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SUMMARY OF PB/ZN/AG, AU
AND SN OCCURRENCES

CASSIAR, BRITISH COLUMBIA

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Shell internal report

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1. INTRODUCTION

The following is a brief description of mineral occurrences and deposits of the Cassiar Area worked by Shell from 1979 to 1981. Further detailed reports and papers are available to interested parties.

Ag/Pb/Zn(Sn) and Au mineralization near the Town of Cassiar has been known since 1922, the first work on the area was started in 1955. The presence of tin (cassiterite) with the Ag, Pb, Zn mineralization was first recognized in 1978. Tetrahedrite and chalcopyrite occur in a large area of quartz veining underlying the Reo Claims. The property has been divided into four main areas, the D-Zone, Magno Zone, G-Zone (Pant Zone) and Reo Zone. The D-Zone and Magno Zone have received the most extensive exploration.

The Pb-Zn-Ag deposits are all hosted by the Cambrian Atan Group Carbonates as replacement bodies and shoots along east-west and northeast-southwest trending structural zones. Occasionally, the mineralization is conformable. The quartz veins are hosted by the Upper Paleozoic Sylvester Group greenstones.

2. LOCATION AND ACCESS

The D-Zone, Magno Zone, G-Zone (Pant Zone) and Reo Zone are located approximately 3 kilometres southeast of the Town of Cassiar in the Liard Mining District of Northern British Columbia, Latitude 59°15', Longitude 129°52'.

Both areas are easily accessible with four wheel drive vehicles.

3. LAND STATUS

Figure 1 shows the Ag/Pb/Zn(Sn) Au occurrences relative to the pertinent claim groups. Table 1 shows the land status.

On the ground, a discrepancy in the location of the Magno 3 and 4 final post was noted with respect to the Government claim maps. Using the field location of the posts, the Magno West Zone falls within the bounds of the Chiera 1 - 20 claim, under option by Shell Canada Resources. A more detailed claim location is presented on Figure 3.

4. SUMMARY

4.1 D-Zone

The D-Zone has been divided into three main areas; Lower D-Zone, Middle D-Zone, and Upper D-Zone, and one area proximal to the D-Zone, the Granite Creek Showing.

