



Province of  
British Columbia

Ministry of  
Energy, Mines and  
Petroleum Resources

ASSESSMENT REPORT  
TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(S) <b>PROSPECTING</b>	TOTAL COST <b>7004.00</b>
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AUTHOR(S) **Don Barker** SIGNATURE(S)

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED **30 Dec 1985** YEAR OF WORK **1985**

PROPERTY NAME(S) **Beaver**

COMMODITIES PRESENT

B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN

MINING DIVISION **Skeena** NTS **93 E 5E**

LATITUDE **53° 29.5'** LONGITUDE **127° 43'**

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property (Examples: TAX 1-4, FIRE 2 (12 units); PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)):

**Beaver 5 (12 u)**  
**Beaver 6 (10 u)**

OWNER(S)

**Whitesail Ventures Corp**

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

MAILING ADDRESS

**310 - 513 8th Ave SW  
Calgary, Alberta T2P 1G3**

OPERATOR(S) (that is, Company paying for the work)

**John Kruszewski**

**14,752**

MAILING ADDRESS

**same**

**FILMED**

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude).

Metasedimentary rocks that dip 45° northeasterly are cut by the "Main Smith vein" that dips 65° southwesterly. The quartz vein swells to several metres in width and is mineralized with auriferous pyrite, chalcopyrite and malachite. This is probably the same showing as Smith Hash described in assessment report #8834, which previous workers have plotted to the west.

REFERENCES TO PREVIOUS WORK

AMMENDED REPORT TO:  
PROPERTY VISIT REPORT AND WORK  
PROPOSAL ON THE WHITESAIL VENTURES  
CORPORATION SMITH VEIN

BY D. J. Barker P. Eng.  
August 1986

## TABLE OF CONTENTS

	Page
Summary .....	2
Introduction .....	2
Objectives of Present Work .....	3
Geophysical Program .....	3
Lower Zone Outcrop .....	5
Drilling Program for the Main Smith Vein .....	6
Statement of Costs .....	7
Certification and Qualifications .....	8
Conclusion and Recommendations .....	9
References .....	10

## TABLE OF FIGURES

Figure 1.	Property Location
Figure 2.	Claim Map
Figure 3.	Magnetometer Survey Field Notes
Figure 4.A	Magnetometer Anomaly Profile 1
Figure 4.B	Magnetometer Anomaly Profile 4
Figure 5.A	Magnetometer Anomaly Profile 2
Figure 5.B	Magnetometer Anomaly Profile 3
Figure 6.	Magnetometer Survey Profile Lines
Figure 7.	Surface Section of South Face of Sandifer Ridge, looking North
Figure 8.	Lower Mineralized Zone and Lower Fault Zone
Figure 9.	Phase I Drill Hole Location
Figure 10.	Phase I Drill Location Map

Appendix

## SUMMARY

The Smith Vein and claims are located on Sandifer Ridge about 14 kilometers southeast of Kemano.

The author visited the property on October 5th and 6th, 1985. The purpose of that visit was to evaluate the vein exposure and recommend a resource development program. A report was submitted on October 21, 1985.

Past work on the vein exposure has been carried out since 1952. The main Smith Vein has been well mapped and sampled in past programs. That work is well documented in the reference work. It was determined that further mapping and sampling would have little value, and that in depth knowledge of the vein itself was required as the next stage of development.

A phased drill program and consequent underground program was recommended.

A quartz vein outcrop was discovered approximately 90 meters below the bottom portion of the Smith Vein and lower fault zone. The outcrop is significant in that the zone below the main Smith Vein is now considered attractive as an exploration target. A selected sample of strong malachite, chalcopryrite and pyrite mineralization indicated anomalous gold mineralization.

On the basis of the newly discovered zone and required drilling for the main vein, an exploration program, for drilling, geochemistry, geophysics and surface mapping was recommended at a cost of \$54,000.00.

Due to the requirements for assessment work it was decided to enlarge upon the geophysical work done, on October 5th and 6th, 1985, and also upon the newly discovered quartz zone below the main vein.

## INTRODUCTION

The Smith Vein lies within the Beaver II, Beaver IV, Beaver V and Beaver VI Claims Group. The claims are fourteen kilometers southeast of Kemano. The main Smith Vein outcrops on the very steep southerly facing slope of Sandifer Ridge above Seekwyakin Creek. The vein has been mapped and sampled by surface methods.

Present access to the vein is by helicopter to a pad at the top and to the east of the vein. Access to the vein is difficult because of the steep topography, and the access will always pose a problem to reconnaissance exploration, drilling and mining.

WHITESAIL RESOURCES  
CORPORATION

BEAVER CLAIMS

KEMANO AREA, B.C.

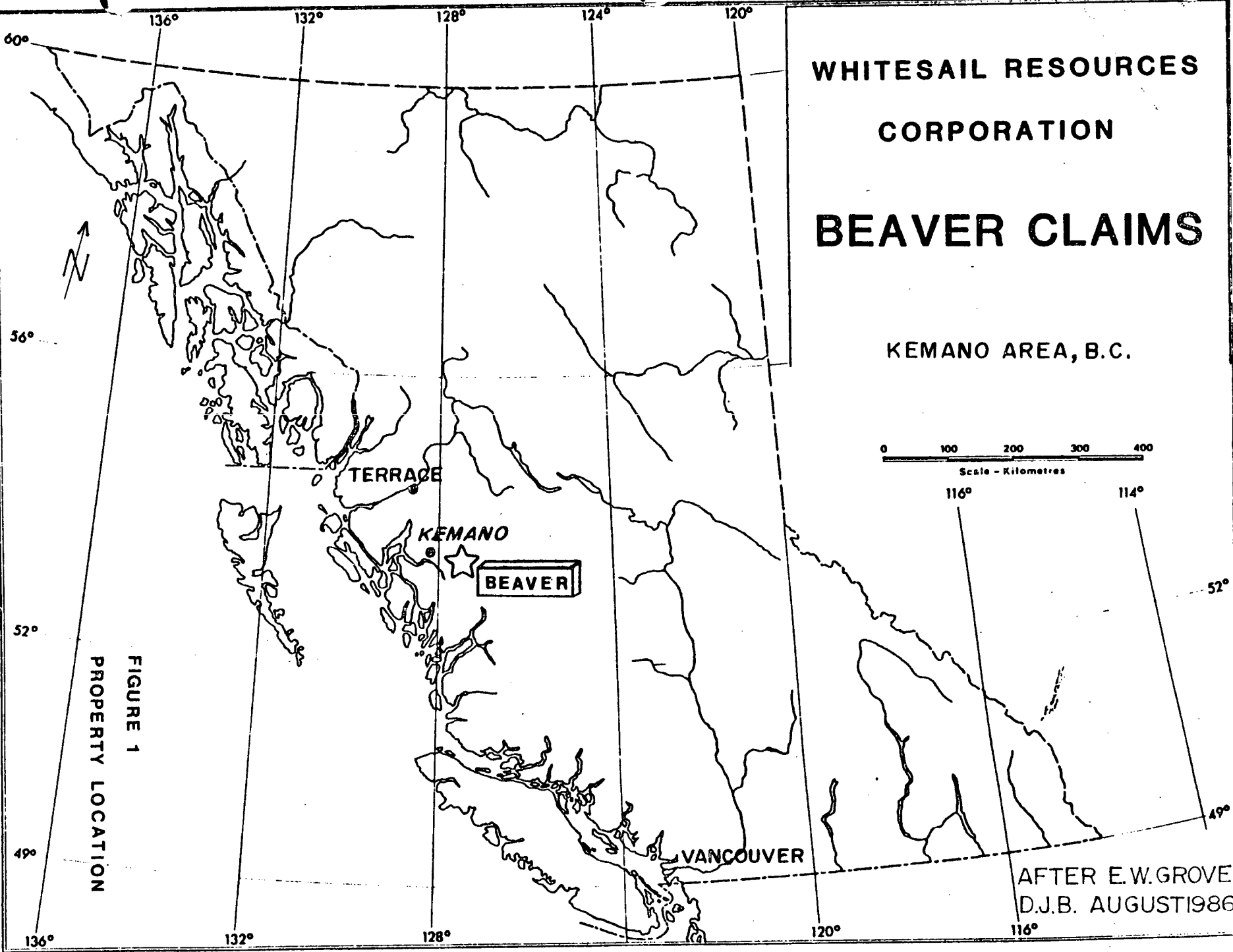
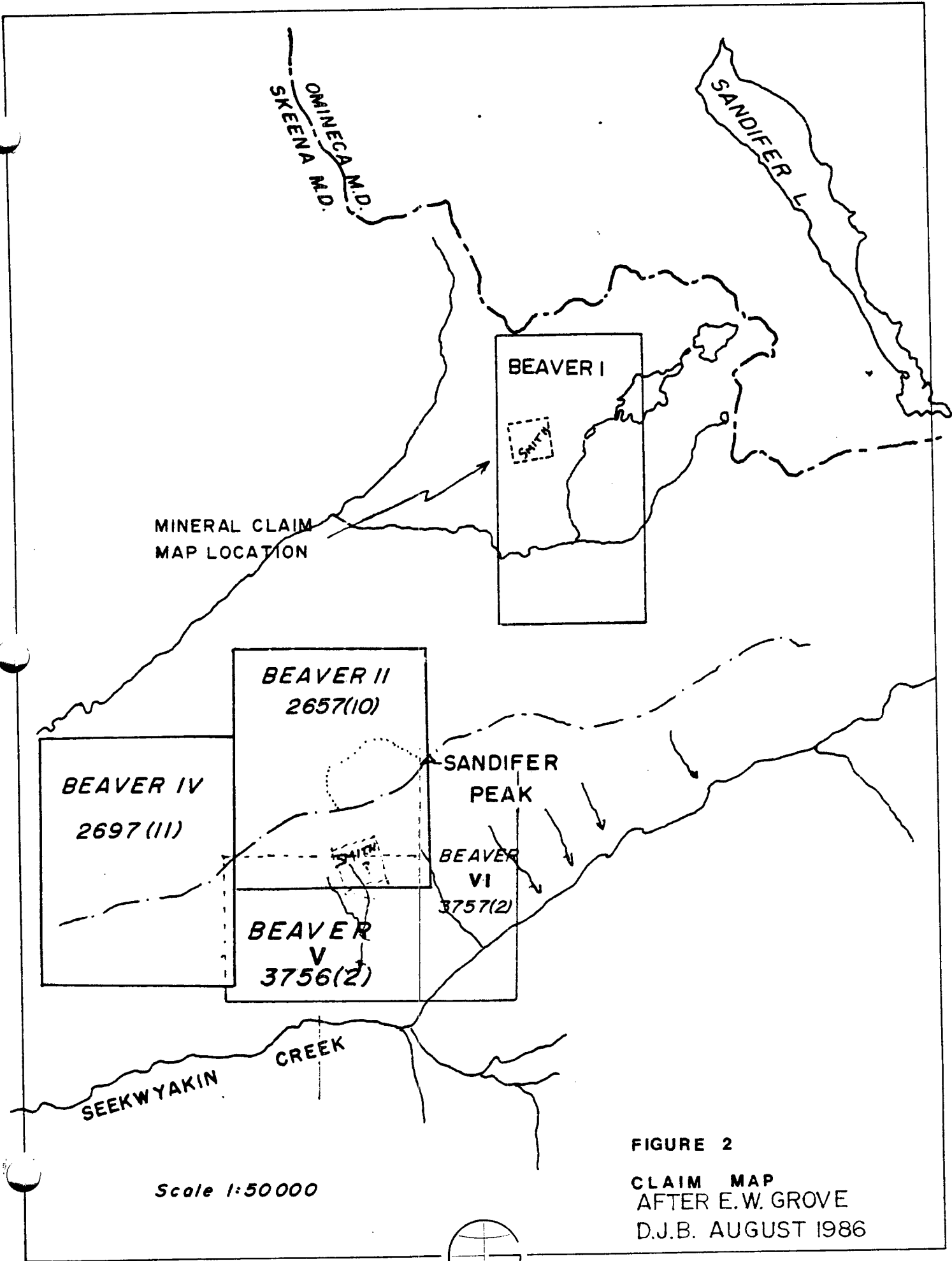


