



42A10SW0114 63.4295 STOCK

010

REPORT ON THE
 PROPOSED EXPLORATION AND DEVELOPMENT PLANS
 OF
 ST ANDREW GOLDFIELDS LTD.
 IN
 LOT 7, CON. I, STOCK TOWNSHIP
 ONTARIO
 (formerly owned by QUEBEC STURGEON RIVER MINES LIMITED)



J.B. Anderson
 J.B. Anderson, P. Eng.

January 28, 1983

OM83-5-C-29



42A10SW0114 63.4295 STOCK

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INTRODUCTION

This report has been prepared at the request of the Directors of St Andrew Goldfields Ltd. and is to be used in the proposed financing of the Stock property through the development and feasibility stages leading to mine production.

The financing involves the formation of the new company St Andrew Goldfields Ltd. with an authorized capital of 20,000,000 shares of which 7,000,000 shares together with warrants to purchase 400,000 shares will be issued to Quebec Sturgeon River Mines Limited as consideration for the Stock mine property together with its related plant and equipment. Quebec Sturgeon River Mines Limited has previously expended approximately \$3,400,000 on exploration and development together with approximately \$1,186,000 (which has a replacement value of \$1,638,000) for plant and equipment. Quebec Sturgeon is transferring by means of a tax free roll-over exploration and development costs of approximately \$6,000,000 of which the aforementioned \$3,400,000 is part. Accordingly St Andrew acquires for tax purposes \$7,638,000 of allowable deductions.

The report shows estimated costs of Phase I and Phase II of the lateral and depth programs as recommended in the R.C. Hart, P. Eng. report dated January 26, 1983.

Present values of the surface plant and costs of proposed surface plant additions are as shown in Leslie Engineering Limited Report dated January 28, 1983.

SUMMARY & CONCLUSION

Present value surface plant	<u>\$1,530,000</u>
Mine stores inventory	<u>\$ 65,500</u>
Mine residence & mobile equipment	<u>\$ 121,000</u>
Estimated costs Phase I (including Surface Plant Additions)	4,898,000
Estimated costs Phase II	<u>3,904,000</u>
TOTAL COST PHASE I & II	<u>*\$8,802,000</u>

*(Jan., 1983 dollars)

PHASE III Cost estimates (costs to bring property to production will be largely dependent on the size of the concentrator as determined in the Phase II feasibility study.

The issuance of 7,000,000 shares together with warrants to purchase 400,000 shares to Quebec Sturgeon River Mines Limited under the terms of the proposed agreement whereby Quebec Sturgeon transfers certain assets to St Andrew Goldfields Ltd. represents a fair and reasonable consideration. This opinion is based on the results achieved to date from the surface and underground exploration of the Stock property and the comments and recommendations in the Hart Report dated January 26, 1983.

LOCATION & HOLDINGS

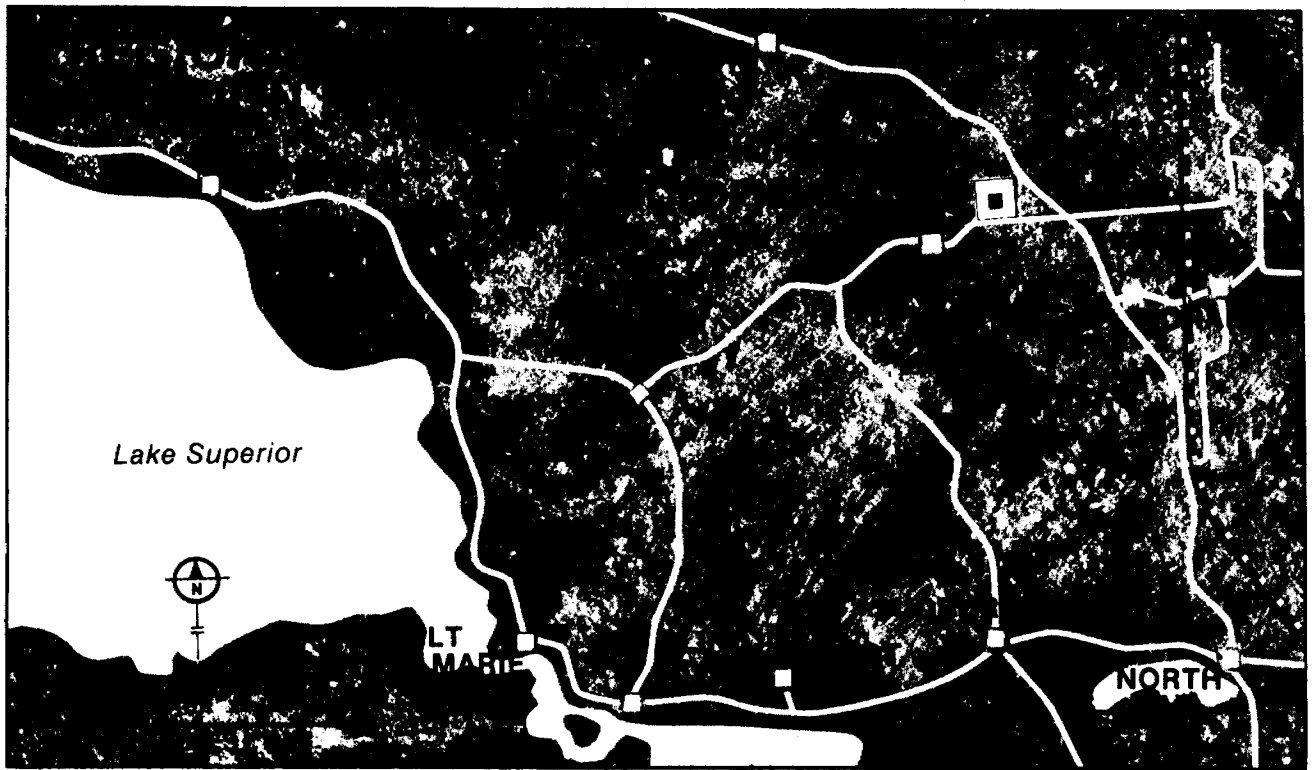
The Stock property of St Andrew Goldfields Ltd, is situated approximately 3 miles east of the east boundary of the city of Timmins. It lies 1 mile north of Highway 101 connecting the city of Timmins and the town of Matheson, Ontario.

The property consists of Lot 7 (300 acres), Concession I, Stock Township, District of Cochrane, Province of Ontario. Development work to date has been confined to the north half of the above lot where both mineral and surface rights are held. Mineral rights are held on the south half along with an 80 foot wide road allowance.

HISTORY & DEVELOPMENT

The initial surface diamond drilling program which began in January 1973 consisted of 49 holes for a total of 24,982 feet. These holes encountered gold-bearing mineralization along an east-west trending strike length of 2,050 feet. Overburden in the area varies from 45 to 180 feet in depth and the larger part of the drilling was confined to the favourable area with the least overburden. In 1974, instead of continuing with more closely spaced, expensive drilling it was decided to undertake an underground development program to correlate the drill results and to assess the potential of the mineralized zone. This program included construction of a mine access road, power supply, headframe and bin, water tank, service building and office building. The shaft was collared to 50 feet but no further work was done at that time due to a shortage of funds and a depressed gold price.

In October, 1980 an underground program was started which included shaft sinking to a depth of 270 feet below surface and establishing a station at the 200 foot level. Lateral work at this horizon included 1,354 feet of drifting and x-cutting and 14,702 feet of underground drilling. This program was completed in December 1981 and since then the plant has been on a care and maintenance basis with pumping being continued from the underground workings.



**PROPERTY LOCATION PLAN
ST ANDREW
GOLDFIELDS LTD.
TIMMINS AREA ONTARIO**

SURFACE PLANT DESCRIPTION

Present surface plant at the property is as follows:

- (i) An all weather access road, one mile in length, which connects the mine site with main Highway 101 between Matheson and Timmins, Ontario.
- (ii) A 2,500 KVA substation capable of serving all mine facilities. Power is supplied through a 27.5 KV primary power line installed by Ontario Hydro at mine expense.
- (iii) A 90 foot headframe and mine waste bin. Foundations have also been poured for future ore bin erection.
- (iv) A 40 feet X 123 feet steel Armco service building housing the 72" X 54" mine hoist, 3 - 1,000 C.F.M. air compressors, 2 heating boilers and mine dry facilities.
- (v) A 40 feet X 102 feet steel Armco service building housing the main offices, warehouse and machine shop.
- (vi) An 80 foot - 12,000 Imp. gallon water tank and a deep well to service the mine plant.
- (vii) A house trailer for mine personnel.
- (viii) Mobile Equipment includes 1 pickup and 1 front end loader.

