521005

REPORT ON

DIAMOND DRILLING
on the
HANK CLAIM GROUP in 1988

Ball Creek Area

Liard Mining Division

N.T.S. 104G/1, 2

OWNER and OPERATOR: LAC MINERALS LTD.
#1050 - 1055 West Hastings
Vancouver, B.C. V6E 2E9

REPORT BY: Rein Turna
LAC MINERALS LTD.

DATE: February 28, 1989

CONTENTS

Tables

FIGURES

APPENDICES

INTRODUCTION

History

The Hank 1, 2 and 3 claims totaling 58 units were staked in March 1983 to cover streams anomalous in gold and draining a hillside with gossanous rocks also anomalous in gold. The HANK 4 claim (10 units) was staked in September 1984.

Claimposts from 1966 to 1980 belonging to five different owners were found within the area of the HANK Property. Government files show no record of work for assessment of these properties. Apparently they were allowed to lapse after the first year or were not registered.

Reports relevant to the HANK Claimgroup including summaries of work performed by LAC Minerals prior to 1987 are listed under References on page no. 20

1988 Field Season and This Report

In 1988, seven (7) kilometers of road were built on the Property. Twenty -three (23) diamond drill holes totalling 4,736 metres (15,539 feet) were drilled.
Additional geological mapping was performed. A few surface rock samples were collected (their sample numbers are prefixed "88H"). A future campsite was chosen at the bottom of Creek 5 and a road was built down to it.

No. of Samples	Analyses
Core (1,626)	1626 for Au, 316 for any of the "LAC Package" of (Ag,As,Cd,Cu,Fe,Mn,Mo,Ni,Pb,Sb,Zn,Hg,C)
Rocks (22)	22 for Au, 11 for "LAC Package" as above.

330 pulps of previous years' soils were analysed for Cu, Pb, Zn

This report presents the results of the 1988 drilling and geochemical analyses. Updated geological interpretation is presented. Chain-compass-inclinometer surveying has resulted in the relocation of some old sampling on the maps. Thus the Sample Numbers and Geology maps have been redrawn and the new versions presented in this report. Results of previous years' induced polarization surveys are presented on a chargeability map in this report. Cu, Pb and Zn soil geochem maps, never presented before are included in this report.

Personnel Deployment and Project Dates

Two LAC staff members, Mssrs. Rein Turna and York So worked on the Project during the 1988 season. They were assisted by four temporary employees.

Overall coordination and supervision of the Project was the responsibility of Mr. Rein Turna. Mr. York So logged the majority of the core.

The temporary personnel consisted of:

Personnel	Time with HANK Project
Mr. Brent Czornobay (geophysics graduate)	July 09 - September 25/88
Ms. Eden Bard (1st year geology student)	July 09 - September 01/88
Ms. Doreen Chan (1st year geology student)	July 09 - September 01/88
Mr. Brent Saunders	July 09 - September 25/88

Drilcor Ltd. of Delta B.C., the diamond drilling contractor, had up to 12 personnel, including the cook, on the Project at one time. Drilcor's foremen were alternately; Mr. Larry Gagnon, Mr. Udo Guse, Mr. Gord Warfield, Mr. Dave Dubnie.

The two students working for LAC returned to school on September 1, 1988. They were replaced by Mssrs. Blair Gillespie and Perry Joyce of AMEX Exploration Services Ltd. of Kamloops, B.C. Drilcor had a 120% turnover of personnel. None of their originals remained at the end.

No significant drilling stoppages occurred due to injuries or people quitting, thanks to Mssrs. Saunders, Gillespie and Gagnon who helped keep the drills running until replacements arrived.

Mobilization and demobilization of LAC personnel were on July 6 and September 25, respectively. Drilcor's mob and demob dates were June 28 and September 28/88.

Weather - 1988

Unusually heavy and continuous rainfall in July significantly hampered road building. Runoff from snowmelt lasts all summer and keeps certain areas always soggy.

The only snowfall occurred on September 9/88. Five inches accumulated but quickly melted in the following days. The runoff from this exacerbated some muddy sections of road.

Logistic Support - 1988

The helicopter company used was Northern Mountain Helicopters Ltd. The machines used were usually based out of the Bronson Creek airstrip in the Iskut gold camp. Occasionally a machine based in the Sulphurets gold camp was used.

Northern Mountain has offices in Terrace and Smithers, their head office being in Prince George. Loading and unloading of helicopters and temporary storage of supplies and equipment was at the Burrage Creek airstrip, crossing Highway 37 four kilometers north of the Burrage Creek bridge.

The 1988 HANK Project used 177.5 hours of helicopter time from July 6 to September 28. This does not include Drilcor's mobilization onto the Property before July 6. Of the above total, 39.6 hours went for a Hughes 205 helicopter and the remaining 137.9 hours went mainly for a Hughes 500D with a few of those hours for a Bell 206.

