·____ · _

1

YEIP 87-020 Vol. 1

í

ļ



PRELIMINARY GEOLOGICAL REPORT

ON THE

MCKINNON CREEK PROPERTY INDIAN RIVER AREA DAWSON MINING DISTRICT YUKON TERRITORY

FOR

VOLCANO RESOURCES CORP. VANCOUVER, BRITISH COLUMBIA

February 28, 1987 Vancouver, B.C.

,

Thomas R. Tough, P.Eng. Consulting Geologist

`

TABLE OF CONTENTS

ì

| | PAGE |
|--|--|
| Part A | |
| Summary Conclusions Recommendations | (i) (11) (iv) |
| Part B | |
| Introduction Property Ownership Location Access Topography Timber Water and Power Climate Transportation and Supplies History Recent Work Regional Geology Local Geology Mineralization Geophysical Surveys Exploration Program Estimate of Costs of Exploration Program Certificate Bibliography | 1 2 2 3 3 3 3 3 3 4 5 5 5 6 7 9 10 11 12 |

MAP INDEX

,

Location Map Claim Location Map Claim Map Geology Map Magnetometer Survey VLF - EM Survey

-

_

Preliminary Geological Report on the McKinnon Creek Property Indian River Area Dawson Mining District Yukon Territory

Part A

Summary

33.4

17.64

. .

5r., 85%

5. 5.

. .

Volcano Resources Corp. holds 123 contiguous mineral claims under option.

The claims are situated some 40 kilometres (25 miles) southeast of Dawson City, west-central Yukon Territory.

For the prevailing conditions in the Yukon, the logistics involved with the exploration and development of the property are good.

The auriferous Mckinnon Creek conglomerates were first discovered and staked around 1899.

(1)

During the early years of exploration a total of three shafts were sunk to depths of 30 metres (100 feet) and numerous trenchs were cut along both sides of McKinnon Creek. A couple of short adits were also driven.

Sampling of the conglomerates of the years gave assay results varying from a trace to 0.100 ounces of gold per ton to a high of 48 ounces of gold per ton with good silver values.

Through the late 1960's to 1986 a number of companies carried out geological mapping, limited surface sampling (rock and soil), percussion and diamond drilling and an airborne magnetometer survey.

On December 5, 1986, Volcano Resources Corp. acquired an option on 36 claims along McKinnon Creek and during January and February staked an additional 87 claims.

A combined magnetic and electromagnetic survey was carried out over 50 kilometres (31.2 miles) of grid lines during January and February of 1987.

Anomalous zones were encountered along the west side of McKinnon Creek and generally parallel the creek, suggestive of parallel stream channels or andesite dykes and/or zones of silicification. The old workings tend to coincide with the anomalous zones. The property is underlain by McKinnon Creek conglomerates, a member of the Indian River formation of Lower Cretaceous age, which is comprised of quartz pebble conglomerate intercalated with units of sandstone, siltstone, shale and minor coal. A black colour is imparted to the unit by the presence of finely crystalline graphite in the matrix.

Volcanic rocks of the Carmacks group intrude and overlie the conglomerates which are of fluvial origin and host to the known gold occurrences on the property.

./

The gold occurs as very fine-grained particles and appears to be disseminated throughout the matrix of the conglomerate.

Conclusions

Sampling of the conglomerates over the past 85 years indicates that gold values do occur within the McKinnon conglomerate member of the Indian River formation.

Previous sampling has resulted in assay values between a trace to 0.100 ounces of gold per ton with some erratic highs.

The property warrants further detailed exploration to locate areas within the conglomerates where the gold may be concentrated

(111)

in economic quantities.

Recommendations

100

Sec.

مى ئىلىمى دە

14. S. A.

It is recommended that the property be tested by a two-phased diamond drill program to explore the black auriferous McKinnon conglomerates specifically along McKinnon Creek where gold has been previously found. Areas of magnetic and electromagnetic anomalies along the McKinnon Creek area should be drilled first.

Contingent upon the results of the initial phase of drilling, a second phase consisting of additional drilling should be underta-

It is further recommended that Volcano Resources Corp. allocate the sum of \$ 95,400.00 to implement and execute Phase I of the recommended exploration program.

Respe mitted, Eng. gist

February 28, 1987 Vancouver, B.C. (v)

Preliminary Geological Report on the McKinnon Creek Property Indian River Area Dawson Mining District Yukon Territory

Part B

Introduction

At the request of William A. Jackson, President, Volcano Resources Corp., the writer visited the McKinnon Creek property on February 6, 1987 and studied available data on previous and recent exploration programs carried out over portions of the property. The purpose of the examination and study was to evaluate the results and propose an exploration program that would best assess the economic potential of the property.

Property

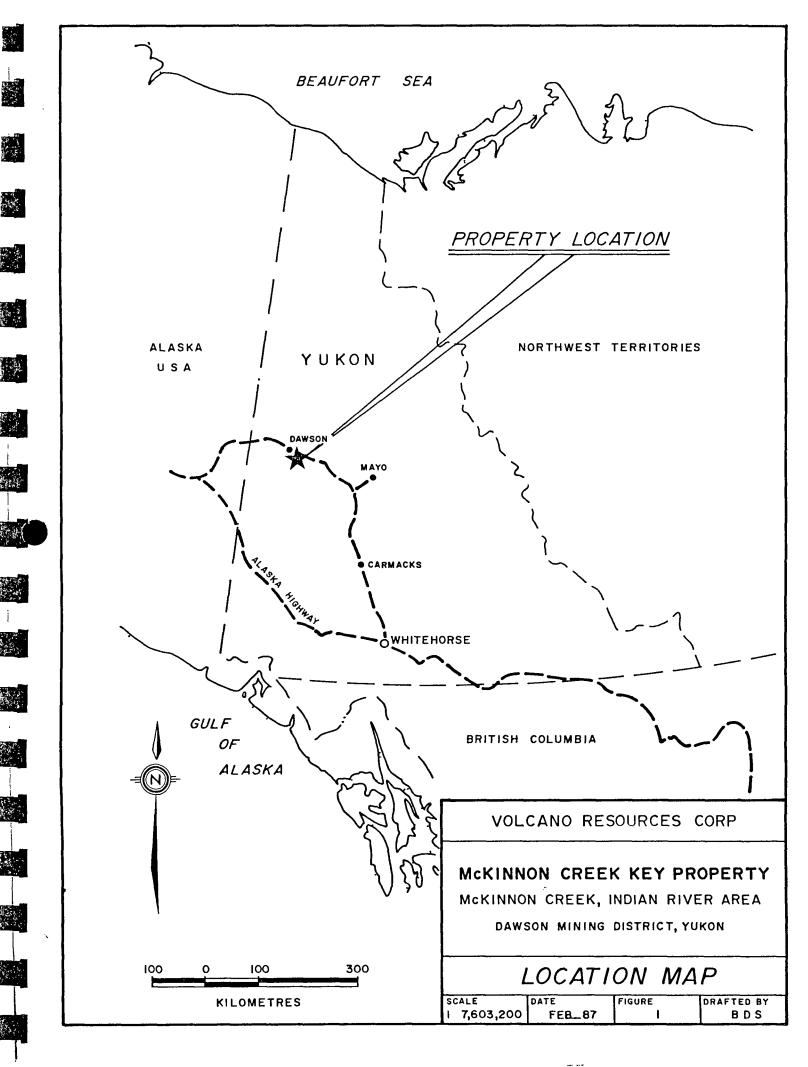
- **1** - **1** -

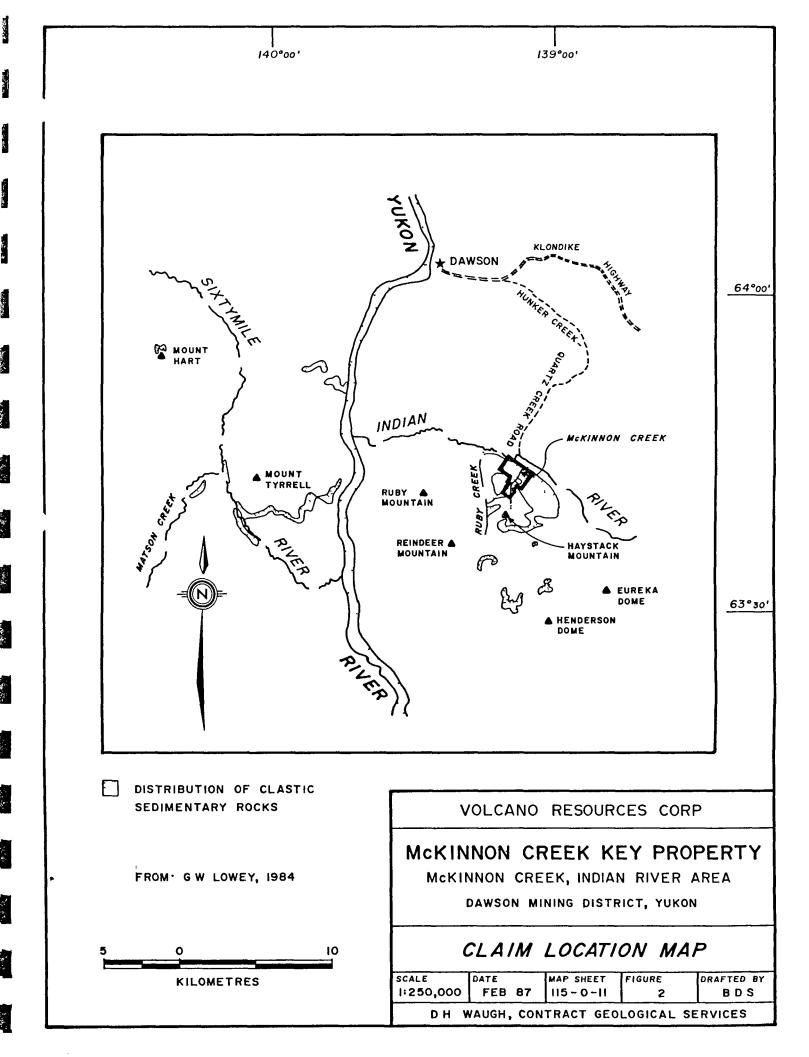
.

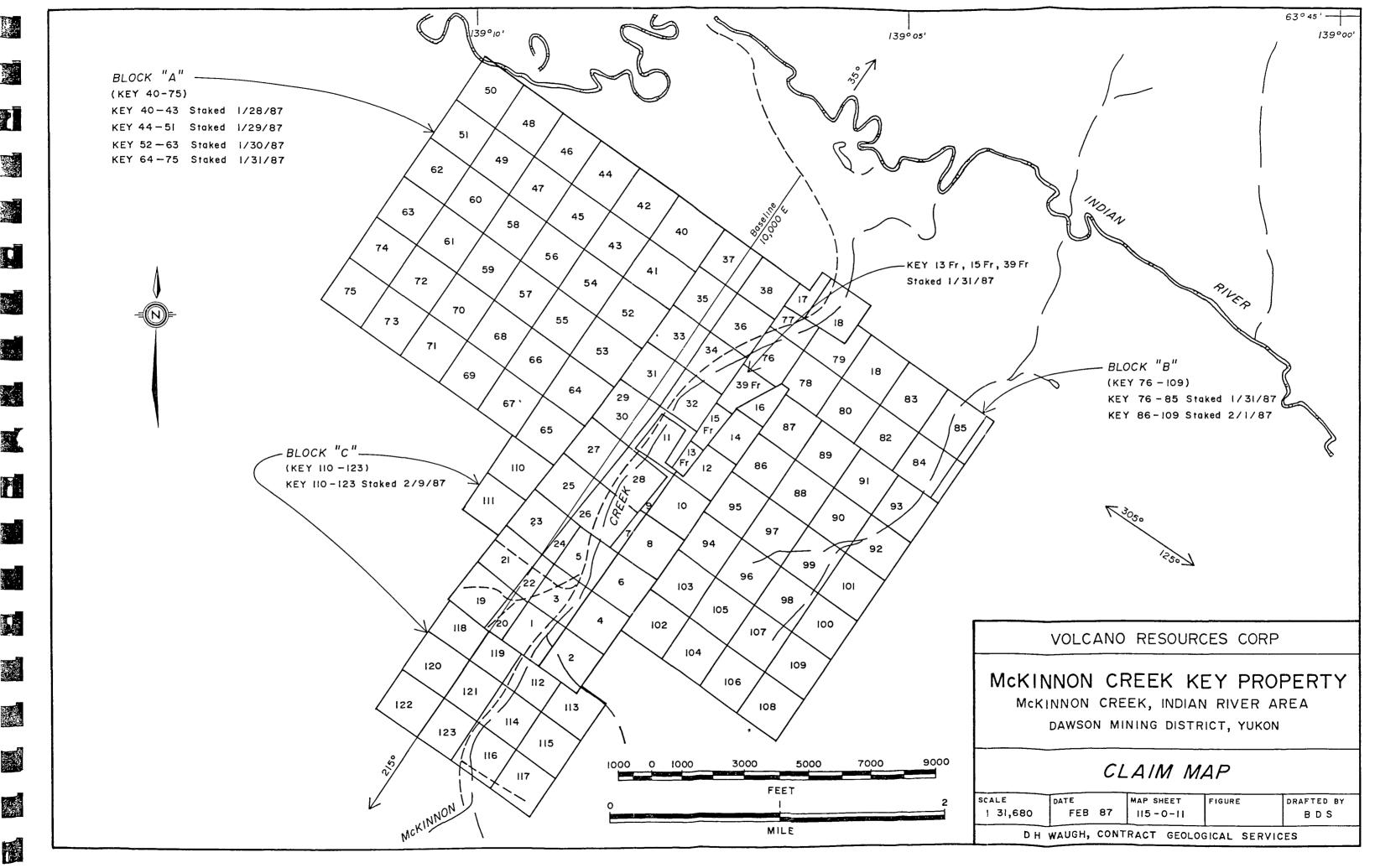
The property consists of 123 contiguous mineral claims held by location. They are as follows:

| <u>Claim Number</u> | Record Number | Expiry Date |
|---------------------|----------------------|-------------|
| Key 1-12 incl. | YA 87792 - 803 incl. | 4 Oct 1987 |
| Key 13 fr. | YA 88703 | 3 Feb 1988 |
| Key 14 | YA 87804 | 4 Oct 1987 |
| Key 15 fr. | YA 88704 | 3 Feb 1988 |
| Key 16 | YA 87805 | 4 Oct 1987 |
| Key 17,18 | YA 87818 - 819 incl. | 7 Oct 1987 |
| Key 19-28 incl. | YA 87808 - 817 incl. | 7 Oct 1987 |

- 1 -







| <u>Claim Number</u> | Record Number | Expiry Date |
|---------------------|----------------------|-------------|
| Key 29-38 incl. | YA 87820 - 829 incl. | 7 Oct 1987 |
| Key 39 fr. | YA 88705 | 3 Feb 1988 |
| Key 40-109 incl. | YA 88706 - 775 incl. | 3 Feb 1988 |
| Key 110-123 incl. | YA 88798 - 811 incl. | 10 Feb 1988 |

The claims are currently in good standing and are shown on the Yukon Government Claim Sheet # 115-0-11.

<u>Ownership</u>

ý . 90

1. A. S. A.

Sec. Sec.

Landa

and the second

E Car

Contraction of the

1.2.2

1. B. B. F.

The claims are held under option by Volcano Resources Corp. of Vancouver, British Columbia.

Location (63N - 140W)

The claims are located along McKinnon Creek, near its confluence with the Indian River, some 40 kilometres (25 miles) southeasterly from Dawson City, Dawson Mining District, Yukon Territory.

<u>Access</u>

The property is accessible by 4 X 4 vehicles along a dirt road which leads south from Dawson City to the Indian River which is fordable at low water levels. The road then follows along McKinnon Creek through the property to the camp and field offices. Helicopter service is also available from Dawson City.

Topography

The elevation on the claims varies between 518 metres (1,700 feet) and 610 metres (2,000 feet) above sea level resulting in a gentle northward slope towards the Indian River.

Timber

a and a

である

day to Bull

100 A

Sec.

4.22.44

The claims are sparsely covered with secondary growth consisting primarily of poplar and spruce. Finished lumber would have to be purchased in Dawson City or Whitehorse, Y.T..

1

Water and Power

Water is available for all phases of exploration and development, and diesel-electric power will be required for all phases of exploration, development and production.

Climate

Winters are relatively cold with moderate to light snowfall. The summer months have temperatures which range from 7 degrees C. to 21 degrees C. with light rainfall.

Transportation and Supplies

The Yukon Territory is serviced by good trucking facilities based out of Whitehorse. A deep sea port is situated at Skagway, Alaska. Whitehorse is serviced by major airlines and a local airline services Dawson City. Most supplies are obtainable from Dawson City or Whitehorse which is provided with good daily express services.

History

1. S. W. 1. 1. 1.

Auriferous McKinnon Creek conglomerates were first discovered and staked by the McKinnon brothers around 1899. At least three shafts, the Britannia, Winchester, and Arctic were sunk in the vicinity of McKinnon Creek to depths of 18 to 30 metres (60 to 100 feet).

A small test mill was erected to extract gold from material taken from the 18 metre (60 ft.) level of the Britannia shaft, located on the Britannia Crown granted Lease (now covered by the current claims). Some 2.5 tons were processed and the recovery is stated to have been 0.02 ounces of gold per ton collected on amalgam plates. Cyanidation was used as a check method on similar material and two tests gave values of 0.160 and 0.350 ounces of gold per ton.

Assaying by various assayers gave values varying from a trace to a high of 48 ounces of gold per ton.

During the late 1960's through to 1976, Yukon Revenue Mines Limited, Cominco Limited and Andac Resources Ltd. carried out exploration of the auriferous conglomerates located along the McKinnon Creek valley.

The exploration consisted of an airborne magnetometer survey, four rotary drill holes and three diamond drill holes. Low gold values were encountered.

- 4 -

The area was also drilled to test the known coal deposits on the property by Cyprus Anvil Mining Corporation in 1980. Poor quality coal was encountered in one of three diamond drill holes.

Esso Minerals Canada took a number of rock and soil samples in August of 1986.

Recent Work

During January and February of 1987, Volcano Resources Corp. carried out a combined ground magnetometer and electromagnetic survey on the property at a cost of approximately \$ 83,000.00.

