

1981 Assessment Report

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
10258

Diamond Drilling

Title: CROWN GROUP

Claims: J & R Fr., Hartford, Hartford Fr., Silver Star, Murray Fr., Nellie Cotton, Hep Fr., Golden Crown Fr., Star Fr., Crown Fr., Willie Fr., Crown 1-16

Location: Hartford Junction - Greenwood M.D.  
82E 2E  
49 05' N 118 34' W

By: L. Sookochoff, P.Eng.  
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Owner: Consolidated Boundary Explorations Ltd.  
Grand Forks, B.C.

Operator: Argenta Resources Ltd.  
2602-1055 West Georgia Street  
Vancouver, B.C., V6E 3P3

Dates of Work: September 5, 1981 to December 15, 1981

Date of Report: December 15, 1981

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1" = 100 FEET

Diamond Drill Report

on the

CROWN GROUP

for

ARGENTA RESOURCES LTD.

INTRODUCTION

During the 1981 field season, Argenta Resources as operator, completed a diamond drill program on the Golden Crown property. Four holes for a total of 304.1 meters (998 feet) were put down for the purpose of testing a localized E.M. anomaly delineated by a survey on the J & R Fr. claim. The E.M. anomaly appears to be an extension of the structure on the adjacent Golden Crown claim where since 1905 a 300 foot shaft and considerable diamond drilling has been completed to test a massive pyrrhotite gold bearing zone.

PROPERTY

The property is comprised of 29 contiguous claims of which five are reverted crown grants. Particulars are as follows:

<u>Claim Name</u>	<u>Lot No.</u>	<u>Record No.</u>	<u>Expiry Date</u>
Willie Fr.		2014	January 30, 1984
Crown Fr.		2027	February 6, 1984
Murray Fr.	718 S	1985	January 28, 1984
Silver Star	1550	1926	December 21, 1983
J & R Fr.	1059	1865	November 8, 1983
Hartford	1057	1927	December 21, 1983
Hartford	1061	1928	December 21, 1983
Crown 1-8		1886-1993	January 28, 1984
Crown 9-16		2015-2022	February 6, 1984
Crown 17-19		2202-2204	May 28, 1984
Nellie Cotton		2173	May 13, 1984
Hip Fraction		2199	May 28, 1984
Star Fr.		2201	May 28, 1984

LOCATION AND ACCESS

The property is located 13 km northwest of Grand Forks and within four km of Phoenix. Access is west from Grand Forks via the No. 3 Highway for 16 km to the Phoenix junction. At Hartford junction and near the Phoenix Mine tailings the Hartford road leads to a secondary road branching off to the west. The property is within three km of the junction.

### PHYSIOGRAPHY

The property is situated on the southern slope of Knob Hill which is at an elevation of 1,500 m. The ground covered by the claim group is of moderate to shallow slopes with elevations of up to 1,525 m and a relief of 215 m.

### WATER AND POWER

Sufficient water for all phases of the exploration program should be available from water courses on or near the property.

A power transmission line and a telephone line pass through the property.

### HISTORY

The history of the immediate area dates back to 1891 when large low grade copper deposits were discovered near Phoenix. In 1913 production from the Phoenix area peaked with a virtual shut down on the mines and smelters in 1919. During this period a number of quartz hosted gold-silver deposits were developed not only for the contained precious metal value, but for the silica which was a prime smelter requirement.

On the adjacent property, the Winnipeg claim was reported to be the largest gold mine in the Greenwood area producing some 59,000 tons during the period 1900 to 1912. The production was more than all the other gold mines combined in this area. In addition to the extensive development on the Winnipeg claim, similar scale development with lesser production were made from the adjoining Golden Crown claim.

On the Crown Group of claims, information is sketchy however a 1901 report states that development work comprised of "250 feet of sinking and 150 feet of cross-cutting and drifting on the Hartford were carried out". During the same period "75 feet of shafting and crosscutting" on the J and R claim were reported.

Granby reportedly carried out limited diamond drilling on the present Crown claim group.

In 1980 two diamond drill holes were completed on the J & R Fr. claim for a total of 120 meters.

In the Greenwood-Phoenix area the oldest rocks of Carboniferous sedimentary strata in association with volcanic flows are intruded by mafic rich and larger felsic igneous bodies. The sedimentary strata include a limestone sequence designated as the Brooklyn Formation and which is host to the Phoenix copper replacement and high grade skarn deposits of the area.