SURFACE PLANT - PRESENT VALUE

(From Leslie Engineering Limited Report)

	<u>Building</u>	<u>Equipment</u>	<u>Total</u>
Service building	\$337,700	\$474,000	\$ 811,700
Office & shops	160,900	10,000	170,900
Headframe	175,000		175,000
Water tank		31,000	31,000
Cooling pond		4,000	4,000
Sewage disposal	6,000		6,000
Transformer station		167,000	167,000
Power line		40,000	40,000
Road	20,000		20,000
Surface pipe lines	108,000	76,400	184,400
Sheave Wheels	<u> </u>	<u>28,000</u>	<u>28,000</u>
	<u>\$807,600</u>	<u>\$830,400</u>	<u>\$1,638,000</u>
Mine residence		\$ 45,000	
Pickup truck Replacement value	\$ 11,000		
Front end loader Replacement value	<u>103,000</u>		
Total	\$114,000		
Present depreciated value 2/3 X 114 = 76,000		<u>\$ 76,000</u>	
		<u>\$121,000</u>	

PLANT STORES INVENTORY

Timber - Shaft wallplates, dividers end plates and posts	\$24,300
Pipe - 6", 4" and 2"	15,400
Pipe fittings and couplings	7,700
2 - 1,000 ft. - 1" sinking cables	7,700
Guide brackets, hanging rods, rock bolts	2,900
Miscellaneous stores	1,600
Heating oil, gasoline etc.	<u>5,900</u>
	<u>\$65,500</u>

SURFACE PLANT ADDITIONS

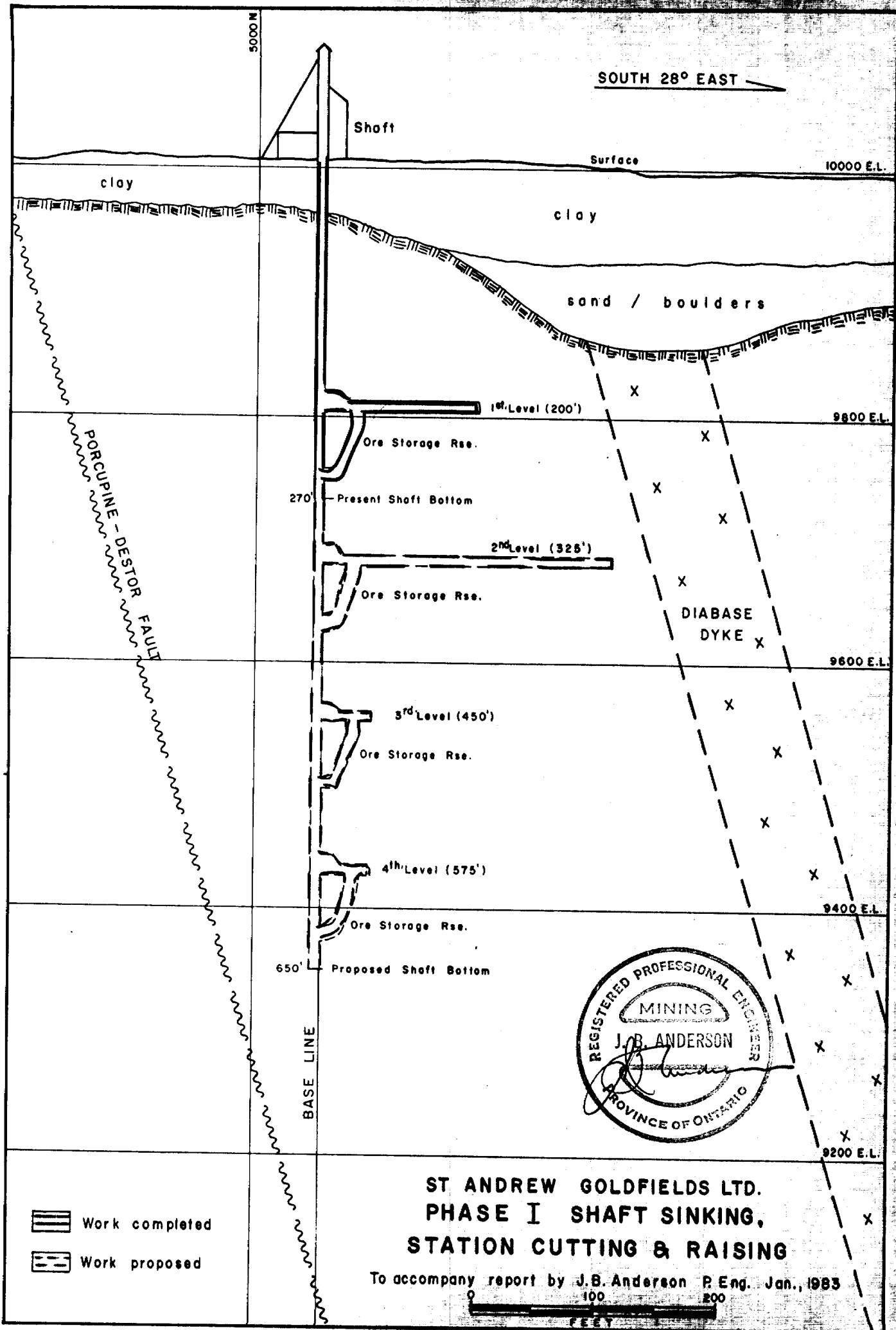
These will include the following:

- (i) Enclosure of the timber headframe tower, the sheave house and the waste bin section with metal cladding.
- (ii) Erection of a steel Armco insulated building for use as a shaft house.
- (iii) Installation of a pinion brake assembly on the main hoist on completion of shaft sinking.
- (iv) House trailer.

PLANNED EXPLORATION

PHASE I

Phase I of the underground exploration program includes that work recommended by Mr. R.C. Hart, P. Eng. in his report of January 26, 1983. This includes sinking the shaft an additional 380 feet with new levels and ore pockets being established at the 325, 450 and 575 foot horizons. Development work will be done only on the 2nd or 325 foot level during this phase of the exploration. Lateral work will include a total of approximately 4,400 feet comprised mainly of line drives and x-cuts as shown in plans pages 9 and 10. Total diamond drilling is planned at approximately 45,000 feet. Estimated time to complete Phase I of the program is 15 months after startup.



SOUTH 28° EAST

Shaft

Surface

10000 E.L.

clay

clay

sand / boulders

PORCUPINE-DESJOR FAULT

1st Level (200')

9800 E.L.

Ore Storage Rse.

270' Present Shaft Bottom

2nd Level (325')

Ore Storage Rse.

DIABASE DYKE

9600 E.L.

3rd Level (450')

Ore Storage Rse.

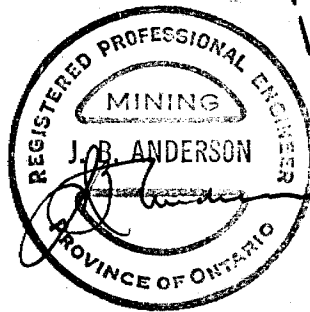
4th Level (575')

Ore Storage Rse.



9400 E.L.

650' Proposed Shaft Bottom

BASE LINE



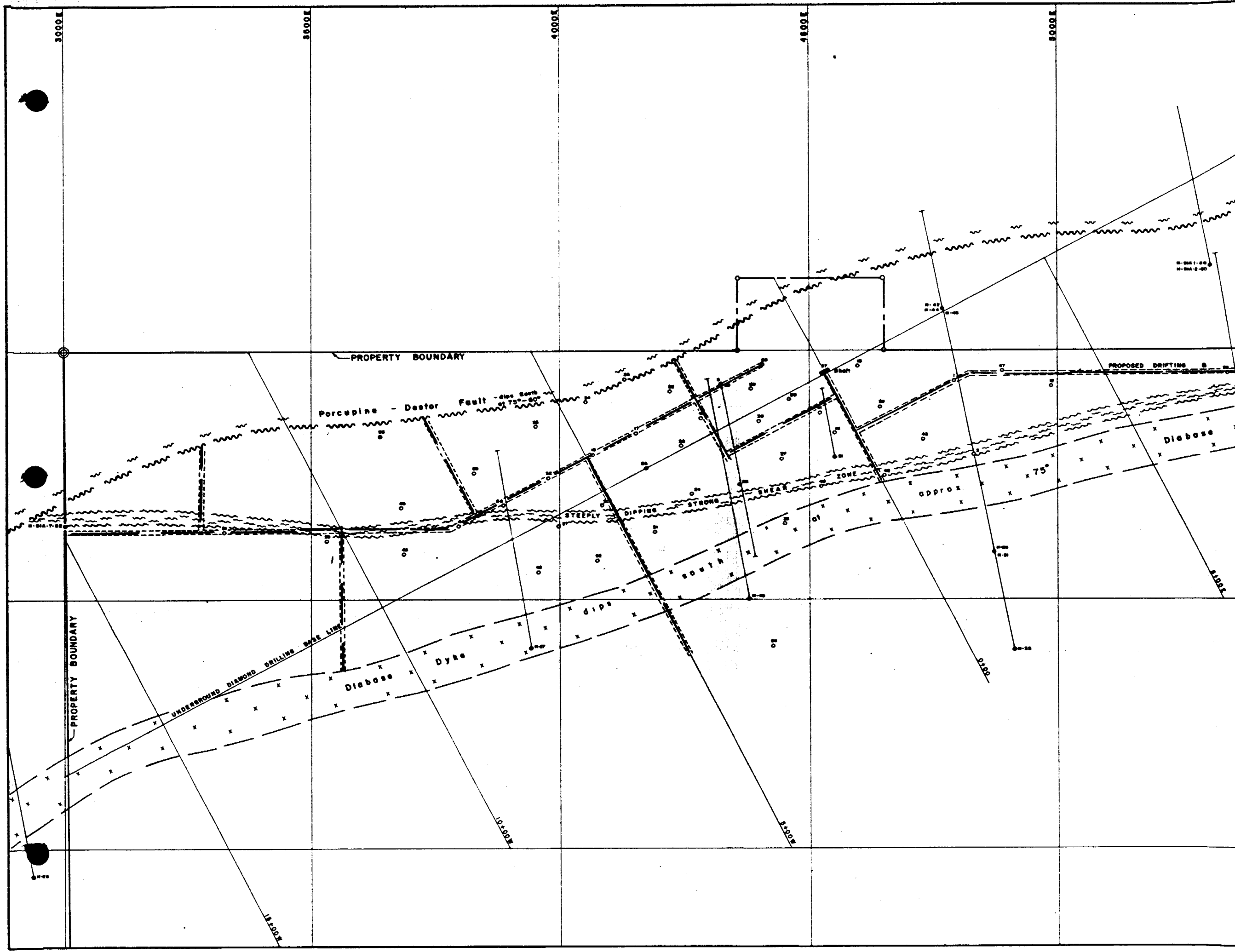
9200 E.L.