FIGURE 1  
PROPERTY LOCATION

AFTER E.W.GROVE  
D.J.B. AUGUST 1986



The history of development on the main vein is well documented in past reports.

At the request of Mr. R. Hansen, the author visited the claims on October 5th and 6th. The objectives and findings of the visit are documented in the October 21, 1985 report.

The Smith Vein has been well mapped and sampled on its surface exposure. Assay values for gold and silver are significant and the vein requires further work in order to define a tonnage base in conjunction with the surface gold values. Further development should be in the form of various drilling programs leading to an underground program.

The Quartz outcrop below the lower fault zone is significant in that copper sulfides were visually observed and a selected sample assayed an anomalous gold value. The potential for this zone to become expanded below the lower fault zone should be explored.

#### **OBJECTIVES OF PRESENT WORK**

The objectives of this report are as follows:

- i. To document a geophysical survey done on October 5th and 6th, 1985.
- ii. To document the extent and importance of the lower quartz outcrop zone.
- iii. To document the proposed drill program.
- iv. To prepare the information in a format that conforms to the assessment requirement guidelines.

#### **GEOPHYSICAL PROGRAM**

A geophysical program was carried out by Mr. B. Meyers and the following is a description of that program written by Mr. Kruszewski.

"A reconnaissance Magnetometer survey was undertaken by Mr. B. Meyers, on October 5th and 6th, 1985. The purpose of the survey was to determine:

- i. the degree of response over exposed mineralization,
- ii. the amplitude of any anomalies based on the response from overlying rock types,
- iii. the degree of geophysical response east and west of, and along the visible and projected strike of the Smith Vein.

The equipment used was a McPhar Fluxgate M700 Magnetometer. The instrument is self levelling, insensitive to orientation, has a temperature drift of less than 200 gammas over -35 degrees C to +55 degrees C and has a range of 100,000 gammas. A latitude adjustment allows readings of the most sensitive scale by cancelling the earth's magnetic field.

The amplitude of the earth's magnetic field will be reflected in a higher vertical magnetic intensity when underlying rocks contain a higher concentration of iron.

#### Procedure

The measurement lines were run east and west using a Brunton Compass and a hip chain meter. Stations were established on 10 meter centres and readings taken at the stations. A total of 4 lines were run. The magnetic diurnal variation was corrected 50 and 100 gammas respectively.

#### Discussion of Results

From the tabulated survey readings it is apparent that the magnetic response is muted. This could be as a result of the overlying volcanics. However, an anomalous negative response was recorded on or near the known quartz vein.

Below the lower fault horizon where a "new" vein was discovered the anomalous negative highs shift to the east of the vein indicating a possible north - east strike of the vein. The initial work indicates that the survey generates data which can be used to expand the exploration direction in further programs."

Each profile was run on very difficult topography. Actual references are to the vein itself in terms of profile lengths.

It appears that on lines 1, 2 and 4, more negative readings occur to the immediate east of the known vein. In line 2 a second vein was indicated to the east of the main Smith Vein.

On line 3, an anomalous positive indication is thought to represent part of the fault system which could be related to the lower fault zone.

The results of the magnetometer survey are preliminary and are of a reconnaissance nature. However minor anomalies can be noted over the known Smith Vein structure, and therefore the technique should be used below the lower fault zone to survey for further quartz vein structures.



MAGNETOMETER SURVEY  
FIELD NOTES

SURVEY BY B. MEYERS  
HORIZONTAL SCALE 1: 1000

BASE STATION OCT. 5, 1985 12:01pm. — 530 GAMMAS

4:56pm.—530 GAMMAS

OCT. 6, 1985 8:45am.—380 GAMMAS

3:30 pm.—430 GAMMAS

SCALE CHANGED FOR SENSITIVITY CORRECTION

WEST

LOOKING NORTH

EAST

LINE 1

-450 -470 -440 -410 -440 -420 -430 -430 -450 -490 -440 -440 -440 -390 -420 -430 -420 -470

LINE 2

-480 -500 -500 -520 -530 -550 -570 -530 -570 -480 -530 -550 -520 -520 -580 -580 -570 -580 -570 -530

10 METRES EAST OF VISIBLE QUARTZ VEIN  
CUTTING THE OVERLYING SEDIMENTS

METASEDIMENTS

VERTICAL FOOTWALL

LINE 2a.

-540 -690 -770 -830

-990 VEIN SWELLS TO 8 METRES WIDTH LINE 2b.

LINE 3

-730 -700 -220 +250 -760 -840 -830

FAULT ZONE

LOWER FAULT ZONE

LINE 4

-780 -880 -710 -925 -1000 -1050 -850 -850

FIGURE 3

MAGNETOMETER ANOMALY PROFILE 1.

