ASSESSMENT REPORT Diamond Drilling on Lucky Jack and Rusty 21 Mineral Claims Poplar Creek, B.C.

Mining Division: Slocan N.T.S. 82K/6E

> P.J. Wojdak February, 1982



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INTRODUCTION

Lucky Jack and Rusty 21 claims are part of the Bullock and Rusty claim groups located on lower Poplar Creek, at its confluence with Lardeau River, 70 km north of Kaslo, B.C.

Access is by Highway #33 (gravel surface) from Meadow Creek and Kaslo. The claims lie on a moderate to steep southwest side of Lardeau Valley, deeply incised by Poplar Creek Valley. Outcrop is moderately abundant on steep slopes, as at Lucky Jack, but is sparse on moderate slopes, such as at Bullock.

A gold prospecting rush passed through the Lardeau Valley at the turn of the century, stopping briefly at Poplar Creek between 1898 and 1903. Exploration, consisting of open cuts and driving numerous short adits continued intermittently until about 1930. Essentially no further work had been done until 1980 when claims were optioned by Westmin Resources and Armco from Ernie Alexander of Cooper Creek and Chris Graf of Vancouver.

Previous assessment (Wojdak, 1981) reports have described geology, soil geochemistry and trenching results on the Lucky Jack and Marquis-Gilbert zones, respectively on the Lucky Jack and Rusty 21 claims. These zones were diamond drilled between October 9 - 29, 1981, as part of a larger drill program at Poplar Creek. Diamond drilling on the Goldsmith zone has been described in a separate report, Wojdak (1981). Eight holes totalling 1,105 feet are reported herein. A Longyear Super 38 drill and Case 1000D dozer were used. The core is stored on the Lucky Jack claim in a clearing 200 m west of Highway #33, 300 m south of the Poplar Creek bridge. Thirty-two gold assays and 52 geochem gold determinations are reported.

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REGIONAL SETTING

The Poplar Creek area is underlain by lower Paleozoic volcanic and sedimentary strata of the Lardeau Group. These have undergone polyphase deformation and biotite grade metamorphism. The Poplar Creek area geology has been studied in detail by Read (1973) and the regional context for this report is given by a preceding assessment report (Wojdak, 1981). The main lithologies of the area are variably carbonated mafic volcanic rocks (chlorite schist, greenstone) and argillaceous metasediments.

PROPERTY GEOLOGY

The Lucky Jack claim is underlain by mafic volcanic rocks (now carbonated chlorite schist) and overlying thin bedded black argillite. The latter is extensively intruded by a 30-50 m thick andesite intrusive that is feldspar porphyritic to microcrystalline. The sill-like intrusive is well jointed and quartz veins that fill cross joints are up to one metre wide. Lucky Jack stratigraphy is truncated by a northwest trending normal fault that has down dropped and preserved the Lucky Jack block.

The Rusty 21 claim is underlain by stratigraphically lower mafic volcanic strata.

DIAMOND DRILLING

Lucky Jack

Seven holes totalling 964 feet were drilled on the Lucky Jack zone, locations shown on Figure 50. A complete description of hole orientation, depth, rocks encountered and assays is given in the logs and are only summarized below.

Drill holes 7 and 8 were drilled at -45° and -90° respectively, from the same site to test the quartz vein in trench LJ-2 that assayed 0.167 oz Au/ton over 0.76 m (average of 3 samples). The holes cored homogeneous feldspar porphyry andesite (Unit 10) with numerous fracture (joint) filling quartz veins. The contact between Unit 10 and underlying thin bedded black argillite is very sharp. Also, the andesite porphyry becomes very fine grained toward the contact and is concluded to be the chilled margin of an intrusive. The argillite is underlain by mafic volcanic rock. All quartz veins were assayed but yielded very low gold values. A 3.0 m interval of porphyritic andesite in hole 7 assayed 0.025 oz/ton.

