

INMET
MINING

825794

Inmet Mining Corporation

3rd Floor - 311 Water Street
Vancouver, B.C.
Canada V6B 1B8

Tel: (604) 681-3771
Fax: (604) 681-3360

May 17, 1996

Donald McLeod, President
Newhawk Gold Mines Ltd.,
Suite 860 - 625 Howe Street,
Vancouver, B.C.
V6C 2T6

via fax: (604) 689 5041

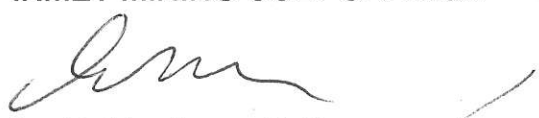
Dear Sir:

Re: Sulphurets/Bruceside Gold Silver Property

Thank you for forwarding to us your detailed property summary of the Sulphurets/Bruceside Gold Silver Property and I apologize for not responding sooner. After reviewing the data and discussing the project internally, we have concluded that it is not an opportunity which Inmet is willing to pursue at this time.

We appreciate being considered and hopefully we will be kept in mind if you should be contemplating outside involvement on any of your projects in the future.

Sincerely,
INMET MINING CORPORATION



Ian R. Morrison, P. Geo.
District Geologist - Western Canada

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MINING

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3rd Floor - 311 Water Street
Vancouver, B.C.
Canada V6B 1B8

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April 16, 1996

Mr. Donald McLeod
Newhawk Gold Mines Ltd.,
Suite 860 - 625 Howe Street
Vancouver, B.C.
V6C 2T6

via fax: (604) 689 5041

Re: Sulphurets/Bruceside Gold-Silver Property

Dear Mr. McLeod

Further to your letter dated January 16, 1996, offering to sell a 60% interest in to the above property, Inmet Mining Corporation is interested in gold opportunities and would appreciate the chance to review the project in your data room. Enclosed please find a signed Confidentiality Agreement. Please advise us as to the availability of the data room.

Sincerely,

INMET MINING CORPORATION



Ian R. Morrison, P. Geo.
District Geologist - Western Canada

NTS 104 B 8/9

NEWHAWK GOLD MINES LTD.

Suite 860 - 625 Howe Street
Vancouver, B.C. V6C 2T6
CANADA

Tel. 604 • 687 - 7545
Fax. 604 • 689 - 5041

April 15, 1996

Inmet Mining
3rd Floor, 311 Water Street
Vancouver, BC V6B 1B8

Attention: Mr Peter Daubeny

RECEIVED APR 16 1996

Dear Sirs:

Re: Sulphurets/Bruceside Gold-Silver Property

Thank you for your interest in the Sulphurets/Bruceside Gold-Silver property. Enclosed is a more detailed property summary.

A data room has been set up in our Vancouver B.C. office. Each interested party will initially be allocated one full day to review the available data. Bookings will be on a first come basis. Newhawk will require a \$25,000 refundable deposit before admittance to the data room will be granted. Reasonable charges for any requested copying will be deducted from the deposit.

Site visits can be arranged as soon as snow conditions permits. Travel costs to Stewart BC will be the responsibility of the visiting parties.

Please feel free to call me at (604) 687-7545 if you require any additional information.

Sincerely,

NEWHAWK GOLD MINES LTD.

per:



Donald A. McLeod
President

DAM/dbm
Encl.

April 27-225

NEWHAWK GOLD MINES LTD.

Suite 860 - 625 Howe Street
Vancouver, B.C. V6C 2T6
CANADA

Tel. 604 • 687 - 7545
Fax. 604 • 689 - 5041

January 16, 1996

Inmet Mining
3rd Floor, 311 Water Street
Vancouver, BC V6B 1B8

RECEIVED JAN 22 1996

Attention: Mr Frank Balint
Exploration Manager

Dear Sirs:

Re: Sulphurets/Bruceside Gold-Silver Property

Newhawk Gold Mines Ltd. is interested in selling its 60% interest in the Sulphurets/Bruceside gold-silver property located in Northwestern British Columbia, Canada. We send this brochure to you to determine your interest in evaluating this opportunity. If you are interested we would appreciate your corresponding with the undersigned at (604) 687-7545.

A confidentiality agreement is enclosed if you wish to obtain further information on the property. Those parties who have shown a serious interest will be invited to visit the data room and the site. Preference will be given to parties with demonstrated financial resources necessary to complete the transaction.

Sincerely,

NEWHAWK GOLD MINES LTD.

per:



Donald A. McLeod
President

DAM/dbm

Encl.

Newhawk Gold Mines Ltd.
Summary Report
on the
BRUCESIDE PROJECT
SULPHURETS PROPERTY
Northwestern British Columbia



ORCAN

ORCAN CONSULTANTS, Consulting Geologists

**Suite 907 - 626 West Pender Street
Vancouver, B.C. Canada V6B 1V9
Tel: Fax: (604) 662 3722**

Newhawk Gold Mines Ltd.

Vancouver B. C.

Summary Report

on the

BRUCESIDE PROJECT

SULPHURETS PROPERTY

Northwestern British Columbia

N.T.S. 104 B/8 & 9

Skeena Mining Division

October 15, 1995

David R. Budinski, P. Geo.

Consultant

Vancouver, Canada

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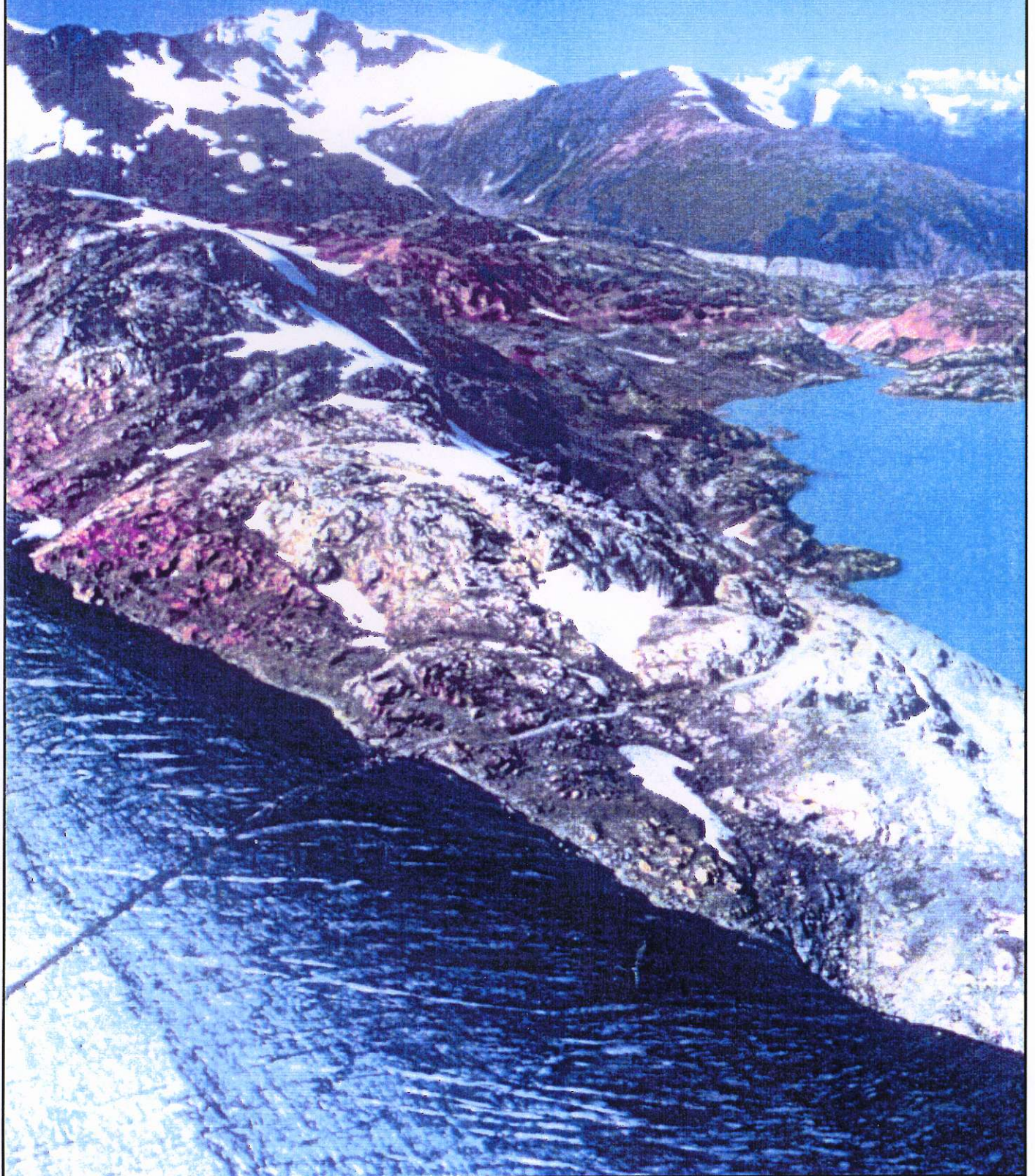
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SULPHURETS PROPERTY
Northwestern B.C.



EXECUTIVE SUMMARY

The Sulphurets property is located in the Golden Triangle, a well-known mineral district in Northwestern British Columbia. Important deposits in the area include the Snip, Eskay Creek and Golden Bear which are currently in production, ex-producer Johnnie Mountain and large deposits such as Red Mountain, Kerr, Galore Creek and Schaft Creek which are not yet in production.

The Bruceside Project, which is part of the Sulphurets property, comprises two separate claim groups, Brucejack and Knipple. The Brucejack Group, which is the subject of this report is made up of 149 units in 31 claims and has been explored by the Newhawk (60%) - Granduc (40%) joint venture since 1985. Newhawk is the operator. The companies have spent over \$37-million on exploration to date and have discovered more than 40 mineralized zones including one major gold-silver deposit (West Zone) plus five smaller satellite deposits (Shore, Gossan Hill, Galena Hill, SG and Maddux). The West Zone deposit, camp and underground workings are located near the west shore of Brucejack Lake, approximately 60 kilometres north of Stewart, and the other five deposits are all within one kilometre of the West Zone.

The Bruceside claim area is underlain by Jurassic metavolcanic and metasedimentary rocks intruded by Jura-Cretaceous Coast Range Intrusives ranging in composition from syenite to diorite to quartz monzonite. Strong zones of silica-sericite-pyrite(QSP) alteration are present along major structures and gold-silver mineralization occurs in veins, stockworks and breccias within the QSP envelope. Vein minerals include quartz, calcite and barite gangue with disseminated pyrite, tetrahedrite, tennantite, arsenopyrite, chalcopyrite, galena, pyrargyrite, sphalerite, polybasite, electrum and native gold.

