

800459

REPORT  
on  
OPERATIONS ON THE  
BIG MISSOURI CLAIM GROUP  
SKEENA MINING DIVISION,  
STEWART, BRITISH COLUMBIA  
(NTS 104 B/IE)  
for  
CONSOLIDATED SILVER BUTTE LTD.  
VANCOUVER, BRITISH COLUMBIA

November 1, 1982  
Vancouver, B.C.

W.G. Hainsworth, P. Eng.  
Consulting Geologist

REPORT  
on  
OPERATIONS ON THE  
BIG MISSOURI CLAIM GROUP  
SKEENA MINING DIVISION  
STEWART, BRITISH COLUMBIA  
for  
CONSOLIDATED SILVER BUTTE LTD.,  
VANCOUVER, B.C.

CONTENTS

Summary and Conclusion .....	Page 1
Introduction .....	Page 2
Property and Location .....	Page 3
Geology .....	Page 4
Operations .....	Page 5
Analysis .....	Pages 6, 7
Certificate .....	Page 8
Appendix "A" - 1982 Diamond Drill Results .....	Page 9

FIGURES

Fig. 1	Location Map following page 2
Fig. 2	Claim Map with Operations following page 4
Fig. 3	Face Cut #2 - Drilling Plan following page 5

# W. G. HAINSWORTH & ASSOCIATES LTD.

## *Mining Consultants*

SUITE 905  
837 WEST HASTINGS STREET  
VANCOUVER, BRITISH COLUMBIA  
V6C 1B6 (604) 687-6930

### SUMMARY AND CONCLUSION

The Big Missouri claim group of Consolidated Silver Butte Ltd., located 25 kilometers north of Stewart, British Columbia has been on option to Esso Minerals Canada (Esso) since August 1980. During this period Esso has carried out geophysical, geochemical and geological surveys across the claims in addition to prospecting and diamond drilling.

The result of the programs to date has been the locating with subsequent excavation or blasting of numerous trenches and rock faces which, upon sampling, have carried precious metal values often in association with variable base metal contents. The 1982 field season was concentrated upon diamond drilling two face cuts of significance. Some 4,510 feet in 22 holes were drilled, the results of which show bands of stratabound mineralization contained within a highly siliceous basic flow formation. Continuity of these bands has been hampered by the presence of post-ore faults.

In the limited drilling of 1982 the mineralized bands of Face Cut #2 have been demonstrated to extend over a north-south lateral extent of 210 feet and an east-west lateral width of 80 feet. The deepest intersection has been 200 feet below the hole collar. Average grade from the four holes reported by Esso is 5.09 oz./ton silver and 0.241 oz./ton gold. Assays are awaited on seven additional holes while four holes are stated to have no significant mineralization.

In addition to diamond drilling Esso ran a series of Induced Polarization geophysical lines in the vicinity of selected targets. The responses appear encouraging and will likely be the recipients of drilling in 1983. Field personnel of Esso expect a large size drill program to be proposed for 1983 on the Consolidated Silver Butte claims.

Esso has done a professional job of examining the Big Missouri claims. The majority of their trenches and face cuts have exposed mineralization. The fault structures have complicated the geology but they do not hide the fact that mineralization is present in intriguing amounts on the claim group. The property, hinged to precious metal values, has not fallen into an open pit or underground category, nor has it been rejected. Ahead lies a large diamond drill campaign to unravel the fault offsetting, define the mineralization continuity and prove up economic grade and tonnage.

