

LOG NO:	DEC 23 1993 RD.
ACTION:	
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1993 ASSESSMENT REPORT
ON THE
SNOWFIELD PROPERTY

Latitude: 56°29'N
Longitude: 130°13'W
NTS: 104B/9 SE

Skeena Mining Division

OWNER/OPERATOR:

Newhawk Gold Mines Ltd.
860 - 625 Howe St.
Vancouver, B.C. V6C 2T6

BY: M.D. McPherson, P.Geo

November 30, 1993

GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,172

Distribution:
2 - BC MEMPR
2 - Newhawk

SUMMARY

The Snowfield property is situated within the "Golden Triangle" of north-western British Columbia, approximately 65km northwest of Stewart, BC. It lies immediately east of Placer Dome's Kerr/Sulphside property and north of Newhawk Gold Mine's Sulphurets/Bruceside property. The property consists of 10 claims and one fraction totalling 54 units. Two of the claims are under option to Newhawk, and the remainder are owned 100% by Newhawk.

The Snowfield property was initially staked in 1959 by Granduc Mines Ltd. to cover various porphyry copper and precious metal vein showings between Mitchell Glacier and Brucejack Lake. Between 1960 and 1975 the property was intermittently explored by Granduc, who completed geologic mapping, geochemical sampling, geophysical surveying and limited drilling primarily over known porphyry showings. Granduc optioned the property to Esso Minerals in 1980, who completed extensive exploration between 1980 and 1983 that led to the discovery of several mineralized zones; the Snowfield Gold Zone, Josephine, Quartz Stockwork and Moly. Esso returned the property to Granduc in 1985, and it was subsequently optioned by Newhawk Gold Mines Ltd. Additional mapping, sampling and diamond drilling was completed by Newhawk in 1985, 1989, 1991, and 1992 when Newhawk purchased Granduc's share in the property. To 1992, a total of 1801.1m in nine holes had been drilled on the property; targeted on the Quartz Stockwork and Snowfield Gold Zones.

The property is underlain by Lower Jurassic Hazelton Group andesitic tuffs, flows and minor sediments that have been extensively and pervasively quartz-sericite-pyrite altered. Mineralization consists of up to 15% disseminated pyrite occurring within both altered volcanics and local quartz vein stockwork. Minor, less than 1% combined, chalcopyrite, sphalerite, molybdenite and arsenopyrite are occasionally found associated with pyrite in quartz veins.

To date five zones of mineralization have been located on the property: Snowfield Gold Zone, Quartz Stockwork, Coffee Pot, Josephine and Moly. The majority of work has been completed on the Snowfield Gold Zone, a low grade disseminated gold deposit, where geologic reserves based on limited drilling and surface sampling are calculated at 7.04 million tonnes grading 0.083 opt Au. The Josephine Zone is a quartz vein system located on Mitchell-Sulphurets Ridge that carries up to 5.666 opt Au, 138.82 opt Ag in tetrahedrite and pyrargyrite bearing quartz veins. The other three zones are of limited size and do not carry significant precious metal values.

Work in 1993 consisted of detailed mapping and sampling west of the Snowfield Gold Zone and on the Josephine Zone, three drill holes on the Snowfield Gold Zone, and three drill holes on the Josephine Zone. Only one of the Josephine drill holes, 93-425, is being filed for assessment.

Results from DDH 93-425 indicate that the quartz vein system is open along strike to the northeast and down dip. The hole intersected extensive quartz veining, with veins carrying up to several percent combined tetrahedrite and pyrargyrite. These veins correlate with quartz veins at surface and also represent stacked vein structures that are not exposed at surface. The best intersection was 0.279 opt Au, 22.8 opt Ag over 6.1m. Further drilling is recommended to test the zone at depth and along strike to the northeast.

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1.0 INTRODUCTION

1.1 Location and Access:

The property is located within the Coast Range Mountains of northwestern B.C., approximately 65 kilometres northwest of the village of Stewart and is centred at 130° 13'W, 56° 29'N on NTS sheet 104B/9 (Fig. 1.1).

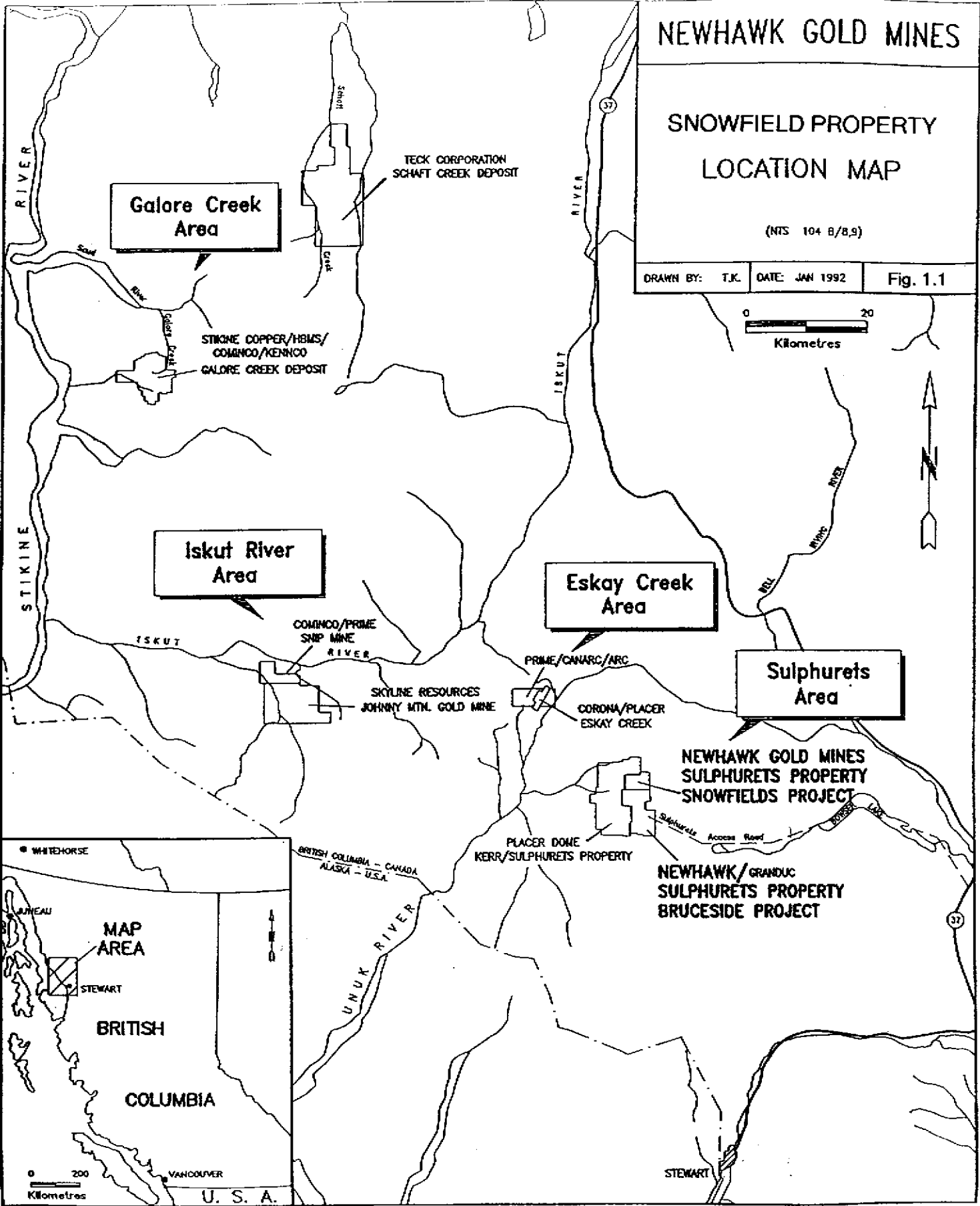
Access during the early summer is limited to helicopter from Stewart, BC. Later in the season, supplies can be mobilized via the Granduc road to the Tide Lake airstrip, 35 kilometres south of the property or by plane to the Knipple airstrip 15 kilometres southwest of the property. Access from these points is then by helicopter. A permanent camp is located at the west end of Brucejack Lake, seven kilometres south of the Snowfield property. A Hughes 500D helicopter was based in camp for crew set-outs and drill moves.