The larger (205) helicopter was required to move the larger (JKS300) drill. The small (500D) helicopter was sufficient for the smaller (Hydra) drill.

Drilling and Road Building - Special Problems

Record heavy rainfall throughout July slowed road building. The bulldozer (a John Deer 450c) suffered a blown engine as it tipped onto its end in a hole. This machine was of barely adequate size for the job. Some sections of road were not built wide enough to allow passage of the drill rig when being pulled. A larger cat, backhoe equipped, could ensure a wider and more quickly built road. It must also be considered however, that a larger cat may be less easily air transported and may also be more likely to bog in mud due to its greater weight.

Some sections of road will remain wet permanently. The area below Bald Bluff is very soft. The road from DDH88-22 going toward the base of Creek 5 may have to be partially bypassed or rebuilt.

On future drill programs road building and repairs should get a two week head start on drilling.

In 1988, drilling stayed ahead of road building much of time. Nine drill moves were thus by helicopter. Twelve moves were by bulldozer.

The most important drilling difficulty is caused by broken rock in the Alteration Zones. The Altered rock is often deeply eroded. Loose chips continually bind up rods in the upper 200 feet of core. Binding rods always prevented the drills from reaching their theoretical depth. Generally the holes were terminated when the drill was experiencing excessive difficulty. It is thus recommended that in future drilling holes be started out with NQ size, the upper 200 feet should be cemented to secure the borehole and finish the hole with BQ size.

Diamond Drilling

The drilling contractor used was DRILCOR Ltd. of Delta, B.C. Two diamond drills were used throughout the Project; a JKS300 and a DRILCOR HYDRADRIL. Their practical depth capability on the HANK Property was usually approximately 1400 feet and 700 feet, respectively, varying considerably according to ground conditions.

Total length drilled was 4736 metres (15,539 feet) Core size was B.Q. 1626 core samples were analysed.

Most of the core is stored at the coreshack on the Property. Some 1988 core was brought to storage in North Vancouver. Table No. 2 on next page identifies which boxes from which holes are in North Vancouver storage.

Geochemical Laboratory Methodology

Bondar Clegg & Company Ltd. prepared and analysed all samples. It is unnecessary to discuss their specific methods here.

TABLE NO. 2

HANK PROJECT

Core Boxes in North Vancouver Storage

Hole No.	Box No.	Intervals Represented (metres)
DDH84-2	1,2,3,4,5,6,7	0 - 56.18
-3	1,2,3,4,5,6,7,8,9,10,11,12	0 - 94.49
-4	1,2,3,4,5,6,7,8	0 - 59.44
DDH85-4	4,11,12,13	21.06 - 28.57, 71.89 - 91.44
-5	10,11,12	81.80 - 99.36
-6	2,3,12,13	24.67 - 38.97, 95.40 -110.95
-8	1,3,4,5,6,7	3.66 - 14.82, 22.13 - 59.55
-9	1,2,3,4,5,6,7,8	5.00 - 62.79
-10	1,2,3,10	0 - 26.50, 69.74 - 76.50
-11	4,6	32.31 - 39.53, 46.43 - 53.26
-12	16	115.22 -119.79
-13	1,2,3,4,5	5.50 - 56.39
-14	5	75.66 - 83.06
-16	3,4,5	37.07 - 58.42
-20	3,4	33.54 - 46.42
-22	1,2	10.51 - 24.54
-25	7,8	83.26 - 97.09
-29	2,3,11	15.20 - 30.80, 80.79 - 88.13
-30	2,6	13.29 - 19.91, 40.40 - 47.20
-31	5	31.42 - 38.56
-32	2,3	22.86 - 33.66
-34	1,2	6.10 - 20.31
-36	4	48.26 - 55.38
-37	1	3.05 - 12.89
-45	(boxes 1 to 19)	7.54 -142.65
DDH87-3	2,3,4,5,6,7,	15.03 - 54.97
8	14,15,16,17	102.49 -130.44
9	1,2,3,4,5	0 - 52.12
DDH88-4	(boxes 1 to 56)	0 -437.39
-6	(boxes 1 to 10, 45 to 49)	8.76 -106.24, 357.33 -393.12
12	7	59.78 - 67.5
-12A	26,27,29,30	153.31 -167.42, 174.52 -188.77
-14	(boxes 19 to 21, 23 to 27)	151.44 -177.38, 180.42 -215.70
-22	(boxes 1 to 29)	12.45 -232.56

GEOLOGY (1988 Interpretation)

The stratigraphic column of the HANK Property appears to share many major characteristics with that of the Stewart Mining Camp. These shared characteristics will be discussed here.

