



# ARCHER, CATHRO

& ASSOCIATES (1981) LIMITED

CONSULTING GEOLOGICAL ENGINEERS

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VANCOUVER, B. C. V6B 1L8



(604) 688-2568

## TRENCHING, GEOPHYSICAL AND DIAMOND DRILLING PROGRAM

on the

GOLDSTAR PROPERTY

Augusta	15494
Margarete	15505
Gold Star	15519
Peerless	15549
Protection Fr	15677
Shear Zone 1-2	60420-60421
Vindicator 1-2	60422-60423
Liberty	63638
Excelsior 1-3	63639-63641
Progress 1-2	73464-73465
Goldstar Fr	Y80600
Greenstone 1-4	90465-90468
5	91056
6F	Y21094
7-9	YA92778-YA92780
10	YA92869
Rick 1-14	YA92082-YA92095
15-23	YA92748-YA92756
Cabage 1-11	YA92757-YA92767
13-14	YA92768-YA92769
17-24	YA92770-YA92777
Bynordac 1 - 6	YB05903-YB05908



MT. FREEGOLD, YUKON

Latitude 62°17'N Longitude 137°09'W NTS 115I/6

Whitehorse Mining District

BIG CREEK JOINT VENTURE

C.A. MAIN, B.Sc.

February, 1988

Work done between June 9 and September 23, 1987

092127

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053128

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### SUMMARY AND RECOMMENDATIONS

The Goldstar property consists of 76 contiguous mineral claims and fractions owned by prospectors E. Weinecke (51%) and G. Harris (49%) and held under option by Big Creek Joint Venture [Big Creek Resources Ltd. (66.7%) and Rexford Minerals Ltd. (33.3%)]. Expenditures in 1987 of \$416,000 focused on the Margarete vein and the Augusta showing and were managed by Archer, Cathro & Associates (1981) Limited. The program consisted of bedrock sampling of 5800 m of bulldozer trenching and 1460 m of excavator trenching. A geophysical VLF-EM and proton magnetometer survey was also conducted over 13.86 kilometers of grid.

The Goldstar property lies in central Yukon, 50 km northwest of Carmacks within the Dawson Range Gold Belt. This belt is an 85 km long northwest-trending zone of porphyry-related gold and copper deposits which occur along the southern margin of the Big Creek Fault, a major regional lineament. The Goldstar property consists of a basement assemblage of metamorphosed Yukon Cataclastic Complex that has been intruded by Jurassic syenites and Cretaceous quartz monzonite and subsequently faulted and disrupted by two stages of Late Cretaceous felsic dykes. Limy horizons within the metamorphosed basement have been altered to magnetite skarns. Most of the higher part of the property is unglaciated, which has resulted in the formation of a surface cap of weathered material. Oxidized gold mineralization found within this weathered cap is probably amenable to low cost heap leach cyanide extraction.

The Goldstar property has a long exploration history, beginning with the discovery of the first lode gold occurrence in the Dawson Range (Augusta showing) by F. Guder in 1930. Early work by Guder consisted of hand dug shafts

and trenches concentrating on the Margarete, Augusta and Goldstar showings. Drill programs in 1956 and 1974 mainly tested the Margarete vein with minor emphasis on the magnetite skarn.

Work to date has identified three main types of gold mineralization.

1. Quartz-carbonate Veins

Discordant northwesterly- to westerly-trending vein faults, the best example of which is the Margarete vein, cut both the metamorphosed basement rocks and the later granodiorites. The veins dip vertically, or steeply to the northeast and consist of numerous irregular quartz-carbonate stringers and veinlets contained within a wider zone of intense argillic alteration and brecciation. Quartz feldspar dykes follow irregularly along the vein and are commonly clay altered. The veinlets are relatively narrow, from 0.3 to 1.0 m, but the fault zone has an average true thickness of about 3.3 m. Gold mineralization appears to be related to the presence of sulphides, which are seen in drill core to consist mainly of pyrite with lesser arsenopyrite and chalcopyrite. At surface, the sulphide minerals are oxidized to limonite. The veinlets give good assays of up to 150 g/t (4.5 opt) gold over narrow widths (0.3 m) although average grades across the vein zone are about 4.1 g/t (0.12 opt) gold and 48.0 g/t (1.4 opt) silver over 3.3 m.

2. Magnetite Skarn

Limy members of the metamorphosed basement rocks have been altered to magnetite skarns. The skarns are conformable with foliation and are probably conformable with bedding. The main skarn band is commonly 30 m ranging up to 70 m wide and has been traced for over 500 m along strike with trenches, a few random drill holes, and a magnetic survey. The primary skarn mineral assemblage

consists of magnetite, epidote, diopside, red and brown garnet and calcite. This has been overprinted by a later retrograde assemblage of quartz, hematite, actinolite and chlorite. The retrograde assemblage, which may be related to faulting, exhibits a crude zoning from a siliceous (magnetite/hematite) core, out to more chloritic rocks. The primary skarn typically averages 0.03 g/t (0.001 opt) gold and 6 g/t (0.2 opt) silver. A few samples of skarn assay higher, ranging up to 11.5 g/t (0.34 opt) gold over 1.8 m and, at a different site, 155 g/t (4.5 opt) silver over 9.9 m. In these cases, it appears mineralization may be related to faulting and retrograde metasomatism.

The Augusta showing is hosted in a small body of magnetite skarn some 350 m from the main horizon. The mineralization is probably more related to Margarete-type veining than to the magnetite skarn as all the mineralized material appears to be confined to fault zones. These vein faults, which are disjointed and difficult to trace, may be the eastern extension of the Margarete vein system. Some surface samples from the Augusta showing have given spectacular gold assays, up to 366 g/t (10.67 opt) gold and 106 g/t (3.0 opt) silver over 5 m. Drilling failed to confirm these high grades at depth, suggesting that some of the gold mineralization may have been enhanced by surface enrichment. The best intersection at depth assayed 4.45 g/t (0.13 opt) gold and 46.3 g/t (1.35 opt) silver over 6 m, which is typical of the grades found in the Margarete vein.

### 3. Porphyry Breccias

The Cabin zone, which was mapped in 1981 as an intensely weathered and leached felsic porphyry breccia, lies about 500 m south of the Margarete vein.

This zone has a moderate gold soil geochemical expression and further work is warranted to determine if the anomaly is associated with mineralization similar to the Antoniuk porphyry breccia located 4 km to the southeast.

#### MINERAL INVENTORY

The Margarete vein is the only mineralized occurrence with sufficient sampling to allow estimation of a geological inventory. The computation of average grade and width is based on the five 1987 drill intercepts, consisting of HQ size core, which provided larger samples with better recovery than those obtained in the two previous drill programs. The drill holes tested the vein at intervals of 50 m along strike. The calculated reserves for the 250 m interval that was drilled is as follows:

#### Geological Inventory Margarete Vein, Goldstar Property

#### Assuming:

1. an idealized 45 degree pit wall;
2. a specific gravity of 2.5 for both ore and waste;
3. an average vein width of 3.3 m; and,
4. an average grade of 4.21 g/t (0.12 opt) gold and 47.2 g/t (1.4 opt) silver

<u>Depth(m)</u>	<u>Tonnes</u>	<u>Contained gold (g)</u>	<u>Contained silver (g)</u>	<u>Waste:Ore</u>
5	10,315	43,400	486,500	0.9:1
10	20,630	86,800	973,000	1.8:1
20	41,250	173,600	1,946,000	3.5:1
30	61,890	260,400	2,919,000	5.2:1
60	123,800	520,800	5,838,000	10.4:1

A \$300,000 program is recommended for 1988, as follows (includes all camp cost, infrastructure, etc):

1.	Exploration of Margarete vein, expose on surface and channel sample at 5 m intervals, dig excavator test pit every 25 m for metallurgical samples and drill rotary holes every 25 m. D8 Caterpillar bulldozer - 150 hours; Excavator - 50 hours; Rotary drill holes - 400 m .....	\$150,000
2.	Exploration of Augusta showing, cut 5 m wide trench to 10 m depth for length of 50 m to investigate distribution of high grade mineralization; Excavator - 100 hours; Contract blasting as required .....	45,000
3.	Trenching of Vindicator, Liberty and Cabin zones, D8 Caterpillar bulldozer - 200 hours .....	85,000
4.	Reanalyses of 2000 soil samples for gold and 32 element ICP .	<u>20,000</u>
		<u>\$300,000</u>

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

C.A. Main, B.Sc.

*for C.A. Main*

/mc

### INTRODUCTION

The Goldstar property covers the first lode gold discovery in the Dawson Range. Discoverer F. Guder held the property until his death in 1981, at which time it was acquired by the present owners. Big Creek Joint Venture (BCJV) [Big Creek Resources Ltd. [BCRL], formerly Nordac Mining Corporation, (66.7%) and Rexford Minerals Ltd. (33.3%)] optioned the property in April, 1987 and conducted a program of bulldozer and excavator trenching and diamond drilling. The 1987 program, which cost \$416,000, was planned and managed by Archer, Cathro & Associates (1981) Limited. C.A. Main served as project manager and was assisted by geologist J.L. Duke who logged the drill core and supervised the trench mapping. Geologist Mike Walls assisted with supervision and mapping. F. Anderson, G. MacIntosh, and M. Maidment assisted with field work and L. Robinson was cook.

### PROPERTY, LOCATION AND ACCESS

The Goldstar property consists of 76 mineral claims owned by E. Weinecke (51%) and G. Harris (49%) and optioned to BCRL by agreement dated April 16, 1987. The Goldstar property is part of the BCJV holdings by an agreement dated May 13, 1987. The claims are registered in the name of Archer, Cathro & Associates (1981) Limited with the Whitehorse Mining Recorder as follows:

<u>CLAIM NAME</u>	<u>GRANT NUMBER</u>	<u>EXPIRY DATE</u>
Augusta	15494	December 12, 1991
Margarete	15505	December 12, 1991
Gold Star	15519	December 12, 1991
Peerless	15549	December 12, 1991
Protection Fr	15677	December 12, 1991
Shear Zone 1-2	60420-60421	December 12, 1991
Vindicator 1-2	60422-60423	December 12, 1991
Liberty	63638	December 12, 1991
Excelsior 1-3	63639-63641	December 12, 1991
Goldstar Fr	Y80600	December 12, 1991
Greenstone 6F	Y21094	December 12, 1991
Rick 1-2	YA92082-YA92083	January 29, 1993
Cabage 2	YA92758	January 29, 1993
Cabage 4	YA92760	January 29, 1993
Cabage 17-20	YA92770-YA92773	January 29, 1993
Cabage 22	YA92775	January 29, 1993
Cabage 24	YA92777	January 29, 1993
Progress 1-2	73464-73465	December 12, 1991
Greenstone 1-4	90465-90468	December 12, 1991
5	91056	December 12, 1991
7-9	YA92778-YA92780	January 29, 1993
10	YA92869	January 29, 1993
Rick 3-14	YA92084-YA92095	January 29, 1993
15-23	YA92748-YA92756	January 29, 1993
Cabage 1	YA92757	January 29, 1993
3	YA92759	January 29, 1993
5-11	YA92761-YA92767	January 29, 1993
13-14	YA92768-YA92769	January 29, 1983
21	YA92774	January 29, 1993
23	YA92776	January 29, 1993
Bynordac 1-6	YB05903-YB05908	January 29, 1993

The property is located on Mt. Freegold, in central Yukon, near the southeast end of the Dawson Range Gold Belt, as shown on Figures G-1 to G-3 on the following page. The property is accessed from Carmacks, 53 km to the southeast, by an all-weather dirt road maintained by the Yukon Territorial government in summer. The claims are within NTS map sheet 115I/6 at latitude 62°17' and longitude 137°09'W.

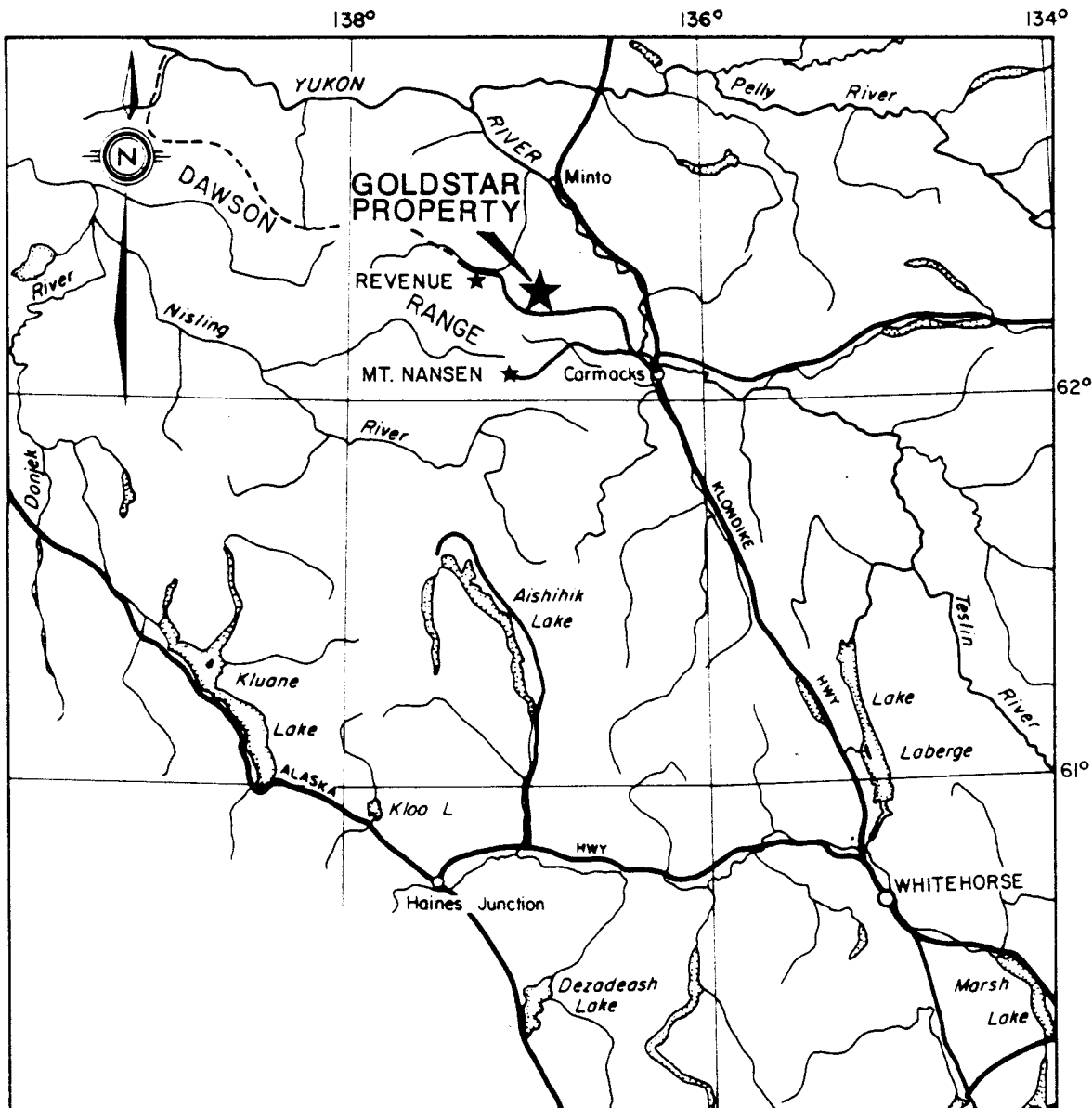


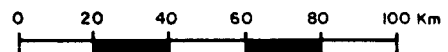
Figure G-1

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
**GENERAL LOCATION MAP**

GOLDSTAR PROPERTY  
 MOUNT FREEGOLD, Y.T.

BIG CREEK RESOURCES LTD.  
 REXFORD MINERALS LTD.

SCALE 1:2,000,000



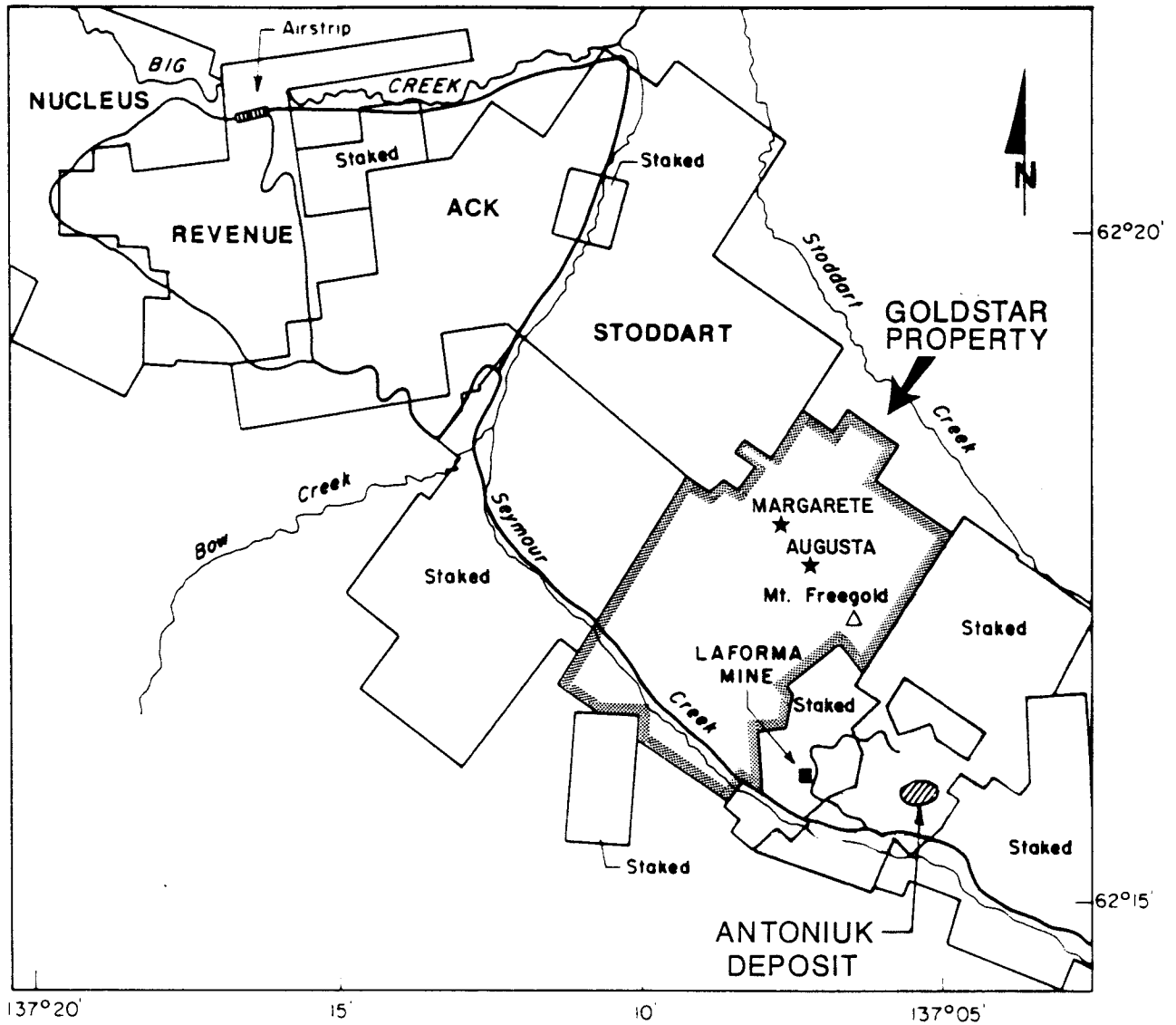


Figure G-2

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

## PROPERTY LOCATION MAP

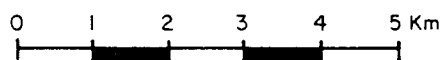
GOLDSTAR PROPERTY

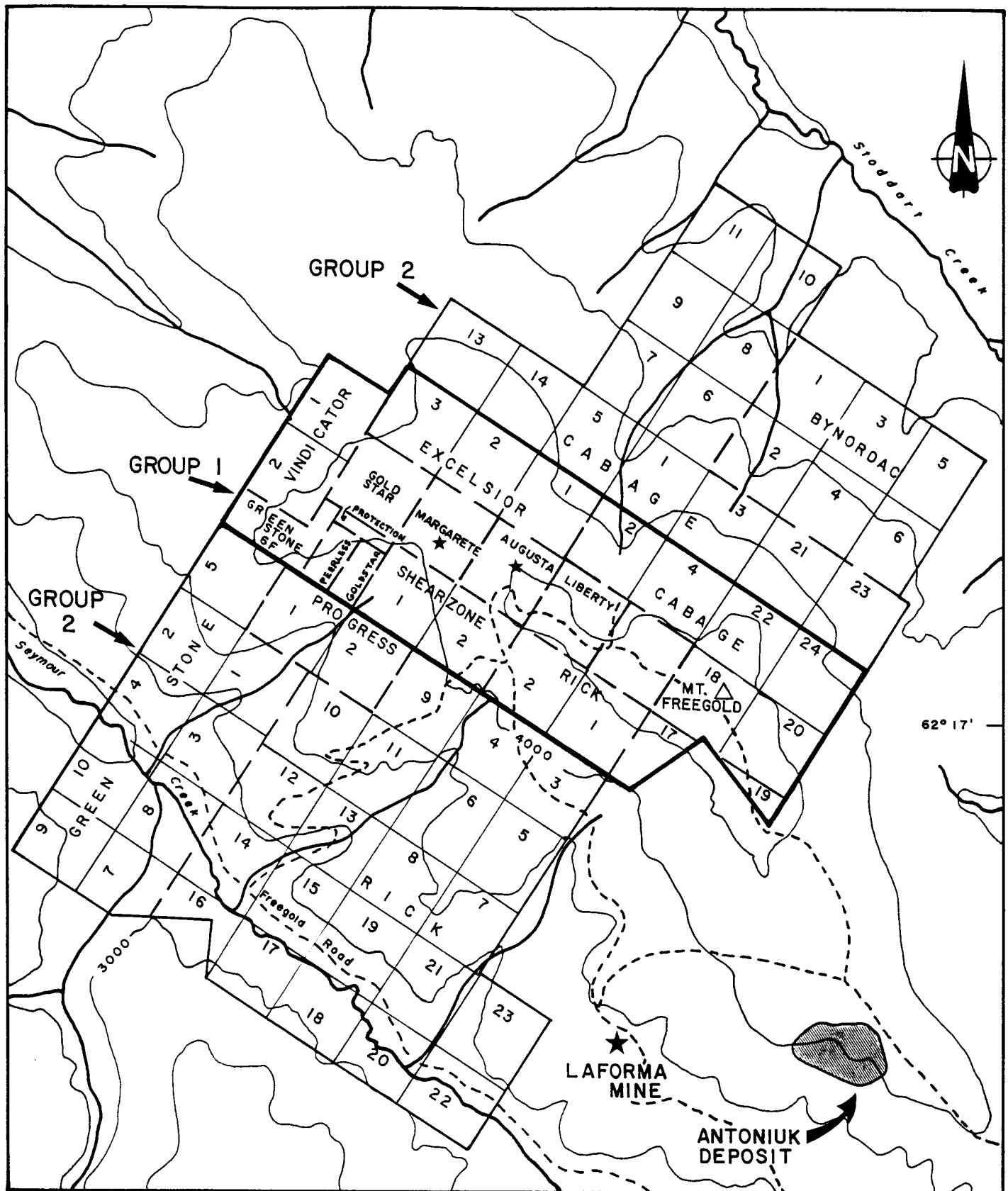
MOUNT FREEGOLD, Y.T.

BIG CREEK RESOURCES LTD.

REXFORD MINERALS LTD.

SCALE 1:100,000





137° 10'

Figure G-3

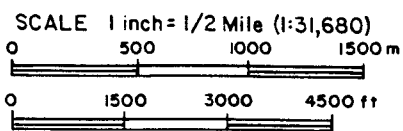
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

# CLAIM LOCATION MAP

GOLDSTAR PROPERTY

BIG CREEK RESOURCES LTD.

REXFORD MINERALS LTD.



### PHYSIOGRAPHY AND GEOMORPHOLOGY

The Goldstar property lies at the northwest end of Mt. Freegold covering a broad, gentle sloping ridge separating Seymour Creek to the south and west and Stoddart Creek to the north. Seymour Creek has cut a deep V-shaped valley and the south-facing part of the property adjacent to Seymour Creek is much steeper than the rest of the property, with slopes locally exceeding 30°. Elevations range from 850 m on the floor of Seymour Creek Valley to 1440 m at the summit of Mt. Freegold. Vegetation ranges from spruce and poplar trees on south- and east-facing hills to stunted black spruce and thick moss on north- and west-facing slopes.

Soil profiles typically include 1 to 10 cm of "A" horizon organics, 0 to 100 cm of volcanic ash, 5 to 50 cm of "B" horizon soil and 100 to 300 cm of "C" horizon soil over deeply weathered bedrock. Glacial and fluvial deposits are rare except perhaps on the floor of Seymour Valley. Permafrost is extensive, particularly on north- and west-facing slopes. Outcrop and talus is restricted to ridge crests and steep southeast-facing slopes.

### HISTORY AND PREVIOUS WORK

Gold-bearing magnetite was discovered on the Goldstar property by F. Guder in 1930 near the summit of Mt. Freegold. A small staking rush occurred in the spring of 1931 but few of the claims were worked and most were allowed to lapse. Significantly, the G-3 (LaForma) and the Rambler veins, which are south and southeast of the Goldstar property, were discovered at this time. Guder worked the Goldstar property by hand dug shafts and trenches. In 1959, Conwest optioned Guder's claims and drilled five diamond drill holes totalling 309 m.

Recoveries were poor but four intervals returned significant assays averaging 0.14 oz/ton Au over 2.1 m. In 1969, Yukon Revenue Mining Ltd. optioned the property and performed bulldozer trenching and geological mapping. This work outlined the intensely bleached Cabin zone in Cabin Creek on the south slope of Mt. Freegold, which was explored as a porphyry copper target. In 1973, Prism Resources Ltd. optioned the property, staked additional fringe claims, and conducted geological mapping and a ground magnetic survey. Prism transferred the option in 1974 to Dynasty Exploration Ltd. which performed, in the same year, detailed geological mapping, linecutting, soil geochemistry, a magnetometer survey, bulldozer trenching and drilled eight diamond drill holes totalling 653 m. The claims reverted to Guder who reoptioned them from 1980 to 1982 to Arctic Red Resources Corp., which conducted geochemical surveys. Following Guder's death in 1981, the claims were transferred to Guder Mining Explorations Ltd. (controlled by E. Wienecke), which performed bulldozer trenching in 1982 and 1983.

The G-3 vein on the LaForma property, to the east of the Goldstar property, has been continuously explored since its discovery in 1931. In 1939-40, a total of 1418 tons grading 34.75 g/t (1.01 opt) gold were profitably mined by optionees. During 1965-66, Ormsby Mines Ltd. developed the property and mined 5938 tons of ore with a recovered grade of 9.26 g/t (0.27 opt) gold and 32.9 g/t (0.96 opt) silver. Because of excessive dilution and poor recovery, this was not a profitable venture and the mine closed after nine months leaving published reserves of 68,546 tons grading 15.1 g/t (0.44) opt gold.

### 1987 PROGRAM

The 1987 field season, which began on June 9 and concluded September 23, 1987, was conducted from an established camp on the Antoniuk property located 5 km southeast of the Goldstar property. This camp housed from four to fifteen people, including field crew and contractors. An Hitachi excavator was contracted from E. Caron Diamond Drilling Ltd. and a Caterpillar D-8 was contracted from IbeX Contracting Limited, both of Whitehorse. A geophysical survey was contracted from Delta Geosciences Ltd., Delta, B.C. The following is an outline of the work performed.

Diamond drilling: A total of seventeen HQ diamond drill holes was drilled by Caron. An initial program of nine holes totalling 292.5 m focused on the Margarete vein and a later program of eight holes totalling 448.6 m tested both the Augusta showing and Kirsteen zone.

Bulldozer: A total of 581.0 machine hours at an inclusive rate of \$155.00/hour was spent in access road building and preparing and pre-stripping approximately 5800 m of trenches.

Excavator: A total of 180.5 machine hours at an inclusive rate of \$120.00/hour was spent in trenching 1460 m (all of which had been previously pre-stripped by bulldozer).

Rock sampling: Bulldozer and excavator trenches were sampled, usually at 5 m intervals. Over 900 rock samples averaging 5 kg each were sent by truck to Chemex Labs Ltd. in North Vancouver, B.C. and analyzed for gold.

Geophysics: Delta Geoscience performed VLF-EM and proton magnetometer (including total field and gradiometer) surveys on a 14 km grid, using lines established during previous exploration programs and resurveyed during 1987.

