IRON MASK AND TOPSEY CLAIMS
4-MILE MOUNTAIN AREA
HAZELTON, B.C.

NTS 93M 5E

55°01.5'N 127°33'W

OMINECA M. D.

PREPARED FOR
SHORT STAUN MINERALS CORPORATION

JAMES M. LOGAN

GEOLOGIST

LOCKE B. GOLDSMITH, P. ENG.

CONSULTING GEOLOGIST

GEORGE L. MILL, P. ENG.

CONSULTING ENGINEER

ARCTEX ENGINEERING SERVICES

SEPTEMBER, 1980



TABLE OF CONTENTS

	Page
Abstract	1
Introduction	2
Geology	••• 5
Mineralization	7
Conclusions	9
Recommendations	9
Cost Estimate	10
Engineer's Certificates	11
References	14
Cost Statement	15.
ILLUSTRATIONS	į
Plate 1 Geology Map	in pocket
<u>FIGURES</u>	•
	Page
Figure 1 Location Map	• 3
Figure 2 Claims Map	4

APPENDIX

Appendix Assay Certificates

ABSTRACT

The Topsey and Iron Mask crown granted mineral claims are located on Four Mile Mountain, Hazelton, B.C. and are owned by Short Staun Minerals Corporation. The claims are underlain by granodiorite of the (Early Tertiary? age) Four Mile Mountain boss. Mineral deposites of silverbearing galena, jamesonite and sphalerite are located in and along the contacts of this intrusive body both within and adjacent to the proerty. Overbourden covers much of the property and additional exposures are required before an evaluation of the property can be made.

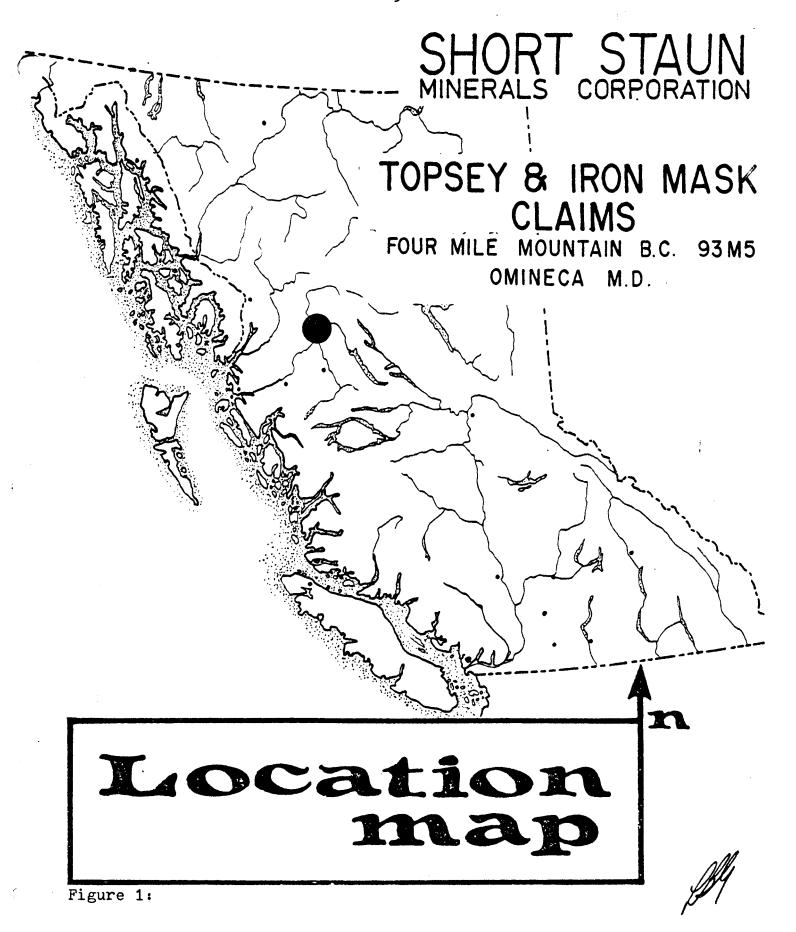
A geochemical soil survey to search for additional mineralization is recommended. Also, a program of surface stripping (trenching), based in part on geochemical results and known mineral occurrences should be planned.

