in area than was formerly anticipated.

2. Distinct facies change from shales and sandstones into breccias; this, concomitant with a rise in basement rocks northwest of DDH-WL-4, discounts the possibility of encountering anything but thin coal seams at depth in this direction. Coal-forming conditions in the Bowron River basin are less and less obvious in upward vertical succession while the percentage of coarse clastics tends to rise.

3. Because of extreme variations in thickness of coal seams and interbedded sediments, continuity of individual coal seams is not maintained at depth and their correlation has not been possible.

4. Coal-bearing rocks dip eastward at dips ranging from 60° on the west edge of the Bowron River graben to 20° in the northern part of the area. There is no evidence to suggest that these rocks reverse their dip beneath the Bowron River valley. Because of this, it is almost certain that there is no potential for large tonnages amenable to surface mining.

CERTIFICATE

I, RICHARD E. KUCERA, of 2946 West 36th Avenue, Vancouver, British Columbia, do hereby certify:

1. That I am an Associate Professor of Geology and a Consulting Geologist;

2. That I graduated as a geologist from the Ohio State University with the degree Bachelor of Science in the year 1952, and the degree Master of Science in Geology in the year 1954. I am also a graduate of the University of Colorado with a Ph.D. degree in Geology in the year 1962;

3. That I am a member of the American Association of Petroleum Geologists, a member of the Geological Society of America, a member of the Rocky Mountain Association of Geologists, a member of the American Association for Advancement of Science, and a Fellow of the Geological Association of Canada;

4. That I have no interest, direct or indirect, in the properties described in the attached report entitled "Geological Report, Bowron River Coal, Cariboo District, B.C." dated November 4, 1971;

5. That this report is based on both field and laboratory study.

Richard E. Kucera

Richard E. Kucera, Ph.D.

November 4, 1971
Vancouver, British Columbia

BOWRON RIVER COALS

ANALYSES FROM DRILL HOLE CORES. 1971. Bethlehem Copper Corp.

ASH	VOLATILES	FIXED CARBON	CAL. VALUE	SULPHUR.
21.90	35.97	42.13	10,849	0.90
27.17	34.37	38.46	10,109	2.71
19.98	40.47	37.55	11,024	1.90
14.45	39.61	45.94	11,891	0.91
21.78	34.42	43.80	10,599	0.99
23.43	33.74	42.80	10,507	1.70
20.98	35.24	43.78	10,776	1.22
22.60	34.00	43.40	10,618	0.85
15.75	40.73	43.52	11,680	3.06
11.21	42.13	46.66	12,222	2.45
16.70	37.96	45.34	11,437	1.32
AVERAGE: 19.63 (11 Samples.)	37.15	43.22	11,064	1.63
VARIATION: 11.21 - 27.17	34.00 - 42.13	38.46 - 46.66	10,109 - 12,222	0.90 - 3.06

Present work has indicated that seams are rather discontinuous. Average dip is about 40° N.E. Coal traced for about 2,500' down dip and 8000' along strike. assuming seam thickness of 6 feet: this indicates a reserve of about 5 million tons.

71-5 volcanics 272' 3200' east of Bowron River. extreme limit 14,000 feet (2.7 miles along the strike) for productive coal seams.

A.R.C. James

(M)

LOG

STEWART DRILLING Co. Sept 10 1970 – Feb 15 -1971

to: A. D. Ross Northern Coal

hole diameter to 825 feet - 4¾ inches
CORE diameter: 2⅛ inches + 2⅞ inches

0 – 58' loose yellow til overburden (silts + gravels)
58–180' blue clay & some pebbled areas (damp)
180–758' dry blue shale & conglomerate beds
758–763' carboniferous shale + coal
763–820' carbon shale (
820–825 shattered shales + conglomerate (water) : (mud loss)
825–848' carbon shale (some conglomerate)
848'–860' coal
860'–861 carbon shale

480' → interspersed & thin showings of coal

Materials used

1 20-foot length of 4½" steel casing was set @ 725' to counter heavy mud loss. 18 bags of cement a

10 100-pd. bags of bran to stop mud-loss

15 bags of drilling gel (mud)

10 rock bits (ATH Walker-Mac tri-cone) $63.00 per. bit
4 tri-blade bits @ $42.00 per. bit
6 diamond bits: wedrill (receipts + billing to Mr. Ross)
5 tungston carbide core bits @ $55.00 per. bit

$1263.00 (paid)

— Paid (J) Stewart

Extra billing (not paid)

to: KLine Brothers Contracting Prince George B.C.
3½ days total road clearing @ $200.00 per. day = $600.00 (½ day free)

total bill with coring time $13200.00 (drilling + coring)
materials 1263.00
$14463.00

per. J. J. Stewart Drilling Co.

7

A B C D E F G H

1 2 3 4 5 6

122°00' W 121°55' W 121°50' W 121°45' W 121°40' W

120,000 N 110,000 N 100,000 N 90,000 N 80,000 N 70,000 N

53°50' N 53°45' N

L 6647
CL 457
572 Ac.
May, 22

L 7869
CL 450
640 Ac.
May, 22

L 6646
CL 449
427 Ac.
May, 22

L 6645
CL 458
612 Ac.
May, 22

CL 478
359 Ac.
May, 22

CL 479
640 Ac.
May, 22

CL 480
640 Ac.
May, 22

CL 477
576 Ac.
May, 22

L 9596
CL 459
640 Ac.
May, 22

L 9595
CL 460
640 Ac.
May, 22

L 4869
CL 461
640 Ac.
May, 22

L 6643
CL 451
632 Ac.
May, 22

L 9592
CL 148
640 Ac.
Nov. 10

L 9593
CL 162
640 Ac.
Aug. 12

L 9594
CL 455
640 Ac.
May, 22

L 4868
CL 452
640 Ac.
May, 22

L 9591
CL 163
640 Ac.
Aug. 12

L 9590
CL 456
640 Ac.
May, 22

L 4846
CL 453
640 Ac.
May, 22

CL 1644
640 Ac.
June, 11

L 4845
CL 454
640 Ac.
May, 22

L 4844
CL 1646
640 Ac.
June, 11

CL 1645
640 Ac.
June, 11

CL 960
640 Ac.
Feb. 16

CL 1641
640 Ac.
June, 11

CL 1643
640 Ac.
June, 11

CL 961
640 Ac.
Feb. 16

CL 1640
640 Ac.
June, 11

CL 1642
640 Ac.
June, 11

L 6642
CL 1647
561 Ac.
June, 11

CL 959
640 Ac.
Feb. 16

CL 958
640 Ac.
Feb. 16

CL 962
564 Ac.
Feb. 16

CL 963
640 Ac.
Feb. 16

L 6640
CL 950
640 Ac.
Feb. 16

L 6639
CL 949
582 Ac.
Feb. 16

71-1 71-2 71-3 71-4 71-5

PRITCHARD LAKE

Tenoskli Cr.

Saw Creek

Creek

Taspai

BOWRON

RIVER

Kenneth

Creek

Hah Cr.