On the adjacent Winnipeg-Golden Crown property a major northwesterly trending fault structure is a prime control to at least seven known and/or developed gold-silver-copper veins. Cross structures are a factor in determining vein continuity with reported faults which offset some veins. Veins are also cut by post-mineral dykes.

An example of vein continuity is indicated within the Golden Crown workings where a continuous vein is exposed for some 80 meters horizontally with an indicated 100 meter vertical projection. There is no information on the continuity or extent of the Winnipeg vein structure.

The Golden Crown vein occurs predominantly within meta-volcanics with associated serpentine adjacent to the hanging wall.

The major northwesterly trending fault structure which hosts the gold-silver-copper bearing veins on the adjoining property is projected to extend to the Crown Group.

On the Crown Group property outcropping of andesites, latites with mafic and dioritic plugs are indicated.

A vein on the Hartford claim of the Crown Group was explored by "200 feet of sinking and about 150 feet of cross-cutting and drifting". On the J and R claim there are "75 feet of shafting and cross-cutting and a body of 4 feet of ore has been developed for 47 feet".

#### MINERALIZATION

On the adjacent Winnipeg-Golden Crown property, mineralization is primarily of pyrrhotite and chalcopyrite with gold and silver values within a veined quartz matrix. Veins, as exposed in numerous pits, trenches and within the Golden Crown workings, are commonly comprised of massive sulphide constituents. Wall rock adjacent to the main vein may be mineralized. Moderate sulphide content with gold-silver-copper values also occurs in localized areas without a definite vein structure.

The 1980 drilling intersected narrow zones of pyrite-pyrrhotite-chalcopyrite mineralization associated with quartz veining. Assays of .018 oz. Au/ton and .12 oz. Ag/ton were obtained from D.H.-JR1 and .04 oz. Au/ton, .50 oz. Ag/ton, 1.0% Cu across .48 m in D.H.-JR2.



1981 DIAMOND DRILL PROGRAM

In the BQ diamond drill program, four holes for 304.1 meters was completed. Particulars are as follows:

D.H. 81-1

Location: 10E 5.5N

Bearing: 240°

Dip: -60°

Length: 85.3 meters

Results: An intersection of 0.7 m of massive pyrite with associated pyrrhotite and chalcopyrite assayed .001 oz.

Au/ton, .01 oz. Ag/ton and .19% Cu. An adjacent 1.5 meter intersection of 10% sulphides in a silicified zone assayed .02 oz. Au/ton, .18 oz. Ag/ton and .76% Cu.

D.H. 81-2

Location: 10E 5.4N

Bearing: 240°

Dip: -45°

Length: 39.6 meters

Results: An intersection of 1.1 meters of massive brecciated sulphides with quartz which assayed .194 oz.

Au/ton, .66 oz. Ag/ton and 2.34% Cu.

D.H. 81-3

Location: 11E 5.5N

Bearing: 240°

Dip: -45°

Length: 60.3 meters

Results: Two main vein intersections. The first of 0.5 meter width of .176 oz. Au/ton, .70 oz. Ag/ton and 2.65% Cu. A second zone .221 oz. Au/ton, 2.28 oz. Ag/ton and 4.25% Cu across 0.3 meters.

D.H. 81-4

Location: 9E 2.5N

Bearing: 040°

Dip: -45°

Length: 118.9 m

Results: A sulphide-quartz zone assaying .004 oz. Au/ton, .10 oz. Ag/ton and .40% Cu across a width of 1.4 meters.

The core is stored at the property.

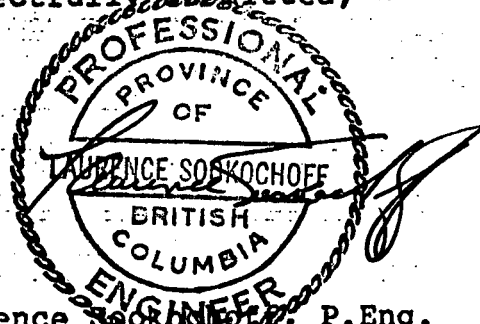
CONCLUSIONS

It is concluded that the localized E.M. survey was successful in delineating a main fault structure containing variable contents of gold-copper-silver mineralization. In this geological environment, potential economic zones of mineralization may be located as relatively narrow "shoots" or "pipes" within structurally controlled traps. Drill hole 81-2 indicates that such an economic zone may be present in that values of up to .194 oz. Au/ton occur across a mineable width within the indicated structure. The mineralization also occurs as brecciated massive sulphides suggesting an extensive breccia pipe zone. Other structural controlled mineral zones are indicated from D.H. 81-3 where a .5 meter zone of 0.176 Au/ton was intersected.

