

PROPERTY EXAMINATION REPORT  
SHELL-COAST SILVER (STORIE)-TIN

675975.  
Cassiar Dist.  
104P/5

Location: Cassiar, B.C.

Latitude: 59° 16' N

Longitude: 129° 50' W

N.T.S.: 104 P/4 & 5

Commodities: Sn (Pb,Zn,Ag)

Brought Forward By: W.J. Storie (June, 1982)

Examined By: I. Coster, I. Lyn (June-August, 1982)

Action: More sampling is recommended

## 2. CONCLUSIONS (Cont'd.)

Showings on the Pant Zone and the Pant Showing are too small and erratic to be of any interest.

The only samples we took on the Magno Zone were of Pb-Zn-Ag (Fe) "ore" type material, none of which ran over 0.1% Sn. We did not sample any rock similar to the pyritic carbonate from the "D" zone (3.2% Sn), although similar rock has been reported on the East Magno Zone. (It should be noted that claims on the East Magno are not owned by Storie)

## 3. RECOMMENDATIONS

Primarily, more sampling of "pyritic white carbonate" should be carried out. This "unit" should also be mapped in detail, if possible. Depending on the sample results, claims covering the favourable areas may want to be optioned (probably "D" zone and Magno), so that priority areas could be trenched and sampled.

## 4. GEOLOGY

In general, all of the showings are hosted in the higher part of the Lower Cambrian Atan Gp. These rocks are mainly limestone and dolomite, more recrystallized to the west (closer to the Cassiar stock), but also include hornfels' and quartzites. The Pant Showing, to the west, is very close to the fault contact (trending NNW) of Atan Gp. carbonates and Kechica argillites. Bedding of units varies from NNW to NNE and dips are between 45°-60° east. Fracturing is roughly E-W and dips steeply north.

## 5. DESCRIPTION OF SHOWINGS

### 5.1 "D" Zone

The "D" zone is divided into the Upper "D" zone, Middle "D" zone and the Lower "D" zone lenses from west to east respectively. (see Fig. 1)

The Upper "D" Zone showing is a cat stripping, perhaps 10 m wide, exposing fairly massive magnetite-pyrolusite-galena replacing Atan Gp recrystallized limestone. The showing is highly Fe and Mn oxidized. A grab sample (14206) was taken of the more massive magnetite-galena rock. Also, a grab sample (14207) was taken of hematite altered, dolomitic limestone. The Upper "D" zone has had five holes drilled on it by Coast Silver, two of which intersected mineralization.

The Middle "D" zone is not really a showing, but consists of mineralized float and drill sites for 15 Coast Silver diamond drill holes. Five grab samples were taken, two of which (14203, 14205) were of hornfels float with minor galena, pyrite, pyrrhotite and chalcopyrite. Sample 14202 was of massive sulphide float (galena, pyrite, magnetite). Sample 14201 was of white carbonate float with poorly cubic pyrite as clots. Sample 14204 was of light brown crystalline dolomite float with minor galena along fractures.

5.1 "D" Zone (Cont'd.)

The Lower "D" Zone is all deep overburden hosting geophysical and geochemical anomalies. Five Coast Silver drill holes failed to intersect mineralization.

None of the "D" zone rocks showed scheelite under the UV lamp.

We ran a soil sample grid on the existing Coast Silver grid. The areas sampled were areas where existing Pb, Zn anomalies, ground mag. and I.P. anomalies, and resistivity lows all coincided. (see Fig. 4, 5 and 6) See Fig. 2 for our sample locations and numbers and Fig. 3 for the results.

5.1a Assessment of Geochemical Results

A total of 111 soil samples were collected on the grid, as well as 2 silt samples (one of which was pan concentrated), and the 7 rock samples mentioned earlier. All samples were analyzed for tin.

Results of the soil grid show a string of anomalies ( $\geq 10$  ppm Sn) trending NW-SE from Line 22 on the Middle "D" zone to Line 6 on the Lower "D" zone. There was only one anomalous sample on the Upper "D" zone. (See Fig. 3) The best sample ran 370 ppm Sn, with a total of 8 samples running over 40 ppm Sn. The trend of anomalies near the Middle "D" zone seems to be the down-slope expression of the known Middle "D" zone deposit as outlined by the Coast Silver diamond drill holes. The trend of anomalies near the Lower "D" zone and between the Lower and Middle "D" zones may either be a glacial dispersion train off the Middle "D" zone, or it may be an expression of a buried eastern extension of the Middle "D" zone. Five Coast Silver drill holes on the Lower "D" zone failed to intersect mineralization and the results of another drill hole (R-23) which lies between the Lower and Middle "D" zones, are unknown.

The results of the rock samples we took are as follows:

Upper "D" Zone

14201 (float)	40 ppm Sn	Massive magnetite-galena "ore"
14206 (grab)	0.05% Sn	Hematitic carbonate "host"

Middle "D" Zone

14201 (float)	3.2% Sn	Pyritic white carbonate
14202 (float)	0.08% Sn	Massive galena-pyrite-magnetite
14203 (float)	0.03% Sn	Hornfels with minor sulphides
14204 (float)	600 ppm Sn	Dolomite with minor sulphides
14205 (float)	0.03% Sn	Hornfels with minor sulphides

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5.1a Assessment of Geochemical Results (Cont'd.)

