888290

DEPT. OF MINES
AND PETROLEUM RESOURCES
ROC'A MAR 19 1980

SMITHERS, B. C.

REPORT

on the

Von Schwert

STEWART, B.C. AREA PROPERTY

OF

SCOTTIE GOLD MINES LTD. SKEENA MINING DISTRICT

by

M.P. DICKSON, P. ENG.

and

W. M. ASH, P. ENG.

November 21, 1979 Vancouver, B. C. MINISTRY OF MINES
AND PETROLEUM RESOURCES
REC'D: MAR 1 2 1980
SUBJECT:
FILE:
PRINCE RUPERT, B.C.

### TABLE OF CONTENTS

		PAGE
1	SUMMARY	1 - 2
II	GENERAL	3 - 6
	A. PROPERTY	3
	B. LOCATION	3
	C. ACCESS	3
	D. TOPOGRAPHY & CLIMATE	4
•	E. HISTORY	4 - 5
	F. ECONOMIC GEOLOGY	5 - 6
III	PROGRESS REPORT	7 - 9
	A. ACCESS ROAD	7
	B. CAMP	7
	C. ASSAY OFFICE	8
	D. PORTAL AREA PREPARATION	8
	E. UNDERGROUND PREPARATION	8
	F. UNDERGROUND DEVELOPMENT	8
	G. DIAMOND DRILLING	9
	H. OTHER PROJECTS	9
IV	RESULTS & ASSESSMENT	9 - 13
	A. McLEOD EAST ZONE	9 - 11
	B. DIAMOND DRILLING - 3,600 LEVEL	11 - 12
	C. "B" ZONE	12 - 13
	D. McLEOD WEST ZONE	13
V-A	ORE RESERVES	13
V-B	OTHER POSSIBLE ORE RESERVES	14
VI	PHASE II DEVELOPMENT	14 - 15
	A. UNDERGROUND DEVELOPMENT	14 - 15
	B. MINE AREA CONSTRUCTION	15
	C. FIRST PHASE MILL CONSTRUCTION	15
VII	SUMMARY OF COSTS - PHASE II	16
	CERTIFICATES OF QUALIFICATION	17 - 18

Continued ....

## TABLE OF CONTENTS - CONT'D.

### MAPS & DRAWINGS

FIG.	NO.			<u> </u>	SCAL	<u>E</u>
1		LOCATION		1" =	150	Miles
2		STEWART AREA		1" =	: 4	Miles
3		LOCATION MAP		1" =	: 1 ½	Mile
4		SURFACE & UNDERGROUND WORKINGS		1" =	: 160	Feet
5		GEOLOGY & ORE ZONES 3,000 LEVEL		1" =	<b>80</b>	Feet
6		3,100 LEVEL GEOLOGY PLAN (McLEOD EAST & "B" ZONES)		1" =	= 64	Feet
7		DRILL SECTIONS ON McLEOD EAST ZO	NE	1" =	= 83	Feet
8		3,600 LEVEL DIAMOND DRILLING		1" =	= 50	Feet
9		GEOLOGY 3,000 LEVEL, "B" ZONE &	DRILLING	1" =	<del>-</del> 64	Feet -
10		PROPOSED ALIMAK OREPASS & MANWAY	SYSTEM .	1" =	= 64	Feet
11		ORE RESERVES McLEOD EAST ZONE	in the second of	1" =	= 128	Feet
12		ORE RESERVES McLEOD EAST FOOTWAL	L ZONE	1" =	= 128	Feet
13		ORE RESERVES McLEOD EAST ZONE AB 3,600 LEVEL & #1 VEIN (3,600 L	the state of the s	1"	- 128	Feet
14		ORE RESERVES McLEOD WEST & "S" ZONES		1" -	- 128	Feet

President and Directors SCOTTIE GOLD MINES LTD. 333 - 885 Dunsmuir Street Vancouver, B. C. V6C 1N5.

Dear Sirs:

## STEWART, B. C. GOLD PROPERTY

The Stewart, B.C. area property of Scottie Gold Mines Ltd. has been subjected to the Phase I development as recommended in our report of June 4, 1979.

The following report is the result of continuous involvement by Mr. Plen Dickson, P.Eng., Vice President of Operations, and Mr. Wayne M. Ash, P.Eng., Manager of Engineering, both of Northair Mines Ltd., in the physical development of the property of Scottie Gold Mines Ltd., and frequent, lengthy visits to the property.

This report deals with a description of the development done in Phase I, assessment of the results obtained, and recommendations and costs involved for a Phase II program to further develop and bring the property toward production at a rated capacity of not less than 125 tons per day.

### I SUMMARY:

### PHASE I DEVELOPMENT

Summer and winter roads, camp and portal facilities have been constructed and completely winterized. Underground development has been completed essentially as originally recommended. Surface prospecting was not carried out but an additional diamond drill program was conducted from the 3,600 foot level with favorable results.

#### RECOMMENDATIONS & COSTS

It is recommended that Phase II of the development program be initiated immediately.

The costs for such a program are estimated at \$2,000,000.00.

Respectfully submitted,

M. Plen Dickson, P.Eng.

Vice President of Operations

Northair Mines Ltd.

Wayne M. Ash, P.Eng. Manager of Engineering

Northair Mines Ltd.

WMA/MPD-sh

#### II GENERAL

#### A. PROPERTY

The property consists of the following Crown Grant claims:

NAME	LOT
Prince No. 1 C.G.	L 6407
Prince No. 2 C.G.	L 6408
Prince No. 4 C.G.	L 6409
Prince No. 5 C.G.	L 6410
Prince No. 6 C.G.	L 6411
Prince Fraction C.G.	L 6412
	1
Summit Lake No. 1 C.G.	L 6296
Summit Lake No. 2 C.G.	L 6297
Summit Lake No. 3 C.G.	L 6298
Summit Lake No. 4 C.G.	L 6299
Summit Lake No. 5 C.G.	L 6300
Summit Lake No. 6 C.G.	L 6301
Summit Lake FR# 7 C.G.	L 6405
Summit Lake FR# 8 C.G.	L 6406

#### B. LOCATION

The property is located 30 miles north of the town of Stewart, B.C., on the east slope of Morris Summit and west of Summit Lake, in NTS area 104-B-1 (see fig. 1). The main portal is approximately  $56^{\circ}$  30' North Latitude and  $130^{\circ}$  05' West Longitude at an elevation of 3,000 feet.

#### C. ACCESS

Access to the property is over 32 miles of good gravel road from Stewart, B.C. to Granduc's Tide Lake camp. (See Fig. 2) From there, the summer road winds south from the Tide Lake camp for 1½ miles along the west side of Summit Lake to the main portal (see Fig. 4). At the present time the Granduc road is open for twelve months of the year. A winter road, has been constructed by Scottie Gold Mines Ltd. over the drained lake bottom, ensuring year round access to the minesite.

#### D. TOPOGRAPHY & CLIMATE

The topography of the area is very rugged. Morris Summit slopes upward immediately from lake level at  $35^{\circ}$  to  $45^{\circ}$  to an elevation of over 6,000 feet. Much of the property located above the 4,000 foot elevation is covered by Alpine Glacier.

Summit Lake has purged itself annually for many years. The lake completely empties during the autumn and the lake level drops over 100 feet to its silt bed, re-filling itself during the summer months.

The climate is Northern marine coast type. Annual precipitation is over 100 inches with as much as 1,100 inches of snow falling during the winter months.

#### E. HISTORY

The property has been inspected, explored, developed and reported on by many companies since its initial discovery.

The main surface showings were staked prior to 1930 by Ted Morris and Associates of Stewart, B.C. under the group name "Salmon Gold." It was originally optioned to Premier Gold Mining Company in 1931. Surface trenching disclosed ore-grade mineralization at two points with indicated strike lengths of 85-to-350 feet.

Ten diamond drill holes were drilled and six of these indicated a downward extension of the veins.

In 1934 the property of the newly incorporated Salmon Gold Mines Ltd. was optioned to Consolidated Mining and Smelting Company of Canada Ltd.

Several surface diamond drill holes were drilled that year with encouraging results. Between 1935 and 1938 CM&S developed the property by a hand-steeled adit located at the 3,600 foot elevation. During that period some 1,650 feet of crosscutting and drifting were done, disclosing a 210 foot strike length of ore grading 0.357 oz. Au/ton over a width of 2.4 feet. Three thousand feet of underground diamond drilling disclosed several other zones of interest. A surface showing, plus the diamond drilling, suggested that one zone had a potential vertical height of at least 1,000 feet. Drifting to intersect the upward projection of this zone at the 3,600 foot level was not followed up. In July 1939, CM&S relinquished its option due to disappointing results at its Big Missouri Mine and to the impending war.

