825278

REPORT ON THE

LUCK JACK - BULLOCK GROUP

CROWN GRANTED CLAIMS

POPLAR CREEK AREA

LARDEAU

SLOCAN MINING DIVISION

BRITISH COLUMBIA

82K/6W

50° 24' N : 117° 07' W

for

HARDY INTERNATIONAL DEVELOPMENTS INC.

by

F. Marshall Smith, P.Eng.

May, 1983

F. MARSHALL SMITH, P. ENG. CONSULTING GEOLOGIST GEOCHEMIST
6580 MAYFLOWER DRIVE, RICHMOND, B.C. V7C 3X6 (604) 271-6556

May 9,1983

TO WHOM IT MAY CONCERN:

The undersigned is the author of the report:

Report on the
Lucky Jack - Bullock Group
Poplar Creek Area
Lardeau
Slocan Mining Division
British Columbia
for
Hardy International Developments Inc.
dated May, 1983

I hereby authorize the use of this report or relevant and representative extracts therefrom, in any duly authorized prospectus, statement of material facts or other informational releases, so long as the use of portions of the report or quotations from the report are agreed to in writing or verbally before release.

Yours truly,

F. Marshall Smith, P.Eng.

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INTRODUCTION

The writer was retained by Mr. Martin Toban, President of Hardy International Developments Inc. to write a qualifying report based on field work and data collected by Westmin Resources and others on the Crown granted claims at Poplar Creek, Lardeau River, British Columbia.

The Writer undertook the report based on the understanding that if a work programme was justified, the report can only deal with the claimed areas included within the pre-existing (reverted) crown grants.

SUMMARY AND CONCLUSIONS

The diamond drill programme by Westmin Resources on the Lucky Jack and Bullock areas of the reverted Crown granted claims at Poplar Creek, now under option to Hardy International Developments Inc., discovered two significant mineralized zones. The dacite porphyry and vein in DDH12 grades from subcrop 0.25 oz/ton gold (8.6 gm/t) for 23.3 ft. (7.1 m). The extensions of this zone remain untested.

Several mineralized zones on Goldsmith and Golden Crown claims remain open in strike and dip with grades up to 1.404 oz/ton gold in drill hole #5 over 3 ft. Trenches GS 30 and 18 have not been drill tested to determine continuity, strike and dip of the mineralized flows.

The gold mineralization on the Lucky Jack and Goldsmith groups appears to be of the "gold porphyrite" type. This type of deposit tends to have all or most of the gold disseminated through a submarine flow with the gold concentrated at or near the ceiling and edges of a lens shaped sheet (normal to the flow axis). The flows tend to cluster in time and space within the mixed sedimentary and volcanic rocks of the district.

If the first phase of evaluation of Lucky Jack and Goldsmith are successful in locating extension of known mineralization related to the celing of the flow then there is considerable probability of locating a large tonnage low to moderate grade deposit on the claimed area.

A budget of $200,000 is recommended in two phases to define the shape and character of the gold bearing zones located by previous operators of the claims. This programme will include geological mapping, trenching, geophysical exploration and diamond drilling. Most of the programme will be expensed on diamond drilling.

LOCATION AND ACCESS

The Lucky Jack and Bullock crown grants are located in the Central Lardeau district on the south (west) side of Lardeau River on the south side of Poplar Creek from the confluence of Poplar and Lardeau for apporoximately 2 km south and southwest.

The claims are on map sheet 82 K/6W at about 50° 24' N latitude and 117° 07' W longitude in the Slocan Mining Division, British Columbia. Poplar Creek lies about 70 km north of Kaslo on Highway 3A (gravel road) and 22 km north of the nearest small community of Meadow Creek.

Roads have been cut for logging throughout the crown grant claimed area and all old trenches are accessible with four wheel drive trucks during the summer field season according to Westmin Resources personnel.

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POPLAR CREEK PROJECT

POPLAR CREEK-LARDEAU RIVER AREA

SLOCAN M.D., B.C.

LOCATION MAP

KILOMETRES

0 100 200 300 400

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TOPOGRAPHY

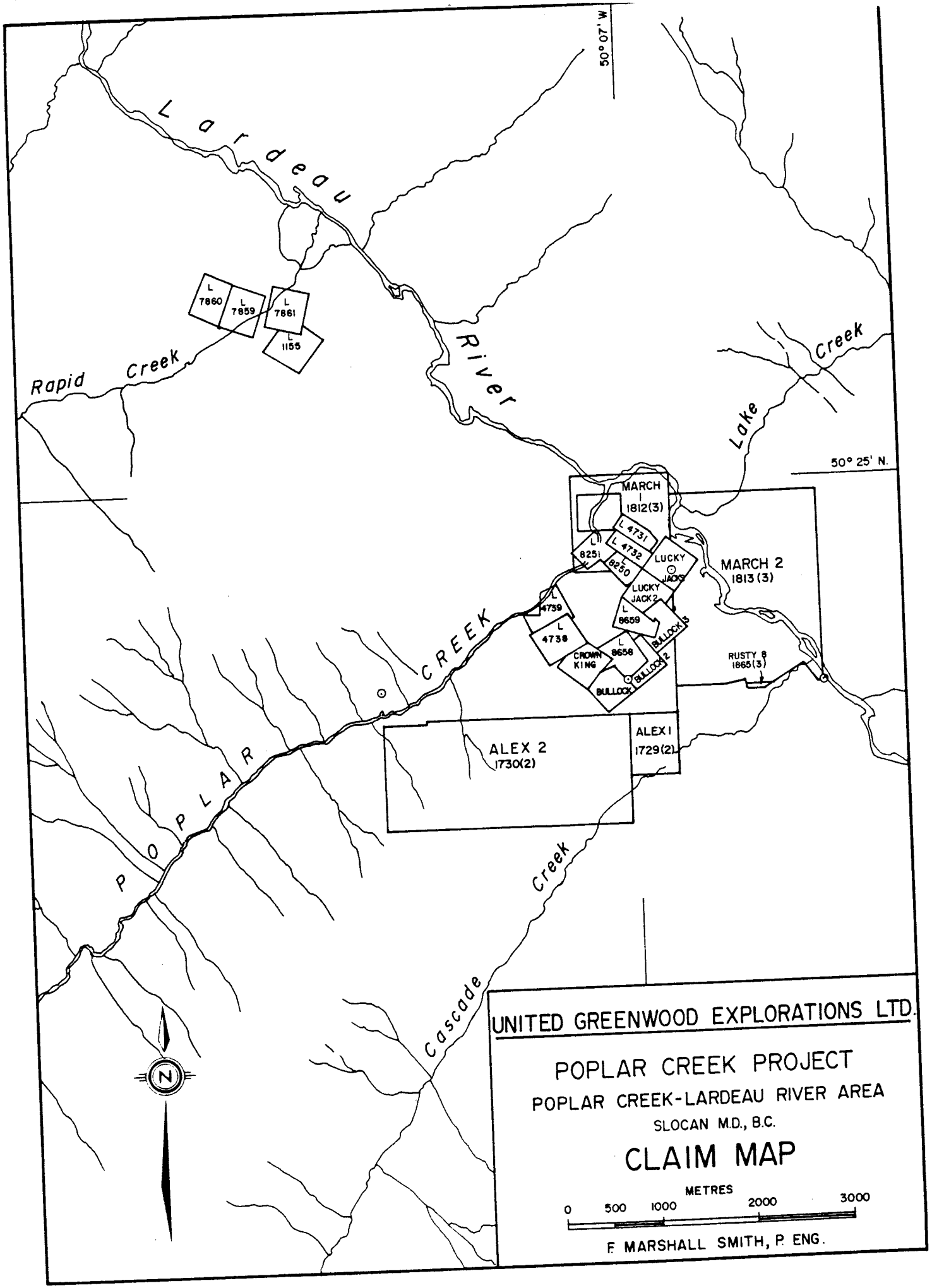
The property has not been visited but the crew chief responsible for cutting the soil sample lines (Mr. V. Rybeck-Hardy, P.Eng.) advised the writer that most of the area has been clear cut with steep slopes (canyon) along Poplar Creek. There is a broad flat valley at Lardeau River with steep to bench/plateau valley walls on the south side of Lardeau River. According to P.J. Wojdak (for Westmin Resources) there is abundant outcrop in the steeper areas but outcrop is sparse in the gentle slope portions of the property.