### TRENCHING

A combination of bulldozer and excavator trenching proved to be the most effective method of trenching the Goldstar property. The bulldozer was used to prepare the ground for the excavator by stripping the moss to allow the ground to thaw. Several passes by the bulldozer over periods ranging up to three weeks were required to remove the frozen overburden, which commonly had thicknesses of about one metre. The excavator was then used to cut a bucket-wide slot (about 1 m) in the regolith until bedrock was reached. Depth of penetration into bedrock varied according to lithology and intensity of alteration or fracturing. Schistose bedrock and pervasively altered quartz-monzonite was always penetrated to a minimum of one-half metre. Some areas of fresh intrusive rock could not be penetrated.

## GEOLOGY

The Goldstar property is situated within the Yukon Crystalline Terrane which consists of Paleozoic or older metamorphic basement rocks intruded and overlain by a variety of Mesozoic igneous rocks. Property geology is shown on Figures G-4 and G-7, in pocket, and units are described as follows.

### CRETACEOUS

#### Mount Nansen Volcanic Suite

a) Gray quartz-feldspar porphyry (rhyolite?)

This unit consists of 3 to 10% subrounded quartz phenocrysts set in an aphanitic to very fine-grained matrix of quartz and feldspar. Typically it contains 1 to 3% pyrite as disseminated specks, often oxidized at surface to limonite. Alteration of this unit typically includes silicification as well as development of common sericite and kaolin. This unit is spatially associated with the known gold mineralization on the Goldstar property, as well as with arsenic soil geochemical anomalies.

b) Pink (hornblende) quartz-feldspar porphyry

This unit is a porphyritic rock with phenocrysts ranging from 20 to 80%, consisting of variable amounts of feldspars and minor quartz. Hornblende, commonly 3 to 15% of the rock, is often altered to chlorite. The matrix is aphanitic and often pale pink. Chlorite alteration often gives this rock a green colour. On the Goldstar property, this unit has a similar spatial relationship to Antoniuk where, in both cases, the pink hornblende porphyry generally occurs to the north of and away from the gold mineralization.

Dawson Range Batholith

Hornblende-biotite potassic quartz-diorite

This is a medium-grained equigranular light gray rock. Alteration ranges from weak quartz and epidote veining on fractures to locally intense kaolinization.

JURASSIC

Klotassin Suite

Syenite is seen as several scattered outcrops in the central portion of the property and a large mass to the east of the Augusta showing. This unit is unaltered and consists of phenocrysts of pink orthoclase, up to 10 cm across, set in a very coarse matrix of hornblende and plagioclase feldspar. Crude alignment of the crystals occurs. A weak foliation is present in some outcrops. The matrix consists of medium- to coarse-grained, black hornblende with finer-grained orthoclase and plagioclase.

PALEOZOIC

Basement Metamorphic Complex

a) Hornblende-biotite granodiorite

This is a medium-grained rock with a granitic texture showing thickly banded gneissic textures. Foliation ranges from well developed to absent.

b) Metasediments

This is a highly variable metamorphosed unit. Rock types include gray marble, banded quartz-feldspar-mica schist, quartz-feldspar-mica gneiss, chlorite schist, amphibolite-rich schist, amphibolite and gray quartzite. All rock types exhibit a penetrative foliation oriented northwest and dipping steeply to the northeast. Metamorphic textures range from mylonite through gneiss and schist. Limy members of this unit have been altered to skarn as described under "Mineralization", following.

## MINERALIZATION

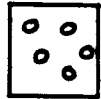
Precious metal mineralization occurs in narrow quartz veins within and adjacent to porphyry dykes, and within elongate east-west trending magnetite-rich skarns as shown on Figures G-8 to G-15 in pocket. A summary of all significant samples taken from bulldozer and excavator trenches, as well as diamond drill core, is included in Appendix Four. Diamond drill sections with gold and silver assays are shown on Figures G-16a to G-16t on the following pages.

### Margarete Vein System

The best example of quartz veining is the Margarete vein which was discovered about 1932 by F. Guder after he had found the nearby Augusta showing. There was active exploration on Mt. Freegold at this time with discovery of the Rambler (Antoniuk property) and G-3 veins (LaForma Mine) in 1931. Guder explored the Margarete vein over a fifty year period with a number of hand dug shallow (6-7 m) shafts, trenches, and ground sluices. The GSC report that vein specimens from the dumps of one of the Margarete shafts assayed up to 2070 g/t (60.3 opt) gold.

The Margarete vein is a near vertical, west-northwesterly trending swarm of irregular quartz veinlets often associated with argillically altered quartz feldspar porphyry dykes. The zone that contains the veins lacks sharp boundaries but has good lateral continuity and can be easily traced. The veinlets, which consist mainly of quartz-carbonate material with minor sulphide altered to limonite, can be relatively narrow (0.3 to 1.0 m), but the mineralized zone, which often consists of intensely altered porphyry, has an average true width of about 3.3 m. Leaching of the sulphides probably extends

LEGEND FOR 1987 DRILL SECTIONS



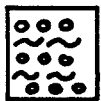
QUARTZ-FELDSPAR PORPHYRY



ORTHOCLASE-HORNBLLENDE PORPHYRITIC SYENITE



CHLORITE-HORNBLLENDE-QUARTZ-FELDSPAR SCHIST AND GNEISS



QUARTZOFELDSPATHIC SCHIST AND GNEISS



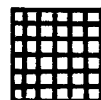
QUARTZITE



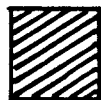
AMPHIBOLITE



MASSIVE MAGNETITE +/- QUARTZ



SKARN: CLORITE+/-EPIDOTE+/-MAGNETITE+/-DIOPSIDE+/-GARNET  
+/-ACTINOLITE+/-HEMATITE+/-SPECULAR HEMATITE



INTENSELY ALTERED ZONE



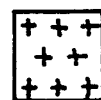
BRECCIA TEXTURES



FAULT



MARBLE



GRANODIORITE

N. 6908546.72

HOLE

**GLD - 87-01**

E. 388876.46

Az. 180°

Start \_\_\_\_\_

El. 1282.84

Dip -60°

Finish \_\_\_\_\_

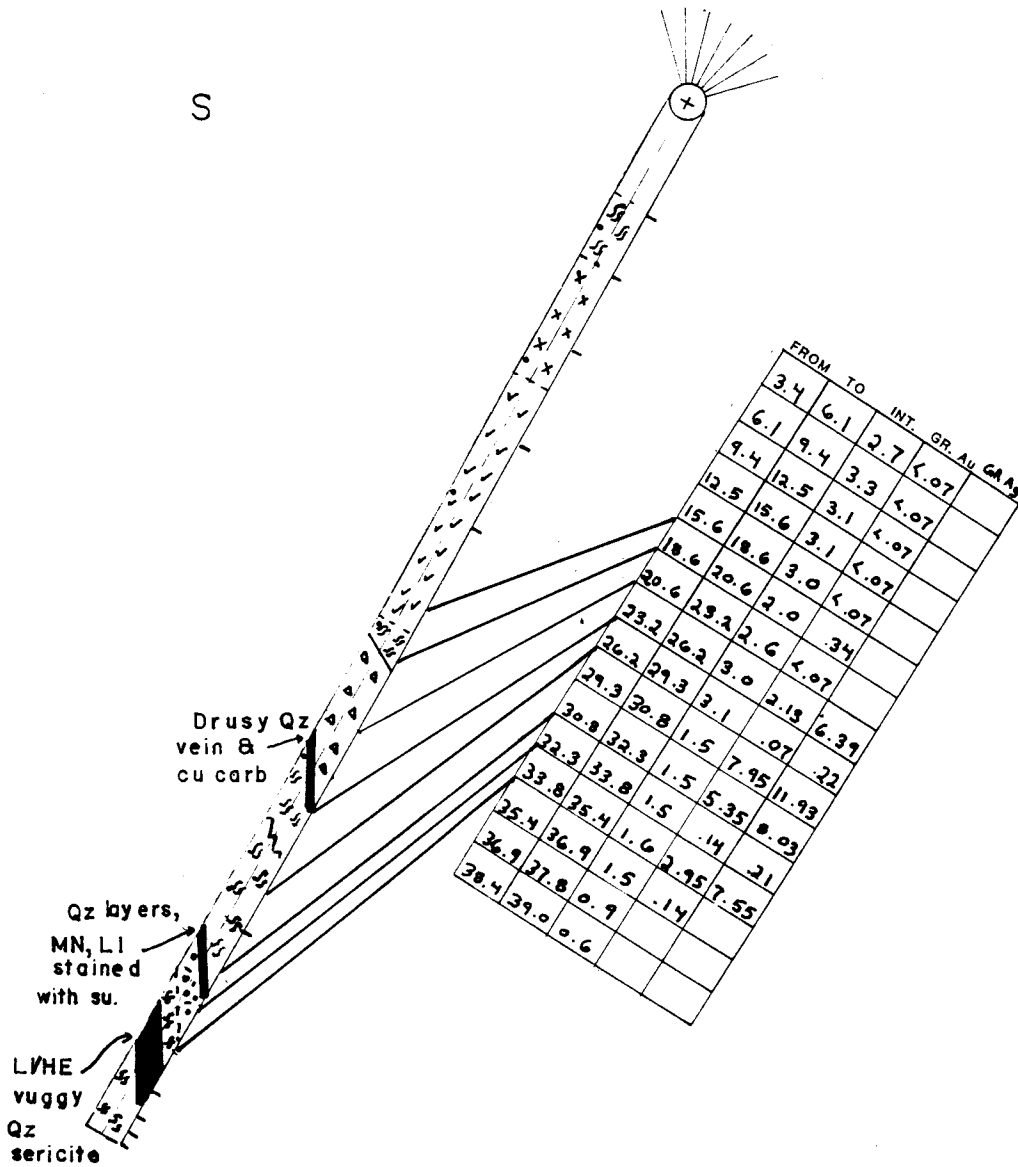


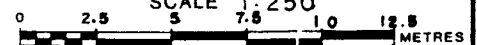
Figure 16b

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

GOLDSTAR PROPERTY

**DRILL SECTION**

SCALE 1:250



N6908520.41

HOLE GLD-87-02

E. 388878.28

Az. 356° Start \_\_\_\_\_

El. 1281.69

Dip - 53° Finish \_\_\_\_\_

S

N

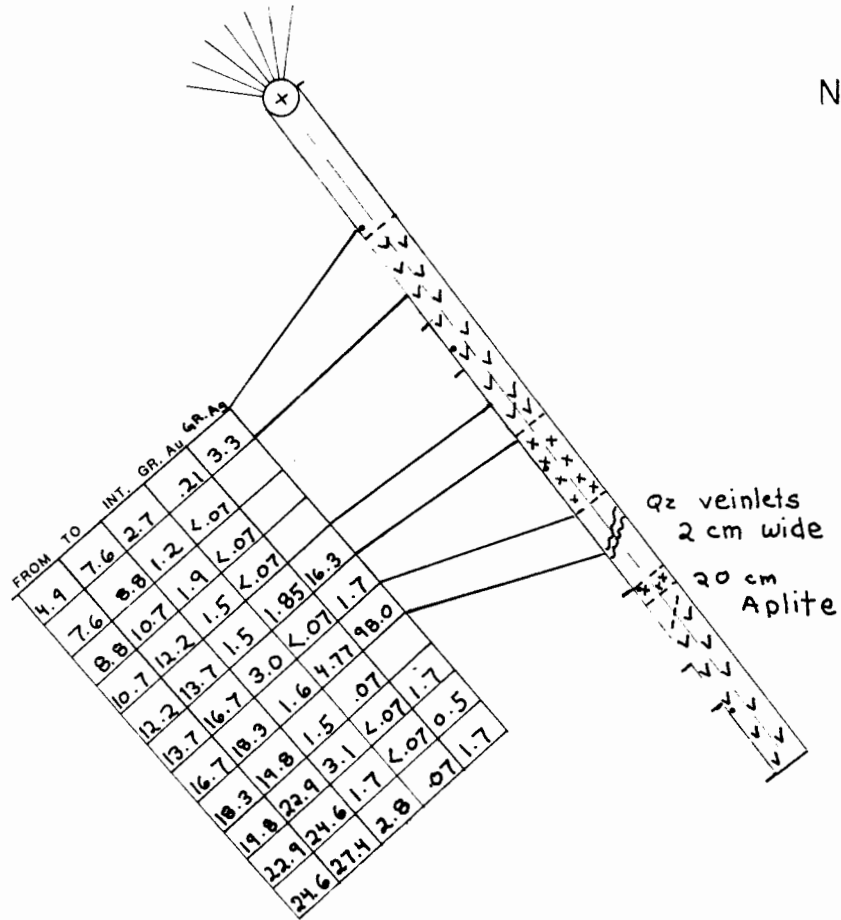
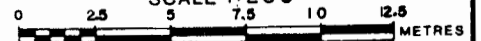


Figure 16c

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
GOLDSTAR PROPERTY

DRILL SECTION

SCALE 1:250



N.6908515.19

HOLE GLD - 87-03

E.388828.76

Az. 010° Start

El.1273.62

Dip - 50° Finish

S

N

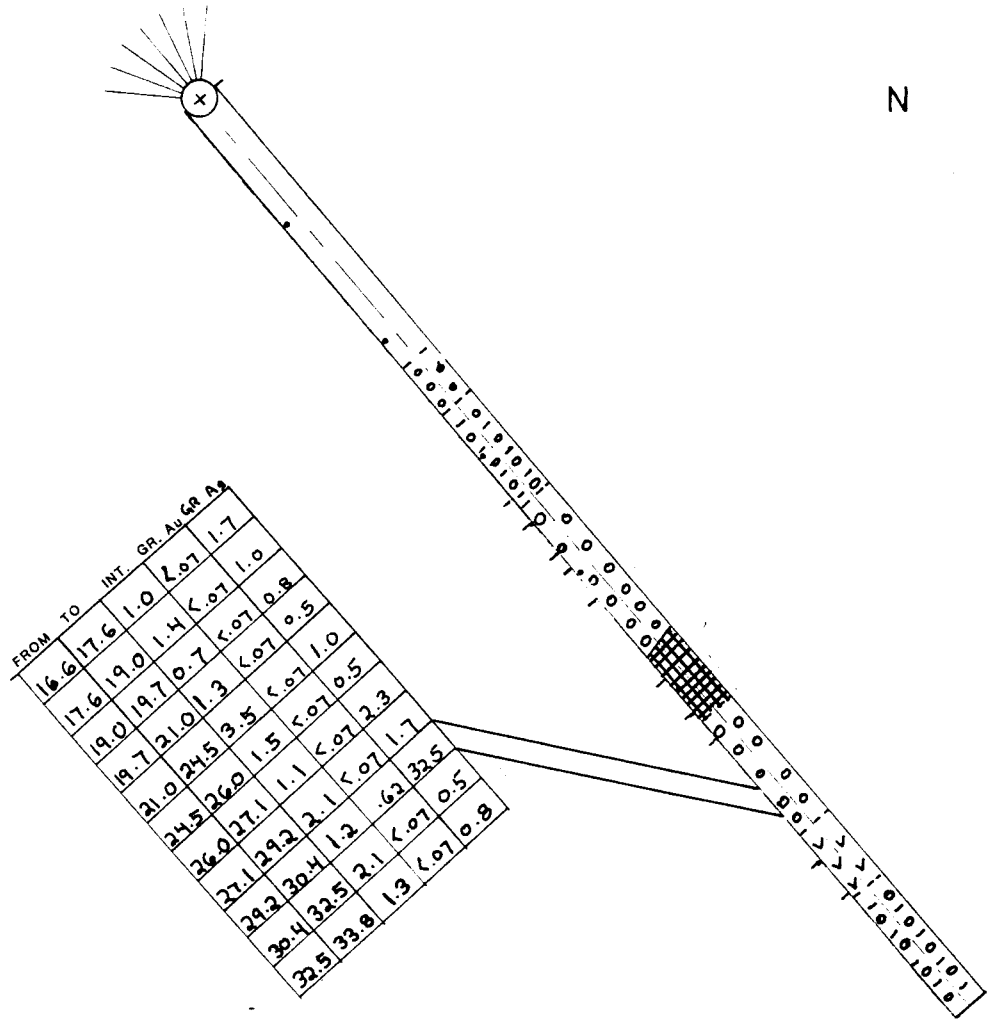


Figure 16d

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

GOLDSTAR PROPERTY

DRILL SECTION

SCALE 1:250



N. 6908489.96

HOLE GLD-87-04

E. 388927.5

Az. 010° Start \_\_\_\_\_

El. 1293.22

Dip -48° Finish \_\_\_\_\_

S

N

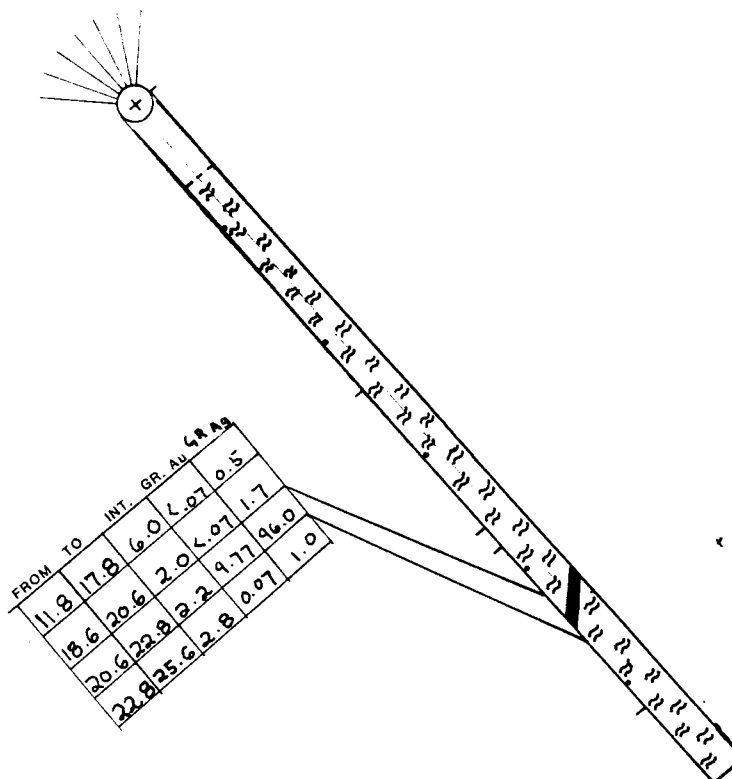


Figure 16e

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
GOLDSTAR PROPERTY  
**DRILL SECTION**

SCALE 1:250

0 2.5 5 7.5 10 12.5 METRES

N. 6908475.7

HOLE GLD- 87-05

E. 388976.97

Az. 010° Start \_\_\_\_\_

El. 1304.53

Dip -48° Finish \_\_\_\_\_

S

N

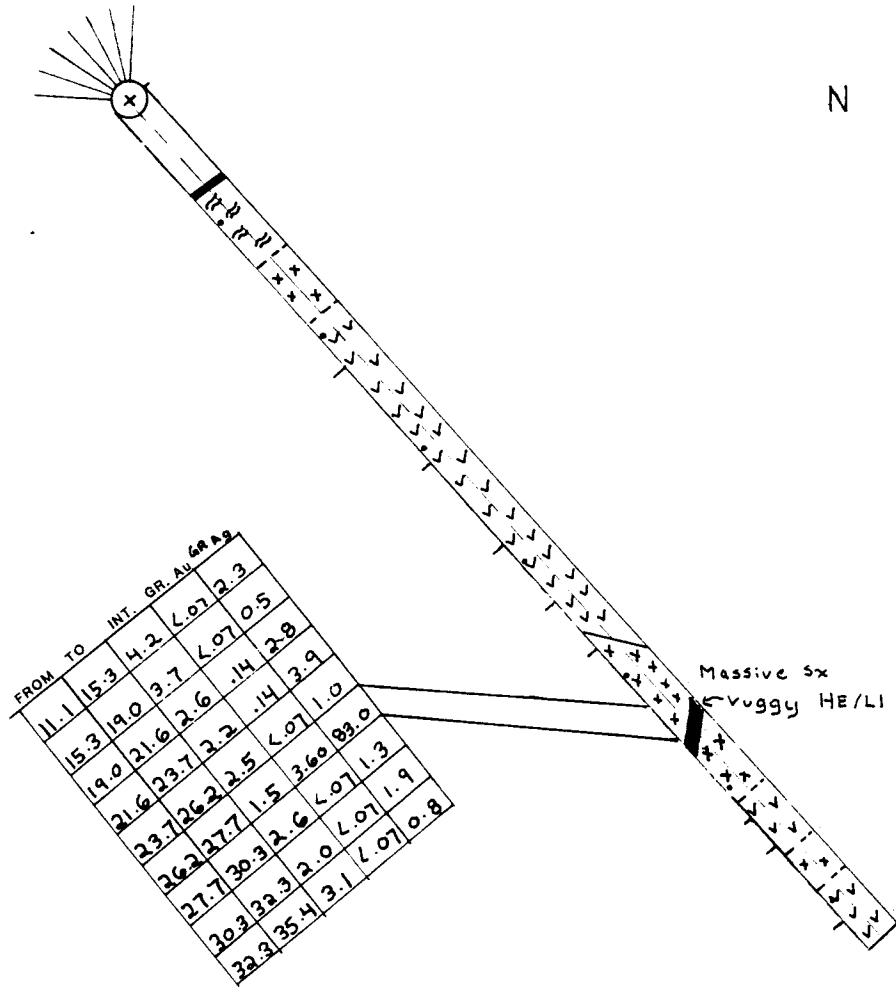
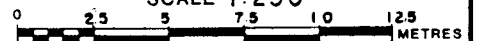


Figure 16f

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
GOLDSTAR PROPERTY

**DRILL SECTION**

SCALE 1:250



N.6908540.61

HOLE GLD-87-06

E.388779.77

Az. 010° Start \_\_\_\_\_

EI. 1268.62

Dip -50° Finish \_\_\_\_\_

S

N

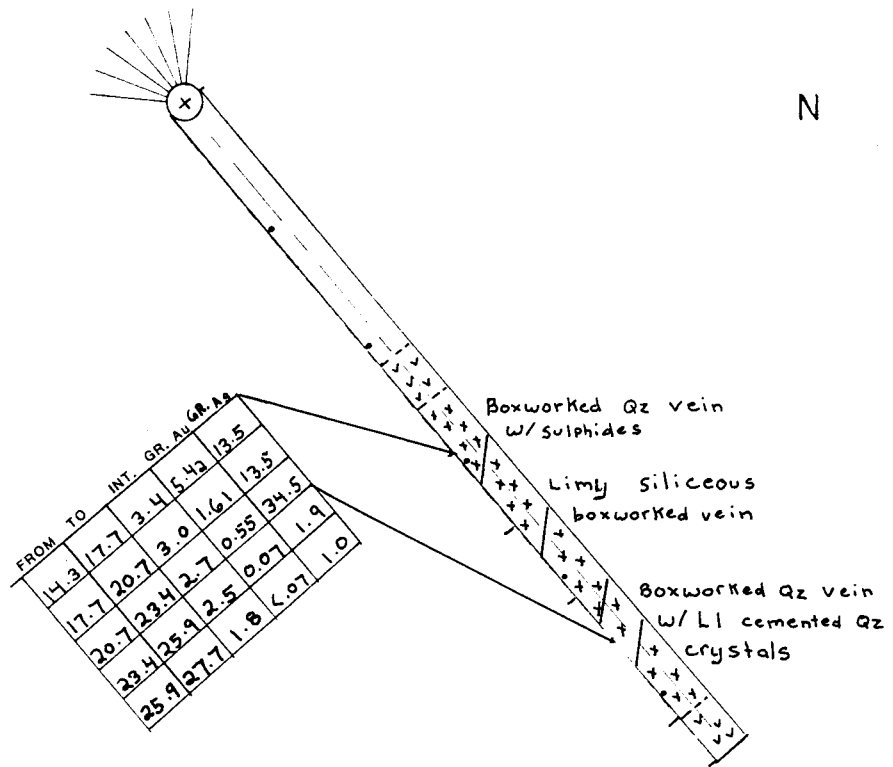


Figure 16g

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
 GOLDSTAR PROPERTY  
**DRILL SECTION**

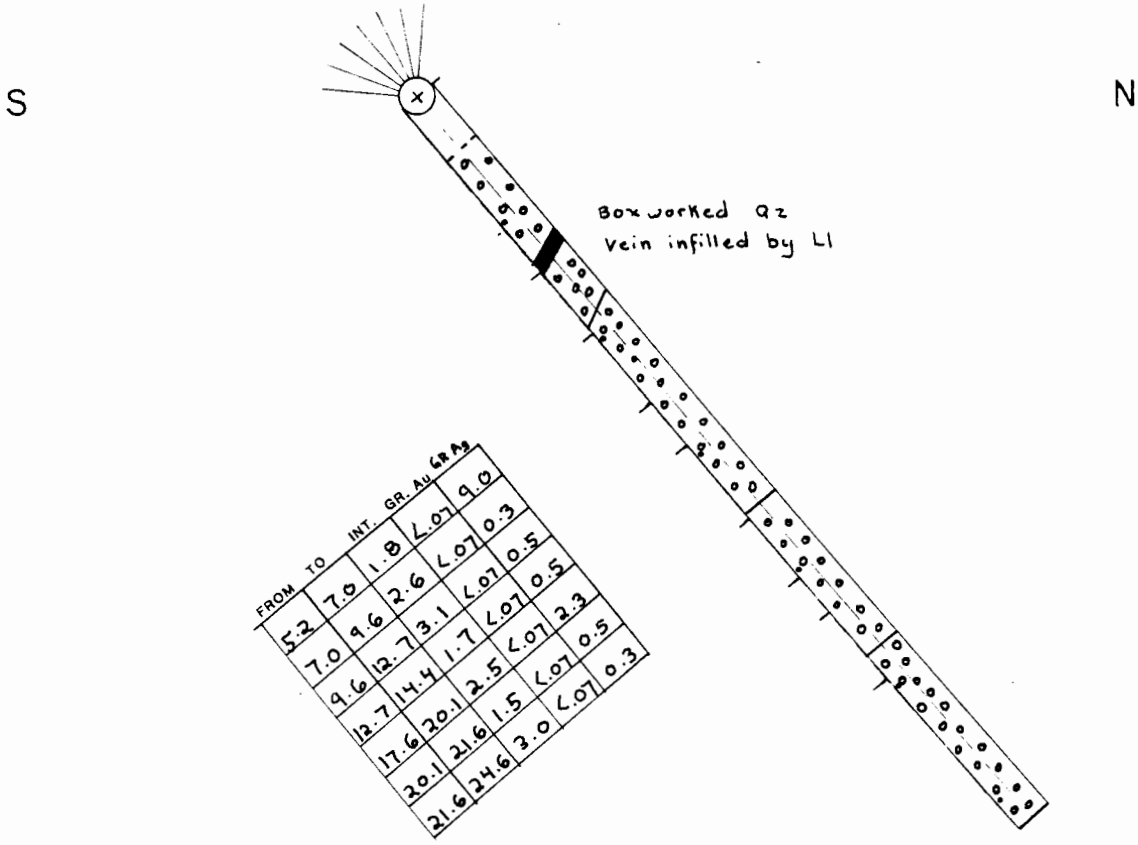
SCALE 1:250

0 2.5 5 7.5 10 12.5 METRES

N. 6908588.3 HOLE GLD-87-07

E. 388728.15 Az. 010 Start \_\_\_\_\_

El. 1261.65 Dip -50 Finish \_\_\_\_\_



FROM	TO	INT.	GR. AU	GR Au
5.2	7.0	1.8	<.07	0.3
7.0	9.6	2.6	<.07	0.5
9.6	12.7	3.1	<.07	0.5
12.7	14.4	1.7	<.07	0.3
17.6	20.1	2.5	<.07	0.5
20.1	21.6	1.5	<.07	0.3
21.6	24.6	3.0	<.07	0.3

