

1978 ASSESSMENT REPORT

TITLE: DIAMOND DRILLING REPORT
KITSALT PROPERTY

CLAIMS: LEASE NO. 172, 173, 174, 175,
176, 177, 180, 190, 157, 158,
BLUE 4 FR., BLUE 5 FR., BLUE 6 FR.,
BLUE 1, and BLUE 2

MINING DIVISION: SKEENA MINING DIVISION

NTS LOCATION: NTS 103 *P/W EW*

LATITUDE AND
LONGITUDE: 55°26' N. and 129°27' W.

OWNER AND
OPERATOR: CLIMAX MOLYBDENUM CORPORATION
OF BRITISH COLUMBIA, LIMITED

AUTHOR: ROGER C. STEININGER

DATE SUBMITTED: FEBRUARY 13, 1979

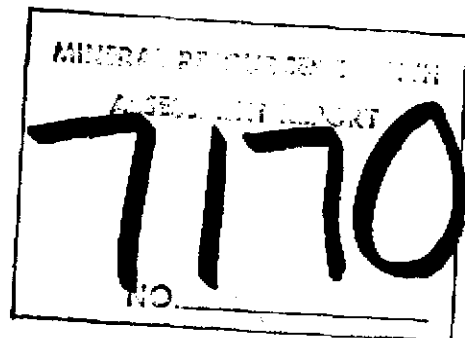


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INTRODUCTION

Location and access

The Kitsault property is approximately four miles south of the town of Alice Arm, and two miles south of the Kitsault townsite. Access to the property is by road from Kitsault to the open pit and by helicopter to Mohawk Mountain (Figure 1).

Physiography

Claims are between sea level and 2,500 feet elevation. Upper elevations are either thickly wooded or open swampy ground. At lower elevations tree and bush cover is extremely dense. Slopes are generally steep; deeply incised gulleys are common in the northern and eastern parts of the claim group.

History

The leases were originally owned by B.C. Molybdenum, Limited. Climax Molybdenum Corporation of British Columbia, Limited purchased these leases in 1973. The Blue and Blue Fraction claims were staked for Climax in the summer of 1978.

The area is of interest for its known and potential molybdenum mineralization.

SCOPE OF PRESENT WORK

One NQ-BQ diamond core hole was drilled into the claims (Figure 2). This hole, LC-78-6, is 457.4 m long.

DRILLING RESULTS

Hole LC-78-6 was collared vertically and stayed essentially straight throughout its length, with a bottom bearing of N. 38° W. and an inclination of -85° (survey data in Appendix B). The collar location shown on Figure 2 is at an elevation of approximately 2,000 feet above sea level. The hole was a BQWL size for its entire length of 1,502 feet (457.4 m). Drilling started on September 10, 1978, and was completed on September 24, 1978. A statement of costs for this drilling is in Appendix C.

Drill hole LC 78-6 was collared in graywacke and micrograywacke members of the Bowser Lake Group. The entire hole consists of alternating layers of graywacke, micrograywacke, and argillite. Individual layers vary from a few centimeters to as much as 20 m thick. Contacts between the units are sharp and cut the core axis at angles of 45 to 60°. Numerous small faults or fracture zones are common throughout the drill hole, but the amount of movement could not be determined. Localized areas of the core have been weakly hornfelsed. This alteration probably is part of the outer halo of the Lime Creek intrusive complex thermal aureole. The only mineralization encountered was 1- to 5-mm-wide calcite veins in rare 1- to 7-mm-wide quartz-pyrite veins. Several narrow mafic porphyry dikes were intersected by the drill hole. A detailed geologic log is in Appendix A.