INTRODUCTION

During late July - early August, 1980 a program of regional geological mapping and prospecting was carried out over the Topsey, lot #4453, Iron Mask, lot #3577 crown grant mineral claims and surrounding area for Short Staun Minerals Corporation. The object of the study was a rapid assessment of economic mineralization reported to be in the area and to recommend further evaluation, if warranted.

The Topsey and Iron Mask crown granted mineral claims are located in the Omenica Mining Division on the south side of Four Mile Mountain, approximately 2 miles NNE of New Hazelton, B.C. (Figure 1).

Previous development work has been carried out on areas adjacent to the above mentioned claims. Specifically, the Comet group located south of Iron Mask and the Erie group (Mohawk Mine) located immediately north of the Topsey claim.



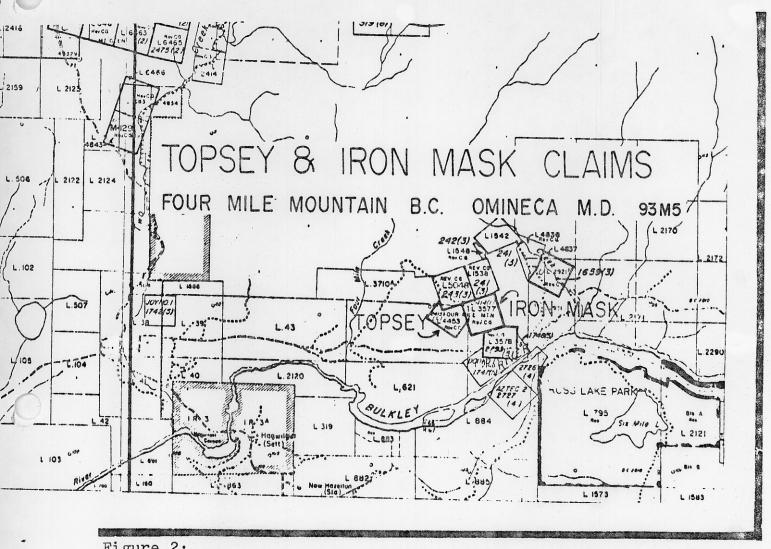


Figure 2:



SHORT STAUN MINERALS CORPORATION



GEOLOGY

The area of study is underlain by sediments belonging to the Hazelton Group, of Upper Jurassic and Lower Cretaceous age. These sedimentary rocks are intruded by a granodiorite boss, (of Early Tertiary(?) age) one mile in diameter forming the top of Four Mile Mountain. The general geologic relationships covering the area are shown on B.C. Department of Mines and Petroleum Resources Map 69-1.

Economic mineralization is found to lie on or near the contacts of the igneous (granodiorite) and sedimentary rock units.

For the most part, the area is covered in talus and thick overburden below elevations of 1800 feet.

<u>Sediments</u>

The sedimentary rock consists of interbedded sandstone and greywacke which have altered to quartzite and locally hornfels, with a well-developed red-brown pyritic alteration.

Due to scarcity of outcrops, the trend of the sediments is uncertain, but appears to dip away from the intrusive body.

Igneous

Outcrops of the Four Mile boss consist of massive grey to greenish-white, coarsely crystalline, equigranular granodiorite. The granodiorite consists of about 10% quartz, 10% orthoclase, 10% biotite, 10% hornblende and 60% andesine feldspar (after E.D. Kindle, 1954). Only minor variations were observed in ratios of biotite to hornblende and locally alteration to chlorite of one or both of these mafics.

The granodiorite is moderately fractured with the more prominent jointing and/or shearing/faulting being north-easterly with a vertical dip. The northwesterly fracture trend is inclined to the north.

MINERALIZATION

Quartz veins fill some of the fault fissures/shear zones which occur in the granodiorite, striking predominently northwesterly and northeasterly. These fissure-fillings contain various amounts of silver-bearing james-onite, galena, sphalerite and pyrite in a siderite and/or quartz gangue.

Mineralization other than disseminated iron sulphide was sampled (see Plate 1) on the Iron Mask claim and adjacent areas to the south. At the time of investigation, no mineralization was found within the Topsey claim.

Mineral occurrences located off the property are discussed in Appendix B.

In the Iron Mask, two semi-parallel fault-fissures located in the granodiorite ridge at an elevation of 1975 feet constitute samples F-30-1 and F-30-2 (see Sample Location Map, Plate 1). The quartz/siderite veins strike N15 E and dip 42 E. Sample F-30-2 carries appreciably more visible mineralization over a width of 2 to 3 inches, consisting of galena, sphalerite and pyrite with traces of disseminated chalcopyrite. Sample F-30-1 consisting predominently of siderite gangue with traces of sphalerite and galena extends over a width of approximatley 1 foot.