Figure 16h

ARCHER, GATHRO & ASSOCIATES (1981) LIMITED  
GOLDSTAR PROPERTY

## DRILL SECTION

SCALE 1 250

0 2.5 5 7.5 10 12.5 METRES

N6908572.51

HOLE GLD-87-08

E. 388676.02

Az. 010° Start \_\_\_\_\_

El. 1257.19

Dip - 50° Finish \_\_\_\_\_

S

N

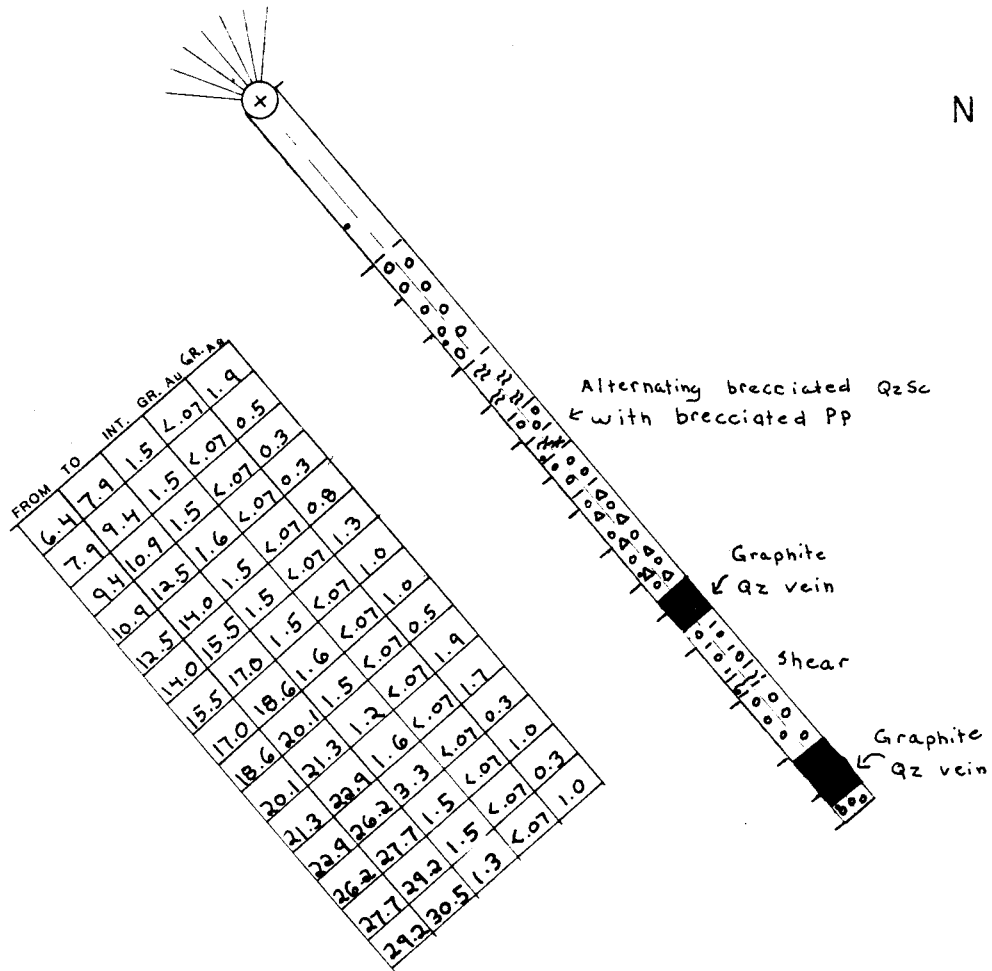
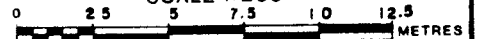


Figure 16i

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
GOLDSTAR PROPERTY

DRILL SECTION

SCALE 1:250



N.6908587.12

HOLE GLD-87-09

E.388631.32

Az. 010° Start \_\_\_\_\_

El.1257.88

Dip -51° Finish \_\_\_\_\_

S

N

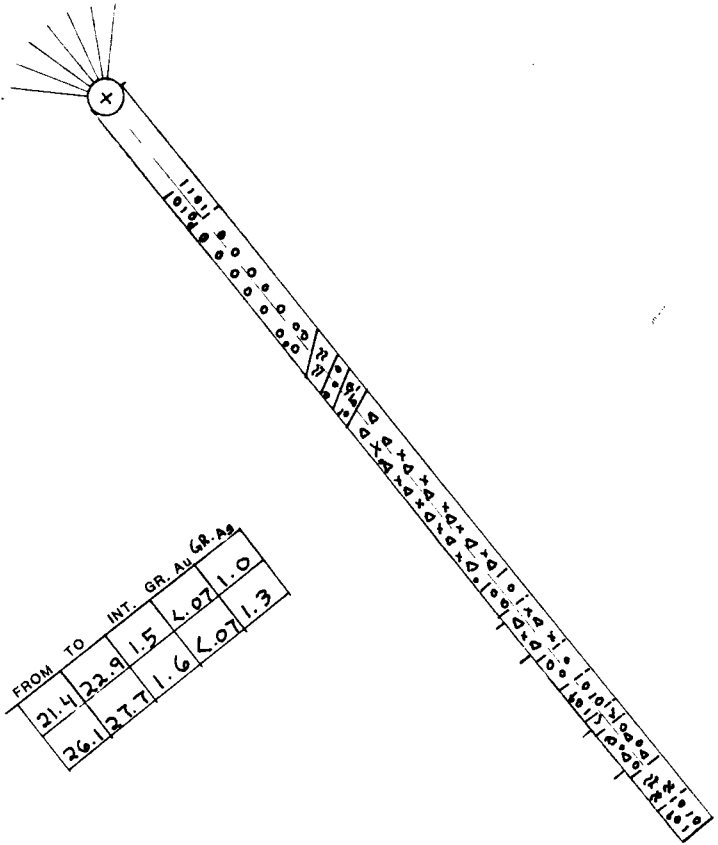
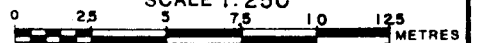


Figure 16j

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
GOLDSTAR PROPERTY

**DRILL SECTION**

SCALE 1:250



# COMPOSITE GEOLOGICAL SECTIONS,

## DDH 10, 11, 12: AUGUSTA ZONE

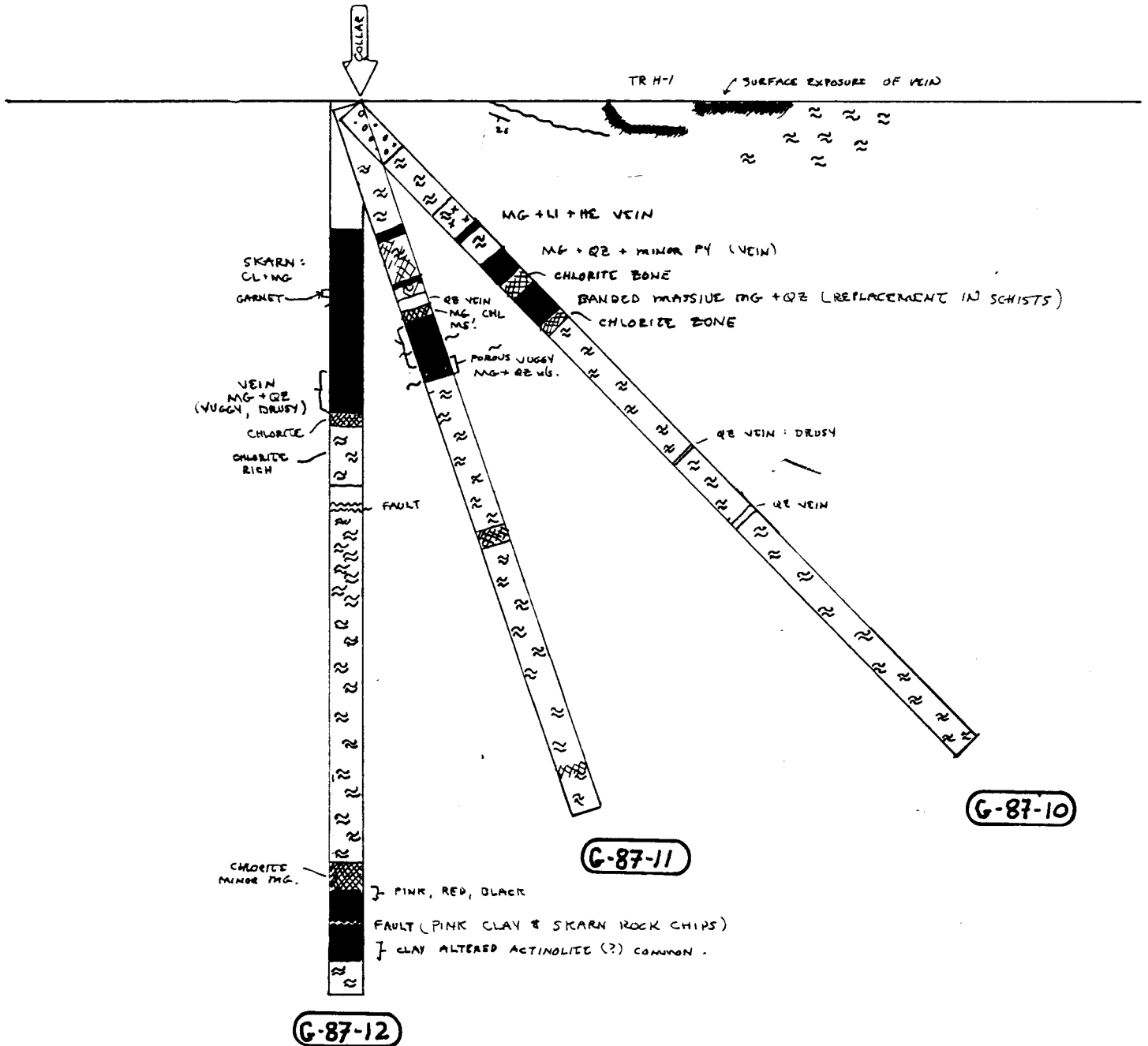
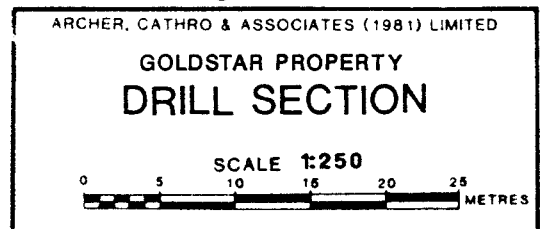


Figure 16k



N.6908221.59

HOLE GLD - 87-10

E.389319.64

Az. 162° Start \_\_\_\_\_

El. 1384.84

Dip - 45° Finish \_\_\_\_\_

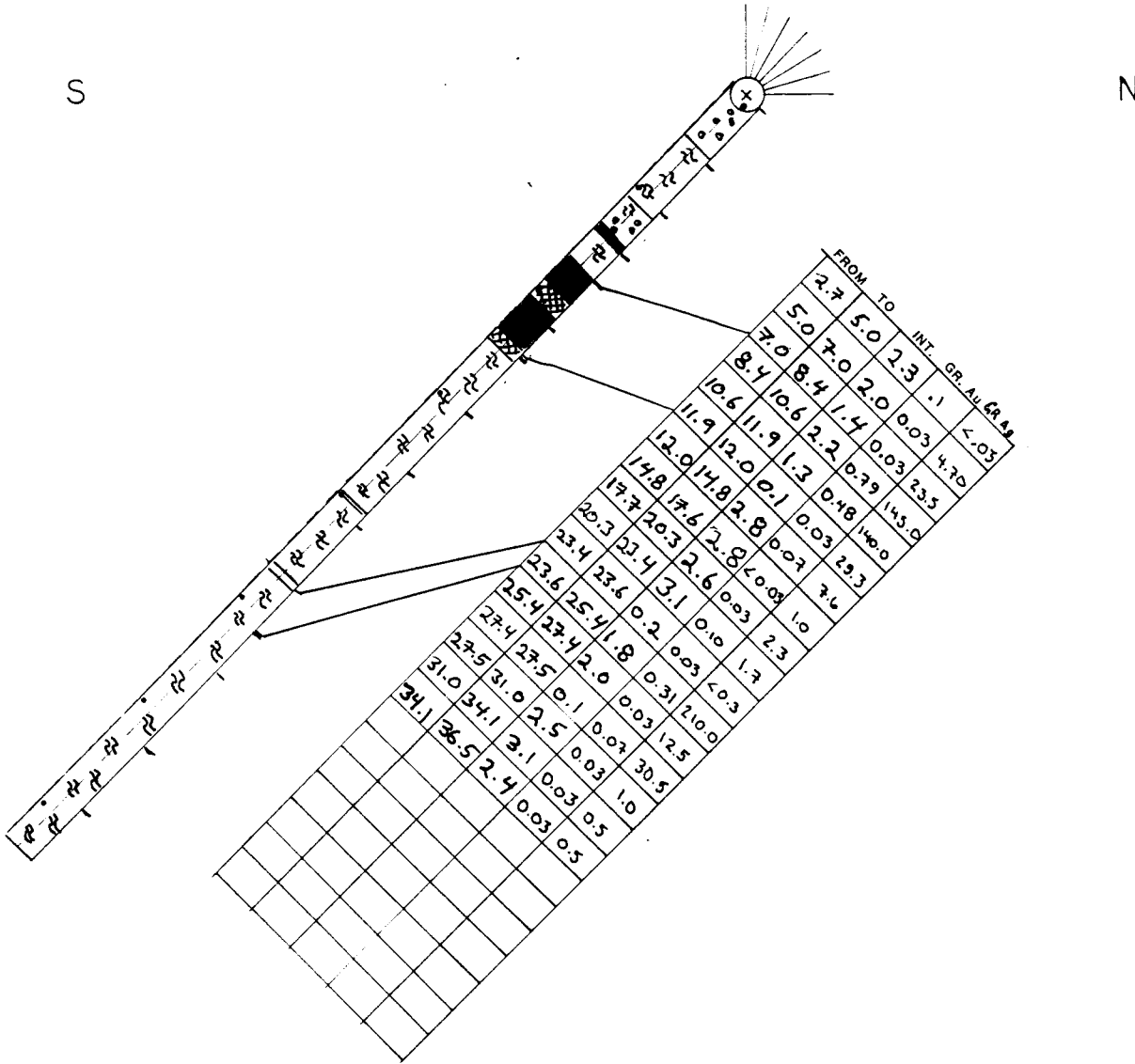


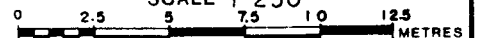
Figure 161

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

GOLDSTAR PROPERTY

DRILL SECTION

SCALE 1:250





N. 6908221.59

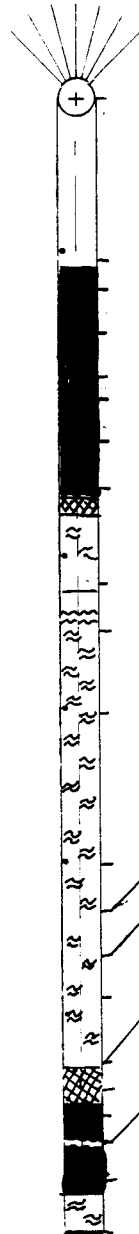
HOLE GLD-87-12

E. 389319.64

Az. \_\_\_\_\_ Start \_\_\_\_\_

El. 1384.84

Dip -90° Finish \_\_\_\_\_



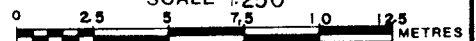
FROM	TO	INT.	GR. Au	GRA <sub>g</sub>
5.2	6.2	1.0	0.03	2.8
6.2	7.6	1.4	0.03	8.0
7.6	9.1	1.5	0.03	32.0
9.1	9.8	0.7	0.03	4.4
9.8	11.2	1.4	0.21	6.3
11.2	12.8	1.6	0.24	10.3
12.8	15.8	3.0	0.07	9.5
15.8	17.4	1.6	0.17	11.5
17.4	20.1	2.7	0.07	3.0
20.1	25.0	4.9	0.03	0.5
25.0	26.6	1.6	0.03	1.0
26.6	28.0	1.4	0.99	3.3
28.0	29.9	1.4	0.07	1.0
29.9	31.5	2.1	0.03	0.03
31.5	32.5	1.0	0.62	2.5
32.5	33.3	0.8	1.34	5.5
33.3	34.2	0.9	0.96	3.3
34.2	35.5	1.3	0.07	1.0
35.5	37.0	1.5	0.07	0.5

Figure 16n

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
GOLDSTAR PROPERTY

DRILL SECTION

SCALE 1:250



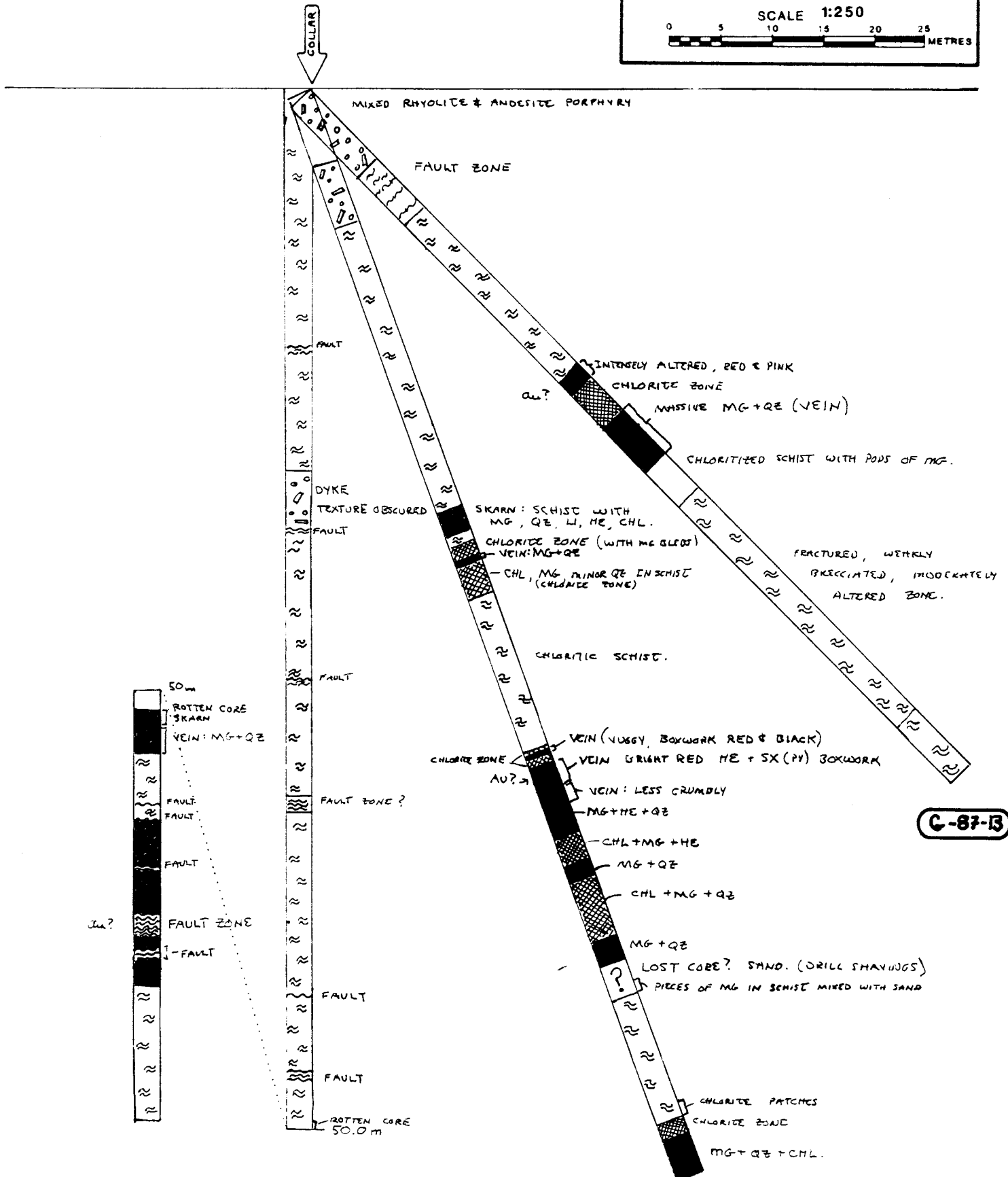
# COMPOSITE GEOLOGICAL SECTIONS

## DDH 13, 14, 15: AUGUSTA ZONE

Figure 160

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
 GOLDSTAR PROPERTY  
**DRILL SECTION**

SCALE 1:250



N. 6908227.22

HOLE GLD-87-13

E. 389330.21

Az. 159° Start \_\_\_\_\_

El. 1385.33

Dip - 45° Finish \_\_\_\_\_

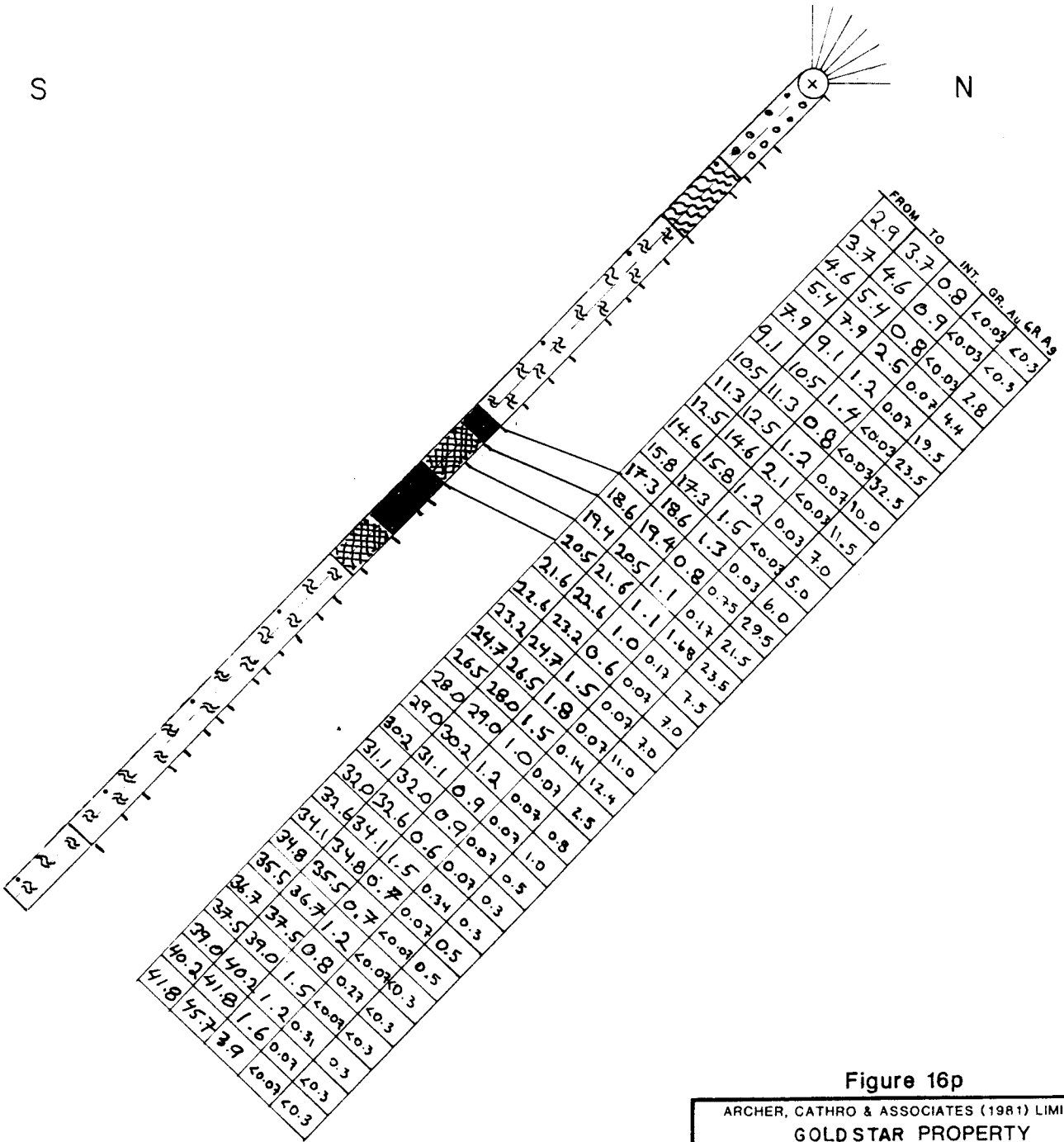


Figure 16p

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
 GOLDSTAR PROPERTY  
**DRILL SECTION**

SCALE 1 250

N. 6908227.22

HOLE **GLD-87-14**

E. 389330.21

Az. 159° Start \_\_\_\_\_

El. 1385.33

Dip -71° Finish \_\_\_\_\_

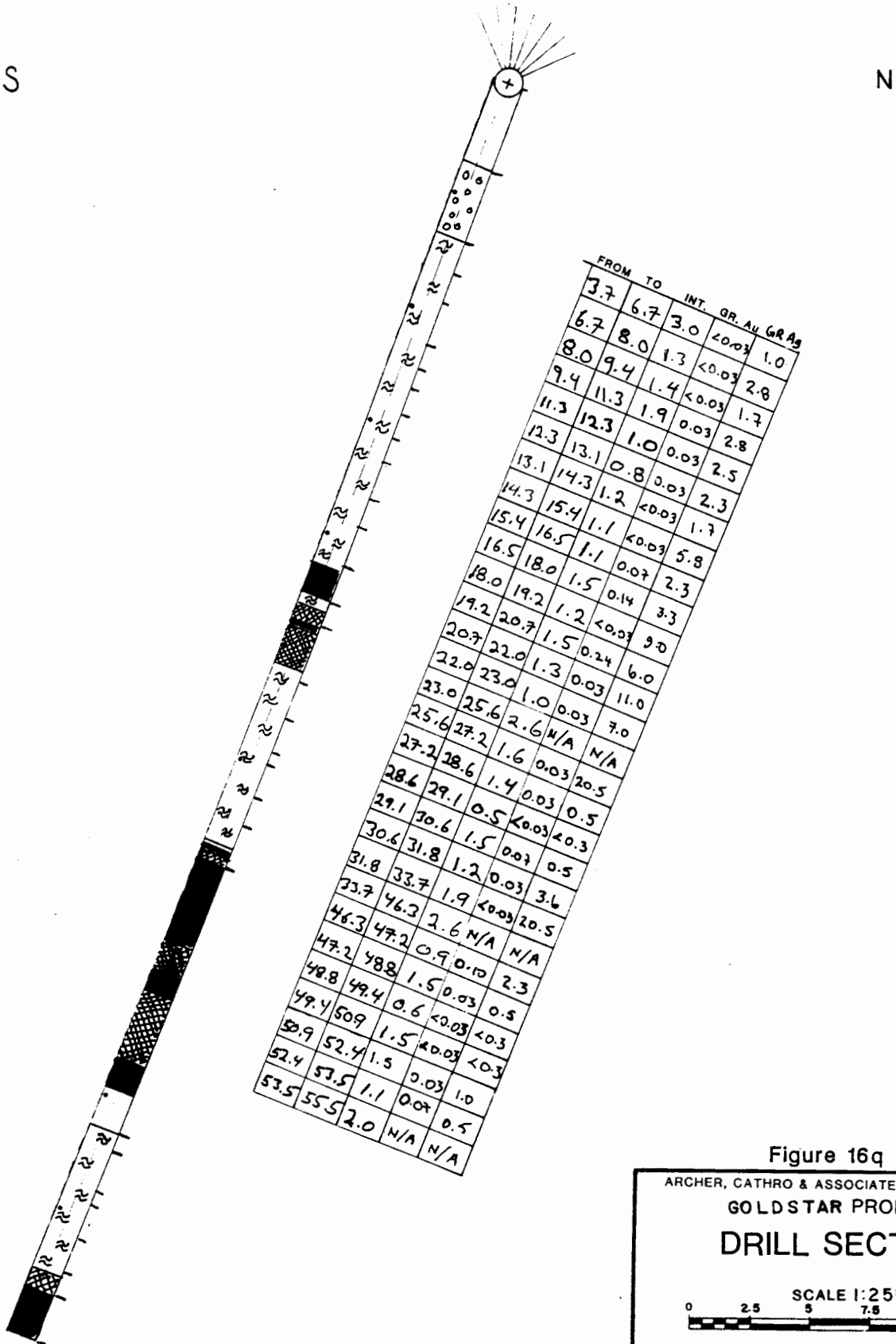


Figure 16q

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
 GOLDSTAR PROPERTY  
**DRILL SECTION**

SCALE 1:250

N. 6908227.22

**HOLE** GLD - 87-15

E. 389330.21

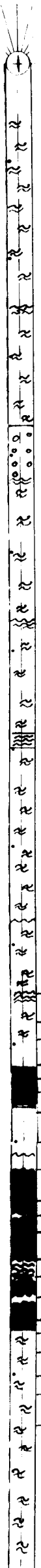
Az \_\_\_\_\_ Start \_\_\_\_\_

El. 138533

Dip - 90 Finish \_\_\_\_\_

S

N



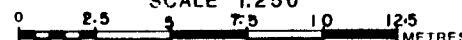
FROM	TO	INT.	GF	AU	GRA <sub>9</sub>
47.4	48.8	1.4	0.24	1.0	
48.8	49.7	0.9	0.03	0.5	
49.7	50.9	1.2	0.03	1.7	
50.9	51.5	0.6	0.24	7.0	
51.5	52.4	0.9	0.07	3.3	
52.4	53.3	0.9	0.07	2.3	
53.3	54.7	1.5	0.03	1.0	
54.7	56.3	1.6	0.03	1.0	
56.3	57.9	1.6	0.03	9.8	
57.9	58.5	0.6	0.10	41.5	
58.5	59.4	0.9	0.17	18.0	
59.4	60.8	1.4	1.95	15.5	
60.8	61.6	0.8	0.55	108.0	
61.6	62.8	1.2	2.34	17.0	
62.8	63.9	1.1	18.80	98.0	
63.9	64.6	0.7	0.07	6.5	
64.6	65.5	0.9	<0.03	1.9	
65.5	66.8	1.3	<0.03	1.7	
66.8	67.7	0.9	<0.03	1.9	
67.7	69.2	1.5	<0.03	1.7	
69.2	70.7	1.5	<0.03	1.0	