RECOMMENDATIONS

It is recommended that a geophysical survey over the property be completed to locate prime anomalous targets which would be tested for potentially economic mineral zones. In addition a second series of drill holes should be completed to delineate the D.H. 81-2 brecciated mineral zone.

Respectfully submitted,



Laurence Soskchoff, P.Eng.  
Consulting Geologist

December 15, 1981  
Vancouver, B.C.

REFERENCES

## MINISTER OF MINES REPORTS -

1901 p. 870

1902 p. 1063

McNAUGHTON, D.A. - Greenwood - Phoenix Area British  
Columbia, Geological Survey of Canada  
Paper 45-20, Ottawa 1945

SOOKOCHOFF, L. - Geological Report on the Winnipeg and  
Golden Crown for Munde Mines Ltd.  
February 7, 1980

SOOKOCHOFF, L. - Diamond Drill Assessment Report on the  
Crown Group, November 12, 1980

**CERTIFICATE**

I, Laurence Sookochoff, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

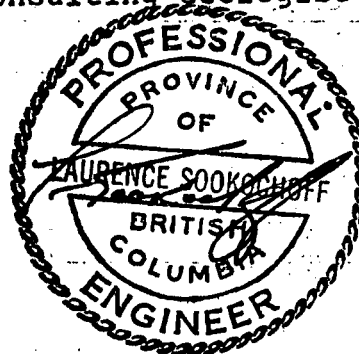
That I am a Consulting Geologist with the firm of Pan-American Consultants Ltd. of 2602-1055 West Georgia Street, Vancouver, B.C.

I further certify that:

1. I am a graduate of the University of British Columbia (1966) and hold a B.Sc. degree in Geology.
2. I have been practising my profession for the past fifteen years.
3. I am registered with the Association of Professional Engineers of British Columbia.
4. The information for the accompanying report is based on pertinent publications as cited under references in addition to work the writer has done on the property since 1979.

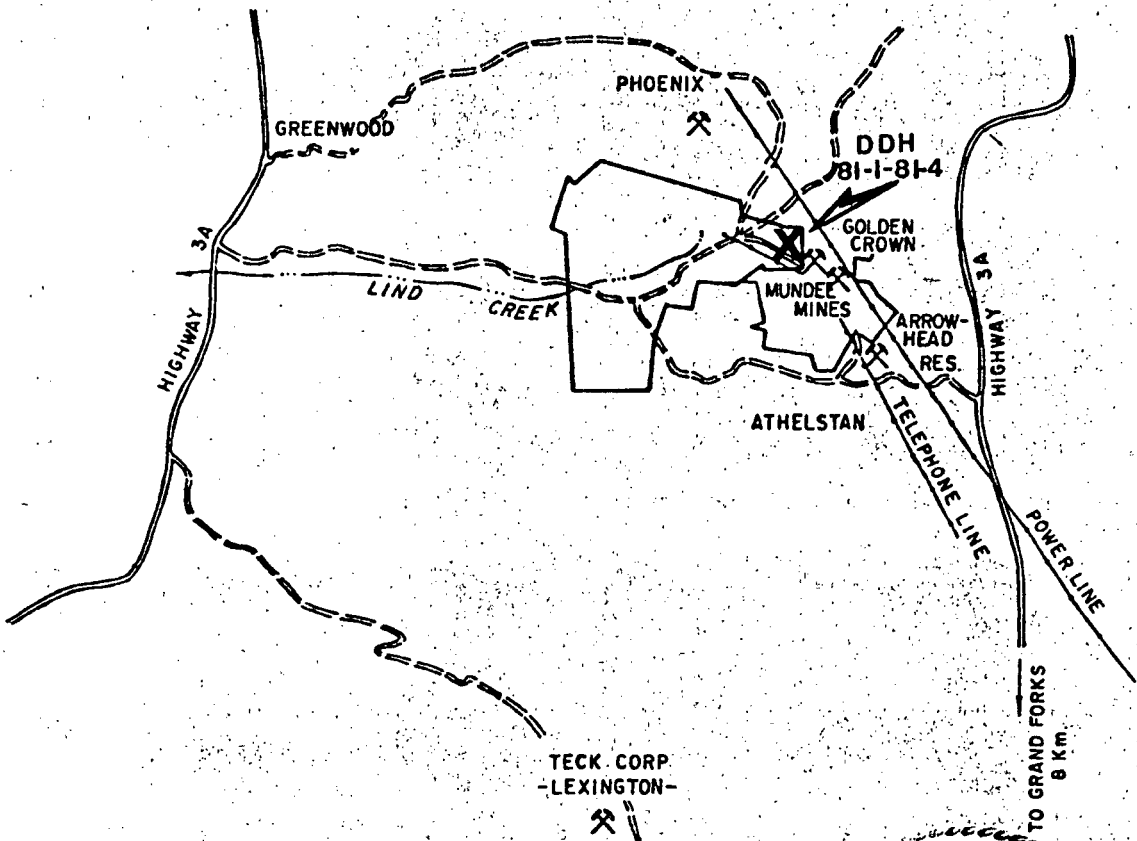
Laurence Sookochoff, P.Eng.  
Consulting Geologist