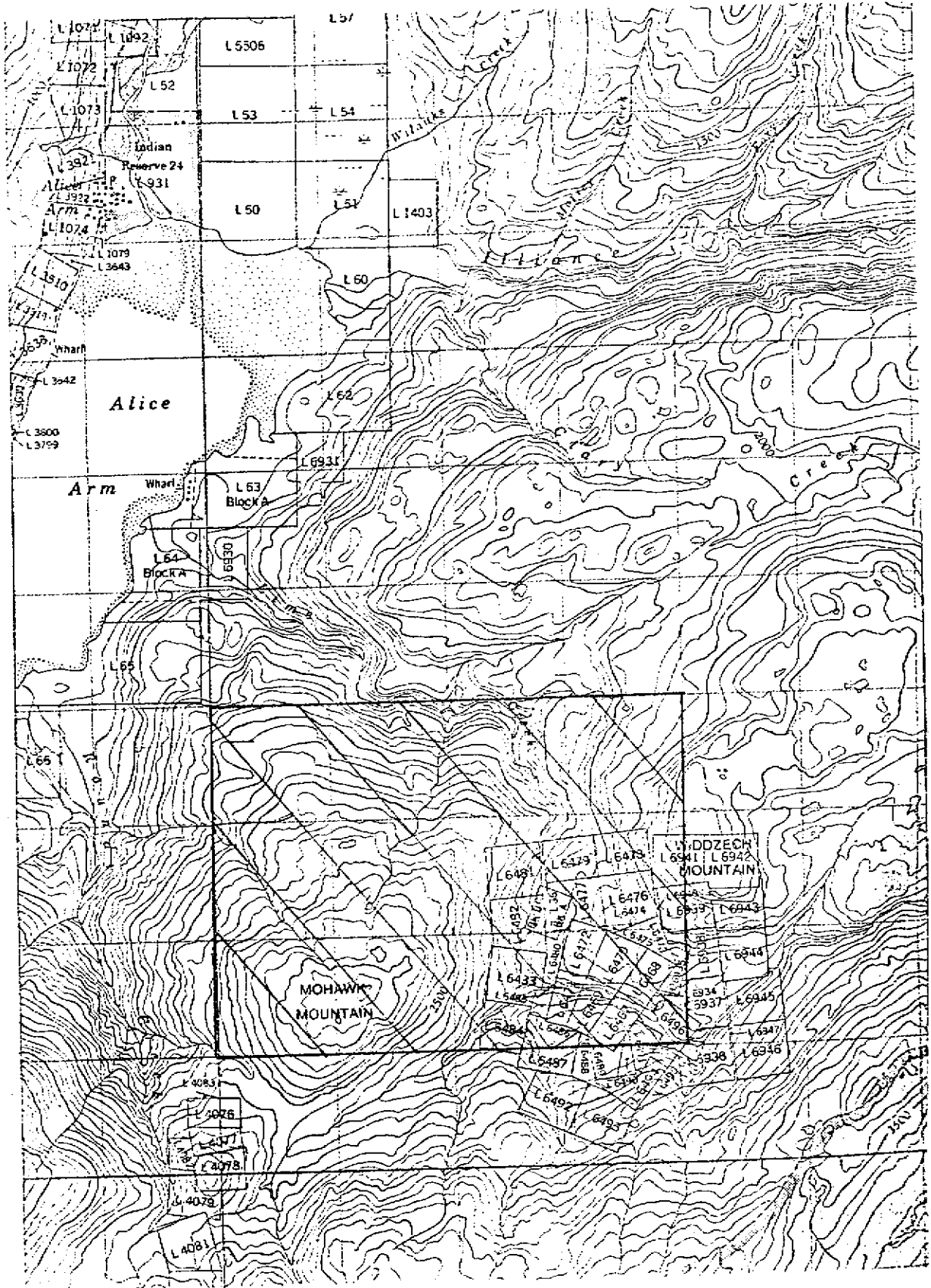


Figure 1. Approximate region of interest shown by striped area. Map is a portion of the 1:50,000 Aiyansh sheet NTS 103 P/6. North to top.

This hole was designed to test for mineralization and to supply ground condition information along the line of a proposed tailing disposal tunnel. The results from this drill hole have satisfied these objectives. There are no assays for this hole.

Roger Steninger

AUTHORS QUALIFICATIONS

Roger C. Steininger

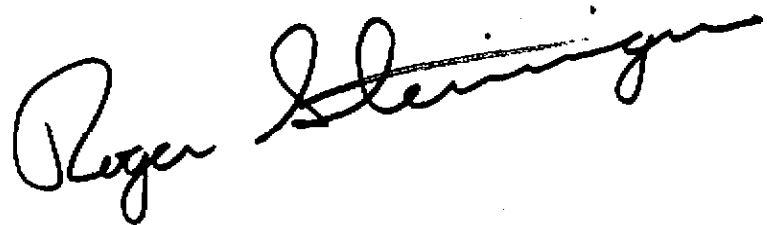
Education

B.S. - Geology, 1964, Western Michigan University
M.S. - Geology, 1966, Brigham Young University
Ph.D. - Geology, in progress, Colorado State University

Professional Experience

1967-1971 Associate Geologist to Senior Geologist,
Climax Mine

1971 to present Senior Project Geologist, Climax Molybdenum
Company. Responsible for exploration and
evaluation of molybdenum and tungsten prop-
erties throughout North America.

