Tinkess OP90-456 Dec 5/90

Dear Sirs;

Please accept for your consideration my final reports on my 3 projects. Two were finished and one was incomplete due to mechanical problems.

The Boulder project proved to be the most interesting. The actual site of the mine had been lost for almost 90 years. Through diligent research and prospecting, the two shafts were located. This discovery is being written up in the annual report of the Regional Geologist Kenora District. A lot of time was spent on this site, carefully searching the immediate area of both shafts, trying to find ore material in the mine dumps and trying to trace the extension of the veins. It was very exciting work and involved taking many samples both from the mine shafts and the surrounding area. Both shafts are filled with water and access was limited to about 8'. No attempt yet has been made to pump them out, as yet. There are no actual production records from this mine and information is quite sketchy. All ore material has been hauled away and is believed it was milled at a mill site a few miles down the lake.

Several companies have expressed interest in this claim group but almost all samples have returned low gold values, which is most disappointing. However, visible gold was found

(next page)

in quartz vein material at the #2 shaft, and old newspaper clippings say the ore grade material from the #1 shaft is at the 150' level. #1 shaft is 300' deep with 4 levels, #2 shaft is 70'. There are several anomalies on the property. Some geophysics were done several years ago by a small company. They never located the shafts and never followed up with any more work. I have had several geologists at the site and all agree that it needs more work, possibly a few shallow holes to test the veins at the shafts.

The Chase Point project was completed and results were quite encouraging. Gold values were increased and shown be constant and not erratic. Veins are narrow at surface but with good gold values and a high percentage of copper it may make sense to put a couple of drill holes down to see if the veins open up.

The Bag Lake project did not get completed. This one has excellent potential as it has been sampled in the past and has had a couple of drill holes put down that showed good gold values though narrow widths. The work I did this year was an attempt to show the length of the main zone. I manually

(next page)

tripped a few areas, blasted and took some samples. Overburden was too deep and I could not get to the actual vein. However a grab sample from the farthest trench gave an assay of .068 oz/T Au which is highly anomalous and appears to show that the vein extends in that direction. I was depending on a contractor to strip this area with a D 7 bulldozer. Unfortunately it kept breaking down on him until the weather made further work impossible.

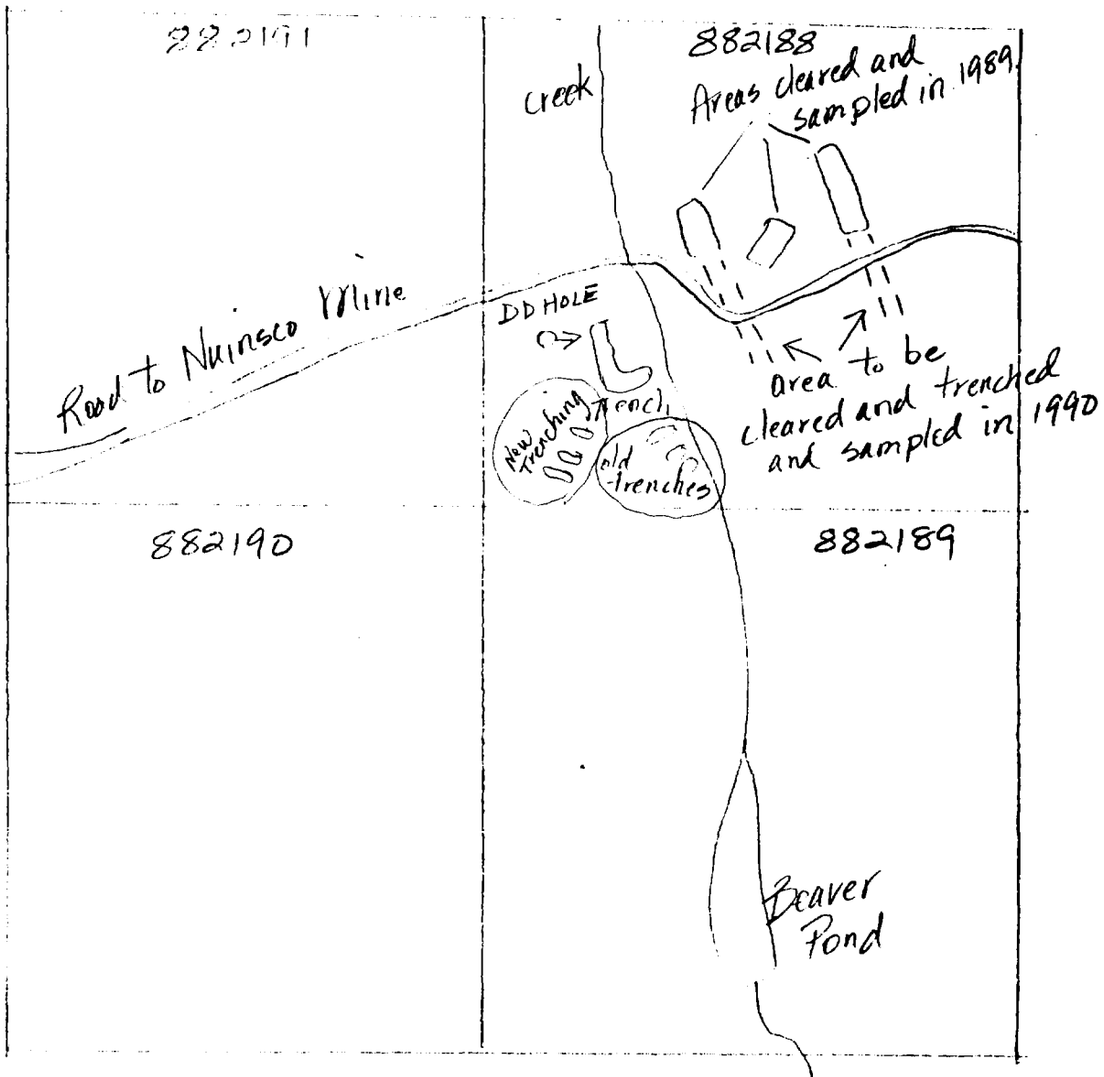
In a better investment and mining climate, all of these projects would get serious consideration from mining companies. I am preparing to leave for Vancouver to meet with representatives of several mining companies to try to option these properties.

Overall I would say the purpose of the grants has been fulfilled. The Chase Point property has been proved up, the Boulder Mine has been discovered (re-discovered) and the limited work at Bay Lake has shown anomalous gold on an extension of the vein. This work could not have been done without the grant money as I do not have the personal assets.

Yours truly,

R. Bruce

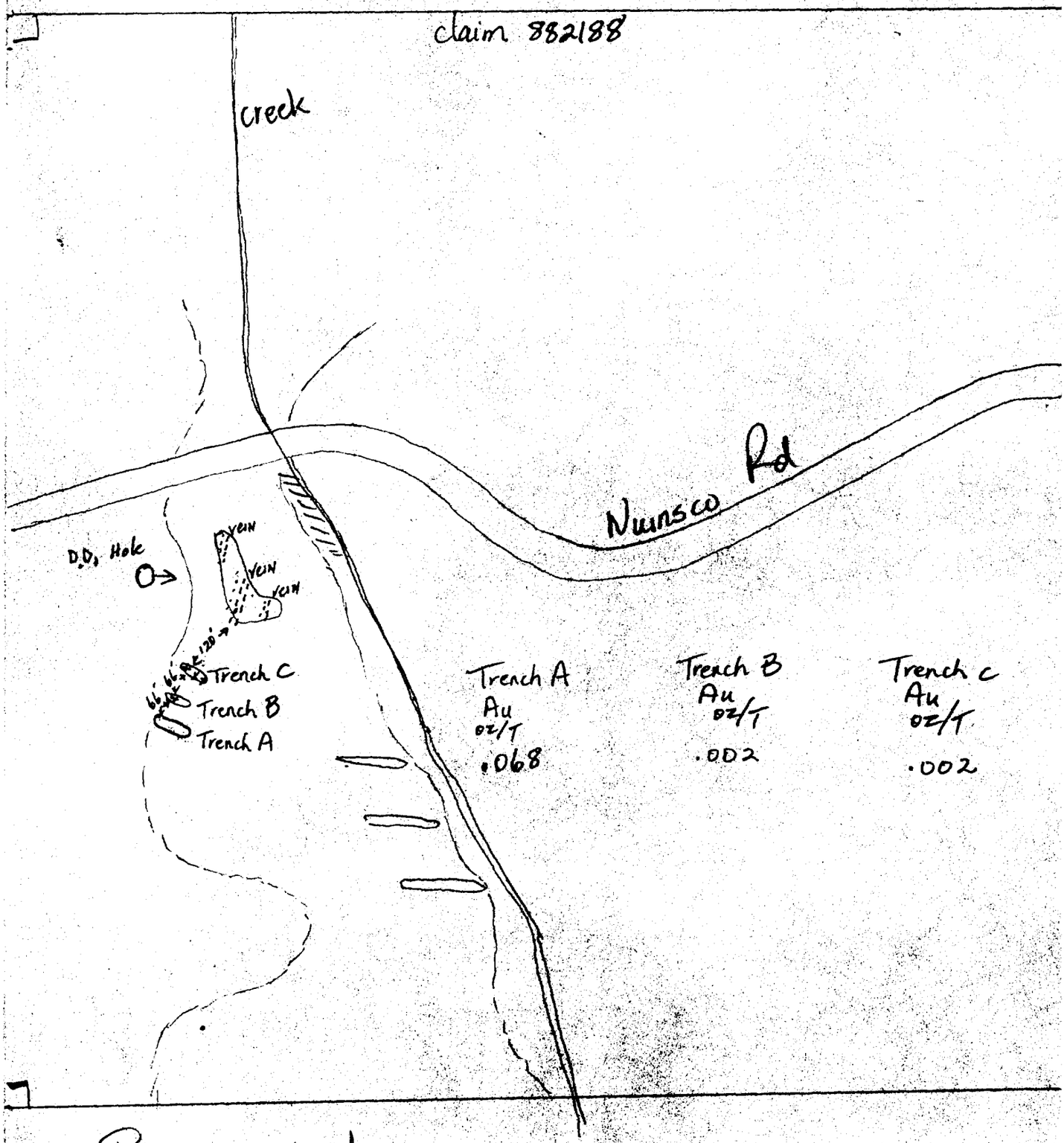
Tinkess Project #1 Bag Lake



This claim group has promise. Was optioned to Tranges Ex and drilled with good values over narrow widths. The new zones I am working on will greatly enhance the property and make it more attractive. Tranges of course no longer has the property