Figure 16r

ARCHER, CATPRO & ASSOCIATES (1981) LIMITED  
GOLDSTAR PROPERTY

**DRILL SECTION**

SCALE 1:250



N.6908371.25

HOLE GLD-87-16

E.389215.65

Az. 022° Start

El. 1335.71

Dip- 45° Finish

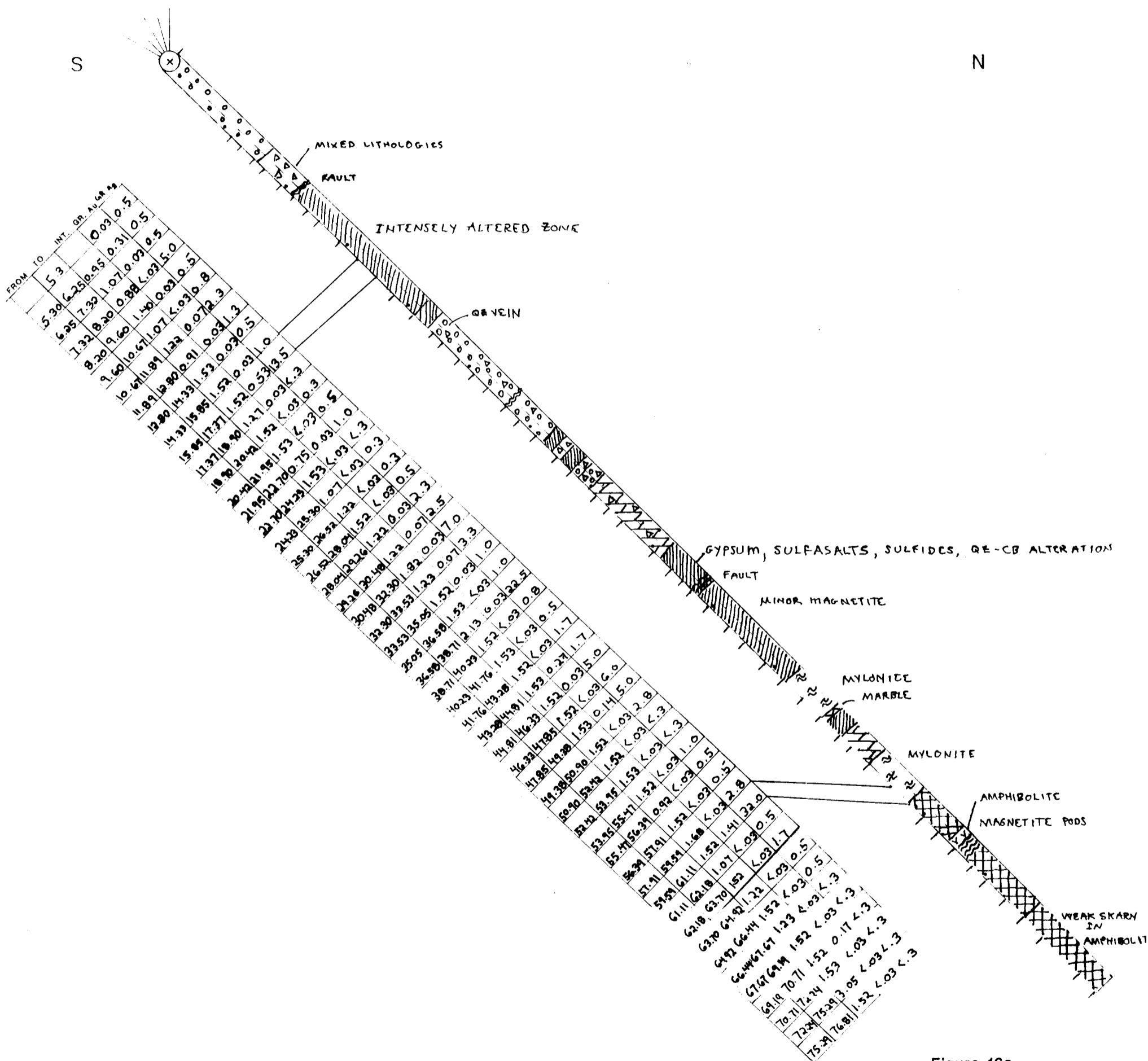


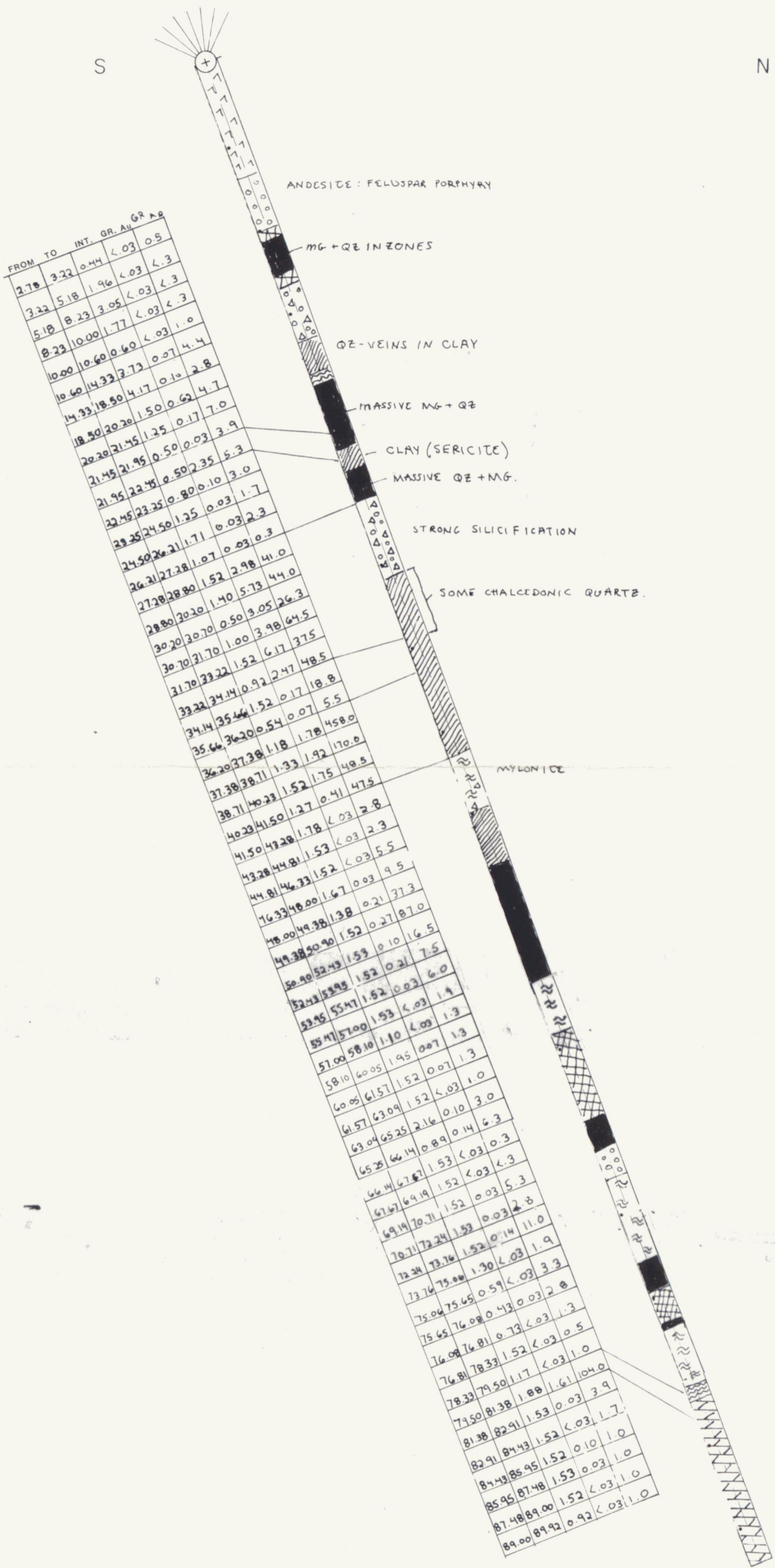
Figure 16s  
 ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
 GOLDSTAR PROPERTY  
 DRILL SECTION  
 SCALE 1:250  
 0 25 50 75 100 125 METRES

002107

N. 69 7125 HOLE GLD-87-17

E. 389215.65 Az. 022° Start \_\_\_\_\_

EI. 1335.71 Dip -70° Finish \_\_\_\_\_



092127

Figure 16t  
 ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
 GOLDSTAR PROPERTY  
**DRILL SECTION**  
 SCALE 1:250  
 0 2.5 5 7.5 10 12.5 METRES

to depths of about 60 m, as is the case at the nearby Antoniuk deposit. Drilling of unoxidized material indicates the sulphides are pyrite with some chalcopyrite and arsenopyrite.

Gold and silver assays vary widely depending upon whether the samples have been taken from the veinlets, which can have good values of up to 150 g/t (4.5 opt) gold over narrow widths (0.3 m), or from the whole zone that has a relatively consistent content of about 4.1 g/t (0.12 opt) gold and 48.0 g/t (1.4 opt) silver over 3.3 m. The gold and silver content of this zone is discussed more fully under Mineral Inventory in the following section.

The vein has been traced on surface for at least 340 m and the probable strike extension to the northwest is known for an additional 250 m. A gold soil geochemical anomaly extends for at least an additional 1.0 km to the northwest. The vein is truncated at its southeastern end by a right(?) lateral fault and it is probable that the offset extension continues at least 200 m to the Kirsteen zone or 300 m to the Augusta showing.

#### Kirsteen Zone

The Kirsteen zone occurs 200 m east of the truncated eastern end of the Margarete vein and may be part of the same structure. If the Margarete has a right hand offset of 50 m, it would extend through the Kirsteen zone; however, if the Margarete is offset about 200 m then it extends through the Augusta showing. The structure at the Kirsteen zone could be a parallel and separate structure. The vein at the Kirsteen zone appears similar to the Margarete in that it trends west-northwest and probably dips steeply to the northeast. As in the Margarete vein, the gold mineralization is carried in silicified structures within intensely clay altered and brecciated porphyry. There is

some minor quartz-magnetite skarn development in the host rocks but these skarns are not as continuous nor as well developed as at the main skarn zone to the west, as described below, or the Augusta showing to the east. The best trench intersection over the Kirsteen zone graded 1.92 g/t (0.056 opt) gold and 30.0 g/t (0.87 opt) silver over 5 m and a drill hole directly underneath (87-17) intersected 4.33 g/t (0.13 opt) gold and 83.3 g/t (2.43 opt) silver over 6.8 m (with a true width of perhaps 3-4 m). Unfortunately, a drill hole between these two intersections (87-16) intersected the structure but was unmineralized indicating that the mineralization can be highly erratic.

#### Magnetite Skarn

Limy members of the metasedimentary basement rocks have formed iron skarns with apparent introduction of iron and silica. These skarns are spatially associated with amphibolite horizons and the metasomatism is probably related to emplacement of the Jurassic syenite which lies to the east and north. The bands of skarn, which can be up to 70 m wide but usually averages 20 to 30 m wide, trend northwesterly, parallel to the penetrative foliation of the hosting schists, and dip steeply to the northwest. Primary skarn minerals include quartz, magnetite, epidote, diopside, red and brown garnets and calcite. The magnetite occurs as intergrowths with quartz and as zones of massive magnetite. The primary skarn minerals are overprinted by an assemblage of retrograde skarn minerals which include quartz, actinolite, chlorite after actinolite, and chlorite. Oxidation of the magnetite has converted some of the magnetite to hematite. The development of the retrograde assemblage (and possibly the primary skarn development as well) appears spatially related to zones of structural weakness. The retrograde minerals are zoned from a core of

magnetite (and/or hematite) and quartz out into a surrounding zone of chlorite (sometimes after actinolite). Coarse-grained muscovite occasionally occurs in a wide potassic alteration halo around both primary and retrograde skarns. Precious metal mineralization and minor amounts of copper appear to be spatially related to zones with retrograde skarn assemblages.

The magnetite skarn is best exposed in a 500 m long zone located northeast of the Margarete vein. For most of this length, it carries trace (0.03 g/t or 0.001 opt) gold and low, but consistent, values in silver averaging 3.0 to 15.0 g/t (0.1 to 0.5 opt). Only one sample from the most northwesterly trench sample (Dynasty 1974-K) carries any appreciable gold, 11.6 g/t (0.34 opt) gold over 1.8 m, but this occurs in a segment of metasediment (or porphyry?) within the skarn. The skarn zone apparently extends farther to the northwest but this has not been investigated. Trench samples (Dynasty 1974-G) from the eastern end of the zone carry good silver values (up to 410 g/t [12.0 opt] silver over 1.5 m within an interval grading 155 g/t [4.5 opt] silver over 9.9 m) but the skarn zone is truncated abruptly at this point and the mineralization may be related to the fault which is cutting the skarn.

The magnetite skarn is well defined by its magnetic expression, as shown by the contoured magnetic plan map on Figure G-17a in pocket. The southeastern extension of the skarn zone (described above) is uncertain as there is little magnetic expression between the main skarn zone and the Augusta showing located 350 m farther to the southeast. There are some magnetite exposures in trenches in this interval but they are weakly developed and do not appear to form a consistent horizon.

### Augusta Showing

This occurrence was the original discovery of lode gold in the Dawson Range. F. Guder had found mineralized magnetite float while prospecting for placer gold, which led him to the Augusta showing that outcrops on a ridge crest near the top of Mt. Freegold. A pod of massive magnetite skarn that varies from 1 to 5 m wide can be traced for about 100 m in a northwesterly direction, at which point the magnetite skarn is truncated, as indicated by its disappearance in outcrop and a change in magnetic expression.

The original Augusta mineralization consisted of free gold found within surface samples of highly oxidized, vuggy and limonitic coated magnetite. Massive fresh magnetite usually carries low gold values. One 1987 trench sample of intensely clay altered and hematitic material assayed up to 366 g/t (10.67 opt) gold and 106 g/t (3.0 opt) silver over 5 m across the skarn zone and resampling returned grades of 105 g/t (3.0 opt) gold over the same interval. More detailed trenching showed the sample was taken from part of the skarn that had been faulted, with retrograde skarn development. Much of the mineralized material is apparently confined to the fault and consisted of chlorite and hematite after magnetite with intense clay alteration. Detailed drilling of the showing (Holes 87-10 to 87-15) showed that faulting is extensive, causing a complex and extremely erratic distribution of rock units, alteration and mineralization. Of the six holes drilled directly under the high grade trench assay, only two had significant intersections:

<u>DDH</u>	<u>Sample Length (m)</u>	<u>Gold g/t (opt)</u>	<u>Silver g/t (opt)</u>
87-11	3.4	2.40 (0.07)	26.1 (0.75)
87-15	6.0	4.45 (0.13)	46.3 (1.35)

With the degree of faulting evident in the drill holes, there is a small possibility that the high grade material seen at surface has been offset and has not been intersected by the drilling.

It is also possible that the gold mineralization found at surface is formed by supergene surface enrichment and grades encountered in the drill holes are more typical of the average grades in the structures.

### Vindicator Zone

The Vindicator zone is located 1000 m west along strike from the Margarete vein. Old bulldozer trenches in this area were not completely cut to bedrock but they did expose a narrow (0.2 m) quartz carbonate vein (called the Red Fox showing) which carries minor galena, grading in specimen up to 5800 g/t (171 opt) silver and 70% lead. One part of the trench sampled in 1968 assayed 3.78 g/t (0.11 opt) gold and 620 g/t (18.1 opt) silver over 1.22 m. A specimen of limonite stained quartz vein float collected nearby in 1986 assayed 3.84 g/t (0.11 opt) gold. This occurrence lies toward the northwestern end of a 500 m long gold geochemical anomaly which extends off the present geochemical grid. A geochemical anomaly from previous sampling in 1981 suggests the geochemical anomaly extends at least another 500 m to the northwest. This occurrence was not trenched during 1987 since building an access road to this area proved difficult.

### Minor Occurrences

1. A minor quartz carbonate vein in Trench G-10, about 70 m south of the Margarete vein, assayed 5.9 g/t (0.17 opt) gold and 32.0 g/t (0.93 opt) silver over 5 m. Although this is a minor structure, it is definitely distinct from the Margarete vein.

2. At the north end of Trench G-10, a porphyry dyke cuts chlorite gneiss. The highly altered exposure of porphyry assays 1.31 g/t (0.038 opt) gold and 54.0 g/t (1.58 opt) silver across 10.0 m (true width is likely much less). This occurrence is at least 50 m north of the main skarn zone and represents a new zone.
3. Along the southern boundary of the grid, a number of previously unknown pits and shafts were located. All the workings had caved and been overgrown with vegetation but one specimen of quartz carbonate vein material from a dump assayed 4.59 g/t (0.134 opt) gold. This vein zone occurs along the contact of the metamorphic basement rocks and granodiorite and it warrants further exploration.
4. No exploration was conducted around the Cabin porphyry zone which is located a farther 300 m south of the 1987 grid. This had been described in 1969 (by Yukon Revenue) as an altered breccia but mapping in 1981 indicated the alteration is actually leaching due to intense weathering. An area with moderately anomalous gold soil geochemical assays occurs in the area and the leached cap and the potential of this zone requires further investigation. Narrow quartz veins nearby produced specimens assaying up to 15.77 g/t (0.46 opt) gold and 187.9 g/t (5.48 opt) silver (Yukon Revenue).
5. The Liberty and Castle zones lie 500 and 1000 m north of the 1987 grid and were not visited in 1987. They are both poorly explored zones of intense hydrothermal alteration which host small occurrences of gold and base metal mineralization. Limited soil geochemical surveys over both deposits had not been particularly anomalous. Neither zone has been systematically explored for the presence of bulk, low grade gold mineralization.

MINERAL INVENTORY

Margarete Vein:

There have been three programs of drilling which tested the Margarete mineralization. The positions of the drill holes from these programs are shown on Figure G-6, G-7 and G-8, in pocket.

a) Conwest Exploration Co. drilled the Margarete vein in 1959 with the following results. One additional hole did not intersect the vein and is not listed.

<u>Hole</u>	<u>Length(m)</u>	<u>Dip(°)</u>	<u>Azimuth(°)</u>	<u>Interval(m)</u>	<u>Gold(g/t)</u>
F-1	54.9	-45	35	2.6	11.66
F-2	68.6	-60	35	2.1	2.06
F-3	61.6	-45	0	1.2	4.11
F-4	68.9	-60	0	<u>2.4</u>	<u>0.35</u>
Weighted Average:				2.1 (6.7')	4.47 (0.13 opt)

b) As part of an extensive geochemical, geophysical and trenching program, Dynasty Explorations Ltd. drilled eight holes on the Goldstar property in 1974. Of these holes, three were drilled along the main magnetite skarn zone which was found to be unmineralized (trace to 0.35 g/t gold). Of the five holes drilled along the Margarete vein, three holes tested the vein with the following results. The other two holes did not intersect the vein.

<u>Hole</u>	<u>Length(m)</u>	<u>Dip(°)</u>	<u>Azimuth(°)</u>	<u>Interval(m)</u>	<u>Gold(g/t)</u>	<u>Silver (g/t)</u>
G-1	106.7	-50	13	3.1	1.85	48.0
G-6	76.8	-50	20	1.5	4.45	39.8
G-7	70.7	-55	17	<u>1.5</u>	<u>0.68</u>	<u>6.2</u>
Weighted Average:				2.0 (6.6')	2.20 (0.06 opt)	35.7 (1.04 opt)

c) Current Program

The first part of the 1987 drill program was designed to test the oxidized surface portion of the Margarete vein. The first two holes were sited at the Margarete #1 shaft and subsequent holes were stepped out at 50 m intervals. The siting of drill holes was based on an interpretation of the 1974 work by Dynasty. The 1987 drilling and trenching showed that the position of the Margarete vein was significantly different from its assumed position and, for this reason, four of the nine 1987 drill holes missed the Margarete vein. The five drill holes that intersected the Margarete vein had the following results.

<u>Hole</u>	<u>Length(m)</u>	<u>Dip(°)</u>	<u>Azimuth(°)</u>	<u>Interval(m)</u>	<u>Gold(g/t)</u>	<u>Silver (g/t)</u>
87-1	39.0	-60	180	12.2	3.09	45.3
87-2	27.4	-50	355	1.6	4.80	97.4
87-4	29.2	-50	10	2.2	9.60	95.3
87-5	36.9	-50	10	1.5	3.83	82.6
87-6	27.7	-50	10	<u>6.4</u>	<u>4.45</u>	<u>13.4</u>
Weighted average:				4.78 (15.7')	4.21 (0.12 opt)	47.2 (1.38 opt)

Because the 1987 drill holes were drilled with larger size core than used in previous drill programs, with a resultant improvement in recovery, the 1987 results were used as the basis for calculating a mineral inventory. Although the average vein intersection is 4.78 m in core, the true thickness is probably closer to 3.3 m. Vein intersections from previous drilling are often narrower but often have better grades. Ore reserves have only been computed for the 250 m segment of the Margarete vein centered on the Margarete #1 shaft and no reserves have been calculated for the strike extensions. The mineralization at the Augusta showing is too erratic and discontinuous to allow for calculation of an inventory with confidence. The following table is modeled on an idealized pit

with 45° walls and no attempt was made to compute reserves using an actual pit mining design. Specific gravity is assumed to be 2.5 for both ore and waste.

Geological Inventory  
Margarete Vein, Goldstar Property

<u>Depth(m)</u>	<u>Tonnes</u>	<u>Contained gold (g)</u>	<u>Contained silver (g)</u>	<u>Waste:Ore</u>
5	10,315	43,400	486,500	0.9:1
10	20,630	86,800	973,000	1.8:1
20	41,260	173,600	1,946,000	3.5:1
30	61,890	260,400	2,919,000	5.2:1
60	123,780	520,800	5,838,000	10.4:1

GEOCHEMISTRY

Most of the Goldstar property had been covered by geochemical surveys for base metals in 1974 and for gold in 1986. The results of the gold survey, as shown on Figure G-5, in pocket, show that the gold soil response is low over the known part of the Margarete vein, possibly due to immature soil development. The arsenic values from 1974 samples (not shown) show a correlation with the younger gray porphyry dykes and both the arsenic anomalies and the gray porphyry dykes appear to have a spatial relationship with gold mineralization.

No additional soil sampling surveys were conducted in 1987 but the bottom of some bulldozer trenches, which consisted of poorly exposed bedrock material, was geochemically sampled as a general guide to gold mineralization.

Most of the gold anomalies discovered by the 1986 soil geochemical survey have not been investigated. A northwest-trending anomaly that extends along the probable extension of the Margarete vein through the Vindicator zone and onto the Elephant claims requires further trenching. Similarly, the many spotty, erratic anomalies in Cabin Creek, Porcupine Gulch and Liberty Gulch (north of the Augusta showing) require further investigation.

### GEOPHYSICS

A new grid was established using part of the Dynasty's 1974 grid. The old baseline was resurveyed and 1100 m was rechaind using metric coordinates. A total of 12,760 m of crosslines was established perpendicular to the baseline at 50 m intervals and stations were measured every 20 m along crosslines.

A combination of proton magnetometer (total field and gradiometer) and VLF-EM techniques was measured over the grid and the data is shown on Figures G17a to G17d, in pocket. The magnetic data is shown in contoured plan, as line profiles and as gradiometer values in contoured plan. The VLF data has been Fraser filtered and is shown as profiles. As well, the data from each line has been filtered by a techniques outlined by Hjelt and Karous and is shown as depth profiles in Appendix Three.

The most obvious feature of the magnetic data is the strong response of the magnetite skarns. This response is not surprising and the position of the geophysical anomaly agrees very well with the observed position in the field, except that there is a very strong magnetic anomaly south of the Augusta showing indicating the magnetite skarn is more extensive in that area than had been mapped. Of more importance than the position of the skarn are the sharp discontinuities in the magnetic anomalies that indicate strong cross faulting with possible displacements. The well defined magnetite anomaly over the main skarn occurrence loses strength at its eastern end, about line 650 W, and from this point to the east it either changes character or has been offset to a new location. In this survey, the Margarete vein shows no magnetic variability.

The VLF-EM data is confusing and although there are many anomalies, it is uncertain what relationship, if any, they have to mineralized structures. The strongest feature is a northwest-trending anomaly that passes through the cutoff end of the main magnetite anomaly (i.e. about 650W). This may represent a major fault parallel to the Big Creek Fault. It may have affected the magnetite skarn through alteration of the magnetite (and hence the loss of magnetic character) and/or it may have offset the skarn dextrally to the southeast which would suggest the skarn of the Augusta showing is the offset southeast extension of the main magnetite skarn. The Margarete vein is reflected by a series of minor EM anomalies but these particular anomalies are neither distinctive nor unique. There are a number of other minor EM anomalies but it is uncertain if these have any relationship to other veins. Continued trenching will be useful in interpreting the EM data.

### FURTHER EXPLORATION

The most immediate exploration target is the identification of potentially mineable reserves along the Margarete vein and its strike extensions. This would involve bulldozer stripping along the 250 m length, already identified, followed by tracing the extensions in each direction. The vein should be mapped and channel sampled at 5 m intervals for its entire length with excavator pits dug every 25 m to produce material for metallurgical samples. Pit sites could be less than every 25 m, depending upon changes in metallurgical characteristics. Once the vein is well located on surface, it should be rotary drilled at 10 m intervals with holes designed to intersect the vein at a depth of about 10 m below surface.

This work would require about 150 hours with a D8 bulldozer, 50 hours with an excavator and about 400 m of drilling at a total cost of about \$150,000.