A handwritten signature in black ink that reads "Roger Steininger". The signature is written in a cursive style with a long, sweeping underline that extends to the right.

CLAIM STATUS

<u>Claim Name</u>	<u>Record</u>	<u>Work Due Date</u>
Lease No. 58	L6468	
Lease No. 157	L6467	
Lease No. 172	L6489	
Lease No. 174	L6488	
Lease No. 175	L6473	
Lease No. 175	L6474	
Lease No. 175	L6475	
Lease No. 173	L6492	
Lease No. 176	L6476	
Lease No. 177	L6477	
Lease No. 180	L6494	
Lease No. 190	L6493	
Blue 4 Fr.	658	June 22, 1979
Blue 5 Fr.	915	June 22, 1979
Blue 6 Fr.	916	June 22, 1979
Blue 1	646	June 22, 1979
Blue 2	647	June 22, 1979

APPENDIX A.

DRILL LOG FOR DRILL HOLE LC 78-6

- 0 - 52' Bedrock.
- 52 - 91' Interlayered micrograywacke and argillite. The majority of the rock type is argillite. Rock is moderately fractured from 53 to 54.5 ft, 70 to 78 ft, and 81 to 83 ft.
- 91 - 95' Mafic porphyry dike, moderately fractured throughout.
- 95 - 160' Interlayered argillite and micrograywacke. The major rock type is argillite. Moderately fractured from 95 to 107 ft, 116 to 117 ft, and 158 to 159 ft.
- 160 - 170' Weakly hornfelsed graywacke. Seams of fine-grained brown biotite up to 1 cm wide with clots of secondary(?) biotite to 2 mm. in the intervening rock. Sample of this hornfels at 168 ft.
- 170 - 201' Argillite with minor micrograywacke. Interval is weakly to moderately fractured throughout. Calcite-gash veins become more abundant as fracturing increases.
- 201 - 226' Micrograywacke with minor interlayered argillite. Rock is weakly hornfelsed, containing fine-grained disseminated brown biotite. From 204 to 226 ft core is moderately to strongly fractured with an increase in calcite-gash veins.
- 226 - 285' Argillite with interbedded graywacke. Moderately fractured from 253 to 256 ft.
- 285 - 424' Graywacke. Massive bedding, minor calcite-gash veins. Sample at 420 ft.
- 424 - 600' Argillite with interbedded micrograywacke. The contact between the argillite and the graywacke at 424 ft cuts the CA at 70°. The micrograywackes appear to be weakly hornfelsed with clots of disseminated brown biotite. Throughout the interval numerous 2- to 10-cm-wide moderately to strongly broken zones that have associated minor gouge and argillization probably represent a series of narrow faults. At 534 ft a 4-inch mafic porphyry dike.
- 600 - 865' Interbedded micrograywacke and argillite. The micrograywacke is weakly hornfelsed and has a light-brown color imparted by finely divided biotite flakes. Core is moderately broken from 760 to 768 ft, 790 to 794 ft, 808 to 809 ft, and 819 to 828 ft.
- 865 - 936' Graywacke with minor argillite layers. Rock is weakly hornfelsed and has a light-brown color imparted by finely divided brown biotite. From 867 to 880 ft numerous calcite-gash veins. Rock is moderately broken from 884 to 895 ft and 900 to 917 ft.
- 936 - 950' Probable fault zone consisting of moderately broken rock, argillized argillite, minor gouge, minor shears, and a quartz vein filling. The fault zone from 937 to 940 ft contains numerous fragments of argillite and micrograywacke.
- 950 - 1055' Graywacke weakly hornfelsed. Moderately broken from 980 to 998 ft with associated argillization.
- 1055 - 1125' Interlayered micrograywacke and argillite. Bedding cuts the CA at 45°. Rock is weakly to moderately fractured from 1073 to 1080 ft and 1090 to 1098 ft.
- 1125 - 1414' Graywacke is weakly hornfelsed. At 1301 ft a 7-mm-wide quartz-pyrite vein cuts the CA at 45° and contains a bleached halo. This is the first sign of mineralization in this hole. Hornfelsing occurs in patches and is generally most intense in association with the coarser grained graywacke. Within this interval are numerous interlayered argillite layers that are essentially unhornfelsed, suggesting that the more per-