Swamp Cr.

Tsus Creek

Fly Creek

Grizzly Bear Cr.

2000' 1000' 0 2000' 4000' 6000'

DATE REVISED	BY	
NOV 09 1971		DEPT. — EXPLORATION
		DRAWN BY — ALTAIR / b.d.
		CHECKED — E.A.
		APPROVED —
		DATE — AUGUST, 1971
		SCALE — 1" = 2000'

Bethlehem Copper CORPORATION LTD. VANCOUVER BRITISH COLUMBIA

TITLE — BOWRON RIVER PROJECT
COAL LICENCE PLAN 7

FILE NUMBER —

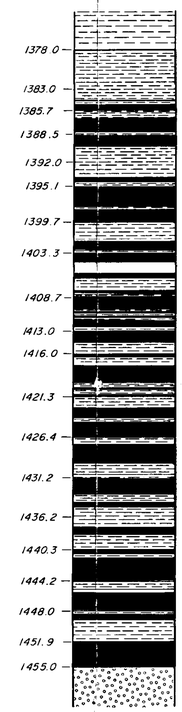
DRAWING NUMBER — 1-1

BW. BOWRON RIVER 71(2)A.

DRILL HOLE LOG

SCALE: 1" = 50'

SECTION OF COAL SEAM



LEGEND

- OVERBURDEN
- AGGLOMERATE
- SHALE
- SANDSTONE

ELEVATION	DEPTH	SECTION	DESCRIPTION	% CORE RECOVERED	SAMPLE WIDTH	SAMPLE No.
	1378.0 – 1378.5		COAL			
	1378.5 – 1378.7		Dark Shale. Thin Bands of Light Grey Sandy Shale			
	1378.7 – 1379.8		Dull Shale Mixed with COAL			
	1379.8 – 1383.0		Grey Shale			
	1383.0 – 1384.1		Shale			
	1384.1 – 1384.4		COAL			
	1384.4 – 1384.8		Coaly Shale			
	1384.8 – 1385.0		COAL			
	1385.0 – 1385.7		COAL			
	1385.7 – 1386.0		Coaly Shale			
	1386.0 – 1386.7		Coaly Shale. Slickensides			
	1386.7 – 1387.7		COAL			
	1387.7 – 1388.3		Shaley COAL			
	1388.3 – 1388.5		Shale			
	1388.5 – 1390.1		COAL			
	1390.1 – 1392.0		Grey Shale			
	1392.0 – 1394.0		Dark Shale			
	1394.0 – 1394.6		COAL			
	1394.6 – 1395.1		Shale			
	1395.1 – 1397.7		COAL			
	1397.7 – 1398.0		Shale			
	1398.0 – 1399.7		COAL. Broken			
	1399.7 – 1402.0		Shale			
	1402.0 – 1403.0		COAL			
	1403.0 – 1403.3		Coaly Shale			
	1403.3 – 1404.5		COAL. Broken. 0.1 Shale Band at 1403.6			
	1404.5 – 1406.0		Finely Ground Material Resembling Dry Soil			
	1406.0 – 1406.5		COAL			
	1406.5 – 1408.0		Shale			
	1408.0 – 1408.5		COAL			
	1408.5 – 1408.7		Shale			
	1408.7 – 1410.4		COAL			
	1410.4 – 1410.6		Shale			
	1410.6 – 1410.8		COAL			
	1410.8 – 1411.0		Shale			
	1411.0 – 1411.4		COAL			
	1411.4 – 1411.6		Shale			
	1411.6 – 1412.7		COAL. Thin Shale Bands			
	1412.7 – 1413.0		Shale			
	1413.0 – 1414.4		COAL			
	1414.4 – 1416.0		Shale with Occasional Coaly Streaks			
	1416.0 – 1416.2		COAL			
	1416.2 – 1417.4		Shale			
	1417.4 – 1419.7		COAL			
	1419.7 – 1420.2		Shale			
	1420.2 – 1420.4		COAL			
	1420.4 – 1420.5		Shale			
	1420.5 – 1420.7		COAL			
	1420.7 – 1421.0		Shale			
	1421.0 – 1421.3		COAL			
	1421.3 – 1422.8		Shale			
	1422.8 – 1424.0		COAL			
	1424.0 – 1424.6		Shale			
	1424.6 – 1426.4		COAL			
	1426.4 – 1427.2		Shale			
	1427.2 – 1429.7		COAL			
	1429.7 – 1431.0		Shale			
	1431.0 – 1431.2		Sandy Shale Mixed with COAL			
	1431.2 – 1433.4		COAL			
	1433.4 – 1434.6		Shale			
	1434.6 – 1435.0		COAL			
	1435.0 – 1435.2		Shale			
	1435.2 – 1435.6		COAL			
	1435.6 – 1435.8		Coaly Shale. Several Resin Blebs			
	1435.8 – 1436.2		Shale			
	1436.2 – 1437.0		Coaly Shale			
	1437.0 – 1437.6		Coaly Shale			
	1437.6 – 1438.5		COAL			
	1438.5 – 1440.3		Shale			
	1440.3 – 1441.0		COAL			
	1441.0 – 1441.4		Coaly Shale			
	1441.4 – 1444.2		COAL. 0.13 Shale Band at 1442.5 – 1442.63			
	1444.2 – 1445.3		Shale			
	1445.3 – 1445.8		Shaley COAL			
	1445.8 – 1448.0		COAL			
	1448.0 – 1448.4		Shale			
	1448.4 – 1449.0		COAL			
	1449.0 – 1451.9		Shale			
	1451.9 – 1452.7		COAL. Thin Shale Band at 1452.2			
	1452.7 – 1455.0		Shale			

EXCEPT 1394.6 – 1395.1

EXCEPT 1424.0 – 1424.6 & 1426.4 – 1427.2

ANALYSIS OF COAL SEAM

FRACTION S.G.	FRACTION YIELD %	FRACTION CUM YIELD %	MOISTURE % FRACTION	MOISTURE % CUMUL.	ASH % FRACTION	ASH % CUMUL.	VOLATILE % FRACTION	VOLATILE % CUMUL.	FIXED CARBON % FRACTION	FIXED CARBON % CUMUL.	CALORIFIC VALUE LB/LB FRACTION	CALORIFIC VALUE LB/LB CUMUL.