For a more detailed description of HANK rock types and lithologic units, see the HANK Property's report for 1987 work (Report on Diamond Drilling and Trenching on the HANK Claim Group in 1987 by Rein Turna, February 16, 1988). A full description of Stewart Camp's lithologies and mineralization can be found in the two Ministry of Mines reports by D.J. Alldrick (see Appendix No. 4 in this report).

The purpose of the following comparison is to suggest that the HANK Property's stratigraphic position and metalogenesis may be the same as that at the Stewart Camp and indeed, that Stewart Camp's best lithologic subunit (ie) may be analogous to HANK Property's Lower Alteration Zone and surrounding rocks.

STEWART MINING CAMP	equivalent units	HANK PROPERTY
Unit No. 4 - Sedimentary Sequence. Grey fossilferous sedimentary rocks containing middle Jurassic bivalves.		SEDS Grey fossiliferous sedimentary rocks containing the pelecypod, Weyla, an index fossil for the uppermost lower Jurassic.
Unit No. 3 - Felsic Volcanic Sequence. A very thin but extensive felsic tuff and breccia unit. One subunit (3e) contains 5 to 15% pyrite.		FELS Felsic extrusive. One subunit (the Red Felsite of Felsite Hill) contains 5 to 15% pyrite. Though the FELS outcrops occur in the correct stratigraphic location to make these a Unit No. 3 - equivalent, FELS is considered to be possibly Tertiary and extruded into a topographic low. The reasons for this are discussed in the Hank 1987 work's report.
Unit No. 2 - Epiclastic Sequence. Contains bedded andesitic volcaniclastics. It has a complex of facies boundaries. This unit is derived from erosion of Unit No.1 below.		EPVC Contains bedded andesitic volcaniclastics. It has a complex of facies boundaries (see Maroon Pyroclastic, Camp Peak formation and the EPVC basin mentioned on pages 7,8 and 9, respectively, in the HANK 1987 work's report). This unit is considered derived from erosion of the ANDS unit below.
Unit No. 1 - Andesitic Sequence. Consists mainly of green and maroon pyroclastics. The uppermost member, the Premier Porphyry Flows is divided into subunit 1g,a green porphyritic rock containing large orthoclase phenocrysts and subunit 1f, a green and maroon augite porphyritic andesite. Below the Premier Porphyry Flows occur a thick andesitic clastic subunit (1e). This subunit hosts many deposits of base and precious metal-rich sulphides, such as Big Missouri Mine, considered to be a stratabcend syngenetic deposit and the Silbak Premier Mine (see in Appendix No. 4) the two Ministry of Mines reports by D.J. Alldrick, Paper 1985-1 page 322 and Paper 1984-1 page 161). Below subunit ie. is a thin grey siltstone member used as a marker bed.		ANDS Consists of mainly green and maroon andesitic Pyroclastics. It also contains green (Bald Bluff Fm) and maroon (PPAN) flows that may be equivalent to the Premier Porphyry Flows. Bald Bluff fm is a green porphyritic flow rock containing large orthoclase phenocrysts (see Petrographic Descriptions in Appendix No. 3 in this report).Though topographically higher than the EPVC basin, Bald Bluff is considered and erosional remnant; an upper member of ANDS and possibly equivalent to Stewart Camp's subunit 1g. PPAN is a maroon and green augite porphyritic andesite. This crystaline flow rock underlies the 1985 drilling area, marks the footwall to the epigenetic-style mineralization there, may be at the ANDS-EPVC contact and is thus correlated with Stewart Camp's subunit 1f. Below maroon-coloured flow rocks the (syngenetic?) mineralized Lower Alteration Zone occurs in andesitic volcaniclastic rocks. The Lower Alteration Zone is the major mineralized zone on the Property; probably analogous to a low-grade massive sulphide deposit. Here thus, may be Stewart Camp's subunit 1e and the syngenetic mineralization that occurs therein. Topographically (and likely stratigraphically) below the Lower Alteration Zone a grey siltstone member exists. Its outcrops are at 1000m elevation west of Creek 1, below 1000m on Creek 6, along 1000m elevation from Creeks 10 to 13 and near the mouth of Creek 12.

Addendum to 1987 Discussion

The HANK Report for 1987 work includes an extensive and then up to date discussion of the geology and mineralization on the Property. That text will not be rehashed here. However, changes and additions resulting from 1988 work are here included and referenced to the relevant sections of the 1987 report if modifications to past geological thinking is required.

