

DRILLING REPORT DDH 147/150 INCLUSIVE

YORKE-HARDY PROPERTY

OMENICA MINING DIVISION

93L/14W

Lat 54°49' Long 127°18'

Climax Molybdenum Corp. of B.C. Ltd.
Box 696 Smithers, B.C.

August 30, 1979

D.A. Davidson M.A.Sc. P.Eng.
Project Supervisor

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

7565

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HOLE No. 149

ROCK DESCRIPTION

- 0 - 110 Mixed zone of porphyritic granodiorite and stoped volcanic blocks. Felspar phenocrysts in the granodiorite range in size to 3mm forming up to 4% of the rock. Groundmass grain size is 0.5 - 1mm with 5% chlorite. Mafic volcanic blocks are equigranular plagioclase and hornblende, often altered to chlorite clots to 1cm size of garnet, epidote, chlorite, magnetite and sericite form 5 - 10% of the rock. Halos of felspar and phyllic envelope veins. Veins include quartz + molybdenite, magnetite and pyrite.
- 110 - 170 Granodiorite Grey and equigranular, with 10% mafics. Much phyllic alteration envelopes quartz, magnetite and molybdenite veins.
- 170 - 200 Mixed zone (as 0 - 110)
- 200 - 285 Zone of pervasive alteration has obliterated primary minerals with resulting loss of texture. Veins of quartz, molybdenite and scheelite in secondary K-felspar, sericite, quartz, plagioclase and pyrite.
- 285 - 416 Mottled grey, green and pink granodiorite. 2 mm felspar phenocrysts up to 5% of the rock, in quartz felspar chlorite (5 - 10%) groundmass, with 0.75 grain size. Clots to 3 cm of garnet, epidote, chlorite, magnetite and sericite. Bleach and pink colored felspar and grey to green phyllic halos envelope quartz, magnetite, molybdenite, chalcopyrite and scheelite.

HOLE No. 150

ROCK DESCRIPTION

- 0 - 44 Mixed zone of normal granodiorite and stoped volcanic blocks. Ratio 2:1 Granodiorite is mottled green and grey with up to 20% mafic minerals and is locally porphyritic, 2mm buff, subhedral feldspar laths may form 5% of the rock. Volcanic blocks are black, fine grained and equigranular. Development of chlorite + magnetite + sericite spots or clots of alteration to 1 cm width. Veining includes narrow magnetite veins forming a stockwork and rare quartz molybdenite veins.
- 44 - 53 Quartz + molybdenite vein
- 53 - 190 Granodiorite as above, here clots of garnet and epidote have replaced 10% of the primary minerals. Zones of pervasive alteration due to intense veining. Good quartz + molybdenite stockwork. Some scheelite veins.
- 190 - 380 Mixed zone (as 0 - 44) Good regular quartz + molybdenite veins
- 380 - 416 Granodiorite (as 53 - 190) Here molybdenite rare, quartz + scheelite veins and magnetite stockwork occur.
- 416 End of hole.

HOLE No. 147

ROCK DESCRIPTION

- 0 - 90 Mixed zone of Granodiorite and Mafic Volcanic (?) blocks. Granodiorite is porphyritic with Felspar Phenocrysts to 4mm in a groundmass averaging 1mm. Colour is mottled green and pink. Mafic blocks are dark green to black. Equigranular, rarely Ophitic, and some are Porphyritic. Contact between blocks and Granodiorite is usually sharp, some are brecciated with fragments of Granodiorite generally angular in a mafic matrix. Mineralisation includes magnetite stockwork, narrow Pyrite, Chalcopyrite fracture coatings and Molybdenite + Quartz + Calcite veins to 1 cm width. Garnet, Epidote, Chlorite alteration spots.
- 90 - 130 Granodiorite, as above.
- 130 - 164 Mixed zone of Granodiorite and Mafic blocks, as above, weak mineralisation, pervasive Phyllic alteration.
- 164 - 400 Granodiorite as above. Several large Molybdenite veins with Quartz - Calcite Gangue. Strong Phyllic alteration. Increased development of secondary K-Felspar as Halos surrounding Quartz - Molybdenite, Quartz - Scheelite and Quartz - Pyrite veins. Mafic mineral content increases to 20%, mainly chlorite. Minor Garnet, Chlorite, Sericite, Epidote spots.
- 400 - 421 Mixed zone of Granodiorite and Mafic blocks.