0790-456

Dec 5/90



Bag Lake

R. Tinkess OP90-456 Dec 5/90

Bay Lake
OP90-456

Tinkess
Dec 5/90

Sample #	Type				Au oz/T	Cu PPM	Zn PPM		
140547	GRAB			porphyry 5-10% py ✓ ✓	.002				
140548	✓				.002				
140549	✓			qtz carbonate	.002				
140550	✓			✓	.002				
140551	✓			qtz carbonate ± chlorite, py	.068				

ACCURASSAY LABORATORIES LTD.

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President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

Certificate of Analysis

R. Tinkess

Date: November 28 19 90

36379 NESTOR FALLS, ONTARIO
POX 1KO

Work Order # : 181616
Project :

SAMPLE NUMBERS Accurassay	Customer	Gold ppb	Gold Oz/T	
280408	140547	25	<0.002	C
280409	140548	6	<0.002	
280410	140549	27	<0.002	
280411	140550	11	<0.002	B
280412	140551	2347	0.068	A
280412	140551	2178	0.063	Check

Eagle Lake.

OP90-456

Dec 5/90

LF-30

Per: Howard Lakes

ORIGINAL

BOULDER
OP90-456

Turkess
Dec 5/90

Sample #	Type	Sample length			Au oz/T	Cu ppm	Zn ppm		
B1	Grab			chloritic schist, small qtz veins	.004				
BNE-1	✓			white qtz	.002				
BNE 2	✓			qtz, pyrite	.002	30			
BNE-3	✓			basalt	.002				
BNE-4	✓			basalt + qtz	.002				
2SH-1	✓			chloritic schist	.002	340			
2SH-2	✓			chloritic biotite qtz veinlets	.095				
2SH-3	✓			biotite qtz carbonate	.425				
2SH-4	✓			chloritic schist + qtz	.066				
BNV-3	✓			sericitic basalt	.052	68			
BNV-4	✓			siliceous alteration	.013	84			
BDS-1	✓			qtz minor py	.002				
BDS-2	✓			basalt + minor qtz v.	.002				
BS-1	✓			glassy white qtz	.002				

Boulder
OF 70-456

Tinkess
Dec 5/90

Sample #	Type	Length	old number		AU oz/t	CU PPM	ZN PPM		
140510	chip	3'	526-1	white glassy qtz with chlorite mineralization	.004				
140535	grab			vein mat. qtz chlorite, minor biotite	.022				
140536	"			from 2 shaft qtz vein	.112				
140537	"						15		

Boulder
OP90-456

Tinkers
Dec 5/90

Sample #	Type	Length	old number		Au oz/t	Cu ppm			
140522	Grab		[illegible]	sheared basalt rusty	.002				
140523	"		[illegible]	sheared rusty basalt qtz veinlets minor py	.002				
140524	"		08-5	rusty basalt minor py	.002				
140525	"		S10-1	pure glassy qtz	.002				
140526	"		S10-2-1	sidewall of qtz vein basalt	.002				
140527	"		S10-2-2	qtz vein + chlorite	.002				
140528	"		S10-2-3	qtz vein with chlorite + chalco	.002	1300			
140529	"		S10-2-4	qtz vein	.003				
140530	"		S10-3	qtz veined basalt + py in shear zone	.002				
140531	"		02-1	Rusty shear	.002				
140532	"		02-2	Rusty shear highly altered	.002	86			
140533	"		02-3	Rusty shear py	.002				
140534	"				.002				

Boulder
OP90 - 456

Tinkess
Dec 5/90

Sample #	Type	Length	old number		Au oz/t	Cu %	Zn PPM		
BS-2	GRAB			Mine dump #1 shaft - qtz	.002				
2SH-D-1	✓			Mine dump #2 qtz + chlorite	.002				
BVN-2	✓			Rusty basalt - sheared	.002				
BVN0	✓			alteration min py	.002				
140511	✓		S26-2	qtz vein minor py	.002				
140512	✓		S26-3	✓ ✓	.002				
140513	✓		S26-4	shear zone rusty basalt	.002				
140514	✓		S26-5	ext of main vein #1 shaft	.002				
140516	✓		S26-7	ext of main vein qtz + chlorite	.002				
140517	✓		S26-8	ext of main vein qtz 2 minor py	.002				
140518	✓		S26-0	gabbro qtz veinlets chalcopy	.022	4200			
140519	✓		A-16-1	#2 mine dump, qtz with chalco	.002	380			
140520	✓		08-1	felsic dike	.002				
140521	✓		08-2	felsic dike + basalt contact	.002				
140515	✓		S26-6	Ext of main vein, chlorite + basalt	.002				

INCO GOLD

Boulder

OP90-456

Dec 5/90

TRAVERSE NUMBER _____

N.T.S. 52 E 1

PROJECT ROB TINKNESS

AREA NESTOR FALLS

GEOLOGIST(S) L. M'EACHERN

DATE AUG 15/90

SAMPLE NUMBER	SAMPLE TYPE: RX Rock, Talus	SAMPLE TYPE: SX Stream Silt, Soil	SAMPLE TYPE: Grab, Chip, Channel	SAMPLE LENGTH, WIDTH, AREA	LATITUDE, LONGITUDE and/or U.T.M.	SAMPLE DESCRIPTION: Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	RESULTS (ppm. / % / oz. per ton): Au ppb
RX165150	Rock	—	GRAB	—		MAFIC VOLCANIC, FG, MODERATELY SHEARED, TR. FG PY.	17
RX165151		—		—	A11-5	FELSIC INTRUSIVE, MODERATELY SILICIFIED, 3% FG DISS PY, 3% MG Po.	<5
RX165152		—		—	A2-5	QTZ VN, GLASSY, LOCALLY RUSTY, TR. FG PY.	9
RX165153		—		—	A11-8	AMYGDILOIDAL MAFIC FLOW, SILICEOUS AMYGDULES FILLED WITH K-SPAR. NO VIS MINE.	<5
RX165154		—		—	A2-2	GLASSY WHITE QTZ W ODD POD OF CHLORITE NO VIS MINE.	<5
RX165155		—		—	A2-3	AMPHIBOLITE, SHEARED WITH QTZ STRINGERS CONCORDANT TO FOLIATION, NO VIS MINE.	19
RX165156		—		—	A11-6	AS RX165150	<5
RX165157		—		—	A11-7	DIORITE, SILICEOUS, W 30% 4mm FELDSPAR PHENOCRYSTS NO VIS MINE	<5
RX165158		—		—	A11-1	SHEARED, INTERMEDIATE VOLCANIC, SILICEOUS, BIOTITE RICH, TR PY.	<5

INCO GOLD

Boulder

OP90-456 Dec 5/90

TRAVERSE NUMBER _____ PROJECT BOB TINKNESS GEOLOGIST(S) L. McEACHERN

N.T.S. 52 E 1 AREA NESTOR FALLS DATE AUG. 20/90

SAMPLE NUMBER	SAMPLE TYPE: RX Rock, Talus	SAMPLE TYPE: SX Stream Silt, Soil	SAMPLE TYPE: Grab, Chip, Channel	SAMPLE LENGTH, WIDTH, AREA	LATITUDE, LONGITUDE and/or U.T.M.	SAMPLE DESCRIPTION: Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	RESULTS (ppm. / % / oz. per ton): Au Ag
RX165159	ROCK	—	GRAB	—	A2-4	AS RX165155	24
RX165160		—		—	A2-1	MAFIC VOLCANIC WITH QTZ VNLTS THRUOUT, TR MG PO.	16
RX165161		—		—	A11-9	STRONGLY SHEARED VOLCANIC (MAFIC, INTERMEDIATE) QTZ STRINGERS + SERICHLORITE PARALLEL TO FOLIATION.	<5
RX165162		—		—	A11-3	RUSTY, FG, MAFIC VOLCANIC NO VIS MINZ.	<5
RX165163		—		—	A2-6	BIOTITE SHCIST, SHEARED, NO VIS MINZ	19
RX165164		—		—	A11-4	MAFIC VOLCANIC, FG, MODERATELY SHEARED, NO VIS MINZ	<5

