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PETER E. WALCOTT & ASSOC. LTD.

GEOLOGICAL BRANCH ASSESSMENT REPORT

13,410

PART 1 OF 3

A REPORT

ON

A SEISMIC REFRACTION SURVEY

Atlin Area, British Columbia

59° 32'N, 133° 30'W

N.T.S. 104N - 11W & 12E

Claims Surveyed: SHUKSAN 2

Survey Dates: June 10th - July 24th, 1984

FOR

STANDARD GOLD MINES LTD.

Vancouver, B.C.

BY

PETER E. WALCOTT & ASSOCIATES LIMITED

Vancouver, B.C.

APRIL 1985 GEOPHYSICAL SERVICES

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A P P E N D I X

INTRODUCTION.

Between June 10th and July 24th, 1984, Peter E. Walcott & Associates Limited carried out a two line seismic refraction survey over part of a property, located in the Atlin area of British Columbia, for Standard Gold Mines Ltd.

The survey was carried out over two east-west handcut lines that were chained by the geophysical crew.

Seismic refraction profiling was undertaken using a Nimbus ES-1210F 12 channel seismograph with dynamite as the source of energy. Records were shot in both directions with a 15 metre geophone take-out spread.

The results are presented as bedrock profiles bound in this report.

PROPERTY, LOCATION AND ACCESS.

The property is located in the Atlin Mining District of British Columbia and consists of the following claims:

KAREN 3, 4, 5, 6, 7, 8

SHUKSAN 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 19

SURPRISE 1

The claims are situated straddling Spruce Creek some 15 kilometres southeast of the town of Atlin, British Columbia.

Access was obtained by means of 4 wheel drive vehicle along the Spruce Creek access road to the various placer operations that exist or existed there, and thence by a cleared cat road that was put in to service the property.

PREVIOUS WORK.

Previous work on the property consisted of reconnaissance geological work and prospecting, V.L.F. electromagnetic surveying, and airborne electromagnetic and magnetic surveying, the results of which are documented in reports held by Standard Gold Mines Ltd.

PURPOSE.

The purpose of the survey was to determine the overburden depth prior to investigating the favourable mineralized areas by diamond drilling and backhoe trenching.

GEOLOGY.

The reader is referred to the forementioned reports held by Standard Gold Mines Ltd.

SURVEY SPECIFICATIONS.

The seismic refraction survey was carried out using a 12 channel signal enhancement seismograph - Model ES-1210F - manufactured by EG & G Geometrics of Sunnyvale, California.

Basically the system consists of the following: (1) the geophones, moving coil electromagnetic tranducers whose functions are to transform the mechanical energy of the arriving seismic waves into electric signals, (2) the amplifiers with adjustable gains where the signal strengths can be adjusted for optimized display (3) the filters where the incoming signals can be deleted of a variety of unwanted signals, i.e. noise, generated by wind, machinery, etc. (4) the CRT - cathode ray tube - with adjustable traces where the incoming signals are displayed on a daylight visible screen (5) the electro-sensitive plotter where a hard copy of the optimally adjusted display is obtained.

Records were obtained from shot points 45 or 50 metres apart along the survey lines using a geophone spread cable with 15 metre takeouts. The spread length was adjusted to that 5 to 10 metres geophone-shot point arrivals could be obtained for topsoil corrections. Shot points were staggered - 50 metres - in some cases in an effort to obtain better geophone locations and thus better coupling with the ground.

DISCUSSION OF RESULTS.

From the travel time plots it was readily apparent in most cases that only a thin layer or layers of unconsolidated material overlay the bedrock.

This was also suggested by the induced polarization traverse on Line 2 (see I.P. report by the writer).

Accordingly the data was interpreted on the basis of a simple two layer case namely a high velocity bedrock layer overlain by a low velocity surface layer.

The true velocity of the bedrock layer was determined by the "minus" method. In this method the differences in the arrival times at the same geophone from reversed shots ($T_A - T_B$), whose total travel time (T_{end}) is the same, plotted against horizontal distance result in a graph whose best fitted reciprocal slope is one half the true velocity of the refractor.

Although slope distances were used in the determinations here (approximately the same due to the gentle topography) these plots resulted in very well fitting graphs whose slopes gave velocities as shown on the bedrock profiles.

The plots of the "minus" times showed remarkably little scatter even though the profiles were shot across the geological formations.

The depths to the interface, i.e. the bedrock, were determined from the "plus" relationship i.e. from $T = \frac{1}{2} (T_A + T_B - T_{end})$. The depth at any point is given by $d = T. V1/\cos i$ where i is the critical angle of incidence i.e. $\sin i = V_1/V_2$. As the velocity contrast is large in this case the depths may be approximated by $d = T. V_1$ i.e. directly proportional to V_1.