STATIONS AT 100' INTERVALS

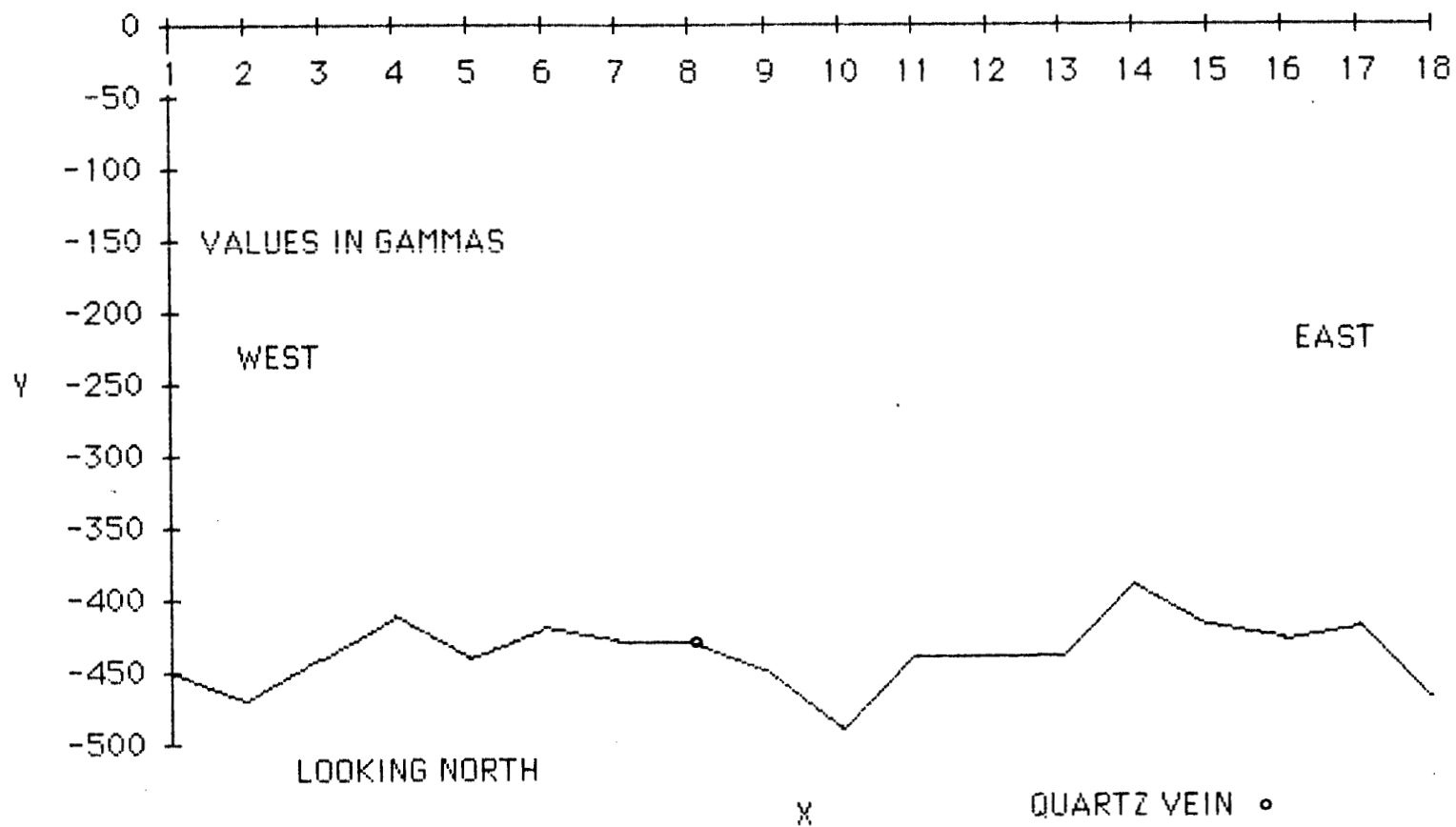


FIGURE 4A (LINE 1)

MAGNETOMETER ANOMALY PROFILE 4.

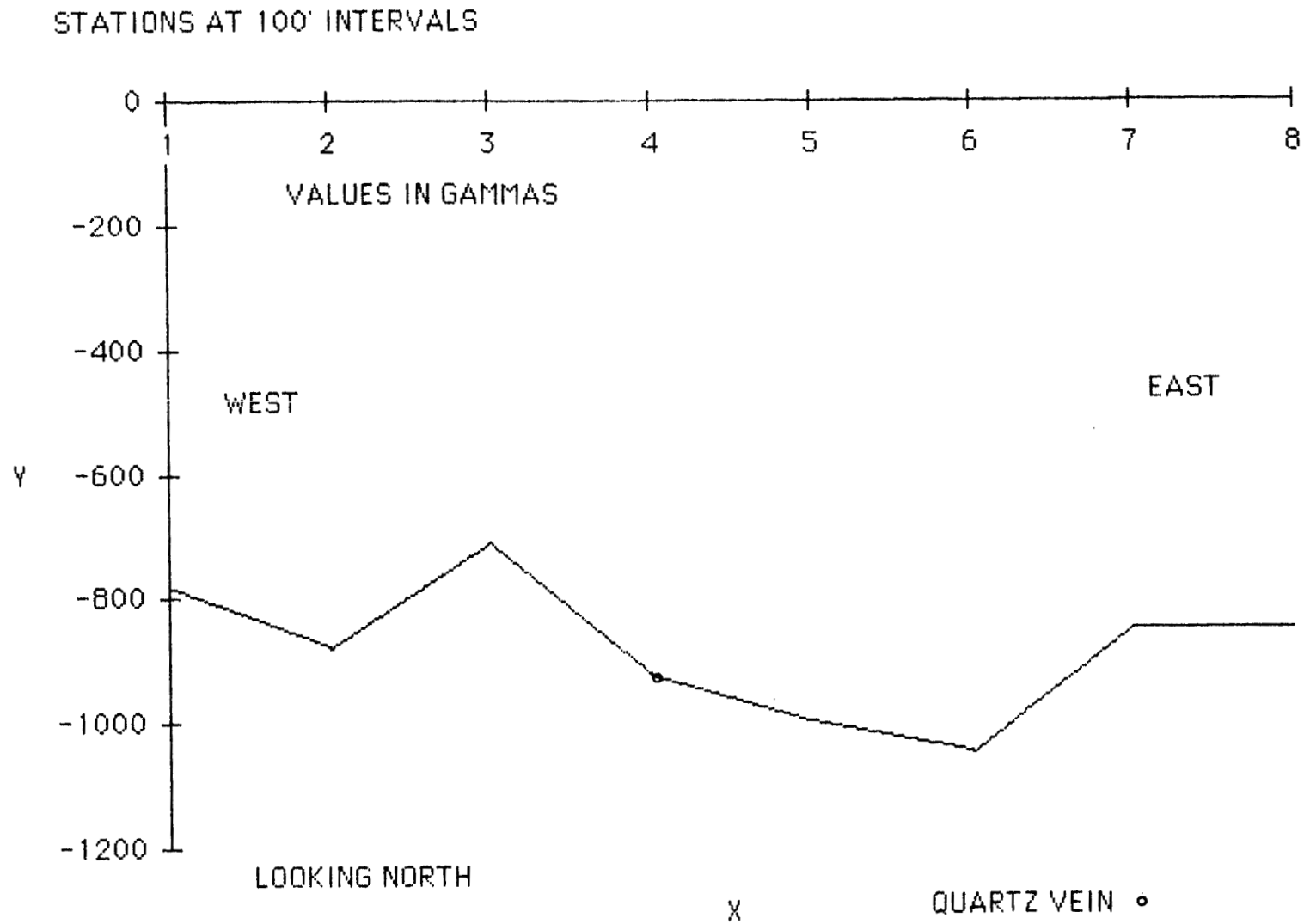


FIGURE 4B (LINE 4)

MAGNETOMETER ANOMALY PROFILE 2.