The West Zone is by far the best deposit found to date and it has been explored by 5,000 metres of underground development, 75,000 metres of diamond drilling and related work. This work has outlined a geological reserve of 826,000 tons grading 0.450 oz/ton gold and 18.8 oz/ton silver. In October, 1990, Corona Corporation, at that time a significant shareholder of Newhawk Gold Mines Ltd., completed a feasibility study on the West Zone based on diluted mineable reserves of 550,900 tons grading 0.418 oz/ton gold and 18.00 oz/ton silver. An additional 47,000 tons grading 0.314 oz/ton gold and 9.3 oz/ton silver of diluted mineable reserves outlined by drilling in late 1990 were not included in the study. The results of the study indicated that a 350 ton per day underground operation using conventional gravity and flotation processing would recover 89% of the gold and 85% of the silver to produce approximately 50,000 oz gold and 1,950,000 oz silver per year for 4.5 years. With a capital cost of \$43-million, operating costs of \$171/ton milled, a gold price of US \$400/oz, a silver price of US \$5.00/oz and an 85 cent dollar, the economic analysis yielded a base-case DCFROR of 6.7%. Sensitivity analyses showed that the project was most sensitive to metal prices, ore grade and the foreign exchange rate.

350 tpd / 4.5 yr

By adding the 47,000 tons of new reserves and applying current metal prices of US \$385/oz for gold and US \$5.50/oz for silver and a 73 cent dollar, and with all other base case parameters the same as above, the sensitivity analyses contained in the feasibility report indicate that the DCFROR will increase to about 21%.

The West Zone, which consists of at least 10 separate veins, is considered to have good exploration potential at depth and some of the vein structures are still open along strike and down plunge. Also, the five satellite deposits have combined geological resources of about 200,000 tons grading 0.570 oz/ton gold and 3.95 oz/ton silver and it is likely that some of this material may be economic if a mine was developed at Brucejack. The satellite deposits and some of the other mineral occurrences on the property also have additional exploration potential.

In addition to the six deposits with reserves and resources, there are another eight mineralized zones on the Bruceside claims that are considered to be good exploration targets that warrant further work.

Five years ago, the economics of developing a small underground gold-silver mine on the West Zone were marginal. Now, with a lower Canadian dollar and a higher silver price, the indicated rate-of-return is much more favourable and a sustained increase in precious metal prices would have a significant impact on project economics. Another positive factor is that the joint venture has a Mine Development Certificate valid until September, 1997, so the project is ready for permitting.

Two other positive factors regarding mine development at Brucejack are:

- There are no outstanding environmental issues and the Joint Venture has posted bonding of \$247,500 which is believed to be sufficient to cover any potential future liabilities and
- The main access road from Highway 37 has been extended about 10.5 kilometres which reduces the barge travel distance by about nine kilometres. This also reduces the feasibility capital costs of road construction by \$340,000.

The Bruceside Project is an attractive precious metals prospect with considerable upside potential. It clearly warrants further work and a detailed review of all cost data to update its economic viability.

1.0 INTRODUCTION

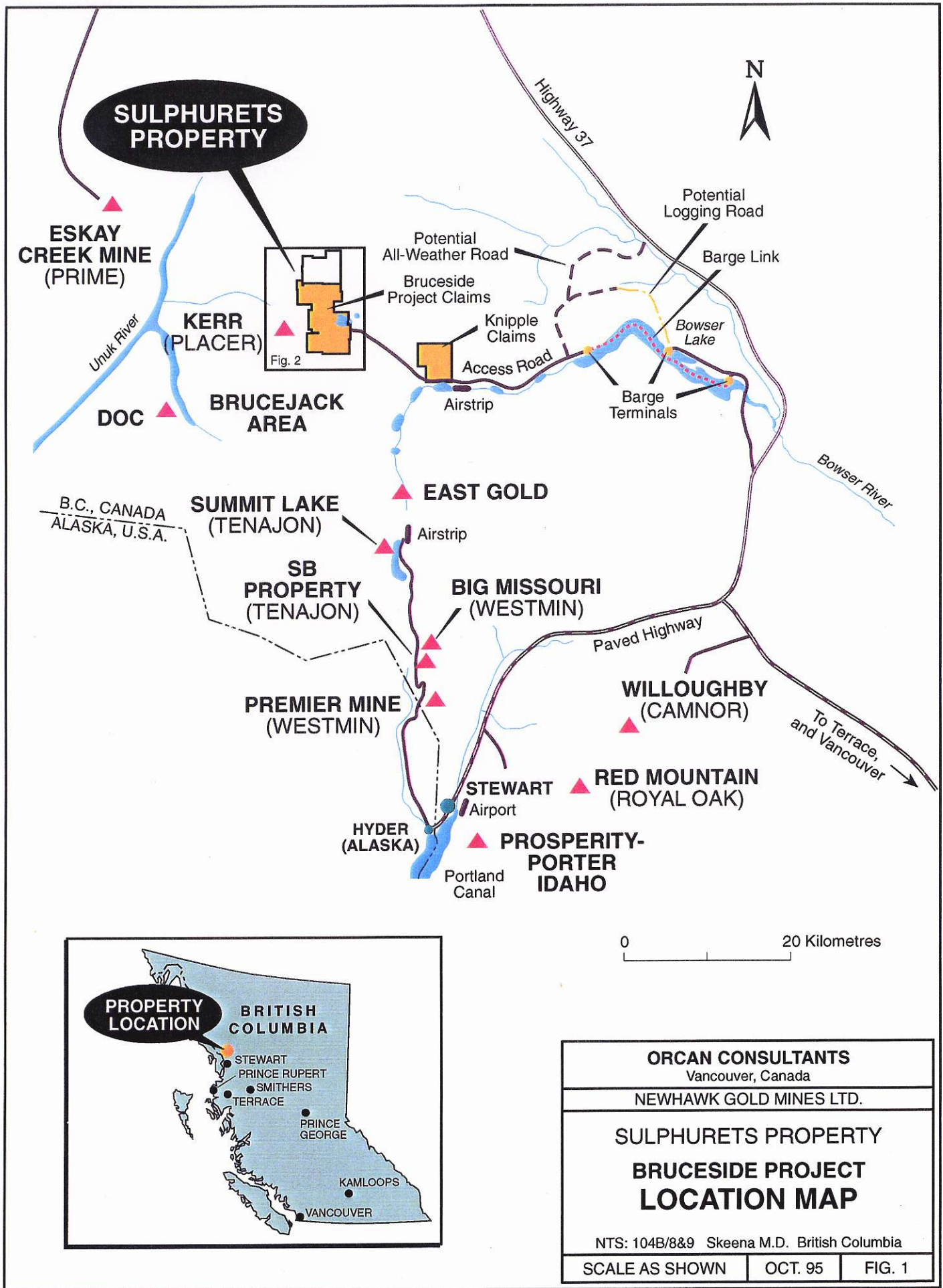
In mid - September, Mr. Fred Hewett, Vice-President of Newhawk Gold Mines Ltd. requested Orcan Consultants to prepare a concise but comprehensive summary of all work done to date on the Company's Bruceide Project which is part of the Sulphurets Property located in Northwestern B. C. The Bruceide Project comprises two claim groups, Brucejack Group and Knipple Group. They are about 10 kilometres apart and this report deals only with the Brucejack Group. The reader is referred to the 1992 Evaluation Report cited in the references for information on the Knipple Group.

The Bruceide Project is a 60:40 joint venture with Newhawk Gold Mines Ltd. and Granduc Mines Limited, both junior mining companies based in Vancouver. Newhawk is a member of the Northair Group of Companies and is controlled by Homestake Canada Inc. while Granduc is controlled by Conwest Exploration Company Limited of Toronto.

The author of this report is familiar with the project and was personally involved in some of the work there, having spent about six weeks as a consulting Mine Geologist on the underground exploration program in 1989. The information in this report is based on a thorough review and compilation of a great deal of exploration and engineering data at Newhawk's Vancouver office as well as personal communication with some of the Company's staff and senior management.

1.1 LOCATION AND ACCESS

The Sulphurets gold-silver property is located in a remote part of Northwestern British Columbia, approximately 900 kilometres northwest of Vancouver and about 60 kilometres north of the town of Stewart (Figure 1). The claims comprising the Brucejack Group are on NTS map sheets 104B/8 and 9 at 56 degrees 29' N latitude and 130 degrees 13' W longitude. Although Stewart is the nearest organized community, the cities of



SULPHURETS PROPERTY

ESKAY CREEK MINE (PRIME)

KERR (PLACER)

BRUCEJACK AREA

DOC

SUMMIT LAKE (TENAJON)

EAST GOLD

SB PROPERTY (TENAJON)

BIG MISSOURI (WESTMIN)

PREMIER MINE (WESTMIN)

WILLOUGHBY (CAMNOR)

STEWART

RED MOUNTAIN (ROYAL OAK)

HYDER (ALASKA)

PROSPERITY-PORTER (IDAHO)

B.C., CANADA
ALASKA, U.S.A.



PROPERTY LOCATION

BRITISH COLUMBIA

STEWART
PRINCE RUPERT
SMITHERS
TERRACE
PRINCE GEORGE
KAMLOOPS
VANCOUVER

0 20 Kilometres

ORCAN CONSULTANTS Vancouver, Canada		
NEWHAWK GOLD MINES LTD.		
SULPHURETS PROPERTY BRUCESIDE PROJECT LOCATION MAP		
NTS: 104B/8&9 Skeena M.D. British Columbia		
SCALE AS SHOWN	OCT. 95	FIG. 1

Terrace and Smithers are in the same general region. Both are directly accessible by daily jet service from Vancouver. Stewart has good road access but does not have scheduled air service. There is a permanent camp on the property at Brucejack Lake. Access from Stewart presently is by helicopter, however, during the underground exploration period in the late 1980's, freight, supplies and personnel were transported from Stewart overland via paved Highway 37, then by gravel road to Bowser Lake, then by barge along Bowser Lake, then by road along Bowser River and finally by tracked vehicle up the Knipple Glacier. Overland access on a year-round basis is the preferred alternative in the Feasibility Study (1990)

