175-#443-#7011

GEOLOGICAL REPORT

on the

SHAS-SHA CLAIM GROUP

Omineca Mining Division
British Columbia

LOCATION

Latitude 126°59'
Longitude 57°15'
NTS 94E

WORK PERIOD

July 29 - August 8, 1978

REPORT DATE

7 November 1978

SUBMITTED BY

R.E. Gale, P.Eng.

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TABLE OF CONTENTS

ATTACHMENTS

REFERENCES

Carter, N.C. -B.C. Dept. of Mines & Petroleum Resources G.E.M. 1971, pg. 63-70

Meyer, W & Folk, P.- Assessment Report on the Sha Claims, August 1st, 1975

Vancouver, B.C. 7 November 1978

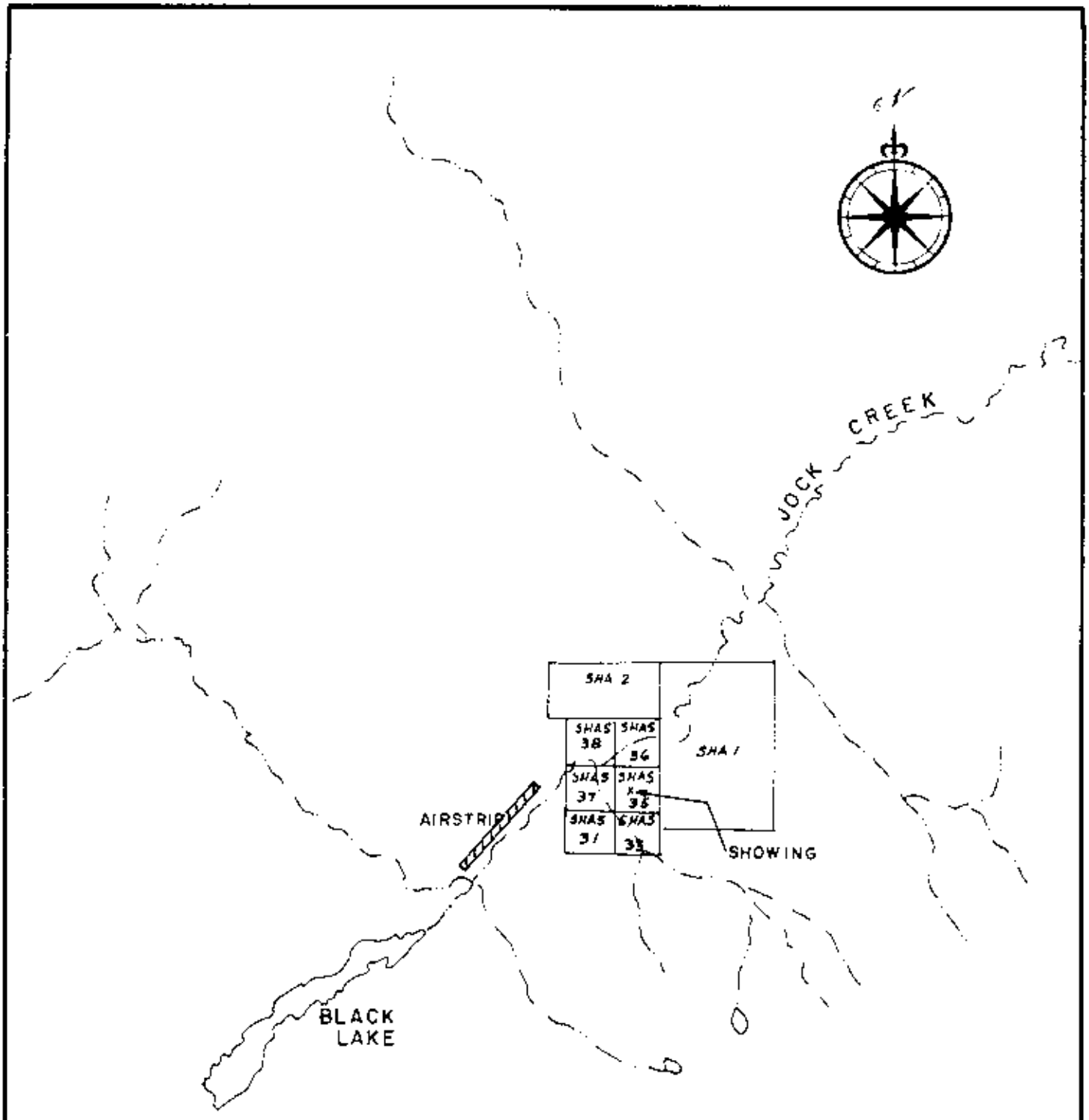
INTRODUCTION

Following a brief initial examination by Mr. M.F. Lancaster in October 1977, it was recommended that an option of the Shas and Sha claims be arranged, and that further mapping, trenching and sampling be carried out to determine the nature and distribution of the gold mineralization. An option was arranged in March 1978, and the program of geological work, including trenching and sampling, was carried out during 11 days, July 29th through August 8th. Property work involved 7 days drilling and trenching by 2 men with a Cobra drill and dynamite, 3 days geological mapping by R.E. Gale, and 2 days sampling and demobilization supervised by D.G. MacIntyre. A total of four days were required for mobilization and demobilization by truck, plane and helicopter for men and equipment from Vancouver to the property and return.

CLAIMS

The Shas and Sha Group (Sha #2 Group) of International Shasta Resources Ltd. (NPL), consists of the following claims:

CLAIM	RECORD NO.	EXPIRY DATE
Shas 31	113614	21 July/79
Shas 33	113616	21 July/79
Shas 35	113618	21 July/79
Shas 36	113619	21 July/79
Shas 37	113620	21 July/79
Shas 38	113621	21 July/79
Sha 1 (6 units)	69 (8)	5 Aug/79
Sha 2 (2 units)	70 (8)	5 Aug/79



1000 0 1000 METRES

ASARCO Vancouver

LOCATION-SHAS GROUP TOODOGGONE AREA B.C.

Drawn by	Date	NTS	M.D.	SCALE
R.E. GALE	OCT 1978	94E	OMINECA	1: 50,000

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LOCATION AND ACCESS