AS RECEIVED

WEIGHT/Gms.	MOISTURE %	ASH %	VOLATILE %	F.C. %	B.T.U.	SULPHUR %
	3.88	22.52	32.43	41.17	10099	1.63
	3.94	20.15	33.85	42.06	10351	1.17
	3.58	21.79	32.78	41.85	10238	0.82
	3.23	15.24	39.41	42.12	11303	2.96
	3.60	10.81	40.61	44.98	11782	2.36
	3.68	16.09	36.56	43.67	11016	1.27

DRY BASIS

WEIGHT/Gms.	ASH %	VOLATILE %	F.C. %	B.T.U.	SULPHUR %
	36.67				
	35.01				
	23.43	33.74	42.83	10507	1.70
	20.98	35.24	43.78	10776	1.22
	22.60	34.00	43.40	10618	0.85
	15.75	40.73	43.52	11680	3.06
	11.21	42.13	46.66	12222	2.45
	16.70	37.96	45.34	11437	1.32
	32.05				

7

BW - BOWRON RIVER 71(2)A

SAMPLING DATA		DRILLING DATA	LAND DATA	SURVEY DATA	
SAMPLED BY:	DATE:	DATE COMMENCED: July 10, 71	MINING DIVISION: Cariboo	LATITUDE:	11,683
LOGGED BY: R.E. Kucera	DATE: July, 71	DATE FINISHED: July 22, 71	LAND DISTRICT: Cariboo	DEPARTURE:	15,489
F/S ANALYSIS BY:	DATE:	CORE DIAMETER: N.Q. 1 7/8"	COAL LICENCE No. 162	COLLAR ELEVATION:	2404.0'
COAL ANALYSIS BY: Commercial Testing & Eng.	DATE: Aug. 71	DEPTH OF OVERBURDEN: 92'	DISTRICT LOT No. 9593	DIP:	90°
		TOTAL DEPTH: 1546'	GEOGRAPHIC Co-ords. 53° 50' N 121° 55' W	BEARING:	—

DEPT. — EXPLORATION
DRAWN BY — Altair/m.k
CHECKED — E.A
APPROVED — NOV 09 1971
DATE — AUGUST, 1971
SCALE —

Bethlehem Copper CORPORATION LTD. VANCOUVER BRITISH COLUMBIA

TITLE — BOWRON RIVER PROJECT
DRILL HOLE NO. 71-1

FILE NUMBER —

DRAWING NUMBER — 7-1

DRILL HOLE LOG

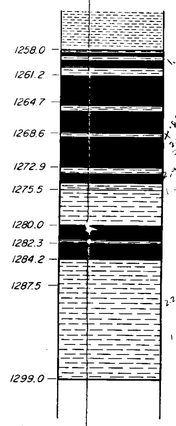
SCALE: 1" = 50'

SECTION OF COAL SEAM

ELEVATION	DEPTH	SECTION	DESCRIPTION	% CORE RECOVERED	SAMPLE WIDTH	SAMPLE No.

LEGEND

- OVERBURDEN
- AGGLOMERATE
- SHALE
- SANDSTONE



1258.0 – 1258.4 Hard Coaly Shale
X 1258.4 – 1258.9 Bright COAL
1258.9 – 1259.4 Hard Shale Impregnated with Bright COAL
X 1259.4 – 1260.3 Bright COAL – Broken
1260.3 – 1261.2 Hard Shale Impregnated with Bright COAL
x 1261.2 – 1262.6 Bright COAL
1262.6 – 1264.7 Bright Shiny Coaly Material. Slickensides
X 1264.7 – 1265.0 Bright Coal
1265.0 – 1265.8 Hard Black Shale
1265.8 – 1266.6 Bright COAL
1266.6 – 1268.6 COAL, Badly Broken
1268.6 – 1269.0 Shale Impregnated with Bright COAL
X 1269.0 – 1271.9 Bright, Shaley COAL. Badly Broken
1271.9 – 1272.9 Bright Shiny Coaly Material. Slickensides
1272.9 – 1273.5 Hard Grey Shale
X 1273.5 – 1274.0 Shaly COAL
X 1274.0 – 1274.7 COAL
1274.7 – 1275.5 Shale
1275.5 – 1277.5 Shale
1277.5 – 1280.0 Shale (Est. 70% Recovery)
1280.0 – 1282.2 COAL
1282.2 – 1282.3 Shale
1282.3 – 1283.3 COAL (Est. 40% Recovery)
1283.3 – 1283.7 COAL
1283.7 – 1284.2 Shaley COAL
1284.2 – 1286.8 Shale
1286.8 – 1287.5 Shale
1287.5 – 1299.0 Shale Except 0.3' of COAL at 1295.2–1295.5

ANALYSIS OF COAL SEAM

(M3)

FRACTION	MOISTURE %	ASH %	VOLATILE %	FIXED CARBON %	CALORIFIC VALUE LB/LB

AS RECEIVED							DRY BASIS					
WEIGHT/Gms.	MOISTURE %	ASH %	VOLATILE %	F.C. %	B.T.U.	SULPHUR %	WEIGHT/Gms.	ASH %	VOLATILE %	F.C. %	B.T.U.	SULPHUR %
								31.53				
								31.58				
								39.13				
								45.39				
	4.43	20.82	32.89	41.86	10129	0.95		21.78	34.42	43.80	10599	0.99
								31.34				

SAMPLING DATA		DRILLING DATA	LAND DATA	SURVEY DATA	
SAMPLED BY:	DATE:	DATE COMMENCED: July 23, 71	MINING DIVISION: Cariboo	LATITUDE:	10,455
LOGGED BY: R.E. Kucera	DATE: July – Aug. 71	DATE FINISHED: Aug 9, 71	LAND DISTRICT: Cariboo	DEPARTURE:	16,390
F/S ANALYSIS BY:	DATE:	CORE DIAMETER: N.Q. 1 7/8"	COAL LICENCE No. 162	COLLAR ELEVATION:	2401.0'
COAL ANALYSIS BY: Commercial Testing & Eng.	DATE: Aug. 71	DEPTH OF OVERBURDEN: 189.5'	DISTRICT LOT No. 9593	DIP:	90°
		TOTAL DEPTH: 1317'	GEOGRAPHIC Co-ords 53° 50' N 121° 55' W	BEARING:	——

DEPT. EXPLORATION
DRAWN BY A.to.
CHECKED E.A.
APPROVED NOV 09 1971
DATE AUGUST, 1971
SCALE

Bethlehem Copper CORPORATION LTD
VANCOUVER BRITISH COLUMBIA

TITLE
BOWRON RIVER PROJECT
DRILL HOLE NO. 71-2

FILE NUMBER —

DRAWING NUMBER
7-2

7

B.W. - Bowron River 71(2)A.

TITLE

FILE No.

DRAWING No.

THLEHEM COPPER CORPORATION LT

COAL LOG

PROPERTY ..... BOWRON RIVER

HOLE NO DDH-71-2

CO-ORDINATES ... 10455 N

..... 16390 E

ELEVATION ..... 2401.0'

DIP ..... 90°

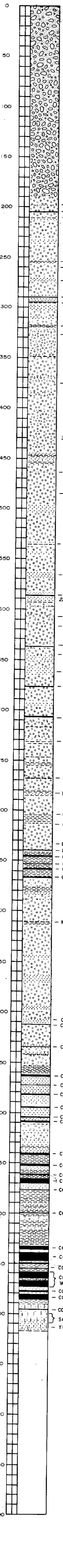
BEARING .....

TOTAL LENGTH ... 1317'

DRILL TYPE .....

REMARKS .....