Regional Geology

1. W. T.

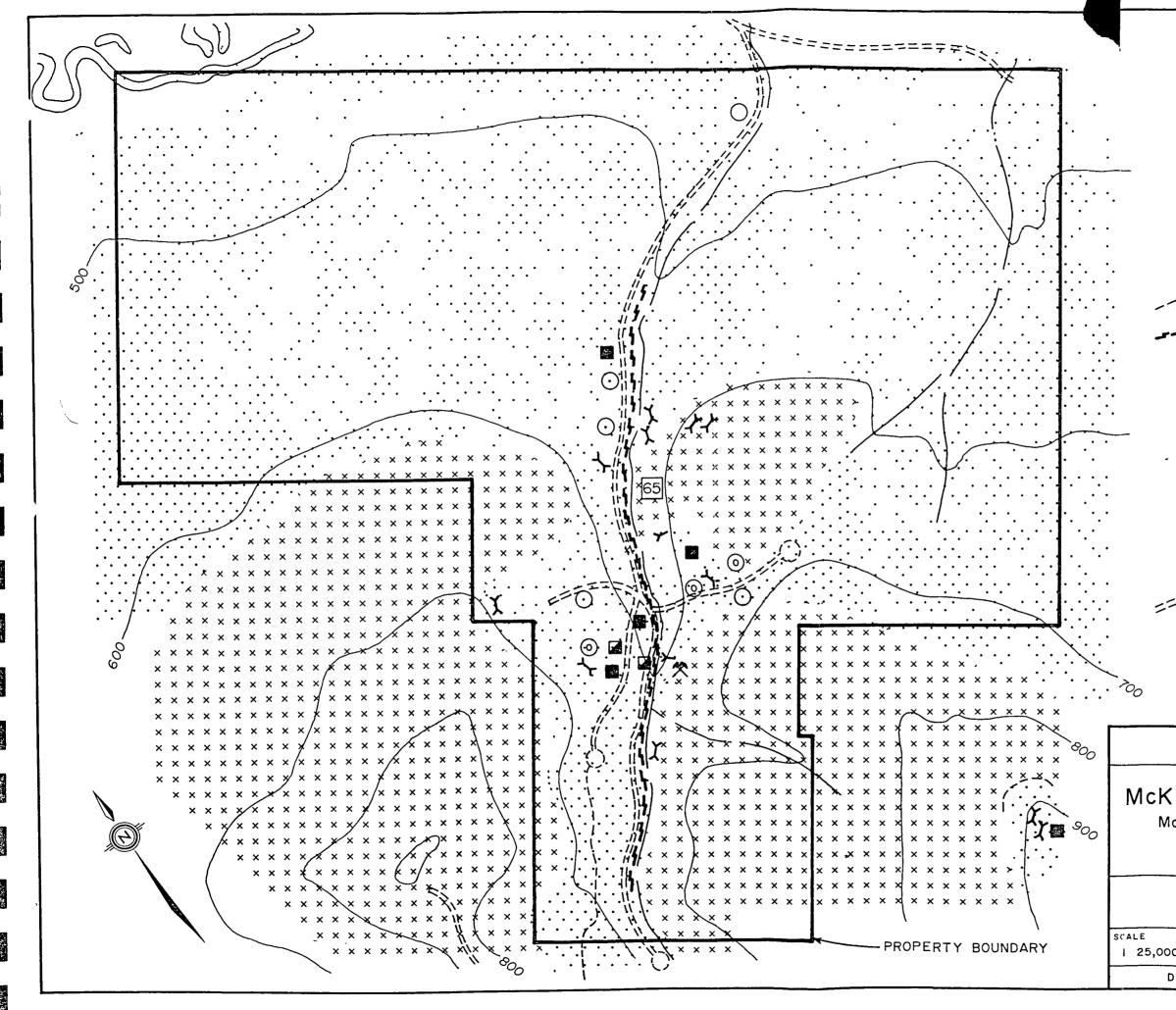
(4, th)

The claims lie within an area mapped by H.S. Bostock between 1935 and 1937 and published in 1942 as Map 711A, OGILVIE. The area is underlain by Precambian gneiss, schist, quartzite, slate and limestone of the Yukon group along with gneissic granite and ultrabasic units. Younger conglomerates and volcanics of the Carmacks group overlie the Precambrian units.

Local Geology

The claims are underlain by the Lower Cretaceous Indian River formation which is comprised of quartz pebble conglomerate intercalated with units of sandstone, siltstone, shale and minor coal. The formation is light-grey to dark grey-green and black and is poorly indurated.

- 5 -



| L | Ε | GI | EI | N | D |
|---|---|----|----|---|---|
| | - | - | _ | | |

| | <u>RECENT</u> Unconsolidated alluvial deposits <u>PALEOCENE AND UPPER CRETACEOUS</u> Carmacks Group—Haystack Andesite | | | |
|---|--|--|--|--|
| | andesite and minor dacite, porphyritic, light- to dark-green, weathering light-green-brown <u>LOWER CRETACEOUS</u> Indian River Formation interbedded sandstone, shale, conglomerate and minor coal, light-grey to black, weathering light-grey | | | |
| | Geologic boundary (approximate, assumed) | | | |
| | Fault (assumed) | | | |
| * | Mine (Gold Mine) | | | |
| \odot \odot | Diamond drill hole, Rotary drill hole | | | |
| | Shaft | | | |
| ~ | Adıt | | | |
| × | Trench | | | |
| | Building | | | |
| | Trall (bulldozer, foot) | | | |
| 65 | Radiometric age (millions of years) | | | |
| 500 | 0 1500 | | | |
| | METRES | | | |
| FIELD WOR | K BY G W LOWEY, 1981, 1983 | | | |
| VOLCANO RESOURCES CORP | | | | |
| KINNON CREEK KEY PROPERTY ACKINNON CREEK, INDIAN RIVER AREA DAWSON MINING DISTRICT, YUKON | | | | |
| GEOLOGY MAP | | | | |
| DATE FEB 87 | MAP SHEET FIGURE DRAFTED BY 115-0-11 B D S | | | |
| DH WALGH COM | TRACT CEOLOGICAL DEDUIDED | | | |

DH WAUGH, CONTRACT GEOLOGICAL SERVICES

The McKinnon conglomerate exhibits silicification in areas of close proximity to McKinnon Creek which appears to occupy a shear zone or fault along its course. The color of the conglomerate is black, caused by a matrix of finely-crystalline graphite. The unit tends to thin to both the east and west of McKinnon Creek and is enclosed within the fluvial-deltaic fan of the Ruby Quartz conglomerate member. The McKinnon conglomerate unit appears to be entirely fluvial in origin and is the host to the gold occurrences on the property.

Volcanic rocks of the Carmacks group intrude and overlie the conglomerate. They vary from andesite to rhyodacitic in composition, are porphyritic and light to dark green.

Mineralization

The gold occurs as very fine-grained (silt size) particles and appears to be disseminated throughout the matrix of the massive conglomerates which are exposed along portions of McKinnon Creek. The gold in the conglomerates varies from a trace to 0.100 ounces per ton.

The auriferous conglomerates have previously been interpreted as a paleoplacer deposit and to be similar to the Witwatersrand gold field in South Africa. (Minter, 1978, Pretoruis, 1975)

The gold may have also been introduced by the intrusion of andesite and rhyodacite dykes and sills or remobilized from the

- 6 -

original conglomerates and redeposited therein. Gold does have an affinity for graphitic units and hence the resultant concentration of fine gold within the McKinnon conglomerate. The auriferous conglomerates along McKinnon Creek display the cnaracteristics of both a placer deposit and a hydrothermal disseminated deposit with extensive alteration and a spatial relationship to felsic intrusions.

Geophysical Surveys

, ¹ 54

1 1 1

् स

4

12.2

A total of 50 kilometres (31.2 miles) of lines were established on the property using a small bulldozer. A combined electromagnetic and magnetic survey was carried out over the grid during January and February, 1987.

(a) Electromagnetic Survey

A VLF-EM-16 (GEONICS) survey was conducted over the established grid by Gary Lee, P.Eng.. Readings were taken every 25 metres (82 feet).

The VLF-EM-16 instrument is a sensitive radio receiver which encompasses the frequency bands of very low frequency (V.L.F.) transmitting stations with a patented method of measuring the in-phase and quadrature components of the vertical electromagnetic field at right angles to the direction of transmission. The main transmitter used for the survey was N.P.G. located at Jim Creek near Seattle, Washington, U.S.A.. Transmitters in Hawaii

- 7 -

and Cutler, Maine were also used.

The data was processed by the Fraser-filter method and plotted on a scale of 1 2,500.

Linear anomalous conditions were encountered parallel to and west of McKinnon Creek suggesting the presence of older stream channels of McKinnon Creek. Some of the old workings are within the anomalous zones.

The anomalies may also reflect volcanic dykes and/or zones of silicification.

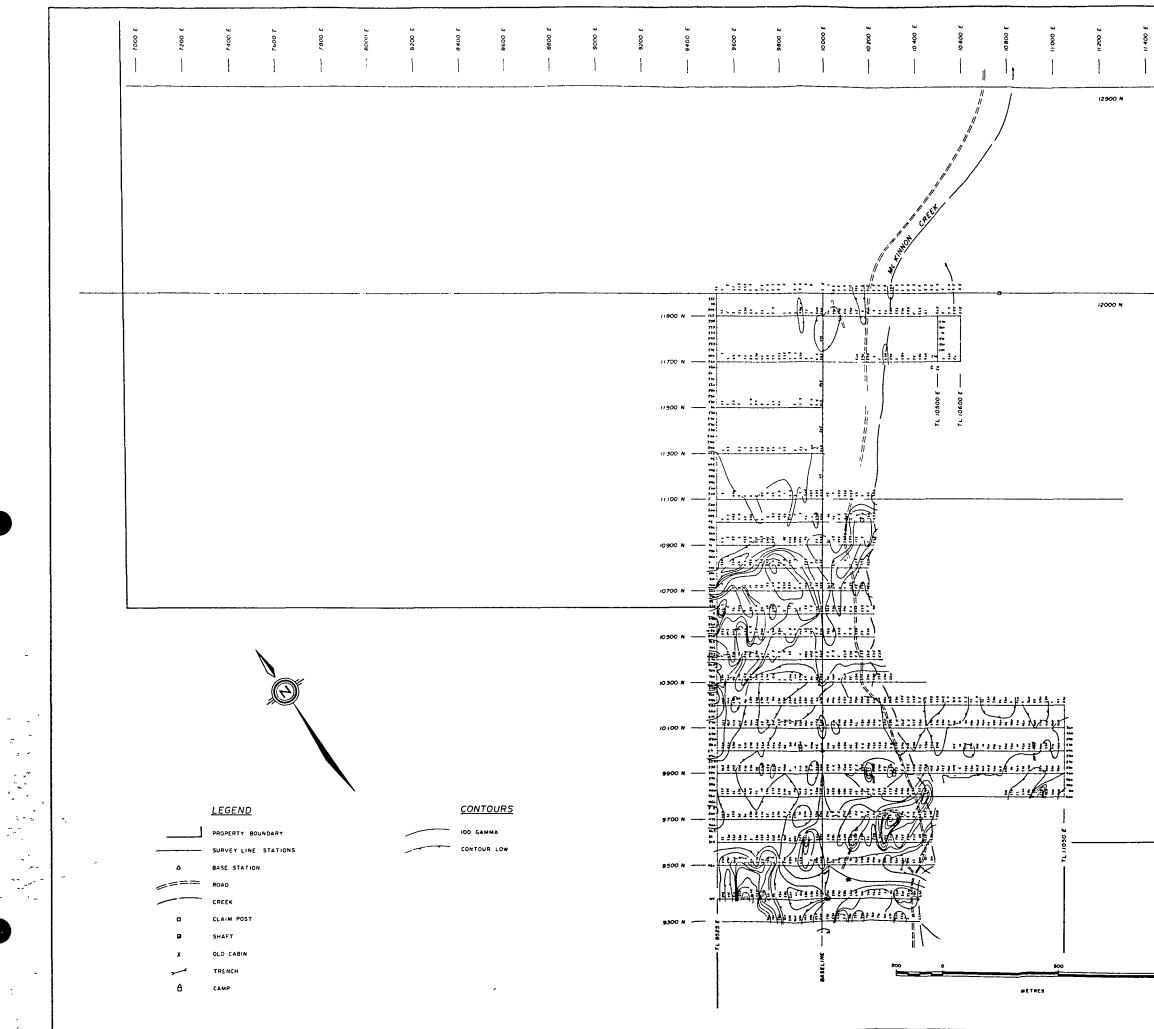
(b) Magnetic Survey

A Fluxgate MF-1 magnetometer was used to survey the grid established on the property. The results were plotted and contoured at 100 gamma intervals. Readings were taken every 25 metres (82 feet).

A number of magnetic anomalous conditions occur within the survey area, some of high intensity and others much lower.

The lower intensity magnetic anomalies councide well with the strongest electomagnetic anomalies, with higher gamma readings occasionally coincident or nearly so.

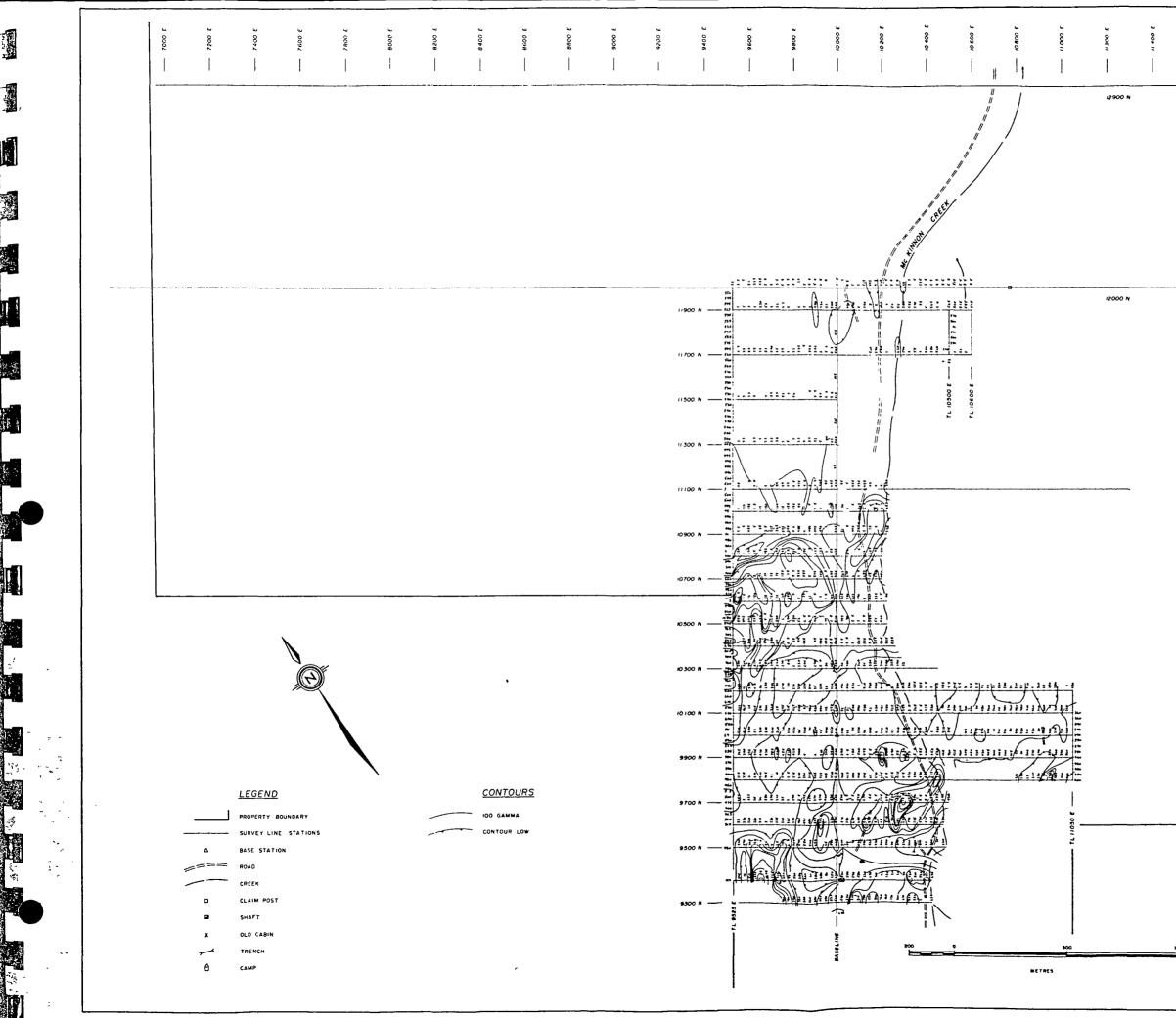
- 8 -



| 11 600 E | 3 000 11 | 12 000 £ | 12 200 E | 12 400 E | 12 600 £ | 12800 £ | |
|----------|----------|--|----------|-----------------|----------|---------|--|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | I 008 SCALE † 10 GAMMA SHARPE MA | READINGS | Y INSTRUMENT | | | |
| | | | | | | | |
| | | | | . <u> </u> | | | |
| | | | McKIN | | EK KEY | PROPER | |

MAGNETOMETER SURVEY

E 000 PER 87 W MIET P SUBE - 1 FT 3 0 S



1

1

14

đ.

12 400 2 800 INSTRUMENT MF : FLUXGATE MAGNETOMETER 1008 SCALE READINGS + 10 GAMMA SENSITIVITY SHARPE MANUFACTURED INSTRUMENT DIURNAL VARIATION CORRECTED VOLCANO RESOURCES CORP McKINNON CREEK KEY PROPERTY MCKINNON CREEK INDIAN RIVER AREA DAWSON MINING DISTRICT TUKON

MAGNETOMETER SURVEY

4 8 78 87 8 87 113 0 11 80 8

Exploration Program

The property should be diamond drilled to test the auriferous conglomerates for concentrations of gold along the favourable fault or shear which is followed by McKinnon Creek.

Anomalous magnetic and electromagnetic areas related to the McKinnon conglomerates should be primary drill targets.

A second phase of diamond drilling should be undertaken if the the results of the first phase are encouraging.

i'

Estimate of Costs of Exploration Program

Phase I:

| Mobilization & Demobilization | \$ 6,000 |
|--|-----------|
| Site Preparation | 7,500 |
| Diamond Drilling - 1,500 ft NQ @ \$30/ft | 45,000 |
| Assaying | 4,000 |
| Engineering & Supervision | 10,000 |
| Geologist & Helper | 7,000 |
| Contingency @ 20% | 15,900 |
| TOTAL - PHASE I | \$ 95,400 |

Contingent upon the results of Phase I, a second phase should be undertaken and consist of additional drilling.

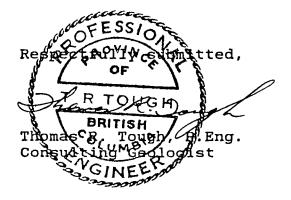
Phase II:

| Mobilization & Demobilization | \$ | 6,000 |
|--|-----|---------------|
| Site Preparation | | 7,500 |
| Diamond Drilling - 2,000 ft NQ @ \$30/ft | | 60,000 |
| Assayıng | | 5,000 |
| Engineering & Supervision | | 10,000 |
| Geologist & Helper | | 7,000 |
| Contingency @ 20% | | <u>18,900</u> |
| TOTAL - PHASE II | \$1 | 14,400 |

It is estimated that Phase I should take approximately one and

one half months to complete.

February 28, 1987 Vancouver, B.C.



- 10 -

CERTIFICATE

I, Thomas R. Tough, of the Municipality of Richmond, in the Province of British Columbia, do hereby certify

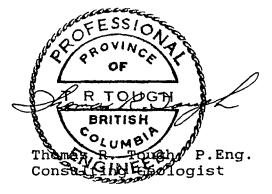
That I am a consulting geologist and Principal of T.R. Tough and Associates Ltd. with offices at 500 - 890 West Pender Street, Vancouver, British Columbia, V6C 1J9.

I further certify that:

Constant.

- 1. I am a graduate of the University of British Columbia (1965) and hold a B.Sc. degree in Geology.
- I have been practicing my profession for the past twenty-two years.
- 3. I am registered with the Association of Professional Engineers of the Province of British Columbia.
- 4. The information for the accompanying report was compiled from a personal examination of the property on February 6, 1987, and from a study of available government and private reports on the McKinnon Creek area.
- 5. I have no direct or indirect interest whatsoever in the property described herein, nor in the share capital or securities of Volcano Resources Corp. and do not expect to receive any interest therein.

Dated in Vancouver, B.C., this 28th day of February, 1987.



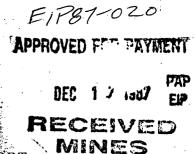
<u>Bibliography</u>

| Bostock, H.S., | 1936; | Carmacks District, Yukon; Geol. Survey. Can., Mem. 189 |
|--------------------|-------|---|
| Bostock, H.S., | 194 | 2; Ogılvıe, Yukon Terrıtory; G.S.C. Map 711A |
| Tully, D.W.,P.Eng. | 1974; | "KIN No. 1-16 Claim Group, McKinnon Creek, Indian River Area, Dawson Mining District, Yukon Territory" |
| Armstrong, W.P., | 1969; | "Geological Report on Mac Group 1-16 for Cominco Ltd." |
| Adamson, J.A., | 1980; | "Drilling Report, Coal License 101, Cyprus Anvil Mining Corporation." |
| Lowey, G.Wm., | 1984; | "The Stratigraphy and Sedimentology of Siliciclastic Rocks, West-Central Yukon, and Their Tectonic Implıcations" PhD Thesis. |

- 12 -

And the second second

•



manda man aktimistikki kibalisi .

