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Mining Records Curator
Arizona Geological Survey
3550 N. Central Ave, 2nd floor
Phoenix, AZ, 85012
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PROPERTY SUMMARY
and
PRELIMINARY ECONOMIC EVALUATION

- of the -

BIGHORN GOLD PROSPECT
Maricopa County
Arizona, U.S.A.

- for -

RODDY RESOURCES INC.
200-1055 West Hastings Street
Vancouver, B.C.
V6E 2E9

Prepared by:

G. BELIK & ASSOCIATES LTD.
664 Sunvalley Drive
Kamloops, B.C.

G. D. Belik, M.Sc.

April 30, 1985

Introduction

The Bighorn Property, situated in Maricopa County, northwestern Arizona, contains four zones of significant epithermal-type gold mineralization. Based on the results of surface and underground sampling and drilling carried out to date, mineable reserves of the Lower Shaft and Upper Shaft Zones are placed at 565,000 tons probable, grading approximately 0.09 oz gold per ton. These reserves are amenable to open pit mining at a waste: ore ratio of 3:1 to 3.5:1.

Based on a open pit, 150,000 t.p.y., heap leach-type operation it is estimated that raw gold bullion can be produced from the two zones for about \$87 U.S. per oz. At a gold price of \$300 U.S., assuming a recovery rate of 70% (indicated from results of preliminary column leach tests), the operation would generate an annual profit, before royalties of \$2,044,500 U.S. for a period of 3.8 years. Total net profit after royalties and payback of capitalization costs (estimated at 1.3 million) would be 6.08 million with an average annual rate of return on investment capital of 57.3%. Payback of investment capital would be achieved in 0.65 years.

The 3.8 year mine life, operating at a rate of 150,000 t.p.y., is based on probable reserves developed to date. There is a good potential for developing additional reserves on the property, particularly at depth in the Lower Shaft Zone, along the extension of the Lower Shaft Zone to the north, and within two other zones on the property referred to as the North Adit and South Adit Zones. Although there is insufficient data at present to estimate possible additional reserves, the target areas outlined above potentially could host another 1.5 million tons. If the potential for these additional reserves is realized the operation life of the mine could be extended for another 10 years.

Salient Features and Exploration History

The Bighorn Property, consisting of ten patented and 12 unpatented mineral claims, is situated in rolling, foothills-type terrain, within a desert region of northwestern Arizona. The property can be reached via about 20 miles of back roads from either Wickenburg, on Highway 93, or Aguila, on Highway 60.

The claim area straddles a major northerly-trending

fault which separates a Tertiary volcanic sequence on the east and Precambrian schists and gneisses to the west. Within the area of the claims, in close proximity to the Tertiary/Precambrian fault contact, significant gold mineralization is confined to steeply dipping, tabular quartz stockwork and vein/breccia zones up to 130 feet wide. Post ore faulting has segmented the main mineralized structure into four en-echelon segments which have a combined strike length exceeding 3200 feet.

Early development work, which includes several shafts, adits and shallow pits, was carried out by the Hauxhurst Copper Company between 1908 and 1920. The main workings consist of two vertical shafts, 600 ft. and 486 ft. deep. The deeper, or Lower Shaft (No. 1) has fairly extensive lateral workings on the 150 and 250 levels. The Upper Shaft (No. 2) has about 200 ft. of lateral development on the 250 level and 300 ft. on the 350 level.

There are no records of any substantial production. About 4,500 tons of dump ore reportedly was milled in 1943 which yielded \$4.50 U.S. gold per ton (\$35 gold) and 0.5 to 0.75% copper. In 1961, three shipments of

dump and surface ore, totalling 133 tons, were treated by the Superior and Hayden Smelters in Arizona. These shipments averaged 0.091 oz gold per ton and 2.01% copper.

Since acquiring the property in January, 1984, Roddy Resources Inc. has carried out a comprehensive exploration program consisting of detailed surface sampling and mapping, reverse-circulation drilling (9,840 Ft. in 35 holes), underground mapping and sampling and bulk sampling for metallurgical testing.

Mineralization and Geological Model

The complex quartz vein zones which host the mineralization on the Bighorn Property are characterized by an intense stockwork of quartz veins and veinlets, up to 130 feet wide, with intensely silicified vein/breccia zones up to 16 feet wide. Less intense stockwork zones occur within and peripheral to the main stockwork zones. The host volcanic units typically are kaolinized and locally chloritized.

Quartz within the stockwork and vein/breccia zones generally is banded, contains abundant drusy cavities

and locally contains jasperoid-type fragments and bands. Black specular hematite and dark, earthy red hematite, in amounts up to 30%, occur finely impregnated within quartz and wallrock and within veinlets and blebs cutting quartz and wallrock.

Fine native gold, ranging from less than .01 to more than 1.0 oz/ton occurs both within stockwork and vein/breccia zones. Copper as secondary oxides, carbonates and silicates locally is abundant within the vein/breccia zones and generally present in minor amounts within the stockwork zones. The average copper content is estimated to be between 0.15 and 0.3 percent.

The Bighorn Property displays most of the characteristics of a classic epithermal-type deposit. Deposits of this type have been major producers of gold and silver throughout western North America and Mexico.

A sketch illustrating the probable evolution of the Bighorn deposits is shown in Figure 1033-3.

Economics

A preliminary economic evaluation of the Bighorn

Property was carried out by G. Belik and Associates Ltd., in February, 1985. Based on the results of work carried out to date the property is viewed as having an excellent potential for the development of an economically viable open pit, heap leach-type operation.

Probable reserves established to date would sustain a 150,000 t.p.y. mining operation for 3.8 years. Possible additional reserves could add another 10 years to the life of the operation.

Table I illustrates the projected annual net profit, at various metal prices, for a 150,000 t.p.y. operation mining ore from the Upper and Lower Shaft Zones at an average grade of 0.09 oz gold and 0.15 oz silver per ton. The calculations are based on a gold recovery of 70%, a silver recovery of 25% and operating cost of \$5.50 per ton of ore.

Table II shows the projected earnings, at various metal prices, for the life of the operation.

Conclusions and Recommendations

The Bighorn Property has many positive features.

Table I: Projected Annual Net Profit (before taxes & royalties) at various metal prices (U.S. funds)

Price (\$)		Value Per Ton (\$)		Total Value Per Ton (\$)	Operating Costs Per Ton (\$)	Net Profit Per Ton	Annual Net Profit (\$)
Au	Ag	Au	Ag				
500	10	31.50	0.38	31.89	5.50	26.39	3,958,500
400	8	25.20	0.30	25.50	5.50	20.00	3,000,000
350	7	22.05	0.26	22.31	5.50	16.81	2,521,500
300	6	18.90	0.23	19.13	5.50	13.63	2,044,500
250	5	15.75	0.19	15.94	5.50	10.44	1,566,000
200	4	12.60	0.15	12.75	5.50	7.25	1,087,500
150	3	9.45	0.11	9.56	5.50	4.06	609,000

Table II: Projected Earnings at various metal prices (U.S. funds) for life of operation (3.8 years)

Price \$	Net Earnings \$	Capitalization \$	Royalties \$	Payback of Capitalization (yrs.)	Net Profit after Royalties and pay- back of Capitalization
Au					
Ag					
500 10	15,042,000	1,300,000	630,000	0.34	13,112,000
400 8	11,400,000	1,300,000	544,000	0.44	9,556,000
350 7	9,582,000	1,300,000	501,000	0.53	7,781,000
300 6	7,769,000	1,300,000	458,000	0.65	6,077,000
250 5	5,951,000	1,300,000	392,000	0.86	4,259,000
200 4	4,133,000	1,300,000	317,000	1.24	2,516,000
150 3	2,314,000	1,300,000	238,000	2.27	776,000

Projected earnings are based only on probable reserves established to date. If the potential for additional reserves is realized the life of the operation could be extended an additional 3-10 years.

The property is readily accessible by road, close to towns and transportation facilities and is situated in a warm arid region suitable for a year-round leaching operation. A preliminary economic evaluation suggests that sufficient reserves have been outlined to support a moderate size mining venture which could generate a strong positive cash flow in a short period of time.

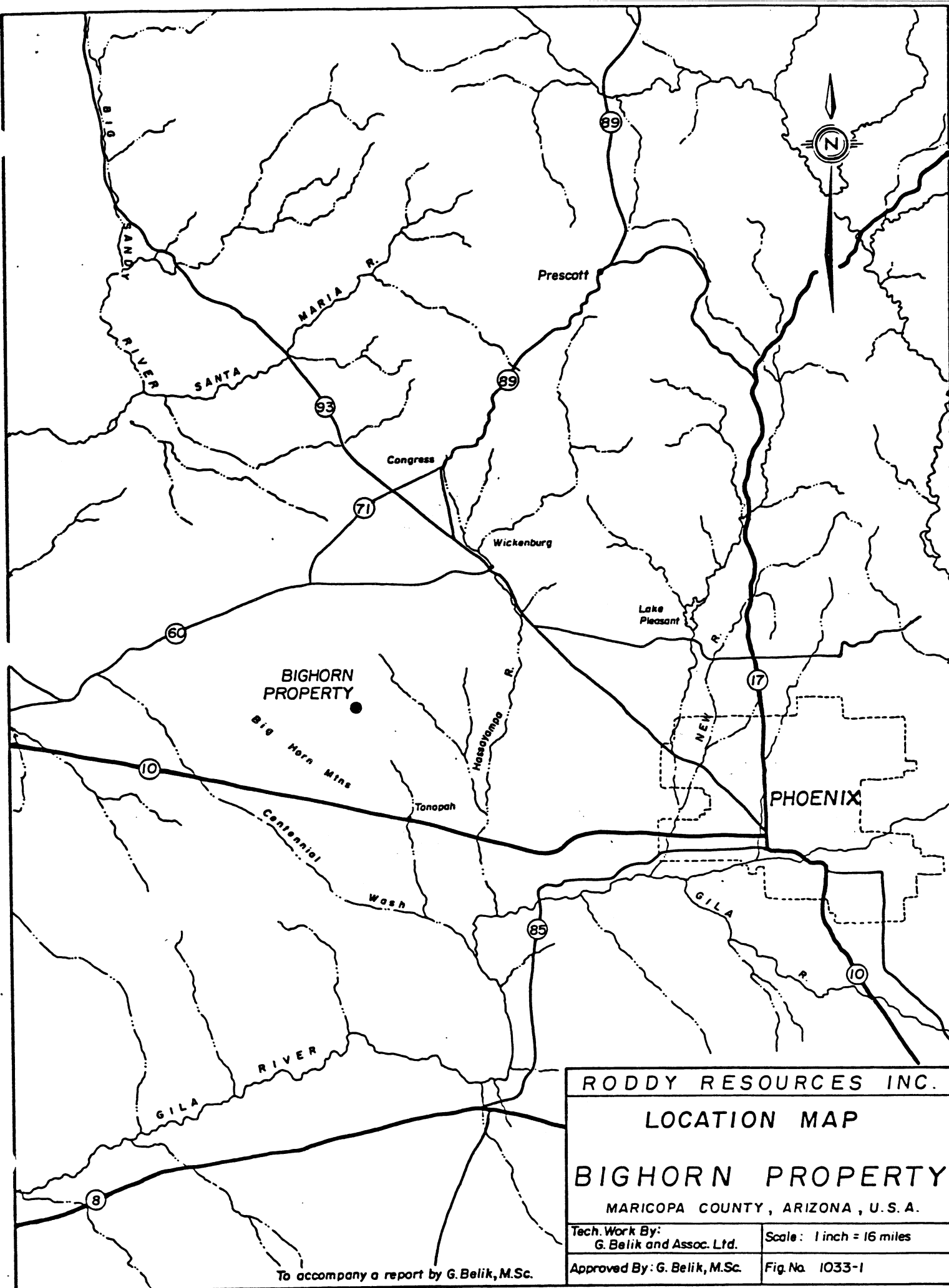
The above features suggest that the Bighorn Property has an excellent mine-making potential. However, before making a final production commitment it is essential that further work be carried out. This work should include: a) a pilot heap-leach test to verify recoveries obtained in the column leach tests, b) fill-in drilling in the Lower and Upper Shaft Zones to establish with certainty the tonnage/grade estimates, c) topographic and drill hole surveys to assist in the preparation of final feasibility studies and d) final feasibility studies to provide a more detailed, updated evaluation and to determine optimum pit designs, access routes, waste disposal sites etc.

The program outlined above is estimated to cost \$300,000 U.S., which is included in the estimated \$1.3 million capitalization costs to bring the property into production.

Respectfully Submitted,

G. D. Belik, M.Sc.

April 30, 1985



RODDY RESOURCES INC.

LOCATION MAP

BIGHORN PROPERTY

MARICOPA COUNTY, ARIZONA, U.S.A.

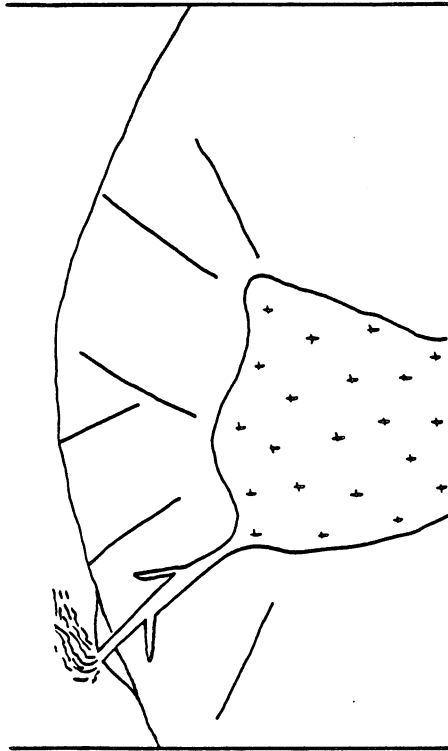
Tech. Work By:
G. Belik and Assoc. Ltd.

Scale: 1 inch = 16 miles

Approved By: G. Belik, M.Sc.

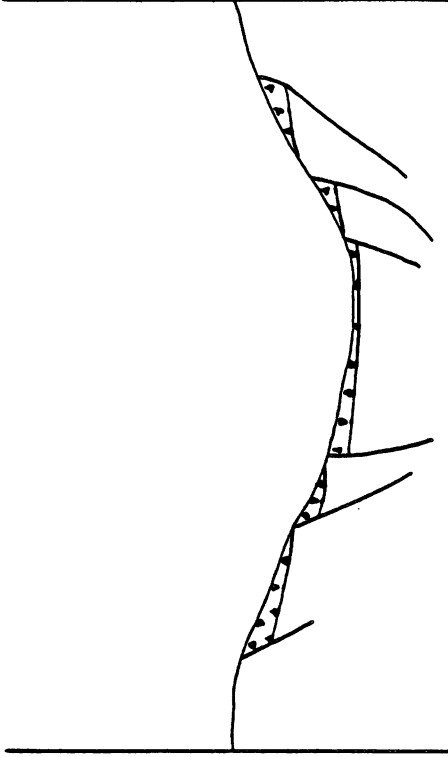
Fig. No. 1033-1

To accompany a report by G. Belik, M.Sc.



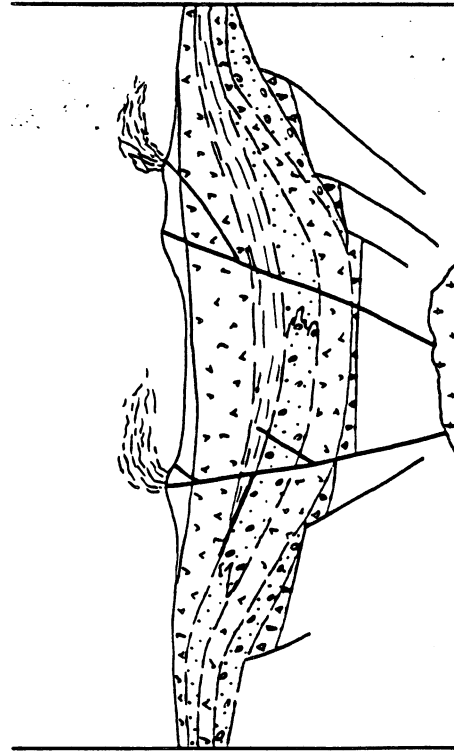
STAGE I

DOMING AND FRACTURING



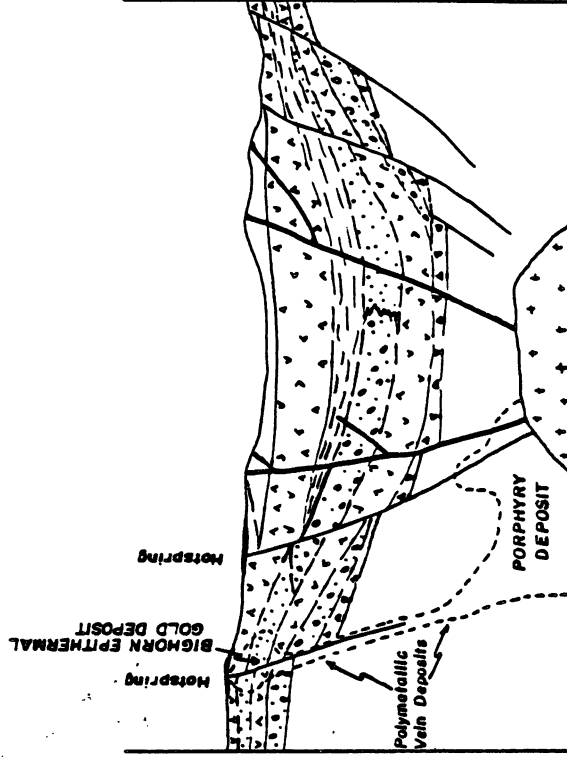
STAGE II

SUBSIDENCE FORMING COLLAPSE CALDERA



STAGE III

CYCLIC BASIC TO FELSIC VOLCANISM
AND FAULTING



STAGE IV

LATE STAGE FAULTING AND ASSOCIATED
HOTSPRING ACTIVITY

FIG NO. 1033-3

SIMPLIFIED SCHEMATIC ILLUSTRATION OF THE GEOLOGICAL
EVOLUTION OF THE BIGHORN EPITHERMAL GOLD DEPOSIT



POSSIBLE 300,000 - 700,000 TONS OPEN PIT
RESERVES .03 - .04 OZ/T Au

Lower Shaft Fault

PROPOSED LOWER SHAFT PIT OUTLINE
RESERVE ESTIMATES:
PROBABLE - 365,000 TONS, .092 Au
POSSIBLE - 200,000 to 500,000
ADDITIONAL TONS AT DEPTH AND TO
THE NORTH

PROPOSED UPPER SHAFT PIT
OUTLINE
RESERVE ESTIMATE:
200,000 TONS, .08 Au

LEGEND

- ROAD
- SHAFT
- DRILL HOLE (1984 PROGRAMME)
- OUTLINE OF QUARTZ STOCKWORK AND
QUARTZ VEIN BRECCIA BRECCIA ZONE -
GENERALLY STRONGLY HEMATIZED AND
KAOLINIZED
- SURFACE TRACE OF STEEPLY DIPPING
FAULTS
- LOW ANGLE FAULTS
- GEOLOGIC CONTACT

LITHOLOGIES

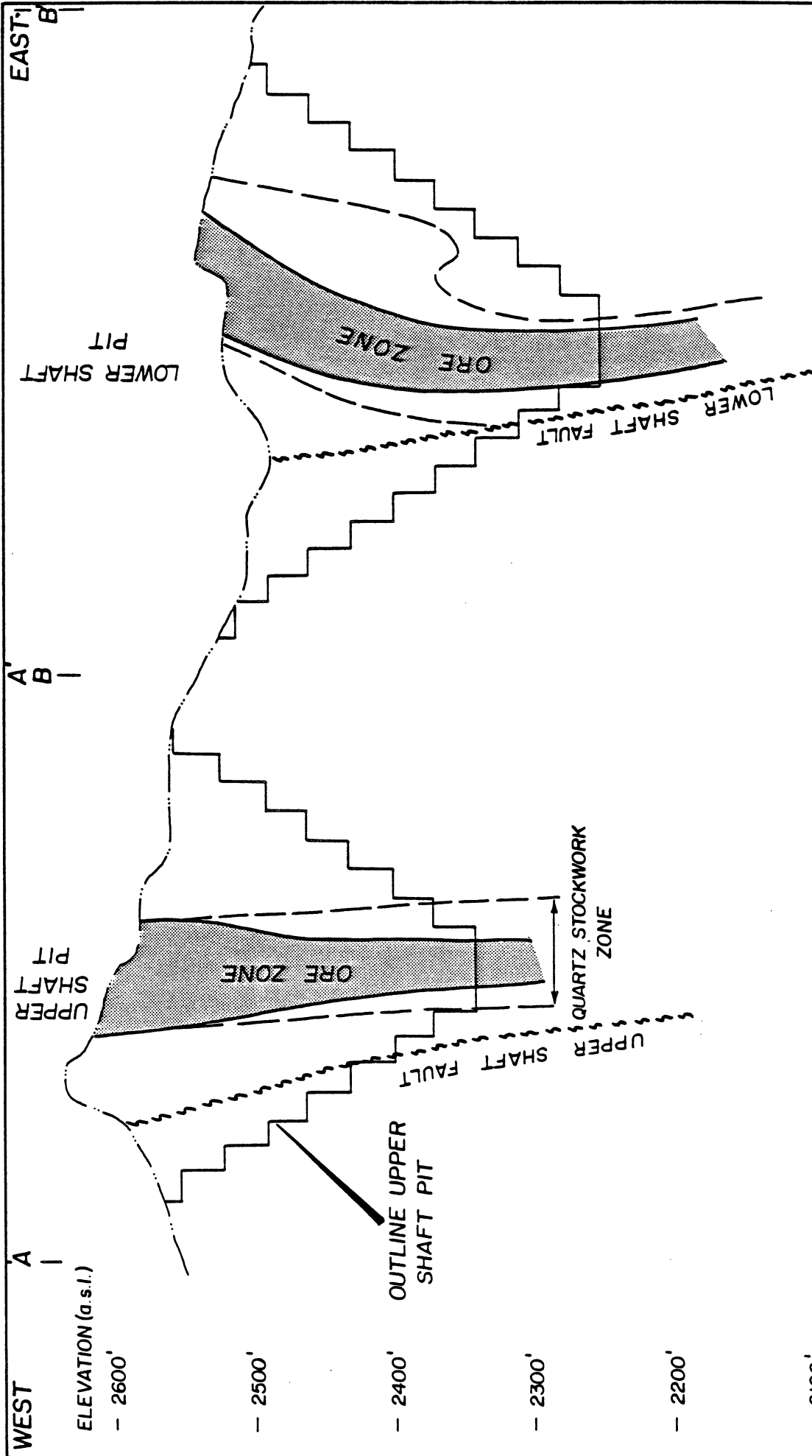
- Tv TERTIARY VOLCANICS - DACITE, RHYOLITE,
ANDESITE TUFFS AND FLOWS
- Di Di DIABASE DYKES AND SILLS
- PC PRECAMBRIAN SCHISTS AND GNEISSES

RODDY RESOURCES INC.

GENERALIZED GEOLOGICAL PLAN

BIGHORN PROJECT

TECHNICAL WORK BY G. BELIK AND ASSOC. LTD.	SCALE 1" = 200'
DRAWN BY W. G.	DATE APRIL, 1985
APP'D BY G. BELIK, M.Sc.	FIG. NO.



LEGEND

- QUARTZ STOCKWORK ZONE
- GOLD ORE ZONE
- FAULT
- PIT OUTLINE (APPROX.)

RODDY RESOURCES INC.

CROSS SECTION —
LOWER AND UPPER SHAFT ZONES
BIGHORN PROJECT

TECHNICAL WORK BY:

SCALE - 1" = 100'

DRAWN BY: W.G. (APR/85)

FIG. NO.

To accompany a report by G. Belik, M.Sc.

Appendix I

Estimated Cost of Recommended Program

Phase I

- pilot heap leach test to verify recoveries \$ 50,000
- using about 1500 tons of material (available in dumps) crushed to minus 1/4"

TOTAL PHASE I \$ 50,000

Phase II- contingent upon results of Phase I

- a) surface, core and reverse circulation drilling
5000 ft. at \$25/ft. all inclusive \$125,000
- b) underground drilling
 - percussion holes to provide additional info along the 150 & 250 levels in the Lower Shaft Zone and possibly a section of holes down the Upper Shaft 25,000
- c) topographic and drill hole surveys 20,000

TOTAL PHASE II \$170,000

Phase III- contingent upon results of Phases I & II

- feasibility studies \$ 80,000

TOTAL PHASE III \$ 80,000

TOTAL PROGRAM \$300,000 U.S.

REPORT

- on the -

BIGHORN PROPERTY

MARICOPA COUNTY

ARIZONA, U.S.A.

- for -

RODDY RESOURCES INC.,

2500 THREE BENTALL CENTRE,

595 BURRARD STREET,

VANCOUVER, B.C.

Prepared by:

KERR, DAWSON & ASSOCIATES LTD.,

#206 - 310 NICOLA STREET,

KAMLOOPS, B.C. V2C 2P5

.

J.M. DAWSON, P. ENG.

March 23, 1984.

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* * * * *

Appendix A: Estimated Cost of
Recommended Programme.

Appendix B: Assay Results

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Appendix E: Maps

INTRODUCTION:

This report has been requested by the directors of Roddy Resources Inc. It reviews the exploration and development history of the subject property, discusses its geology, mineralization and exploration potential, and recommends a programme of exploration to test the continuity and grades of mineralization at depth.

A series of maps showing location, property, surface geology and mineralization as well as data on recent soil and rock sampling are included in the text of this report.