DESCRIPTION



DRILL HOLE LOG

SCALE: 1" = 50'

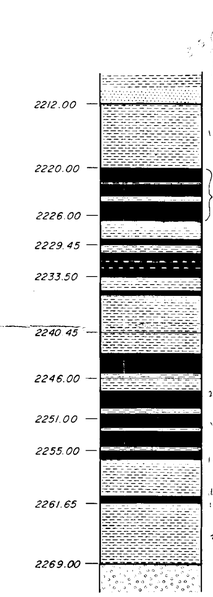
SECTION OF COAL SEAM

ELEVATION	DEPTH	SECTION	DESCRIPTION	% CORE RECOVERED	SAMPLE WIDTH	SAMPLE No.

LEGEND

- OVERBURDEN
- AGGLOMERATE
- SHALE
- SANDSTONE

LOWER SEAM



2212.00 – 2220.00	Shale	
2220.00 – 2221.85	COAL	EXCEPT 2221.85 – 2222.00 & 2223.65 – 2224.17
2221.85 – 2222.00	Shale	
2222.00 – 2223.65	COAL	
2223.65 – 2224.17	Shale	
2224.17 – 2224.40	COAL	
2224.40 – 2224.85	Shaley COAL	
2224.85 – 2226.00	COAL	
2226.00 – 2226.50	Shaley COAL	
2226.50 – 2228.90	Shale	
2228.90 – 2229.45	Shaley COAL	
2229.45 – 2230.50	Shale	
2230.50 – 2231.40	COAL	
2231.40 – 2231.60	Shale	
2231.60 – 2232.35	COAL	
2232.35 – 2232.45	Shale	
2232.45 – 2233.00	COAL	
2233.00 – 2233.50	COAL	
2233.50 – 2235.10	Shale	
2235.10 – 2235.90	COAL	
2235.90 – 2240.05	Shale	
2240.05 – 2240.45	Coaly Shale	
2240.45 – 2243.00	Shale	
2243.00 – 2245.40	COAL	
2245.40 – 2246.00	Shale	
2246.00 – 2247.85	Coaly Shale	
2247.85 – 2248.15	COAL	
2248.15 – 2249.90	Shaley COAL	
2249.90 – 2250.40	Shale	
2250.40 – 2251.00	Shaley COAL	
2251.00 – 2252.10	Shaley COAL	
2252.10 – 2252.70	Shale	
2252.70 – 2254.70	Shaley COAL	
2254.70 – 2255.00	Shale	
2255.00 – 2255.70	COAL	
2255.70 – 2256.00	Shaley COAL	
2256.00 – 2260.60	Shale	
2260.60 – 2261.65	Shaley COAL	
2261.65 – 2266.50	Shale	
2266.50 – 2269.00	Shale, Gravel Appearance	

ANALYSIS OF COAL SEAM

FRACTION S.G.	FRACTION YIELD %	FRACTION CUM YIELD %	MOISTURE % FRACTION	MOISTURE % CUMUL	ASH % FRACTION	ASH % CUMUL	VOLATILE % FRACTION	VOLATILE % CUMUL	FIXED CARBON % FRACTION	FIXED CARBON % CUMUL	CALORIFIC VALUE LB/LB FRACTION	CALORIFIC VALUE LB/LB CUMUL

AS RECEIVED

WEIGHT/Gms.	MOISTURE %	ASH %	VOLATILE %	F.C. %	B.T.U.	SULPHUR %
	3.48	21.14	34.72	40.66	10471	0.88
	3.14	26.32	33.29	37.25	9792	2.62

DRY BASIS

WEIGHT/Gms.	ASH %	VOLATILE %	F.C. %	B.T.U.	SULPHUR %
	21.90	35.97	42.13	10849	0.91
	27.17	34.37	38.46	10109	2.71

SAMPLING DATA		DRILLING DATA	LAND DATA	SURVEY DATA	
SAMPLED BY:	DATE:	DATE COMMENCED: Aug. 4, 71	MINING DIVISION: Cariboo	LATITUDE:	9,361
LOGGED BY: R.E. Kucera	DATE Aug. 71	DATE FINISHED: Aug. 24, 71	LAND DISTRICT: Cariboo	DEPARTURE:	14,177
F/S ANALYSIS BY:	DATE:	CORE DIAMETER: N.Q. 1 7/8"	COAL LICENCE No. 163	COLLAR ELEVATION:	2379.6'
COAL ANALYSIS BY: Commercial Testing & Eng.	DATE: Aug. 71	DEPTH OF OVERBURDEN: 121'	DISTRICT LOT No. 9591	DIP:	90°
		TOTAL DEPTH: 2412'	GEOGRAPHIC Co-ords. 53° 50' N 121° 55' W	BEARING:	—

DEPT. — EXPLORATION
DRAWN BY — Altair /m.k
CHECKED — E.A
APPROVED — NOV 09 1971
DATE — AUGUST, 1971
SCALE —

Bethlehem Copper CORPORATION LTD. VANCOUVER BRITISH COLUMBIA

TITLE — BOWRON RIVER PROJECT
DRILL HOLE NO. 71-3 (SHEET 2 of 2)

FILE NUMBER —

DRAWING NUMBER — 7-3

7

BW-BOWRON-71(2)4

DRILL HOLE LOG

SCALE: 1" = 50'

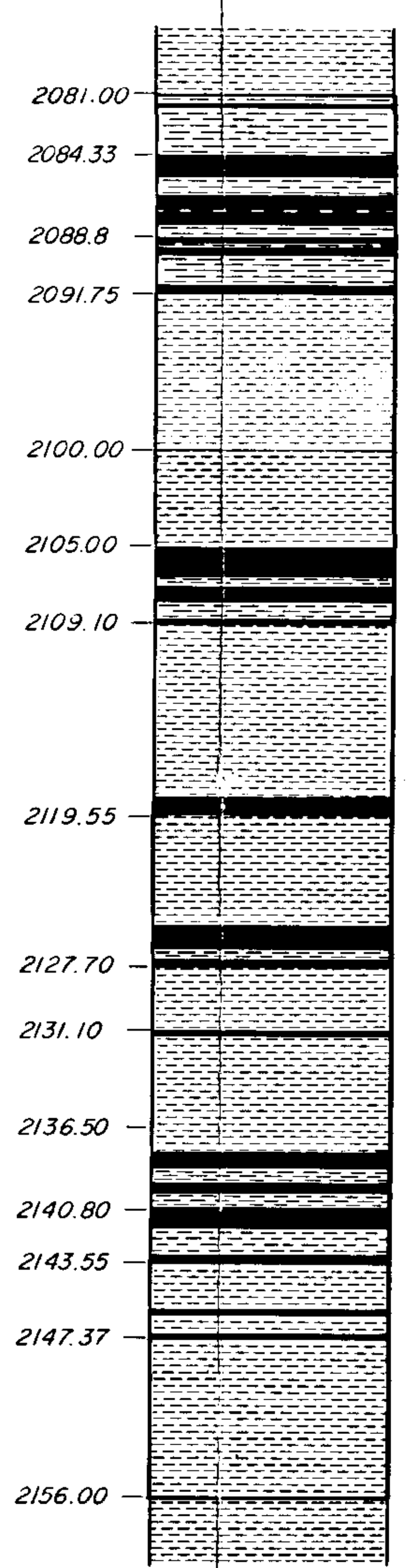
SECTION OF COAL SEAM

ELEVATION	DEPTH	SECTION	DESCRIPTION	CORE RECOVERED	SAMPLE WIDTH	SAMPLE No.