<u>:</u> 1

A PRELIMINARY DIAMOND DRILLING REPORT

YEIP

87-020

Vol. 2

on the

KEY 3 and 5 Quartz Claims

McKinnon Creek - Indian River Area N.T.S. 115-0-11 Dawson Mining District Yukon Territory Latitude: 63°40' Longitude: 139°07'

For: VOLCANO RESOURCES CORPORATION Suite 502 - 595 Howe Street Vancouver, B.C. V6C 2T5

> By: D. H. WAUGH, Geologist

December 1987 Field work: September 10 - October 21, 1987

TABLE OF CONTENTS

- 和二、如何的影响和影子

| | 2 | | Page |
|--|---------|----|----------------|
| Figure 1: Location Plan (scale 1:7,603,200) | | | - - |
| INTRODUCTION | | | 1 |
| PROPERTY AND OWNERSHIP | | | 1 |
| Figure 2: Claim Location Map (scale 1:250,000) | · . | | - |
| LOCATION AND ACCESS | | , | 2 |
| TOPOGRAPHY AND CLIMATE | | С. | 2 |
| Figure 3: Claim Map (scale 1:31,680) | | | - |
| HISTORY | | | 3 |
| GEOLOGY | | | 3 |
| Figure 4: Geology Map (scale 1:25,000) | | | - |
| MINERALIZATION | | | 4 |
| 1987 DRILL PROGRAM | | | 5 |
| Figure 6: Plan Map – Diamond Drill Holes 87–1 thru 87–5 (scale 1:200) | • | | - |
| Figure 7: Plan Map – Diamond Drill Holes 87–6, 87–7 (scale 1:200) | · · · · | | - . |
| Figure 8: Plan Map – Diamond Drill Holes 87–8, 87–9 (scale 1:200) | ۲ ۲ | | - |
| STATEMENT OF QUALIFICATIONS | | | 7 |
| COST STATEMENT | · | | 8 |

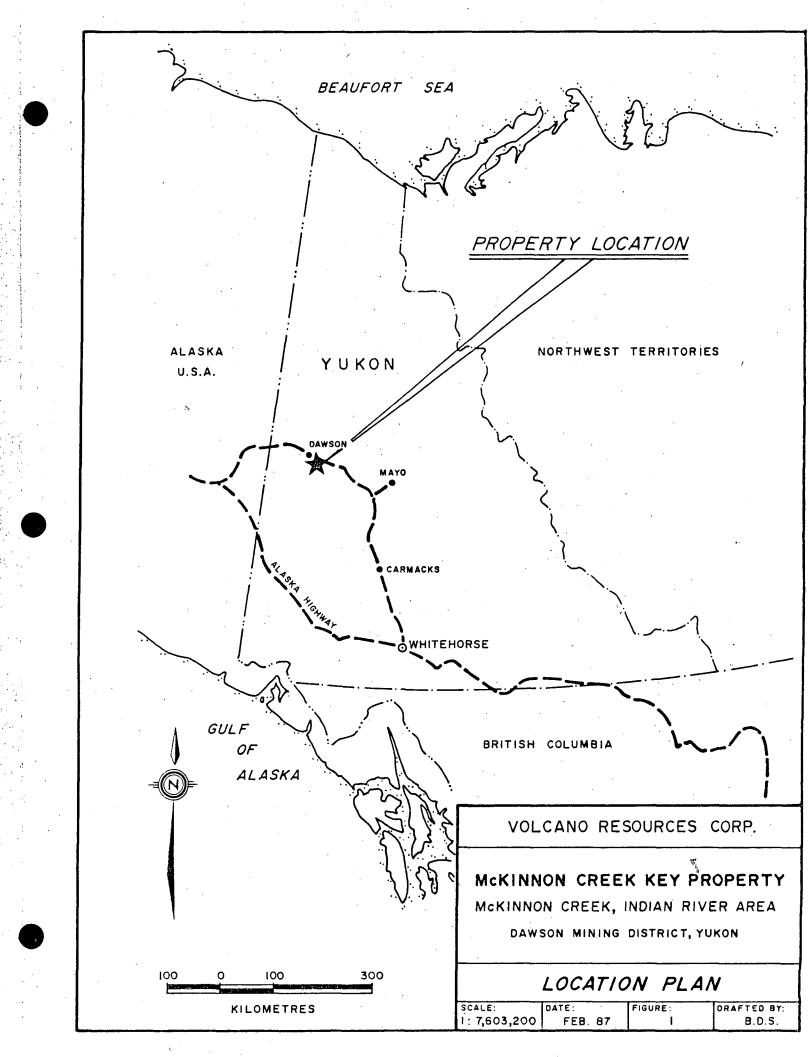
Appendices

| Appendix I: | Bibliography |
|---------------|---------------------------------------|
| Appendix II: | Drill Logs, Sample Descriptions |
| Appendix III: | Analytical Report, Assay Certificates |
| Appendix IV: | Vouchers |

Map Pocket

Figure 5:

Detailed Plan (scale 1:2,000)



INTRODUCTION

This report is written as a follow-up to the 1987 diamond drilling program on the McKinnon Creek KEY 3 and KEY 5 claims and is a representation work requirement. Fieldwork was conducted during the periods of September 10 thru October 21, 1987 by D. H. Waugh Contract Geological Services for Volcano Resources Corp.

The diamond drilling was contracted to Kluane Drilling Ltd. of 14 MacDonald Road, Whitehorse, Yukon.

The purpose of the drill program was to test the economic potential of the property in the vicinity of some of the old shafts and adits where historic data indicated gold values of possible economic tenor from the McKinnon Creek conglomerates.

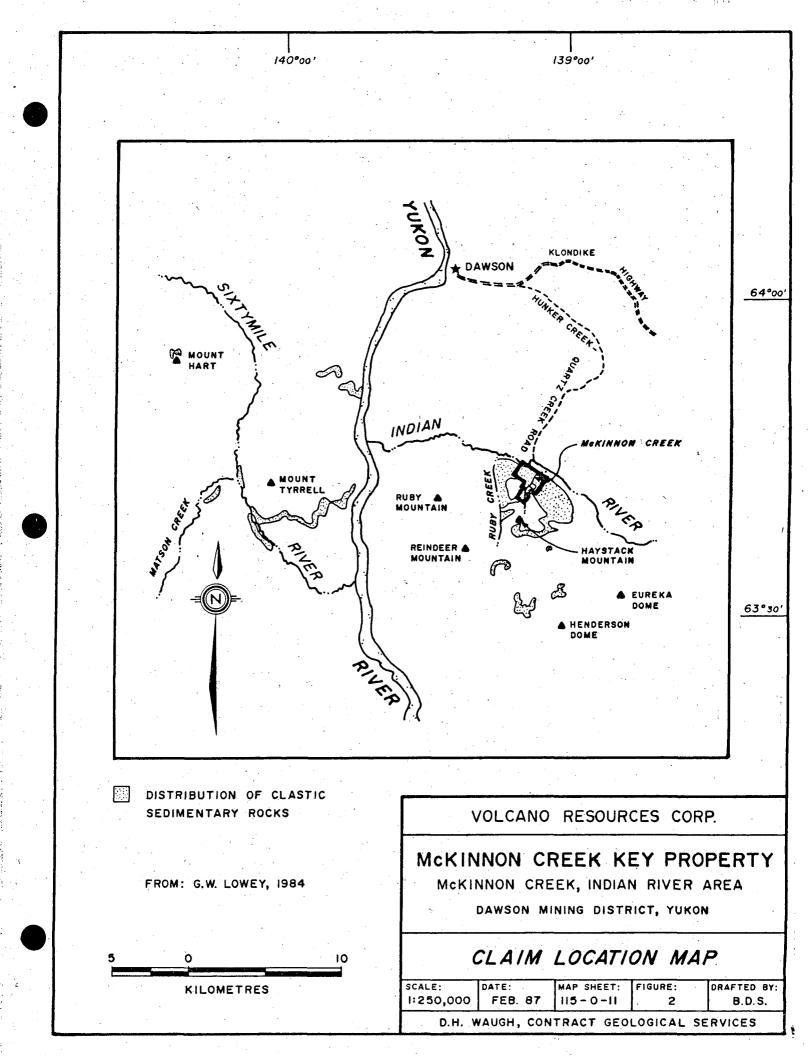
PROPERTY AND OWNERSHIP

The property consisted of 123 contiguous quartz claims held by location at the time the drill program was conducted.

The claims are located on Claim Sheet 115–O-11 and are as listed below. (Expiry dates are subject to acceptance of the assessment work described in this report.)

| <u>Claim Number</u> | Record Number | Expiry Date |
|---------------------|---------------------------|------------------|
| KEY 1-12 incl. | YA 87792 - YA 87803 incl. | 3 February 1992 |
| KEY 13 Fr. | YA 88703 | 3 February 1993 |
| KEY 14, 16 | YA 87804, YA 87805 | 3 February 1992 |
| KEY 15 Fr. | YA 88704 | 3 February 1993 |
| KEY 17, 18 | YA 87818, YA 87819 | 3 February 1992 |
| KEY 19-28 incl. | YA 87808 - YA 87817 incl. | 3 February 1992 |
| KEY 29-38 incl. | YA 87820 - YA 87829 incl. | 3 February 1992 |
| KEY 39 Fr. | YA 88705 | 3 February 1993 |
| KEY 40-51 incl. | YA 88706 - YA 88717 incl. | 3 February 1993 |
| KEY 52–75 incl. | YA 88718 - YA 88741 incl. | 3 February 1989 |
| KEY 76-85 incl. | YA 88742 - YA 88751 incl. | 3 February 1993 |
| KEY 86-109 incl. | YA 88752 - YA 88775 incl. | 3 February 1989 |
| KEY 110-123 incl. | YA 88798 - YA 88811 incl. | 10 February 1989 |
| | | 5 |

The claims are currently in good standing, subject to acceptance of this report, and are held under option by Volcano Resources Corp. of 502-595 Howe Street, Vancouver, B.C., V6C 2T5.



LOCATION AND ACCESS

The KEY claims are located along McKinnon Creek near its confluence with the Indian River - a distance of about 40 kilometers southeasterly from Dawson City in the Dawson Mining District of the Yukon Territory, at latitude 139°7' and longitude 63°43'.

と何,時 いいかいゆ

The property is accessible by government-maintained gravel roads that lead from Dawson City via the Upper Bonanza Creek road or via the Hunker Creek road to the junction of the Quartz Creek road – a distance of about 29 kilometers and 34 kilometers respectively. The Quartz Creek road is periodically maintained and leads to the Indian River over a distance of approximately 11 kilometers. A bulldozer trail leads up the south bank of the Indian River, then up McKinnon Creek to the field camp – a distance of 6.5 kilometers from the ford at the Indian River crossing near the confluence of Quartz Creek. This section of road requires upgrading to provide year-round access by 4x4 vehicles. The last 0.5 kilometers to the camp was accessed by all-terrain-vehicles and partly by helicopter during mobilization.

Helicopter charter is available from Dawson City on a year-round basis.

TOPOGRAPHY AND CLIMATE

The elevation of the claims varies between 460 and 730 meters above sea level. Most of the property is occupied by gentle slopes. Grades steepen somewhat in the vicinity of McKinnon Creek along the east bank of the valley.

Permafrost conditions occur as lenses in the creek valley, particularly along the west facing slopes of the east side where drilling was conducted.

Winters are usually cold, with moderate to light snowfall and temperatures ranging from lows near -45° C and highs to -10° C, averaging about -25° C. The summers are temperate, with long, warm, sunny days and temperatures ranging from about 10° C to as high as 30° C, averaging about 20° C.

Rainfall is usually light but the region experienced a wet summer and fall during 1987. Generally, though, summers and falls are historically dry and the climate can be classified as semi-arid.

- 2 -

STATEMENT OF QUALIFICATIONS

I, DAVID H. WAUGH, of 118 Alsek Road, Whitehorse in the Yukon Territory, HEREBY STATE that:

- 1. I have practised my profession as an exploration geologist for 23 years.
- 2. I was educated at Michigan Technological University, class of 1964, and majored in geological engineering.
- 3. I personally supervised and managed the diamond drilling and related work on the KEY 3 and 5 quartz claims during September and October, 1987, which property is held under option by Volcano Resources Corp.
- 4. The observations made in this report are those of my own unless otherwise disclosed.

DATED at Whitehorse, Yukon, this 13th day of December, 1987.

ithan David H. Waugh

McKINNON CREEK - DRILL PROGRAM VOLCANO RESOURCES CORP. KEY CLAIMS

.

COST STATEMENT

| Perıod: Fıeldwork: | September 4, 1987 - December 16, 1987 September 10, 1987 - October 21, 1987 | |
|------------------------|---|---|
| Drilling | Kluane Drilling Ltd: 464 meters of NQ core; | |
| Drining | holes 87-1 thru 87-9 | \$ 67,080.90 |
| Geological Services | D. H. Waugh: 69 days (July 1 - December 16, 1987) - geological, supervision and management services Geologist - M. Fekete: 35 days (Sept. 8/Oct. 20) Geologist-G.Davidson: 7 days (Sept. 25/Oct. 2) Consulting geologist - T. Tough: 4 days (Oct. 5-27) | 20,700.00 6,025.00 1,750.00 1,200.00 |
| Labour | Camp cook: 30 days) Handyman: 16 days) Labourer: 22 days) | 8,250.00 |
| Bulldozer Support | H. Coyne & Sons, D7E Cat: Sept. 9-Oct. 21 | 27,770.50 |
| <u>Transportation</u> | Scheduled airlines: CA/Alkan Air Helicopter charter: Capital Helicopters Vehicle rentals: trucks/cars/ATV's Taxis, air and highway freight: CA/Alkan/Frontier e Fuel – gas/diesel Repairs: minor service and repairs | $\begin{array}{r} 4,290.70\\ 3,339.00\\ 10,304.65\\ \text{etc} 1,003.50\\ 3,665.65\\ 246.00\\ \end{array}$ |
| Accommodation | Camp - D.H. Waugh: trailer camp rental and equipment rental Hotel - hotel rooms only | 4,800.00 2,284.40 |
| Groceries/Meals | Camp groceries, hotel and restaurant meals/tips | 6,282.11 |
| Supplies | Field and camp supplies; minor equipment parts | 3,342.14 |
| Expediting | Expediting services; minor supplies | 395.00 |
| <u>Report</u> | Drafting, reproduction, secretarial, supplies | 975.12 |
| Assays | Gold and silver assays for 90 samples | 1,921.50 |
| | SUBTOTAL | \$176,782.32 |
| Claims | Filing fees on KEY 1-39 incl., KEY 76-81 incl. renewals | 1,230.00 |
| | TOTAL | \$178,012.32 |
| | , am | Through |

,

APPENDIX I

BIBLIOGRAPHY

| Bostock, H. S. | 1936 | Carmacks District, Yukon: Geol. Survey. Can. Mem. 189. |
|----------------------|------|--|
| Bostock, H. S. | 1942 | Ogılvıe, Yukon Terrıtory: G.S.C. Map 711A. |
| Tully, D. W., P.Eng. | 1974 | "KIN No. 1-16 Claim Group, McKınnon Creek, Indian Rıver Area, Dawson Mıning District, Yukon Terrıtory." |
| Armstrong, W. P. | 1969 | "Geological Report on MAC Group 1-16 for Cominco Ltd." |
| Adamson, J. A. | 1980 | "Drilling Report, Coal Licence 101, Cyprus Anvil Mining Corporation." |
| Lowey, G. Wm. | 1984 | "The Stratigraphy and Sediment- ology of Siliciclastic Rocks, West- Central Yukon, and their Tectonic Implications" - PhD thesis. |

•

DIAMOND DRILL RECORD

| | PROPERTY | MacKinnon Creek - Vo. al | no Resou | irces | _ HOL | .E NO | 87-3 | 1 | | |
|---------------------------------|---|----------------------------|-------------------|----------|---------|--------------------|--------|--------|------|----------|
| HEET NUMBER 1 of 2 SECTION FROM | | TO | | | STARTED | | | | | |
| LATITUDE | 97+04N | DATUM | | | | COMPLETED | | | | |
| DEPARTURE | 105_15E | BEARING | BEARING | | | UI | TIMATE | DEPTH. | 148' | (45.1 m) |
| ELEVATION | 1974' (601.7 m) | DIP | DIPPROPOSED DEPTH | | | | | | | |
| DEPTH FEET | FO | RMATION | SAMPLE NO | FROM | то | WIDTH ASSAY VALUES | | | | |
| 0 - 24 | CASING | | | | | | | | | |
| | | | 56001 | 24 | 27 | | | | | |
| 24 - 40.5 | QUARTZ PEBBLE CONG | LOMERATE - white to gray, | _34101 | 27 | 32 | | | | | |
| | clast supported sl | ight argillic to sericitic | 34102 | 32 | 40.5 | | | | | |
| | alteration | | 56002 | 40.5 | 43.5 | | | | | |
| | | | 56003 | 43.5 | 48.5 | | | | | |
| 40.5 - 70 | - very broken with | poor recovery; matrix | | | | | | | | |
| | lost and quartz pe | bble returned | 56004 | 48.5 | 52 | | | | - | - |
| | | | 56005 | 52 | 56 | | | | l | |
| 70 - 79 | - white, very blea | ched, intense argillic | 56006 | 56 | 70 | | | | L | |
| | alteration | | 56007 | 70 | 73 | | | | | |
| | | | 56008 | 73 | 76 | | | | | |
| 79 - 94 | - white-rusty as f | ractures very broken and | | | | | | | | |
| | crumbled | | 56009 | 76 | 79 | | | | | |
| | | | 56010 | 79 | 82 | | | | | |
| 94 - 126 | "FELSIC" VOLCANIC | - pale to slightly rusty, | 56011 | 82 | 85 | | | | | |
| | very soft with intense argillic/supergene | | 56012 | 85 | 90 | | | | | |
| | alteration; probab | oly altered andesite | 56013 | 90 | 93 | | | | | |
| | porphyry, crumbled | and broken | | | | | | | ļ | |
| | | | | . | | | - | | ļ | |
| | | | | | | 1 | | | 1 | |

Dam SIGNED_

DRILLED BY_

DIAMOND DRILL RECORD

| | PROPERTY | | | | | IOLE NO. 87-1 | | | | | |
|--|--|---------------------------------------|----------------|------|---------|---------------|--------------|--|--------|------|-----------|
| SHEET NUMBER_ | 2 of 2 S | SECTION FROMTO | | | STARTED | | | | | | |
| LATITUDE | | DATUMBEARING | | | | COMPLETED | | | | | |
| | | | | | | | | | | | ELEVATION |
| DEPTH FEET | FORMATION | | SAMPLE FROM TO | | то | WIDTH | ASSAY VALUES | | VALUES | | |
| 126 - 129 | ANDESITE PORPHYRY - slightly rusty porphyr- | | 56014 | 93 | 96.5 | | | | | | |
| | itic volcanic; rustiness is stain over | | 56015 | 96.5 | 100 | | | | | | |
| | basic texture; phenocrysts visible slightly | | 56016 | 100 | 103 | | | | | · | |
| | clouded | | | | | | | | | | |
| 129 - 151 | - dark green fresh; chloritized + 1% dis- | | 56017 | 123 | 126 | | | | | | |
| | seminated pyrite indicates pervasive weak propylitic alteration | | 56018 | 126 | 129 | | | | | | |
| | | | 56019 | _129 | 133 | | | | | | |
| | | | | | | | | | | | |
| • | | | | | | | | | | | |
| | | | | | | | | | | | |
| ······································ | | | | | | | | | | | |
| | | | | | | | | | | | |
| <u> </u> | | | | | | | | | | L | |
| | | | | | | | | | | | |
| | | · · · · · · · · · · · · · · · · · · · | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | \ | | + | | | | | |

Jalang SIGNED_

DRILLED BY ____

| | PROPERTY Mack | MacKinnon Creek - Volca Resources | | | | | HOLE NO | | | | | | |
|---------------------------------------|-------------------------------|-----------------------------------|--------------|------|------|----------|---------|----------|----------|--------|--|--|--|
| SHEET NUMBER_ | 1 of 3 | SECTION FROM | | _TO | | STA | ARTED | | | | | | |
| LATITUDE | 97+04N | DATUM | | | | COI | MPLETEI | D | <u> </u> | | | | |
| DEPARTURE | 105+15E | BEARING | 125 | | · | UL | TIMATE | DEPTH | 151' | (46 m) | | | |
| ELEVATION | 1974' (601.7 m) | DIP | -70° | | | PRO | DPOSED | DEPTH_ | | | | | |
| DEPTH FEET | FORMA | TION | SAMPLE NO | FROM | то | WIDTH | | ASSAY | VALUES | | | | |
| 0 - 33 | CASING | | 56029 | 34 | 37 | | | | | 1 | | | |
| | | | 56030 | 37 | 40 | | | | | | | | |
| 33 - 55 | QUARTZ PEBBLE CONGLOME | RATE (QPC) - poorly | 56031 | 40 | 43 | | | | | | | | |
| | indurated, clast suppo | rted; 80% gray to | 56032 | 43 | 46 | | | | | | | | |
| | white quartz clasts + | 20% gray to black | 56033 | 46 | 47 | | | | | | | | |
| | clastic material (sst, | mst) clasts; clasts | 56034 | 49 | 52 | | | | | | | | |
| | very well rounded indi | cating that material | 56035 | 52 | 55 | | | | | | | | |
| | was very well worked h | efore disposition; | | | | | | | | | | | |
| | clasts range from 1/8" | to >2" with ½" | 56020 | 55 | 57 | | | | ļ | | | | |
| | average; matrix soft, | crumbly with moderate | 56021 | 57 | 59 | | | | | | | | |
| • | (clay) alteration + we | ak sericitic altera- | 56022 | 59 | 61.5 | | | | | | | | |
| | tion, minor rust on fr | actures @ ±10-20° to | 56023 | 61.5 | 64 | | | | | | | | |
| | C/A | | 56024 | 64 | 69 | 1 | | · | | | | | |
| · · · · · · · · · · · · · · · · · · · | | | 56025 | 69 | 73 | <u> </u> | | | | | | | |
| 55 - 57.5 | QPC - as to 55' but ve | ry broken and | | | | | | ····· | | | | | |
| <u></u> | crumbled with intense | argillic (clay) | 56036 | 73 | 76 | | | | | | | | |
| <u></u> | alteration - shear? | . <u> </u> | 56037 | 76 | 79 | | | <u></u> | | | | | |
| 57 5 - 59 | QPC - very rusty | ····· | 56038 | 79 | 82 | | | | | | | | |
| | · | · | 56039 | 82 | 85 | <u> </u> | | | <u> </u> | | | | |
| 59 - 62.5 | <u>QPC - intense silicifi</u> | cation, rusty, clasts | 56040 | 85 | 88 | | | <u> </u> | | l | | | |
| | very angular and broke | en, suggesting breccia- | 56041 | 88 | 91 | | | | Ì | | | | |

Jangh SIGNED_

DRILLED BY.__

| | PROPERTY | HOLE NO. 87-2 | | | | | | | |
|---------------|---|---------------|--------|--------|-------|---------|--|--------|---|
| SHEET NUMBER_ | 2 of 3 SECTION FROM | . <u></u> | _то | | STA | RTED | | | |
| LATITUDE | DATUM | | | | COI | MPLETED |) | | |
| DEPARTURE | BEARING | | | | UL | TIMATE | DEPTH_ | | |
| ELEVATION | DIP | | | | PRC | DPOSED | DEPTH_ | | |
| DEPTH FEET | FORMATION | SAMPLE | FROM | то | WIDTH | | ASSAY | VALUES | |
| | tion by hydrothermal processes; fracture @ | 56042 | 91 | 94 | | | | | |
| | 30° to C/A | 56043 | 94 | 97 | | | | | |
| | | 56044 | 97 | 101 | | | | | |
| 62 5 - 74 | QPC - very rusty broken material; intense | 56045 | 101 | 104 | | | | | |
| | clay alteration of matrix; possible fault | | | | | | | | |
| | gouge FW to breccia zone | | | | | | | | |
| - <u></u> | | 56046 | 104 | 107 | | | | | |
| 74 - 84 | QPC - white to gray; rusty on fractures; | 56047 | 107 | 109.75 | | | | | |
| | very broken with only clasts recovered in | 56048 | 109 75 | 113 | | | | | |
| | some intervals (matrix probably lost in | | | | | | | | |
| • | drilling) | 56026 | 117 | 118.25 | | | | | |
| 84 - 87 | QPC - white to grey with intense silifica- | | | | | | | | |
| | tion + weak sericitic alteration (indicated | | | | | | | | |
| | by muscovite) | | | | | | | | |
| - <u></u> | | | | | | | | | |
| 87 - 92.6 | QPC - white to gray; rusty on fractures; | | | | | | | ··· | |
| | very broken; intense but spotty silicifica- | | | | | | | | ļ |
| | tion | - | | | | | | | |
| | | | | | | | <u>. </u> | | l |
| | | | | | | | | 1 | |

la SIGNED_

DRILLED BY

| | PROPERTY | | | | HOLE NO87-2 | | | | | |
|---|--|---|----------------|-----------------|---------------------------------------|----------------|----------------|-------|--------|---------|
| SHEET NUMBER | 3 of 3 | SECTION FROM | | то | | ST | ARTED_ | | | |
| LATITUDE | ······································ | DATUM | | | | CC | MPLETE | D | | <u></u> |
| DEPARTURE | | BEARING | | <u> </u> | | ULTIMATE DEPTH | | | | |
| ELEVATION | | DIP | | | | PR | PROPOSED DEPTH | | | |
| DEPTH FEET | FORMATI | 0 N | SAMPLE NO | FROM | то | WIDTH | | ASSAY | VALUES | |
| 92.6 - 109.75 | QPC - white to gray, rus | | | | | | | | | |
| 109.75 - 117 | SILTSTONE - grey to blac 40° to C/A | ack, well-bedded @ | | | | | | | | |
| 117 - 118.25 | QPC - rusty gray to whit conglomerate | te quartz pebble | 56027 56028 | 144.0 146.75 | 146.75 151.0 | 2.75 | | | | |
| 118 25 - 124.25 | SILTSTONE - grey to bla bedding @ 40° to C/A | ck, sandy matrıx, | | | | | | | | |
| 124 25 - 128 | QPC - gray to black, ve clasts average <낞" | ry graphitic matrix; | | | | | | | | |
| 128 - 140 SILTSTONE - gray to bigraphitic fissile alor 60° to C/A; numerous fissile | | bedding planes @ actures within fine | | | | | | | | |
| 140 - 151 | grained reddish hematit SILTSTONE - very black; | | to C/A | | · · · · · · · · · · · · · · · · · · · | | | | | |

Chlauph SIGNED_

DRILLED BY ____

| | | | KILL RECORD | | | | | | | |
|---------------|---|-----------------------|--------------|----------|-------|----------|-------------|----------|----------|--|
| | PROPERTY MacKini | non Creek - Volcano | ources | | _ HOI | .E NO8 | 37-3 | | | |
| SHEET NUMBER_ | l of 2 | SECTION FROM | | _то | | START | 'ED | <u> </u> | | |
| LATITUDE | 97+01 N | DATUM | | | | COMPI | LETED | | | |
| DEPARTURE | 105+11.5 E | BEARING | 285 | <u>.</u> | | ULTIM | IATE DEPTH_ | 299' (9 | 91.1 m) | |
| ELEVATION | 1974' (601.7 m) | DIP | -55° | | | PROPC | SED DEPTH_ | <u> </u> | | |
| DEPTH FEET | FORMA | TION | SAMPLE NO | FROM | 10 | WIDTH | ASSAY | VALUES | | |
| 0 - 54 | CASING | | | | | | | | | |
| 54 - 58 | QUARTZ PEBBLE CONGLOM | ERATE - verv broken | 34093 | 54 | 58 | | | | | |
| | gray to white, rusty; | | 34094 | 58 | 61 | | | , , | | |
| | leaving only quartz c | | 45095 | 61 | 64 | | | | | |
| | - | | | | | | | | | |
| 58 - 71 | "FELSIC" VOLCANIC - pale to slightly rusty, | | | | | | | | | |
| <u></u> | very soft intense argillic alteration; | | | | | | | | | |
| | phonocryst "ghosts" a | oparent, probably | | | | | | | | |
| · | intensely altered and | esite porphyry | | | | | | | | |
| 71 - 93 | "FELSIC" VOLCANIC - s | ımılar to above but | 34096 | 82 | 87 | | | | | |
| | very pale white | | | | | | | | | |
| | | | 34097 | 98 | 102 | | | | | |
| 93 - 107 | "FELSIC" VOLCANIC - s | lightly rusty grading | | | | | | | | |
| | into fresher volcanic | | | <u> </u> | | | | | . | |
| <u>-</u> | | ······ | | <u> </u> | | <u> </u> | | ļ | | |
| 107 - 118 | ANDESITE PORPHYRY - 1 | ight green; feldspar | | ļ | | | | | | |
| | phenocrysts clouded a | nd slightly rusty; | | | | | | | | |
| | matrix dulled and pat | chy, rusty, | | · | | | | | | |
| | chloritized | | | | 1 | | 1 | 1 | 1 | |

Dand SIGNED_ 21

DRILLED BY_

| | PROPERTY | HOLE NO. 87-3 | | | | | | | | |
|---------------|--|---------------------------------------|--------|---------------------------------------|-----|----------------|--------|--------|--------|---------|
| SHEET NUMBER_ | 2 of 2 | SECTION FROM | | _то | | STA | ARTED | | | |
| LATITUDE | | DATUM | | | | со | MPLETE | D | | |
| DEPARTURE | | BEARING | | · · · · · · · · · · · · · · · · · · · | | UL | TIMATE | DEPTH. | | |
| ELEVATION | | DIP | | | | PROPOSED DEPTH | | | | |
| DEPTH FEET | FOI | RMATION | SAMPLE | FROM | то | WIDTH | | ASSAY | VALUES | |
| 118 - 152 | ANDESITE PORPHYRY | - rusty, very clay | | | | | | | | |
| | | 138 large fracture @ 30° | | | | | | | | |
| | to C/A with dark m | aterial (MnO ₂), possible | 34098 | 149 | 153 | | | | | |
| | fault | | 34099 | 153 | 157 | | | | | |
| 152 - 165 | ANDESITE PORPHYRY | - light green with white | 34100 | 168 | 172 | | | | | <u></u> |
| | clouded feldspar phenocrysts, matrix | | | | | | | | | |
| | chloritized with ±1% disseminated pyrite | | | | | | | | | |
| | indicating pervasi | ve propylitic alteration | | · · · · · · · · · · · · · · · · · · · | | | | | | |
| 165 - 176 | - thin zone of int | ense chloritization | | | | | | | | |
| 176 - 195 | - lıght green, sım | 1lar to 157-165 | | | | | | | | |
| 195 - 211 | - buff coloured, p | ossibly a more dacitic/ | | | | | | | | |
| | rhyolitic layer | | | | | | | | | |
| 211 - 277 | - lıght green with | thin calcite veinlets | | | | | | | | |
| 277 - 290 | - massive to sligh | tly porphyritic; generally | | | | | | | | |
| | finer grained | | | | | | | | | |
| | | | | | | | | | | |
| a | · · · · · · · · · · · · · · · · · · · | | | | | | | | | |
| | | | | ·• | | | | | | |

De Jaup SIGNED__

DRILLED BY ____

DIAMUND DKILL RECORD

| | PROPERTY MacKinnon Creek - Volcar. | | | Resources HO | | | 87-4 | | | | | |
|---------------|---|------------------------|--------|--------------|-----------|----------------|------------|-------|----------|----------|--|--|
| SHEET NUMBER_ | 1 of 3 | SECTION FROM | | _то | | ST | ARTED_ | | | | | |
| LATITUDE | 96+8 5 E | DATUM | | | COMPLETED | | | | | | | |
| DEPARTURE | 105+14.5 N | BEARING | 195 | | | UL | TIMATE | DEPTH | 201' (6 | 51.3 m) | | |
| ELEVATION | 1974' (601.7 m) | DIP | -70° | | <u> </u> | PROPOSED DEPTH | | | | | | |
| DEPTH FEET | FORMA | TION | SAMPLE | FROM | то | WIDTH | | ASSAY | VALUES | | | |
| 0 - 27 | CASING | | | | | | | | | | | |
| 27 - 35 | QUARTZ PEBBLE CONGLOME | RATE (QPC) - poor | 34051 | 27 | 35 | | | | | | | |
| | recovery mostly broken | quartz clasts; | 34052 | 35 | 40 | | | | | | | |
| | matrix shows moderate | argillic alteration | 34053 | 40 | 43 | | | | | | | |
| | | 34054 | 43 | 46 | | | | | | | | |
| 35 - 54 | QPC - clast supported; quartz clasts mostly | | 34055 | 46 | 49 | | | | | | | |
| | but some dark siltstone clasts; matrix | | | | | | | | | | | |
| | patchy discontinuous r | usty supergene alter- | 34056 | 49 | 54 | _ | | | | | | |
| | ation; moderate to int | ense argillic seri- | 34057 | 54 | 57 | | | | | | | |
| • | citic alteration | = | 34058 | 57 | 60 | | <u>-</u> - | | | | | |
| | | | 34059 | 60 | 65 | | | | | | | |
| 54 - 71 | QPC - very rusty with | some sections very | 34060 | 65 | 68 | | | | | | | |
| | crumbled and decompose | d and others intensely | 7 | | | | | | | <u></u> | | |
| ····· | silicified with appare | nt hydro-thermal | 34061 | 68 | 71 | | <u></u> | | 1 | | | |
| ··· | brecciation. HW conta | ct very distinct @ | 34062 | 71 | 74 | | | | <u> </u> | | | |
| | ±20° to C/A | | 34063 | 74 | 77 | | | | | <u> </u> | | |
| | | | 34064 | 77 | 80 | | · | | | | | |
| 71 - 119 | QPC - clast supported; | mostly white to gray | 34065 | 80 | 83 | | | | ļ | | | |
| | quartz clasts with ±10 | % gray to black | 34066 | 83 | 86 | | | | ļ | | | |
| | clastic material; matr | 1x very hard, silici- | 34067 | 86 | 89 | | | | | | | |

Ch/angl SIGNED_

DRILLED BY ____

DIAMUND DKILL RECORD

| | PROPERTY | | <u>.</u> | _ HOL | E NO | 87- | 4 | | |
|---------------|---|--------|----------|---------|-------|--------|--------|--------|----------|
| SHEET NUMBER_ | 2 of 3 SECTION FROM | | _TO | | ST. | ARTED | | | |
| LATITUDE | DATUM | | | | СО | MPLETE | J | | |
| DEPARTURE | BEARING | | | | UL | TIMATE | DEPTH | | |
| ELEVATION | DIP | | | <u></u> | PR | OPOSED | DEPTH. | | |
| DEPTH FEET | FORMATION | SAMPLE | FROM | то | WIDTH | | ASSAY | VALUES | <u> </u> |
| | fied and brittle - shattering when struck; | 34068 | 89 | 92 | | | | | - |
| | thin zones with graphitic matrix and/or | 34069 | 92 | 95 | | | | | |
| | sandy matrix; clasts average 0.5 - 1" but | 34070 | 95 | 98 | | | | | |
| | up to 2"; possible bedding planes measured | | | | | | | | |
| | at 72' @ 40° to C/A | 34071 | 98 | 101 | | | | | |
| | | 34072 | 101 | 104 | | | | | |
| 119 - 130.5 | SILTSTONE - black to gray; thin bedded | 34073 | 104 | 107 | | | | | |
| | with bedding @ 45° to C/A, slightly graphitic | 34074 | 107 | 110 | | | | | |
| | | 34075 | 110 | 113 | | | | | |
| 130.5 - 137.5 | QPC - speckled gray, white, black; up to 60% | | | | | | | | |
| • | quartz clasts, 40% black to gray clastic | 34076 | 113 | 116 | | | | | |
| | material clasts | 34077 | 116 | 118 | | | | | |
| 137.5 - 151 | SILTSTONE - sandy matrix; gray to black; | | | | | | | | |
| | convoluted bedding @ ±40° to C/A; banded | | 1 | | | | | | |
| | appearance caused by alternating beds of | 34078 | 130.5 | 134 | | | | 1 | |
| | gray and black material | 34079 | 134 | 137.5 | | | | | |
| 151 - 157 | SILTSTONE - pale gray sandy siltstone with | | | | | | | | |
| | beds of hematitic material; soft crumbling | | | | | | | | |
| | with argillic (clay) alteration bedding | | | | | | | | |

DRILLED BY ____

.-

SIGNED__

a

X

| | PROPERTY | | | | HOLE NO. 87-4 | | | | | |
|--------------|---|--------------------------------------|--------|------|---------------------------------------|-------|-------------|-----------|--|--|
| SHEET NUMBER | 3 of 3 | SECTION FROM | | то | | | | | | |
| LATITUDE | | DATUM | | | COMPLETED | | | | | |
| DEPARTURE | | BEARING | | | | UL | TIMATE DEPT | н | | |
| ELEVATION | | DIP | ····· | | <u> </u> | PR | OPOSED DEPT | н | | |
| DEPTH FEET | FORM | ATION | SAMPLE | FROM | то | WIDTH | ASS | AY VALUES | | |
| | planes @ 20° to C/A | | | | | | | | | |
| 157 - 182 | SILTSTONE - black to gray; some massive | | | | · · · · · · · · · · · · · · · · · · · | | | | | |
| | and some bedded with C/A | some bedded with bedding @ 30-40° to | | | | | | | | |
| 182 - 196 | SANDSTONE - light gray salt and pepper | | | | | | | | | |
| | colour; some large | 'erratıc" clasts | | | | | | | | |
| 196 - 201 | SILTSTONE - very bla | ack almost coal-like; | | | | | | | | |
| · · · · · · | massive | | | | | | | | | |
| | END OF HOLE | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | _ | | | | | | | |
| | | | | | | | | | | |

Dhaugh. SIGNED_

DRILLED BY____

| | DIA | | | | | | | | |
|---------------|---------------------------------------|--|--------------|------|------|-------|-------------|--------|-----------------|
| | PROPERTY MacKinn | on Creek - Volcano | ources | | _ HO | LE NO | 87-5 | | |
| SHEET NUMBER_ | 1 of 2 | SECTION FROM | | _то | | START | 'ED | | |
| LATITUDE | 97+1.5 N | DATUM | | | | COMPL | LETED | | |
| DEPARTURE | 105+14.5 E | BEARING | 020 | | | ULTIM | IATE DEPTH. | 79' | <u>(30.1 m)</u> |
| ELEVATION | 1974' (601.7 m) | DIP | | | | PROPO | SED DEPTH_ | | |
| DEPTH FEET | FORMA | TION | SAMPLE NO | FROM | то | WIDTH | ASSAY | VALUES | |
| 0 - 22 | CASING | ······································ | | | | | | | |
| 22 - 32 | QUARTZ PEBBLE CONGLOME | RAGE - mottled gray | 34080 | 24 | 28 | | | | |
| | to white, slightly rus | ty; very hard due to | 34081 | 28 | 32 | | | | |
| | silicification; some c | ore loss due to | 34082 | 32 | 36 | | | | |
| | grinding of matrix | | 34083 | 36 | 40 | | | | |
| | · · · · · · · · · · · · · · · · · · · | | 34084 | 40 | 44 | | | | |
| 32 - 46 | - soft and crumbled; 1 | ntense argillic | 34085 | 44 | 48 | | | | |
| · | alteration | | 34086 | 48 | 52 | | | | |
| | | | 34087 | 52 | 56 | | | | |
| 46 - 54.5 | - soft and crumbled; m | atrix very rusty | 34088 | 56 | 60 | | | | |
| 54.5 - 57 | - gray to white, broke | en, some loss due to | | | | | | | - |
| | matrix wash; intense s | | 34089 | 68 | 72 | | | | |
| | | | | | | | | | |
| 57 - 73 | "FELSIC" VOLCANIC - ve | ery bleached white, | | | | | | | |
| | porphyritic texture ba | arely discernible; | | | | | | | |
| | very soft due to inter | nse clay alteration | | | - | | | | |
| 73 - 91 | - soft, rusty; grading | g into rock below | 34090 | 87 | 91 | | | | |
| | | · · · · · · · · · · · · · · · · · · · | | | · | | | | |