meable graywacke intervals were more susceptible to the movement of heat and fluids causing the hornfelsing. Moderately fractured zones from 1245 to 1249 ft, 1290 to 1293 ft, 1313 to 1318 ft, 1339 to 1341 ft, 1346 to 1355 ft, 1357 to 1368 ft, and 1373 to 1374 ft.

1414 - 1502' Interlayered micrograywacke and argillite, with the micrograywacke being weakly hornfelsed. Rock is moderately to strongly fractured from 1419 to 1422 ft and 1482 ft to end of interval.

Footage _____

DATE 9/26/78Logged by B.R.T.

Depth From-To	% Recovery	Max Core Length	Pieces of Core	RQD	Comp	Remarks	Estimated MoS ₂
0-52						OVERBURDEN	
52-60	98	0.55	49	15.5			
60-70	100	1.1	35	50			
70-80	89	1.05	40	21			
80-90	87	0.35	52	NIL			
90-100	93	0.65	66	0.65			
100-110	90	1.2	43	42.5			
110-120	100	1.0	27	39			
120-130	100	2.2	17	82			
130-140	93	1.55	15	78			
140-150	100	1.0	23	73.5			
150-160	96	1.35	45	61			
160-170	100	1.0	45	31			
170-180	84	0.6	59	11			
180-190	89	0.8	42	34			
190-200	89	0.5	62	9			
200-210	100	1.35	38	37.5			
210-220	85	1.2	43	31.5			
220-230	98	0.6	73	34.5			
230-240	100	1.55	26	49			
240-250	96	1.25	30	48			
250-260	100	0.9	42	25			
260-270	97	3.9	15	62.5			
270-280	88	3.6	4	88			
280-290	100	1.4	16	44.5			
290-300	100	3.2	8	100			
300-310	100	1.45	24	60			
310-320	100	3.85	4	100			
320-330	97	5.05	6	65			
330-340	100	4.9	10	93			

Footage _____

DATE 9/26/78

Logged by B.R.T.

Depth From-To	% Recovery	Max Core Length	Pieces of Core	RQD	Comp	Remarks	Estimated MoS ₂
340-350	97	2.35	14	73			
350-360	94.5	1.95	13	62.5			
360-370	100	2.45	10	93.5			
370-380	98	2.3	9	88			
380-390	100	2.9	15	70			
390-400	88	3.9	12	70.5			
400-410	100	2.3	34	36			
410-420	93	1.55	24	53			
420-430	100	0.95	27	42			
430-440	83	0.75	45	40			
440-450	100	0.95	36	33.5			
450-460	97	1.7	27	34			
460-470	96	0.8	29	37.5			
470-480	99	1.8	24	59			
480-490	95	0.7	41	23.5			
490-500	93.5	0.7	39	26			
500-510	100	0.6	47	23.5			
510-520	83	0.85	51	15.5			
520-530	97	1.1	38	36			
530-540	80	0.75	33	35			
540-550	92	1.5	30	54.5			
550-560	94	0.9	35	41.5			
560-570	97	1.65	23	62			
570-580	98	1.25	20	72			
580-590	100	1.1	18	56			
590-600	100	1.75	22	68			
600-610	71	0.6	36	10			
610-620	99	1.9	36	62			
620-630	98	0.65	41	28			
630-640	100	1.55	28	65.5			

Footage _____

DATE 9/26/78

Logged by B.R.T.