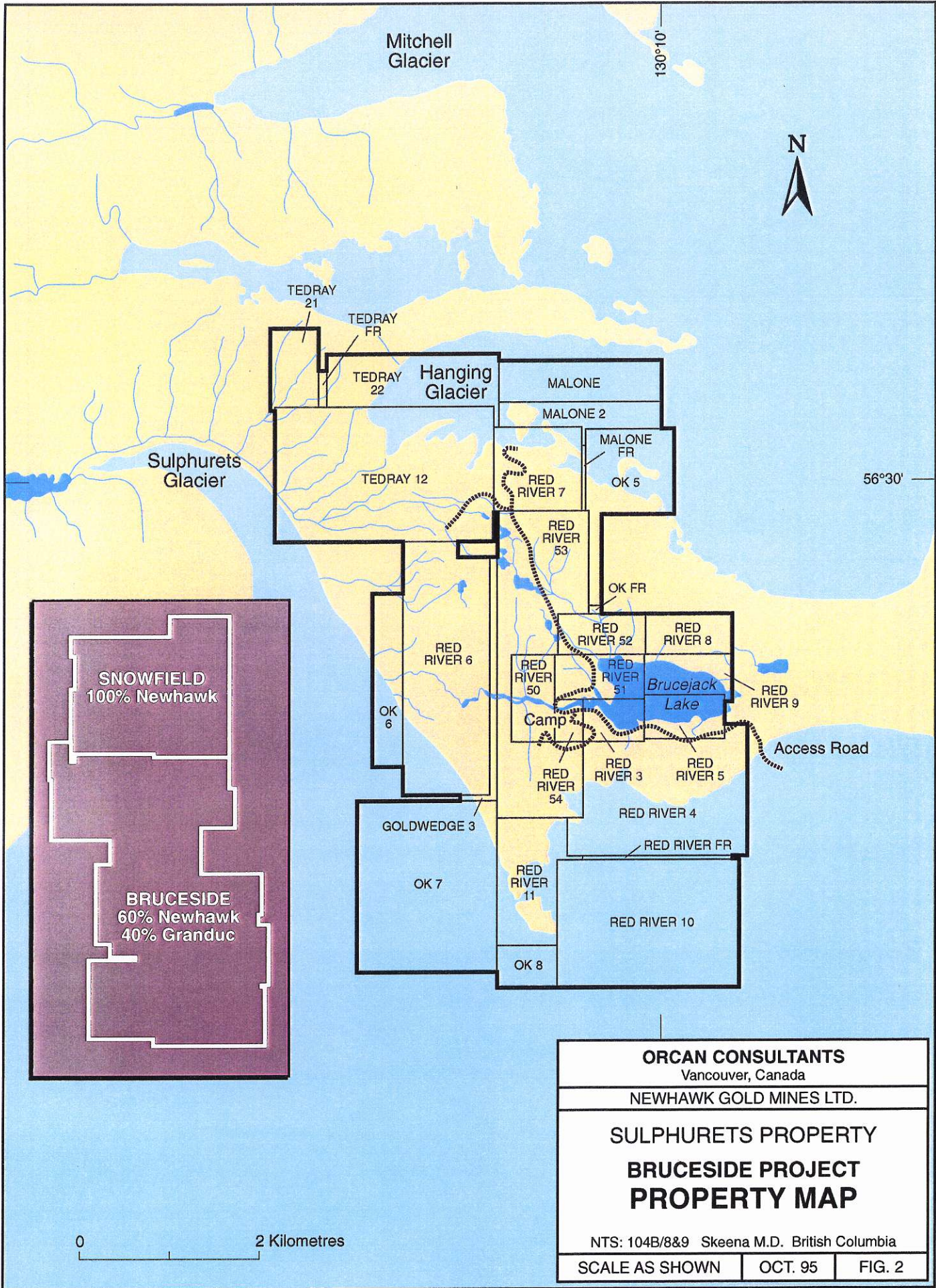
1.2 PHYSIOGRAPHY AND CLIMATE

The Sulphurets property is situated in the Coast Range Mountains on a large ice - covered ridge at elevations ranging between 550 and 1830 metres above sea level. The terrain is rocky and rugged with permanent ice-fields filling the upper reaches of many of the valleys. The Brucejack Lake camp is at 1,375 metres elevation on a high plateau above timberline and the lake is ice-bound most of the year. The underground mine portal near the camp is at 1,382 metres elevation.

The climate is harsh. Winters are long with heavy snowfall and high winds while summers are cool and wet. Vegetation is sparse with only some scrub spruce and fir at lower elevations along creeks and juniper and alpine grasses at higher elevations.

1.3 PROPERTY

The Sulphurets claim group comprising approximately 33 square miles was originally 100% owned by Granduc Mines Limited. In July 1985, Newhawk and Lacana Ex (1985) entered into a 50:50 joint venture allowing them to earn a 60% interest through staged cash payments and exploration expenditures. By late 1986, each company earned



a 30% interest and in November, 1987, Newhawk purchased Lacana's interest by issuing shares. This increased Newhawk's interest to 60% with Granduc retaining the other 40%.

In 1991, the Sulphurets property was divided into three project areas; Sulphside, Bruceside and Snowfield comprising approximately 4,510, 2,870 and 1,170 hectares respectively. In 1992, the Joint Venture sold its interest in Sulphside to Placer Dome Inc. who owns the adjoining Kerr copper-gold property to the west. At about the same time, the company purchased Granduc's 40% interest in the Snowfield project area. At the present time, the Bruceside Project which is the subject of this report is owned 60-40 by the Newhawk-Granduc joint venture. The Snowfield Project is 100% owned by Newhawk and is the subject of a separate report.

There are 31 claims comprising 149 units in the Brucejack Group. They are shown on Figure 2 and described in Table 1. The Knipple Group which comprises 11 claims totalling 144 units, is shown on Figure 1 and listed in Table 1. All claims lie within the Skeena Mining Division.

TABLE 1. Bruceside Project Claims

Brucejack Group

<u>Claim</u>	<u>Record</u>	<u>Units</u>	<u>Expiry Date</u>
Red River 3	250899	2	Sept. 2, 2004
Red River 4	250939	12	Nov. 3, 2004
Red River 5	250940	2	Nov. 3, 2004
Red River 6	250985	12	June 30, 2004
Red River 7	250986	4	June 30, 2004
Red River 8	251022	2	Sept. 29, 2004
Red River 9	251023	2	Sept. 29, 2004
Red River 10	251058	12	July 12, 2004
Red River 11	251059	6	July 12, 2004
Red River 50	254205	2	June 29, 2004

Red River 51	254206	2	June 28, 2004
Red River 52	254207	2	June 30, 2004
Red River 53	254208	14	July 4, 2004
Red River 54	254209	1	June 29, 2004
Red River Fr.	313085	1	Sept. 9, 2004
Tedray No. 12	250388	15	Aug. 26, 2004
Tedray 21	250990	2	June 30, 2004
Tedray 22	251066	8	Oct. 6, 2004
Tedray Fr.	313084	1	Sept. 9, 2004
OK# 5	251284	8	Dec. 10, 2004
OK# 6	251285	4	Dec. 10, 2004
OK# 7	251286	12	Dec. 10, 2004
OK# 8	251287	2	Dec. 10, 2004
OK Fr.	313086	1	Sept. 9, 2004
Goldwedge # 3	251512	6	Sept. 3, 2004
Malone	313089	6	Sept. 10, 2004
Malone 2	313090	4	Sept. 5, 2004
Malone Fr.	313087	1	Sept. 10, 2004
Dawn*	269290	1	Nov. 6, 1996
Mack*	269292	1	Nov. 6, 1996
<u>Cloud*</u>	269291	<u>1</u>	Nov. 6, 1996
31 claims		149	

Knipple Group

Knipple 1	308696	18	April 4, 1996
Knipple 2	308697	20	April 4, 1996
Knipple 3	308698	18	April 4, 1996
Knipple 4	308699	12	April 4, 1996
Knipple 5	308700	20	April 4, 1996
Knipple 6	308701	20	April 4, 1996

Knipple 1	309940	1	May 27, 1996
Knipple 2	309941	1	May 27, 1996
Knipple 3	309943	12	May 27, 1996
Knipple 4	309944	12	May 27, 1996
<u>Tiger CFH</u>	309942	<u>10</u>	May 27, 1996
11 Claims		144	
*Placer Claim			

1.4 HISTORY

The Sulphurets area has been intermittently explored for precious and base metals for more than 100 years. While some of the earlier work is not well documented, activities since the 1950's are reasonably well - known. The following is a chronological description of mineral exploration in the Sulphurets Creek - Brucejack Lake area:

1930's	Churn drill testing for placer gold on Sulphurets Creek.
1935	Prospectors discover copper mineralization about six kilometres northwest of Brucejack Lake.
1959	Gold and silver mineralization discovered in upper Sulphurets Creek area.
1960	Granduc Mines Limited and Alaskan prospectors staked the main Sulphurets claim group.
1961- 68	Prospecting led to the discovery of several gold-silver and copper occurrences, six copper-moly zones tested with 40 diamond drill holes.
1970's	Granduc conducted geological mapping, sampling, geophysics, prospecting and limited drilling on known base and precious metal targets north and northwest of Brucejack Lake.

- 1980 - 84 Esso Minerals optioned the property and carried out detailed exploration for large porphyry copper-moly, copper-gold and bulk mineable gold deposits. Several high-grade gold-silver vein deposits were also evaluated including the West Zone which was and still is considered the best deposit on the property. Total of 8,230 metres diamond drilling on the property to the end of 1984.
- 1985 Newhawk Gold Mines Ltd. entered into a 60:40 joint venture with Granduc to explore and develop the Sulphurets property after Esso withdrew from mineral exploration in the Stewart area. Drilled 3,600 metres on the West, Shore, and Gossan Hill Zones.
- 1986 The joint venture initiated underground exploration and development on the West Zone - a 200 metre decline and 227 metres of drifts and crosscuts were driven. Over 6,400 metres of surface diamond drilling was completed on the West Zone.
- 1987 Underground work continued - decline was extended 320 metres, 113 metres of drifting and 50 metres of raising in the West Zone mineralization; also completed 10,670 metres of surface and 7,900 metres of underground diamond drilling. Other work included building a temporary winter road, metallurgical testing, environmental baseline studies and preliminary mineral inventory estimates. Prospectus submitted to the British Columbia Government.
- 1988 A three-phase evaluation program was carried out which included advancing the decline 540 metres, about 1,200 metres of drifting and 780 metres of raising, 7,500 metres of surface and underground diamond drilling on the West Zone. The nearby Shore and Gossan Hill zones were also explored by 1,950 metres of surface drilling and the road was improved from Bowser Lake to Knipple Camp and Brucejack Camp. Geological reserves estimated for the West Zone.

- 1989 Underground development continued - total of 1,800 metres of underground workings - decline extended down to 1,150 elevation, 4,880 metres of surface and 14,000 metres of underground drilling on West Zone. Detailed surface mapping, sampling on other mineral occurrences on the property and condemnation drilling for millsite and damsite. Geological reserves estimated and reviewed by consultants , Stage 1 Environmental and Socioeconomic Impact Assessment report submitted to Provincial agencies.
- 1990 Completed 5,500 metres underground diamond drilling on West Zone. Computerized reserves calculated by Gemcom and conventional ore reserve estimate by Watts, Griffis and McOuat. Updated ore reserve estimate by Newhawk based on new drilling. Feasibility study completed in late 1990 by Corona Corporation, then a controlling shareholder of Newhawk.

1.5 RECENT ACTIVITY

- 1991 Trenching, sampling, mapping on several targets north of the West Zone, 1,200 metres in six surface diamond drill holes on Shore Zone. Combined helicopter-borne magnetic, electromagnetic, VLF and radiometric survey over entire Sulphurets property.
- 1992 Prospecting, mapping, trenching, geochemical surveys on 13 known targets and on a regional scale. 17 new mineral occurrences discovered.
- 1993 Mapping, prospecting, channel sampling and drilling to evaluate zones of known gold-silver mineralization with potential near surface reserves exclusive of the West Zone. 17 zones were evaluated of which five were drilled(4,120 metres in 31 holes). Geological resources were calculated for four of the drilled zones.

- 1994 Mapping, trenching and drilling of the highest priority targets on the Bruceside Project area was conducted on 10 of the best deposits (including West Zone). 2,790 metres was drilled on the West Zone in eight holes and 4,564m in 12 holes was drilled on six other deposits.
- 1995 Other than some environmental monitoring, road reclamation and seeding there was no work done on the Bruceside Project this year.