CLAIMS AND OWNERSHIP

This report covers only the restaked crown grant mineral claims listed below. Hardy International Developments Inc. has entered into an agreement with Eros Resources Inc. to explore the listed claims. The agreement covers the listed claims and several located claims in the district.

Claim Name	Lot Number	Record Number
Lucky Jack	4731	785 (8)
Lucky 3	4732	1624 (11)
Big Hope Fr	8250	1627 (11)
Big Hope #2 Fr	8251	1628 (11)
Goldsmith	4738	1625 (11)
Goldhill	4739	1626 (11)
Pluto	8658	1629 (11)
Galileo	8659	1630 (11)
Louise	4740	1876 (3)
Crown King		1225 (6)
Bullock		17945 (7)
Bullock 2		1226 (6)
Bullock 3		1227 (6)
Lucky Jack 2		1228 (6)
Lucky Jack 3		1229 (6)

None of the claimed land has been field examined by the writer.


50° 07' W
Lardeau
River
Rapid Creek
Lake Creek
50° 25' N.
L 7860
L 7859
L 7861
L 1155
MARCH 1812(3)
L 4731
L 4732
L 8251
8250
LUCKY JACKS
LUCKY JACK 2
L 8659
BULLOCK 3
L 4739
L 4738
CROWN KING
L 8658
BULLOCK 2
BULLOCK
MARCH 2 1813(3)
RUSTY 8 1865(3)
CREEK
ALEX 2 1730(2)
ALEX 1 1729(2)
POPLAR
Cascade Creek
N
UNITED GREENWOOD EXPLORATIONS LTD.
POPLAR CREEK PROJECT
POPLAR CREEK-LARDEAU RIVER AREA
SLOCAN M.D., B.C.
CLAIM MAP
METRES
0 500 1000 2000 3000
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HISTORY

Placer gold was found in Lardeau River below Trout Lake in 1890, but limited production was attained due to the local ground conditions. Placer gold in Poplar Creek and the related vein occurrences was discovered in 1898 but the main rush to this area commenced in June 1903 with the discovery of rich specimen "ore" on the Gold Park and (later) on the Lucky Jack claims.

The Lucky Jack property had little or no production due to litigation and the removal of the highgrade as "a few shots blew out the rich pocket" (Emmons, 1914). R.W. Brock in reports of 1903, 1904 and 1907 described the geology of the area and referred to the massive "greenstones" of the area as "diabase schist" and Gunning in page 41 of GSC Memoire 161 remarks that free gold can be panned from the diabase schist or carbonated greenstone. About 300 ft. of adit was completed before 1904.

The Bullock group lies south of the Lucky Jack with 1200 ft. of drifting in 5 adits by 1929 on the main vein which Gunning describes as being nearly 1000 ft. long and varying up to 5 feet. Below the main adit are numerous veins in open cuts and adits in "greenstone" and coarsely crystalline carbonate rock. The fine stringers in this area carry pockety high grade "ore" according to Gunning.

According to R.W. Brock (1903):

> "On the Crown King veins are also numerous. For some little distance a vein occurs every few feet. The Country rock itself appears to carry gold values. The owners had started to dig in what appeared to be some weathered diabase schist, but this earthy material was found to pan well. Some stringers of quartz one-eighth of an inch to two inches in width occur in it containing a little galena. A pan of this quartz and decomposed rock-matter was washed and a large quantity of fine gold and a number of nuggets recovered."

Work is described for 1903, 1904, 1908, 1914, 1920 and 1928 in BCDM reports on the company crown grant claims and others in the immediate vicinity.

In the report of activities for 1928 the Bullock Group is described as:

> "The formation, generally speaking consists of highly metamorphosed rocks, schistose in character and mineralized in certain zones with pyrite and argenopyrite. The schists are rich in iron sulfides and evidently carry gold in appreciable quantities, as good results have been obtained in some places by panning the decomposed and oxidized material from the surface, and it is possible that if a big enough body of this material is discovered it could be mined and treated at a profit."

No further report of activities is listed and the only known recent work is by Westmin Resources Ltd. in 1980 through 1981 on portions of the company claims. This work consisted of detail mapping, soil sampling, line cutting and preliminary diamond drilling. The area of the claims has had several examinations by geologists for the Province of B.C. and Government of Canada. The most recent detail publication is Bulletin 193, GSC in 1973 by Peter B. Read on the Poplar Creek area. There is no discussion of the mineral showings in this volume. The most recent major publication on the geology related to mineral occurances is by Walker, Bancroft and Gunning as G.S.C. Memoir 161, Lardeau Map - area British Columbia in 1929.