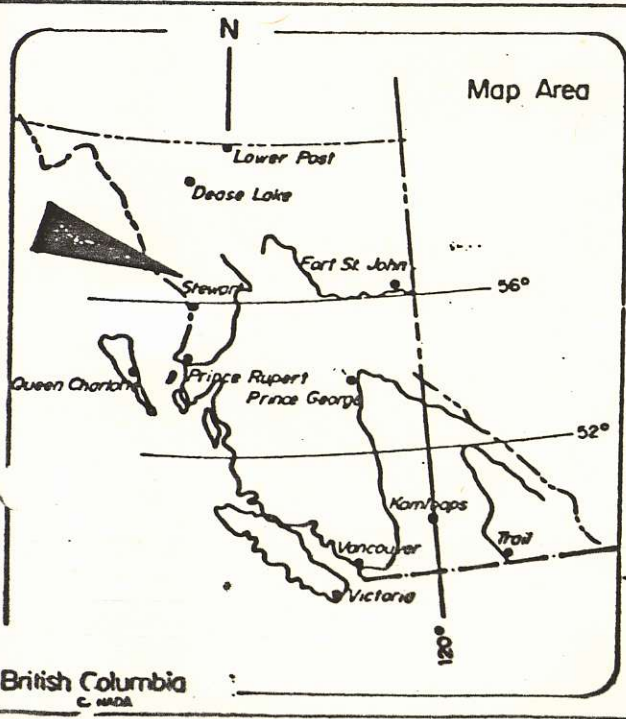
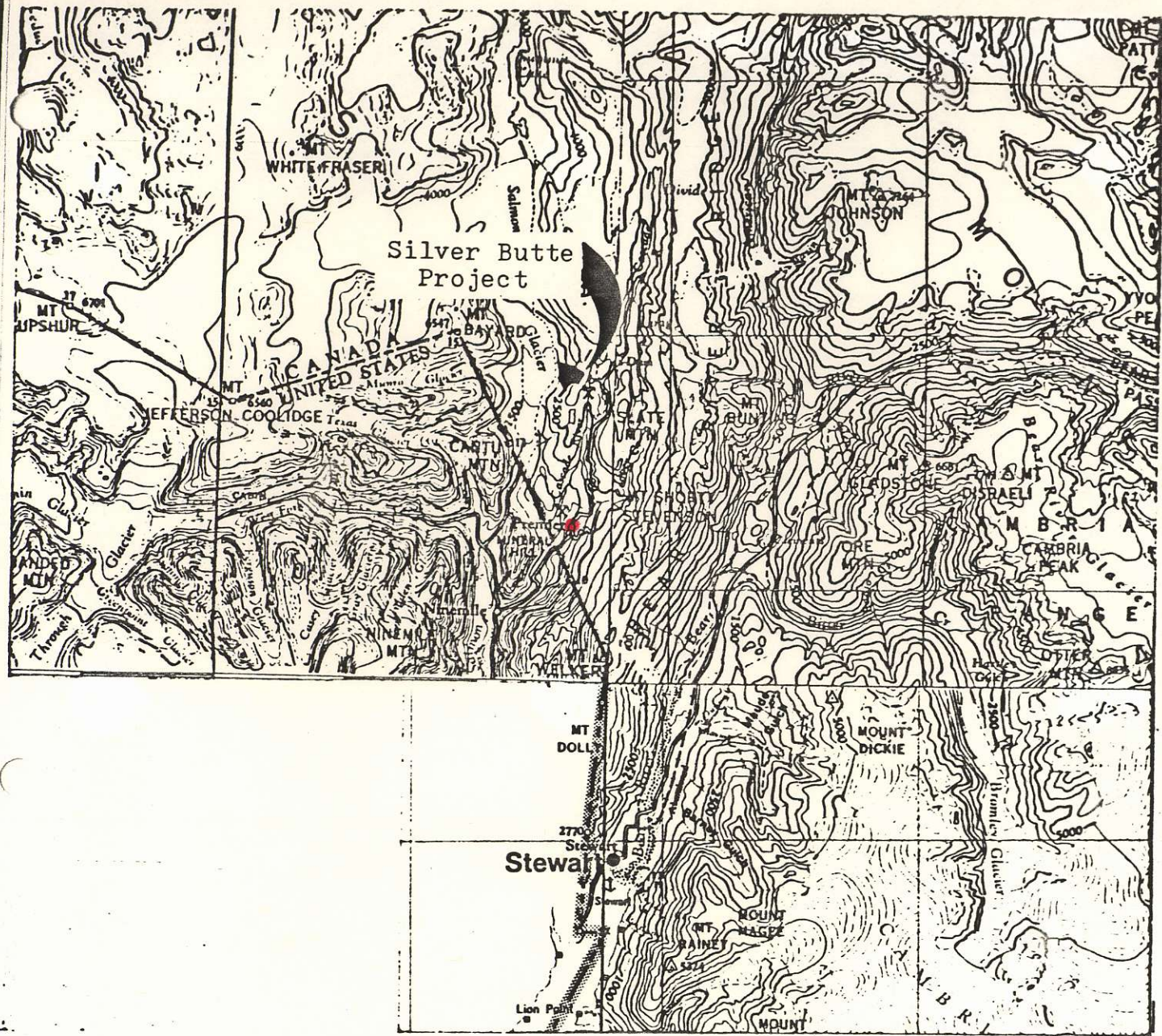
## INTRODUCTION