STATIONS AT 100' INTERVALS

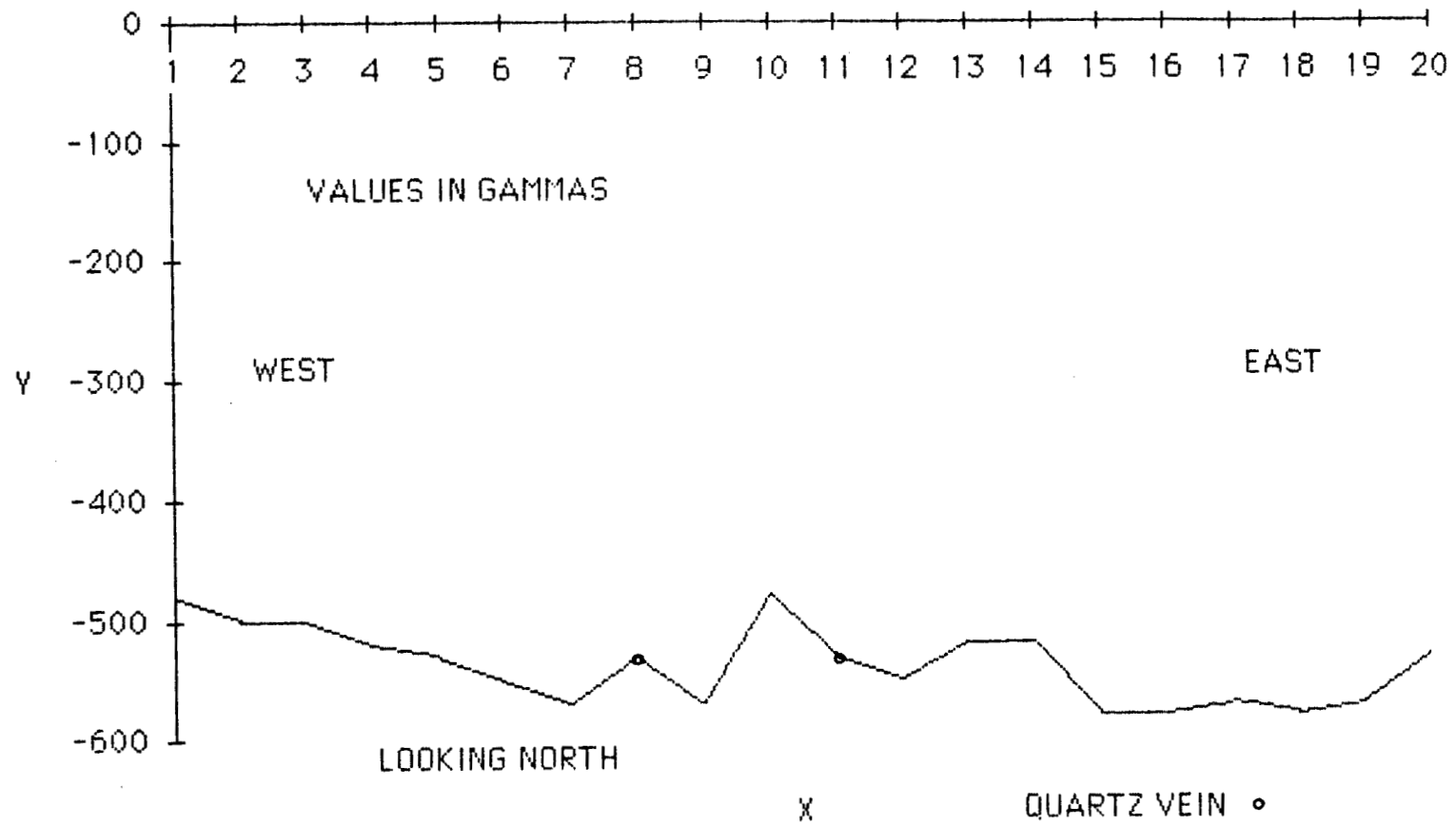


FIGURE 5A (LINE 2)

MAGNETOMETER ANOMALY PROFILE 3.

STATIONS AT 100' INTERVALS

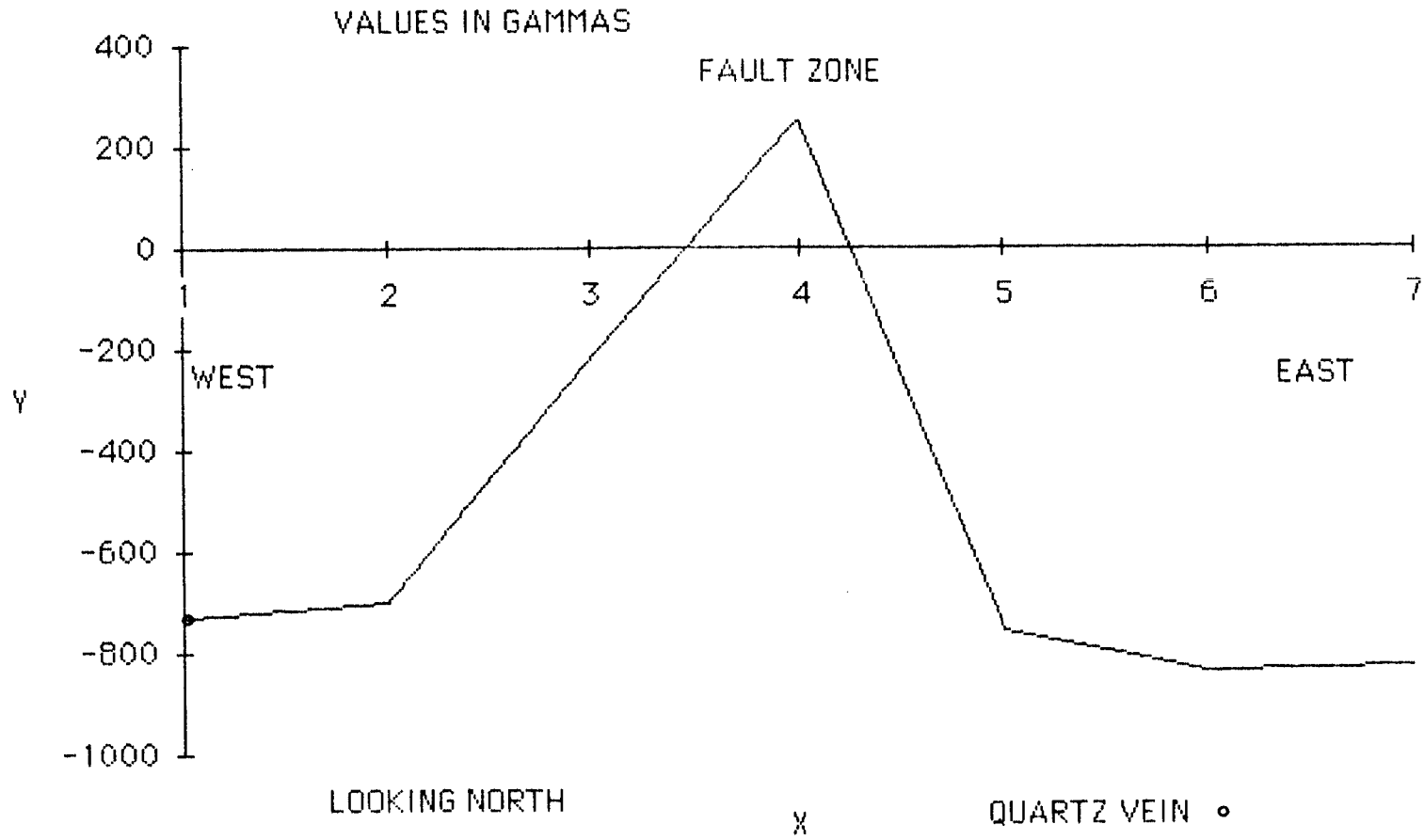
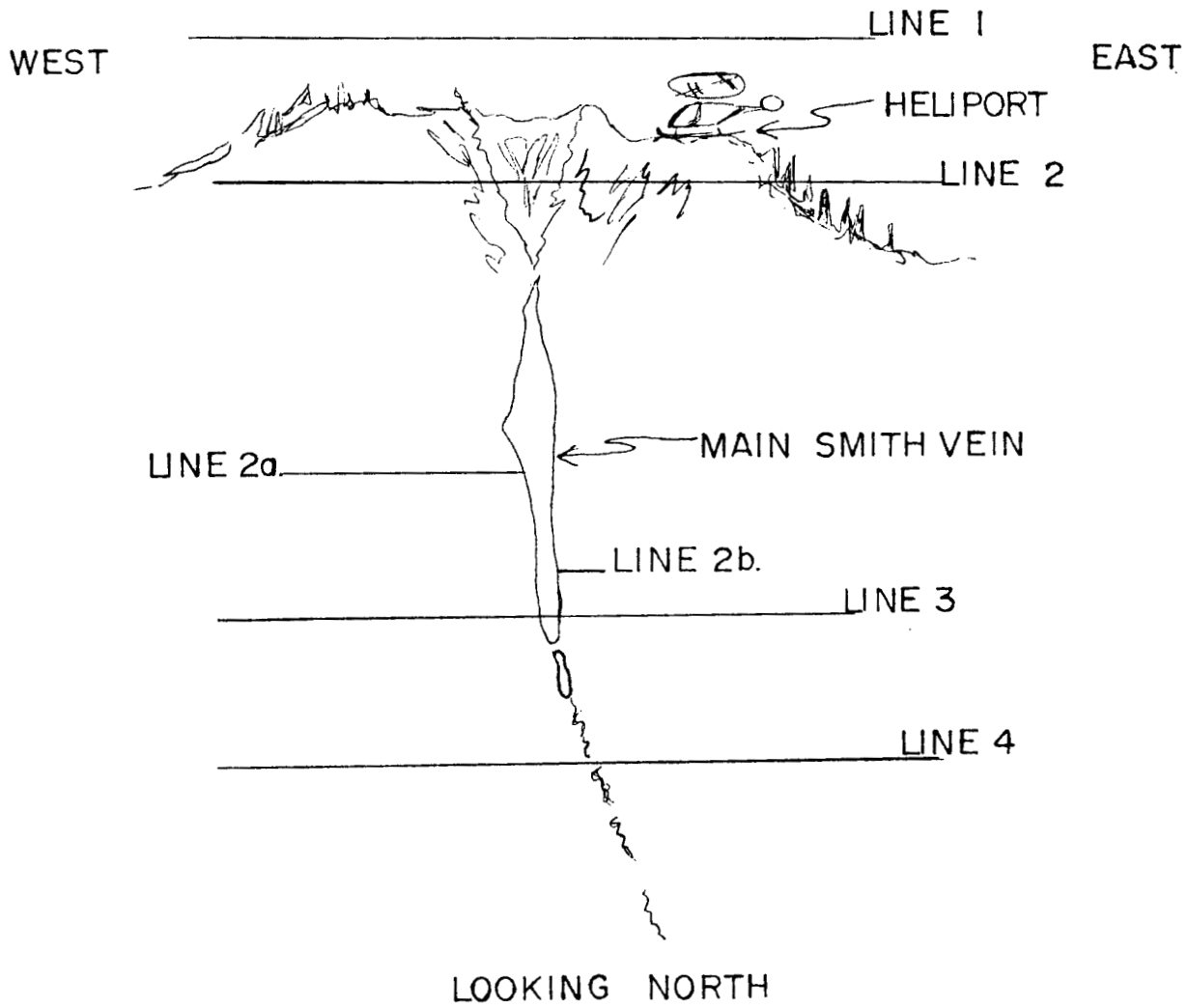