LEGEND

- *OVERBURDEN*
- *AGGLOMERATE*
- *SHALE*
- *SANDSTONE*

UPPER SEAM



Depth	Description
2081.00 – 2081.46	Shale
2081.46 – 2081.55	Shaley COAL
2081.55 – 2084.33	Shale
1.0 X 2084.33 – 2085.42	Bright COAL. Calcite Streaks
2085.42 – 2086.65	Shale
X 2086.65 – 2087.10	COAL
2087.10 – 2087.32	Hard Shale
X 2087.32 – 2088.00	COAL
2088.00 – 2088.80	Dark Shale
X 2088.80 – 2089.00	COAL
2089.00 – 2089.30	Shale
X 2089.30 – 2089.75	COAL
2089.75 – 2091.25	Shale
X 2091.25 – 2091.75	COAL. Slightly Shaley
2091.75 – 2100.00	Shale
2100.00 – 2104.35	Shale
2.16 X 2104.35 – 2105.00 (2105.00 – 2108.80)	Shale Mixed With COAL. 0.7' Shale Band at 2107.16
2108.80 – 2109.00	Shale
X 2109.00 – 2109.10	COAL. Resin Blebs
2109.10 – 2110.80	Dark Shale
2110.80 – 2112.30	Hard Shale. Sandy
2112.30 – 2116.00	Shale
2116.00 – 2116.40	Carb. Shale
2116.40 – 2117.35	Shale
2117.35 – 2118.00	Shale. Slightly Coaly
2118.00 – 2118.82	Shale
X 2118.82 – 2119.55	COAL. Shaley
2119.55 – 2125.50	Shale
1.4 X 2125.50 – 2126.90	COAL
2126.90 – 2127.25	Shale
X 2127.25 – 2127.70	Shaley COAL
2127.70 – 2131.10	Shale
X 2131.10 – 2131.20	COAL
2131.20 – 2136.50	Shale
2136.50 – 2137.80	Shale
X 2137.80 – 2138.45	COAL. Badly Broken
2138.45 – 2139.30	Shale
X 2139.30 – 2139.90	COAL. Resin Blebs
2139.90 – 2140.80	Shale
1.07 X 2140.80 – 2141.85	COAL. Shaley
2141.85 – 2143.20	Shale
X 2143.20 – 2143.55	COAL
2143.55 – 2146.00	Shale
X 2146.00 – 2146.10	COAL
2146.10 – 2147.23	Shale
X 2147.23 – 2147.37	Shaley Coal
2147.37 – 2156.00	Shale

ANALYSIS OF COAL SEAM

(M6)

6743688

FRACTION			MOISTURE %		ASH %		VOLATILE %		FIXED CARBON %		CALORIFIC VALUE LB/LB	
			FRACTION	CUMUL	FRACTION	CUMUL	FRACTION	CUMUL	FRACTION	CUMUL	FRACTION	CUMUL

AS RECEIVED

WEIGHT/Gms.	MOISTURE %	ASH %	VOLATILE %	F.C. %	B.T.U.	SULPHUR %
	3.27	19.33	39.15	38.25	10664	1.84
	4.39	13.82	37.87	43.92	11369	0.87

DRY BASIS

WEIGHT/Gms.	ASH %	VOLATILE %	F.C. %	B.T.U.	SULPHUR %
	19.98	40.47	39.55	11024	1.90
	14.45	39.61	45.94	11891	0.91

7

BW - Bowron River 71(2)A.

SAMPLING DATA		DRILLING DATA	LAND DATA	SURVEY DATA	
SAMPLED BY:	DATE:	DATE COMMENCED: Aug 4, 71	MINING DIVISION: Cariboo	LATITUDE:	9,361
LOGGED BY: R.E. Kucera	DATE: Aug. 71	DATE FINISHED: Aug. 24, 71	LAND DISTRICT: Cariboo	DEPARTURE	14,177
F/S ANALYSIS BY:	DATE:	CORE DIAMETER: N.Q. 1 7/8"	COAL LICENCE No. 163	COLLAR ELEVATION:	2379.6'
COAL ANALYSIS BY: Commercial Testing & Eng.	DATE: Aug. 71	DEPTH OF OVERBURDEN: 121'	DISTRICT LOT No. 9591	DIP	90°
		TOTAL DEPTH 2412'	GEOGRAPHIC Co-ords 53° 50' N 121° 55' W	BEARING	——

DEPT — EXPLORATION
DRAWN BY — A. Toic / m.k.
CHECKED — E. A.
APPROVED NOV 09 1971
DATE — AUGUST, 1971
SCALE

Bethlehem Copper Corporation Ltd
VANCOUVER BRITISH COLUMBIA

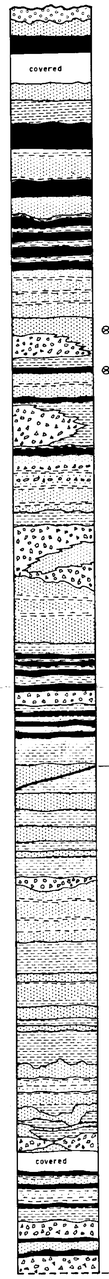
TITLE — BOWRON RIVER PROJECT
DRILL HOLE NO. 71-3 (SHEET 1 of 2)