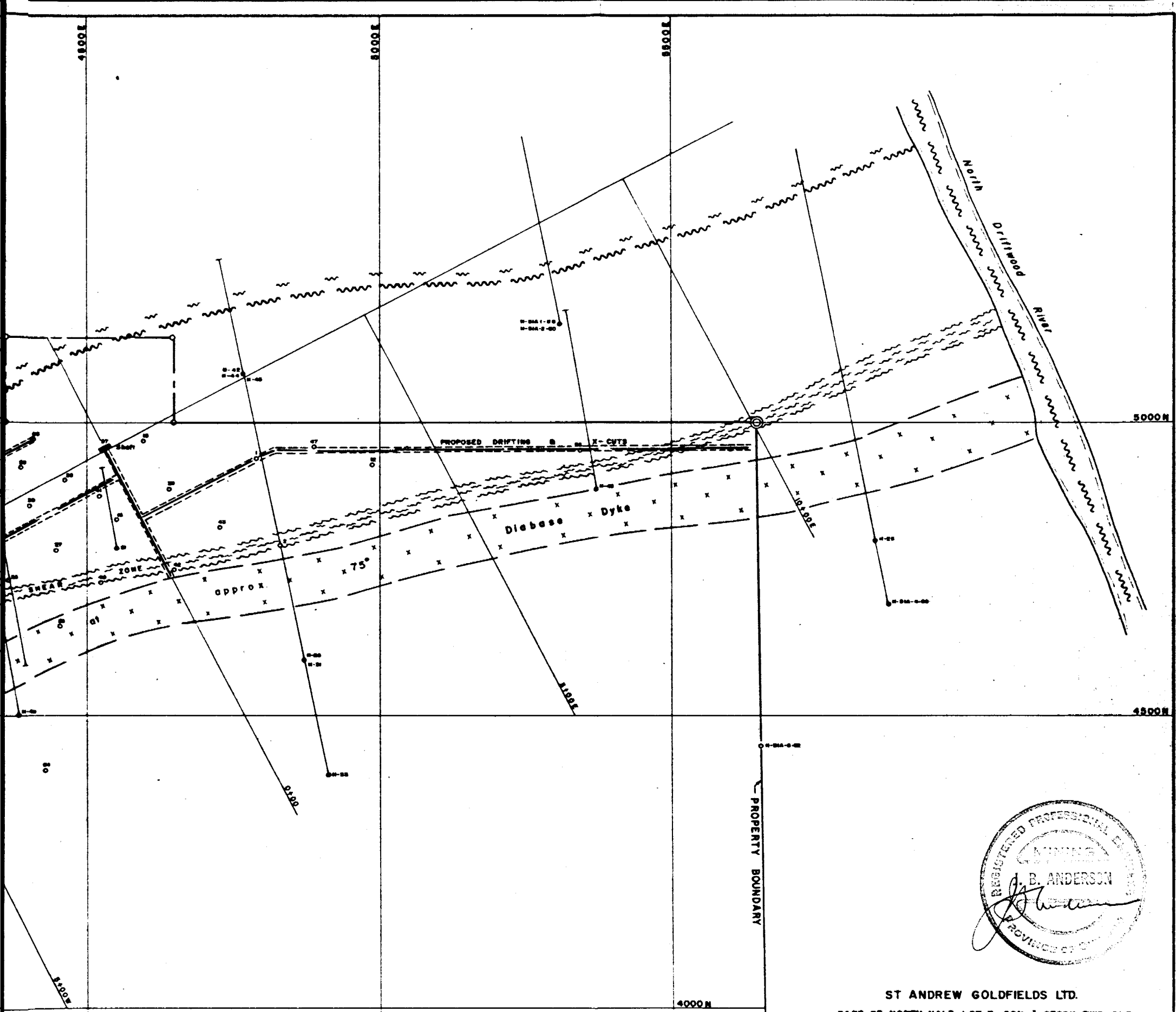
-  Work completed
-  Work proposed

**ST ANDREW GOLDFIELDS LTD.
PHASE I SHAFT SINKING,
STATION CUTTING & RAISING**

To accompany report by J.B. Anderson P. Eng. Jan., 1983







ST ANDREW GOLDFIELDS LTD.
 PART OF NORTH HALF LOT 7, CON. I, STOCK TWP., ONTARIO
PHASE I UNDERGROUND EXPLORATION
DRIFTING & CROSS-CUTTING
DRIFTS 8ft. WIDE

To accompany report by J.B. Anderson P. Eng. Jan., 1983



PROPOSED DEVELOPMENT

PHASE II

Phase II of the underground program will be underway after assessment of the work completed during the Phase I program. Development will include the opening up of the 3rd and 4th levels by drifting, x-cutting and diamond drilling. Further work will also be required on the 1st and 2nd levels to outline the ore sections in more detail for ore reserve estimates. Considerable raising will be required for tracing ore continuity and providing material for representative samples. Further mill testing will be done using a representative bulk sample from all zones outlined at that time. This will be followed by a mine production feasibility study. Estimated time for Phase II completion is 8 months.

PROPOSED PROGRAM

PHASE III

At the completion of Phase II, if warranted, additional expenditures would be required to proceed with Phase III during which the property would be brought to production.

These expenditures would include:

- (a) completion of all required underground facilities including stope preparation.
- (b) an environmental impact study program.
- (c) completion of detail design and engineering followed by mill construction.
- (d) enlargement of the surface plant, equipment and power facilities as required.
- (e) construction of a tailing disposal area.

ESTIMATED COSTS
SURFACE PLANT ADDITIONS

Headframe & sheave house enclosure	\$ 63,000	
Shafthouse	37,000	
Hoist pinion brake assembly	45,000	
House trailer	<u>40,000</u>	\$185,000

PHASE I

General & Administrative (15 Months)

Head office	\$185,000	
Project Supervision	75,000	
Mine office salaries	150,000	
Power	60,000	
Heating	33,000	
Telephone	7,000	
Roads	6,000	
Travelling expenses	13,000	
Vehicles	15,000	
Building repairs & maintenance	6,000	
Insurance & taxes	25,000	
Estimated Ontario Capital Tax	<u>125,000</u>	\$700,000

ESTIMATED COSTS

(Phase I)

Shaft Sinking

	<u>Cost/ft.</u>	
Sinking single line hoisting		
Muck, drill & blast	\$1,750	
Supplies - timber, hardware, cables, station sets door		
Bearing sets, reinforcing	<u>275</u>	
380 ft. @	\$2,025	\$ 770,000
Concrete rings - 16 cu. yds/ring Rings @ 4' intervals		
48 req'd @ 16 cu yds = 768 yds @ \$75/yd		58,000
Water rings - 6 req'd		5,000
Lip pockets - 3 req'd @ 30,000		90,000
Grizzly - 325' level - 1 req'd		4,000
Stations - 3 req'd		77,000
Mine pumps and sumps etc.		24,000

Lateral Exploration

Mine hoisting cables		12,000
Drifts, x-cuts - 4,400 ft. - \$340./ft.		1,496,000
Track pipe etc. - 4,400 ft. - \$20./ft.		88,000
Diamond drilling including core splitting etc. - 45,000 ft. - \$15./ft.		675,000
Hoistmen, compressor, deckmen during drilling program		<u>75,000</u>
Add contingency 15%		\$4,259,000 <u>639,000</u>
TOTAL ESTIMATED COSTS PHASE I (INCLUDING SURFACE PLANT ADDITIONS)		<u>\$4,898,000</u>

ESTIMATED COSTS

(Phase II)

General & Administrative (8 Months)

Head office	\$96,000	
Project supervision	40,000	
Mine office salaries	75,000	
Power	32,000	
Heating	20,000	
Telephone	4,000	
Roads	5,000	
Travelling expenses	10,000	
Vehicles	12,000	
Building repairs & maintenance	5,000	
Insurance & taxes	20,000	
Estimated Ontario Capital Tax	<u>95,000</u>	\$ 414,000

Mine Development

Drifts & x-cuts - driving - 5,200 ft. @ \$340/ft.		1,768,000
- pipe, track etc. - 5,200 ft. @ \$20/ft		104,000
Raising Development - 1,600 ft. @ \$340/ft.		544,000
Diamond drilling - 33,000 ft. @ \$15/ft.		495,000
Bulk mill test & metallurgy		40,000
Production feasibility study		<u>30,000</u>
		\$3,395,000
Add 15% Contingency		<u>509,000</u>
TOTAL ESTIMATED COSTS - PHASE II		<u>\$3,904,000</u>

ESTIMATED COSTS

PHASE III

Expenditures in Phase III will be largely dependent on the size of the concentrator as determined in the Phase II feasibility study.

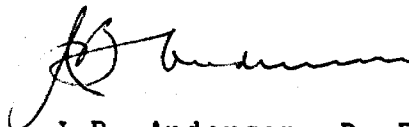
Although it is premature to estimate the expenditures required to complete Phase III, a preliminary capital expenditure estimate for mill and crushing plant facilities of the magnitude of 750 to 1,000 tons per day is \$7,000,000 to \$9,000,000 in 1983 dollars.

CERTIFICATE OF QUALIFICATION

I, J. Burns Anderson residing at 11 Thornbury Crescent, Islington, Ontario do hereby certify that:

1. I am a Consulting Engineer with my office at 11 Thornbury Crescent, Islington, Ontario;
2. I am a graduate of Queen's University, Kingston, Ontario with a B.Sc. degree in Mining Engineering and have been involved in the mining profession for over 25 years;
3. I am a registered Professional Engineer in the Province of Ontario;
4. A 2 day visit was made to the property during January, 1983. At that time an inspection was made of the surface plant and underground workings.
5. This report is based on information gained at the property as well as technical data and estimates supplied by Quebec Sturgeon River Mines Limited staff and other consultants.
6. I have no interest, nor do I expect to receive any interest, directly or indirectly in St Andrew Goldfields Ltd. or Quebec Sturgeon River Mines Limited.

Islington, Ontario
January 28, 1983


J.B. Anderson, P. Eng.



Stock Twp.

020



Driftwood

Creek

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ST ANDREW

GOLDFIELDS

LTD.

12 11 10 9 8 7 6 5 4 3 2 1

SCALE



 HOLLINGER MINES LTD.

