

84-1140-12945

DIAMOND DRILLING ASSESSMENT REPORT

ON THE

DEN 5 CLAIM

KAMLOOPS MINING DIVISION

NTS 92-I-11

50°32'N, 121°03'W

December, 1984

D. B. Petersen

Owner: Acheron Resources Ltd.

Operator: Acheron Resources Ltd.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,945

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1. Location and Access

The DEN 1-7 claims (47 units) are situated approximately 50km Southwest of the town of Kamloops in South Central, B. C. They are centred at geographic co-ordinates $50^{\circ}32'N$, $121^{\circ}03'W$, $3\frac{1}{2}$ km North of the Valley Copper deposit and $4\frac{1}{2}$ km Northwest of the Bethlehem Copper mine. NTS is 92-I-11. See Fig. 1, "Property Location Map".

Access is by paved highway from Ashcroft and Logan Lake to the Bethlehem mine road and then by 4-wheel drive road to the claims. See Fig. 2, "Compilation Map".

2. Topography and Vegetation

The claims cover the gently-sloping Southwestern flank of South Forge Mountain. Elevation ranges from approximately 1300m to 1900m a.s.l.

Vegetation consists of conifers, with much windfall.

3. Regional Geology

The claim lies close to the core of the concentrically-zoned Guichon Batholith. Differentiation of acidic intrusive magma has resulted in a range of composition that varies from quartz diorite at the margin through granodiorite to quartz monzonite at the core. Productive porphyry-type copper and molybdenum deposits are hosted by the innermost Bethsaida, and the flanking Skeena and Bethlehem phases. Individual deposits are localized by granite dykes (Bethlehem), a major quartz-porphyry dyke (Lornex, Highmont) and stocks of quartz-monzonite (JA). These localizing features occur close to, and appear to favour rock contacts.

Two important structural features are the North-South striking Lornex fault and the East-West striking Witches Brook fault. There is



Dr. Peterson

PROPERTY

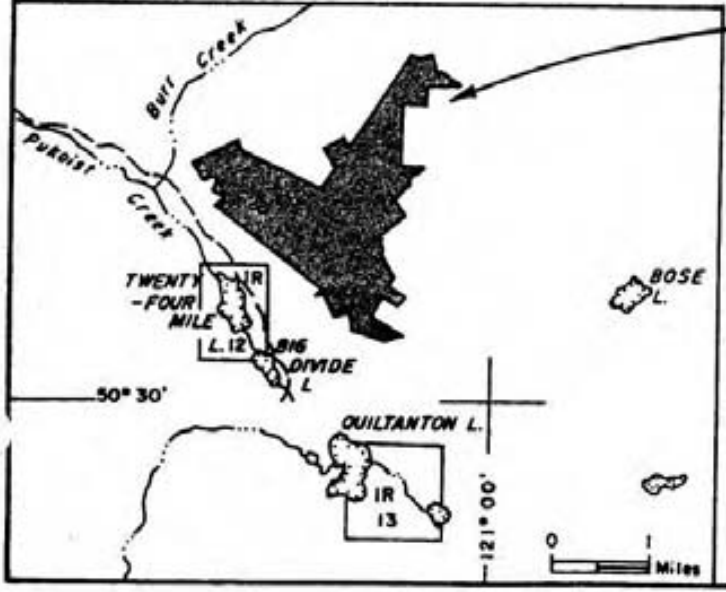


FIGURE 1

ACHERON RESOURCES LTD.
DEN CLAIMS
KAMLOOPS MINING DISTRICT, B.C.
PROPERTY LOCATION MAP
SCALE
0 40 80 120 160 200 Kilometres Kilometres

3. Regional Geology (Cont'd)

evidence to suggest that these faults are recurring and are both pre- and post-mineral, for the former truncates both the Lornex and Valley Copper deposits, while the latter localizes the quartz monzonite stock that is ancestral to the JA deposit. The Valley Copper deposit occurs close to the intersection of the Lornex and Witches Brook faults.

4. Claim Geology

Mapping by McMillan (1978) has shown that the DEN claim is underlain by Bethlehem phase granodiorite and the much younger Kamloops Group volcanics in the Northern half of the property that consist of rhyolites, tuffs and agglomerates. A small exposure of Guichon phase granodiorite occurs at the Northeast corner of the claim.

5. Previous Work Done

The following work has been performed on the claim (Holcapek, 1974):-

1. Geological Mapping

Mapping showed that the Bethlehem granodiorite is medium-grained with low mafic (hornblende) and variable potash feldspar contents.