Two stream sediment samples were taken, one of which was a panned concentrate of heavy minerals. The regular silt sample did not return anomalous Sn, but the heavy mineral sample (82D75HM) returned values of 160 ppm Sn, 200 ppm W and <10 ppb Au. It has shown only minor response under UV light.

5.1b History

The "D" zone was initially found when high grade Pb-Zn float was discovered on the property in the late 1950's. In 1968 and 1969 the property was optioned by Coast Silver Mines Ltd., who conducted soil sample magnetic and I.P. surveys which lead to the drilling of 29 diamond drill holes (totalling 10,380'). Results of the drilling indicated - 90,000 tonnes (to 90 m) of 3.3%, 6.3% Zn and 70 gm/tonne Ag on the Middle "D" zone. Shell Canada Resources optioned the ground from 1979 to 1981 because of its Sn potential. One of their grab samples of float on the Middle "D" zone ran 3.5% Sn, and core from the old Coast Silver drill holes (on the Middle "D" zone) was reanalyzed for Sn returning intersections of:

DDH R-8	3.0 m	0.86% Sn
DDH R-3	0.9 m	0.22% Sn
DDH R-3	1.2 m	0.33% Sn
DDH R-10	0.9 m	6.5% Sn

5.2 Granite Creek Showing

The Granite Creek showing is a replacement body of massive sulphides, perhaps 1.5 m wide, hosted in recrystallized Atan limestone. It is poorly exposed but appears to run at 100° and dip 50° north. Mineralization consists of massive pyrite, pyrrhotite with lesser amounts of sphalerite, galena and minor magnetite and arsenopyrite, within a siliceous matrix. The host limestone outcrops in Granite Creek and appears to be bedded at 135°, dipping 72° to the NE. It is moderately fractured at 062° dipping vertical to very steep NW. No samples were taken of the mineralization by Brinco.

The showing is located on the south side of Granite Creek by Line 32 of the old Coast Silver grid. (See Fig. 1) Two holes were drilled into the showing by Shell with one hole intersecting 3.02 m (apparent width) of 14% Zn, 0.1% Pb, 11.66 gm/tonne Ag and 0.03% Sn. A 1 m chip sample taken at surface by Shell, assayed 0.12% Sn.

5.3 Pant Showing

The Pant Showing consists of several large blocks (½ m?) of sulphide (subcrop) float consisting of massive arsenopyrite, pyrite and trace pyrrhotite. A grab sample (82C-R73) was taken of this. Occasionally the odd lump was seen consisting of crystalline arsenopyrite with interstitial white dolomite. West of the showing are outcrops of brown Atan

### 5.3 Pant Showing (Cont'd.)

hornfels which are thinly bedded at  $012^{\circ}$ , dipping  $75^{\circ}$  east. At the showing, the only outcrop is of vein quartz, stained with limonites, cutting the brown hornfels. In the gully east of the showing, is an outcrop of splintery dark grey-purple argillite/hornfels, probably belonging to the Kechica. The Kechica and Atan are in fault contact just east of the showing. Andre Panteleyev, B.C.D.M. regional geologist, assayed the massive sulphide and it returned 1.5% tin. Shell confirmed this with an assay returning 1.5% Sn over 3.6 m. The showing is ~15 m west of Shell DDH80-6, which returned the following assays from two mineralized zones: 0.9 m of 0.94% Sn; 0.2 m of 0.61% Sn and 0.6 m of 0.10% Sn. Both zones carry minor Pb-Zn-Ag values, and the zones are separated by about 3.5 m of brecciated quartz-carbonate. It is believed the mineralization is a replacement along fault breccia, within the thin fault wedge of Atan carbonate.

#### 5.3a Assessment of Geochemical Results

We took fifteen soil samples on the existing Shell grid, along lines 100 m apart, at 30 m intervals. (See Fig. 7) We took them over the buried fault contact between Atan carbonates and Kechica argillites going NE towards the Pant zone and Tremolite zone. All samples were analyzed for arsenic and tin and the results for all the samples were very low with the highest Sn value being 7 ppm. Fig. 8 shows the Sn values on the Pant zone grid. The grab sample we took of the massive Aspy-py at the showing (82C-R73), returned  $> 1000$  ppm As,  $> 1000$  ppm Sn.

#### 5.4 Tremolite Zone, Pant Zone

The Pant Zone is about 500 m NW of the Pant Showing on the south side of the ridge north of Lang Creek. The Tremolite zone is on the top of the ridge. (See Fig. 7)

The Tremolite zone consists of coarse tremolite dispersed erratically in Atan dolomite, which is occasionally zebra textured, sucrosic and hematite stained. The dolomite is locally highly silicified with drusy quartz an/or chalcedony and chalcedony breccia. It appears that the chalcedony replaces the tremolite. One lens of silicification was oriented at  $052^{\circ}/52^{\circ}$  N. No interesting mineralization was seen in the Tremolite Zone. A Shell drill hole (DDH81-4) was drilled from the top of the ridge on the Tremolite Zone, but failed to intersect any mineralization. Shell reassayed a pyrrhotite-magnetite intersection in an old Coast Silver drill hole and this assay returned 0.20% tin over 2.0 metres. This hole was on the G-zone, about 200 m NW of the Tremolite Zone.