#### HISTORY CONT'D.

In 1945 a new company was formed under the name of Morris Summit Gold Mines Ltd. Between 1946 and 1948 some 4,000 feet of lateral work and raise development were done from a new portal located at the 3,000 foot elevation. In addition some 17,000 feet of diamond drilling was done. A spur cross-cut directed toward an old CM&S diamond drill intersection disclosed the McLeod East zone, which was subsequently developed on that level. Three other ore shoots were also found but the company was unable to obtain financial backing to further develop the property. A joint venture between Newmont Mining Company and Granby Mining & Smelting Company gained control of the company in 1952. These companies re-sampled the workings and diamond drill holes, substantiating the results of Morris Summit Gold Mines Ltd. Surface prospecting and geophysics done in 1956 disclosed the presence of several more gold-bearing veins, but no follow-up work was done on any of these. The property essentially remained idle until 1978 when controlling interest of Morris Summit Gold Mines Ltd. was sold to D. A. McLeod and Associates of Vancouver. During the autumn of 1978 a rough road was punched through to the 3,000 foot level adit and completed this year.

In January 1979 the McLeod interests began the formation of Scottie Gold Mines Ltd. to develop and proceed in planning and financing towards bringing the mine to commercial production.

#### F. ECONOMIC GEOLOGY

The ore blocks consist of ore lenses formed along near-vertical faults and fracture systems within competent fragmental volcanics and sediments.

The gold is mainly associated with pyrrhotite - rich lenses occuring along northwest striking faults and easterly striking fractures, with the higher grade gold values often occuring at the junctions of the two.

Three mining blocks have been partially developed on the 3,000 and 3,100 Levels, and one on the 3,600 foot level. Vein widths vary from 6-inches to 12-feet or more, with ore block lengths varying from 70-to-220 feet.

Of the ore blocks disclosed by drifting, only the McLeod East has been adequately explored by diamond drilling. Over the years this zone was cut by 25 diamond drill holes in which 33 ore intersections were disclosed. At least five veins are indicated within this zone, most of these converging from the south with the hanging wall or main zone. Until this year's program the ore within the McLeod East zone was drill indicated through a vertical distance

## ECONOMIC GEOLOGY-CONT'D.

of some 500 feet, with the ore zone open-ended upward and partially open on the other three sides. Where drifted upon on the 3,000 Level, the ore zone has a length of some 100 feet but diamond drilling above indicates the length at the 3,200 foot level to be approximately 300 feet.

#### III PROGRESS REPORT - May 31 - October 31, 1979

#### A. ACCESS ROAD

Work on the two mile access road began May 30, 1979. The portal area was reached June 26, 1979 although work on improving and widening of the access road continued until August 7, 1979. On September 2nd, re-routing of the north end of the road was begun in order to by-pass a snow slide area, provide for improved snow clearing and reduce the access road grade in this section. Work was carried on intermittently and this section was complete by October 24th.

8.5 6

Summit Lake drained September 22nd and the construction of a winter Cat road over the lake bottom was begun October 22nd. This road skirts all snow slide areas to the north of the camp and will allow development to continue at the property during the winter months. The snow road was completed November 10th.

#### B. CAMP

Drilling and blasting commenced on July 5th for the levelling of a campsite. Camp construction started on July 28th and consists of a 32-man camp including:

- a) An 18-man single accommodation dorm.
- b) A 15-man double accommodation dorm.
- c) Washroom and laundry facilities.
- d) Temporary dry facilities.
- e) A kitchen with 18-man seating capacity, coat room, cold-storage room and docking facilities.
- f) First-aid room and facilities.
- g) Four offices.
- h) Domestic water supply.
- i) Generators and buildings.
- j) Diesel and propane fuel supplies.
- k) Sewage disposal system.

The camp was occupied on September 5th and the skirting, stairways and landing were completed on September 14th.

On October 3rd construction of the snow roofs over the camp facilities was begun and was completed November 8th.

#### C. ASSAY OFFICE

A completely equipped assay office was installed in a rented building in Stewart capable of handling both fire and chemical assays.

#### D. PORTAL AREA PREPARATION

Portal preparation began on June 26th. It consisted of:

- a) The removal of old equipment, pipe, track etc., and levelling the portal site.
- b) The installation of 250 feet of track.
- c) Installation and repairing a 16'x30' mechanic shop.
- d) Preparation of an ore-waste dump.
- e) Installation of 2 compressors, 1 generator, and a mine ventilation fan.
- f) Installation of a 5000 gallon tank farm.

This work was completed by July 30th.

Buildings were built over the compressors and generator between October 10th and October 30th. The installation of a 55,000 gallon diesel oil tank farm began October 28th. The job was completed November 4th, and the tanks were filled by November 20th.

#### E. UNDERGROUND PREPARATION

The underground work began July 4th. Preparation consisted of:

- a) Removing and discarding of old equipment, pipe, track, camp supplies, vent pipe.
- b) Installation of new air and waterlines, and vent tubing throughout the 4,000 feet of underground workings.
- c) The mucking out and removal of some 400 tons of old muck, the installation of 320 feet of new track and switches, 2-chutes, an underground warehouse and pump station.

The last of this work was completed September 7th.

#### F. UNDERGROUND DEVELOPMENT

Underground development began August 5th and has continued into November. The work to November 6th consisted of:

Four raises for a total of - 607 linear feet of raising 458 Linear feet of sub-drifting 15,190 cu. ft. of slashing

Total for 1979 = 759 ft Rung 679 pt drifting 15190 ist stacking

#### G. DIAMOND DRILLING

Diamond drilling was done from the 3,600 foot level to test the upward projection of the McLeod East zone. On August 26th the drill equipment and air line was flown by helicopter to the upper portal. Installation of the air line was complete by September 7th and drilling began on September 12th. Four holes were drilled for a total of 2,075 feet and the equipment was brought down the mountain by helicopter on October 20th.

A total of eight holes were drilled on the 3,000 and 3,100 foot levels to October 31st. Drilling began on October 12th and continues.

#### H. OTHER PROJECTS

Six potential mill sites have been investigated. A final decision has not yet been made as to which site will be chosen. The final site will be selected in this Phase II period and preliminary preparation and acquisition of equipment will commence.

A representative bulk sample was taken from the ore zones exposed on the 3,000 foot level on August 15th. This sample was sent to Lakefield Research Ltd. on August 17th for confirmatory metallurgical and pollution control testing. Testwork resulted in 95% recovery of gold, substantiating testwork done last year and as reported in May 1979. The extraction method will be straight cyanidation.

#### IV RESULTS & ASSESSMENT

The three zones developed during 1979 were the McLeod East, McLeod West and the "B" zones.

#### A. McLEOD EAST ZONE

Development of the McLeod East zone was of greatest importance as 80% of the total drill indicated ore reserves were from this zone. The object of the first phase of development in this zone was to sub-drift on the hanging wall zone to prove that the assays from diamond drilling were an adequate representation of what was actually there. In addition, diamond drilling and cross-cutting were to be done on the McLeod East footwall zone to prove its existence and mineability.

Two raises were driven on the McLeod East zone. The No. 1 raise cross-cut the hanging wall zone and averaged 0.710 oz. Au/ton over a length of 133 feet. The No. 2 raise was started from a point 25 feet above the 3,000 foot Level and some six feet into the hanging wall of the mineralized zone. It intersected first ore at 35 feet above the 3,000 foot Level and cross-cut the ore for a 70 foot slope distance, averaging 0.672 oz. Au/ton over the 70 feet.

At the 3,100 foot Level the zone was drifted upon for 275 feet. It is expected that at least 205 feet will be of ore grade although assays at this time are available for only 171 feet. The central section of the main zone assayed 1.43 oz. Au/ton over an average drift width of 6.76 feet, while the extreme west section assayed 0.28 oz. Au/ton over a length of 35 feet and a drift width of 4.2 feet. Development of the west face was stopped at the scheduled location with a full face of ore (4.2 feet) assaying 0.32 oz. Au/ton.

Assay results are still pending on a 33 foot drift length located between the extreme west section and the central section. However, strong sulphides occur here and from adjacent assay data it is anticipated this section will average approximately 0.10 oz. Au/ton,

An additional 70 feet of sub-drifting was done to the east but assay results are still pending.

Considerable ore has been left in the walls of the sub-drift as the tenor, rather than the width of the ore zone was of concern for the Phase I program.

In sub-drifting and raising, three previously drilled diamond drill holes were intersected. The drill hole assays correspond with the sub-drift assays, proving the viability of utilizing diamond drilling results as an adequate means of "proving-up" ore reserves.

The entire 3,000 Level was remapped and a cross-cut was driven 22 feet into the footwall on the 3,100 foot level in order to prove the existence of high-grade "footwall" zone. Two massive sulphide veins were intersected while much of the remaining country rock showed substantial amounts of disseminated sulphides. As yet, only the massive sulphide veins have been assayed. The strike of these veins suggests that rather than a single footwall vein occuring parallel to the McLeod East Hangingwall zone, a series of en-echelon veins occur, converging with the Hangingwall zone at various

points. At least four of these offshoot veins are known to occur. Only three have been sampled.