FILE NUMBER —

DRAWING NUMBER — 7-3

L. 9592
CL. 148
L. 9593
C.L. 162
L. 9594
C.L. 455
L. 9591
C.L. 163
L. 9590
C.L. 456
BOWRON RIVER
DDH WL-4 2367.8
DDH WL-3 2390.4
DDH WL-2 2391.3
DDH V-4 2411.1
DDH-32 2398.6
DDH WL-1A 2365.9
DDH-31 2399.5
DDH-30 2397.4
DDH-29 2395.7
DDH-V3 2394.6
DDH-28 2395.1
DDH-27 2381.6
DDH 71-5 2399.6
DDH 71-2 2379
DDH 71-1 2395
DDH 71-3 2379.6
DDH-24 2368.0
DDH-21 2368.6
DDH-22 2366.5
DDH-23 2369.5
DDH-20 2370.3
DDH-17 2368.8
DDH-7 2370.6
DDH-6 2348.1
DDH-11 2370.5
DDH-15 2369.2
DDH-14 2369.0
DDH-13 2370.2
DDH-10 2389.2
DDH-9 2396.8
DDH-4 2397.0
DDH WL-7 2386.2
DDH WL-6 2437.9
DDH EX-4 2395.7
DDH EX-5 2407.9
DDH WL-5 2430.8
DDH 71-4 2420 est
571590 5965950
571525 5965695
571230 5964160
572825 5963460
(14,000 N) 104,000 N
(12,000 N) 102,000 N
(10,000 N) 100,000 N
(8,000 N) 98,000 N
(6,000 N) 96,000 N
(6,000 E) 96,000 E
(8,000 E) 98,000 E
(10,000 E) 100,000 E
(12,000 E) 102,000 E
(14,000 E) 104,000 E
(16,000 E) 106,000 E
(18,000 E) 108,000 E
A B C D E F G H
1 2 3 4 5 6
M7
Bw- Bowron River 71(2)A
DATE REVISED NOV 09 1971
BY
DEPT. — EXPLORATION
DRAWN BY — Altair /m.k.
CHECKED — E.A.
APPROVED —
DATE — AUGUST, 1971
SCALE — 1" = 400' 1:4800
Bethlehem Copper Corporation Ltd
VANCOUVER BRITISH COLUMBIA
TITLE — BOWRON RIVER PROJECT DRILL HOLE PLAN
FILE NUMBER —
DRAWING NUMBER — 3-1
7

S. N.



STREAM GRAVELS
SS.
COAL

36° Dip E.

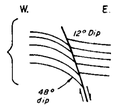
⊖ RADIOACTIVITY 3 x BACKGROUND

⊖ RADIOACTIVITY 7x BACKGROUND

LIMONITIC STAINING

IMBRICATE STRUCTURES- transport from south

FAULT - TREND N 5°W. *DIP 70°E.*



NODULAR WEATHERING

NODULAR WEATHERING

RIVER LEVEL

1"=5ft.

NOTE:
Measured 500 feet South of Northern Coal Camp on west side of Bowron River. Starting at south edge of outcrop at River Level.

LEGEND

- SHALE
- SANDSTONE
- BRECCIA
- COAL

7

BW - BOWRON RIVER 71(2)A

DATE REVISED	BY
NOV 09 1971	

DEPT. — EXPLORATION
DRAWN BY — Altair / k. k.
CHECKED — E. A.
APPROVED —
DATE — OCTOBER, 1971
SCALE — 1" = 5 Feet

Bethlehem Copper CORPORATION LTD
VANCOUVER BRITISH COLUMBIA

TITLE — BOWRON RIVER PROJECT
DETAILED STRATIGRAPHIC SECTION

FILE NUMBER —

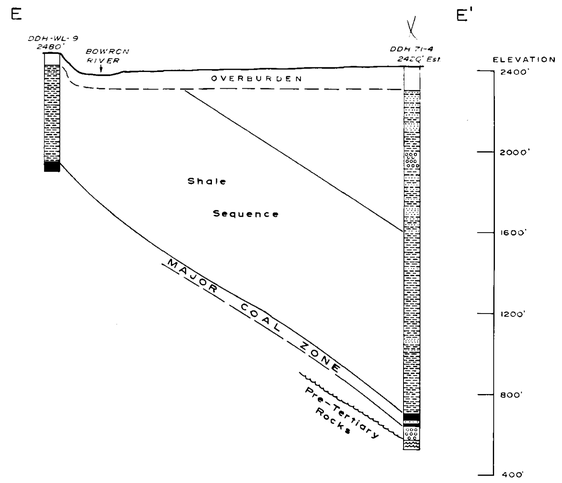
DRAWING NUMBER — 6-1

TITLE

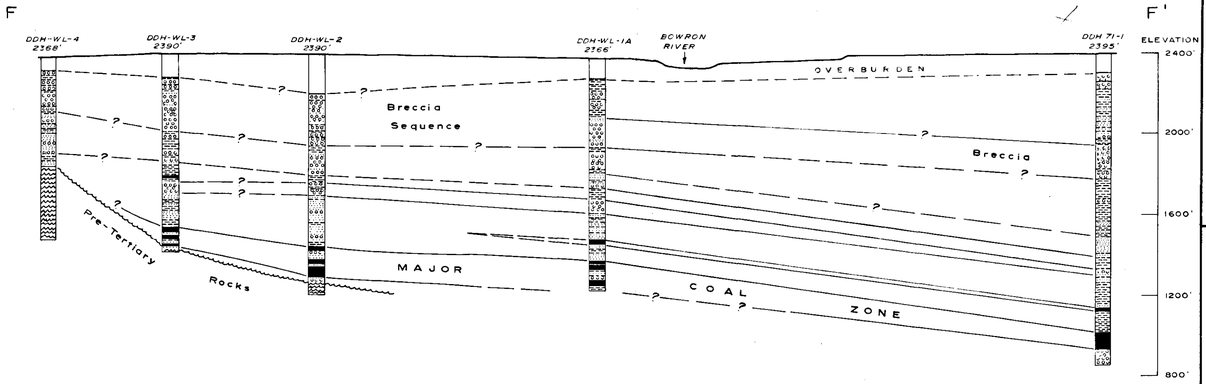
FILE No.

DRAWING No.

Say 8000' STRIKE LENGTH
2.500' DOWN DIP
AV SEAM THICKNESS 6'0"
RESERVES: 4,800,000 TONS
L. 9592
CL. 148
L. 9593
CL. 162
L. 9594
CL. 455
L. 9591
CL. 163
L. 9590
CL. 456
BOWRON RIVER
Possible Fault 400'± Displacement
Gravel Road to Highway No. 16
Road
DDH WL-4 2367.8'
DDH WL-3 2390.4
DDH WL-2 2391.3
DDH WL-1A 2365.9
DDH 71-2 2378.7'
DDH-31 2399.5
DDH 71-5 2399.6'
DDH 71-1 2396
DDH-19 2369.2
DDH 71-3 2379.6'
DDH-11 2370.5
DDH WL-7 2386.2
DDH WL-9 2480.0
DDH 71-4 2420 est.
NOTE: SECTION E-E' PROJECTED 150'N. OF TRUE LOCATION
LEGEND
Structure Contours on top of major Coal Zone
Contour Interval = 200 Feet
2378.7' Surface Elevation
D.D.H. 71-2 Diamond Drill Hole
1144' Elevation of Coal Zone
(1067') Elevation of Basement rock penetrated by drill
Access Road
Datum - mean Sea Level
A — A' Section Line
BW - Bowron River 71(2)A
DATE REVISED NOV 09 1971
BY
DEPT. — EXPLORATION
DRAWN BY — Altair / k.k.
CHECKED — E. A.
APPROVED —
DATE — OCTOBER, 1971
SCALE — 1" = 400'
Bethlehem Copper Corporation Ltd
VANCOUVER BRITISH COLUMBIA
TITLE — BOWRON RIVER PROJECT STRUCTURE CONTOUR MAP
FILE NUMBER —
DRAWING NUMBER — 4-1 7