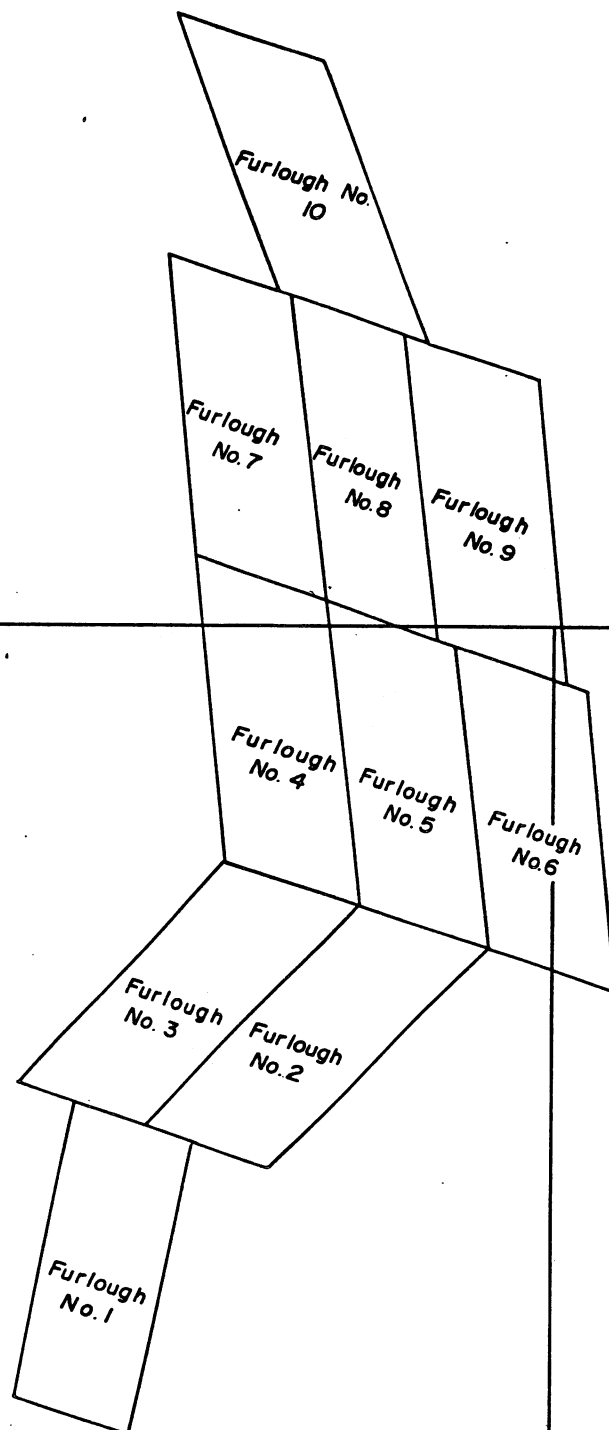
SUMMARY AND CONCLUSIONS:

1. The Bighorn property consists of 10 contiguous, patented claims aggregating about 200 acres, located in moderate terrain in southwestern Arizona, U.S.A. and is easily accessible by road from either Wickenburg or Phoenix.

2. The property was probably discovered in the late 1800's and was explored by a number of tunnels, pits and shafts all of which were excavated before 1920. The property was leased during the 1940's and about 4500 tons of dump ore was shipped to local smelters. Minor exploration and shipping of dump material took place in the 1950's. The Louisiana Land and Exploration Company acquired the property in 1971 and carried out an exploration programme oriented towards the discovery of a porphyry copper deposit. This work consisted of surface mapping and sampling, geophysics and the drilling of 4 deep holes. Roddy Resources Inc. acquired the property in late 1983 and carried out a detailed evaluation for gold.



R 8 W
R 7 W



T 5 N
T 4 N

RODDY RESOURCES INC.

CLAIM MAP

BIGHORN PROPERTY

MARICOPA COUNTY, ARIZONA, U. S. A.

Tech. Work By:
G. Belik and Assoc. Ltd.

Scale: 1" = 1,000' (approx.)

Approved By: J.M. Dawson, P.Eng. Fig. No. 325-2

To accompany a report by J.M. Dawson, P.Eng.

3. The property is underlain by a sequence of Tertiary volcanics which unconformably overlie Precambrian basement. A linear and perhaps arcuate fracture zone is the locus for the intrusion of diabase dikes and an extensive zone of epithermal quartz veining and stockworks. Later faulting has locally disrupted the continuity of the zone of quartz veining.

4. Gold and copper mineralization is associated with the areas of epithermal quartz veining. The mineralized zone is now dislocated by local faulting but is essentially tabular, strikes northerly and stands approximately vertical. It is approximately 4500 feet long, averages about 50 to 60 feet in width and has been tested by old shafts to depths of between 500 and 600 feet. Visible mineralization consists of extensive limonite, hematite and scattered secondary copper minerals in epithermal quartz veins, breccias and stockworks.

5. Extensive surface sampling has confirmed the presence of large areas of significant gold mineralization. There is an excellent potential for developing several million tons of gold bearing material in the 0.05 to 0.10 oz/ton range which might be mined by low cost open pit methods. A detailed programme of drilling to fully test this potential is recommended.

PROPERTY:

The property consists of 10 contiguous patented claims known as the Furlough #1 - #10 inclusive and aggregating about 200 acres. (see figure 325-2) The claims were surveyed in 1916 and brought to patent in 1966. They are registered by Patent No. 772925 recorded on February 15, 1966 and shown on Mineral Survey No. 3286 on file in the Bureau of Land Management, Phoenix, Arizona.

LOCATION AND ACCESS:

The property is located in Maricopa County, southwestern Arizona about 55 miles west-northwest of Phoenix, the county seat. The town of Wickenburg, the nearest major center is located about 25 miles north-east of the claims.

The claim block occupies parts of section 1, T 4N, R 8W; section 6, T 4N, R 7W, and section 31, T 5N, R 7W. The geographic center of the property is located at $33^{\circ} 43'$ north and $113^{\circ} 01.5'$ west.

The property is reached from Phoenix by driving northwest on U.S. Highway 93 for a distance of about 55 miles to Wickenburg, thence 22 miles southwest along the Vulture Mine road and a further 10 miles west along an unimproved dirt road to the foothills of the Big Horn Mountains. All parts of the property are easily accessible on foot.

PHYSIOGRAPHY AND VEGETATION:

The claim block covers a north-northwesterly trending ridge in an area of typical badlands topography known as the Big Horn Mountains. Rocky ridges and dry sandy washes predominate in an area which is essentially a desert. Relief is moderate to gentle on the property with elevations ranging from 2300 to 2800 feet (a.s.l.)

Rainfall in this region is minimal, consequently when there are periodic rainstorms in the winter and spring, water does not penetrate the hardpan and flash floods are common. Water for local farming and livestock is generated through deep wells.

Vegetation is typical of the southwestern desert and consists of scattered thorny brush, palo verde trees and various types of cacti.

HISTORY:

The history of exploration work on this property has been summarized in detail by Belik (1984) and his report is quoted extensively here.

Copper mineralization was probably first discovered here in the late 1800's when the Arizona Territory was being opened up. The first recorded work was carried out by the Hauxhurst Copper Company in the early 1900's. Surface exploration and the excavation of shallow pits and shafts was reported by the U.S. Bureau of Mines when the property was known as the U.S. Mine.

A report on the property by W.E. Greenwalt in 1912 mentions work on two parallel veins about 250 feet apart. Two shafts, 456 feet deep and 40 feet deep were sunk on the main vein reported to be as much as 100 feet wide. A 100 foot deep shaft was said to have been sunk on a 4 foot wide copper rich zone within a second vein, reported as 30 feet wide.

In a 1914 report by T.C. Alsorf work is reported on four veins or "bands of silicified rock". Most work was carried out on the No. 1 and No. 2 veins (Lower Shaft Zone and Upper Shaft Zone respectively). The No. 1 vein was developed by a 20 foot shaft, a 106 foot shaft and a 60 foot shaft. The principal development on the No. 2 vein was a 486 foot shaft. A cross cut to the west was reportedly driven for a distance of 48 feet at the 250 foot level in this shaft. According to old reports mineralized material was encountered over the length of this cross cut.

The early development work, all probably carried out before 1920 is summarized in a 1958 U.S. Bureau of Mines report as follows:

"The principal development work was performed shortly after the turn of the century and consists of a vertical shaft said to be 500 feet deep with fairly extensive lateral workings (lower shaft), and another vertical shaft said to be 480 feet deep (upper shaft). The deeper or main shaft (No. 1) is collared near the base of the ridge on its southeastern slope and the other shaft is collared on the same side of the ridge at a point 300 feet southerly from the main shaft and about halfway up the slope of the ridge. Both of these shafts are inaccessible and no clear account is available regarding the workings or mineralization disclosed. However, the substantial dump at the lower shaft is evidence of a substantial deposit of low grade gold ore with a small copper content."

No further work is reported until a local Wickenburg miner acquired a five year lease on the property in 1943. During the term of this lease it is reported that 4500 tons of dump ore was treated and returned an average value of \$4.50 (U.S.) per ton (gold at \$35.00 U.S. per ounce) and from 0.50 to 0.75% copper per ton.

Between 1952 and 1958 minor exploration was carried out by local miners and in 1961 a total of 133 tons of ore from various dumps was shipped to the Phelps Dodge smelter at Ajo, Arizona. This material reportedly averaged 0.091 oz gold and 2.01% copper per ton. The claims were surveyed and brought to patent in 1966.

Louisiana Land and Exploration Company purchased the property in 1971 and during the next two years this company carried out a broadly based prospecting, mapping and sampling programme on the subject claims and surrounding property. This company may have performed geophysical surveys and probably drilled the four deep core (?) holes now found on the claims. (see figure 325-3) No records of this work apparently exist however it is believed that this company was testing the prospect with the hope of developing a large tonnage, porphyry copper deposit.

The property was examined by E.D. Black, P. Eng. in 1976 and 1982 who subsequently acquired an option from Louisiana Land and Exploration Co.

Roddy Resources Inc. entered into an agreement with Mr. Black in late 1983 and carried out a detailed evaluation of the property during November, 1983 and January and February, 1984. This report is based largely on the results of that work.

GEOLOGY:

The property is underlain by a mixed succession of Tertiary volcanic flows and fragmental rocks which unconformably overlie Precambrian metamorphic basement. A linear and perhaps arcuate fracture zone is the locus for the intrusion of younger Tertiary diabase dikes and sills, and an extensive zone of epithermal quartz veining and stockworks. Later faulting has locally disrupted the continuity of the zone of quartz veining.

The oldest rocks found are Precambrian mica schists, quartzites and biotite-epidote gneisses which outcrop at and west of the west boundary of the claims. These metamorphic basement rocks are interpreted to dip shallowly east under the Tertiary cover and perhaps to be down dropped by a series of north-trending normal faults.

Unconformably overlying the Precambrian basement is a mixed sequence of Tertiary volcanic rocks. These consist of pink to white, rhyolitic to dacitic crystal tuffs, green to purple andesitic tuffs and flows, dark green to maroon basaltic tuffs, flows and agglomerate, and dacitic agglomerate, lahar and breccia. These rocks are complexly interfingering as well as folded (?) and faulted, however in general they are thought to dip to the east.

A northerly-trending and possibly arcuate fault and/or fracture zone cuts the Tertiary volcanic package and parallels the Tertiary-Precambrian basement contact. This feature may be part of a much larger circular fracture zone associated with Tertiary caldera development. A number of narrow diabase dikes and sills are spatially related to this fracture zone. They are now largely altered and dislocated by later hydrothermal activity and faulting.

Also associated with this zone of weakness is a distinctive zone of epithermal quartz veins and stockworks. This zone of quartz flooding is about 4500 feet long, up to 130 feet wide and has been locally disrupted and offset by later high angle normal faults and high and low angle thrust faults (see figure 325-3).

MINERALIZATION:

Gold and copper mineralization is associated with the arcuate, north-trending band of epithermal quartz flooding. This area of quartz flooding is essentially tabular in form, stands approximately vertical though locally its walls may dip steeply east or west and has been locally displaced as much as 300 feet by later faulting. It varies from a few feet to as much as 130 feet in width. It has been described by Belik (1984) as follows:

.....an intensive stockwork of quartz veins and veinlets with intensely silicified vein/breccia-type zones up to 16 feet wide. Less intense stockwork zones locally occur within and peripheral to the main stockwork zones. The host volcanic units typically are strongly kaolinized. The quartz within the stockwork and vein/breccia zones generally is banded, contains abundant drusy cavities and locally has jasperoid fragments and bands. Black to earthy red hematite, jarosite and specular hematite, in amounts up to 20% occur finely impregnated within quartz and are present as veinlets and blebs cutting quartz and wallrock. Calcite is present as a minor constituent in the south but locally reaches amounts up to 5% near the north end of the North Adit Zone (see figure 325-3).

Copper as secondary oxides, carbonates and silicates generally is abundant within the vein/breccia zones (locally 5 - 10% by volume) and present in minor amounts within the stockwork zones. Gold, ranging from 80 ppb to about 19,000 ppb (0.542 oz/ton) occurs both within the stockwork and vein/breccia zones. There is no apparent correlation between the abundance of quartz vein material and higher gold values.a number of shafts, pits and adits have investigated various parts of this mineralized system. Most of this work appears to have been directed towards evaluating copper-rich segments."

Belik (1984) carried out a detailed mapping and sampling programme and subdivided the mineralization into 4 zones:

- (a) South Adit Zone.
- (b) Upper Shaft Zone.
- (c) Lower Shaft Zone and Lower Shaft Extension.
- (d) North Adit Zone.

A programme of geochemical soil sampling (see figure 325-4) shows that significant gold mineralization is confined to the main zones of quartz veining and stockworks. The results of Belik's sampling as well as check samples taken by the writer are summarized on Figure 325-5.

The South Adit Zone can be discontinuously traced for about 1000 feet and varies from about 15 feet to more than 70 feet wide. It has been developed by several pits and an 80 foot long adit. A 45 foot chip sample along the adit wall averaged 0.068 oz Au/ton. Two other chip samples near the north end of this zone assayed 0.090 oz Au/ton over 15 feet and 0.132 oz Au/ton over 25 feet respectively.

The Upper Shaft Zone can be traced for about 600 feet along strike and varies from 15 to 80 feet in width. It has been developed by a number of pits as well as a 60 foot shaft and a 486 foot shaft. Six chip samples were taken across this zone (see figure 325-5) and the results are as follows:

<u>Sample No.</u>	<u>Width</u>	<u>Au (oz/ton)</u>
1	15'	0.110
2	24'	0.077
3	40'	0.095
4	50'	0.050
5	10'	0.045
6	15'	0.060

Two 25 foot check samples were taken by the writer across the 50 foot section at Belik's No. 4 sample location. Results are as follows:

<u>Sample No.</u>	<u>Width</u>	<u>Au (oz/ton)</u>
JD-5	25'	0.06
JD-6	25'	0.044

Material on the dump of the 486 foot deep shaft is more or less similar to that seen in outcrop on surface. The host rock of some of the material is Precambrian metamorphic rocks, indicating that the mineralization continues below the Precambrian-Tertiary contact. A composite sample collected from this dump by Belik (1984) assayed 0.117 oz Au and 0.13% Cu/ton.

The Lower Shaft Zone and Lower Shaft Extension together can be traced for about 1150 feet and must continue for some distance to the south of the main shaft where it is overburden covered (see figure 325-3). This zone varies from 20 feet to 130 feet wide though it is not possible to sample the widest part because of overburden cover.

It has been developed by a number of pits, a 600 foot shaft, a 20 foot shaft and a 120 foot long adit. The locations of surface chip samples are shown on figure 325-5 and are as follows:

<u>Sample No.</u>	<u>Width</u>	<u>Au (oz/ton)</u>
1	60'	0.045
2	75'	0.133
3	45'	0.108
4	63'	0.038
5	20'	0.084
6	15'	0.015
7	45'	0.020
8	45'	0.022
9	20'	0.034
10	38'	0.024

Two 20 foot check samples were taken by the writer across 40 feet of Belik's No. 2 sample location. The results are as follows:

<u>Sample No.</u>	<u>Width</u>	<u>Au (oz/ton)</u>
JD-3	20'	0.23
JD-4	20'	0.093

A 30 foot check sample was taken by the writer over a portion of Belik's No. 3 sample location. This sample assayed 0.03 oz Au/ton.

The North Adit Zone can be traced for about 800 feet along strike on surface and varies from about 10 feet to approximately 70 feet wide. It has been explored by several pits, a 60 foot long adit and a 90 foot vertical shaft.

Surface chip sampling of this zone produced the following results (see figure 325-5):

<u>Sample No.</u>	<u>Width</u>	<u>Au (oz/ton)</u>
1	10'	0.025
2	23'	0.029
3	35'	0.022
4	50'	0.040
5	55'	0.037
	including 20'	0.064
6	12'	0.050

A 10 foot check sample taken by the writer over a portion of Belik's No. 3 sample location assayed 0.038 oz Au/ton.

EXPLORATION POTENTIAL:

An extensive, gold-bearing, epithermal system has been outlined on surface by sampling on the Bighorn property. The system is at least 4500 feet long, as much as 130 feet wide and is known to extend at least in some places to at least 600 feet of depth.

There is an excellent possibility for the delineation of several million tons of gold-bearing material in the 0.05 to 0.10 oz/ton range which might be mined by low cost, bulk mining methods. A detailed drilling programme is certainly warranted to fully test this potential.

RECOMMENDATIONS:

1. Carry out a surface programme of bulldozer trenching and sampling to fully delineate the mineralization on surface.
2. Repair the property access road as well as upgrading and extending the present roads on the claim block.
3. Test the various zones with inclined reverse circulation drill holes to about 300 feet at depth on roughly 100 foot centers as follows:

(a) South Adit Zone	- 6 holes	total 2,000 feet
(b) Upper Shaft Zone	- 4 set-ups with a fan of 3 holes each plus a single hole at each end	- 14 holes
		total 7,500 feet
(c) Lower Shaft Zone	- 5 set-ups with a fan of 3 holes each plus a single hole at each end	- 17 holes
		total 8,500 feet
(d) Lower Shaft Ext.	- 5 holes	total 1,500 feet
(e) North Adit Zone	- 6 holes	total <u>2,000 feet</u>

TOTAL DRILLING 21,500 FEET

respectfully submitted:
KERR, DAWSON & ASSOCIATES LTD.



James M. Dawson
James M. Dawson, P. Eng.
GEOLOGIST.

THIS AGREEMENT made as of the 17th day of January, 1984

BETWEEN:

E.D. BLACK CONSULTING, INC.,
10247 East Applewood Drive,
Parker, Colorado,
U.S.A. 80134

(hereinafter called "Black")

OF THE FIRST PART

AND:

RODDY RESOURCES, INC.,
c/o Lawrence and Shaw
2500 - 3 Bentall Centre
P.O. Box 49200
595 Burrard Street
Vancouver, British Columbia,
CANADA V7X 1L1

(hereinafter called "Roddy")

OF THE SECOND PART

WHEREAS:

A. Black has the right to purchase certain patented mining claims situated in the Big Horn Mining District, Maricopa County, Arizona, U.S.A.

B. Roddy wishes to acquire an interest therein and to explore, and if warranted, to develop, mine and sell minerals from the said Claims.

NOW THEREFORE, THIS AGREEMENT WITNESSES that in consideration of the payment by Roddy to Black of \$15,000, the receipt of which is hereby acknowledged by Black, and the mutual covenants and agreements hereinafter contained, the parties hereto agree as follows:

1. DEFINITIONS

1.1 In this Agreement:

(a) "Claims" shall mean the ten (10) patented lode mining claims owned by Louisiana Land & Exploration Company, more fully described as: Furlough #1 - 10, Sec. 6, T4N, R6W; Sec. 31, T5N, R7W; and, Sec. 1, T4N, R8W of the Gila and Salt River Base & Meridian, being shown on Mineral Survey

#3286, on file with the Bureau of Land Management as granted by Patent #772925, recorded February 15, 1966, in Docket #5923, page 366, Maricopa County, Arizona.

And, such after-acquired lode mining claims as may be acquired by either party hereto within one mile of the said patented claim boundaries.

(b) "Commercial Production" shall mean the leaching, milling and sale of ores and concentrates which result from ore extracted from the Claims. The Claims or any part thereof will be deemed, for all purposes of this Agreement to have been placed in Commercial Production when, if there is a concentrator on the Claims or any part thereof, such concentrator has for the first time operated at 60% of its rated concentrating capacity for 30 days out of 40 consecutive days, or if there is no such concentrator, ore from the Claims or any part thereof or doré has been shipped therefrom on a reasonably regular basis for a 30 day period for the purpose of earning revenues, but in any event the Claims will be deemed to have been placed in Commercial Production 90 days after such concentrator has for the first time operated or if there is no such concentrator, 90 days after leaching for other than test purposes has commenced or 90 days after ore has first been shipped from the claims for the purpose of earning revenues.

(c) "Expenditures" shall mean any expenses, obligations and liabilities of whatever nature incurred by the parties hereto directly or indirectly in connection with the exploration and/or development of the Claims including all cash payments made hereunder by Roddy, plus ten percent (10%) thereof to cover administration and head office overhead expenses which need not be specifically accountable.

(d) "Monies" shall mean all references herein to monies, dollars and/or funds which shall be in United States currency.

(e) "Option" shall mean the Option granted to Roddy as described in Section 3.1.

(f) "Option Period" shall mean the period from the date hereof to the day upon which the Option is exercised in accordance with Section 4.2.

(g) "Products" means ores, minerals, concentrates or other products mined or produced from the Claims.

(h) "Royalty Reservation" means the reservation of a Royalty interest more particularly described in the

Warranty Mining Deed to the Louisiana Land & Exploration Company by Thomas C. King and Lisa D. King, dated May 10, 1971, a copy of which forms part of the Black/Louisiana Land agreement, attached hereto as Exhibit "A", and forms part hereof.

(i) "Work" shall mean any and all activities of the parties hereto carried out on or in behalf of the Claims in connection with the exploration, development and production of ores or minerals from the Claims.

2. REPRESENTATIONS AND WARRANTIES

2.1 Black represents to Roddy that:

(a) Black has the exclusive right to enter into this agreement and to assign the Claims in accordance with the terms hereof, and according to the terms of the agreement entered into between Louisiana Land & Exploration Company and Black, first dated July 1, 1983, a copy of which is attached hereto as Exhibit "A".

(b) To the best of Black's knowledge and belief, the Claims are free and clear of encumbrances, except for the two percent (2%) Royalty Reservation to Thomas C. King and Lisa D. King, as set out in the Louisiana Land Warranty Mining Deed, a copy of which is attached hereto in the form of Schedule "A".

(c) There is no adverse claim or challenge against or to the ownership of or title to any of the Mineral Claims comprising the Claims, nor to the knowledge of Black is there any basis therefor.

2.2 Each of Black and Roddy represent and warrant to the other that:

(a) it is a company duly incorporated, organized and validly subsisting;

(b) it has full power and authority to carry on its business and to enter into this agreement and any agreement or instrument referred to or contemplated by this agreement;

(c) neither the execution and delivery of this agreement nor any of the agreements contemplated hereby, nor the consummation of the transactions hereby contemplated, conflict with, or result in the breach of, or accelerate the performance required by, any agreement to which it is a party;

(d) the execution and delivery of this agreement and the agreements contemplated hereby will not violate or result in the breach of the laws of any jurisdiction applicable or pertaining thereto or of its constating documents.

2.3 The representations and warranties hereinbefore set out are conditions upon which the parties have relied in entering into this agreement.

2.4 Each party hereto will indemnify and save the other harmless from all loss, damage, costs, actions and suits arising out of any breach of any representation, warranty, covenant or agreement made by it in this agreement.

3. GRANT OF OPTION BY BLACK

3.1 Black hereby grants to Roddy an exclusive non-revocable option to acquire a 51% working interest in the Claims on the terms and conditions stated herein.

4. THE OPTION

4.1 In order to keep the Option in good standing, Roddy shall:

(a) make the following cash payments:

- (i) \$25,000 on or before April 30, 1984;
- (ii) \$25,000 on or before June 30, 1984;
- (iii) \$25,000 on or before September 30, 1984;
- (iv) \$25,000 on or before January 1, 1985;
- (v) \$25,000 on or before January 1, 1986;
- (vi) \$25,000 on or before January 1, 1987.

(b) Expend \$400,000 on Work on the Claims as follows:

<u>DATE</u>	<u>CUMULATIVE EXPENDITURES</u>
By December 31, 1984	\$ 50,000
By December 31, 1985	\$100,000
By December 31, 1986	\$250,000
By December 31, 1987	\$400,000

PROVIDED THAT Roddy may make up any deficiency in Expenditures on any date by paying the amount of any such deficiency to Black, which payments, if made, shall be deemed to be Expenditures.

4.2 Roddy shall have exercised the Option at such time as it has made the cash payments and expended the funds on Work as described in Section 4.1 and delivered a notice thereof to Black. Upon exercise of the Option, Roddy shall have earned a 51% working interest in and to the Claims and Black shall assign to Roddy all of its rights and title to the Claims, subject to a 49% working interest reserved for Black and to be held thereafter by Roddy in trust for Black, subject to the terms and conditions of this agreement.

5. DURING THE OPTION PERIOD

5.1 During the option period Roddy shall:

(a) permit representatives of Black, appointed by writing, at all reasonable times and at their own expense and risk, such to be acknowledged at the time of appointment, to have access to the Claims, Work and results which Roddy obtains from its exploration and/or development of the Claims; and

(b) will indemnify and save Black harmless from all claims and demands, costs, damages, actions, suits or other proceedings whatsoever, which are in any way attributable to Roddy's activities or Work on or with respect to the Claims.

(c) subject to the terms and conditions herein and the general terms and conditions of the Black/Louisiana Land & Exploration Company agreement, (Exhibit "A"), have the sole and exclusive right to enter upon the Claims, to conduct thereupon such exploration work, including geological and geophysical work, drilling, sampling and removal of such bulk sample material as might be required to fully explore and evaluate the Claims to establish the presence of economically developable mineral deposits. Excepting for sampling and testing purposes, Roddy may not remove or ship ores or minerals from the Claims until it has exercised the Option.

6. NET SMELTER RETURN ELECTION

6.1 Roddy shall have the right for a period of 30 days from the date upon which the Option is exercised to deliver a notice to Black containing Roddy's election to convert Black's 49%

working interest in the Claims to a 5% Net Smelter Return Interest in all Products removed from the Claims including those extracted from tailings or other waste materials.

6.2 (a) Black's 5% Net Smelter Return Interest shall be computed and paid as follows:

(i) No net smelter returns earned by Roddy from the sale of Products shall be paid to Black during the period from the time of commencement of Commercial Production to the expiration of two years thereafter.

(ii) If Products are removed from the Claims and delivered to a mill or a smelter in a bona fide arms-length sale transaction, the net smelter return received by Roddy therefor shall be the total gross sale proceeds therefore which are received by or credited to Roddy, less only:

(A) all actual costs incurred by Roddy for transportation of the Products to the point or points of sale including insurance;

(B) all sampling, assaying, weighing, treatment or processing, milling, smelter or refining charges, or penalties which are charged by the purchaser to Roddy except those deducted by the purchaser directly from the proceeds of sale; and

(C) all taxes levied upon production or severance of the Products, or upon the sale upon which the net smelter return is computed, but income taxes shall not be deducted. There shall be no deduction for cost of any treatment, processing or beneficiation by or on behalf of Roddy.

(iii) If products are removed from the Claims for other than a bona fide arms-length sale transaction, the amount payable to Black shall be based upon a value equivalent to net smelter return, which shall be the gross fair market value of the Products at the Claims in the form and condition in which the Products are transported from the Claims, without any deduction for costs of any treatment, processing or beneficiation. In addition to any other removal which is not subject to clause (i), this equivalent value method of computation shall be utilized when Products are removed from the Claims for sale to processing elsewhere by a facility owned or controlled by Roddy, or on a tolling basis.

(iv) If Products are lost or destroyed under circumstances in which Roddy receives payment under an insurance policy, such payment shall be deemed to be a net smelter return and Black shall be paid 5% thereof in accordance with the terms hereof.

(b) 5% of net smelter returns from the sale of Products during the third and subsequent years after commencement of Commercial Production shall be paid to Black within 15 days after receipt by Roddy of funds from a purchaser pursuant to transactions described in subsection 6.2(a)(ii), within 15 days of the date of removal of products from the Claims pursuant to subsection 6.2(a)(iii) and within 15 days after receipt by Roddy of funds from an insurance company pursuant to subsection 6.2(a)(iv).