NEWHAWK GOLD MINES

SNOWFIELD PROPERTY LOCATION MAP

(NTS 104 8/8,9)

DRAWN BY: T.K. DATE: JAN 1992 Fig. 1.1



1.2 Claim Information

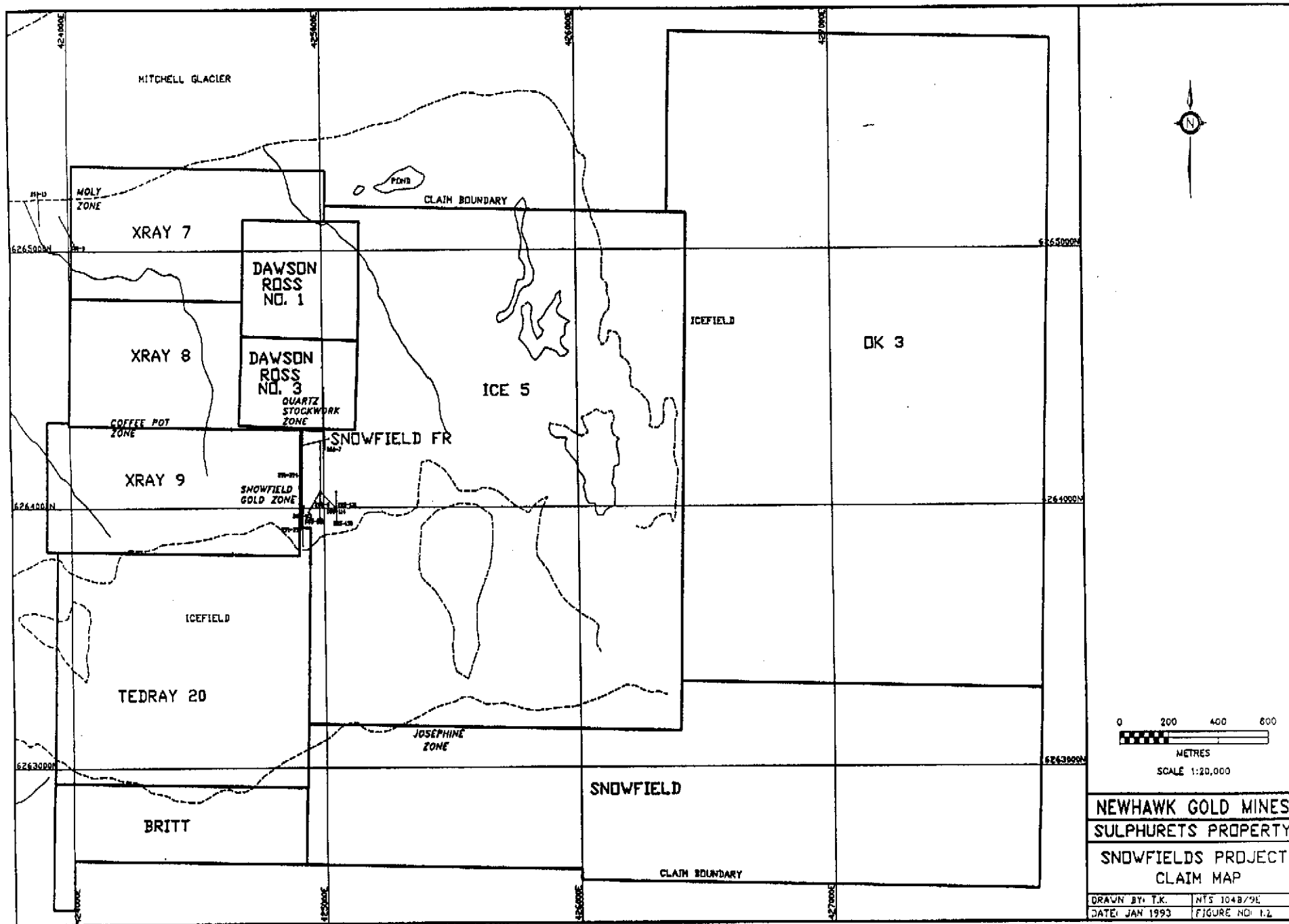
The Snowfield property consists of 10 claims and one fraction totalling 54 units (Fig. 1.2). All claims lie within the Skeena Mining Division. Newhawk Gold Mines Ltd. owns a 100% interest in all the claims, with the exception of Dawson-Ross 1 and 3 which are owned by Mr. Don Ross of Ketchikan, Alaska. Newhawk can earn a 100% interest in these two claims by completing a series of option payments.

<u>Claim</u>	<u>Record #</u>	<u>Units</u>	<u>Expiry Date*</u>
Ice 5	250988	12	June 30, 2003
Tedray 20	250989	4	June 30, 2003
Dawson-Ross 1	254796	1	July 24, 2003
Dawson-Ross 3	254797	1	July 24, 2003
Snowfield Fr.	313083	1	Sept 3, 2003
Britt	313079	2	Sept 5, 2003
Snowfield	313088	12	Sept 9, 2003
XRay 7	250823	2	Oct. 12, 2003
XRay 8	250824	2	Oct. 12, 2003
XRay 9	250825	2	Oct. 12, 2003
OK 3	251282	15	Dec. 10, 2003

* With the acceptance of this assessment work

1.3 Physiography and Vegetation:

Project topography is typical of the Coast Range Mountains with steep glaciated U-shaped valleys, and several permanent snowfields. The property is bounded to the north and east by Mitchell Glacier, and to the south by Hanging Glacier. A large permanent snowfield occupies the central part of the property immediately south of the Snowfield Gold Zone. Elevations range from 1000 metres along Mitchell Glacier in the northwest to 1960m along the east-west trending Mitchell-Sulphurets Ridge in the southern part of the property.



Winters tend to be severe with extensive snowfall and high winds, and summers are cool and wet. Vegetation consists of sparse spruce and fir at lower elevations along Mitchell Creek, with scrub alpine spruce and juniper higher up. The northern part of the property, between the snowfield and Mitchell Glacier, is covered by moderate to thick accumulations of glacial till and gravel, which show signs of severe slumping at lower elevations.

1.4 Property History:

Exploration in the area dates back to the 1880's when placer gold was located on Sulphurets and Mitchell Creeks. In 1935, copper-molybdenum mineralization was located in the vicinity of the 'Main Copper' showing 3 kilometres southwest of the Snowfield property. The area was intermittently explored until 1959, when gold and silver bearing veins were found in the Brucejack Lake area, 7 kilometres to the south. As a result of this discovery, Granduc Mines Ltd. staked a total of 246 units, known as the Sulphurets property. These claims covered the gold-silver vein occurrences on the Bruceside project, the porphyry copper \pm gold showings located on the Sulphside project, and the ground now referred to as the Snowfield property.

Between 1960 and 1975 Granduc completed several exploration programs consisting of geologic mapping, bedrock sampling, geophysical surveying, prospecting and limited drilling, primarily in the vicinity of the known porphyry showings. In 1968, two drill holes totalling 711.12 metres were drilled on the Quartz Stockwork Zone, a low-grade porphyry type molybdenum showing located in the centre of the Snowfield Property. Results showed the zone to contain extensive anomalous, but low grade gold values with no significant base metal values.

In 1980, Esso Minerals optioned the entire Sulphurets property from Granduc and completed extensive exploration on the Snowfield property between 1980 and 1983. Work consisted of geologic mapping, trenching and geochemical sampling and led to the discovery and definition of several mineralized zones: the Snowfield Gold

Zone, Moly and Josephine. Limited work on Mitchell-Sulphurets Ridge in 1983 outlined the Josephine Zone, a 340m by 50m area of northeast trending steeply northwest dipping en echelon quartz veins carrying up to several percent combined pyrite, tetrahedrite and pyrargyrite, and rare electrum. Rock sampling returned values up to 8.044 opt Au, 480.0 opt Ag, but follow up work was never completed. For various reasons, Esso dropped the option on the Sulphurets property in 1985.

In 1985, Newhawk Gold Mines Ltd. optioned the property from Granduc and completed five diamond drill holes totalling 740.0 metres on the Snowfield Gold Zone. This work outlined a tabular, shallow south dipping zone, approximately 70 metres thick, of low grade disseminated gold mineralization. A preliminary geologic inventory based on surface trenching and five diamond drill holes was calculated at 7.04 million tonnes at 0.083 opt Au (Tribe, 1985). In 1989, Newhawk and Corona Corporation completed a program consisting of grid emplacement and rock sampling over the Snowfield Gold Zone to further define the zone. This led to the discovery of the Coffee Pot Zone; a gold - silver bearing quartz vein system of limited size located 800m northwest of the Gold Zone.

In 1991, Newhawk, in conjunction with Granduc, completed additional mapping and sampling on the Snowfield Gold Zone, and drilled two holes totalling 350m. The results of this program further defined the zone, but did not change its basic configuration. In early 1992, Newhawk purchased Granduc's interest in the Snowfield property. A small mapping and sampling program was completed later that year over the Dawson-Ross 1 and 3 claims which cover the Quartz Stockwork Zone.

1.5 1993 WORK PROGRAM:

Exploration in 1993 consisted of detailed mapping west of the Snowfield Gold Zone, detailed mapping and trenching of the Josephine Zone to follow up 1983 Esso results, and six diamond drill holes totalling 1458.2 meters. Three holes tested the Snowfield Gold Zone and three holes tested the Josephine quartz vein system. The

program was completed in conjunction with ongoing exploration at the Bruceside property to the south, and all camp costs were shared between the two projects. Only one of the Josephine holes is being filed for assessment work; DDH 93-425.