INCO GOLD

OP90-456 Dec 5/90

Boulder

TRAVERSE NUMBER _____ PROJECT ROB TINKESS GEOLOGIST(S) A. AUBUT

N.T.S. 52 E 1 AREA BOULDER MINE DATE AUG 15/90

SAMPLE NUMBER	SAMPLE TYPE: RX Rock, Talus	SAMPLE TYPE: SX Stream Silt, Soil	SAMPLE TYPE: Grab, Chip, Channel	SAMPLE LENGTH, WIDTH, AREA	LATITUDE, LONGITUDE and/or U.T.M.	SAMPLE DESCRIPTION: Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	RESULTS (ppm. / % / oz. per ton)					
							Au ppb					
165143			CHIP	1.96M		CHIP ALONG E END OF SHAFT - QTZ HAS FAIRLY DISCREET SULPHIDE PALE CONSISTING UP TO 2% MA-VFG PYRITE AS MASSIVE CLOTS, DISS & SEAMS.		68				
165144			GRAB			QTZ VEIN MATERIAL - FROM SHAFT - 15% FG PYRITE LUMPS - LOCAL POCKET.		21				
165145			CHIP	0.8M		QTZ VEIN - BULL QTZ.		8				
165146			GRAB			60M @ 230° FROM SHAFT ALTERED FELSIC DYKE.		45				
165147			GRAB			GRABS OFF DUMP QTZ VEIN MATERIAL 2ND SHAFT - APPROX 1100 FT E OF 1ST SHAFT.		9.89	ppm		0.11	oz/ton
165148			GRAB					1.08	ppm		0.03	oz/ton
165149			GRAB					3.54	ppm		0.105	oz/ton

OP90-456 Dec 5/90

Tinkess

Boulder

Activation Laboratories Ltd. Work Order: 2022 Report: 2026

Sample description	AU PPB	AG PPM	AS PPM	BA PPM	BR PPM	CA %	CO PPM	CR PPM	CS PPM	FE %	HF PPM	HG PPM	IR PPB	K %	MO PPM	NA PPM	NI PPM	RB PPM	SB PPM	SC PPM	SE PPM
RX 165143	60	<5	<2	<100	<1	<1	<5	290	<2	1.23	<1	<1	<5	<0.5	<5	<500	<50	<30	<0.2	1.1	<5
RX 165144	21	<5	<2	<100	<1	<1	17	210	<2	1.97	<1	<1	<5	<0.5	<5	<500	100	<30	<0.2	1.4	<5
RX 165145	8	<5	<2	<100	<1	<1	<5	290	<2	1.04	<1	<1	<5	<0.5	<5	935	<50	<30	<0.2	3.0	<5
RX 165146	<5	<5	<2	<100	<1	3	10	63	2	1.50	5	<1	<5	<0.5	<5	64100	<50	<30	<0.2	4.0	<5
RX 165147	3550	<5	<2	270	<1	4	35	159	6	4.82	1	<1	<5	1.5	<5	8140	<50	64	0.2	23	<5
RX 165148	1000	<5	<2	270	<1	4	32	92	5	5.92	1	<1	<5	1.3	<5	4340	140	40	<0.2	21	<5
RX 165149	3590	<5	<2	<100	<1	<1	6	240	<2	1.21	<1	<1	<5	<0.5	<5	1750	62	<30	<0.2	4.0	<5
RX 165150	17	<5	<2	<100	<1	7	16	59	<2	13.1	3	<1	<5	<0.5	<5	20100	<50	<30	<0.2	42	<5
RX 165151	<5	<5	<2	130	<1	3	9	92	<2	1.33	5	<1	<5	<0.5	<5	58000	<50	<30	<0.2	3.3	<5
RX 165152	9	<5	<2	<100	<1	<1	5	270	<2	0.86	<1	<1	<5	<0.5	<5	1640	89	<30	<0.2	3.4	<5
RX 165153	<5	<5	2	<100	<1	4	23	84	<2	4.45	3	<1	<5	<0.5	<5	47400	170	<30	<0.2	15	<5
RX 165154	<5	<5	<2	<100	<1	<1	<5	220	<2	0.42	<1	<1	<5	<0.5	<5	830	<50	<30	<0.2	0.8	<5
RX 165155	196	<5	<2	440	<1	10	59	86	12	9.57	2	<1	<5	1.9	<5	12900	<50	94	<0.2	44	<5
RX 165156	<5	<5	<2	<100	<1	6	47	71	<2	10.3	4	<1	<5	<0.5	<5	25800	<50	45	<0.2	45	<5
RX 165157	<5	<5	<2	350	<1	2	<5	90	2	1.55	4	<1	<5	<0.5	<5	42300	<50	52	<0.2	3.2	<5
RX 165158	<5	<5	<2	<100	<1	3	8	130	<2	10.7	6	<1	<5	<0.5	<5	34800	<50	<30	<0.2	36	<5
RX 165159	24	<5	<2	290	<1	6	55	84	9	10.1	3	<1	<5	<0.5	<5	20100	<50	110	<0.2	41	<5
RX 165160	16	<5	<2	<100	<1	5	36	110	<2	7.96	2	<1	<5	<0.5	<5	14900	<50	<30	<0.2	26	<5
RX 165161	<5	<5	<2	<100	<1	14	59	750	<2	9.62	3	<1	<5	<0.5	<5	<500	500	<30	<0.2	29	<5
RX 165162	<5	<5	<2	<100	<1	3	22	120	<2	12.2	2	<1	<5	1.0	<5	15400	<50	<30	<0.2	19	<5
RX 165163	19	<5	<2	400	<1	7	62	74	9	10.2	2	<1	<5	1.8	<5	8040	<50	85	<0.2	35	<5
RX 165164	<5	<5	2	<100	<1	7	31	64	<2	9.71	3	<1	<5	<0.5	<5	28500	<50	<30	<0.2	37	<5