Depths here have been calculated using a surface velocity V_1 of 400 m/sec and the bedrock profiles drawn accordingly. These would necessarily change if V_1 throughout the area changes as expected.

SUMMARY AND CONCLUSIONS.

Between June 10th and July 24th, 1984, Peter E. Walcott & Associates Limited undertook two short seismic traverses across a lower lying drainage area for Standard Gold Mines Ltd. on their property near Atlin, British Columbia prior to their investigation to extend a favourable mineralized area with backhoe trenching and diamond drilling.

The results show that no considerable thickness of unconsolidated cover overlies the bedrock, and thus investigation by backhoe trenching is entirely possible.

Respectfully submitted,

PETER E. WALCOTT & ASSOCIATES LIMITED

Peter E. Walcott, P.Eng.
Geophysicist

Vancouver, B.C.
April 1985

APPENDIX

COST OF SURVEY.

Peter E. Walcott & Associates undertook the survey on a daily basis. Mobilization and reporting costs were extra, so that the total cost of services provided was $14,099.29.

PERSONNEL EMPLOYED ON SURVEY.

Name	Occupation	Address	Dates
Peter E. Walcott	Geophysicist	Peter E. Walcott & Assoc. 605 Rutland Court, Coquitlam, B.C. V3J 3T8	June 10th - July 24, Nov. 29th - 30th, 84 Mar. 1st - Apr. 10th 1985
V. Pashniak	Geophysical Operator	"	June 10th - July 14, 1984
D. Sloan	"	"	June 10th - July 24, 1984
S. Gibbons	"	"	July 9th & 10th, 84
P. Charlie	"	"	July 9th - July 24, 1984
C. Speropoulos	Geophysical Assistant	"	June 10th - July 24, 1984
D. Dawson	"	"	July 9th - July 14, 1984
J. Walcott	Typing	"	November 30th, 84 April 11th, 1985
G. MacMillan	Draughting	"	Mar. 23rd - 27th, 1985

CERTIFICATION.

I, Peter E. Walcott, of the Municipality of Coquitlam, British Columbia, hereby certify that:

1. I am a Graduate of the University of Toronto with a B.A.Sc. in Engineering Physics, Geophysics Option, in 1962.

2. I have been practising my profession for the last 22 years.

3. I am a member of the Association of Professional Engineers of British Columbia and Ontario.

4. I hold no interest, direct or indirect, in the securities and/or properties of Standard Gold Mines Ltd. nor do I expect to receive any.

Peter E. Walcott, P.Eng.

Vancouver, B.C.

