

ARIS SUMMARY SHEET

District Geologist, Kamloops

Off Confidential: 90.01.23

ASSESSMENT REPORT 18583

MINING DIVISION: Nicola

PROPERTY: Lucky Mike  
LOCATION: LAT 50 17 00 LONG 120 41 00  
UTM 10 5572482 665048  
NTS 092I07E

CAMP: 014 Swakum Mountain Area

CLAIM(S): Lucky Mike, Old Alameda, Old Alameda 1, Old Alameda 8-9

OPERATOR(S): Corona

AUTHOR(S): Wells, R.C.

REPORT YEAR: 1989, 68 Pages

COMMODITIES

SEARCHED FOR: Gold, Silver, Copper, Lead, Zinc, Tungsten

KEYWORDS: Triassic, Nicola Group, Andesite, Lithic Tuffs, Limestone, Skarn  
Sphalerite, Chalcopyrite

WORK

DONE: Drilling  
DIAD 800.1 m 11 hole(s); NQ  
Map(s) - 9; Scale(s) - 1:500, 1:5000

MINFILE: 092ISE027, 092ISE094, 092ISE100

LOG NO: 0330	RD.
ACTION:	
FILE NO:	

DIAMOND DRILLING REPORT  
on the

PETRIE PROPERTY

NICOLA MINING DIVISION  
British Columbia

NTS 92-1/7

for

CORONA CORPORATION  
1440 - 800 W. Pender St.,  
Vancouver, B.C.

FILMED

COVERING: LUCKY MIKE, OLD ALAMEDA, OLD ALAMEDA 1, 8, 9 CLAIMS

PROPERTY OWNER: W. Petrie  
Box 1023  
1813 - 1st Ave.  
Merritt, B.C.

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

OPERATOR: CORONA CORPORATION

PROGRAM SUPERVISOR: R.C. WELLS  
Regional Geologist  
Kamloops Office  
CORONA CORPORATION  
101 - 2985 Airport Rd.  
Kamloops, B.C.

18,583

February 10, 1989

R.C. Wells, B.Sc., F.G.A.C.

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## SUMMARY AND CONCLUSIONS

This is a report on all exploration surveys conducted by Corona Corporation (previously Lacana) on the Petrie property in the Nicola Mining Division. These surveys were conducted on the property between October 1987 and the termination of the option agreement in December 1988. During this period the following program was completed under the supervision of R.C. Wells, F.G.A.C.

1. 34 m of linecutting to cover the shaft areas and trend of the favourable tuff (Marker) horizon within the Nicola volcanic sequence. Also the areas east and west of the horizon where copper mineralization occurs within the volcanics.
2. Detailed geological mapping 1:2500 scale over the grid area.
3. Detailed mapping and sampling of all old workings including the Lucky Mike, Old Alameda and Old Alameda No. 1 shafts.
4. Airborne Dighem III geophysical survey over Swakum Mountain. This survey covered Swakum Mountain with east-west flight lines at approximately 100 metre spacing.
5. Detailed magnetic and V.L.F. electromagnetic surveys over the survey grid 1987. Detailed H.L.E.M. Survey, 1988 (Max Min II).
6. Soil geochemical survey over the control grid with analysis for Au, Ag, Cu, Pb, Zn. Detailed follow-up surveys in 1988.
7. Winter drill program between January and April 1988: 800 metres (2,625 feet) were drilled by Scope Explorations of Merritt, B.C. in 11 holes. Seven holes (LS-1 to 7) were on the Lucky Mike polymetallic skarn, four holes (LS-8 to 11) on the Old Alameda polymetallic quartz vein system.

8. Trenching program in 1988 with six large excavator trenches on geophysical and geochemical targets outlined by previous surveys. Total of 175 linear metres.

On the Petrie property, polymetallic skarn mineralization is associated with altered sections of the 'Marker' horizon at the Lucky Mike (Cu, W, Ag minor Au, Zn) and the Old Alameda No. 1 shaft (Cu, Zn). 1988 drilling on the Lucky Mike skarn proved it to be much smaller than that indicated by the earlier work by Torwest. Tungsten mineralization is widespread in the garnet skarn while Cu, Zn, Au and Ag values tend to be restricted to late cross-cutting structures. The tonnage potential for both styles of mineralization appears limited.

At the Old Alameda Shaft, polymetallic (Au, Ag, Cu, Pb, Zn) quartz veins are controlled by a narrow, gently west dipping (35°) fault zone. Drilling and trenching of the structure to shallow depth and along strike showed the vein to be narrow, with erratic base and precious metal values.

## INTRODUCTION

This is a report on the results of a winter drilling program conducted on the Petrie Property, Nicola Mining Division, British Columbia. The work was funded by Lacana Mining Corporation (now Corona Corporation). Supervision of the drill program and other work on the property was by R.C. Wells, B.Sc., F.G.A.C., district geologist for Corona in Kamloops, B.C.

The drill program tested two targets on the Lucky Mike and Alameda claims. Scope Drilling of Merritt completed 2625 feet of NQ diamond drilling between January and March 1988. Core logging, sampling and assaying continued until late April 1988.

\$18,000 of the costs of the drill program is being submitted for assessment work on the Petrie claims (Appendix A).

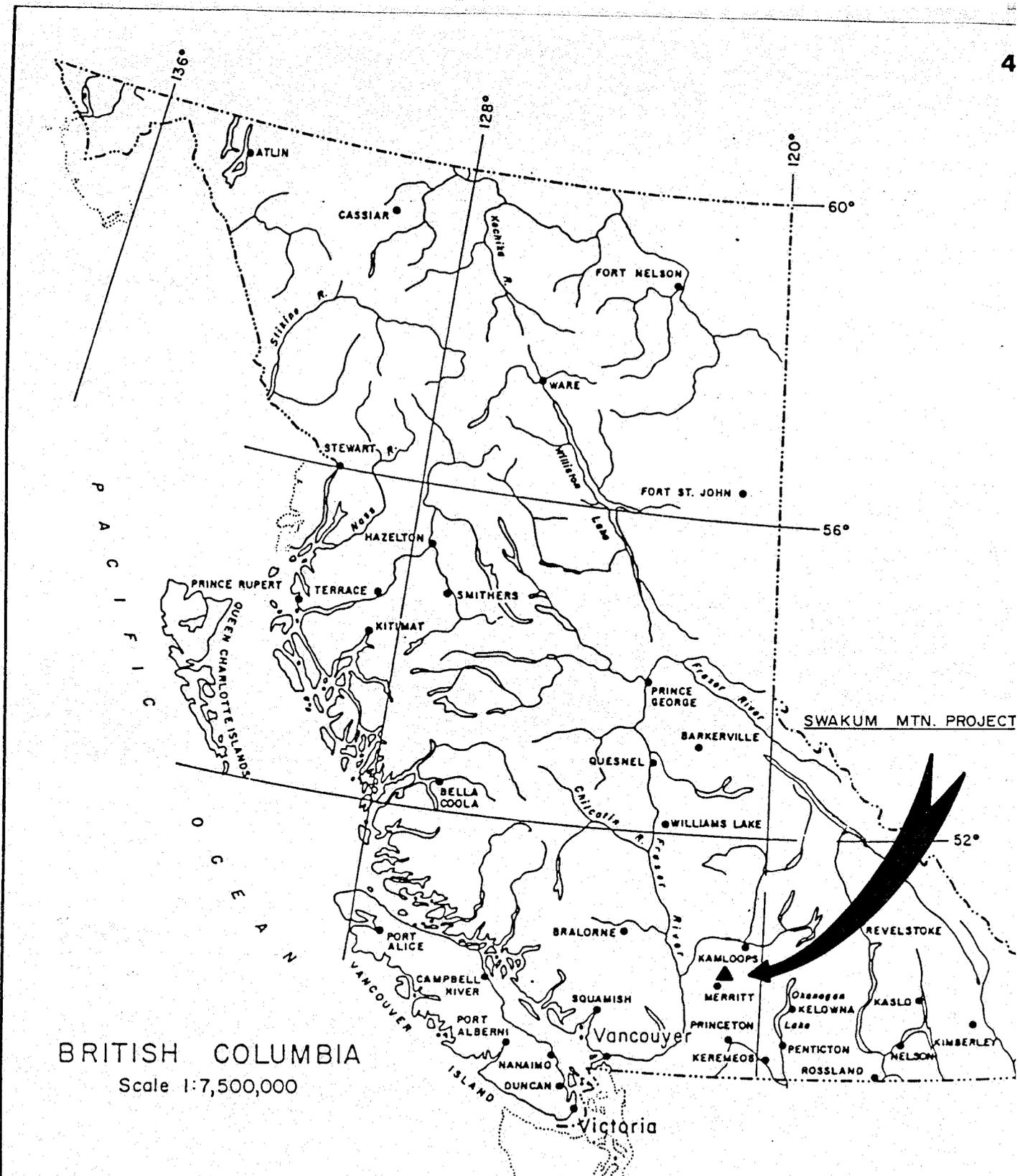
## LOCATION AND ACCESS

The Petrie Property straddles the north and east slopes of Swakum Mountain, 20 kilometres north of Merritt, British Columbia. Swakum Mountain's main peak is at 1723 m elevation and at 120° 41' West Longitude and 50° 18' North Latitude. Property Location is shown in Figure 1.

Access to the property is by logging roads from the new Coquihalla Highway, north of Merritt. A southern route uses the Shuta Creek road, a route from the north is via Helmer Lake then south. Numerous 4x4 trails and old logging roads give excellent access to most parts of the property.

## TOPOGRAPHY AND VEGETATION

The property covers an area of moderate relief between 1500 m and 1700 m elevation. Steep slopes mark the east and west sides of the main peak of the mountain (ridge) and are locally broken by small cliffs. Swakum



BRITISH COLUMBIA  
Scale 1:7,500,000



 <b>CORONA CORPORATION</b>		
SWAKUM MOUNTAIN PROJECT  <b>LOCATION MAP</b>		
PREPARED BY: D. M.	SCALE: 1:7500000	PROJECT NO: 1016
N.T.S.: 92-1-7	DATE: NOV. /88	MAP NO: 1

Mountain has two peaks over 1650 m elevation separated by a swampy valley (watershed). Drainages radiate outward from the peaks, most are dry for large parts of the year.

Vegetation cover is variable. The mountain was previously heavily wooded with much deadfall. Logging activities on the mountain over the past twenty years has left large cleared areas on the Lucky Mike claim.

#### PROPERTY

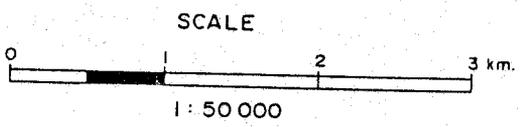
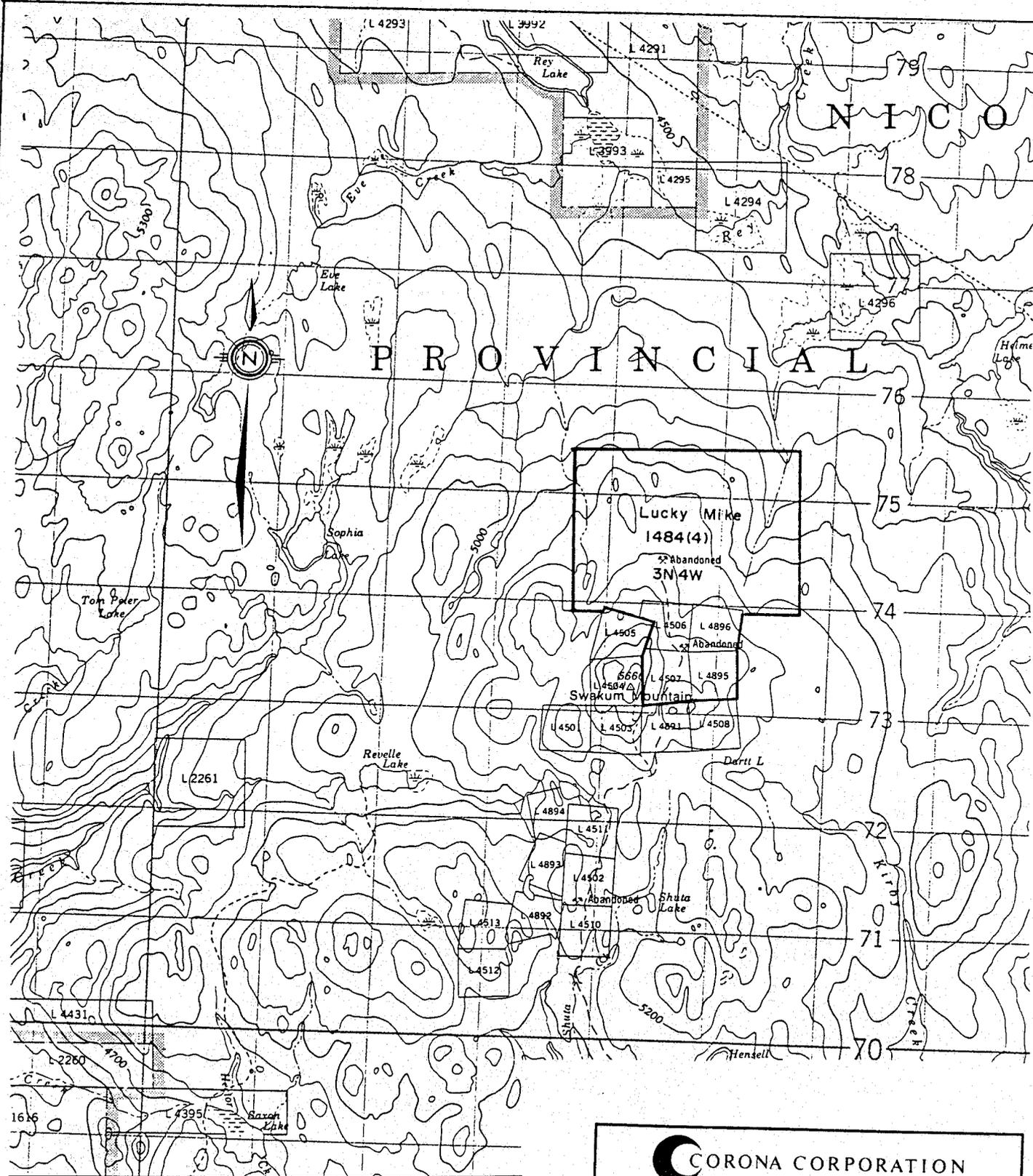
The Petrie Property consists of four (4) reverted Crown Grants and the Lucky Mike claims which are located in Nicola Mining Division (Figure 2). The property consists of the following claims:

Claim Name	Units	Record No.	Type
LUCKY MIKE	12	1484	Modified Grid
ALAMEDA 4506	1	375	Reverted Crown Grant
ALAMEDA 4507	1	374	" " "
ALAMEDA 4895	1	372	" " "
ALAMEDA 4896	<u>1</u>	373	" " "
Total	16		

All of the above claims are registered in the name of William F. Petrie, Box 1023, Merritt, B.C. Keith and Gerry D'Angelo of Kamloops hold the claims under option. Corona Corporation (formerly Lacana Mining Corporation) late in 1987 made an exploration agreement with the D'Angelo's on the property. This agreement was terminated in December 1988.

#### REGIONAL GEOLOGY

Swakum Mountain lies within the Intermontane Belt of the B.C. Cordillera. This belt includes a large number of major, past and present, porphyry copper producers, some of which occur in the Kamloops-Merritt district such as the Highland Valley and Afton.