The No. 1 offshoot has a width of 0.6 feet and assays 5.00 oz. Au. per ton where it intersects with the Hangingwall zone.

The No. 2 offshoot vein was intersected in the cross-cut. The west limb assayed 2.52 oz. Au/ton over a width of 1.3 feet while the east limb assayed 3.66 oz. Au/ton over a width of 1.6 feet.

The No. 3 offshoot vein occurs six feet into the footwall of the No. 2 vein and assayed 1.236 oz. Au/ton over 0.3 feet, 3.622 oz. Au/ton over 0.5 feet and 4.80 oz. Au/ton over 0.4 feet. The No. 2 and No. 3 veins create a zone eight feet wide assaying 0.77 oz. Au/ton.

Four diamond drill holes were drilled on the 3,000 foot Level below this cross-cut. The best intersections of the first hole (D.D.H. 30-355) assayed 1.22 oz. Au/ton across 3.3 feet and 1.91 oz. Au/ton across 4.7 feet. These intersections appear to represent the downward extensions of the No. 2 and No. 3 offshoot veins. Accepting the eight feet of dilution between the intersections they represent a zone width of fourteen feet assaying 1.00 oz. Au/ton.

The second hole (D.D.H. 30-356) intersected 0.30 oz. Au/ton across a core length of 3.0 feet, some 26 feet to the east of, and related to the No. 2 offshoot vein. Considerable core was lost at the eastern projection of the No. 3 offshoot vein and only minor values were obtained from the existing core. Assays are pending on the other two holes and further diamond drilling is recommended for this winter's program.

#### B. DIAMOND DRILL PROGRAM - 3,600 LEVEL

During the 1940's the McLeod East ore zone was drilled between the 2,850 and the 3,350 foot elevations. The ore zone was open-ended up-dip from the 3,350 foot elevation and a strong showing was found on surface at the 3,950 foot elevation on the up-dip projection of the McLeod East zone. Due to lack of drill information no reserves had been assigned this intermediate block.

An underground diamond drill program was therefore initiated on the 3,600 Level to substantiate or disprove the continuity of mineralization between the surface showing and the upper limit of the drill indicated ore reserves.

Four holes were drilled. The first hole (#36 - 351) intersected 10.1 feet (true width 9.6 feet) of 0.917 oz. Au/ton. The second hole, intersected 4.5 feet (true width) grading 0.49 oz. Au/ton. This intersection was located 60 feet east of 36-351. The third hole intersected 1.1 feet grading 0.176 oz./ton, a further 60 feet to the east. The fourth hole, cut an intersection of 8.9 feet (true width) grading 1.847 oz. Au/ton. This intersection was located 115 feet below D.D.H. #36-351. As all drill holes intersected the ore at the anticipated target points, the continuity of the up-dip extension of the ore is substantiated and "geologically inferred" ore reserves have therefore been assigned to the up-dip extension of the McLeod East zone.

The "S" zone, on which two previous diamond drill holes had intersected 0.70 oz. Au/ton across 2.8 feet, and 0.46 oz. Au/ton across 3.2 feet, was intersected at three locations in 1979. These assayed 0.52 oz. Au/ton across a true width of 4.2 feet, 3.9 feet true width of 0.06 oz. Au/ton and 2.6 feet true width of 0.10 oz./ton.

Both the McLeod East and "S" zones are open to the west.

#### C. "B" ZONE

This zone was not diamond drilled prior to this year's development and thus, difficulty was encountered in staying on the main gold-bearing structure. Sampling was done in the 1940's on a very narrow section of the structure, with the result that a zone 100 feet long and two feet wide was outlined averaging 1.3 oz. Au/ton.

This year's raising and test holing has indicated a gold-bearing structure of economic grade over a width of 9.5 feet to a height some 62 feet above the 3,000 Level drift back. At this point a fault was encountered which offset the oreshoot. Due to time and productivity considerations, little time was spent in searching for the extension in this direction. A knuckle-back raise was driven but did not encounter good ore. At the 3,100 foot level a diamond drill was set up and intersected the ore zone some 10 feet into the footwall. Seventy feet of sub-drifting has been done on this vein. Only six assays of the 35 samples have been assayed as yet and while encouraging, no tonnage estimates above the 3,062 foot elevation have been made.

Drifting has been stopped until additional diamond drilling is done to further outline this potential ore zone.

Two horizontal diamond drill holes were drilled from the 3,000 Level to locate the possible eastern extension of this vein. Although assays from these holes are not yet available, strong sulphide mineralization was encountered in the second hole.

#### D. McLEOD WEST ZONE

Lack of previous diamond drilling has hampered the development of this zone. A raise was driven to the 3,100 foot level but only sporadic values were encountered. Diamond drilling is presently being done at the 3,100 Level and more diamond drilling will be done from the 3,000 Level to locate the upward extension of this zone. Two-thirds of the ore reserves originally assigned to this block have been temporarily cancelled until further defined.

#### V-A ORE RESERVES

This year's work has increased the ore reserves tonnage picture substantially. The total ounces of gold have increased by 13,700 ounces in the indicated, probable and possible categories. The ore reserves calculated in May were uncut and undiluted. The results of this years labour has allowed us to make an educated estimate as to the dilution that can be expected. Consequently, the reserves have been partially diluted to a minimum mining width of 4½ feet. In addition we are now very confident that the ore in the McLeod East zone will project to surface. We have consequently assigned geologically inferred ore reserves, although no grade can be assigned until further drilling is completed.

The results of the newest evaluation are tabulated and categorized below:

CATEGORY	TONS	GRADE OZ. Au/T	ON
Drift and Drill Indicated Drift Probable Drill & Drift Possible	98,311 5,216 31,396	0.793 0.195 0.780	(Mainly diluted)
Geologically Inferred	134,923 Tons 70,851	0.767	
	205,774 Tons		

#### Y-B OTHER POSSIBLE ORE RESERVES

Thirteen additional showings were described in the June 4th report. Two of these, the upward projection of the McLeod East zone and the "S" zone, were diamond drilled with very encouraging results. No surface prospecting was done during 1979 as the underground geological work took precedence, but the preponderance of additional showings, both on surface and underground, lend a high degree of confidence to the potential for a long term mining operation. Four diamond drill holes, drilled below the 3,000 Level indicate the downward continuity of the ore zones.

#### VI PHASE II DEVELOPMENT

Results of the first phase of development work have been most encouraging with a strong statistical parallel being shown between diamond drilling results and lateral development.

A general plan toward development has been formulated:

A 200 ton mill is presently being designed. An initial 125 ton per day production rate is planned, with the increased capacity to be held for future increased production rates.

No firm decision has been reached on the millsite location although several potential sites are under consideration.

The underground wallrock has proved very competent and consequently it is now anticipated that the ore zones will all be mined by shrinkage stoping methods.

Phase II development should span a period of six months, from November 1, 1979 to April 30, 1980.

The work will consist of:

- 1. Underground development.
- 2. Final Feasibility Studies.
- 3. Mine area construction.
- 4. First Phase mill construction.

#### A. UNDERGROUND DEVELOPMENT

The underground development will consist of:

- a) An Alimak-driven manway raise to the 3,600 Level.
- b) An Alimak-driven ore pass raise to the 3,600 Level with finger-raise and sub-drift connections at 100 foot intervals.

- c) Sub-drift connections from the orepass to the McLeod East zone on the 3,200 Level.
- d) Retracking of the entire 3,000 Level.
- e) Additional drifting.
- f) Additional raising.
- g) Underground diamond drilling (4,000 feet).

Retracking of the entire 3,000 Level is necessary because the present track is too old, too light-weight, and too narrow to allow adequate production rates.

The underground drilling will consist of some 50 short (less than 80 feet) drill holes to define local ore structures, plus six longer holes to test the upward projections of the McLeod West and "B" zones.

#### B. MINE AREA CONSTRUCTION

This will consist of:

- a) Ore-bin construction.
- b) Extension of facilities area at Portal.

#### a) Ore Bin Construction

Drilling and blasting is required to clear a location for the ore bin. The bin will have a capacity of 800 tons and will be of wood construction.

#### b) Extension of Portal Facilities Area

The portal area is presently restricted for space. Underground facilities for compressors, generators and a mechanics shop will be necessary and work will begin on these.

#### C. FIRST PHASE OF MILL CONSTRUCTION

This will include the following:

- a) Mill site and electric power preparation.
- b) Down payments on pre-fabricated mill and crusher buildings.
- c) Down payments on jaw crusher, cone crusher, ball mill.