The ANDS lithologic unit is now subdivided; the EPVC epiclastic volcanics, formerly a subunit, is now considered a a distinct unit, younger than ANDS. Bedded EPVC rocks are best exposed in Creek 4 between about 1325m and 1425m elevations, the cliffs on Camp Peak and the cliff at about 1325m elevation of Creek 7. An EPVC sedimentary basin is considered to underlay the flat terrain area below Bald Bluff. The (laharic breccia?) of Creek 5 is still included in the ANDS unit.

The maroon amygdaloidal flow at Creeks 6-7 also contains minor amounts of crystalline augite porphyry andesite (PPAN). Pipe-shaped amygdales which occur on the underside of flows exist on the northwest side of the amygdaloidal flow exposure. This indicates that the southeast-dipping bedding on the Property has not been overturned.

Concerning the Syngenetic question for the Lower Alteration Zone: adding to the controversy is the existence of banded sulphides at about the 398m mark of DDH88-4. This banding may be of sedimentary origin. If so, and if the Lower Alteration Zone is indeed a deposit from undersea fumaroles (black smokers), why does sulphide banding occur at this one place only? A possible

explanation may be that here was an ocean floor depression where sea currents were weaker. The"black smoke" was thus dispersed to a lesser degree. It was allowed to settle to form banding. Perhaps also a greater metallic content in the sediments is thus likely here. Be that as it may, this area of the Lower Alteration Zone has returned the best assays for gold and base metals. (See the geochem results for DDH87-3, DDH88-4, 6 and 22 and past surface rock sampling in Lower Alteration Zone of Creeks 5 and 7).

A major fault is now recognized in the upper part of Creek 8. It follows the creek and then curves toward the upper part of Creek 9. It may continue northward toward the bottom of Creek 10. The fault was observed this year in DDH88-21 at about the 227 m mark, in two outcrop exposures in Creek 8 above the road and in the roadcut at the Creek 8 crossing. Slickensides indicate strike slip movement at one of the creek outcrops. Northeastward dip slip movement is indicated at the other outcrop. These two exposures are not necessarily the main fault. They could be smaller splays. The roadcut at Creek 8 shows a wide clayey gouge zone and this would be the fault. Past hints of a fault here come from the Gold Geochemistry map (1:5000 scale) which shows a rough alignment of gold soil anomalies along the fault's locus. The VLF-EM survey of 1984 indicated sharply a conducting zone at Line 2600N 625E, best explained by the Creek 8 fault. A fair air photo curvilinear traces out the fault's locus. On the Geology map and on the Chargeability map of this report it is apparent that the Upper Alteration Zone northeast of Creek 8 appears to stop at Creek 8.
The fault here can account for this. This raised a new question. Is the Upper Alteration Zone really the Lower Zone, displaced in right lateral fashion along Creek 8 fault, a rotational strike slip of about 1 km? That would seem a rather great displacement. Also the Upper Alt. Zone has a geochemistry somewhat different from the Lower Alt. Zone in that base metal sulphides seem not nearly as common in the Upper Zone.

Roadcuts and drilling results confirmed the presence of Altered though weakly pyritic rocks below the cliffs of Camp Peak and extending south westward and apparently penetrated by drill holes between DDH88-11 at Creek 4 and DDH88-16 at the end of Line 200N. Whether this trend is the Upper Alt Zone, some other (Middle?) Alt Zone or unconnected features cannot be decided conclusively at this stage.

Bald Bluff Fm. rocks were previously considered to be pyroclastics with mainly plagioclase phenocrysts. Thin section study has now redefined the rocks as flows and the phenocrysts as orthoclase!

Maroon PPAN augite porphyry andesite assigned to the ANDS unit exists at the 1400m elevation between Creeks 6 and 8, apparently within the younger EPVC unit. This can be explained if these PPAN outcrops were an erosional remnant like Bald Bluff at the time of EPVC deposition.

DISCUSSION OF CROSS SECTIONS

Before beginning it's necessary to explain the numerical values given to Alteration and fracture intensities in the holes' geologic logs portrayed on the cross sections. The intensities are on a 0 (lowest) to 10 (highest) scale. This copies International Geosystem Corporation's Geolog System.

The scale for fracture intensities are as follows:

Value	Fractures per meter	Description
10 or X	100	shattered
9	81	extremely well fractured
8	64	very well fractured
7	49	well fractured
6	36	fairly well fractured
5	25	moderately fractured
4	16	fairly lightly fractured
3	9	lightly fractured
2	4	very lightly fractured
1	1	slightly fractured
0	0	unfractured

The above scale is also used for Alteration intensity as follows:

Value	Description	
10 or X	exceptionally high amount	Generally, 9 or 10 are fault gouge. 6 to 8 is the normal range of Alteration Zone rocks. 5 and lower are not considered to be alteration Zone intensity though "clots" of such unAltered rock exist in the Zone. 6 and up the rocks are grey with no green colouring included. 5 can be mixed green and grey. 4 and down is green or maroon with no grey included and the rock is hard. 5 can be hard or soft. 6 and up the rock is almost always very soft and crumbly. Though pyrite is generally higher in Altered rocks than in unAltered rocks, it is influenced much by presence of shears or zones of veining.
9	extremely high	
8	very high	
7	high	
6	fairly high	
5	moderate	
4	fairly low	
3	low	
2	very low	
1	extremely low	
0	nil	

Some Abbreviations and symbols are also explained here:

Alt	Altered	MN	manganese
ANAG	andesitic agglomerate	OPT,oz/ton	ounces per ton
Au	gold	OVB	overburden
BO	bornite	ppb,ppm	parts per billion, parts per million
BXX, BRXX	breccia		
C	carbon		
CB	carbonate	Py	pyrite
CP	chalcopyrite	QZ	quartz
FELS	felsite	RHYL	rhyolite
GG	gouge	SI	silicification
GN	galena	SP	sphalerite
HE	hematite	/V	vein
LI	limonite	/	orientation of vein

Colour Code for Cross Sections

Veins %	Colour
>10%	heavy blue
2 1/2 to 10%	light blue

Pyrite %	
>5%	wide yellow bar
2 1/2 to 5%	narrow bar

Gold		
1500 ppb (.044 Troy oz/Short Ton)	wide red bar	(NOTE: if a sample is analysed twice and the results disagree the average is taken and accordingly assigned a wide or narrow red bar).
500 ppb (.015 Troy oz/Short Ton)	narrow red bar	

Following is a discussion by Rein Turna of the geological interpretations of core made by Mr. York So of LAC Minerals Ltd. Mr. So was the principal core logger and designed all the cross sections in this report.

- Figure No. 12
  Cross Section 1600 m SW

DDH88-16 targeted an area of anomalous chargeability considered to be the location of the (Upper?) Alteration Zone. A high degree of Alteration and gold values were consistent throughout the hole.

- Figure No. 13
  Cross Section 1400 m SW

DDH88-15 targeted a chargeability anomaly which was not adequately tested by DDH87-9 due to drilling difficulties. Alteration intensity increased downward. Erratic occasionally high gold values occurred. Pyrite did not seem high enough to justify the chargeability anomaly. Crystalline andesite which was occasionally magnetic dominated in the core. Magnetite may explain the chargeability here.

- Figure No. 14
  Cross Section 1200 m SW

DDH88-17, oriented vertical, was intended to penetrate much deeper than previous years' holes here. 1987 work here indicated a strong chargeability anomaly and comparatively uniform highly anomalous gold in core and surface sampling.

Hole 88-17 essentially confirmed a comparatively uniform and high average pyrite and Alteration intensity and anomalous gold. Drilling difficulty prevented a deep penetration to the footwall of this mineralized-Altered zone.

- Figure No. 15
  Cross Section 1040 m SW (SE Section)

DDH88-18 was intended to test a low resistivity anomaly possibly onstrike with a strong chargeability zone. Geological mapping indicated Altered rock to occur here.

As in hole 88-13 to the NE, hole 88-18 encountered highly Altered, pyrite and vein poor rock with occasional elevated gold values. A generally high gold background is noted throughout the core.

- Figure No. 16

  Cross Section 1040 m SW (NW Section)

DDH88-23 was intended to test a strong bulls-eye chargeability anomaly in the Lower Alteration Zone. Highly pyritic Altered rock was encountered with only occasional elevated gold values. Toward the bottom of the hole pyrite and Alteration, though not necessarily gold as yet, decreased substantially. This suggests the footwall to the Lower Alteration Zone was encountered.

- Figure No. 17

  Cross Section 860 m SW

DDH88-13 targeted a low resistivity anomaly where Altered rock was indicated by geological mapping. Highly Altered, pyrite and vein poor core had occasional slightly elevated gold values. The low resistivity anomaly is considered to reflect waterlogged ground condition here.

- Figure No. 18

  Cross Section 535 m SW

DDH88-20 was intended to test the possible continuation of high gold values of DDH88-11 and Creek 4 surface sampling. Erratic pyrite and Alteration intensity are reflected by erratically anomalous gold values.

Fault gouge characterizes much of hole 88-20 core. The significance or position of this fault zone is uncertain at this time.

- Figure No. 19

  Cross Section 420 m SW

DDH88-9 was intended to test the possibility of the 1985 "Hot Spot" extending through this area. Random slightly elevated gold values were encountered.

DDH88-11 was intended to drill underneath Creek 4 surface samples that had high gold results in 1987. The upper half of the hole is characterized by elevated gold values related to gouge zones. These gouge zones may correlate with a postulated fault zone extending along the upper portion of Creek 4 here.