**CORONA CORPORATION**

SWAKUM MOUNTAIN PROJECT

**CLAIMS MAP**

PREPARED BY: R. W.	SCALE: 1:50 000	PROJECT NO.: 1016
N.T.S.: 92-1-7	DATE: NOV. /88	MAP NO.: 2

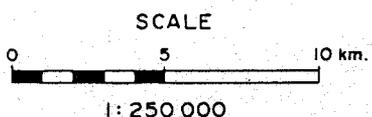
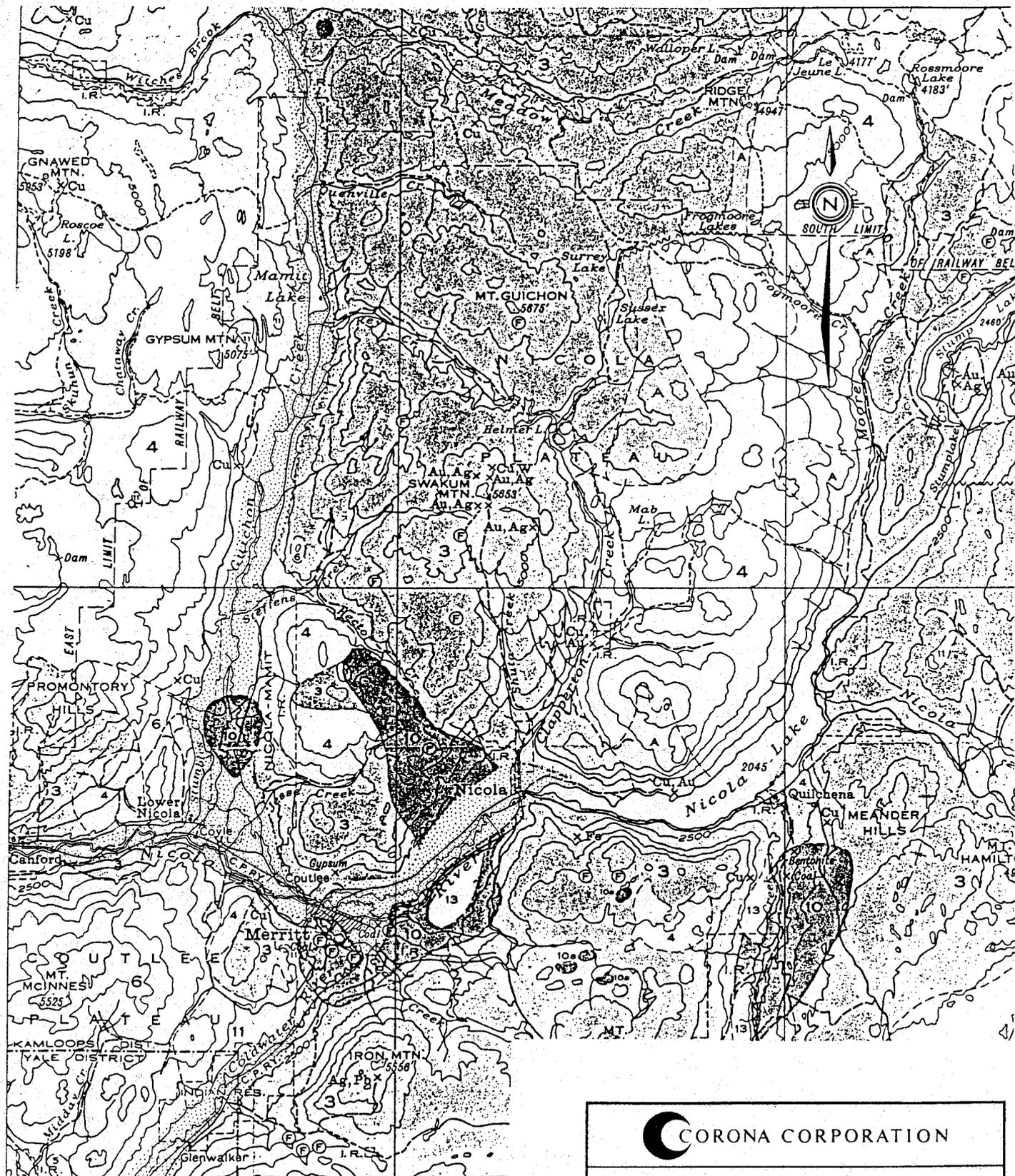
The property area has not received any government mapping since G.S.C. Memoir 249 by W.E. Cockfield in 1948, part of which is shown in Figure 3. Much of the area consists of folded, Nicola Group (Triassic) Volcanics with minor interbedded sedimentary units. These rocks are intruded by large north trending felsic to intermediate intrusions (batholiths) east and west of the mountain.

Nicola Group rocks on the mountain strike north to northeasterly with generally steep dips. For a large part they consist of andesitic flows and tuffs, agglomerates, occasional basalts and rhyolites. A mixed volcanic sedimentary unit consisting of tuffs, limey sediments and a prominent limestone has northeasterly strike and crosses the Old Crown Grants on the mountain (over a 2.5 km strike length). Cockfield used this unit as a marker horizon during mapping and interpretation a large assymetrical, south plunging, anticline with its north trending axis near the mountain's peak. The Marker unit on the western limb of the anticline passes near Sophia Lake, 4 kilometres west of the property.

#### MINING HISTORY OF SWAKUM MOUNTAIN

Swakum Mountain has been prospected since 1919 when the Lucky Mike (Last Chance) claim was staked. During the 1920's, 1930's and 1940's various mineral showings - Alameda, Corona, Thelma and Bernice were examined by trenching, shaft sinking, diamond drilling, prospecting and mapping (Figure 3A). Most of the underground work was performed during this period. Since 1950, geophysical, geochemical and geological surveys have been performed by interested parties on various mineral claims and crown grants on the mountain. Torwest Resources Ltd. did some diamond drilling on the Lucky Mike and Old Alameda claims in 1965.

Most of the old workings on the mountain occur in close proximity to or on the volcanic sedimentary unit (Marker unit) described in the previous section. The Lucky Mike (Figure 3A) is a polymetallic skarn (Cu, W, Ag, minor Au, Zn) at the north end of the limestone (Lucky Mike Claim). To



 CORONA CORPORATION		
SWAKUM MOUNTAIN PROJECT		
REGIONAL GEOLOGY		
PREPARED BY:	R. W.	SCALE: 1:250 000
N.T.S.:	92 - I	PROJECT NO.: 1016
	DATE: NOV. /88	MAP NO.: 3

# LEGEND

- CENOZOIC**
- TERTIARY**  
**MIOCENE OR LATER**
- 13** Valley basalt; mainly vesicular basalt
- MIOCENE OR EARLIER**
- 11** **12** **KAMLOOPS GROUP**  
 11. Rhyolite, andesite, and basalt; associated tuffs, breccias and agglomerates. May include some younger basalts  
 12. **TRANQUILLE BEDS**: conglomerate, sandstone, shale, tuff; thin coal seams
- 10** **COLDWATER BEDS**: conglomerate, sandstone, shale, and coal; 10a, similar to 10, but may include younger beds
- MESOZOIC OR CENOZOIC**
- CRETACEOUS OR TERTIARY**
- 9** **COPPER CREEK INTRUSIONS**: granite, granodiorite, granite porphyry
- 8** Andesite, basalt; picrite, agglomerate, breccia, and tuff; minor conglomerate and sandstone
- 7** Conglomerate, sandstone, and shale
- CRETACEOUS**  
**LOWER CRETACEOUS**  
**KINGSVALE GROUP**
- 6** Rhyolite, andesite, and basalt; associated tuffs, breccias, and agglomerates; arkose, conglomerate
- SPENCE BRIDGE GROUP**
- 5** Hard, reddish lava
- JURASSIC AND (?) LATER**
- 4** **COAST INTRUSIONS**: granite, granodiorite, gabbro; 4a, Iron Mask batholith; syenite, monzonite, diorite, gabbro; 4b, pyroxenite and peridotite. Probably not all of the same age, and may be in part post-Lower Cretaceous
- TRIASSIC**  
**UPPER TRIASSIC**  
**NICOLA GROUP**
- 3** Greenstone; andesite, basalt; agglomerate, breccia, tuff; minor argillite, limestone, and conglomerate
- PALAEZOIC**
- CARBONIFEROUS AND PERMIAN**  
**CACHE CREEK GROUP (?)**
- 2** Greenstone, generally slightly sheared. May include some Triassic rocks (3)
- 1A** Argillite, quartzite, hornstone, limestone, sheared conglomerate, breccia, greenstone, and serpentine; 1A, limestone
- A** Chlorite schist, quartz-mica schist, amphibolite, and granitic intrusions; commonly gneissic and largely of Palaeozoic age

the south Pb, Zn, Ag bearing quartz veins and replacements occur along the limestone unit at the Bernice, Thelma and Corona prospects. The Old Alameda is a polymetallic quartz vein (Au, Ag, Cu, Pb, Zn) east of the limestone unit on the Petrie Crown Grants.

Small shipments of ore were made from various prospects on the mountain, mainly from:

Lucky Mike (Last Chance): 26 tons of ore yielding 2 oz Au, 137 oz Ag, (.08 oz/T Au, 5.3 oz/T Ag) 1,932 lbs Cu and 1,753 lbs Pb.

Thelma and Bernice: 89 tons of ore yielding 1 oz Au, 7,419 oz Ag (83.4 oz/T), 9,683 lbs Pb, 10,237 lbs Zn.

Old Alameda: 3 tons of ore yielded 1 oz Au, 52 oz Ag (.33 oz/T Au, 17.33 oz/T Ag) and 576 lbs. Pb.

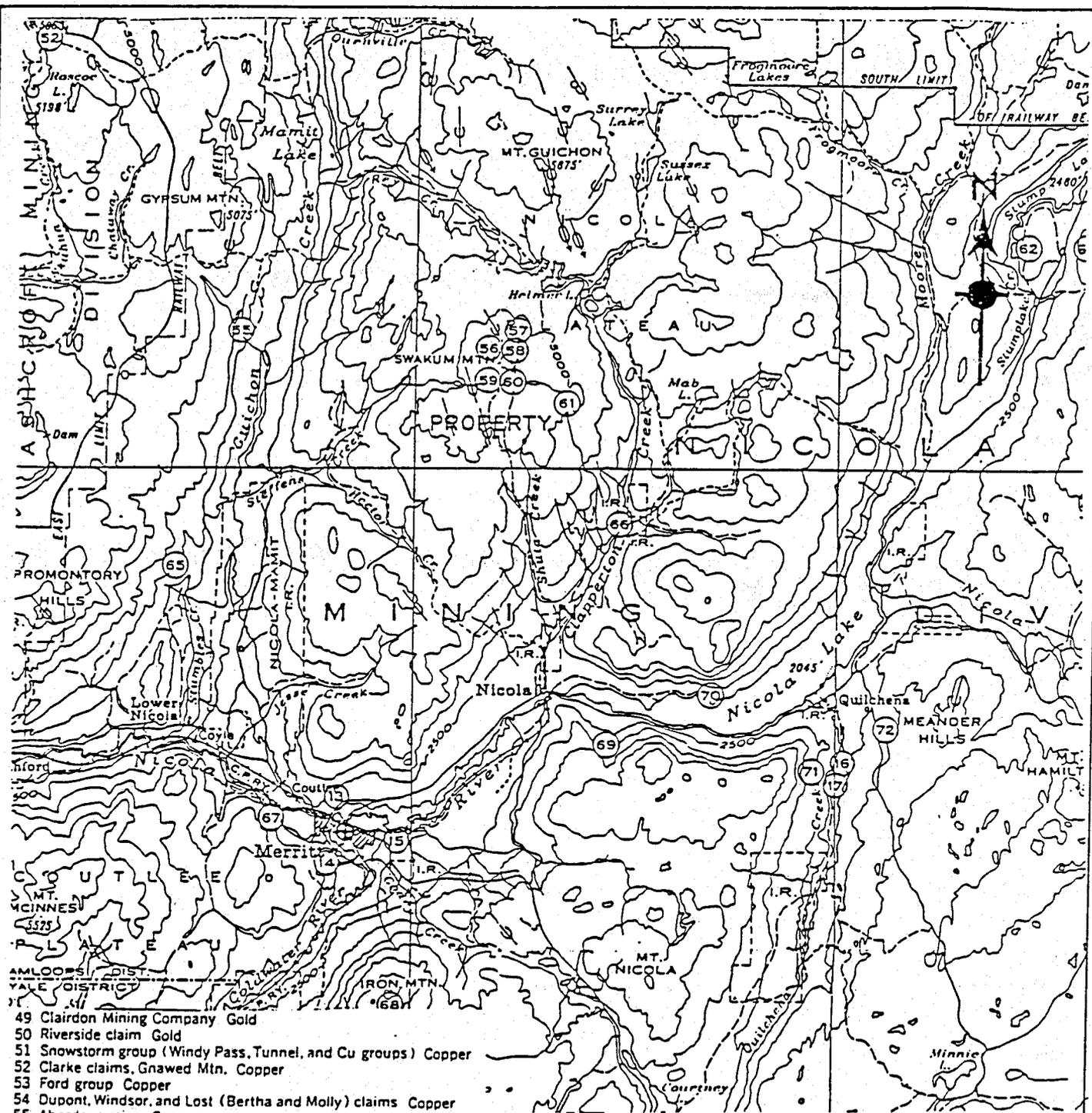
The majority of old workings are collapsed or flooded, most trenches are sloughed in. During 1987 the underground workings at the Old Alameda shaft were pumped out by Lacana.

#### PROPERTY HISTORY

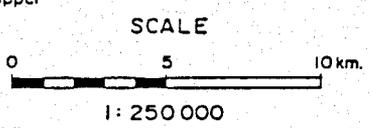
Numerous old workings occur on the Petrie Property. The most important of these are the Lucky Mike on the Lucky Mike claim and the Old Alameda Shaft on reverted crown grants 4506 and 4507 (see Figure 3A). These prospects have been worked at various times by a number of companies, a summary follows:

##### 1. LUCKY MIKE (POLYMETALLIC SKARN)

1916      Discovery by Oscar Schmidt.



- 49 Clairdon Mining Company Gold
- 50 Riverside claim Gold
- 51 Snowstorm group (Windy Pass, Tunnel, and Cu groups) Copper
- 52 Clarke claims, Gnawed Mtn. Copper
- 53 Ford group Copper
- 54 Dupont, Windsor, and Lost (Bertha and Molly) claims Copper
- 55 Aberdeen mine Copper
- 56 Gold Gossan group Gold, Silver
- 57 Last Chance group, Swakum Mtn. Copper, Tungsten
- 58 Alameda group
- 59 Corona group } Formerly Sheffield Gold Gold, Silver
- 60 Theima group } and Silver Mines Ltd.
- 61 "A" group Gold, Silver
- 62 Consolidated Nicola Goldfields. Ltd. Gold, Silver
- 63 Don group (Scottie). Gold, Silver
- 64 Jean group (Mary Reynolds) Gold, Silver
- 65 Eric claim Copper
- 66 Peacock (Hunter) group Copper, Gold
- 67 Copper Belle and Anaconda groups Copper
- 68 Comstock of B.C. Ltd. Silver, Lead
- 69 Iron King and Iron Queen Iron
- 70 Nicola Lake group Copper, Gold
- 71 Sunny Boy group Copper
- 72 Lakeshore Deep group Copper



**CORONA CORPORATION**

**SWAKUM MOUNTAIN PROJECT**  
**HISTORICAL MINERAL OCCURRENCES**  
**MAP**

PREPARED BY: R. W.	SCALE: 1: 250 000	PROJECT NO.: 1016
NYE: 92-1	DATE: NOV. /88	MAP NO.: <b>3A</b>

- 1917 22 ton ore shipment averaging 4.6% Cu from surface workings. Diamond drilling by Granby Consolidated Mining investigating Cu potential. Northwestern Mines Ltd. sank an inclined shaft on the north end of the zone.
- 1942-43 Surface work by W.B. Milner. Numerous trenches and open cuts tracing skarn for 80 metres along strike (N-S). Two bands of skarn separated by greenstone (narrow). Numerous  $WO_3$  values in the 0-1% to 1% range over variable widths.
- 1943 Strategic Metals Committee. Wartime investigation for tungsten. 14 diamond drill holes over 100 metre strike length. 8 holes intersected a weighted average of 0.312%  $WO_3$  over an average width of 25 feet. No samples were assayed for gold or copper. On the tungsten potential, the deposit was considered too low grade with poor continuity of scheelite mineralization.
- 1958-65 Property worked by Torwest Resources Ltd. Much work on the mountain and Lucky Mike including trenching, geophysical, geochemical and geological surveys. Two or more drill phases on the Lucky Mike, skarn zone. 23 or more holes over 150 metre strike length. Based on these programs plus 1943 data, Torwest defined two east dipping tungsten-skarn bodies. Hainsworth in 1965 (for Torwest) made a tonnage guesstimate of 350,000 tons for the deposit with tungsten grades in the 0.2 to 0.3%  $WO_3$  range. There were very few assays for Au, Ag or Zn. Copper assays occur wherever there was significant chalcopyrite. Torwest's conclusion was similar to that in 1943 and work ceased.

## 2. OLD ALAMEDA (POLYMETALLIC-QUARTZ VEINS)

1916-1920 The early history of the Old Alameda is unclear. Discovery appears to have been by Oscar Schmidt approximately in the same time period as the Lucky Mike.

An inclined shaft dipping 30°-35° West followed the mineralized quartz vein down dip for 35 metres. Two short drifts on the vein occur at 7 m (16 m long) and 20 m (8 m long) depth.

The workings follow visibly strong Pb-Zn mineralization and a small ore shipment of 3 tons (high grade) yielded significant Au, Ag and Pb values (see previous section).

1962 Torwest Resources Ltd. drilled two short holes below the old workings, SM #8 at -30° for 117 feet and SM #9 at -55° for 82 feet. SM #18 intersected a 1 foot section of quartz vein assaying 0.15 oz Au, 1.10 oz Ag, 0.64% Pb and 2.0% Zn. SM #9 did not intersect significant mineralization.

1980 Property owner W. Petrie dewatered and upgraded the old workings followed by a small sampling program (Figure 7B). Limited trenching and sampling took place to the north and south along the strike of the vein.

## 3. 1987 EXPLORATION PROGRAM ON THE PROPERTY BY LACANA

The 1987 exploration program conducted on the Petrie property by Lacana was largely between the beginning of October and mid-December. The aim of the 1987 program was to give the property as complete geological, geophysical and geochemical coverage as possible prior to the end of the field season. Most important was to evaluate existing exploration targets (old workings) and to develop new targets. Both types of target were to be

brought to a stage whereby they could be drilled or trenched following minimal upgrading in 1988.

A survey grid over 30 kilometres long was cut on the property and used for geological, geophysical (Magnetic and V.L.F.) and soil geochemical surveys. Detailed mapping and sampling was conducted on the Lucky Mike, Old Alameda, Old Alameda No. 1 and other old workings on the property. A Dighem III airborne geophysical survey was conducted over Swakum Mountain with 275 kilometres of flight line.

The geological mapping on the mountain indicated that the area consists largely of steeply dipping, northerly striking, Nicola Group volcanics including massive andesitic and fragmental units (breccias). A break occurs in the volcanic stratigraphy with a thick package of felsic volcanic flows, lithic and crystal tuffs and limey volcanics with minor limestone units. This is Cockfield's Marker Unit which can be traced across the mountain from north to south through the various old workings. To the east of the Marker unit on the mountain main peak occurs a thick, unconformable wedge of immature sediments, predominantly coarse polymictic conglomerates (fan-type) and grits with minor cherty units (equivalent to Kingsvale Group?). Narrow quartz porphyry dikes locally intrude the Nicola sequence.