2.0 GEOLOGICAL SETTING

2.1 REGIONAL GEOLOGY

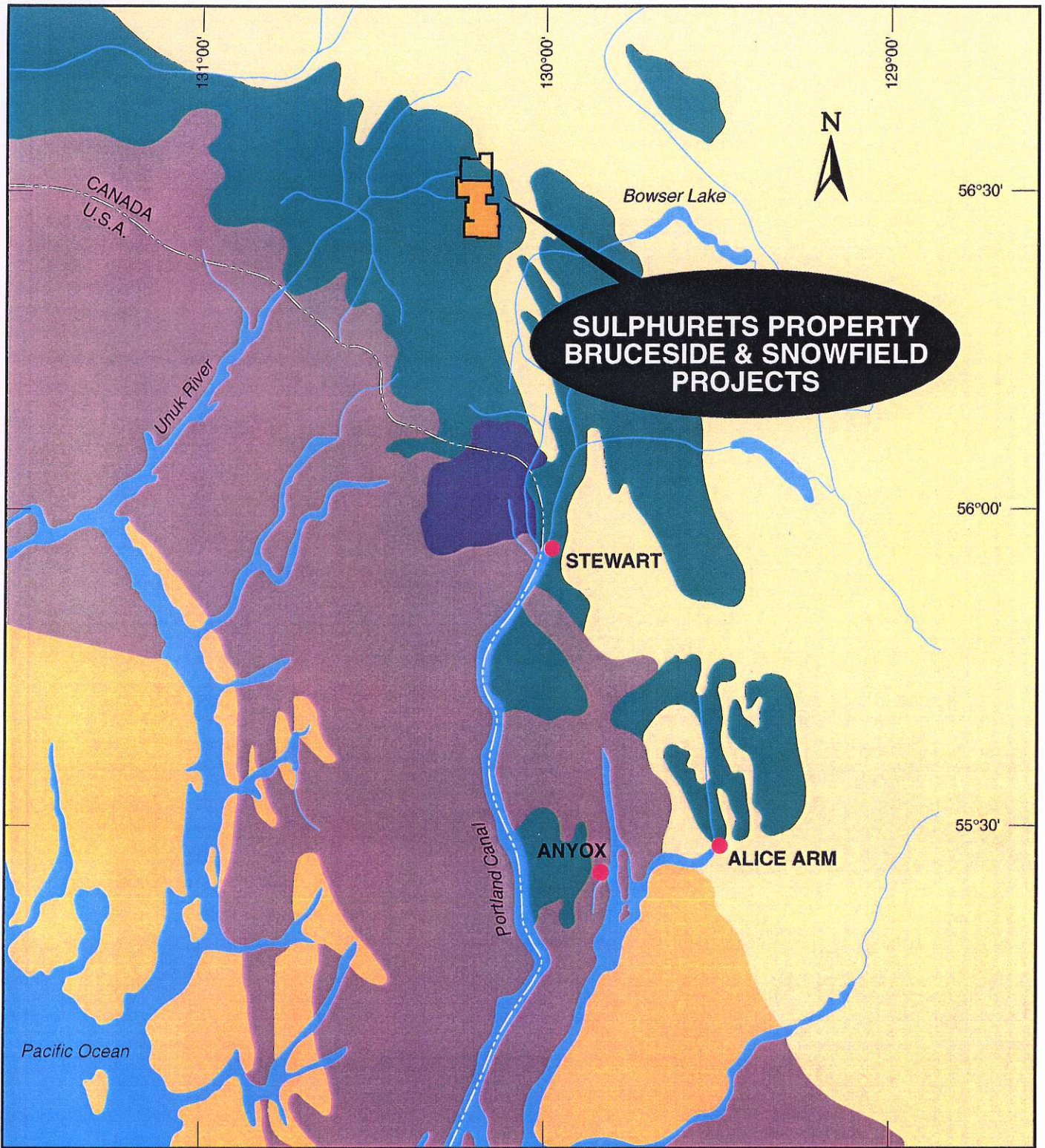
The Sulphurets property, which lies within the Stikine Terrain, is underlain by Hazelton Group volcanic, volcanoclastic and sedimentary rocks of upper Triassic to Lower and Middle Jurassic age (Figure 3). They are intruded by Mesozoic felsic to intermediate plutons and a few Tertiary mafic dykes and sills.

Recent mapping by Britton and Alldrick (1991) and by Kirkham (1994) subdivides the Hazelton Group into several formations; sandstone and conglomerates, of the Lower Unuk Formation, volcanics and siltstones of the Upper Unuk Formation, interbedded conglomerates, sandstones, and intermediate to mafic volcanics of Betty Creek Formation, felsic pyroclastic and tuffaceous rocks of the Mount Dillworth Formation and finally by siltstones and sandstones of the Salmon River Formation. The youngest rocks in the region are sedimentary rocks of the Bowser Lake Group.

Hazelton Group rocks are gently folded and strong north-south steeply-dipping normal and reverse faults are common.

2.2 PROPERTY GEOLOGY

The Bruceside Project claims are underlain by two sedimentary and volcanic assemblages; Upper Triassic Stuhini Group rocks on the west and Jurassic Hazelton Group rocks in the central and eastern parts of the claim area (Figure 4). Younger flows and clastics overlie the Hazelton Group rocks east of the property. Jurassic sub-alkaline plutons ranging in composition from syenite to hornblende-feldspar-porphyry to diorite and monzonite intrude all units.

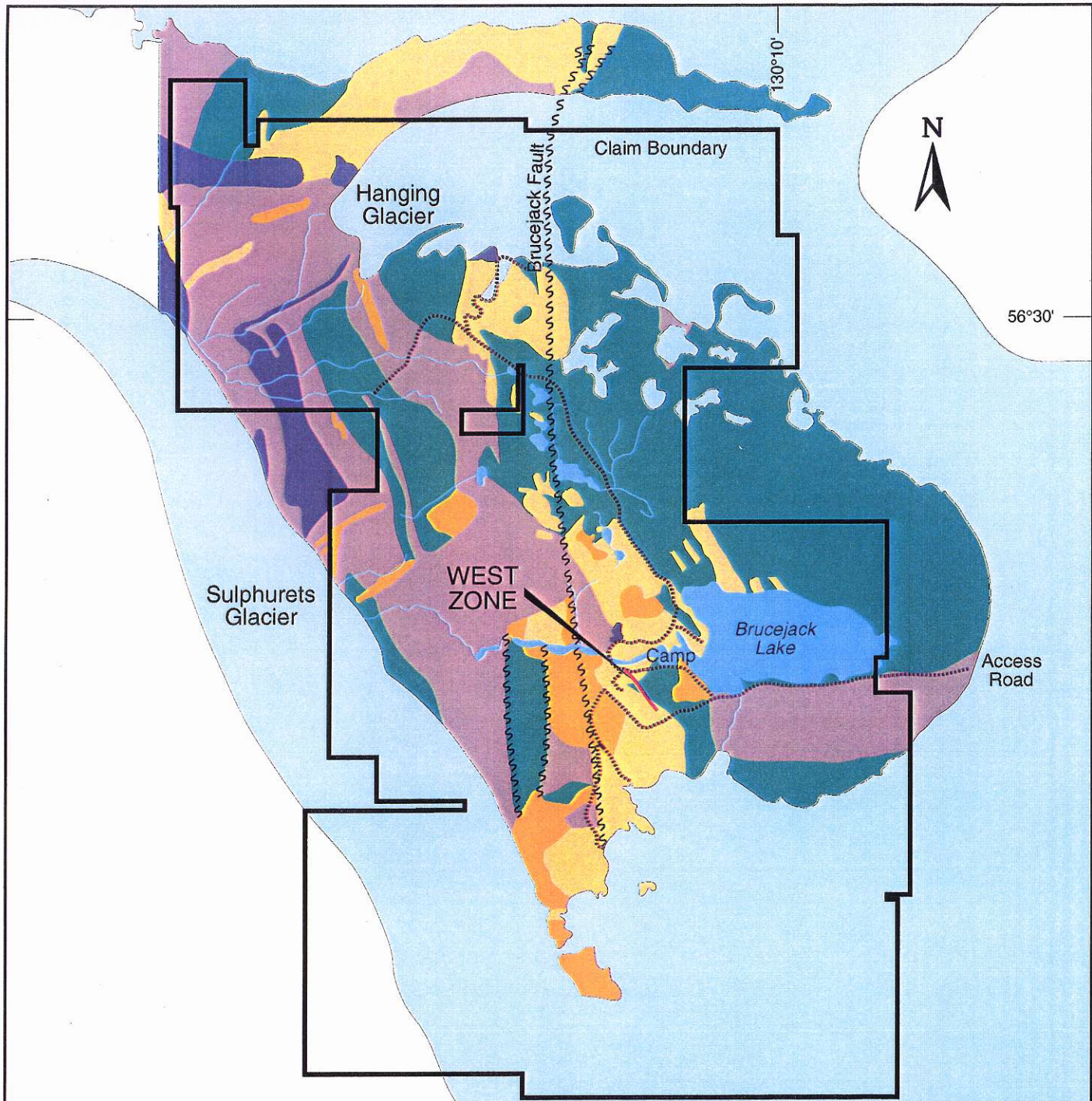


**SULPHURETS PROPERTY
BRUCESIDE & SNOWFIELD
PROJECTS**

- Lower-Middle Jurassic
Bowser Assemblage
- Upper Triassic-Lower Jurassic
Takla & Hazelton Assemblage
- Wrangell Metamorphic Belt
(Undefined Age)
- Upper Triassic-Lower Jurassic
Texas Creek Intrusion
- Cretaceous-Tertiary
Coast Range Intrusions

0 20 Kilometres

ORCAN CONSULTANTS Vancouver, Canada		
NEWHAWK GOLD MINES LTD.		
SULPHURETS PROPERTY BRUCESIDE PROJECT REGIONAL GEOLOGY		
NTS: 103/104 Skeena M.D. British Columbia		
SCALE AS SHOWN	OCT. 95	FIG. 3



- Quartz-Sericite-Pyrite Alteration
- Mafic Intrusive
- Felsic Intrusive
- Metasediments
- Andesitic Metavolcanics
- Glaciers
- Faulting
- Road

0 1 Kilometre

ORCAN CONSULTANTS Vancouver, Canada		
NEWHAWK GOLD MINES LTD.		
SULPHURETS PROPERTY BRUCESIDE PROJECT PROPERTY GEOLOGY		
NTS: 104B/8&9 Skeena M.D. British Columbia		
SCALE AS SHOWN	OCT. 95	FIG. 4

Post-mineral deformation and faulting are common with the north-striking Brucejack Fault and the west - trending Bruce Fault being the most prominent.

A north trending zone of intense quartz-sericite-pyrite (QSP) alteration 100 metres to 450 metres wide and 4.5 kilometre long cuts through the central part of the claim group. The alteration is pervasive and hosts over 40 known zones of structurally controlled quartz-carbonate, gold-silver bearing veins, stockworks and breccias. The most important ore -bearing structures occur within a complex vein system and can range from a few centimetres metres to up to 50 metres wide and can contain up to 60% quartz. Individual mineralized zones range in length from several metres to several hundred metres.

The majority of the veins trend northwest-southeast and dip steeply northeast. Less common are northeast trending and east-west striking veins that can have dips of 60 degrees north to vertical.

The most important and therefore the most extensively explored mineralized zone on the Bruceside Project area is the West Zone which consists of at least 10 separate veins.

Metallic mineralization within the alteration zone consists primarily of disseminated pyrite and minor arsenopyrite. Vein mineralogy consists of up to 10% disseminated pyrite with variable amounts and combinations of tetrahedrite, tennantite, arsenopyrite, chalcopyrite, galena, pyrargyrite, sphalerite, polybasite, electrum and native gold.