(c) Black may, by delivering notice thereof to Roddy, elect to take its net smelter return in kind in which event Roddy shall deliver to Black refined gold and silver equal to Black's 5% net smelter return interest taking into account the costs described in subsection 6.2(a)(ii). Payment of 5% of net smelter returns in kind shall be made in accordance with the payment schedule described in subsection 6.2(b).

(d) After commencement of Commercial Production, Roddy will, within 30 days after the end of each calendar quarter, furnish to Black quarterly unaudited statements respecting operations on the Claims together with a statement of net smelter returns for the quarter last completed.

(e) Forthwith after completion of the third calendar year following the year in which commencement of Commercial Production occurs, the accounts of Roddy in relation to operations on the Claims shall be audited by the auditors of Roddy and the statement of operations, which will include a statement of net smelter returns for the year last completed, will be furnished to Black not later than March 31 of the next year and for each year thereafter. Black will have 45 days after receipt of such statements to question the accuracy thereof in writing and, failing such objection, the statements will be deemed to be correct and unimpeachable thereafter.

(f) If the audited financial statements furnished pursuant to subsection 6.2(e) disclose any overpayment of net smelter return by Roddy to Black during the year, the amount of the overpayment will be debited against future instalments of net smelter return payable hereunder or will, if requested by Roddy be refunded by Black forthwith.

(g) Roddy's obligation to pay Black 5% of net smelter returns in accordance with this Section 6.2 shall terminate at such time as Black has received \$1,500,000 or the equivalent thereof by taking gold and silver in kind thereunder.

7. JOINT VENTURE

7.1 If Roddy does not elect to convert Blacks 49% working interest in the Claims into 5% of net smelter returns interest in accordance with the terms of Section 6, both parties will be deemed to have elected to participate in the further development of the Claims. In such event further exploration and development of the Claims shall be made jointly by the parties, each party paying its share of Expenditures in proportion to its working interest in the Claims, which shall initially be 51% for Roddy and 49% for Black. Such exploration and development shall be carried out under the terms of a joint venture agreement which shall be entered into by the parties acting in good faith, such agreement to have the following minimum terms together with such other reasonable terms and conditions as may be required by the parties upon advice from their legal counsel:

Management Committee

(a) The affairs of the joint venture shall be under the direction and control of a management committee which shall consist of one representative of each of Roddy and Black. The representative of the operator shall be chairman of the management committee.

(b) Meetings of the management committee shall be held in Vancouver, British Columbia, unless the management committee otherwise directs. The management committee shall meet no less than once in each calendar year.

(c) A quorum of the management committee shall consist of the representative from each of Roddy and Black. The management committee shall take no action without a quorum being present provided that if a quorum is not present at the time and place set for a meeting then the meeting may be adjourned to the same place at a time no sooner than seven days thereafter. The representatives at the adjourned meeting shall constitute a quorum.

(d) Decisions of the management committee shall be by majority vote with the representatives of each of the parties having a number of votes equal to their respective working interests in the Claims. In the case of a tie in voting, the chairman shall not have a casting vote.

Operator

(e) The operator shall, subject always to the control and direction of the management committee, be charged with carrying out the exploration and development of the property.

(f) Roddy shall initially be the operator.

Programs

(g) All Expenditures shall be carried out under approved programs. The operator shall present a proposed program and budget for the next year to the management committee no later than October of a year. Members of the management committee shall have 30 days in which to review the proposed program and budget. A management committee meeting shall be convened at the end of such 30 day period to review the proposed program and budget. If members of the management committee request changes to the proposed program and budget, those changes shall be communicated to the operator who shall in good faith consider such proposals and prepare a proposed final program and budget which shall be submitted to the management committee prior to the end of the year. The management committee shall meet no later than January 30th of the next year for the purpose of approving the proposed final program and budget, which upon approval shall be the approved program for the year.

Participation in Programs

(h) The parties to the joint venture shall have 30 days after receipt of the approved program for a year to deliver a notice to the operator of its election whether or not to participate in such program to the full extent of its working interest in the Claims. If a party elects not to participate in the approved program to the extent of its pro-rata share of Expenditures, its working interest in the Claims and in the joint venture shall be reduced and the working interest in the Claims and interest in the joint venture of the other party who has elected to participate, shall be increased, such that the working interest of a party in the Claims and joint venture shall be a percentage share being the percentage equivalent of the fraction the numerator of which is the aggregate amount of Expenditures contributed by the party up to that time and the denominator of which is the aggregate amount of Expenditures contributed by all parties up to that time. For the purposes of the joint venture Black shall be deemed

to have incurred \$542,843 of Expenditures at the time of exercise of the Option. A party who declines to participate in an approved program in accordance with the terms hereof shall be entitled to participate in future approved programs in accordance with its reduced working interest.

Operator Declines to Present a Proposed Program

(i) If the operator defaults in presenting a proposed program and budget to the management committee in any year, as required by subsection (g), the other party may prepare and present a proposed program and budget to the management committee and the terms of subsections (g) and (h) hereof shall apply to such proposed program and budget mutatis mutandis. If the operator elects not to participate in funding its share of Expenditures of the proposed program and budget, the party proposing the program shall have the right, by delivering a notice in writing to the management committee, to become the operator of the joint venture and such proposed program and budget shall be deemed to be an approved program.

Indemnity

(j) Each party, proportionate to its working interest, shall agree to indemnify and hold harmless the operator against any claim of or liability to any third person resulting from any act or omission of the operator or its agents and employees in conducting operations pursuant to the joint venture agreement, provided however that the operator shall not be indemnified nor held harmless by the parties for any loss, damage, claim or liability resulting from the gross negligence of willful misconduct of the operator, its agents or employees.

Fees

(k) The operator shall be paid a fee for its administrative services including an amount in respect of general administrative costs that cannot be specifically allocated to the joint venture, which fee shall be 10% of all direct Expenditures incurred under the joint venture, and shall be reimbursed for all proper direct charges, expenses and other outlays made by it in the performance of its duties thereunder.

Replacement of Operator

(l) If the operator fails to perform in a manner that is consistent with good mining practice or fails to perform in

a manner consistent with its duties and responsibilities, the non-operator may give to the operator, written notice setting forth particulars of the operators default. The operator shall either within 30 days dispute the occurrence of such default or within 60 days of receipt of such notice commence to remedy the default. Failure of the operator to do either shall allow the other party to replace the operator by delivering notice thereof to the management committee.

(m) The operator's appointment shall automatically terminate if the operator becomes bankrupt or makes an assignment for the benefit of its creditors.

Right of First Refusal

(n) Each party will have a right of first refusal to acquire the other party's working interest in the Claims and in the joint venture should a party desire to dispose of its interest therein.

Area of Interest

(o) The joint venture shall have an area of interest of one mile from the external perimeter of the Claims as they exist on the date hereof.

8. TERMINATION

8.1 This agreement and the rights and obligations of Roddy shall terminate, subject to Section 8.2 hereof:

(a) if Roddy gives notice in writing to Black of its decision to terminate this Agreement, provided such notice shall not be given within thirty (30) days preceding any date upon which an installment cash payment or work commitment Expenditure, or payments in lieu, is due to Black and payable hereunder in accordance with the terms of Section 4.1, or,

(b) at the option of Black, if Roddy is in default in making any of the cash payments or minimum work expenditure commitments, or payments in lieu by the date stipulated to be made in Section 4.1, provided that Black shall first give Roddy notice in writing of any such default and Roddy shall have fifteen (15) days upon being so notified, within which to remedy such default by the appropriate payment.

8.2 In the event of termination of this Agreement pursuant to Section 8.1, Roddy shall:

(a) re-assign all rights, title and interest in the Claims to Black, including delivery to Black if necessary of a registerable Quit Claim Deed; and

(b) deliver to Black all reports, technical data and other information with respect to any Work done by Roddy together with available drill cores.

9. ASSIGNMENT

9.1 Each of the parties hereto has full rights of assignment of its interest in the Claims and in this Agreement provided, however, that notice of such assignment is given in writing to the other party thirty (30) days prior to such assignment and provided the assignee is subject to all of the terms and conditions set out in this Agreement and the Black/Louisiana Land & Exploration Company agreement, attached hereto.

10. FURTHER ASSURANCES

10.1 The parties hereto agree to do or cause to be done all acts or things necessary to implement and carry into effect this agreement to the full extent.

10.2 Time is of the essence.

11. DEFAULT - DAMAGES

11.1 In the event that Roddy is delinquent in any payments or expenditures required herein, and Roddy becomes in default of this agreement and Roddy does not cure such default pursuant to the terms herein, Roddy's interest hereunder and to the Claims shall be immediately forfeited and surrendered without need for further notice, demand or legal action. Roddy hereby waives any statutory relief which might otherwise restrict Black's right to immediate re-possession and ownership to the Claims upon Roddy's default. Roddy agrees that in the event of such default, Black will retain all amounts previously paid to it by Roddy under this agreement as compensation for Roddy's occupancy and possession of the Claims and as full and complete damages for any such default, in lieu of specific performance, further compensatory damages or other remedies under law or equity.

12. AREA OF INTEREST

12.1 Any mineral claim(s) or other rights to explore, develop or mine, acquired by or on behalf of either Black or Roddy within one mile of the Claims, as constituted at the date of this agreement, shall be subject to the terms and conditions of this Agreement and shall, for all relevant purposes of this Agreement, be deemed Claims.

13. ENUREMENT

13.1 This agreement shall enure to the benefit of and be binding upon the parties hereto and their respective successors and assigns.

14. HEADINGS

14.1 The headings of the respective Sections hereof shall not be deemed to be part of this agreement but shall be regarded as having been used for convenience only.

15. NOTICES

15.1 Any notice, statement, approval or delivery required or permitted to be given hereunder shall be given or made in writing and any such notice, statement, approval or delivery and any payment required to be made hereunder shall be deemed to be given or made if it is delivered in person at the relevant address set forth below or if it is sent by prepaid registered letter and addressed as follows:

If to Roddy:

RODDY RESOURCES, INC.
c/o Lawrence & Shaw
2500 - 3 Bentall Centre
595 Burrard Street
P.O. Box 4920
Vancouver, British Columbia
CANADA V7X 1L1

Attention: Barry Finlayson

If to Black:

E.D. BLACK CONSULTING, INC.
10247 East Applewood Drive
Parker, Colorado
U.S.A. 80134

Any such notice given as aforesaid shall be deemed to have been given if delivered, when delivered, or if mailed, on the fifth business day after mailing or on the day of telegraphing thereof. Either party may from time to time by notice in writing, change its address for the purposes of this Section 14.


16. PROPER LAW

16.1 This Agreement shall be construed in accordance with the

laws prevailing in the Province of British Columbia.


IN WITNESS WHEREOF, the parties hereto have executed this agreement as to the day and year first above written.

The Corporate Seal of E.D.
BLACK CONSULTING, INC. was
hereunto affixed in the
presence of:



C/S

The Corporate Seal of RODDY
RESOURCES, INC. was hereunto
affixed in the presence of:



C/S

3654f(90f)

AGREEMENT FOR SALE

This Agreement made this 17 day of Feb., 1983 ("Effective Date") between E. D. Black Consulting, Inc., 10247 East Applewood Drive, Parker, Colorado 80134 (hereinafter referred to as "Black") and The Louisiana Land and Exploration Company, 3900 South Wadsworth Blvd., Suite 660, Lakewood, Colorado 80235 (hereinafter referred to as "LL&E").

WITNESSETH:

WHEREAS, LL&E owns full title and interest in and to ten patented mining claims (hereinafter referred to as "Claims"), as more specifically described and defined in the attached Exhibit A, and,

WHEREAS, LL&E desires to sell, and Black desires to purchase, the Claims under the terms and conditions contained herein,

RR *\$5000.00* *2/13* NOW THEREFORE, in consideration of the amount of *FIVE* *RR* ~~Ten~~ Thousand Dollars (\$10,000.00) paid herewith and the mutual covenants contained herein, the parties agree as follows:

1. Conveyance

LL&E hereby agrees to sell to Black, and Black agrees to purchase, the Claims for the total amount of Seventy-Five Thousand Dollars (\$75,000.00) (hereinafter referred to as "Purchase Price").

2. Purchase Price

The Purchase Price shall be paid to LL&E in the following manner:

- (a) The amount of Ten Thousand Dollars (*5000* *ENT* *RR* ~~\$10,000.00~~) has been paid upon execution of this Agreement.
- (b) Within 90 days of the Effective Date of this Agreement, Black will pay to LL&E the amount of Twenty Thousand Dollars (\$20,000.00).

- (c) Within 180 days of the Effective Date of this Agreement, Black will pay to LL&E an additional amount of Twenty Thousand Dollars (\$20,000.00).
- (d) Within 270 days of the Effective Date of this Agreement, Black will pay to LL&E an additional amount of Twenty Thousand Dollars (\$20,000.00).
- (e) Within 360 days of the Effective Date of this Agreement, Black will pay to LL&E an additional amount of Five Thousand Dollars (\$5,000.00). *22*
- (f) Provided, however, that Black may make all or any portion of the above specified payments in advance without penalty.

Payments shall be made to LL&E at the address specified above, to the attention of the Division Land Manager.

3. Title

Within 15 days of satisfaction by Black of the full Purchase Price as stated herein, LL&E will deliver to Black a general warranty deed to the Claims evidencing good and marketable title, excepting only covenants, restrictions, and easements of record on the Effective Date or apparent upon physical inspection of the Claims, as well as any provisions, reservations or limitations contained in the patent of the United States issued for each survey lot. Black shall examine and satisfy itself as to the sufficiency of LL&E's title within 30 days from the Effective Date; in the event that Black shall discover any substantial defect of such title, it will promptly notify LL&E, which will have the option of either (1) promptly curing such defect, (2) contesting such allegation of defect, or (3) returning to Black the consideration paid herewith.

4. Possession

Black shall be entitled to immediate possession of the Claims, provided, however, that upon any termination or default of this Agreement for any reason, Black will immediately relinquish possession of the Claims free and clear of liens or any other

encumbrance caused or suffered by Black and will and does hereby indemnify LL&E for any liabilities arising due to acts or omissions by Black, its employees, or agents while in possession of the Claims.

5. Taxes

Taxes on the Claims for the current year shall not be allocated, but Black shall be responsible for taxes becoming due after the Effective Date.

6. Default; Damages

In the event that Black is delinquent in any payments required herein for a period of 30 days, Black shall be in default of this Agreement, and Black's interest hereunder and to the Claims shall be immediately forfeited and surrendered without need for further notice, demand, or legal action; Black hereby waives any statutory relief which might otherwise restrict LL&E's right to immediate possession and ownership of the Claims upon Black's default. LL&E, in turn, agrees that, in the event of such default, it will retain all amounts previously paid to it by Black under this Agreement as compensation for Black's occupancy and possession of the Claims and as full and complete damages for any such default, in lieu of specific performance, further compensatory damages or other remedies under law or equity.

7. Black's Duties During Term of Agreement

While this Agreement is in effect, and until Black receives title to the Claims, Black shall,

- (a) pay in full for all labor performed upon or material furnished to the Claims ordered or requested by Black, and shall keep the Claims free and clear of any and all liens resulting from the furnishing of such labor or material; and
- (b) conduct all operations on the Claims in accordance with sound engineering and mining practice and in compliance with applicable laws and regulations; and

- (c) keep the Claims free of liens, outstanding assessments or other encumbrances;
and
- (d) indemnify LL&E for any and all liabilities, claims, or damages arising from
Black's occupancy of the Claims.

8. Assignment

The rights of either party hereunder may be freely assigned to any party, with timely and prompt notice given to the other party hereto; provided, however, that any such assignor shall remain primarily responsible for any obligation under this Agreement until its terms have been fully satisfied.

9. Notices

Any notice desired or required to be given under this Agreement shall be given to the party at the address stated in the heading above.

IN WITNESS WHEREOF, the parties have executed this Agreement on the day and year first above written.

E. D. BLACK CONSULTING, INC.

ATTEST:

By: J. A. Burman

By: E. D. Black

Title: President

THE LOUISIANA LAND AND
EXPLORATION COMPANY

ATTEST:

By: Michael W. Poudon

By: R. L. Wood

Title: Vice President

EXHIBIT A

to Agreement For Sale dated 12/1/66.

The Claims to be conveyed by the Agreement For Sale to which this Exhibit is attached are further defined as follows:

Furlough numbers 1 through 10 in Section 6, T4N,R7W, Section 31, T5N, R7W, and Section 1, T4N,R8W of the Gila & Salt River Base & Meridian being shown on Mineral Survey #3286 on file with the Bureau of Land Management as granted by Patent No. 772925 recorded February 15, 1966 in Docket 5923, page 366, Maricopa County, Arizona.

93525

WARRANTY MINING DEED

For valuable consideration and the Royalty Reservation as described below, THOMAS C. KING AND LISA D. KING, his wife, hereinafter called "Grantors", hereby convey to THE LOUISIANA LAND AND EXPLORATION COMPANY, hereinafter called "Grantee", Suite 1605 Wilco Bldg., Midland, Texas 79701, a Maryland corporation, the following ten patented mining claims situated in the Big Horn Mining District, Maricopa County, Arizona, together with extralateral rights, and all rights and privileges appurtenant thereto, to wit:

FURLOUGH NO. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, MINING CLAIMS in the Section 6, Township 4 North, Range 7 West, Section 31, Township 5 North, Range 7 West, Section 1, Township 4 North, Range 8 West of the Gila and Salt River Base and Meridian, being shown on Mineral Survey No. 3285 on file in the Bureau of Land Management as granted by Patent No. 772925 recorded February 15, 1966 in Docket 5923, page 366, records of Maricopa County, Arizona.

SUBJECT to ad valorem taxes for 1971 and any covenants, conditions, restrictions, and reservations in U. S. Mineral Patent No. 772925.

Royalty Reservation: The Grantee, its successors and assigns, shall pay to Grantors, their personal representatives, heirs and assigns, as production royalty, two (2) percent of sales of all minerals, metals, or ores sold from the above described mining claims on or before the 20th day of the month next following receipt of payment for such sales, until a total of two hundred thousand dollars (\$200,000.00) in royalties shall have been paid, at which time this royalty reservation shall cease and be of no further force and effect; provided, Grantees, its successors and assigns shall have no express or implied obligation by this royalty reservation to conduct exploration, development or mining operations on the above described mining claims at any time or to sell any minerals, metals or ores from said mining claims, it being expressly understood Grantees, their personal representatives, heirs and assigns shall be entitled to a royalty only if and when minerals, metals or ores from the above described mining claims are mined and sold; and provided, further, that Grantee, its successors and assigns shall have no obligation to pay any royalty to personal representatives, heirs and assigns of Grantors until furnished satisfactory evidence of the right of the personal representatives, heirs or assigns to receive royalty.

Except as otherwise provided above, Grantors warrant the title against all persons whomsoever.

Dated this 10th day of May, 1971.

SKT 8695 mx143

Thomas C. King
Thomas C. King

Lisa D. King
Lisa D. King

STATE OF ARIZONA } ss:
County of Pinal }

On this the 10 day of May, 1971, before me, the undersigned Notary Public, personally appeared THOMAS C. KING and LISA D. KING, his wife, known to me (or satisfactorily proven) to be the persons whose names are subscribed to the foregoing instrument, and acknowledged that they executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Anne M. Greenblatt
Notary Public

My Commission Expires:

8-21-71

STATE OF ARIZONA } ss:
County of Maricopa }

I hereby certify that the within instrument was filed and recorded at request of

Barth, Liebowitz, et al

in Book 8695 at 1571-14

on page 742-143
Witness my hand and official seal the day and year first stated.

Paul C. Anderson
County Recorder
By Paul C. Anderson
Deputy Recorder

Title Insurance Policy

issued by



A Service of
Transamerica Corporation

Transamerica Title Insurance Co

a California corporation, herein called the Company, for a valuable consideration paid for this policy, the number, the effective date, and amount of which are shown in Schedule A, hereby insures the parties named as Insured in Schedule A, the heirs, devisees, personal representatives of such Insured, or if a corporation, its successors by dissolution, merger or consolidation, against loss or damage not exceeding the amount stated in Schedule A, together with costs, attorneys' fees and expenses which the Company may become obligated to pay as provided in the Conditions and Stipulations hereof, which the Insured shall sustain by reason of:

1. Any defect in or lien or encumbrance on the title to the estate or interest covered hereby in the land described or referred to in Schedule A, existing at the date hereof, not shown or referred to in Schedule B or excluded from coverage in Schedule B or in the Conditions and Stipulations; or
2. Unmarketability of such title; or
3. Any defect in the execution of any mortgage shown in Schedule B securing an indebtedness, the owner of which is named as an Insured in Schedule A, but only insofar as such defect affects the lien or charge of said mortgage upon the estate or interest referred to in this policy; or
4. Priority over said mortgage, at the date hereof, of any lien or encumbrance not shown or referred to in Schedule B, or excluded from coverage in Schedule B or in the Conditions and Stipulations, said mortgage being shown in Schedule B in the order of its priority;

all subject, however, to the provisions of Schedules A and B and to the Conditions and Stipulations hereto annexed.

In Witness Whereof, the Company has caused its corporate name and seal to be hereunto affixed by its duly authorized officers on the date shown in Schedule A.

Transamerica Title Insurance Company

By

Daniel Leaird

President.

Attest:

John P. Lee

Secretary



POLICY NO. 02018858

AMOUNT \$25,000.00

DATE May 13, 1971 at 1:45 P.M.

INSURED

THE LOUISIANA LAND AND EXPLORATION COMPANY, a Maryland corporation.

1. Title to the estate or interest covered by this policy at the date hereof is vested in:

THE LOUISIANA LAND AND EXPLORATION COMPANY, a Maryland corporation.

2. The estate or interest in the land described or referred to in this schedule covered by this policy is a fee.

3. The land referred to in this policy is situated in the County of Maricopa, State of Arizona, and is described as follows:

FURLOUGH NO. 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10, MINING CLAIM in the Section 6, Township 4 North, Range 7 West, Section 31, Township 5 North, Range 7 West, Section 1, Township 4 North, Range 8 West of the Gila and Salt River Base and Meridian, being shown on Mineral Survey No. 3286 on file in the Bureau of Land Management as granted by Patent recorded February 15, 1966 in Docket 5923, page 366, records of Maricopa County, Arizona.

This policy does not insure against () or damage by reason of the following:

PART ONE

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public record.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.

PART TWO

(All recording data refer to records in the office of the County Recorder of the County in which the land is situated).

A. 1971 taxes not yet due and payable.

CONDITIONS AND STIPULATIONS

1. DEFINITION OF TERMS

The following terms when used in this policy mean:

- (a) "land": the land described, specifically or by reference, in Schedule A and improvements affixed thereto which by law constitute real property;
- (b) "public records": those records which impart constructive notice of matters relating to said land;
- (c) "knowledge": actual knowledge, not constructive knowledge or notice which may be imputed to the Insured by reason of any public records;
- (d) "date": the effective date;
- (e) "mortgage": mortgage, deed of trust, trust deed, or other security instrument; and
- (f) "insured": the party or parties named as Insured, and if the owner of the indebtedness secured by a mortgage shown in Schedule B is named as an Insured in Schedule A, the Insured shall include (1) each successor in interest in ownership of such indebtedness, (2) any such owner who acquires the estate or interest referred to in this policy by foreclosure, trustee's sale, or other legal manner in satisfaction of said indebtedness, and (3) any federal agency or instrumentality which is an insurer or guarantor under an insurance contract or guaranty insuring or guaranteeing said indebtedness, or any part thereof, whether named as an Insured herein or not, subject otherwise to the provisions hereof.

2. BENEFITS AFTER ACQUISITION OF TITLE

If an insured owner of the indebtedness secured by a mortgage described in Schedule B acquires said estate or interest, or any part thereof, by foreclosure, trustee's sale, or other legal manner in satisfaction of said indebtedness, or any part thereof, or if a federal agency or instrumentality acquires said estate or interest, or any part thereof, as a consequence of an insurance contract or guaranty insuring or guaranteeing the indebtedness secured by a mortgage covered by this policy, or any part thereof, this policy shall continue in force in favor of such Insured, agency or instrumentality, subject to all of the conditions and stipulations hereof.

3. EXCLUSIONS FROM THE COVERAGE OF THIS POLICY

This policy does not insure against loss or damage by reason of the following:

- (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning ordinances) restricting or regulating or prohibiting the occupancy, use or enjoyment of the land, or regulating the character, dimensions, or location of any improvement now or hereafter erected on said land, or prohibiting a separation in ownership or a reduction in the dimensions or area of any lot or parcel of land.
- (b) Governmental rights of police power or eminent domain unless notice of the exercise of such rights appears on the public records at the date hereof.
- (c) Title to any property beyond the lines of the land expressly described in Schedule A or title to streets, roads, avenues, lanes, ways or waterways on which such land abuts, or the right to maintain therein vaults, tunnels, ramps or any other structure or improvement; or any rights or easements therein unless this policy specifically provides that such property, rights or easements are insured, except that if the land abuts upon one or more physically open streets or highways this policy insures the ordinary rights of abutting owners for access to one of such streets or highways, unless otherwise excepted or excluded herein.
- (d) Defects, liens, encumbrances, adverse claims against the title as insured or other matters (1) created, offered, assumed or agreed to by the Insured claiming loss or damage; or (2) known to the Insured Claimant either at the date of this policy or at the date such Insured Claimant acquired an estate or interest insured by this policy and not shown by the public records, unless disclosure thereof in writing by the Insured shall have been made to the Company prior to the date of this policy; or (3) resulting in a loss to the Insured Claimant; or (4) attaching or created subsequent to the date hereof.
- (e) Loss or damage which would not have been sustained if the Insured were a purchaser or encumbrancer for value without knowledge.
- (f) Usury or claims of usury not shown by the public records.
- (g) Any consumer credit protection, or truth-in-lending law.

DEFENSE AND PROSECUTION OF ACTIONS—NOTICE OF CLAIM TO BE GIVEN BY THE INSURED

(a) The Company, at its own cost and without undue delay shall provide (1) for the defense of the Insured in litigation consisting of actions or proceedings commenced against the Insured, or defenses, restraining orders, or injunctions interposed against a foreclosure or sale of the mortgage and indebtedness covered by this policy or a sale of the estate or interest in said land; or (2) for such action as may be appropriate to establish the title of the estate or interest or the lien of the mortgage as insured, which litigation or action in any of such events is founded upon an alleged defect, lien or encumbrance insured against by this policy, and may pursue any litigation to final determination of the court of last resort.

(b) In case any such action or proceeding shall be begun, or defense interposed, or in case knowledge shall come to the Insured of any claim of title or interest which is adverse to the title of the estate or interest or lien of the mortgage as insured, or which might cause loss or damage for which the Company shall or may be liable by virtue of this policy, or if the Insured shall in good faith contract to sell the indebtedness secured by a mortgage covered by this policy, or if an Insured in good faith leases or contracts to sell, lease or mortgage the same, or if the successful bidder at a foreclosure sale under a mortgage covered by this policy refuses to purchase and in any such event the title to said estate or interest is rejected as unmarketable, the Insured shall notify the Company thereof in writing. If such notice shall not be given to the Company within ten days of the receipt of process or pleadings or if the Insured shall not, in writing, promptly notify the Company of any defect, lien or encumbrance insured against which shall come to the knowledge of the Insured, or if the Insured shall not, in writing, promptly notify the Company of any such rejection by reason of claimed unmarketability of title, then all liability of the Company in regard to the subject matter of such action, proceeding or matter shall cease and terminate; provided, however, that failure to notify shall in no case prejudice the claim of any Insured unless the Company shall be actually prejudiced by such failure and then only to the extent of such prejudice.