Drill holes 9 and 10 tested the gold-arsenopyrite zone sampled in trench LJ-2. They cored the same stratigraphy as described for holes 7 and 8. The intrusive andesite is at least 30 m thick and the underlying black argillite is 10 m thick. Very sparsely disseminated arsenopyrite occurs at 16.7 to 20.6 m in hole 9 and at 20.6 to 27.0 in hole 10. Anomalous gold values extend beyond these limits, higher in hole 9 but deeper in hole 10. As defined by assay limits, the auriferous zone cross-cuts layering by about 20° (see section, Figure 52). Hole 9 returned 0.023 oz Au/ton over 7.7 m (a true thickness). Hole 10 gave 0.023 oz Au/ton over 11.3 m (8.2 m true thickness). From the trench assays tabulated below:

	True Thickness	oz Au/ton
LJ-l	4.1 m (open in one direction)	0.02
LJ-2	9.0 m	0.087
LJ-3	5.4 m (open in one direction)	0.02

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It is readily apparent the drill intersection is COMParable to LJ-2 in width but unfortunately is comparable to LJ-1 and LJ-3 with respect to grade. No arsenopyrite was observed in LJ-1 or 3.

Hole 11 was an additional test of the LJ-2 auriferous quartz vein. Drilling at the top of the hole was difficult because of proximity to the Lucky Jack fault. It cored graphitic black argillite, greenstone (both correlated with units encountered in holes 7 - 10) and an underlying argillite. Several veins occur in the greenstone but all assays were very low.

Hole 12 was designed to test the Main Lucky Jack vein with an intersection anticipated at 25 - 30 m. A vein was intersected at 29 m but assayed .003 oz Au/ton. However, a one-metre vein inter-section at 14 m assayed 0.957 oz Au/ton (average of two assays). A 5.0 m interval including the vein and using the lower of the two vein assays is 0.273 oz Au/ton. This vein is either a faulted offset of the Main Lucky Jack vein or, more likely, is the extension of a vein exposed 5 m west of the Main Lucky Jack portal that gave anomalous, but low grade gold assays in 1980 sampling.

Hole 13 was collared at same site as 12 but angled to test trench LJ-2 disseminated arsenopyrite zone further down dip from hole 10. The position of the zone has been projected in Figure 55 to show the desired interval was tested, but all gold values are very low.

Drilling conditions in holes 12 and 13 were bad due to broken ground. Hole 13 was stopped when the bit was lost down hole.

Marquis-Gilbert

Only one hole was drilled on this zone, totalling 140 feet. The hole was designed to test a group of arsenopyrite-bearing quartz veins, comparable to those at Goldsmith, exposed in trench MG-2 from a site on the switchback in the logging road The intersection was anticipated at about below the trench. Monotonous, massive, weakly carbonated greenstone was 34 m. intersected until 42.7 m where the bit was lost in a fault and the hole abandoned. Several minor quartz veins were intersected but assays are low. The MG-2 quartz veins appear to lack depth continuity. At this point, the drilling program was curtailed due to (1) necessity to continue trucking water because of freeze-up of local run-off (2) low drilling priority of the Marquis-Gilbert zone and disappointing results of the first hole and (3) dissatisfaction with the drill contractor.

CONCLUSIONS

Gold mineralization at Lucky Jack is associated with (1) quartz vein that fill joint fractures in a 30-50 m thick intrusive andesite feldspar porphyry and (2) a sub-conformable zone within the intrusive andesite, up to 9 m thick of trace arsenopyrite at or near the top of the intrusive andesite. This could be the 'diabase schist' of old reports. An exceptional assay of type (1) vein mineralization has been recorded from a 1981 drill hole, 0.957 oz Au/ton over 1.3 metres. However, the average of 28 drill vein intercepts is 0.046 oz Au/ton* and is not an . economic grade. Pronounced jointing in the andesite sill results in badly broken ground as demonstrated by condition of adits and drilling problems and would represent mining problems. The average grade of type (2) sub-conformable gold mineralization is about 0.02 oz Au/ton, as determined from diamond drilling. The 0.087 oz Au/ton value from LJ-2 may result from fortuitous location of the trench along the intersection of the sub-conformable band with an auriferous quartz vein.

* not weighted by sample length

The potential of both types of gold mineralization at Lucky Jack is limited by the 30-50 m thickness of the intrusive andesite host rock (perhaps not a seriously limiting factor) and more importantly by faulting. The Lucky Jack area is a small downfaulted block preserved near, the bottom of Lardeau River Valley. Up-dip extensions of the Lucky Jack stratigraphic level (across the fault) have been removed by erosion and extensions along strike or down-dip are beneath river valley level -- a formidable exploration target. Consistent with this interpretation, the Lucky Jack andesite porphyry intrusive has not been observed elsewhere in the Poplar Creek area.

Wojdak.