3.0 MINERAL DEPOSITS

3.1 WEST ZONE

3.1.1 Introduction

The complex vein system which has been designated as the "West Zone" is illustrated on Figures 6, 7, and 8. It has been extensively explored since the 1980's by conducting both surface and underground programs. This work included more than 5,000 metres of underground development and nearly 75,000 metres of surface and underground diamond drilling. By the end of the 1980's, the results of these programs indicated that the deposit had sufficient reserves of high-grade gold and silver mineralization to warrant a feasibility study. In October, 1990, Corona Corporation which was then a controlling shareholder (42%) of Newhawk, was contracted to evaluate the economic potential of the deposit. The following is a brief summary of the various components addressed in the Corona feasibility study:

3.1.2 Geology and Mineralization

The West Zone is a structurally controlled northwest trending multiple vein system consisting of gold and silver bearing quartz veins, stockworks and breccias. It may be a splay off the north trending Brucejack Fault which lies immediately to the west. The mineralized system, which includes 10 veins, occurs within an envelope of intensely altered volcanic rocks bordered by intrusive stocks to the northeast and southwest. The individual veins vary in thickness and in length, plunge steeply southeast and dip steeply northeast. For convenience, the veins have been named R1, R2, R4, R5, R6, R7, R8, Gold Zone (GZ), Eraser (ER) and Bielecki (BL). All come to surface except R4, R8 and GZ and all the veins have well defined pods or lenses of high-grade mineralization that

appear to have developed in tensional openings. Also, although they are called veins, they are actually groups of veins or veinlets which may be parallel or en echelon with frequent branching and splitting. Local crosscutting is also present forming high-grade stockworks. Briefly, the veins are described as follows:

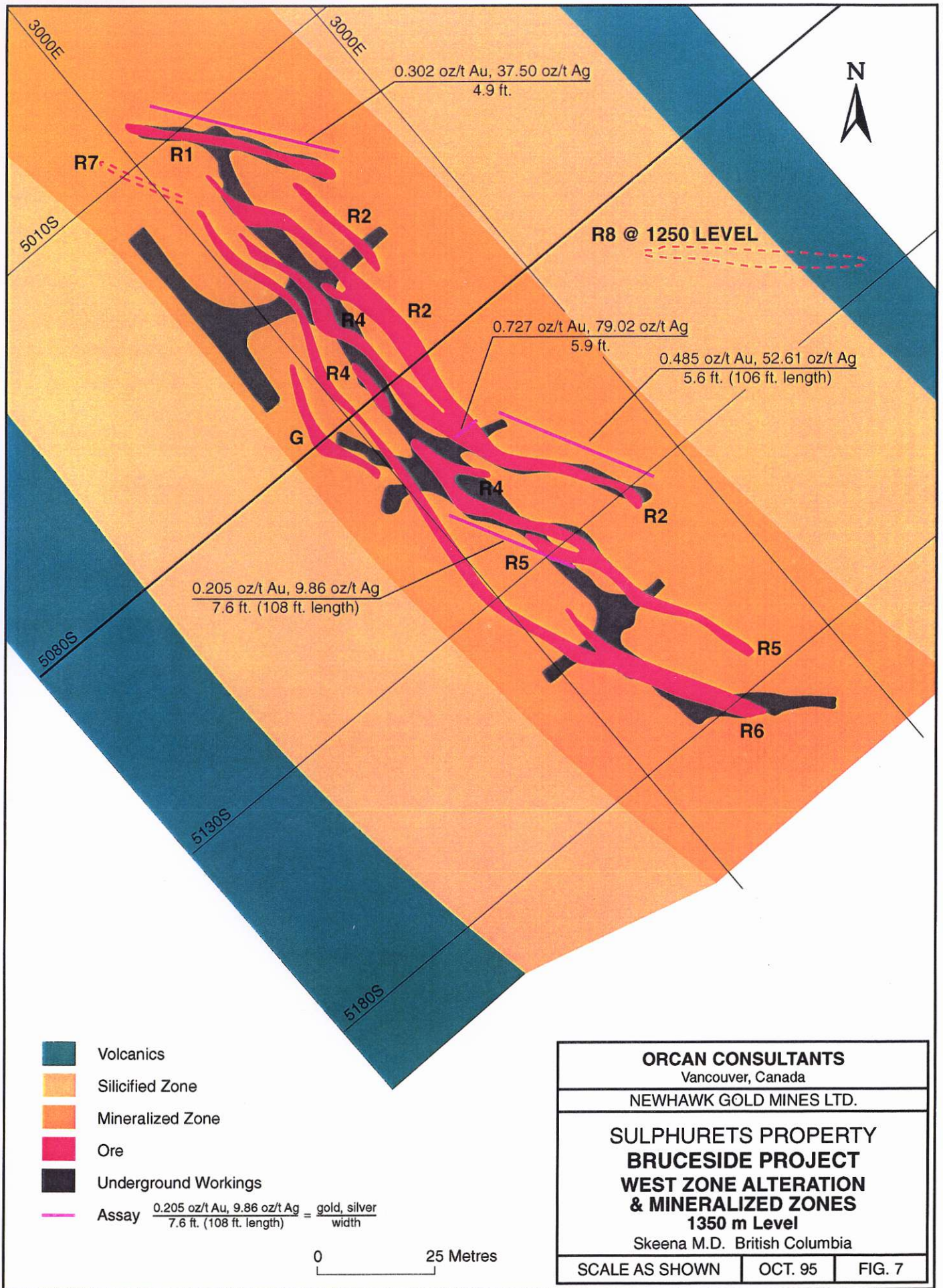
- R1 < 0.5 metres wide, broken, en echelon quartz vein, 50 metre long, 65 metres vertical extent, average grade of 0.305 oz/ton Au and 33.7 oz/ton Ag with Ag:Au ratio of 110:1.
- R2 several erratic parallel quartz veins less than 1.0 metres wide with strike length of 123 metres and vertical extent of 250 metres, average grade of 0.343 oz/ton Au and 25.7 oz/ton Ag.
- R4 one of the strongest multiple vein structures and stockworks in the West Zone extending 280 metres vertically, consists of two shoots each about 40 metres long strengthening at depth to 130 metres long, average grade of 0.441 oz/ton Au and 27.1 oz/ton Ag.
- R5 a series of short irregular shoots with westerly strike and northwesterly plunge, length usually less than 60 metres and vertical extent of 200 metres, average grade of 0.352 oz/ton Au and 13.7 oz/ton Ag.
- R6 a strong continuous vein, 250 metres long with vertical extent of nearly 200 metres, appears to be a principal structure with other veins branching from it, average grade of 0.262 oz/ton Au and 16.0 oz/ton Ag.
- R7 a stockwork and several narrow veins over a vertical extent of 35 metres from surface with a second R7 structure between 1240 - 1250 metres elevations, grades of 0.165 oz/ton Au and 11.1 oz/ton Ag
- R8 one of the most important veins in the West Zone; this vein has a uniform strike length of 80 metres and average width of 2 - 5 metres, extends over vertical depth of at least 190 metres, the present limit of exploration and is open at depth, differs from all other veins because of flat (58 degrees) northeast dip, high-grade, averaging 0.623 oz/ton Au and 12.4 oz/ton Ag with higher grade core averaging 1.259 oz/ton Au and 20.5 oz/ton Ag.

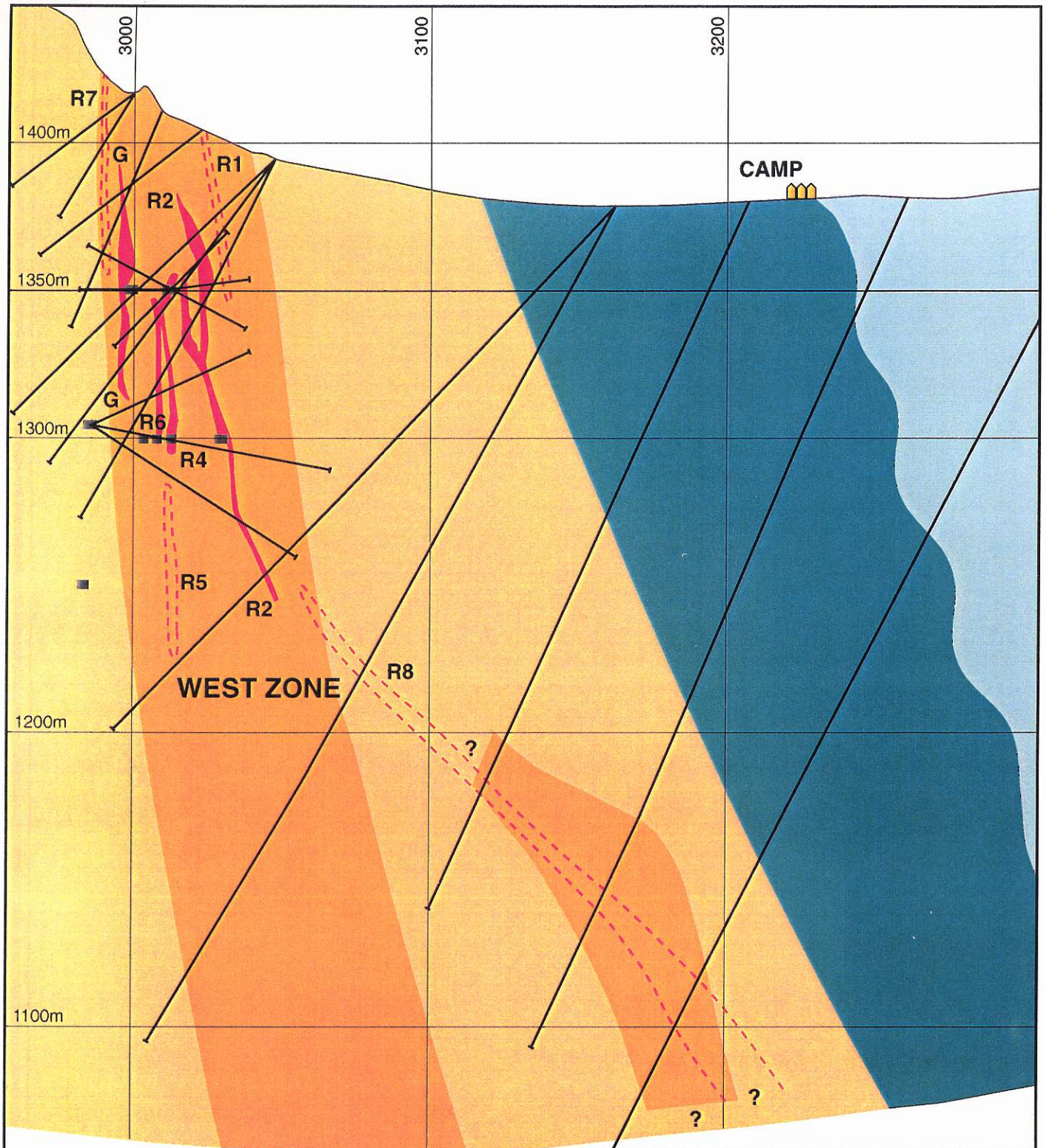


- Quartz Stockwork
- Syenite
- Volcanics
- Sediments
- Underground Workings
- Fault

0 50 Metres

ORCAN CONSULTANTS Vancouver, Canada		
NEWHAWK GOLD MINES LTD.		
SULPHURETS PROPERTY BRUCESIDE PROJECT WEST ZONE SURFACE GEOLOGY		
Skeena M.D. British Columbia		
SCALE AS SHOWN	OCT. 95	FIG. 6





- Volcanics
- Silicified Zone
- Mineralized Zone
- Ore
- Underground Workings

0 50 Metres

ORCAN CONSULTANTS Vancouver, Canada		
NEWHAWK GOLD MINES LTD.		
SULPHURETS PROPERTY BRUCESIDE PROJECT IDEALIZED CROSS SECTION (5080S)		
Skeena M.D. British Columbia		
SCALE AS SHOWN	OCT. 95	FIG. 8

- GZ small, erratic lens localized in chlorite rich pockets SW of the main R6 structure, average grade of 0.585 oz/ton Au and 1.6 oz/ton Ag.
- ER separated by faulting from the R veins, the ER structure lies immediately south of the West Zone, strikes northwest and dips steeply to the northeast, exposed on surface over 50 metres strike length with variable widths up to 6 metres, average grade of 0.332 oz/ton Au and 18.6 oz/ton Ag.
- BL at extreme southeast end of West Zone and adjacent of the ER, the BL Zone consists of two cross-cutting veins exposed over a strike length of 55 metres, width of up to 30 metres wide, average grade of 0.267 oz/ton Au and 24.9 oz/ton Ag.