At the request of Mr. L.P. Starck, P. Eng., President of Consolidated Silver Butte Limited, (the Company) the writer visited the Company's Big Missouri claim group in northern British Columbia.

The property has been under option to Esso Minerals Canada of Vancouver (Esso) since August of 1980. Under the terms of the option agreement, a point is being approached at which the Company is required to make a decision concerning its future participation in the joint venture. Geological input was requested of the writer to assist the President and Directors to their conclusion.

The claims were visited from October 18th to 20th, 1982.

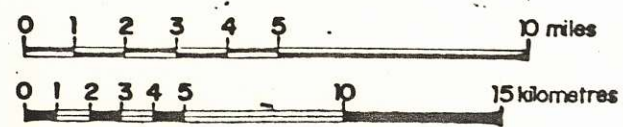




Silver Butte Project, Near Stewart,  
B.C., Skeena Mining Division.  
N.T.S. 104-A and 104-B.

FIG. 1  
Location Map

Scale : 1 to 250,000 or 1 inch equals approx. 4 miles.





## PROPERTY AND LOCATION

The Big Missouri claim group consists of 3 reverted Crown-granted claims, 1 recently staked claim fraction and a staked claim of 12 units, as follows:

<u>Claim</u>	<u>Record No.</u>
Winer	L3212
Big Missouri	L2317
Packers Fraction	L5540
Winer Fraction	-
Sarah	12 Units

The above claims are located in the Skeena Mining District of northern British Columbia some 25 kilometers north of Stewart. The Stewart-Granduc Mine road bisects the claims.

Some units of the Sarah staked claim include the Salmon River Glacier, whereas the Crown-grants to the east of the glacier area have typical steep rising mountain slopes. Outcrop exposures are limited due to the heavy slide rubble that lies along the slopes.

## GEOLOGY

The claim area is underlain by various units of the Hazelton Volcanic Group. Mapping by Esso Minerals has identified black graphitic argillites, an interbed of the above argillites combined with green andesitic tuffs and a lower sequence of flow type andesitic rocks.

The trend of the formations is roughly north-south with the dip varying steeply to the east. However, the formational attitude has not been fully determined to the present time.