FIGURE 5B (LINE 3)



MAGNETOMETER SURVEY PROFILE LINES

NOT TO SCALE  
 SKETCH  
 AFTER E.W. GROVE  
 D.J.B. AUGUST 1986  
 FIGURE 6

## LOWER ZONE OUTCROP

The main Smith Vein is cut off at the lower portions of the ridge by a series of flat lying faults. The lower fault zone appears to be about 10 meters thick. Below the fault zone a talus pile of material has collected which is derived from both the upper Smith Vein material and material from both the hanging wall and the foot wall. Both the lower fault systems and the talus piles are shown on figures 7 and 8 and also photographs 14, 15 and 16 of the October 21, 1985 report.

Approximately 15 meters below the talus pile a quartz outcrop was discovered. The location of the quartz outcrop is shown in figures 7 and 8 and also on photograph 17 of the October 21, 1985. report.

The outcrop is about 90 meters below the lower fault zone within the drainage draw that contains the talus pile. The dimensions of the outcrop is 15 meters in strike length by about 2 meters in true thickness. About 5 meters of down dip exposure is visible.

The outcrop is of massive quartz mineralization covered with much vegetation and moss. In places the outcrop is heavily oxidized due to erosion of local sulfides and soil cover.

Beneath a soil covered area on the outcrop a selected sample was taken from a zone of malachite, chalcopyrite and pyrite mineralization. The zone is shown in photograph 18 of the October 21, 1985 report. The sample indicated the following assay:

Cu = 2.89 %

Au = .347 oz/ton

Ag = .61 oz/ton

The assay indicates anomalous gold and silver values and also a strong copper value. Given that these values represent the only assays to date on the lower outcrop zone, exploration in the form of mapping, geochemistry and various geophysical techniques are well warranted.

A further 50 meters below the new outcrop, a large quartz boulder was found which likely came from either the main Smith Vein or the new outcrop. The boulder is shown in figure 7 and photograph 19 of October 21, 1985 report. No further vein development was evident above the quartz boulder.

## DRILLING PROGRAM FOR THE MAIN SMITH VEIN

A phase 1 drill program was recommended for the initial depth penetration of the main Smith Vein. The program consisted of 6 holes, the locations of which are shown in figure 9.

The location for the four holes drilled from the hanging wall side, is about 40 meters above the main vein base and about 10 meters to the west of the vein. The location is the only possible area in the midst of very steep topography.

Drill and accessories would have to be brought in by helicopter, either directly to the drill site or to the west of the drill site. The actual hole locations should be chosen in the field depending on the topography and the results of previous holes. The attitude and plunge is given in the October 1985 report.

Two holes should be drilled down dip for depth extension development. The location of the down dip holes can be decided in the field but should be immediately to the east of the 4 hole program and on the vein. Sample 1826 cut a good gold value from hanging wall to footwall in the vicinity of the recommended drilling (ie, Au = 1.598 oz/ton, Ag = .69 oz.ton).

Both drilling and access will be difficult in the extremely rugged terrain. Judgment on drilling access and drill locations will have to be made in the field.