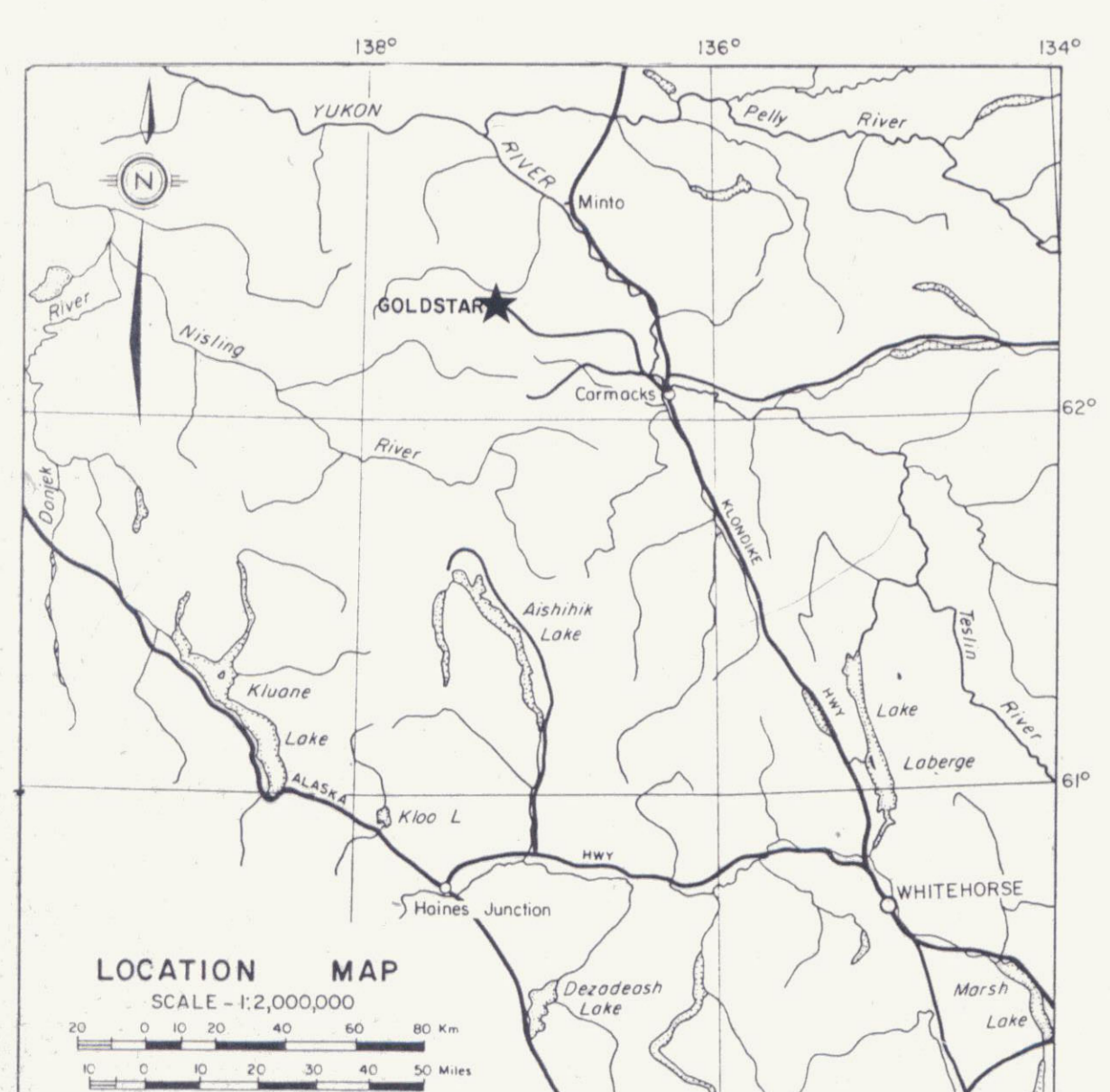
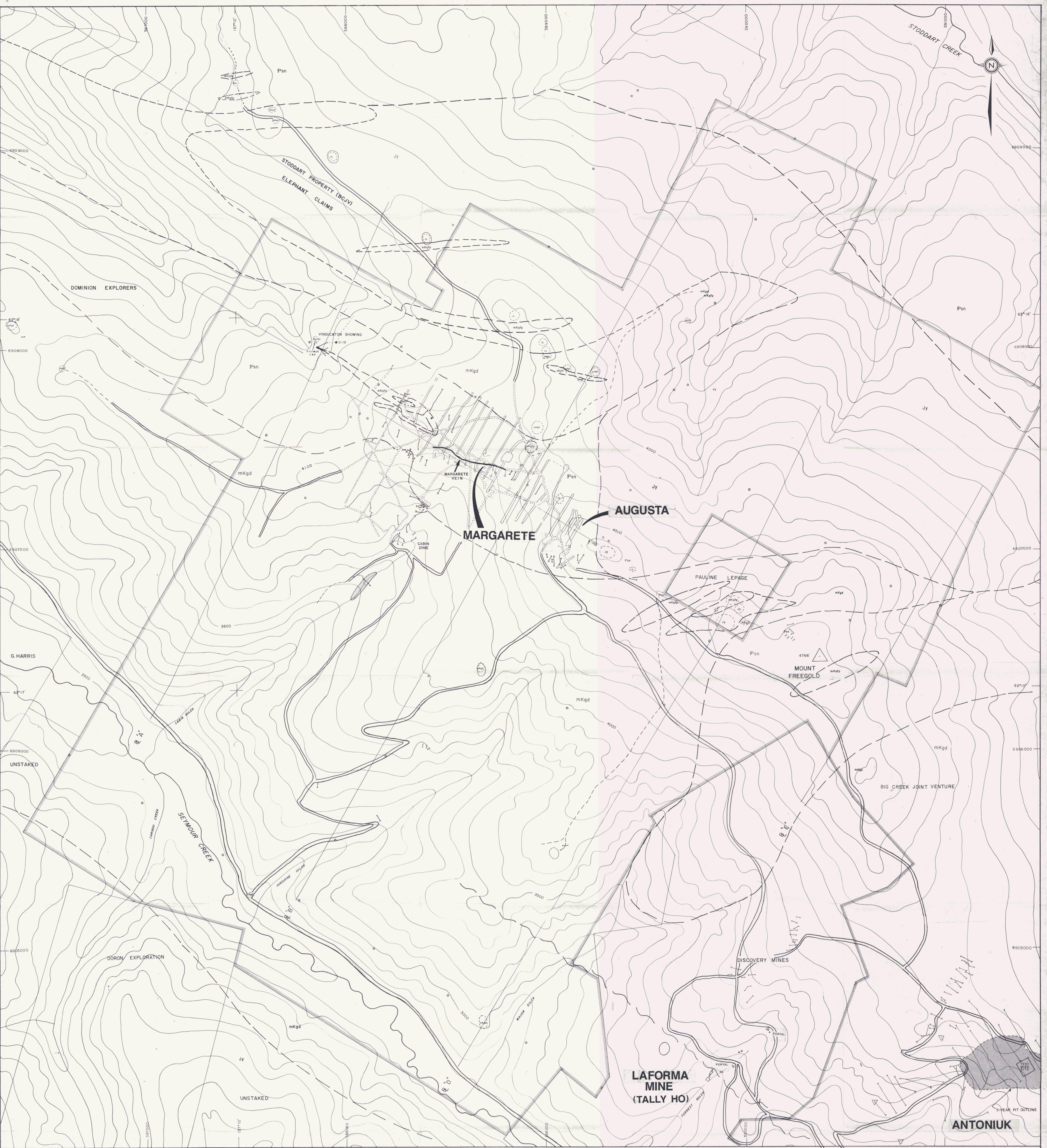
The erratic, but occasionally very high grade, mineralization at the Augusta showing should be explored by excavator. A wide and deep trench should be cut in stages along the surface mineralization. As the trench is being cut deeper, each exposure of the trench floor should be mapped and sampled and the excavated material should be selectively treated (crushed and/or ground) so that any free gold can be extracted by gravity concentration techniques. The trench should be cut down as deeply as possible, using blasting if necessary. It may be possible from this exercise to determine the distribution of the high grade material and whether the grade decreases with depth. A 5 m wide trench, cut to a depth of 10 m for a length of 50 m, would produce a total of over 5,000 tonnes of material. Excavation of the trench would require about 100 hours of excavator time at a cost of about \$35,000 with perhaps an additional

\$10,000 required for contract blasting. The percentage of the excavated material that would require processing cannot be determined at this time. Determining the cost of gravity extraction using a small placer operation would require more detailed study.

There are a number of other exploration targets on the Goldstar property. The occurrences with known gold mineralization - the Vindicator, Cabin and Liberty zones - should all receive initial bulldozer trenching to attempt to determine the extent and nature of mineralization. Any veins discovered should be followed by trenching and sampling. The initial exploration of these zones would require 200 hours of D8 bulldozer time at a cost of \$85,000.

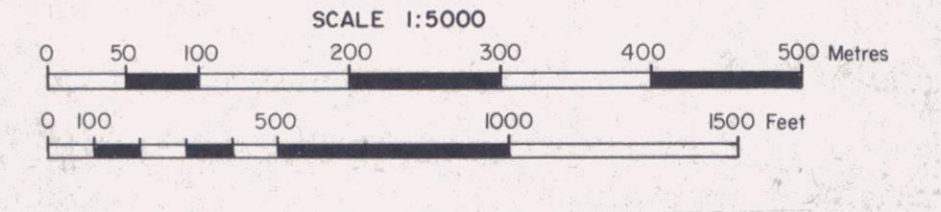
A geochemical survey conducted in 1986 shows a number of anomalous gold soil anomalies, as shown on Figure G-5 in pocket, but additional data is required to evaluate these targets. Of the 1986 samples, 600 were not analyzed for gold and all 2000 samples should be analyzed for arsenic, which appears to be an excellent indicator for gold mineralization along vein faults. This reanalysis, assuming the arsenic analysis was by ICP techniques which would provide information about other trace elements, would cost about \$20,000.

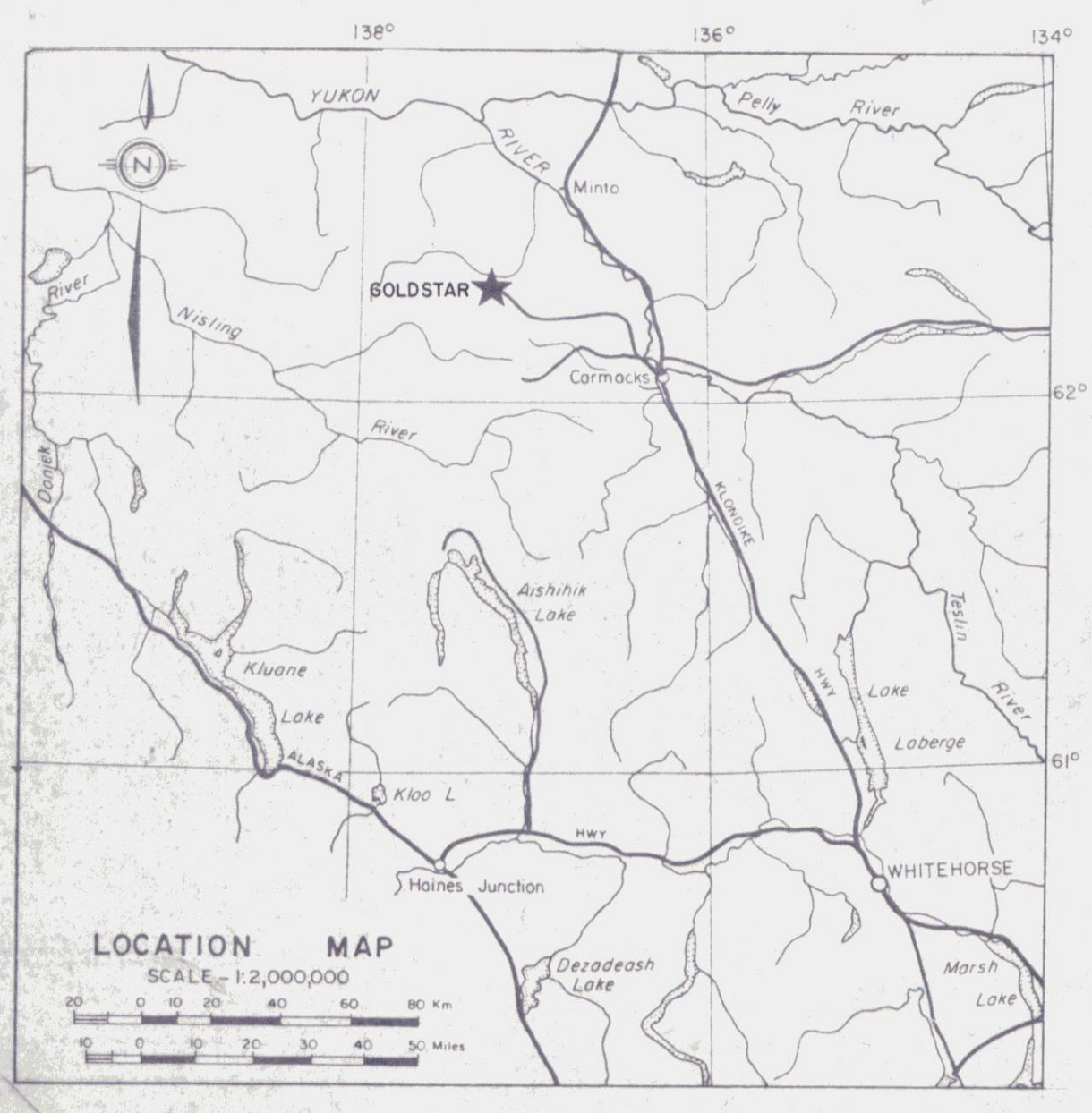
There are at least two areas from the 1986 geochemical survey that have significant, if spotty, gold geochemical anomalies. These zones, in Porcupine Gulch and Liberty Gulch, as well as any new anomalies found during reanalysis, should receive further bulldozer exploration. This work should be deferred until the initial exploration described has been completed.



- Geological contact known, assumed
- Fault
- Road
- Trench
- Large Bulldozer Trench
- Trail
- Diamond drill hole
- Shaft
- Placer operation
- Vein zone
- Claim post
- Shear zone
- Outcrop
- Middle Cretaceous quartz feldspar porphyry
- Middle Cretaceous granodiorite
- Jurassic syenite
- Pleistocene or older metamorphic rocks
- Grab sample with gold value in opt
- Au/Ag values in oz/ton with width in metres (Dynasty 1974)

Figure G-1  
 ARCHER, CATIRO & ASSOCIATES (1981) LIMITED  
**REGIONAL GEOLOGY**  
**GOLDSTAR PROPERTY**  
 092127  
 BIG CREEK JOINT VENTURE





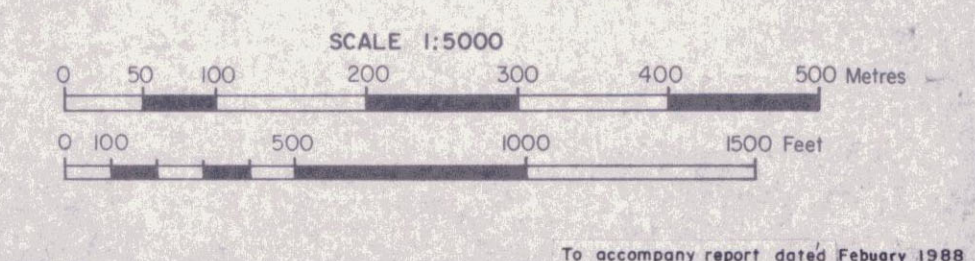
- LEGEND**
- 15 Soil sample location with Au values in ppb
  - Property boundary
  - ≥ 25 < 50
  - ≥ 50 < 100
  - ≥ 100
  - Road
  - Trail
  - Trench
  - Large Bulldozer Trench
  - Placer Operation
  - Diamond Drill Hole

Figure G-5

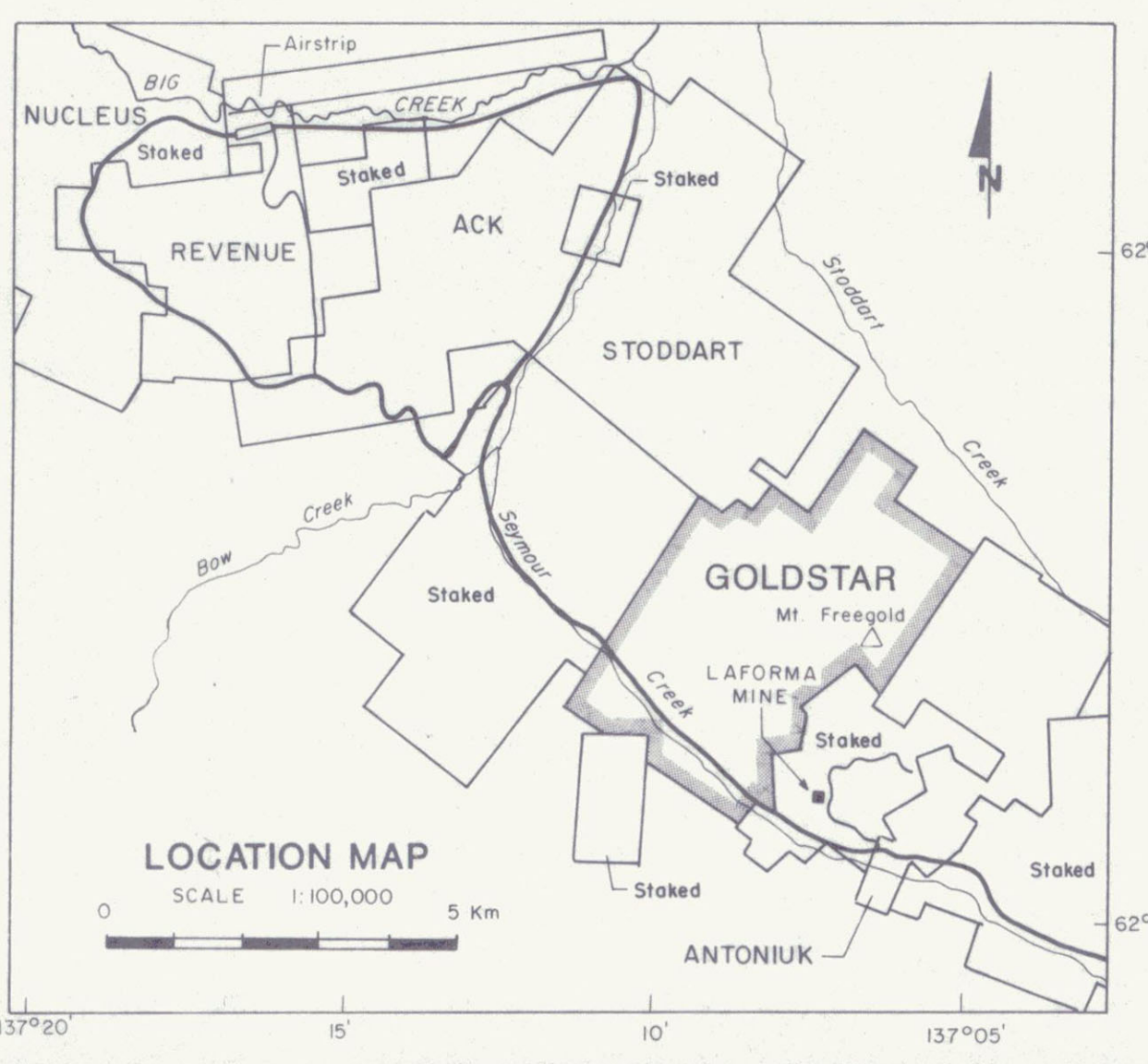
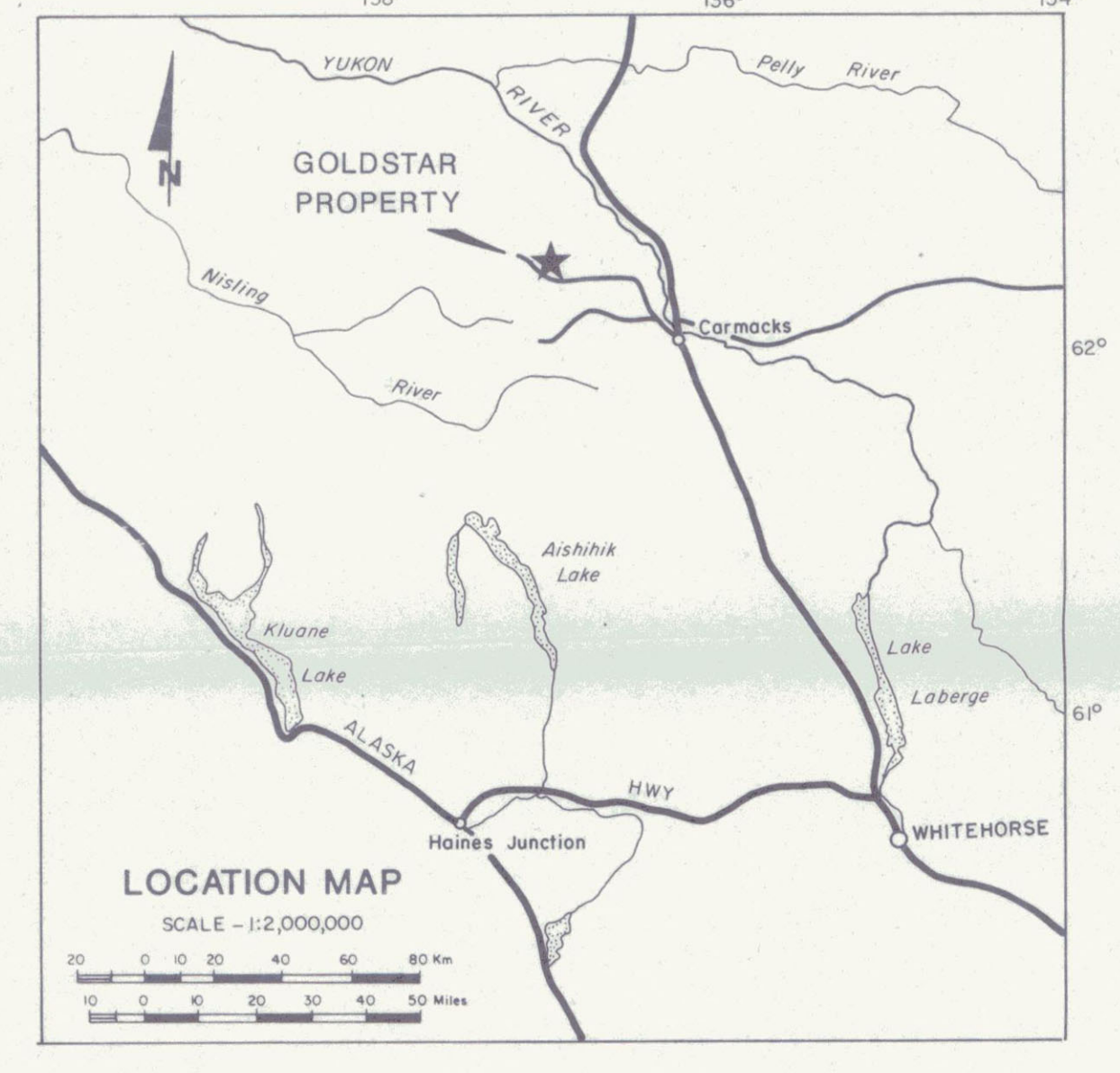
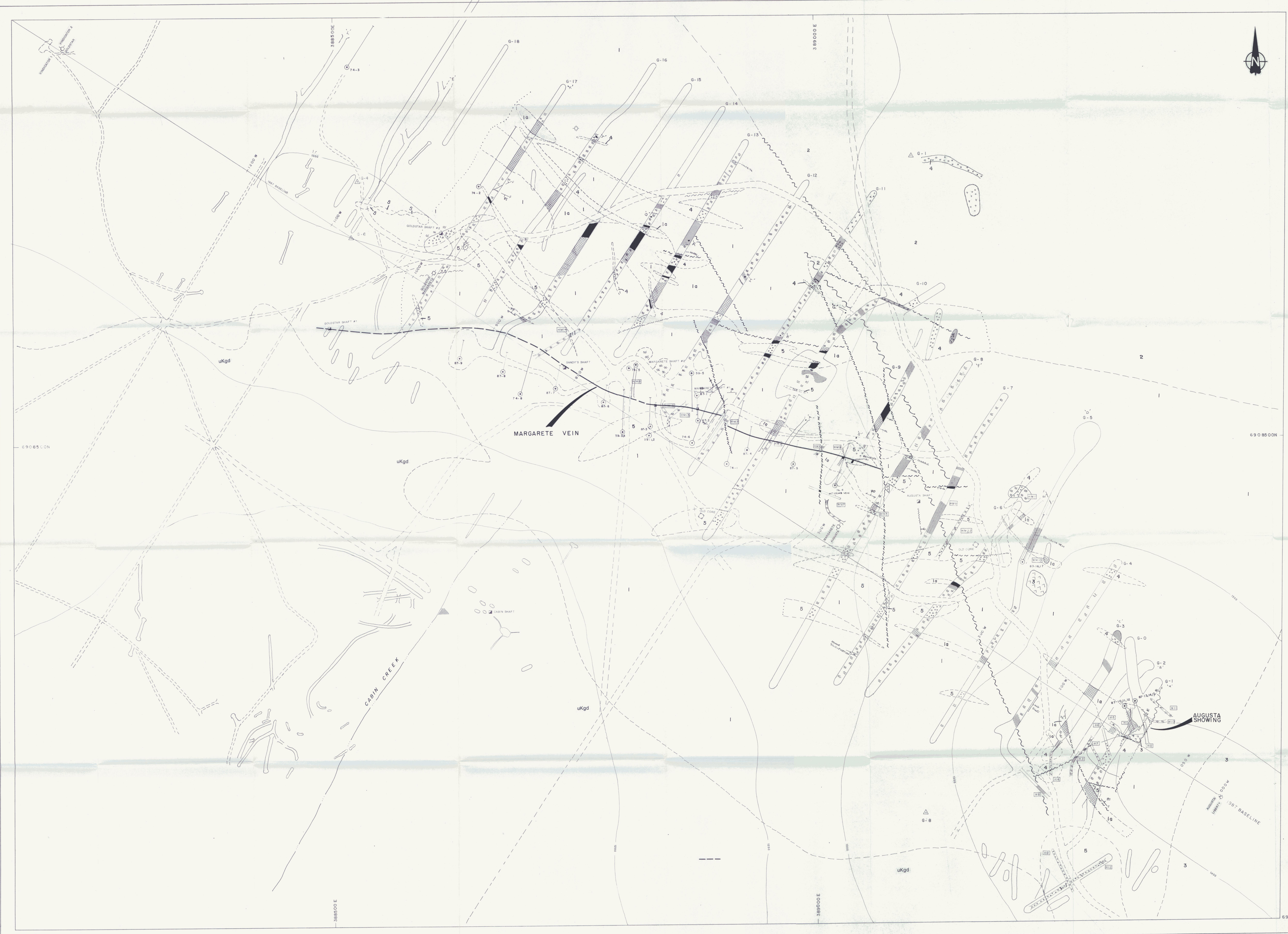
**REGIONAL GEOCHEMISTRY**

**092127**  
GOLDSTAR PROPERTY

BIG CREEK JOINT VENTURE







**LEGEND**

- BULLDOZER TRENCH
- BACKHOE TRENCH
- ROAD OR CAT TRAIL
- SHAFT OR DEEP PIT
- DIAMOND DRILL HOLE
- SURVEY STATION
- CLAIM POSTS
- GEOLOGICAL CONTACT
- FAULT known, assumed
- INTENSE ALTERATION
- LIMIT OF DETAILED MAPPING
- 1987 BULLDOZER TRENCHES
- 1987 HOE TRENCHES, AUGUSTA ZONE
- 1987 HOE TRENCHES MARGARETE AND WRITTEN ZONES
- 1974 TRENCH LOCATION APPROXIMATE (often obscured by 1987 trenching)
- START OF 1974 TRENCH LOCATION APPROXIMATE
- MARGARETE GOLD-BEARING VEIN
- PROBABLE EXTENSION OF THE MARGARETE GOLD-BEARING VEIN
- SKARN IN UNIT 1: (defined in trenches only) Includes quartz, magnetite, and specular hematite
- SKARN IN UNIT 1: (defined in trenches only) Includes chlorite. May include calc-silicate minerals, magnetite, hematite, and actinolite
- FAULT ATTITUDE
- FOLIATION vertical, inclined