Detail mapping of Lardeau East half was completed in 1957 by J.E. Reesor and published as Memoir 369, GSC. This publication details the geology of the belt of rocks passing south easterly from Poplar Creek to Kootenay Lake.

REGIONAL GEOLOGY

The Poplar Creek area is in the south eastern end of the "Central Mineral Belt" proposed by R.W. Brock in 1903. This "Belt" conforms to the outcrop of the Lardeau Group of schists, pelitic schists, green-schists and volcanic flows with related massive ferro-dolomites. The mapping by P.B. Read has the majority of rocks in the district as the basal Index formation of Lardeau group with unconformably overlying Broadview formation with a decollement at the base of the Broadview.

Mapping by Fyles and Wheeler indicate the greenstones in the district (as detailed by P.J. Wojdak of Westmin Resources) are probably the Jowett formation (central Lardeau Group) and the majority of rocks along and near the Lardeau River are of the Broadview formation.

The prinicpal components are mixed (and related) volcanic flows, chemical sediments (exhalite), volcano-wackes, graphitic phyllites, and limestones all highly folded and structurally deformed. These units host throughout the belt flows of albite-dacite or albitic latites with internal quartz lenses both parallel and oblique to the flow boundaries. These chlorite and carbonate quartz keratophere flows host the majority of known gold and silver zones in the district. The gold bearing albite dacite flows are enclosed in limey black argillites that represent a minor component of a predominantly andesite to basalt flow sequence.

The structural framework proposed by P.B. Read for the district appears to be significantly different from the recent mapping by Westmin Resources. In particular, none of the intense folding was in evidence on the portion between Poplar Creek and Trout Lake on the west side of Lardeau Rier as outlined by Read (Bull. 193).

The sequence of rocks in the district are as below:

Group	Unit	
Intrusives	(a) (b)	Leucoquartz monzonite and granite. Ultrabasic rocks intruded into Lardeau group.
Triassic Milford		Grey phyllitics, sandstones, limestone.
Pre Triassic	Broadview	Metavolcanics and related sediments Metagrits similar to base of Millford Group.
Lardeau	Triune, Ajax Sharon Creek Formations	Phyllitic limestones. argillites, quartzite and grey phyllites.
	Index	Metasedimentary, cherts, shales intercalled with minor volcano sedimentary units and metavolcanic rocks.

PROPERTY GEOLOGY

The rock units as mapped by Westmin Resources are as per report by P.J. Wodjak.

Unit 1 These are dark green, commonly magnetic, mafic volcanic strata probably of basalt composition. They are homogeneous except for local interflow chert beds.

Unit 2 These are fine grained quartz sericite schists and local massive, fine grained quartzo-feldspathic rocks that were tentatively mapped as felsic volcanics in the field. Follow-up thin section work mainly on the massive variety has not stood up to a felsic volcanic origin. Instead, these appear to be metasedimentary rocks.

Unit 3 Black to dary grey, commonly graphitic argillite occurs at a number of stratigraphic levels intercalated with carbonated mafic volcanic rocks (Unit 4). The appearance of argillite is interpreted to signal diminishing volcanic activity and the approaching termination of the mafic volcanic cycle represented by Unit 1. The argillites are thin bedded, and probably formed as deep water distal turbidites.

Unit 4 These are pale green altered mafic volcanic rocks that may include tuffaceous material. They are equivalent to Unit 1 except for containing up to 50% carbonate (typically 20%) as disseminated porphyroblasts and stringer veins. Quartz veins are also very common. Carbonate alteration also affects interbedded argillites and is interpreted to be contemporaneous seafloor hydrothermal activity that had an increasing opportunity to leave its mark as the rate of volcanism slowed.

Unit 5 The carbonate exhalite unit represents the end results of the hydrothermal process described above. Where best developed, the rock consists of massive coarse grained ferroan dolomite intergrown with quartz, fuchsite-muscovite and lesser chlorite to produce an amazingly hard compact rock. The iron carbonate weathers to a dark red gossan. This unit is best developed on the Bullock zone. Where the rock has not recrystallized it is schistose and laminated with chert, carbonate and muscovite (sericite) rich bands on a scale of mm to 10 cm. The laminations are considered primary compositional layers (bedding) and indicates the hydrothermal process vented

onto the sea-floor. The carbonate unit contains minor pyrite and is the locus of intensive quartz veining. As discussed further below these quartz veins contain little other than quartz. Graphitic argillite has also been included in this unit although it is not clear if these truly are interbeds, or represent under or overlying strata that might instead be assigned to Unit 3. As exposed at the beginning of the Bullock #1 adit, Unit 5 is at least 15 m thick.

Unit 6 These are siltstone and argillite beds intercalated with limy chlorite schist. Unit 6 is comparable lithologically to Unit 3 but is separated from it stratigraphically by the carbonate exhalite, Unit 5. Where Unit 5 is not developed, distinction between Units 3 and 6 is obscure, other than the slightly grittier grain size.

Unit 7 This is a thick medium green mafic volcanic unit locally with distinctive limestone lenses that range from a few cm to several metres in thickness. The mode of occurrence of carbonate and darker colour distinguish Unit 7 from Unit 4, although the possibility these represent facies variations of the same stratigraphic unit has been considered. This unit is laterally extensive and like Unit 4, contains intercalated clastic sedimentary strata (Units 6 and 8).

Unit 8 is a local facies variant of Unit 6 and consists of coarser clastic detritus, quartzite and grit. The gradational coarsening upward of clastic material represented by Units 3, 6 and 8 reflects a gradational change to coarse clastic sedimention that typifies the Broadview Formation.

Unit 9 is a 25 m thick limestone band within Unit 7 greenstone. It varies from pure limestone to laminated chlorite-sericite phyllitic limestone. In comparison with Unit 5, chert is rare but limy black phyllite is about equally common. This unit is best developed at the Big Hope adits where quartz veins associated with the unit are well developed. Elsewhere quartz veins in Unit 9 carbonate are uncommon. It is dubious whether "exhalite" is an appropriate term; the carbonate is calcite with minor dolomite, chert is rare and fuschsite is absent. The possibility that Unit 9 carbonate is a structural repetition of Unit 5 has been considered in conjunction with the comparison of Units 4 and 7, but likewise has been discounted.