All the rocks are faulted and sheared. The strongest fracturing exhibits a North-South trend and is apparently related to the Lornex fault that cuts the property.

Widespread, weak propylitic alteration is evident. Potassic alteration in the form of secondary biotite is present along fractures in parts of the property, and also as feldspar envelopes to the Northeast.

Scattered mineralization is present consisting principally of bornite and malachite in fine fractures. In the Northeast of the property,

5. Previous Work Done (Cont'd)

1. Geological Mapping (Cont'd)

malachite and azurite are present in fracture planes.

2. Soil Geochemistry

A soil geochemical survey was inconclusive. Several erratic spot copper highs are present but occur in topographic lows and creeks. The glacial overburden in the Guichon Batholith precludes the use of soil geochemistry as an exploration tool - productive deposits are overlain by negligible values.

3. Magnetometry

A ground magnetic survey outlined a low trend that appears to coincide with the surface expression of the Lornex fault. No definite correlation is apparent between the I.P. and magnetic surveys.

4. Induced Polarization

Two I.P. surveys were conducted using the time-domain method, the first by Hunttec Ltd. (Finney, 1968) in 1968, the second by Atled Exploration Management (Nielsen, 1973) in 1973. The surveys were conducted on East-West lines spaced 400 feet apart.

The 1968 survey used a pole-dipole array, 100 ft. electrode separation and spacings of $n=1$, $n=2$. The survey showed that four small chargeability highs were present. See Fig. 2, "Compilation Map".

The 1973 survey used a pole-dipole array, electrode separation of 400 feet and spacings of $n=1$, $n=2$, and $n=3$. The survey showed that background chargeabilities of approximately 2 to 3 milliseconds and three chargeability highs of 8 or more milliseconds are present. Two of the chargeability highs are small, one of which coincides with one of the Hunttec anomalies, the third is a large ring-shaped anomaly of approximately

5. Previous Work Done (Cont'd)

4. Induced Polarization (Cont'd)

1km diameter that occurs immediately East of the Lornex fault. The anomaly is noteworthy for two reasons - firstly, it is evident only at the n=2 and n=3 spacings, not at n=1, which means that the top of the anomaly occurs at least 500 feet below surface and, secondly, the anomaly is narrow, without any apparent "side-effect" that would be expected to occur on the lines that adjoin the anomalous lines.

5. Percussion Drilling

Nine percussion drill holes were drilled in 1973 to test the I.P. anomalies. See Fig. 1, "Compilation Map". Six of these were drilled to 300 feet depth, with holes No. 1 and 7 to 380 feet and hole 8 to 200 feet. Holes 1 and 2 tested the coincident Huntex and Atled anomaly, holes 3 through 7 tested the ring-shaped anomaly and its core. Holes 8 and 9 tested the small exposure of Guichon phase granodiorite in the extreme Northeast portion of the claim.

The results of the drilling were negative. Holes 1 through 7 averaged less than 0.01% Cu, while holes 8 and 9 averaged less than 0.02% Cu.

6. Lithological Geochemistry and Geological Mapping

In 1983, B. V. Hall (Hall, 1983) mapped the Southern portion of the property that was underlain by intrusive rocks and took 135 rock samples which were analyzed for Cu, F, Mn and Mo. The results showed that a weak Cu anomaly was present in the area of PDH-1. F, Mn and Mo results were essentially background. The mapping showed that Skeena phase granodiorite is present in the Southwestern portion of the property, while Bethlehem phase granodiorite constitutes the remainder of the intrusive rocks. A zone of weak propylitic alteration is present to the North and to the East

5. Previous Work Done (Cont'd)

6. Lithological Geochemistry and Geological Mapping (Cont'd)

of the ring-shaped I.P. anomaly. The area of the anomaly itself is devoid of outcrop and as the sludge from the percussion holes has been washed away no sampling and mapping were possible in the area covered by the anomaly.

6. Work Done in 1984

The core of the ring-shaped I.P. anomaly on the DEN 5 claim is regarded as an exploration target for the following reasons:-

1. it occurs adjacent to the favourable Lornex fault.
2. its shape is reminiscent of a well known style or porphyry copper deposit, where a high-chargeability pyrite halo flanks a low-chargeability copper-rich core (Bell Copper, J.A.) (Sutherland-Brown, 1976).

Neither the anomaly nor the core has actually been tested, for the upper limit of the anomaly occurs at a depth of at least 500 ft. (150m) below surface, and the deepest percussion hole PDH 7 stopped at 380 ft. (115m) and PDH 5 and 6, testing the core, stopped at 300 ft. (91m) and 330 ft. (100m) respectively.