December 15, 1981  
Vancouver, B.C.



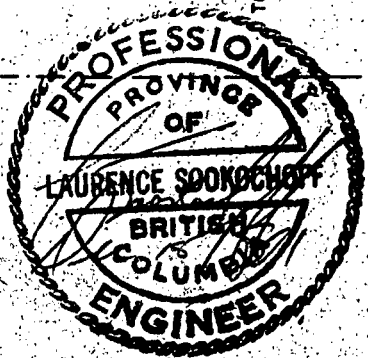
STATEMENT OF COSTS

998 feet of BQ core drilling	
at \$20 per lineal foot	\$19,960.00
Travel and lodging expenses	1,258.50
Assays	120.00
Engineering and supervision	1,400.00
Report	<u>750.00</u>
	<u>\$23,488.50</u>



CANADA  
USA

118°30'      49°00'



MAP 1

PAN AMERICAN CONSULTANTS LTD.

ARGENTA RESOURCES LTD.  
CROWN GROUP  
GREENWOOD M.D. — 82 E-2E

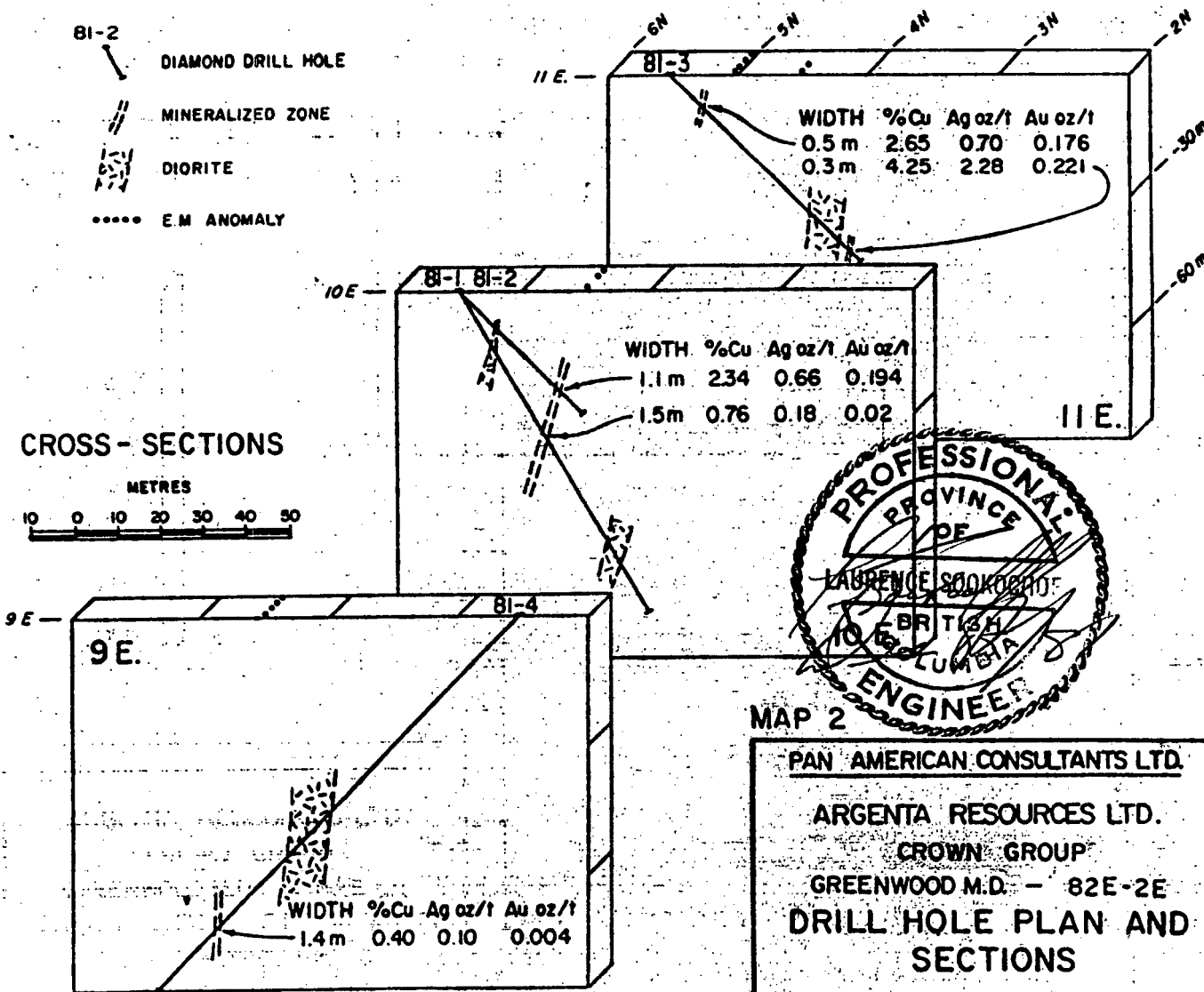
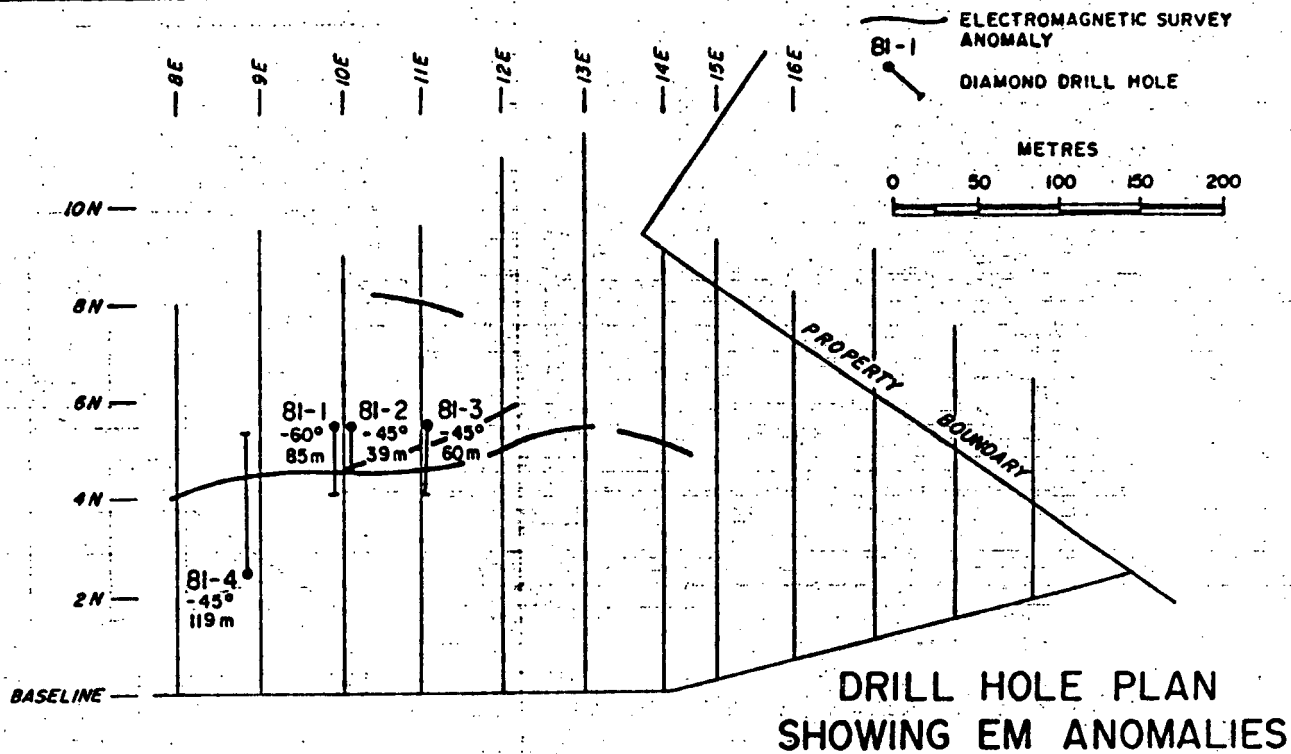
**INDEX & LOCATION MAP**