3.1.3 Reserves and Resources

There have been several estimates of the geological resources in the West Zone during the past few years. As exploration progressed, the geological resource tonnage increased and was gradually upgraded to mineable reserves. Some of the estimates are summarized below:

- 1987 Watts, Griffis and McOuat (WGM) estimated probable geological reserves of 332,000 tons grading 0.29 oz/ton Au and 20.7 oz/ton Ag.
- 1988 Vulumiri estimated measured and indicated geological reserves of 304,044 tons grading 0.387 oz/ton Au and 23.2 oz/ton Ag.
- 1989 Dearin estimated measured and probable geological reserves of 379,611 tons grading 0.354 oz/ton Au and 23.2 oz/ton Ag in same general area as Vulumiri.
- 1990 WGM estimated proven and probable in-situ geological reserves of 715,400 tons grading 0.431 oz/ton Au and 19.7 oz/ton Ag (this estimate included three new veins that were not included in the Dearin and Vulumiri estimates).

All of the above estimates were based on a cutoff grade of 0.20 oz/ton Au equivalent with Au:Ag price ratio of 66:1, specific gravity of 2.75 and minimum width of 1.5m.

1990 Newhawk estimated that an additional 111,000 tons grading 0.570 oz/ton Au and 13.6 oz/ton Ag were outlined by drilling in 1990 that were not included in the WGM 1990 estimate bringing the total in-situ geological reserves for the West Zone to 826,000 tons grading 0.450 oz/ton Au and 18.8 oz/ton Ag.

1990 Corona Corporation calculated proven and probable diluted mineable reserves of 550,900 tons grading 0.418 oz/ton Au and 18.0 oz/ton Ag based on the WGM 1990 geological reserves estimate. A review of the new reserves outlined by the 1990 drilling yielded an additional 47,000 tons of mineable reserves grading 0.314 oz/ton Au and 9.3 oz/ton Ag. The Corona cutoff grade was 0.30 oz/ton Au equivalent at a Au : Ag price ratio of 80:1.

In summary, the current diluted proven and probable mineable ore reserves in the West Zone deposit are:

	550,900 tons of 0.418 oz/ton Au and 18.00 oz/ton Ag
plus	<u>47,000</u> tons of <u>0.314</u> oz/ton Au and <u>9.30</u> oz/ton Ag
Total =	597,900 tons 0.410 oz/ton Au and 17.30 oz/ton Ag

3.1.4 Mining

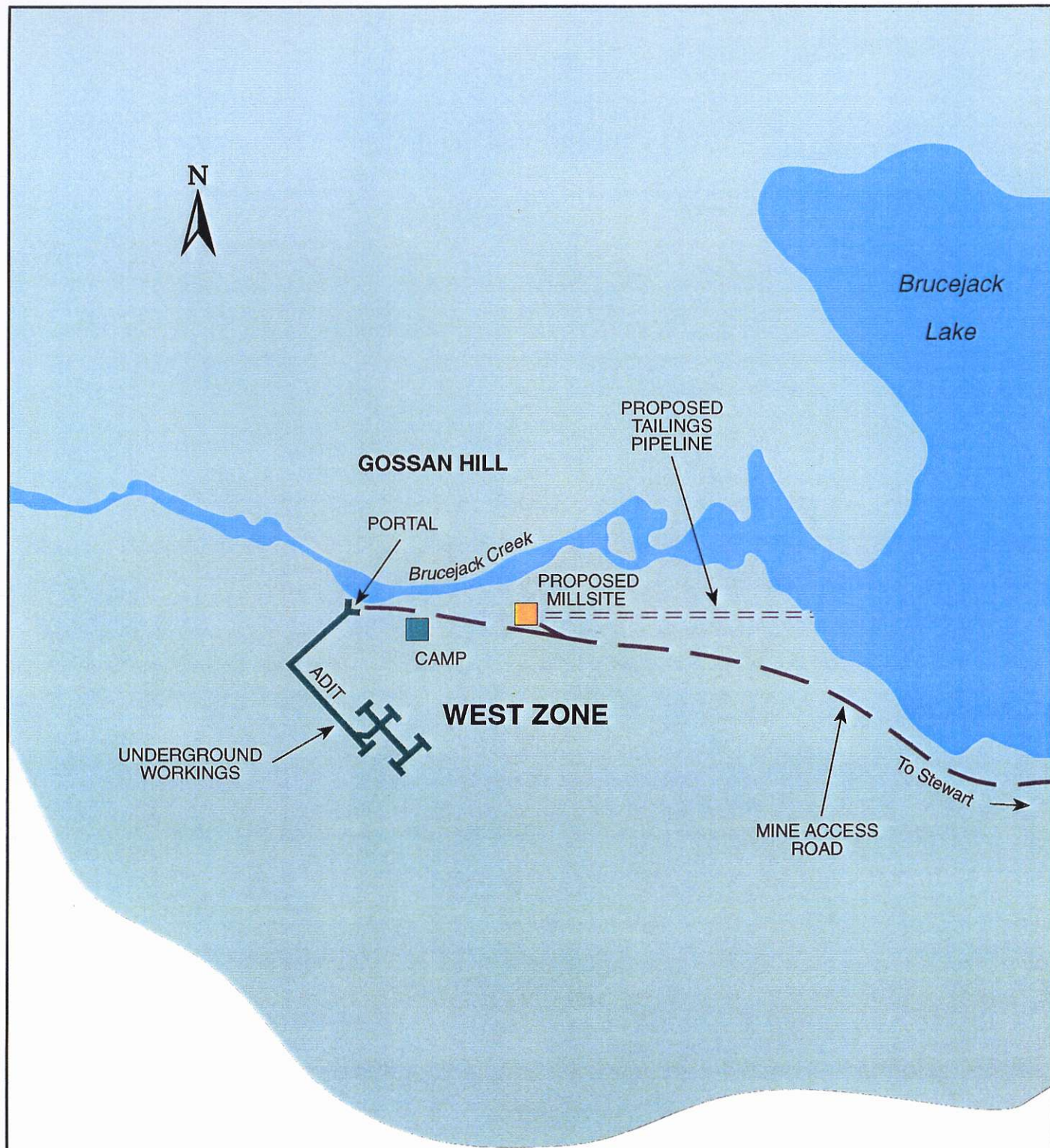
The decline that has been driven from surface down to the 1150 level provides good access to the ore zones. The ore will be accessed every 50 metres vertically from the ramp and extraction will be by cut and fill, shrinkage and blasthole stoping. Production rate will be 127,000 tons ore and 36,000 tons waste per year. Estimated manpower requirements for mining are 54 and direct mining costs are estimated to be \$57 per ton (1990).

3.1.5 Milling

The jaw and cone crushers will be located underground and fine ore will be conveyed to a 350-ton bin located adjacent to the mill on surface. Milling at 350 tpd will be by conventional ball, gravity and flotation circuits to produce about 18 tons of concentrate per day. Manpower requirements in the mill are 30 and estimated costs are \$19.85 per ton milled.

3.1.6 Tailings System

Mill tailings will be classified to produce mine backfill and the balance will be pumped from the mill approximately 2.2 kilometres and discharged into Brucejack Lake. The concept of underwater tailings disposal into the lake is an integral part of the Mine Development Certificate.



0 200 Metres

ORCAN CONSULTANTS Vancouver, Canada		
NEWHAWK GOLD MINES LTD.		
SULPHURETS PROPERTY BRUCESIDE PROJECT WEST ZONE - SITE PLAN		
NTS: 104B/8&9 Skeena M.D. British Columbia		
SCALE AS SHOWN	OCT. 95	FIG. 9

3.1.7 Site Service and Facilities

Process water will be obtained from Brucejack Lake and from mine de-watering while potable water will be pumped to the campsite from a small lake approximately 1.5 kilometres north of the site. A large shop will house maintenance and warehouse facilities and an adjacent building will house a standby generator and mine air compressors. Fuel will be stored in tanks in a bermed storage area.

A mine dry-office complex and an 80-bed sleeping-kitchen complex will be erected at the present campsite.

3.1.8 Power

A small hydroelectric plant is planned on Brucejack Creek to provide two megawatts. The powerhouse will house a single pelton wheel and power will be distributed by about 2 kilometres of overhead transmission lines. Estimated operating cost is about 0.5 cents per kwh.

3.1.9 Access and Transportation

Land access to the Sulphurets property is fairly difficult. The present and several alternate routes are shown on Figure 10. Since the 1990 feasibility study was completed, a logging company has extended the access road from Highway 37 about 10.5 kilometres west to Graveyard Point on Bowser Lake. This reduces the barging distance by about nine kilometres and capital cost of road construction by about \$340,000. At the present time, freight, fuel and personnel can be taken in via 17 kilometres of gravel road from Highway 37 to Graveyard Point on Bowser Lake, 16 kilometres by ferry or barge along

the lake, 24 kilometres of gravel road to Knipple Camp, 14 kilometres of ice road over the Knipple Glacier and finally six kilometres of gravel road to Brucejack Camp. Alternatively, personnel and light freight can be flown from Terrace or Smithers to the Knipple airstrip and then transported by tracked vehicle to the minesite. A 20-man camp and road maintenance facilities will be established at Knipple Camp to upgrade the existing camp.

It is estimated that about 4,000 tons of material and supplies will be transported over this route during the construction period and 12 tons of freight and 18 tons of concentrate will be moved daily during the operating period. Estimated operating cost is about \$19 / ton milled and manpower requirements are 13.

3.1.10 Concentrate Handling

It is estimated that about 8,000 ounces of gold will be recovered annually from the gravity circuit which will be shipped directly to a refinery. Flotation concentrate containing about 5 ounces gold and 300 ounces silver per ton will be shipped to a smelter in two-ton nylon bags. Freight plus treatment and penalty costs are estimated at \$22/ton milled.

3.1.11 Work Force and Administration

The total on-site work force will be 85 and employees will work on a rotating work schedule. The schedule will probably be four weeks in and two weeks out which will require a total work force of 128. Total labour costs are estimated at \$75/ton milled which is about half of the total operating cost.