2.0 GEOLOGY

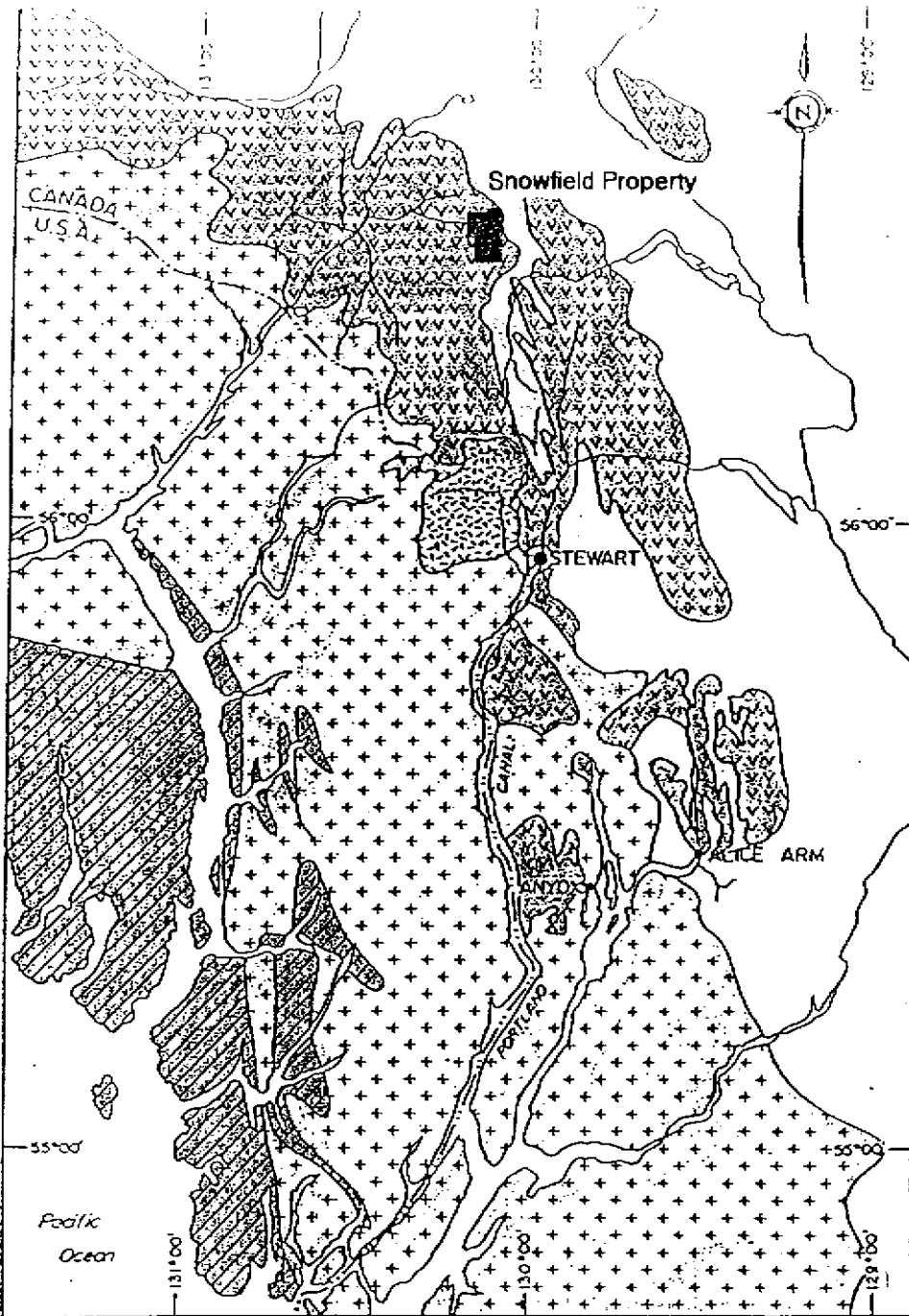
2.1 Regional Setting

The Snowfield property lies within the Stikine Terrane, along the western margin of the Intermontane belt (Fig. 2.1). The area is underlain by Upper Triassic and Lower to Middle Jurassic Hazelton Group volcanic, volcanoclastic and sedimentary rocks, intruded by Mesozoic intermediate to felsic plutons and minor Tertiary mafic dykes and sills. Regional geologic mapping has been completed by the Geological Survey of Canada, the BC Ministry of Energy, Mines and Petroleum Resources, and the Mineral Deposit Research Unit at UBC.






The lithostratigraphic assemblage as compiled by Kirkham (1963), Britton and Alldrick (1988), Alldrick and Britton (1991) and Kirkham et al (in preparation) consists, from oldest to youngest, of alternating siltstone and conglomerate of the Lower Unuk River Formation; intermediate volcanic rocks and siltstones of the Upper Unuk River Formation; interbedded conglomerate, sandstone and intermediate to mafic volcanic rocks of the Betty Creek Formation; felsic flows and pyroclastic rocks, including tuffaceous rocks ranging from dust tuff to tuff breccias and localized welded ash tuffs, of the Mount Dilworth Formation; and finally alternating siltstone and sandstone of the Salmon River Formation and Bowser Lake Group.

At least three intrusive events have occurred in the area: intermediate to felsic plutons that are probably coeval with volcanic and volcanoclastic supracrustal rocks; small stocks related to Cretaceous Coast Plutonic Complex rocks; and minor Tertiary dykes and sills.

Folding is common throughout the region, with Hazelton Group andesitic tuffs and flows southeast of Brucejack Lake being gently warped, while sediments of the Salmon River Fm. and Bowser Lake Group are more tightly folded. Faulting is common, with north striking steep normal faults (ie. the Brucejack Fault) and west dipping thrusts (eg. Sulphurets, Mitchell) being the most prevalent orientations.



LEGEND

- | | | | |
|---|--|---|--|
|  | LOWER - MIDDLE JURASSIC
BOWSER ASSEMBLAGE |  | UPPER TRIASSIC - LOWER JURASSIC
TEXAS CREEK INTRUSION |
|  | UPPER TRIASSIC - LOWER
JURASSIC
TAKLA & HAZELTON
ASSEMBLAGE |  | CRETACEOUS - TERTIARY
COAST RANGE INTRUSIONS |
|  | WRANGELL METAMORPHIC BELT
(UNDEFINED AGE) | | |

REGIONAL GEOLOGY OF THE STEWART - ANYOX AREA



Fig. 2.1 (after Dykes et al, 1988)

2.2 Property Geology:

2.2.1 Stratigraphy

The Snowfield property is underlain by Lower to Middle Jurassic Hazelton Group rocks consisting of andesitic tuffs and flows and minor sediments that have been locally intruded by felsic to intermediate intrusives and later mafic dykes (Fig. 2.2). Throughout much of the area a high degree of alteration exists that precludes the identification of the host rock.

East of the Brucejack Fault along Mitchell-Sulphurets Ridge, rocks are predominantly andesitic volcanics and weakly propylitized sediments consisting of black argillite, tuffaceous arenite, minor grey limestone and pyroxene bearing flows and flow breccias, thought to be part of the Betty Creek Formation.

To the north and west, between the Brucejack and Snowfield Faults, and along the crest of Mitchell-Sulphurets Ridge, are extensive quartz \pm sericite \pm pyrite \pm chlorite altered, strongly foliated andesitic tuffs and flows. Where less altered, rocks are medium to greyish green, fine grained pyroclastics with monolithic, weakly lenticular shaped fragments to 0.4 cm. In general, rocks are weakly foliated, with the intensity of foliation increasing with intensity of alteration. The quartz-sericite-pyrite alteration covers an area roughly 1100 x 1800 metres in size, extending from the Josephine Zone in the south to Mitchell Glacier in the north. Alteration varies from moderate to intense, pervasive quartz-sericite-pyrite to chlorite-sericite-pyrite to pyrophyllite, with local pervasive carbonate. It varies in colour from cream to yellow to pale green, and original textures are completely destroyed. The alteration carries from 5 to 10% disseminated and minor stringer pyrite, and rare disseminated and stringer molybdenite, and is cut by 1 to 5% quartz veinlets up to 2cm, that locally cross-cut, but typically parallel foliation. These veinlets carry up to 10% pyrite and 1% molybdenite.

Along the western margin of the property is a bedded sequence of weakly propylitic tuffaceous arenites and porphyritic and nonporphyritic flows, separated from the quartz-sericite-pyrite alteration by the Ortum Fault.

A monzonite stock cuts stratigraphy in the northern portion of the property, near the Mitchell Glacier, and mafic dykes and sills are common throughout the property. West of the Josephine Zone, rocks are cut by a clay altered feldspar megacrystic porphyritic intrusion.

2.2.2 Structure

Stratigraphy on the Snowfield property strikes northeast and dips moderately to the northwest (Fig. 2.2). Primary bedding is rarely preserved except on the southern slope of Mitchell-Sulphurets Ridge, due to intense alteration. Foliation typically strikes northeast to east and dips steeply northwest, and is most strongly developed within the quartz-sericite-pyrite altered rocks.