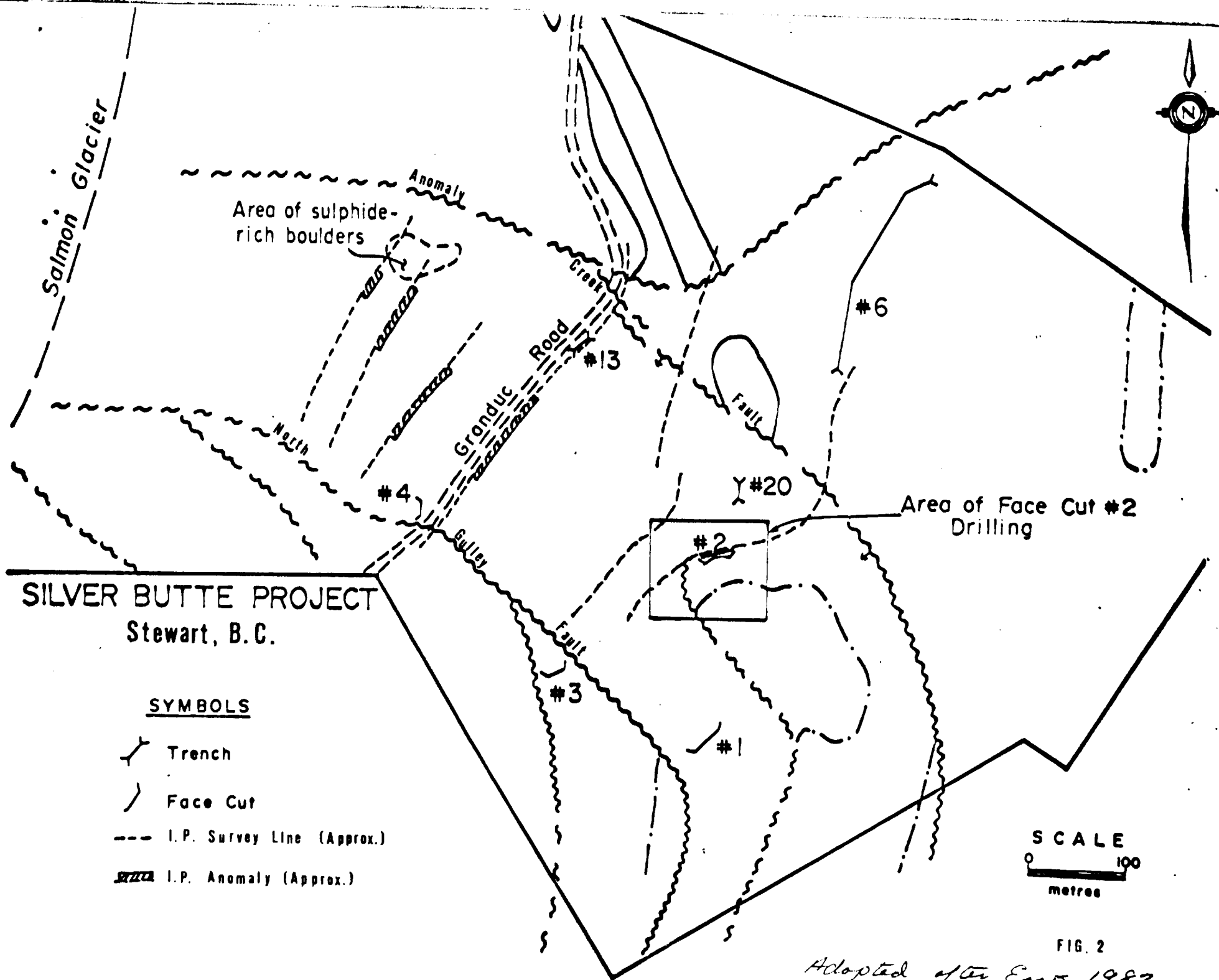
Alteration of the volcanics is variable in intensity and consists of silicification and sericitization with the former having local areas of quartz-calcite veinlets. Pyritization is general but heavier amounts are usually associated with the sericite alteration.

A large granodiorite intrusive termed the Texas Creek Batholith underlies portions of the Packer Fraction claim and eastern units of the Sarah claim. In turn it is overlain by the Salmon Glacier.

Mineralization is present as galena (lead), and sphalerite (zinc). Precious metal values are associated with the base metals and in other instances are related to the presence of pyrite. However, higher grade gold values occur in weak to totally absent lead and zinc minerals. Where sphalerite is present the silver values increase.

Experience to date has related the metal values to the silicified andesite flows. It appears that the stronger and more consistent the silicification combined with the presence of pyrite, the more certain that precious metal values will be present.

Faulting plays an important role in the localization of the mineralization. Two strong faults were identified early in the history of the property, the Anomaly Creek Fault and the North Gulley Fault. These faults appear from under the glacier on an easterly strike but gradually bend to the south south-east. The Anomaly Creek has a south westerly dip. Numerous cross faults striking east-west with general southerly dips have been identified in drilling and in rock blasting. These cross faults are of post-ore origin with seemingly right hand movement.