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OF BRITISH COLUMBIA, LIMITED

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August 30, 1979

Ministry of Energy, Mines
and Petroleum Resources,
Victoria, B.C.

Dear Sirs:

This report contains geology logs for DDH 147/150 inclusive, for underground drilling done on our Yorke-Hardy property in the Omenica Mining Division near Smither, B.C. (Lat $54^{\circ}49'$, Long. $127^{\circ}18'$).

The program consisted of the preparation of drill stations and the drilling of 4 "up-holes" with an aggregate footage of 1729 feet. The work was performed by Canadian Mine Services.

The holes were drilled on Mineral Leases M-82, M-83 and M-85. Surface support for the work operated on Mineral Lease M-81.

Drill core was logged by Dr. D. Atkinson. All core was crushed, and the reject material is stored at the Climax warehouse in Smithers, B.C.

Yours sincerely,



D. Davidson M.A.Sc. P.Eng.
Project Supervisor

DD/bd

HOLE No. 148

ROCK DESCRIPTION

- 0 - 85 Mixed zone of granodiorite and mafic believed volcanic stopped blocks. Granodiorite is green porphyritic in parts, feldspar phenocrysts to 2mm up to 5% of the rock. Mafic blocks are black to dark green and equigranular. Alteration includes clots to 2 cm of garnet rimmed with epidote or chlorite + magnetite + sericite spots to 1 cm. Feldspar and phyllic alteration occurs as narrow halos enveloping stockwork fracture of magnetite, chlorite, quartz, molybdenite, pyrite, chalcopyrite and rare scheelite.
- 85 - 120 Green granodiorite, feldspar phenocrysts 2-5 mm form 5% of the rock. Alteration includes clots (as above) and extensive replacement of primary minerals by secondary feldspar, sericite, quartz and pyrite with loss of original texture.
- 120 - 190 Mixed zone (as 0 - 85) of granodiorite and mafic blocks.
- 190 - 380 Dark green granodiorite, up to 25% mafic minerals. Porphyritic, feldspar phenocrysts 2mm size up to 4% of rock. Alteration includes chlorite, magnetite sericite clots, development of secondary chlorite replacing primary mafic (biotite?) minerals and feldspars. Much feldspar and phyllic alteration has masked primary igneous texture. Veining is intense, vein fillings are quartz, K-feldspar, calcite, molybdenite, chlorite, secondary biotite, pyrite, chalcopyrite and magnetite.
- 380 - 476 Granodiorite with 2mm feldspar phenocrysts up to 5% of rock. Clots of garnet, epidote, chlorite, sericite and magnetite to 2 cm size. Other alteration is silicification and development of secondary feldspar (soda feldspar) resulting in light coloured rock. Veins are chlorite, pyrite, magnetite, quartz, molybdenite, rare chalcopyrite and scheelite.

DDH	CO-ORDS	ELEV	CORE SIZE	INC	BRG
147	17,300N 15,000E	3517	HQ	+38°	270°
148	17,300N 15,000E	3517	HQ	+40°	90°
149	17,300N 15,000E	3520	HQ	+90°	-
150	17,500N 15,000E	3517	HQ	+45°	270°

EXHIBIT A

Drilling Payments

A. Total cost of mobilization from point of origin to the portal area and demobilization (one-half paid after move on and one-half when job is complete).....\$5,000.00