The Pant Zone showings consisted of several small replacement (?) pods of massive sulphides. The maximum dimensions of the pods were  $< 4$  m<sup>2</sup> and consisted of pyrite, pyrrhotite, arsenopyrite with much Mn and Fe oxides. Four rock samples were taken of the pods (82C-R75,76,77,78). In the gully immediately east of the showings, was found vein quartz and tremolite, probably an extension of the silicified dolomite. This was poorly exposed but may mark the fault contact between the Atan dolomite and Kechica argillite, as the Kechica argillite is exposed (poorly) just east of the silicified zone.

5.4a Assessment of Geochemical Results

Four rock samples were taken on existing Shell sample sites. See Fig. 8 for sample locations (marked as triangles)

	<u>As(ppm)</u>	<u>Sn(ppm)</u>	<u>Location</u>	<u>Notes</u>
82C-R75	>1000	400	ES196-3	Grab over 4.0 m of massive PY-Trem (PO) replacement
82C-R76	>1000	235	ES196-5	Chip over 1.3 m of massive PO (PY) replacement
82C-R77	>1000	>1000	ES196-3	Grab over 1 m of massive PY (PO, ASPY) replacement
82C-R78	>1000	35	ES196-2	Chip over 1.5 m of massive PY (PO, ASPY) replacement

5.5 Magno Zone

The Magno zone is located within the Marble Creek basin and is divided into the West zone, the Middle West zone and the East zone. (See Fig.1)

Mineralization on the Magno Zone consists of massive magnetite, galena ("steel"), sphalerite, pyrrhotite and pyrite with associated siderite, pyrolusite and hydrozincite. Magnetite is the most abundant mineral. This mineralization replaces Atan carbonates along an E-W striking fault zone.

All three zones have been fairly extensively drilled and the West zone has two 200 m adits driven in it. The drill indicated potential is as follows:

East Zone - 129, 273 tonnes - avg. width 5.76 m  
4.06% Pb  
4.40% Zn  
131 gm/tonne Ag  
0.69 gm/tonne Au

Middle West  
Zone - 77,110 tonnes - avg. width 3.4 m  
9.43% Pb  
5.34% Zn  
258.5 gm/tonne Ag

West Zone - 200,487 tonnes - avg. width 2.8 m  
5.4% Pb  
3.4% Zn  
198.8 gm/tonne Ag

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5.5 Magno Zone (Cont'd.)

Also, the West zone has 349,265 tonnes of ore geologically inferred. Shell reassayed on old drill intersection on the Middle West zone which ran 0.32% Sn over 4.6 metres.

We took four rock samples from the Magno, the results are as follows:

	<u>% Sn</u>	
14274	0.06	grab of float of "magnetite-ore"; West zone adit dump
14275	0.04	grab of float of "galena-ore"; West zone adit dump
14276	0.03	grab of split magnetite-rich core; West zone core shed
82C-R79	0.01	grab of float of magnetite-galena-sphalerite; East zone near road

6. LOCATION AND ACCESS

The "D" zone, Granite Creek showing, Magno, Pant Zone (Tremolite Zone) and Pant Showing, are all located between 3 and 6 km southeast of Cassiar, B.C. All the areas are easily accessible by four-wheel drive truck. Main access is by a gravel road cutoff, just past the Cassiar airstrip on the airstrip road.

7. HISTORY

See Section 5-1b for "D" zone history.

The Granite Creek showing was found by Shell and they drilled two D.D. holes into the showing in 1980, one of which intersected mineralization.

The Pant Showing was found by B.C.D.M. geologist A. Panteleyev and was drilled in two places by Shell in 1980.

The Pant Zone was trenched and drilled once by Shell in 1980.

The Magno has been known since the 1930's. It was trenched and drilled by Silver Standard in 1955. The most work has been done by Coast Silver Mines, who completed 45 diamond drill holes and two 200 m adits by 1970. Little work has been done since.

The entire Marble Creek basin has been examined several times by Cassiar A.C. for its Pb-Zn-Ag potential, by W. Plumb in 1971 and 1969 and by B.I. F. Breakey in 1952.

8. REFERENCE MAPS AND REPORTS

The following files were used, which are stored in our 104 P Properties File:

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8. REFERENCE MAPS AND REPORTS (Cont'd.)

1. Shell - Coast Silver 104 P/5
2. Coast Silver General 104 P/5
3. Coast Silver Cassiar Analysis 104 P/5
4. Coast Silver Marble Basin-Wilms 104 P/5
5. Coast Silver Totem Minerals 104 P/5
6. Balfour Mines, Magno 104 P/5

9. OWNERSHIP

The "D" zone, Pant Showing, Pant Zone (Tremolite Zone) and Magno West zone all lie on claims owned by Bill Storie, Cassiar, B.C.

The Magno East zone and Middle West zones lie on claims owned 50% by Quartet Energy Resources Ltd. and 50% by Cultus Expl. (B.C.) Ltd.