At the Lucky Mike workings the limey volcanics, tuffs and limestones of the Marker Unit have been in part, converted to garnet-epidote-calcite skarn with associated Cu, W, Ag minor Au and Zn mineralization. The Old Alameda No. 1 Shaft on the unit 400 metres to the southwest shows minor epidote skarn and sulfide lenses (sphalerite, chalcopyrite, pyrrhotite) along the skarn line (limestone contact).

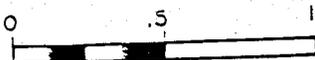
At the Old Alameda a northerly trending structure with shallow west dip ( $35^\circ$ ) hosts narrow quartz veins with significant sulfides near contacts. Significant Cu, Pb, Zn, Au and Ag values have been obtained from the underground workings on the Main Vein.



## LEGEND

 1987 Grid. Cut, chained, picketed. 100 m. spaced lines. 25 m. stations.

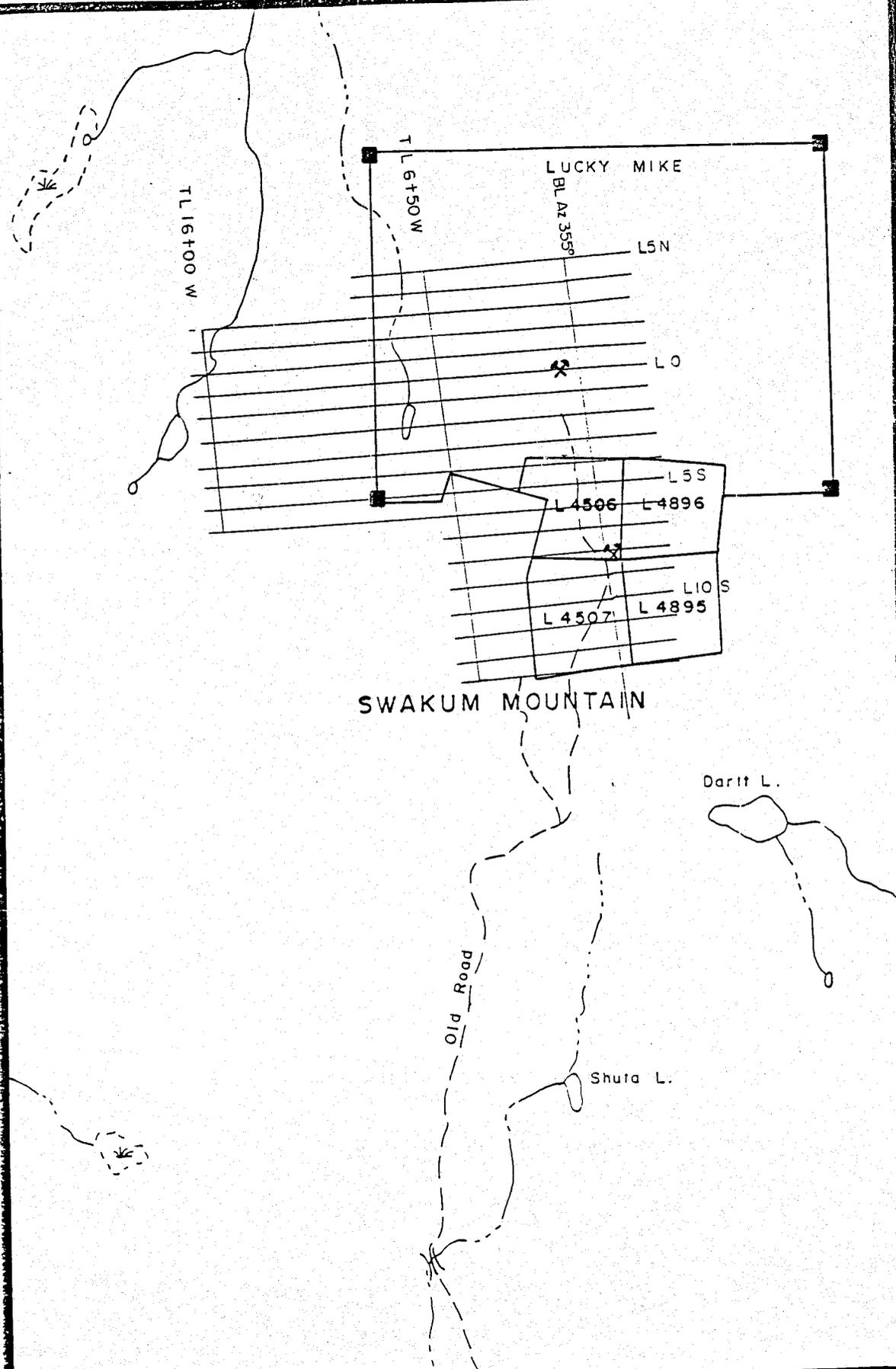
 Claim boundaries and corner posts.

 0 .5 1 Km.

 CORONA CORPORATION

SWAKUM MOUNTAIN PROJECT  
PROPERTY AND GRID MAP  
1988

PREPARED BY:	R. W.	SCALE:	1:25 000	PROJECT NO.:	1016
N.T.S.:	92-I-7	DATE:	NOV. /88	MAP NO.:	<b>3B</b>



The geochemical soil surveys in 1987 indicated a number of multi-element anomalies with various Au, Ag, Cu, Pb and Zn combinations on the property. Two of the strongest anomalies occur over the Old Alameda and Lucky Mike workings.

## 1988 DIAMOND DRILLING PROGRAM

### 1. INTRODUCTION

The results from the 1987 surveys on the Petrie property indicated a number of targets for exploration in 1988 two of these were the Lucky Mike and the Old Alameda zones of mineralization.

At the Lucky Mike significant precious metal (Au and Ag) as well as Cu and Zn values were obtained during the 1987 sampling program. Au, Ag and Zn were largely ignored by previous drill programs on the zone by Torwest and wartime exploration. The skarn also appeared to be poorly tested along strike and to depth.

Underground sampling of the Old Alameda vein in 1987 yielded significant Cu, Pb, Zn, Au and Ag values. The structure with vein had not been tested along strike where polymetallic soil anomalies had been outlined in 1987. The depth potential of the zone was also untested.

### 2. METHOD

A winter drill program was conducted on the Petrie property between January and April 1988. The drilling was completed by Scope Drilling from Merritt by March 7th. However, logging and sampling continued into late April.

Drilling was by standard wireline and NQ core size. 800 metres (2,625 feet) were drilled in 11 holes (see Table 1 for details). Seven holes (LS-2 to 7) were on the Lucky Mike polymetallic skarn; four holes (LS-8 to 11)

TABLE 1

WINTER DRILL PROGRAM DRILLING COMPILATION

SWAKUM MOUNTAIN PROJECT - NICOLA M.D.

Hole No.	Az	Dip	Date	Target	Met	Cum Met.
LS-1-88	N70°W	-44	20/1/88 24/1/88	LUCKY MIKE	60.96	60.96
LS-2-88	N70°W	-66	24/1/88 28/1/88	" "	104.55	165.51
LS-3-88	N70°W	-45	28/1/88 30/1/88	" "	65.84	231.35
LS-4-88	N70°W	-45	30/1/88 4/2/88	" "	91.74	323.09
LS-5-88	N70°W	-65	4/2/88 11/2/88	" "	86.87	409.96
LS-6-88	N70°W	-45	11/2/88 16/2/88	" "	71.20	481.16
LS-7-88	N70°W	-45	16/2/88 22/2/88	" "	106.98	588.14
LS-8-88	N90°E	-43	23/2/88 26/2/88	OLD ALAMEDA	60.96	649.1
LS-9-88	N90°E	-65	27/2/88 28/2/88	" "	40.23	689.33
LS-10-88	N90°E	-44	28/2/88 1/3/88	" "	36.86	726.19
LS-11-88	N90°E	-60	2/3/88 7/3/88	" "	73.76	<u>799.95</u>
				TOTAL		799.95 m.

were on the Old Alameda precious-base metal quartz vein. Diamond drill logs for all holes occur in Appendix B.

### 3. Lucky Mike - Polymetallic Skarn

The positions of 1988 drill holes on the Lucky Mike skarn are shown in Figure 9. Cross sections are available in Figures 9A to E.

The seven holes tested the skarn for 110 metres strike length, and at a variety of elevations 40 to 80 metres below the old surface workings. Combined with the last seven holes drilled by Torwest in 1964 under Bill Hainsworth's supervision, a fairly clear geological picture is now possible. It is now strongly evident that 90 percent of Torwest's drilling was down dip and its own could not give an accurate picture of skarn geometry and tonnage potential.

The main skarn unit is 100 metres long with northeasterly strike. It occurs at the contact between epidotized, andesitic breccias and intermediate to felsic, crystal-lithic tuffs within a lens of limey volcanics, lithic tuffs and limestone (skarn protoliths). The skarn is bimodal in mineralogy, consisting of interfingering garnet skarn (andraditic garnet, magnetite, epidote, hornblende, chlorite and calcite) and carbonate skarn (coarse calcite, epidote, hornblende, chlorite, minor magnetite or hematite) possibly reflecting original compositional variation (protolith-coarse, highly carbonated, lithic tuffs?). Numerous late, fairly wide, easterly dipping (30° to 50°) fracture zones cut the skarn with local displacements. A major fault zone is evident in the hangingwall lithic tuffs (eastern side of the knoll).

Skarn geometry is complex with the marble line (skarn edge) having a tooth-like cross section. Locally wide near to surface (up to 25 metres true width) the skarn tapers to depth with narrow, 1 to 2 metre wide 'roots' 50 metres below surface.

The tungsten mineralization is confined to the bimodal skarn with fine to coarse disseminated scheelite (obvious with a U.V. lamp). Values are summarized in the following table:

SECTION N	HOLE NO.	SKARN WIDTH M	W. MINERALIZATION % W/WIDTH M	ELEVATION M
0+50N Dike	LS-7-88	very minor skarn	wide feldspar	porphyry
0+20N	LS-3-88	6.28	trace up to .1% up to .06%	1490
0+13S	LS-1-88	26.38	.152%/14.1 m	1475
0+13S	LS-2-88	2.57	.07%/2.57 m	1476
0+35S	LS-4-88	15.04	.14%/4.51 m	1465
0+35S	LS-5-88	No skarn below marble line at 1450		
0+65S	LS-6-88	No skarn encountered, fault displaced?		

Torwest's drilling, mainly at shallow depth, (above 50 m depth) intersected average grades in the 0.15% to 0.40%  $WO_3$  range (high to +1%). An estimate on skarn available for tungsten mineralization based on a compilation of all drilling gives less than 100,000 tons. Torwest's estimate for the Lucky Mike @ 300,000 tons with 0.22%  $WO_3$  is basically impossible.

Copper mineralization with silver and locally zinc values appears to be structurally controlled, located along shallow east dipping fault zones within the skarn and in the footwall epidotized volcanics. The structures are late (post skarn). They are wider in the skarn than in the volcanics but yielding lower copper and silver values (than in the volcanics below). A summary follows:

HOLE NO.	INTERSECTION (Core) Cu %, Ag oz/t - width m	LOCATION
LS-7-88	no significant assays	
LS-3-88	.41%, 1.62 oz/0.91 m .81%, 4.3 oz/1.36 m	structure in skarn (top) structure in skarn (bottom)
LS-1-88	.18%, 1.12 oz/3.60 m .23%, 1.21 oz/1.3 m	structure in skarn (top) structure in skarn (bottom)
LS-2-88	.31%, 1.48 oz/2.57 m 1.34%, 8.01 oz/1.06 m	structure in skarn (root) structure in skarn (root)
LS-4-88	.72% /4.9 m inc. 2.35%, 1.87 oz/1.25 m	fault in footwall dip 30°E
LS-5-88	.24% /0.5 m	fault in footwall dip 30°E
LS-6-88	No significant assays.	

Tungsten values occur with the copper and silver where the structures cut through the skarn. This also appears to be the case at surface at the Lucky Mike Shaft. Low but anomalous gold values up to 400 ppb were encountered in the skarn where fractured. Tungsten mineralization in the skarn body appears to be early (prograde?) while Cu, Ag, Zn and Au mineralization is late (retrograde?) associated with fracturing.

#### 4. Old Alameda - Polymetallic - Quartz Vein

Following drilling at the Lucky Mike, four holes were completed in the vicinity of the Old Alameda Shaft. The positions of these holes were shown on the compilation map, Figure 11. Drill sections occur in Figures 10A and B.

The volcanic stratigraphy in the vicinity of the Old Alameda Shaft strikes northerly and appears to dip east. The structure hosting the quartz, pyrite, sphalerite and galena vein strikes north but dips west at between 30° and 40° (from underground survey in 1987).

The drilling consisted of two double hole set-ups (-45° and -65°), collared 30 metres north and south of the shaft and designed to test the projections of the shaft vein at shallow depths. Holes LS-8(-43) and 9(-65) on the northern set-up intersected the vein within a clayey fracture zone cutting felsic to intermediate porphyritic volcanics. The two intersections line up well with the surface showings giving a 30° to 40° dip on the vein structure. Widths are close to true and as follows:

HOLE NO.	INTERSECTION M (widths)	Au oz	Ag oz	Cu%	Pb%	Zn%
LS-8-88	29.40-29.73 (.33) (2.6 m below assayed 0.1% Zn)	.04	1.31	0.23	1.14	3.80
LS-9-88	29.60-30.28 (.68) (low values in Pb and Zn for 2 m above)	.01	4.90	1.09	5.25	20.90

Holes LS-10 and 11 on the southern set-up intersected similar but more fractured volcanics but no vein. The vein could be displaced by faulting or is weak to absent in this area. It was decided that further testing of the vein system along strike should be by surface trenching and coincide with strong polymetallic soil anomalies.

## STATEMENT OF QUALIFICATIONS

I, RONALD C. WELLS of the City of Kamloops, British Columbia do hereby certify that:

1. I am a Fellow of the Geological Association of Canada.
2. I am a graduate of the University of Wales, U.K. B.Sc in Geology (1974), did post graduate (M.Sc) studies at Laurentian University, Sudbury, Ontario (1976-1977) in Geology.
3. That I am presently employed by Corona Corporation as a Regional Geologist based in Kamloops, B.C.
4. That I have practiced continuously as a geologist for more than eleven years throughout Canada and have past experience and employment as a geologist in Europe.

Signed and dated in Kamloops, British Columbia this 22 day of

March 1989.



R. C. Wells

STATEMENT OF EXPENDITURES  
to December 31, 1988

1987

1. Linecutting 22.8 km @ \$380/km	\$ 5,664.00
2. Geochemical Sampling (soils and rock)	17,939.89
3. Magnetic Survey	1,600.00
4. V.L.F. Electromagnetic Survey	1,600.00
5. Geological Survey	2,500.00
6. Shaft Dewatering	1,500.00
7. Dighem III Survey	<u>28,520.00</u>
Sub Total	\$ 59,323.89

1988

1. Geology	\$ 7,162.34
2. Geochemical (soils, rock, core)	23,465.97
3. Geophysics (Max Min II Survey)	4,520.50
4. Trenching (Excavator Costs)	5,850.00
5. Drilling (799.95 metres) NQ	62,529.59
6. Reports	1,993.75
Sub Total	\$ 105,512.15
Total	164,836.04

1988 Report Compilation and Maps

6,000.00

GRAND TOTAL

\$ 170,836.04

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APPENDIX A



Province of British Columbia  
 Ministry of Energy, Mines and Petroleum Resources  
 MINERAL RESOURCES DIVISION — TITLES BRANCH  
 MINERAL ACT

DOCUMENT No. \_\_\_\_\_  
 OFFICE USE ONLY

**SUB-RECORDER  
 RECEIVED**

JAN 28 1989  
 M.R. # 301474d \$800.00  
 VANCOUVER, B.C.  
 RECORDING STAMP

**Statement of Work — Cash Payment**

I, DARREL JOHNSON (Name) Agent for WILLIAM PETRIE (Name)  
 Valid subsisting FMC No. 280734 (282136) 283592  
1071 Corona Crescent (Address) Box 1023, 1813 - 1st Ave. (Address) -1989  
Coquitlam, B.C. (Address) Merritt, B.C. (Address) PMC  
V3J 7J1 (Postal Code) 689-5453 (Telephone Number) VOK 2B0 (Postal Code) (604) 378-9961 (Telephone Number)

STATE THAT: [NOTE: If only paying cash in lieu, turn to reverse and complete columns G to J and S to V]

1. I have done, or caused to be done, work on the OLD ALAMEDA, OLD ALAMEDA 1, 8, 9, Claim(s)  
LUCKY MIKE  
 Record No(s) 372, 373, 374, 375, 1484  
 Situate at Swakum Mt. in the NICOLA Mining Division,  
 Work was done from January 25, 19 88 to April 31, 19 88

**TYPE OF WORK**

**PHYSICAL:** Work such as trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails. Details as required under section 13 of the Regulations, including the map and cost statement, must be given on this statement.

**PROSPECTING:** Details as required under section 9 of the Regulations must be submitted in a technical report. Prospecting work can only be claimed once by the same owner of the ground, and only during the first three years of ownership.

**GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL, DRILLING:** Details must be submitted in a technical report conforming to sections 5 through 8 (as appropriate) of the Regulations.

**PORTABLE ASSESSMENT CREDIT (PAC) WITHDRAWAL:** A maximum of 30% of the approved value of geological, geophysical, geochemical and/or drilling work on this statement may be withdrawn from the owner's or operator's PAC account and added to the work value on this statement.