PHASE II DEVELOPMENT Deferred to start May 1/80

November 1, 1979 - April 30, 1980

1.	Capital, Rental-Purchase, Repair Supplies		\$ 395,300
2.	Mine Surface and Underground Development:		
	- Fire door Installation, Retrack, Ballast,		
	Pipe Installation etc.	\$ 67,600	the second secon
	- Alimak Orepass Raise Systems	146,800	. •
		116,800	
	<ul> <li>Alimak Manway Raise System</li> <li>U/G Diamond Drilling</li> </ul>	52,000	
		22,100	
	- U/G Mechanical Facilities	35,700	
	- Other Drifting		
	- Other Raising	41,000	E66 200
	- Ore Bin Construction, Supervision, etc.	84,300	566,300
3.	Mill Construction Preparation		
	- Down Payment on Mill Buildings	\$ 36,400	
	- Clear Land (Millsite)	6,000	
	- Roadway, Ditch, Culvert	4,000	
	- Mill Equipment Inspection Trips	10,000	
	- Downpayment on Major Pieces of	•	
	Mill Equipment	25,000	
	- Hydro Line Clearing	43,000	124,400
4.	General On-Going Costs	A 77 000	
	- Fuel and Lube	\$ 77,200	
	- Warehouse, Assay Office	15,300	
	- Communications, Tools & misc. Supplies,		
	Hiring, Management Travel, etc.	55,200	
	- Catering	117,900	•
	- Freight	31,500	
	- Camp Building, Repair, Supplies & Labour	18,000	
	- Avalanche Control	27,000	A Comment
	- Personnel wages, Salaries, Fringes	209,700	551,800
5.	Feasibility Study, Metallurgy, Pollution		
•	Control, Administration		
	- Salaries, Administration Expense	\$ 71,800	
	- Consultants (Metallurgy, Pollution Control	•	
		66,000	137,800
	etc.)	20,000	23.,000
6.	Contingencies		224,400
			•
•			
TO	TAL ESTIMATED COSTS PHASE II DEVELOPMENT		\$ 2,000,000

#### CERTIFICATE OF QUALIFICATIONS

I, Wayne M. Ash, P.Eng., Mining, of 2543 Orkney Way, Garibaldi Highlands, B.C., certify as follows:

- 1. That I am a graduate of the Provincial Institute of Mining (Ontario) and Michigan Technological University and hold a Bachelor of Sciences degree in Mining Engineering.
- 2. That I have been a member of the Association of Professional Engineers of British Columbia since March 1971.
- 3. That I have been engaged in the Profession of Mining Engineering for the past ten years and have been involved in the mining industry for the past 19 years.
- 4. That I have been employed by Northair Mines Ltd. since September 1976 as Chief Engineer and since February 1, 1979 as Manager of Engineering.
- 5. That the attached Report is based on day-to-day involvement with the development of Scottie Gold Mines Ltd., and frequent visits to the property.
- 6. That I have no interest either directly or indirectly in the property or securities of Scottie Gold Mines Ltd., nor do I expect to receive any.
- 7. Permission is hereby given to Scottie Gold Mines Ltd. to reproduce this Report, or any part of it, for the purpose of a financial prospectus, provided however, that no portion may be used out of context in such a manner as to convey a meaning differing materially from that set out in the whole.

Wayne M. Ash, P. Eng.

Dated this 21st day of November 1979, at Vancouver, B. C.

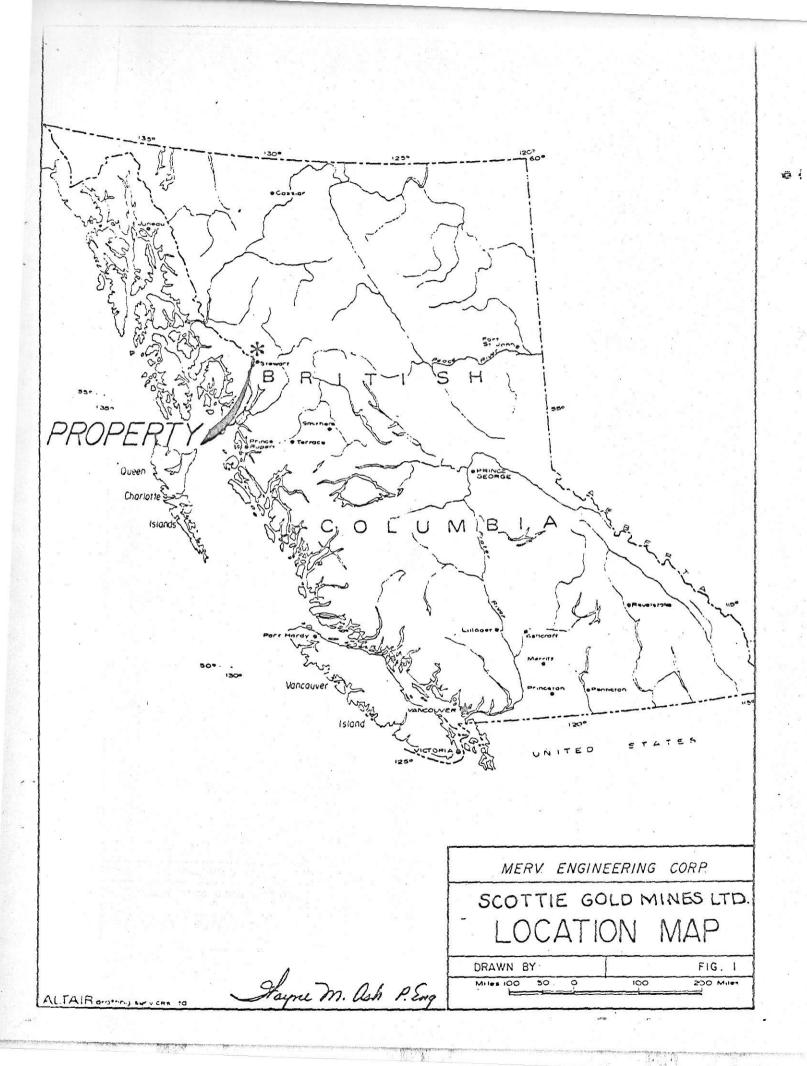
#### CERTIFICATE

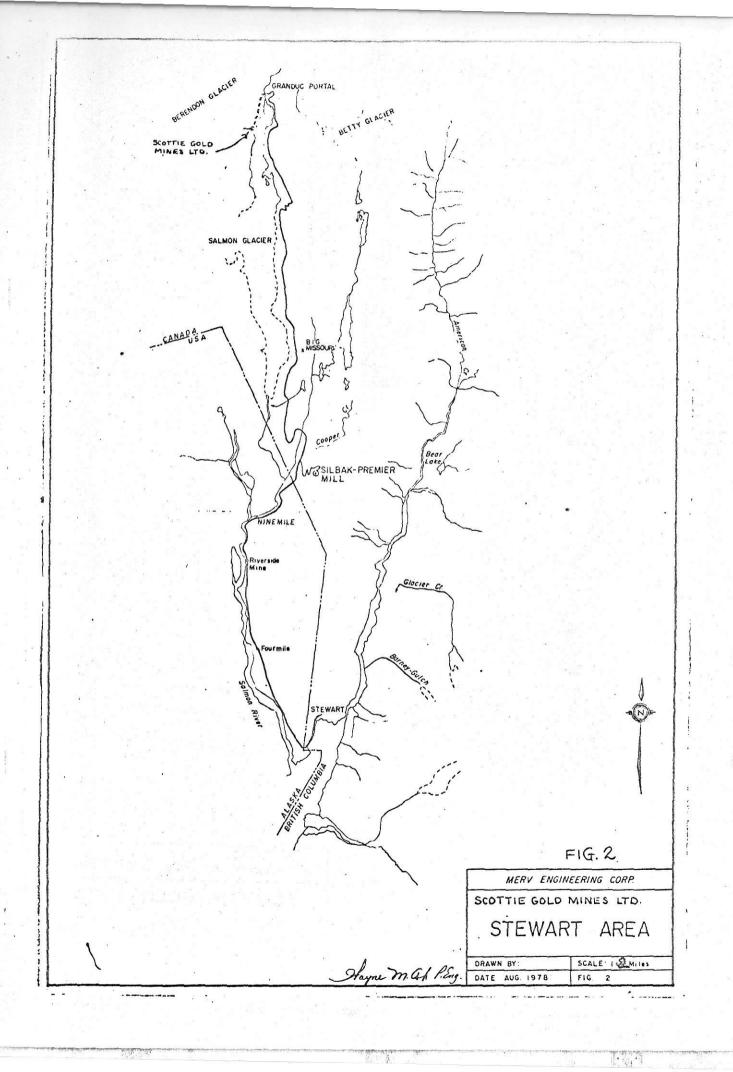
I, Melvin Plenny Dickson, of 40215 Kintyre Drive, in the town of Garibaldi Highlands, in the Province of British Columbia, DO HEREBY CERTIFY THAT:

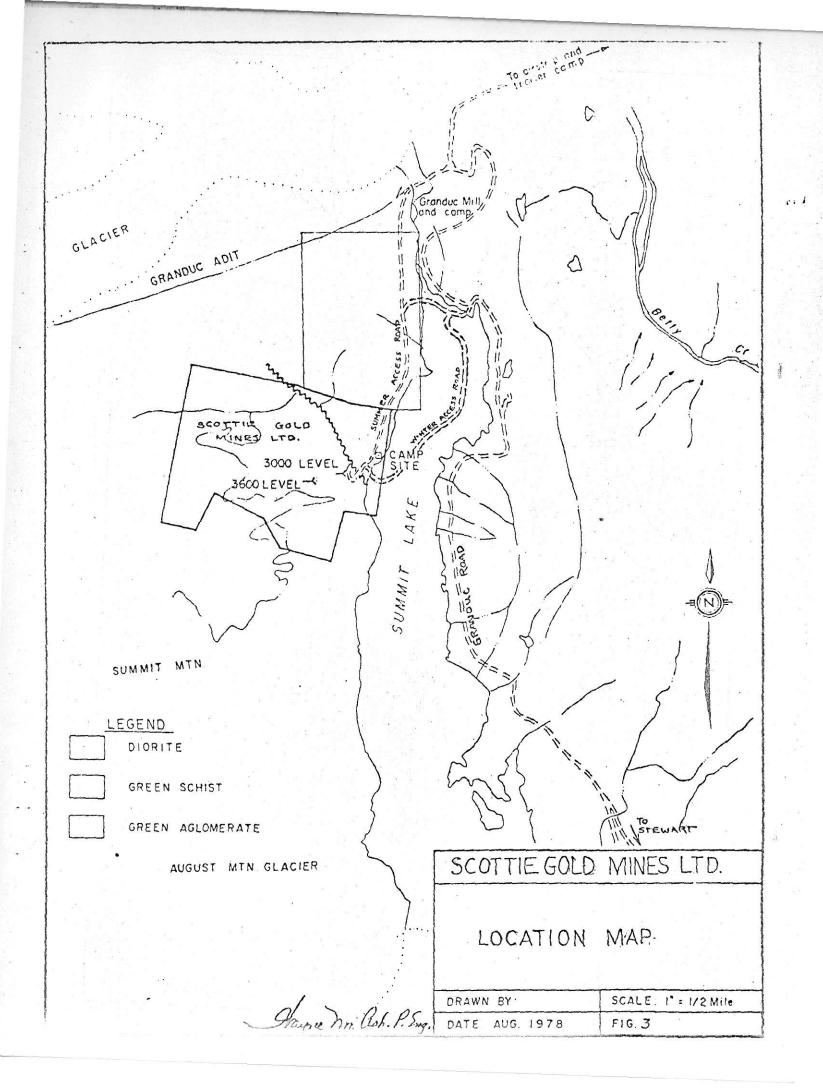
- 1. I have been employed with Northair Mines Ltd. of 333 885
  Dunsmuir Street, Vancouver, B.C., since April 1973, as Chief
  Geologist and Project Manager, Assistant Manager, General Manager
  and since February 1, 1979, as Vice President of Operations.
- 2. I am a graduate of Mount Allison University, Sackville, New Brunswick and hold a Bachelor of Science Degree in Geology.
- 3. I am a Registered Professional Engineer of the Province of British Columbia, Registration No. 11456.
- 4. I have actively practised my profession in mineral exploration, mine development, production and management since graduation in 1965.
- 5. The attached report is based on information obtained from Scottie Gold Mines Ltd. daily involvement with the property, and frequent visits of 3-to-4 days duration.
- 6. I have no interest either directly or indirectly in the property or securities of Scottie Gold Mines Ltd.
- 7. Permission is hereby given to Scottie Gold Mines Ltd. to reproduce this report, or any part of it, for the purpose of a financial prospectus, provided however, that no portion may be used out of context in such a manner as to convey a meaning differing materially from that set out in the whole.

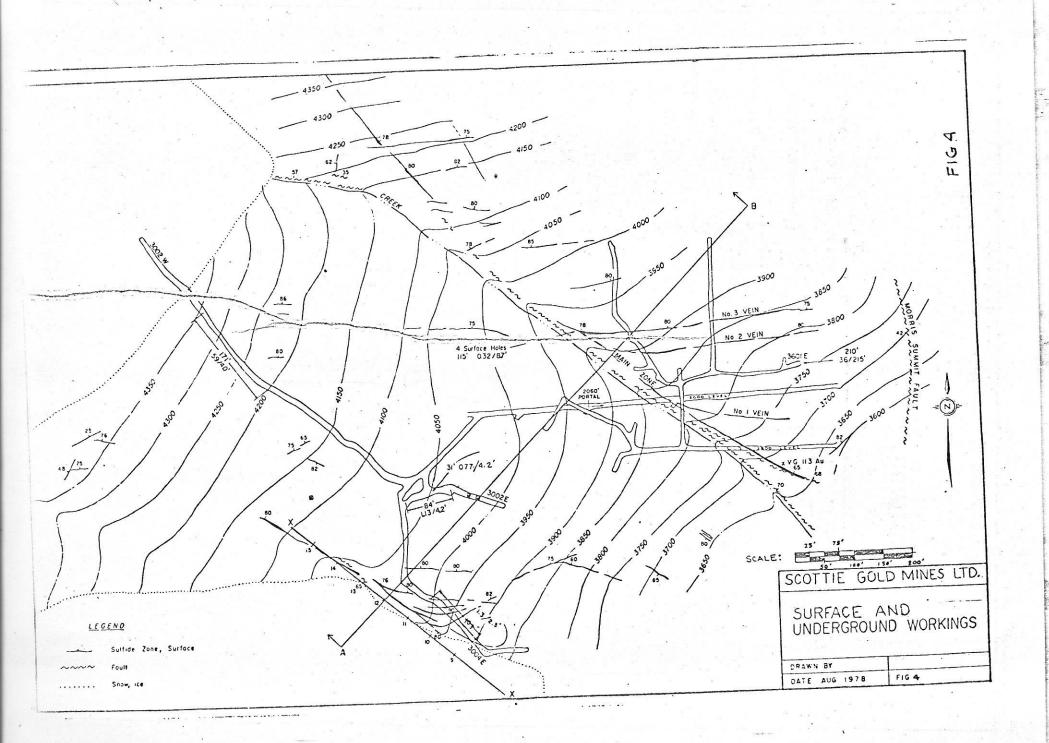
M. P. Dickson, P. Eng.

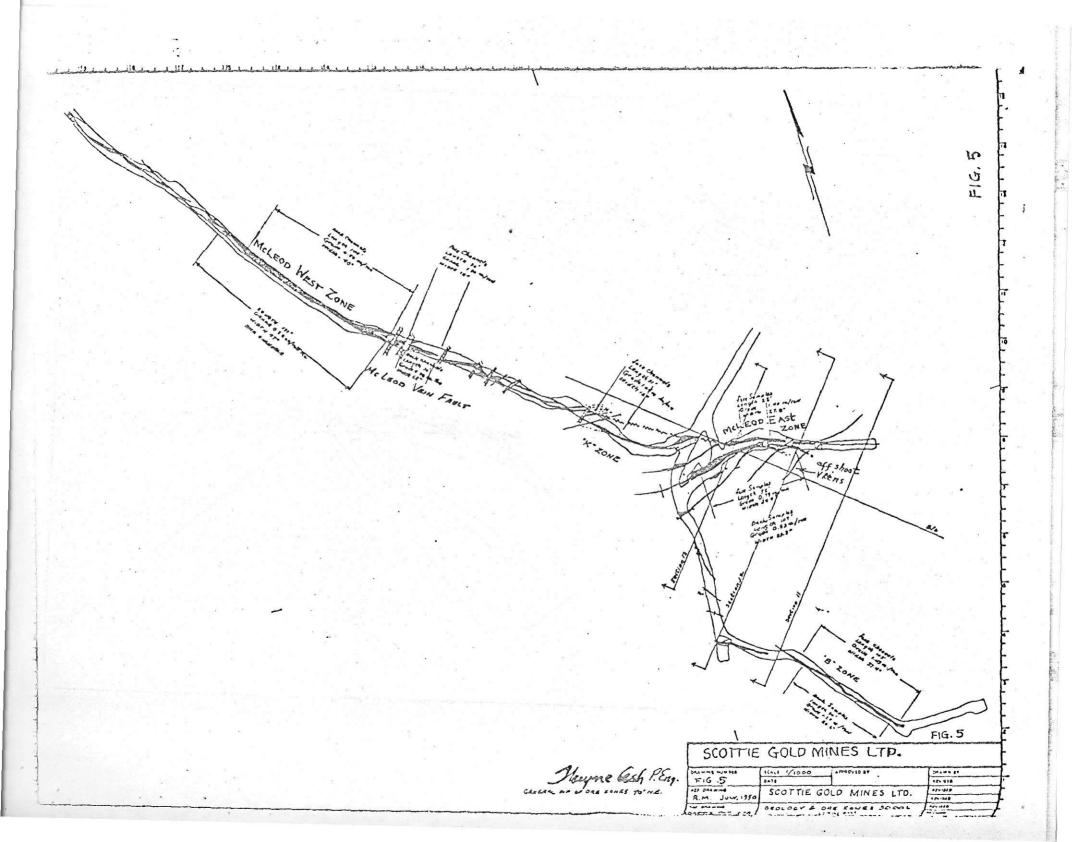
Dated this 21st day of November 1979 at Vancouver, B. C.