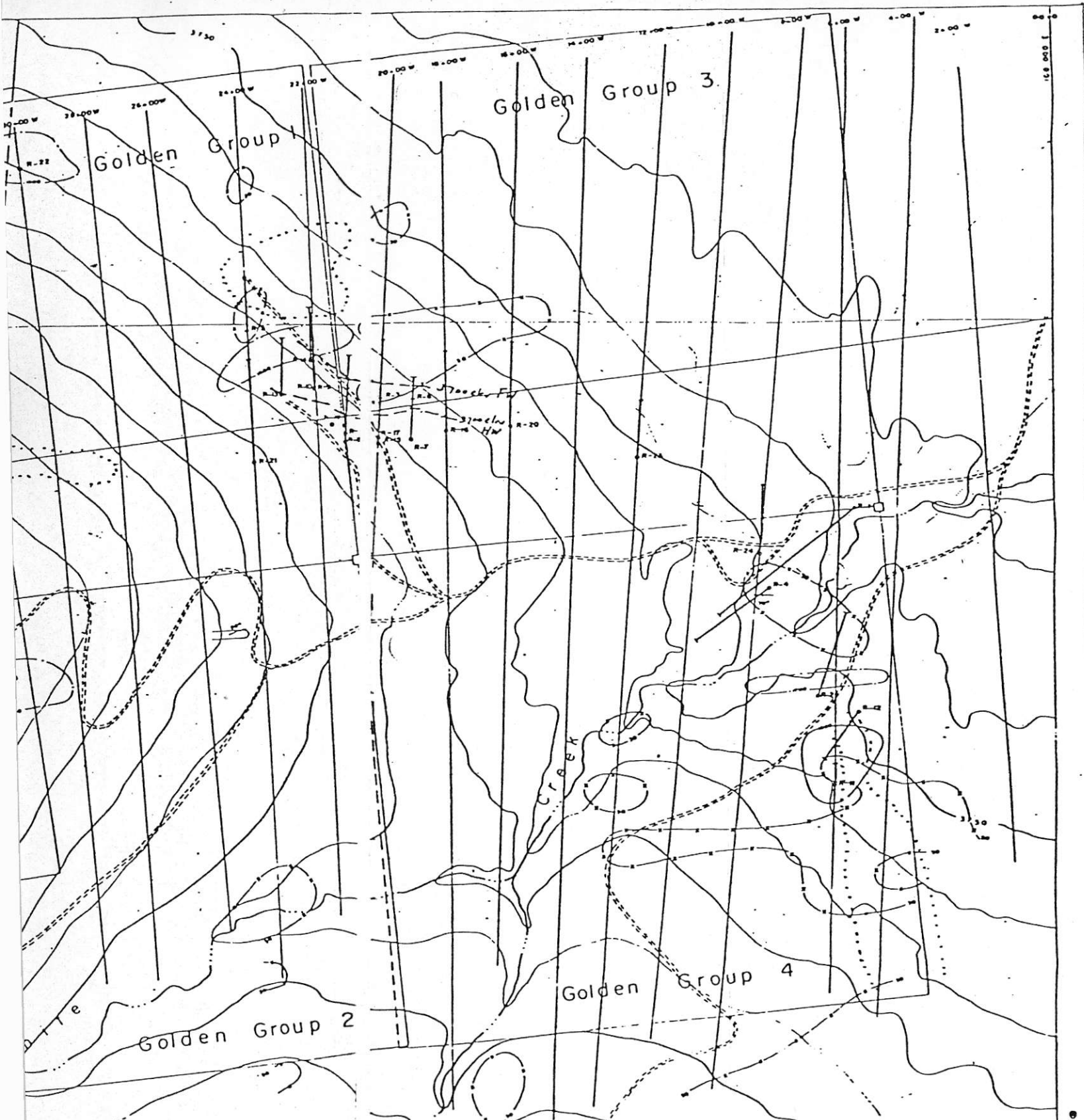
10. CLAIM STATUS

(See Fig. 9)

<u>Showing Name</u>	<u>Claim Name (units)</u>	<u>Owner</u>	<u>Record No.</u>	<u>Expiry Date</u>
"D" zone	Pit 1&2 (2)	W.J. Storie	69616 & 69617 (?)	April 9/1985
"	Zone 1-4 (4)	"	6 (4)	April 4/1983
"	Alta 1 (2)	W.J. Storie	802 (5)	May 31/1985
"(partially)	Alta 6 (16)	"	806 (5)	May 31/1985
Magno	Magno 1-4 (4)	*	15800- 15804 (N)	Oct. 23/1987
"	Jean 1-2 (2)	*	31633- 31634 (K)	Aug. 16/1988
Magno & G Zone	Chiera 1-20 (16)	W.J. Storie	2 (3)	Mar. 31/1983
Pant Zone & Showing	Alta 8 (11)	W.J. Storie	927 (8)	Aug. 21/1985
Pant Zone (partially)	Bev 1-20 (18)	W.J. Storie	263 (2)	Feb. 28/1987

\* 50% Quartet Energy Resources Ltd.; 50% Cultus Expl. (B.C.) Ltd.