TYPE OF WORK (Specify Physical (include details), Prospecting, Geological, etc.)	VALUE OF WORK		
	Physical	*Prospecting	*Geological etc.
NO DIAMOND DRILLING			\$18,000.00
TOTALS	A	+ B	+ C
PAC WITHDRAWAL — Maximum 30% of Value in Box C Only			E → E
from account(s) of _____			
			TOTAL F 18,000.00
* Who was the operator (provided the financing)?	Name <u>CORONA CORPORATION</u>	Transfer amount in Box F to reverse side of form and complete as required.	
	Address <u>1440 - 800 W. Pender St.</u>		
	<u>Vancouver, B.C.</u> Phone: <u>689-5453</u>		

APPENDIX B

LACANA MINING CORPORATION  
DRILL LOGS

HOLE NO.

LS-1-88

PROPERTY: SWAKUM MT. PROJECT NO. 101G N.T.S.: LOCATION: LUCKY MIKE CLAIM	DATE STARTED: 20/1/88 DATE COMPLETED: 24/1/88 DRILLED BY: SCOPE LOGGED BY: RON WELLS DATE LOGGED: 24/1/88 HOLE TYPE: DDH NO CORE	NORTHING: 0+135 EASTING: 0+135 COLLAR ELEV: AZIMUTH: N 70°N LENGTH: 60.96m. CORE SIZE: NQ	DEPTH COLLAR AZIMUTH 290 DIP ANGLE -45° DIP TEST	LOCATION SKETCH
---	---	--	---	-----------------

INTERVAL		SECTION R x S A M	DESCRIPTION	SAMPLE INTERVAL			ASSAY/ANALYTICAL RESULTS					
FROM m	TO m			SAMPLE No:	FROM	TO	LENGTH	Au ppb	Ag ppm	Cu ppm	W ppm	Zn ppm
0	17.09		CASING: Sandy overburden.	21451	17.66	18.88	1.22	10	2.3	71	10	53
17.09	17.66		BADLY BROKEN GROUND, BOULDERS? Predominantly hard, dark grey, feldspar (white), porphyritic basalt. Moderately magnetic.	21452	19.81	21.00	1.19	20	7.9	490	10	185
				21453	21.00	22.11	1.11	30	1.8	98	10	74
17.66	22.11		CARBONATED BRECCIA Relatively soft, light greenish grey, mottled, strongly carbonated. Original lithology appears to have been breccia or lithic tuff. Locally sub angular ghosts of fragments are visible. Late carbonate veins and veinlets at variable angles upto 1cm wide, some with magnetite others pyrite. Locally upto 2%. Becoming harder and silicified with depth. @19.40-19.81 Badly broken 50% recovery Dark grey porphyritic basalt @20.60-20.75 Strongly fractured 40°CA. Clayey some quartz. Pyritic veins 75°hCA. Carbonate veins 40-50°CA.									

R. Wells

## LACANA MINING CORPORATION

## DRILL LOGS

HOLE No.:

PAGE No. 2

LS-1-88

INTERVAL		SECTION R x S A M	DESCRIPTION	SAMPLE No.	SAMPLE INTERVAL			ASSAY/ANALYTICAL RESULTS				
FROM	TO				FROM	TO	LENGTH	Au ppb	Ag ppm	Cu ppm	W ppm	Zn ppm
22-11	23-77		DARK GREY, PORPHYRIC BASALT As at 17.09 with white feldspar phenocrysts (2-3mm) Badly broken (60% Rec) local quartz veins 40-50°C with 5% fine to med grained disseminated Py at wallrocks contacts. Local medium to coarse bleby Py. Weak carbonate veinlets.	21454	22-11	23-77	1-66	20	0.3	43	8	76
				21455	23-77	24-40	0-63	20	2.3	200	0.13%	64
				21456	24-40	25-90	1-50	185	1.5802	0.23%	50	133
				21457	25-90	27-22	1-32	15	26.9	0.12%	200	
				21458	27-22	28-00	0-78	30	15.20	0.15%	80	
				21459	28-00	28-50	0-50	15	0.9	266	150	
				21460	28-50	30-00	0-50	10	0.8	331	750	
				21461	30-00	30-78	0-78	30	0.6	110	750	
				21462	30-78	32-31	0-55	20	6.5	267	300	
23-77	50-15		SKARN Mixed garnet-epidote and carbonate skarn. The garnet skarn is brown to reddish mottled, medium grained and magnetic. Consists predominantly of garnet with carbonate and epidote minor chlorite, amphibole, magnetite and pyrite. Local significant med to coarse Cpy, Po, Py. @ 23-77-24-40. 60% garnet skarn as 'islands' in carbonate, amphibole skarn. 1-3% Py. Moderately magnetic @ 24-40-27-22 Predominantly carbonate skarn with coarse amphibole, local epidote. Local coarse patches of Py, Cpy Po. Cpy tends to be on its own locally to 5%. Garnet rich, sulfide poor sections at 24-86-25-11; 25-96-26-10; 26-56-26-80 @ 27-22-32-40 80% garnet skarn, local epidote patches (27-40). Strongly magnetic Cpy with epidote at 27-22-27-60 upto 5% coarse bleby Py. at 28-50-28-75 very coarse carbonate, amphibole, patchy garnets.	FROM	24-40	28-00	3-60		1-1202	0-175%		

R. C. Wells

INTERVAL		SECTION R x S A M	DESCRIPTION	SAMPLE No.	SAMPLE INTERVAL			ASSAY/ANALYTICAL RESULTS				Zn ppm
FROM	TO				FROM	TO	LENGTH	A <sub>v</sub> ppb	A <sub>g</sub> ppm	C <sub>u</sub> ppm	W ppm	
			carbonate veins 40°-60°CA. at 30.45-30.72 with upto 10% bleby Py.	21463	32.31	33.83	1.52	25	0.8	189	400	
			@ 32.40-37.25 60% garnet skarn with carbonate 'islands' minor bleby Py, Cpy local epidote carbonate skarn 40%.	21464	33.83	34.97	1.14	10	0.9	77	0.15%	
			Magnetite → hematite locally. These carbonate areas contain upto 10% coarse bleby Py upto 2% spotty Cpy.	21465	34.97	36.40	1.43	10	1.1	96	0.13%	
			@ 37.25-38.59 Coarse carbonate skarn, locally siliceous. upto 10% patchy garnet skarn. Locally upto 5% coarse bleby Py, Cpy	21466	36.40	37.25	0.85	<5	0.4	143	450	
			@ 38.59-43.06 Garnet skarn local carbonate patches. Upto 20% coarse bleby Py	21467	37.25	38.59	1.34	65	1.2102	0.23%	0.27%	
			@ 43.06-44.62 Coarse siliceous skarn. Hard quartz + carbonate + hornblende? 5% coarse disseminated Py.	FROM	33.83	36.40	2.57				0.14%	
			@ 44.62-46.60 Coarse carbonate skarn with garnet skarn patches. 1-5% coarse bleby Py. Local quartz veins 60°CA with bleached wallrocks. Minor Cpy local significant magnetite	21468	38.59	39.60	1.01	15	3.4	263	0.09%	34
			@ 46.60-47.93 As above 40% garnet skarn some quartz. Few high angle carbonate veins 80°-90°CA. Magnetic	21469	39.60	41.07	0.47	10	2.3	311	0.12%	47
			@ 47.93-50.15 Hard quartz + carbonate + amphibole skarn. Few veins 1-5% coarse Py, Cpy, Mgt as intergranular blebs minor Py.	21470	41.07	42.07	1.0	<5	6.6	180	0.16%	32
				21471	42.07	43.06	0.99	5	2.4	314	0.14%	39
				21472	43.06	44.00	0.94	175	5.5	446	0.14%	122
				21473	44.00	44.62	0.62	60	5.3	484	0.10%	100
				21474	44.62	45.62	1.00	205	6.1	451	0.43%	96
				21475	45.62	46.60	0.98	15	4.2	297	0.14%	157
				21476	46.60	47.93	1.33	30	3.1	232	0.11%	76
				21477	47.93	49.20	1.27	160	3.3	211	25	134
				FROM	37.25	47.93	10.68				0.164%	

R. C. Wells

## LACANA MINING CORPORATION

## DRILL LOGS

HOLE No.:

LS-1-88

PAGE No.

4

INTERVAL FROM	TO	SECTION R x S A M	DESCRIPTION	SAMPLE INTERVAL			ASSAY/ANALYTICAL RESULTS					
				SAMPLE No.	FROM	TO	LENGTH	Au ppb	Ag ppm	Cu ppm	W ppm	Zn ppm
50.12	57.00		@ 49.07-49.20 10% coarse Py. Py mainly as a single mass.	21478	49.20	50.12	0.92	20	1.7	192	20	195
			PORPHYRITIC BASALT	21479	50.12	51.17	1.02	15	3.1	254	20	134
			Hard dark grey, fine grained with small light coloured phenocrysts to 3mm.	21480	51.17	52.12	0.95	10	0.5	38	15	148
			Weakly carbonated. Patchy weak to strong epidote alteration common minor bleby Cpy	21482	52.12	53.33	1.21	10	0.9	57	10	220
			Local quartz carbonate veinlets 50-60° CA with epidote Moderate to strong magnetic	21483	53.33	58.17	1.17	20	0.1	314	10	105
57.00	59.13		@ 52.12-53.33 5% bleby disseminated and fracture fill Py. patchy epidote.		58.17	59.13	0.95	15	1.2	455	10	161
			EPIDOTE ALTERED METAVOLCANIC (SKARN)									
59.13	60.96		Hard, medium green, predominantly epidote. Local fine pinkish garnets. Coarse quartz-epidote sections 5-20cm wide.									
			Local bleby Py, Cpy. magnetic. Some slickensided fractures subparallel to CA.									
60.96	60.96		@ 57.75-58.00 1cm quartz vein small angle to CA. Silicified plus carbonate altered wallrocks with 10% fine to coarse disseminated Py.									
			EPIDOTIZED PORPHYRITIC BASALT									
			Magnetic, hard, medium to dark green feldspar porphyritic. Lighter strongly epidotized sections 5-20cm wide with bleby Py minor Cpy. Local quartz veins 40° CA.									
			END OF HOLE.									

R. C. Wells







## LACANA MINING CORPORATION

## DRILL LOGS

HOLE No. :  
LS-2-88PAGE No.  
3

INTERVAL FROM	TO	SECTION R x S A M	DESCRIPTION	SAMPLE INTERVAL			ASSAY/ANALYTICAL RESULTS						
				SAMPLE No	FROM	TO	LENGTH M	Au PPM	Ag PPM	Cu PPM	Co PPM	Zn PPM	
55.60	80.12		Minor Cpy. slickensides along 10°-30° CA hematitic fractures.	21569	47.28	48.73	1.45	30	1.1	173	500	34	
			@ 47.28-48.85 medium grained garnet skarn local coarse magnetite. Minor carbonate with upto 10% Py	21570	48.73	49.85	1.12	45	2.9	219	0.14%	38	
			@ 48.85-50.70 Dark green basalt with epidote along fractures 40° CA. Badly broken core.	21571	49.85	50.70	0.85	30	3.6	393	350	105	
			@ 50.70-53.24 medium to coarse grained garnet skarn with coarse magnetite. Coarse chlorite sections with Py.	21572	50.70	52.12	1.42	25	2.0	741	0.21%	36	
			@ 53.24-55.60 strongly carbonated volcanic 5% Py. Transition between skarn and volcanics	21573	52.12	53.24	1.12	45	1.0	121	0.13%	43	
			PORPHYRITIC BASALT	21574	53.24	54.60	1.36	55	11.5	668	400	54	
			Hard, medium to dark green, fine grained with white feldspar and dark green (hornblende?) phenocrysts to 3mm. weak to moderately carbonated. Moderate to strongly epidotized zones predominantly in areas of 30°-50° CA fractures. Local fine to coarse Cpy commonly with epidote.	21575	54.60	55.60	1.00	40	0.9	112	200	79	
			@ 55.60-59.24 strongly broken sections some oxidized fractures. moderately epidotized weakly silicified. upto 3% fine disseminated and fracture fill Py	21576	55.60	56.67	1.07	25	2.1	65	50	78	
			@ 59.24-60.80 porphyritic basalt weakly epidotized.	21577	56.67	57.91	1.22	30	0.1	142	150	99	
			@ 60.80-61.80 Moderately epidotized, carbonated	21578	57.91	59.24	1.33	25	2.1	96	3	104	
			@ 61.80-63.15 weakly epidotized and bleached	21579	59.24	60.80	1.56	40	0.5	288	4	33	
			@ 63.15-63.80 strong epidote carbonate alteration	21580	60.80	61.80	1.0	35	1.4	730	3	131	
				21581	61.80	63.15	1.35	15	0.6	429	4	130	
				21582	63.15	63.80	0.65	25	2.1	67	4	117	
						FROM 48.73	53.24	4.51				0.14%	















INTERVAL		SECTION R x S A M	DESCRIPTION	SAMPLE INTERVAL			ASSAY/ANALYTICAL RESULTS					
FROM	TO			SAMPLE No:	FROM	TO	LENGTH	Au ppm	Ag ppm	Cu ppm	W ppm	Zn ppm
40.56	55.60		quartz veins. weak fracturing. SKARN Predominantly hard, mottled brown, green and greys, magnetic. sections of medium grained garnet > chlorite, epidote, magnetite skarn. Fine to coarse, disseminated to bleby Py minor Cpy. separated by sections of coarse grained carbonate > amphibole, chlorite, minor quartz + garnet skarn. Fine to coarse bleby Py local Cpy. @ 40.56-41.45 Interfingering garnet and chlorite rich layers. Upto 3% coarse bleby Py local coarse magnetite. Sections begin with 10% medium grained Py minor Cpy. @ 41.45-42.33 Coarse grey carbonate, chlorite, amphibole, magnetite skarn. Upto 3% coarse bleby Py and Cpy. @ 42.33-43.32 Medium grained garnet skarn, chloritic partings 30°CA. Local quartz, spotty magnetite. Upto 2% coarse bleby Py @ 43.32-43.59 Dark green and chloritic @ 43.59-44.45 Predominantly garnet skarn, fine fractures 35°CA. 1-3% medium grained Py @ 44.45-45.30 Coarse carbonate, chlorite, amphibole skarn. 3-5% disseminated to bleby Py, Cpy. @ 45.30-46.02 Garnet skarn with coarse carbonate, chlorite patches. 2 fracture sets 10°-20°CA and 45°-65° locally hematitic @ 46.02-47.28 Mixed carbonate > garnet skarn with chloritic sections. Local quartz with carbonate with upto 15% coarse bleby Py	21565	42.33	43.32	0.99	355	4.1	50	300	28
				21566	43.32	44.45	1.13	25	0.4	61	300	36
				21567	44.45	46.02	1.57	105	2.2	175	300	44
				21568	46.02	47.28	1.26	60	5.7	533	300	80

## LACANA MINING CORPORATION

## DRILL LOGS

HOLE No.:

25-4-88

PAGE No. 3

INTERVAL FROM	TO	SECTION R x S A M	DESCRIPTION	SAMPLE INTERVAL			ASSAY/ANALYTICAL RESULTS							
				SAMPLE No	FROM	TO	LENGTH	Au ppb	Ag ppm	Cu ppm	W ppm	Zn ppm		
5560	80.12		@ 47.28-48.85 Medium grained garnet skarn. local coarse magnetite. Minor carbonate with upto 10% Py.	21569	47.28	48.73	1.45	30	1.1	173	500			
		@ 48.85-50.70 Dark green basalt. Epidote along fractures 40°CA. Badly broken core.	21570	48.73	49.85	1.12	45	2.9	219	0.14%	38			
		@ 50.70-53.24 Medium to coarse grained garnet skarn with coarse Magnetite. Coarse chloritic sections with Py.	21571	49.85	50.70	0.85	30	3.6	393	350	105			
			21572	50.70	52.12	1.42	25	2.0	741	0.21%	36			
			21573	52.12	53.24	1.12	45	1.0	121	0.13%	43			
		@ 53.24-55.60 Strongly carbonated volcanic. 5% Py. Transition between skarn and volcanics.	21574	53.24	54.60	1.36	55	11.5	668	400	54			
			21575	54.60	55.60	1.00	40	0.9	112	200	79			
					PORPHYRITIC BASALT									
					Hard medium to dark green, fine grained with white feldspar and dk green (hornblende) phenocrysts to 3mm. Weak to moderately carbonated. Moderately to strongly epidotized zones, predominantly in areas of 30-50°CA fractures. Local fine to coarse cpy commonly with epidote.	FROM	48.73	53.24	4.51				0.14%	
					@ 55.60-59.24 Strongly broken sections some oxidized fractures. Moderately epidotized weakly silicified. Upto 3% fine disseminated and fracture fill Py	21576	55.60	56.69	1.09	25	2.1	65	50	88
					@ 59.24-60.80 Porphyritic basalt weakly epidotized.	21577	56.69	57.91	1.22	30	.	142	150	99
					@ 60.80-61.80 Moderately epidotized. carbonated	21578	57.91	59.24	1.33	25	2.1	96	3	104
					@ 61.80-63.15 weakly epidotized and bleached	21579	59.24	60.80	1.56	40	0.5	388	4	93
					@ 63.15-63.86 Strong epidote, carbonate alteration weak skarn	21580	60.80	61.80	1.0	35	1.14	730	3	131
					@ 63.80-66.53 Dark porphyritic basalt with short epidote sections (carbonated)	21581	61.80	63.15	1.35	15	0.6	429	4	130
					@ 66.53-68.28 FRACTURE ZONE (70% Recovery) Strong epidotized and carbonated. Locally with upto 10% coarse blocky to lensey cpy some along fractures 20-30°CA	21582	63.15	63.80	0.65	25	2.1	67	4	117
					@ 68.28-70.80 as above weaker fracturing and alteration	21583	66.53	67.03	0.50	15	0.6	392	4	157
						21584	67.03	68.28	1.25	300	1.87oz	2.35%	200	0.10%
						21585	68.28	69.45	1.17	15	1.2	604	5	181
						21586	69.45	70.71	1.26	60	13.3	0.25%	20	312
						21587	70.71	71.93	1.22	35	5.9	0.17%	3	226
						FROM	67.03	71.93	4.90				0.72%	