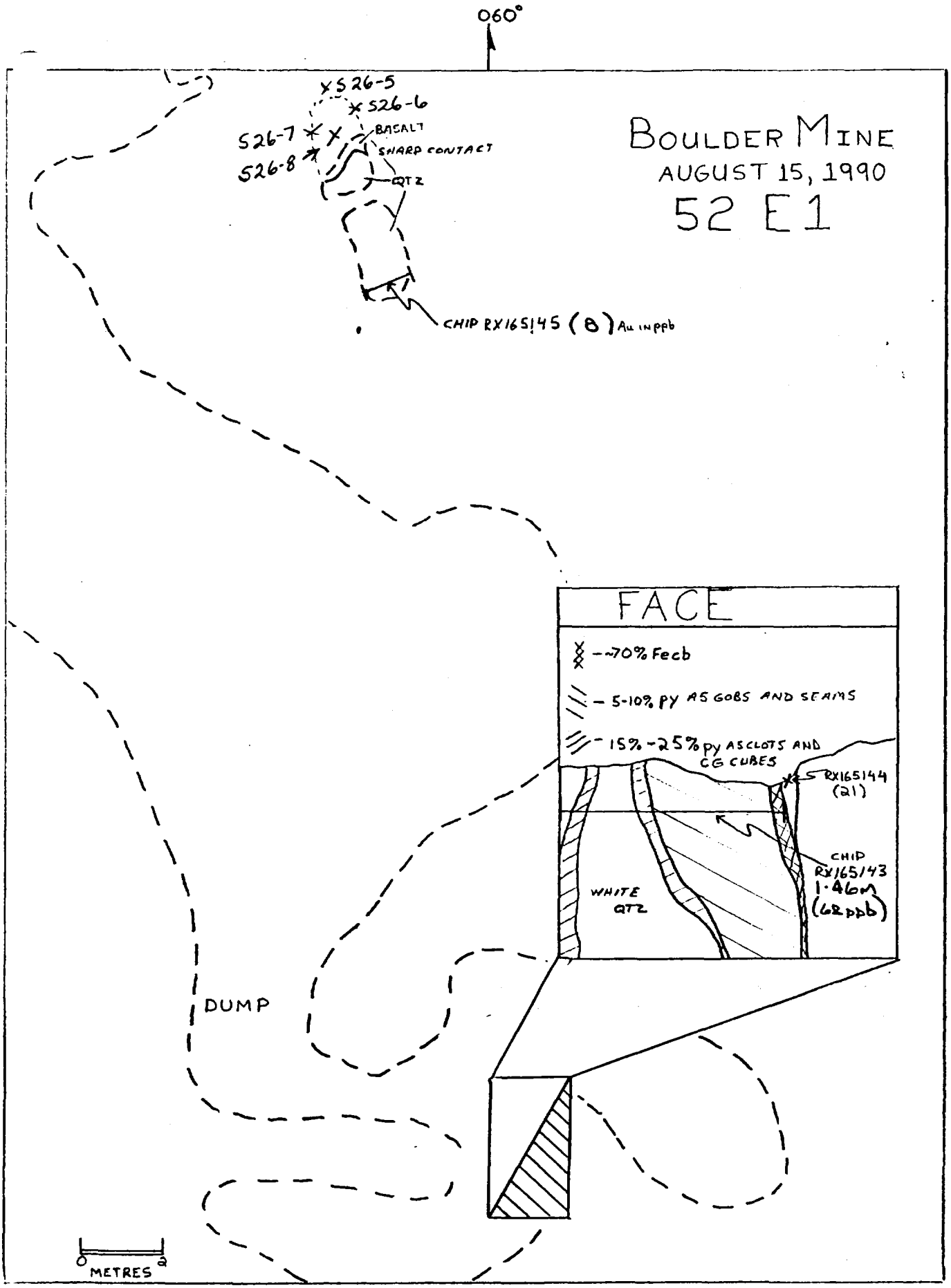
OP90-456 Dec 5/90

Boulder

Tinkess

Activation Laboratories Ltd. Work Order: 2022 Report: 2026

Sample description	SN %	SR %	TA PPM	TH PPM	U PPM	W PPM	ZN PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	TB PPM	YB PPM	LU PPM	CU PPM
RX 165143	<0.01	<0.05	<1	<0.5	<0.5	<4	<50	1	<3	<5	0.2	<0.2	<0.5	0.09	<0.05	8
RX 165144	<0.01	<0.05	<1	<0.5	<0.5	<4	129	1	3	<5	0.2	<0.2	<0.5	0.08	<0.05	29
RX 165145	<0.01	<0.05	<1	<0.5	<0.5	<4	<50	<1	<3	<5	0.2	<0.2	<0.5	0.11	<0.05	6
RX 165146	<0.01	<0.05	2	2.5	<0.5	<4	118	9	19	<5	1.2	0.5	1.6	0.35	<0.05	65
RX 165147	<0.01	<0.05	<1	<0.5	<0.5	<4	95	3	6	<5	0.9	0.7	<0.5	1.17	0.19	200
RX 165148	<0.01	<0.05	<1	<0.5	<0.5	<4	120	2	7	7	1.0	0.5	<0.5	1.15	0.15	91
RX 165149	<0.01	<0.05	<1	<0.5	0.9	<4	<50	<1	<3	<5	0.2	<0.2	<0.5	0.23	<0.05	22
RX 165150	<0.02	<0.05	<1	<0.5	<0.5	<4	262	3	9	9	1.7	0.9	<0.5	2.42	0.40	120
RX 165151	<0.02	<0.05	<1	2.4	<0.5	<4	<50	9	17	<5	1.1	0.4	<0.5	0.29	0.06	56
RX 165152	<0.01	<0.05	<1	<0.5	<0.5	<4	<50	<1	<3	<5	0.2	<0.2	<0.5	0.24	<0.05	51
RX 165153	<0.02	<0.05	<1	1.1	<0.5	<4	<50	5	14	<5	1.4	0.6	<0.5	0.82	0.19	75
RX 165154	<0.01	<0.05	<1	<0.5	<0.5	<4	<50	<1	<3	<5	0.1	<0.2	<0.5	0.05	<0.05	2
RX 165155	<0.02	<0.05	1	<0.5	0.7	<4	191	6	14	12	2.7	1.2	<0.5	2.37	0.45	120
RX 165156	<0.02	<0.05	<1	<0.5	<0.5	<4	227	4	12	<5	2.1	0.8	<0.5	2.48	0.41	48
RX 165157	<0.01	<0.05	<1	1.9	<0.5	<4	82	11	21	6	1.1	0.5	<0.5	0.34	<0.05	7
RX 165158	<0.02	<0.05	<1	3.0	3.0	<4	343	4	8	<5	0.6	<0.2	<0.5	2.62	0.37	58
RX 165159	<0.02	<0.05	<1	<0.5	<0.5	<4	252	6	16	<5	2.5	1.0	<0.5	2.35	0.37	150
RX 165160	<0.02	<0.05	<1	<0.5	<0.5	<4	185	3	7	<5	1.5	0.7	<0.5	1.62	0.26	160
RX 165161	<0.01	<0.05	<1	5.8	<0.5	<4	223	56	130	57	9.6	3.0	<0.5	1.27	0.25	15
RX 165162	<0.01	<0.05	<1	<0.5	<0.5	<4	<50	4	9	<5	1.4	0.5	<0.5	1.07	0.20	120
RX 165163	<0.01	<0.05	<1	0.7	<0.5	<4	152	5	14	<5	2.1	0.9	<0.5	2.00	0.35	220
RX 165164	<0.02	<0.05	1	<0.5	<0.5	<4	194	4	13	<5	2.0	0.8	<0.5	2.27	0.39	110



R. TINKESS OP90-456

3

ACCURASSAY LABORATORIES LTD.

P.O. BOX 604
KIRKLAND LAKE, ONTARIO, CANADA P2N 3J5
TEL.: (705) 567-6343

President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

Certificate of Analysis

30545

Garry Clark
Oval Bay Resources
1070 Lithium Dr.
Unit 1
Thunder Bay, Ontario
P7B-6G3

Date: May 22 19 90

Work Order # : T900237
Project : Bould

SAMPLE NUMBERS Accurassay	Customer	Gold ppb	Gold Oz/T	
520135	8801	<5	<0.001	
520136	8802	<5	<0.001	
520137	8803	<5	<0.001	
520138	8804	8	<0.001	
520139	8805	1905	0.055	
520140	8806	632	0.018	
520141	8807	23	0.001	
520141	8807	60	0.002	Check

Boulder
OP90-456

Tinkess

LF-30

Per:

CUSTOMER COPY

Gerry Clark - Ovalbay Res. Thunder Bay May 22/90

BOULDER PROPERTY

Location: Phillips Township, 2.0 kilometres west of Highway 71 (north of Nestor Falls), approximately 100 feet west of shore of Whitefish Bay, Lake of the Woods to shaft, Kenora Mining Division.

Access: via boat, road access could be created (~2.0 kilometres of road).

Claims: 15 unpatented mining claims - Kenora Mining Division

Contact: Bob Tinkess - Nestor Falls (807) 484-2707

Geology: contact zone between mafic volcanics and mafic intrusive (diorite gabbro). Regionally volcanic belt between two granitic stocks.

Mineralization and Alterations:
up to 11 foot white glassy to sucrosic quartz vein with biotite, sericite, carbonate and pyrite on fracture. Strong biotite, chlorite alteration. Possible hornfels texture. Pyrite (up to 5 mm) on fracture of quartz veins. Minor sericite and biotite on fracture with visible gold.

Assays: Bob Tinkess up to >0.4 ounces gold per ton grab/same sample re-assayed by Ovalbay at 0.055 ounces gold per ton. Definite free gold problem.

Recommendations:
No work since turn of century. Needs prospecting, trenching and sampling.

Boulder OP90-456

Tinkess

Gerry Clark
Oval Bay Res
Thunder Bay

May 22/90

BOULDER PROPERTY

SAMPLE NUMBER	DESCRIPTION	LOCATION	GOLD ASSAY
8801	chlorite, feldspar quartz schist with quartz veinlets - glassy white, trace pyrite	south shaft (dump)	<5 ppb
8802	white glassy quartz vein, chlorite and biotite on fracture, trace pyrite	south shaft (dump)	<5 ppb
8803	chip of main vein - white glassy, blebs of pyrite (brassy), 2-3 mm cubes parallel fracture	south shaft (dump)	<5
8804	same as 8803, location of Tinkess - BNE-1	south shaft (dump)	8
8805	biotite-chlorite schist with quartz carbonate, veinlets with chlorite biotite and trace pyrite (location same as Tinkess >0.4 oz. Au/ton)	north shaft (dump)	1905
8806	quartz veins fragments from dump, minor pyrite and biotite on fracture	north shaft (dump)	632
8807	quartz vein - seam of pyrite (3 mm), minor biotite on fracture	north shaft	23/60

Boulder OP90-456

Tinkess

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Certificate of Analysis

Total 24

30413

Mr. R. Tinkess
[redacted]
NESTOR FALLS, ONTARIO
P0X 1K0

Date: April 24 19 90

Work Order # : 181459
Project :

SAMPLE NUMBERS Accurassay	Customer	Gold Oz/T	
274378	B1	0.004	
274379	BNE-1	<0.002	
274380	BNE-2	<0.002	30ppm cu
274381	BNE-3	<0.002	
274382	BNE-4	<0.002	
274383	2SH-1	<0.002	
274384	2SH-2	0.095	
274385	2SH-3	0.425	
274386	2SH-4	0.066	
274387	BNV-3	<0.002	
274387	BNV-3	<0.002	Check
274388	BNV-4	0.013	
274389	BDS-1	<0.002	
274390	BDS-2	<0.002	
274391	BS-1	<0.002	
274392	BS-2	<0.002	
274393	25H-D-1	<0.002	
274394	BVN-2	<0.002	
274395	BVIN0	<0.002	
274395	BVIN0	<0.002	Check

Boulder

Per: [signature]

LF-30

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Certificate of Analysis

30429

Mr. R. Tinkess
[redacted]
NESTOR FALLS, ONTARIO
POX [illegible]

Date: April 26 19 90

Work Order # : 181459
Project :

SAMPLE NUMBERS Accurassay	Customer	Copper ppm	Au oz/T
274380	BNE-2	30	.002
274383	2SH-1	340	.002
274387	BNV-3	68	.002
274388	BNV-4	84	.013

LF-30

Per: [signature]

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President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