The Shas and Sha claims are located 280 kms due north of Smithers, B.C., about 2 kms southeast of Black Lake. Approximate map co-ordinates of the claims are 126°59' and 57°15'. Access is by fixed wing aircraft with floats to Black Lake or by aircraft on wheels to a 1000 meter airstrip east of the east end of the lake. From the airstrip a 2-4 kms long trail rises approximately 250 meters above the lake level onto the claims. In the case of the present job where camp and other heavy equipment was required, a helicopter which was working at Jacobson Lake 80 kms SE, was obtained to move the drill, dynamite and camp gear to the main showing at an elevation of about 5000'.

The area of the main showing on Shas 35 claim where the 1978 work was done, is indicated on the Location Map - Figure One.

GEOLOGY

General - The main showing on the Shas Claim group is exposed on a relatively gentle north-facing slope flanking the eastern side of a deeply incised northerly-flowing creek. The area has been burned over, and underbrush is light. A north-south ridge of outcrops about 250 meters long exposes a northerly to northwesterly-trending group of quartz veins 0.5 to 10 meters wide, cutting medium to coarse-grained quartz-feldspar-porphyry tuffs of the Lower to Middle Jurassic

Toodoggone volcanic group. Pyrite and an unidentified black sulfide mineral are the only metallic minerals associated with the quartz veins. Gold and silver presumably accompany these sulfides in variable amounts and are the only potentially valuable elements in the veins. Minor gold-silver values are also present in altered Toodoggone volcanic rocks near quartz vein stockworks.

QUARTZ-FELDSPAR-PORPHYRY TUFF

As shown on the accompanying 1:600 scale geology map, Figure Two, quartz-feldspar-porphyry tuff of the Toodoggone volcanic group is the only rock exposed in the main showing within the area mapped. Based on megascopic and microscopic examination, these rocks appear to be dacite tuffs.

These rocks megascopically are medium to coarse-grained crystal tuffs, composed of 50% to 60% medium-grained subhedral crystals of white to pink plagioclase and 10% - 15% rounded quartz eyes set in a light to dark green groundmass of fine-grained quartz and feldspar forming the remainder of the rock.