 Q.S.R.M. LTD.

PROPERTY ST ANDREW GOLDFIELDS LTD.

PAGE 1

LOCATION L 0 + 05 E. 0 + 32 South BEARING S-73°-E HOLE NO. 5-02

LOGGED BY O. Zavesiczky ELEVATION 4th level DIP 0 FINAL DEPTH 325.0'

STARTED December 18, 1983 At 318' Dec 31, TESTS (CORRECTED) _____

FINISHED January 4, 1984: Hole stopped due to high water pressure encountered at 320' & 322'

CASING _____

CORE SIZE AQ: Ross Finlay Ltd.

FROM	TO	DESCRIPTION
0.0	41.5	Chloritized Andesite: dark grey to black, few intermittent qtz. vs. 1.7 - 3.1 : Lost Core, ground. 4.5 - 15.0: 33 - 50% qtz v'g at mod. angles 22.3 - 25.1: 25% white carb. rosettes 31.2 - 41.5: Chl'd Shear Zone: mod. to strong shr'g at low angles to CA, 20% qtz. vlts along shears, tr. 1% py.
41.5	56.8	Porphyry: light brown, brecc'd but indurate, 1-2% f. py locally, 55° contact. 45.0 - 47.2: sil'd & chl'd country rock.
41.5	101.3	Chloritized Andesite: mod. shr'g at mod to high angles, qtz-carb vlts & laminae are boudinaged, 93.5 - 96.1 : 33% ^{or} porphyry.

HOLE NO. 5-02

PROPERTY

PAGE 2

LOCATION _____ BEARING _____ HOLE NO. 5-02

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH _____

STARTED _____ TESTS (CORRECTED) _____

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
		96.1 - 101.3': 66% qtz. v'g
101.3	103.6	Green Carbonate: pale green, 20% brecc'd qtz. vlts.
103.6	109.3	Prophyry: micro-brecc'd, 1-3% py along micro- fractures. silicious, straw-coloured, sericitic.
109.3	121.1	Green Carbonate: emerald green, 33% qtz. vlts, low to mod. angles, brecc'd, 1% py loc.
121.1	125.6	Grey Carbonate: dark grey, f-mod. gr., 5-10% brecc'd qtz. vlts. loc. chl'd.
		121.6 - 122.4': Prophyry as above
125.6	141.7	Prophyry: brownish-white brecc'd, intermittent ser'tic buds, 1-3% diss'd py.
141.7	148.0	Chl'd Zone: black, soft to med. hard, 1-3% diss py. loc.
		144.4 - 145.7: 66% por. v'g.

HOLE NO.
5-02

PROPERTY

PAGE 3

LOCATION _____ BEARING _____ HOLE NO. 5-02

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH _____

STARTED _____ TESTS (CORRECTED) _____

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
148.0	198.0	Green Carbonate: emerald green, local intervals of gry carb. 20-50% qtz. vlts locally at mod. to high angles, upper contact at 70°
198.0	203.2	Grey Carbonate: essentially the same as above but grey.
203.2	219.3	Chl'd Shear Zone: black, striped by white brecc'd & boudinayed qtz.-carb. vlts., mod. to high angles, generally.
		207.7 - 210.0: subparallel gougy joint'g
219.3	248.3	Quartz-Veined and Chloritized Zone: dark grey to black, 50-80% white qtz. vlts at mod. to high angles, brecc'd tr. - 1% py. loc.
248.3	260.9	Porphyry: brown, brecc'd., 3-5% py, mod. angles, loc. ser'd.

HOLE NO. 5-02

PROPERTY

PAGE 4

LOCATION _____ BEARING _____ HOLE NO. 5-02

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH _____

STARTED _____ TESTS (CORRECTED) _____

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
260.9	325.0	<p>Quartz-Veined Green Carbonate: pale emerald green, 66-80% qtz. v'g at mod to high angles, very brecc'd, tr. py.</p> <p>320.9 - 325.0': Fault Zone, 50% core recovery, core chips are gougy & limonitic at 322.0', rock is more greyish coloured than above.</p> <p>-major water seams entered at 320 and 322.0'</p> <p>325.0' End of Hole: hole stopped due to high water pressure encountered in the above seams.</p> <p>Core Split</p>

HOLE NO. 5-02

SAMPLE RECORD SHEET

5-02

1A

-HOLE NO.

-PAGE

PROPERTY-

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				DESCRIPTIONS
				Au oz/t				
0001	0.0	1.7	1.7'	Tr				Chl'd Ands: 5% qtz., 1% py.
Lost Core	1.7	3.1	1.4'	.010				Lost Core
0002	3.1	8.1	5.0'	Tr 010				Chl'd Ands: 33% qtz.: tr.-1% diss. py.
3	8.1	13.1	5.0'	Tr				" " : " " ; " " " "
4	13.1	18.1	5.0'					" " : 15% " : " " " "
5	18.1	23.1	5.0'					" " : 5% " : " " " "
6	23.1	28.1	5.0'					" " : " " ; " " " "
7	28.1	31.2	3.1'					" " : " " ; " " " "
8	31.2	36.2	5.0'					Chl'd Shr Zone: 20% " : " " " "
9	36.2	41.6	5.4'					" " " : " " ; " " " "
0010	41.6	45.0	3.4'					Por: brecc'd; 50% qtz. 1-2% py.
11	45.0	47.1	2.1'					Chl'd & Sil'd xenolith: tr. py.
12	47.1	52.1	5.0'					Por: as above
13	52.1	56.8	4.7'					" : " "
14	56.8	61.8	5.0'					Chl'd Ands: 33% qtz. v'g; 1% py.
15	61.8	66.8	5.0'					" " : 5% qtz.; tr.-1% py.
16	66.8	71.8	5.0'					" " : " " ; " " "
17	71.8	76.8	5.0'	Tr				" " : " " ; " " "

SAMPLE RECORD SHEET

5-02
2A

-HOLE NO.
-PAGE

PROPERTY-

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				DESCRIPTIONS
				Au oz/t				
0018	76.8	81.8	5.0'	Tr.				Chl'd Ands: 5% qtz. tr - 1% py.
19	31.8	86.8	5.0'	↑ ↓			" " : " " " " "	
0020	36.8	91.8	5.0'					" " : " " " " "
21	91.8	93.5	1.7'					" " : " " " " "
22	93.5	96.1	2.6'					" " : 33% por. " " "
23	96.1	101.2	5.1'					" " : 66% qtz.v'g: tr.-1% py
24	101.2	103.6	2.4'					Grn. Carb: 20% qtz. " " "
25	103.6	109.3	5.7'					Por: Brecc'd, 1-3% py
26	109.3	114.3	5.0'					Grn. Carb: 33% qtz., tr. - 1% py
27	114.3	119.3	5.0'					" " : " " " " "
28	119.3	121.1	1.8'					" " : " " " " "
29	121.1	122.4	1.3'					Gry Carb: 75% por; 1% py.
0030	122.4	125.6	3.2'					" " : 33% qtz., tr - 1% py
31	125.6	130.6	5.0'		Tr.			Por: brecc'd; 1-3% py
32	130.6	135.6	5.0'		.017			" : " " "
33	135.6	141.7	6.1'		Tr			" : " " "
34	141.7	144.4	2.7'		.038			Chl'd Zone: 5% py along flts & diss'd
35	144.4	145.7	1.3'		Tr.			Por: brecc'd; 1-3% py.

SAMPLE RECORD SHEET

5-02 -HOLE NO.
3A -PAGE

PROPERTY-

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				DESCRIPTIONS
				All oz/t				
0036	145.7	148.0	3.7'	Tr.				Chl'd Zone: 10% qtz.; 1 - 3% py.
37	148.0	153.0	5.0'	.018				Grn. Carb: 20% qtz.; Tr. py.
38	153.0	157.6	4.6'	Tr.				" " : 33% " ; " "
39	157.6	159.1	1.5'	↑ ↓				80% qtz., brecc'd brownish like por. tr. py.
0040	159.1	165.8	6.7'					Grn. Carb: 33% qtz. tr. py.
41	165.8	170.8	5.0'					Gry Carb.: 20% " " "
42	170.8	186.1	5.3'					Grn. Carb: 33% " " "
43	176.1	179.2	3.1'		Tr.			" " : 80% " : tr. - 1% py.
44	179.2	184.2	5.0'	.011				Grn. Carb: 33% " : Tr. py.
45	184.2	189.2	5.0'	Tr.				" " : 10% " : " "
46	189.2	194.2	5.0'	↑ ↓				" " : 20% " : " "
47	194.0	198.0	4.0'					" " : 20% " : tr. py.
48	198.0	203.0	5.0'					Gry, Carb.: 20% " : tr. - 1% py.
49	203.0	208.0	5.0'					Chl'd Shr. Zone: 20% qtz-carb, tr.py.
0050	208.0	213.0	5.0'					" " " : " " " " "
51	213.0	219.3	6.0'				" " " : " " " " "	
52	219.3	224.3	5.0'				Qtz. V'd & Chl'd: 50% qtz. tr. py.	
53	224.3	229.3	5.0'	Tr				" " " : " " " "

SAMPLE RECORD SHEET

5-02
4A

-HOLE NO.
-PAGE

PROPERTY-

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				DESCRIPTIONS
				Au oz/t				
0054	229.3	234.3	5.0'	Tr.				Qtz. V'd & Chl'd: 33% qtz., Tr-1% py
55	234.3	239.3	5.0'	.009				" " " : " " " "
56	239.3	244.3	5.0'	.001				" " " : 66% " " " "
57	244.3	248.3	4.0'	Tr.				" " " : 75% " " " "
58	248.3	253.3	5.0'	.008				Por: brecc'd; 5% py.
59	253.3	258.3	5.0'	.007				" " " "
0060	258.3	260.9	2.6'	.001				" " " "
61	260.9	265.9	5.0'	Tr.				Qzt V'd Grn. Carb: 66% qtz. tr.-1% py.
62	265.9	270.9	5.0'	↑ ↓				" " " " : " " " "
63	270.9	275.9	5.0'		" " " " : 80% " " " "			
64	275.9	280.9	5.0'		" " " " : 80% " " " "			
65	280.9	285.9	5.0'		" " " " : 80% " " " "			
66	285.9	290.9	5.0'		" " " " : 80% " " " "			
67	290.9	295.9	5.0'	Tr.				" " " " : 80% " " " "
68	295.9	300.9	5.0'	.004				" " " " : 80% " " " "
69	300.9	305.9	5.0'	.008				" " " " : 80% " " " "
0070	305.9	310.9	5.0'	.016				" " " " : 80% " " " "
71	310.9	315.9	5.0'	.001				" " " " : 80% " " " "

PROPERTY ST ANDREW GOLDFIELDS LTD.