3.1.12 Environmental Considerations

The project received Stage 1 approval under the old Mine Development Review Process in September, 1989 and a Mine Development Certificate was issued in April 1993. The certificate was scheduled to expire on September 20, 1994 but a three-year extension was granted by the Ministry of Energy Mines and Petroleum Resources until September 1997. A Mine Development Certificate gives the joint venture the right to negotiate permit conditions, however, no production permits have been applied for to date.

The Stage 1 review process involved a thorough assessment of all environmental aspects of the proposed development. Approval is granted when all federal and provincial agencies involved in the process are satisfied that all significant environmental issues have been successfully addressed. There are no known environmental issues outstanding at the present time and the project is ready for permitting.

The Joint Venture has posted bonding of \$247,500 which is believed to be more than sufficient to cover any potential environmental liabilities.

3.1.13 Construction / Development Schedule

It is estimated that mine construction and mine development can be completed in 18 months, but detailed planning is crucial because of a very short construction season (June to October).

3.1.14 Capital Costs

It was estimated in late 1990 that total capital costs including working capital and a 15 per cent contingency would be about \$43-million.

3.1.15 Operating Costs

Operating costs per ton milled were determined by Corona and Newhawk staff to be :

Mining	\$56.72
Milling	19.85
Maintenance	6.39
Administration	41.93
Transportation	18.71
Vancouver Office	4.70
Freight & Treatment Charges	<u>22.33</u>
Total	\$170.63

3.1.16 Economic Analysis

At US \$400 per ounce gold and US \$5 per ounce silver and an 85 cent dollar, the pre-tax Discounted Cash Flow Rate of Return (DCFROR) was determined to be 6.7 per cent. Sensitivity analyses were also run and indicated that the ROR is most sensitive to metal prices, ore grade and the foreign exchange rate.

3.2 SATELLITE DEPOSITS

In addition to the West Zone, there are five other mineral deposits in the Bruceside Project area that have been explored in sufficient detail to permit estimation of a geological resource for each. These deposits are shown on Figure 5 and the following is a brief description of each deposit.

3.2.1 Shore Zone

The Shore zone lies along the western shore of Brucejack Lake about 500 metres east of the West Zone. The zone was discovered in 1981 by Esso Minerals who tested the zone with 4,125 metres of drilling in 29 holes by the end of 1983. Since then, the Newhawk - Granduc joint venture has completed another 6,820 metres of drilling in 34 holes along with detailed mapping and trenching.

The zone strikes 295 degrees, is 500 metres long by 50 metres wide and consists of mineralized stockworks, breccia and veins enclosed within a 150 metre wide zone of phyllic, sericitic alteration. Mineralization occurs in quartz-carbonate and barite veins which host variable amounts of pyrite, tetrahedrite, sphalerite, chalcopyrite, galena, arsenopyrite and electrum. The individual veins form stacked en echelon lenses up to 100 metres long and up to 1.5 metres wide but average 20-30 metres in length. Grades are variable with the best drill intersection averaging 2.24 oz/ton Au and 4.3 oz/ton Ag over a true width of 10 metres.

A geological resource of 92,276 tons grading 0.371 oz/ton Au and 4.63 oz/ton Ag was calculated by Vulumiri in 1989 but, because the zone dips beneath the lake, leaving a 30-metre crown pillar would reduce the extractable reserves by about 40% which would leave about 54,000 tons of mineable ore. There have been at least eight holes drilled in the Shore Zone since the Vulumiri reserve calculation, indicating that the zone is still completely open.

3.2.2 Gossan Hill Zone

Gossan Hill refers to the prominent hill located on the north side of Brucejack Creek immediately north of the camp. It is underlain by quartz-sericite-pyrite-carbonate altered volcanics, argillite and diorite/granodiorite intrusives.

Exploration to date has resulted in defining 12 zones of mineralized quartz veins and stockworks. From north to south they have been named: Marie Gold, PM-1, PM-3, U-Vein, PM-2, Silver Streak, PM-3, PM-4, PM-4A, PM-5, PM-6 and Tommyknocker. In general, the veins strike east-west, dip steeply north and are cut and offset by faults. Individual veins can be up to 240 metres long with variable widths of up to 20 metres. Vein mineralogy consists of quartz-carbonate-sericite with up to 10% combined disseminated pyrite, sphalerite, galena, arsenopyrite and chalcopyrite. Visible gold has also been found on surface and in drill core.

The deposit has been tested by 7,380 metres of surface diamond drilling in 40 holes. A geological resource of 20,102 tons grading 1.522 oz/ton Au and 2.17 oz/ton Ag has been estimated for the Tommyknocker and PM-4A structures with over 14,000 tons of this in the Tommyknocker zone.

Drilling beneath Gossan Hill in 1994 indicated that PM structures persist to a depth of at least 200 metres with no appreciable increase in grade. Regarding the Tommyknocker zone, several spectacular drill core assays were intersected at depth but mineralization is erratic and vein geometry is difficult to interpret. Further work is warranted on the Tommyknocker zone but all previous work should first be compiled to determine if there is a relationship with West Zone R8 mineralization.

3.2.3 Galena Hill Zone

Galena Hill is located about 800 metres south of the Brucejack camp. It is underlain by variable altered andesitic flows, tuffs and breccias. Alteration is predominantly quartz-sericite-pyrite and a 200 x 400 metre area of alteration has been mapped that hosts at least eight parallel NE - SW trending steeply dipping zones of quartz veining and stockwork (G1 to G-8). Individual structures can be nearly 300 metres long and up to 8 metres wide. Quartz veins, which can be up to one metre wide and 50 metres long, contain up to 10% pyrite, massive galena and sphalerite and minor tetrahedrite and chalcopyrite in carbonate gangue.

The Galena Hill Zone has been extensively explored by trenching and drilling. Since 1981, the various G structures have been tested by approximately 3,000 metres of drilling in 28 holes. The best intersection was 1.565 oz/ton Au over 3.0 metres in hole 93-412.

A geological resource of 30,852 tons grading 0.784 oz/ton Au and 8.66 oz/ton Ag was calculated after the most recent (1993) drilling program.

In general, past exploration results indicate that although the majority of the G structures are continuous, they are too narrow and too low-grade to yield significant mineable reserves. An exception is the G-8 vein which is a quartz stockwork up to 3 metres wide x 270 metres long. Although a 250 metre long section of the vein has been tested by drilling, the zone remains open along strike and dip due to splaying and faulting. Further exploration is warranted.

3.2.4 SG Zone

This zone, which was discovered in 1992, is located about one kilometre northwest of the Brucejack camp. The area is underlain by quartz-sericite-pyrite altered metavolcanics with local tuffs, breccias and metasediments. The pervasive hydrothermal alteration envelop consists primarily of calcite, barite and anhydrite. Mapping and sampling in 1992 and 1993 identified six zones of gold-silver mineralization. Individual veins are up to 280 metres long and 13 metres wide. Vein minerals include quartz-barite-sericite-calcite gangue with up to 5% disseminated pyrite and up to 2% combined arsenopyrite, galena, chalcopyrite, tetrahedrite, tennantite, sphalerite and rarely visible gold.

Of the six mineralized veins in the zone, the most significant is the SG which is an east-west zone of quartz veining, stockwork and breccia. It has been traced on surface for 280 metres with widths of over 12 metres. It is open along strike to the west and is cut off by the Brucejack Fault to the east. The 1993 exploration program on the SG zone included 874 metres of diamond drilling in seven holes and 123 metres of surface trenching in 27 trenches. The best drill intersection was 0.374 oz/ton Au and 1.32 oz/ton Ag over 3.00 metres and the best trench value was 2.202 oz/ton Au and 0.15 oz/ton Ag over 1.10 metres. The results of this work were compiled on plans and sections and a geological resource of 46,200 tons grading 0.296 oz/ton Au and 0.82 oz/ton Ag was estimated. The SG veins remain open at depth and along strike and are considered to have reasonably good exploration potential.

3.2.5 Maddux Zone

The Maddux Zone is located about 1,100 metres northwest of Brucejack camp not far from the SG Zone but on the east side of the Brucejack Fault. It is a 200 metre long, 3-7 metre wide zone of quartz stockwork enclosed within a 300 metre long, 20-50 metre wide zone of intensely altered andesitic tuffs and breccias. Alteration is quartz-sericite-pyrite with minor chlorite-sericite-pyrite. The main zone strikes east-northeast dipping northwest. Mineralization consists of 1-10% disseminated pyrite, rare arsenopyrite and traces of tetrahedrite in quartz veins. Visible gold has been found in the quartz veins in two places. In 1993, the Maddux zone was tested by 151 metres of diamond drilling in two holes and 131 metres of trenching in 26 trenches. The best drill intersection was 0.690 oz/ton Au and 1.02 oz/ton Ag over 1.15 metres and the best trench assay was 1.239 oz/ton Au and 8.60 oz/ton Ag over 0.65 metres. Based on the results of the 1993 program a geological resource of 9,000 tons grading 0.324 oz/ton Au and 0.82 oz/ton Ag was calculated. The exploration potential of this deposit is considered good.