**SILVER BUTTE PROJECT**  
Stewart, B.C.

FIG. 2

*Adopted after East 1982*



## OPERATIONS

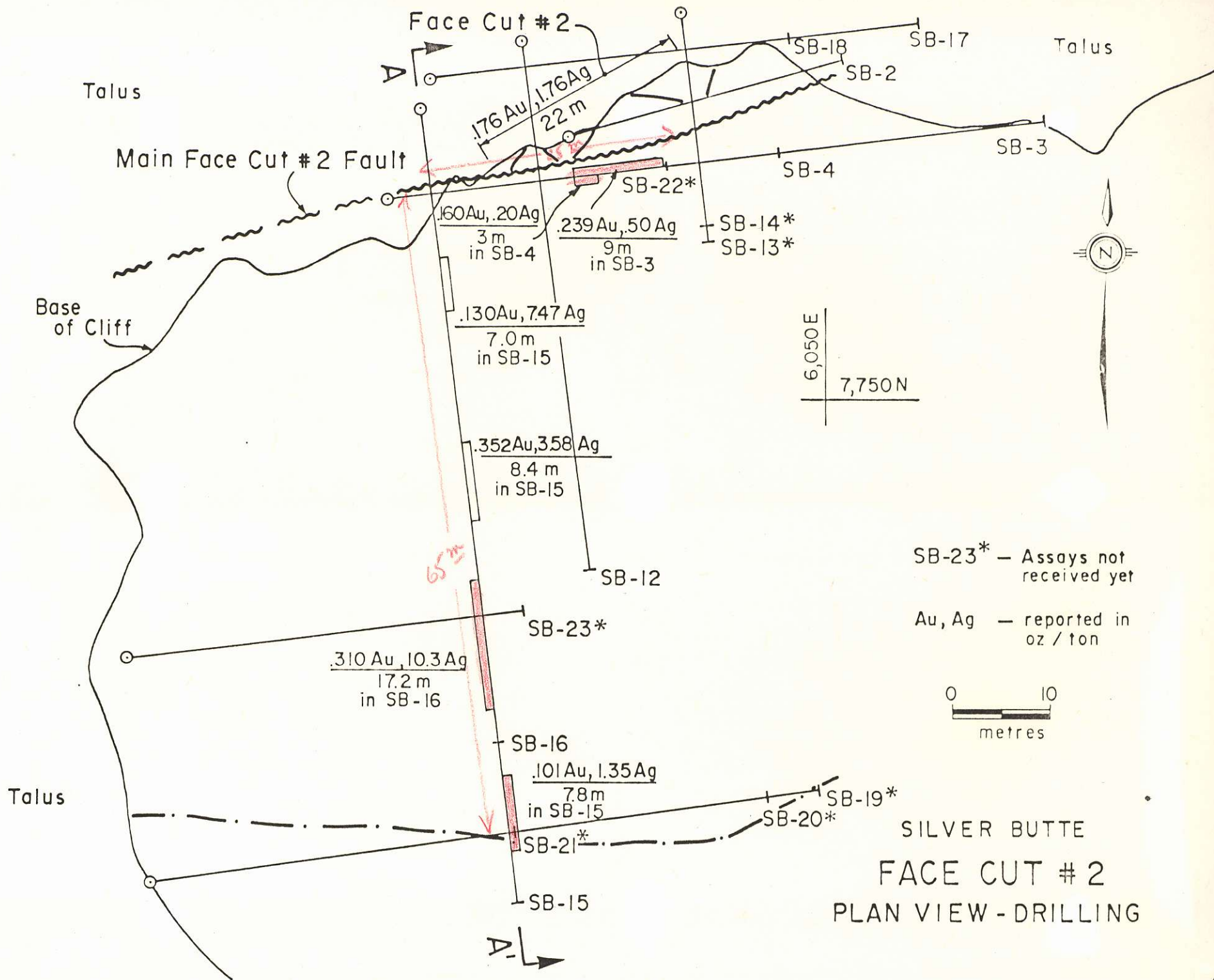
Since acquiring the claim from Consolidated Silver Butte in August of 1980, Esso has carried a more detailing program each succeeding year. During the 1980 and 1981 field seasons, the property was given systematic prospecting, detailed geological mapping, reconnaissance and detailed geochemical and geophysical programs and the excavation of some eight trenches and the face blasting of six mineralized cuts.