PAGE 1

LOCATION L 0 + 05 E. 0 + 32 South BEARING S-73°-E HOLE NO. 5-02

LOGGED BY O. Zavesiczky ELEVATION 4th level DIP 0 FINAL DEPTH 325.0'

STARTED December 18, 1983 At 318' Dec 31, TESTS (CORRECTED) _____

FINISHED January 4, 1984: Hole stopped due to high water pressure encountered at 320' & 322'

CASING _____

CORE SIZE AQ: Ross Finlay Ltd.

FROM	TO	DESCRIPTION
0.0	41.5	Chloritized Andesite: dark grey to black, few intermittent qtz. vs. 1.7 - 3.1 : Lost Core, ground. 4.5 - 15.0: 33 - 50% qtz v'g at mod. angles 22.3 - 25.1: 25% white carb. rosettes 31.2 - 41.5: Chl'd Shear Zone: mod. to strong shr'g at low angles to CA, 20% qtz. vlts along shears, tr. 1% py.
41.5	56.8	Porphyry: light brown, brecc'd byt indurate, 1-2% f. py locally, 55° contact. 45.0 - 47.2: sil'd & chl'd country rock.
41.5	101.3	Chloritized Andesite: mod. shr'g at mod to high angles, qtz-carb vlts & laminae are boudinaged, 93.5 - 96.1 : 33% ^v ptophyry.

HOLE NO. 5-02

PROPERTY

PAGE 2

LOCATION _____ BEARING _____ HOLE NO. 5-02

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH _____

STARTED _____ TESTS (CORRECTED) _____

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
101.3	103.6	96.1 - 101.3': 66% qtz. v'g Green Carbonate: pale green, 20% brecc'd qtz. vlts.
103.6	109.3	Prophyry: micro-brecc'd, 1-3% py along micro- fractures. siliceous, straw-coloured, sericitic.
109.3	121.1	Green Carbonate: emerald green, 33% qtz. vlts, low to mod. angles, brecc'd, 1% py loc.
121.1	125.6	Grey Carbonate: dark grey, f-mod. gr., 5-10% brecc'd qtz. vlts. loc. chl'd.
		121.6 - 122.4': Prophyry as above
125.6	141.7	Prophyry: brownish-white brecc'd, intermittent ser'itic buds, 1-3% diss'd py.
141.7	148.0	Chl'd Zone: black, soft to med. hard, 1-3% diss py. loc.
		144.4 - 145.7: 66% por. v'g.

HOLE NO. 5-02

PROPERTY

PAGE 3

LOCATION _____ BEARING _____ HOLE NO. 5-02

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH _____

STARTED _____ TESTS (CORRECTED) _____

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
148.0	198.0	Green Carbonate: emerald green, local intervals of gry carb. 20-50% qtz. vltz locally at mod. to high angles, upper contact at 70
198.0	203.2	Grey Carbonate: essentially the same as above but grey.
203.2	219.3	Chl'd Shear Zone: black, striped by white brecc'd & boudinayed qtz.-carb. vltz., mod. to high angles, generally.
		207.7 - 210.0: subparallel gougy joint'g
219.3	248.3	Quartz-Veined and Chloritized Zone: dark grey to black, 50-80% white qtz. vltz at mod. to high angles, brecc'd tr. - 1% py. loc.
248.3	260.9	Porphyry: brown, brecc'd., 3-5% py, mod. angles, loc. ser'd.

HOLE NO. 5-02

PROPERTY

PAGE 4

5-02

LOCATION _____ BEARING _____ HOLE NO. _____

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH _____

STARTED _____ TESTS (CORRECTED) _____

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
260.9	325.0	<p>Quartz-Veined Green Carbonate: pale emerald green, 66-80% qtz. v'g at mod to high angles, very brecc'd, tr. py.</p> <p>320.9 - 325.0': Fault Zone, 50% core recovery, core chips are gougy & limonitic at 322.0', rock is more greyish coloured than above.</p> <p>-major water seams entered at 320 and 322.0'</p> <p>End of Hole: hole stopped due to high water pressure encountered in the above seams.</p> <p>Core Split</p>

HOLE NO. 5-02

SAMPLE RECORD SHEET

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-HOLE NO.

-PAGE

PROPERTY-

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				DESCRIPTIONS
				Au oz/t				
0001	0.0	1.7	1.7'	Tr				Chl'd Ands: 5% qtz., 1% py.
Lost Core	1.7	3.1	1.4'	.010				Lost Core
0002	3.1	8.1	5.0'	Tr				Chl'd Ands: 33% qtz.: tr.-1% diss. py
3	8.1	13.1	5.0'	Tr				" " ; " " ; " " "
4	13.1	18.1	5.0'					" " : 15% " : " " "
5	18.1	23.1	5.0'					" " : 5% " ; " " "
6	23.1	28.1	5.0'					" " : " " ; " " "
7	28.1	31.2	3.1'					" " : " " ; " " "
8	31.2	36.2	5.0'					Chl'd Shr Zone: 20% " : " " "
9	36.2	41.6	5.4'					" " : " " ; " " "
0010	41.6	45.0	3.4'					Por: brecc'd; 50% qtz. 1-2% py.
11	45.0	47.1	2.1'					Chl'd & Sil'd xenolith: tr. py.
12	47.1	52.1	5.0'					Por: as above
13	52.1	56.8	4.7'					" : " "
14	56.8	61.8	5.0'					Chl'd Ands: 33% qtz. v'g; 1% py.
15	61.8	66.8	5.0'					" " : 5% qtz.; tr.-1% py.
16	66.8	71.8	5.0'					" " : " " ; " " "
17	71.8	76.8	5.0'	Tr				" " : " " ; " " "

SAMPLE RECORD SHEET

5-02 -HOLE NO.
2A -PAGE

PROPERTY-

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				DESCRIPTIONS
				Au oz/t				
0018	76.8	81.8	5.0'	Tr.				Chl'd Ands: 5% qtz. tr - 1% py.
19	81.8	86.8	5.0'	↑				" " ; " " " " "
0020	86.8	91.8	5.0'					" " ; " " " " "
21	91.8	93.5	1.7'					" " ; " " " " "
22	93.5	96.1	2.6'					" " ; 33% por. " " "
23	96.1	101.2	5.1'					" " ; 66% qtz.v'g: tr.-1% py
24	101.2	103.6	2.4'					Grn. Carb: 20% qtz. " " "
25	103.6	109.3	5.7'					Por: Brecc'd, 1-3% py
26	109.3	114.3	5.0'					Grn. Carb: 33% qtz., tr. - 1% py
27	114.3	119.3	5.0'					" " ; " " " " "
28	119.3	121.1	1.8'					" " ; " " " " "
29	121.1	122.4	1.3'				Gry Carb: 75% por; 1% py.	
0030	122.4	125.6	3.2'				" " : 33% qtz., tr - 1% py	
31	125.6	130.6	5.0'	Tr.				Por: brecc'd; 1-3% py
32	130.6	135.6	5.0'	.017				" : " " "
33	135.6	141.7	6.1'	Tr				" : " " "
34	141.7	144.4	2.7'	.038				Chl'd Zone: 5% py along flts & diss'd
35	144.4	145.7	1.3'	Tr.				Por: brecc'd; 1-3% py.

SAMPLE RECORD SHEET

5-02

-HOLE NO.

3A

-PAGE

PROPERTY--

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				DESCRIPTIONS
				AU oz/t				
0036	145.7	148.0	3.7'	Tr.				Chl'd Zone: 10% qtz.; 1 - 3% py.
37	148.0	153.0	5.0'	.018				Grn. Carb: 20% qtz.; Tr. py.
38	153.0	157.6	4.6'	Tr.				" " : 33% " ; " "
39	157.6	159.1	1.5'	↑ ↓				80% qtz., brecc'd brownish like por. tr. py.
0040	159.1	165.8	6.7'					Grn. Carb: 33% qtz. tr. py.
41	165.8	170.8	5.0'					Gry Carb.: 20% " " "
42	170.8	176.1	5.3'					Grn. Carb: 33% " " "
43	176.1	179.2	3.1'	Tr.				" " : 80% " : tr. - 1% py.
44	179.2	184.2	5.0'	.011				Grn. Carb: 33% " : Tr. py.
45	184.2	189.2	5.0'	Tr.				" " : 10% " : " "
46	189.2	194.2	5.0'	↑ ↓				" " : 20% " : " "
47	194.0	198.0	4.0'					" " : 20% " : tr. py.
48	198.0	203.0	5.0'					Gry, Carb.: 20% " : tr. - 1% py.
49	203.0	208.0	5.0'					Chl'd Shr. Zone: 20% qtz-carb, tr.py.
0050	208.0	213.0	5.0'					" " " : " " " " "
51	213.0	219.3	6.0'					" " " " " " " " "
52	219.3	224.3	5.0'					Qtz. V'd & Chl'd: 50% qtz. tr. py.
53	224.3	229.3	5.0'	Tr				" " " : " " " "