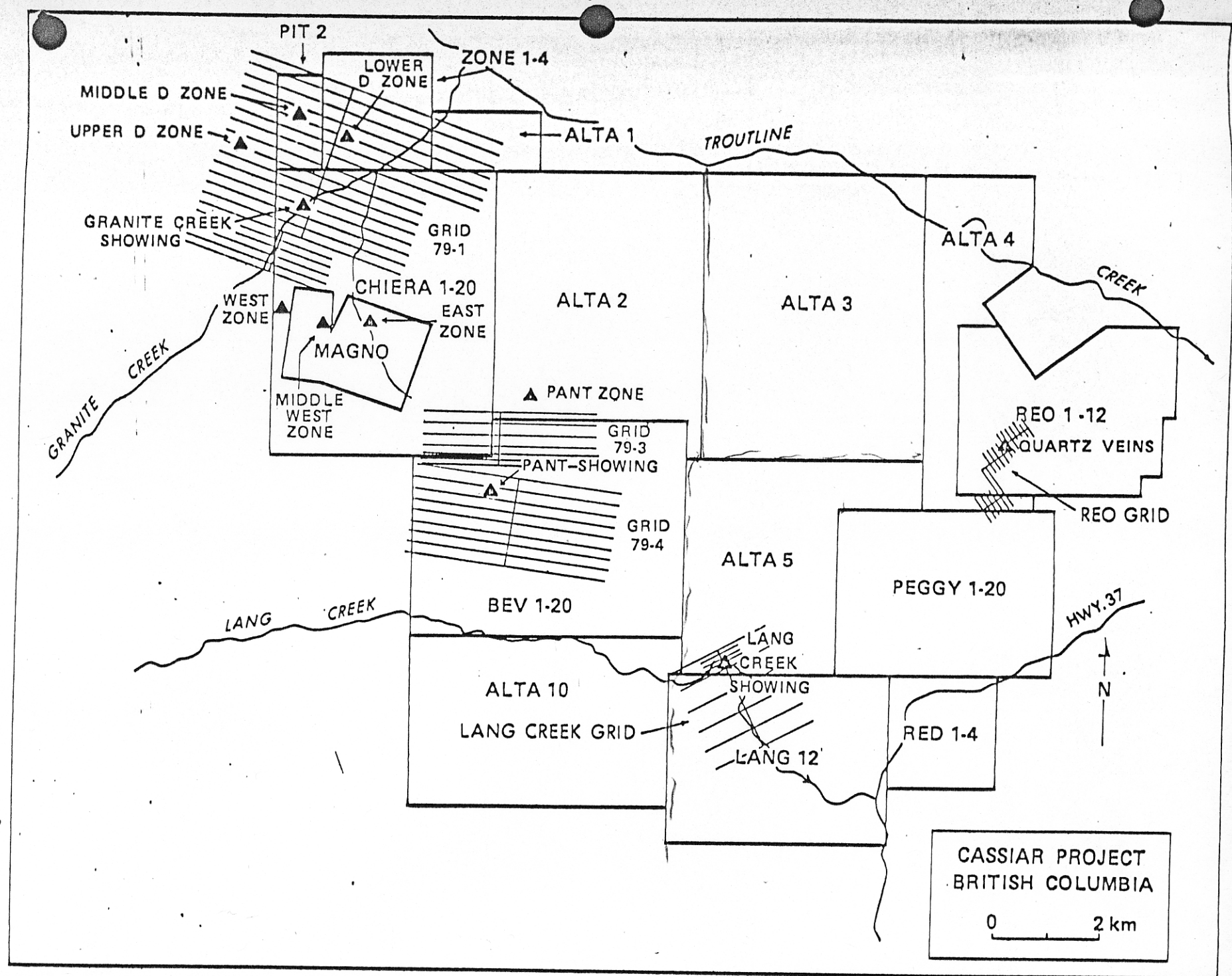


FIGURE I

TABLE 1

CASSIAR PROJECT CLAIM HOLDINGS AND PRESENT STATUS				
CLAIM GROUP				
NAME	NUMBER	UNITS	RECORDING DATE	PRESENT ASSESSMENT GOOD UNTIL
PIT	1	1	9 APRIL 1973	1985
	2	1	9 APRIL 1973	1985
CHIERA	1 - 20	20	31 MARCH 1975	1984
ZONE	1 - 4	4	4 APRIL 1975	1983
LANG	1 - 12	12	8 APRIL 1976	1987
REO	1 - 12	12	27 MAY 1976	1987
PEGGY	1 - 12	12	15 FEB. 1977	1987
BEV	1 - 20	20	28 FEB. 1977	1987
RED	1 - 4	4	29 JUNE 1977	1987
ALTA	1	2	31 MAY 1979	1985
	2	20	31 MAY 1979	1985
	3	20	31 MAY 1979	1985
	4	12	31 MAY 1979	1985
	5	16	31 MAY 1979	1987
	10	15	21 AUG 1979	1987

The Lower D-Zone was originally identified as an IP chargeability high with coincident magnetic anomalies. Five diamond drill holes failed to intersect any mineralization.

replacement?

Mn + Au

The Upper D-Zone is a small magnetite, pyrolusite, galena showing. Two of five diamond drill holes completed on the zone intersected mineralization. The best intersection ran 4.73% Pb, 4.74% Zn, 240 grams/tonne Ag, and 0.069 grams/tonne Au over 7.6 metres.