Sample F-2-2 is located along the same outcrop of granodiorite at an elevation of 1935 feet approximately 650 feet east of the above mentioned samples. This siderite

and quartz vein strikes at N59°E and dips 15°N exposed for a strike length of 15 feet and width of 6 inches. The siderite and quartz are arranged in parallel bands (banded/crustified) and the vein as a whole swells and shrinks over the exposed strike length. Minor mineralization consisting of sphalerite, galena, pyrite and tetrahedrite are present, finely disseminated throughout.

CONCLUSIONS

Much of the area within the two claims is covered by overburden, limiting a rapid assessment of this nature. The area is underlain by granodiorite and Hazelton sediments, both favourable hosts for economic fissure-type deposits (of the area) which could be present but simply covered by the overburden.

The mineralized veinlets in the fault fissures located in the Iron Mask claim appear narrow with mineralization somewhat irregular [assay certificates in Appendix A(samples F-30-1 and F-30-2)]. These stringers could be offshoots of a larger economical vein and/or come together to form an ore shoot; additional exposures are required for evaluation.

RECOMMENDATIONS

The following recommendations are offered:

- (1) Surface stripping (trenching) above the cliff edge (Iron Mask claim) along strike of the fault fissures.
- (2) A regional soil geochemical survey to be carried out over the two claim groups and surrounding area.
- (3) An effort be made to acquire the Comet Group claim, located south of the Iron Mask claim.

184

COST ESTIMATE

Surface stripping and trench bulldozer and part by h		\$	5,000
Soil geochemical survey		•	5,000
Analyses, assays			2,000
Project geologist and assist	ant		8,000
Supplies, travel, room, boar	d, vehicle		5,000
Supervision, engineering			5,000
Reporting			2,000
	Sub total	\$	32,000
Contingencies, @ 10%			3,200
	TOTAL	\$	35,200

Respectfully submitted

James M. Logan

Geologist

Locke B. Goldsmith, P. Eng.

Consulting Geologist

Vancouver, B.C.

September, 1980

George L. Mill, P. Eng.

Consulting Engineer

GEOLOGIST'S CERTIFICATE

- 1. I, James M. Logan, have a B.Sc.(Honours) in Geology from Brock University, Ontario. My address is #1 1133

 Harwood St., Vancouver, B.C. V6E 1R9.
- 2. I have been engaged in mining exploration for 5 years.
- 3. I have co-authored the report entitled "Iron Mask and Topsey Claims, 4-Mile Mountain Area, Hazelton, B.C.", dated September, 1980. The report is based upon research and field work conducted and supervised by the author.
- 4. I have no ownership in the property, nor do I own shares of Short Staun Minerals Corporation.
- 5. I consent to the use of this report in a prospectus or in a statement of material facts related to the raising of funds.

Respectfully submitted

Vancouver, B.C.

September, 1980

James M. Logan

Geologist

ENGINEER'S CERTIFICATE

- 1. I, Locke B. Goldsmith, am a Registered Professioal Engineer in the Province of Ontario and a Registered Professional Geologist in the State of Oregon. My address is #301 1855 Balsam St., Vancouver, B.C. V6K 3M3
- 2. I have a B.Sc.(Honours) degree in Geology from Michigan Technological University and have done post-graduate study in Geology at Michigan Tech., University of Nevada and the University of British Columbia. I am a graduate of the Haileybury School of Mines and am a Certified Mining Technician. I am a member of the Society of Economic Geologists, the AIME, and the Australasian Institute of Mining and Metallurgy.
- 3. I have been engaged in mining exploration for 22 years.
- 4. I have co-authored the report entitled "Iron Mask and Topsey Claims, 4-Mile Mountain Area, Hazelton, B.C.", dated September, 1980. The report is based on research and field work conducted and supervised by the author.
- 5. I have no ownership in the property, nor do I own shares of Short Staun Minerals Corporation.
- 6. I consent to the use of this report in a prospectus or in a statement of material facts related to the raising of funds.

Respectfully submitted

Locke B. Goldsmith, P. Eng.

Consulting Geologist

Vancouver, B.C.