Unit 10 is a weak to moderately foliated feldspar porphyry andesite. Feldspar phenocrysts are ubiquitous and account for 10-30% of the rock. Quartz eyes are rare but petrologically significant. The rock is well jointed, the joints filled by quartz veins. Very fine grained, lens shaped (flattened) mafic fragments occur sporadically. Upper and lower contacts have been observed and are sharp. The origin of this rock has been debated as either extrusive (a massive flow with fragments) or intrusive (a sill with xenoliths). Lack of flow alignment of feldspar, sharp lower contact with chilled margin (observed in drill core) and contacts which truncate bedded units favour an intrusive origin. Unit 10 is probably the rock termed "diabase schist" by the early miners. It only occurs in the Lucky Jack area.

Unit 11 is a sedimentary unit intruded by andesite (Unit 10) at Lucky Jack. Below the andesite lies a graphitic black argillite and above is graphitic black argillite and dark grey argillaceous greywacke.

MINERALIZATION

Lucky Jack Zone: (See Appendix I Westmin Report).

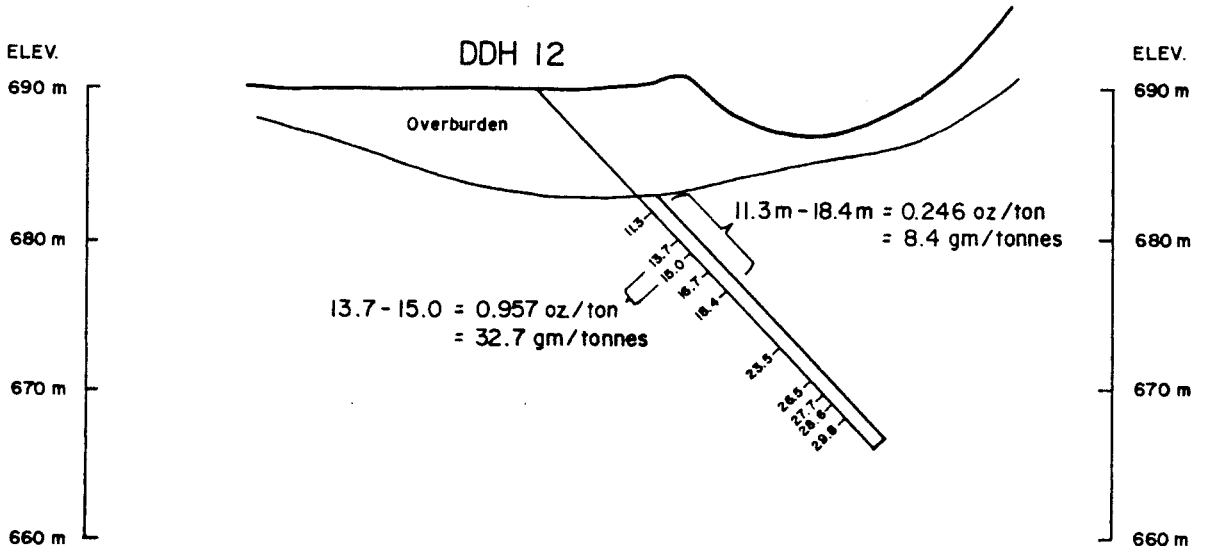
Diamond drilling on Lucky Jack Zone attempted to test mineralized quartz veins in quartz dacite crystal tuff or flows. Drill hole No. 12 penetrated a new zone near but above (south) of the old adits. The average grade including one unassayed interval is 0.25 oz/ton gold (8.6 gm/tonne) over 23.3 ft. (7.1 m).

The results of diamond drilling on the Lucky Jack crown grant claim indicates there is potential for expanding on the zone of gold mineralization located in the grey porphyritic flow in diamond drill hole 12. The zone appears to be the 'top' of a flow of grey dacite porphyry similar to many of the newly discovered gold deposits in British Columbia. The grey dacite is intercalated within black graphitic limy argillite with a "footwell" fault (or shear) and hanging wall of conformable sedimentary rocks. As noted by Westmin, the bottom and top of the flows have chilled margins and the porphyritic nature appears to indicate an intrusive nature to the rock. Also, the rock commonly has a 'foliation' that represents the complex flow nature of the partly consolidated rock. These "rock unit" gold zones are extremely difficult to drill with standard drill systems and get reliable gold grades. As noted in the core log for DDH 12 recovery is very bad (about 62% for the sample interval). Careful drilling of this sort of deposit with significantly better core recovery usually upgrades the values found in the dacite but not in the 'gash' quartz veins.

Southwest of the other drill holes on this claim (i.e., DDH 7, 8, 9, 10, 11) are a series of anomalous gold values in soil samples collected by Westmin. The source of these values may have been located in place on Trench #2 but this zone has not been located in the core drilling to date. Some minor values over short intervals in the core may represent (if the recovery was less than 90%) zones where gold values have been diminished by the mechanical action of coring.

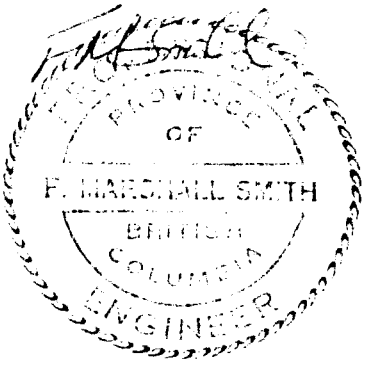
South of the Lucky Jack is the Swede and Gold Park (Martin & Gilbert) zones described by Emmons (p. 63) where "... stringers of arsenopyrite traverse the formation in all directions forming a stockwork. Some of this mineral is very rich in

NW SE



SAMPLE No.	SAMPLE INTERVAL	SAMPLE LENGTH	Au oz/ton
38774	11.3 - 13.7	2.4	0.182
38775	13.7 - 15.0	1.3	1.246
38776	16.7 - 18.4	1.3	0.048
38777	23.5 - 26.5	3.0	—
38778	27.7 - 28.6	0.9	—
38779	28.6 - 29.8	1.2	<0.003

Assays by Westmin Resources 1981



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POPLAR CREEK PROJECT

POPLAR CREEK-LARDEAU RIVER AREA

SLOCAN M.D., B.C.