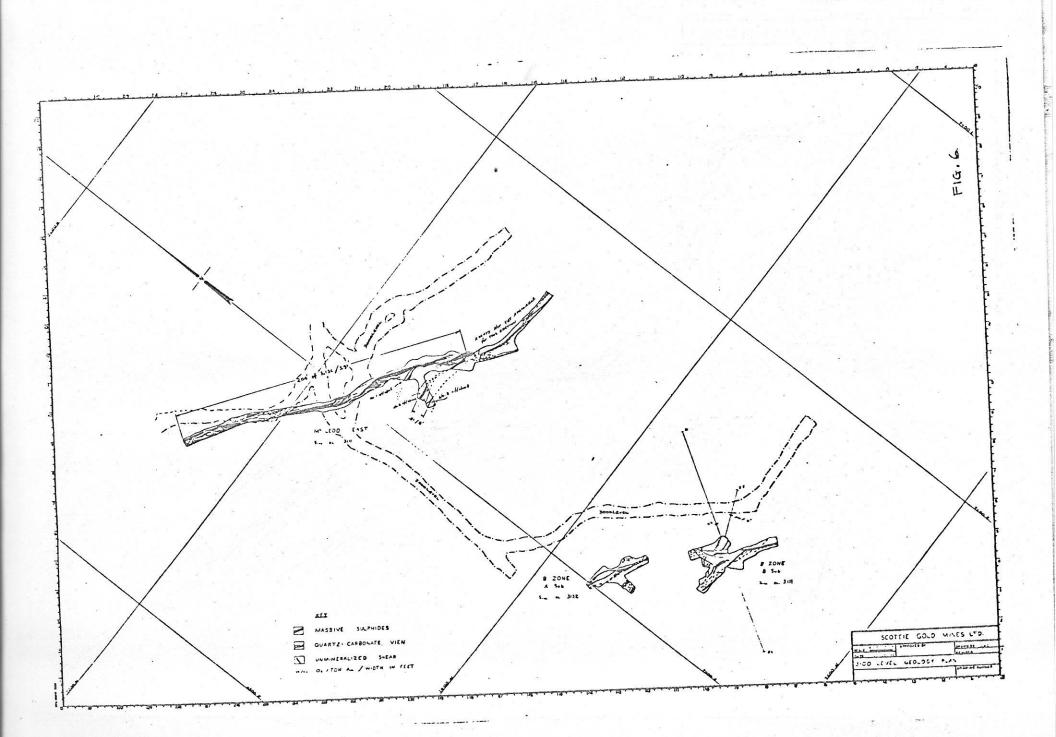


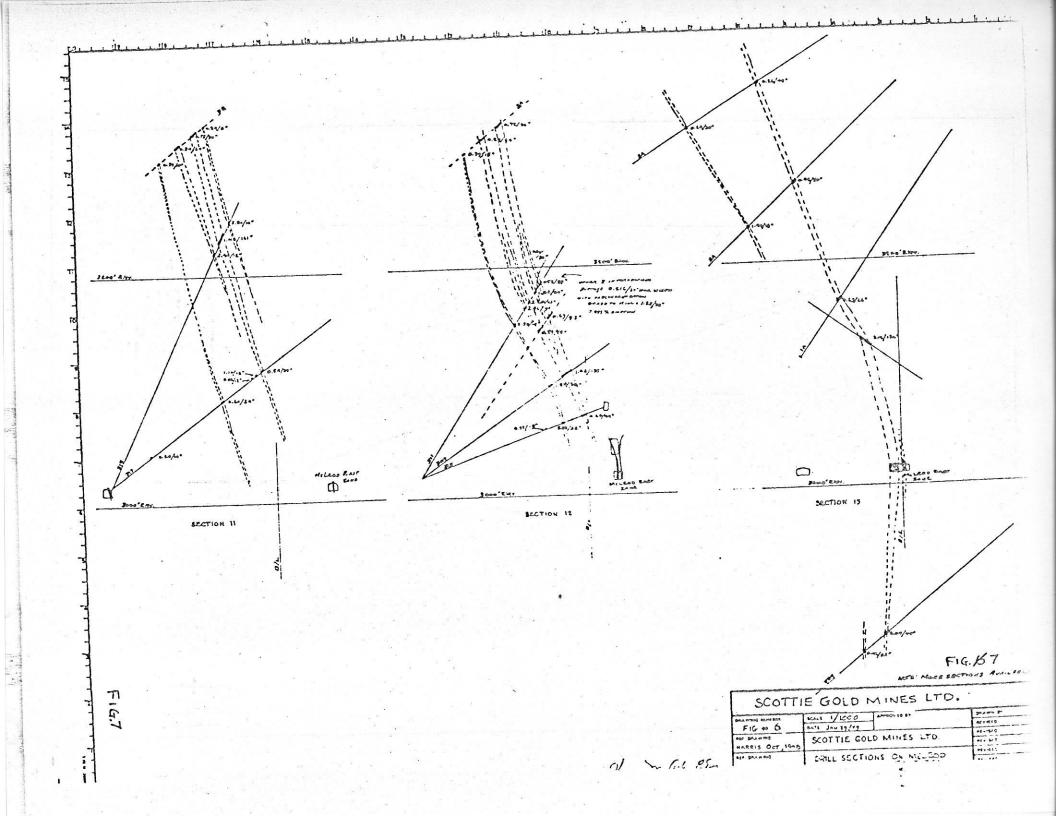


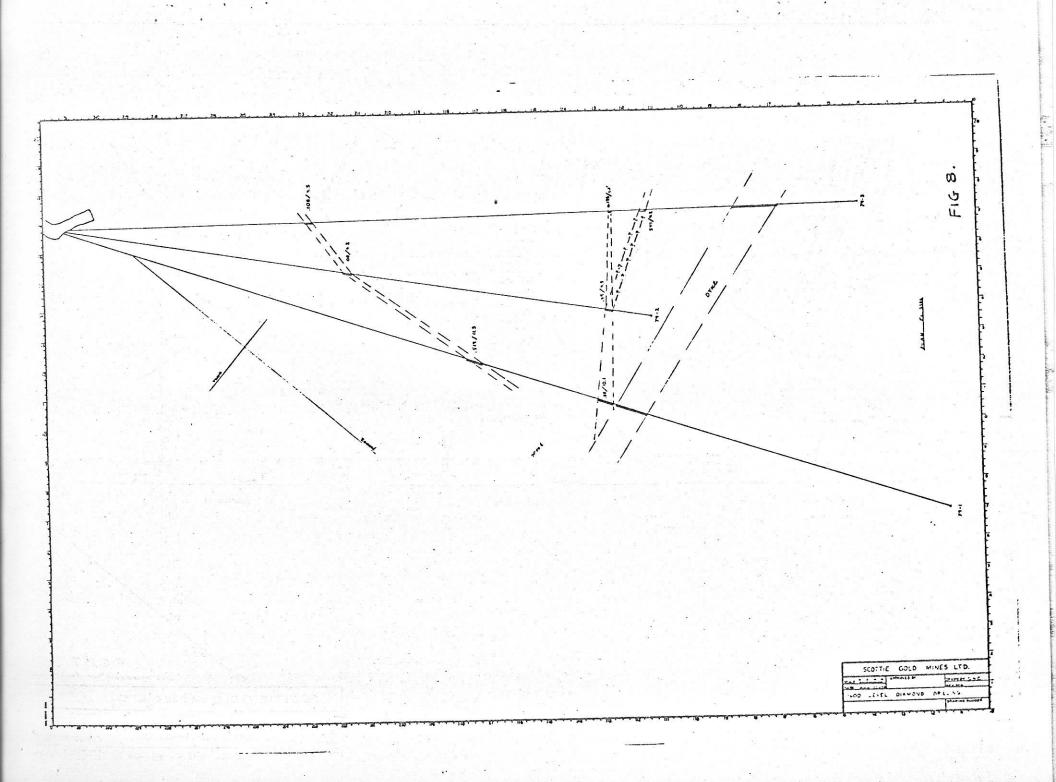


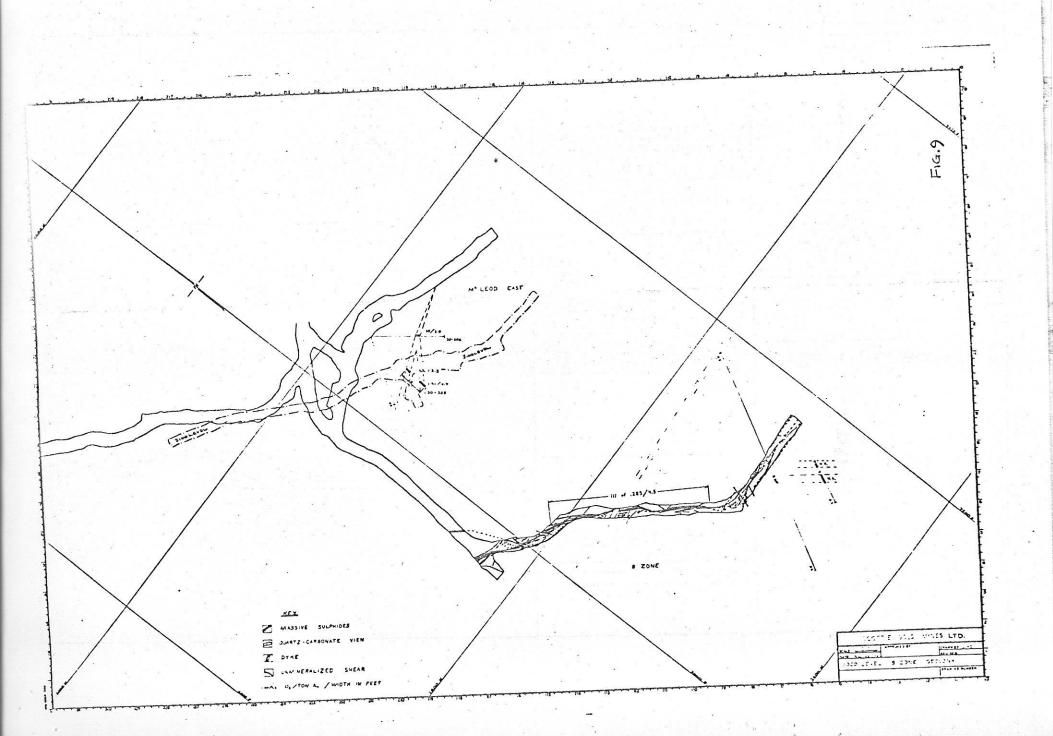


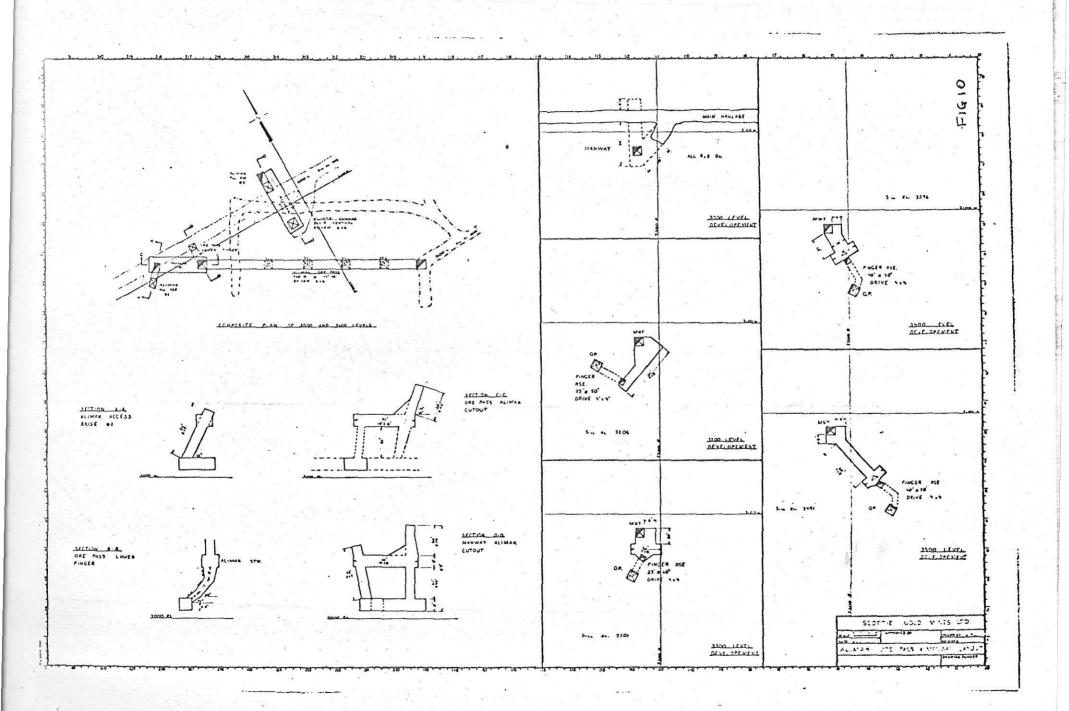


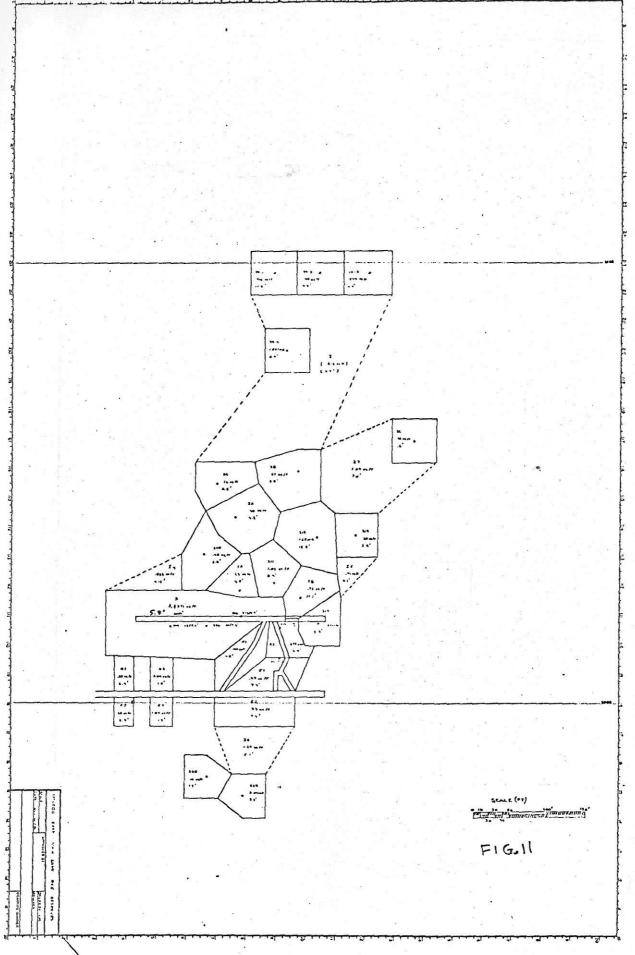


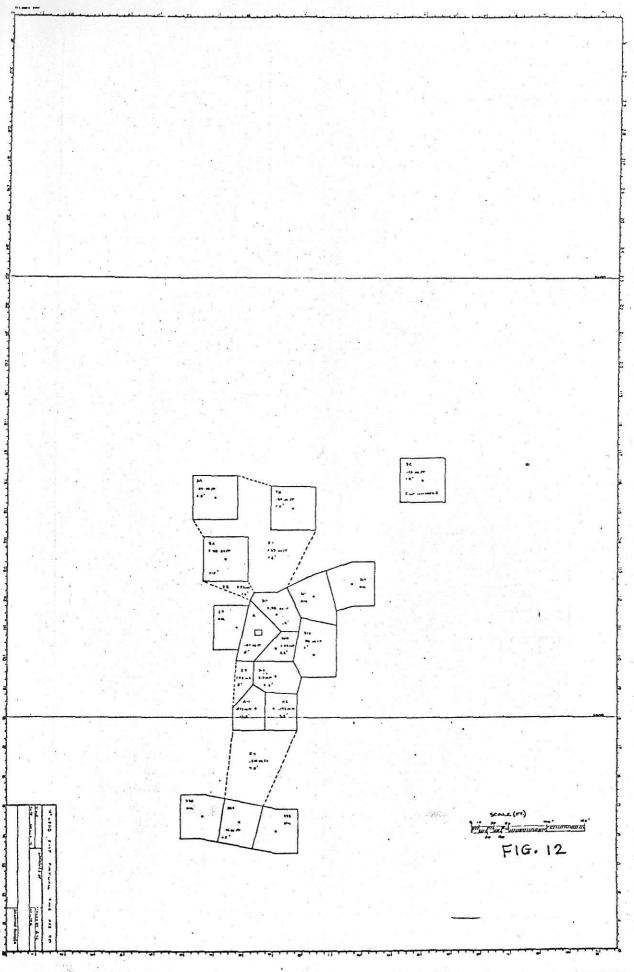






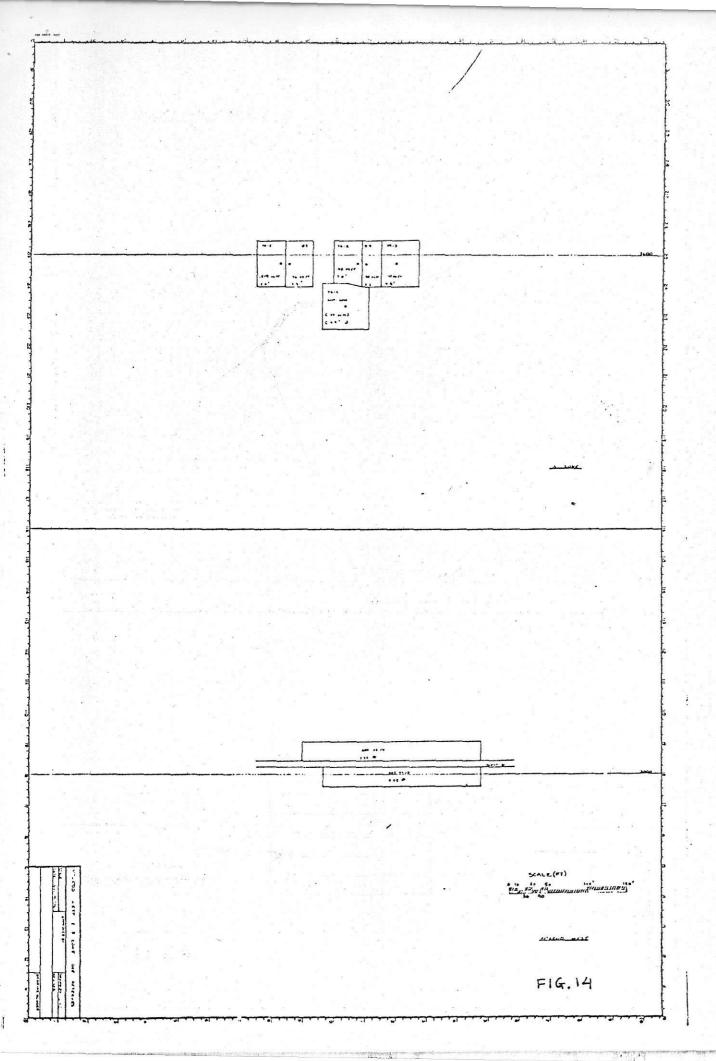






. ...

MAINTENNE TARE WATER TONK NOTE: SURFACE PROMILE BASED BY WORK BY MERV FINGINEERING COAP AUG / 76 79-1 ,416 / 10.5 .19/45 .511/1.5 ~\* SCALE (FI.) FIG 13



E

SCOTTIE GOLD MINES LID.

FINANCIAL STATEMENTS

31 OCTOBER 1979

## SMITH, FLYNN, STALEY

CHARTERED ACCOUNTANTS

225 – 4299 CANADA WAY, BURNABY, B.C. V5G 1H3 TELEPHONE: 434-1384 R. C. SMITH C.A.
A. R. FLYNN C.A.
D. L. STALEY C.A.

## COMMENTS ON UNAUDITED INTERIM FINANCIAL INFORMATION

To the Directors of Scottie Gold Mines Ltd.

We have prepared the accompanying unaudited interim financial statements comprising the summarized balance sheet and the summarized statements of changes in financial position and deferred exploration and development costs for the nine months ended 31 October 1979 from the records of Scottie Gold Mines Ltd. and from other information supplied to us by the company and have reviewed such interim financial information. Our review, which was made in accordance with standards established for such reviews, consisted primarily of enquiry, comparison and discussion.

We have not performed an audit and consequently do not express an opinion on this interim financial information. The most recent audited financial statements issued to shareholders on which we have expressed an opinion were for the year ended 31 January 1979.

29 November 1979

Chartered Accountants

# SCOTTIE GOLD MINES LTD. BALANCE SHEET AS AT 31 OCTOBER 1979

#### ASSETS

CURRENT		
Cash		\$ 258,102