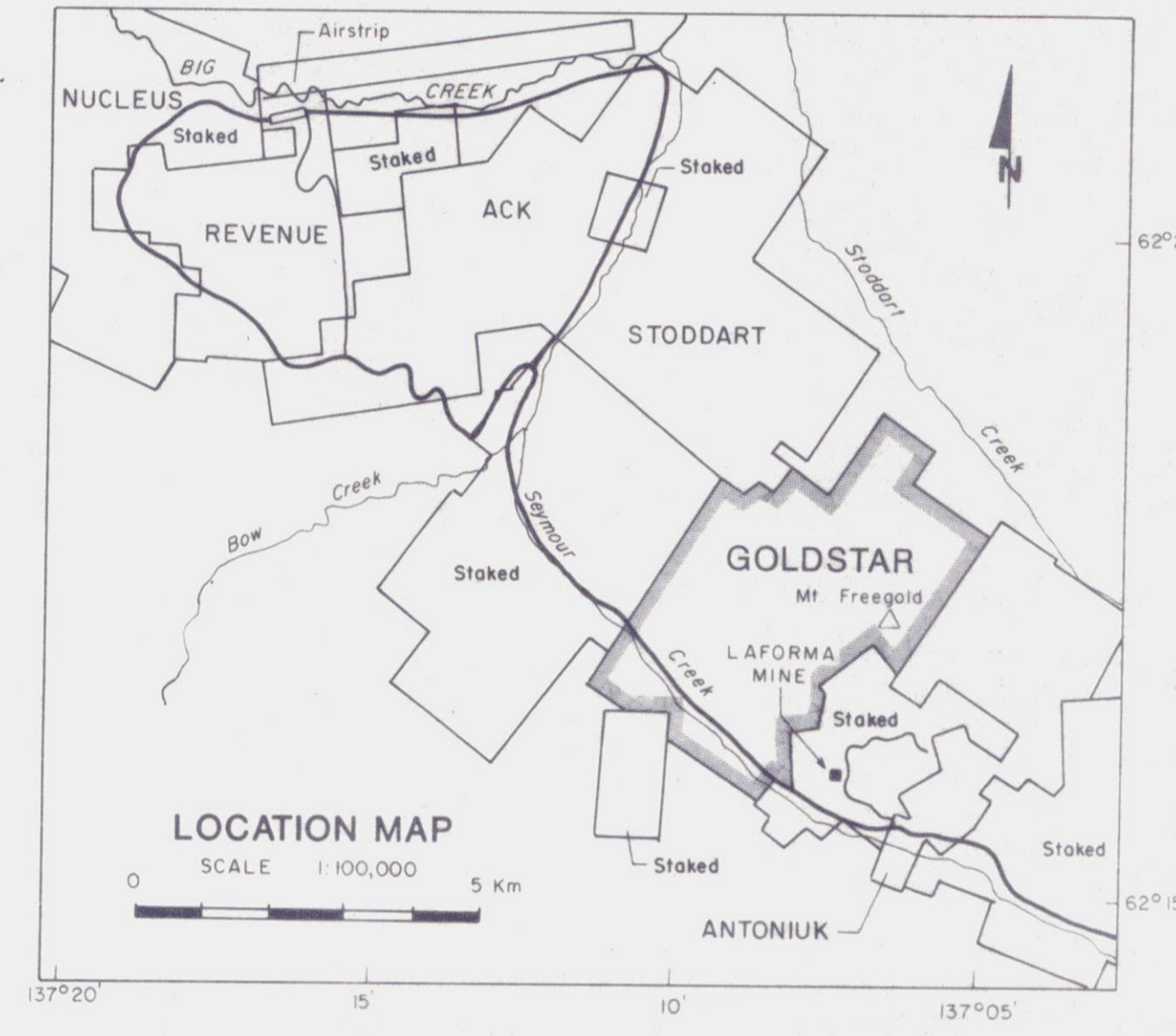
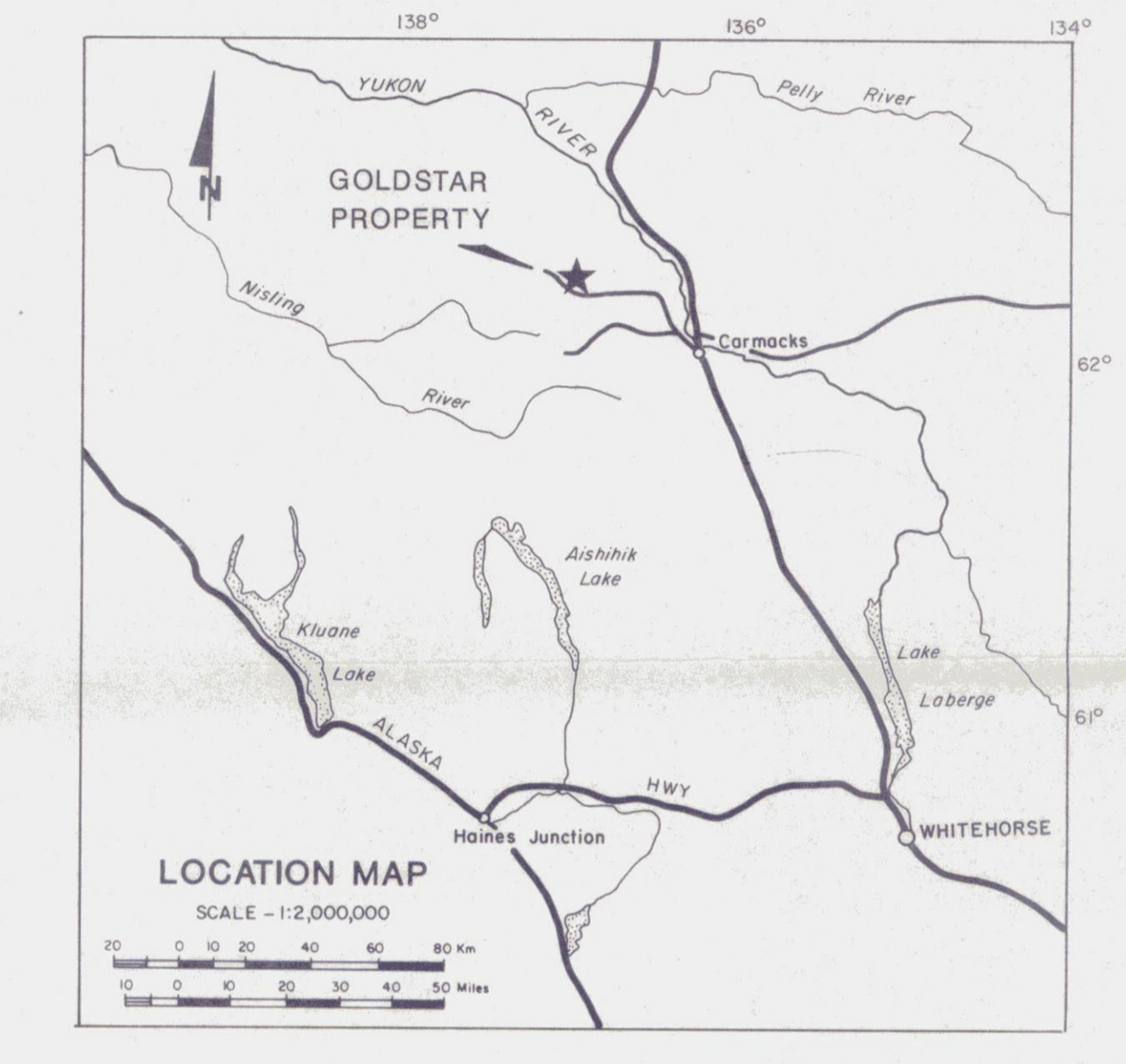
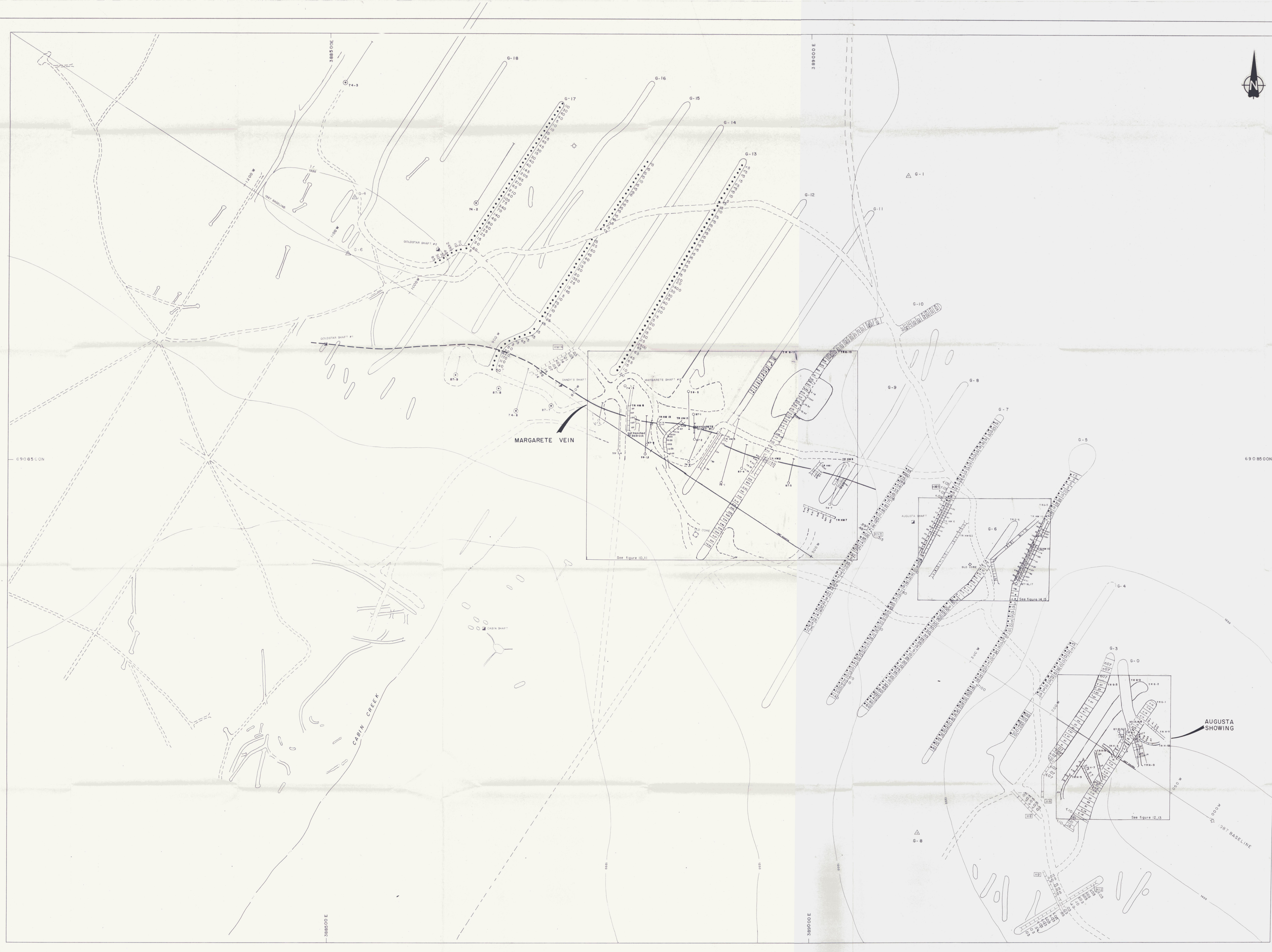
- CRETACEOUS (Mount Nansen Volcanic Suite)**
- GREY QUARTZ-FELDSPAR PORPHYRY
  - PINK HORNBLende QUARTZ-FELDSPAR PORPHYRY
- EARLY JURASSIC (Kiotassin Suite)**
- ORTHOCLASE-HORNBLende PORPHYRITIC SYENITE
- PALEOZOIC OR OLDER (Basement metamorphic complex)**
- FOLIATED TO UNFOLIATED HORNBLende-BIOTITE GRANODIORITE
  - METASEDIMENTARY ROCKS: Includes amphibolite, mica schist, gneiss, minor quartzite and marble.
  - SKARN IN UNIT 1: Includes chlorite, epidote, magnetite, quartz, hematite, actinolite and garnet.
- CRETACEOUS ?**
- GRANODIORITE

Figure G-7  
 ARCHER, CATRO & ASSOCIATES (1983) LIMITED

**GEOLOGY**

GOLDSTAR PROPERTY  
 BIG CREEK JOINT VENTURE .092127

SCALE 1:1000  
 0 10 20 30 40 50 60 meters  
 0 50 100 200 300 feet

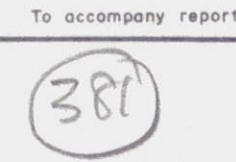
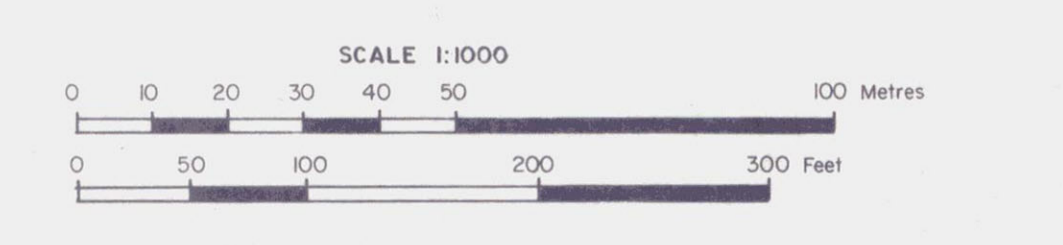


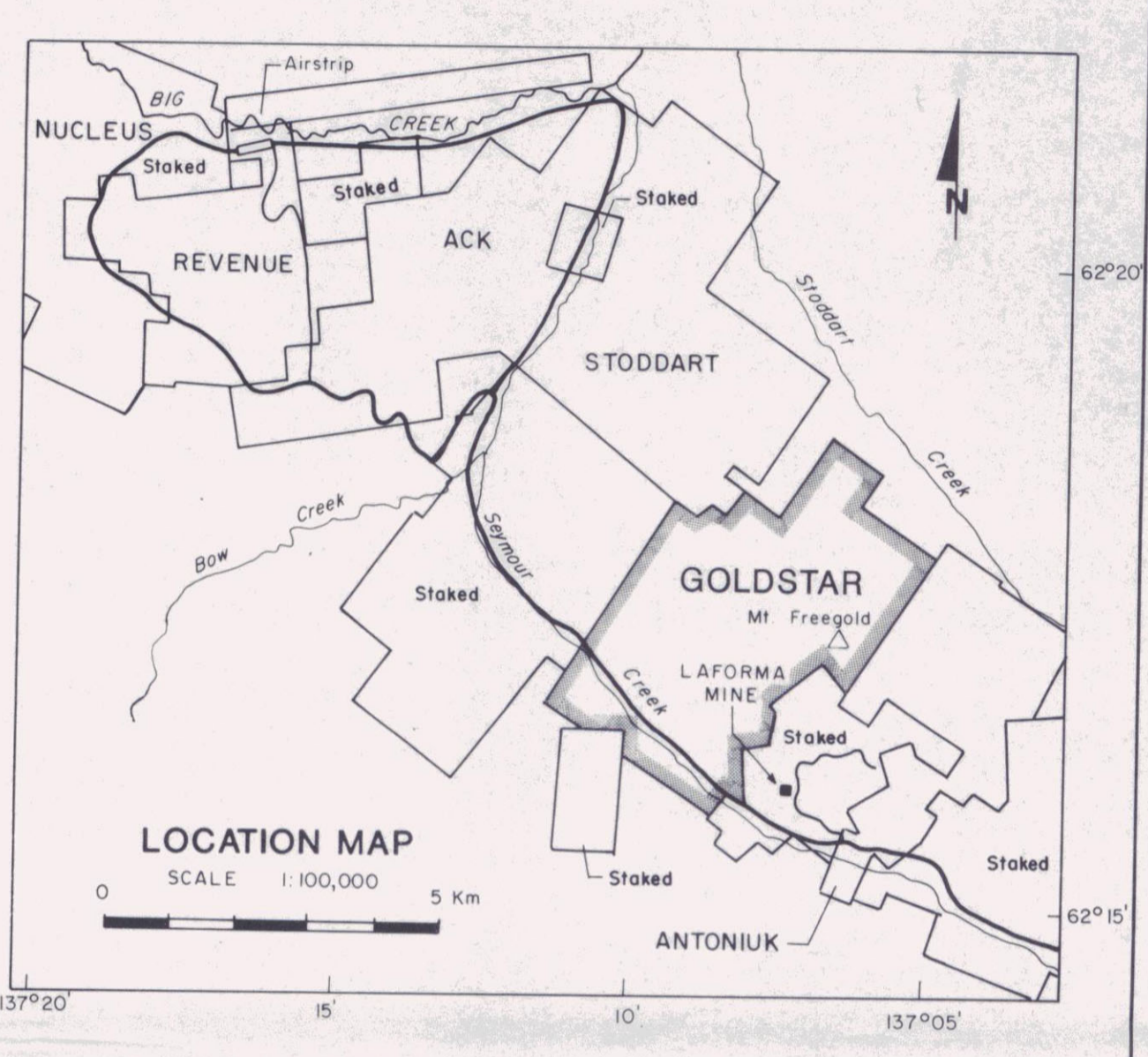
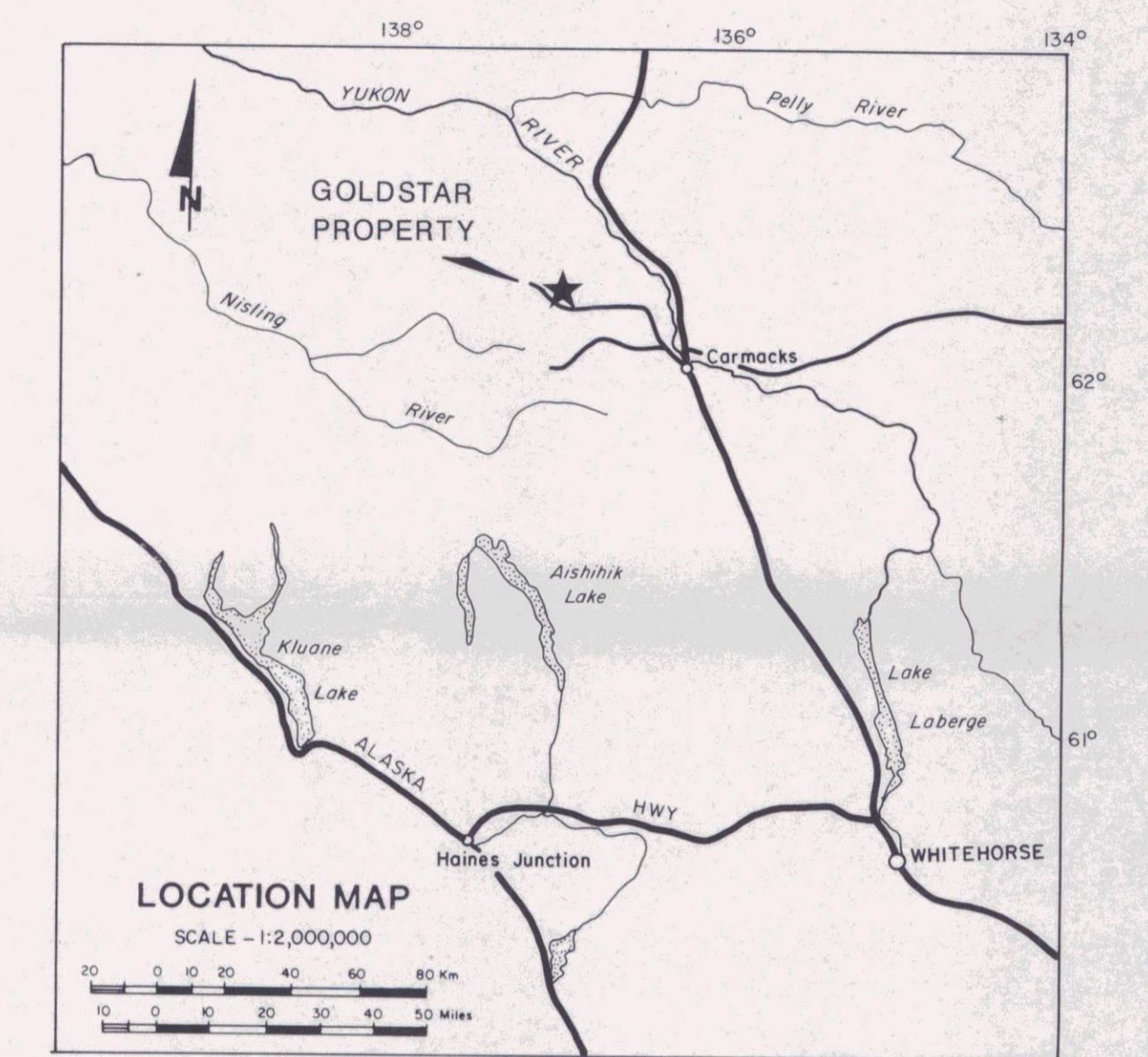
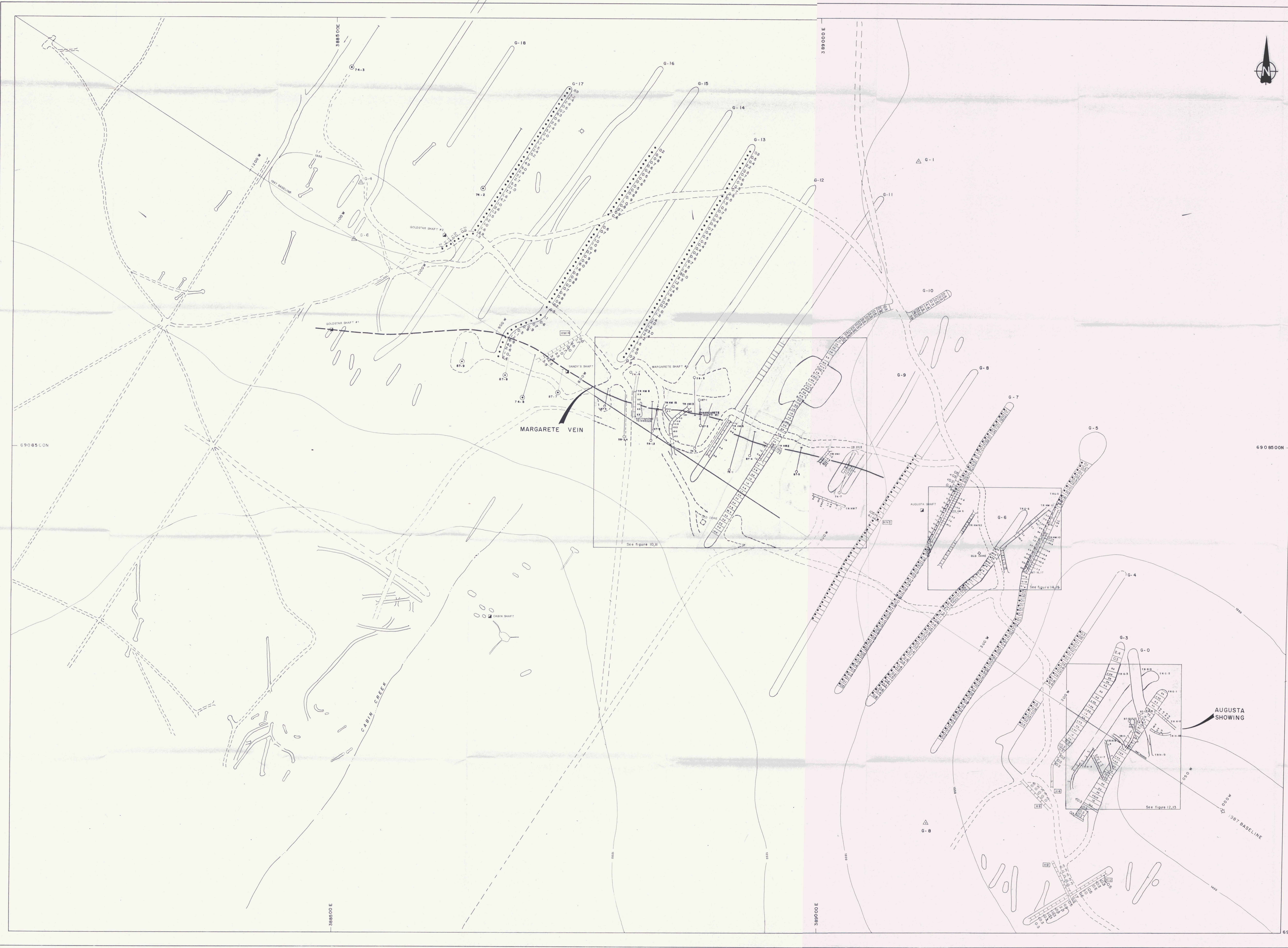
LEGEND

- BULLDOZER TRENCH
- BACKHOE TRENCH
- ROAD OR CAT TRAIL
- SHAFT OR DEEP PIT
- DIAMOND DRILL HOLE
- SURVEY STATION
- CLAIM POSTS
- ASSAY VALUE IN GRAMS/TONNE Au
- SOIL SAMPLE ACROSS 5m INTERVAL IN ppb Au
- SOIL SAMPLE VALUE IN ppb Au
- MARGARETE VEIN, defined, probable extension

092127

FIGURE 8  
 ARCHER, CATIRO & ASSOCIATES (1981) LIMITED  
 GOLD ASSAYS AND GEOCHEMISTRY  
 GOLDSTAR PROPERTY  
 BIG CREEK JOINT VENTURE

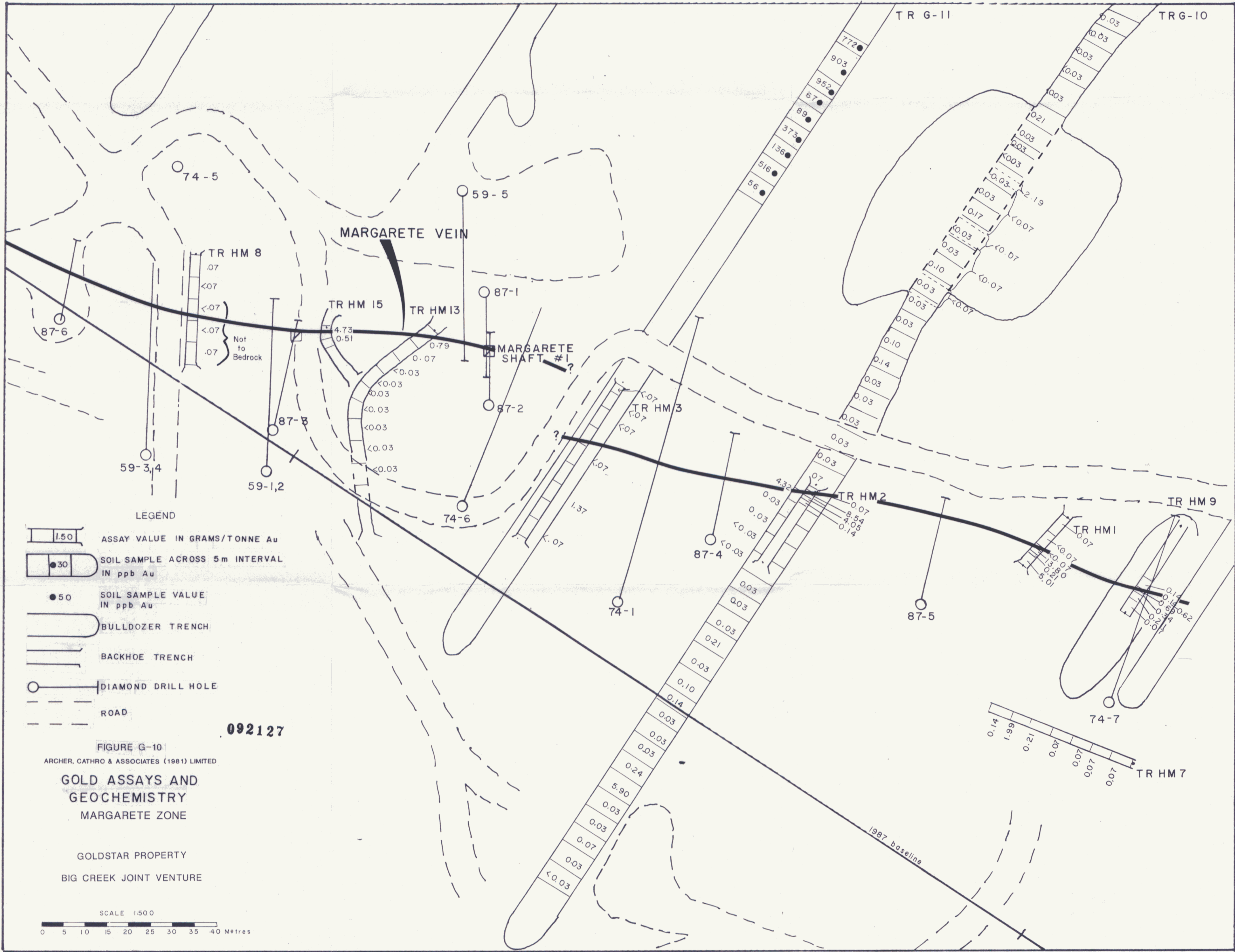




- LEGEND**
- BULLDOZER TRENCH
  - BACKHOE TRENCH
  - ROAD OR CAT TRAIL
  - SHAFT OR DEEP PIT
  - DIAMOND DRILL HOLE
  - SURVEY STATION
  - CLAIM POST
  - ASSAY VALUE IN GRAMS/TONNE Ag
  - SOIL SAMPLE ACROSS 2m INTERVAL IN ppm Ag
  - SOIL SAMPLE VALUE IN ppm Ag
  - MARGARETE VEIN, defined, probable extension

092127,  
 FIGURE 9  
 ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
 SILVER ASSAYS AND GEOCHEMISTRY  
 GOLDSTAR PROPERTY  
 BIG CREEK JOINT VENTURE

SCALE 1:1000  
 0 10 20 30 40 50  
 0 50 100 200 300 Feet



- LEGEND
- ASSAY VALUE IN GRAMS/TONNE Au
  - SOIL SAMPLE ACROSS 5m INTERVAL IN ppb Au
  - SOIL SAMPLE VALUE IN ppb Au
  - BULLDOZER TRENCH
  - BACKHOE TRENCH
  - DIAMOND DRILL HOLE
  - ROAD