No stratification of the tuffs were noted in hand specimen or in outcrop, although as shown in Figure Two, the rocks are well fractured along NNW and NE trends.

In thin section, the fragmental nature of the feldspar and quartz grains is apparent. Sodic plagioclase crystal fragments and relatively large rounded quartz grains are

set in a very finely crystalline groundmass of unknown composition. A few large scattered flakes of muscovite are present, and about 5% of the rock consists of calcite rimming feldspars and cutting across the plagioclase as thin calcite veinlets.

ALTERATION

Close to quartz veins and quartz vein stockworks, the tuffs become progressively more altered with increasing amounts of quartz added to the rocks. The feldspars become recrystallized forming large pink clots or masses of crystals and the color of the rock changes to deep pink or white, depending on the amount of quartz added. The more intense pink color is probably due to the addition of fine-grained hematite to the plagioclase. The net effect is to give the rock the appearance of an intrusive rock resembling a leucocratic pegmatite. Within areas of quartz vein stockwork, the rock is entirely replaced by quartz and takes on the appearance of true quartz vein material forming large irregular masses of quartz. Variable amounts of disseminated pyrite accompany the alteration, and within quartz veins and strongly silicified areas, increasing amounts of pyrite may reflect better gold values. However, disseminated pyrite also occurs away from quartz veins in relatively fresh rocks, and these pyritized areas do not seem to carry better gold values. In general, altered tuffs with disseminated pyrite carry

slightly better gold values than the fresh volcanic rocks.

In thin section, remnants of the dark green fresh tuff occur within the altered dacite tuff and have similar texture to that in the unaltered rock, but much of the altered rock is converted to masses of fine-grained, amorphous quartz and the feldspars appear to be replaced by fine-grained sericite. Disseminated pyrite forms about 1% of the rock.

MINERALIZATION

As shown in Figure Two, alteration within the volcanic rocks is quite restricted to the areas of quartz veining and fresh barren rocks are encountered rapidly away from the veined zones. The attitude of the quartz veins and stockworks are controlled by the prominent fractures striking NNW dipping steeply NE and NW, and striking NE dipping vertically or steeply south.

Veins form close-knit stockworks with veins 0.5 meters wide or large masses up to 10 meters wide where the stockworks have coalesced. The shape and size of the large veins is controlled by the intersection of the major fracture patterns.

SAMPLING - GOLD VALUES

During the 1977 examination, the old trenches blasted by International Shasta Resources Ltd. were re-sampled, and although Asarco's values were generally somewhat lower than Shasta's, Asarco's 1977 sampling tended to confirm the

existence of widespread, low gold values in the main showing. However, this earlier trenching (Trenches 1-10) tested mainly quartz-veined areas and it was realized that further sampling of areas between veins, either by drilling or more trenching, would be required to accurately determine the feasibility of finding a large tonnage-low grade gold deposit suitable for bulk mining.

Accordingly, during the 1978 field season, another series of trenches (11-19) designed to test some of the intermediate areas between veins, was blasted and the area was mapped in good detail to pin down the distribution of significant gold values.

The location of trenches and the results obtained by sampling are shown in Figure Three. A copy of the assays received from Min-En Labs is included as Appendix II. As is apparent from this work, the only significant (± 0.10 Oz Au/T) values obtained were associated with quartz-veined altered rocks.

Samples 11a, b, c and d, from fresh to altered rocks adjoining veins, were all essentially barren as were 12a and 12b.

Samples 13, 14 and 18 obtained the best results for gold and silver values, but they are from within quartz stockworks near large veins. Samples 15, 16 and 17 are not near major veins and are also barren of significant values. Sample 19 composed of altered rock combined from both margins

of a large vein, also failed to show important values.

CONCLUSIONS AND RECOMMENDATIONS

The zone of quartz-veined and altered tuffs is about 60 meters wide at its widest point near the south end of the main zone, narrowing to about 15 meters wide about 240 meters to the north near Trench 10. Although parts of the zone over narrow widths will assay 0.10 Oz Au/T or better, the whole zone would average much less than 0.05 Oz Au/T. Considering that some near-surface enrichment of gold-silver values has probably also occurred, due to oxidation, the possibility of outlining a multi-million ton deposit of ± 0.10 Oz Au/T rock here does not appear good.