September, 1980

CERTIFICATION

I, George L. Mill, hereby certify:

- 1 That I am a Mining and Metallurgical Engineer residing at 255-5936 Willow Street, Vancouver, B.C., V5Z 3S6.
- 2 That I am a graduate of Queen's University, B.Sc., and a registered member of the Corporation of Professional Engineers of the Province of British Columbia.
- 3 That I have practised my profession for 49 years.
- 4 That I have no financial interest, direct or indirect, in the shares of Short Staun Minerals Corporation, in the Iron Mask and Topsay mineral claims, in any other claims in the area and that I do not expect to obtain any such interest.
- That I have never examined the two claims personally but am familiar with the general area and agree with Mr. L.B. Goldsmith that the silver content reported in the appendix warrants investigation. In this case, the claims are shown as contiguous but consideration should be given to the acquisition or optioning of adjoining ground.
- 6 That I am in complete accord with the exploratory program as outlined in the report but again stress the importance of determination of strike and dip of the mineralized zones as the prime objective.

George L. Mill. P. Eng

To accompany report on the Iron Mask and Topsay Claims Hazelton, B.C. For Short Staun Minerals Corporation September, 1980

REFERENCES

Carter, N.C., and Kirkham, R.V.
1969: Geological Compilation Map of Smithers, Hazelton and Terrace Areas, B.C.; B.C. Dept. Mines Pet.,
Map 69-1.

COST STATEMENT

<u>Personnel</u>				
Name	Position	Rate	Days	Cost
J.M. Logan	Field Co-ordinator	\$200	7	\$ 1400
J.P. Ursel	Field Assistant	90	7	630
Room and Board				
14 Man Days at	\$22.00 per Day			308
Transportation				į
Automobile 7 d	ays at \$10.00 pe	er Day	·	70 '
Assaying				
7 rock samples:	analysed for A at \$18.50 per	Ag, Zn, Pb sample		129.50
Report Writing				
3 Days at \$200.00 per Day				
Drafting				
				420.

Total

Report Typing

16 Pages @ \$2. per page

32

\$ 3589.00

bl.

APPENDIX

1



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO.

70242

TO: Mr. Logan

ir. Logan

INVOICE NO.

39356

Apt. 1 - 1133 Harwood VANCOUVER, B.C.

RECEIVED

Sept. 24/80

ATTN:

ANALYSED

Oct. 3/80

SAMPLE NO. :	%	%	%	%	Oz/Ton	Oz/Ton
SAMPLE NO. :	Cu	Мо	Pb	Zn	Ag	Au
F 4-1			12.6	1.13	4.70	
4-2			5.87	0.52	4.87	
4-3			5.61	1.49	2.72	
2-1			0.50	0.07	2.85	
2-2			0.25	0.89	0.22	
30-1			0.01	0.01	0.17	
F 30-2			0.94	5.40	9.82	
Т 13-4			1.24	9.39	8.44	
13-5			11.2	9.20	167.60	
14-1			6.17	11.1	19.44	
25-1			0.14	0.46	1.80	•
19-1	-		0.36	0.82	34.74	
т 19-3			14.0	14.4	47.22	
N 3-1			11.9	11.5	18.88	
3-2			0.08	0.04	0.26	
5-1			0.92	3.21	1.36	
5-2			1.83	1.22	4.02	
5-3			3.80	7.16	3.73	•
5-4			5.71	26.2	14.02	
5-5			2.20	3.58	2.40	
5-6			33.8	2.22	6.68	
6-1			0.16	0.31	0.36	
6-2			0.06	0.19	0.12	
6-3			1.60	1.56	2.26	
7-1			1.12	12.2	13.72	
7-2			0.68	3.10	1.20	
8-1			0.21	0.29	0.20	
8-2			0.02	0.02	0.06	
8-3			0.08	0.15	0.26	
8-4			22.1	13.5	33.10	
8-5			20.9	12.0	24.26	
9-1			2.00	1.95	5.48	
9-2			9.79	8.68	21.96	
9-3			7.08	15.3	17.58	
9-4			1.65	10.3	5.50	
9-5			12.0	7.56	15.06	
2 9 -1			0.16	0.14	0.40	
1 29-2			0.02	0.01	0.36	
N 26-1			10.3	11.5	//2.90	
т 13-1	1.86	< 0.001		1	V	0.046
				1	19	
					11	