INTERVAL		SECTION Rx S A M	DESCRIPTION	SAMPLE INTERVAL			ASSAY/ANALYTICAL RESULTS					Zn ppm	
FROM	TO			SAMPLE No	FROM	TO	LENGTH	Au ppm	Ag ppm	Cu ppm	W ppm		
41.40	83.52		phenocrysts to 3mm. Groundmass well carbonated numerous carbonate veins at variable angles to CA with upto 3% fine to medium grained disseminated by minor Cpy.	21601	39.51	41.40	1.89	10	2.1	43	10	101	
			CARBONATE BRECCIA	21602	41.40	42.60	1.20	305	2.1	25	10	23	
			Soft, light to medium grey, coarse breccia. Mainly carbonate fragments (Limestone?) more massive sections. Rare dark coloured volcanic fragments. Locally broken and clayey, fine carbonate veinlets, sparse fine sulfides. Local Py along fractures.	21603	43.14	44.66	1.52	10	0.2	13	10	18	
				21604	44.66	46.18	1.52	15	2.1	13	10	16	
				21605	46.18	47.25	1.07	20	1.7	13	10	30	
				21606	47.25	48.50	1.25	5	4.8	15	10	109	
				21607	48.50	50.00	1.50	10	3.5	12	22	33	
				@ 41.40-42.60 fractured breccia, fine fracture fill Py.	21608	54.25	55.17	0.92	5	0.5	28	10	30
				@ 42.60-43.14 Dark green dike or volcanic ? chloritic weakly carbonated, strong fracturing contacts 45°CA.	21609	55.17	56.69	1.52	25	1.3	14	10	42
				@ 43.14-50.27 weak carbonate breccia local pyrite along fractures.	21610	56.69	58.36	1.67	15	0.6	10	10	22
				@ 50.27-55.17 FRACTURE ZONE broken cone locally clayey. Py along subparallel fractures to CA at end of section	21611	58.36	60.10	1.74	20	1.0	11	10	50
				@ 55.17-60.10 broken, weakly brecciated limestone. Local quartz carbonate veinlets, sparse sulfides	21612	60.10	61.77	1.67	20	1.0	30	10	193
				@ 60.10-63.40 FRACTURE ZONE mainly dark, sandy clay gouge. well carbonated, sparse sulfides.	21613	61.77	63.40	1.63	5	0.2	100	10	40
				@ 63.40-65.27 medium grey, weak breccia local semi-massive Po, Py, Cp along fractures S&A	21614	63.40	64.20	0.80	10	1.4	73	22	20
				@ 65.27-65.80 SEMI-MASSIVE SULFIDES. brecciated sulfides Py, Po > Cpy. Fine carbonate stringers 30°-40°CA. Some carbonate breccia.	21615	64.20	65.27	1.07	5	2.1	58	10	98
					21616	65.27	65.80	0.53	10	1.4	0.24%	10	88









INTERVAL		SECTION R x S A M	DESCRIPTION	SAMPLE INTERVAL			ASSAY/ANALYTICAL RESULTS			
FROM	TO			SAMPLE No	FROM	TO	LENGTH	Av pph	Ag ppm	Cu ppm
16.64	19.22		QUARTZ, CARBONATE, PYRITE ZONE Patched hard and soft, whites and greens. Coarse grained to breccia textures. Coarse quartz and Py with finer carbonate as 'islands' separated by greenish more carbonated, chloritic with Py and minor quartz. Short sections of feldspar porphyry. 15-20% fine to coarse Py throughout.	21629	16.64	18.00	1.36	135	15.7	23
				21630	18.00	19.32	1.32	405	1.1602	598
				21631	20.84	21.94	1.10	10	2.5	
				21632	21.94	23.20	1.26	5	4.6	
				21633	23.20	24.40	1.20	10	2.8	
				21634	24.40	25.60	1.20	15	1.9	
19.32	20.86		DARK, FELDSPAR-EPIDOTE PORPHYRY. Medium hard, dark grey, similar to 16.76. Mafic phenocrysts. Locally epidotized. Sparse feldspar phenocrysts. Weakly carbonated. Some carbonate fractures. @ 20.84 sharp contact 85°C. This may be a later dike as it is not silicified by feldspar porphyry dike.	21635	25.60	26.60	1.00	10	0.7	
				21636	26.60	27.78	1.18	5	0.4	
20.84	27.78		FELDSPAR PORPHYRY DIKE Locally similar to 11.93-16.26. Other sections show strong silicification and/or carbonate and/or K. spar alteration. Moderately fractured throughout. Patchy disseminated Py. @ 20.84-23.20 Feldspar porphyry. Porphyry texture vague with depth @ 23.20-24.40 Moderately fractured weak porphyry. weak carbonate, K. spar alteration @ 24.40-24.70 Strong fracturing & carbonate @ 24.70-27.78 medium orange, mottled. moderate to strong K. spar alteration. Moderate fracturing. Sparse Py. carbonate fractures. @ 27.78 Contact at 60°C.							

## LACANA MINING CORPORATION

## DRILL LOGS

HOLE No.:  
LS-7-88PAGE No.  
3

INTERVAL FROM	TO	SECTION R x S A M	DESCRIPTION	SAMPLE No.	SAMPLE INTERVAL			ASSAY/ANALYTICAL RESULTS	
					FROM	TO	LENGTH	A <sub>0</sub> ppb	A <sub>5</sub> ppm
27.78	32.25		<p>PORPHYRITIC ANDESITE</p> <p>Relatively soft, dark brown, fine to fine/medium grained andesite.</p> <p>Carbonate altered tabular phenocrysts (feldspar) local weak epidote alteration.</p> <p>Numerous fine, carbonated fractures, weak groundmass carbonate. Becoming more fractured and clay altered with depth. Sparse Py.</p> <p>@ 29.95-32.25 Soft, fractured and clay altered. Fractures commonly 30°C.A.</p> <p>Altered phenocrysts, rare with depth.</p>	21637	32.30	33.60	1.30	115	7.5
				21638	33.60	35.00	1.40	115	9.0
				21639	35.00	36.10	1.10	5	4.1
				21640	43.28	44.80	1.52	10	0.4
				21641	44.80	46.32	1.52	10	4.1
				21642	46.32	47.85	1.53	15	0.2
				21643	47.85	49.07	1.22	5	4.1
32.25	36.70		<p>MEDIUM GREEN, EPIDOTIZED BASALT.</p> <p>Hard, fine grained, moderate epidote, chlorite alteration throughout. Locally hematitic fractures with slickensides 10-30°C.A. Sections of quartz veining, breccia with up to 10% bleby Py as at 32.62-33.0; 33.90-34.30.</p>						
36.70	49.07		<p>DARK GREEN BASALT</p> <p>Hard, fine grained and dark colored. Local fine, feldspar porphyritic. Weak to moderate fracturing with carbonate veinlets. Py sparse concentrations along fractures.</p> <p>@ 36.70-37.20 Broken, Fracture Zone</p> <p>@ 37.20-41.50 Dark basalt &lt;1% Py along fractures 30°C.A some slickensides.</p> <p>@ 41.50-44.75 More broken with clayey sections, local bleaching. Carbonate veining common increasing with depth.</p> <p>@ 44.75-49.07 FRACTURE ZONE brecciated with carbonate fill. Strong clay, carbonate, epidote altered sections</p>						





LACANA MINING CORPORATION  
DRILL LOGS

HOLE NO.

LS-8-88

PROPERTY: SWAKUM MT  
PROJECT NO. 1016  
N.T.S.:  
LOCATION:

DATE STARTED: 23/2/88  
DATE COMPLETED: 26/2/88  
DRILLED BY: SCOPE DRILLING  
LOGGED BY: RON WELLS  
DATE LOGGED: 3/3/88  
HOLE TYPE: DDM.

NORTHING: 8+95  
EASTING: 0+16E  
COLLAR ELEV:  
AZIMUTH: N 90°E  
LENGTH: 60.96M  
CORE SIZE: N φ CORE

DEPTH  
COLLAR

AZIMUTH  
90°E

DIP ANGLE  
-43

LOCATION SKETCH

ACID  
DIP TEST

57.00M

-42°

INTERVAL FROM	TO	SECTION R x S A M	DESCRIPTION	SAMPLE INTERVAL			ASSAY/ANALYTICAL RESULTS		
				SAMPLE No:	FROM	TO	LENGTH	Ag ppb	Ag ppm
0	6.30		CASING. Broken bedrock.	21651	10.00	11.58	1.58	10	2.1
6.30	60.96		GREY RHYODACITE Hard light to medium grey, predominantly fine grained with local light feldspar phenocrysts to 3mm. Fine quartz-carbonate stringers at variable angles to CA. Weak to moderately fractured 40-60°CA, local dissem. and fracture fill Py.	21652	15.00	16.15	1.15	5	0.1
				21653	16.15	17.15	1.00	45	0.1
				21654	17.15	18.13	0.98	10	2.1
				21655	18.13	19.00	0.87	10	2.1
				21656	19.00	20.50	1.50	10	0.2
			@ 6.30-7.77 Broken core rubble recovery. Porphyritic rhyodacite. Limonitic fractures.	21657	20.50	21.75	1.45	165	7.6
			@ 7.77-10.00 Less broken, as above	21658	21.75	23.17	1.22	5	0.2
			@ 10.0-11.58 Bodily broken fractures 30°CA minor clay some slickenslides. Pyrite along fractures upto 1%.						
			@ 11.58-15.00 light to medium grey porphyritic rhyodacite						
			@ 15.00-17.10 weakly porphyritic rhyolite. Quartz stringers common 35-65°CA upto 2% fine disseminated Py.						
			@ 17.10-18.40 Darker, dacitic to andesitic, medium grained						
			@ 18.40-20.50 Moderately broken, some clayey fractures. Rhyodacite, upto 1% fracture fill Py. @ 19.25 2 1cm quartz veins at 30-50°CA.						
			@ 20.50-22.55 Bodily broken 60% recovery. FRACTURE ZONE. Rhyodacite with fracture fill Py.						



## LACANA MINING CORPORATION

## DRILL LOGS

HOLE No.:  
LS-8-88PAGE No.  
3

INTERVAL		SECTION R x S A M	DESCRIPTION	SAMPLE No.	SAMPLE INTERVAL			ASSAY/ANALYTICAL RESULTS			
FROM	TO				FROM	TO	LENGTH	Ag	Ag		
			@ 52.67 - 57.60 Badly broken 50% recovery	21669	52.43	53.95	1.52	1.16	1.16		
			@ 57.60 - 60.96 coarser feldspar porphyritic hydacite. Numerous quartz carbonate veins and stringers 45° CA. Bleached wallrocks. 1-2% fracture fill Ag	21670	58.30	59.50	1.20	2.5	2.1		
			@ 57.96 Quartz vein 15° CA Some wallrock Ag	21671	59.50	60.96	1.46	1.5	1.7		
	60.96		END OF HOLE					1.0	1.1		





LACANA MINING CORPORATION  
DRILL LOGS

HOLE NO.

LS-10-88

PROPERTY: SWAKUM MT PROJECT NO. 1016 N.T.S.: LOCATION:	DATE STARTED: 28/2/88 DATE COMPLETED: 1/3/88 DRILLED BY: SCOPE LOGGED BY: RON WELLS DATE LOGGED: 3/3/88; 5/4/88 HOLE TYPE: DDH	NORTHING: 81005 EASTING: 0+10E COLLAR ELEV: AZIMUTH: N 90°E LENGTH: 36.86m CORE SIZE: N Q	DEPTH COLLAR	AZIMUTH N 90°E	DIP ANGLE -44	LOCATION SKETCH
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INTERVAL		SECTION Rx S A M	DESCRIPTION	SAMPLE INTERVAL			ASSAY/ANALYTICAL RESULTS			
FROM	TO			SAMPLE No:	FROM	TO	LENGTH	Au ppb		
0	4.87		CASING. Broken bedrock.	21679	11.12	12.50	1.38	25	2.2	
4.87	15.50		RHYODACITE Hard, light to medium grey, fine grained, locally feldspar porphyritic, phenocrysts upto 5mm. weak to moderate fracturing throughout. Fine quartz veinlets upto 2% fine fracture fill pyrite. local bleached sections.	21680	12.50	14.00	1.50	5	1.6	
				21681	14.00	15.50	1.50	25	1.9	
				21682	15.50	17.00	1.50	25	1.8	
				21683	21.64	23.00	1.36	5	1.7	
15.50	21.64		DARK GREY ANDESITE Hard grey to black, fine grained with numerous white, tabular feldspar phenocrysts. Fine fractures with quartz and pyrite.	21684	23.00	24.38	1.38	5	1.9	
				21685	24.38	25.60	1.22	36	2.1	
21.64	38.86		RHYODACITE, ANDESITE As at 4.87. Hard fine grained with light feldspar phenocrysts. Fine fractures with quartz and pyrite. Some subparallel to CA. @ 21.64-25.60 as above @ 25.60-29.85 medium grained, mottled andesitic. local weak spotty epidote alteration @ 29.85-32.30 lost core. @ 32.30-32.91 badly broken @ 32.91-34.00 Dark rhyodacite. Fine grained non porphyritic. @ 34.00-36.86 light grey, fine grained moderately carbonated rhyodacite.							
	36.86		END OF HOLE.							

LACANA MINING CORPORATION  
DRILL LOGS

HOLE NO.

LS-11-88

PROPERTY: SWAKUM MT PROJECT NO. 1016 N.T.S.: LOCATION:	DATE STARTED: 2/3/88 DATE COMPLETED: 7/3/88 DRILLED BY: LOGGED BY: Ron Wells DATE LOGGED: 30/3/88-20/4/88 HOLE TYPE: D.D.H.	NORTHING: 81905 EASTING: 0410E COLLAR ELEV: AZIMUTH: N 90° E LENGTH: 73.76m CORE SIZE: NQ	DEPTH COLLAR DIP TEST @ 70.0m - 58	AZIMUTH DIP ANGLE - 60	LOCATION SKETCH
---	--	--	---------------------------------------	---------------------------	-----------------

INTERVAL FROM	TO	SECTION R x S A M	DESCRIPTION	SAMPLE INTERVAL			ASSAY/ANALYTICAL RESULTS		
				SAMPLE No:	FROM	TO	LENGTH	Au ppb	Ag ppm
0	3.30		CASING. Broken bedrock, overburden.	21687	6.55	7.92	1.37	15	0.5
3.30	40.80		RHYODACITE	21688	7.92	9.24	1.32	75	11.3
			Predominantly hard, light to dark grey, porphyritic with white feldspar phenocrysts to 3mm in dark fine grained groundmass.	21689	9.24	9.93	0.69	55	1.0
			Lighter, finer, non-porphyritic sections, more rhyolitic. Generally weak - fine fracturing with upto 2% fracture fill Py.	21690	9.93	11.28	1.35	35	0.5
			Local clay alteration in more broken sections. Sparse veining.	21691	11.28	12.80	1.52	20	0.3
			@ 3.30-8.00 Broken cone. Laminitic staining	21692	12.80	14.33	1.53	15	0.3
			@ 3.30-6.95 Dark grey porphyritic rhyodacite upto 2% Py in fractures.	21693	14.33	15.55	1.22	10	0.4
			@ 6.95-7.92 Soft, light grey, strongly fractured. Strong clay alteration obscuring original textures. sparse Py.	21694	15.55	16.92	1.37	10	0.3
			@ 7.92-9.93 Light grey weakly porphyritic rhyolitic sections. Local quartz veins at variable angles to C.A.	21695	16.92	18.44	1.52	45	0.3
			@ 9.93-17.20 medium grey, feldspar porphyritic rhyodacite. weak to moderately fractured. 1-3% disseminated Py also as fracture fill.						
			@ 15.25 2cm wide quartz vein 55°CA with 30% coarse bleby Py.						
			@ 17.20-18.80 More fractured, phenocrysts vague						

## LACANA MINING CORPORATION

## DRILL LOGS

HOLE No.: PAGE No.  
15-11-88 2

INTERVAL FROM	TO	SECTION R x S A M	DESCRIPTION	SAMPLE No	SAMPLE INTERVAL			ASSAY/ANALYTICAL RESULTS	
					FROM	TO	LENGTH	A <sub>1</sub> ppb	A <sub>2</sub> ppm
			through alteration. Some leucite fractures locally with clay alteration	21696	34.13	35.96	1.83		
			@ 18.80-22.70 Medium grey feldspar porphyritic rhyodacite. Weak fracturing with 1% dissem. and fracture fill py. Weak epidote alteration along fractures.	21697	35.96	37.18	1.22	30	0.4
				21698	37.18	38.70	1.52	25	1.2
				21699	40.99	42.67	1.66	45	1.1
			@ 22.70-27.80 medium grey, fine grained, non porphyritic. Weakly fractured with some carbonate. 1% fracture fill py.	21700	42.67	43.89	1.22	10	0.3
				21701	43.89	45.26	1.37	35	0.3
			@ 27.80-30.52 Rubby cone recovery much less (drilling not natural causes).	21702	45.26	46.31	1.05	45	0.3
			@ 30.52-36.30 As at 22.80. Darker andesitic. Patchy alteration associated with quartz stringers and fractures. Weak epidote and silicification.	21703	46.31	48.00	1.69	25	0.2
				21704	48.00	49.07	1.07	10	0.3
			@ 36.30-37.30 Broken core. Series of small quartz veins 40°-50° CA with blebby py. Patchy epidote alteration. Locally upto 5% coarse blebby py. Moderate fracturing some slickensides on surfaces. 25°-45° CA.					15	0.2
			@ 37.30-40.80 Medium to dark grey, feldspar porphyritic. Patchy weak to moderate, fracture controlled epidote alteration						
40.80	73.76		ALTERED DACITE, ANDESITE. Mixed greys, greens and browns, medium hard, fine grained. Weak to moderate fracturing throughout. Patchy weak to moderate epidotization, silicification and clay alteration. Local weak k. spar alteration. All alteration is fracture controlled. Short sections of feldspar porphyritic rhyodacite. Original textures are obscured by alteration						
			@ 40.80-47.30 Broken core 1% py.						
			@ 47.30-49.60 less broken, dark grey,						