- Figure No. 20

Cross Section 260 m SW

Holes in this section were intended to test the Lower Alteration Zone at this place.

DDH88-2 was stopped prematurely due to excessively difficult drilling. A new hole, DDH88-4, was started at the same site at a steeper angle.

In hole 88-2 erratic elevated gold values occur in pyritic Altered rock.

Hole 88-4 is pyritic and Altered and anomalous in gold throughout. Several exceptionally high gold assays occur with a marked coexistence with copper, lead and zinc sulphides in veins. These sulphides occur throughout most of the hole, with a major concentration along with gold at about the 315 m mark. This hole also shows the only known banded sulphides on the HANK Property, suggesting the original pyrite here may be a syngenetic massive sulphide equivalent. The banded sulphides occur near the 398 m mark. This hole bottoms out in unAltered-looking rock which may signal an exit from the Lower Alteration Zone.

DDH88-22 was generally similar to the above two holes. A one (1) metre zone of 60% pyrite with copper, lead, zinc in veins and elevated gold values are considered the possible continuation of the (vertical oriented?) gold and sulphide vein zone from 315 m of hole 88-4.

- Figure No. 21

Cross Section 80 m NE

Holes in this section were intended to test the Lower Alteration Zone at this place. High pyrite content and frequent occurrence of base metal sulphides characterized this section.

DDH88-6 had 108.41 gm/tonne gold at the 375 m mark, associated with copper and zinc sulphides. The vein here was apparently not intercepted again in DDH88-19A.

DDH88-19 was stopped at 78 m because of difficult drilling and restarted as hole 19A at a steeper dip angle.

- Figure No. 22

  Cross Section 280 m NE

DDH88-8 was intended to test the Lower Alteration Zone at this place. Pyrite and gold content increased with depth. Greater depth penetration or more downhill drill setups are called for.

- Figure No. 23

  Cross Section 520 m NE

Holes in this section were intended to test the Lower Alteration Zone at this place. High pyrite content and elevated gold values associated with veins and base metal sulphides characterize this section.

DDH88-10 was stopped at 69 m due to difficult drilling and restarted as DDH88-12 at a steeper dip angle. Hole 88-12 caved in below the 92 m mark. DDH88-12A continued from 92 m.

- Figure No. 24

  Cross Section 560 m NE

DDH88-1, was intended to test if the 1985 "Hot Spot" extended to the NE.

Pyritic crystalline andesite had elevated gold values associated with carbonate-quartz veins. Note however that many veins in this core were vertical, oriented parallel to core axis.

- Figure No. 25

  Cross Section 1000 m NE

Holes in this section were drilled in an area which at the time was considered to be possibly on strike with the main auriferous zone of the 1985 drilling "Hot Spot". A pyritic Altered zone was encountered and is considered to be the Upper Alteration Zone.

The geologic model for the HANK Property considers the Upper Alt Zone to be essentially syngenetic like the Lower Alt Zone. The 1985 "Hot Spot" is epigenetic related to the Felsite Hill event.

DDH88-3 and 5 had only a few slightly elevated gold values in a generally gold poor background.

- Figure No. 26

Cross Section 1040 m NE

DDH88-14 was intended to test the Lower Alteration Zone at this place. High pyrite content and Alteration intensity were encountered as expected. Erratic highly anomalous gold values occur, with greater veins % serving as a good marker, as usual.

Copper and zinc sulphides were frequently visible and have a marked coexistence with elevated gold values.

- Figure No. 27

Cross Section 1060 m NE

DDH88-21 was intended to test the Lower Alteration Zone at this place. Pyrite, Alteration and gold results suggest the drill setup was high up in the hanging wall to the Zone.

At about the 200 m mark pyrite, veining, Alteration and gold start to pick up. At about the 227 m mark the Creek 8 fault was apparently encountered, beyond which, the Lower Alteration Zone proper should exist.

- Figure No. 28

Cross Section 1260 m NE. DDH88-7 targeted the center of a strong chargeability anomaly on Line 3200N near 1300E. A spot high gold geochem in soil occurred here also.

Core consisted of magnetic crystalline andesite with very low gold values. Magnetite, rather than pyrite is considered the explanation for the I.P. anomaly here.

The location of the drill set up and the unusual SE azimuth for the borehole was determined by the steep muddy hillside and lack of good setup locations.

Recommendations

Three Great Targets are proposed:

1) The Lower Alteration Zone should be more intensively drilled. Fences of holes across the Zone should be completed at closer than the present 200m spacings. The center piece of this project would be the area of holes 87-3, 88-4, 6 and 22 and Creeks 5 and 7 high assay results.