Diamond drill hole 84-1 is intended to test the core of the anomaly at depth. It is collared close to the centre of the core, is vertical, and is to be drilled in stages to its intended depth of approximately 300m.

Rainbow Diamond Drilling Ltd. of Merritt, B.C., commenced drilling on 26th October and completed the hole to a depth of 30.1m on 27th October. Core size is BQ wireline. The casing has been plugged. The core is stored in Rainbow Diamond Drilling's warehouse in Merritt, B. C.

The writer logged the core on 27th October, 1984. The log is included in Appendix I.

7. Results of Work Done in 1984

Diamond drill hole 84-1 intersected overburden from 0-10.5m and Bethlehem Quartz Diorite from 10.5m to 30.1m.

A sample of split core from 28.5m to 30m was sent to Acme Analytical Laboratories in Vancouver for analysis. It returned 0.2ppm Ag, 5ppb Au.

8. Conclusions

It is concluded that:

1. the ring-shaped I.P. anomaly represents a valid exploration target, despite its depth.
2. the percussion drilling that was done was too shallow to test the anomaly.

9. Recommendations

It is recommended that hole 84-1 be deepened in stages to a depth of approximately 300m.

10. Statement of Costs

The following costs were incurred in the programme:-

Project Preparation

D. Petersen, Geologist	23rd October	\$ 275	
Travel		<u>193</u>	\$ 468
<u>Labour</u>			
D. Petersen, Geologist	26, 27 October 2 days @ \$275		550
Assaying		\$ 16	
Travel and Transport		177	
Meals and Accommodation		107	
Drilling Costs		<u>3,980</u>	4,280

10. Statement of Costs (Cont'd)

Reporting

D. Petersen	1½ days @ \$275	\$ 413	
Typing, S. Wheat	3 hours @ \$15	45	
Drafting		<u>40</u>	<u>\$ 498</u>
	TOTAL:		<u>\$5,796</u>

11. Title

<u>Name of Claim</u>	<u>Owner</u>	<u>No. of Units</u>	<u>Record No.</u>	<u>Anniversary Date</u>
DEN 5	Acheron Resources Ltd.	9	1077	28 October

ss Petersen

12. References

Finney, W.A., 1968, Report on an Induced Polarization (I.P.) Survey, Den Group, Highland Valley.

Hall, B.V., 1983, Lithogeochemical and Geological Report on the DEN (3-7) Claim Block, Highland Valley, British Columbia.

Holcapek, F., 1974, Summary Report on Exploration Completed Grandora Mines Ltd. (NPL) Highland Valley Property by Acheron Mines Ltd. (NPL) - Agilis Engineering Ltd. Private Report.

McMillan, W.J., 1978, Geology of the Guichon Creek Batholith and Highland Valley Porphyry Copper District, British Columbia; B. C. Ministry of Mines and Petroleum Resources Preliminary Map 30.

Morgan, D.R., 1981, A Summary Geological Report on the DEN Claims of Pan Acheron Resources Ltd.

Nielsen, P.P. Gutrath, G.C., 1973, Geophysical Report of the Induced Polarization Survey on the Adera Property.

Sutherland Brown, A., et al, 1976, Porphyry Deposits of the Canadian Cordillera - C.I.M. Spec. Vol. 15.

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
To Wit:

In the Matter of the diamond drilling conducted on the DEN 5 claim,

I, David B. Petersen

of Daiwan Engineering Ltd., 1010 - 409 Granville Street, Vancouver, B. C. V6C 1W9
in the Province of British Columbia, do solemnly declare that the following costs were incurred:-

PROJECT PREPARATION

D. Petersen, Geologist	1 day @ \$275	\$ 275	
Travel		<u>193</u>	\$ 468

LABOUR

D. Petersen, Geologist	2 days @ \$275		550
Assaying		\$ 16	
Travel and Transport		177	
Meals and Accommodation		107	
Drilling Costs		<u>3,980</u>	4,280