SECTION: D.D.H.-12

METRES

0 5 10 20 30

F. MARSHALL SMITH, P. ENG.

gold, assays of selected specimens showing it to contain as much as 325 oz. (per ton gold) . . . "

Bullock/Gold Smith: See Appendix II

Further south of the Swede group is the Bullock and Gold Smith crown grant group described by in part Gunning (Memoire 161) p.42.

"The more important veins may be seeen above the portal of the upper adit and have been followed on the surface by open-cuts and trenches for nearly 1,000 feet. They vary in width up to 5 feet or more, 15 feet of quartz being exposed at the intersection of two leads. Pyrrhotite, pyrite, and arsenopyrite are irregularly distributed through the veins and small amounts of ankerite are present.

No. 1 adit was commenced 50 feet below these outcrops near their north end, and was run as a crosscut for 435 feet. It cuts, from the portal in, massive, grey, carbonate rock, grading on the west into green chlorite schists and followed by a 15-foot band of carbonaceous, graphitic schists beyond which is chlorite schist. A few lenses and stringers of quartz occur in the carbonaceous schists, but none in the chlorite schists. The lead exposed on the surface was encountered 81 feet from the portal and was drifted on, for the most part, in a southeasterly direction, for over 100 feet. Two veins are present and they persist for 70 feet southeast from the main crosscut, where they were lost in a zone of rather complex faulting. The two veins continue 15 feet northwest from the main drift and have been followed by a raise to the surface. The quartz throughout is watery, white, and quite barren. Two samples, which proved to be barren of gold, were taken, one of quartz from the drift just south of the main crosscut, and one of pyritized country rock in the small drift to the northwest at the foot of a short raise.

Hanson's tunnel, 400 feet northwest along the strike from No. 1 adit, crosscut 160 feet of carbonate rock and limy schists and exposes several quartz veins, some of which are slightly mineralized with pyrite. Chromium mica appears in some of the quartz.

Below, that is northeast of the main adit, numerous veins have been exposed by open-cuts or short adits. Those which strike northwest and dip steeply southwest are the more persistent. Many small stringers intersect them and at the junctions several small pockets of high-grade ore, some containing visible free gold, have been found. Only small amounts of sulphides were seen and pyrite is the most common of these. Galena is very scarce. Green chromium mica is present in some of the quartz veins and impregnates several of the bands of coarsely crystalline carbonate rock. The mica is commonly more abundant near the high-grade pockets and, therefore, may be taken as a rough guide to ore.

> Much money has been spent on development work; a small mill and excellent cabins have been erected. The two samples taken by the writer indicate that gold is very erratically distributed and is not present in any important amount in the main vein or in the adjacent country rock. All that remains to be done is careful systematic sampling and assaying of the quartz veins to ascertain what average values, if any, may be expected."

Soil sampling in 1981 by Westmin in the area of Goldsmith, Crown King, and Bullock crown grants have located significant soil gold geochemical values not related to mineralization described by Brock, Emmons or Gunning. According to mapping and diamond drilling by Westmin (P.J. Wodjak) the geology in the area of the most significant results consists of interbedded volcanic flows and carbonaceous limey shales. The flows have consistent conformable contacts and host a miriad of thick and thin quartz and quartz carbonate veins carrying pyrite, galena, sphalerite and significant quantities of arsenopyrite with native gold and gold encased in the arsenopyrite. The flows have been sampled in trenches GS 30, 32, GS 18 (east), GS 18 and to the south on GS 19 and 20, and sites GS 1 to 3.

As detailed in the Westmin report (Appendix II) trenches GS 30, portions of GS 34 and 18 appear to have gold values on surface but only DDH 5 has gold values with one 0.9 m (3 ft.) section from 56.7 to 57.6 m (186 ft. to 189 ft. with 41 gm/t (1.20 oz per ton) gold.

Drill hole #6 to the east and along strike of #5 failed to pass through the same geological interval as drill hole #5 (i.e., #6 is about 30 m (100 ft.) NE of #5 hole and appears to have been too short to test the equivalent zone penetrated in drill hole #5). Drill hole #3 southwest of #5 was drilled back (NE) towards the mineralization in Trench GS 30 and the collar of DDH #5. This hole was both too short and drilled at 15° to 25° shallower than the bedding and hence could not have tested the mineralization in Trench GS 30.

Soil sample site PM 1424 north of DDH #1 is a significant value (3200 ppb gold) and remains unexplained by the current work. Old trenches and the Goldsmith No. 3 adit traverse the area of this soil sample but no channel samples have located any mineralization in place.

The anomalous gold values at soil chemical sample sites PM 1412, 1413, 1415, 1457 in the northern portion of Goldsmith crown grant have not been explored by trenching or drilling in the recent work by Westmin resources and remain significant targets for further exploration.

There are 2 major untested anomalous gold values on Crown King and at least one major untested anomaly on Bullock 1 crown grant.

CONCLUSIONS

The gold mineralization in diamond drill hole No. 12 within the 'dacite' flow on Lucky Jack crown grant appears to be a significant target for further drill testing for mineralization of the 'gold porphyrite' type. The grade of this sort of deposit cannot be drill tested with a standard drilling scheme as even a 5% core loss can result in significantly reduced gold values in core.

The gold mineralization on Gold Crown, Goldsmith and Bullock crown grants appears to be in flows and related volcano-sedimentary units encased in graphitic shales. These zones have not been adequately drill tested to determine grade, length thickness and rake of the gold bearing zones.

Several significant gold geochemical soil anomalies and trench assays remain untested by past operators.

As the best grade gold zones are within dacites or chlorite rich rocks (spillites?) that are enclosed in graphitic argillite, resistivity mapping of the depth extension of the mineralized zones should determine the general rake of the lens shaped zones.

All soil samples collected to date have been analysed after the coarse fraction (+80 mesh) was removed. In general with this sort of deposit more of the gold in the original soil will be in the coarse fraction than the fine and as the soils are relatively alkaline the arsenopyrite, pyrite and galena will weather very much slower than in acid soils liberating the mechanically enclosed gold in sulfides very slowly. Also, this sort of deposit type tends to have coarse gold associated with the higher grade bed rock and fine gold of almost equal importance in the low grade and high grade zones. Thus the lack of major soil anomalies over subcropping (and shallow soil) zones should be checked by resampling for the coarse gold content to determine if the soil grid should be resampled in areas of favourable geology.

If thin section and preliminary studies on site indicate that the deposit is of the gold porphyrite type there is considerable possibility of expanding on the proven gold bearing zones by detail geophysics and careful diamond drilling.