SURFACE SECTION OF SOUTH FACE OF SANDIFER RIDGE  
LOOKING NORTH

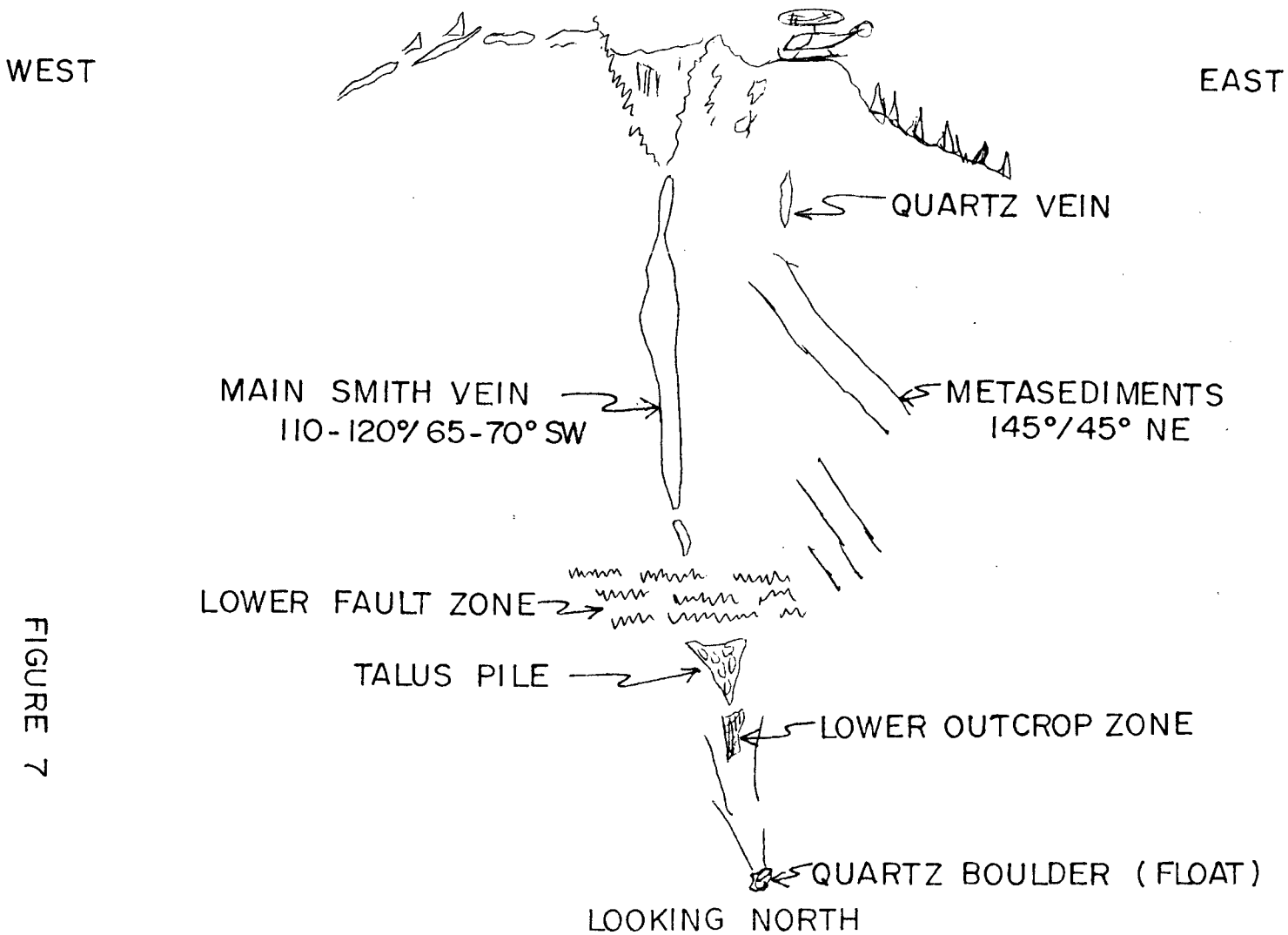


FIGURE 7

NOT TO SCALE  
SKETCH  
AFTER E.W. GROVE  
D.J.B. AUGUST 1986

LOWER MINERALIZED ZONE AND LOWER FAULT ZONE

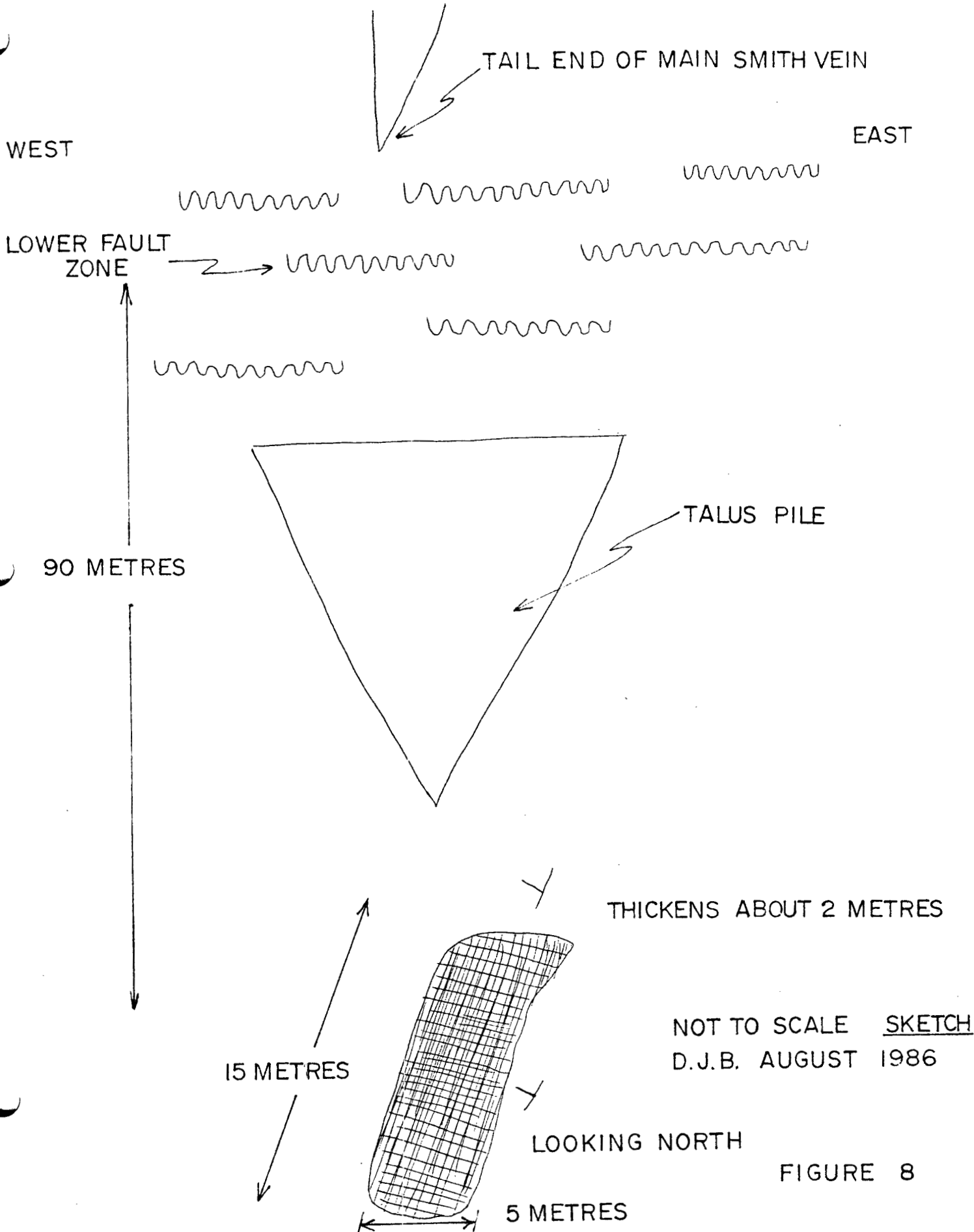
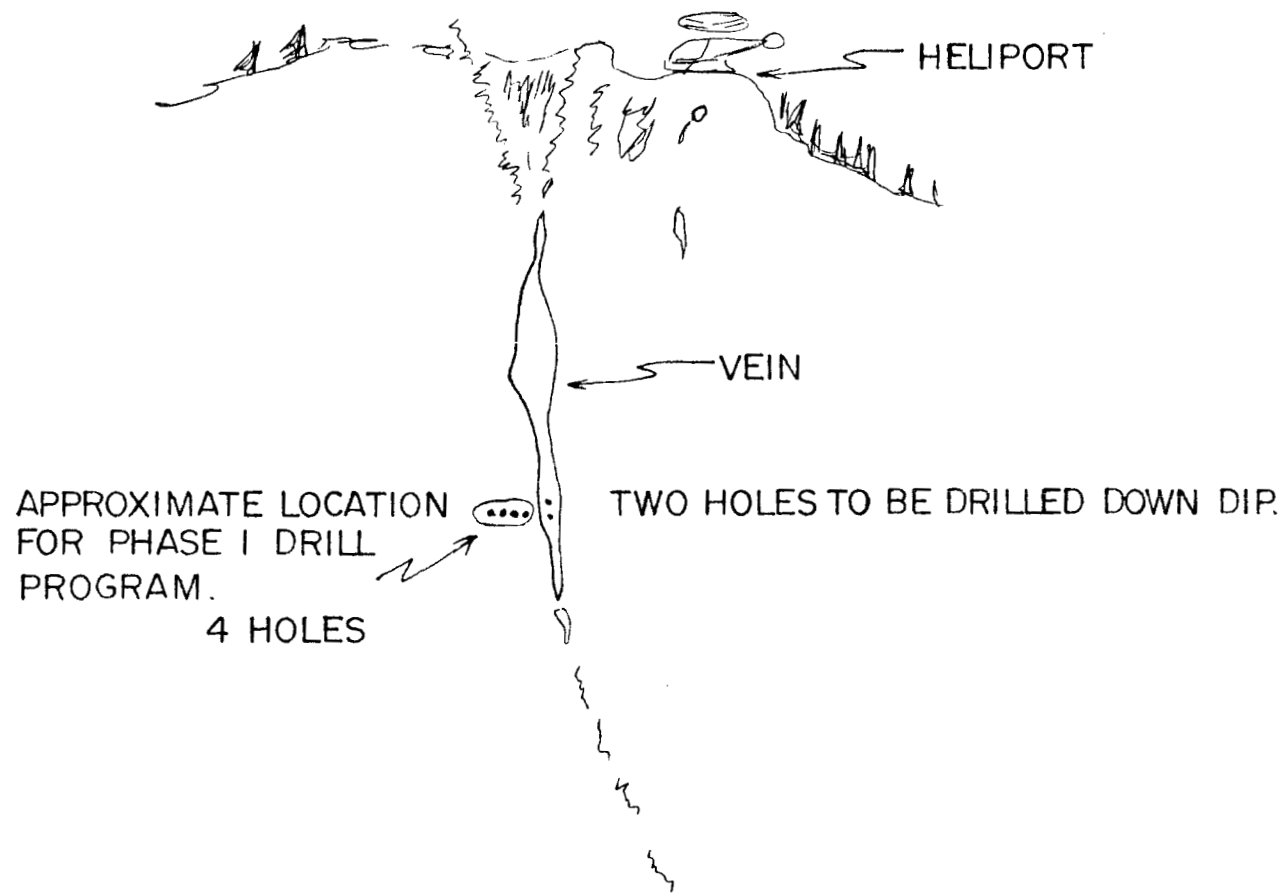