APPENDIX 1

- STATEMENT OF EXPENDITURES ON LUCKY JACK AND RUSTY 21 MINERAL CLAIMS Work Period - October 9 - 29, 1981 Salaries A.E. Marr (drill supervision, surveying drill sites, core logging, core splitting, drafting, camp demob) 16 days @ \$71/day \$ 1,136.00
 - Richard Ney (core splitting, camp demob) 7 days @ \$50.00 350.00
 - P.J. Wojdak (supervision, locating drill sites, core logging, splitting, drafting) 5 days @ \$160.00 800.00

Analyses

32	Au assay @	\$6.00	192.00
52	Au geochem	@ \$4.50	234.00

Diamond Drilling

Contracted to J.K. Drilling and Candrill	
Enterprises, Delta, B.C., pro-rated on	
basis of 1,105 feet of 2,447 total footage	27,381.94
Core boxes	350.34
Dozer work to prepare drill sites and skid	
diamond, drill hauling water for hole 14,	
contracted to KEMEM Earth Moving, Argenta, B.C.	3,908.00

Transportation

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Four wheel drive truck, fuel, camp	
demobilization	\$ 900.00
Sample shipping	200.00
Camp Costs	
32 man đays @ \$16 per day	512.00
Report Preparation	400.00
	\$36,364.28

\$30,304.28 HHHHHHH

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APPENDIX 2

STATEMENT OF QUALIFICATIONS

I, PAUL J. WOJDAK of the Municipality of Delta, Province of British Columbia, hereby certify:

- 1. That I am a geologist residing at 11405 85th Avenue, Delta, British Columbia with a business address at Suite 904, 1055 Dunsmuir Street, P.O. Box 49066, Four Bentall Centre, Vancouver, British Columbia V7X 1C4.
- 2. That I graduated with a B.Sc. (Honours) in Geology and Chemistry from McMaster University, Hamilton, Ontario in 1971 and with a M.Sc. in Geology from the University of British Columbia in 1974.
- 3. That I am a member of the Geological Association of Canada.
- 4. That I have practised geology with Cominco Limited and Westmin Resources Limited from 1974 to 1982.

Dated this 2nd day of February, 1982 at Vancouver, British Columbia.

, dale Signed

P.J. Wojdak, M.Sc.





LARDEAU GROUP, Cambrian to Devonian

argillite; grey.

faulting.

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crystal fragments and tuff appearance. Limestone, dolomite, laminated chlorite-sericite 9 9a phyllitic limestone, numerous quartz veins; 9b chert; 9c limy black phyllite. Associated with unit 7. Quartzite, grit, minor argillite; may be facies 8 equivalent of unit 6. Carbonated mafic volcanic; medium to light green 7 limy chlorite schist commonly with distinctive limestone lenses. Siltstone, argillite; intercalated with limey 6 chlorite schist (mafic tuffs(?)) Carbonate Exhalite (?), 5a massive coarse grained 5 ferroan dolomite - fuchsite - quartz rock to schistose ferroan dolomite - sericite - chlorite quartz schist. Deep rust weathering, minor pyrite, arsenopyrite, very numerous quartz veins. 5b pyritic chert. 5c graphitic argillite. Carbonated mafic volcanics, light green chlorite 4 4a schist. 4b mafic tuff. Argillite, graphitic argillite; intercalated with 3 3a limy chlorite schist; similar to unit 6 and where unit 5 is absent distinction of unit 3 and 6 is uncertain. 3b with intercalated chlorite schist. Felsic volcanics; light coloured, rusty, quartz-2 sericite schist, with quartz eyes and amygdules near Mobb workings. Stratigraphic position variable. Mafic volcanics, dark green pillow basalt, chlorite 1 schist. Α Quartz - (feldspar) grit. MINERAL REPORCES SORNOH ASTECHNER REPORT mm -----WESTMIN RESOURCES LTD. POPLAR PROJECT LUCKY JACK ZONE AREA OF DIAMOND DRILLING Scale 1: 500 Date: Dec. 1981 Drawn By: R. Ivany

Jowett Formation - units represent an approximate lithologic sequence and may not be a stratigraphic succession. Some units may be equivalent and related by folding or

Argillaceous greywacke, minor graphitic

Feldspar porphyry andesite; ranges from dark green massive, well jointed, with lens shaped mafic inclusions to grey or black, well foliated,

Geological Contact Outcrop Trench Diamond Drill Hole Fault Road

FIGURE: 50