Accounts receivable		2,649
Security bond		5,000
Prepaid expense		1,040
		266,791
MINERAL RIGHTS, at cost (Note 2)		191,137
		,.,.
DEFERRED EXPLORATION AND DEVELOPMENT COSTS		
- Schedule 1 (Note 2)		1,635,961
		.,.,,,,
PLANT AND EQUIPMENT, at cost		
Buildings	\$ 53,005	
Equipment	28,418	
Construction in progress	67,611	
Propression and Propression	المتسادة متساحة المستاسية	
	149,034	
Less - Accumulated depreciation (Note 3)	18,185	130,849
		\$ 2,224,738
		V C, CCT, 1 70
LIABILITIES		
CURRENT		
Accounts payable and accrued liabilities		\$ 443,958
vecoming balance and accided transfitties		# 44J,3JO
SHAREHOLDERS' EQUITY		
SHARE CAPITAL (Note 4)		
Authorized -		
3,000,000 Class A common shares of no par value		
605,000 Class B common shares of no par value		
Issued and fully paid -		
1,899,730 Class A shares	\$ 1,774,730	4
605,000 Class B shares		1,780,780
007,000 Class D shales	6,050	1,100,100
APPROVED ON BEHALF OF THE BOARD:		
Director .		
9 2220000		
• Director		
DII 60 001		
	· · · · · · · · · · · · · · · · · · ·	\$ 2,224,738
		=======================================

<sup>-</sup> Prepared Without Audit -

# SCOTTIE GOLD MINES LTD. STATEMENT OF CHANGES IN FINANCIAL POSITION FOR THE NINE MONTHS ENDED 31 OCTOBER 1979

#### SOURCE OF FUNDS

Treasury shares	\$ 1,231,050
Less - mineral rights acquired in exch for treasury shares	ange . 6,050
	1,225,000
Interest income - net	14,779
	1,239,779
APPLICATION OF FUNDS	
Purchase of plant and equipment	\$ 149,033
Deferred exploration and development	ash costs 1,192,626 1,341,659
DECREASE IN WORKING CAPITAL	101,880
Working Capital Deficit - 31 Januar	y 1979 75,287
No. 1	
WORKING CAPITAL DEFICIT - 31 OCTOBER 1979	\$ 177 <b>,</b> 167

## SCOTTIE GOLD MINES LTD. SCHEDULE OF DEFERRED EXPLORATION AND DEVELOPMENT COSTS FOR THE NINE MONTHS ENDED 31 OCTOBER 1979

DIRECT		