B. COMPANY shall pay CONTRACTOR the sum of Fifty-three Dollars (\$53.00) per hour plus ten percent (10%), for each hour, or a pro-rata portion thereof for each drilling rig which COMPANY requests be held in readiness to resume drilling pending completion by COMPANY of probing, depth measurements, or surveying of the hole, or pending further instructions from COMPANY. CONTRACTOR shall make no claim for, and COMPANY shall have no duty or obligation to pay CONTRACTOR, standby payments for any time elapsing between the end of any work day or shift and the beginning of the next succeeding work day or shift, or for any time when CONTRACTOR has not been specifically requested by COMPANY to stand by, including any standby or delay resulting from CONTRACTOR's acts, omissions, or neglect or breakdown of CONTRACTOR's equipment, except as to standby time required for the setting of cement and delays caused by other contractors pursuant to Paragraph C of Article XI, Other Contractors, Company Access, and Cooperation, which shall be deemed as standby requested by COMPANY.

C. Core drilling, per linear foot:

<u>Linear Foot</u>	<u>HQ</u>	<u>NQ</u>	<u>BQ</u>
0 to 500'	\$19.75	\$18.25	\$16.75
500 to 750'		21.00	19.50
750 to 1,000'		28.00	26.00

D. Drilling equipment time -- two-man crew and equipment:

1. Cementing, regaining lost circulation, and hole conditioning, per hour plus materials used. *(Also stabilization and delays attributed to high water inflows)*\$57.00 plus 10%
2. Installing and pulling casing, per hour....\$57.00 plus 10%

- 3. Reaming (plus CONTRACTOR's third-party invoice cost for bits and all consumables f.o.b. jobsite), per hour.....\$57.00 plus 10%
- 4. Re-entry and cleaning out old hole (plus CONTRACTOR's third-party invoice cost of all bits and supplies, f.o.b. jobsite), per hour.....\$57.00 plus 10%
- 5. Hole survey (plus cost, if any, of instrument rental), per hour.....\$57.00 plus 10%
- 6. Move in from portal and set-up on first borehole, and tear-down of last borehole and move out to portal at job completion, per hour.....\$53.00 plus 10%
- 7. Interstation moves, in excess of 20 man-hours, per hour.....\$53.00 plus 10%
No charge for moves within the station.
- 8. Supplies consumed, damaged beyond re-use, or lost in boreholes on which work is progressing on a site-cost basis would be charged at field replacement cost. *PLUS 10% per N.F.R.*
- 9. Additional personnel in excess of two-man crew, per man-hour.....\$17.75 plus 10%

E. Casing left in hole at COMPANY's request will be charged at replacement cost plus twelve percent (12%).

F. Drill mud, drill mud additives, and cement used will be charged at CONTRACTOR's ~~published list prices plus ten percent (10%) for handling and transportation to the jobsite.~~

*net cost f.o.b
job site +10%*

N.F.R.

N.F.R.

No other charges shall be paid to or billed by CONTRACTOR without prior written approval of the COMPANY.