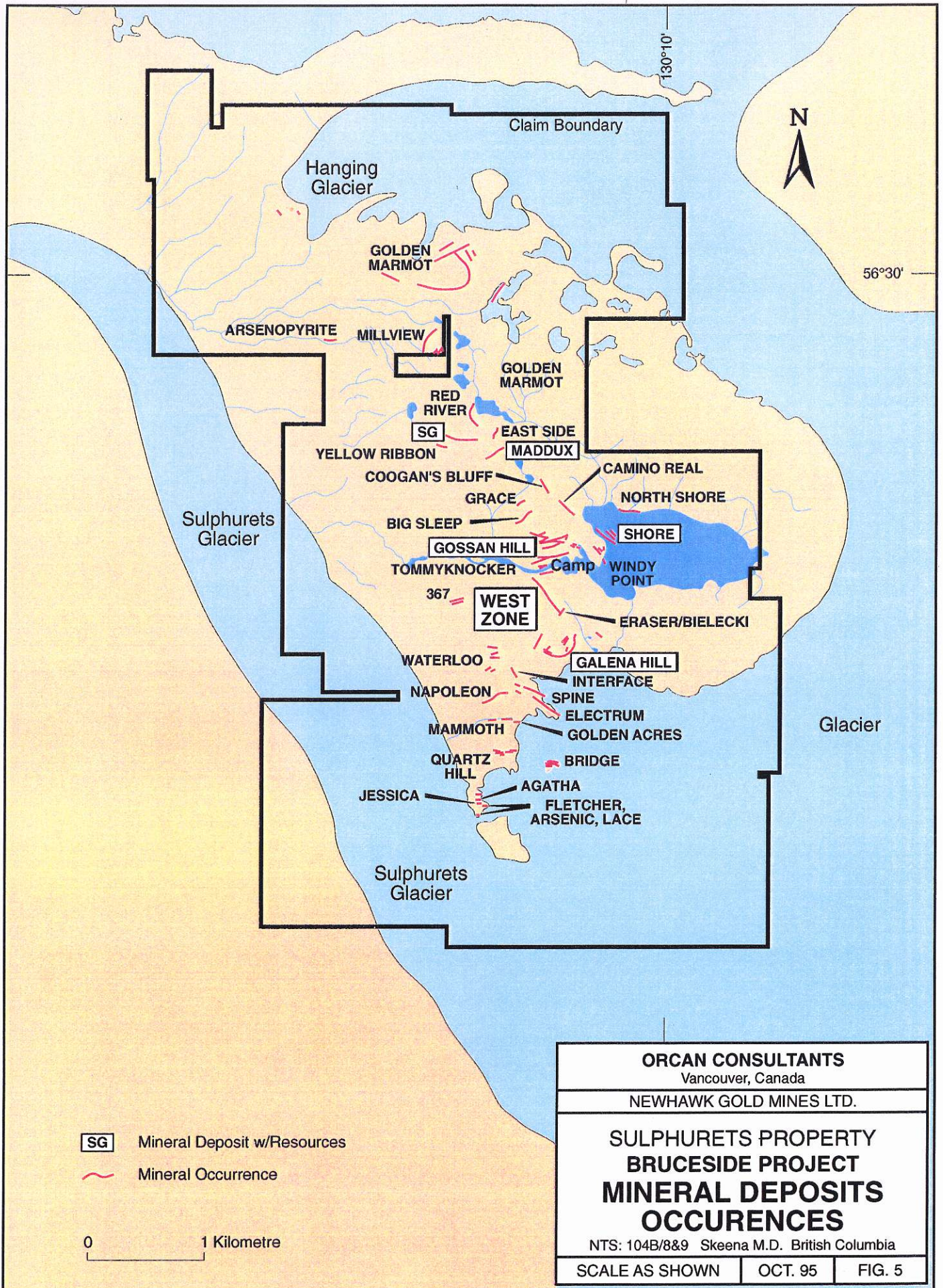
3.3 OTHER MINERALIZED ZONES

Most of the known mineral occurrences on the Bruceside property are shown on Figure 5. A new zone the Maggie, which does not come to surface, was found in 1994 by drilling and is believed to be genetically related to the R8 structure.

Up until the end of 1992, over 40 mineralized zones had been found on the Bruceside Claim group. Most of them have been explored to various degrees and some have been eliminated as potentially economic while others have hardly been explored at all. Six have been extensively explored and geological reserves or resources have been calculated for them as discussed in previous sections of this report. The following is a summary of the status and exploration potential of the mineralized zones on the Bruceside property.

3.3.1 Zones With Reserves/Resources (@ 0.200 opt Au_e cutoff, uncut, undiluted)

<u>Reserves</u>	<u>Tons</u>	<u>oz/t.Au</u>	<u>oz/t.Ag</u>
West Zone	<u>826,400</u>	<u>0.450</u>	<u>18.90</u>
Total Reserves	826,400	0.450	18.90
<u>Resources</u>			
Shore Zone	92,300	0.371	4.63
Gossan Hill	20,100	1.522	2.17
Galena Hill	30,900	0.784	8.66
S G	46,200	0.296	0.82
Maddux	<u>9,100</u>	<u>0.324</u>	<u>0.82</u>
Total Resources	198,500	0.570	3.95



SG Mineral Deposit w/Resources
 ~ Mineral Occurrence

0 1 Kilometre

ORCAN CONSULTANTS Vancouver, Canada		
NEWHAWK GOLD MINES LTD.		
SULPHURETS PROPERTY BRUCSIDE PROJECT MINERAL DEPOSITS OCCURENCES		
NTS: 104B/8&9 Skeena M.D. British Columbia		
SCALE AS SHOWN	OCT. 95	FIG. 5

3.3.2 Zones Considered Good Targets

In addition to the six zones with reserves and resources listed above, further exploration is warranted on some of the other mineralized areas. The highest priority targets are:

- (a) Hanging Glacier - four styles of mineralization - needs drilling.
- (b) Maggie - new zone - probable extension of R8 - needs more drilling.
- (c) Trachel - new discovery-exposed for 280 metres and up to 12 metres wide.
- (d) Old Yeller - on strike extension of Galena Hill zone.
- (e) Quartz Hill - four separate veins - medium priority target.
- (f) 367 - large zone of disseminated mineralization with sporadic highs.
- (g) Silver Streak - may be extension of PM veins on Gossan Hill Zone.
- (h) Yellow Ribbon - veins and stockworks - disappear beneath talus cover.

3.3.3 Zones with Low Exploration Potential

Several of the known mineral occurrences that have been evaluated by mapping, trenching and in some cases drilling do not appear to have much economic potential and are therefore considered to be low priority targets. Some of these are:

- (a) Windy Point - drilled-poor gold-silver values below surface.
- (b) Big Sleep - drilled - weak mineralization at depth.
- (c) Coogan's Bluff - drilled - limited size and grade potential.
- (d) Grace - drilled - mineralization weakens at depth.
- (e) Camino Real - trenching indicates zone is very narrow and erratic.
- (f) Bielecki - 1994 drill hole indicates zone is cut off by fault and narrows.
- (g) Millview - trenched - limited strike length and width.
- (h) Red River - narrow and discontinuous - pinches out, erratic grades.

- (I) East Side - near Maddux zone - discontinuous stockwork, limited size.
- (j) Spine - low grade - best surface channel sample - 0.057 Au, 11.6 Ag/0.9m.
- (k) Electrum - narrow, short discontinuous veins - limited size and low grade.
- (l) Bonanza/Lakeview - extreme east end of SG zone - low grade, narrow.
- (m) Golden Marmot - sampled and drilled - no significant mineralization.
- (n) Waterloo - scattered erratic values, poor continuity.
- (o) Lakeview - very low grade and erratic values on surface.
- (p) Splay - narrow quartz veins near Electrum zone - talus covered area.
- (q) Bridge - chip samples on nunatuk weakly anomalous.
- (r) Napoleon - channel sampling returned negative results.
- (s) Rainman - low grade and limited size potential.
- (t) Spinerama - very narrow and low grade veins.
- (u) Offside - possible extension of Spinerama.
- (v) Golden Acres / Mammoth - limited exposure- ice covered and low grades.
- (w) Arsenopyrite - narrow (25-20cm) shear hosted arsenopyrite-bearing vein.
- (x) North Shore - cut off by faulting and feathers out - limited size potential.
- (y) OYP - very narrow - cut off by faulting at both ends.
- (z) Interface - low-grade values in channel samples - narrow.

There are a few other zones at the extreme south end of the Bruceside property about which little is known. They are Jessica, Fletcher, Arsenic, Lace and Agatha zones but, because of glacial cover, they are difficult to explore.

4.0 EXPLORATION POTENTIAL

4.1 WEST ZONE

The most recent exploration program on the West Zone vein system was carried out in 1994. Detailed surface mapping at 1:500 scale, 26.2 metres of trenching and 1,127 metres of surface diamond drilling in three holes was completed on the westerly strike extension of the West Zone. The down-dip extension of the R8 structure was also tested by 1,663 metres of drilling in five holes. One 67-metre hole was also drilled to test the Bielecki Zone.

Based on the results of the 1994 and earlier West Zone exploration programs, the following conclusions can be drawn:

1. The important R8 vein is still open along strike to the west and down-dip.
2. Drilling to test the western extension of the R8 structure resulted in the discovery of a new zone; the Maggie zone. This zone, which is a quartz-stockwork-breccia lying approximately 50 metres up-dip of the R8 zone, is probably genetically related to R8. Further drilling is warranted
3. The drilling to test the northeast extension of the Bielecki zone showed that the zone is displaced by a fault and the zone pinches down from a six-metre wide vein zone to a 1.2 metre wide stockwork. The exploration potential on the Bielecki zone is probably limited.

4.2 OTHER ZONES

In addition to the West Zone, the five satellite deposits for which geological resources have been estimated all have good exploration potential, especially the Tommyknocker vein in Gossan Hill Zone.

Other zones with reasonably good exploration potential are listed in section 3.3.2 of this report.

5.0 DISCUSSION

Drilling on the West Zone in late 1990 resulted in increasing the diluted mineable reserves by 47,000 tons grading 0.314 oz/ton Au and 9.3 oz/ton Ag. This was not included in the Corona October, 1990 feasibility study.

Changing economic conditions during the past five years or so have a significant impact on the ROR, so an updated review of all the 1990 calculation parameters is warranted. For example, the silver price used in the 1990 study was US \$5.00 /oz as compared to the current price of about US \$5.50, a 10% increase. Also, the value of the Canadian dollar has declined to about US \$0.73 as compared to US \$0.85 in 1990, a decrease of about 14%. The gold price used in the 1990 study was US \$ 400 / oz as compared to the current price of about US \$385/oz, a decrease of about 4%, however, this is more than offset by the change in the foreign exchange rate. Based on the above, the net increase in the metal prices between 1990 and the present time is about 12.3% and according to sensitivity analyses in the 1990 study, this increase in metal prices would increase the DCFROR to about 19.5%. Also, increasing the ore reserves by 47,000 tons would further increase the DCFROR to around 21%.

There are several other factors that should be reviewed which could have a positive impact on the ROR. Some of these are: capital costs of hydro versus diesel power generation, buying used equipment instead of new, mining methods, increase in mineable ore reserves and grade along strike and at depth in R8 zone which remains open, reduction of operating costs, especially administration which appears to be abnormally high, etc.

The main access road from Highway 37 has been extended about 10.5 kilometres by a logging Company to Graveyard Point. This reduces the barge travel distance by about 9 kilometres and capital costs for road construction by \$340,000.

Since 1985, the Newhawk- Granduc joint venture has expended \$37.3-million on exploring the Sulphurets property. Although some of these funds were spent on the Snowfield and Sulphside Project areas, the bulk of the expenditures were allocated to exploration on the Bruceside claims. It is estimated that Newhawk's share of Bruceside Project expenditures is more than \$20-million.

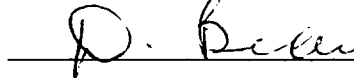
In addition to the mineral assets, the joint venture also owns a considerable inventory of mining and transportation equipment on-site.

6.0 CONCLUSIONS

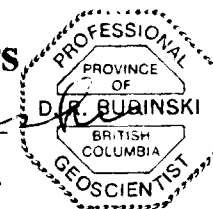
- Of the more than 40 mineral occurrences discovered to date on the Bruceside Project claim group, six have been sufficiently explored to call them "*deposits*".
- The West Zone is by far the most important where extensive exploration since 1985 has outlined mineable reserves of nearly 600,000 tons grading 0.418 oz/ton gold and 17.3 oz/ton Ag.
- A 1990 feasibility study by Corona Corporation yielded a discounted cash flow rate of return (DCFROR0) of 6.7%.
- The five satellite deposits (Shore, Gossan Hill, Galena Hill, SG and Maddux) contain nearly 200,000 tons with an average grade of 0.570 oz/ton gold and 3.95 oz/ton silver. This is an important resource because of the high gold values and all five zones are reasonably close to the West Zone. Also, all are considered to have favourable exploration potential.
- Some of the other known mineral occurrences on the Bruceside property warrant further exploration to determine their economic potential. Other blind deposits, such as the R8 zone, may be discovered by reconnaissance drilling.
- It is the authors opinion that the Bruceside Project is an attractive precious metals project with considerable upside exploration and development potential. It clearly warrants further work and a detailed review of all capital and operating cost data used in the feasibility study should be undertaken.

Respectfully submitted by

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