2

Certificate of Analysis

Page: 1

28463 Mr. R. Tinkess

Date: October 16 19 90

Nestor Falls, Ontario
P0X 1K0

Work Order # : 181585
Project :

SAMPLE NUMBERS		Copper	Au
Accurassay	Customer	ppm	oz/T
279437	14518	4200	.022
279438	14519	380	.002
279447	14528	1300	.002
279451	14532	86	.002

Boulder

Boulder OP90-456

LF-90

Per: Howard Rattle

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Certificate of Analysis

28465 Mr. R. Tinkess

Date: October 17 19 90

Nestor Falls, Ontario
P0X 1K0

Work Order # : 181585
Project :

SAMPLE NUMBERS Accurassay	Customer	Gold ppb	Gold Oz/T	
279423	14502	2703	0.079	
279424	14504	2921	0.085	
279425	14505	3307	0.096	
279426	14506	46	<0.002	
279427	14507	12	<0.002	
279428	14508	49	<0.002	
279429	14509	13	<0.002	
279430	14511	<5	<0.002	
279431	14512	<5	<0.002	
279432	14513	10	<0.002	
279432	14513	9	<0.002	Check
279433	14514	<5	<0.002	
279434	14515	<5	<0.002	
279435	14516	<5	<0.002	
279436	14517	<5	<0.002	
279437	14518 - float	741	0.022	
279438	14519 - mine dump flat 2	41	<0.002	
279439	14520	8	<0.002	
279440	14521	19	<0.002	
279441	14522	<5	<0.002	
279441	14522	<5	<0.002	Check
279442	14523	<5	<0.002	
279443	14524	6	<0.002	
279444	14525	<5	<0.002	
279445	14526	<5	<0.002	
279446	14527	<5	<0.002	
279447	14528	67	0.002	
279448	14529	97	0.003	
279449	14530	22	<0.002	
279450	14531	<5	<0.002	
279450	14531	<5	<0.002	Check

Chase Point
qtz veins 5 o/#1
shear zone 2 o/#1

Boulder
4200 ppm Cu.
380 ppm
1300 ppm Cu.
N.ex shore from mine landing

Boulder OP90-456

Per: Howard Latta

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Certificate of Analysis

28466 Mr. R. Tinkess

Date: October 17 19 90

Nestor Falls, Ontario
P0X 1K0

Work Order # : 181585
Project :

SAMPLE NUMBERS Accurassay	Customer	Gold ppb	Gold Oz/T	Cu PPM
279451	14532	<5	<0.002	86
279452	14533	<5	<0.002	
279452	14533	<5	<0.002	Check

Boulder

Boulder OP90-456

AFS/

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3

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Certificate of Analysis

Mr. R. Tinkess
NESTOR FALLS, ON
P0X 1K0

Date: October 25 19 90

36047

WORK ORDER: T900895
PROJECT:

SAMPLE NUMBERS ACCURASSAY	CUSTOMER	WEIGHT PULP (g)	GOLD Oz/T	RESIDUE Oz/T	TOTAL ASSAY Oz/T	PERCENT RECOVERY
534363	140501	853.0 g	0.026	0.0723	0.099	27
534364	140503	750.0 g	0.022	0.0075	0.029	74
534365	140510	694.0 g	<0.004	0.0010	<0.004	

Chip Pour

Boulder qtz vein 3' chip

Boulder 0P90-456

LF-30

Per: Blaine Chuffe

ORIGINAL

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Certificate of Analysis

28533 Mr. R. Tinkess

Nestor Falls, Ontario
P0X 1K0

Date: November 9 19 90

Work Order # : 181610
Project :

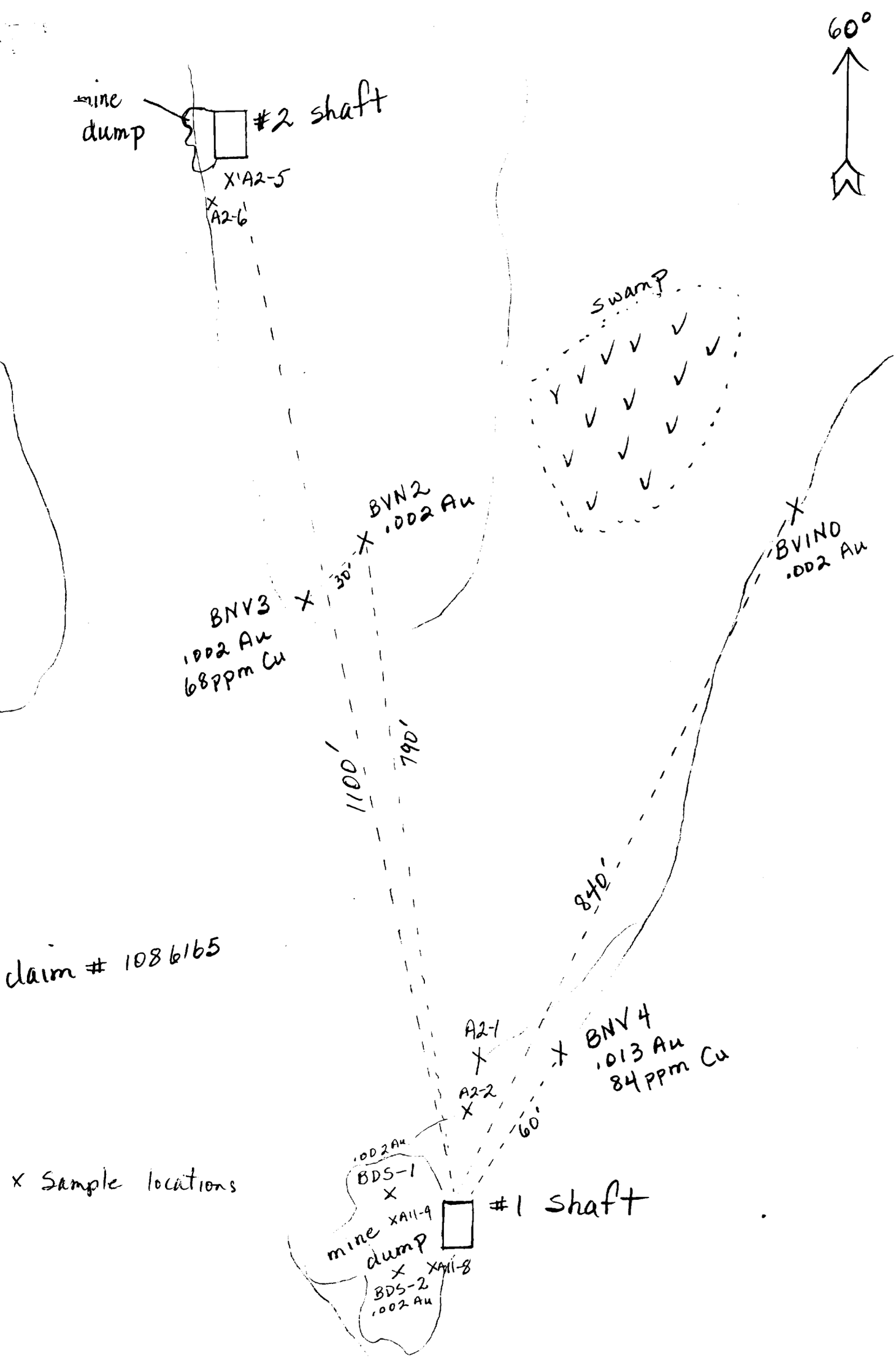
SAMPLE NUMBERS Accurassay	Customer	Gold ppb	Gold Oz/T	
280101	140534	6	<0.002	Boulder
280102	140535	766	0.022	Boulder
280103	140536	3861	0.112	Boulder
280104	140537			
280105	140539			
280106	140540	78	0.002	Chase Point
280107	140541			Chase Point
280108	140542			Chase Point
280109	140543	<5	<0.002	Chase Point
280110	140544	<5	<0.002	Chase Point
280110	140544	<5	~~Check~~ <0.002	
280111	140545			
280112	140546			
280112	140546		~~Check~~	