Dulany SIGNED_

DRILLED BY_

| | PROPERTY | PROPERTY | | | | | HOLE NO ⁸⁷⁻⁵ | | | | | |
|---------------|---------------------------------------|---|---------------------------------------|---------------------------------------|-----------|-------|-------------------------|-----------|-----|--|--|--|
| SHEET NUMBER_ | 2 of 2 | SECTION FROM | | _то | STARTED | | | | | | | |
| LATITUDE | | DATUM | | | COMPLETED | | | | | | | |
| DEPARTURE | | BEARING | ···· | | | ULT | IMATE DE | PTH | | | | |
| ELEVATION | | DIP | | | | PRO | POSED DE | PTH | | | | |
| DEPTH FEET | FORM | ATION | SAMPLE | FROM | то | WIDTH | | ASSAY VAL | UES | | | |
| 91 - 99 | ANDESITE PORPHYRY - 1 | .ight to dark green, | 34091 | 91 | 94 | | | | | | | |
| | zones of intense chlo | | 34092 | 94 | 96 | | | | | | | |
| | shows minor (+1%) pyr | | | | | | | | | | | |
| | | alteration | | | | | | | | | | |
| · | | | | | | | | | | | | |
| | END OF HOLE | | | | | | | | | | | |
| <u> </u> | | ·· | | | | | | | | | | |
| | | | | | <u> </u> | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| <u> </u> | · · · · · · · · · · · · · · · · · · · | | · · · · · · · · · · · · · · · · · · · | | <u> </u> | | | | | | | |
| | | · · · · · · · · · · · · · · · · · · · | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| <u></u> | | | | | | | | | | | | |
| | | | | 1 | | | | | | | | |
| | | | | · · · · · · · · · · · · · · · · · · · | | | | | | | | |
| | | | | | | | | | | | | |
| | | *************************************** | | 1 | | | | | | | | |
| | | | | | - | | | | | | | |

haugh SIGNED \leq

DRILLED BY_

| | PROPERTY MacKinnon Creek - Volcano . Jources | | | | | HOLE NO ⁸⁷⁻⁶ | | | | | |
|--------------|---|-------------------------|--------------|----------------|---------|-------------------------|---------|--------|--------|--------|--|
| SHEET NUMBER | 1 of 2 | SECTION FROM | | то | STARTED | | | | | | |
| LATITUDE | 99+08 N | DATUM | | | | COMPLETED | | | | | |
| DEPARTURE | 104+89 E | BEARING | | | | UI | .TIMATE | DEPTH. | 151' | (46 m) | |
| ELEVATION | 1905' (580.6 m) | DIP | 90° | | | PR | OPOSED | DEPTH | | | |
| DEPTH FEET | FORMA | TION | SAMPLE NO | FROM | то | WIDTH | | ASSAY | VALUES | | |
| 0 - 20 | CASING | | | | | | Au | | | | |
| 20 - 35 | SILTSTONE - black, mag | ssive, matrix muddy | | | | | | | | | |
| 35 - 40 | CONGLOMERATE - poorly | 34103 | 35 | 40 | 5 | | | | | | |
| | supported, matrix ver | | | | | | | | · | | |
| 40 - 44 | SILTSTONE - black, mas | ssive; matrix muddy | | | | | | | | | |
| 44 - 55 | SILTSTONE - gray to r | isty; well bedded @ | | | | | | | | | |
| 55 - 68 | | ısty, well bedded @ 75° | | | | | | | | | |
| | to C/A | | | | | | | | | | |
| 68 - 73 | | E/SILTSTONE - distinct | | | | | | | | | |
| | beds of sandstone alto | ernating with siltstone | | | | | | | | | |
| 73 - 103 | SILTSTONE - gray to r well b edded @ 80° to | | | | | | | | | | |

Ohlang -SIGNED_

DRILLED BY ____

| | PROPERTY | ROPERTY | | | _ HOL | HOLE NO. 87-6 | | | | | |
|---------------|---------------------------------------|--|--------------|----------|----------------|---------------|--------|--------|----------|----------|--|
| SHEET NUMBER_ | 2 of 2 | SECTION FROM | | _то | <u></u> | ST | ARTED_ | | | | |
| LATITUDE | | DATUM | | | COMPLETED | | | | | | |
| DEPARTURE | | BEARING | | | | UL | TIMATE | DEPTH_ | | | |
| ELEVATION | | DIP | | | PROPOSED DEPTH | | | | | | |
| DEPTH FEET | FORMA | TION | SAMPLE NO | FROM | то | WIDTH | | ASSAY | VALUES | | |
| 103 - 110 | VOLCANIC PORPHYRY - 1 | ight coloured and | | | | | | | | | |
| | speckled; altered and | esite or dacitic | | | | | | | | | |
| <u> </u> | volcanic? | <u> </u> | | | | | ····· | | | | |
| 110 - 151 | ANDESITE PORPHYRY - d | ark green; matrıx | | | | | | | | | |
| | chloritized; feldspar | phenocrysts slightly | | | | | | | | | |
| | chloritized | | | | | | | | | | |
| | ····· | | | <u> </u> | | | | | | | |
| | | ······································ | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | ····· | | | | | | | | | |
| · | | · · · · | | | | | | | | | |
| | | | | | <u> </u> . | | | | | | |
| | | ······································ | | | | | | | | | |
| | · · · · · · · · · · · · · · · · · · · | | | | | | | | | _ | |
| | | | - | | <u>.</u> | | | | | | |
| ····· | | <u></u> | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | 1 | | | | | <u> </u> | | |

Ohlangh SIGNED__

DRILLED BY ____

| | PROPERTY Macki | unnon Creek - Volcan | esource | S | _ HOI | .E NO | 87-7 | | | | |
|---------------|------------------------|------------------------|------------------|------|-------|-----------|----------|---------|-------|---------|--|
| SHEET NUMBER_ | 1 of 2 | SECTION FROM | | _TO | | STA | RTED | | | | |
| LATITUDE | 99 + 08 N | DATUM | | | | COMPLETED | | | | | |
| DEPARTURE | 104 + 90 E | BEARING | 355 | | | ULI | TIMATE D | DEPTH_ | 204' | | |
| ELEVATION | 1905' (580.6 m) | DIP | -60 ³ | | | PRC | POSED D | EPTH_ | 150' | | |
| DEPTH FEET | FORMA | TION | SAMPLE NO | FROM | то | WIDTH | | ASSAY V | ALUES | <u></u> | |
| 0 - 20 | CASING | | | | | | | | | | |
| 20 - 62 | SILTSTONE - black to : | slightly rusty brown; | | | | | | | | | |
| | bedding @ 40° to C/A | | | | | | | | | | |
| 62 - 78 | SANDSTONE - brown to | slightly rusty; | | | | | | | | | |
| | bedding @ 40° to C/A | | | | | | | | | | |
| 78 - 81 | SANDSTONE - very rust | У | | | | | | | | | |
| 81 - 90 | SANDSTONE - brown to | slightly rusty, | | | | | | | | | |
| | bedding @ 30° to C/A | | | | | | | | | | |
| 90 - 101 | SANDSTONE - gray with | very black clasts of | | | | | | | | | |
| | clay up to 1" long; ': | rıpu p clasts' | | | | | | | | | |
| 101 - 139 | SILTSTONE - gray, ver | y well bedded @ 50° to | | | | | | | | | |
| | C/A; lense of coarse | gray sandstone at | | | | | | | | | |
| | 115-117 | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | ļ | | (| | | 1 | |

In lange SIGNED_

DRILLED BY .____

| | PROPERTY | ···· | | | | HOLE NO87-7 | | | | |
|---------------------------------------|---|-----------------------|--------|------|-----------|-------------|--------|------------|--------|--|
| SHEET NUMBER_ | 2 of 2 | SECTION FROM | | _TO | | ST | ARTED_ | | | |
| LATITUDE | | DATUM | | | COMPLETED | | | | | |
| DEPARTURE | | BEARING | | | ,, | UL | TIMATE | IATE DEPTH | | |
| ELEVATION | | DIP | | | | PR | OPOSED | DEPTH_ | | |
| DEPTH FEET | FOR | MATION | SAMPLE | FROM | то | WIDTH | | ASSAY | VALUES | |
| 139 - 176 | "FELSIC" VOLCANIC - colour; porphyritic may be due to alter | texture; light colour | | | | | | | | |
| | porphyritic andesit | e | | | | | | | | |
| 176 - 204 | ANDESITE PORPHYRY - shows pervasive pro (chloritite, pyrite | | | | | | | | | |
| · · · · · · · · · · · · · · · · · · · | END OF HOLE | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

6. SIGNED_ 6 lan. <

| | PROPERTY MacKin | nnon Creek - Volcanc 💡 | sources | | HOL | .E NO | 87-8 | | | | | |
|---------------|--------------------------------------|-------------------------|---------|-----------|----------|---------|-------------|-------------------|-------|--|--|--|
| SHEET NUMBER_ | l of l | SECTION FROM | | _TO | | STARTED | | | | | | |
| LATITUDE | 101+12 N | DATUM | | COMPLETED | | | | | | | | |
| DEPARTURE | 104_33 E | BEARING | 045 | | <u> </u> | ULT | IMATE DEPTH | 4 <u>149' (45</u> | .4 m) | | | |
| ELEVATION | 1900' (879.1 m) | DIP | -60° | | | PROP | POSED DEPTH | ſ | | | | |
| DEPTH FEET | FORMA | TION | SAMPLE | FROM | то | WIDTH | ASSA | Y VALUES | | | | |
| 0 - 20 | CASING | | | | | | | | ····· | | | |
| 20 - 64 | SILTSTONE - grey to b | lack; well bedded @ 45° | | | | | | | | | | |
| | to C/A, matrix sandy | | | | | | | | | | | |
| 64 - 86 | - gray to black, well | bedded @ 40° to C/A; | | | | | | | | | | |
| | matrix muddy/silty | | | | | | | | | | | |
| 86 - 126 | - banded siltstone cau | used by alternating | | | | | | | | | | |
| • • | gray and black beds, b convoluted | pedding @ 50° to C/A; | | | | | | | | | | |
| 126 - 133 | SANDSTONE - gray "salt | and pepper" sandstone | | | | | | | | | | |
| 133 - 149 | MUDSTONE - black, well | L bedded @ 60° to C/A | · | | | | | | | | | |
| | | | | | | | | | | | | |
| ····· | | | | | | | | | | | | |
| ····· | | | | | | | | | | | | |
| | | | | | Į | | | | | | | |

Dhangh SIGNED_

DRILLED BY

DIAMUND DKILL RECORD

| | PROPERTYMac | Kinnon Creek - Volca | Resourc | es | _ HOI | LE NO | 87-9 | _ | | | | |
|---------------------------------------|-----------------------|-------------------------|--------------|----------|----------|-----------|-----------|--------------|----------|--|--|--|
| SHEET NUMBER_ | 1 of 1 | SECTION FROM | | _TO | <u> </u> | STARTED | | | | | | |
| LATITUDE | 100+98 N | DATUM | | <u> </u> | <u> </u> | COMPLETED | | | | | | |
| DEPARTURE | 104 38 E | BEARING | 140 | | | UL' | TIMATE DE | PTH 139' | (42.4 m) | | | |
| ELEVATION | 1900' (579.1 m) | DIP | -60° | | · | PRC | DPOSED DE | PTH150 |)' | | | |
| DEPTH FEET | FORM | ATION | SAMPLE NO | FROM | то | WIDTH | | ASSAY VALUES | | | | |
| 0 - 20 | CASING | | | | | | | | | | | |
| 20 - 48 | SILTSTONE - slightly | rusty, gougey inter- | | | | | | | | | | |
| | layered siltstone, sa | andy siltstone, sand | | | | | | | | | | |
| | stone | | | | | | | | | | | |
| 48 - 60 | - black well bedded @ | 9 50° to C/A | | | | | | | | | | |
| 60 - 71 | SANDSTONE - slightly | rusty; nondescript | | | | | | | | | | |
| 71 - 91 | - gray "salt and pepp | per" colour | | | | | | | | | | |
| 91 - 121 | SILTSTONE - black; we | ell bedded @ 50° to C/A | | | | | | | | | | |
| 121 - 139 | - well bedded @ 50° t | co C/A with alternating | | | | | | | | | | |
| | gray and white beds o | giving ribboned appear- | | | | | | | | | | |
| | ance | | | | | | | | | | | |
| | | | | | | | | | | | | |
| • • • • • • • • • • • • • • • • • • • | | | | | <u> </u> | | | | | | | |
| | | | | | | | | | | | | |

Dhank SIGNED_

DRILLED BY .__

-

DIAMOND DRILL CORE

SAMPLE DESCRIPTIONS

VOLCANO RESOURCES KEY CLAIMS September - October 1987

| | | | | - Au |
|-----------|-----------|------------|----------|--|
| Hole | Interval | Width (ft) | Sample # | Description oz/ton |
| 87-1 , | 24-27 | 3 | 56001 | Quartz pebble conglomerate; slight argillic/sericitic alteration |
| | 27-32 | 5 | 34101 | Ditto |
| | 32-40.5 | 8.5 | 34102 | Ditto; poor recovery |
| | 40.5-43.5 | 3 | 56002 | Very broken quartz pebble conglomerate |
| | 43.5-48.5 | 5 | 56003 | Very broken, rusty quartz pebble conglomerate |
| | 48.5-52 | 3.5 | 56004 | Ditto; poor recovery |
| | 52-56 | 4 | 56005 | Quartz pebbles from conglom- erate; poor recovery returned only pebbles - no matrıx |
| | 56-70 | 14 | 56006 | Ditto |
| | 70-73 | 3 | 56007 | White, bleached quartz pebble conglomerate |
| | 73-76 | 3 | 56008 | White quartz pebble conglomerate |
| | 76-79 | 3 | 56009 | Ditto |
| | 79-82 | 3 | 56010 | Quartz pebble conglomerate; white, rusty on fractures; very broken |
| | 82-85 | 3 | 56011 | Quartz pebble conglomerate; very broken; rusty on fractures with dark mineral (mnO ₂ °) |
| | 85-90 | 5 | 56012 | Quartz pebble conglomerate, very broken; white to rusty |
| | 90-93 | 3 | 56013 | Quartz pebble conglomerate, very broken; white to rusty on frac- tures |

•

| | | | | | Au |
|----------------|--------------|------------|----------|--|------------------|
| Hole | Interval | Width (ft) | Sample # | Description | $\frac{oz}{ton}$ |
| 87-1 (cont) | 93-96.5 | 3.5 | 56014 | Very broken white quartz pebble conglomerate inter- layered with light coloured volcanic porphyry; note poor recovery | |
| | 96.5-100 | 3.5 | 56015 | Volcanic porphyry - rusty to grey white | |
| | 100-103 | 3 | 56016 | Volcanıc - lıght coloured; very soft and crumbly; ıntense clay alteratıon | |
| | 123–126 , | 3 | 56017 | Andesite porphyry - slightly rusty; light coloured | |
| | 126-129 | 3 | 56018 | Ditto | |
| | 129-133 | 4 | 56019 | Andesite porphyry; dark green with ± 1% disseminated pyrite | |
| 87-2 | 55-57 | 2 | 56020 | Quartz pebble conglomerate; very broken; weak to moderate silicification | |
| | 57-59 | 2 | 56021 | Quartz pebble conglomerate; very rusty oxidized; crumbled and broken | |
| | 59-61.5 | 2.5 | 56022 | Quartz pebble conglomerate; rusty colour; intense silicifi cation; clasts broken and angu indicating brecciation (hydro- thermal?) | lar |
| | 61.5-64 | 2.5 | 56023 | Quartz pebble conglomerate; rusty clay altered matrıx with grey quartz clasts | l |
| | 64-69 | 5 | 56024 | Ditto | |
| | 69-73 | 4 | 56025 | Quartz pebble conglomerate; white to slightly rusty; inten clay alteration | se |
| | 117-118.25 | 1.25 | 56026 | Quartz pebble conglomerate; th lens in mudstone | ın |
| | 144-146.75 | 2.75 | 56027 | Mudstone with hematite; soft a broken | nd |
| | 123-126 | 3 | 34253 | Basal pebbly ss or sandy con- glomerate, black | |

| Hole | Interval | <u>Width (ft)</u> | Sample # | Au Description <u>oz/ton</u> |
|----------------|------------|-------------------|----------|--|
| 87-2 (cont) | 126-127.5 | 1.5 | 34254 | Basal pebbly ss or sandy con- gomerate; black |
| | 146.75-151 | 4.25 | 56028 | Mudstone - light grey with streaks of hematite |
| | 34-37 | 3 | 56027 | White quartz pebble conglomerate |
| | 37-40 | 3 | 56030 | Ditto |
| | 40-43 | 3 | 56031 | Ditto |
| | 43-46 | 3 | 56032 | Ditto |
| | 46-49 | 3 | 56033 | Ditto |
| | 49-52 | 3 | 56034 | Ditto |
| | 52-55 | 3 | 56035 | Ditto |
| | 73-76 | 3 | 56036 | White quarts pebble conglomer- ate; silicified |
| | 76-79 | 3 | 56037 | Quarte pebble conglomerate; white to rusty; silicified with minor sericitic alteration; very broken |
| | 79-82 | 3 | 56038 | Ditto; poor recovery - matrix lost |
| | 82-85 | 3 | 56039 | Quartz pebble conglomerate; white, silicified |
| | 85-88 | 3 | 56040 | Ditto |
| | 88-91 | 3 | 56041 | Ditto |
| | 91-94 | 3 | 56042 | Ditto |
| | 94-97 | 3 | 56043 | Ditto |
| | 97-101 | 4 | 56044 | Ditto |
| | 101-104 | 3 | 56045 | Ditto |
| | 104-107 | 3 | 56046 | Ditto |
| | 107-109.75 | 2.25 | 56047 | Ditto |
| | 109.75-113 | 3.25 | 56048 | Siltstone; sandy, grey to black |

| Hole | Interval | Width (ft) | Sample # | Description | Au oz/ton |
|------|----------|------------|----------|---|--------------|
| 87-3 | 54-58 | 4 | 34093 | Very broken quartz pebble conglomerate | |
| | 58-61 | 3 | 34094 | Crumbled clay altered rusty volcanic | |
| | 61-64 | 3 | 34095 | Ditto | |
| | 82-87 | 5 | 34096 | Ditto | |
| | 98-102 | 4 | 34097 | Very rusty, intense clay altere volcanic porphyry | d |
| | 149-153 | 4 | 34098 | Andesite porphyry | |
| | 153-157 | 4 | 34099 | Ditto | |
| | 168-172 | 4 | 34100 | Ditto | |
| 87-4 | 27-35 | 8 | 34051 | Quartz pebble conglomerate; very broken with poor recovery | |
| | 35-40 | 5 | 34052 | Quartz pebble conglomerate matrıx shows argıllıc and serıcıtıc alteratıon | |
| | 40-43 | 3 | 34053 | Ditto | |
| | 43-46 | 3 | 34054 | Ditto | |
| | 46-49 | 3 | 34055 | Ditto | |
| | 49-54 | 5 | 34056 | Ditto | |
| | 54-57 | 3 | 34057 | Quartz pebble conglomerate; par show intense silicate alteratio with brecciation and parts very crumbly, rusty | n |
| | 57-60 | | 34058 | Quarte pebble conglomerate; rus crumbling with section of inten silicification | - |
| | 60-65 | | 34059 | Quartz pebble conglomerate; intense silicification; rusty a very broken, appears brecciated with open spaces | |
| | 65-68 | 3 | 34060 | Quartz pebble conglomerate; slightly rusty with intense silicification, brecciated | |

| Hole | Interval | <u>Width (ft)</u> | Sample # | Description | Au oz/ton |
|----------------|-----------|-------------------|----------|---|--------------|
| 87-4 (cont) | 68-71 | 3 | 34061 | Quartz pebble conglomerate; rusty and broken | |
| | 71-74 | 3 | 34062 | Quartz pebble conglomerate; white to grey with silici- fication | |
| | 74-77 | 3 | 34063 | Ditto | |
| | 77-80 | 3 | 34064 | Ditto | |
| | 80-83 | 3 | 34065 | Ditto | |
| | 83-86 | 3 | 34066 | Ditto | |
| | 86-89 | 3 | 34067 | Ditto | |
| | 89-92 | 3 | 34068 | Ditto | |
| | 92-95 | 3 | 34069 | Ditto | |
| | 95-98 | 3 | 34070 | Ditto | |
| | 98-101 | 3 | 34071 | Ditto | |
| | 101-104 | 3 | 34072 | Ditto | |
| | 104-107 | 3 | 34073 | Ditto | |
| | 107-110 | 3 | 34074 | Ditto | |
| | 110-113 | 3 | 34075 | Ditto | |
| | 113-116 | 3 | 34076 | Ditto | |
| | 116-119 | 3 | 34077 | Ditto | |
| | 130.5-134 | 3.5 | 34078 | Lens of conglomerate within siltstone | |
| | 134-137.5 | 3.5 | 34079 | Ditto | |
| 87-5 | 24-28 | 4 | 34080 | Quartz pebble conglomerate; very broken | |
| | 28-32 | 4 | 31081 | Quartz pebble conglomerate; very broken; silicified | |
| | 32-36 | 4 | 34082 | Quartz pebble conglomerate, ve broken, crumbled, intense argi (clay) alteration | |