The Middle D-Zone was originally a geophysical and geochemical anomaly. Fifteen diamond drill holes were completed on the zone indicating 90,000 tonnes of mineralization grading 3.3% Pb, 6.3% Zn, and 70 grams/tonne Ag. The mineralization has been tested to a depth of 90 metres. A grab sample of float taken in 1978 assayed 3.5% Sn. Three holes sampled from the Middle D-Zone returned the following tin assays:

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

The Granite Creek showing outcrops as a 1 metre thick vein of galena, sphalerite, pyrite, pyrrhotite, and magnetite along Granite Creek. A chip sample assayed 1.4% Pb, 0.63% Zn, 0.12% Sn, 59 grams/tonne Ag and 1.0 gram/tonne Au. Two holes were drilled into the showing by Shell. One hole intersected 3.02 metres of mineralization grading 0.1% Pb, 14% Zn, 11.66 grams/tonne Ag and 0.03% Sn.

Ag Pb Zn + Sn, Au vein.

4.2 Magno Zone

Mineralization on the Magno Zone consists of massive galena, sphalerite, magnetite, pyrrhotite, pyrite, siderite, and pyrolusite as shoots and occasionally conformable lenses along a 1,200 metre east/west striking fault zone.

The Magno Zone is divided into three mineralized areas; the East Zone, Middle West Zone, and West Zone. The West Zone has been the most extensively explored. Two 200 metre adits have been driven into the west zone plus surface and underground diamond drilling. The exploration work on the Middle West and East Zones has been confined to diamond drilling.

The drill indicated potential is as follows:

East Zone - 129,273 tonnes
4.06% Pb
4.40% Zn
131 grams/tonne Ag
0.69 grams/tonne Au
Average width - 5.76 metres.

Ag Pb Zn, Au replacement?

Middle West Zone - 77,110 tonnes
9.43% Pb
5.34% Zn
258.5 grams/tonne Ag
Average width - 3.4 metres

West Zone - 200,487 tonnes
5.4% Pb
3.4% Zn
198.8 grams/tonne Ag
Average width - 2.8 metres.

The West Zone has a geologically inferred potential of 349,265 tonnes. A sample from an old drill intersection on the Middle West Zone ran 0.32% Sn over 4.6 metres.

The East Zone and Middle West Zone lie within claims currently held by Balfour Mines. According to the field location of the claim posts, the west zone lies within claims under option by Shell Canada Resources. The D-Zone lies within claims under option by Shell.

4.3 G-Zone (Pant Zone)

Attention was first drawn to the area by an airborne magnetic anomaly from a survey flown in 1968. A follow-up geochemical survey isolated two lead-zinc anomalies. Four holes were drilled to test the mag and geochem anomalies. No mineralization was found in holes drilled on the geochem anomalies, one mag high was due to a pyrrhotite-magnetite body with traces of lead and copper. Re-assaying of the pyrrhotite-magnetite intersection in 1979 returned 0.20% Sn over 2 metres.

Sulphide lenses on the Lang Valley slope of the G-Zone were sampled in 1978 and returned tin values. The best assay was from the Pant Showing which assayed 1.5% Sn across 3.6 metres.

Three holes were drilled by Shell on the G-Zone (Pant Zone). One hole under the Pant Showing returned the following: 0.9 m - 0.94% Sn, 0.2 m - 0.61% Sn, < 0.1% Pb, 16.5 grams/tonne Ag, 0.6 m - 0.08% Cu, 0.22% Pb, 0.74% Zn, 0.10% Sn, 49 grams/tonne Ag, 0.4 m - 2.28% Pb, and 296.2 grams/tonne Ag.

4.4 Reo Zone

The Reo Zone consists of three east-west trending quartz veins. Tetrahedrite with chalcopyrite occurs sporadically within the veins. At surface, the veins attain a thickness of up to 5 metres.

A geochemical survey completed over the veins in 1980 outlined a 100 x 300 metre area of +250 ppb gold with a high of 2,500 ppb. Three diamond drill holes were drilled along a north-south section

to test the soil anomaly. The drill holes intersected significant quantities of quartz veining, however the gold assays were poor with no ore grade intersections. The best silver assay ran 149.4 grams/tonne over 1 metre. The soil anomaly was not fully explained by the drilling.

5. CONCLUSIONS

The D-Zone, Magno Zone, Pant Zone, and Reo Zone may have potential for low tonnage high grade deposits. As such they would not be of interest to Shell but may prove attractive to those companies involved in ventures of this nature.