*P.H. Sevensma*

**COAST SILVER MINES LTD.**

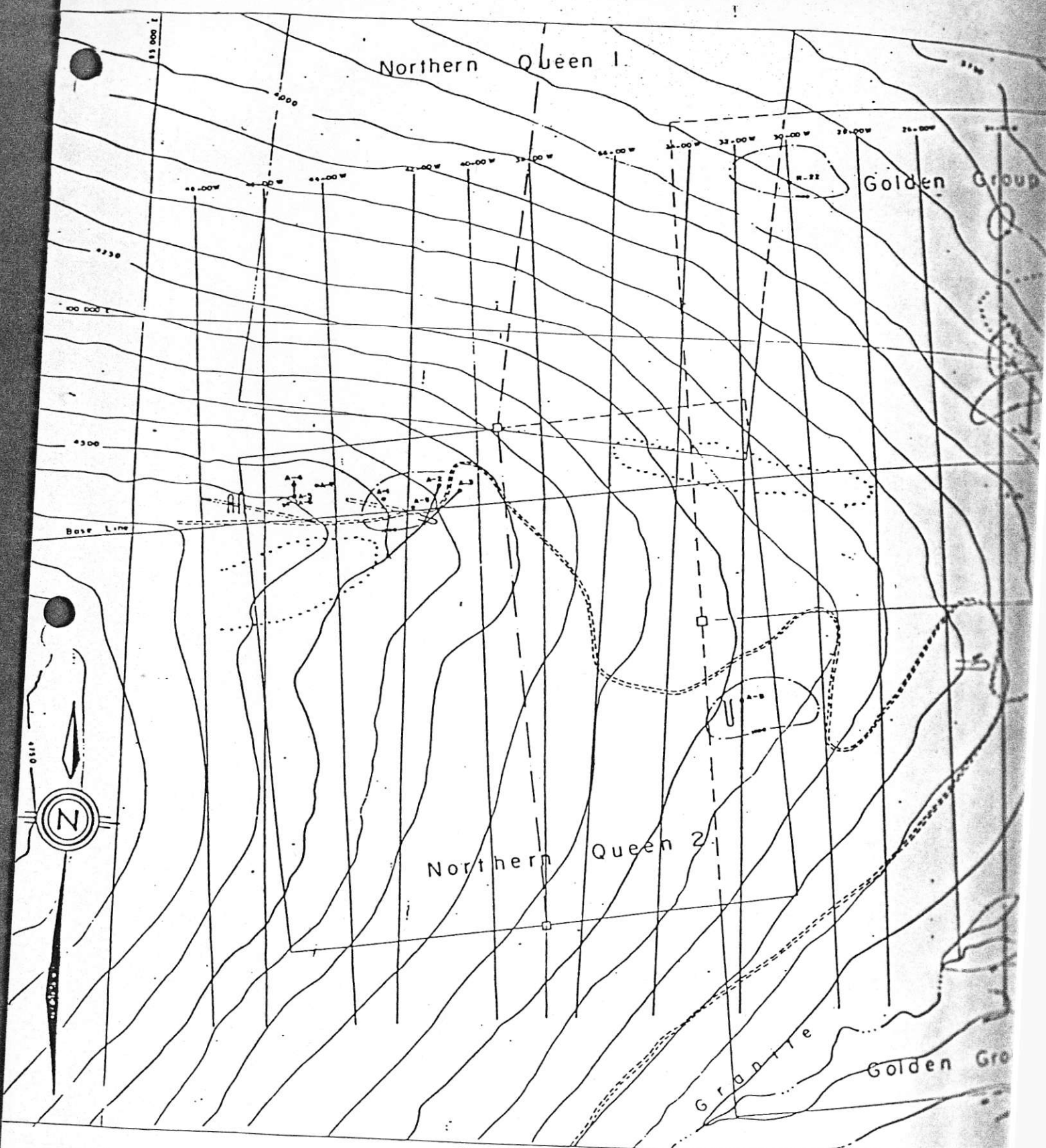
"D" Zone Fig. 4  
 DRILL SITE - LOCATION MAP

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







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P. H. Sevensma Consultants Ltd.