(c) The Company shall have the right at its own cost to institute and prosecute any action or proceeding or do any other act which in its opinion may be necessary or desirable to establish the title of the estate or interest or the lien of the mortgage as insured; and the Company may take any appropriate action under the terms of this policy whether or not it shall be liable thereunder and shall not thereby concede liability or waive any provision of this policy.

(d) In all cases where this policy permits or requires the Company to prosecute or provide for the defense of any action or proceeding, the Insured shall secure to it the right to so prosecute or provide defense in such action or proceeding, and all appeals therein, and permit it to use, at its option, the name of the Insured for such purpose. Whenever requested by the Company the Insured shall give the Company all reasonable aid in any such action or proceeding, in effecting settlement, securing evidence, obtaining witnesses, or prosecuting or defending such action or proceeding, and the Company shall reimburse the Insured for any expense so incurred.

5. NOTICE OF LOSS—LIMITATION OF ACTION

In addition to the notices required under paragraph 4(b), a statement in writing of any loss or damage for which it is claimed the Company is liable under this policy shall be furnished to the Company within sixty days after such loss or damage shall have been determined and no right of action shall accrue to the Insured under this policy until thirty days after such statement shall have been furnished, and no recovery shall be had by the Insured under this policy unless action shall be commenced thereon within two years after expiration of said thirty day period. Failure to furnish such statement of loss or damage, or to commence such action within the time hereinbefore specified, shall be a conclusive bar against maintenance by the Insured of any action under this policy.

6. OPTION TO PAY, SETTLE OR COMPROMISE CLAIMS

The Company shall have the option to pay or settle or compromise for or in the name of the Insured any claim insured against or to pay the full amount of this policy, or, in case loss is claimed under this policy by the owner of the indebtedness secured by a mortgage covered by this policy, the Company shall have the option to purchase said indebtedness; such purchase, payment or tender of payment of the full amount of this policy, together with all costs, attorneys' fees and expenses which the Company is obligated hereunder to pay, shall terminate all liability of the Company hereunder. In the event, after notice of claim has been given to the Company by the Insured, the Company offers to purchase said indebtedness, the owner of such indebtedness shall transfer and assign said indebtedness and the mortgage securing the same to the Company upon payment of the purchase price.

7. PAYMENT OF LOSS

(a) The liability of the Company under this policy shall in no case exceed, in all, the actual loss of the Insured and costs and attorneys' fees which the Company may be obligated hereunder to pay.

(b) The Company will pay, in addition to any loss insured against by this policy, all costs imposed upon the Insured in litigation carried on by the Company for the Insured, and all costs and attorneys' fees in litigation carried on by the Insured with the written authorization of the Company.

(c) No claim for damages shall arise or be maintainable under this policy (1) if the Company, after having

received notice of an alleged defect, lien or encumbrance not excepted or excluded herein removes such defect, lien or encumbrance within a reasonable time after receipt of such notice, or (2) for liability voluntarily assumed by the Insured in settling any claim or suit without written consent of the Company, or (3) in the event the title is rejected as unmarketable because of a defect, lien or encumbrance not excepted or excluded in this policy, until there has been a final determination by a court of competent jurisdiction sustaining such rejection.

(d) All payments under this policy, except payments made for costs, attorneys' fees and expenses, shall reduce the amount of the insurance pro tanto and no payment shall be made without producing this policy for indorsement of such payment unless the policy be lost or destroyed, in which case proof of such loss or destruction shall be furnished to the satisfaction of the Company; provided, however, if the owner of an indebtedness secured by a mortgage shown in Schedule B is an Insured herein then such payments shall not reduce pro tanto the amount of the insurance afforded hereunder as to such Insured, except to the extent that such payments reduce the amount of the indebtedness secured by such mortgage. Payment in full by any person or voluntary satisfaction or release by the Insured of a mortgage covered by this policy shall terminate all liability of the Company to the insured owner of the indebtedness secured by such mortgage, except as provided in paragraph 2 hereof.

(e) When liability has been definitely fixed in accordance with the conditions of this policy the loss or damage shall be payable within thirty days thereafter.

8. LIABILITY NONCUMULATIVE

It is expressly understood that the amount of this policy is reduced by any amount the Company may pay under any policy insuring the validity or priority of any mortgage shown or referred to in Schedule B hereof or any mortgage hereafter executed by the Insured which is a charge or lien on the estate or interest described or referred to in Schedule A, and the amount so paid shall be deemed a payment to the Insured under this policy. The provisions of this paragraph numbered 8 shall not apply to an Insured owner of an indebtedness secured by a mortgage shown in Schedule B unless such Insured acquires title to said estate or interest in satisfaction of said indebtedness or any part thereof.

9. SUBROGATION UPON PAYMENT OR SETTLEMENT

Whenever the Company shall have settled a claim under this policy, all right of subrogation shall vest in the Company unaffected by any act of the Insured, and it shall be subrogated to and be entitled to all rights and remedies which the Insured would have had against any person or property in respect to such claim had this policy not been issued. If the payment does not cover the loss of the Insured, the Company shall be subrogated to such rights and remedies in the proportion which said payment bears to the amount of said loss. If loss should result from any act of the Insured, such act shall not void this policy; but the Company, in that event, shall be required to pay only that part of any losses insured against hereunder which shall exceed the amount, if any, lost to the Company by reason of the impairment of the right of subrogation. The Insured, if requested by the Company, shall transfer to the Company all rights and remedies against any person or property necessary in order to perfect such right of subrogation, and shall permit the Company to use the name of the Insured in any transaction or litigation involving such rights or remedies.

If the Insured is the owner of the indebtedness secured by a mortgage covered by this policy, such Insured may release or substitute the personal liability of any debtor or guarantor, or extend or otherwise modify the terms of payment, or release a portion of the estate or interest from the lien of the mortgage, or release any collateral security for the indebtedness, provided such act does not result in any loss of priority of the lien of the mortgage.

10. POLICY ENTIRE CONTRACT

Any action or actions or rights of action that the Insured may have or may bring against the Company arising out of the status of the lien of the mortgage covered by this policy or the title of the estate or interest insured herein must be based on the provisions of this policy.

No provision or condition of this policy can be waived or changed except by writing indorsed herein or attached hereto signed by the President, a Vice President, the Secretary, an Assistant Secretary or other validating officer of the Company.

11. NOTICES, WHERE SENT

All notices required to be given the Company and any statement in writing required to be furnished the Company shall be addressed to it at its office, 114 W. Adams St., Phoenix, Arizona 85003.

Drill Hole Summary

Bighorn Project

Hole #	Interval	Core Length	T.D.	Oz/ton Gold (uncut)		Ag
				Acme Labs	Kam. Research*	
84PH-1 ✓	70-120	50 Ft.	200	0.116 (incl. 20'	0.186)	
2 ✓	140-185	45 Ft.	300	0.012		
3 ✓	5-75	60.62 TW 70 Ft.	100	.075 (incl. 5'	.410)	
4 ✓	0-120	60' TW 120 Ft.	180	.092 (incl. 30'	0.179 & 15' 0.226)	
5 ✓	70-90	20 Ft.	240	.031		
	165-205	40 Ft.		.070		
6 ✓	120-135	15 Ft.	360	.054		
	230-245	15 Ft.		.044		
7 ✓	130-150	20 Ft.	235	.030		
8 ✓	Weakly Mineralized		310			
9 ✓	85-190	105 Ft.	225	.020		
10 ✓	150-220	70 Ft.	355	.055 (incl. 15'	0.117)	
or	135-225	90 Ft.	200	.047		
11 ✓	120-170	50 Ft.	200	.037		
12 ✓	195-250	55 Ft.	300	.016		
13 ✓	60-65	5 Ft.	100	.096		
14 ✓	90-130	40 Ft.	180	.017		
15 ✓	100-125	25 Ft.	160	.047		
16 ✓	90-175	85 Ft.	245	.020	.019*	
	175-225	50 Ft.		.177	.170* (incl. 15' .246 & 10' .309)	
or	90-225	135 Ft.		.078		
17	No Mineralization		165			
18 ✓	10-50	40 Ft.	500	.058		
	50-110	60 Ft.		.022		
or	10-110	100 Ft.		.037		
19 ✓	105-170	65 Ft.	335	.020	.019*	
165°	170-220	50 Ft.		.092 (incl. 20'	0.171)	
	220-310	90 Ft.		.027		

Feed 46.90

52
-14

FWD TD
4690

	or 105-310	205 Ft.		.041	
20 ✓	390-410	20 Ft.	480	.094	
	410-425	15 Ft.		.032	
	or 390-425	35 Ft.		.068	
21	200-245	45 Ft.	355'	.037	.041*
22	240-265	25 Ft.	345'	.038	
23	230-270	40 Ft.	305'	.036	.41
24	220-235	15 Ft.	350	.061	
	or 190-245	55 Ft.		.028	
25	85-115	30 Ft.	285'	.021	
	185-210	25 Ft.		.022	
32 ✓	205-225	20 Ft.	345'	.067	
	or 160-230	70 Ft.		.033	

26 300'
27 300'
28 300'
29 275'
30 245'
31 450'

33 320'
34 275'
35 220'

9840'

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs

HOLE No. 84P-1

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
 Angle of Hole -40°
 Claim.....
 Section.....
 Bearing 94°
 Total Depth 200 Ft.
 % Recovery
 Elev. Collar 2523 Ft.
 Latitude
 Departure
 Sheet No 1' of 4
 Logged by G. Belik
 Date Begun June 1/84
 Date Finished June 2/84
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)
0'-50'		Red to maroon, fractured hematized dacite; fine cuttings light brown to red		0-5	5	
				5-10	5	
				10-15	80	
		20'-25' : minor quartz		15-20	20	
		25'-30' : fragments of hematitic quartz		20-25	5	
		30'-50' : veinlets of hematitic quartz		25-30	5	
				30-35	5	
				35-40	5	
				40-45	5	
				45-50	5	
50-55		Hematitic dacite with strong vein sections		50-55	5	.001
55-65		Dark red to black strongly hematitic zone with hematitic quartz veining; secondary copper minerals		55-60	5	.004
				60-65	90	.004
65-90		Kaolinized (?) and hematized dacite with strong stockwork of hematitic quartz veins (15%-30% of unit)		65-70	150	.005
				70-75	1360	.038
				75-80	1970	.062
		70-80 : abundant secondary copper minerals		80-85	6400	.165
		85-90 : secondary copper		85-90	3400	.083

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84P-1

SHEET No. 2 of 4

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)	Au(oz/ton)
90-95		80% rhyolite/dacite with hairline quartz veinlets		90-95	1330	.046
		20% hematitic quartz fragments				
95-100		20% hematitic quartz		95-100	900	.027
		30% rhyolite/dacite				
		50% brecciated diabase				
100-105		Mainly silicified diabase with 20%-25% hematitic quartz		100-105	3800	.122
105-115		Hematized diabase and dacite with 40%-50% hematitic quartz; secondary copper minerals		105-110 110-115	11,200 6,400	.265 .205
115-120		20% quartz		115-120	5,600	.151
		40% pink hard dacite				
		40% chloritized and silicified mafic secondary copper minerals				
120-140		Hard siliceous pink dacite; hematitic envelopes adjacent to fractures; locally chloritized; 5%-10% hematitic quartz		120-125 125-130 130-135 135-140	320 80 60 50	.011 .004 .003 .003

G. BELIK & ASSOCIATES LTD.

PERCUSSION DRILL RECORD

Bighorn

HOLE No.

84P-1

SHEET No. 3

七

[illegible]

G. BELIK & ASSOCIATES LTD.

Bighorn

HOE No. 84P-1

SHEET No. 10 of 17

SHEET No. 10 of 17

[illegible]

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84P-2

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size Total Depth 300 Ft. Sheet No 1 of 4
 Angle of Hole -69° % Recovery Logged by G. Belik
 Claim Elev. Collar 2523 Ft. Date Begun June 2/84
 Section Latitude Date Finished June 3/84
 Bearing 94° Departure Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)
0-10		Not sampled				
10-20		Maroon to red highly oxidized andesite(?)		10-15	5	
				15-20	5	
20-25		Maroon to green partly oxidized andesite		20-25	770	
25-55		Variably hematized and oxidized andesite;		25-30	690	
		30-35 : minor quartz		30-35	70	
		40-55 : 2%-3% hematitic quartz fragments		35-40	70	
				40-45	200	
				45-50	60	
				50-55	40	
55-65		Maroon to dark pink hematized andesite		55-60	5	
		Partly chloritized dacite; minor quartz		60-65	5	
65-75		Pale green to pink weakly kaolinized and silicified felsic with thin quartz seams		65-70	5	
				70-75	5	

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84P-2

SHEET No. 2

of 4

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)
75-80		Kaolinized, silicified and hematized felsic with 2%-5% quartz		75-80	5	
80-90		Hematized, partly chloritized dacite; minor quartz		80-85 85-90	5 30	
90-100		Darker, more strongly hematized dacite; some quartz		90-95 95-100	110 70	
100-105		Red highly hematitic zone with some hematitic quartz fragments		100-105	5	.001
105-165		Bright red and orange/red hematitic zone; fragments consist of highly hematized and kaolinized felsic; abundant fine specular hematite in fines and as fragments; hematitic quartz fragments		105-110 110-115 115-120 120-125 125-130	5 30 60 30 40	.001 .001 .002 .001 .001
		115-117 : weakly hematized dacite		130-135	60	.002
		135-150 : 30%-60% of fragments massive fine- grained hematite and quartz/hematite		135-140 140-145	180 690	.007 .024
		145-150 : 30% of fragments crysocola		145-150	250	.010
		150-165 : crysocola and other secondary Cu minerals present		150-155 155-160 160-165	100 50 110	.004 .002 .005

G. BELIK & ASSOCIATES LTD.

Bighorn

HOLE No.

84P-2

SHEET No. 3

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PROPERTY
Bighorn

HOLE No.

84P-2

SHEET No.:

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G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84P-3

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
 Angle of Hole -30°
 Claim
 Section
 Bearing 243°
 Total Depth 100 Ft.
 % Recovery
 Elev. Collar 2583 Ft.
 Latitude
 Departure
 Sheet No. 1 of 2
 Logged by G. Belik
 Date Begun June 4/84
 Date Finished June 4/84
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)	
0-5		Not sampled					
5-40		Medium to dark red, hematized and kaolinized dacite; 20%-70% of fragments hematitic quartz; secondary Cu minerals locally evident		5-10 10-15 15-20 20-25 25-30 30-35 35-40	3600 1720. 5600 1510 1370 1500 830	.092 .064 .101 .054 .050 .052 .026	
40-45		Siliceous pink dacite with 5% hematitic quartz		40-45	580	.011	
45-60		Kaolinized and hematized dacite with intense quartz/hematite veining; bright red to red/ orange color		45-50 50-55 55-60	1770 820 360	.068 .021 .015	
60-65		Siliceous white, hematitic red and maroon and green felsic fragments; +5% quartz; some secondary Cu		60-65	250	.010	

G. BELIK & ASSOCIATES LTD.

Bighorn

84P-3

HOLE No.

SHEET No. 2

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G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84P-4

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size 180 Ft. Sheet No. 1 of 3
 Angle of Hole -60° Logged by G. Belik
 Claim 2583 Ft. Date Begun June 4/84
 Section Latitude Date Finished June 4/84
 Bearing 243° Departure Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)
0-20		Dark red cuttings; strongly hematitic dacite with some hematitic quartz		0-5 5-10 10-15 15-20	7600 3600 1200 2800	.380 .110 .041 .097
20-90		Dark red to reddish brown cuttings; strongly hematized and kaolinized felsic with strong hematitic quartz stockwork (20%-50% of unit)		20-25 25-30 30-35 35-40 40-45 45-50 50-55 55-60 60-65 65-70 70-75 75-80 80-85 85-90 90-95	6200 4000 480 610 340 760 660 600 600 3400 320 200 630 230 240	.286 .160 .019 .028 .014 .032 .025 .028 .026 .103 .017 .007 .024 .010 .009
90-95		30% hematitic quartz frags. 30% pink dacite 30% epidotized felsic				

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84P-4 SHEET No. 2 of 3

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz./ton)
95-105		Variably hematized dacite with 10%-20% hematitic quartz		95-100 100-105	9600 1300	.350 .049
105-120		Medium to dark red hematized and kaolinized felsic with 30%-65% hematitic quartz		105-110 110-115 115-120	7000 1280 2000	.274 .042 .070
120-125		Chocolate brown cuttings; variably hematized dacite with some quartz		120-125	100	.004
125-130		Maroon, pink, white variably hematized dacite; minor quartz		125-130	5	
130-140		White intensely crackled dacite flooded with bright red hematite; minor quartz		130-135 135-140	20 5	
140-145		Purple, pink and pale green dacite		140-145	5	
145-155		White, pink, purple variably hematized dacite		145-150 150-155	5 5	
155-160		Chocolate brown cuttings; rusty variably hematized dacite; minor quartz		155-160	5	

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G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY
Bighorn

HOI E No 47-148

SHEET No. 3

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G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY..... Bighorn Drill Logs

HOLE No. 84P-5

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size 240 F.
 Angle of Hole -35°
 Claim.....
 Section.....
 Bearing 267°
 Total Depth
 % Recovery
 Elev. Collar 2485 Ft.
 Latitude
 Departure
 Sheet No 1 of 5
 Logged by G. Belik
 Date Begun June 5/84
 Date Finished June 6/84
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)	Au(oz/ton)
0-15		Not sampled				
15-30		Pale pink to white felsic; some strongly hematitic fragments with jarosite		15-20 20-25 25-30	5 5 5	
30-40		20%-40% white to pink felsic fragments 60%-80% blood red hematitic fragments 1%-2% quartz		30-35 35-40	5 5	
40-60		Very dark red strongly hematitic zone 40-45 : 25% hematitic quartz fragments		40-45 45-50 50-55 55-60	20 5 5 25	
60-65		Very dark red hematitic zone; 60% of fragments hematitic quartz		60-65	405	.014
65-70		Very dark red, complex vein/breccia zone; secondary Cu		65-70	90	.003

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PROPERTY Bighorn

HOLE No.

84P-5

SHEET No. 2

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PROPERTY Bighorn

HOLE No. 84P-5

SHEET No. 3

of 5

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/tgn)
110-125		Dark pink dacite; strong hematitic sections		110-115	5	
				115-120	130	
				120-125	5	
125-135		Variably hematized dacite; chloritic fragments		125-130	10	
				130-135	15	
135-140		Pink and pale to medium green dacite		135-140	5	
140-160		Variably hematized dacite		140-145	145	
				145-150	305	
				150-155	5	
				155-160	5	
160-165		Grey powder with few fragments		160-165	20	
165-220		Dark red strongly hematized zone with intense veining (hematite and hematitic quartz); sections of massive hematite and quartz/hematite		165-170	2200	.058
				170-175	2500	.074
				175-180	2750	.079
				180-185	3800	.110
		170-185 : crysocola fragments		185-190	585	.025
				190-195	2900	.089
				195-200	2700	.072
				200-205	1500	.049
				205-210	180	.007
				210-215	260	.008
				215-220	40	

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84P-5

SHEET No. — 47

5

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)	Au(oz/ton)
220-225		Dark red, crackled and brecciated hematitic dacite; 10%-15% hematitic quartz		220-225	50	
225-230		Maroon hematized dacite; 5% hematitic quartz fragments		225-230	5	
230-235		230-232 : sandy section (fault?) 232-235 : medium to dark green dyke		230-235	5	
235-240		235-237.5 : green dyke 237.5-240 : hematitic felsic with abundant hematitic quartz		235-240	140	
240-245		Dark green diabase; 5% hematitic quartz		240-245	5	
245-255		Strongly hematized diabase; 20%-30% fine specular hematite in fines; 10%-20% hematitic quartz		245-250 250-255	90 5	
255-260		Hematized diabase with 30% hematite and quartz/ hematite fragments		255-260	5	
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PROPERTY Bighorn

HOLE No. 84P-5

SHEET No. 5 of 5

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)
260-285		Medium to dark green Precambrian meta-andesite with veinlets of hematitic quartz (5%-10%)		260-265	5	
				265-270	5	
				270-275	5	
				275-280	5	
				280-285	5	
285-295		Bright red intensely hematized Precambrian		285-290	580	
				290-295	5	
295-300		40% hematitic fragments		295-300	5	
		30% meta-andesite				
300-305		Strongly hematized section; chloritic frags; +20% hematitic quartz		300-305	40	
				305-310	120	
305-330		Strongly hematized Precambrian; 1%-5% hematitic quartz		310-315	5	
				315-320	5	
				320-325	5	
				325-330	5	
330-335		As 305-330; less intense hematitic alterations; some dark green weakly altered fragments		330-335	5	
335-340		Mixture of unaltered (60%) and hematized (40%) Precambrian andesitic schist; +5% hematitic quartz		335-340	5	
		End hole; due to cave				

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs

HOLE No. 84P-6

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
 Angle of Hole -52°
 Claim.....
 Section.....
 Bearing 267°

Total Depth 360 Ft.
 % Recovery
 Elev. Collar 2485 Ft.
 Latitude
 Departure

Sheet No 1 of 6
 Logged by G. Belik
 Date Begun June 7/84
 Date Finished June 12/84
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)	Au(oz/ton)
0-20		Not sampled				
20-30		White to cream colored, rusty dacite	3701	20-25	5	
			3702	25-30	5	
30-40		White to dark pink dacite with 10% dark red hematitic siliceous fragments; 1%-3% hematitic quartz	3703	30-35	5	
			3704	35-40	60	
40-45		White to cream felsic; rusty patches and fragments	3705	40-45	40	
45-50		White to cream felsic with 40% rusty hematitic fragments and 30% dark grey hematitic felsic	3706	45-50	5	
50-80		Pink hematitic dacite; 1%-5% hematitic quartz	3707	50-55	30	
			3708	55-60	5	
			3709	60-65	5	
			3710	65-70	5	
			3711	70-75	5	
			3712	75-80	5	

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Bighorn

84P-6

SHEET No. 2

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Bighorn

HOLE No.! 84 P-6

HOLE No.! 84 P-6

SHEET No. 3

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PROPERTY Bighorn

HOLE No. 84P-6

SHEET No. 4 of 6

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(oz./ton)	
180-185		Hematized dacite; +20% quartz/hematite	3733	180-185	.009	
185-190		Light to dark pink hematitic dacite; 5%-10% quartz/hematite	3734	185-190	.001	
190-195		Brick red cuttings; cream to red hematitic dacite; 5% quartz/hematite	3735	190-195	.001	
195-215		Light purple pink and brown variably hematized dacite; 5%-10% hematitic quartz	3736	195-200	.001	
			3737	200-205	.001	
			3738	205-210	.001	
			3739	210-215	.001	
215-250		Dark red strong hematitic kaolinized zone (altered felsic) with stockwork of hematitic quartz veins (5%-30%); locally dark green secondary chlorite	3740	215-220	.001	
			3741	220-225	.001	
			3742	225-230	.001	
			3743	230-235	.016	
		235-250 : 2%-20% secondary Cu minerals	3744	235-240	.102	
			3745	240-245	.015	
			3746	245-250	.007	
250-255		30% diabase; 40% strongly hematized felsic; 20% quartz/hematite; secondary Cu	3747	250-255	.004	
255-265		Bright red; kaolinized, hematized felsic with stockwork of hematitic quartz veins (15%-20%) crysocolle; chloritic fragments	3748	255-260	.001	
			3749	260-265	.001	

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84P-6 SHEET No. 5 of 6

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(oz/ ton)	
265-270		25% hematized felsic; 25% medium-grained, olive green dyke; 25% quartz/hematite	3750	265-270	.001	
270-275		30% strongly hematized frags; 50% olive green dyke rock with hematitic quartz veinlets; 15%-20% quartz/hematite fragments	3751	270-275	.001	
275-285		40% white siliceous felsic with hematitic fractures and envelopes; 50% various green colored frags; 5%-10% hem/quartz; some jaspery- type fragments	3752 3753	275-280 280-285	.002 .001	
285-295		White strongly fracture felsic with intense hematitic fractures and envelopes; 1%-2% quartz	3754 3755	285-290 290-295	.001 .002	
295-315		Pink hematitic dacite; 2%-5% quartz 295-300 : minor secondary Cu	3756 3757	295-300 300-305	.001	
			3758	305-310	.001	
			3759	310-315	.001	
315-320		Dark red hematitic zone; +15% quartz/hematite	3760	315-320	.001	

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PERCUSSION DRILL RECORD

Bighorn

84P-6

SHEET No.-

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G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84P-7

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size 235 Ft. Sheet No. 1 of 3
 Angle of Hole -35° Logged by G. Belik
 Claim Date Begun June 13/84
 Section Date Finished June 14/84
 Bearing 270° Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Weight (oz./tbn)	
0-20		Not sampled				
20-65		Light to dark pink and light purple dacite				
65-75		Mixture of dark pink dacite and light green andesitic to dacitic tuff	3779	70-75	.002	
75-80		Dark red strong hematitic zone; 60% hematite and quartz/hematite fragments; 30% kaolinized and hematized fragments; secondary Cu (cryso-colla)	3780	75-80	.009	
80-110		Pink, crackled, variably hematized dacite with thin quartz veins (2%-10%)	3781 3782 3783 3784 3785 3786	80-85 85-90 90-95 95-100 100-105 105-110	.010 .007 .001 .006 .001 .001	
110-115		Dark red hematitic dacite; 40% greenish colored frags (secondary chlorite?) 5%-10% hematitic quartz	3787	110-115	.015	

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84P-7 SHEET No. 2 of 3

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(oz./ton)	
115-130		Dark pink hematitic dacite; 2%-10% hematitic quartz	3788	115-120	.005	
			3789	120-125	.006	
			3790	125-130	.004	
130-135		Pink dacite; +30% quartz and vein-type frags.	3791	130-135	.027	
135-140		As 130-135; 70% quartz and vein-type fragments	3792	135-140	.038	
140-150		Very dark red strongly hematized zone; abundant hematitic quartz frags; secondary Cu	3793	140-145	.040	
			3794	145-150	.016	
150-175		Dark red strongly hematized and kaolinized zone with stockwork of hematitic quartz veins (10%-30%)	3795	150-155	.001	
			3796	155-160	.010	
			3797	160-165	.010	
			3798	165-170	.012	
			3799	170-175	.004	
175-180		Poor recovery (water injected in zone); 50% fresh diabase; 50% felsic; +10% hematitic quartz	3800	175-180	.001	
180-185		As 150-175	3801	180-185	.001	
185-190		30% as 150-175; 30% white siliceous rhyolite; 30% diabase; 5%-10% hematitic quartz	3802	185-190	.002	

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PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84P-7

SHEET No. 3 **of** 3

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G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs

HOLE No. 84P-8

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
 Angle of Hole -55°
 Claim.....
 Section.....
 Bearing 270°

Total Depth 310 Ft.
 % Recovery
 Elev. Collar 2460 Ft.
 Latitude
 Departure

Sheet No 1 of 4
 Logged by G. Belik
 Date Begun June 14/84
 Date Finished June 20/84
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (oz/ton)	
0-40		Not sampled				
40-100		White to pink limonitic dacite				
100-105		Dark pink variably hematized dacite; jarosite; minor quartz				
105-110		50% as 100-105	3901	105-110	.001	
		45% chloritic fragments				
		5% hematitic quartz				
		Moderate hematite alteration				
110-120		Hematized diabase; 10% hematitic quartz	3902	110-115	.001	
			3903	115-120	.002	
120-125		Hematized dacite; 10% dark green diabase; 5%-10% hematitic quartz	3904	120-125	.001	
125-130		White to dark pink dacite; 20% hematitic quartz	3905	125-130	.004	

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84P-8 SHEET No. 2 of 4

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(oz./ton)	
130-135		Mainly soft red powder; kaolinized and hematized dacite; 20% hematitic quartz	3906	130-135	.046	
135-155		Light to dark pink dacite with veinlets of hematitic quartz (3%-10%)	3907	135-140	.001	
			3908	140-145	.001	
			3909	145-150	.001	
			3910	150-155	.001	
155-160		Moderate to strongly hematized dacite; 5% hematitic quartz	3911	155-160	.004	
160-175		White to pink dacite with stockwork of thin quartz veinlets (5%)	3912	160-165	.001	
			3913	165-170	.002	
			3914	170-175	.004	
175-180		White to pink kaolinized dacite; 30% quartz and hematitic quartz	3915	175-180	.004	
180-185		As 175-180; 5%-10% hematitic quartz	3916	180-185	.010	
185-190		Kaolinized and moderately hematized dacite; +20% hematitic quartz	3917	185-190	.001	
190-195		as 185-190 with 20% diabase fragments; 20% quartz	3918	190-195	.001	

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84P-8

SHEET No. 3 of 4

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Wt (oz./ton)	
195-200		Dark green hematized diabase; 2% quartz	3919	195-200	.001	
200-205		70% diabase; 25% hematized/kaolinized felsic; 5% hematitic quartz	3920	200-205	.001	
205-210		Mainly strongly hematized diabase; abundant secondary Cu; 5% hematitic quartz	3921	205-210	.036	
210-245		Dark red strongly hematized and kaolinized felsic with stockwork of hematitic quartz veins (15%-40%) 240-245 : 30% diabase fragments	3922 3923 3924 3925 3926 3927 3928	210-215 215-220 220-225 225-230 230-235 235-240 240-245	.008 .020 .006 .004 .005 .004 .004	
245-250		Intensely hematized diabase with 2%-5% hema- titic quartz	3929	245-250	.001	
250-255		As 210-245; 30% diabase; 10% hematitic quartz	3930	250-255	.001	
255-275		Mainly hematized diabase; 2%-5% hematitic quartz	3931 3932 3933 3934	255-260 260-265 265-270 270-275	.001	

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Bighorn

HOLE No. 84P-8

SHEET No. 4 of 7

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Bighorn Drill Logs

HOI E No 84PH-9

HOLE No. 84PH-9.....