2) The exceptionally strong chargeability anomaly on the Lower Alt. Zone of Creeks 8 to 9 should be drill tested. This strong chargeability center may mark a paleo volcanic center or a paleo ocean basin depression where fumarolic "black smoke" was allowed to concentrate. The presence of greater (syngenetic?) sulphide mineralization here represents a greater metals reservoir to provide a supply for remobilized epigenetic concentrations.

3) Felsite Hill provides a classic felsite flow dome complex target. 1985 drilling confirmed a gold "hot spot" below and peripheral to the flow dome. This epithermal mineralization may be relatively distal to a possible orebody that may occur in the dome's breccia pipe feeder.

Figure Nos. 3a and 3b are models proposing a relationship among the Lower and Upper Alt. Zones (syngenetic) mineralization and Felsite Hill epithermal mineralization. Note that Felsite Hill drilling requires at least a 600m depth capability.

REFERENCES

HANK, Main Reports

Report on Diamond Drilling and Trenching on the HANK Claim Group in 1987 by Rein Turna, February 16, 1988.

This report contains cross sections for the 1987 drilling including revisions to the 160m and 200m sections of the previous years' report. Also included are results for trenching performed at the upper parts of Creeks 3 and 4. A more complete discussion of geology and mineralization than from previous reports is presented here. Some photographs of the Alteration Zones are shown. A model for Felsite Hill epithermal style mineralization is presented.

Report on Diamond Drilling and Trenching on the HANK Claim Group in 1985 by Rein Turna, March 17, 1986.

The main current relevance of this report are the drilling cross sections, though the sections 160m and 200m are now superseded by revised versions found in the report covering 1987 work. Results of 1985 trenching are still best presented in this report. 1985 trenching had concentrated in the upper parts of Creeks 5,6,7,8,10. An appendix contains a memo from J. Hogan (Vancouver Exploration Manager) to D. Sheehan (Vice President Exploration) concerning a preliminary estimate of exploration potential and open pittable reserves.

Geological, Geochemical and Diamond Drilling Assessment Report on the HANK Claim Group by Rein Turna, March 1985.

This report has been submitted to the Ministry of Mines for assessment purposes. As a result, the expiry date for the property is in 1995. The geology and gold geochemistry maps and drilling sections have been superseded. Not superseded and still relevant are: the arsenic geochemistry map, the magnetometer and VLF-EM maps (not submitted to the Ministry of Mines but included in LAC's in-house copy) and the detailed results of trenching performed on the Lower Alteration Zone in Creeks 3 to 9 and the upper parts of Creeks 5 to 7. This report also contains the results of many soil profile pits and a petrographic description of 11 rocks. Photomicrographs of gold placer grains are included.

Geological and Geochemical Assessment Report on the HANK Claim Group by Rein Turna, February 24, 1984.

This report has been submitted to the Ministry of Mines for Assessment purposes. Most samples were analysed for 30 elements of which gold, silver and arsenic have been plotted onto maps. A petrographic description of 17 rocks by Vancouver Petrographics Ltd. is included.

Geophysical Reports

A Geophysical Report on an Induced Polarization Survey for LAC Minerals Ltd. by Peter E. Walcott & Associates Limited, January 1985.

This survey mainly covers the Camp Peak-Felsite Hill area where subsequent 1985 drilling was concentrated.

A Geophysical Report on an Induced Polarization Survey for LAC Minerals Ltd. by Peter E. Walcott & Associates Limited, May 1988.

This survey covers a wide area of the HANK property and in particular the Lower Alteration Zone.

THESIS (BSc)

Wall Rock Alteration and Vein Mineralogy of the HANK Epithermal Gold Prospect, Northwestern British Columbia by Eric Peter Paul Ochs, the University of British Columbia, April 1985.

Rock samples from the Lower Alteration Zone in Creek 7 were subjected to thin and polished section and scanning electron microscope study.

Vancouver Petrographics Ltd. Reports

Invoice No. 7811, December 10, 1988

Contains petrographic descriptions of 34 rocks, mainly from core from 1988 drilling. A copy of this report is included as part of the main HANK report concerning 1988 work.

Invoice No. 7349, May 1988

Contains petrographic descriptions of 2 rocks. A copy of this report is included as part of the main HANK report concerning 1988 work.

Invoice No. 5062, February 28, 1985

Contains petrographic descriptions of 11 rocks. Photomicrographs show occurrence of gold with sulphides in polished sections and also of some placer gold particles. A copy of this report is included as part of the main HANK report concerning 1984 work.

Invoice 4319, January 10, 1984

Contains petrographic descriptions of 17 rocks. A copy of this report is included as part of the main HANK report concerning 1983 work.

Miscellaneous Reports

HANK Project (British Columbia) Two-Page Summary by Rein Turna, February 25, 1988.