Vancouver B C

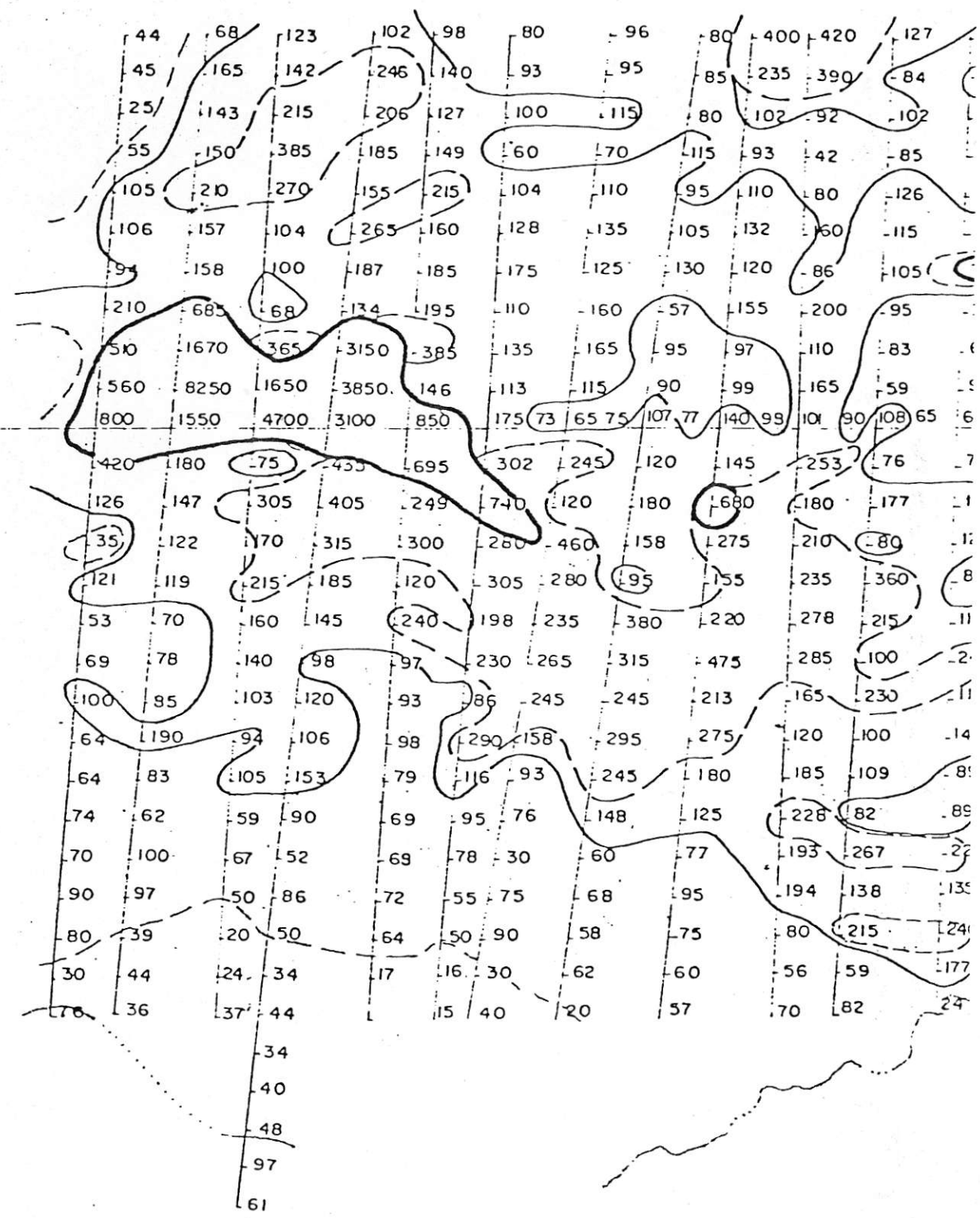


LEGEND


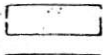
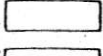
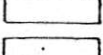
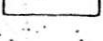
-  Dyke
-  Trench
-  Road
-  Drill hole - vertical
-  Drill hole - inclined
-  Ground magnetic anomaly
-  IP anomaly
-  Claim post
-  Resistivity lows < 600