On the western part of Mitchell-Sulphurets ridge, foliation strikes east to east-northeast and dips steeply north, curving to strike northwest and dip moderately northeast adjacent the Brucejack Fault. In the vicinity of the Josephine Zone, foliation is not well preserved, probably due to an overprint of pervasive silicification \pm potassium feldspar alteration. The few locales of well developed foliation within the zone trend southeast and dip steeply northeast.

Structure on the property is dominated by north to northwest trending steep westerly dipping normal faults. As mentioned previously, the Ortum Fault marks the western boundary of quartz-sericite-pyrite alteration, while the eastern boundary is the Brucejack Fault, best exposed on Mitchell-Sulphurets Ridge east of the Josephine Zone. Offset along the Brucejack Fault in the vicinity of the Snowfield property is inferred to be approximately 700 to 800m of reverse, west-side up, displacement, based on stratigraphic contacts (P.Lewis; pers. comm. 1993). Offset along the

Ortum Fault is not known. Within the extensive package of quartz-sericite-pyrite alteration are two important north trending normal faults that form the east and western boundaries to the Snowfield Gold Zone; the Whitetip and Snowfield Faults. Both faults are localized within the vicinity of the Gold Zone, and do not offset stratigraphy on Mitchell-Sulphurets Ridge. The amount of offset along these two faults is uncertain as there is no appreciable change in alteration across them.

2.2.3 Mineralization

Five mineralized zones have been located to date: Snowfield Gold Zone, Coffee Pot, Quartz Stockwork, Josephine and Moly (Fig. 2.2). Of the five, the Snowfield Gold Zone is considered the most significant and has seen the most development. Only the Josephine Zone will be discussed here, and readers are referred to Visagie and Roach (1992) for a more detailed description of the other zones.

The Josephine Zone consists of a series of an echelon quartz and quartz-barite veins trending northeast and dipping 60 to 70 degrees northwest over a 340m by 50m area. The veins are massive, pale grey to pink and carry up to 1-2% pyrite, trace to 2% tetrahedrite, and rare pyrargyrite. Individual veins are typically 0.30m to 2.0m wide and up to 30m long. The veins are hosted within a broader zone (10 to 50m wide) of pervasively silicified and possibly potassium feldspar altered quartz-sericite-pyrite schist carrying 5 to 10% barren quartz veinlets. Only the mineralized quartz veins carry significant precious metal values, ie. greater than 0.100 opt Au. The host quartz-sericite-pyrite alteration typically carries less than 0.01 opt Au.

3.0 DIAMOND DRILLING

3.1 Introduction:

Drill hole 93-425 tested the Josephine Zone where both the extent of veining and the grade at surface were highest (Fig. 2.2). The hole was designed to test the continuity of the veins at depth, as well as locate possible stacked vein structures not exposed at surface.

<u>DDH</u>	<u>Azimuth</u>	<u>Dip</u>	<u>Length</u>	<u>UTM North/East/Elevation</u>
93-425	135°	-69°	72.9m	6263234.58N/ 425432.83E/ 1954.41m

The drill contractor was F. Boisvenue of New Westminster, BC, using a JKS Super-300 diamond drill to drill BQTW core. The drill was moved using a Hughes 500D helicopter contracted from Vancouver Island Helicopters of Sidney, BC. Zones of veining and/or alteration were split using a manual Longyear core splitter, and shipped to Westmin Resources assay lab at the Premier Gold Mine north of Stewart, BC for analysis. Split core was crushed and a 400g sub-sample pulverized with a ring and puck pulveriser. Samples were analyzed for gold by fire assay with a gravimetric finish on a 1/2 assay ton sub-sample, and for silver by acid digestion with an AA finish.

3.2 Results:

Drill hole 93-425 intersected strong quartz-sericite-pyrite alteration throughout the hole and extensive quartz veining (Fig. 3.1). Quartz-sericite-pyrite alteration carries 5 to 7% disseminated pyrite and is cut by 1 to 5% fine white quartz veinlets which locally carry trace pyrite.

The hole intersected significant quartz veining from 36.3m to 45.5m, consisting of three 50cm wide quartz veins and a 1.3m wide strong quartz stockwork carrying up to 20% tetrahedrite, 2% pyrargyrite and 1% pyrite. The four structures are hosted within weak to moderate quartz stockwork, also mineralized with up to 2%

tetrahedrite, 1% pyrargyrite, 10% pyrite. Veins are pale pink to beige, massive to coarsely crystalline quartz and minor barite (less than 5%). This intersection assayed 0.258 opt Au, 21.11 opt Ag over 6.6m (4.9m true thickness), and correlates well with a 2.0m wide quartz vein at surface running 0.189 opt Au, 84.01 opt Ag. The drill intersection confirms a 75 to 80 degree northwest dip to the vein system.

Several additional narrow quartz stockwork zones were intersected below the main zone, confirming the presence of stacked en echelon vein structures not exposed at surface. The veins are similar in appearance to those higher up in the hole, carry trace to 2% tetrahedrite and 1 to 5% pyrite, but do not carry significant precious metals. A 50cm quartz stockwork at 50.1m ran 0.014 opt Au, 1.23 opt Ag over 1.0m, and a second 90cm quartz vein at 58.0m ran 0.024 opt Au, 10.33 opt Ag over 0.9m. The lower 14.0m of the drill hole carries 5 to 10% quartz veinlets with rare tetrahedrite and pyrite, but no significant gold or silver values. Unmineralized quartz-sericite-pyrite alteration typically runs less than 0.01 opt Au.

A narrow fault/fracture zone from 57.6m to 58.0m has possible chalcantinite on fracture surfaces.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The Snowfield property is a precious metal prospect located 65km northwest of Stewart in northwest British Columbia. The property consists of ten claims and one fraction totalling 54 units. All but two of the claims are owned 100% by Newhawk Gold Mines Ltd.; the Dawson-Ross 1 and 3 claims are under option from Mr. Don Ross.

Five zones of alteration and mineralization have been discovered since the property was initially staked in 1959: the Snowfield Gold Zone, Josephine, Quartz Stockwork Zone, Coffee Pot and Moly. Alteration consists of moderate to intense quartz-sericite-pyrite to chlorite-sericite-pyrite within andesitic tuffs and minor sediments of the Upper Triassic Stuhini Group and Lower Jurassic Hazelton Group. Mineralization consists of 2 to 15% disseminated and stringer pyrite within altered volcanics, and minor quartz stockwork. Minor, less than 1% combined chalcopyrite, sphalerite, molybdenite and arsenopyrite are occasionally found associated with pyrite in quartz veins. A geologic inventory has been calculated for the Snowfield Gold Zone, at 7.04 million tonnes of 0.083 opt gold based on seven diamond drill holes and several surface trenches (Tribe, 1985).

The Josephine Zone consists of a series of roughly en echelon quartz and quartz-barite veins trending northeast and dipping steeply northwest over a 340m by 50m area. Drillhole 93-425 was designed to test the zone where both the extent of veining and the grade at surface were highest. The hole intersected strong quartz-sericite-pyrite alteration throughout the hole and extensive quartz veining. Individual veins are up to 50cm wide and carry up to 20% tetrahedrite, 2% pyrargyrite and 1% pyrite. The best intersection assayed 0.258 opt Au, 21.11 opt Ag over 6.6m (4.9m true thickness), and correlates well with a 2.0m wide quartz vein at surface carrying 0.189 opt Au, 84.01 opt Ag. Several additional narrow quartz stockwork zones up to 90cm wide were intersected below the main vein intersection, and represent

stacked vein structures that do not come to surface.

Drilling confirmed a steep 75 to 80 degree northwest dip to the quartz vein zone, and indicated that there is potential for additional vein intersections at depth in "stacked" structures. The zone remains open along strike to the northeast, and down dip. Additional diamond drilling is warranted to test this zone further.

5.0 REFERENCES

Alldrick, D.J. and Britton, J.M.(1991): Sulphurets Area Geology; BC Ministry of Energy, Mines and Petroleum Resources, Open File 1991-21.

Britton, J.M. and Alldrick, D.J. (1988): Sulphurets Map Area; in Geological Fieldwork 1987, BC Ministry of Energy, Mines and Petroleum Resources, Paper 1988-1, pages 199-209.

Kirkham, R.V. (1963): The Geology and Mineral Deposits in the Vicinity of Mitchell and Sulphurets Glaciers, Northwestern British Columbia; unpublished M.Sc thesis, University of British Columbia, 122 pages.

Kirkham, R.V., Ballantyne, S.B. and Harris, D.C. (in preparation): Sulphurets Area, British Columbia - Preliminary Geology, Geochemistry and Mineralogy of a Deformed Porphyry Copper, Molybdenum, Precious Metal System.