This summary was written for the benefit of Peter Allen (President, LAC MINERALS LTD.). Two maps (Geology and Gold Geochemistry) included in Mr. Allen's copy are excluded from the Vancouver Office copy as they are identioal to those in the main HANK report concerning 1987 work.

The Golden Ball Project by C.M. Rebagliatti,

This report was part of a property submission made to LAC Minerals Ltd. in early 1983. It contains the results of a 1976 geochemical and prospecting survey by Newconex Canadian Exploration Ltd. in the present HANK Claimgroup area.

Assessment Report No. 8546
(Ball Creek Project for G.R.C. Exploration Company by J.R. Woodcock and Dennis Gore, J.R. Woodcock Consultants Ltd., February 3, 1981.)

A geological and geochemical report mainly concerned with claims several kilometers northeast of the HANK Claimgroup. The Ball 1,2,3,4, claims were staked on the area of the present HANK property. One prospecting traverse was done over the gossanous felsites. No work was recorded on the Ball 1,2,3,4, claims.

For drill hole logs, field notes and maps see the HANK file in LAC Minerals Ltd., Vancouver office.

Reconnaissance Work by LAC Minerals Ltd.

Report on Reconnaissance Work and Property Evaluations by LAC Minerals Ltd. by R.F. Brown, March, 1985.

Work was performed on the N.T.S. mapsheets: 104B10,11 and 104G1,2,7,8,9,16.

1987 (Regional) Coastal and Iskut Programs, reports by Turna, April 20, 1988.

In the Iskut portion work was performed on the N.T.S. mapsheets: 104A12 and 104B11,15,16.

Geological Survey of Canada Reports

Telegraph Creek Map-Area, British Columbia, by J.G. Souther (1971), Geological Survey of Canada Paper 71-44 and Map 11-1971 (1:250,000 scale.)

Map 1418A, Iskut River, British Columbia-Alaska, Sheet 104, 114, compiled by J.G. Souther, D.A. Brew and A.V. Okulitch (1979),)1:1,000,000 scale).

National Geochemical Reconnaissance 1: 250,000 Map Series, Sumdum-Telegraph Creek, British Columbia (NTS 104F-104G), GSC Open File 1646, MEMPR BC RGS 19, (1988).

Giles R. Peatfield, Ph.D., P.Eng.
Consulting Geologist
104 - 325 Howe Street
Vancouver, B.C. V6C 1Z7
Telephone: (604) 685-3441
Telecopier: (604) 681-9855
11 April 1989

Mr. J.S. Drever
Blackdome Mining Corporation
120 Adelaide St. W., Suite 2010
Toronto, Ontario
M5H 1T1

FAX: (416) 869-3651

Dear Mr. Drever:

Re: LAC Minerals HANK Property, Northwestern B.C.:

I visited the LAC warehouse in North Vancouver earlier today, and looked at the core from several of the better intersections from the lower alteration zone, including the good intersections in 87-3 and 88-6, and the probable footwall zone in 88-4.

The core in all cases suggested that the mineralized zones lie within a body of intensely altered (to iron-rich carbonate, sericite and lesser quartz with disseminated pyrite) rock which appears to be very competent and which yields very good core recovery. The mineralized zones are only slightly less competent looking, although there is some shearing. I cannot see that there would be any serious problems with mining this material underground.

The mineralized sections consist of soft carbonate zones with a weak stockworking of narrow (generally less than 5 mm and often about 2 mm) veinlets of coarse grained black sphalerite, galena and tetrahedrite (?), in some cases discontinuous and with very little quartz or calcite. Some veinlets contained chalcopyrite, but pyrite was generally subordinate. I quizzed Robert Brown, who said that to the best of his knowledge, no-one had seen free gold in the core. Clearly, one would have to produce a complex sulphide concentrate or concentrates, which would require marketing. Whether gravity would recover free gold is not clear.

I was struck by the absence of a strongly developed vein or lode structure, which brings up the point that the zones may lack continuity or regularity. The zones may also not be parallel to the alteration zone, but cut across it in plan or on section, and may consist of a series of en echelon lenses, of presently unknown dimensions or orientations. I cannot see any way to determine the probability of such an eventuality from the work done to date. In the final analysis, only underground work will provide the answer; the initial drilling programme would serve only to give enough encouragement to proceed with the underground testwork.

I wish I could be more positive about what I saw in the core. I do not think that these precautionary comments should deter Blackdome from making a strong bid for the property. I cannot believe that such a good success ratio in the early drilling does not indicate a significant deposit or deposit, although it may turn out to be more complex than we had at first imagined. I reiterate that the first thing to be done is to re-log the core, much of which is in North Vancouver, in real detail.

Please call if you have questions.

Yours very truly,

G.R. Peatfield

Giles R. Peatfield

GRP/