Depth From-To	% Recovery	Max Core Length	Pieces of Core	RQD	Comp	Remarks	Estimated MoS ₂
640-650	89	1.2	24	48.5			
650-660	100	1.65	25	66.5			
660-670	99.5	1.5	26	64			
670-680	95.5	1.2	26	49			
680-690	98	0.65	35	27.5			
690-700	100	1.75	28	63			
700-710	100	1.25	26	62			
710-720	96	1.55	23	56.5			
720-730	100	0.75	29	50			
730-740	99	1.55	15	79			
740-750	97	4.75	10	69			
750-760	100	3.1	10	72.5			
760-770	100	1.6	55	20			
770-780	98	1.25	22	77			
780-790	69.5	1.4	20	27			
790-800	95	1.35	37	35			
800-810	95	1.1	31	48			
810-820	91.5	0.75	45	36			
820-830	97	1.2	61	19			
830-840	97	1.3	16	76.5			
840-850	100	1.3	31	56			
850-860	97.5	0.9	23	49			
860-870	95	0.8	52	24			
870-880	100	0.9	53	26.5			
880-890	93	0.8	49	24			
890-900	97	0.65	55	13.5			
900-910	98	0.4	59	0.8			
910-920	91	0.6	43	18			
920-930	100	1.2	24	63			
930-940	94	1.2	50	28			

Footage _____

DATE 9/27/78Logged by B.R.T.

Depth From-To	% Recovery	Max Core Length	Pieces of Core	RQD	Comp	Remarks	Estimated MoS ₂
940-950	85	0.85	43	18			
950-960	100	1.55	29	65			
960-970	95	1.4	28	51.5			
970-980	100	0.7	33	22			
980-990	98	0.4	62	0.4			
990-1000	100	1.0	59	30.5			
1000-1010	96	0.75	34	54			
1010-1020	100	3.25	23	62.5			
1020-1030	100	1.55	30	40.5			
1030-1040	90	1.0	25	46			
1040-1050	98	1.25	36	31			
1050-1060	93.5	1.5	41	36			
1060-1070	97	1.15	30	46.5			
1070-1080	88.5	0.65	41	25.5			
1080-1090	89	0.95	28	51			
1090-1100	100	2.0	48	39			
1100-1110	98	2.85	8	86			
1110-1120	100	1.45	20	82.5			
1120-1130	90.5	0.75	27	35.5			
1130-1140	100	1.75	23	55.5			
1140-1150	100	1.6	24	63			
1150-1160	49	1.0	33	38.5			
1160-1170	98.5	2.9	15	71			
1170-1180	94	1.8	30	45			
1180-1190	100	1.85	19	71			
1190-1200	100	2.5	14	92			
1200-1210	100	1.45	30	57.5			
1210-1220	98.5	1.45	54	39.5			
1220-1230	98	0.85	33	25			
1230-1240	100	1.3	20	72.5			

Footage DATE 9/26/78Logged by B.R.T.

Depth From-To	% Recovery	Max Core Length	Pieces of Core	RQD	Comp	Remarks	Estimated MoS ₂
1240-1250	51	0.5	32	14			
1250-1260	54	0.65	32	16			
1260-1270	100	0.85	48	31			
1270-1280	84.5	0.6	48	28			
1280-1290	84	0.6	43	28			
1290-1300	93	1.0	35	40.5			
1300-1310	100	1.4	22	55.5			
1310-1320	100	1.65	58	24.5			
1320-1330	100	0.9	31	37			
1330-1340	95	2.6	23	58			
1340-1350	90	0.95	56	13.5			
1350-1360	95.5	1.05	47	32			
1360-1370	89.5	0.8	45	23			
1370-1380	100	1.4	17	65			
1380-1390	100	4.25	18	76			
1390-1400	99	3.15	16	77			
1400-1410	100	6.15	7	100			
1410-1420	100	1.8	25	62			
1420-1430	100	1.4	26	53			
1430-1440	100	1.8	13	74			
1440-1450	100	1.7	17	74			
1450-1460	99	2.0	20	44			
1460-1470	92	0.8	38	29			
1470-1480	91.5	2.7	20	58.5			
1480-1490	100	1.1	45	26			
1490-1500	80	0.85	35	29.5			
1500-1502	19	0.4	17	0.4			
						End of DDH LC 78-6 at 1502'	

Footage _____

DATE 9/26/78

Logged by B.R.T.

Depth From-To	% Recovery	Max Core Length	Pieces of Core	RQD	Comp	Remarks	Estimated MoS ₂
						Zones of Intense Fracturing	
						216 to 226 ft	
						760 to 767 ft	
						825 to 828 ft	
						886 to 889 ft	
						1363 to 1364 ft	
						1499 to 1500.6 ft	

APPENDIX B

SURVEY DATA FOR DRILL HOLE LC 78-6

SURVEY DATA

LC 78-6

<u>Footage</u>	<u>Inclination</u>	<u>Bearing</u>
70	-89°	N.47°E.
170	-89°	N.63°W.
290	-89°	N.53°W.
400	-88°	N.53°W.
500	-88°	N.58°W.
577	-88°	N.58°W.
700	-87°	N.63°W.
820	-86°	N.58°W.
900	-86°	N.53°W.
1060	-84°	N.23°W.
1200	-86°	N.48°W.
1300	-85°	N.43°W.
1400	-86°	N.43°W.
1502	-85°	N.38°W.