Roach, S. and MacDonald, A.J. (1991): Silver-Gold Vein Mineralization, West Zone, Brucejack Lake Area, Northwestern British Columbia (104B/8E); in Geological Fieldwork 1991, BC Ministry of Energy, Mines and Petroleum Resources, Paper 1992-1, pages 503-511.

Tribe, N.L. (1985): Progress Report. 1985 Field Season - Sulphurets Property; an in-house report prepared for Newhawk Gold Mines Ltd.

Visagie, D.A. and Roach, S. (1992): 1992 Evaluation of the Snowfield Project; BC Ministry of Energy, Mines and Petroleum Resources Assessment Report # 22741.

6.0 COST STATEMENT**Labour**

D. Visagie; Project Geologist	Aug. 19: 0.5 days @ \$315/day	\$ 157.50
M. McPherson; Geologist	Aug. 19: 1 day @ \$250/day	\$ 250.00
	Oct. 4-6: 3 days @ \$250/day	\$ 750.00
T. Kirby; Technician	Aug. 25: 0.5 days @ \$200/day	\$ 100.00
B. Kinney; Core Splitter	Aug. 21: 1 day @ \$150/day	\$ 150.00

Room & Board

5 man-days @ \$100/day; geology crew, pilot	\$ 500.00
8 man-days @ \$100/day; drill crew	\$ 800.00

Helicopter

Hughes 500D - 5.3 hrs x \$700/hr; including fuel (crew changes, drill move)	\$ 3,710.00
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Diamond Drilling

footage; 239 feet @ \$15/foot	\$ 3,585.00
diesel; 2 days @ 45 gal/day @ \$3/gal.	\$ 270.00
core boxes; 13 boxes @ \$6.50/box	\$ 84.50

Analysis

39 core samples @ \$11/sample; assay for Au, Ag	\$ 429.00
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Equipment rental & Supplies

field gear; flagging, sample bags, pickets, etc.	\$ 100.00
Tropari rental; 2 days @ \$1000/mo.	\$ 65.00

Report Preparation

Includes drafting, map reproduction, xeroxing, etc.	\$ 500.00
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Sub-Total: \$11,451.00

Management Fee (10%) \$ 1,145.00

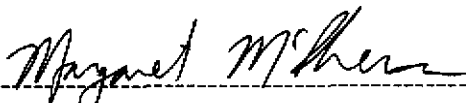
TOTAL: \$12,596.00

7.0 STATEMENT OF QUALIFICATIONS

I, Margaret D. McPherson of 4083 Parkway Drive, Vancouver, British Columbia, do hereby declare that:

1. I graduated from the University of British Columbia with a Bachelor of Science Degree, majoring in Geology, in 1987.
2. I am a registered member of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
3. I have worked in the mining industry since 1985 and have been employed by Newhawk Gold Mines Ltd., as a geologist, since June, 1993.
4. I supervised the work undertaken on the Snowfield Property in 1993.

Dated at Vancouver, British Columbia, this 18th day of October, 1993.


Margaret D. McPherson, P. Geo



APPENDIX 1: Diamond Drill Log



NEWHAWK GOLD MINES LTD.

Diamond Drill Hole Record

SULPHURETS PROPERTY

DEPTH	BEARING	DIP	SURVEY TYPE	ZONE: JOSEPHINE	LENGTH: 72.9m	HOLE NO.: 93-425
COLLAR	123°	-72°	SILVA	CLAIM: ICE 5	CORE SIZE: BOTW	SHEET NO. 1 of 5
69.8m	134°	-69°	TROPARI	LATITUDE: 425432.828E	RECOVERY: 79.0%	LOGGED BY: M. McPherson/D.
72.9m	135°	-70°	Tropari	DEPARTURE: 6263 23A.577N	STARTED: Aug 18/93 9PM	SAMPLED BY: B. Kinross
				ELEVATION: 1954.413m	COMPLETED: Aug 19/93 7AM	PURPOSE: Test Josephine

Interval (meters)		Rock Type	Geologic Description	Alteration		Mineralization					Assay Data						Core Data											
From	To			From	To	SIL	CHLOR	SER	CARB	(clay)	% Py	% Cp	% Mag	% Mo	±	Sample	From	To	Int	Au opt	Cu %	Au check	Cu check	Ag opt	Mo %	RQD %	Run	Recovery %
0.0	3.0	CASE																										
3.0	13.7	QSP	Strong qz-ser-pg. Pale to medium grey, mottled v. weak foliation @ 55°. Original ANLT textures moderately well preserved. - 20% Lepid. - darker grey, weakly elongated (fns foliation and partly replaced by pg); 4.1 to 3cm long. Weak fracture @ 15°, 50° < 1% white qz or pg veinlets to 5mm @ 35°, 45°. Loc pale grey @ 35° @ 6.3m carries 1% dlags ss blebs in selvage (±). Local limonite on fractures. Bl grey. Fluxes to 3mm; ser 0-3% to 12.6m; calc?	3.0	13.7	7	3	10	tr	7					(rare)	11865	4.5	6.0	1.5m	.001				.029				
																11866	6.0	7.0	1.0m	.002				.029				
																11867	7.0	8.5m	1.5m	.001				.029				
			3.0-4.0m: limonite, cherty barren core. hard bit													11868	14.5	16.0	1.5m	tr				.058				
			17.5-18.7m v. strong limonite on fractures present. Wuggy limonite breccia! Med. perm. clay. Bleached. Nstly - cream. Broken core.													11869	16.0	17.5	1.5m	.002				.029				
															11870	17.5	18.7	1.2m	tr				.029					
18.7	33.2	QSP	Qz-ser-pg. Same as previous interval, but not strongly bleached to v. pale grey, weak pervasive clay. Loose uniform, competent nature. Med-strong fracture. 2-3% wuggy pale grey to pink pink qz veinlets 2mm-2cm @ 40°. Locally limonitic. - 1% pyrite.	18.7	33.2	7	3	10	tr	3	7					11871	18.7	19.7	1.0m	.002				.058				

NEWHAWK GOLD MINES LTD.
SULPHURETS PROPERTY

Hole No. 93-925

Page 2 of 5

Interval (meters)		Rock Type	Geologic Description	Alteration					Mineralization					Assay Data						Core Data								
From	To			From	To	SIL	CHLOR	SEK	CARB	clay	% Py	% Cp	% Mag	% Mo	tet	Sample	From	To	Int	Au opt	Cu %	Au check	Cu check	Ag opt	Mo %	ROD %	Run	Recovery %
18.7	33.2	QSP	Caric																									
			19.7m-21.3m: Q2-cb QSPX Matrix - grey silty sand fragments in white to pale pink or red matrix. 3-5% py in fragments. UC @ 45° to c/s. 0.5% tet @ 20.7m 2cm pulv. & bnd.	19.7	21.3	30	23	7	5		3-5				0.5%	11972	19.7	21.3	1.6m	.049				1.750				
																11873	21.3	22.8	1.5m	.011				.146				
																11874	22.8	24.3	1.5m	.002				.117				
																11875	24.3	25.8	1.5m	.006				.233				
																1276	25.8	27.1	1.3m	.007				.146				
			23.4-24.1m: Strong laminitic fracture. Banded core. 2% vuggy like to pale pink gu to 1cm, @ 55°. Trace gys in veins.																									
			27.1-33.2m: Strong fracture, banded ground, local clay gg - fault zone? Same as previous matrix but w/ 1 ft yellow clay on fractures. Pink gu to 2cm - locally w/ up to 2% tet blobs! n. @ 28.1m. Best min. + 10% gu is 28.1-28.4m. Corresponds to surface vein ?? looks low angle to core, but hard to tell in broken rocks.	27.1	33.2	7	3	10	tr	3-5	7				0.5	11877	27.1	28.6	1.5m	.003				.788				
																11878	28.6	30.2	1.6m	.003				.209				
																11879	30.2	31.7	1.5m	.002				.175				
																11880	31.7	33.2	1.5m	Tr				.23				
			Strongest faultly 28.6-28.8m, 29.2-29.4m, 31.5-31.6m																									
33.2	43.8	QSP	Q2-ss-py-alth: 1 in competency. Weak fracture. Pale to med. grey w/ dk gy-brown relict lapilli - ss-py replaced; 20% lapilli - 1% v. pale pink to white gc veinlets 2mm to 1cm wide. Carry trace gys occasionally. Veinlets @ 40°. Wk perv. Sulfidation.	33.2		10	3	10	1	-	5-7				tr	11881	33.2	34.7	1.5	Tr				.47				
																11882	34.7	36.2	1.5m	Tr				.105				