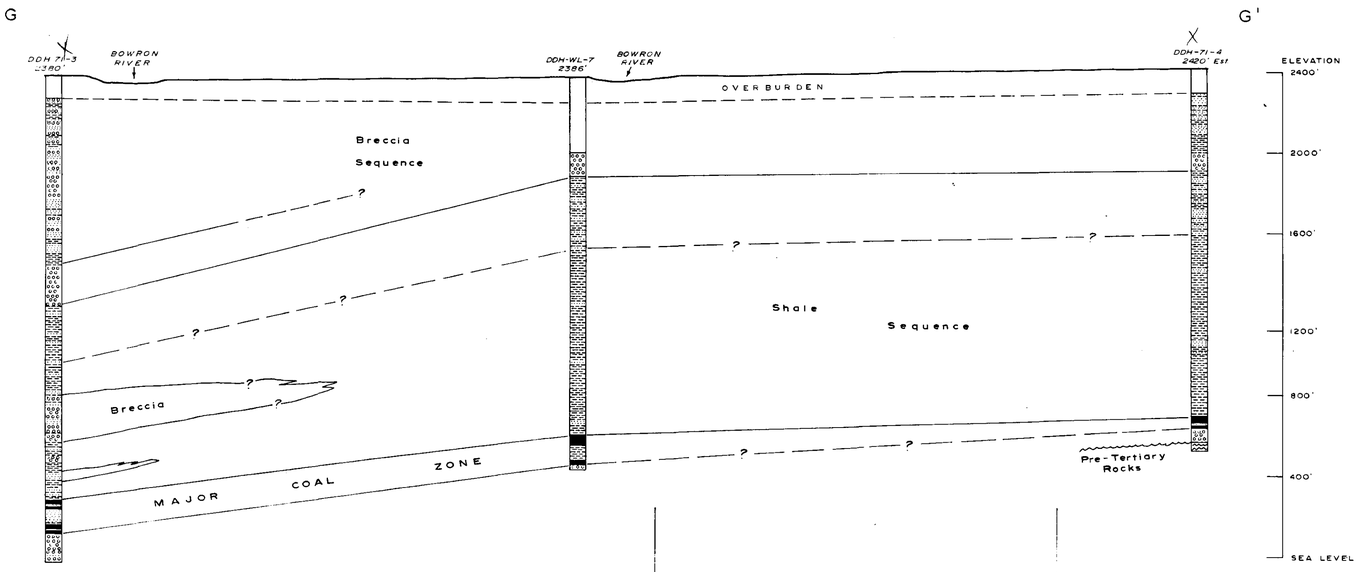


VERTICAL SECTION E-E'
LOOKING NORTH



VERTICAL SECTION F-F'
LOOKING N. 54° E.

VERTICAL SECTION G-G'
LOOKING N. 63° E.



DATE REVISED	BY	
NOV 09 1971		DEPT. — EXPLORATION
		DRAWN BY — Altair/mk
		CHECKED — E.A.
		APPROVED —
		DATE — NOV 1971
		SCALE — 1" = 400'

Bethlehem Copper CORPORATION LTD
VANCOUVER BRITISH COLUMBIA

TITLE —
BOWRON RIVER PROJECT
VERTICAL DRILL HOLE SECTIONS

FILE NUMBER —

DRAWING NUMBER —
5-2

7

BW - Bowron River 71(2)A

FILE No.

DRAWING No.

BCIL - 3110 - B.C.

LEGEND

- Qal — Quaternary Alluvium
- Tc — Coal Formation (Tertiary)
- Ms — Slide Mountain Group (Mississippian)
- Green Volcanics, Quartzite, Phyllite, Black Limestone
- Assumed Fault (Covered)
- Contact
- Assumed Bedding (Covered)
- Estimated Photo Dip
- R — Areas of Rock Outcrop

DATE REVISED	BY	
NOV 09 1971		DEPT. — EXPLORATION
		DRAWN BY — ALTAIR / b.d.
		CHECKED — E.A.
		APPROVED —
		DATE — AUGUST, 1971
		SCALE — 1" = 2000'

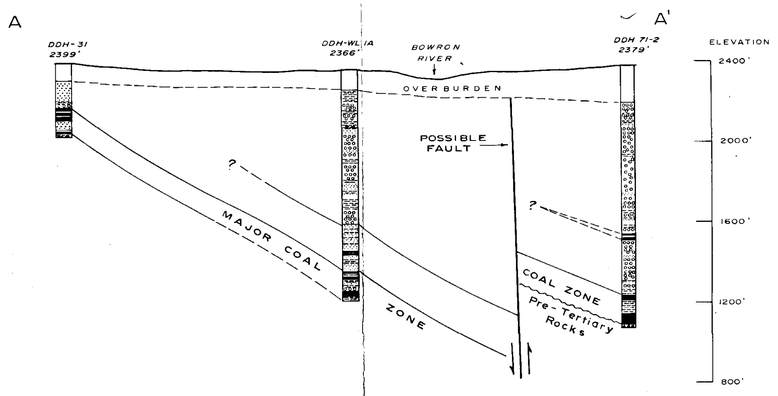
Bethlehem Copper Corporation Ltd. — Vancouver, British Columbia

TITLE — BOWRON RIVER PROJECT
PHOTOGEOLOGIC MAP

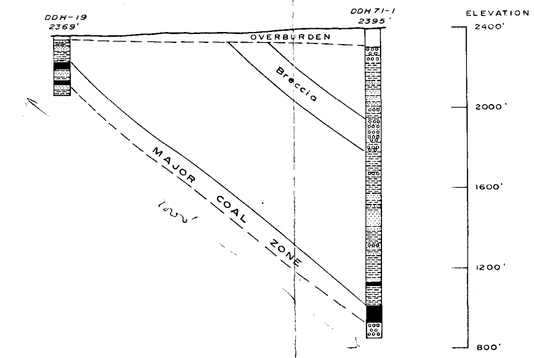
FILE NUMBER —

DRAWING NUMBER — 2-1

7 BW: Bowron River 71(2)A.

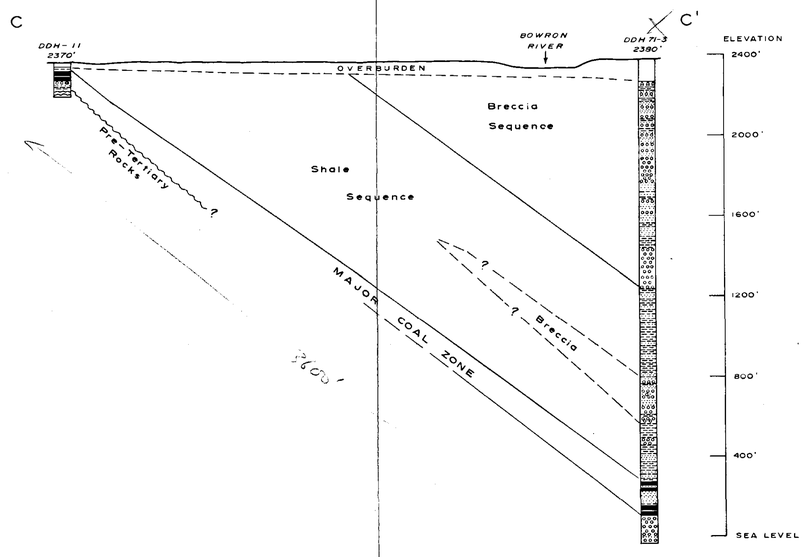


VERTICAL SECTION A-A'
LOOKING N. 7° W.