PROGRAMME

The proposed programme is to focus on the known gold bearing zones to determine if one or more can be enlarged to a size with sufficient grade to justify a detail systematic drilling programme to block out ore reserves.

The preliminary programme is required to fill in the omissions in past work and detail log all drill core in an effort to determine the relation between the flows and enclosing sedimentary rocks. This work can commence before any field work is required.

The field work should consist of trenching the bedrock zone at DDH 12 on Lucky Jack and extending the zone to the northwest until the capping argillite is reached. Detail mapping and sampling of this area will assist in the location of the next drill holes.

The various anomalous gold soil sample sites on the Bullock area (Bullock, Crown King and Goldsmith crown grants) must be trenched and mapped.

Diamond drilling will follow detail resistivity mapping of the "dacite" zones at Lucky Jack and Goldsmith. Diamond drilling must be done with every effort expended to keep core recovery as high as possible.

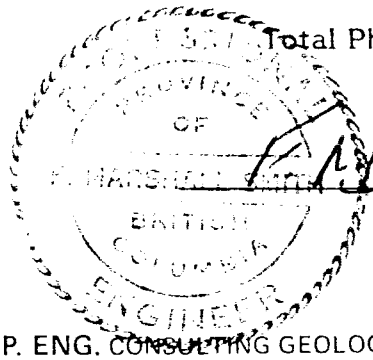
BUDGET

Phase I - Lucky Jack and preliminary work Bullock Zone.

Preliminary:	
Thin sections	$ 500
Relogging core (Geolog.)	1,000
Resplitting all "flow rock" and assays	1,500
Field:	
Back hoe trenching Lucky Jack, Goldsmith	2,000
Detail mapping and sampling	5,000
Geophysical surveys	15,000
Diamond Drilling 500 m at $100/m (all inclusive)	50,000
Room, Board, Transportation	5,000
Supervision	5,000
Contingencies, inclusive of reports	15,000
Total Phase I	$100,000

Phase II - Detail drilling, if justified, Lucky Jack and drill testing Goldsmith, Gold Crown and Bullock Zones.

Geophysical survey	$ 15,000
Diamond drilling 600 m at $100/m	60,000
Room, Board, Travel	5,000
Supervision, core logging	10,000
Contingencies inclusive of reports	10,000
Total Phase II	$100,000
Total Phase I & II	$200,000



F. Marshall Smith, P.Eng.
May 9, 1983

CERTIFICATE OF QUALIFICATIONS

I, F. Marshall Smith, do hereby certify that:

1. I am a consulting geologist and geochemist with offices at Mayflower Drive, Richmond, British Columbia.

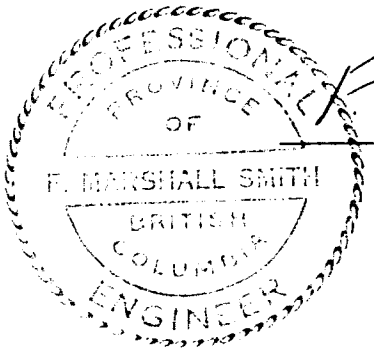
2. I am a graduate of the University of Toronto with a degree of B.Sc., Honours Geology.

3. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.

4. I have practiced my profession continuously since 1967 primarily in the Cordillera of North America.

5. This report is based on the examination of all available reports, and literature pertaining to the listed reverted Crown Grants on page 5 of this report. The property was not examined by the writer.

6. I have no interest direct or indirect in the claims or shares of Hardy International Developments Inc.



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May 9, 1983

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APPENDIX I

Bullock

Trench locations are shown on the Bullock grid geology map (Figure 3). Seventy-nine samples were taken from 16 trenches, totalling 143 m of sample length. Detailed sample locations, lithologies and results are indicated on the accompanying detailed trench plans. Trench locations were based on presence of carbonate exhalite (Unit 5), old workings, and 1980 soil geochem anomalies but limited somewhat by steep topography. The ferroan dolomite-quartz-fuchsite exhalite unit and associated quartz veins were intensely sampled in trenches B-6, 10, 11, 12, 13, 14 and 15 with disappointing results. The best values are only 0.022 oz Au/ton over 1.4 m in B-12, and 0.005 oz Au/ton over 2 m in trenches B-6, 10 and 13. Other lithologies sampled were carbonated mafic volcanics and variably limy argillite. These also gave uniformly low results, one of the best values being only 150 ppb Au over 6.9 m in trench B-8. Galena occurs sporadically in quartz veins at Bullock (trenches B-6, 9, 13, 15) but these do not give better gold values.

Lucky Jack

Trench locations are shown on the Lucky Jack grid geology map (Figure 4). Forty-one samples were taken from seven trenches and one short adit, totalling 111 m of sample length. Detailed sample locations, lithologies and results are indicated on accompanying detailed trench plans, except for three samples from the Upper Lucky Jack adit located midway between trenches LJ-3 and LJ-5 which are listed below.

The main Lucky Jack vein is inaccessible by the old adit (now caved in badly broken ground) but was sampled in 1980 in the cliff face above the portal (samples AG-1156 to 1159; 0.492, 0.104, 0.044 and 0.092 oz Au/ton). This old main adit is located on line 1+00SE, 10 m from the baseline. The best of three samples of the main vein in trench LJ-5 (located on a bench 15 m above the adit) is 0.058 oz Au /ton across 1.5 m. The vein in the Upper Lucky Jack adit (midway between trench LJ-3 and LJ-5) is on trend with the main

vein and gives anomalous gold values:

Upper Lucky Jack adit vein		Au(ppb)	Au(oz/ton)	Ag(oz/ton)
A	2.0m	110		
B	1.5m	420		
C	1.2m	1400	0.010	.05

Trenches LJ-4, 6 and 7 gave low gold values.

The most economically significant sample results at Lucky Jack came from trench LJ-2. Trench LJ-2 was based on a 1980 sample that gave 0.22 oz Au/ton over 1.0 m. A 12.5 m trench sample (detailed below) across a zone of sparse disseminated arsenopyrite in feldspar porphyry andesite gave 0.087 oz Au/ton, representing about 9 m true stratigraphic thickness.