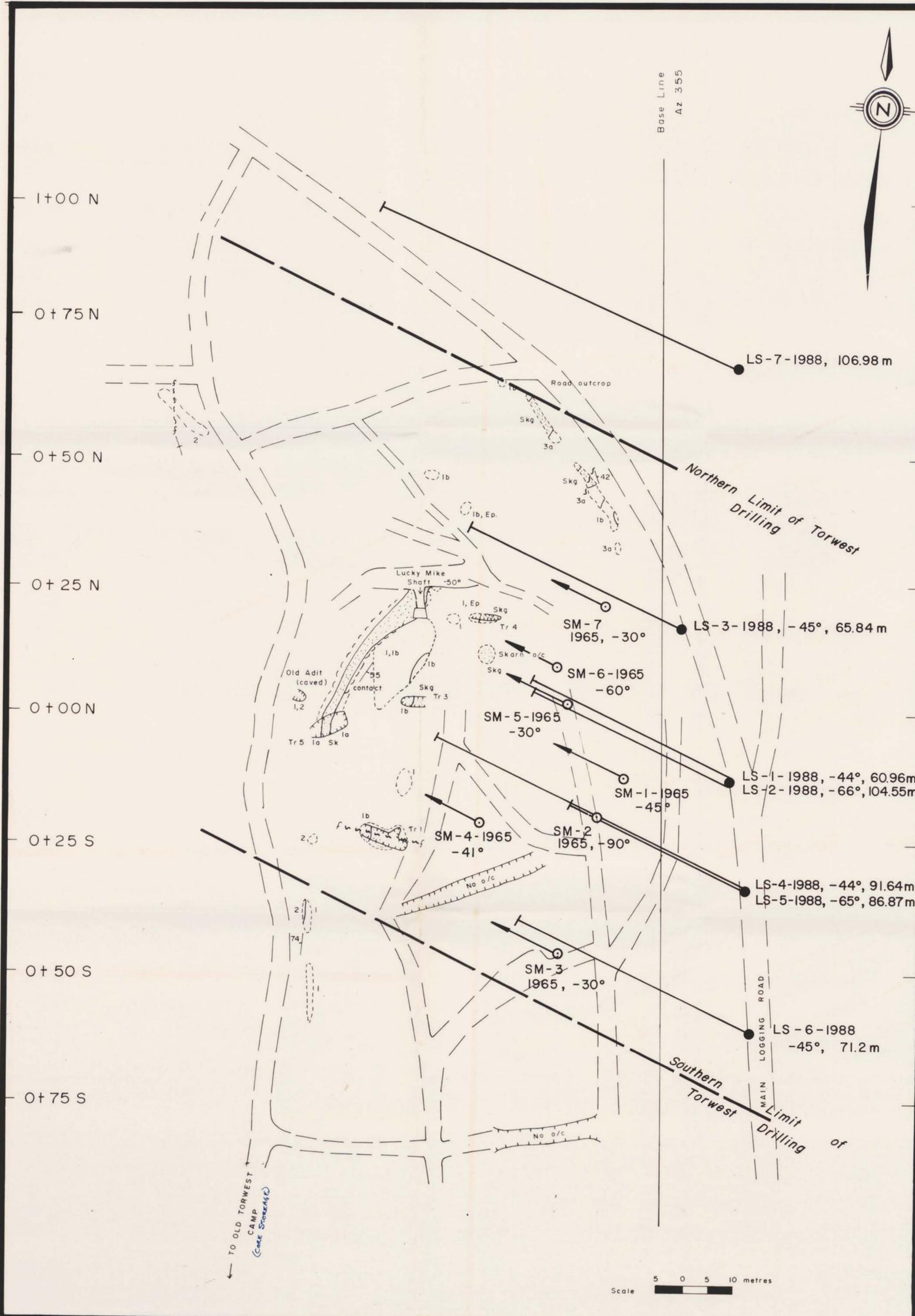
## LACANA MINING CORPORATION

## DRILL LOGS

HOLE No.:  
LS-11-88PAGE No.  
3

INTERVAL		SECTION R x S A H	DESCRIPTION	SAMPLE No.	SAMPLE INTERVAL			ASSAY/ANALYTICAL RESULTS	
FROM	TO				FROM	TO	LENGTH	Ag ppb	Ag ppm
			weak feldspar porphyritic. weak epidote alteration upto 1% fine to medium grained disseminated and fracture fill Py	21705	49.07	51.05	1.98	15	0.2
				21706	51.05	52.10	1.05	10	0.3
				21707	52.10	53.61	1.51	5	0.1
			@ 49.60-50.0 clay filled fracture	21708	53.61	55.16	1.55	5	0.2
			@ 50.0-55.1 silicified. weak epidote alteration. Generally 1% Py.	21709	55.16	56.99	1.83	10	0.2
			@ 55.1-60.50 As above weak k-spar alteration along some fractures	21710	56.99	58.52	1.53	10	0.2
			@ 60.50-65.30 Badly broken zone, porphyritic sections	21711	58.52	59.74	1.22	5	0.7
				21712	59.74	60.70	0.96	10	0.8
				21713	71.52	72.84	1.52	25	0.2
			@ 65.30-73.76 medium grey, locally porphyritic. Fracturing with narrow quartz veins and silicification.						
	73.76		END OF HOLE						

APPENDIX C



### LEGEND

#### CHIP SAMPLING

Sample	Au	Ag	Cu	Zn	W	Au in ppb or (.02) oz. per ton
Width	.7	.01	.6	129	60	Ag in ppm or (1.6) oz. per ton Cu, Zn, W in ppm. or (1.0) %

#### GEOLOGICAL UNITS

- 1** Mafic Metavolcanics
  - 1 Andesite flows, minor breccia. Locally porphyritic.
  - 1a More mafic basalt, locally porphyritic
  - 1b Andesite, basalt breccia
- 2** Agglomerate
  - Coarse, bimodal with angular to subrounded andesite (1) and granite to dacite fragments.
- 3** Carbonate Unit
  - 3a Limestone, including very strong, pervasive carbonate alteration of adjacent volcanics
- Skg** Garnet, Epidote Skarn
  - Fine to coarse granular garnets, calcite, epidote, minor pyroxene. Local chalcopyrite, pyrrhotite, magnetite, sphalerite, scheelite.

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

18,583

#### SYMBOLS

- Observed geological contacts
- Dip and strike of geological contacts, fault planes
- Observed faults
- Outcrop boundary
- Trenches
- Area stripped of overburden
- Bulldozer roads and trails

#### DIAMOND DRILLING

- LS-5-1988 -65°, 86.87m 1988 LACANA DIAMOND DRILL HOLE COLLAR LOCATION, HOLE NO., DIP, LENGTH.
- SM-4-1965 -41° 1965 TORWEST DIAMOND DRILL HOLE COLLAR LOCATION, DIP, DIRECTION INDICATED.

NOTE: TORWEST RESOURCES LTD. DIAMOND DRILL HOLES BEFORE 1965 NOT SHOWN. MORE THAN 40 D.D.H.'S WITHIN BOUNDARIES.

--- TORWEST BOUNDARY

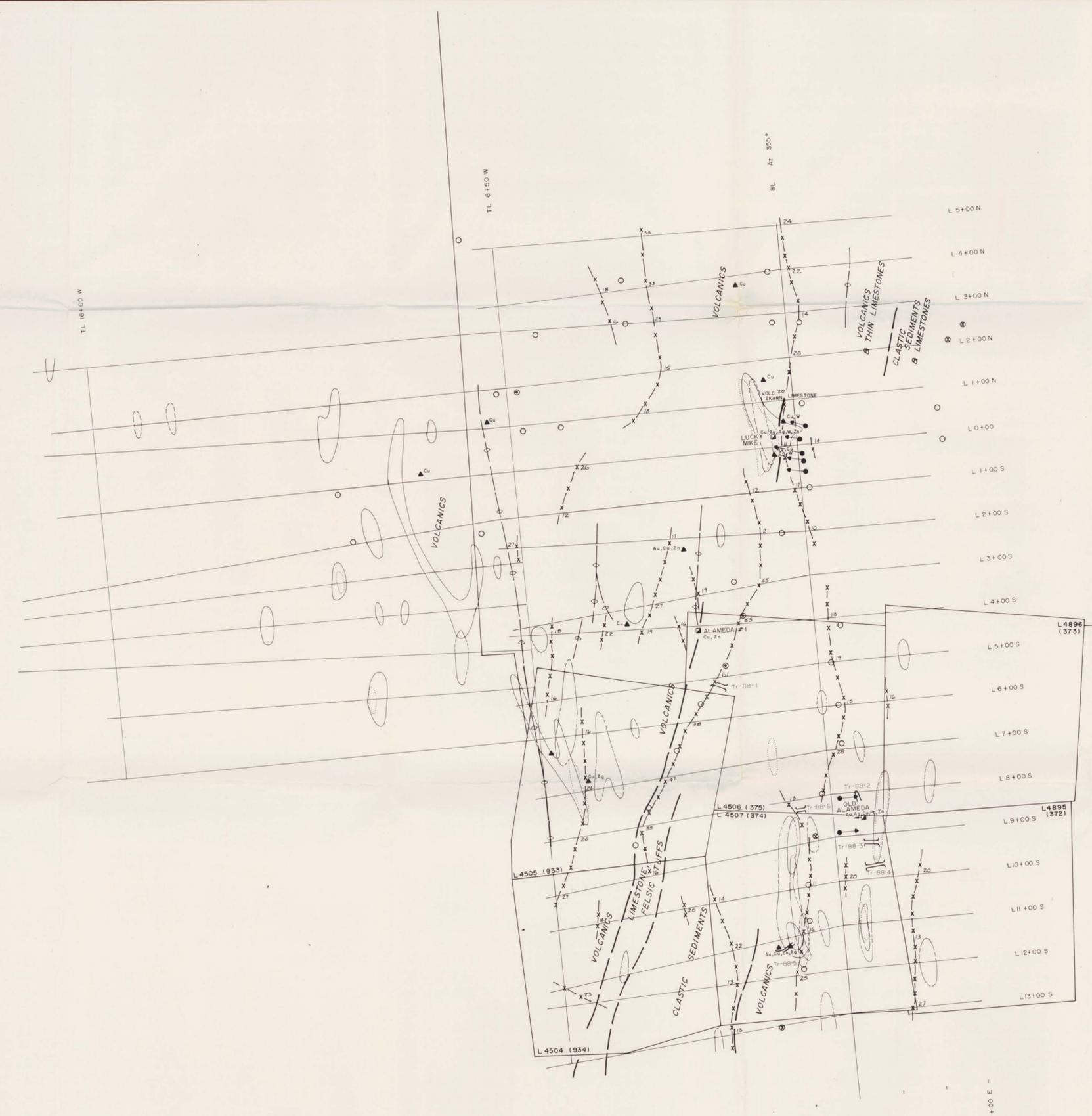
CORONA CORPORATION

SWAKUM MTN. PROPERTY

DIAMOND DRILLING PLAN  
LUCKY MIKE - SKARN ZONE

PREPARED BY: R.W.	SCALE: 1:500	PROJECT NO.: 1016
N.T.S.: 92 I / 7	DATE: 12 / 2 / 88	MAP NO.: 9

Scale 5 0 5 10 metres



**LEGEND**

- L 10+00 S ——— GRID LINE
- L 4506 ——— CLAIM BOUNDARIES AND RECORD NUMBER (TAKEN FROM LEGAL SURVEYS AND RECENT CLAIM MAPS.)
- L 4507 ——— CLAIM BOUNDARIES AND RECORD NUMBER (TAKEN FROM LEGAL SURVEYS AND RECENT CLAIM MAPS.)

**GEOLOGY**

- VOLCANICS
  - LIMESTONE
- APPROXIMATE GEOLOGICAL BOUNDARIES OF MAJOR ROCK TYPES

**SOIL GEOCHEMICAL ANOMALIES**

- ZINC > 400 ppm
- COPPER > 250 ppm
- GOLD > 100 ppm
- SILVER > 3 ppm
- LEAD > 200 ppm

**LITHGEOCHEMISTRY**

- Av. Ag SHAFT WITH MAIN METALS.
- Av. Ag SIGNIFICANT SHOWING WITH MAIN METALS.

**GEOPHYSICS**

- MAGNETIC HIGH AXIS (GROUND SURVEY) INSTRUMENT EDA ppm 300.
- VLF AXIS FROM FILTERED DATA WITH FRASER FILTERED VALUE (PEAK). GROUND SURVEY USING SABRE VLF UNIT.

**TRENCHING**

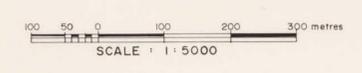
- Tr-88-1 1988 TRENCH LOCATIONS

**AIRBORNE EM ANOMALIES**

- 2 CHANNEL CONDUCTOR
- 1 CHANNEL CONDUCTOR
- INDETERMINATE CONDUCTOR

**DRILLING**

- 1988 DIAMOND DRILL HOLE. COLLAR AND BEARING.



**LACANA** LACANA MINING CORPORATION

**SWAKUM MOUNTAIN PROJECT (6330)**

*Compilation Map*

NICOLA MINING DIVISION

PREPARED BY DBM	SCALE 1:5000	DATE MAR., 88'	N T S SHEET 92 1/7	FIGURE
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**GEOLOGICAL BRANCH ASSESSMENT REPORT**  
**18,583**

N 70° W

BASE LINE

Section Line cuts  
Base Line at 0+73 N

NO OUTCROP

EL. 1500 m

EL. 1500 m

EL. 1450 m

EL. 1450 m

EL. 1400 m

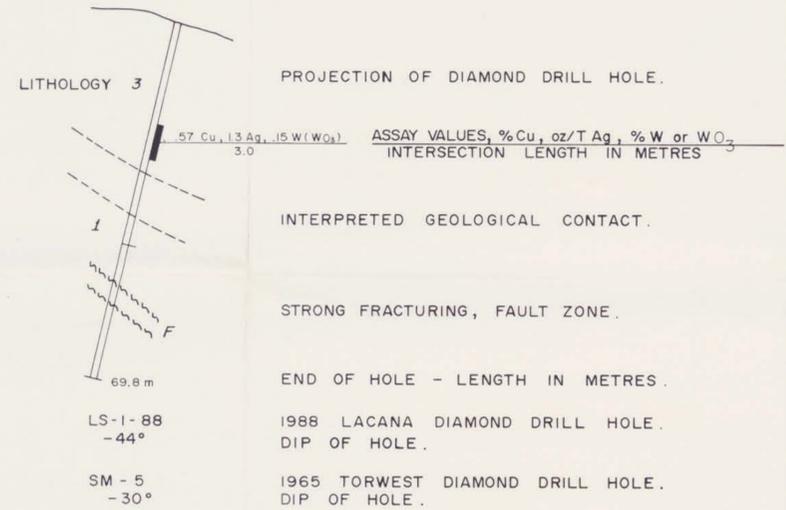
EL. 1400 m

LS - 7 - 88  
-45°

106.98 m  
COARSE HETEROLITHIC TUFF

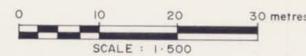
QUARTZ - CARBONATE PYRITE ZONE

## LEGEND



## LITHOLOGY

- OVERBURDEN
- GARNET SKARN  
Fine to coarse granular garnet, calcite, epidote, minor pyroxene. Local chalcopyrite, pyrrhotite, magnetite, scheelite.
- CARBONATE SKARN  
As 1A but carbonate (coarse) dominant. Minor epidote, garnet. Local scheelite.
- Q. F. P. DIKES  
Predominantly porphyritic rhyolitic dikes with quartz-eyes and feldspar phenocrysts. Highly siliceous. Darker, hornblende-feldspar porphyritic, border phases.
- VOLCANICLASTICS, TUFFS  
Grey to green, felsic to intermediate, lithic and crystal - Lithic tuffs. Minor flows.
- CARBONATE UNITS  
Carbonated andesitic breccias, lithic tuff and some limestone.
- ANDESITIC TO BASALTIC FLOWS AND FRAGMENTALS  
Predominantly dark coloured feldspar porphyritic flows. Fragmental sections - 1A strong epidote alteration.