APPENDIX C
STATEMENT OF COSTS



CAMERON McCUTCHEON DRILLING LIMITED

DIAMOND DRILLING CONTRACTORS

Telephone 253-5251
Telex: 04-54311

745 Clark Drive
Vancouver, B.C.
V5L 3J3

INVOICE NO. 12056

JOB NO. 355

OCTOBER 5TH, 1978

Climax Moly Corp. of B.C. Ltd.
13949 West Colfax Ave.
Golden, Colorado
U.S.A. 80401

Attention: Mr. Roger Steininger

RE: SURFACE DRILLING AT ALICE ARM

DEMOBILIZATION (LUMP SUM)		\$ 2,617.50
HOLE #78-4B B.Q.	1623' - 1920' = 297' @ \$18.50	5,494.50
HOLE #78-6 NW/BW	0' - 52' = 52' @ \$16.50	858.00
	B.Q. 52' - 1000' = 948' @ \$15.25	14,457.00
	1000' - 1500' = 500' @ \$16.50	8,250.00
	1500' - 1502' = 2' @ \$18.50	37.00
SITE COSTS	SCHEDULE A	5,814.33
SUPPLIES	SCHEDULE B	5,984.98
DIAMOND CREDIT	SCHEDULE C	<u>(188.36)</u>
		<u>\$43,324.95</u>

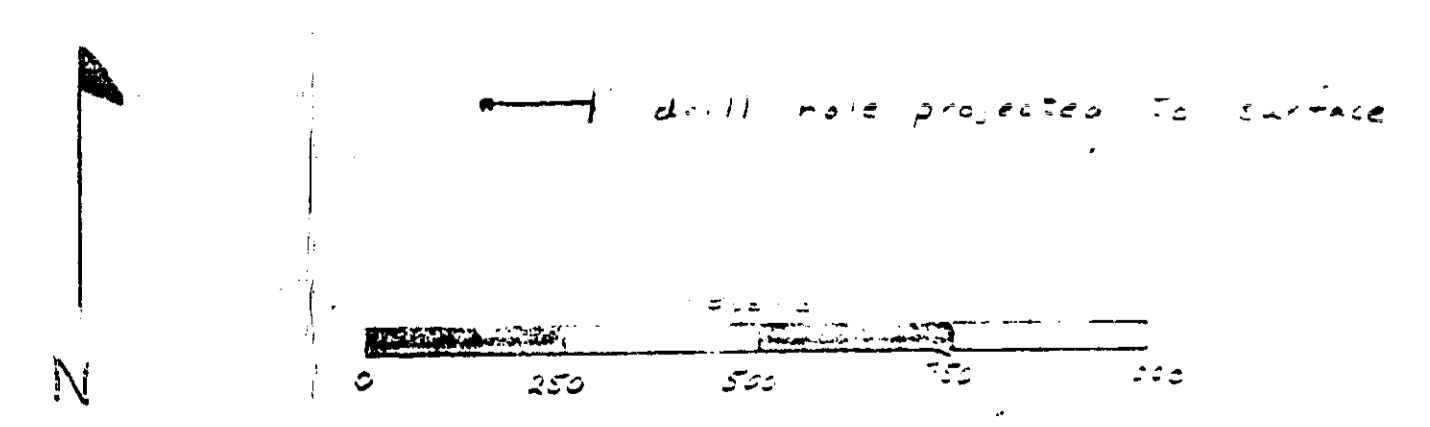
DIRECT PAYMENT	
PURCHASE APPROVED & PAID	
DEPT. HEAD	WAW
DATE	10/16/78
AMOUNT	P.C.C.
SCHE	1.0. 870-984-11000
KITSAULT	BCK 15
FINAL APPROVAL	<i>[Signature]</i>

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GEOLOGY DEPARTMENT



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Figure 2-Location map for drill hole LC78-6



Roger Steinger

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