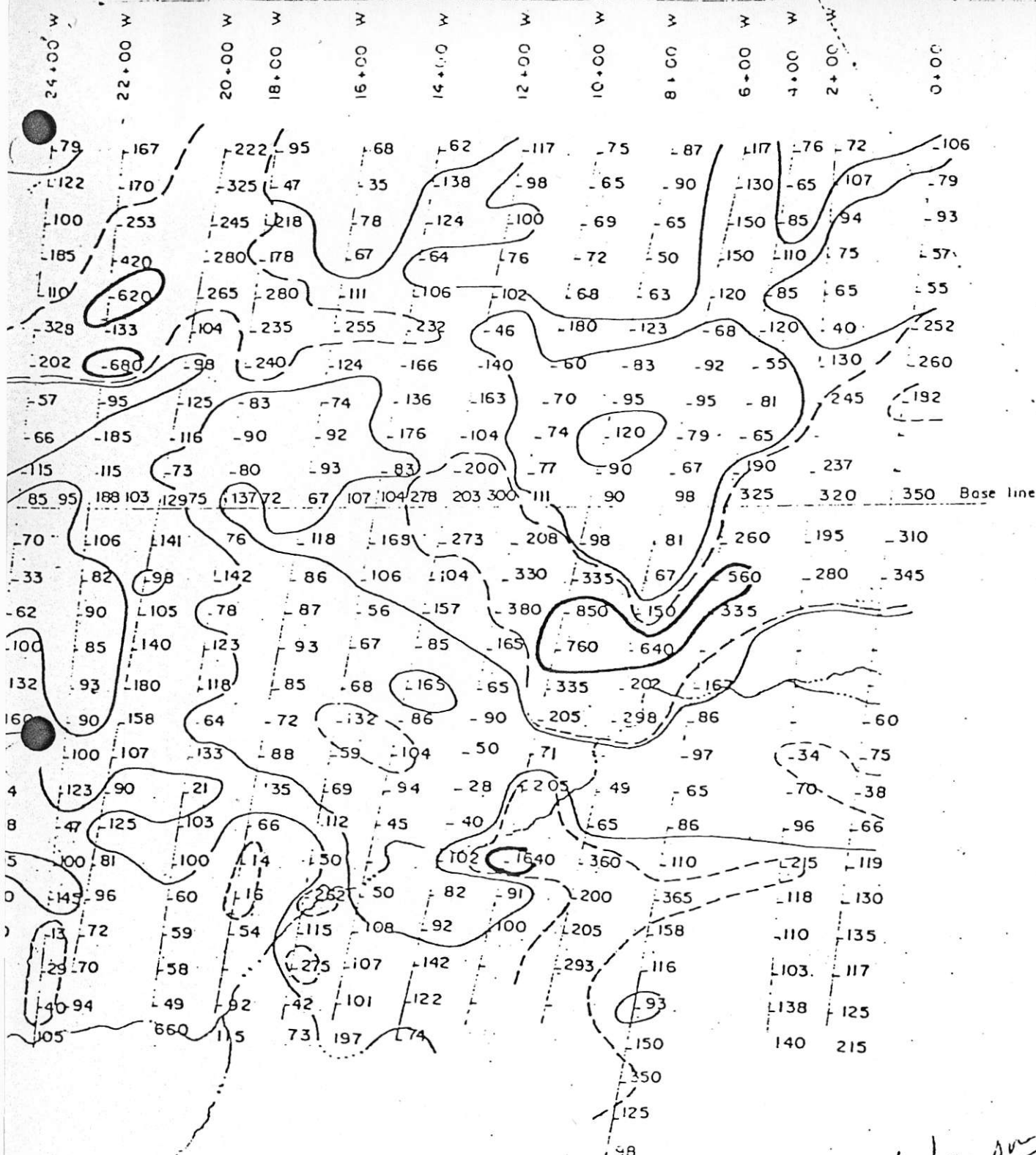
*D.H. Smith*

48+00 W 46+00 W 44+00 W 42+00 W 40+00 W 38+00 W 36+00 W 34+00 W 32+00 W 30+00 W 28+00 W 26+00 W



LEGEND

-  Peak 8250 p.p.m
-  > 500 p.p.m
-  200 - 500 p.p.m.
-  100 - 200 p.p.m
-  < 100 p.p.m.