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CORONA CORPORATION

SWAKUM MTN. PROPERTY  
LUCKY MIKE - SKARN ZONE  
DRILL SECTION 0+73 N  
LS - 7 - 88  
LOOKING NORTH

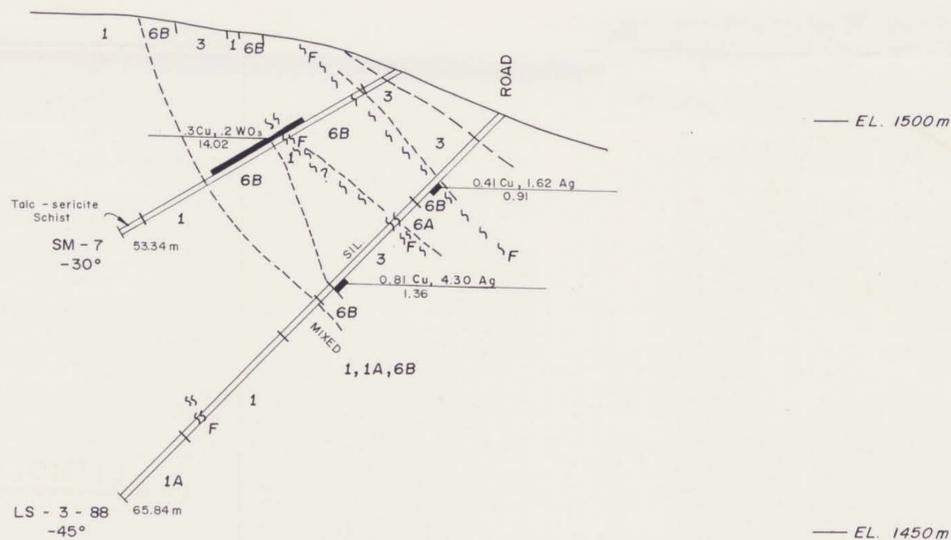
PREPARED BY: R.W.	SCALE: 1:500	PROJECT NO.: 1016
N.T.S.: 92 I / 7	DATE: Nov., 1988	MAP NO.: 9A

N 70° W

BASE LINE

Section Line cuts  
Base Line at 0+18N

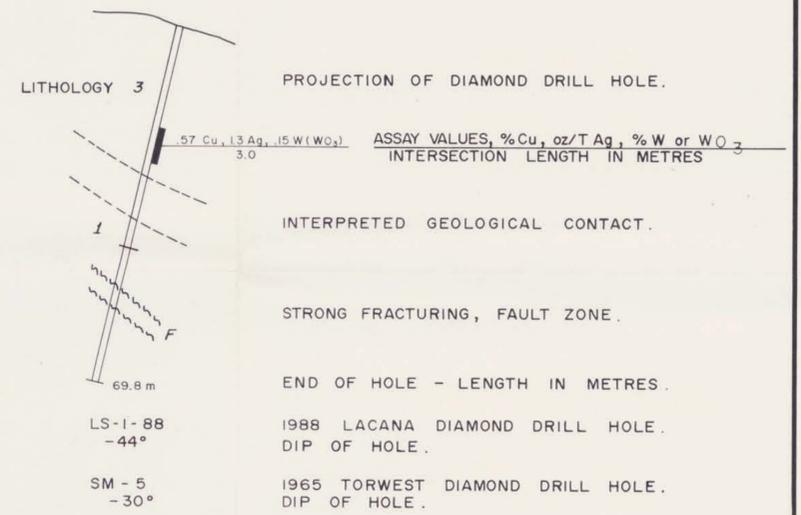
EL. 1500 m



EL. 1450 m

EL. 1400 m

## LEGEND



## LITHOLOGY

- OVERBURDEN
- GARNET SKARN  
Fine to coarse granular garnet, calcite, epidote, minor pyroxene. Local chalcopryrite, pyrrhotite, magnetite, scheelite.
- CARBONATE SKARN  
As 1A but carbonate (coarse) dominant. Minor epidote, garnet. Local scheelite.
- Q. F. P. DIKES  
Predominantly porphyritic rhyolitic dikes with quartz-eyes and feldspar phenocrysts. Highly siliceous. Darker, hornblende-feldspar porphyritic, border phases.
- VOLCANICLASTICS, TUFFS  
Grey to green, felsic to intermediate, lithic and crystal - Lithic tuffs. Minor flows.
- CARBONATE UNITS  
Carbonated andesitic breccias, lithic tuff and some limestone.
- ANDESITIC TO BASALTIC FLOWS AND FRAGMENTALS  
Predominantly dark coloured, feldspar, porphyritic flows. Fragmental sections. 1A strong epidote alteration.



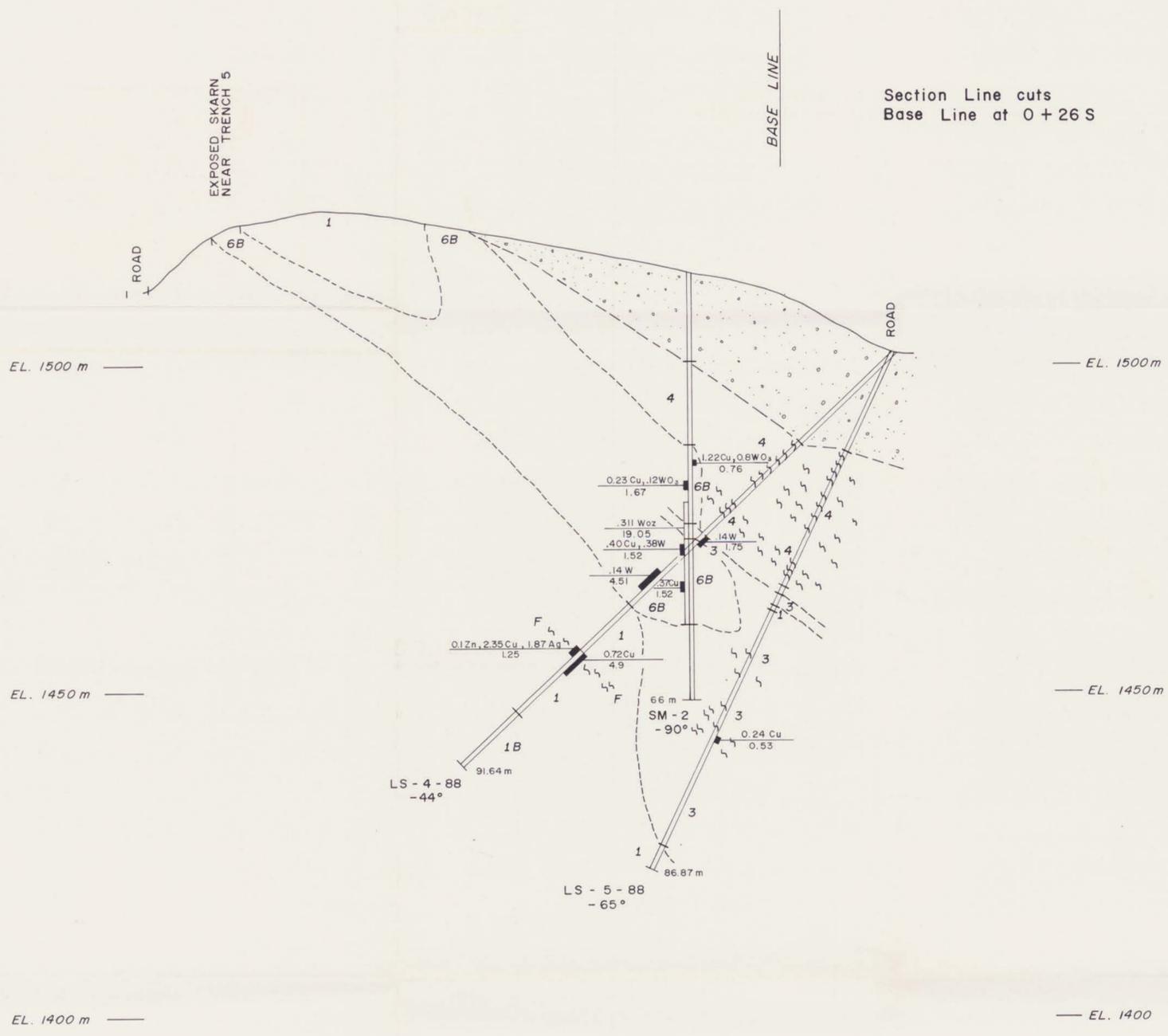
18,583

CORONA CORPORATION

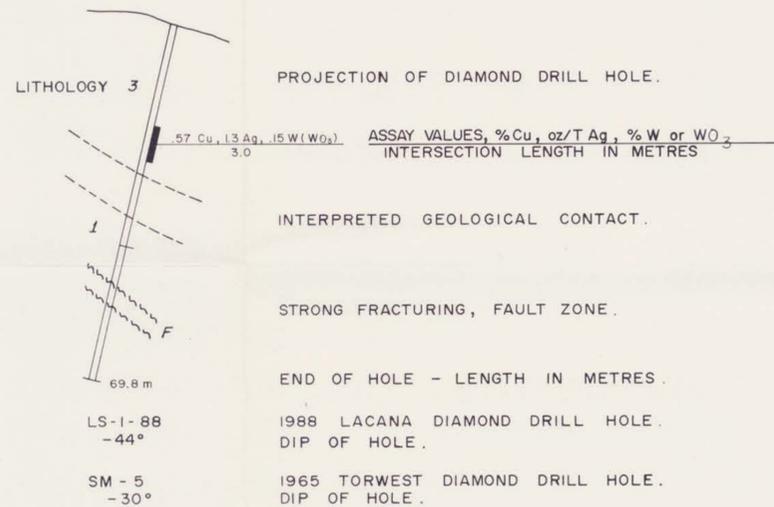
SWAKUM MTN. PROPERTY  
LUCKY MIKE - SKARN ZONE  
DRILL SECTION 0+18N  
LS - 3 - 88  
LOOKING NORTH

PREPARED BY: R.W.	SCALE: 1:500	PROJECT NO.: 1016
N.T.S.: 92 I / 7	DATE: Nov., 1988	MAP NO.: 9B

N 70° W



**LEGEND**

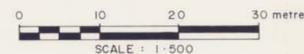


**LITHOLOGY**

- OVERBURDEN
- GARNET SKARN  
Fine to coarse granular garnet, calcite, epidote, minor pyroxene. Local chalcopyrite, pyrrhotite, magnetite, scheelite.
- CARBONATE SKARN  
As 1A but carbonate (coarse) dominant. Minor epidote, garnet. Local scheelite.
- Q. F. P. DIKES  
Predominantly porphyritic rhyolitic dikes with quartz-eyes and feldspar phenocrysts. Highly siliceous. Darker, hornblende-feldspar porphyritic, border phases.
- VOLCANICLASTICS, TUFFS  
Grey to green, felsic to intermediate, lithic and crystal - Lithic tuffs. Minor flows.
- CARBONATE UNITS  
Carbonated andesitic breccias, lithic tuff and some limestone.
- ANDESITIC TO BASALTIC FLOWS AND FRAGMENTALS  
Predominantly dark coloured feldspar, porphyritic flows. Fragmental sections. 1A strong epidote alteration.

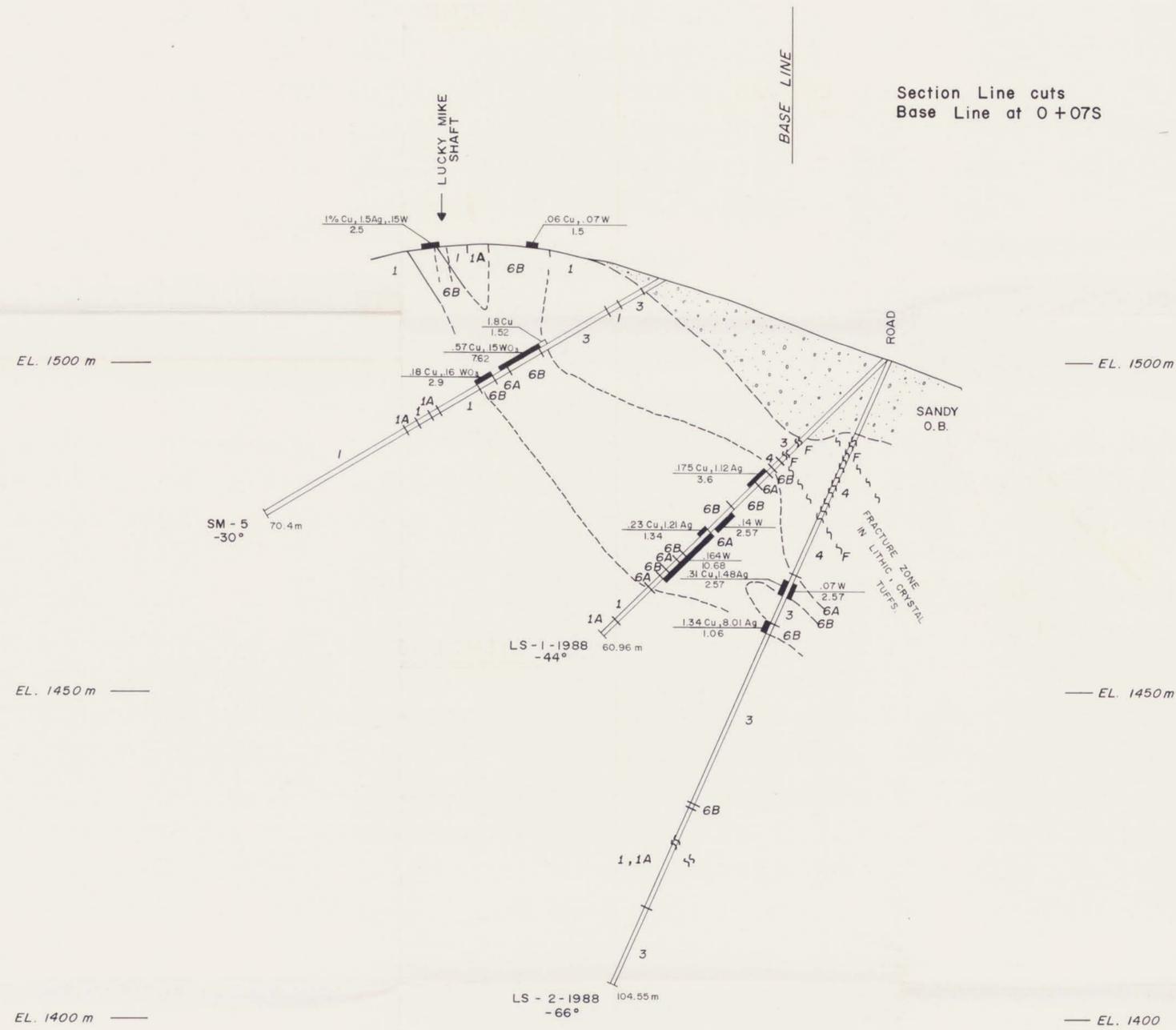
18,583  
CORONA CORPORATION

SWAKUM MTN. PROPERTY  
LUCKY MIKE - SKARN ZONE  
DRILL SECTION 0+26 S  
LS - 4 - 88, LS - 5 - 88  
LOOKING NORTH

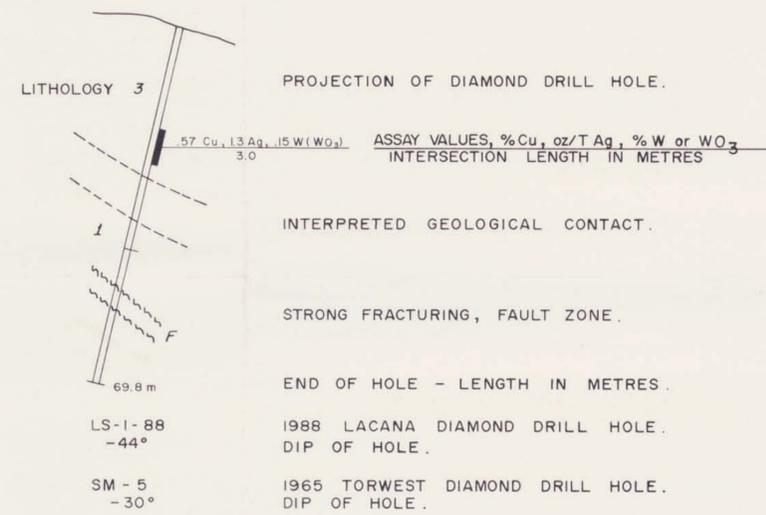


PREPARED BY: R.W.	SCALE: 1:500	PROJECT NO.: 1016
N.T.S.: 92 I / 7	DATE: Nov., 1988	MAP NO.: 9D

N 70° W



### LEGEND



### LITHOLOGY

- OVERBURDEN
- 6B GARNET SKARN  
Fine to coarse granular garnet, calcite, epidote, minor pyroxene. Local chalcocopyrite, pyrrhotite, magnetite, scheelite.
- 6A CARBONATE SKARN  
As 1A but carbonate (coarse) dominant. Minor epidote, garnet. Local scheelite.
- 5 Q. F. P. DIKES  
Predominantly porphyritic rhyolitic dikes with quartz-eyes and feldspar phenocrysts. Highly siliceous. Darker, hornblende-feldspar porphyritic, border phases.
- 4 VOLCANICLASTICS, TUFFS  
Grey to green, felsic to intermediate, lithic and crystal - Lithic tufts. Minor flows.
- 3 CARBONATE UNITS  
Carbonated andesitic breccias, lithic tuff and some limestone.
- 1 ANDESITIC TO BASALTIC FLOWS AND FRAGMENTALS  
Predominantly dark coloured feldspar porphyritic flows. Fragmental sections, 1A strong epidote alteration.