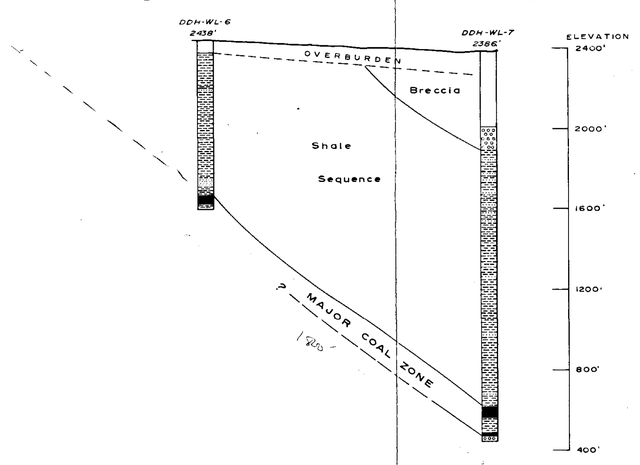


VERTICAL SECTION B-B'
LOOKING N. 41° W.

VERTICAL SECTION C-C'
LOOKING N. 17° W.



VERTICAL SECTION D-D'
LOOKING N. 22° W.



7

BW- BOWRON RIVER 71(2)A

DATE REVISED	BY	
NOV 09 1971		DEPT. — EXPLORATION
		DRAWN BY — Altair / m.k.
		CHECKED — E.A.
		APPROVED —
		DATE — NOV. 1971
		SCALE — 1" = 400'

Bethlehem Copper CORPORATION LTD
VANCOUVER BRITISH COLUMBIA

TITLE —
BOWRON RIVER PROJECT
VERTICAL DRILL HOLE SECTIONS

FILE NUMBER —	DRAWING NUMBER —
	5-1

TITLE
FILE No.
DRAWING No.

BCIL - 3170 - B/C.

BETHLEHEM COPPER CORPORATION L^{td}

COAL LOG

(M13)

PROPERTY .... BOWRON RIVER

HOLE NO. DDH-71-3

CO-ORDINATES .... 9361 N
.... 14177 E

ELEVATION 2379.6

DIP .... 90°

BEARING ....

TOTAL LENGTH .... 2412'

DRILL TYPE ....

REMARKS ....

DESCRIPTION

7

BETHLEHEM COPPER CORPORATION LTD

COAL LOG

PROPERTY ..... BOWRON RIVER

HOLE NO. ..... DDH 71-1

CO-ORDINATES .... 11683 N

..... 15489 E

ELEVATION 2404.0

DIP ..... 90°

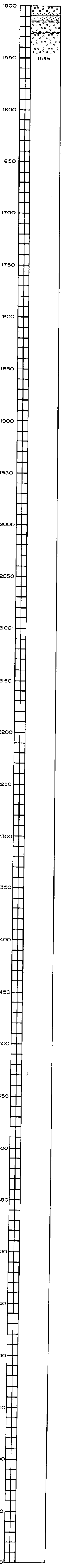
BEARING .....

TOTAL LENGTH .... 1546'

DRILL TYPE .....

REMARKS .....

DESCRIPTION



7

E HLEHEM COPPER CORPORATION LTD

COAL LOG

PROPERTY ..... BOWRON RIVER

HOLE NO. DDH-71-5

CO-ORDINATES ..... 12931 N
..... 14693 E

ELEVATION 2399.6

DIP ..... 90°

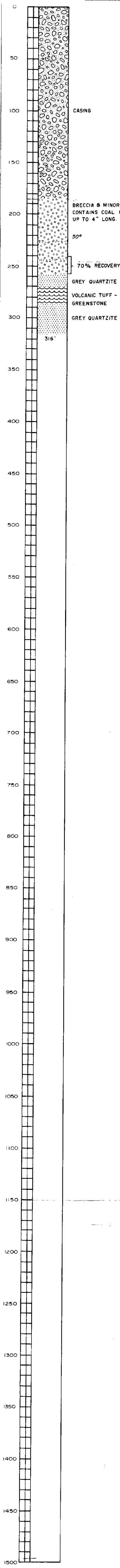
BEARING .....

TOTAL LENGTH ..... 316'

DRILL TYPE .....

REMARKS .....

DESCRIPTION



7

THLEHEM COPPER CORPORATION L

COAL LOG

PROPERTY .... BOWRON RIVER

HOLE NO. DDH-71-4

CO-ORDINATES ... 4470 N Est.
.... 16760 E

ELEVATION .... 2420 Est.

DIP .... 90°

BEARING ....

TOTAL LENGTH ...

DRILL TYPE ....

REMARKS ....

M16

Bowron River 71(2)4

DESCRIPTION

7

THLEHEM COPPER CORPORATION LT
COAL LOG

PROPERTY .... BOWRON RIVER (M17)

HOLE NO. DDH-71-4

CO-ORDINATES ... 4470 Est. N
16760 E

ELEVATION .... 2420 Est.

DIP .... 90°

BEARING ....

TOTAL LENGTH ...

DRILL TYPE ....

REMARKS ....

DESCRIPTION

7

BETHLEHEM COPPER CORPORATION LTD.

COAL LOG

PROPERTY .... BOWRON RIVER

HOLE NO. DDH-71-3

CO-ORDINATES ..... 9361 N
..... 14177 E

ELEVATION 2379.6

DIP .... 90°

BEARING ....

TOTAL LENGTH ... 2412'

DRILL TYPE ....

REMARKS ....

DESCRIPTION

THLEHEM COPPER CORPORATION L[T]

COAL LOG

PROPERTY ..... BOWRON RIVER

HOLE NO. ..... DDH 71-1 (M19)

CO-ORDINATES ... 11683 N

..... 15489 E

ELEVATION 2404.0

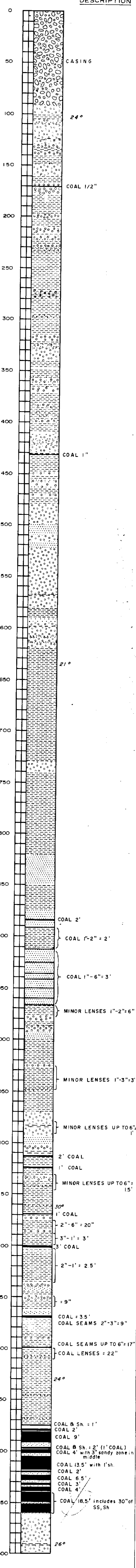
DIP ..... 90°

BEARING .....

TOTAL LENGTH ... 1546'

DRILL TYPE .....

REMARKS .....



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