The rocks hosting the quartz vein mineralization on the Shas Group, the Toodoggone dacite tuffs, are the same type of rocks as those overlying the gold-quartz veins on the Chappelle claims, several kilometers northwest. If the quartz veins on the Shas Group have any depth continuity, it is possible that at greater depth they could produce some small tonnages of high grade material similar to Chappelle, either within the Toodoggone volcanics or within the underlying Takla volcanics, if they are present on the Shas claims.

The prospect of small, high grade bodies at depth is not considered an interesting target for Asarco, in view of the remote location of the showing under the present conditions of access. No further work by Asarco is

recommended on the Shas claims.

R.E. Gale.

REG:sm

APPENDIX I

COST ANALYSIS

SHA AND SHAS CLAIMS (SHA #2 GROUP)

INTERNATIONAL SHASTA RESOURCES LTD.

			$	$
(1)	Labor Costs, 29 July - 8 August 1978, incl.			
	P. Mirko	11 days @ $35.54/day	390.94	
	T. Carroll	11 days @ $26.92/day	296.12	
	J. Morgan	2 days @ $25.00/day	50.00	737.06
(2)	Transportation Costs			
	Truck cost, 11 days @ $500/calendar month 11/30 x 500		183.33	
	Fixed wing charters - Smithers Air Service August 1st and August 7th , 1978		1,260.00	
	Helicopter Charter, Okanagan Helicopters, Smithers, August 1st and August 7th, 1978		1,439.51	2,882.84
(3)	Expenses			
	Travel Costs		150.00	
	Groceries		285.63	
	Explosives		338.71	
	Assaying		136.50	910.84
(4)	Supervision - Geological Mapping			
	R.E. Gale, 3 days @ $150.00/day		450.00	
	D.G. MacIntyre, 2 days @ $100.00/day		200.00	650.00
	TOTAL EXPENDITURES:			5,180.74

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MIN-EN LABORATORIES LTD.
705 WEST 15TH STREET
NORTH VANCOUVER, B.C.
Phone: 980 5814

Certificate of Assay

APPENDIX II

TO: Asarco Explorations,
504-535 Thurlow St.,
Vancouver, B.C.