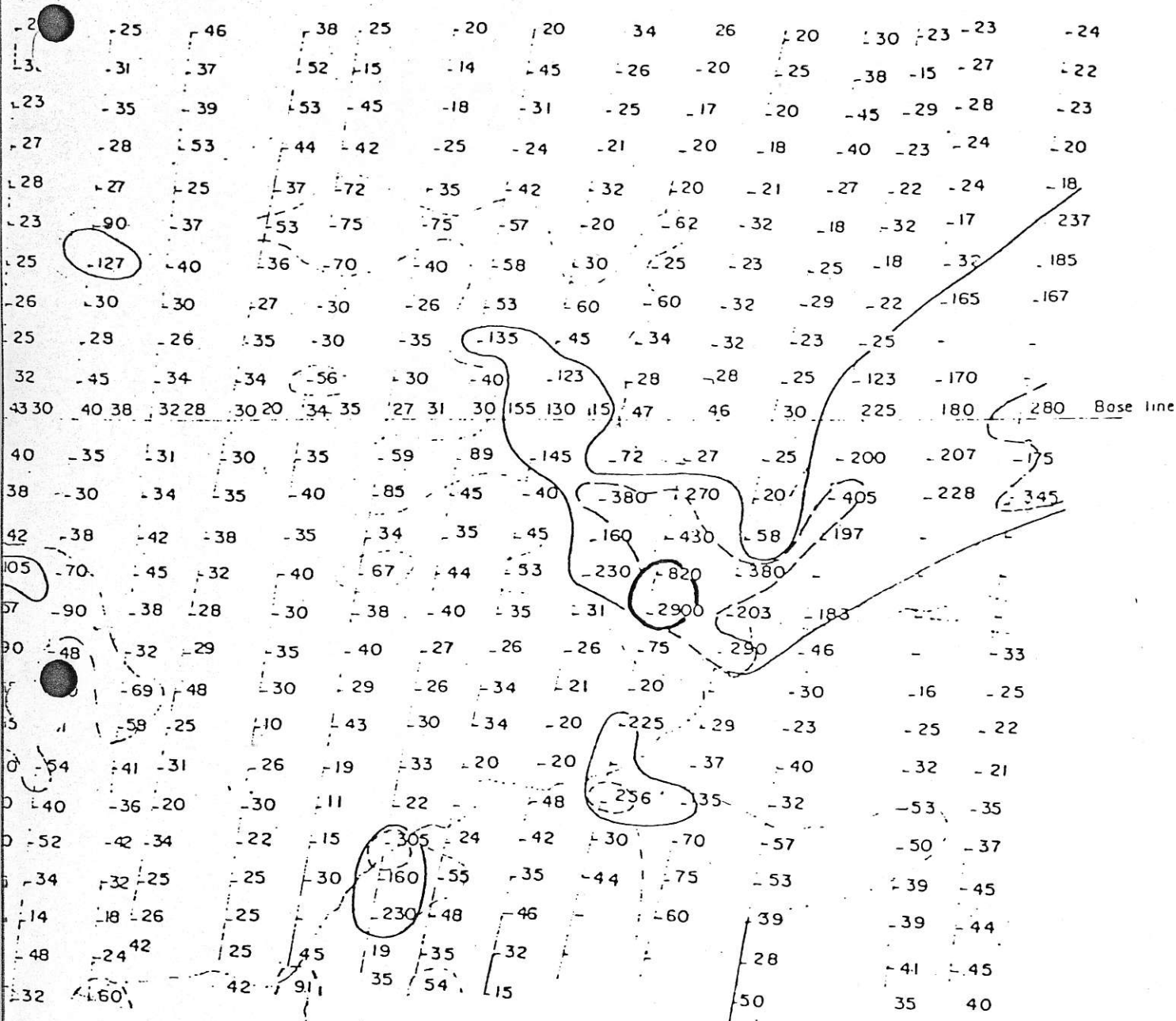
"D" GRID

Zn. Plot Fig. 6

COAST SILVER MINES LTD.	
GEOCHEMICAL SOIL SURVEY	
Liard M D - BC	104 - P - 4
P. H. Sevensma Consultants Ltd. Vancouver, B.C.	
Fig. 10	October 1969
Scale	0 400



26+00 W 24+00 W 22+00 W 20+00 W 18+00 W 16+00 W 14+00 W 12+00 W 10+00 W 8+00 W 6+00 W 4+00 W 2+00 W 0+00



*H. Sevensma*

Pb. Plot Fig. 5

"D" GRID

COAST SILVER MINES LTD.	
GEOCHEMICAL SOIL SURVEY	
Grid M D - 8 C	104 - P - 4
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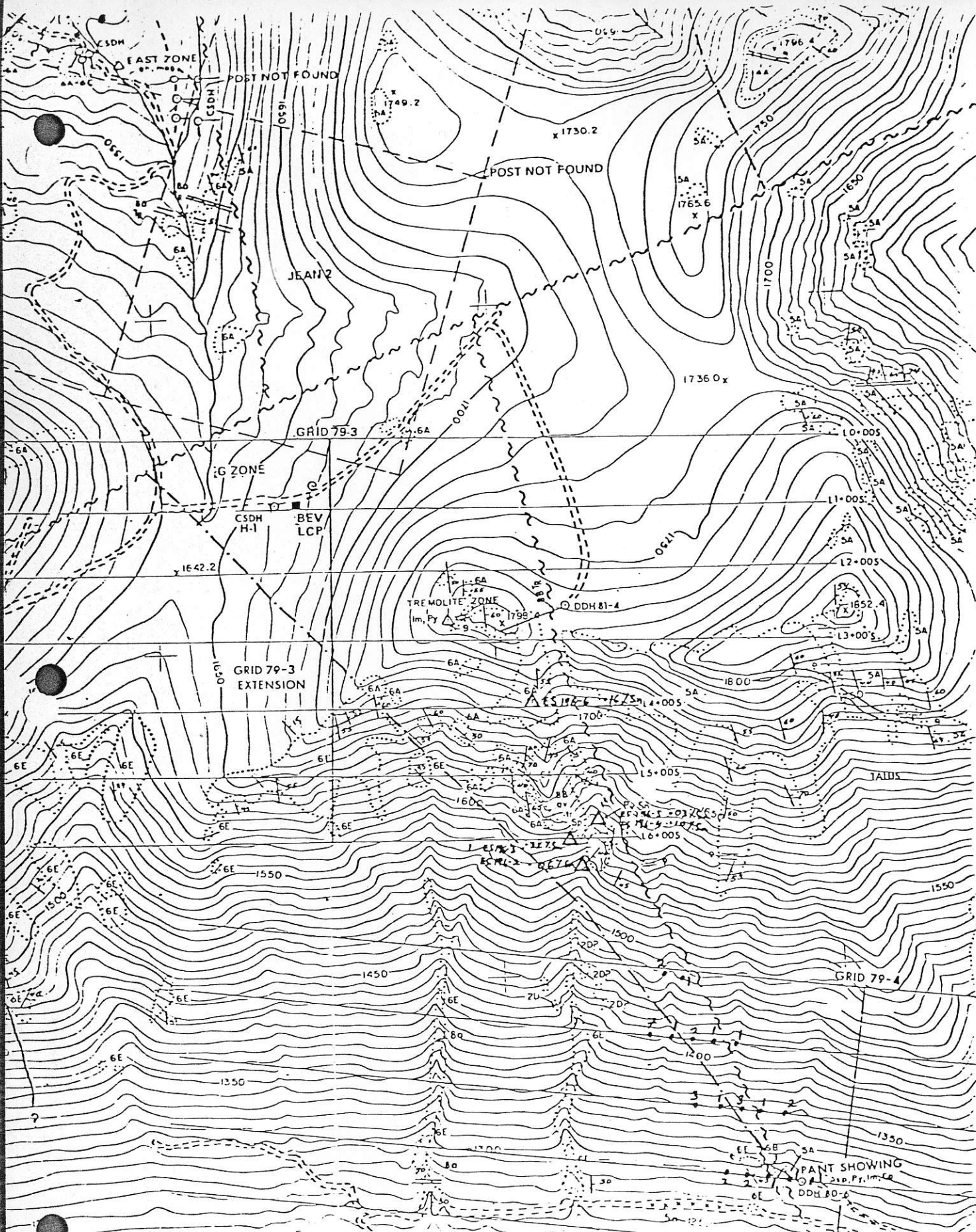


Fig. 8 Pant Zone

Appx. 1:7500

GEOCHEMISTRY  
TIN (PPM)  
IN  
CSDM .2