FIGURE 8

PHASE I DRILL HOLE LOCATION

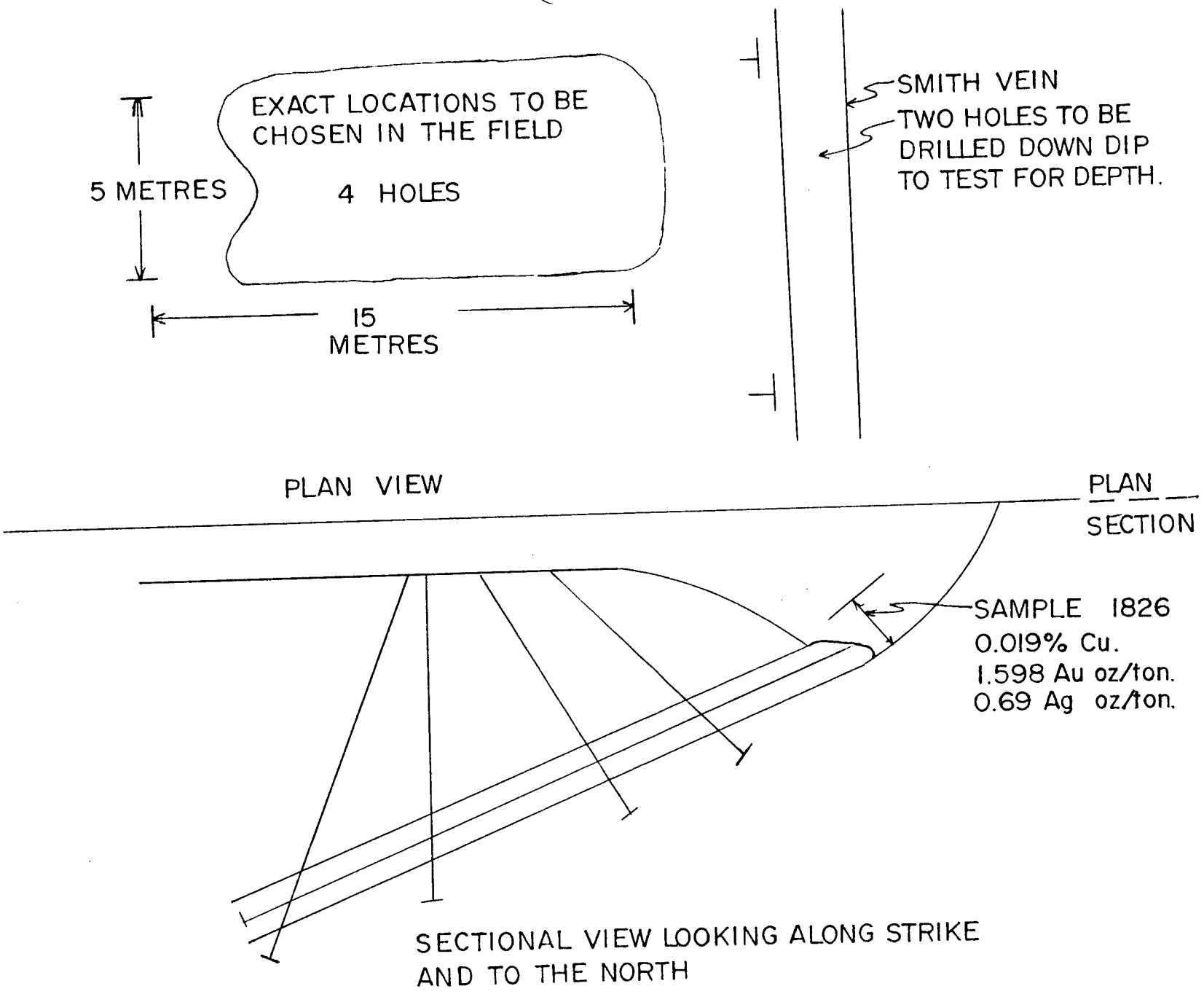
FIGURE 9



NOT TO SCALE SKETCH  
AFTER E.W.GROVE  
D.J.B. AUGUST 1986

PHASE I DRILL LOCATION MAP

FIGURE 10



NOT TO SCALE SKETCH  
D.J.B. AUGUST 1986

## STATEMENT OF COSTS

Total Report Preparation	\$2,800.00
Brian Meyers	600.00
J.M. Kruszewski	850.00
Equipment rental	135.00
Car rental & Mileage	375.00
Fuel	128.00
Meals	135.00
Supplies	96.00
Helicopter	1,685.00
Stenographic & Drafting	<u>200.00</u>
<b>TOTAL COSTS</b>	<b>\$7,004.00</b>

## CERTIFICATE AND QUALIFICATION

I, Donald James Barker, of Calgary, Alberta hereby certify as follows:

1. I am a geological and mining engineer residing at 408 Woodbend road S.E., Calgary, Alberta.
2. I am a registered Professional Engineer in the Province of Alberta.
3. I am a registered Professional Engineer in the Province of British Columbia.
4. I am a graduate of Queen's University in Geological Engineering(1969).
5. I have practised my profession as a geologist and mining engineer for more than 15 years.
6. I have no interest , direct or indirect in the Smith Vein Property or securities of Whitesail Ventures Corporation.
7. This report is based on my personal examination of the property on October 5th and 6th, 1985, and available reports pertaining to the property.
8. I consent to the use of this report in connection with a Prospectus or Statement of Material Fact, provided however, that no portion may be used out of context in such manner as to convey a meaning differing materially from that set out in the whole.

## CONCLUSIONS and RECOMMENDATIONS

"The Smith Vein Property represents a good target for developing a small tonnage gold property. The potential for additional exploration activity outside the main Smith Vein and particularly below the lower fault is excellent."

October 21, 1985.


The upper main smith Vein must be penetrated in depth as the next logical step in development. This has long been recognized by many authors with various programs recommended.

The program recommended in October 1985 for drilling is the minimum program necessary prior to a major drilling or underground program. That drill program would cost approximately \$50,000.00 and should be completed as soon as possible as a next step in property development.

The Magnetometer program completed in October, 1985, indicated some potential over the main Smith Vein. That potential will be best utilized in the exploration of further vein development below the lower fault zone.

The outcrop zone below the lower fault zone represents a new potential for a significant area below the lower fault zone. This potential should be explored through a mapping program, available geophysical techniques and by utilizing a geochemistry program.

D. J. BARKER P. Eng.



P. Eng.

August 1986

WHITE SAIL VENTURES CORP.

OCTOBER 11, 1985

SAMPLE TYPE: ROCK

WHIT010-0101-85-0136

**CERTIFICATE OF ANALYSIS**

LOCATION:	Cu %	Au oz/ton	Ag oz/ton
1826 Lower Zone	0.01	1.598	0.69
1827	2.89	0.347	0.61

Sample 1826 was taken at profile line #3 across the quartz vein from hanging wall to footwall, and represents the uncut grade along that line.

Sample 1827 is a selected sample from the lower outcrop zone shown in figure 7.

*D. Bd*  
August 1986.

*ABNF*



## REFERENCES

Report on the Smith Gold Property, Kemano, B.C.  
for Silver Standard Mines Ltd.  
F.J. Hemsworth, P. Eng., 1972

Geological Report and Work Proposal on the  
Whitesail Ventures Corporation Beaver Claims  
by E.W. Grove, P. Eng., July, 1983

Generalized Assay Profile  
S.W. Exploration Partnership 1980

Generalized Geology Profile  
S.W. Exploration Partnership 1980

Property Visit Report and Work Proposal  
on the Whitesail Ventures Corporation  
Smith Vein, October 21, 1985

The following documentation refers to the work done on the property on October 5th and 6th, 1985. Relevant information as it pertains to either exploration or mining is noted. For the purpose of emphasis or clarity, reference is made to photographs taken on the visit. These photographs are in the Appendix.

Both days were spent evaluating the exposed vein, exploration opportunities for possible vein extensions, anticipated underground development concepts, and potential drill programs. The following points are worth noting:

1. The upper portion of the exposed vein is cut off by a talus slope. However a visual inspection of the surficial features of the talus and the formation above the talus indicates that vein extension is a possibility. These features can be seen at the top of photographs 20 and 21. Random quartz mineralization was noted in the talus area. The area could be a future exploration target in the long term.
2. The vein itself and the immediate flanking footwall and hanging wall rocks are deeply eroded as shown in photographs 3 and 4. These photographs were taken at the top of the vein, however the erosion is persistent throughout the entire length of the outcrop.

It does not appear that the quartz vein or the immediate footwall and hanging wall is excessively fractured. However massive pyrite mineralization at the top and bottom of the vein is severely eroded and this might have contributed to the instability of the vein structure.

3. The hanging wall and footwall formation attitude is variable and does not parallel the vein attitude. The hanging wall strata appears reasonably competent. Hanging wall contacts are shown in photographs 5 and 6.
4. Massive pyrite and associated malachite and marcasite mineralization is predominantly found at the hanging wall and footwall side of the quartz vein. It appears that these areas have experienced the deepest erosion as shown in photographs 1 and 11. Because gold values are associated with the sulfides, the possibility of selective mining should be investigated. It is assumed that because of the steeply dipping nature of the quartz vein, the shrinkage stoping technique would be utilized. This technique would allow some selectivity of mining. An evaluation of the assay and geological plan indicates zones of spotty high grade mineralization.

Selective mining tends to enrich the grade prospects and reduce tonnage. This is highly desirable.

In anticipation of selective mining, all future sampling programs, either channel sampling or core, should segregate sulfide and non sulfide zones as separate sections. Hanging wall and footwall strata should also be sampled separately. Arithmetic weight averaging can be done for the purpose of reserve calculations. Photograph 2 shows the massive pyrite mineralization at the hanging wall side.

5. At the top of the exposed Smith vein, a narrow offset vein occurs. This vein should be explored in the future.
6. Considerable thickening and thinning of the vein occurs throughout its length as demonstrated in the surface outcrop.
7. The upper fault zone at elevation 1463 metres is not readily obvious. A minor vein offset is apparent but it is not thought that the upper fault has important economic consequences. An evaluation of the assay plan tends to confirm this. The fault contact is shown in photographs 7, 8, 9 and 10.
8. The quartz vein disappears in the vicinity of the lower fault zone at elevation 1400 metres. Considerable talus is in this area and

it is difficult to determine whether the vein is offset or simply eroded. The lower fault zone is very important from the point of view of offset control on the vein. Many of the better gold assays are immediately above the fault structure. A thorough mapping program for this structure would be worthwhile.