DIP AND AZIMUTH TEST		
	Corrected	
	Angle	Azimuth
Footage		

Total Depth 225 Ft.
 % Recovery
 Elev. Collar 2564 Ft.
 Latitude
 Departure
 Sheet No 1 of 3
 Logged by G. Belik
 Date Begun June 21/84
 Date Finished June 22/84
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (oz/ton)	Au* (oz/ton)
0-10		Not sampled				
10-20		Light green Precambrian andesitic gneiss and schist				
20-30		Hematized gneiss and schist with diabase intervals				
30-60		White to dark pink dacite; minor quartz				
60-70		Hematized diabase; 5%-10% hematitic quartz	3848	60-65	.012	
			3849	65-70	.018	
70-75		Strongly veined, hematized diabase; 80% quartz and hematitic quartz	3850	70-75	.008	
75-90		Strongly hematized felsic with stockwork of hematitic quartz veins (30%-60%)	3851	75-80	.010	
			3852	80-85	.006	.008
			3853	85-90	.014	

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-9 SHEET No. 2 of 3

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(oz/ton)	Au* (oz/ton)
90-100		Hematized diabase with strong hematitic quartz veining (30%-40%)	3854 3855	90-95 95-100	.022 .020	.021* .015*
100-140		Dark red strongly hematized and kaolinized felsic with strong stockwork of hematitic quartz veins (20%-30%) 120-125 ; 30% diabase	3856 3857 3858 3859 3860	100-105 105-110 110-115 115-120 120-125	.018 .012 .014 .014 .012	.019* .011* .015* .011* .012*
			3861	125-130	.010	.008*
			3862	130-135	.026	.019*
			3863	135-140	.030	.037*
140-150		Hematized diabase with 15%-20% hematitic quartz; abundant secondary Cu	3864 3865	140-145 145-150	.018 .090	.013* .078*
150-155		Fault zone? poor recovery; mainly diabase and strongly hematized fragments; minor secondary Cu	3866	150-155	.016	.015*
155-160		Poor recovery; dark pink hematitic dacite; 5% quartz	3867	155-160	.006	.011*
160-165		Variably hematized dacite; 10% quartz and hematitic quartz	3868	160-165	.012	.013

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

Bighorn

84PH-9

HOLE No.

SHEET No.

3 of 3

PROPERTY

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(oz./ton)	Au* (oz./ton)
165-170		Moderate to strongly hematized felsic; 20% hematitic quartz; abundant secondary Cu	3869	165-170	.018	.019*
170-180		Strongly hematized felsic; 30% hematitic quartz abundant secondary Cu	3870 3871	170-175 175-180	.022 .016	.013* .001*
180-195		Variably hematized dacite with stockwork of hematitic quartz veinlets (10%-30%)	3872 3873 3874	180-185 185-190 190-195	.004 .026 .006	.025* .004*
195-200		Light to dark pink dacite; +5% hematitic quartz	3875	195-200	.008	
200-205		Dark pink dacite with abundant hematitic quartz veinlets (20%)	3876	200-205	.008	
205-225		White, pink, and maroon variable hematized dacite; 2%-5% quartz 220-225 : Secondary Cu	3877 3878	205-210 220-225	.004 .004	

G. BELIK & ASSOCIATES LTD.

PROPERTY..... Bighorn Drill Logs.....

HOLE No. 84PH-10

[illegible]

Core Size	Total Depth	Sheet No
Angle of Hole	% Recovery	1
Claim.....	Elev. Collar	of 4
Section.....	Latitude	Logged by G. Belik
Bearing	Departure	Date Begun
		June 22/84
		Date Finished
		June 23/84
		Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (oz/ ton)
0-30		Not sampled			
30-35		Dark green diabase; 1%-2% quartz			
35-45		Cream to pink partly kaolinized and hematized dacite; 30% diabase fragments; 5% quartz			
45-55		Dark green to maroon (hematized) mafic schist			
55-65		Hematized diabase; minor quartz			
65-120		Mainly light to dark pink dacite; locally partly chloritized; 1%-2% quartz			
120-125		60% dacite			
		40% diabase			
		Minor quartz			

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

Bighorn

84PH-10

HOLE No.

SHEET No. 2

of 4

PROPERTY

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(oz/ton)	
125-130		Hematized diabase; 1%-2% quartz	3879	125-130	.006	
130-135		70% medium to dark pink dacite; 20% diabase; +5% quartz; 1%-2% crysocola	3880	130-135	.008	
135-140		Diabase and hematized diabase; +20% hematitic quartz; secondary Cu	3881	135-140	.014	
140-145		Diabase and hematized felsic; +50% quartz and hematitic quartz; secondary Cu	3882	140-145	.018	
145-155		Strongly hematized felsic with 40%-70% hema- titic quartz and abundant secondary Cu	3883 3884	145-150 150-155	.016 .042	
155-160		Intensely hematized diabase with 20% hematitic quartz; secondary Cu	3885	155-160	.040	
160-190		Intensely hematized zone; mixture of diabase and felsic with strong hematitic quartz stockwork (30%-70%)	3886 3887 3888 3889 3890 3891	160-165 165-170 170-175 175-180 180-185 185-190	.046 .056 .078 .026 .022 .020	

G. BELIK & ASSOCIATES LTD. -

Bighorn

HOLE No.

84PH-10

SHEET No. 3

107

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(oz./ton)
190-200		Kaolinized and hematized felsic with 10%-30% hematitic and chloritic quartz veins	3892	190-195	.024
			3893	195-200	.044
200-210		Variably hematized diabase; 5%-10% hematitic quartz	3894	200-205	.018
			3895	205-210	.174
210-220		70%-80% quartz and vein-type material; host mainly diabase; fair secondary Cu	3896	210-215	.096
			3897	215-220	.080
220-225		Mixture of felsic to andesitic volc fragments with 30% quartz and vein-type fragments; secondary Cu	3898	220-225	.026
225-230		Mixture of odd vein-type fragments (10%), quartz (5%), felsic, breccia (30%) & diabase	3899	225-230	.001
230-235		Dark pink dacite with chlorite/hematite alteration zones; 5% quartz	3900	230-235	.016
235-240		Pink dacite crackled with hematite and hematitic quartz veinlets (10%)	3951	235-240	.001

G. BELIK & ASSOCIATES L.D.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-10 SHEET No. 4 of 4

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (oz./ton)	
240-265		Pale green to pink dacite; minor quartz				
265-270		Partly kaolinized and hematized felsic; minor quartz				
270-275		Orange powder; cream partly hematized and kaolinized dacite cut by hematitic quartz veinlets (+5%)				
275-305		Pale green to dark pink dacite; 1%-3% quartz				
305-310		Red hematitic dacite; 5%-10% hematitic quartz	3952	305-310	.008	
310-335		Hematized and kaolinized felsic with stockwork of quartz and hematitic quartz veins (10%-30%)	3953	310-315	.009	
			3954	315-320	.004	
			3955	320-325	.001	
			3956	325-330	.001	
			3957	330-335	.001	
335-350		Pink dacite; 2%-5% quartz	3958	335-340	.001	
		335-340 : secondary Cu				
350-355		Banded dacitic tuff; minor quartz				

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84PH-11

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
 Angle of Hole -34°
 Claim
 Section
 Bearing 98°

Total Depth 200 Ft.
 % Recovery
 Elev. Collar 2590 Ft.
 Latitude
 Departure

Sheet No 1 of 2
 Logged by G. Belik
 Date Begun June 24/84
 Date Finished June 25/84
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (oz/ton)	
0-20		Not sampled				
20-40		Bright red strongly hematized, Precambrian greenschist; minor quartz	3959 3960	30-35 35-40	.001 .007	
40-50		As 20-40 with 60% hematitic quartz 45-50 : 20% diabase	3961 3962	40-45 45-50	.004 .008	
50-70		Silicified and weakly chloritized dacite with 10%-30% quartz (locally amethyst) and hematitic quartz	3963 3964 3965 3966	50-55 55-60 60-65 65-70	.007 .001 .001 .001	
70-75		Dark pink to maroon, moderately hematized dacite; 15% quartz	3967	70-75	.001	
75-105		Hard, white, pink and maroon dacite with thin hematitic quartz veinlets (2%-8%)	3968 3969 3970 3971 3972	75-80 80-85 85-90 90-95 95-100	.001 .001 .001 .001 .001	

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

Bighorn

HOLE No. 84PH-11

SHEET No. 2 of 2

PROPERTY

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(oz/ ton)	
			3973	100-105	.001	
105-120		Mainly dark maroon, siliceous dacite; 2%-10% hematitic quartz	3974	105-110	.013	
			3975	110-115	.017	
			3976	115-120	.003	
120-140		Moderately hematized dacite with stockwork of small hematitic quartz veins (5%-15%)	3977	120-125	.031	
			3978	125-130	.085	
		120-130 : secondary Cu	3979	130-135	.096	
			3980	135-140	.010	
140-155		Kaolinized and hematized felsic; stockwork of hematitic quartz veins (10%-30%)	3981	140-145	.011	
			3982	145-150	.010	
			3983	150-155	.002	
155-170		Hematized diabase; 10%-15% hematitic quartz; secondary Cu	3984	155-160	.004	
			3985	160-165	.084	
			3986	165-170	.037	
170-185		Moderately hematized diabase; 1%-5% quartz; minor secondary Cu	3987	170-175	.001	
185-200		Siliceous pink dacite; minor quartz				

G. BELIK & ASSOCIATES LTD.

HOLE No. 84PH-12

HOLE No. 84PH-12

[illegible]

Core Size 300 Ft.
 Angle of Hole -70°
 Claim.....
 Section.....
 Bearing 98°
 Total Depth 300 Ft.
 % Recovery
 Elev. Collar 2590 Ft.
 Latitude
 Departure
 Sheet No 1 of 3
 Logged by G. Belik
 Date Begun June 26/84
 Date Finished June 27/84
 Core Stored At

[illegible]

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84PH-12

SHEET No. 2

of 3

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(oz/ton)	
135-230		Moderate to strongly hematized felsic; diabase fragments generally present throughout section;	3939	135-140	.001	
		strong hematitic quartz stockwork (av. 30% quartz); vein quartz locally chloritic	3940	140-145	.003	
			3941	145-150	.001	
			3942	150-155	.001	
			3943	155-160	.001	
			3944	160-165	.001	
			3945	165-170	.001	
			3946	170-175	.001	
			3947	175-180	.001	
			3948	180-185	.001	
			3949	185-190	.006	
			3950	190-195	.007	
			3989	195-200	.032	
			3990	200-205	.038	
			3991	205-210	.001	
			3992	210-215	.001	
			3993	215-220	.009	
			3994	220-225	.021	
			3995	225-230	.008	
230-238		Siliceous white to dark pink dacite; minor quartz	3996	230-235	.006	
			3997	235-240	.015	
238-278		Hematitic diabase and kaolinized and hematized felsic; generally good quartz stockwork with	3998	240-245	.036	
			3999	245-250	.012	

G. BELIK & ASSOCIATES LTD.

Bighorn

84PH-12

HOLE No.

SHEET No. 3

3

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G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs

HOLE No. 84PH-13

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size 0
 Angle of Hole -35
 Claim
 Section
 Bearing 62°

Total Depth 100 Ft.
 % Recovery
 Elev. Collar 2550 Ft.
 Latitude
 Departure

Sheet No 1 of 2
 Logged by G. Belik
 Date Begun June 27/84
 Date Finished June 27/84
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(oz/ton)		
0-5		Not sampled					
10-15		Hematitic diabase; minor quartz					
15-20		Pale green to pink dacite; minor quartz					
20-25		Hematitic diabase 5%-10% quartz					
25-30		Dark red strongly hematitic zone; +30% hematitic quartz	5008	25-30	.025		
30-35		Hematized and kaolinized dacite; 5% quartz	5009	30-40	.006		
35-40		Siliceous white to pink dacite; 1%-2% quartz					
40-45		Moderately hematized dacite; 5% quartz	5010	40-45	.002		
45-55		Hematized and kaolinized felsic; 10% hematitic quartz	5011	45-50	.001		

G. BELIK & ASSOCIATES LTD. -- PERCUSSION DRILL RECORD

**Bighorn
PROPERTY**

84PH-13

HOLE No.

SHEET No. 2

2

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G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84PH-14

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
Angle of Hole
Claim.....
Section.....
Bearing
Total Depth 180 Ft.
% Recovery
Elev. Collar
Latitude 2550 Ft.
Departure
Sheet No. 1 of 2
Logged by G. Belik
Date Begun June 27/84
Date Finished June 28/84
Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(oz/ton)	
0-20		Not sampled				
20-25		Dacite; minor quartz				
25-30		60% diabase				
		40% dacite				
30-35		Dacite; minor quartz				
35-40		30% diabase				
		70% dacite				
		minor quartz				
40-45		Mainly diabase; minor quartz				
45-50		Mainly dacite; 3%-5% quartz				
50-60		Siliceous pink dacite; 1%-2% quartz				
60-75		Moderate to strongly hematized diabase; 5%-10% hematitic quartz veins	5017	60-70	.009	
			5018	70-80	.003	

G. BELIK & ASSOCIATES LTD."

Bighorn

471-44478

HOLE No.

SHEET No. 2

2

PROPERTY.

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G. BELIK & ASSOCIATES LTD." - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs
HOLE No. 84PH-15

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
Angle of Hole -30°
Claim
Section
Bearing
Total Depth 160 Ft.
% Recovery
Elev. Collar 2563 Ft.
Latitude
Departure
Core Stored At

Sheet No 1 of 3
Logged by G. Belik
Date Begun June 28/84
Date Finished July 10/84

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE Au (oz/ton)	
0-10		Not sampled			
10-35		Dark green diabase; minor quartz 30-35 : hematitic veinlets and fractures			
35-40		As 10-35; 40% of section hematitic			
40-50		Hematized diabase; 1%-2% quartz			
50-55		Dark brown hematitic diabase and chloritized felsic; 30% hematitic quartz	5028	50-60 .002	
55-60		Mixture of diabase and felsic fragments; most frags jarositic; 5%-10% quartz			
60-65		65% diabase, 30% jarositic, 5% quartz	5029	60-70 .004	
65-70		45% diabase, 30% felsic, 20% jarositic, 5% hematitic quartz			

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-15 SHEET No. 2 of 3

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)	Au(oz/ton)
70-80		Dark pink hematitic dacite; 1%-5% quartz	5030	70-80		.001
80-85		Dark pink hematitic dacite; 20% quartz (some Amethyst)	5031	80-90		.010
85-90		Pink chloritic dacite with thin veinlets of quartz				
90-100		Pink dacite with chloritic fractures; minor quartz				
100-110		Maroon dacite cut by veinlets of quartz (5%-10%)		100-105 105-110	590 340	.019 .011
110-115		Strongly hematized zone; 70% diabase, 20% felsic, 10% quartz		110-115	1500	.055
115-120		Strongly hematized diabase; 15% hematitic quartz		115-120	1260	.060
120-125		Mainly dark red hematitic powder; fragments consist of hematized diabase (major), felsic (10%) and hematitic quartz (10%-15%)		120-125	2860	.091

G. BELIK & ASSOCIATES LTD.

Bighorn

51-H478

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PERCUSSION DRILL RECORD

HOLE No. 84PH-16

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size	245 Ft.	Total Depth	Sheet No. 1	of 4
Angle of Hole	-60°	% Recovery	Logged by	G. Belik
Claim		Elev. Collar	Date Begun	July 10/84
Section		Latitude	Date Finished	July 11/84
Bearing	288°	Departure	Core Stored At	

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)	Au # (oz/ton)
0-70		Dark green diabase; sections with minor quartz					
70-80		Brown, moderately hematized diabase; 2%-5% quartz		75-80	5		
80-90		Moderately hematized diabase; 5%-10% quartz		80-85	5		
				85-90	5		
90-95		Hematized diabase; 10%-15% quartz and hematitic quartz		90-95	340	.019	.021
95-100		Strongly hematized diabase; 20%-30% quartz		95-100	830	.031	.016
100-105		Intensely hematized diabase; +40% hematitic quartz and quartz; secondary Cu		100-105	390	.013	.034
105-110		Strongly hematized diabase; 20%-30% quartz; secondary Cu		105-110	1390	.059	.056
				*Kamloops	Research	Check	Assay

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-16 SHEET No. 2 of 4

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)	Au* (oz/ton)
110-115		40% diabase, 40% hematized felsic, 20% hematitic quartz; jarositic fragments		110-115	390	.013	.018*
115-120		Dark pink dacite; 15%-20% diabase; 20%-30% hematitic quartz; jarositic fragments		115-120	560	.016	.014*
120-130		Pink to maroon hematized and partly chloritized dacite; 20%-30% quartz; jarosite		120-125 125-130	410 610	.013 .016	.012* .017*
130-155		Moderately hematized dacite; secondary chlorite locally evident; vein quartz ranges from 10%-30%; amethyst locally present		130-135 135-140 140-145 145-150 150-155	220 300 1960 550 410	.006 .007 .078 .019 .016	.005* .006* .059* .013* .012*
155-160		Medium to dark pink dacite; 40% quartz and hematitic quartz		155-160	590	.017	.015*
160-170		Pink dacite cut by thin quartz, quartz/hematite veinlets (5%-10%)		160-165 165-170	330 210	.009 .006	.007* .008*
170-175		Variable pink dacite; chloritic fragments; minor quartz; jarosite		170-175	320	.009	.008*

G. BELIK & ASSOCIATES LTD." - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84PH-16

SHEET No. 3 of 4

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)	Au* (oz/ton)
175-180		Moderately hematized and kaolinized felsic; 5%-10% quartz		175-180	2460	.106	.097*
180-185		Strongly hematized and kaolinized zone; 20%- 30% quartz (chloritic and hematitic varieties)		180-185	5920	.210	.221*
185-190		Very dark red moist hematitic zone; abundant hematitic quartz		185-190	8400	.336	.339*
190-200		Dark red/brown strongly hematized/kaolinized zone; 10%-20% quartz		190-195 195-200	5920 1830	.204 .087	.179* .065*
200-205		White, kaolinized, limonitic felsic; 20% hematitic quartz		200-205	1820	.080	.076*
205-210		Mixture of white, green and maroon felsic fragments; +10% quartz		205-210	950	.037	.039*
210-220		Diabase and hematized diabase; +20% hematitic quartz		210-215	13860	.440	.397*
220-225		210-215 : abundant secondary Cu		215-220	7020	.206	.220*
		Mixture of diabase and felsic; 10% quartz		220-225	1720	.060	.063*

G. BELIK & ASSOCIATES LTD.

PROPERTY Bighorn

HOLE No. 84PH-16

SHEET No.

17

10.

17

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PROPERTY..... Bighorn Drill Logs

HOLE No. 84PH-17.....

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size .....	.....0.....	Total Depth	165 Ft.	Sheet No	1	of	1
Angle of Hole	-60	% Recovery .....	.....	Logged by	G. Belik		
Claim.....	.....	Elev. Collar	2450 Ft.	Date Begun	July 11/84		
Section.....	.....	Latitude .....	.....	Date Finished	July 12/84		
Bearing	265°	Departure .....	.....	Core Stored At .....	.....	

[illegible]

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84PH-18

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size Total Depth 500 Ft. Sheet No 1 of 4
 Angle of Hole -90° % Recovery Logged by G. Belik
 Claim Elev. Collar 2480 Ft. Date Begun July 13/84
 Section Latitude Date Finished July 16/84
 Bearing Departure Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)	Au(oz/ton)	Ag(ppm)
0-10		Shaft dump- not sampled					
10-20		Dark red hematized diabase; strong hematitic quartz veining; secondary Cu		10-20	2420	.076	2.6
20-30		Strong hematitic zone; +40% hematitic quartz; abundant secondary Cu		20-30	1300	.047	2.3
30-40		Hematized diabase; 30% quartz; secondary Cu		30-40	1960	.059	1.9
40-50		Mainly orange powder; fragments consist of 50% diabase, 40% kaolinized/hematized felsic, 5%-10% quartz; minor secondary Cu		40-50	1470	.048	.8
50-60		Diabase and moderately hematized felsic; generally minor quartz		50-60	530	.017	.7

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84PH-18

SHEET No. 2 of 4

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)	Au (oz/ton)	Ag(ppm)
60-70		Pink dacite with thin quartz veinlets (2%)		60-70	210	.009	.3
70-80		Dark pink dacite with 2%-5% hematitic quartz		70-80	340	.013	.4
80-90		Dark pink and pale green dacite; 2% quartz		80-90	320	.011	.4
90-100		Dark pink dacite; 35% quartz/hematitic quartz; minor secondary Cu		90-100	990	.032	.9
100-120		Hematitic dacite; 20%-30% quartz		100-110	880	.029	1.4
				110-120	220		.8
120-140		Hematitic dacite; 5%-10% quartz		120-130	90		.4
				130-140	20		.8
140-150		Hematized dacite and diabase; 10% hematitic quartz		140-150	70		.8
150-170		Dark green, locally hematized diabase; 5% quartz		150-160	60		.7
				160-170	50		.8
170-180		70% diabase, 30% felsic, 2% quartz		170-180	5		.7.