0 1 2 3 4 KM.

DEC. 1981







MAP 2

PAN AMERICAN CONSULTANTS LTD.

ARGENTA RESOURCES LTD.  
 CROWN GROUP  
 GREENWOOD M.D. - 82E-2E  
**DRILL HOLE PLAN AND SECTIONS**

# DIAMOND DRILL SAMPLING RECORD

DIP TESTS	Hole No. <u>81-4</u>
	Sheet No. <u>1</u>

Property CROWN  
 Started September 23, 1981  
 Finished September 26, 1981  
 Logged by L. Sookchoff, P.Eng.

Bearing 040° Dip at Collar -45° Hor. Comp. 84.1 Ver. Comp. 84.1  
 Location 9E 2.5N Elevation \_\_\_\_\_ Lat. \_\_\_\_\_ Dept. 118.9 m.  
 Purpose of Hole Test 81-1 zone to west & E.M. anomaly

Distance		DESCRIPTION	Sample No.	Length Ft.	Core Recovery %	Analysis			PROGRESSIVE TOTALS			
						Cu p.p.m.	Ag p.p.m.	Au p.p.m.	Cu %	Ag oz/ton	Au oz/	
0	1.8	Casing										
1.8	17	SILICIFIED GREENSTONE: Green fg. spotty w/cal. blebs lg py blebs, qtz; py v.l. @ 20° 50° qtz v.l.										
17	23	CHERTY VOLCANICS; Dense grn, sil'd mod. qtz v.l.										
23		GREENSTONE: Grn, f-fg. mod. qtz. v.l., 29 + po. blebs 30.5 - 1 cm qtz v.l. @ 35° qtz. + py. po. cpy. 30.8 - heavy po. sr. fr. @ 30° 31.4 - 31.5 - Qtz zone @ 35° no sulfides 31.5 - 3% py in v.l. w/ po. + cpy; mod qtz. v.l. @ 40° 44.5 to 46 - mod. py. cpy po on fr. 52.1 - dense - fig. w/acc py 53.1 - 6 cm. qtz. w/ 40% sulfides @ 45° brecc'd py. w/po + cpy str. + blebs 57.3 to 57.9 - dense fig. 3 - 1.5 cm qtz. veins @ 40° w/30% py + cpy 2:1 25° w/20% py + cpy 2:1 25° w/20% py + cpy 3:1 58.5 to 61.8 - Dense to fig w/py str.										
			36.3			144		.005				
			44.8			465		.005				
			57.3			188		.005				
61.8	76.6	DIORITE: m.g. allotriomorphic tex. w/sub. fels. in dense grn-black matrix, 6% sulfides diss thru matrix. lt prop-arg alt'n. decreasing sulfides to 71.3	75.5			205		.005				
76.6	118.9	SILICIFIED GREENSTONE: Dense to fig. w/loc. py. str. mod qtz @ 45°, 20° 76.7 to 77.05 - Qtz zone w/massive sulfides @ 35° 84.1 - 1 cm qtz. @ 40° w/cpy blebs py diss + on fr. w/cpy	94.7			48		.005				
			118.8			86		.005				

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Property CROWN

# DIAMOND DRILL SAMPLING RECORD

DIP TESTS

Hole No. 81-4

Started September 23, 1981

Bearing 040° Dip at Collar -45° Hor. Comp. 84.1 Ver. Comp. 84.1

Sheet No. 1/2

Finished September 26, 1981

Location 9E 2.5 N Elevation \_\_\_\_\_ Lat. \_\_\_\_\_ Dept. 118.9 M

Logged by L. Sookochoff P.Eng.