Sample	Trench Length	oz Au/ton
LJ-2A	4.1m	0.028
-2C	1.0m	.070
-2D	4.1m	.112
-2E	0.3m	0.488
-2F	3.0m	.100
	12.5m	0.087 (average)

Two samples of a narrow (10cm) quartz vein running the length of the trench gave 0.038 and 0.116 oz Au/ton, both over 0.7 m. The southerly adjacent bluff outcrop was sampled in an unsuccessful attempt to extend the width of the zone. However, in so doing, the vein described above was sampled a third time and gave 0.348 oz Au/ton across 0.9 m. It should be noted that the strike and dip of this vein (045°/35° NW) is different from the main Lucky Jack vein (170°/90°), although roughly on trend.

Parallel trenches (LJ-1 and 3) were located on each side of LJ-2. Sample LJ-1F gave 4.1 m of 0.020 oz Au/ton and LJ-3C gave 7.5 m of 0.020 oz Au/ton. The latter could be the same strata as in LJ-2 but the auriferous zone in LJ-1 is different, suggesting a cross-cutting but grossly stratabound zone. The higher grade in LJ-2 may be the result of the adjacent gold-bearing vein although

it can be argued that either the vein is gold-bearing because it has intruded gold-bearing strata or that strata adjacent the vein have been enriched in gold due to a halo effect near the high-grade vein.

APPENDIX II

Goldsmith

Trench and sample locations are shown on the Goldsmith grid geology map (Figure 3B). Fifty-five samples were taken from 10 trenches, totalling 89 m of sample length. A list of sample lengths, lithologies and analytic results is given in Table 1. Goldsmith samples were not crushed and split in the field -- the entire sample was shipped to Chemex Labs.

The Goldsmith claim is underlain mainly by basaltic strata that are variably altered and contain from 5 - 40% carbonate. The rocks are now chlorite ± sericite ± quartz-carbonate schists and range from light green to dark blue-green in colour. Locally, especially near quartz veins (as in trench GS-34), the chlorite schist contains minor disseminated pyrite resulting in deep oxidation. There are two distinct textural varieties of greenstone; most outcrops are schistose, soft and recessive but some conformable bands are semi-massive, hard and distinctly resistant, although they may be well carbonated. The former are probably thin flows and tuffs while the latter may be a thick flow or intrusive sill. Neither possess preserved primary textures. Graphitic argillite, argillite and siltstone (or siltite) are interbedded with the mafic volcanic strata.

Sediments and greenstone strike northwest and dip moderately (40 - 60°) northeast. Terrain slopes northeasterly but less steeply than stratigraphic dip. Some abrupt changes in slope and gullies transverse to slope strongly suggest strike faults but stratigraphic control is insufficient to define these probable faults. One such structure is shown on Figure 5.

The Goldsmith claim lies 500 m along strike from the Bullock ferroan dolomite-fuchsite-quartz exhalite. Quartz veins occur over a 150 m width extending onto Goldsmith. These have a similar strike to the host rocks but their dip varies from 45° SW to 45° N. Dumps containing massive arsenopyrite (with high gold content)

TRENCH	SAMPLE #	WIDTH	LITHOLOGY	Au (ppb)	Au (oz/t)	Ag (oz/t) or ppm when state
GS-1	72213	2.5 m grab	quartz vein in argillite		0.090	0.02
GS-2	72214	1.5 m	quartz carbonated veins		0.058	0.01
GS-3	72215	3.0 m	argillite		0.062	0.01
GS-4	72216	0.8 m	quartz vein in adit #3		<0.003	0.05
GS-5	72217	2.0 m	chlorite carbonate schist in adit #3		0.010	0.10
GS-6	72218	2.3 m	quartz vein		0.003	0.02
GS-7	72219	0.8 m	quartz vein		<0.003	0.01
GS-8a	72220	1.2 m	quartz vein		<0.003	0.01
GS-8b	72221	1.3 m	quartz vein		0.004	0.02
GS-8c	72222	1.0 m	quartz vein		0.005	0.01
GS-9	72223	1.0 m	quartz vein		<0.003	0.01
GS-10	72224	1.5 m	carbonated chlorite schist		<0.003	0.01
GS-11	72225	4.0 m	argillite		0.050	0.07
GS-15	72226	grab	trench arsenopyrite		0.068	0.28
DR-45	72067	grab	trench arsenopyrite		0.674	.55
GS-20	72227	1.7 m	quartz veins in chlorite schist in adit #3		0.004	0.07
GS-21	72228	1.3 m	quartz vein in chlorite schist in adit #3		<0.003	0.01
GS-22	72229	1.1 composite grab	quartz vein in adit #3		0.003	0.02
GS-23	72230	grab	quartz vein, adit #1 dump		0.005	0.01
GS-24	72231	grab	chlorite schist, adit #1 dump		0.005	0.03

TRENCH	SAMPLE #	WIDTH	LITHOLOGY	Au (ppb)	Au (oz/t)	Ag (oz/t) or ppm when state
DR-44	72067	grab	quartz vein schist, adit #1 dump		.032	.17
GS-30	72314	1.0 m	trench GS-30 10 cm quartz vein with arsenopyrite odour, in chlorite schist	>10,000	0.418	0.9 ppm
GS-31	72315	0.9 m		3,100	0.006	0.1 ppm
GS-32	316	1.0 m		560	0.090	0.1 ppm
GS-33	317	1.0 m		20		0.1 ppm
GS-34	318	0.75 m	pyritic chlorite schist (no quartz veins)	4,400	0.164	1.2 ppm
GS-34A	334	1.3 m	rusty, carbonated chlorite schist	40		0.1 ppm
GS-34B	335	1.4 m	(20 cms) quartz vein and carbonated chlorite schist	100		0.8 ppm
GS-34C	336	2.0 m	(40 cm) quartz vein, rusty, carbonated, chlorite schist	40		1.0 ppm
GS-34D	72337	1.3 m	rusty, carbonated chlorite schist	20		0.2 ppm
GS-34E	338	3.4 m	rusty, carbonated chlorite schist and 60 cm quartz vein	80		0.42 oz 20.0 ppm
GS-34F	339	2.4 m	20 cm quartz vein & rusty carbonated chlorite schist	20		0.01 oz 0.7 ppm
GS-34G	340	1.8 m	30 cm quartz vein & rusty carbonated chlorite schist	70		0.1 ppm
GS-18A	341	1.6 m	3 small quartz veins (3 cm, 5 cm, 8 cm) & rusty carbonated chlorite schist	260		0.6 ppm
GS-18B	342	2.0 m	30 cm quartz vein, rusty, carbonated chlorite schist	160		0.2 ppm
GS-18C	343	1.6 m	rusty, carbonated chlorite schist	360		0.1 ppm
GS-18D	344	1.9 m	3 cm quartz vein, & rusty, carbonated chlorite schist	90		0.1 ppm