ì

.

| Hole | Interval | Width (ft) | Sample # | Description | Au <u>oz/ton</u> |
|----------------|----------|------------|----------|---|---------------------|
| 87-5 (cont) | 36-40 | 4 | 34083 | Quartz pebble conglomerate; very broken and crumbled, intense clay alteration | |
| | 40-44 | 4 | 34084 | Ditto | |
| | 44-48 | 4 | 34085 | Ditto | |
| | 48-52 | 4 | 34086 | Quartz pebble conglomerate; rusty, crumbled, broken | |
| | 52-56 | 4 | 34087 | Quartz pebble conglomerate; white to grey; silicified | |
| | 56-60 | 4 | 34088 | Quartz pebble conglomerate, just HW to altered volcanic | |
| | 68-72 | 4 | 34089 | "Felsıc" volcanıc - very soft with intense argillıc alteration | |
| | 87-91 | 4 | 34090 | Andesıte porphyry - soft, clay altered and rusty | |
| | 91-94 | 3 | 34091 | Andesıte porphyry - lıght gree | n |
| | 94-96 | 2 | 34092 | Ditto | |
| 87-6 | 35-40 | 5 | 34103 | Matrıx supported conglomerate; matrıx very black and muddy | |

APPENDIX III

/

| F~1 | I | | - E | N | L (| AE | 80 | RP | | \mathbf{O} | R | L | E | 5 | 6 | ' | T | D | ' |
|------------|---|--|-----|---|-----|----|----|----|--|--------------|---|---|---|---|---|---|---|---|---|
|------------|---|--|-----|---|-----|----|----|----|--|--------------|---|---|---|---|---|---|---|---|---|

Specialists in Mineral Environments 705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

| FHC 504)9B0-5814 DR (604)988-4524 | | | TELEX:VIA USA 7601067 UC |
|---|---|--------------------|---|
| | Analytical | Report | } |
| Company:VOLCANO RESOUN Fronct: Attention:W.JACESON/W. | | | File:7-1503 Date:OCT 6787 Type:ROCE ASSAY |
| | | N. N | |
| Date Samples Received Samples Submitted by | | | |
| | | | Geochem Samples |
| | ••••••••••••••••••••••••••••••••••••••• | | Assay Samples |
| Copies cont to: | | | 1 |
|), U.JACI 2. M.G.11 | SON, MANCOUVER, B.C. MMENS, MARCOUVER, D.C M, WHITEHORST, YUEDM | | ž |
| / Samples: Sreved to mu | | same to the second | 1 |
| | ` | | |
| Fr. and samples store rejects store | dallan XIII disco dalah disco | | |
| Methods of analysis: | AU-FIRE, AG - ACID | DIDUCTION, CHEH | ICAL ANALYSIS |

.

'n

~

Femaries

| PHONE+(604)980-5814 OR (604)988-4 | 524 ' | | | | TELEXIVIA USA 7601067 UC |
|--|----------------|--------------|---------------|------------------------------|--|
| | <u>Cert</u> | ific | <u>ate (</u> | <u>27 Ass</u> | AY |
| Jompany VOLCANO KES Project: Attention:W.JACKSON | /W.G T1MH1 | NSZD H I | MAN2H | | File:7-1503/P1 Date:0CT 6/87 Type:RDCK ASSAY |
| le hereby certify | the follow | ittiğ rösi | ulls for | samples su | umitted |
| 5 amp 1 o Number | AG GZD ONNE | | AU G/TONNE | AU DZ 7 TÜN | |
| 56 001 | 0 1 | 0.01 | 0 02 | 0.001 | |
| 96-00 ' 36-003 | 0 1 0 2 | 0.01 0.01 | 0.07 | 0 001 0 001 | |
| 56 004 | 0.1 | 0 01 | 0.01 | 0.001 | |
| 56 005 | 0 1 | 0 01 | 0.02 | 0.001 | |
| 56-006 | 03 | 0 01 | 0.02 | 0.001 | |
| 56 007 | 0.2 | 0.01 | 0.03 | 0.001 | |
| 56 008 56 007 | | 0 01 0 01 | 006 015 | 0 002 | ŧ |
| 56 010 | 0 1 | 0.01 | 0 41 | 0 012 | |
| 56 011 | დ. 4 | 0 U1 | υ 34 | 0.010 | |
| 56 01 ² | 0 2 | 0.01 | 0 12 | 0 004 | i i |
| 6 017 | D 📜 | | 0.14 | 0.004 | |
| 56 014 56 015 | 67 04 | 0 01 0 70 | 0.04 | 0 00 <u>1</u> 0 005 | |
| ····· | | | | | |
| 56 016 56 017 | 01 | 0.01 0.01 | 0.02 | 0.001 | |
| 18 017 16 018 | 0.6 | 0.02 | 0.03 | 0.001 | |
| 56 019 | 05 | 0.01 | 0.05 | 0.001 | |
| 26 020 | 03 | 0.01 | 0.20 | 0 006 | |
| 56 021 | <u>с</u> о | 0 01 | 0.02 | 9-001 | |
| 56 022 56 023 | 01 | 0.01 | 0 01 0 08 | 0,00t 0.00% | |
| 16 024 | 0. | 0 01 | 0.08 | 0.002 | |
| 06 025 | 03 | 0 01 | 0 18 | 0 005 | |
| 56 0.26 | 0 <u>1</u> | 0.01 | ο ο <u>τ</u> | <u>_ 0_001</u> | |
| 56 077 | 0 ~ | 0.01 | 0.05 | 0.001 | |
| 56 078 | 0 1 | 0 01 | 0.02 | 0-001 | , |
| | | | | | |
| | | | | | *********************************** |
| | | | | / | D = 1 |
| | | | | \sim | 5.0.1 |
| | | Lert | itied by_ | <u>[</u> | SICMAD . |
| | | | | MTNL-CN | A UKATORIES LTD |
| | | | | 1111 14-1 21 1 | THEORED LID |

,

, ,^ĵ

I.

1

MIN-EN LABORATORIES LTD.

Specialists in Mineral Environments 705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONF . (604) 980-5814 OR (604) 988-4524

TELEX: VIA USA 7601067 UC

Analytical Report

| Company:VOLCAND RESOURCES Project:VOLCANU Attention:W.JACEGON/D.WAUGH | File:7-1551 Date:OCT 8/87 Type:ROCK ASSAY | | | | |
|--|---|--|--|--|--|
| Date Samples Received :OCT 5/87 Samples Submitted by :D.WAUGH | | | | | |
| Report on | | | | | |
| | Assay Samples | | | | |
| Copies Sent to: 1. VOLCANO RESOURCES, VANCOUVER, B.C. 2. D. WAUGH, WHITEHORSE,YURON. T. | | | | | |
| Samples: Sieved to mesh Ground to mesh | 150 | | | | |
| Prepared samples stored:X discarded: rejects stored:X discarded: | | | | | |
| Methods of analysis: | | | | | |
| AG - ACID DIGESTION-CHEMICAL ANALYSIS. AU - FIRE ASSAY. | | | | | |

Remarks

| NE (604)980-5814 DR (604)988-45 | 24 | | | | TELEX: VIA USA 7601067 UC |
|---|----------------|--------------|----------------|----------------|--|
| | Certi | Ific. | ate (| T ASS | <u>SAY</u> |
| mpany.VOLCANO RESC oject:VOLCANO tention W JACKSON/ | | | | | File:7-1551/P1 Date OCT 8/87 Type:ROCK ASSAY |
| hereby certify t | he follow | ing res | ults for | samples su | bmitted. |
| mple mber | AG G/1 ONNE | AŬ | AU G7 FONNE | AU | |
| | 0.4 | 0 01 | .01 | 0.001 | |
| 070 | 05 | 0 01 | | 0 001 | |
| 071 | 03 | 0 01 | 01 | 0 001 | |
| 072 1073 | 04 0.2 | 0 01 0.01 | 01 02 | 0 001 0 001 | |
| | 0 2 | 0.01 | | υ ου 1 | |
| 075 | 03 | 0 01 | | 0 001 | |
| 076 | υ 5 | 0.01 | | 0 001 | |
| 077 | 0 2 | 0 01 | | 0 001 | |
| 078 | ô S | 0 01 | 01 | 0,001 | |
| 079 | 02 | U 01 | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | A | |

--- -

• ---

.

_ ;

MIN-EN LABORATORIES LTD.

Specialists in Hineral Environments

705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHDNE: (604) 980-5814 DR (604) 988-4524 .

TELEX:VIA USA 7601067 UC

Analytical Report

| Company:VOLCAND RESOURCES Project:VOLCANO Attention:D.H.WAUGH | File:7-1579 Date:OCT 13/87 Type:ROCE ASSAY | | |
|---|--|--|--|
| Date Samples Received :OCT 9/87 Samples Submitted by :D.WAU6H | | | |
| Report on | | | |
| | Assay Samples | | |
| Copies sent to: | | | |
| J. W.JACKSON, VANCOUVER, B.C. 2. W.G.TIMMINS, ONT. | | | |
| J. D.WAUGH, DAWSON CITY, YULON | | | |
| Samples: Sieved to mesh Ground to mesh | 100 | | |
| Prepared samples stored:X discarded: rejects stored:X discarded: | | | |
| Merrods of analysis: AU-FIRE; AG-AC1D DIGESTION CHEMICAL | ANALYSIS | | |

Remarks

| М | T | <u>N</u> - | - E . | N | L | A | BC | ж | A | 1.6 | Uн | ст | ES | 6 I | L i | 1 1 |)_ |
|---|---|------------|--------------|---|-----|---|----|---|---|-----|----|----|----|-----|-----|-----|----|
| | | O | | T | - 4 | | 14 | | | | | | | L | | | |

Specialists in Mineral Environments 705 West 15th Street North Vancouver, B C Canada V7M 1TZ

| TELEY | υτλ | IICA | 7601067 | ur |
|-------|-----|------|---------|----|
| ILLEA | A19 | 058 | /60106/ | υL |

1113

<u>Certificate of ASSAY</u>

Company VOLCANO RES Froject VOLCANO Attention D H.WAUGH

PHONE (604)980-5814 DR (604)988-4524

File.7-1579/P1 Date:OCT 13/87 Type:ROCK ASSAY

<u>He hereby certify</u> the following results for samples submitted

| Sample Number | G/TONNE | | G/TONNE | | |
|------------------|------------|--------|---------|-------|--|
| 56 029 | 5 | υ 01 | | 0 006 | |
| 56 030 | 2 | 0 01 | 07 | 0 001 | |
| 56 031 | ; | 0 01 | | 0 001 | |
| 56 012 | 4 | O $O1$ | | 0.002 | |
| 56 031 | 2 | 0 01 | | 0 001 | |
| 56 034 | 2 | 0 01 | | 0.002 | |
| 56 075 | 3 | 0 01 | 03 | 0.001 | |
| 56 0 6 | 2 | 0 01 | .09 | 0.002 | |
| 56 0.17 | <u>;)</u> | 0 01 | 01 | 0 001 | |
| 56 038 | | | | 0.001 | |
| 56 0°9 | .2 | | | 0 001 | |
| 56 040 | .2 | 0 01 | 07 | 0.001 | |
| 56 041 | 3 | 0.01 | 01 | 0 001 | |
| 56 042 | 2 | 0 01 | 01 | 0 001 | |
| 56 047 | 2 | 0.01 | 05 | 0 001 | |
| 56 044 | ຼ | 0.01 | | 0.001 | |
| 56 045 | 2 | 0 01 | 02 | 0 001 | |
| 56 046 | 3 | 0 01 | 01 | Ö 001 | |
| 56 047 | 2 | O OI | 01 | 0 001 | |
| 56 048 | τ. | 0 01 | . 04 | 0 001 | |

Certified by____ U -4

MIN-EN LABORATORIES LTD

MIN-EN LABORATORIES LTD.

Specialists in Hineral Environments

705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE: (604)980-5814 DR (604)988-4524 _____

TELEX: VIA USA 7601067 UC

• i

Analytical Report

| Company:VOLCAND RESOURCES Frorect VOLCANO Attention:B.JACESON/D.WAUGH | File:7-1560 Date:OCT 16/87 Type:ROCE ASSAY | | | | |
|---|--|--|--|--|--|
| Date Samples Received :OCT 8/87 Samples Submitted by :D. WAUGH | | | | | |
| Report on | - | | | | |
| | Assay - Samples | | | | |
| Cupies sent to: i. VOLCAND RESOURCES, VANCOUVER, B.C. D. VOLCANO RESOURCES, DAWSON CITY, YULON. J. | | | | | |
| Samples: Sieved to mesh | 150 | | | | |
| Prepared samples stored:X discarded: rejects stored:X discarded: | | | | | |
| (leanods of analysis: | | | | | |
| AG FE — ACID DIGESTION-CHEMICAL ANALYSIS. AU — FIRE ASSAY. HG — FLAMFLESS AA. SB — ADUA REGIA A.A. | | | | | |

Remarks

MIN-EN LABORATORIES LTD. Specialists in Mineral Environments 705 Nest 15th Street North Vannuver, B.C. Canada VIN 112

| PHONE (604)980-56 | 14 DR (604)988-4524 | | TELEX VIA L | ISA 7601067 UC | | | | |
|--|--|--|----------------------------|---|---------------|-------------|-----------------------------------|----------|
| | <u>c</u> | <u>Cert</u> ; | ifica | <u>ate c</u> | of AS | <u>isay</u> | | |
| Froinct VC | ILCAND RFSDU ILCAND IF JACHSON/D | | | | | Det | le:7-156 te OCT 1 se ROCK (| 6/87 |
| <u>We hereby</u> | <u>certity</u> th | e fullow | แกญ หอรม | ults for | samples s | submitte | d | |
| Sample Number | AG G/TDINNE | AG DZ/TON | AU G7 FONNE | AU OZZTON | ГЕ / | HG FFB | AS / | SB / |
| 74 251 74 252 24 080 4 081 54 082 | 0304 | 0 01 0 01 0 01 0 01 0 01 0 01 | 01 | $\begin{array}{c} 0 & 0.01 \\ 0 & 0.01 \end{array}$ | 5 40 17 25 | 35 | 01 01 | 01 01 |
| 14 081 34 084 14 085 14 085 24 086 24 087 | 0 1 0 2 0 1 0 7 0 1 | 0 01 0 01 0 01 0 01 0 01 0 01 | 03 02 01 07 01 | 0 001 0 001 0 001 0 001 0 001 | | | | |
| 24 088 24 087 24 090 34 091 34 092 | 04 01 06 07 03 | 0 01 0 01 0 02 0 01 0 01 0 01 | 08 02 01 04 01 | 0 002 0.001 0 001 0 001 0 001 | | , | | |
| 24 097 74 094 24 095 74 096 24 097 | 0 1 0 4 0 2 0 2 0 5 | 0 01 0 01 0 01 0 01 0 01 0 01 | 01 02 01 01 01 | 0 001 0 001 0 001 0 001 0 001 | | | | |
| 74 098 74 099 74 100 | 01 03 02 | 0 01 0 01 0 01 | 05 01 01 | 0 001 0 001 0 001 | | | | |

ŕ

U L Certified by____

MIN-EN LABORATORIES LTD.

Ч. -

}____

3. i 1

MIN-EN LABORATORIES LTD.

Specialists in Mineral Environments

705 West 15th Street North Vancouver, B.C. Canada V7M 1T2

PHONE: (604) 980-5814 OR (604) 988-4524 TELEX: VIA USA 7601067 UC Analytical Report F 1] 0: 7--1617 Company: VOLCANCE RESOURCES 1 Fro rect #VOLCAND Date: OCT 16/87 Attention: B. JACH SON/D. WAUGH Type:ROCH ASSAY Date Samples Received :0CT 14/87 Samples Submitted by :: D. WAUGH Copies sent to: 1. VULCAND RESOURCES, VANCOUVER, P.C. C. VOLCANO RESOURCES, DAWSUN CITY, YULON. Samples: Sieved to mesh Ground to mesh-150.... Frepared samples stored:.....X.... discalded:........ Hethods of analysis: A5 - ACID DIGESTION-CHEMICAL ANALYSIS. AU - FIRE ASSAY.

ficimat 1 55

ци. . . .