Boulder OP90-456

LF-30

Per: Howard Lehto

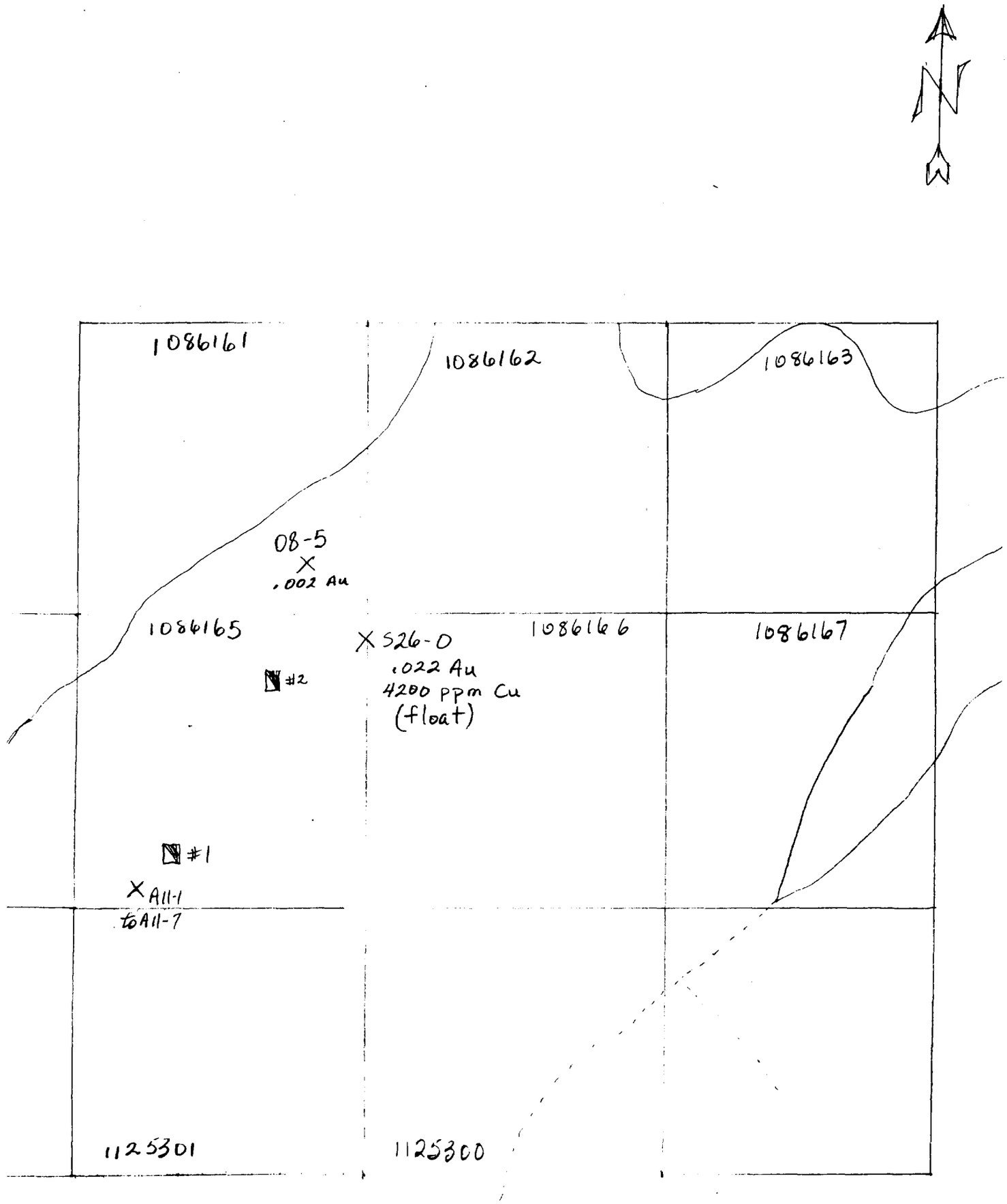
CUSTOMER COPY



x Sample locations

not to scale

R. Tinkess OP90-456 Boulder Project Dec 5/90

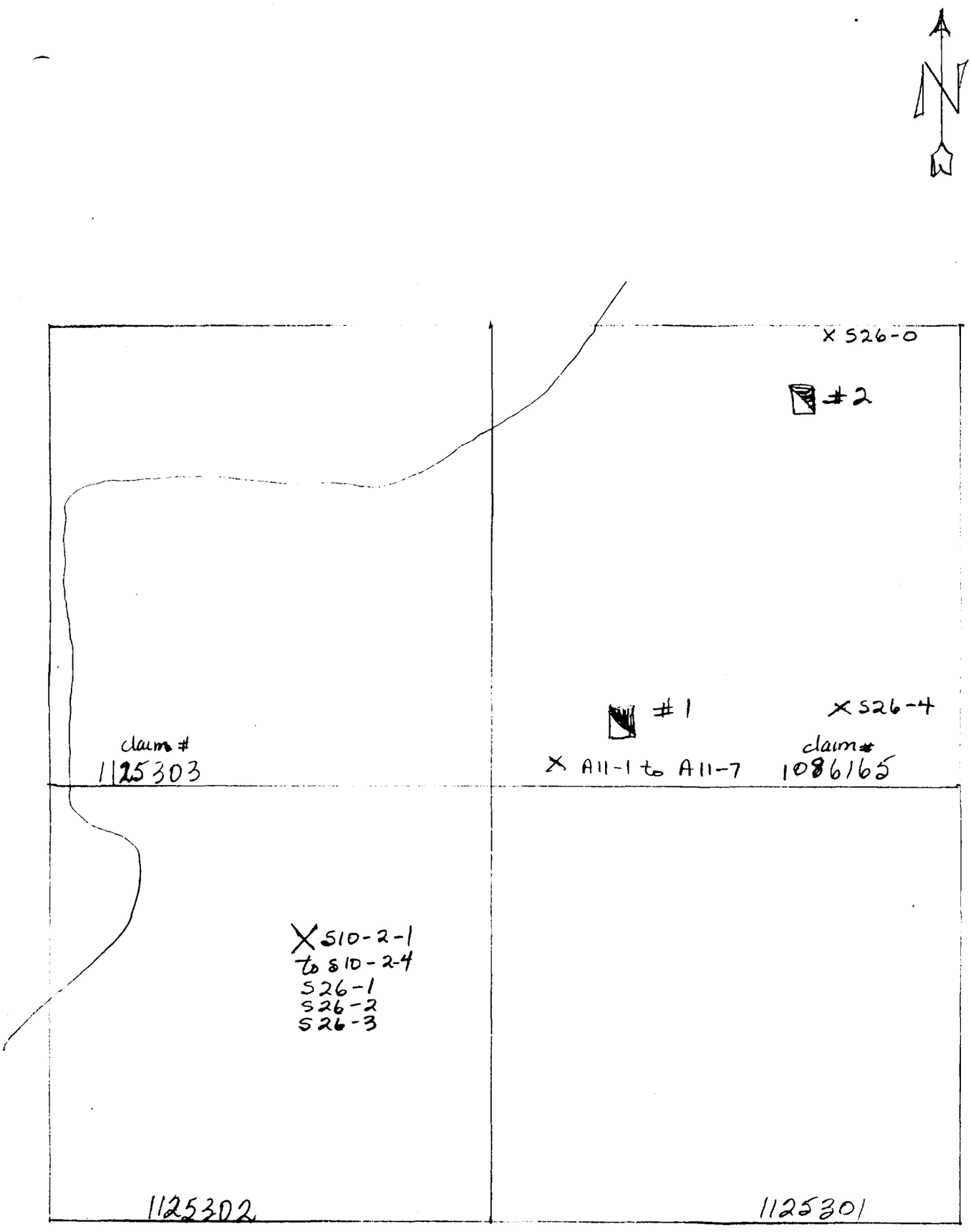


× Sample locations

1" = 100'
0 feet 500

Dec 5/90

R. Tinkess Boulder Project OP90-456



X - Sample locations

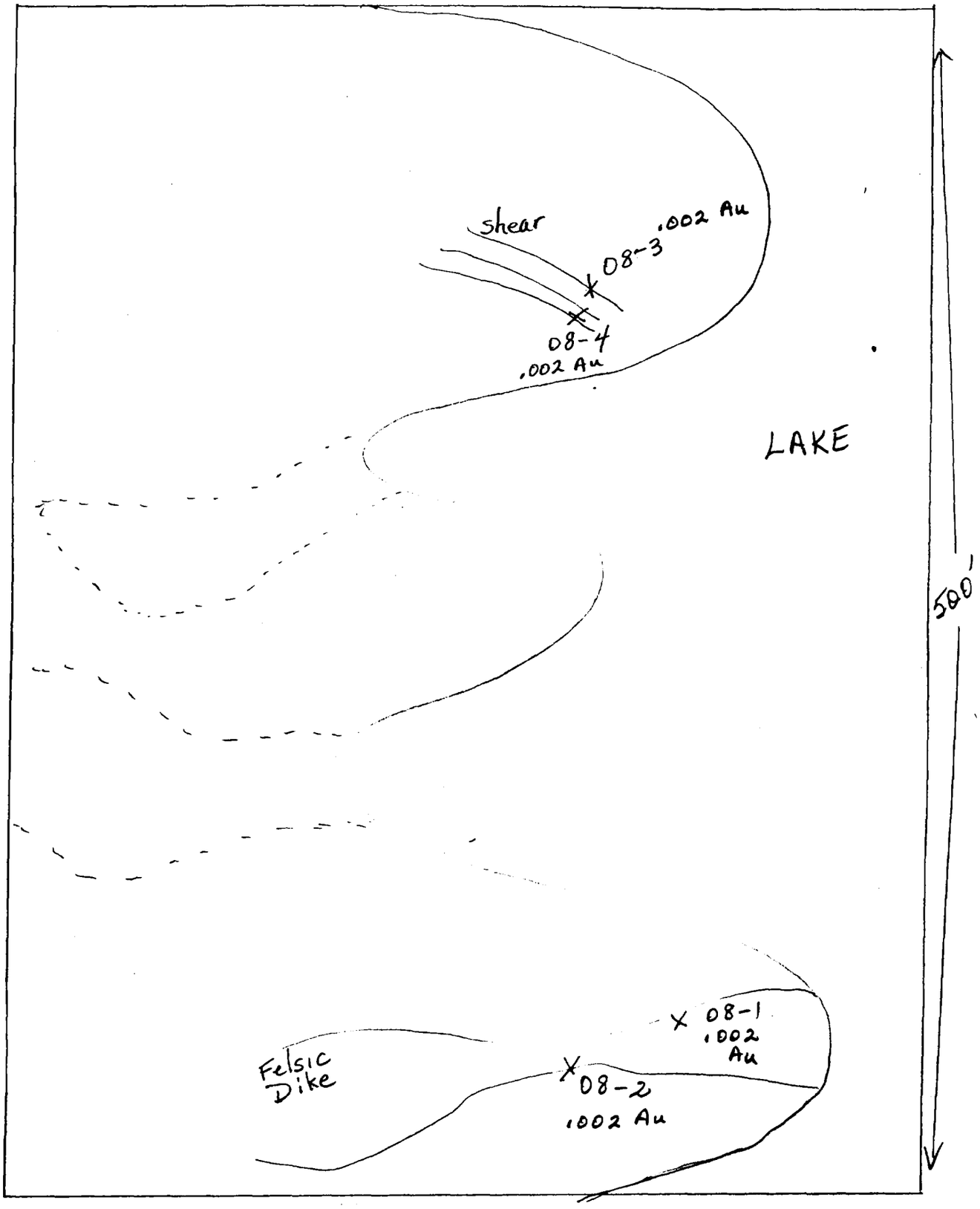
0 feet 500

R. Tinkess Boulder OP90-456

Dec 5/90

Boulder Project

Part of claim 1086164



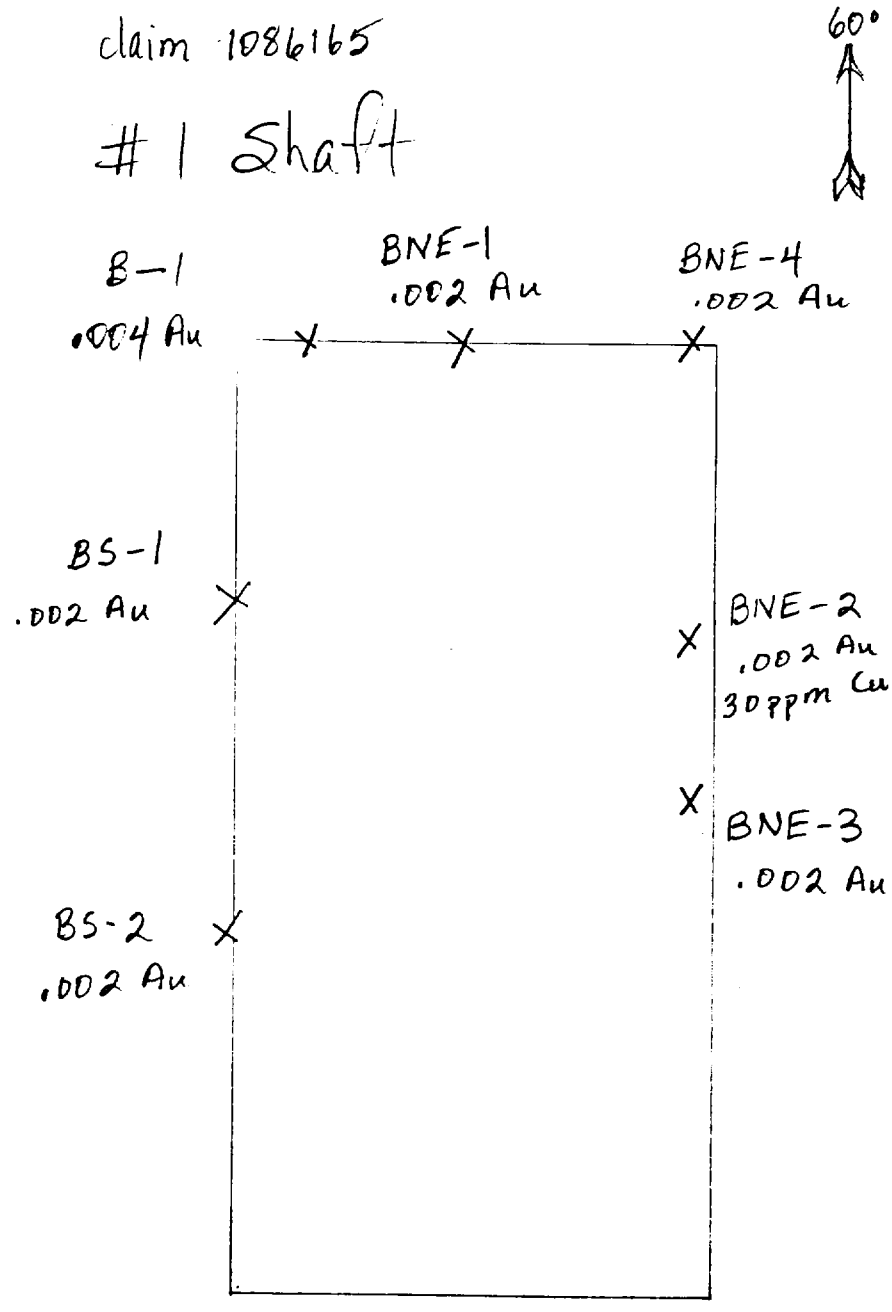
× Sample locations

R. Tinkess OP90-456

Dec 5/90

claim 1086165

#1 Shaft