SAMPLE RECORD SHEET

5-02
4A

-HOLE NO.
-PAGE

PROPERTY--

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				DESCRIPTIONS
				Au oz/t				
0054	229.3	234.3	5.0'	Tr.				Qtz. V'd & Chl'd: 33% qtz., Tr-1% py
55	234.3	239.3	5.0'	.009				" " " : " " " "
56	239.3	244.3	5.0'	.001				" " " : 66% " " " "
57	244.3	248.3	4.0'	Tr.				" " " : 75% " " " "
58	248.3	253.3	5.0'	.008				Por: brecc'd; 5% py.
59	253.3	258.3	5.0'	.007				" " " "
0060	258.3	260.9	2.6'	.001				" " " "
61	260.9	265.9	5.0'	Tr.				Qzt V'd Grn. Carb: 66% qtz.tr.-1% py.
62	265.9	270.9	5.0'	↑				" " " " : " " " "
63	270.9	275.9	5.0'					" " " " : 80% " " " "
64	275.9	280.9	5.0'					" " " " : 80% " " " "
65	280.9	285.9	5.0'					" " " " : 80% " " " "
66	285.9	290.9	5.0'	↓				" " " " : 80% " " " "
67	290.9	295.9	5.0'	Tr.				" " " " : 80% " " " "
68	295.9	300.9	5.0'	.004				" " " " : 80% " " " "
69	300.9	305.9	5.0'	.008				" " " " : 80% " " " "
0070	305.9	310.9	5.0'	.016				" " " " : 80% " " " "
71	310.9	315.9	5.0'	.001				" " " " : 80% " " " "

PROPERTY ST ANDREW GOLDFIELDS LTD.

PAGE 1

LOCATION 0+00, 0+32 South BEARING S-28°-E HOLE NO. 5-01

LOGGED BY O.Zavesiczky ELEVATION 4th level 575' DIP 0° FINAL DEPTH 462.0'

STARTED December 7, 1983 TESTS (CORRECTED) _____

FINISHED December 17, 1983

CASING _____

CORE SIZE AQ: Ross Finlay Ltd. 0+00 Section

FROM	TO	DESCRIPTION
0.0	5.0'	No Core: hole collared adjacent to blasted cut and therefore slipped into a 5' fracture.
5.0	16.7'	Chloritized Andesite: Black, 20% brecciated quartz-carbonate laminae, sharp & veinlet angles at 60° 13.2 - 16.7': 50% quartz veins & veinlets at low & moderate angles.
16.7	46.7'	Porphyry: Pale brownish-white, very hard, glassy, 50% quartz veining & silicification, local chloritized intervals, pyrite locally.
46.7	147.6'	Green Carbonate Zone: Pale yellowish emerald green, mottled by sericite, generally 20-33% quartz veinlets at moderate to high angles. 107.5 - 120.0: 25% light-brown marrow porphyry dikes, trace pyrite.

HOLE NO. 5-01

LOCATION _____ BEARING _____ HOLE NO. 5-01

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH _____

STARTED _____ TESTS (CORRECTED) _____

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
147.6	179.0'	Grey Carbonate: grey, med. gr., 25 to 33% qtz. veins at mod. to high angles, tr. to 1% py loc. along veins, loc. fuchsite along veins,
179.0	188.5'	Chloritized Shear Zone: (Minor Zone) black, med. hard, f.gr., mod. shr'g, 20% qtz-carb. vlt's & shearing at mod. to high angles to CA,
188.5	191.5'	Porphyry Dyke: brownish grey to whitish grey, brecciated but indurate,
191.5	193.5'	Intermediate Dyke: grey, massive, aphanitic, med. hard to soft, chloritized & suicitized, low angle joints.
193.5	330.5'	Green Carbonate: as above at 46.7'
		236.3 - 241.3: 33-50% qtz v'g & minor porphyry

PROPERTY

PAGE 3

LOCATION _____ BEARING _____ HOLE NO. 5-01

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH _____

STARTED _____ TESTS (CORRECTED) _____

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
330.5	405.7'	<p>249.3 - 276.0: 66-80% white, qtz. v'g at variable angles, in brecc'd grn. carb. matrix, tr. to 1% py locally. few low angle limonitic joints.</p> <p>276.0 - 297.0: few narrow buff coloured sericitic bands, generally 20% qtz. v'g</p> <p>267.5 - 268.0: brown por at high angles.</p> <p>297.0 - 330.5: 50-66% qtz. v'g. in brecc'd grn. carb.</p> <p>314.1 - 317.1: 80% qtz. v'g with black chl'd interstitial mafic material</p> <p>Quartz-Veined & Chloritized Zone: generally 50-66% qtz. veining, 50-33% black chloritized, f. gr. country rock, brecc'd locally 60-90° angles to CA, tr. py.</p> <p>338.5 - 344.6: 90% white qtz.-veining at mod. to high angles.</p>

HOLE NO. 5-01

PROPERTY

PAGE 4

LOCATION _____ BEARING _____ HOLE NO. 5-01

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH _____

STARTED _____ TESTS (CORRECTED) _____

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
		390.0 - 392.3: 50% brown porphyry, 40% white qtz. veining
405.7	442.2	392.3 - 405.7: becoming more greenish in colour, Chlorite Schist: (contact effect of Diabase?) black, soft, slightly talcose, f.gr shr'g at 55 - 60° to CA, few intermittent minor gougy faults at mod. to high angles, 1-5% very minor qtz-carb. vits.
		423.0 - 425.1: Fault gouge 75% core recovery.
442.2	452.0	Diabase Dyke: (E-W Type) black, massive, f.-med. gr. slightly magnetic, minor quartz.
452.0	462.0	Lost Core: friable diabase was ground away
	462.0'	End of Hole

HOLE NO. 5-01

SAMPLE RECORD SHEET

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1A

-HOLE NO.
-PAGE

PROPERTY--

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				DESCRIPTIONS
				Au oz/t				
9701	5.0	10.0	5.0'	Tv				Chl'd Ands: 20% qtz. tr. py.
9702	10.0	13.2	3.2'					" " : 50% " " "
03	13.2	16.7	3.5'					" " : 50% " " "
04	16.7	21.7	5.0'					Porph: 50% qtz. v'g, 1% fine py.
05	21.7	26.2	4.5'	Tv				" : " " " " " "
06	26.2	31.2	5.0'	.002				" : as above but with 33% chl'd ands.
07	31.2	33.4	2.2'	.016				Porph: 50% qtz. v'g, 5% fine py.
08	33.4	38.4	5.0'	.018				" : " " " 1% " "
09	38.4	41.9	3.5'	.012				" : " " " " " "
9710	41.9	43.5	1.6'	.002				Carbonate metaerysts
11	43.5	46.7	3.3'	.006				Porph: 50% qtz. v'g, 1% f. py.
12	46.7	51.7	5.0'	.003				Grn. Carb: 20% white & gry qtz. vlts: tr. py.
13	51.7	56.7	5.0'	Tv				" " : 33% " " " "
14	56.7	61.7	5.0'					" " : " " " " "
15	61.7	66.7	5.0'					" " : " " " " "
16	66.7	69.0	2.3'					" " : 10% " " " "
17	69.0	72.5	3.5'					" " : 5% " " " "
18	72.5	77.5	5.0'	Tv				" " : 15% " " " "

SAMPLE RECORD SHEET

5-01
2A

-HOLE NO.
-PAGE

PROPERTY--

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				DESCRIPTIONS
				Au oz/t				
9719	77.5	82.5	5.0'	TV				Grn.Carb: 10% white & gry qtz vg, tr. py
9720	82.5	87.5	5.0'					" " : " " " " " "
21	87.5	92.5	5.0'					" " : " " " " " "
22	92.5	97.5	5.0'					" " : " " " " " "
23	97.5	102.5	5.0'					" " : " " " " " "
24	102.5	107.5	5.0'					" " : " " " " " "
25	107.5	110.5	3.0'					" " : 10% porphyry veins, 1% py
26	110.5	113.5	3.0'					" " : 5% qtz. vlts: tr. py.
27	113.5	115.0	1.5'					Por. V.: light brown, " "
28	115.0	119.0	4.0'					Grn.Carb: 33% qtz, v/g: " "
29	119.0	120.0	1.0'					Por. V: light brown, " "
9730	120.0	125.0	5.0'					Grn.Carb: 10% qtz. vlts: " "
31	125.0	130.0	5.0'					" " : 25% " " : " "
32	130.0	135.0	5.0'					" " : " " " : " "
33	135.0	140.0	5.0'					" " : 33% " " : " "
34	140.0	145.0	5.0'					" " : 50% " " : 1% diss. py.
35	145.0	150.0	5.0'					Gry.Carb: 20% " " : " " "
36	150.0	155.0	5.0'	TV				" " : 10% " " : " " "

SAMPLE RECORD SHEET

5-01
3A

-HOLE NO.
-PAGE

PROPERTY-

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				DESCRIPTIONS
				Au oz/t				
9737	155.0	160.0	5.0'	Tv				Gry. Carb: 33% qtz. vlts: 1-2% py.
38	160.0	165.0	5.0'					" " : " " " : " "
39	165.0	170.0	5.0'					" " : 15% " " : 1% py.
9740	170.0	175.0	5.0'					" " : 25% " " : tr. py.
41	175.0	179.0	4.0'					" " : " " " : " "
42	179.0	184.0	5.0'					Chl'd Shr.: 20% " " : tr.-1% py.
43	184.0	188.5	4.5'	Tv				" " : " " " : " "
44	188.5	191.5	3.0'	010				Por. Dyke: tr. py.
45	191.5	193.5	2.0'	Tv				Intmed. Dyke:
46	193.5	198.5	5.0'	026				Grn. Carb: 10% qtz. Vlts: Tr. py.
47	198.5	203.5	5.0'	021				" " : " " " : " "
48	203.5	208.5	5.0'	Tv				" " : " " " : " "
49	208.5	212.2	3.7'					" " : 20% " " : " "
9750	212.2	217.2	5.0'					" " : 50% " " :
51	217.2	221.8	4.6'					" " : 20% " " : " "
52	221.8	226.8	5.0'					" " : " " " : " "
53	226.8	231.8	5.0'					" " : " " " : " "
54	231.8	236.8	5.0'	Tv				" " : " " " : " "