PROJECT No. ____

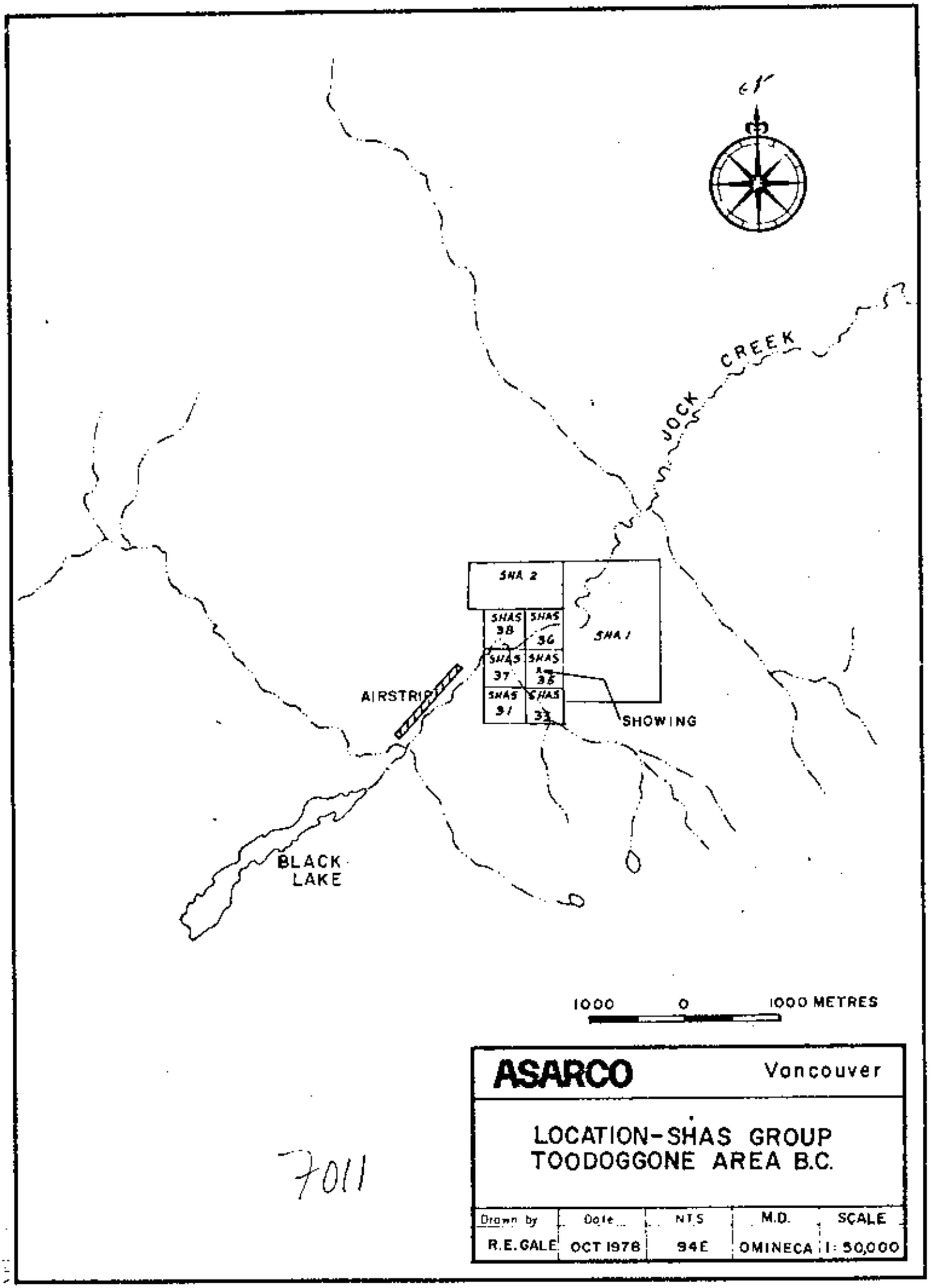
DATE Aug.16/78.

File No. 8-348

SAMPLE No.	Ag oz/ton	Au oz/ton	Trench No.	
4592	.48	.007	11A	
93	.23	.005	11B	
94	.11	.001	11C	
95	.02	.001	11D	
96	.57	.012	12A	
97	.06	.002	12B	
98	4.23	.105	13	
99	7.27	.125	14	
4600	.31	.007	15	
01	.18	.010	16	
02	.07	.002	17	
03	.18	.095	18	
4604	.66	.008	19 (2 trenches combined)	

MIN-EN Laboratories Ltd.

CERTIFIED BY ____



ASARCO Vancouver

LOCATION-SHAS GROUP TOODOGGONE AREA B.C.