NEWHAWK GOLD MINES LTD.
SULPHURETS PROPERTY

Hole No. 93-425

Page 3 of 3

Interval (meters)		Rock Type	Geologic Description	Alteration				Mineralization				Assay Data						Core Data								
From	To			From	To	SIL	CHLOR	SER	CARB	% Py	% Cp	% Mag	% Mo	Sample	From	To	Int	Au opt	Cu %	Au check	Cu check	Ag opt	Mo %	RQD %	Run	Recovery %
37.2	38.1	QSP	veining increasing from 36.3, top 1/18 ft zone commonly pyrite 37.2 25cm gr zone @ 40° to 45° pink carbonate 38.1 50cm gr zone @ 40° to 45° 5% to 10% to ruby silver																							
			from 38.4-39.6 major veining with 1-2% pyrite common 1/4 to 3/16" as disseminated & blebs										11883	36.2	37.9	1.6	Tr					225				
			39.6-40.1 gr vein @ 35° to 40° 10% to 15% 1-2% ruby silver to 1% py										11884	37.8	38.7	0.9	.035					650				
			fracturing commonly @ 40 to 60° to ea										11885	38.7	39.5	0.8	.004					93				
			41.7-43.0 gr zone @ 60% veining w veins containing up to semi-massive det. py to veins. Veins p. Hard veins ruby silver										11886	39.5	40.5	1.0	.217					21.29				
			43.0-43.5 veining etc										11887	40.5	41.7	1.2	.082					.73				
			43.5-44.5 Foliated Q.F.S.P. quartz - feldspar - mica - biotite porphyry pale green mud ground chlorite - mica to 1/2" massive poorly mineral			M	H	U					11888	41.7	42.0	1.3	.011					46083				
43.5	44.5	Q.F.S.P.											11889	43.0	43.5	2.1	.018					30				

APPENDIX 2: Assay Data

WESTMIN RESOURCES LIMITED
PREMIER GOLD PROJECT ASSAY LABORATORY

CERTIFICATE OF ASSAY

TO: NEWHAWK

PROJECT >>> NEWHAWK -- GOLD

DATE: 08-27-93
ASSAY LAB FILE: A082793.ALD
TRANSFER TEXT FILE: NG082793.OTD
PAGE: 1
SAMPLE TYPE: ORIGINALS

=====

SAMPLE IDENTITY	Au Oz/t	Au g/ton
--------------------	------------	-------------

11865	0.001	0.034
11866	0.002	0.069
11867	0.001	0.034
11868	TRACE	TRACE
11869	0.002	0.069
11870	TRACE	TRACE
11871	0.002	0.069
11872	0.049	1.680
11873	0.011	0.377
11874	0.002	0.069
11875	0.006	0.206
11876	0.007	0.240

PREMIER GOLD PROJECT ASSAY LABORATORY.

certified by 

WESTMIN RESOURCES LIMITED
PREMIER GOLD PROJECT ASSAY LABORATORY

CERTIFICATE OF ASSAY

TO: NEWHAWK

PROJECT >>> NEWHAWK -- GOLD

DATE: 08-27-93

ASSAY LAB FILE: A082793.ALD

TRANSFER TEXT FILE: N6082793.OTD

PAGE: 2

SAMPLE TYPE: ORIGINALS

=====

SAMPLE IDENTITY	Au Oz/t	Au g/ton
11877	0.003	0.103
11878	0.003	0.103
11879	0.002	0.069
11901	TRACE	TRACE
11902	0.009	0.309
11951	TRACE	TRACE

PREMIER GOLD PROJECT ASSAY LABORATORY.

certified by 

WESTMIN RESOURCES LIMITED
PREMIER GOLD PROJECT ASSAY LABORATORY

CERTIFICATE OF ASSAY

TO: NEWHAWK

PROJECT >>> NEWHAWK -- GOLD

DATE: 08-24-93
ASSAY LAB FILE: A082493.ALG
TRANSFER TEXT FILE: NG082493.OTG
PAGE: 2
SAMPLE TYPE: ORIGINALS

SAMPLE IDENTITY	Au Oz/t	Au g/ton
11880	TRACE	TRACE
11881	TRACE	TRACE
11882	TRACE	TRACE
11883	TRACE	TRACE
11884	0.035	1.200
11885	0.004	0.137
11886	0.217	7.440
11887	0.002	0.069
11888	0.441	15.120
11889	0.018	0.617
11890	0.853	29.246
11891	0.003	0.103
11892	0.002	0.069
11893	0.014	0.480
11894	0.002	0.069
11895	0.006	0.206

PREMIER GOLD PROJECT ASSAY LABORATORY.

certified by *J. J. Jona*

WESTMIN RESOURCES LIMITED
PREMIER GOLD PROJECT ASSAY LABORATORY

CERTIFICATE OF ASSAY

TO: NEWHAWK

PROJECT >>> NEWHAWK --- GOLD

DATE: 08-25-93

ASSAY LAB FILE: A082593.ALE

TRANSFER TEXT FILE: NG082593.OTE

PAGE: 1

SAMPLE TYPE: ORIGINALS

=====

SAMPLE IDENTITY	Au Oz/t	Au g/ton
11896	0.013	0.446
11897	0.003	0.103
11898	0.004	0.137
11899	0.024	0.823
11900	0.002	0.069

PREMIER GOLD PROJECT ASSAY LABORATORY.

certified by *Alona*

WESTMIN RESOURCES LIMITED
PREMIER GOLD PROJECT ASSAY LABORATORY

CERTIFICATE OF ASSAY

TO: NEWHAWK

PROJECT >>> NEWHAWK -- SILVER

DATE: 08-27-93

ASSAY LAB FILE: A082793.ALG

TRANSFER TEXT FILE: NS082793.OTG

PAGE: 2

SAMPLE TYPE: ORIGINALS

=====

SAMPLE IDENTITY	Ag Oz\ton	Ag g\ton
11865	0.204	7.0
11866	0.029	1.0
11867	0.029	1.0
11868	0.058	2.0
11869	0.029	1.0
11870	0.029	1.0
11871	0.088	3.0
11872	1.750	60.0
11873	0.146	5.0
11874	0.117	4.0
11875	0.233	8.0
11876	0.146	5.0
11877	0.788	27.0
11878	0.204	7.0
11879	0.175	6.0
11901	0.029	1.0

PREMIER GOLD PROJECT ASSAY LABORATORY.

certified by *Lena*

WESTMIN RESOURCES LIMITED
PREMIER GOLD PROJECT ASSAY LABORATORY

CERTIFICATE OF ASSAY

TO: NEWHAWK

PROJECT >>> NEWHAWK -- SILVER

DATE: 08-24-93

ASSAY LAB FILE: A082493.ALC

TRANSFER TEXT FILE: NS082493.OTC

PAGE: 3

SAMPLE TYPE: ORIGINALS

=====

SAMPLE IDENTITY	Ag Oz\ton	Ag g\ton
11880	0.233	8.0
11881	0.467	16.0
11882	1.079	37.0
11883	2.246	77.0
11884	6.504	223.0
11885	0.933	32.0
11886	21.291	730.0

PREMIER GOLD PROJECT ASSAY LABORATORY.

certified by 

WESTMIN RESOURCES LIMITED
PREMIER GOLD PROJECT ASSAY LABORATORY

CERTIFICATE OF ASSAY

TO: NEWHAWK

PROJECT >>> NEWHAWK -- SILVER

DATE: 08-25-93

ASSAY LAB FILE: A082593.ALA

TRANSFER TEXT FILE: NS082593.OTA

PAGE: 1

SAMPLE TYPE: ORIGINALS

=====

SAMPLE IDENTITY	Ag Oz\ton	Ag g\ton
11887	0.729	25.0
11888	46.083	1580.0
11889	3.500	120.0
11890	49.875	1710.0
11891	0.146	5.0
11892	0.175	6.0
11893	1.225	42.0
11894	0.438	15.0
11895	0.088	3.0
11896	0.263	9.0
11897	0.117	4.0
11898	0.292	10.0
11899	10.325	354.0
11900	0.175	6.0

PREMIER GOLD PROJECT ASSAY LABORATORY.