SAMPLE RECORD SHEET

5-01 -HOLE NO.
4A -PAGE

PROPERTY--

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				DESCRIPTIONS
				Au oz/t				
9755	236.8	241.3	4.5'	TV				Grn. Carb: 20% qtz. vlts: tr. py.
56	241.3	246.3	5.0'					" " : 33% " " : 33% por, tr. py.
57	246.3	249.3	3.0'					" " : 15% " " : " "
58	249.3	254.3	5.0'					" " : 66% " " : " "
59	254.3	259.3	5.0'					" " : " " " " : " "
9760	259.3	264.3	5.0'	TV				" " : " " " " : " "
61	264.3	267.5	3.0'	.003				" " : " " " " : " "
62	267.5	268.5	0.5'	.005				Por Vein: 10% qtz. : tr. py.
63	268.5	273.0	4.5'	Tr				Grn. Carb: 80% qtz: tr. py.
64	273.0	276.0	3.0'					" " : " " : " "
65	276.0	281.0	5.0'					" " : " " : " "
66	281.0	286.0	5.0'					" " : 10% " : " "
67	286.0	291.0	5.0'					" " : 20% " : " "
68	291.0	297.0	5.0'					" " : " " : " "
69	297.0	302.0	5.0'					" " : 50% " : " "
9770	302.0	307.0	5.0'					" " : 66% " : " "
71	307.0	312.0	5.0'	TV				" " : " " : " "
72	312.0	314.1	2.1'	.004				" " : " " : tr. to .5% py.

SAMPLE RECORD SHEET

5-01 -HOLE NO.
5A -PAGE

PROPERTY--

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				DESCRIPTIONS
				AU oz/t				
9773	314.1	317.1	3.0'	Tv				80% qtz. 20% chl'd material:: tr. py.
74	317.1	322.1	5.0'	Tv				Grn. Carb: 23% qtz: Tr. - 5% py.
75	322.1	327.1	5.0'	.005				" " : 66% " : tr. py.
76	327.1	330.5	3.4'	Tv				" " : " " : " "
77	330.5	335.5	5.0'					75% qtz. : " " : " "
78	335.5	338.5	3.0'					" " : " " : " "
79	338.5	341.8	3.0'					80% white qtz. v'g
80	341.8	344.6	2.8'					95% " " "
81	344.6	349.6	5.0'					Qtz. v'l & chl'd Zone: 50% qtz, tr-1% py.
82	349.6	354.6	5.0'					" " " " : " " "
83	354.6	359.6	5.0'					" " " " : " " "
84	359.6	364.6	5.0'	Tr				" " " " : " " "
85	364.6	369.6	5.0'	.015				" " " " : " " "
86	369.6	374.6	5.0'	.006				" " " " : " " "
87	374.6	379.6	5.0'	Tv				" " " " : " " "
88	379.6	384.6	5.0'					" " " " : " " "
89	384.6	390.0	5.4'					" " " " : " " "
90	390.0	392.3	2.3'	Tv				50% por, 40% qtz. tr. py.

PROPERTY ST ANDREW GOLDFIELDS LTD.

PAGE 1

LOCATION 0+00, 0+32 South BEARING S-28°-E HOLE NO. 5-01
4th level

LOGGED BY O. Zavesiczky ELEVATION 575' DIP 0° FINAL DEPTH 462.0'

STARTED December 7, 1983 TESTS (CORRECTED) _____

FINISHED December 17, 1983

CASING _____

CORE SIZE AQ: Ross Finlay Ltd. 0+00 Section

FROM	TO	DESCRIPTION
0.0	5.0'	No Core: hole collared adjacent to blasted cut and therefore slipped into a 5' fracture.
5.0	16.7'	Chloritized Andesite: Black, 20% brecciated quartz-carbonate laminae, sharp & veinlet angles at 60° 13.2 - 16.7': 50% quartz veins & veinlets at low & moderate angles.
16.7	46.7'	Porphyry: Pale brownish-white, very hard, glassy, 50% quartz veining & silicification, local chloritized intervals, pyrite locally.
46.7	147.6'	Green Carbonate Zone: Pale yellowish emerald green, mottled by sericite, generally 20-33% quartz veinlets at moderate to high angles. 107.5 - 120.0: 25% light-brown marrow porphyry dikes, trace pyrite.

HOLE NO. 5-01

PROPERTY

LOCATION _____ BEARING _____ HOLE NO. 5-01

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH _____

STARTED _____ TESTS (CORRECTED) _____

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
147.6	179.0'	Grey Carbonate: grey, med. gr., 25 to 33% qtz. veins at mod. to high angles, tr. to 1% py loc. along veins, loc. fuchsite along veins,
179.0	188.5'	Chloritized Shear Zone: (Minor Zone) black, med. hard, f.gr., mod. shr'g, 20% qtz-carb. vlt's & shearing at mod. to high angles to CA,
188.5	191.5'	Porphyry Dyke: brownish grey to whitish grey, brecciated but indurate,
191.5	193.5'	Intermediate Dyke: grey, massive, aphanitic, med. hard to soft, chloritized & suicitized, low angle joints.
193.5	330.5'	Green Carbonate: as above at 46.7'
		236.3 - 241.3: 33-50% qtz v'g & minor porphyry

LOCATION _____ BEARING _____ HOLE NO. _____

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH _____

STARTED _____ TESTS (CORRECTED) _____

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
330.5	405.7'	<p>249.3 - 276.0: 66-80% white, qtz. v'g at variable angles, in brecc'd grn. carb. matrix, tr. to 1% py locally. few low angle limonitic joints.</p> <p>276.0 - 297.0: few narrow buff coloured sericitic bands, generally 20% qtz. v'g</p> <p>267.5 - 268.0: brown por at high angles.</p> <p>297.0 - 330.5: 50-66% qtz. v'g. in brecc'd grn. carb.</p> <p>314.1 - 317.1: 80% qtz. v'g with black chl'd interstitial mafic material</p> <p>Quartz-Veined & Chloritized Zone: generally 50-66% qtz. veining, 50-33% black chloritized, f. gr. country rock, brecc'd locally 60-90° angles to CA, tr. py.</p> <p>338.5 - 344.6: 90% white qtz.-veining at mod. to high angles.</p>

HOLE NO. 5-01

PROPERTY

PAGE 4

LOCATION _____ BEARING _____ HOLE NO. 5-01

LOGGED BY _____ ELEVATION _____ DIP _____ FINAL DEPTH _____

STARTED _____ TESTS (CORRECTED) _____

FINISHED _____

CASING _____

CORE SIZE _____

FROM	TO	DESCRIPTION
		390.0 - 392.3: 50% brown porphyry, 40% white qtz. veining
405.7	442.2	392.3 - 405.7: becoming more greenish in colour, Chlorite Schist: (contact effect of Diabase?) black, soft, slightly talcose, f.gr shr'g at 55 - 60° to CA, few intermittent minor gougy faults at mod. to high angles, 1-5% very minor qtz-carb. vlt's.
442.2	452.0	423.0 - 425.1: Fault gouge 75% core recovery. Diabase Dyke: (E-W Type) black, massive, f.-med. gr. slightly magnetic, minor quartz.
452.0	462.0	Lost Core: friable diabase was ground away
	462.0'	End of Hole

HOLE NO. 5-01

SAMPLE RECORD SHEET

5-01
1A

-HOLE NO.
-PAGE

PROPERTY--

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				DESCRIPTIONS
				Au oz/t				
9701	5.0	10.0	5.0'	Tv				Chl'd Ands: 20% qtz. tr. py.
9702	10.0	13.2	3.2'					" " : 50% " " "
03	13.2	16.7	3.5'					" " : 50% " " "
04	16.7	21.7	5.0'					Porph: 50% qtz. v'g, 1% fine py.
05	21.7	26.2	4.5'	Tv				" : " " " " " "
06	26.2	31.2	5.0'	.002				!" : as above but with 33% chl'd ands.
07	31.2	33.4	2.2'	.016				Porph: 50% qtz. v'g, 5% fine py.
08	33.4	38.4	5.0'	.018				" : " " " 1% " "
09	38.4	41.9	3.5'	.012				" : " " " " " "
9710	41.9	43.5	1.6'	.002				Carbonate metaerysts
11	43.5	46.7	2.2'	.006				Porph: 50% qtz. v'g, 1% f. py.
12	46.7	51.7	5.0'	.003				Grn. Carb: 20% white & gry qtz. vlts tr. py.
13	51.7	56.7	5.0'	Tv				" " : 33% " " " "
14	56.7	61.7	5.0'					" " : " " " " "
15	61.7	66.7	5.0'					" " : " " " " "
16	66.7	69.0	2.3'					" " : 10% " " " "
17	69.0	72.5	3.5'					" " : 5% " " " "
18	72.5	77.5	5.0'	Tv				" " : 15% " " " "

SAMPLE RECORD SHEET

5-01

-HOLE NO.