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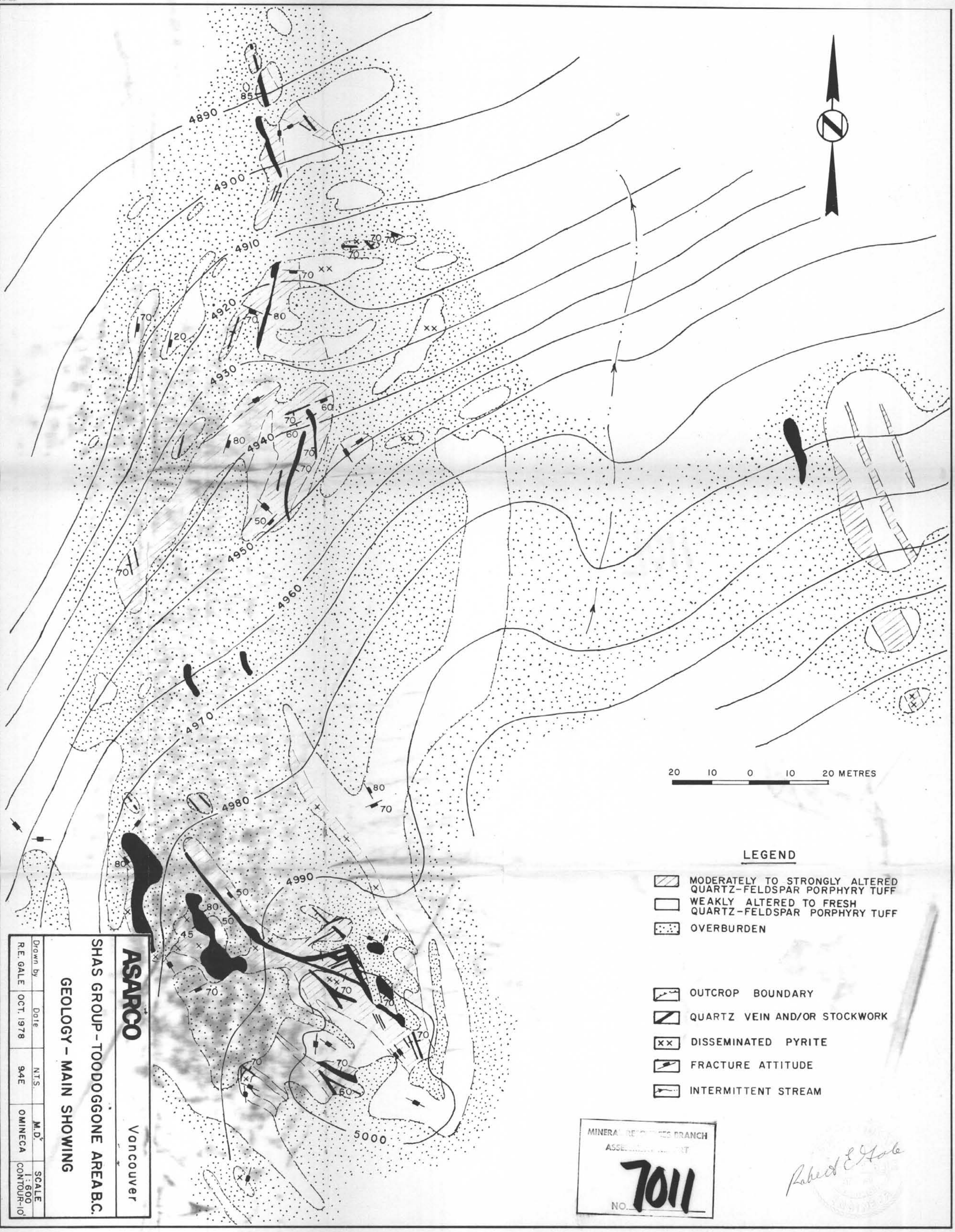