The 1982 program emphasized diamond drilling in the vicinity of two well mineralized face cuts designated Face Cut #2 and Face Cut #3. These rock faces are some 800 feet east and two hundred feet vertically above the Granduc road. An earlier chip sample across 72 feet of Face Cut #2 was analyzed at 0.248% copper, 0.40% lead, 1.31% zinc, 1.76 oz./ton silver and 0.176 oz./ton gold. The #3 Face Cut had two mineralized sections from which a 42.6 foot sample yielded 0.682% copper, 0.64% lead, 6.40% zinc, 2.07 oz./ton silver and 0.012 oz./ton gold, while a 52.5 foot sample taken from the other section of the face assayed 0.356% copper, 4.99% lead, 3.00% zinc, 1.42 oz./ton silver and 0.035 oz./ton gold. Blasting of these rock cuts had disclosed the sulphide mineralization to be faulted in numerous locations.

On October 20th, 1982 weather conditions forced shut down of this year's activities. To that point the two drill machines had completed 4,510 feet in 22 holes. Fifteen holes were drilled into #2 Face Cut with seven holes probing the #3 Face Cut zone.

Assaying had originally been done at the Granduc Mine Laboratory. However, due to the demand from the mine itself, analysis of samples from outside properties received late consideration. The Esso operators generally had analyses run by Min-En Laboratories of Vancouver on the returned pulps of the drill core from the mine lab. Because of this procedure, assay results are late in being returned.

The steep terrain offered few natural drill sites with the result that the locations that were laboriously built were utilized to drill ring holes in several directions. The drill layouts were such that a set of holes would be drilled sub-parallel to the faults to probe the intervening area then turned to drill at right angles to the faults, that is along the formational trend. The complex geology with its attendant mineralization is not fully understood at this date.



Oct 27/82

## ANALYSIS

In order to better interpret the geological and mineralogical aspects of the property, Esso decided to diamond drill the two better looking structures on the claims. It appears Esso geologists are developing some interpretations but they lack hard knowledge of the area.

Esso's thinking with regards to the property is that it must fly on the precious metal contents. To this end they are approaching it from either a low-grade open pit possibility or a high-grade underground operation. Their rather limited 1982 drilling (4510 feet) has not indicated which direction the property is going. It was suggested that the 1983 drilling might involve between 7,000 and 10,000 feet of drill probing with hole spacing limited to 85 to 100 feet in order to avoid slipping through of mineralized zones. These figures are field thinking and do not necessarily represent the view of head office.

Continuity of these multiple mineralized bands on drill sections appears strong but they are hampered by the appearance of crosscutting faults which dislocate the zones. Drilling has been shallow in order to obtain structural information and to confirm continuity. The deepest intersection (Hole SB 16) is only 200 feet below the hole collar.

Present thinking is that the epithermal-type mineralization is a strata bound deposit confined to the quartz-calcite veinletted silicified andesite formation.

The difficulty of finding natural drill sites limited the 1982 program. It is expected that with the close style drill program to be adopted in 1983 the cost of drilling will substantially increase due to the time involvement in providing drill sites. Of interest was an approximate projected \$35/foot drill cost for the 1982 drilling. Drill moves on the mountainside are by helicopter chartered out of Stewart.

During 1982 Esso ran their own Induced Polarization (dipole to dipole) survey. The six lines were tailored to run with the topography while checking specific target zones. The results showed promising responses from five of the lines. These geophysical reactions are due for drill testing in 1983 and if drilling proves successful further I.P. lines will be run.

Of interest but not specifically significant at this time is the fact that Esso ran metallurgical bench tests on two fifty pounds samples for a three concentrate separation - pyrite, copper and zinc. The copper concentrate representing 18% of the input carried 2.2 ounces gold, whereas the zinc concentrate representing 21% carried 1.29 ounces of gold. Esso people do not attach too much importance to these results as the gold content of the two samples (0.8) was considered too high and not truly representative of the deposit.

Esso's drill program for 1983 would include the following areas:

- 1) Face Cut #2 - both north and south of this promising area. A continuation of the 1982 drill program.
- 2) Trench #13 alongside Granduc road. Although the I.P. had very weak response here, a grab sample taken from this badly faulted zone ran 1.2% copper, 6.24% zinc, 2.12% lead, 3.66 oz./ton silver and 0.103 oz./ton gold.
- 3) The I.P. response south of trench #13 alongside the Granduc road.
- 4) The I.P. responses on the line north of the Granduc road. This moderate response aligns itself with the response alongside the road.
- 5) Face Cut #3 - drill sites are organized for this area with a projected six drill holes totalling no more than 600 feet.
- 6) The I.P. response below the boulder zone would receive drill attention.