REPORTING

D. Petersen	1½ days @ \$275	\$ 413	
Typing, S. Wheat	3 hours @ \$15	45	
Drafting		<u>40</u>	<u>498</u>

TOTAL: \$ 5,796

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

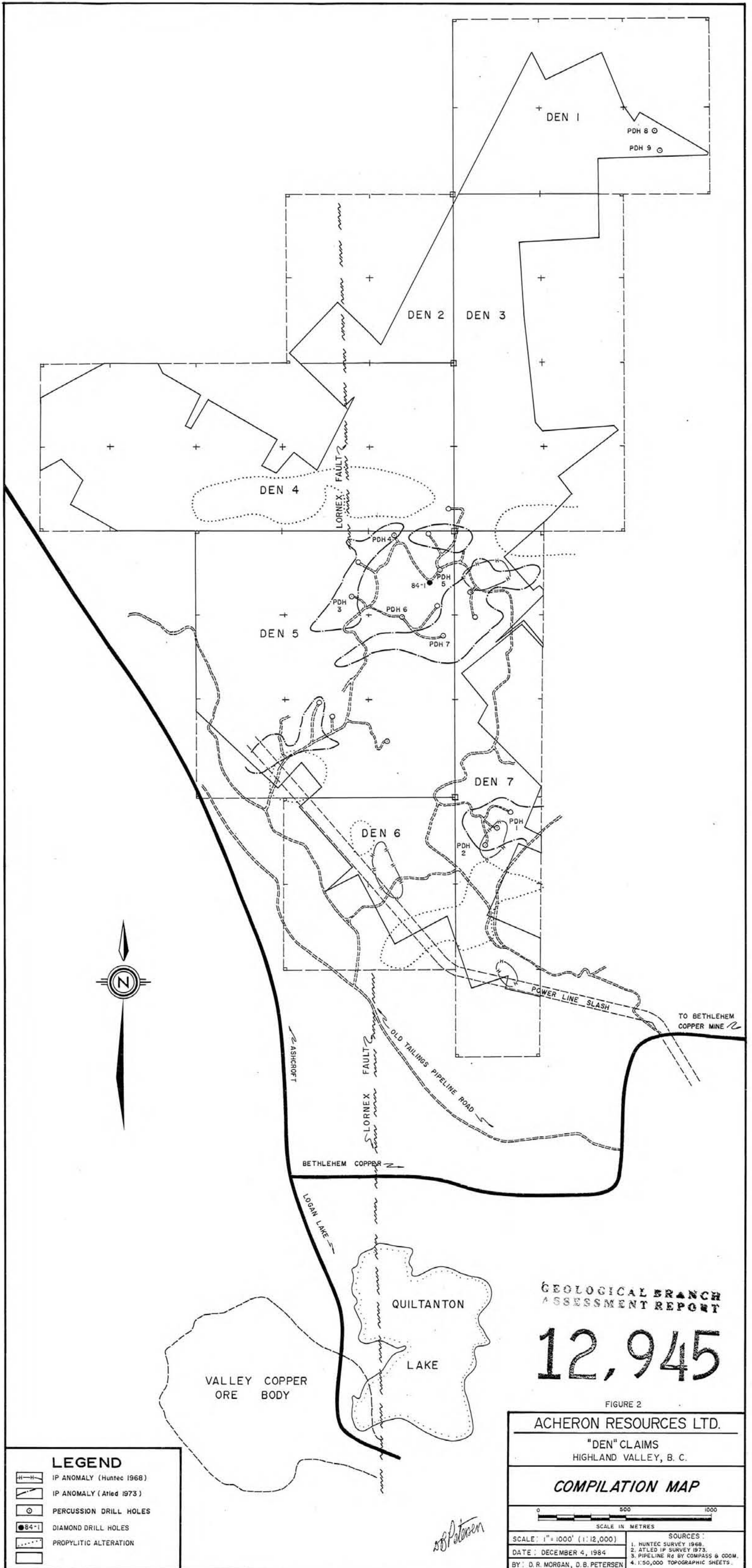
Declared before me at the *City*
of *Vancouver*, in the } *D.B. Petersen*
Province of British Columbia, this *6th*
day of *December* 19*84*, A.D. }

ebay

A Commissioner for taking Affidavits for British Columbia or
A Notary Public in and for the Province of British Columbia.

D.B. Petersen

APPENDIX I



GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,945

FIGURE 2

ACHERON RESOURCES LTD.	
"DEN" CLAIMS HIGHLAND VALLEY, B. C.	
COMPILATION MAP	
<p>SCALE IN METRES</p>	
<p>SCALE: 1" = 1000' (1:12,000)</p> <p>DATE: DECEMBER 4, 1984</p> <p>BY: D. R. MORGAN, D. B. PETERSEN</p>	<p>SOURCES:</p> <ol style="list-style-type: none"> HUNTEC SURVEY 1968. ATLED IP SURVEY 1973. PIPELINE R_d BY COMPASS & ODOM. 1:50,000 TOPOGRAPHIC SHEETS.

LEGEND

- IP ANOMALY (Huntec 1968)
- IP ANOMALY (Atled 1973)
- PERCUSSION DRILL HOLES
- DIAMOND DRILL HOLES
- PROPYLITIC ALTERATION
-

D.B. Petersen