9. Underground drifting would likely occur along strike immediately above the lower fault zone. In this way the drift would be in the best grade zone, as well as at the lower portion of the vein. Access to this zone would be very difficult and involve considerable rock work.
10. Photograph 12 shows the terrain from the lower road to the base of the vein. The difference in elevation is approximately 460 metres and consequently a 5 kilometre road at 10% would be required from the lower road to the base of the lower fault. Although this access would be required for underground development work, it is anticipated that in the event of a production decision, the proposed concentrator would be very close to the existing lower road and that an aerial tramway would transport ore to the concentrator. Therefore a very minimal narrow road is required to the vein and the access should approach at least in the top

region, from the west side. In this way, easier access for future drilling can be attained.

11. Photograph 13 indicates the topography, just to the west of the main vein. A potential underground adit would be collared in this face and inclined slightly to intersect the vein just above the lower fault. Rock conditions within the cliff face are stable in this area.
12. The lower fault zone is very complex as shown in photographs 14 and 15. It appears that below the fault, the vein has been tilted such that the footwall is much flatter. The quartz vein is likely eroded in this area.
13. The lower talus pile which lies below the lower fault zone, represents material that has been eroded from the upper vein. The ratio of hanging wall and footwall sediments to quartz is about 15:1. A random sampling program that indicated gold values of .01 to .04 ounces/tonne Au would be an indication of gold values at depth at least within the eroded zone, above the lower fault. The talus pile is shown in photograph 16.
14. A significant quartz outcrop was noted about 90 metres below the lower fault zone. The outcrop is about 15 metres long and about 5

metres of down dip extension is exposed. The thickness appears to be about one to two metres. This outcrop is just at the base of the lower talus pile. The strike of the outcrop is similar to the vein above the fault but the dip is considerably shallower than the upper vein. The attitude of this outcrop coupled with the shallow attitude of the footwall immediately below the lower fault implies some sort of rotational movement on the lower fault. The outcrop is shown in photograph 17. At the top of the outcrop a zone of malachite and chalcopryrite mineralization is evident as shown in photograph 18.

A further 50 metres below the quartz outcrop is a large quartz boulder as shown in photograph 19. The boulder is about one metre by one metre and is likely float from the vein above.

The quartz vein outcrop below the lower fault zone is significant in that it opens up a new potential area for exploration below the lower fault. The fault itself could well be an important structural feature.

In summary, the property visit was successful in that the vein exposure was well surveyed, an approximate exploration strategy was developed, and a new exploration target below the lower fault was targeted. In my view, further exploration is well warranted.

#### UPPER VEIN DEVELOPMENT

The Smith vein is well exposed on the southerly face of the Sandifer Ridge. Considerable erosion has occurred along its entire length and the resulting V shaped trough can be up to 12 metres deep. As a result of the erosion a talus pile lies just below the lower fault, which is made up of quartz vein material and meta sediment rocks from both the hanging wall and the footwall sides of the vein.

The majority of the vein has been channel sampled and the best gold bearing zone is between the two flat lying faults at the 1400 and 1463 metre elevations.



It is anticipated that initial underground exploration would require a drift approximately 300 metres long, on the strike of the quartz vein structure, and immediately above the fault zone at the 1400 metre elevation. It would be very difficult because of the required surface rockwork, to collar an adit immediately in the vein and at surface. Consequently it is likely that the adit would be collared slightly below the vein, and southwest of the vein outcrop. In this way the initial access would be inclined to intersect the vein immediately above the fault and then the entry would be turned to continue along the strike of the vein.

Having the initial underground entry in the described location has the following advantages:

- i The anticipated drift is at the bottom of the known structure and therefore would utilize gravity to maximum in any mining phase.
- ii The planned drift has access to and is within the best anticipated gold grade areas.
- iii The initial entry provides the best drilling areas for the Smith vein and the other smaller veins to the south of the Smith vein.

However, the underground development can only be justified after it is known that ore grade material exists in depth. This will take two successful drill programs, both of which would be directly in the vicinity of the best grade possibilities and the anticipated underground development.

A major drill program which would be intended to justify the underground work should attain the following objectives:

- i Intersect gold bearing mineralization along the proposed 300 metre drift.
- ii Aim to block out approximately 250,000 tonnes of ore in the category of possible or probable.
- iii Intersect possible minor veins to the southwest of the main vein.

This means that the majority of this program would occur from the upper talus slope at the top of the vein outcrop and to the southwest. This drill program would be expensive and it could only be justified by a previous minor program which at least indicated some depth to the mineralization.

The initial minor drill program has the following objectives:

- i Demonstrate depth of mineralization, even though it might be shallow, by drilling above the vein to intersect the main vein close to the outcrop.
- ii Demonstrate depth of mineralization by drilling down dip as far as possible from the outcrop.

It is not anticipated that any tonnage calculations would be made by the results of this minor program and that an indication of mineralization at depth beyond outcrop values, would represent enough success to justify the major drill program.

Given that the overall objective is to push for the underground exploration program in the summer of 1986, the following phases of development are anticipated:

#### Phase 1

This phase would include four holes drilled from a natural relief area

about 10 metres above the vein outcrop. The chosen location is between the two flat lying faults, is close to the outcrop and is the only spot that the natural relief would allow helicopter access and drilling without extensive rock work. The four holes are as follows:

- |  |           |
|--|-----------|
| 1. One vertical hole.                              | 43 metres |
| 2. One inclined hole at N50°E and plunging at 70°. | 18 metres |
| 3. One inclined hole at S60°E and plunging at 70°. | 50 metres |
| 4. One inclined hole at N10°W and plunging at 70°. | 40 metres |

All four holes are close to the outcrop and are thus shallow. The total meterage of the four holes is 151 metres.

It is intended to drill two further holes from the outcrop and immediately down dip. These holes would penetrate depth of mineralization as well as possibly intersect the lower fault. These two holes are estimated to be 61 metres each. The total footage of this minor program is estimated to approach 300 metres. For timing reasons this program should occur before the end of 1985.

### Phase II

Based on the anticipated success of the phase I program, the phase II program would occur about May, 1986. It is anticipated that about 2200 metres of drilling would be required to locate and justify the underground program.

### Phase III

Based on a successful phase II program the underground program would be done in September and October of 1986. This phase would require a small road approximately 5 kilometres long at 10% from the valley floor to the collar elevation.

### Estimated Cost of the Phase I Program

Drilling	300 metres @ \$83/metre	\$25,000
Helicopter	12 hours @ \$500/hour	6,000
Salaries		6,000
Travel Expenses		3,000

Radio Rental	\$ 400
Camp Supplies	1,000
Board	1,000
Assaying	600
Report Preparation	3,000
Contingencies	<u>2,000</u>
Total	\$48,000

Additional costs are anticipated if this program is coupled with the exploration program on the lower vein section.

#### LOWER ZONE DEVELOPMENT

The observance of quartz vein material as part of the bedrock structure below the lower 1400 metre fault, indicates that this lower area has potential for exploration. The entire area is overlain with talus, soil and plant growth, and bedrock is only exposed intermitently in drainage draws.

The initial exploration should be of the reconnaissance nature and should consider the following:

1. The lower fault at the 1400 metre elevation is really a structural zone of movement which appears to be about 10 metres thick. This fault appears to be responsible for a possible change in dip attitude of the vein from a fairly steep dip in the upper vein to a considerably flatter dip below the fault. Given the complexity of the fault zone and the fact that the fault lies between two known vein structures at differing attitudes, it is reasonable to assume that the fault is a controlling feature of the potential vein location.

A thorough structural mapping program of the fault zone, might give useful clues to offsets and to lower vein locations.

2. All bedrock exposures immediately below the vein, drainages and otherwise, should be mapped structurally and lithologically.
3. Because of overlying material it might be worthwhile to consider various geophysical techniques. Induced Polarization techniques as well as Resistivity and E.M. techniques could be utilized. The Magnetometer should be tested further.
4. A geochemistry program for soil sampling should be defined.
5. A sampling program of the talus pile below the vein and lower fault should be done. Two sample patterns can be defined in which

the total pile can be assessed and also a quartz only sample. The intent of this sampling program is to assess the gold distribution of the vein portion that is eroded from above the lower fault.

The geochemistry and geophysics portion of the lower vein development is very important in that very little exposure is available. It is recommended that much of the above work should be done in conjunction with the phase 1 program prior to the end of 1985. Certainly the sampling, fault and outcrop mapping, and some geophysics and geochemistry sampling can be accomplished this fall.

The estimated cost of this work alone is \$6000 and is best accomplished with the phase 1 program.

Total cost of phase 1 = \$48,000 + \$6,000 = \$54,000.



APPENDIX



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