2A

-PAGE

PROPERTY--

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS					DESCRIPTIONS
				Au oz/t					
9719	77.5	82.5	5.0'	Tr					Grn.Carb: 10% white & gry qtz vg, tr.py
9720	82.5	87.5	5.0'						" " : " " " " " "
21	87.5	92.5	5.0'						" " : " " " " " "
22	92.5	97.5	5.0'						" " : " " " " " "
23	97.5	102.5	5.0'						" " : " " " " " "
24	102.5	107.5	5.0'						" " : " " " " " "
25	107.5	110.5	3.0'						" " : 10% porphyry veins, l&py
26	110.5	113.5	3.0'						" " : 5% qtz. vlts: tr. py.
27	113.5	115.0	1.5'						Por. V.: light brown, " "
28	115.0	119.0	4.0'						Grn.Carb: 33% qtz, v/g:= " "
29	119.0	120.0	1.0'						Por. V: light brown, " "
9730	120.0	125.0	5.0'						Grn.Carb: 10% qtz. vlts: " "
31	125.0	130.0	5.0'						" " : 25% " " : " "
32	130.0	135.0	5.0'						" " : " " " : " "
33	135.0	140.0	5.0'						" " : 33% " " : " "
34	140.0	145.0	5.0'						" " : 50% " " : 1% diss. py.
35	145.0	150.0	5.0'						Gry.Carb: 20% " " : " " "
36	150.0	155.0	5.0'	Tr					" " : 10% " " : " " "

SAMPLE RECORD SHEET

5-01
3A

-HOLE NO.
-PAGE

PROPERTY-

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				DESCRIPTIONS
				Au oz/t				
9737	155.0	160.0	5.0'	Tv				Gry. Carb: 33% qtz. vlts: 1-2% py.
38	160.0	165.0	5.0'					" " : " " " : " "
39	165.0	170.0	5.0'					" " : 15% " " : 1% py.
9740	170.0	175.0	5.0'					" " : 25% " " : tr. py.
41	175.0	179.0	4.0'					" " : " " " : " "
42	179.0	184.0	5.0'					Chl'd Shr.: 20% " " : tr.-1% py.
43	184.0	188.5	4.5'	Tv				" " : " " " : " "
44	188.5	191.5	3.0'	010				Por. Dyke: tr. py.
45	191.5	193.5	2.0'	Tv				Intmed. Dyke:
46	193.5	198.5	5.0'	026				Grn. Carb: 10% qtz. Vlts: Tr. py.
47	198.5	203.5	5.0'	021				" " : " " " : " "
48	203.5	208.5	5.0'	Tv				" " : " " " : " "
49	208.5	212.2	3.7'					" " : 20% " " : " "
9750	212.2	217.2	5.0'					" " : 50% " " :
51	217.2	221.8	4.6'					" " : 20% " " : " "
52	221.8	226.8	5.0'					" " : " " " : " "
53	226.8	231.8	5.0'					" " : " " " : " "
54	231.8	236.8	5.0'	Tv				" " : " " " : " "

SAMPLE RECORD SHEET

5-01 -HOLE NO.
4A -PAGE

PROPERTY-

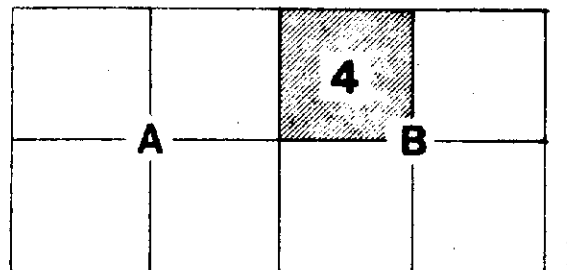
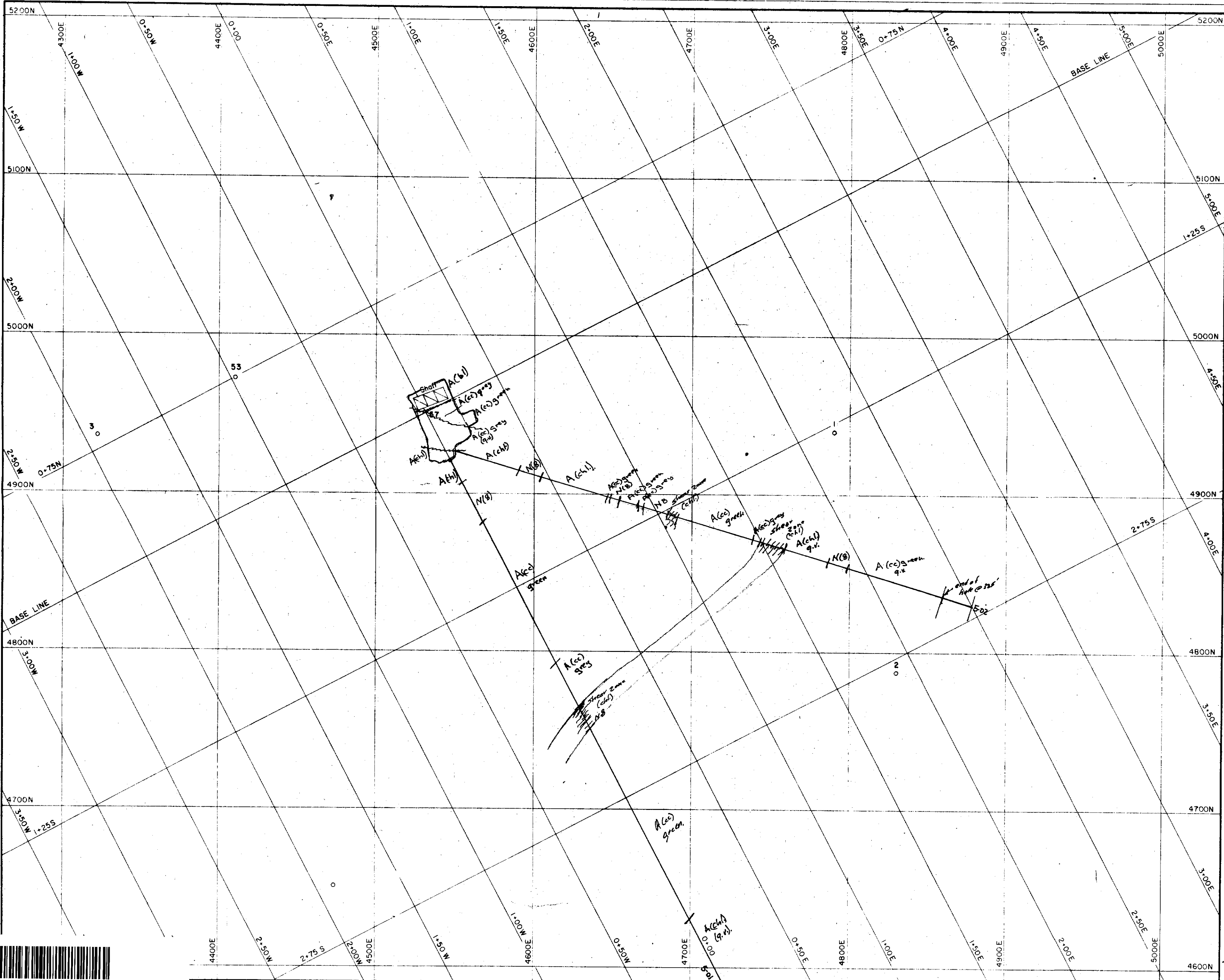
SAMPLE NO.	FROM	TO	LENGTH	ASSAYS				DESCRIPTIONS
				Au oz/t				
9755	236.8	241.3	4.5'	✓				Grn. Carb: 20% qtz. vlts: tr. py.
56	241.3	246.3	5.0'					" " : 33% " " : 23% por, tr. py.
57	246.3	249.3	3.0'					" " : 15% " " : " "
58	249.3	254.3	5.0'					" " : 66% " " : " "
59	254.3	259.3	5.0'					" " : " " " " : " "
9760	259.3	264.3	5.0'	✓				" " : " " " " : " "
61	264.3	267.5	3.0'	003				" " : " " " " : " "
62	267.5	268.5	0.5'	005				Por Vein: 10% qtz. : tr. py.
63	268.5	273.0	4.5'	✓				Grn. Carb: 80% qtz: tr. py.
64	273.0	276.0	3.0'					" " : " " : " "
65	276.0	281.0	5.0'					" " : " " : " "
66	281.0	286.0	5.0'					" " : 10% " : " "
67	286.0	291.0	5.0'					" " : 20% " : " "
68	291.0	297.0	5.0'					" " : " " : " "
69	297.0	302.0	5.0'					" " : 50% " : " "
9770	302.0	307.0	5.0'					" " : 66% " : " "
71	307.0	312.0	5.0'	✓				" " : " " : " "
72	312.0	314.1	2.1'	004				" " : " " : tr. to .5% py.

SAMPLE RECORD SHEET

5-01 -HOLE NO.
5A -PAGE

PROPERTY-

SAMPLE NO.	FROM	TO	LENGTH	ASSAYS					DESCRIPTIONS
				Au oz/t					
9773	314.1	317.1	3.0'	Tr					80% qtz. 20% chl'd material:: tr. py.
74	317.1	322.1	5.0'	Tr					Grn. Carb: 23% qtz: Tr. - 5% py.
75	322.1	327.1	5.0'	.005					" " : 66% " : tr. py.
76	327.1	330.5	3.4'	Tr					" " : " " : " "
77	330.5	335.5	5.0'						75% qtz. : " " : " "
78	335.5	338.5	3.0'						" " : " " : " "
79	338.5	341.8	3.0'						80% white qtz. v'g
80	341.8	344.6	2.8'						95% " " "
81	344.6	349.6	5.0'						Qtz. v'l & chl'd Zone: 50% qtz, tr-lt py.
82	349.6	354.6	5.0'						" " " " : " " "
83	354.6	359.6	5.0'						" " " " : " " "
84	359.6	364.6	5.0'	Tr					" " " " : " " "
85	364.6	369.6	5.0'	.015					" " " " : " " "
86	369.6	374.6	5.0'	.006					" " " " : " " "
87	374.6	379.6	5.0'	Tr					" " " " : " " "
88	379.6	384.6	5.0'						" " " " : " " "
89	384.6	390.0	5.4'						" " " " : " " "
90	390.0	392.3	2.3'	Tr					50% por, 40% qtz. tr. py.



#63-4295



QUEBEC STURGEON RIVER MINES LIMITED
ST ANDREW GOLDFIELDS LTD.
LEVEL PLAN
4B - 575 Ft.

SCALE 0 10 20 40 80 FEET

DWN. CHKD. DATE DWG. NO.