ų[°]

-

| | 04)988-4524 | | | TELEX VIA USA 7601067 UC | 1 |
|--|----------------------|-------------------------|-------------|---|----------|
| | Certi | ticate d | of Ass | <u>: AY</u> | |
| mpany VOLCAND oject VOLCAND tention•B.JAC <u>hereby certi</u> |) CH SON/D. WAUGH | ing results for | samples sub | File.7-1617/P1 Date.OCT 16/87 lype:ROCM ASSAY | |
| mple mber | лG | AG AU OZ/TON G/TONNE | AU | | |
| 101 | | | | | |
| 107 | | 01 | 0 001 | | |
| 107 | | | 0.001 | | 1 |
| 203 | | 02 | 0 001 | | ł |
| 254 | | 01 | 0.001 | | |
| 200 | | | | | |
| 256 | 0.4 | 0.01 01 | 0 001 | | Ĺ |
| 257 | 0.8 | | 0 001 | | ſ |
| | | | | | |
| | | | | | Ì |
| | | | | | |
| | | | | | Ι. |
| | | | | | |
| | | | | | { |
| | | | | | ĺ |
| | | | | | } |
| | | | | | <u>}</u> |
| | | | | | |
| | | | | | l |
| | | | | | |
| | | | | | ĺ |
| | | | | | ļ |
| | | | | | 1 |
| | | | | | i |
| | | | | | } |
| | | | | | Ì |
| | | | | | 1 |
| | | | | | 4 |
| | | | | | Ì |
| | | Certified by | Jan | Jerail | |
| | | cercited by | | | } |
| | | | MIN-ENG | LABORATORIES LTD | 1 |

APPENDIX IV

.

| Mi Bo | conomic Developmines & Small Busi ox 2703, Whitehorse 03) 667-5811 Tele | ness 9, Yukon Y1A 2C6 | | ************************************** | NCENTIVES PROGRAM ATION FOR PAYMENT |
|----------|---|--|----------------|--|--|
| 1. | NAME | VOLCANO | RESOURCES | CORP. | |
| 3. | MAILING ADDRE | ESS502-595 | Howe Street, | Vancouver | |
| | | Province | B.C. | Postal (| Code V6C 2T5 |
| 3. | TELEPHONE (| 604) <u>682-528</u> | 1 | | |
| 4. | HEAD OFFICE A | DDRESS | (as above) | | |
| | | Province | | Postal (| Code |
| 5. | PRINCIPAL BUS | INESS ACTIVIT | YM | ineral exploration | |
| 6. | | | | persons or corporat: insufficient space <u>No. of Shares</u> | attach separate |
| | W. Jackson | | | 325,000 | 17% |
| | <u>G. Lyman</u> | <u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u> | · | 325,000 | 17% |
| | | | | | |
| 7. | | uction of exp | loration exp | any income from mi enses) during the ye _If yes, state how m | ar for which |
| 8. | SOURCES OF FU | NDING (attach | copies of ag | greements and proof | of funding) |
| | Public offering | g of 600,000 Co | mmon Shares | @ \$0.55 per share less | \$ \$0.0825 |
| | commission pe | r share for a no | et proceeds of | \$0.4675 per share or | \$280,500.00. This |
| | offering was c | ompleted on or | about Septer | ber 4, 1987. | <u></u> |

9. EXPENDITURES (N.B. Please provide actual all-inclusive costs, including salaries & wages, equipment and machinery rental, supplies, services, transportation and accommodation directly attributable to the field program. All costs must be supported by original copy of all receipts).

| Preliminary Evaluation | days @ \$/day | = | \$ |
|-------------------------------------|--|---|---------------|
| Prospecting | days @ \$/day | = | \$ |
| Linecutting, chaining, picketting | km @ \$/ km | = | \$ |
| Geological Surveys | days @ \$/day | = | \$ |
| Geochemical Surveys | days @ \$/day | = | \$ |
| Sample analysıssoıl | samples @ \$/sample | = | \$ |
| sılt | samples @ \$/sample | = | \$ |
| rock geochem | samples @ \$/sample | = | \$ |
| Other (specify) | | = | \$ |
| Geophysical Surveys | | | |
| Method | km @\$/ km | = | \$ |
| | km @\$/ km | = | \$ |
| | km C \$/ km | = | \$ |
| Stripping, Trenching | m ³ @ \$/ m ³ | = | \$ |
| Surface drilling | | | |
| TypeDiamond drilling - NQ | <u> 464 m @ \$ 376.85 / m</u> | = | \$_174,860.82 |
| | m@\$/m | = | \$ |
| | m@\$/m | = | \$ |
| Dewatering and rehabilitation old u | inderground workings | | |
| | days @ \$/day | = | \$ |
| Underground drilling | | | |
| Туре | m@\$/m | = | \$ |

(a) For the following the full cost (100% of expenditures) are eligible:

EIPF2.TXT 86.03.01.

_____m@\$____/m=\$_____

2

| Sampling costs | = \$ |
|--|-------------------------|
| | = \$ |
| Assays, petrographic analyses, X-ray analyses etc. | |
| Type <u>Gold/silver assays</u> No. <u>90</u> @ \$ <u>21.35</u> /sar | nple = \$_1,921.50 |
| No @ \$/sam | mple = \$ |
| No @ \$/sam | mple = \$ |
| Metallurgical or process studies (specify) | |
| ******* | = \$ |
| | = \$ |
| Other costs (specify) | = \$ |
| | = \$ |
| | = \$ |
| (b) For the following activities only 25% of total costs | are eligible: |
| On-property construction costs | |
| Access roads km @ \$/ km = \$x | 25% = \$ |
| Camps\$x | 25% = \$ |
| Other (specify)\$x | 25% = \$ |
| \$x | 25% = \$ |
| Shaft sinking, drifting, raising etc. required for undergr and sampling | ound drilling |
| Shaft sinking m @ \$/ m = \$x | 25% = \$ |
| Drifting m @ \$/ m = \$x | 25% = \$ |
| Raising m @ \$/ m = \$x | 25% = \$ |
| TOT | AL \$ <u>176,782.32</u> |

SUPPLEMENTARY INFORMATION The following information is required in order to help us determine the contribution which mineral exploration activity makes to the Yukon economy, and relates to the utilization of Yukon vs outside labour and services. Only figures directly attributable to the field program should be included (approximate figures acceptable, but please be as accurate as possible).

(a) Employment, wages & salaries

| Туре | Number em Yukon | ployed Outside | No. Perso Yukon | n-days Outsıde | Salaries/v Yukon | vages paid Outside |
|--------------------|--------------------|-------------------|--------------------|-------------------|---------------------|-----------------------|
| Prospectors | | · | | | \$ | \$ |
| Linecutters | | | | | \$ | \$ |
| Technicians | | | | | \$ | \$ |
| General labourers | 3 | | 38 | | \$ 4,500.00 | \$ |
| Drillers/helpers | | | | | \$ | \$ |
| Equip. operators | | | | | \$ | \$ |
| Geologists | 3 | | 38 | | \$ 7,775.00 | \$ |
| Geophysicists | | | | | \$ | \$ |
| Geochemists | | | | | \$ | \$ |
| Engineers | | | | | \$ | \$ |
| Supervisory | | | | | \$ | \$ |
| Consulting | (see | "Services") | | | \$ | \$ |
| Secretarial | (see | "Services") | | | \$ | \$ |
| Managerial * | 1 | | 69 | | \$ 20,700.00 | \$ |
| Legal | | | | | \$ | \$ |
| Accounting | | | | | \$ | \$ |
| Others (specify) 1 | Camp Cool | < | 30 | | \$_3,750.00 | \$ |
| Others (specify) | | | | | \$ | \$ |
| TOTALS | 8 | | 175 | | \$ 36,725.00 | \$ |

*Managerial/Supervisory/Accounting/Geologist

~

(b) Goods & Services

| Description | | Expenditure Yukon Outside |
|--------------------|---|--------------------------------------|
| Meals, Groceries e | etc. | \$ <u>6,010.6</u> 6\$ <u>271.</u> 45 |
| Camping Supplies, | Equipment etc. | \$_3,342.14\$ |
| Accommodation | | \$ <u>1,982.0</u> 0\$ <u>302.</u> 40 |
| Transportation - | Scheduled Air | \$ 632.00\$ 3,658.70 |
| | Air Charter | \$_3,339.00\$ |
| | Vehicle Rentals | \$ <u>10,304.6</u> 5\$ |
| | Vehicle O & M costs | \$ <u>3,665.6</u> 5\$ |
| | Other (specify) Air and highway freight, | \$ 973.50\$ 30.00 |
| Equipment Rentals | taxis Trenching etc. Bulldozer D7E | \$ <u>27,770.5</u> 0\$ |
| | Geophysical etc. | \$\$ |
| | Other (specify) Equipment repairs | \$246.00\$ |
| | Other (specify) Camp rental equipment | \$ 4,800.00\$ |
| Contract Drilling | | \$ <u>67,080.9</u> 0\$ |
| Consultant Service | S | \$\$_1,200.00 |
| Assays and analyse | S | \$ 1,921.50\$ |
| Communications | | \$ <u>1,139.49</u> \$ <u>16.66</u> |
| | Report drafting, reproduction, secretarial, | \$ <u>923.1</u> % <u>51</u> .95 |
| Other (specify) | nisc. Expediting | \$395.00\$ |

10. DECLARATION. I hereby apply for a contribution for a designated exploration project under the Yukon Exploration Incentives Program, and declare the information given above to be true and accurate.

Name David H. Waugh Signature Lavid Land Date 17, 1987

T

PROSPECTUS SUMMARY

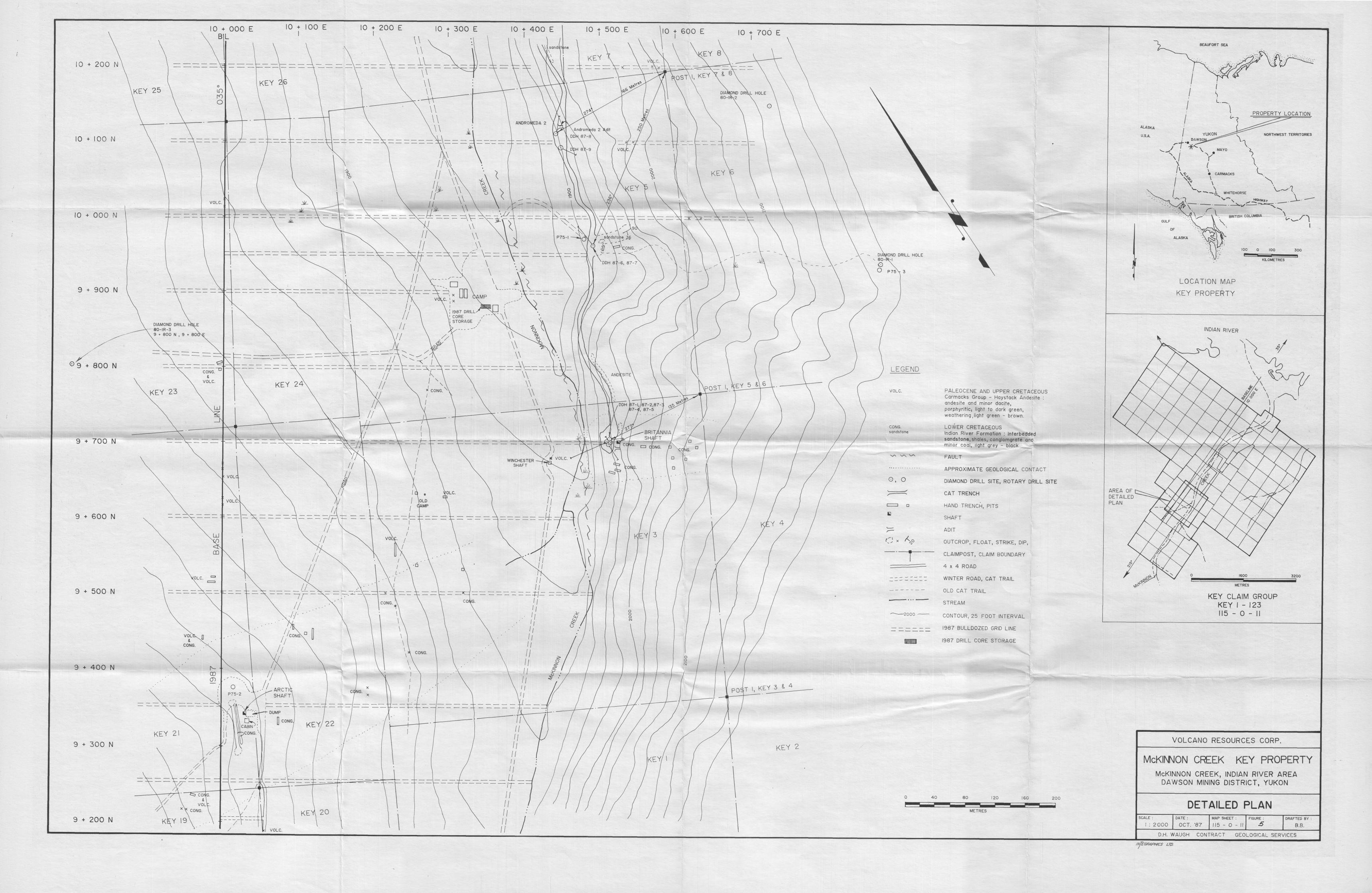
The following is a summary only and reference is made to the more detailed information appearing elswhere in this Prospectus

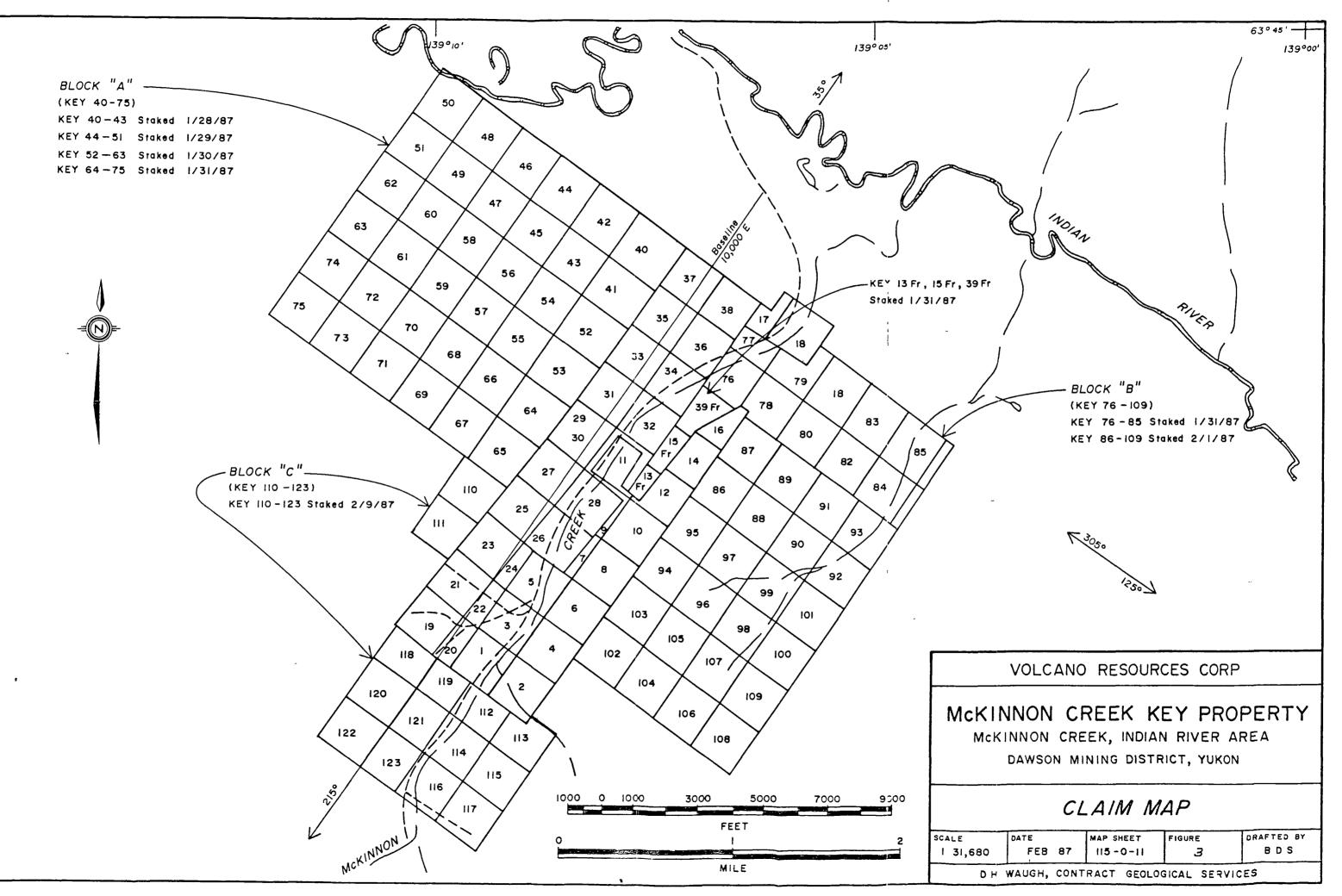
THE ISSUER

ł

,

| Name | VOLCANO RESOURCES CORP |
|-------------------------|--|
| Description of Business | The Issuer is a natural resource company engaged in the acquisition, exploration and develop- ment of mineral properties. The Issuer owns or has an interest in the properties described under the heading "Properties" and intends to seek and acquire additional properties worthy of explora- tion and development |
| | Pursuant to an Agreement dated December 5, 1986 the Issuer acquired an option of an undivided 70% interest in 36 mineral claims located in the Dawson Mining District of the Yukon |
| | Under the terms of the Agreement the Issuer is required to pay \$5,000 cash and a further \$2,000,000 (\$83,000 of which has been paid to date) for exploration work on the property and to issue 200,000 common shares of the Issuer |
| | There is no known reserves of ore on the property |
| | See "Description of Business and Property" for complete details |
| THE OFFERING | |
| Issue | 600,000 Common Shares |
| Price | \$0 55 per share |
| Commission | \$0.0825 per share |
| Agent's Warrants | In consideration of the Agent agreeing to purchase any shares not sold at the conclusion of the Offering, the Agent has been granted non-transferable share purchase warrants entitling it to purchase up to 150,000 shares of the Issuer at any time up to the earlier of the close of business 180 days from listing of the Issuer's shares on the Vancouver Stock Exchange or 12 months from the date of this Prospectus at a price of \$0.60 per share |
| Use of Proceeds | The aggregate of the estimated net proceeds after deducting expenses of the Offering will be \$260,500 That sum will be used to complete Phase I of the work program recommended by Thomas R Tough P Eng in his report dated February 28, 1987 and \$114,400 will be applied as a reserve for Phase II of the work program upon completion of Phase I The remainder will be used for general corporate purposes |
| RISK FACTORS | An investment in the shares is speculative and subject to certain risks. There is no known body of ore on the Issuer's mineral property. There is no established market for the shares of the Issuer |
| | The mining industry in general, is intensely competitive and there is no assurance that even if commercial quantities of ore are discovered, a ready market will exist for sale of same |
| | See 'Risk Factors' for complete details of risks involved |
| FINANCIAL RESULTS | As the Issuer has only been in business for a short period of time no meaningful comment may be made on financial results to date |
| DIVIDENDS | The Issuer has not paid any dividends to date and has no present intention to pay a dividend See Dividend Record |





HISTORY

The Indian River-McKinnon Creek conglomerates were first discovered and staked for gold by the MacKinnon brothers, Donald and Archibald, in 1899. They held and worked their prospect, covered by the Britannia and Andromeda claims, for the ensuing twenty-odd years, exploring for gold in the conglomerates by trenching, sinking shafts and driving adits. A small mill was erected on the Britannia claim, and several small shipments of 'ore' were sent to outside mills for testing. In 1902, a government millrun of two tons averaged \$2.24 per ton at \$20.00 per ounce/gold. In the Dawson Daily News article dated March 3, 1919, a Mr. Chris Fothergill reported on the Indian River conglomerate deposits, quoting values from a number of assay reports ranging from trace to a high of 48 ounces of gold per ton, with the average tenor being about 0.35 ounces/ton. At the peak of activity, over 3,000 claims were staked to cover the conglomerates.

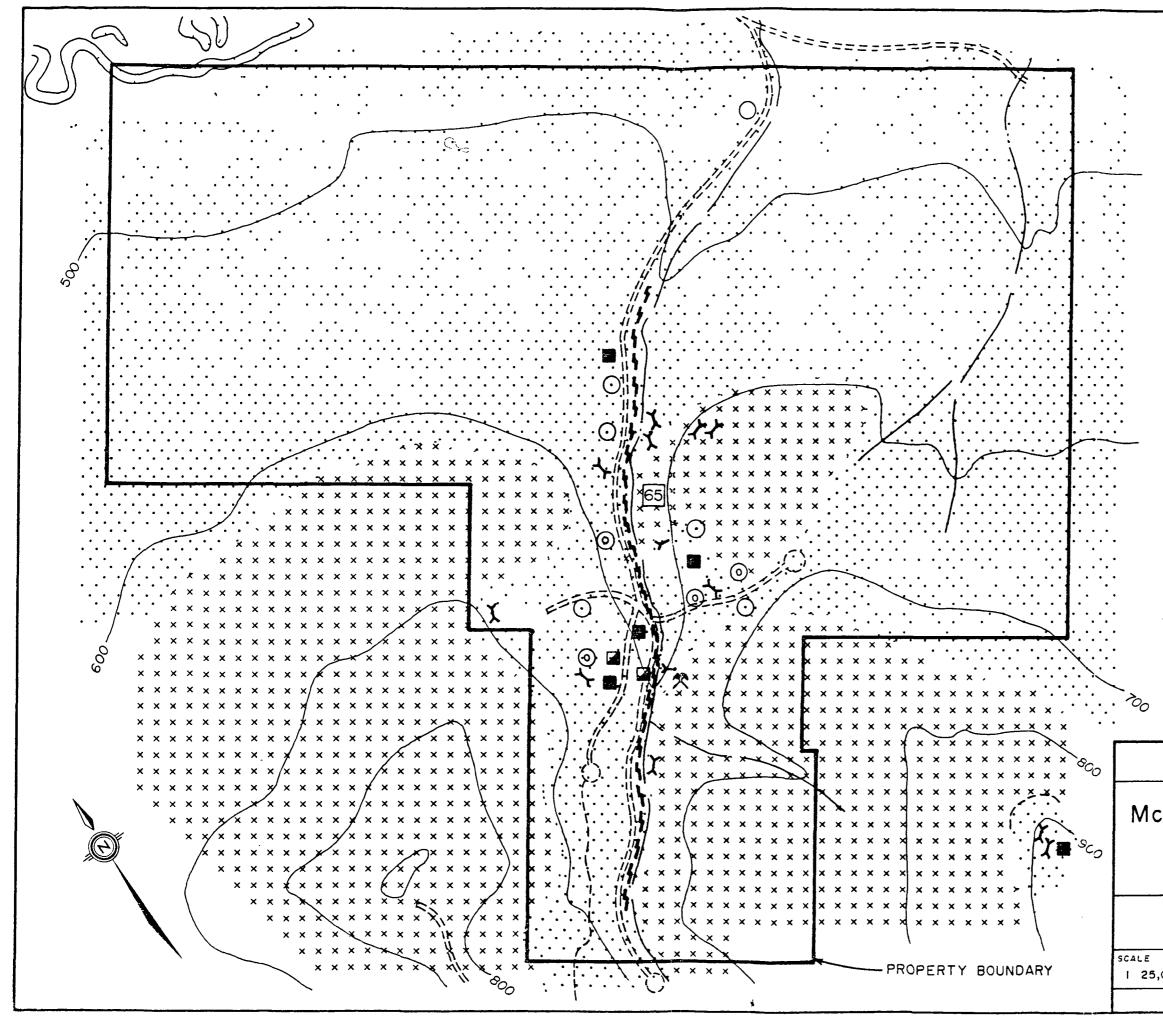
During the 1930's and 1940's, attempts to raise money to test the conglomerates failed. In 1968, Cominco held the MacKinnon prospect and conducted limited mapping and surface sampling; they reported values ranging from trace to 0.10 ounces per ton gold.