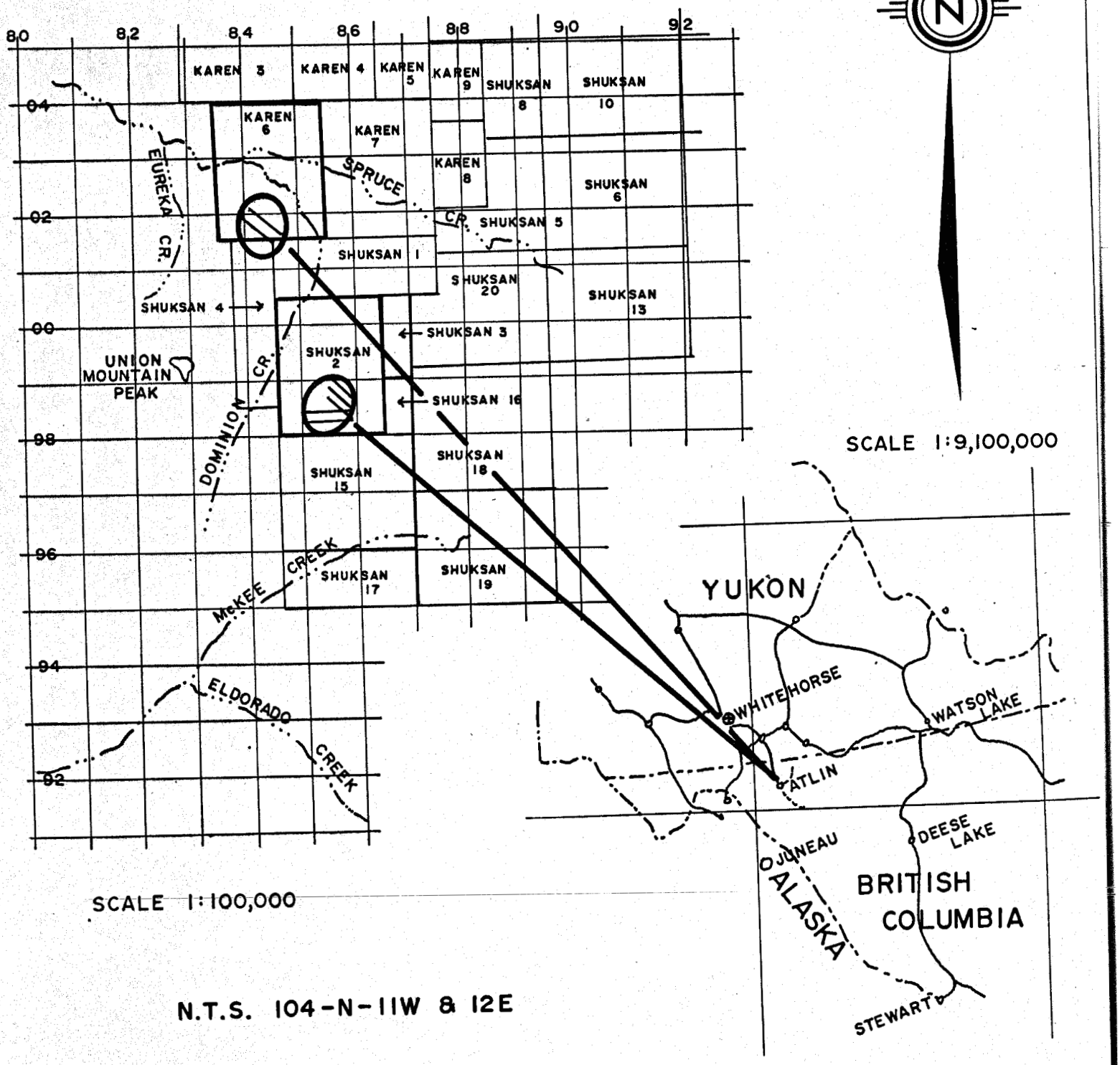
April 1985

STANDARD GOLD MINE LTD.

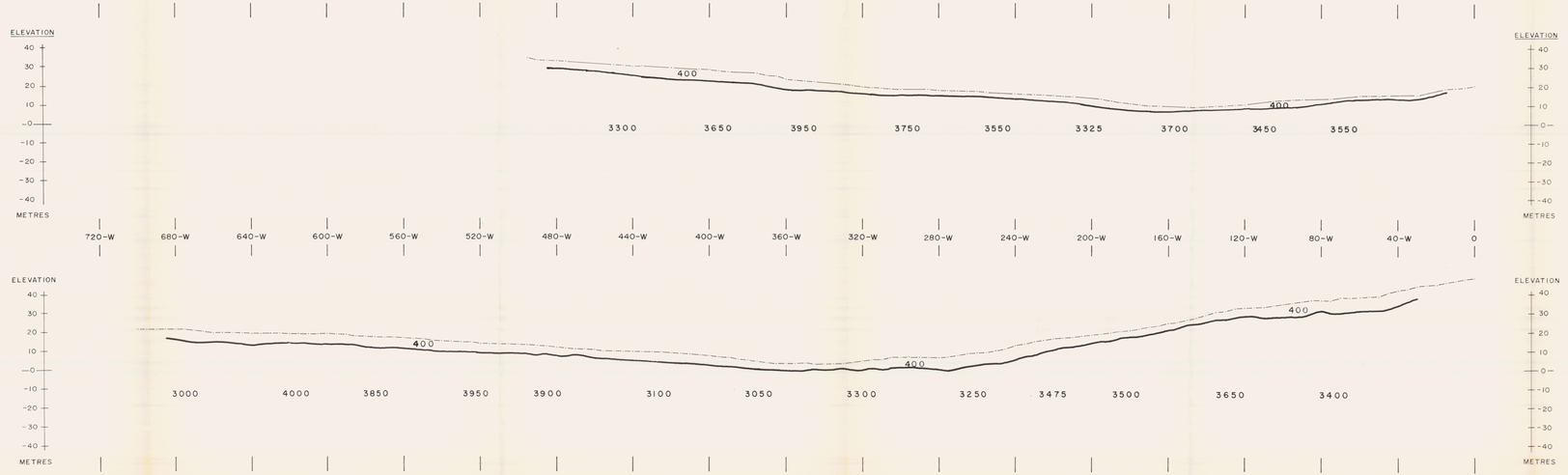
CLAIM LOCATION MAP

KAREN & SHUKSAN CLAIM GROUP

ATLIN MINING DIVISION , B.C.



N.T.S. 104-N-11W & 12E



STANDARD GOLD MINES LTD.

SHUKSAN CLAIMS

SEISMIC SURVEY
BEDROCK PROFILES

LINES 1-S & 2-S

SCALE 1:1,000

0 10 M

SURVEY BY PETER E WALCOTT & ASSOCIATES LTD.
MAY — JUNE / 1984