**092127**

FIGURE G-10  
 ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

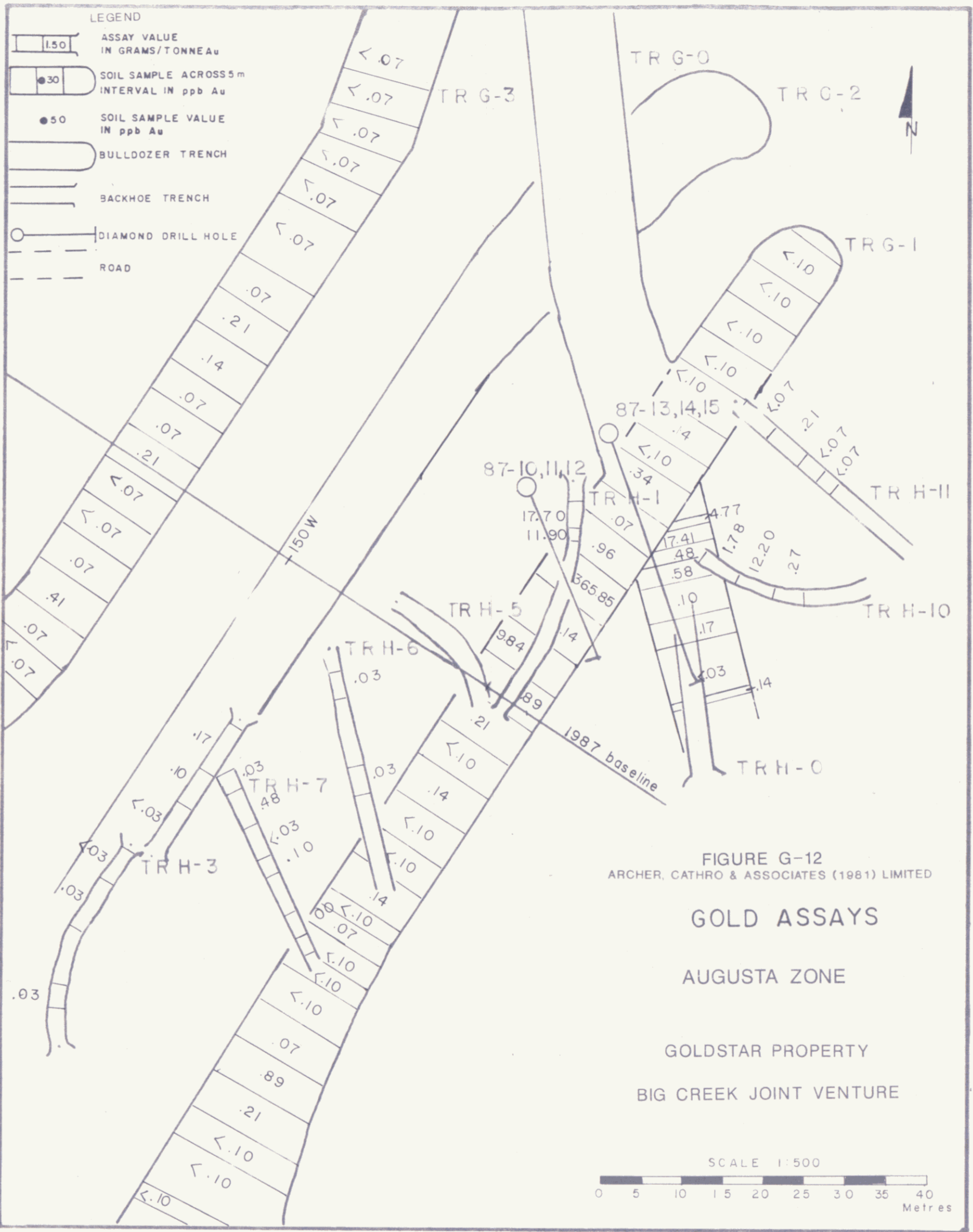
**GOLD ASSAYS AND  
 GEOCHEMISTRY**  
 MARGARETE ZONE

GOLDSTAR PROPERTY  
 BIG CREEK JOINT VENTURE

SCALE 1:500  
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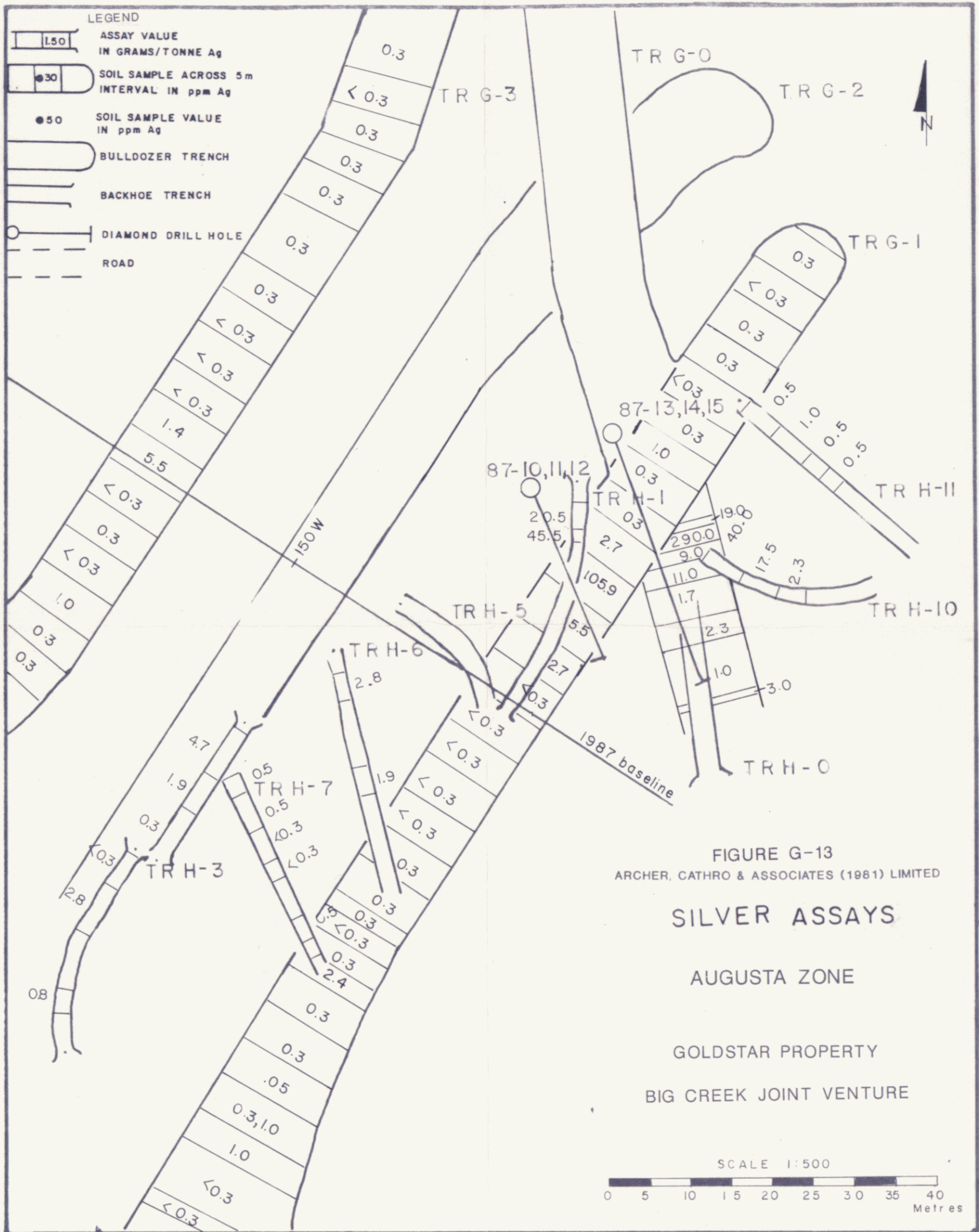
383





behind J

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Sheet 5

behind I

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Inclination: 78 Deg  
Declination: 30 Deg E

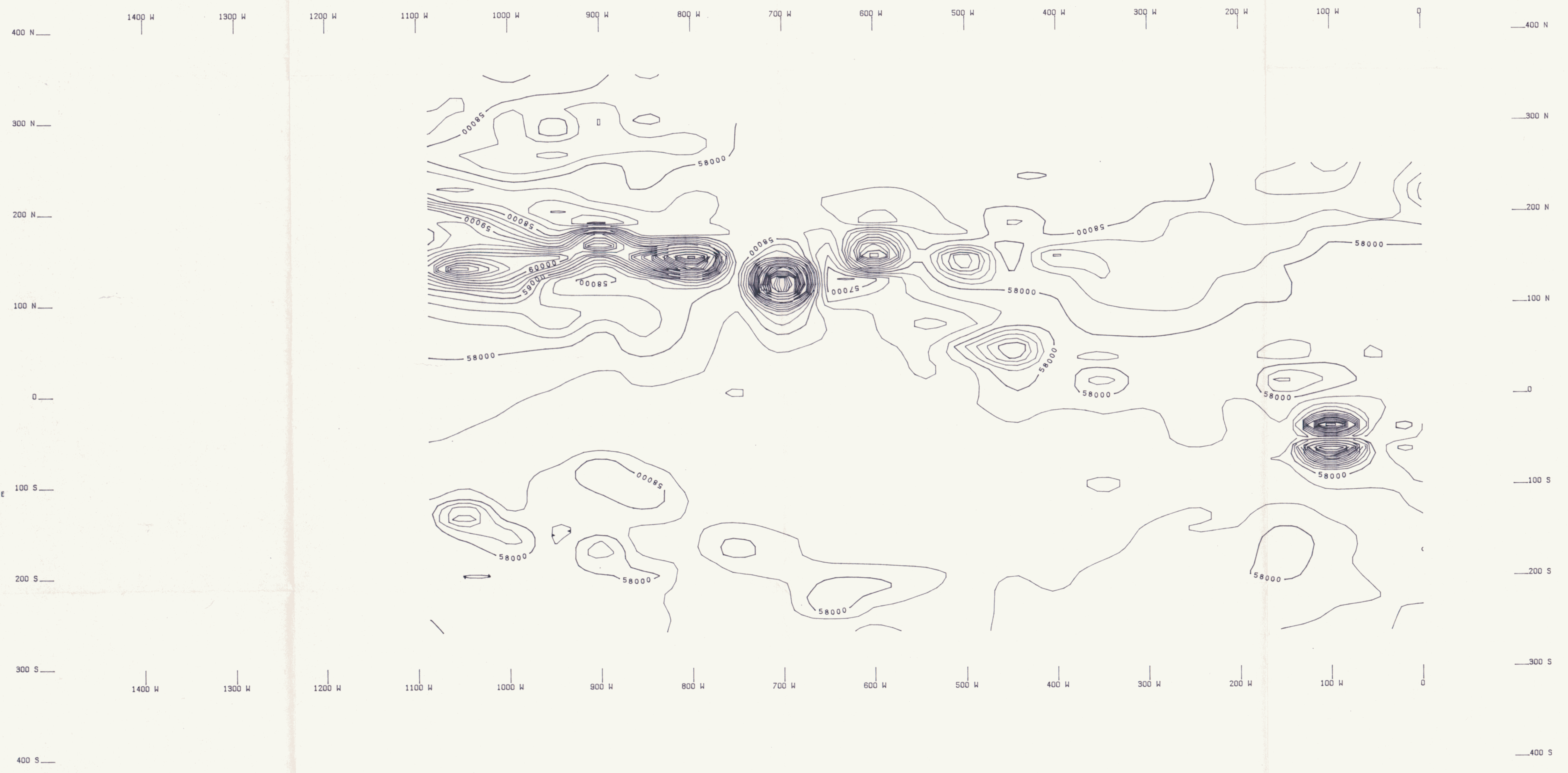


Figure G-17a

ARCHER, CATHRO & ASSOCIATES
GOLDSTAR PROJECT, CARMACKS AREA
TOTAL FIELD MAGNETIC CONTOUR PLAN
contour interval 250 nt
SCALE 1:2500
DELTA GEOSCIENCE LTD

092127

Inclination: 79 Deg  
Declination: 90 Deg E

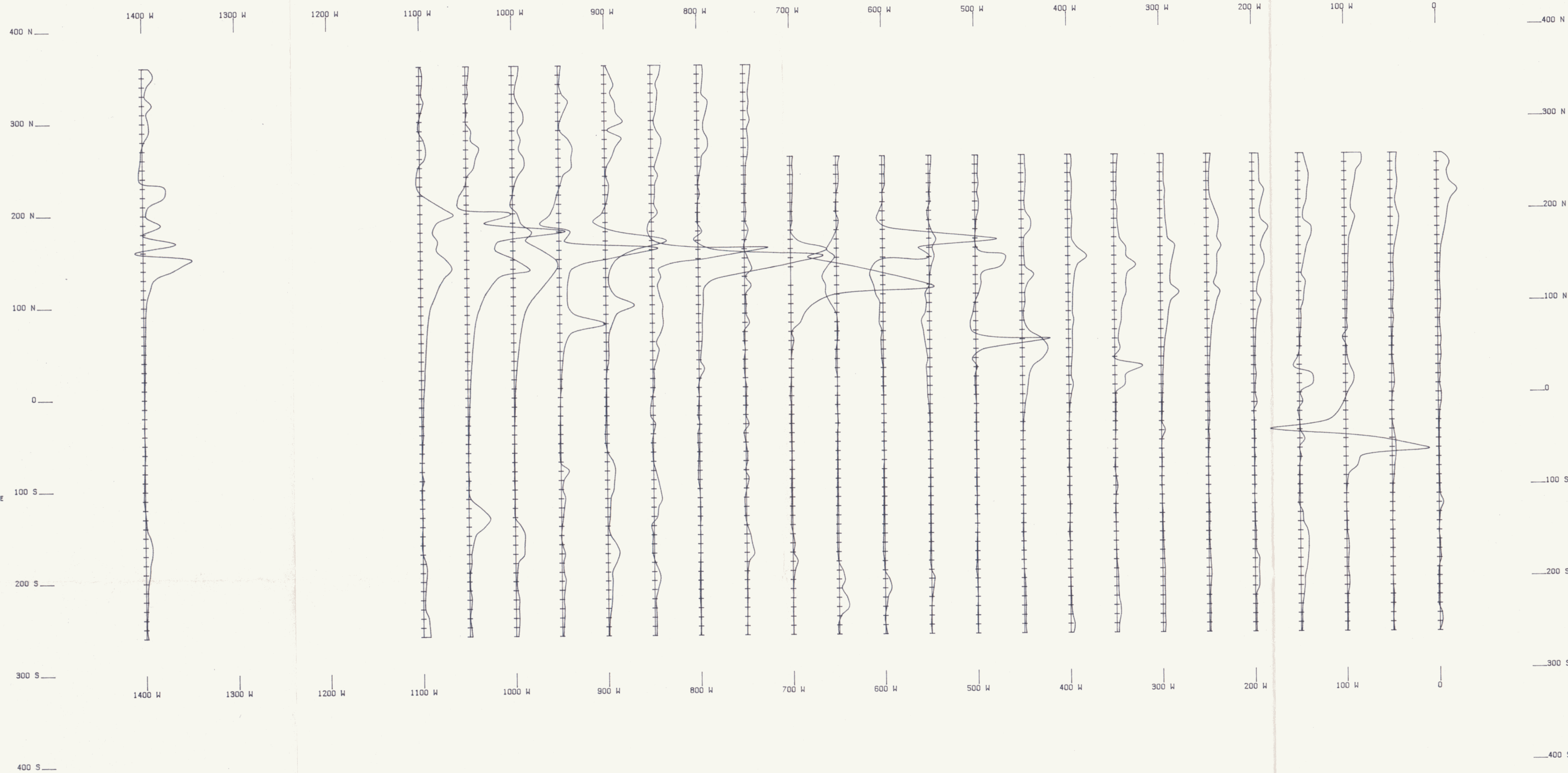


Figure G-17b

ARCHER, CATHRO & ASSOCIATES

GOLDSTAR PROJECT, CARMACKS AREA  
TOTAL FIELD MAGNETIC PROFILES

1 cm = 1500 nt, base 57700nt

SCALE 1:2500

DELTA GEOSCIENCE LTD

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386

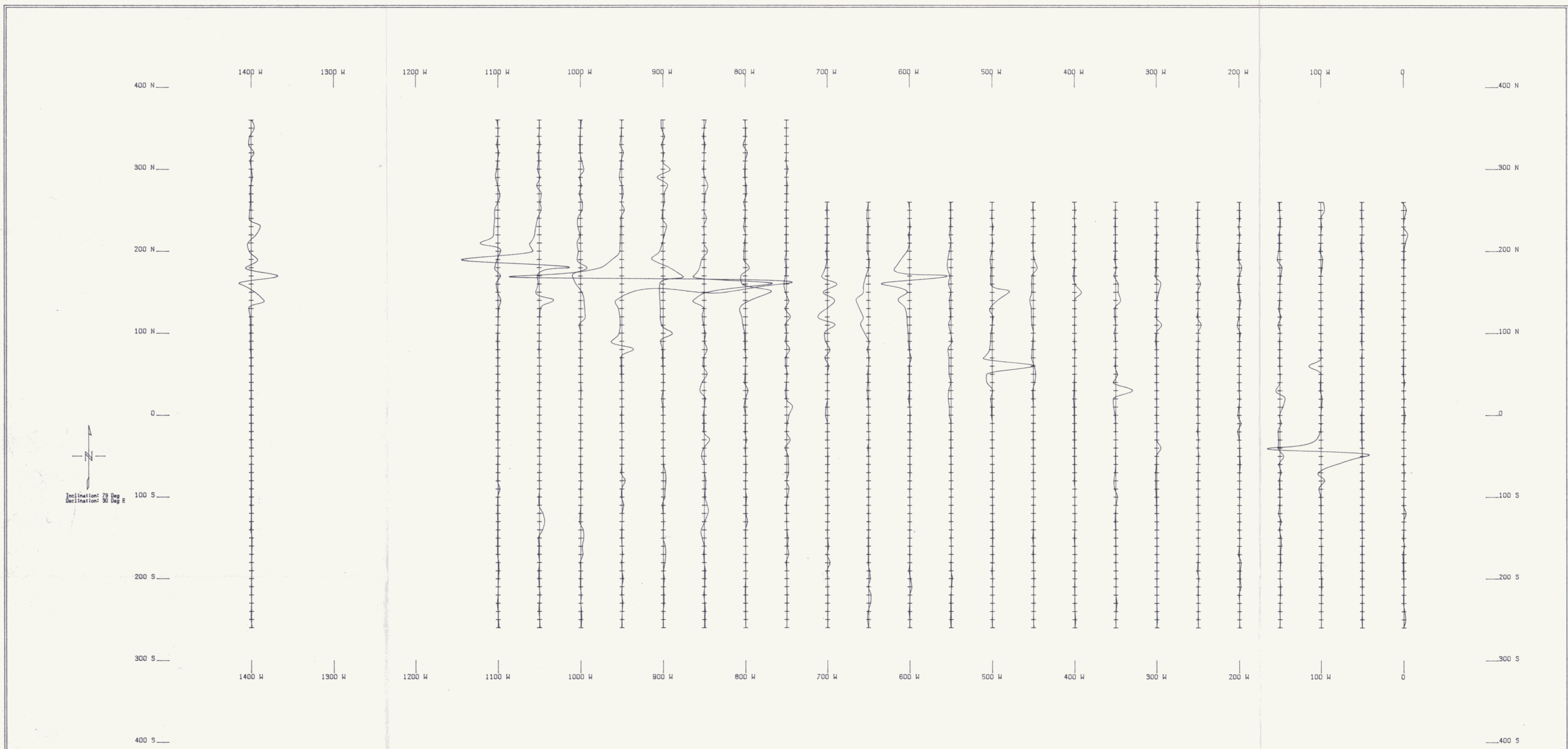


Figure G-17c

ARCHER, CATHRO & ASSOCIATES

GOLDSTAR PROJECT, CARMACKS AREA

MAGNETIC GRADIOMETER PROFILES

1 cm = 500 nt/m, base 0

SCALE 1:2500

DELTA GEOSCIENCE LTD

092127

387

Inclination: 79 Deg  
Declination: 30 Deg E

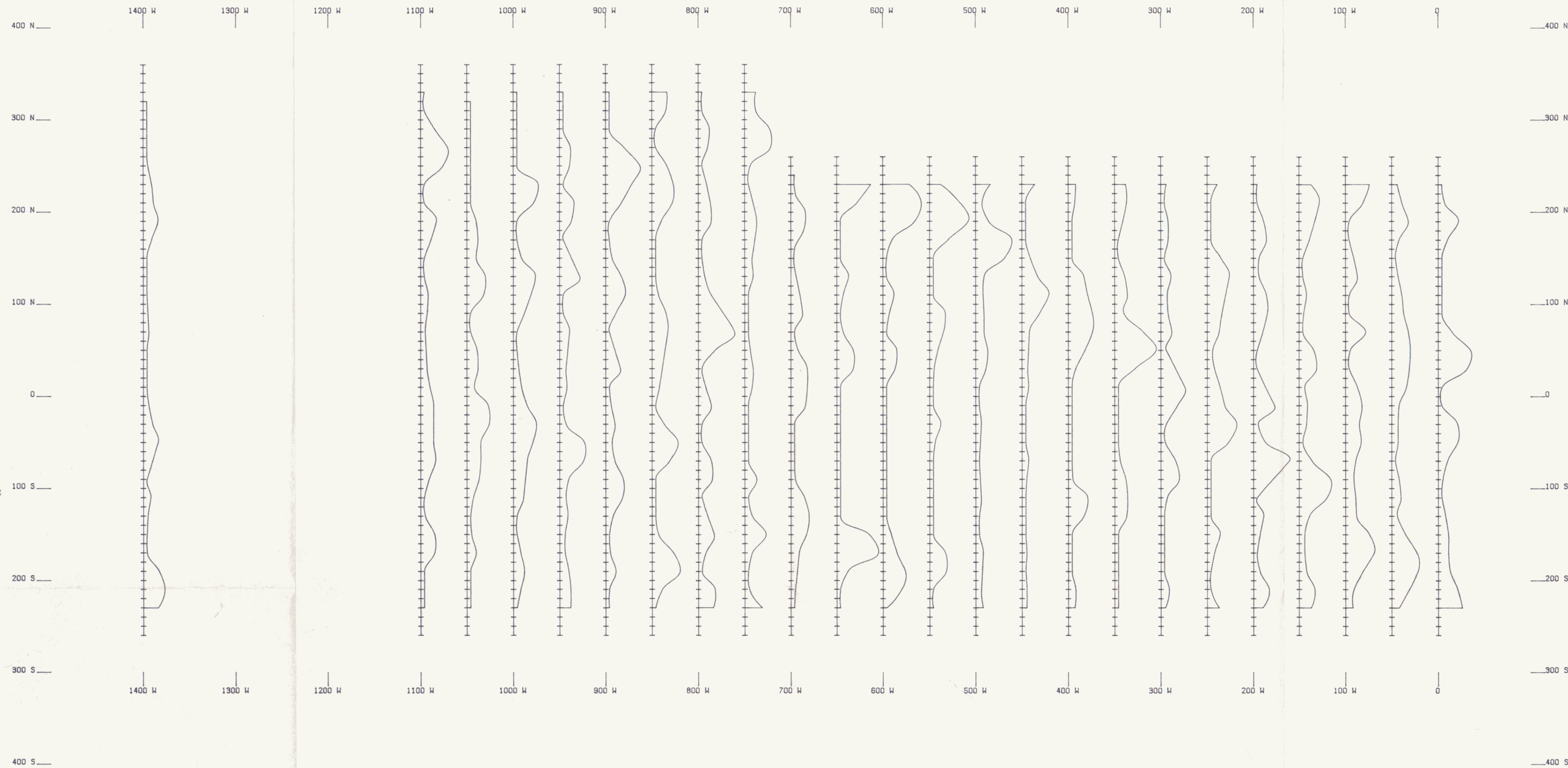


Figure G-17d

ARCHER, CATHRO & ASSOCIATES  
GOLDSTAR PROJECT, CARMACKS AREA  
FILTERED VLF PROFILES, (fraser)  
1 cm = 25%, base -4%  
SCALE 1:2500  
DELTA GEOSCIENCE LTD

092127

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APPENDIX ONE  
STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Charles A. Main, geologist, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia and residential address in Vancouver, British Columbia, hereby certify that:

1. I graduated from the University of British Columbia in 1971 with a B.Sc. majoring in Geological Sciences and Chemistry.
2. I have been actively engaged as a geologist in mineral exploration since 1971 and as a partner of Archer, Cathro & Associates (1981) Limited since June 1, 1981.
3. I have personally participated in or supervised the field work reported herein.

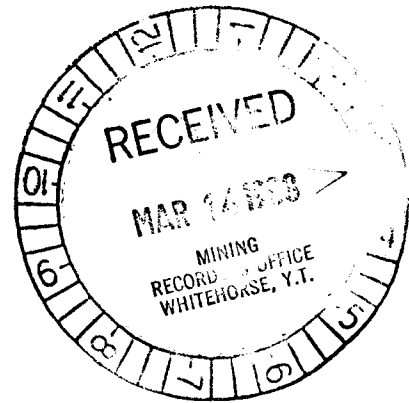
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Charles A. Main, B.Sc.

APPENDIX TWO  
LIST OF EMPLOYEES

LIST OF EMPLOYEES

<u>Name</u>	<u>Position</u>
C.A. Main	Project Manager, Geologist
J.L. Duke	Geologist
M.J. Walls	Geologist
F. Anderson	Fieldman
G. MacIntosh	Fieldman
M. Maidment	Fieldman
L. Robinston	Cook



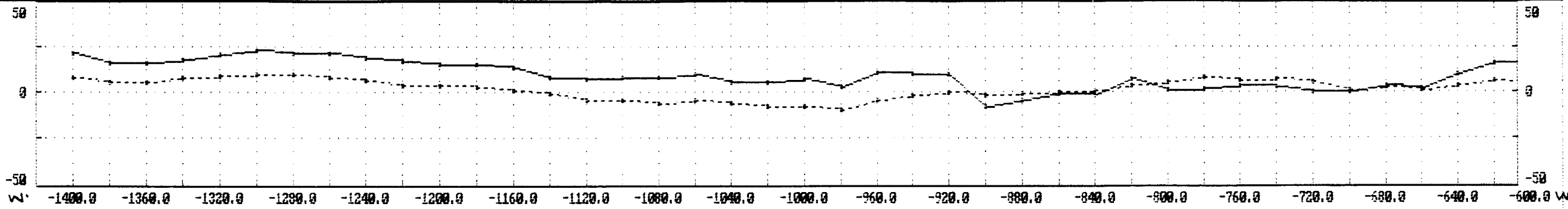
APPENDIX THREE  
GEOPHYSICAL DATA  
VLF-EM HJELT FILTERED PROFILES

092127

# GOLDSTAR GRID, ULF DATA (23.4 KHZ)

LINE 0. (TIE LINE)

QX	3.0	5.0	5.0	3.0	9.0	10.0	10.0	3.0	6.0	4.0	4.0	3.0	1.0	-1.0	-4.0	-4.0	-6.0	-4.0	-6.0	-3.0	-3.0	-10.0	-4.0	-2.0	0.0	-2.0	-1.0	0.0	1.0	4.0	5.0	3.0	6.0	7.0	5.0	1.0	2.0	1.0	4.0	6.0	3.0
IX	21.0	16.0	16.0	18.0	20.0	23.0	21.0	21.0	19.0	17.0	15.0	15.0	13.0	9.0	7.0	3.0	3.0	10.0	5.0	5.0	7.0	3.0	11.0	10.0	10.0	-0.0	-4.0	-1.0	-2.0	7.0	1.0	2.0	4.0	3.0	0.0	0.0	4.0	2.0	10.0	16.0	16.0
FRFLT	3.0	-6.0	-9.0	-6.0	1.0	4.0	5.0	3.0	6.0	4.0	9.0	13.0	6.0	-1.0	-3.0	1.0	9.0	3.0	0.0	-2.0	-11.0	-6.0	19.0	32.0	7.0	-9.0	-10.0	-11.0	2.0	2.0	-4.0	3.0	7.0	-1.0	-6.0	-9.0	-20.0	-20.0	-5.0	-2.0	

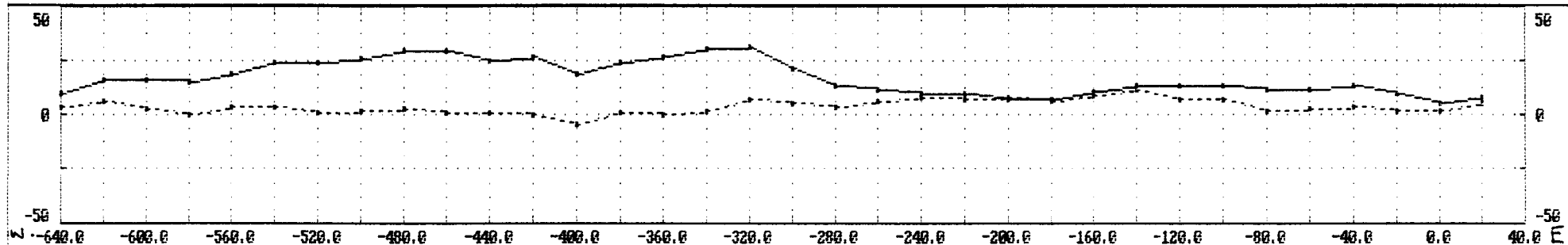


20.0	3.0	2.6	-1.2	-1.0	-3.0	-0.7	1.2	1.3	2.7	2.7	2.1	1.0	4.4	3.7	0.2	0.4	-0.9	1.5	3.3	-1.0	1.5	-2.5	-2.4	1.0	9.6	8.5	-4.3	0.7	-5.2	-2.3	2.0	-2.1	0.1	1.0	1.7	-2.9	-1.9	-4.1	-3.7	-4.1
40.0	2.1	2.5	0.3	-3.9	-2.3	-0.0	1.3	4.0	3.9	3.5	3.0	5.6	5.5	5.1	3.4	-0.3	1.2	1.9	1.1	5.7	-2.1	-2.9	-1.2	6.1	8.3	6.7	6.4	-8.9	-2.0	3.0	-2.5	1.3	-0.5	-0.9	-1.3	0.6	-6.7	-10.5	-7.7	-8.2
60.0	-0.2	0.2	-0.3	-0.2	-2.5	-1.2	1.2	3.7	5.3	5.5	7.7	6.9	5.6	3.9	3.4	4.8	4.4	2.1	4.5	-0.9	0.2	-2.1	7.3	6.3	2.5	7.9	2.5	5.2	-6.0	-5.4	-3.9	-1.0	4.2	-1.6	-2.2	-5.8	-9.0	-10.0	-9.5	-9.5
80.0	-2.6	-2.6	-0.2	1.0	0.9	-1.2	0.5	1.0	4.1	9.7	8.2	7.9	6.5	5.2	7.1	6.9	5.1	3.0	-1.3	-0.1	-0.5	11.5	6.2	4.5	5.7	-2.0	5.0	3.4	2.4	-6.7	-3.7	-2.1	-4.7	1.0	-5.5	-8.3	-6.7	-9.2	-11.4	-14.4
100.0	-5.6	-3.2	-2.2	0.4	2.0	2.6	0.3	0.9	4.7	6.5	9.9	8.6	7.9	9.7	7.0	4.7	6.7	1.0	-0.0	-0.2	10.5	7.7	7.6	4.5	-1.4	2.0	0.3	2.0	2.6	4.5	-5.0	-5.9	-3.1	-7.9	-6.5	-7.6	-7.5	-8.3	-12.2	-14.4
120.0	-6.0	-4.9	-2.0	0.1	1.7	3.3	3.0	4.9	5.3	5.4	7.2	6.0	9.5	3.0	6.0	0.3	3.1	4.2	2.2	9.3	5.9	4.4	5.1	1.6	1.9	1.0	1.3	-0.4	5.2	4.5	3.0	-6.4	-8.1	-9.0	-11.0	-5.4	-11.9	-11.9	-10.5	-12.3

# GOLDSTAR GRID, ULF DATA (23.4 KHZ)

LINE 0.