Yukon Revenue Mines reported assay results from grab samples taken in 1974 that ranged from trace to 0.07 ounces per ton. In 1975 three Becker drill holes (percussion) were put down on the KIN claims. No samples were taken for assay, thus leaving the results of this work inconclusive. Cyprus Anvil Mines drilled three NQ size holes on a coal permit that covered the KIN claims held by Yukon Revenue. This drilling intersected one four-foot coal seam and 34 meters of conglomerate. The coal was of poor quality and the conglomerate was not analyzed. The locations of the 1975 percussion holes and 1980 diamond drill holes are shown on Figures 4 and 5 of this report.

GEOLOGY

The dominant rock type of the prospect, and the only one from which gold values were reported, is a clast-supported, upward-finning conglomerate horizon in a clastic sequence which exceeds 500 meters in thickness.

Prior to Bostock's work, McConnell (1905) and MacLean (1914) had examined the auriferous conglomerates in the Indian River area. The KEY claims are located within the area mapped by H. S. Bostock between 1935 and 1937, published in 1942 as Map 711A, Ogilvie. Bostock describes the area as underlain by Precambrian gneiss, schist, quartzite, slate and limestone of the Yukon Group along with gneissic granite and ultrabasic units. Both younger clastics (conglomerate, sandstone, shale and coal) and volcanics (andesite, dacite, rhyolite, tuff and agglomerate) overlie the Precambrian units.



| LEGEND |
|--------|
| |

| | × × × × × × | <u>RECENT</u> Unconsolidated alluvial deposits <u>PALEOCENE AND UPPER CRETACEOUS</u> Carmacks Group—Haystack Andesite | | |
|--|---|---|--|--|
| (| · · · · | andesite and minor dacite, porphyritic, light- to dark-green, weathering light-green-brown LOWER CRETACEOUS Indian River Formation interbedded sandstone. shale, conglomerate and minor coal, light-gre | | |
| | | to black, weathering light-grey | | |
| | · | Geologic boundary (approximate, assumed) | | |
| ~~· | 5 5 5 F | Fault (assumed) | | |
| | * | Mine (Gold Mine) | | |
| (| 🕑 💿 Diamond drill hole, Rotary drill hole | | | |
| | | Shaft | | |
| | ► Adit | | | |
| | × | Trench | | |
| | | Building | | |
| <u>_</u> : | ====== | Trail (bulldozer, foot) | | |
| - | 65 | Radiometric age (millions of years) | | |
| 5 | 500 0 750 | | | |
| | | METRES | | |
| | FIELD WORK | (BY G W LOWEY, 1981, 1983 | | |
| VOLCANO RESOURCES CORP | | | | |
| CKINNON CREEK KEY PROPERTY | | | | |
| MCKINNON CREEK, INDIAN RIVER AREA DAWSON MINING DISTRICT, YUKON | | | | |
| GEOLOGY MAP | | | | |
| 5,000 | DATE FEB 87 | MAP SHEET FIGURE DRAFTED BY 115-0-11 4 BDS | | |
| DH | WAUGH, CON | TRACT GEOLOGICAL SERVICES | | |
| | | | | |

Mr. G. W. Lowey, as part of a Doctorate thesis requirement, studied the stratigraphy and sedimentology of the siliciclastic rocks of the Indian River-McKinnon Creek area and published his findings in June 1984. Lowey describes the Indian River Formation as an interbedded sandstone, shale, conglomerate unit with minor coal.

The unit is light grey to dark grey-green and black and poorly indurated. Data presented by Lowey demonstrates that these rocks are Lower Cretaceous (Albian) in age and of fluvial and fan-delta origin rather than just fluvial as reported by Bostock (1942).

Along McKinnon Creek, the conglomerates have been tested over the years by numerous pits and trenches and by at least three adits and four shafts. All but one adit on the old Britannia claim, now covered by KEY 3, are presently inaccessible. One shaft, the Winchester, also located on KEY 3, remained in volcanic rocks for its reported 50-foot length. Gold values were reported from three locations: the Britannia, the Arctic and the Andromeda workings.

Seven widely-spaced diamond drill holes and three percussion holes were drilled on the property in the mid-seventies and in 1980 by Dome Exploration, Yukon Revenue and Cyprus Anvil (coal exploration). The four Dome holes failed to intersect gold in economic concentrations; the three Yukon Revenue holes (percussion) were panned but not assayed, and the three Cyprus Anvil holes were logged and tested for coal only. See Figure 4 and Figure 5 for drill hole locations.

There are two distinct varieties of the Indian River conglomerate; these are described by G. Lowey as part of the Upper Ruby Quartz Member. The Ruby Quartz Member is at least 450 meters thick and coarse-grained clastics are characterized by vein quartz and metamorphic rock fragments. The Ruby Quartz Member is subdivided by Lowey into the McKinnon Conglomerate Bed, which measures roughly 25-30 meters thick; it is characterized by a black, fine-grained graphite matrix. This conglomerate is found on the KEY 5 claim in the vicinity of the Andromeda shaft and adit locations. The White conglomerate unit is light to medium-grey, sandy and siliceous, pebble to cobble gravel, and forms medium to thick massive beds.

MINERALIZATION

The gold in the Indian River-McKinnon Creek area occurs as very fine-grained (silt size) particles, occasionally coarser, and appears to be disseminated throughout the matrix of the conglomerates that are exposed along portions of the Indian River and McKinnon Creek valleys and surrounding slopes. Gold in the conglomerates varies from trace to 0.100 ounces per ton. Visible gold has been found by the writer while cutting samples with a diamond saw. Free gold is apparently associated with increased induration and/or silicification of the conglomerates. The auriferous conglomerates of McKinnon Creek show both placer and Carlintype deposit characteristics. The proximity of the felsic to intermediate volcanic intrusives, extensive alteration (silicification, etc.) and fineness of the gold particles point to an epigenetic, epithermal origin for the gold.

It was thought that the concentration of shaft and tunnel work near the McKinnon Creek valley might indicate that gold concentrations, as reportedly found in the Britannia shaft, might also be located adjacent to the McKinnon Creek (fault) lineament and that gold may have been preferentially precipitated in the carbonaceous-rich McKinnon Conglomerate Bed or "Black Conglomerate" since finely disseminated or "invisible" type gold deposits are known to be associated with carbonaceous rock formations. It was also postulated that gold might have been introduced by intrusive fluid action (magnetic origin) or remobilized from the sedimentary units (detrital origin) and precipitated in favourable horizons of the same sedimentary rock sequence.

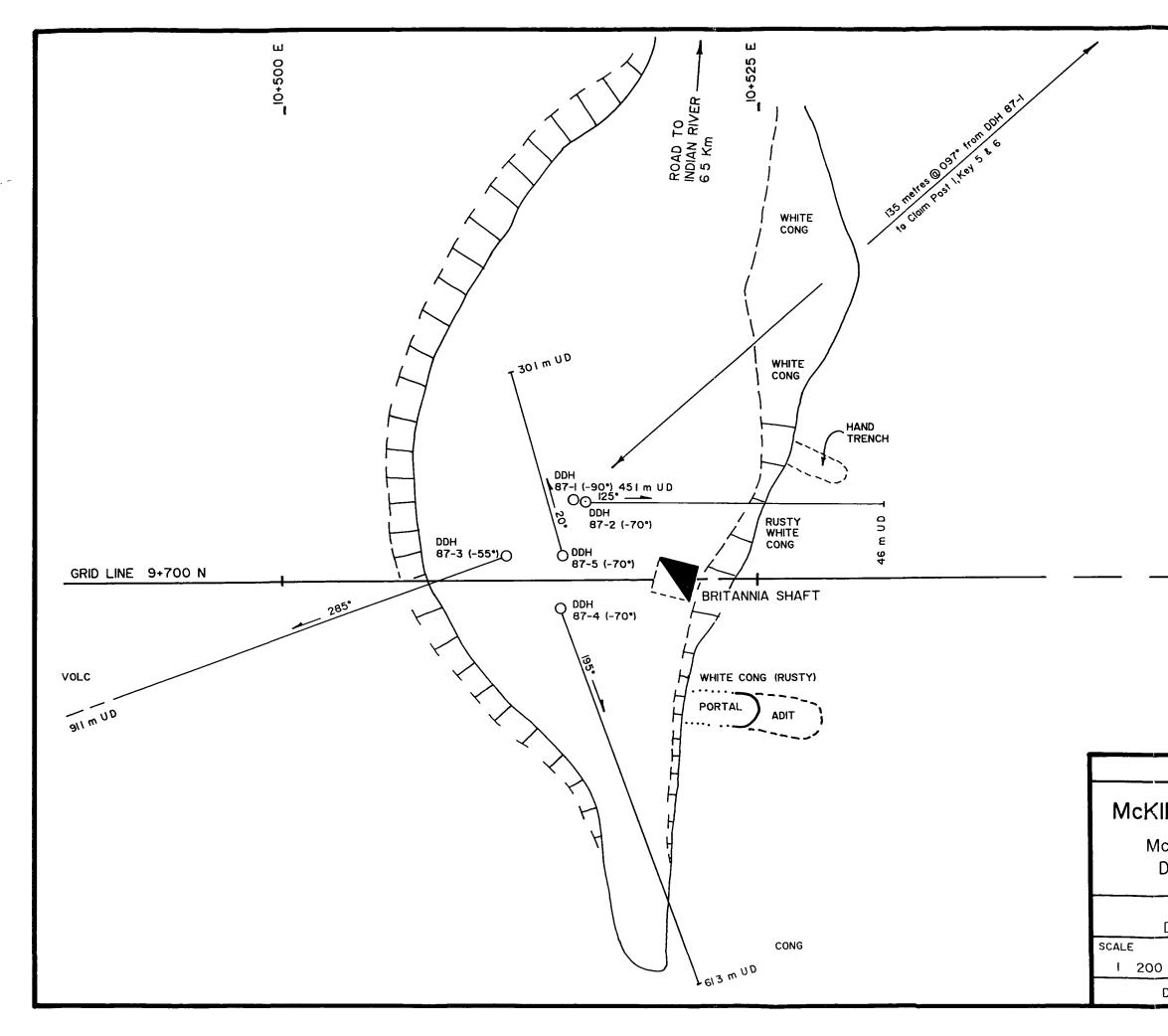
1987 DRILL PROGRAM

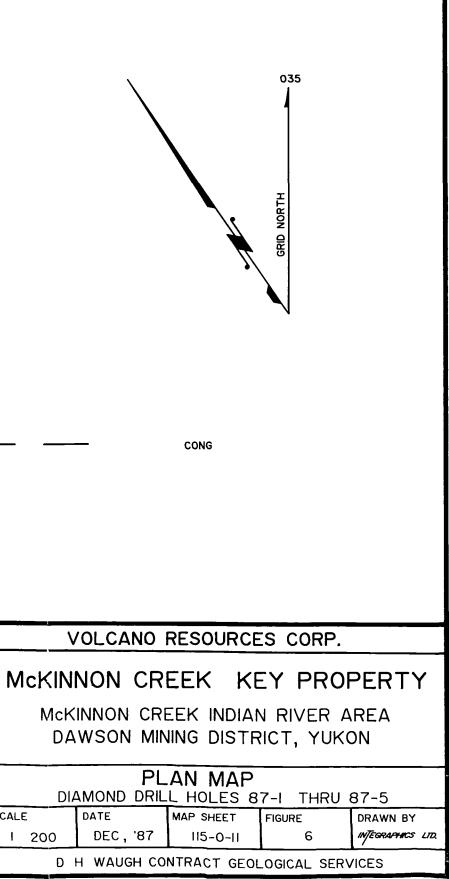
During the period September 5 - October 21, 1987, the drill program on the McKinnon Creek KEY claims was planned, mobilized and completed by Volcano Resources Corp. (under the supervision and management of D. H. Waugh). A total of 1521 feet or 464 meters of NQ core size drilling was completed on nine holes. Five holes were drilled on the KEY 3 claim adjacent to the Britannia shaft and adit; two holes, on the KEY 5 claim, were located in the black conglomerate zone where two old pits are located, and the last two holes were situated in the vicinity of the Andromeda adit on the KEY 5 claim. All nine holes are situated along the east side of and near to McKinnon Creek in permafrozen ground. See figures 5,6, 7 and 8.

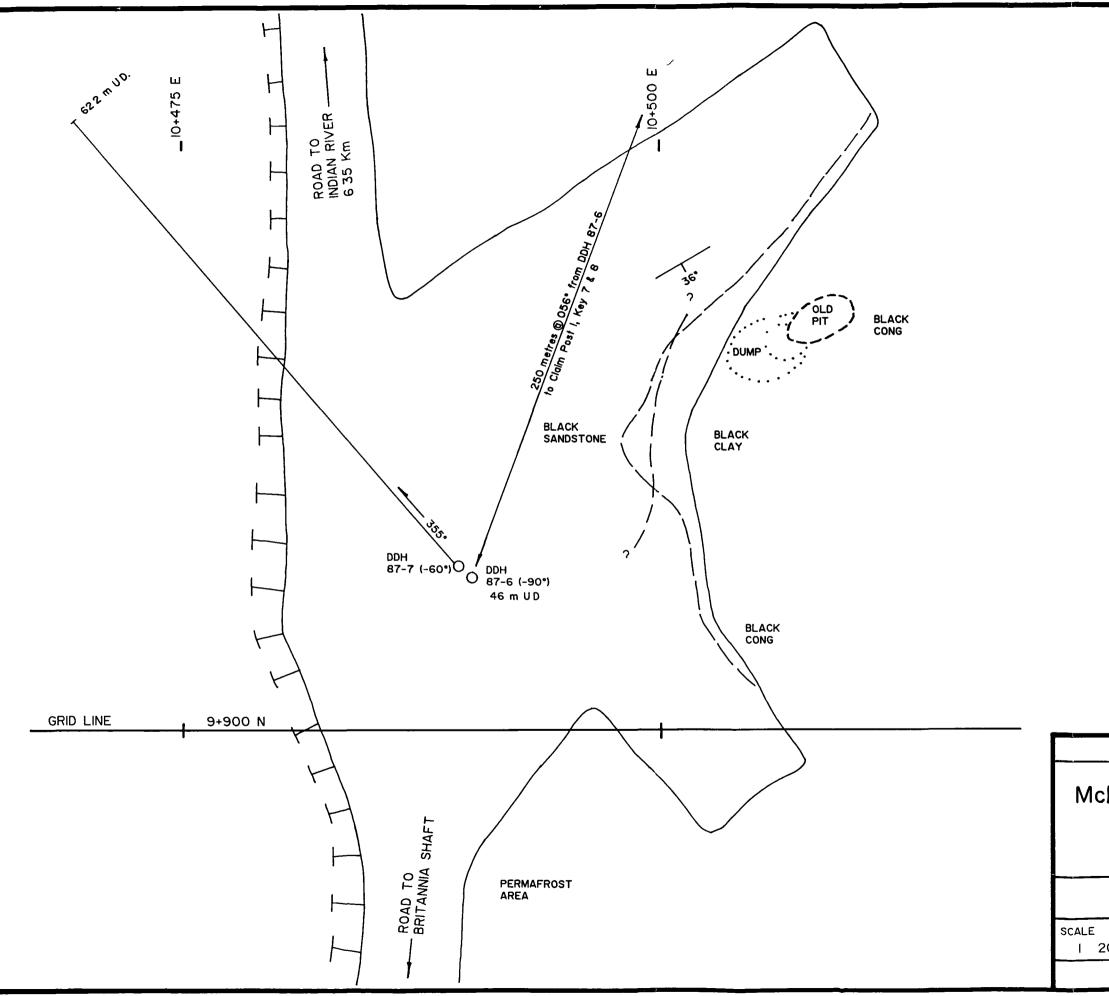
The holes were drilled with a Longyear 38 wireline diamond drill using NQ size equipment. The drilling was contracted to Kluane Drilling Ltd. and was supported by a D7E Cat bulldozer supplied by H. Coyne and Sons of Whitehorse. Mobilization of personnel, some drill equipment and supplies was partly supported by helicopter from Dawson City. In view of the excessively wet and very mild fall weather, mobilization to the first drill site was slow, arduous and expensive. Mobilization from Whitehorse began September 10 and the first drill hole, 87-1, was finally collared on September 22, twelve days later. After many days of having the bulldozer and trucks stuck in the thawed sections of the McKinnon Creek 4x4 trail, extensive upgrading and rerouting of this access road was necessitated before the drill could be moved onto site.

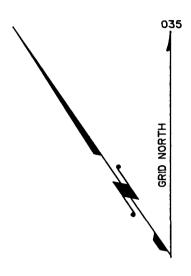
On completion of nine holes, drilling was halted and equipment placed on standby, awaiting assay results. No economic gold or silver values were encountered in the 90 samples assayed by Min-En Laboratories Ltd., 705 West 15th Street, North Vancouver, and the decision to suspend further drilling at the time was made by Volcano Resources Corp; demobilization was subsequently completed on October 21. Included in this report are four plan maps - three at scales of 1:200 and one at 1:2,000. They show the location of drill holes, geological features, old workings, camp, core storage, topographic features, claim locations, bulldozed trails and grid lines. The 1.200 scale detail maps (figures 6, 7 and 8) include drill hole directions, dips and ultimate depths and the distance and bearings to the nearest claim posts. Drill core is stored at the campsite by McKinnon Creek, in wooden core boxes on well constructed core racks and in the core shack. See the detail plan map, Figure 5, for both camp and core storage locations.

Drill logs, sample descriptions, analytical reports and assay certificates are included in the Appendix to this report.









VOLCANO RESOURCES CORP

McKINNON CREEK KEY PROPERTY

McKINNON CREEK INDIAN RIVER AREA DAWSON MINING DISTRICT, YUKON

| PLAN MAP DIAMOND DRILL HOLES 87-6 & 87-7 | | | | |
|---|------------------|-----------------------|-------------|-------------------------------|
| 200 | DATE DEC, '87 | MAP SHEET 115-0-11 | FIGURE 7 | DRAWN BY INTEGRAPHICS LTD. |
| D H WAUGH CONTRACT GEOLOGICAL SERVICES | | | | |