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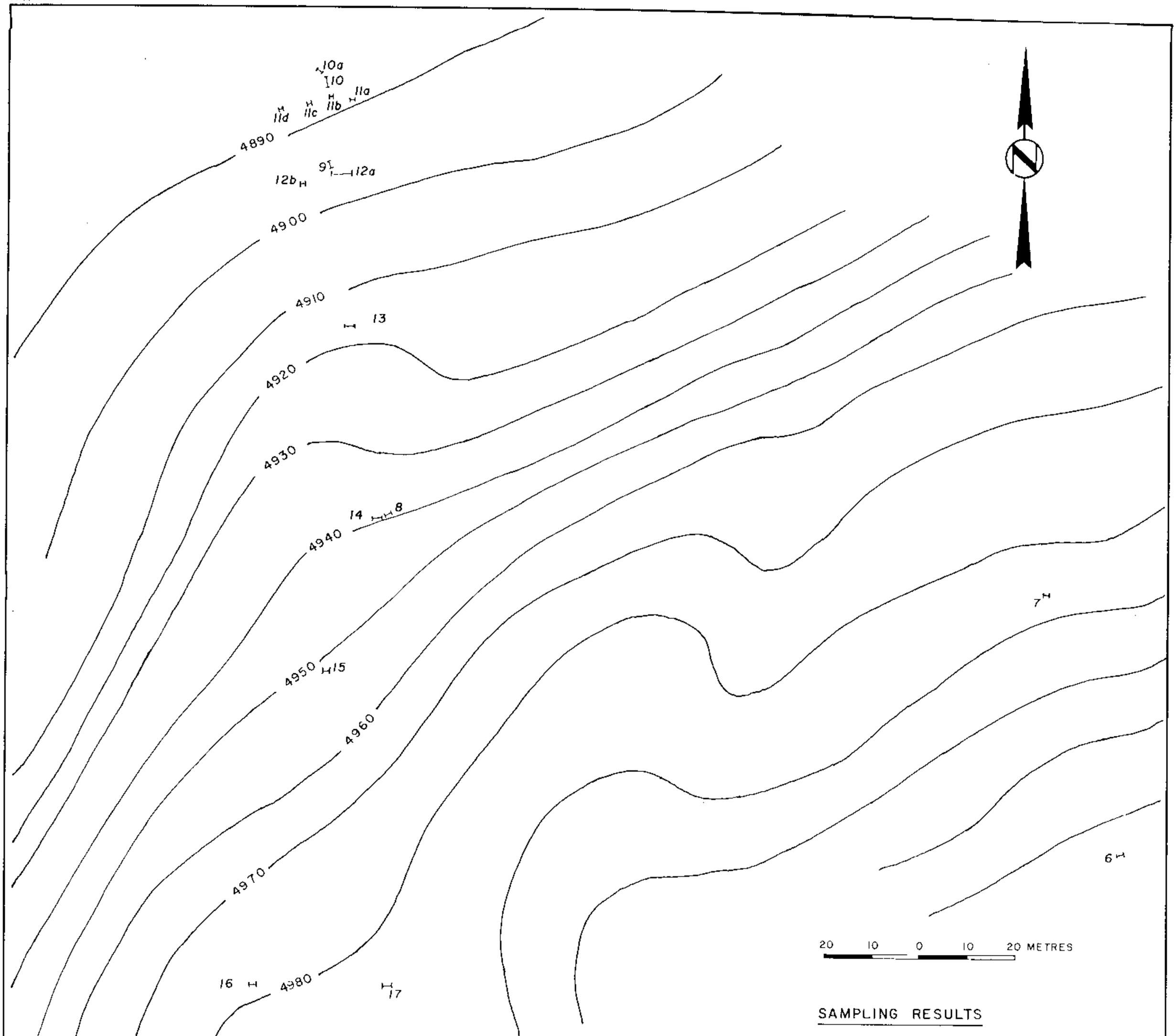
SHAS GROUP-TOODOGGONE AREA B.C.

GEOLOGY - MAIN SHOWING

Drawn by	Date	N.T.S.	M.D.	SCALE
R.E. GALE	OCT. 1978	94E	OMINECA	1:600 CONTOUR-10'

Robert E. Gale

FIGURE TWO



SAMPLING RESULTS

ASARCO – 1977 – RESAMPLING – TRENCHES 1-10

Trench No.	Length Metres	oz. Au.	oz. Ag.
1	2	0.01	0.27
2	2	0.01	0.20
3	4	0.003	0.10
4	Not Sampled		
5	1 Metre-Centre	0.02	0.98
6	2	0.024	0.10
7	1.5	0.003	0.05
8	2	0.016	0.45
9	1	0.102	6.82
10	3	0.144	0.10
10a	2	0.022	0.20

ASARCO – 1978 – NEW TRENCHES 11 – 19

Trench No.	Length Metres	oz. Au.	oz. Ag.
11a	2	0.007	0.48
11b	1	0.005	0.23
11c	1	0.001	0.11
11d	1	0.001	0.02
12a	5	0.012	0.57
12b	1	0.002	0.06
13	2	0.105	4.23
14	2	0.125	7.27
15	1	0.007	0.31
16	1	0.010	0.18
17	2	0.002	0.07
18	8	0.095	0.18
19	2	0.008	0.66

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ASARCO Vancouver

SHAS GROUP-TOODOGGONE AREA B.C.

TRENCHES & ASSAY RESULTS

Drawn by	Date	N.T.S.	M.D.	SCALE
R.E. GALE	OCT. 1978	94E	OMINECA	1:600 CONTOUR-10'

FIGURE THREE