certified by ... *Alma*

WESTMIN RESOURCES LIMITED
PREMIER GOLD PROJECT ASSAY LABORATORY

CERTIFICATE OF ASSAY

TO: NEWHAWK

PROJECT >>> NEWHAWK -- SILVER

DATE: 08-27-93

ASSAY LAB FILE: A082793.ALG

TRANSFER TEXT FILE: NS082793.OTG

PAGE: 3

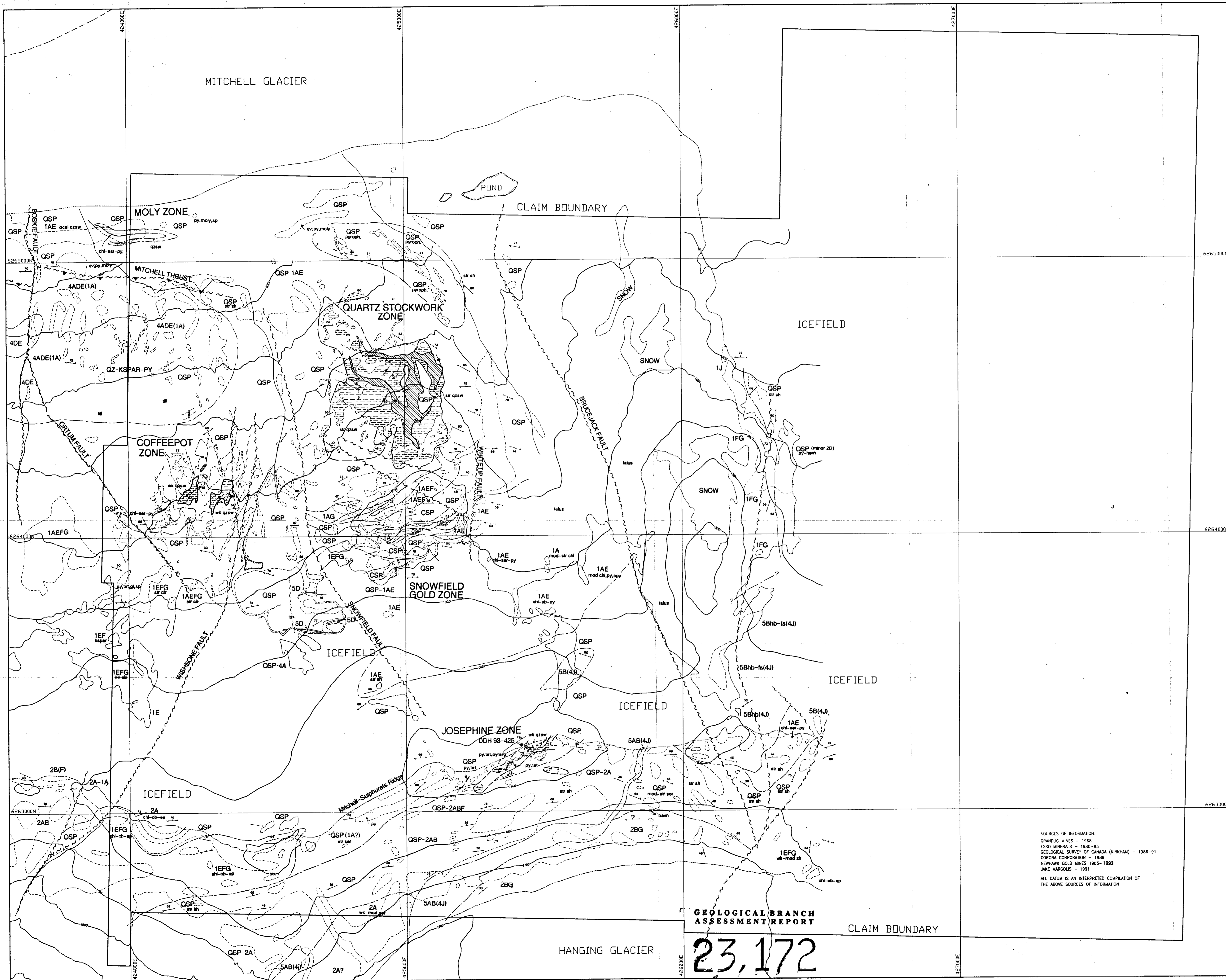
SAMPLE TYPE: ORIGINALS

=====

SAMPLE IDENTITY	Ag Oz\ton	Ag g\ton
11902	0.700	24.0
11951	0.088	2.0

PREMIER GOLD PROJECT ASSAY LABORATORY.

certified by *Lena*



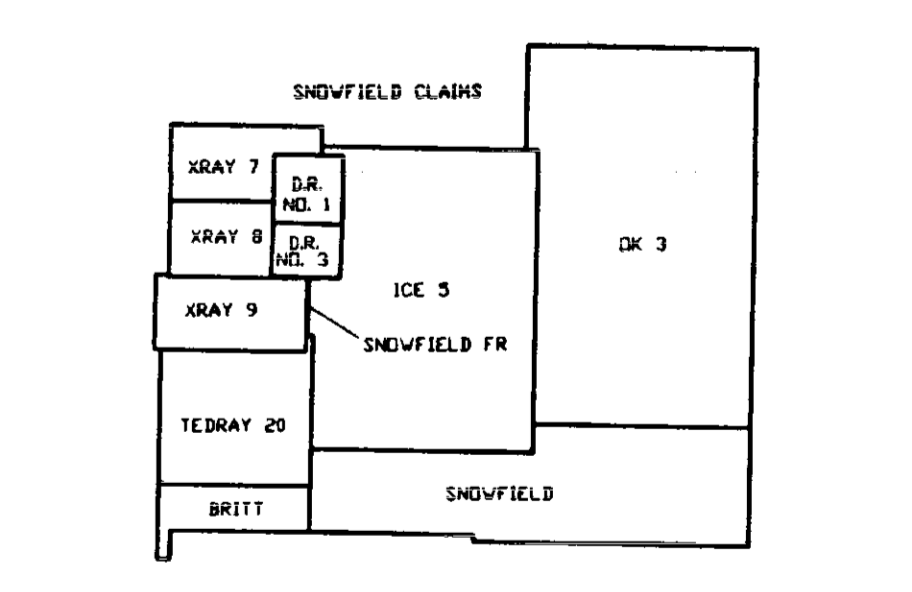
- LEGEND**
- 5 INTERMEDIATE TO MAFIC INTRUSIVES**
 - 5A UNSUBSIDED, 5B QUARTZ (QUT), 5C GABBRO (GAB), 5D DIABASE (DAB), 5E LAMPROPHIRE DYKES-SILLS (LAMP)
 - 4 FELSIC TO INTERMEDIATE INTRUSIVES**
 - 4A UNSUBSIDED, 4B GRANITE (GRAN), 4C SYENITE (SYEN), 4D QUARTZ-MONZONITE (QMON), 4E MONZONITE (MONZ), 4F GRANODIORITE (GRAND), 4G QUARTZ-EYE PORPHYRY (QEP), 4H FELDSPATH-PORPHYRY (FPF), 4I QUARTZ-FELDSPATH PORPHYRY (QFPF), 4J HORNBLende-FELDSPATH PORPHYRY (HPF)
 - 3 CHEMICAL METASEDIMENTS**
 - 3A CHERT (CHERT), 3B CHERT TUFF (CTUF), 3C OXIDE FACIES IF (OXIF), 3D CARBONATE FACIES IF (CBF), 3E SILICATE FACIES IF (SIF), 3F SULPHIDE FACIES IF (SIF)
 - 2 METASEDIMENTS**
 - 2A UNSUBSIDED, 2B ARGILLITE (ARGIT), 2C ARGOSSE (ARGS), 2D ARGILLITE (ARGT), 2E GREYWACKE (GRAN), 2F CONGLOMERATE (CONG), 2G CHERT (CERT), 2H LACSTONE (LAC)
 - 1 METAVOLCANICS** - Rhyolite (RH), Dacite (DA), Andesite (AN), Basalt (BA)
 - 1A UNBARRAGED, 1B MASSIVE FLOWS (ANF), 1C PORPHYRIC FLOWS (ANPF), 1D FLOWED, 1E FLOWING BRECCIA (ANBF), 1F TUFF (ANTF), 1G LARVA TUFF (ANLT), 1H TUFF-BRECCIA (ANBT), 1I CRYSTAL TUFF (ANCT), 1J PORPHYRY (ANPJ), 1K VOLCANIClastic-TANNE (ANVT)

- ALTERED ROCKS**
- ASB ALBITIZATION
 - BO BOTRYOPHIC
 - CA CARBONATE ALTERATION
 - CHL CHLORITIZATION, CHLORITIC
 - CSL POTASSIC ALTERATION
 - CSP PROPYLITIC ALTERATION
 - QSP QUARTZ-SERICITE, PIRITE SCHIST
 - QP QUARTZ-PYRITE (SPAR ALTERATION)
 - SP SERICITIZATION, SERICITIC
 - SR SERICITIZATION, SERICIFIED
 - WK - WEAK MOO - MODERATE STR - STRONG

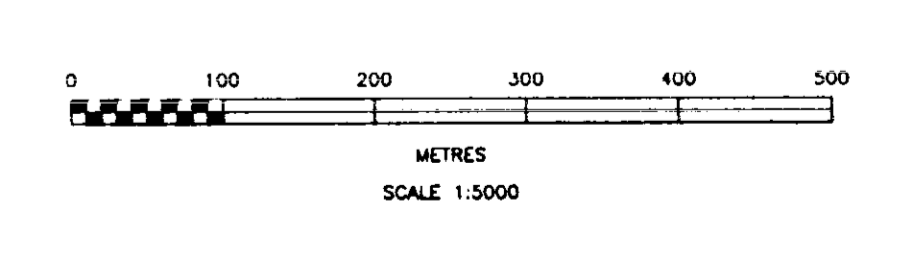
- SYMBOLS**
- OUTCROP BOUNDARY
 - BEDDING / VEN CONTACT (VERTICAL, INCLINED)
 - FOLIATION (HORIZONTAL, INCLINED, VERTICAL)
 - JOINTING (HORIZONTAL, INCLINED, VERTICAL)
 - LINERATION WITH PLUNGE
 - PILLONS (TOPS UNKNOWN, KNOWN)
 - GEOLOGICAL CONTACT (OBSERVED, ASSUMED)
 - ALTERATION CONTACT
 - FAULT (DEFINED, ASSUMED)
 - SHEAR ZONE, LINEAMENT
 - TRENCH, PIT
 - DRILL HOLE (VERTICAL, INCLINED)
 - DIAMOND SAW CHANNEL INTERVAL