Tinkess Boulder OP90-456

Dec 5/90

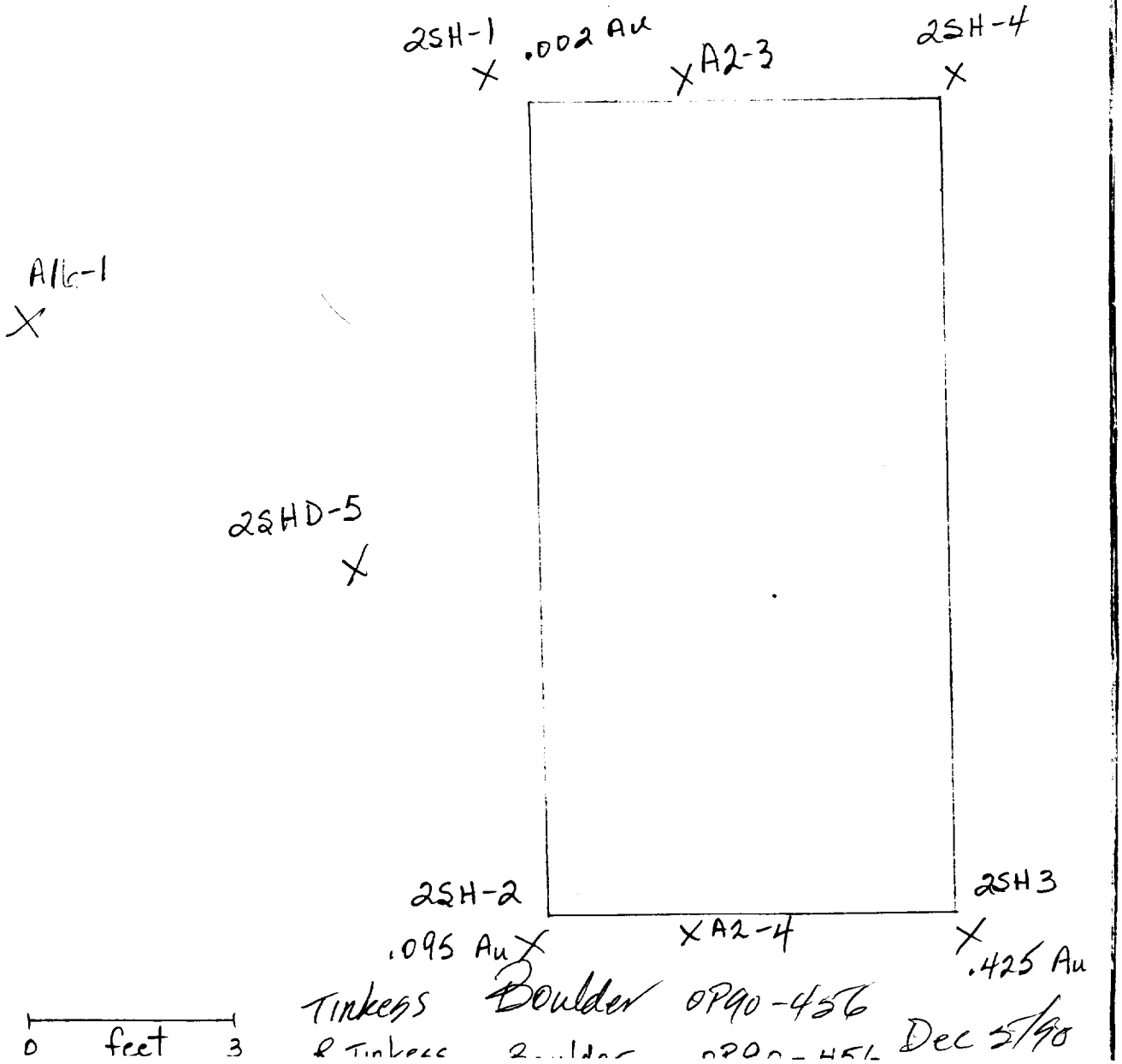
0 feet 3

R. Tinkess Boulder

claim 1086165

60°

#2 Shaft



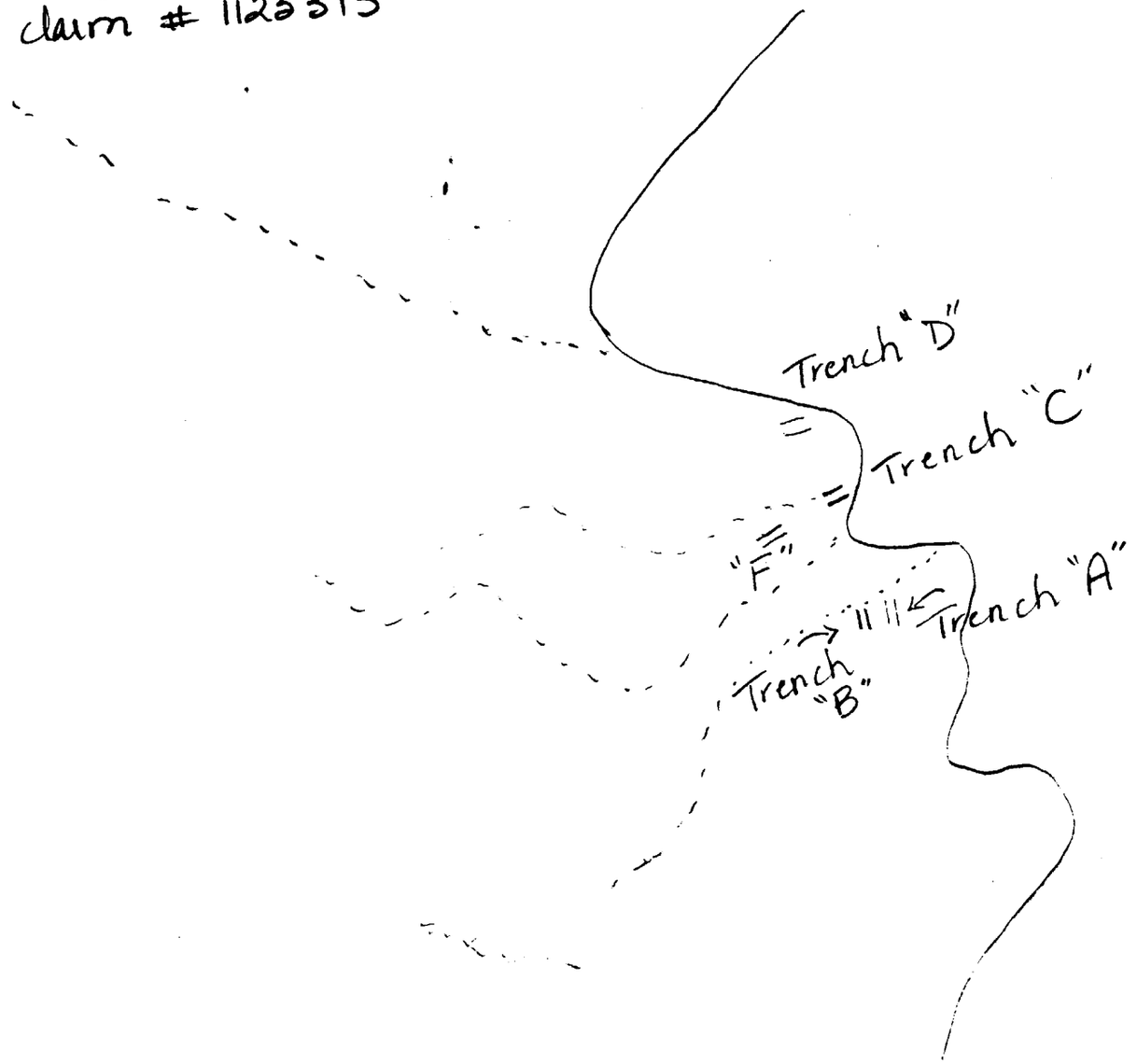
0 feet 3

Tinkers Boulder OP90-456

& Tinkers 2...lder OP90-456 Dec 5/90

CHASE POINT

claim # 1125313



N

Blacky Bay

R. Tirkess

OPAP = OP90-456

CHASE POINT

claim # 1125313

"D"

	Cu	Zn
140539	92	32

	Au oz/T	Cu	Zn
140540	.002	740	32

"C"

Trench "C"

	Au oz/T	Cu ppm	Zn ppm
140508	— .002		
140541		120	46
140542		28	47
140543	.002		
140544	.002		

"F"

Trench "F"

	Au oz/T
140506	— .002
140507	— .002