Purpose of Hole Test 81-1 zone to west & E.M. Anomaly

Distance		DESCRIPTION	Sample No.	Length -Feet- meters	Core Recovery %	Analysis				PROGRESSIVE TOTALS		
From	To									FEET & PER CENT		
										Cu %	Pb oz/tor	Zn oz/tor
	87.2	locally mobilized & dior'd to dense @ 93.5										
	93.5 to 96.6	- coarse brecc'n & healed w/chlorite										
	96.6 to 98.2	- Dioritized greenstone										
	98.2 to 99.6	- Mineralized zone w/25% qtz veins @ 40° w/cherty pink alt'n 20% py as v.l. & fr. w/<10% cpy rare po.										
	99.6 to 108.5	Dense green w/occ py str.										
	108.5 to 118.9	f.g. dk to lt grn ep. w/po										
	118.9	End of Hole										
	From To											
	98.2 99.6	25% sulfides in qtz zone			1.4					.40	.10	.004









# DIAMOND DRILL SAMPLING RECORD

DIP TESTS

Hole No. 81-2

Sheet No. 2/2

Property \_\_\_\_\_  
 Started \_\_\_\_\_ Bearing \_\_\_\_\_ Dip at Collar \_\_\_\_\_ Hor. Comp. \_\_\_\_\_ Ver. Comp. \_\_\_\_\_  
 Finished \_\_\_\_\_ Location \_\_\_\_\_ Elevation \_\_\_\_\_ Lat. \_\_\_\_\_ Dept. \_\_\_\_\_  
 Logged by \_\_\_\_\_ Purpose of Hole \_\_\_\_\_

Distances		DESCRIPTION	Sample No.	Length Meters Ft.	Core Recovery %	Analysis			PROGRESSIVE TOTALS		
From	To					Cu ppm	Ag ppm	Au ppm	Cu %	Ag oz/ton	Au oz/ton
33.5	35.0	DIORITIZED GREENSTONE: Green; m-fg; 33.5-34.5: Qtz 40% @ 25-45° w/py str. * po. py. cpy diss. in g.s. 34.5-35.0; Siliceous zone @ 45° w/loc. coarse brecc'n & healing w qtz; patches cpy on qtz & str. cpy & qtz. @ 45°									
35.0	39.6	CHERTY VOLCANICS: Dense; hard; brittle; lt. green to pinkish qtz. py. str. 40-50°	375								
27.4	29	Cherty pinkish zone w/mod-heavy po. cpy. on fr.	5132	1.6				.10	.01	.001	
31.8	32.4	F.W. of zone - cherty volcanis	5102	0.6							
32.4	32.9	Massive sulphides 90% - 70% py. 20% po. 10% cpy	5082	0.5				1.85	.52	.338	
32.9	33.5	Qtz. & 40% sulphides - 80% py 15% po 5% cpy	5092	0.6				2.75	.78	.074	
33.5	34.3	H.W. of zone sil'd & qtz w/diss. po py cpy in g.s.	5112	0.8				.13	.01	.001	
34.3	35.8	Siliceous g.s. brecc'd zone w/pathces cpy; suffer.	5122	1.5				.25	.03	.001	
38.9	39.6	Po. cpy in dense to cherty g.s. & volc.; 2 cm. po. cpy	5142	0.7				.08	.02	.001	

Property CROWN

# DIAMOND DRILL SAMPLING RECORD

DIP TESTS

Hole No. 81-2

Started September 20, 1981

Bearing 240°

Dip at Collar -45°

Hor. Comp. 28.0

Ver. Comp. 28.0

Sheet No. 1/2

Finished September 21, 1981

Location 10E 5.4N

Elevation \_\_\_\_\_

Lat \_\_\_\_\_

Dept \_\_\_\_\_

Logged by L. Sookchoff, P.Eng.