The possibility of multiple zones of auriferous pyrite mineralization on the Consolidated Silver Butte claims are not remote. However, at the present time the complex geology and structural alignments are not beneficially understood. The geography of the terrain forces interpretation to be primarily through drilling, as opposed to geological mapping.

Advantages going for the property are its accessibility due to the location of Granduc road, its closeness to the Granduc mill and because of terrain, should the property develop to an underground operation, the ease with which adits could be run into the mountain side.

The disadvantages facing the claims are its limitations as to property size and the heavy fault action as disclosed in drilling and face blasting.

Respectfully submitted,

W.G. Hainsworth, P. Eng.  
Consulting Geologist

CERTIFICATE

I, W.G. Hainsworth, Professional Engineer of Vancouver, British Columbia do hereby certify:

- (1) That I am a Consulting Geologist residing at Suite 905, 837 West Hastings Street, Vancouver, B.C.
- (2) That I am a graduate of the University of Western Ontario, London, Ontario, Bachelor of Science Degree.
- (3) That I have practiced my profession for 30 years.
- (4) That I have been a continuous member of the Association of Professional Engineers of British Columbia since 1965 and am a Professional Geologist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta since 1980.
- (5) That I have no financial interest direct or indirect, in Consolidated Silver Butte, and do not expect to obtain any such interest.
- (6) That the information contained in this report is based on examination of all pertinent maps, reports and other data relevant to the property and a visit to the operation on October 18th, 19th, and 20th of 1982.

W.G. Hainsworth, P. Eng.

To accompany: Report on the  
Operations on the  
Big Missouri Claim Group  
Skeena Mining Division  
Stewart, British Columbia

APPENDIX A

1982 DIAMOND DRILL RESULTS

<u>Hole No.</u>	<u>Location</u>	<u>Interval</u>	<u>Cu%</u>	<u>Pb%</u>	<u>Zn%</u>	<u>Ag (oz/t)</u>	<u>Au (oz/t)</u>		
SB 2	FC #2	-	No significant mineralization						✓
SB 3	FC #2	9.0 m	-	0.24	1.04	0.50	0.239		✓
SB 4	FC #2	3.0 m	-	-	-	0.20	0.160		✓
SB 5	FC #3	7.0 m	2.28	4.18	12.61	6.00	0.016		
SB 6	FC #3	7.0 m	1.75	9.25	11.93	7.78	0.018		
SB 7	FC #3	1.2 m	-	0.17	3.25	1.53	0.012		
SB 8	FC #3	13.0 m	0.73	0.14	6.82	2.31	0.022		
SB 9	FC #3	No significant mineralization							
SB 10	FC #3	16.0 m	0.35	0.50	3.00	1.42	0.035		
SB 11	FC #3	<sup>9.0</sup> <del>No significant mineralization</del>			1.84	0.91	0.17		
SB 12	FC #2	No significant mineralization							✓
SB 13	FC #2	<sup>11.0</sup> Assays to come	-	-	-	1.10	0.13		✓
SB 14	FC #2	<sup>6.1</sup> Assays to come	-	-	-	.51	0.09		✓
SB 15	FC #2	7.0 m	1.78	0.13	7.18	7.47	0.130		
		8.4 m	-	0.32	5.74	3.58	0.352		✓
		7.8 m	-	0.24	3.92	1.35	0.101		
SB 16	FC #2	17.2 m	1.6	3.03	17.40	10.37	0.310		
SB 17	FC #2	<sup>3.0</sup> <del>No significant mineralization</del>			-	0.50	0.07		
SB 18	FC #2	No significant mineralization							
SB 19	FC #2	27 m	Assays to come (Hole to be deepened in 1983)						
SB 20	FC #2	16 m	Assays to come						
		9 m	Assays to come						
SB 21	FC #2	<sup>1.34</sup> Assays to come	-	-	1.74	0.87	0.20		
SB 22	FC #2	Assays to come							
SB 23	FC #2	<sup>11.8</sup> Assays to come	0.13	0.24	4.09	1.24	0.04		
		<sup>6.6</sup> Assays to come	-	0.31	5.09	1.16	0.02		