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84Ph-18

SHEET No. 3 of 4

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Ag (ppm)
180-190		Hematized diabase; 5%-10% quartz		180-190	5	.7
190-200		Hematized diabase; minor quartz		190-200	5	1.1
200-210		Diabase and hematized dacite; 5% quartz		200-210	5	1.3
210-220		Mainly hematized diabase; +5% quartz		210-220	5	.9
220-260		Dark green diabase; 5%-10% hematitic quartz		220-230	5	.8
				230-240	210	.6
				240-250	5	.7
				250-260	550	.8
260-300		Hematized diabase; 5% hematitic quartz		260-270	780	1.0
		290-300 : poor recovery		270-280	380	1.8
				280-290	860	3.7
				290-300	1530	2.3
300-320		Hematized diabase with abundant secondary Cu; minor quartz		300-310	160	1.9
				310-320	135	.4
320-330		Brick red hematized felsic; abundant secondary Cu; minor quartz		320-330	20	.1
330-340		Hematized dacite; minor quartz		330-340	5	.1

G. BELIK & ASSOCIATES LTD." - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-18 SHEET No. 4 of 4

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Ag (ppm)
340-360		Variable hematized dacite; minor quartz		340-350	10	.1
				350-360	5	.1
360-370		Hematized dacite; 5% quartz		360-370	40	.1
370-380		White and pink dacite; 20% dark fragments (mainly fine specular hematite)		370-380	5	.1
380-390		Dark red/brown and white to maroon felsic (variably hematized); abundant fine specularite; generally minor quartz		380-390	15	.1
390-400		White to pale pink dacite; 30% strongly hem- atized fragments		390-400	5	.1
400-440		Strongly hematized dacite cut by numerous hematitic (fine specularite) veinlets; some quartz		400-410	5	.1
				410-420	10	.1
				420-430	5	.1
				430-440	5	.1
440-500		Dark brown strongly hematized felsic; 15%-20% of fragments specular hematite and quartz/ hematite		440-450	15	.1
				450-460	5	.1
				460-470	5	.1
				470-480	5	.1
				480-490	5	.1
				490-500	5	.1

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs
 HOLE No. 84PH-19

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
 Angle of Hole -65°
 Claim
 Section
 Bearing 94°
 Total Depth 335 Ft.
 % Recovery
 Elev. Collar 2623 Ft.
 Latitude
 Departure
 Sheet No 1 of 5
 Logged by G. Belik
 Date Begun July 16/84
 Date Finished July 16/84
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)
0-35		Not sampled				
35-80		Fresh, green, well-foliated chlorite-hornblende-sericite-epidote schist (Precambrian basement)				
80-105		As 35-80 with moderate to strongly hematized sections				
105-120		Mixture of diabase and kaolinized/hematized felsic; strong hematitic quartz veining; secondary Cu generally evident throughout section	105-110	105-110	800	.029
				110-115	1460	.049
				115-120	1145	.062
120-130		Light green dacite; 40%-70% of unit dark red and strongly hematized; thin quartz stringers (2%-5%)		120-125	205	.009
				125-130	90	.003

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-19 SHEET No. 2 of 5

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)
130-135		Hematized and kaolinized felsic; 20% dark green chloritic (secondary ?) fragments; +5% quartz		130-135	160	.010
135-160		White (kaolinized) and maroon (hematized) felsic cut by hematitic quartz veins and veinlets				
		135-140 : 5%-10% quartz		135-140	155	.007
		140-145 : 5%-10% quartz		140-145	350	.013
		145-150 : 40% quartz		145-150	1675	.041
		150-155 : 15% quartz		150-155	460	.013
		155-160 : 10% quartz		155-160	405	.010
160-165		Variable pink dacite; minor quartz		160-165	110	.005
165-170		Pink, green and maroon dacite; minor quartz		165-170	560	.015
170-175		Dark green diabase; +30% hematitic quartz		170-175	6900	.276
175-185		White to maroon hematized and kaolinized dacite				
		175-180 : 30% hematitic quartz		175-180	4200	.145
		180-185 : 15% hematitic quartz		180-185	4510	.165
185-190		Variable pink dacite; 5%-10% hematitic quartz		185-190	3180	.098

G. BELIK & ASSOCIATES LTD." - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-19 SHEET No. 3 of 5

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)
190-200		Dark pink dacite; minor quartz		190-195	740	.030
				195-200	550	.024
200-205		Dark pink to maroon dacite; 5% hematitic quartz		200-205	1020	.042
205-210		Strongly hematized dacite; 5%-10% quartz		205-210	1700	.051
210-225		Dark pink dacite				
		210-215 : 10% hematitic quartz		210-215	460	.017
		215-220 : 15% hematitic quartz; secondary Cu		215-220	1280	.069
		220-225 : 5% quartz		220-225	570	.028
225-230		White, maroon and red dacite; minor quartz		225-230	225	.018
230-235		Hematized felsic and diabase; minor quartz		230-235	210	.012
235-240		Pink to maroon dacite; 2%-4% quartz		235-240	110	.010
240-245		Grey to pink dacite; minor quartz		240-245	240	.017
245-250		Dark pink and green dacite; 5%-10% quartz		245-250	370	.009
250-255		Dark pink to maroon dacite; 15% hematitic quartz		250-255	130	.006

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

Bighorn

HOLE No. 84PH-19

SHEET No. 4

of 5

PROPERTY

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)
255-260		White to pink dacite; +30% hematitic quartz and quartz		255-260	760	.034
260-265		Variably hematized dacite; +15% hematitic quartz		260-265	330	.018
265-270		Hematized diabase and felsic; 20% hematitic quartz		265-270	540	.029
270-275		White to maroon (hematized) felsic; +10% hem- ematitic quartz		270-275	700	.037
275-280		White (bleached) to pink dacite; 35% hematitic quartz		275-280	270	.015
280-285		White and maroon dacite; chloritic frags; 5%-10% hematitic quartz		280-285	590	.026
285-295		White to maroon hematized and kaolinized felsic; fair stockwork of quartz veins		285-290 290-295	1270 1210	.049 .049
295-300		Strong hematitic quartz vein zone (+60%) strongly hematized felsic host unit; secondary Cu		295-300	1160	.048

G. BELIK & ASSOCIATES LTD. -

Bighorn

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G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84PH-20

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
 Angle of Hole -60°
 Claim
 Section
 Bearing 273

Total Depth 480 Ft.
 % Recovery
 Elev. Collar 2486 Ft.
 Latitude
 Departure

Sheet No. 1 of 4
 Logged by G.A. Belik
 Date Begun July 17/84
 Date Finished July 18/84
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)
0-160		Not sampled			
160-215		Dark green diabase; sections locally contain 1%-5% quartz/hematite stringers with dark red, hematitic envelopes		180-185	10
		213-215 : +10% hematitic quartz		185-190	5
				190-195	5
				195-200	10
				200-205	10
				205-210	5
				210-215	10
215-220		Diabase and moderately hematized welded tuff; 5% quartz; trace secondary Cu		215-220	25
220-225		Green, yellow and purple (hematization)felsic minor quartz		220-225	15
225-230		Mixture of white and purple, hematized felsic		225-230	5

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84PH-20

SHEET No. 2 of 4

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE Au (ppb)		
230-245		Orange cuttings; mixture of white, purple and red fragments; specular hematite along fractures; minor quartz		230-235 235-240 240-245	5 120 100	
245-265		White and purple (hematized) felsic; black hematite along fractures		245-250 250-255 255-260 260-265	30 50 35 45	
265-275		Pink dacite; black hematite along fractures		265-270 270-275	10 15	
275-280		Dark pink dacite with 1%-2% thin quartz/hematite veins; black hematite along fractures		275-280	10	
280-315		Light green and pink dacite; locally a few thin quartz veins and hematitic fractures		280-285 285-290 290-295 295-300 300-305 305-310 310-315	5 5 5 5 50 40 35	
315-330		Green and dark pink dacite; minor quartz		315-320 320-325 325-330	15 20 5	

G. BÉLIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84PH-20

SHEET No. 3

of 4

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)
330-365		Green and pink dacite; locally minor vein quartz	330-335	5		
			335-340	5		
			340-345	5		
			345-350	5		
			350-355	25		
			355-360	10		
			360-365	5		
365-370		365-369 : dark pink dacite with 2%-5% quartz	365-370	10		
		369-370 : dark green diabase with 10% hematitic quartz				
370-375		370-373 : diabase; 5% quartz			145	
		373-375 : red & white felsic; 2%-5% quartz				
375-385		Variably hematized, white, red and maroon dacite; generally minor vein quartz	375-380	20		
			380-385	60		
385-390		Chocolate brown hematized tuff; 2%-4% specular hematite and quartz	385-390	85		
390-427		Strong vein section; section averages 80%-90% quartz (mainly banded hematitic varieties with milky white, translucent and amethyst varieties); sections with abundant secondary Cu	390-395	4280	.124	
			395-400	2940	.088	
			400-405	2360	.096	
			405-410	1790	.069	
			410-415	535	.018	

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-20 SHEET No. 4 of 4

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/tpn)	
				415-420	925	.029	
				420-425	1290	.049	
				425-430	240		
427-430		Strongly hematized diabase (?); 5%-10%					
		hematitic quartz					
430-435		White to maroon dacite; +10% hematitic quartz		430-435	55		
435-445		Moderate to strongly hematized, white to purple		435-440	40		
		felsic crackled with hematitic fractures; 20%		440-445	270		
		hematite + hematitic quartz					
445-455		Green diabase and brown hematized diabase;		445-450	80		
		5%-7% hematitic quartz		450-455	85		
455-465		Crackled white and maroon dacite; 5%-10%		455-460	30		
		hematitic quartz		460-465	45		
465-480		Strongly hematized Precambrian greenschist		465-470	30		
				470-475	15		
				475-480	50		

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84PH-21

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
 Angle of Hole -60
 Claim
 Section
 Bearing 72°
 Total Depth 355 Ft.
 % Recovery
 Elev. Collar 2435 Ft.
 Latitude
 Departure
 Sheet No. 1 of 5
 Logged by G. Belik
 Date Begun July 19/84
 Date Finished July 24/84
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE			
0-20		Not sampled					
20-28		Hematized Precambrian greenschist					
28-50		Leucocratic feldspar augen gneiss					
50-55		Granite gneiss					
55-65		Various Precambrian gneisses and schists					
65-70		Mixture of schist, tertiary volcanics and diabase; possible fault zone					
70-75		Soft Precambrian schist					
75-80		Mixture of granite gneiss and diabase					
80-90		Mainly sheared green gneiss					

G. BELIK & ASSOCIATES LTD." -

Bighorn

84PH-21

HOLE No.

SHEET No. 2

5

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)	Au (oz/ton)	Au* (oz/ton)
90-100		Precambrian granite gneiss; locally hematized; 2%-3% vein quartz					
100-105		Moderately hematized Precambrian schist; 1%-2% vein quartz					
105-115		Moderately hematized schist and diabase					
115-150		Light pink to maroon dacite; sections with minor vein quartz					
150-155		Light pink and green dacite					
155-195		Monotonous pink dacite with minor vein quartz		190-195	5		
195-200		Pink dacite with 30% fracture controlled chloritic alteration; 5% quartz and hematitic quartz		195-200	30		
200-205		Pink dacite and red hematitic dacite; 20%-30% quartz and hematitic quartz; secondary Cu		200-205	1510	.038	.044
				*Kamloops Research Check Assay			

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-21 SHEET No. 3 of 5

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)	Au (oz/ton)	Au* (oz/ton)
205-225		Pink dacite with stockwork of hematitic quartz veins; greenish hue to unit (possible chloritization)					
		205-210 : +30% quartz		205-210	2100	.052	.059*
		210-215 : +30% quartz		210-215	2430	.068	.063*
		215-220 : +60% quartz		215-220	2110	.044	.053*
		220-225 : +30% quartz		220-225	835	.024	.031*
225-230		Hematized dacite with strong hematitic quartz stockwork (60%)		225-230	725	.020	.021*
230-235		Strongly hematized felsic with +50% hematitic quartz; secondary Cu		230-235	1250	.036	.041*
235-245		Strongly hematized and kaolinized felsic with +30% hematitic quartz; secondary Cu in fair abundance		235-240	800	.028	.031*
				240-245	630	.024	.024*
245-250		Light pink to maroon felsic; +10% hematitic quartz		245-250	290	.006	.010*
250-255		White to maroon, moderate to strongly hematized felsic with +15% hematitic quartz; secondary Cu		250-255	5		

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84PH-21

SHEET No. 4

of 5

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)		
255-263		Strongly kaolinized and hematized felsic; +20% fine specular hematite; some hematitic quartz fragments		255-260 260-265	5 5		
263-270		Pink dacite 269-270 : strong hematitic quartz veining		265-270	5		
270-275		White pink and maroon dacite with stockwork of hematite and quartz/hematite veins (10%-15%)		270-275	30		
275-298		Crackled white and pink dacite; minor quartz 285-290 : +20% quartz + hematitic quartz		275-280 280-285 285-290 290-295	5 5 100 5		
298-300		Hematitic quartz vein with secondary Cu		295-300	100		
300-305		Medium to dark pink dacite breccia; 15% vein quartz		300-305	5		
305-309		White green and maroon dacite		305-310	40		
309-310		Hematitic quartz vein with secondary Cu					

G. BELIK & ASSOCIATES LTD.

Bighorn

84PH-21

HOLE No.

SHEET No. 5

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PROPERTY-

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G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84PH-22

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
 Angle of Hole -60°
 Claim
 Section
 Bearing 72°
 Total Depth 345. Ft.
 % Recovery
 Elev. Collar 2487 Ft.
 Latitude
 Departure
 Sheet No 1 of 4
 Logged by G. Belik
 Date Begun July 25/84
 Date Finished July 28/84
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE		
0-60		Not sampled				
60-75		Fractured, blocky, dark pink dacite				
75-95		Precambrian granitic gneiss and greenschist				
95-110		Blocky, fractured, dark pink dacite				
110-130		Sheared, light green and pink dacite				
130-162		Pink, green and locally purple dacite crystal tuff; minor vein quartz				
162-170		Dark olive green basaltic tuff				
170-175		Green and purple crystal tuff				
175-185		Dark pink to maroon and dark green crystal tuff; porphyritic texture				

G. BELIK & ASSOCIATES LTD.

Bighorn

84PH-22

PROPERTY:

HOLE No.

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SHEET No. 2

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G. BELIK & ASSOCIATES LTD." - PERCUSSION DRILL RECORD

Bighorn

HOLE No. 84PH-22

SHEET No. 3

of 4

PROPERTY

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)	Au (oz/ton)
255-274		Intensely hematized felsic with abundant fine specularite; 10% vein quartz; numerous white, kaolinized fragments		255-260 260-265 265-270 270-275	850 700 690 250	.022 .020 .016 .006
274-285		Strongly hematized and kaolinized felsic with strong hematitic, quartz vein stockwork (10%-20%)		275-280 280-285	170 100	.004 .004
285-290		Pink dacite; 20%-30% hematitic quartz		285-290	140	.004
290-295		Strongly hematized vein/shear zone; 50% hematitic quartz		290-295	350	.011
295-300		Strongly hematized diabase (?); 2%-5% vein quartz		295-300	30	
300-303		Dark pink dacite with 60% vein quartz (most hematitic)		300-305	60	
303-329		Variable pink, green and maroon (hematitic) dacite; generally minor vein quartz		305-310 310-315 315-320 320-325 325-330	160 150 60 5 100	

G. BELIK & ASSOCIATES LTD."

Bighorn

84PH-22

HOLE No.

PROPERTY

SHEET No.:

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**COAE
LOST**

DESCRIPTION

SAMPLE No.

**WIDTH
of SAMPLE**

Au (ppb)

'DEPTH'

329-333

White and dark maroon (hematitic) felsic:

+20% hematitic quartz; abundant secondary Cu

(mainly malachite)

333-345

Dark pink dacite; minor quartz

335-340

5

340-345

5

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84PH-23

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size Total Depth 305 Ft. Sheet No 1 of 3
 Angle of Hole 52.5° Logged by G.A. Belik
 Claim 2529 Ft. Date Begun July 28/84
 Section Latitude Date Finished July 29/84
 Bearing 66° Departure Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)
0-40		Not sampled			
40-50		Precambrian greenschist with diabase dyke; locally hematitic quartz veining			
50-85		Variable pink, pale green and maroon dacite; minor vein quartz			
85-103		Hematized diabase; 5% vein quartz		85-90	5
				90-95	5
				95-100	50
103-107		Sheared, green, chloritized dacite; minor vein quartz		100-105	5
				105-110	5
107-114		Pink dacite; minor quartz		110-115	5
114-120		Dark green, sheared, chloritized dacite		115-120	150

G. BELIK & ASSOCIATES LTD." - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-23 SHEET No. 2 of 3

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)		
120-155		Pink dacite; a few sections with quartz		120-125	5		
				125-130	5		
				130-135	20		
				135-140	5		
				140-145	5		
				145-150	5		
				150-155	70		
155-160		Pink to maroon and light green dacite; 20%- 30% vein quartz		155-160	30		
160-165		Dark maroon, locally chloritic dacite; 10% hematitic quartz		160-165	50		
165-185		Pink, pale green and maroon dacite; generally minor quartz		165-170	30		
				170-175	5		
				175-180	5		
				180-185	15		
185-200		Strong vein section; 30%-70% quartz (trans- lucent, hematitic, amethyst); host unit dark pink to maroon (hematitic) dacite		185-190	90		
				190-195	290		
				195-200	170		
200-210		Mixture of white siliceous felsic crackled with thin quartz veinlets and maroon, hematitic felsic; some large frags (2%) of hematitic quartz		200-205	40		
				205-210	20		

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-23 SHEET No. 3 of 3

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)	Ag (oz/ton)
210-240		Dark maroon, hematized dacite; stockwork of hematitic quartz veins					
		210-215 : 10% quartz		210-215	15		
		215-220 : +5% quartz		215-220	5		
		220-225 : 5%-10% quartz		220-225	5		
		225-230 : 15% quartz		225-230	50		
		230-235 : 15% quartz; malachite		230-235	740	.025	.08
		235-240 : +30% quartz; abundant malachite		235-240	4940	.126	.14
240-265		Strong vein zone; 80%-90% quartz (mainly Hema- titic varieties)		240-245	840	.029	.28
		250-265 : abundant jarosite		245-250	990	.032	.23
				250-255	335	.014	.78
				255-260	420	.018	.74
				260-265	640	.020	.68
265-270		Pale green, maroon and red (hematized) felsic; abundant jarosite; 30% quartz		265-270	610	.022	.35
270-285		Pink to maroon felsic; minor quartz		270-275	80		
				275-280	120		
				280-285	5		
285-305		Pink dacite; minor quartz		285-290	5		
				290-295	5		
				295-300	5		
				300-305	5		

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84PH-24

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size 350 Ft. Sheet No 1 of 4
 Angle of Hole -60° Logged by G. Belik
 Claim 2498 Ft. Date Begun July 30/84
 Section Latitude Date Finished July 30/84
 Bearing 17° Departure Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE Au (ppb)	
0-80		Not sampled			
80-90		Precambrian mafic diorite and greenschist			
90-95		Greenschist; locally hematized; +10% hematitic quartz	90-95	30	
95-100		Hematized greenschist and diabase; 10% hematitic quartz	95-100	100	
100-105		Hematized greenschist; 10% hematitic quartz	100-105	20	
105-160		Dark green diabase and hematized diabase; weak to moderate quartz veining	105-110	10	
		105-125 : 10%-15% hematitic quartz	110-115	20	
		125-155 : 5%-7% hematitic quartz (some amethyst)	115-120	90	
		155-160 : 15% quartz (hematitic + amethyst)	120-125	80	
			125-130	5	
			130-135	5	
			135-140	140	
			140-145	30	
			145-150	210	

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

Bighorn

84PH-24

HOLE No.

SHEET No.

4

PROPERTY

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)	Au (oz/ton)	
				155-160	5		
160-165		Strongly hematized zone; +20% quartz		160-165	40		
165-175		Strong vein zone (+70% quartz); host strongly hematized and chloritized		165-170	230		
				170-175	150		
175-190		Diabase and hematized diabase;					
		175-180 : 20% quartz (amethyst present)		175-180	30		
		180-185 : 5%-10% quartz; minor secondary Cu		180-185	5		
		185-190 : 15% quartz; minor secondary Cu		185-190	280	.007	
190-220		Strong vein/breccia zone averaging 60%-70% quartz; host unit strongly hematized and chloritized diabase (?)		190-195	410	.014	
				195-200	660	.016	
				200-205	500	.014	
		200-220 : interval with fair amount of secondary Cu		205-210	830	.026	
				210-215	500	.012	
				215-220	660	.018	
220-225		Sheared diabase and dacite; some quartz		220-225	1210	.034	
225-230		Vein/breccia zone; 70% quartz, hematitic quartz and vein-type fragments; dark maroon host; secondary Cu		225-230	4200	.106	
230-240		Very dark red hematitic zone; mainly mud from return; some hematitic quartz fragments; possible		230-235	1540	.042	
				235-240	650	.018	

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-24 SHEET No. 3 of 4

% DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/tor)
		sheared, highly hematized diabase				
240-245		Dark green and maroon, fine-grained volcanic; 30% quartz and hematitic quartz		240-245	390	.012
245-250		Sheared diabase; hematitic; minor quartz; abundant secondary Cu		245-250	270	.008
250-255		Similar to 245-250; mainly clay balls of gouge; +15% fragments of hematitic quartz; secondary Cu		250-255	190	.004
255-265		Mainly fault gouge with fragments of diabase, hematized diabase and hematitic quartz (5%-10%)		255-260 260-265	70 80	
265-275		Clay rich fault zone; sheared hematized felsies(?) and diabase; minor quartz		265-270 270-275	5 5	
275-292		Blue/green porphyritic dyke		275-280 280-285 285-290 290-295	5 5 5 110	
292-297		White dense siliceous rhyolite				
297-305		Variety of red hematitic and yellow jarositic fragments		295-300 300-305	180 140	

G. BELIK & ASSOCIATES LTD."

Bighorn

84PH-24

HOLE No.

SHEET No.

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PROPERTY:

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G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84PH-25

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size Total Depth 285 Ft. Sheet No. 1 of 3
 Angle of Hole -56° Logged by G. Belik
 Claim Elev. Collar 2400 Ft. Date Begun July 31/84
 Section Latitude Date Finished July 31/84
 Bearing 252° Departure Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)	Ag (oz/ton)
0-20		Not sampled					
20-38		Pink and pale green dacite; minor quartz					
38-48		Green andesitic tuff					
48-50		Pink to maroon felsic					
50-90		Weak to moderately hematized diabase; generally minor quartz					
90-95		Hematitic diabase and felsic; +10% hematitic quartz		85-90	510	.023	.01
				90-95	120	.006	.03
95-125		Hematized and kaolinized felsic; strong stockwork of hematitic quartz veins (20%-50%)		95-100	1670	.048	.05
				100-105	360	.013	.06
				105-110	550	.019	.06
				110-115	440	.018	.07
				115-120	70		
				120-125	60		

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84Ph-25 SHEET No. 2 of 3

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)	Ag (oz/ton)
125-135		Moderate to strongly hematized felsic; 10%-15% hematitic quartz		125-130	5		
				130-135	5		
135-140		Maroon hematized felsic; +20% hematitic quartz		135-140	5		
140-145		Moderately hematized and kaolinized felsic; +20% quartz and hematitic quartz		140-145	120		
145-150		Mixture of maroon, white, brown and green felsic fragments; 10% quartz		145-150	300		
150-155		Mixture of kaolinized, hematitic felsic and chloritized felsic(?); 10% quartz		150-155	100		
155-165		White to maroon, variably hematized and kaolinized felsic; 20% hematitic quartz		155-160	90		
				160-165	5		
165-173		Variably hematized dacite with strong quartz stockwork (30%-40%)		165-170	190		
				170-175	90		
173-185		Dark green and maroon (hematized) diabase; strong quartz stockwork (15%-20%)		175-180	300	.014	.04
				180-185	140	.006	.03

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84PH-25

SHEET No. 3 of 3

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)	Ag (oz/ton)
185-225		Strongly hematized, intense stockwork vein/ breccia zone; zone averages 80%-90% quartz and vein-type material; most quartz, banded hema- titic varieties with translucent, white and amethyst varieties		185-190 190-195 195-200 200-205 205-210 210-215 215-220 220-225	580 250 420 550 780 380 180 320	.018 .015 .024 .019 .032 .009 .010 .012	.06 .03 .02 .04 .04 .02 .03 .01
225-230		Pink to maroon hematized felsic; strong quartz stockwork (40%-50%)		225-230	250	.009	.03
230-235		Intensely crackled (micro breccia) pink and maroon felsic; 5%-10% quartz		230-235	5		
235-247		Hematized Precambrian greenschist		235-240 240-245 245-250	5 5 68		
247-285		Light to dark pink dacite; minor quartz		250-255 255-260 260-265 265-270 270-275 275-280 280-285	85 45 435 290 95 120 80		

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84PH-26

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size Total Depth 300 Ft. Sheet No 1 of 2
 Angle of Hole -56° Logged by G. Belik
 Claim 2630 Ft. Date Begun Aug. 1/84
 Section Latitude Date Finished Aug. 2/84
 Bearing 148° Departure Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE		
0-20		Not sampled				
20-48		Dark green diabase; locally hematized; minor quartz				
48-95		Medium to dark green mafic Precambrian schist; locally hematized				
95-125		Purple, epidote-rich greenschist; metavolcanic; Phenocryst preserved				
125-145		Mixture of greenschist and diabase; locally hematized				
145-165		Possible fault zone; mixture of sheared, altered Precambrian schist and Tertiary volcs.(?); 2%-5% quartz				
165-170		Green and pink porphyritic unit with epidote; possible tertiary dyke				

G. BELIK & ASSOCIATES LTD.

.Bighorn

HOLE No. 84PH-26

SHEET No. 2 of 2

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G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84PH-27

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
 Angle of Hole -50°
 Claim.....
 Section.....
 Bearing 140°

Total Depth 300 Ft.
 % Recovery
 Elev. Collar 2604 Ft.
 Latitude
 Departure
 Sheet No 1 of 4
 Logged by J. M. Dawson
 Date Begun Aug. 1/84
 Date Finished Aug. 7/84
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE		
0-20		No samples				
20-25		Precambrian(?) dark green-grey hornfelsed basic volcanic				
25-30		Similar to last; minor hematite staining				
30-35		Green-grey, chloritic greenstone				
35-40		Similar to last				
40-45		Fine grained hornfelsed basic volcanic				
45-50		Similar to last				
50-55		" " "				
55-60		" " ; trace quartz				
60-65		Similar to last; no quartz				
65-70		" " ; no quartz				

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

Bighorn

HOLE No. 84PH-27

SHEET No. 2

of 4

PROPERTY

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)	
70-75		Fine grained, hornfelsed amphibolite				
75-80		Fine grained hornfelsed basic volcanics				
80-85		Similar to last				
85-90		" " "		85-90	5	
90-95		Similar hornfels; chloritic in part		90-95	5	
95-100		Similar hornfels; much more hematitic- red brown colour.		95-100	5	
100-105		Similar- blood red colour to material		100-105	5	
105-110		Similar hornfelsed basic volcanics with exten- sive hematite		105-110	5	
110-115		Similar to last section		110-115	5	
115-120		Fine grained, grey hornfelsed volcanics; possibly misplaced sample(?) (90-95?)		115-120	790	
120-125		Fine grained, hornfelsed basic volcanic extensive hematite; blood red colour		120-125	5	
125-130		Similar to last section		125-130	5	
130-135		Similar hornfels; weakening of hematite content; minor quartz		130-135	5	

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-27 SHEET No. 3 of 4

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)		
135-140		Dark grey, fine grained, hornfelsed basic volcanics; trace hematite; no prominent red colour		135-140	5		
140-145		Similar to last section		140-145	30		
145-150		" " "		145-150	5		
150-155		" " "		150-155	5		
155-160		" " "		155-160	5		
160-165		" " "		160-165	5		
165-170		" " "		165-170	5		
170-175		" " "		170-175	5		
175-180		" " "		175-180	5		
180-185		Fine grained, grey chloritized & hornfelsed basic volcanics; hematite prominent blood red colour; minor quartz		180-185	5		
185-190		Similar to last section		185-190	5		
190-195		Grey to buff and pink rhyolitic volcanics; heavy hematite; prominent red colour; minor quartz		190-195	5		
195-200		Similar to last section		195-200	5		
200-205		" " "		200-205	5		
205-210		Similar rhyolite; hematite on fractures; no visible quartz		205-210	5		

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84PH-27

SHEET No. 4 of 4

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)		
210-215		Similar to last section		210-215	5		
215-220		Pink to buff and light grey rhyolite and some dark grey basic (Precambrian?) volcanics		215-220	5		
220-225		Dark grey, hornfelsed basic volcanics; no hematite; minor quartz					
225-230		Similar to last; no quartz; no hematite					
230-235		Similar to last section					
235-240		" " "					
240-245		" " "					
245-250		" " "					
250-255		" " "					
255-260		" " "					
260-265		" " "					
265-270		" " "					
270-275		" " "					
275-280		Similar hornfelsed basic volcanic; traces of quartz					
280-285		Similar Precambrian? volcanics; no quartz					
285-290		Purplish grey, fine grained basic volcanics-hornfelsed					
290-295		Similar to last section					
295-300		" " "					
		End pf hole					

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY..... Bighorn Drill Logs..... HOLE No. 84PH-28.....