Purpose of Hole Test zone above 81-2 intersection Depth 39.6

Distance		DESCRIPTION	Sample No.	Length Ft.	Core Recovery %	Analysis			PROGRESSIVE TOTALS				
From	To					Cu	Ag	Au	Cu	Ag	Au		
						p.p.m.	p.p.m.	p.p.m.	%	oz/ton	oz/ton	oz/ton	
0	1	Casing											
1	8.8	GREENSTONE: Greenish gray; hard brittle; loc sections dior'd; occ qtz str. @ 45-60° w/assoc. py. po. & cpy. splashes on fr. planes; diss. py po <sup>2</sup> cpy in matrix 3.4 qtz. str. @ 20° 5.2-1 cm. py @ 80° pseudo stockwork of cal. veinlets CHERTY VOLCANICS: Dense; hard; lt. grain to pinkish patches locally and randomly	16.1					.035					
8.8	33.5	8.8-10 py. str. assoc. w/Qtz. @ 40°, 50°, 35° < 1 cm. 10.0 heavy po. on fr. w/cpy 14.6-16.5 siliceous; pinkish; occ. qtz; 21.9 po <sup>2</sup> cpy splashes on fr. @ 35° 15.1 - 15.4 py patches 21.3 po <sup>2</sup> cpy on fr. 28.7 to 28.9 siliceous @ 45° 28.9 29.2 mod. - heavy po. cpy. on fr. @ 60°, 50°; mag 30.5 to 32 20% Qtz; > sil'd, pinkish patches 32.4 to 33.5 Massive sulphide and Qtz. zone 32.4 to 32.9 - 90% sulphides; py po <sup>2</sup> cpy coarsely brecc'd w/rounded frags < 2.5 cm & healed w/po-dense black matrix 32.9-33.5 Qtz. w/40% sulphides increasing Qtz. to 33.5 irreg. zones & patches pred. py @ 60°; Cont. @ 45°	9.1					.005					
			21.9					.005					







Property CROWN

# DIAMOND DRILL SAMPLING RECORD

DIP TESTS	Hole No. <u>81-1</u>
	Sheet No. <u>1/2</u>

Started September 15, 1981

Bearing 240° Dip at Collar -60° Hor. Comp. 42.7 Ver. Comp. 73.9

Finished September 20, 1981

Location 10 E 5.5 N Elevation \_\_\_\_\_ Lat. \_\_\_\_\_ Dept. \_\_\_\_\_

Logged by L. Sookchoff

Purpose of Hole Test E.M. & Mag. anomaly Depth 85.3 m.

Distance		DESCRIPTION	Sample No.	Length - Ft. Meters	Core Recovery %	Analysis			PROGRESSIVE TOTALS			
From	To					CU	Ag	Au	FEET & PER CENT			
						p.p.m.	p.p.m.	p.p.m.	Cu %	Ag oz/ton	Au oz/ton	
0	1.5	Casing										
1.5	9.2	Dioritized greenstone: obscure dior. texture w/ greenish white anhedral fels. in chloritized f-m.g. matrix; mod. splashes py on fr. @ 30°, 60° & 45° -		7.6		160	.1	.005				
		occ. v.l. random cal. lt. ep.; specks diss. py. & cpy. fr.; 1% po.		14.3		72	.1	.005				
				22.5		80	.1	.005				
9.2	13.4	silicified greenstone, dense-f. gy. hard-green; variably silicified occ. cal. str. @ 30°; sy. str. 35°		26.2		380	.2	.005				
				42.6		172	.2	.005				
13.4	16.5	Diorite: Gray; allot. granular tex.; prop alt'n; m.g. - blasts of meta vol.; loc. heavy arg. alt'n;		44.5		415	.1	.005				
		13.7 cpy. str. @ 35°; 14.3 occ. blebs py.		54.2		250	.1	.005				
		Contact @ 40°;		61		250	.2	.005				
16.5	22.6	Silicified greenstone as 9.2-13.4; rare str. po. @ 40° patches @ 19.5-21.3;		65.5		196		.005				
22.6	43.5	cherty volcanics: Dease, hard green w/occ patches g.s. 27.4 to 28 - Qtz. vein @ 35° w/8cm. massive py w 2% cpy.		37.4				.025				
		31.1 - 1.5 cm. 80% py. py. pg @ 45°		60.3				.005				
				63.0				.005				
				67.6				.005				
		37.9-40 - 18 cm. Massive py. po. v.l. & pockets @ 45° w/adj. Qtz. & cal. flooding as X1's, v.l. & pockets		72.5				.005				
				78.6				.005				
				85.3				.005				

**10258**