Q%	4.0	6.0	3.0	0.0	4.0	4.0	1.0	2.0	3.0	1.0	1.0	0.0	-4.0	1.0	0.0	2.0	7.0	5.0	4.0	6.0	8.0	7.0	8.0	6.0	9.0	12.0	7.0	7.0	2.0	3.0	4.0	2.0	2.0	5.0
I%	10.0	16.0	16.0	15.0	19.0	24.0	24.0	26.0	29.0	29.0	25.0	27.0	19.0	24.0	27.0	30.0	31.0	21.0	13.0	12.0	10.0	10.0	7.0	7.0	11.0	13.0	13.0	13.0	12.0	12.0	13.0	10.0	5.0	8.0
FFFLI	-20.0	-5.0	-2.0	-12.0	-14.0	-7.0	-7.0	-8.0	1.0	6.0	8.0	9.0	-5.0	-14.0	-10.0	5.0	27.0	27.0	12.0	5.0	5.0	6.0	-1.0	-10.0	-8.0	-2.0	1.0	2.0	0.0	1.0	10.0	10.0		



20.0	7	-4.1	-1.2	-2.6	-5.6	-3.5	-2.0	-3.1	-1.9	2.8	0.7	3.3	1.7	-4.9	-2.0	-1.8	5.4	10.8	5.9	3.5	2.2	1.6	1.6	-2.4	-3.3	-1.3	-0.5	0.3	0.9	0.1	1.2	4.7	1.3	-0.8
40.0	7	-8.2	-6.8	-6.0	-5.5	-8.0	-6.0	-2.9	-1.7	-2.1	4.6	3.3	0.1	-0.7	-5.5	2.7	9.2	11.3	11.4	5.9	3.6	4.1	1.4	-0.7	-3.2	-3.0	0.3	0.9	-0.4	1.4	4.1	2.7	3.7	2.4
60.0	5	-9.5	-13.2	-7.7	-6.5	-8.6	-10.4	-5.6	-3.0	3.4	2.2	1.6	-0.7	-3.6	4.0	3.6	7.0	10.0	12.4	14.1	8.6	0.7	-0.3	0.0	0.6	-0.5	-1.6	-0.5	2.4	5.0	3.1	2.5	2.9	4.3
80.0	4	-14.4	-12.9	-14.4	-12.6	-7.0	-4.6	-6.0	0.2	-0.7	-2.2	-2.9	-1.0	4.0	6.0	7.5	4.7	8.1	11.6	13.7	13.3	5.9	1.0	0.3	-1.3	0.0	-1.4	0.7	6.0	4.4	4.2	4.5	3.9	4.2
100.0	2	-14.4	-16.5	-14.5	-15.1	-8.0	-4.6	-1.1	-5.0	-4.6	-4.4	-5.6	0.9	7.7	8.0	7.5	9.5	7.1	9.2	9.2	10.6	10.9	5.8	2.1	1.4	-0.0	1.0	1.9	1.3	4.3	6.2	6.7	6.3	5.3
120.0	5	-12.3	-14.5	-14.9	-9.7	-14.4	-6.0	-5.4	-7.1	-8.4	-7.7	1.0	5.3	7.0	10.0	9.7	9.3	10.0	4.2	6.3	7.6	9.4	11.2	6.0	1.5	2.5	4.4	2.5	0.0	2.0	4.3	6.4	7.2	7.9

















































APPENDIX FOUR  
SIGNIFICANT DRILL AND TRENCH SAMPLE ASSAYS

GOLDSTAR PROPERTY  
DIAMOND DRILL RESULTS - 1987 PROGRAM

<u>Drill Hole</u>	<u>Length (m)</u>	<u>Azimuth (°)</u>	<u>Dip (°)</u>	<u>From (m)</u>	<u>To (m)</u>	<u>Interval m/(ft)</u>	<u>Grade Gold g/t (opt)</u>	<u>Grade Silver g/t (opt)</u>	
87 - 1	39.00	180	-60	23.2	26.2	3.0/( 9.8)	2.13/(0.06)	7.3/(0.21)	
				---	---	---	---	---	
				29.3	30.8	1.5/( 4.9)	7.95/(0.23)	98.0/(2.85)	
				30.8	32.3	1.5/( 4.9)	5.35/(0.16)	20.5/(0.59)	
				---	---	---	---	---	
				<u>33.8</u>	<u>35.4</u>	<u>1.6/( 5.3)</u>	<u>2.95/(0.09)</u>	<u>213.0/(6.18)</u>	
				Total Interval:	23.2	35.4	12.2/(40.0)	3.03/(0.09)	45.4/(1.32)
87 - 2	27.40	355	-50	12.2	13.7	1.5/( 4.9)	1.85/(0.05)	16.3/(0.47)	
				---	---	---	---	---	
				<u>16.7</u>	<u>18.3</u>	<u>1.6/( 5.3)</u>	<u>4.77/(0.14)</u>	<u>98.0/(2.84)</u>	
				Total Interval:	12.2	18.3	6.1/(20.0)	1.71/(0.05)	30.6/(0.89)
87 - 3	40.00	010	-50	29.2	30.4	1.2/( 3.9)	0.62/(0.02)	32.5/(0.94)	
87 - 4	29.20	010	-50	20.6	22.8	2.2/( 7.2)	9.77/(0.28)	96.0/(2.78)	
87 - 5	36.90	010	-50	26.2	27.7	1.5/( 4.9)	3.63/(0.11)	83.0/(2.41)	
87 - 6	27.70	010	-50	14.3	17.7	3.4/(11.2)	5.42/(0.16)	13.5/(0.39)	
				17.7	20.7	3.0/( 9.8)	3.44/(0.10)	13.5/(0.39)	
				20.7	23.4	2.7/( 8.9)	0.55/(0.02)	34.5/(1.00)	
				---	---	---	---	---	
				Total Interval:	14.3	23.4	9.1/(29.9)	3.32/(0.10)	19.7/(0.57)
				(includes)	14.3	20.7	6.4/(21.0)	4.49/(0.13)	13.5/(0.39)
87 - 7	31.00	010	-50	No mineralization					
87 - 8	30.50	010	-50	No mineralization					
87 - 9	30.80	010	-50	No mineralization					
87 - 10	36.58	155	-45	7.0	8.4	1.4/( 4.6)	0.03/(<0.01)	23.5/(0.68)	
				8.4	10.5	2.1/( 6.9)	0.79/( 0.02)	145.0/(4.20)	
				<u>10.5</u>	<u>11.9</u>	<u>1.4/( 4.6)</u>	<u>0.48/( 0.01)</u>	<u>140.0/(4.06)</u>	
				---	---	---	---	---	
				Total Interval:	7.0	11.9	4.9/(16.1)	0.48/( 0.01)	107.8/(3.13)
				Separate Interval:	23.6	27.4	3.8/(12.5)	0.31/( 0.01)	210.0/(6.09)

DIAMOND DRILL RESULTS - 1987 - GOLDSTAR - PAGE 2

<u>Drill Hole</u>	<u>Length (m)</u>	<u>Azimuth (°)</u>	<u>Dip (°)</u>	<u>From (m)</u>	<u>To (m)</u>	<u>Interval m/(ft)</u>	<u>Grade Gold g/t (opt)</u>	<u>Grade Silver g/t (opt)</u>
87 - 11	31.00	155	-70	8.9	9.5	0.6/( 2.0)	0.07/(<0.01)	68.0/(1.97)
				9.5	11.4	1.9/( 6.2)*	0.58/( 0.02)	30.0/(0.87)
				<u>11.4</u>	<u>12.9</u>	<u>1.5/( 4.9)</u>	<u>4.53/( 0.13)</u>	<u>20.5/(0.59)</u>
				Total Interval: (includes)	8.9 9.5	12.9 12.9	4.0/(13.1) 2.00/( 0.06) 3.4/(11.2)	2.34/( 0.07) 32.1/(0.93) 25.8/(0.75)
				* - sludge grades 10.40 g/t (0.31 opt) Au from 9.7 to 10.8 m - 3.1m (10 ft).				
87 - 12	37.00	---	-90	31.5	32.5	1.0/( 3.3)*	0.62/( 0.02)	2.5/(0.07)
				32.5	33.3	0.8/( 2.6)	1.34/( 0.04)	5.5/(0.16)
				<u>33.3</u>	<u>34.2</u>	<u>0.9/( 3.0)</u>	<u>0.96/( 0.03)</u>	<u>3.3/(0.10)</u>
				Total Interval:	31.5	34.2	2.7/( 8.9)	0.94/( 0.03)
				* - sludge grades 4.32 g/t (0.13 opt) Au from 31.1 to 34.1m - 3.3 m (10 ft).				
87 - 13	45.70	158	-45	No mineralization				
87 - 14	55.45	158	-70	No mineralization*				
				* - sludge sample grades 1.17 g/t (0.03 opt) Au from 31.1 to 34.1 m - 3.0 m/(9.8 ft).				
87 - 15	76.20	158	-90	57.9	58.5	0.6/( 2.0)	0.10/(<0.01)	41.5/(1.20)
				58.5	59.4	0.9/( 3.0)	0.17/(<0.01)	18.0/(0.52)
				59.4	60.8	1.4/( 4.5)	1.95/( 0.06)	15.5/(0.45)
				60.8	61.6	0.8/( 2.6)	0.55/( 0.02)	108.0/(3.13)
				61.6	62.8	1.2/( 3.9)*	2.34/( 0.07)	17.0/(0.05)
				<u>62.8</u>	<u>63.9</u>	<u>1.1/( 3.6)</u>	<u>18.80/( 0.55)</u>	<u>98.0/(2.84)</u>
				Total Interval:	57.9	63.9	6.0/(19.7)	4.48/( 0.13)
				(includes):	61.6	63.9	2.3/( 7.6)	10.21/( 0.30)
				* - sludge sample assays 10.5 g/t (0.31 opt) Au and 37.0 g/t (1.08 opt) Ag from 61.6 to 64.7 - 3.1 m (10 ft).				
87 - 16	76.80	22	-45	59.6	61.1	1.5/( 4.9)*	1.41/( 0.04)	32.0/(0.93)
				* - sludge sample assays 1.30 g/t (0.04) Au and 21.0 g/t (0.61 opt) Ag from 58.5 to 61.6 - 3.3 m/ (10 ft).				



GOLDSTAR PROPERTY  
TRENCHING RESULTS - 1987 PROGRAM

Bulldozer Trenches - 5 kg chip samples (many fragments from all of sampled interval)

Trench	Total Length (m)	Sampled Length (m)	From (m)	To (m)	Interval m/(ft)	Grade Gold g/t (opt)	Grade Silver g/t (opt)		
G - 0	140	22.5	10.0	11.0	1.0/( 3.3)	4.77/(0.14)	19.0/(0.55)		
			11.0	13.5	2.5/( 8.2)	17.41/(0.51)	290.0/(8.46)		
			13.5	15.0	1.5/( 4.9)	0.48/(0.01)	9.0/(0.26)		
			15.0	17.5	2.5/( 8.2)	0.58/(0.02)	11.0/(0.32)		
			Total Interval:		10.0	17.5	7.5/(24.6)	6.73/(0.20)	104.7/(3.05)
Includes:		10.0	13.5	3.5/(11.5)	13.80/(0.40)	212.6/(6.20)			
G - 1	158	158	90.0	95.0	5.0/(16.4)*	0.89/( 0.02)	0.3/(0.01)		
			95.0	100.0	5.0/(16.4)*	9.84/( 0.28)	2.7/(0.08)		
			100.0	106.0	6.0/(19.7)*	0.14/( 0.01)	0.2/(0.16)		
			106.0	111.0	5.0/(16.4)*	365.86/(10.67)	105.9/(3.09)		
			111.0	116.0	5.0/(16.4)*	0.96/( 0.03)	2.7/(0.08)		
*Resampling of the same intervals:									
			90.0	95.0	5.0/(16.4)	0.03/(<0.01)	0.5/(0.01)		
			95.0	100.0	5.0/(16.4)	0.01/(<0.01)	1.7/(0.05)		
			100.0	106.0	6.0/(19.7)	0.10/(<0.01)	4.4/(0.13)		
			106.0	111.0	5.0/(16.4)	109.00/( 3.18)	180.0/(5.25)		
			111.0	116.0	5.0/(16.4)	0.03/(<0.01)	2.3/(0.07)		
G - 3	139	139	No Mineralization						
G - 10	364	364	25.0	30.0	5.0/(16.4)	5.90/( 0.17)	32.0/(0.93)		
			Includes		26.6	26.8	0.2/( 0.7)	11.70/( 0.34)	142.0/(4.14)
			Separate interval:		105.0	108.0	3.0/( 9.8)*	4.32/( 0.13)	126.0/(3.68)
*Margarete Vein									
*Resampled (Margarete Vein)									
			105.5	106.0	0.5/( 1.6)	20.70/( 0.61)	250.0/(7.29)		
			106.0	107.2	1.2/( 3.9)	4.35/( 0.17)	72.0/(2.10)		
			107.2	108.5	1.3/( 4.3)	4.65/( 0.14)	192.0/(5.60)		
Total Interval:			105.5	108.5	3.0/( 9.8)	7.21/( 0.21)	153.7/(4.48)		

TRENCHING RESULTS - 1987 - GOLDSTAR - PAGE 2

Bulldozer Trenches - 5 kg chip samples (many fragments from all of sampled interval)

<u>Trench</u>	<u>Total Length (m)</u>	<u>Sampled Length (m)</u>	<u>From (m)</u>	<u>To (m)</u>	<u>Interval m/(ft)</u>	<u>Grade Gold g/t (opt)</u>	<u>Grade Silver g/t (opt)</u>
G - 10 (Continued)							
Separate Interval:			180.0	185.0	5.0/(16.4)	0.17/(<0.01)	11.0/(0.32)
			185.0	190.0	5.0/(16.4)	0.03/(<0.01)	16.5/(0.48)
			190.0	195.0	5.0/(16.4)*	0.03/(<0.01)	17.0/(0.50)
			195.0	200.0	5.0/(16.4)	---	---
			200.0	205.0	5.0/(16.4)	0.03/(<0.01)	14.8/(0.43)
			205.0	210.0	5.0/(16.4)	0.03/(<0.01)	27.0/(0.79)
			210.0	220.0	5.0/(16.4)	0.21/( 0.01)	6.5/(0.19)
	Total Interval:		180.0	220.0	40.0/(131.2)	0.08/(<0.01)	15.9/(0.47)
	Resample:		191.4	193.0	1.6/( 5.2)	2.19/( 0.06)	n/s
	Separate Interval:		304.0	309.0	5.0/(16.4)	1.34/(0.04)	74.0/(2.16)
			309.0	314.0	5.0/(16.4)	1.27/(0.04)	33.0/(0.96)
	Total Interval:		304.0	314.0	10.0/(32.8)	1.31/(0.04)	54.0/(1.56)

Bulldozer Trenches - 500 gm chip samples (many fragments from all of sampled interval)

G - 4	210	95	No anomalies				
G - 5	325	325	80.0	85.0	5.0/( 16.4)	7.1/( 0.21)	3.0/(0.09)
	Separate Interval:		200.0	210.0	10.0/( 32.8)	0.3/( 0.01)	11.9/(0.35)
	Separate Interval:		230.0	275.0	45.0/(147.6)	0.2/(<0.01)	5.5/(0.16)
						(average)	(average)
G - 6	250	200	25.0S	35.0S	10.0/( 32.8)	0.3/( 0.01)	4.2/(0.12)
						(average)	(average)
G - 7	340	340	75.0N	90.0N	15.0/( 49.2)	0.2/(<0.01)	5.2/(0.15)
	Separate Interval:		85.0S	95.0S	10.0/( 32.8)	0.7/( 0.02)	0.4/(0.01)
						(average)	(average)
G - 8	205	205	125.0N	130.0N	5.0/( 16.4)	0.6/( 0.02)	n/s
G - 11	350	36	136.0N	148.0N	12.0/( 39.3)	0.9/( 0.03)	n/s

TRENCHING RESULTS - 1987 - GOLDSTAR - PAGE 3

<u>Trench</u>	<u>Total Length (m)</u>	<u>Sampled Length (m)</u>	<u>From (m)</u>	<u>To (m)</u>	<u>Interval m/(ft)</u>	<u>Grade Gold g/t (opt)</u>	<u>Grade Silver g/t (opt)</u>
<u>Bulldozer Trenches - 500 gm chip samples (many fragments from all of sampled interval)</u>							
G - 23	650	650	315.0S	320.0N	5.0/( 16.4)	3.3/( 0.10)	4.1/(0.12)
	Separate Interval		25.0S	30.0S	5.0/( 16.4)	1.4/( 0.04)	2.7/(0.08)
	Separate Interval		135.0N	140.0N	5.0/( 16.4)	2.1/( 0.06)	5.4/(0.16)
G - 26	315	315	25.0N	45.0N	20.0/( 65.6)	0.2/(<0.01)	10.3/(0.30)
			115.0N	120.0N	5.0/( 16.4)	0.4/( 0.01)	0.6/(0.02)
<u>Bulldozer Trenches - 500 gm soil sample - selected from one locality</u>							
G - 13	250	250	35.0N			2.5/(0.07)	23.0/(0.67)
			105.0N			1.4/(0.04)	50.0/(1.45)
G - 15	305	270	0.0N			0.6/(0.02)	6.9/(0.20)
			105.0N			1.4/(0.04)	6.0/(0.18)
G - 17	340	325	20.0N			2.5/(0.08)	5.0/(0.15)
			90.0N	135.0N	45.0/(147.6)	0.2/(<0.01)	6.8/(0.18)
<u>Bulldozer Trenches not sampled due to incompleteness of trench:</u>							
G - 9	150						
G - 12	250						
G - 14	300						
G - 16	310						
G - 19	270						

TRENCHING RESULTS - 1987 - GOLDSTAR - PAGE 4

<u>Trench</u>	<u>Total Length (m)</u>	<u>Sampled Length (m)</u>	<u>From (m)</u>	<u>To (m)</u>	<u>Interval m/(ft)</u>	<u>Grade Gold g/t (opt)</u>	<u>Grade Silver g/t (opt)</u>
<u>Excavator Trenches - 500 gm chip samples (many fragments from all of sampled interval)</u>							
'H Series Trenches' - These are cut around the Augusta Showing							
H - 1	30	5	0.0 <u>1.5</u>	1.5 <u>5.0</u>	1.5/( 4.9) <u>3.5/(11.5)</u>	11.9/(0.35) <u>17.7/(0.52)</u>	45.5/(1.32) <u>20.5/(0.60)</u>
	Total Interval		0.0	5.0	5.0/(16.4)	16.0/(0.46)	28.0/(0.81)
H - 3	45	41	Not mineralized				
H - 6	30	7	Not mineralized				
H - 7	25	20	Not mineralized				
H - 8	40	25	Not mineralized				
H - 9	45	28	Not mineralized				
H - 10	20	14	0.0 <u>5.0</u>	5.0 <u>10.0</u>	5.0/(16.4) <u>5.0/(16.4)</u>	1.8/(0.06) <u>12.2/(0.36)</u>	40.0/(1.17) <u>17.5/(0.51)</u>
	Total Interval:		0.0	10.0	10.0/(32.8)	7.0/(0.20)	28.8/(0.84)
H - 11	25	15	Not mineralized				
H - 12	90	90	Not mineralized				

'H series' Excavator trenches not sampled (geological purposes only) include:

H - 0	20
H - 2	5
H - 4	40
H - 5	19

TRENCHING RESULTS - 1987 - GOLDSTAR - PAGE 5

<u>Trench</u>	<u>Total Length (m)</u>	<u>Sampled Length (m)</u>	<u>From (m)</u>	<u>To (m)</u>	<u>Interval m/(ft)</u>	<u>Grade Gold g/t (opt)</u>	<u>Grade Silver g/t (opt)</u>
'HM Series Trenches' - These are cut around along the Margarete Vein near the Margarete shafts							
HM - 1	15	15	10.0 11.0 12.0	11.0 12.0 15.0	1.0/( 3.3) 1.0/( 3.3) 3.0/( 9.8)	13.8/( 0.40) 0.2/(<0.01) 5.0/( 0.15)	58.0/( 1.69) 33.5/( 1.00) 60.0/( 1.75)
	Total Interval:		10.0	15.0	5.0/(16.4)	3.1/( 0.09)	54.3/( 1.58)
HM - 2	20	4.5	6.0 7.0	7.0 8.5	1.0/( 3.3) 1.5/( 4.9)	4.1/( 0.12) 8.5/( 0.25)	110.0/( 3.21) 345.0/(10.06)
	Total Interval:		6.0	8.5	2.5/( 8.2)	6.7/( 0.20)	251.0/( 7.32)
HM - 3	42	42	30.0	35.0	5.0/(16.4)	1.4/( 0.04)	4.4/( 0.13)
HM - 4	23	10	6.0	7.0	1.0/( 3.3)	13.4/( 0.40)	n/s
HM - 5	75	19	3.0	6.0	3.0/( 9.8)	0.9/( 0.03)	10.5/( 0.30)
HM - 6	80	80	0.0	3.5	3.5/(11.5)	0.5/( 0.01)	87.0/( 2.52)
HM - 7	35	35	20.0 25.0	25.0 30.0	5.0/(16.4) 5.0/(16.4)	0.2/(<0.01) 2.0/( 0.06)	203.0/( 5.89) 13.0/( 0.38)
	Total Interval:		20.0	30.0	10.0/(32.8)	1.1/( 0.03)	108.0/( 3.15)
HM - 8	25	25	Not mineralized				
HM - 9	23	10	6.0 6.8	6.8 7.2	0.8/( 2.6) 0.4/( 1.3)	0.3/( 0.01) 0.7/( 0.02)	10.0/( 0.29) 15.0/( 0.48)
	Total Interval:		6.0	7.2	1.2/( 3.9)	0.4/( 0.01)	11.7/( 0.34)
HM - 10	60	60	10.0	15.0	5.0/(16.4)	0.6/( 0.02)	52.0/( 1.52)
	Separate Interval:		30.0	35.0	5.0/(16.4)	1.9/( 0.06)	30.8/( 0.90)
Excavator Trenches - 5 kg chip sample (many fragments from all of sampled interval)							
HM - 11	85	52	18.0	23.0	5.0/(16.4)	0.3/( 0.01)	132.0/(3.85)
HM - 12	30	30	Not mineralized				
HM - 13	45	45	0.0	5.0	5.0/(16.4)	0.8/( 0.02)	25.5/(0.74)

TRENCHING RESULTS - 1987 - GOLDSTAR - PAGE 6

<u>Trench</u>	<u>Total Length (m)</u>	<u>Sampled Length (m)</u>	<u>From (m)</u>	<u>To (m)</u>	<u>Interval m/(ft)</u>	<u>Grade Gold g/t (opt)</u>	<u>Grade Silver g/t (opt)</u>		
HM - 14	49	49	5.0	10.0	5.0/(16.4)	0.9/( 0.03)	22.5/(0.65)		
HM - 15	19	5	0.0	3.0	3.0/( 9.8)	4.7/( 0.14)	158.0/(4.58)		
HM - 16	40	40	Not mineralized						
HM - 17	40	40	Not mineralized						
HM - 18	35	35	Not mineralized						
HM - 19	144	144	Not mineralized						
HM - 20	49	49	16.0N	20.0N	4.0/(13.1)	<0.1/(<0.01)	57.0/(1.66)		
			Separate Interval:		10.0S	17.0S	7.0/(13.0)*	<0.1/(<0.01)	21.0/(0.61)
			* Specimen from narrow galena vein @ 10.0S			2.4/( 0.07)	81.8/(2.39)		
HM - 21	22	22	0.0	5.0	5.0/(16.4)	1.2/( 0.03)	59.0/(1.72)		
			<u>5.0</u>	<u>10.0</u>	<u>5.0/(16.4)</u>	<u>0.5/( 0.01)</u>	<u>96.0/(2.80)</u>		
			Total Interval:		0.0	10.0	10.0/(32.8)	0.8/( 0.02)	77.5/(2.26)
HM - 22	65	65	Not mineralized						

# ARCHER, CATHRO

& ASSOCIATES LIMITED

CONSULTING GEOLOGICAL ENGINEERS

VANCOUVER, B.C. (604) 688-2568

BOX 4127, WHITEHORSE, Y.T. Y1A 3S9 (403) 667-4415

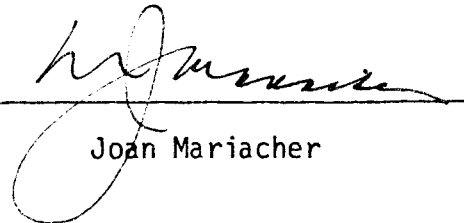
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1016 - 510 WEST HASTINGS STREET  
VANCOUVER, B.C. V6B 1L8

## AFFIDAVIT

I, Joan Mariacher, of Vancouver, B.C. make oath and say:

That to the best of my knowledge the attached Statement of Expenditures for exploration work on the Angus 1-24 mineral claims on Claim Sheet 1151/6 is accurate.

  
Joan Mariacher

Sworn before me at Vancouver, B.C.

this 27th day of

November, 1987

  
Notary, Yukon Territory

Statement of Expenditures  
Angus 1-24 Mineral Claims  
November 27, 1987

Contract Trenching

E. Caron Diamond Drilling Co. Ltd.

\$17,543.64



E. CARON DIAMOND DRILLING LTD.

7 Roundel Road Whitehorse, Yukon Y1A 3H3

Phone (403) 668-2424 Telex 036-8-337

August 29, 1987  
Invoice #-2173  
Tractor & Hoe

IN ACCOUNT WITH:

Archer, Cathro & Associates Ltd.  
3125 - 3 rd. Avenue,  
Whitehorse, Yukon

Tractor Charges August 16 to 29, 1987:		(Revenue)
<u>Tractor D-7E</u>		
115 machine hrs.	@ \$120.00 per hr.	-\$13,800.00
<u>Hitachi Hoe</u>		
74.5 machine hrs.	@ \$120.00 per hr.	-\$ 8,940.00
<u>Travelling Time</u>		
11 man hrs.	@ \$30.00 per hr.	=\$ 330.00
<u>Moving</u>		
5 man hrs.	@ \$30.00 per hr.	-\$ 150.00
<u>Truck Time</u>		
3 machine hrs.	@ \$65.00 per hr.	-\$ 195.00
<u>Fuel for Camp</u>		
May 29 to 31/87		
95 days/1 drum per 10 days		
1944 l	@ \$0.56 per l	-\$ 1,088.64 <u>\$24,503.64</u>

*54 hours  
57 hrs*

Total Invoice            \$24,503.64 ~

*nuclear-6960-  
Revenue-17543.64*

*at 5/17  
2186*