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
 Angle of Hole -50°
 Claim.....
 Section.....
 Bearing 135°

Total Depth 300 Ft.
 % Recovery
 Elev. Collar 2580 Ft.
 Latitude
 Departure
 Sheet No 1 of 4
 Logged by J. M. Dawson
 Date Begun Aug. 7/84
 Date Finished Aug. 8/84
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)		
0-20		No samples					
20-25		Fine grained, dark grey volcanics; Preg (?)					
25-30		Similar to last section					
30-35		Similar grey, hornfelsed volcanic; minor hematite on fractures					
35-40		Similar to last section; hematite stringers more prevalent					
40-45		Similar to last section; prominent red colour					
45-50		Similar to last section					
50-55		" " " ; minor quartz		50-55	70		
55-60		Fine grained, purplish grey volcanics; no quartz		55-60	80		
60-65		Similar to last section; minor quartz		60-65	5		
65-70		Similar to last section; prominent red colour to fines		65-70	5		
70-75		Similar to last		70-75	5		
75-80		Similar hematized volcanics; scattered quartz		75-80	5		

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-28 SHEET No. 2 of 4

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	
80-85		Similar fine grained, basic volcanics; scattered quartz with specular hematite		80-85	5	
85-90		Similar to last section		85-90	5	
90-95		" " " ; heavy red colour to fines		90-95	5	
95-100		Similar to last section		95-100	5	
100-105		Mixed f. g. dark grey volcanics and pink to buff rhyolite; minor quartz stringers		100-105	5	
105-110		Pink to buff and grey rhyolite with hematite coated fractures		105-110	5	
110-115		Similar to last section; minor quartz stringers		110-115	5	
115-120		Similar to last; quartz stringers with specularite		115-120	5	
120-125		Similar rhyolite- less hematite and no quartz		120-125	5	
125-130		Similar to last- hematite stringers; no visible quartz		125-130	5	
130-135		Mixed buff to pink rhyolite and chloritic basic meta volcanics; heavy red colour to fine		130-135	5	
135-140		Pink to red, heavily hematite stained rhyolite		135-140	5	
140-145		Similar to last section; 5% quartz		140-145	5	
145-150		" " " ; no quartz		145-150	5	

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

Bighorn

HOLE No. 84PH-28

SHEET No. 3

4

PROPERTY

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	
150-155		Similar to last section; specularite on fractures 2%-3% quartz		150-155	5	
155-160		Similar to last section; 5% quartz		155-160	5	
160-165		" " " ; " "		160-165	5	
165-170		Pink to buff brecciated rhyolite; trace quartz		165-170	5	
170-175		Grey to buff and pink rhyolite; hematite on fractures; 5% quartz		170-175	5	
175-180		Similar to last section; 1%-2% quartz		175-180	5	
180-185		" " " ; 10% quartz as stringers with specularite grains		180-185	5	
185-190		Similar to last section; 5%-8% quartz		185-190	5	
190-195		" " " ; 3%-5% quartz		190-195	5	
195-200		Dark green grey metavolcanics ; 2%-3% quartz		195-200	5	
200-205		Similar to last section; 3% quartz		200-205	5	
205-210		Mixed grey metavolcanics and buff rhyolite; 3%-5% quartz		205-210	5	
210-215		Fine grained, purplish grey metavolcanics; trace quartz		210-215	5	
215-220		Similar to last section; red colour to fines; trace quartz		215-220	5	
220-225		Grey to pinkish buff rhyolite; hematite on fractures; trace quartz		220-225	5	
225-230		Similar to last section; 1%-2% quartz		225-230	5	
230-235		" " " ; 1%-2% quartz		230-235	5	

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

Bighorn

84PH-28

HOLE No.

SHEET No.

4 of 4

PROPERTY

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	
235-240		Similar to last section; 2%-3% quartz		235-240	5	
240-245		" " " ; 3% quartz		240-245	5	
245-250		Similar rhyolite; heavy hematite in fractures- trace quartz		245-250	5	
250-255		Similar rhyolite; less hematite; no quartz		250-255	5	
255-260		Similar buff rhyolite; 5% quartz with clots of specularite		255-260	5	
260-265		Similar to last section; 3%-5% quartz		260-265	5	
265-270		Dark grey, metavolcanics- greenstone; 10%-15% quartz; no hematite		265-270	5	
270-275		Similar to last section; 3%-5% quartz				
275-280		" " " ; no hematite; trace quartz				
280-285		Dark grey hornfelsed basic volcanics; no hema- tite; no quartz				
285-290		Similar to last section; no hematite; 2%-3% quartz				
290-295		Similar to last section; no hematite; no quartz				
295-300		Similar to last section				
		End of hole				
		"				

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84PH-29

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
 Angle of Hole
 Claim.....
 Section.....
 Bearing
 Total Depth
 % Recovery
 Elev. Collar
 Latitude
 Departure
 Sheet No
 Logged by
 Date Begun
 Date Finished
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)		
0-20		No samples					
20-25		Precambrian grey metavolcanics; hematitic-fines are bright red					
25-30		Similar to last section; trace quartz					
30-35		" " " ; no quartz					
35-40		" " " ; fragments with specular hematite common					
40-45		Similar to last section					
45-50		" " " "					
50-55		Dark grey, metavolcanics; chloritic in part; no quartz		50-55	70		
55-60		Similar to last section; trace quartz		55-60	80		
60-65		Bright red return; similar to last section; 2% quartz		60-65	5		

G. BELIK & ASSOCIATES LTD. -

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

Bighorn

HOLE No.

84PH-29

SHEET No.-

2

10-

5

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	
65-70		Similar to last section; 2% quartz		65-70	5	
70-75		" " " ; 2%-3% quartz		70-75	5	
75-80		" " " ; 5%-7% quartz with included blebs of specularite		75-80	5	
80-85		Similar to last section; 1%-2% quartz		80-85	5	
85-90		Mixed green grey Precambrian volcanics and pale buff to pink rhyolite(?); 3% quartz		85-90	5	
90-95		Similar to last section; 3%-5% quartz		90-95	5	
95-100		Dark grey volcanics; fine grained hematite abundant; 5%-7% quartz		95-100	5	
100-105		Mixed buff rhyolite and dark grey Precambrian volcanics; 3%-5% quartz with specularite		100-105	5	
105-110		Dark grey, chloritic; hornfelsed basalt(?) - 3%-5% quartz		105-110	5	

G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84PH-29

SHEET No. 3 of 5

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	
110-115		Epidote rich amphibolite and hornfelsed basalt; trace quartz		110-115	5	
115-120		Similar to last section; no quartz		115-120	5	
120-125		" " " ; trace quartz		120-125	5	
125-130		" " " ; "		125-130	5	
130-135		" " " ; "		130-135	5	
135-140		" " " ; "		135-140	5	
140-145		" " " ; no quartz but hematite common		140-145	5	
145-150		Similar metayvolcanics; purplish grey in colour; heavy hematite but no quartz		145-150	5	
150-155		Similar to last section; no quartz		150-155	5	
155-160		Mixture of dark grey Precambrian volcanics and buff to pink rhyolite; 1% quartz		155-160	5	

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84PH-29

SHEET No. 4 of 5

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	
160-165		Similar to last section; 5%-7% quartz		160-165	70	
165-170		Primarily grey, basic metavolcanics; 10%-15% quartz		165-170	80	
170-175		Similar to last section; 5% quartz		170-175	5	
175-180		Chloritic greenstone; 3% quartz		175-180	5	
180-185		Similar to last section; 1%-2% quartz		180-185	5	
185-190		" " " ; 5% quartz		185-190	5	
190-195		" " " ; 3% quartz		190-195	5	
195-200		" " " ; 3% quartz		195-200	5	
200-205		" " " ; 2% quartz		200-205	5	
205-210		" " " ; 10% quartz		205-210	20	
210-215		" " " ; 10% quartz		210-215	80	
215-220		" " " ; 1% quartz		215-220	120	
220-225		Dark grey metavolcanics; 1% quartz		220-225	60	

G. BELIK & ASSOCIATES LTD.

Bighorn

62-H478

HOLE No.

SHEET No.

1015

PROPERTY:

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)
225-230		Similar grey metavolcanic; no quartz		225-230	40
230-235		" " ; trace quartz		230-235	5
235-240		" " ; trace quartz		235-240	5
240-245		Return bright red; hematitic grey to purplish grey basalt; trace quartz		240-245	100
245-250		Similar to last section; no quartz		245-250	50
250-255		" " " ; no quartz		250-255	5
255-260		" " " ; no quartz		255-260	5
260-265		" " " ; trace quartz		260-265	5
265-270		" " " ; no quartz		265-270	5
270-275		" " " ; no quartz			
		End of hole			
		.			
		. i			

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84PH-30

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size Total Depth 245 Ft. Sheet No 1 of 4
 Angle of Hole -50° Logged by J.A. M. Dawson
 Claim Elev. Collar 2530 Ft. Date Begun Aug. 9/84
 Section Latitude Date Finished Aug. 10/84
 Bearing 108° Departure Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE		
0-20		No samples				
20-25		Dark grey, Precambrian metavolcanic and epidote bearing feldspathic gneiss				
25-30		Similar to last section				
30-35		" " "				
35-40		Dark purplish grey metavolcanics				
40-45		Similar hornfelsed volcanics & amphibolite				
45-50		" " " "				
50-55		Similar to last section; 2%-3% quartz				
55-60		" " " ; 1% quartz				
60-65		" " " ; no quartz				
65-70		Epidote bearing amphibolite; 1% quartz				

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

Bighorn

HOLE No. 84PH-30

SHEET No. 2

of 4

PROPERTY

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE		
70-75		Chloritic, epidote bearing amphibolite; trace quartz				
75-80		Hematitic, fine grained, dark grey metavolcanics; trace quartz				
80-85		Similar to last section; no quartz				
85-90		" " " ; no quartz				
90-95		" " " ; no quartz				
95-100		Similar; hematite more abundant; no quartz				
100-105		Mixed dark grey volcanics and buff to pink rhyolite; trace quartz				
105-110		Blood red return; buff and red brown rhyolite; no quartz				
110-115		Similar to last section; 1% quartz				
115-120		" " " ; 1% quartz				
120-125		" " " ; 1% quartz				

G. BELIK & ASSOCIATES LTD." - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-30 SHEET No. 3 of 4

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE		
125-130		Similar to last section; 1% quartz				
130-135		Mixed buff to pink rhyolite and dark grey				
		Precambrian metavolcanics; 1% quartz				
135-140		Dark green grey, very chloritic greenstone; trace quartz				
140-145		Similar; no quartz				
145-150		Similar; trace quartz				
150-155		Much chlorite; similar greenstone; fault section??; no quartz				
155-160		Similar to last; no quartz				
160-165		Green-grey metavolcanics; no quartz				
165-170		" " " ; no quartz				
170-175		Purplish grey volcanics; trace quartz				
175-180		Similar to last section; no quartz				
180-185		" " " ; trace quartz				

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

Bighorn

84PH-30

HOLE No.

SHEET No.

4 of 4

PROPERTY

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE		
185-190		Return changes to blood red colour; dark grey hematized volcanics; trace quartz				
190-195		Similar to last section; no quartz				
195-200		" " " ; no quartz				
200-205		" " " ; no quartz				
205-210		Green grey to purplish grey; hematized meta- volcanics; minor stringers of epidote; no quartz				
210-215		Similar to last section; no quartz				
215-220		" " " ; no quartz				
220-225		" " " ; no quartz				
225-230		Return changed to green grey; similar volcanics; trace quartz; not epithermal-older(?)				
230-235		Hematitic greenstone; no quartz				
235-240		" " " ; no quartz				
240-245		Chloritic, hematized volcanics; no quartz				

End of hole

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84PH-31

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
 Angle of Hole -40°
 Claim
 Section
 Bearing 265°

Total Depth 450 Ft.
 % Recovery
 Elev. Collar 2508 Ft.
 Latitude
 Departure
 Core Stored At

Sheet No 1 of 8
 Logged by J. M. Dawson
 Date Begun Aug. 10/84
 Date Finished Aug. 11/84

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE		
0-20		No samples				
20-25		Chloritic, quartz-feldspathic gneiss				
25-30		Similar with hematite on fractures				
30-35		Mixed gneiss and hornfelsed dark grey volcanics				
35-40		Similar to last section				
40-45		Chloritic, quartz-feldspathic gneiss				
45-50		Hematitic and chloritic gneiss as before				
50-55		Similar to last section				
55-60		" " "				
60-65		" " "				
65-70		" " "				

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84Ph-31 SHEET No. 2 of 8

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE		
70-75		Greenish, chloritic, quartz-feldspathic gneiss; hematite on fractures				
75-80		Similar to last section				
80-85		" " "				
85-90		" " "				
90-95		" " "				
95-100		Mixed gneiss and fine grained, dark grey volcanics				
100-105		Fine grained, purplish grey metavolcanics				
105-110		Return blood red in colour; rock is similar to last section				
110-115		Primarily chloritic, feldspathic gneiss				
115-120		Similar to last section				
120-125		" " "				
		" "				

G. BELIK & ASSOCIATES L.D. - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-31 SHEET No. 3 of 8

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE		
125-130		Similar to last section				
130-135		" " "				
135-140		" " "				
140-145		Fault zone(?); much chloritic mud; rock is chloritic; quartz-feldspathic gneiss				
145-150		Similar to last section				
150-155		" " "				
155-160		" " "				
160-165		" " "				
165-170		" " "				
170-175		" " "				
175-180		Water return changes to blood red colour; similar chloritic feldspathic gneiss; trace quartz				
180-185		Similar to last section; no quartz				

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-31 SHEET No. 4 of 8

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE		
185-190		Similar to last section				
190-195		" " "				
195-200		Precambrian, green-grey volcanics				
200-205		" " "				
205-210		Mixed dark grey volcanics and the greenish-white gneiss				
210-215		Chloritic, feldspathic gneiss				
215-220		" " "				
220-225		" " "				
225-230		" " "				
230-235		" " "				
235-240		" " "; trace quartz				
240-245		" " "; no quartz				
245-250		" " "				

G. BELIK & ASSOCIATES LTD." - PERCUSSION DRILL RECORD

Bighorn

PROPERTY

HOLE No.

84PH-31

SHEET No.

5

of

8

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE		
250-255		Similar chloritic, feldspathic gneiss				
255-260		" " "				
260-265		Biotite-feldspar gneiss; no quartz				
265-270		Similar to last section; very hematitic; trace quartz				
270-275		Mixed gneiss and purplish grey volcanics; trace quartz				
275-280		Chloritic, feldspathic gneiss; no quartz				
280-285		" " "				
285-290		" " "				
290-295		" " "				
295-300		Purplish grey metavolcanics; no quartz				
300-305		" " "				
305-310		Mixed purplish grey volcanics and chloritic, quartz-feldspathic gneiss				

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

Bighorn

84PH-31

HOLE No.

SHEET No. 6

of 8

PROPERTY

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE		
310-315		Fine grained, purplish grey volcanics				
315-320		" " " "				
320-325		" " " "				
325-330		Similar to last but more hematitic				
330-335		Green grey to purplish grey volcanics				
335-340		Similar to last section				
340-345		" " " "				
345-350		Water return is dark green; dark green grey volcanics				
350-355		Similar to last section				
355-360		Purplish grey volcanics; water return red brown				
360-365		Similar to last section; trace quartz				
365-370		" " " " ; trace quartz				

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Bighorn

84PH-31

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'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE
370-375		Chloritic, feldspathic gneiss		
375-380		" " ; minor epidote		
380-385		" " ; " "		
385-390		Purplish grey, f.g. volcanics and minor gneiss		
390-395		Similar to last; trace epidote		
395-400		Dark green, chloritic volcanics; minor epidote		
400-405		Similar to last section		
405-410		Fine grained, purplish grey volcanic		
410-415		" " " " ; trace quartz		
415-420		Dark grey volcanics and chloritic gneiss; trace quartz		
420-425		Purplish grey volcanics; minor epidote		
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G. BELIK & ASSOCIATES LTD.

Bighorn

84PH-31

HOLE No.

SHEET No.

8

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G. BELIK & ASSOCIATES LTD." - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs

HOLE No. 84PH-32

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
 Angle of Hole
 Claim
 Section
 Bearing
 Total Depth
 % Recovery
 Elev. Collar
 Latitude
 Departure
 Sheet No. 1 of 7
 Logged by J. M. Dawson
 Date Begun Aug. 11/84
 Date Finished Aug. 12/84
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE			
0-20		No samples					
20-25		Purplish grey andesite(?) Tertiary					
25-30		Fine grained, greenish, chloritized volcanics					
30-35		Similar to last section					
35-40		" " " ; trace quartz with specularite					
40-45		Similar chloritized volcanics; hematite on fractures					
45-50		Similar to last section					
50-55		Mixed greenish to purplish grey volcanics and grey to buff rhyolite					
55-60		Grey to buff and reddish rhyolite; trace quartz					

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-32 SHEET No. 2 of 7

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)		
60-65		Similar to last section		60-65	5		
65-70		" " " ; 1% quartz		65-70	5		
70-75		" " " ; 1% quartz		70-75	5		
75-80		" " " ; 1%-2% quartz with associated specularite		75-80	5		
80-85		Fines very red; mixed rhyolitic and green grey andesite; trace quartz		80-85	5		
85-90		Similar to last section; trace quartz		85-90	5		
90-95		Mostly grey to pink rhyolite; 1% quartz		90-95	5		
95-100		Similar to last section; trace quartz		95-100	5		
100-105		" " " ; 1%-2% quartz with associated specular hematite		100-105	5		
105-110		Similar to last section; 3%-5% quartz		105-110	5		
110-115		Similar to last section; 10%-15% quartz with abundant specularite		110-115	5		

G. BELIK & ASSOCIATES LTD.

Bighorn

HOLE No. 84PH-32

SHEET No. 3

2

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)
115-120		Similar light coloured rhyolite- 10% quartz		115-120	110
120-125		Similar to last section; 15%-20% quartz- abundant specularite and minor malachite and chrysocolla.		120-125	750
125-130		Similar to last section; 20% quartz minor copper carbonate		125-130	60
130-135		Similar to last section; 20% quartz- scattered chrysocolla		130-135	70
135-140		Similar to last section; 10% quartz		135-140	320
140-145		" " " ; 10% quartz + scattered copper carbonates		140-145	270
145-150		Similar to last section; 5% quartz		145-150	90
150-155		Mixed grey volcanics and light coloured rhyolite; 10% quartz- minor copper carbonates		150-155	30
155-160		Pink to red-grey rhyolite; 5% quartz		155-160	5

G. BELIK & ASSOCIATES, LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-32 SHEET No. 4 of 7

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au oz/ton
160-165		Water return blood red; similar pinkish rhyolite; 5% quartz		160-165	1920	.040
165-170		Mixed grey andesite(?) and buff rhyolite; quartz stockwork with specularite; 5% quartz		165-170	1010	.010
170-175		Predominantly pale pink rhyolite; 5%-8% quartz in stockworks		170-175	160	.006
175-180		Similar to last section; 5%-8% quartz		175-180	230	.008
180-185		" " " ; 1% quartz		180-185	370	.016
185-190		" " " ; 2%-3% quartz		185-190	650	.026
190-195		" " " ; 7%-10% quartz		190-195	580	.018
195-200		" " " ; 5%-7% quartz		195-200	870	.027
200-205		" " " ; 7%-10% quartz		200-205	1450	.029
205-210		" " " ; 7%-10% quartz as blue- grey fragments with contained specularite(?)		205-210	890	.048

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-32 SHEET No. 5 of 7

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	Au (oz/ton)
210-215		Fine grained purplish grey volcanics; no visible quartz		210-215	5020	.084
215-220		Similar to last section; heavily hematized; no quartz		215-220	5260	.103
220-225		White to buff bleached rhyolite; 3% quartz		220-225	1030	.032
225-230		Similar to last section; 3% quartz		225-230	750	.016
230-235		" " " ; 3% quartz		230-235	230	.009
235-240		" " " ; heavy hematite stringers; 5% quartz; trace malachite		235-240	240	.007
240-245		Similar to last section; 5% quartz		240-245	Lost sample	
245-250		" " " ; 5% quartz- minor copper carbonates		245-250	620	.008
250-255		Similar rhyolite; 2% quartz		250-255	130	
255-260		Green grey volcanics; 1% quartz		255-260	60	
260-265		Mixed green grey andesite and pale buff to red rhyolite; 1% quartz.		260-265	5	

G. BELIK & ASSOCIATES LTD." - PERCUSSION DRILL RECORD

Bighorn

84PH-32

HOLE No.

SHEET No. 6

of 7

PROPERTY

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	
265-270		Primarily white to pale grey rhyolite- 5% quartz		265-270	5	
270-275		Purplish grey volcanics; 2% quartz		270-275	5	
275-280		" " ; 2%-4% quartz		275-280	5	
280-285		Mixed grey andesite and rhyolite; 1%-2% quartz		280-285	5	
285-290		Grey green; foliated greenstone; no quartz		285-290	40	
290-295		Similar to last section; no quartz		290-295	5	
295-300		" " " ; trace quartz		295-300	650	
300-305		" " " ; trace quartz				
305-310		Purplish grey volcanics; abundant hematite; no quartz				
310-315		Similar to last section; no quartz				
315-320		" " " ; " "				
320-325		" " " ; " "				
325-330		" " " ; " "				

G. BELIK & ASSOCIATES LTD.

Bighorn

HOLE No.

84PH-32

SHEET No. 7

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G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs

HOLE No. 84PH-33

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size
 Angle of Hole55°
 Claim.....
 Section.....
 Bearing265°
 Total Depth320 Ft.
 % Recovery
 Elev. Collar2575 Ft.
 Latitude
 Departure
 Sheet No1..... of6.....
 Logged byJ.A.M. Dawson.....
 Date BegunAug. 12/84.....
 Date FinishedAug. 13/84.....
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE		
0-20		No samples				
20-25		Pale buff to pink, thinly laminated tuff				
25-30		Similar to last section				
30-35		Green to purplish grey andesite				
35-40		Grey green, fine grained andesite				
40-45		Similar to last section				
45-50		" " " ; traces of hematite on fractures				
50-55		Green to purplish grey andesite				
55-60		Similar to last section				
60-65		Mixed green grey andesite and pale buff to grey rhyolite				

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84PH-33

SHEET No. 2 of 6

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE		
65-70		Pinkish buff to grey rhyolite or dacite				
70-75		Similar to last section; thinly flow banded				
75-80		Similar to last section; trace quartz				
80-85		Buff and grey to yellowish rhyolite; 1% quartz and some specularite				
85-90		Similar to last section; trace quartz				
90-95		Mixed buff to red rhyolite and grey green andesite; no quartz				
95-100		Grey green, chloritic andesite; no quartz				
100-105		Similar to last section				
105-110		Purplish grey andesite or dacite				
110-115		Similar to last section				
115-120		" " "				
		" "				

G. BELIK & ASSOCIATES LTD.

Bighorn

84PH-33

HOLE No.

SHEET No. 3

9

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)
120-125		Similar to last section; trace quartz			
125-130		Green grey, chloritized andesite; trace quartz			
130-135		Green grey to purplish grey andesite; no quartz		130-135	5
135-140		Similar to last section		135-140	5
140-145		" " " ; specularite on fractures; 1% quartz		140-145	5
145-150		Blood-red return; buff to red brown dacite; 15%-20% quartz; trace malachite		145-150	5
150-155		Green andesite or dacite; weak hematization; 10% quartz		150-155	5
155-160		Green chloritized andesite; much chloritic mud-fault(?); 10% quartz; minor hematite		155-160	5
160-165		Purplish grey andesite; 10% quartz		160-165	5
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G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84PH-33

SHEET No. 4

of 6

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)		
165-170		Similar to last section; 5% quartz		165-170	5		
170-175		" " " ; 5%-8% quartz		170-175	150		
175-180		Heavy hematite; return brick red; purplish. grey andesite or dacite; 5% quartz		175-180	570		
180-185		Mixed purplish grey andesite and orange brown rhyolite(?); 3% quartz		180-185	230		
185-190		Red to brown dacite or rhyolite; 3% quartz		185-190	40		
190-195		" " " " ; 5%-8% quartz		190-195	80		
195-200		Similar to last section; 3% quartz		195-200	180		
200-205		Green grey and buff red dacite(?); 5% quartz		200-205	190		
205-210		Similar to last section; 5% quartz		205-210	260		
210-215		" " " " ; 8% quartz		210-215	230		
215-220		Purplish grey andesite; trace quartz		215-220	470		
220-225		" " " " ; trace quartz		220-225	180		

G. BELIK & ASSOCIATES L.D. - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-33 SHEET No. 5 of 6

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)		
225-230		Similar to last section; trace quartz		225-230	50		
230-235		" " " ; 15% quartz		230-235	130		
235-240		Return changes to red brown; similar purplish grey andesite; 20% quartz		235-240	580		
240-245		Similar to last section; 25%-30% quartz with much specularite		240-245	290		
245-250		Grey to buff rhyolite; 5% quartz		245-250	160		
250-255		Similar to last section; 10% quartz with abundant specularite		250-255	70		
255-260		Mixed light grey rhyolite and dark grey green andesite; 3% quartz		255-260	180		
260-265		Mostly grey to buff and red rhyolite; 2% quartz		260-265	60		
265-270		Green grey to purplish red andesite; 3%-5% quartz		265-270	250		
270-275		Purplish grey andesite; 3%-5% quartz		270-275	180		

G. BELIK & ASSOCIATES LTD. -

Bighorn

84PH-33

HOLE No. 1

SHEET No..