- ABBREVIATIONS**
- | | |
|---------------------|---|
| AU - NATIVE GOLD | HEM - HEMATITE |
| AG - NATIVE SILVER | LM - LAMPROPHIRE |
| AN - ANDESITE | LMG - MALACHITE |
| ARG - ARGILLITE | MAL - MALACHITE |
| ASFP - ARSENOPYRITE | MOL - MOLDONITE |
| AZ - AZURITE | POLY - POLYDORITE |
| BA - BASALT | PR - PYRITE |
| BAN - BARIUM | PRPH - PYROPHYLITE |
| BN - BARNITE | PRPHL - PYROPHYLITE |
| BR - BRILLOUITE | PRPHS - PYROPHYLITE |
| CHL - CHALCOPYRITE | QCS/QCV - QUARTZ-CARBONATE STRINGER/VEN |
| CHL - NATIVE COPPER | QZ - QUARTZ |
| DOL - DOLOMITE | SD - SIDERITE |
| EL - ELLIPTICUM | SP - SPHALERITE |
| GF - GRAPHITE | TEN - TENNANTITE |
| CA - CALCINE | TT - TETRAHEDRITE |
| HA - HORNBLende | SH - SHEARING |

- ▭ Pheasac Zone QZ-KSPAR-PY-BT
- ▭ QSP-QP QZ-SER-PY
- ▭ ARGILLIC CHL-SER-PY (CSP)
- ▭ QTM - QUARTZ VEN > 80% QV
- ▭ QTSW - QUARTZ STOCKWORK 20%-80% QV



NOTE: CONTOURS FROM ESSO'S 1981 ORTHOPHOTO
OTHER FEATURES FROM 1989 ORTHOPHOTO



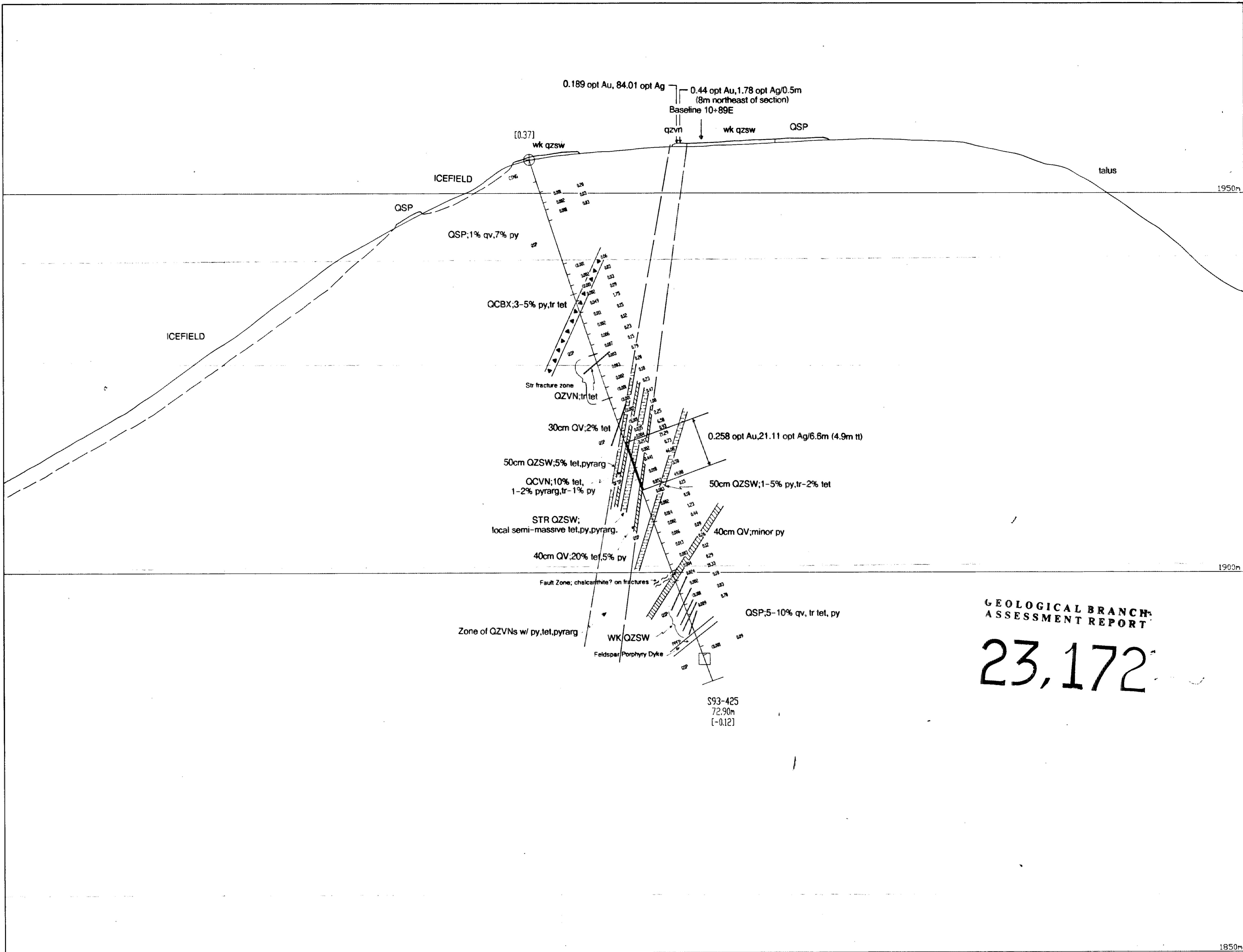
SOURCES OF INFORMATION:
GRANDUC MINES - 1968
ESSO MINERALS - 1980-83
GEOLOGICAL SURVEY OF CANADA (KIRKHAM) - 1986-91
CORONA CORPORATION - 1989
NEWHAWK GOLD MINES 1985-1993
JAKE MARGOLIS - 1991
ALL DATUM IS AN INTERPRETED COMPILED OF THE ABOVE SOURCES OF INFORMATION

GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,172

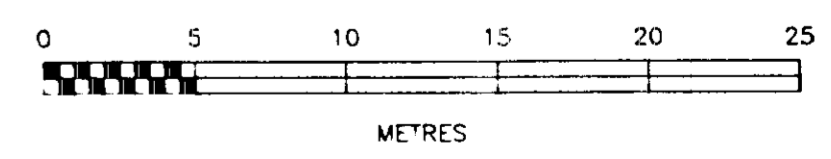
NEWHAWK GOLD MINES
SULPHURETS PROPERTY
SNOWFIELD PROJECT
GEOLOGY

DRAWN BY: M.M.T.K. NTS 104B/9E
DATE: NOV 1993 FIGURE NO: Fig. 2.2



GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,172



NEWHAWK GOLD MINES LTD.

SULPHURETS PROPERTY
SNOWFIELD PROJECT
JOSEPHINE ZONE - S93-425 SECTION
LOOKING NE - SECTION AZIMUTH 128° ②

DRAWN BY: T.K., M.M. SCALE: 1:250
DATE: NOV. 1993 FIGURE NO: 37

LEGEND

QUARTZ VEIN (QCVN - QTZ CARBONATE VEIN)	ANDESITE CRYSTAL TUFF	ALTERED ROCKS	FAULT
QUARTZ VEIN STOCKWORK (QZSW - QTZ CARBONATE STWK)	HETEROLITHIC TUFF	ALB ALBITIZATION	DRILL HOLE WITH PIERCE POINT
QUARTZ VEIN ZONE (QZVN - QTZ CARBONATE ZONE)	ANDESITE DYKE	BIO BIOTFEROUS	.356 / 4.23 AU (oz/t) / AG (oz/t)
QUARTZ BRECCIA (QCBX - QTZ CARBONATE BRECCIA)	QUARTZ SERICITE PYRITE	CB CARBONATE ALTERATION	QUARTZ VEIN ORIENTATION
ANDESITE TUFFS/FLOWS	QUARTZ PYRITE	CHL CHLORITIZATION; CHLORITIC	<-5.00> DISTANCE SOUTH OF SECTION
ANDESITE LAPILLI TUFF		KSP POTASSIC ALTERATION	<5.00> DISTANCE NORTH OF SECTION
		PROP PROPYLITIC ALTERATION	
		QSP QUARTZ-SERICITE; PYRITE SCHIST	
		QP QUARTZ-PYRITE (KSPAR ALTERATION)	
		SER SERICITIZATION; SERICITIC	
		SIL SILICIFICATION; SILICIFIED	
		WK - WEAK MOD - MODERATE STR - STRONG	