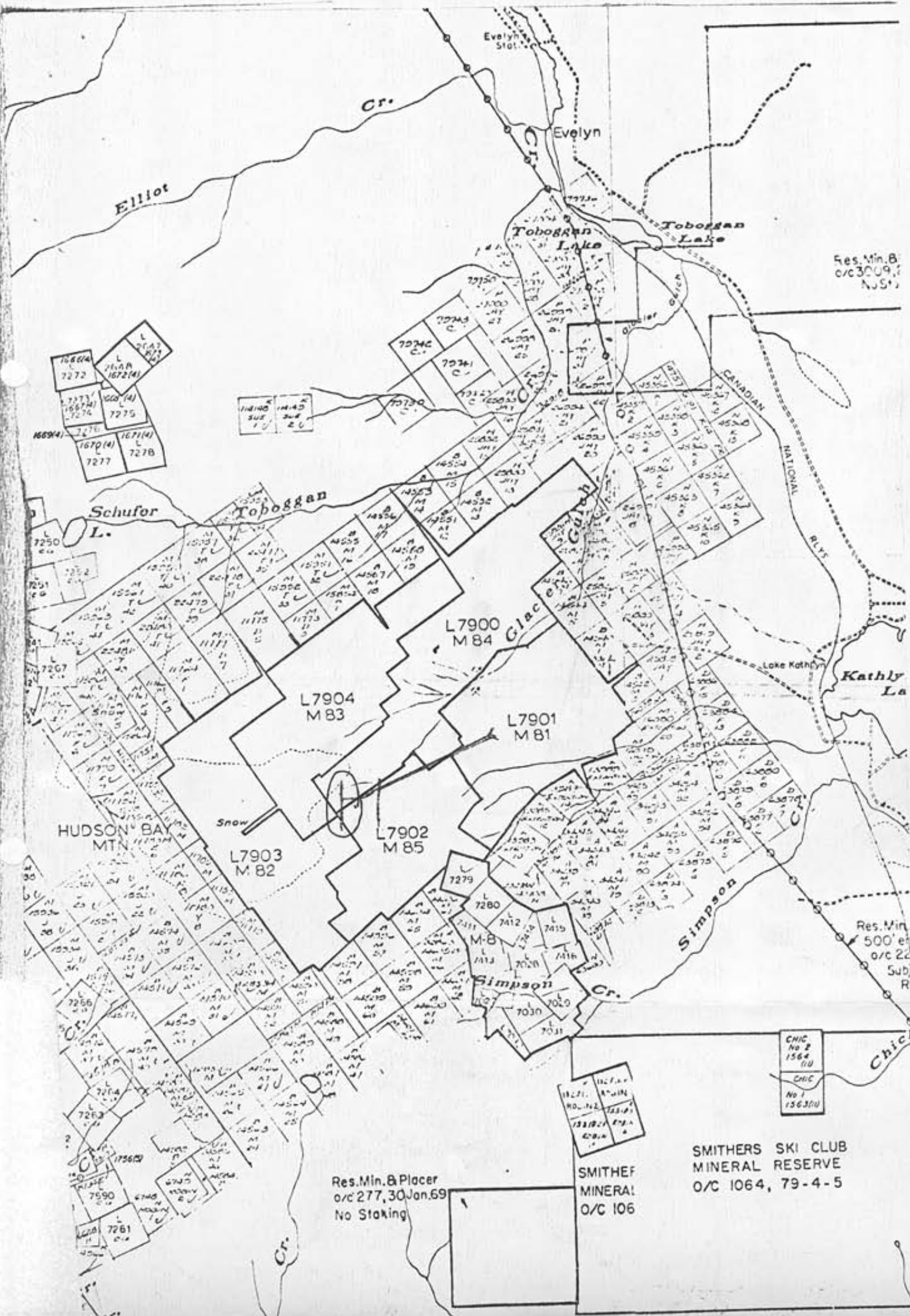
2/3/80 N.F.R. TEK

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FIGURE 1

SCALE 1 : 50,000

93L/14W



Res. Min. B
o/c 3009,
N.S.

Kathly La

Res. Min.
500' e
o/c 22
Subj R

CHIC	No 2
	1564
	(U)
CHIC	No 1
	1563(U)

SMITHEF
MINERAL
O/C 106

SMITHERS SKI CLUB
MINERAL RESERVE
O/C 1064, 79-4-5

Res. Min. & Placer
o/c 277, 30 Jan. 69
No Staking

15,500E

18,500N

25 DDH 160

FIGURE 2

DRILL HOLE LOCATIONS
3500 LEVEL

1" = 100 FT.

24 DDH 161, 162

DDH 159, 163, 164

23

18000N

22 DDH 156, 157, 158

21 DDH 153, 154, 155

AMERICAN RESEARCH
ASSOCIATES
7565
NO.

17500N

20 DDH 150, 151, 152

19 DDH 147, 148, 149