6

PROPERTY

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)
275-280		Similar to last section; 5%-8% quartz		275-280	680
280-285		Blood red water return; rock similar to last section; 7%-10% quartz		280-285	1960
285-290		Similar to last section; 15%-20% quartz		285-290	220
290-295		Return is olive green; grey green andesite; 3% quartz		290-295	190
295-300		Similar to last section; trace quartz		295-300	90
300-305		" " " ; no quartz			
305-310		" " "			
310-315		Chloritic green grey andesite			
315-320		" " "			
		End of hole			
		.			
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G. BELIK & ASSOCIATES LTD.' - PERCUSSION DRILL RECORD

PROPERTY Bighorn Drill Logs HOLE No. 84PH-34

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
 Angle of Hole
 Claim.....
 Section.....
 Bearing
 Total Depth
 % Recovery
 Elev. Collar
 Latitude
 Departure
 Sheet No of
 Logged by
 Date Begun
 Date Finished
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE				
0-20		No samples						
20-25		Grey green andesite						
25-30		" "						
30-35		" "						
35-40		Mixed grey green andesite and pink to buff rhyolite						
40-45		Pinkish buff rhyolite						
45-50		" "						
50-55		" "						
55-60		" "						
60-65		" "						
65-70		" "						

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-34 SHEET No. 2 of 5

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	
70-75		Mixed buff to pink rhyolite and grey-green andesite; minor specularite				
75-80		Predominantly purplish grey andesite; much hematite; trace quartz		75-80	20	
80-85		Similar to last section; trace quartz		80-85	40	
85-90		" " " ; 1% quartz		85-90	5	
90-95		" " " ; trace quartz		90-95	5	
95-100		Red to buff and grey hematized rhyolite; trace quartz; extensive hematite		95-100	5	
100-105		Similar to last section; 1% quartz		100-105	5	
105-110		" " " ; 1%-2% quartz		105-110	5	
110-115		Buff to pinkish, highly altered; kaolinized rhyolite; trace quartz		110-115	5	
115-120		Similar to last section; trace quartz		115-120	5	
120-125		Mixed buff to pink rhyolite and purplish grey andesite; trace quartz		120-125	40	

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84PH-34

SHEET No. 3

of 5

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	
125-130		Similar to last section; 1%-2% quartz		125-130	30	
130-135		Primarily buff-white altered rhyolite; 10% quartz; trace crysocola		130-135	40	
135-140		Mixed purplish grey andesite and white to buff bleached rhyolite; 5% quartz		135-140	620	
140-145		Dark brown water return; dark purplish grey andesite; 20% quartz with blebs of specularite		140-145	750	
145-150		Similar to last section; 15% quartz; minor malachite		145-150	180	
150-155		Similar to last section; 15% quartz		150-155	30	
155-160		" " " ; 5% quartz		155-160	25	
160-165		" " " ; 3%-5% quartz		160-165	5	
165-170		Green grey to purplish grey andesite; 2%-3% quartz		165-170	75	
170-175		Similar to last section; 3% quartz		170-175	250	

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84PH-34

SHEET No. 4

5 of

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au(ppb)	
175-180		Red grey to purplish grey andesite; 5% quartz		175-180	275	
180-185		Dark red dacite or rhyolite; 8%-10% quartz		180-185	40	
185-190		Similar to last section; 8%-10% quartz		185-190	15	
190-195		" " " ; 10%-15% quartz		190-195	35	
195-200		Red brown dacite and grey green andesite; 15%-20% quartz with contained specularite		195-200	140	
200-205		Similar to last section; 40%-50% quartz		200-205	140	
205-210		Grey green to purplish grey andesite; 20%-25% quartz		205-210	100	
210-215		Similar to last section; 60%-70% quartz; traces crysocola		210-215	800	
215-220		Purplish grey andesite; trace quartz		215-220	150	
220-225		Dark purplish grey to yellow brown altered andesite; 1% quartz		220-225	Lost sample	

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn

HOLE No. 84PH-34

SHEET No. 5 of 5

'DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)		
225-230		Greenish brown to altered yellowish brown andesite; 3% quartz		225-230	80		
230-235		Greenish brown andesite; trace quartz					
235-240		Green grey to red brown andesite; 1% quartz					
240-245		Similar to last section; trace quartz					
245-250		" " " ; no quartz					
250-255		Purplish grey andesite; no quartz					
255-260		" " " ; " "					
260-265		Grey green andesite; no quartz					
265-270		Precambrian chloritic greenstone and amphibolite; no quartz					
270-275		Similar to last section End of hole					
		Note: 245-250 bag was not used so all samples are advanced 5 feet from that section thus 270-275 is in bag marked 275-280					

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY..... Bighorn Drill Logs..... HOLE No. 84PH-35.....

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size
 Angle of Hole -45°
 Claim.....
 Section.....
 Bearing 215°
 Total Depth 220 Ft.
 % Recovery
 Elev. Collar 2498 Ft.
 Latitude
 Departure
 Sheet No 1 of 4
 Logged by J. M. Dawson
 Date Begun Aug. 15/84
 Date Finished Aug. 16/84
 Core Stored At

DEPTH	CORE LOST	-0-115 Ft. logged by J. M. Dawson	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE			
0-20		No samples taken						
20-25			Pale grey to buff and pink hematitic rhyolite					
25-30			Similar to last section					
30-35			Mixed chalk white altered rhyolite and purplish grey andesite - or bleached andesite					
35-40			Similar to last section.					
40-45			" " "					
45-50			Predominantly pinkish to purplish grey andesite bleached in part to chalky white kaolinized rock					
50-55			Green grey to purplish grey andesite; trace quartz					
55-60			Similar purplish grey andesite and hard red dacite or rhyolite; trace quartz					

G. BELIK & ASSOCIATES LTD."

Bighorn

HOLE No. 84PH-35

PROPERTY:

SHEET No. — 2

2 01

17[illegible]

G. BELIK & ASSOCIATES LTD. - PERCUSSION DRILL RECORD

PROPERTY Bighorn HOLE No. 84PH-35 SHEET No. 3 of 4

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH of SAMPLE	Au (ppb)	
110-115		No sample return- ?? problem with sampler				
		115' - 220' Logged by G. Belik				
115-130		Pink dacitic tuff; minor vein quartz				
130-155		Medium to dark pink dacitic tuff; 1%-2% vein quartz		150-155	5	
155-160		70% green diabase		155-160	270	
		25% red hematitic dacite				
		1%-2% quartz				
160-170		Hard, siliceous, purple (hematized) felsic;		160-165	500	
		2% quartz		165-170	20	
170-175		Maroon (hematized) and dark green (chloritized) unit; 5%-10% hematitic quartz		170-175	330	
175-180		Variably hematized dacite (pink to maroon); chloritic sections; 15% quartz and hematitic quartz		175-180	110	
180-190		Dark maroon volcanic; chloritic fractures		180-185	60	
		5% quartz		185-190	40	

PERCUSSION DRILL RECORD

84PH-35

of

SHEET No.:

[illegible]



Roddy Resources

2805-44TH AVENUE • VERNON, BRITISH COLUMBIA V1T 7P4 • (604) 542-1534

November 16, 1984

FOR IMMEDIATE RELEASE

GOLD MINERALIZATION REPORTED IN 28 OF 35 ROTARY DRILL HOLES

Gold mineralization ranging to 0.410 ounces per ton over extensive widths has been reported in 28 of 35 rotary drill holes testing Roddy Resources Inc. (ROD-V) Bighorn gold property located in Maricopa County, Arizona.

The company reported today that indicated commercial grade intersections were encountered in widths up to 205 feet with a tested strike zone extending approximately 4,500 feet in length. All assaying was undertaken at a Vancouver laboratory with several samples independently re-checked, the company reported.

Underground sampling is to be carried out in the next phase of exploration of the property and is to commence immediately, the company said.

The recently completed drill program appears to confirm the presence of a large, gold-bearing epithermal system that originally had been outlined by surface sampling, Roddy president, Walter Cullum reported.

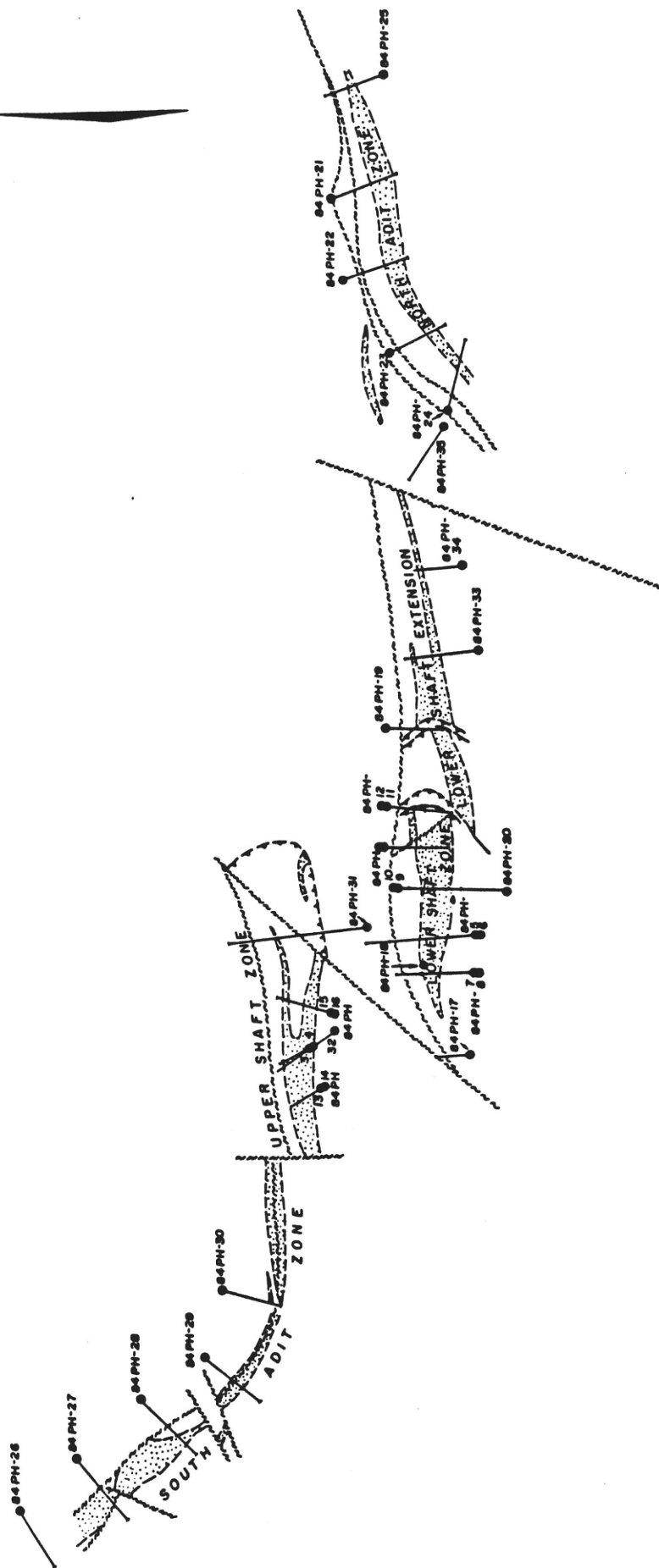
The zone extends 4,500 feet in length and is indicated to be as much as 200 feet wide. Mineralization is known to extend to at least 600 feet in depth in some places, he said.

The property originally was developed for its possible potential as a copper producer in the early 1900's with sporadic further minor copper exploration attempts in the mid 1940's and 1950's and again in 1971.

RODDY RESOURCES INC.
1984 DRILL HOLE SUMMARY
BIGHORN PROJECT
MARICOPA COUNTY, ARIZONA

Hole #	Interval	Core Length	Oz/ton Gold (uncut)
84PH-1	70-120	50 Ft.	0.116 (incl. 20' 0.186)
2	140-185	45 Ft.	0.012
3	5-75	70 Ft.	.075 (incl. 5' .410)
4	0-120	120 Ft.	.092 (incl. 30' 0.179 & 15' 0.226)
5	70-90	20 Ft.	.031
	165-205	40 Ft.	.070
6	120-135	15 Ft.	.054
	230-245	15 Ft.	.044
7	130-150	20 Ft.	.030
8	Weakly Mineralized		
9	85-190	105 Ft.	.020
10	150-220	70 Ft.	.055 (incl. 15' 0.117)
	or 135-225	90 Ft.	.047
11	120-170	50 Ft.	.037
12	195-250	55 Ft.	.016
13	60-65	5 Ft.	.096
14	90-130	40 Ft.	.017
15	100-125	25 Ft.	.047
16	90-175	85 Ft.	.020 .019*
	175-225	50 Ft.	.177 .170* (incl. 15' .246 & 10' .309)
	or 90-225	135 Ft.	.078
17	No Mineralization		
18	10-50	40 Ft.	.058
	50-110	60 Ft.	.022
	or 10-110	100 Ft.	.037
19	105-170	65 Ft.	.020 .019*
	170-220	50 Ft.	.092 (incl. 20' 0.171)
	220-310	90 Ft.	.027
	or 105-310	205 Ft.	.041
20	390-410	20 Ft.	.094
	410-425	15 Ft.	.032
	or 390-425	35 Ft.	.068
21	200-245	45 Ft.	.037 .041*
22	240-265	25 Ft.	.038
23	230-270	40 Ft.	.036
24	220-235	15 Ft.	.061
	or 190-245	55 Ft.	.028
25	85-115	30 Ft.	.021
	185-210	25 Ft.	.022
26-31	Missed zone, faulted off		
32	205-225	20 Ft.	.067
	or 160-230	70 Ft.	.033
33-35	Weakly mineralized over wide intervals		

* Check assays at a different laboratory.



RODDY RESOURCES INC.

DRILL HOLE LOCATION PLAN

BIGHORN PROJECT

MARICOPA COUNTY, ARIZONA, U.S.A.

Steeply dipping faults

Low angle faults

Outline of quartz stockwork and
quartz vein breccia zone

Drill hole location with surface
projection

SCALE 1" = 400'



The current gold-oriented program follows an extensive surface exploration project. Results prompted an independent engineer to report that the property had "an excellent possibility for the delineation of several million tons of gold-bearing material in the 0.05-0.10 ounces per ton range which might be mined by low-cost, bulk mining methods."

Under terms of an acquisition agreement, Roddy can earn up to a 100 percent working interest, subject to a five percent net smelter return that commences two years after the start of commercial production and is limited to \$1.5 million.

The company also has reported that a recently completed exploration program on its 50 percent owned Kusk property in east central British Columbia has confirmed the property has potential for hosting large zones of stratabound gold mineralization.

The prospect is adjacent to the south east of the "Frasergold" gold discovery being developed jointly by Amoco Canada and Eureka Resources Inc.

In a November 2 report to the company, an independent consulting geologist states "the host unit for the gold mineralization on the Frasergold property has been extended into the Kusk claim area and a large zone of anomalous gold values in soils, associated with the unit, has been identified."

Cullum said the anomalous zone extends for approximately one mile in length and one-half mile in width.

An aggressive exploration program, including preliminary diamond drill testing of the property, is planned for the 1985 field season.

- 30 -

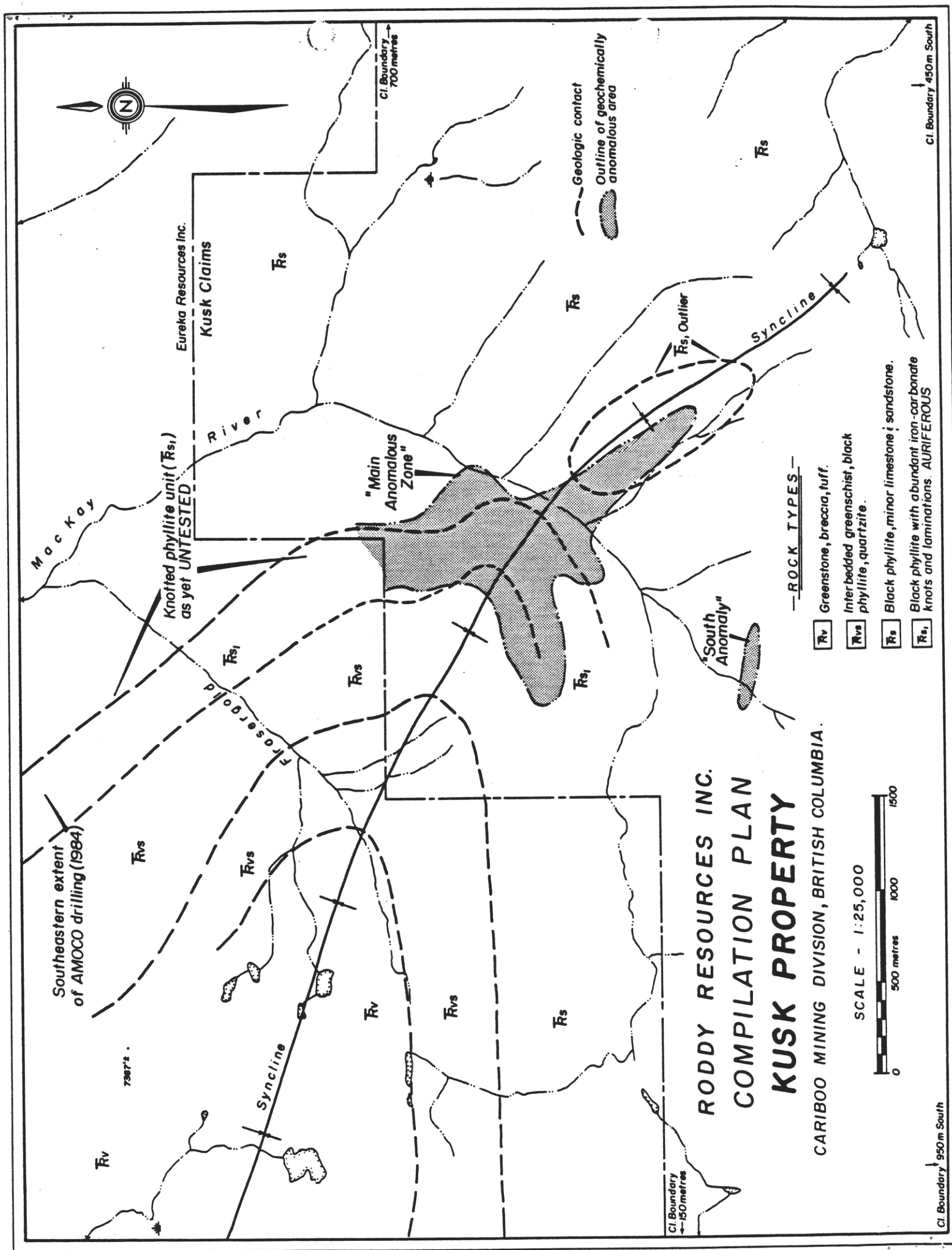
Contact:

Walter Cullum (604) 271-5413 or (604) 542-1534



On Behalf of the Board

The Vancouver Stock Exchange has neither approved nor disapproved the information contained herein.



NIRVANA OIL & GAS LTD. & RODDY RESOURCES INC.
1020-475 Howe Street, Vancouver, B.C. V6C 2B3

Symbol: NVN (VSE)
ROD (VSE)

September 17, 1984

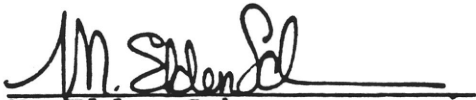
JOINT PRESS RELEASE

Nirvana and Roddy confirm extension of the Frasergold anomaly on their Kusk Property

Preliminary results of a geochemical program on the Kusk claims held jointly by Nirvana Oil & Gas Ltd. and Roddy Resources Inc. confirm a gold anomaly which extends from the boundary of the Eureka/Amoco property for approximately one and one-half (1½) kilometres into the Nirvana/Roddy Kusk claims. This anomaly is on strike with the Eureka/Amoco Frasergold mineralization and is open to the south.

Nirvana/Roddy will commence immediately to do an additional 30 kilometre sampling program over a 4 kilometre length to extend the sampling to the south and west. It is expected that additional results will be available in approximately 2 weeks.

The Directors of Nirvana and Roddy are extremely pleased to learn that their Kusk claims are not only adjoining the Eureka/Amoco property, but show a definite anomaly on strike with the Fraser-gold anomaly. With this information, the results of the Eureka/Amoco drilling program are anxiously awaited.



M. Elden Schorn,
Director, Nirvana Oil & Gas Ltd.

Mr. Schorn has prepared this news release on behalf of the Company and accepts full responsibility for its contents. The Vancouver Stock Exchange has neither approved nor disapproved the information contained herein.

REPORT

- on the -

BIGHORN PROPERTY

MARICOPA COUNTY

ARIZONA, U.S.A.

- for -

RODDY RESOURCES INC.,

2500 THREE BENTALL CENTRE,

595 BURRARD STREET,

VANCOUVER, B.C.

Prepared by:

KERR, DAWSON & ASSOCIATES LTD.,

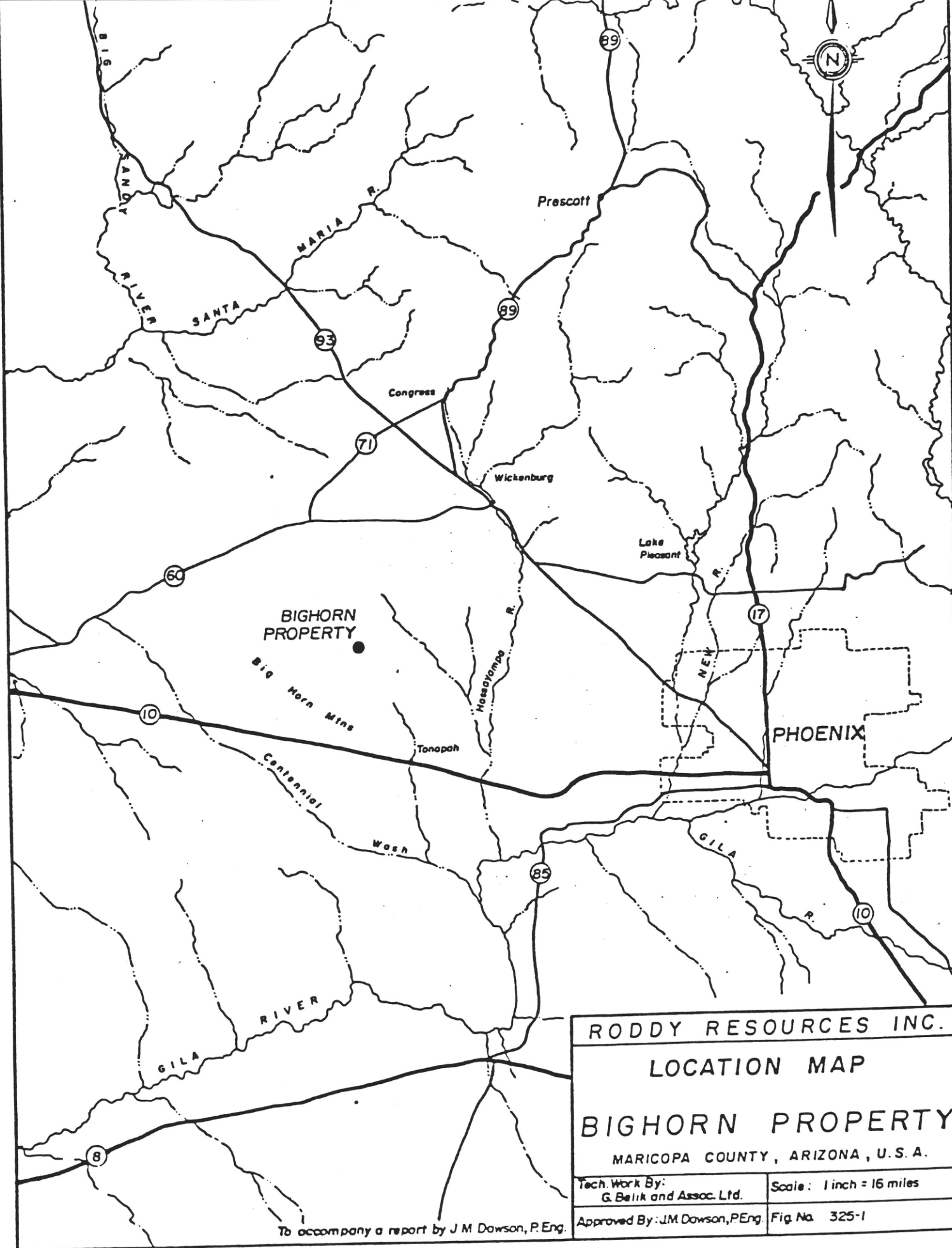
#206 - 310 NICOLA STREET,

KAMLOOPS, B.C. V2C 2P5

.

J.M. DAWSON, P. ENG.

March 23, 1984.



RODDY RESOURCES INC.	
LOCATION MAP	
BIGHORN PROPERTY	
MARICOPA COUNTY, ARIZONA, U.S.A.	
Tech. Work By: G. Belik and Assoc. Ltd.	Scale: 1 inch = 16 miles
Approved By: J.M. Dowson, P.Eng.	Fig. No. 325-1

To accompany a report by J.M. Dowson, P.Eng.

INTRODUCTION:

This report has been requested by the directors of Roddy Resources Inc. It reviews the exploration and development history of the subject property, discusses its geology, mineralization and exploration potential, and recommends a programme of exploration to test the continuity and grades of mineralization at depth.

A series of maps showing location, property, surface geology and mineralization as well as data on recent soil and rock sampling are included in the text of this report.

SUMMARY AND CONCLUSIONS:

1. The Bighorn property consists of 10 contiguous, patented claims aggregating about 200 acres, located in moderate terrain in southwestern Arizona, U.S.A. and is easily accessible by road from either Wickenburg or Phoenix.

2. The property was probably discovered in the late 1800's and was explored by a number of tunnels, pits and shafts all of which were excavated before 1920. The property was leased during the 1940's and about 4500 tons of dump ore was shipped to local smelters. Minor exploration and shipping of dump material took place in the 1950's. The Louisiana Land and Exploration Company acquired the property in 1971 and carried out an exploration programme oriented towards the discovery of a porphyry copper deposit. This work consisted of surface mapping and sampling, geophysics and the drilling of 4 deep holes. Roddy Resources Inc. acquired the property in late 1983 and carried out a detailed evaluation for gold.

3. The property is underlain by a sequence of Tertiary volcanics which unconformably overlie Precambrian basement. A linear and perhaps arcuate fracture zone is the locus for the intrusion of diabase dikes and an extensive zone of epithermal quartz veining and stockworks. Later faulting has locally disrupted the continuity of the zone of quartz veining.

4. Gold and copper mineralization is associated with the areas of epithermal quartz veining. The mineralized zone is now dislocated by local faulting but is essentially tabular, strikes northerly and stands approximately vertical. It is approximately 4500 feet long, averages about 50 to 60 feet in width and has been tested by old shafts to depths of between 500 and 600 feet. Visible mineralization consists of extensive limonite, hematite and scattered secondary copper minerals in epithermal quartz veins, breccias and stockworks.

5. Extensive surface sampling has confirmed the presence of large areas of significant gold mineralization. There is an excellent potential for developing several million tons of gold bearing material in the 0.05 to 0.10 oz/ton range which might be mined by low cost open pit methods. A detailed programme of drilling to fully test this potential is recommended.

PROPERTY:

The property consists of 10 contiguous patented claims known as the Furlough #1 - #10 inclusive and aggregating about 200 acres. (see figure 325-2) The claims were surveyed in 1916 and brought to patent in 1966. They are registered by Patent No. 772925 recorded on February 15, 1966 and shown on Mineral Survey No. 3286 on file in the Bureau of Land Management, Phoenix, Arizona.

LOCATION AND ACCESS:

The property is located in Maricopa County, southwestern Arizona about 55 miles west-northwest of Phoenix, the county seat. The town of Wickenburg, the nearest major center is located about 25 miles north-east of the claims.

The claim block occupies parts of section 1, T 4N, R 8W; section 6, T 4N, R 7W, and section 31, T 5N, R 7W. The geographic center of the property is located at $33^{\circ} 43'$ north and $113^{\circ} 01.5'$ west.

The property is reached from Phoenix by driving northwest on U.S. Highway 93 for a distance of about 55 miles to Wickenburg, thence 22 miles southwest along the Vulture Mine road and a further 10 miles west along an unimproved dirt road to the foothills of the Big Horn Mountains. All parts of the property are easily accessible on foot.

PHYSIOGRAPHY AND VEGETATION:

The claim block covers a north-northwesterly trending ridge in an area of typical badlands topography known as the Big Horn Mountains. Rocky ridges and dry sandy washes predominate in an area which is essentially a desert. Relief is moderate to gentle on the property with elevations ranging from 2300 to 2800 feet (a.s.l.)

Rainfall in this region is minimal, consequently when there are periodic rainstorms in the winter and spring, water does not penetrate the hardpan and flash floods are common. Water for local farming and livestock is generated through deep wells.

Vegetation is typical of the southwestern desert and consists of scattered thorny brush, palo verde trees and various types of cacti.