Underground exploration and development		\$ 663,926
Camp		285,954
Roadwork		148,182
Consulting		10,767
		1,108,829
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
INDIRECT		
Management salaries	\$ 35,796	
Legal fees	13,899	
Telephone	9,003	
Travel and promotion	8,821	
Office salaries	8,659	
Hire and purchase expense	5,997	
Taxes, licences and fees	4,875	
Accounting and audit fees	3,410	
Office rent	2,820	
Shareholders' information and meetings	2,573	
First aid and medical	2,165	• • • •
Transfer agent fees	2,076	
Office and printing	1,719	
Depreciation		
Interest income	(14,779)	87,203
TOTAL COSTS FOR THE PERIOD		1,196,032
Balance - 31 January 1979		439,929
BALANCE - 31 OCTOBER 1979		\$ 1,635,961

## SCOTTIE GOLD MINES LTD. NOTES TO FINANCIAL STATEMENTS 31 OCTOBER 1979

#### 1 REORGANIZATION

By resolution passed at an extra-ordinary general meeting of the shareholders, the company:

- (a) converted from a specially limited company into a limited company and changed its name by deleting "(N.P.L.)" therefrom
- (b) changed the authorized capital from 3,000,000 shares with a par value of \$1.00 to -

3,000,000 Class A common shares of no par value 605,000 Class B common shares of no par value

2. MINERAL RIGHTS AND DEFERRED EXPLORATION AND DEVELOPMENT COSTS

The amounts shown for the above noted items represent the accumulated costs to date and are not intended to reflect present or future values.

#### 3. DEPRECIATION POLICY

The company provides for depreciation on its plant and equipment at the rate of 30% on the declining balance method.

#### 4. SHARE CAPITAL

During the nine months ended 31 October 1979 the following shares were issued from treasury:

For cash - 900,000 Class A shares \$ 1,225,000

For mineral rights - 605,000 Class B shares \$ 6,050