RENCH	SAMPLE #	WIDTH	LITHOLOGY	Au (ppb)	Au (oz/t)	Ag (oz/t) or ppm when stated
GS-18E	345	2.0 m	10-15 cm quartz vein & rusty carbonated chlorite schist	30		0.1 ppm
GS-18F	346	1.7 m	rusty carbonated chlorite schist	100		0.1 ppm
GS-18G	347	2.7 m	15 cm quartz vein, strongly carbonated, hard chlorite schist	140		0.1 ppm
GS-18H	348	1.2 m	15 cm quartz vein, strongly carbonated, hard chlorite schist	400	0.004	0.1 ppm
GS-18I	349	1.5 m	15 cm quartz vein, strongly carbonated, hard chlorite schist	420	0.003	0.1 ppm
GS-18J	350	1.6 m	15 cm quartz vein, chlorite schist	>10,000	0.510	2.4 ppm
GS-18K	351	1.3 m	3 cm arsenopyrite vein in carbonated chlorite schist	300		4.0 ppm
GS-18L	352	0.8 m	3 cm arsenopyrite vein in carbonated chlorite schist	260		0.2 ppm
GS-18M	353	0.7 m	3 cm arsenopyrite vein in carbonated chlorite schist	1,000	0.036	0.1 ppm
GS-18N	354	1.2 m	3 cm arsenopyrite vein in carbonated chlorite schist	160		0.1 ppm
GS-18O	355	1.1 m	3 cm arsenopyrite vein in carbonated chlorite schist	100		0.1 ppm
GS-19A	356	3.0 m		230		0.1 ppm
GS-19B	357	3.7 m		20		0.1 ppm
GS-19C	358	3.9 m		< 10		0.1 ppm
GS-19D	359	4.6 m		80		0.1 ppm
GS-19E	360	4.1 m		1,600	0.062	0.5 ppm

TRENCH	SAMPLE #	WIDTH	LITHOLOGY	Au (ppb)	Au (oz/t)	Ag (oz/t) or ppm when state
GS-20A	361	2.1 m	10-25 cm arsenopyrite vein, in argillite	2,500	0.104	0.5 ppm
GS-20B	362	1.7 m	10-25 cm arsenopyrite vein, in argillite	2,000	0.070	0.2 ppm
GS-20C	363	1.1 m	10-25 cm arsenopyrite vein, in argillite	>10,000	0.370	1.8 ppm
GS-20D	364	0.24 m	10-25 cm arsenopyrite vein, in argillite	1,800	0.058	0.1 ppm

Footnote - Sample sites not shown on Figure 2 were taken prior to cat trenching. These are GS-9, 10, 15 and DR-45 now in trench 18 and GS-11, now in trench 19.

were found beside old hand trenches at what is now trench GS-18, GS-18 East and GS-20. A soil geochemical survey located strong arsenic and gold anomalies (discussed below). These anomalies, arsenopyrite-bearing dumps and quartz vein locations were the basis of the trenching program.

Six bulldozer trenches were dug on the Goldsmith zone, named GS-18, 19, 20, 22, 30 and 34 (the numbers do not designate the sequence of trenching). Continuous chip samples were taken from the trenches with a 2½ lb. hammer and moil. All analyses were performed by Chemex Labs in North Vancouver. A complete list of sample widths, results and concise description is given in Table 1, sample sites are shown in Figure 3.

Trench GS-20 was dug beside a pile of massive arsenopyrite and immediately exposed a 10-25 cm vein within argillite. It is the only Au-bearing vein discovered to date within meta-sediments. Assays range from 0.058 to 0.370 oz Au/ton across 0.24 to 2.1 m. Cat-road exposures and very high soil geochem values at site JE 25 (1,000 ppb Au, 1,900 As) trace the vein for 100 m along strike although it becomes a narrow quartz vein with arsenopyrite odour but very sparse visible arsenopyrite.

Trench GS-19 aimed to better expose an old hand-dug open cut in argillite that was sampled and returned 0.05 oz Au/ton across 4.0 m (sample GS-11). The follow-up sampling (GS-19A to 19E) confirmed the original value with 19E returning 0.062 oz Au/ton over 4.1 m.

Trench GS-30 was dug above a soil sample site that gave 200 ppb Au. A 10 - 15 cm wide southwest dipping quartz vein was exposed that possesses a strong arsenopyrite odour but no visible sulphide. Four 1.0 m samples across the vein, spaced 2.5 - 3.0 m apart, ranged from trace to 0.418 oz Au/ton, dramatically demonstrating the gold sampling problem.

Prospecting follow up of the soil anomaly at JE-21 (250 ppb Au, 340 ppm As) located an arsenopyrite-bearing quartz vein in a

small hand trench. Cat trench GS-34 and three backhoe cuts exposed two parallel quartz veins in deeply weathered pyritic (and arsenopyritic?) chlorite schist. An early sample, prior to the backhoe trenches, gave 0.164 oz Au/ton but subsequent sampling gave low results (all less than 100 ppb gold). Minor galena occurs at the eastern end of the exposed vein and sample 34E gave 0.42 oz Ag/ton, the only significant silver assay from the entire Goldsmith area.

Trench GS-18 East was located on the basis of dump arsenopyrite beside a sloughed open cut. A narrow, flat to very gently north dipping quartz-arsenopyrite vein was exposed. Gold values are 100 to 1,000 ppb (the latter assayed 0.036 oz Au per ton) over about one metre (see Table 1). The main part of trench GS-18 exposed three close spaced quartz vein with sporadic pockets of massive arsenopyrite. The sampling (GS-18A to 18I) gave consistent low anomalous values (30 - 420 ppb Au). The trench had been located on the basis of poorly exposed veins and an old dump of massive arsenopyrite. Two samples of the latter assayed 0.068 oz Au/ton (GS-15) and 0.674 oz Au/ton (DR-45). An apparently barren vein was exposed on the steep sidehill between trench GS-18 and 18 East. A sample of this 15 - 25 cm vein gave a surprising 0.510 oz Au/ton over 1.6 m.

A quartz vein with sporadic arsenopyrite was exposed while preparing drill site 6. This was designated trench GS-22. A sample of the vein returned only 0.003 oz Au/ton.