18,583

CORONA CORPORATION

SWAKUM MTN. PROPERTY  
LUCKY MIKE - SKARN ZONE  
DRILL SECTION 0+07S  
LS - 1 - 88, LS - 2 - 88  
LOOKING NORTH

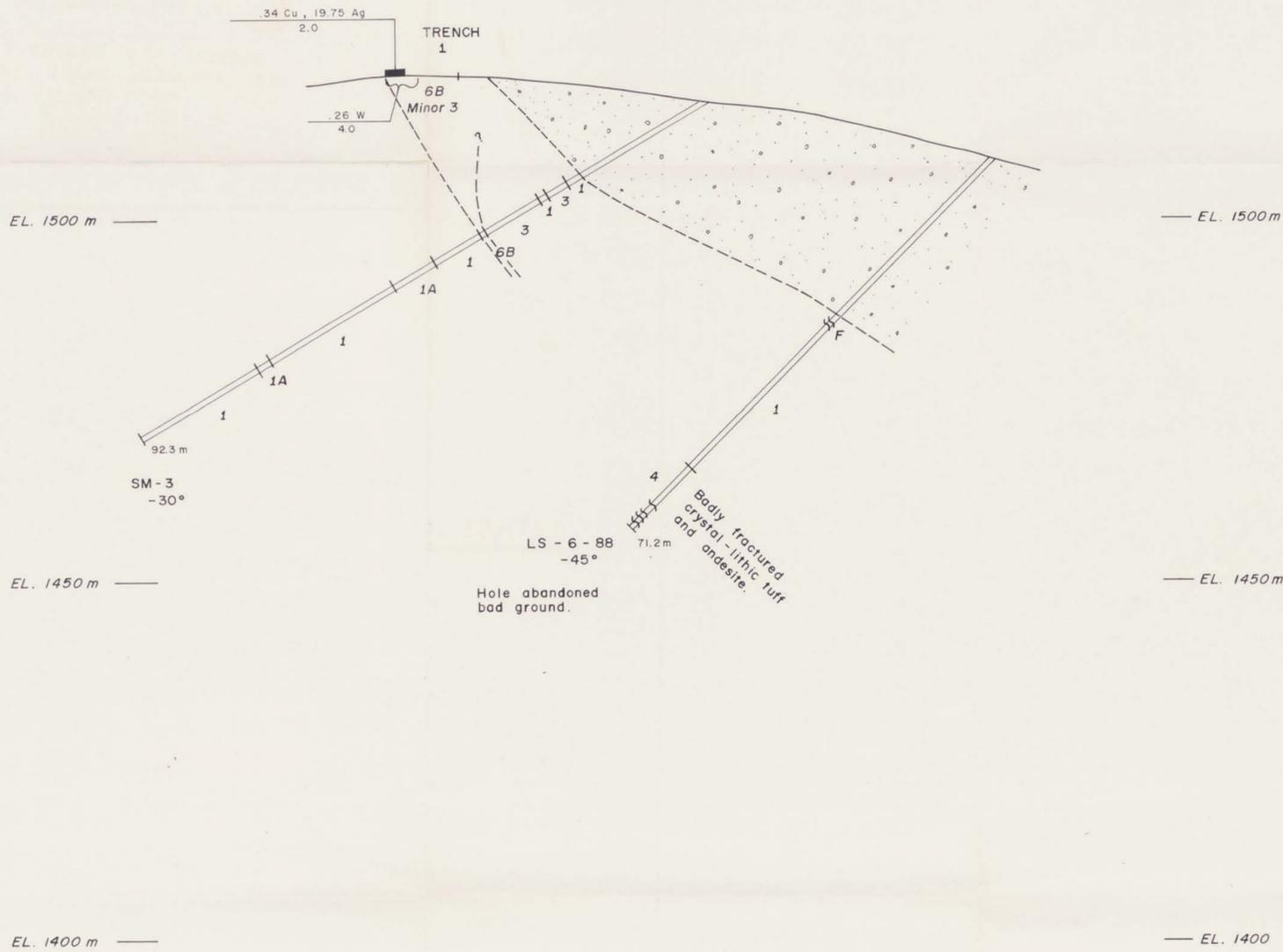


PREPARED BY: R.W.	SCALE: 1:500	PROJECT NO.: 1016
N.T.S.: 92 I / 7	DATE: Nov., 1988	MAP NO.: 9C

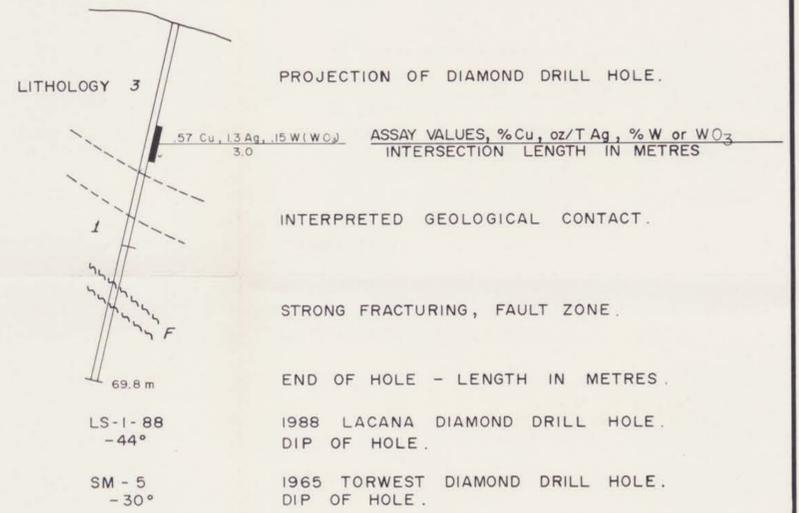
N 70° W

BASE LINE

Section Line cuts  
Base Line at 0+53 S



**LEGEND**



**LITHOLOGY**

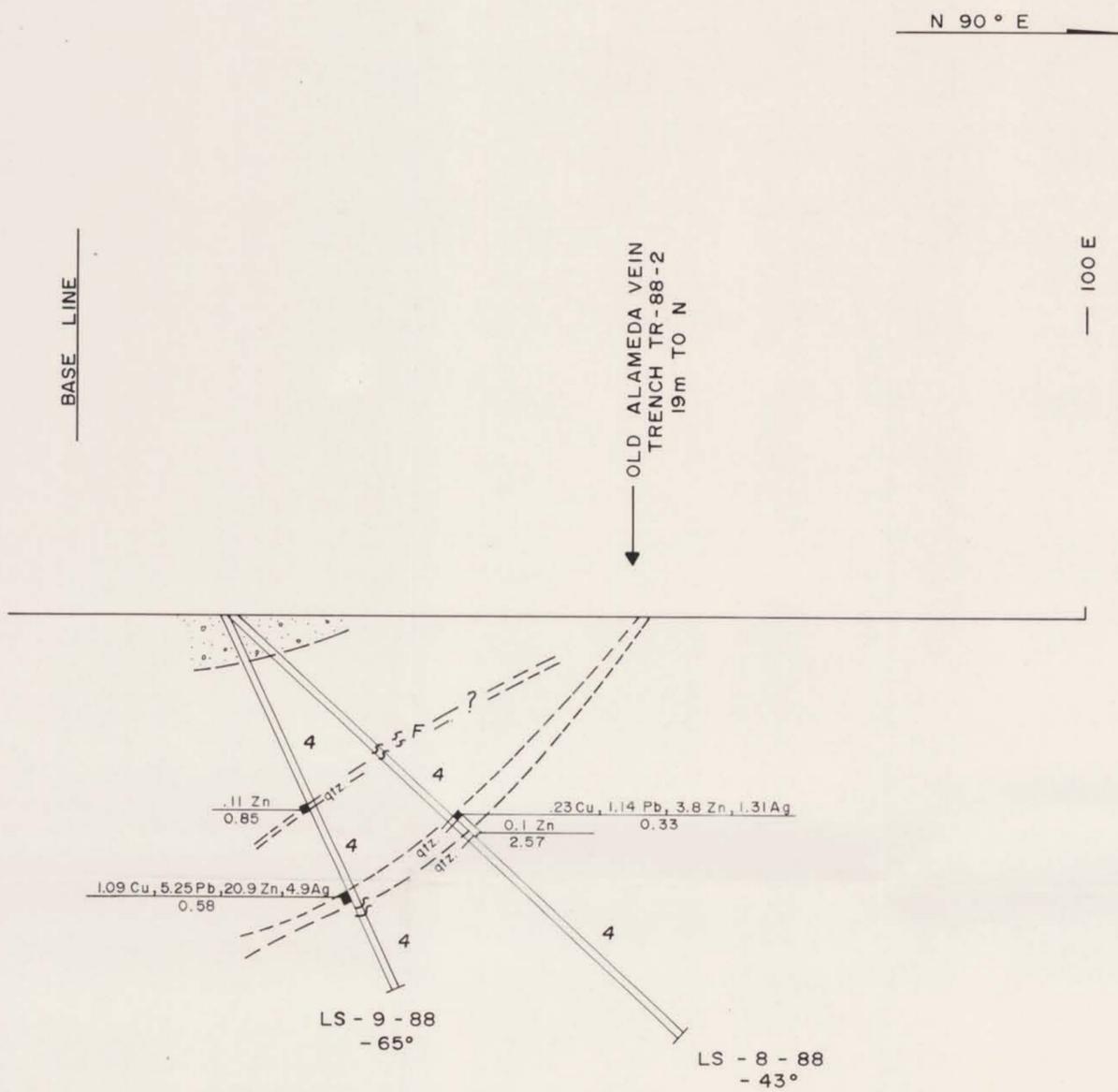
- OVERBURDEN**
- 6B GARNET SKARN**  
Fine to coarse granular garnet, calcite, epidote, minor pyroxene. Local chalcocopyrite, pyrrhotite, magnetite, scheelite.
- 6A CARBONATE SKARN**  
As 1A but carbonate (coarse) dominant. Minor epidote, garnet. Local scheelite.
- 5 Q. F. P. DIKES**  
Predominantly porphyritic rhyolitic dikes with quartz-eyes and feldspar phenocrysts. Highly siliceous. Darker, hornblende-feldspar porphyritic, border phases.
- 4 VOLCANICLASTICS, TUFFS**  
Grey to green, felsic to intermediate, lithic and crystal - Lithic tuffs. Minor flows.
- 3 CARBONATE UNITS**  
Carbonated andesitic breccias, lithic tuff and some limestone.
- 1 ANDESITIC TO BASALTIC FLOWS AND FRAGMENTALS**  
Predominantly dark coloured feldspar, porphyritic flows. Fragmental sections. 1A strong epidote alteration.



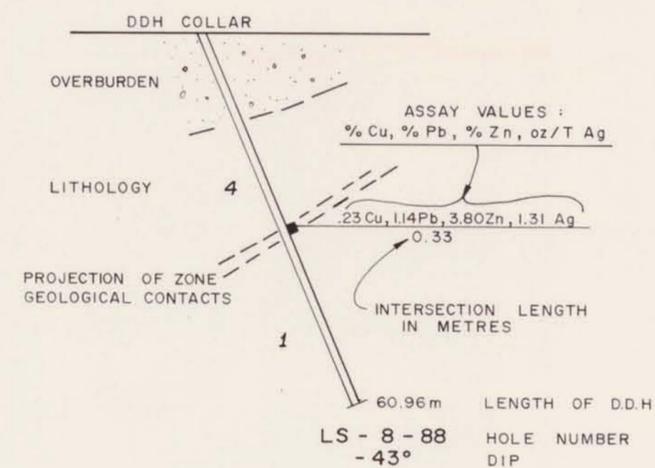
**18,583**  
CORONA CORPORATION

SWAKUM MTN. PROPERTY  
 LUCKY MIKE - SKARN ZONE  
 DRILL SECTION 0+53S  
 LS - 6 - 88  
 LOOKING NORTH

PREPARED BY: R.W.	SCALE: 1:500	PROJECT NO.: 1016
N.T.S.: 92 I / 7	DATE: Nov., 1988	MAP NO.: 9 E



## LEGEND

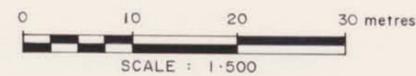


## LITHOLOGY

- 1 DACITIC TO ANDESITIC FLOWS  
Varicoloured, fine grained, locally porphyritic.
- 4 RHYODACITE  
Predominantly grey, hard and siliceous. Porphyritic sections.

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

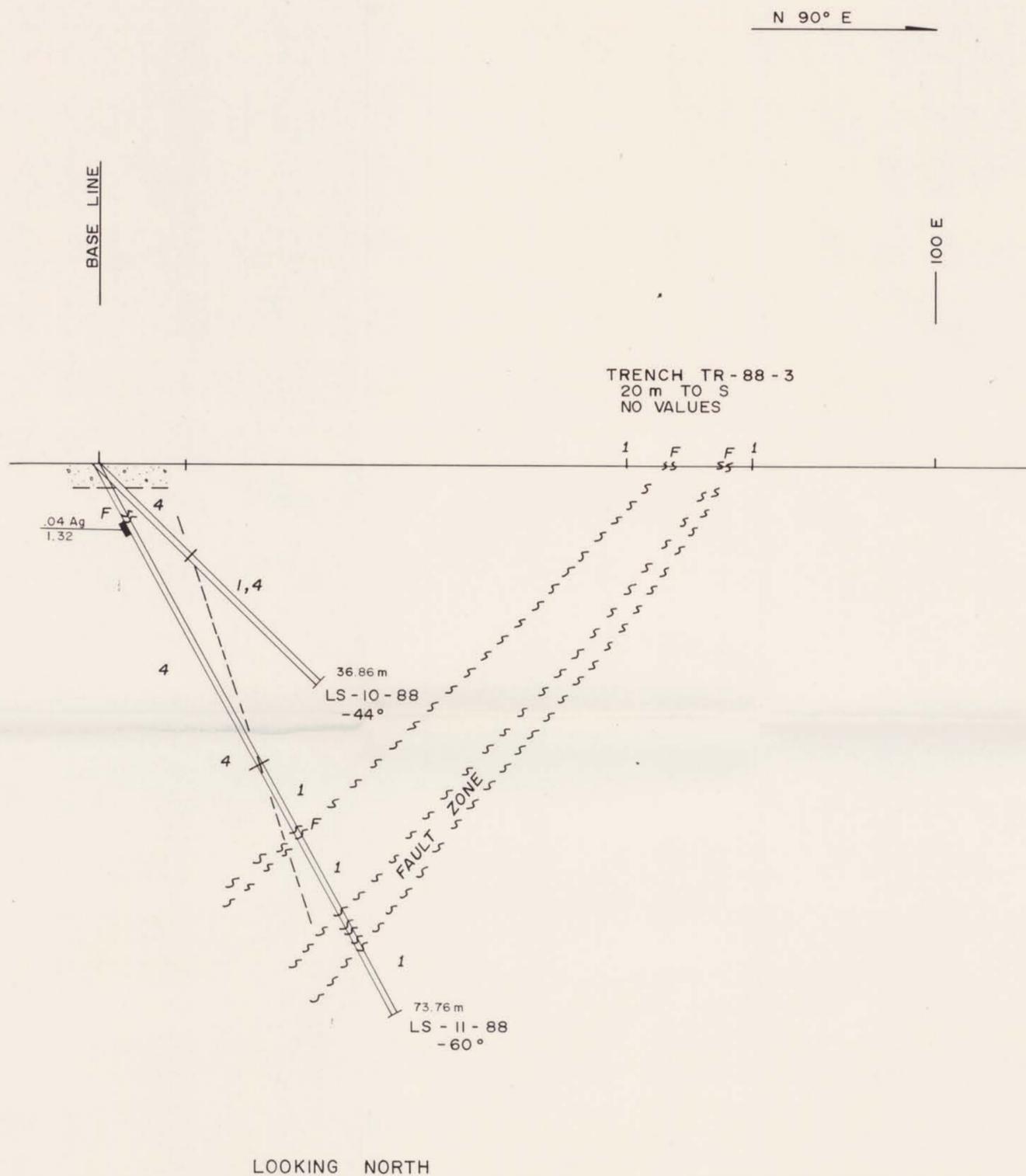
18,583



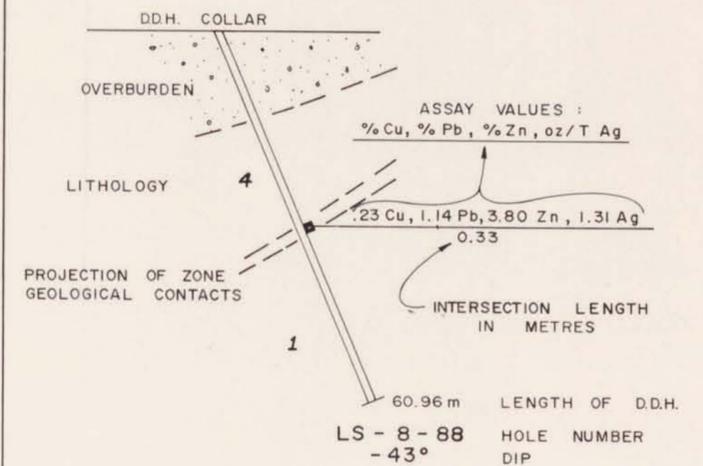
 CORONA CORPORATION

SWAKUM MTN. PROPERTY  
OLD ALAMEDA SHAFT AREA  
DRILL SECTION 8+19S  
LS - 8 - 88 LS - 9 - 88  
LOOKING NORTH

PREPARED BY: R.W.	SCALE: 1:500	PROJECT NO: 1016
N.T.S. 92 1/7	DATE: NOV., 1988	MAP NO. 10A



## LEGEND

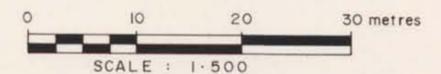


## LITHOLOGY

- 1 DACITIC TO ANDESITIC FLOWS  
Varicoloured, fine grained, locally porphyritic.
- 4 RHYODACITE  
Predominantly grey, hard and siliceous. Porphyritic sections.

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

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 CORONA CORPORATION

SWAKUM MTN. PROPERTY  
OLD AMAMEDA SHAFT AREA  
DRILL SECTION 8+90S  
LS - 10 - 88, LS - 11 - 88  
LOOKING NORTH

PREPARED BY: R.W.	SCALE: 1 : 500	PROJECT NO: 1016
N.T.S.: 92 1/7	DATE: NOV., 1988	MAP NO.: 10 B