140509	— .002

Blacky Bay

Trench "B"

	Au oz/T	Zn ppm
140501	— .099	
140502	— .079	
140546		48

"B"

"A"

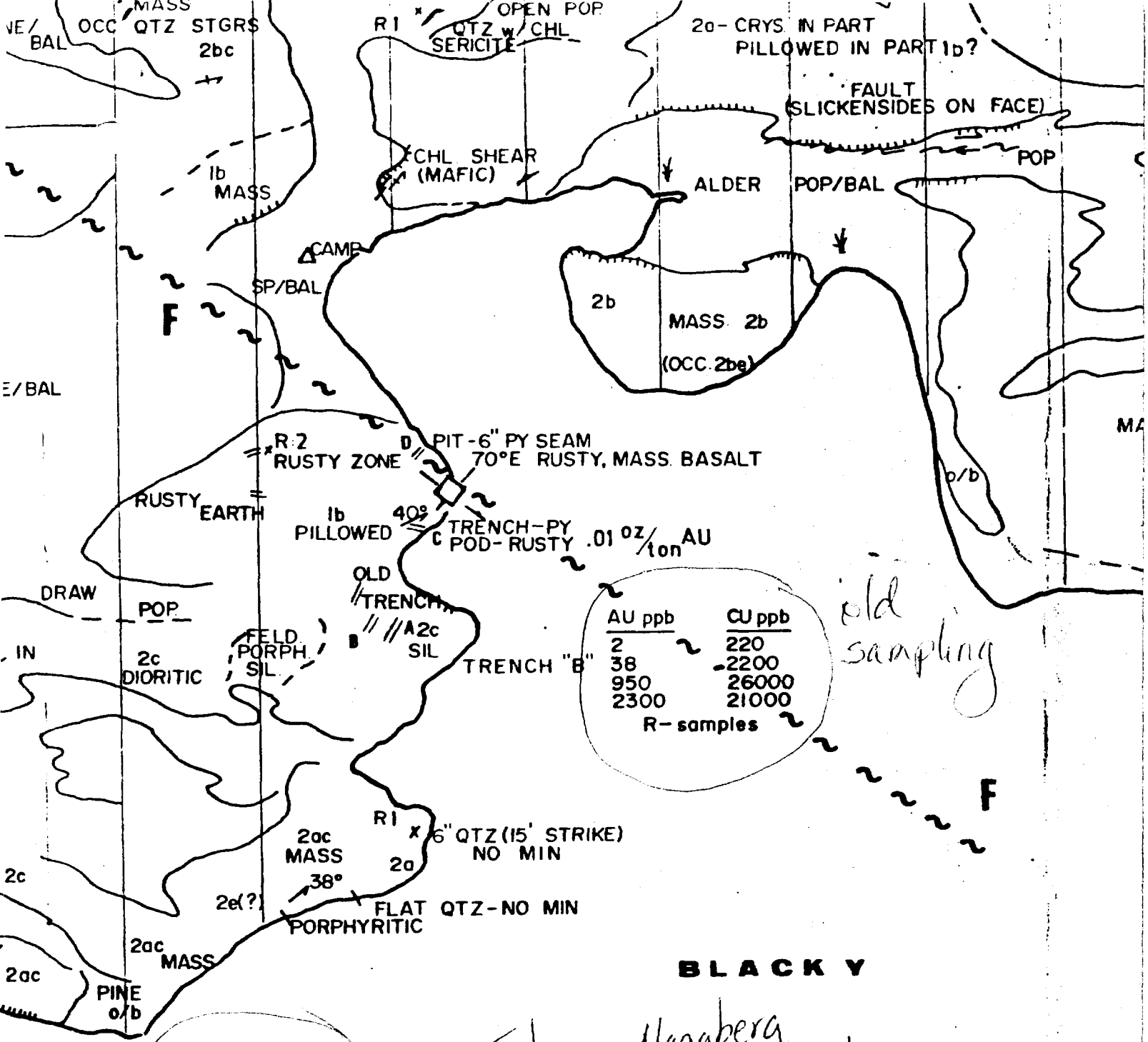
Trench "A"

	Au oz/T	Zn ppm
140503	— .029	
140504	— .085	
140505	— .096	
140545	—	40

All are grab samples taken after blasting.

R. Tinkess SPAP± SP98-EC

0 feet 60


MASS
OCC QTZ STGRS
2bc
BAL
R1
OPEN POR
QTZ w/ CHL
SERICITE
2a- CRYS IN PART
PILLOWED IN PART 1b?
FAULT
(SLICKENSIDES ON FACE)
POP
CHL SHEAR
(MAFIC)
1b
MASS
ALDER
POP/BAL
CAMP
SP/BAL
F
2b
MASS 2b
(OCC 2be)
E/BAL
R2
RUSTY ZONE
D
PIT-6" PY SEAM
70°E RUSTY, MASS BASALT
o/b
RUSTY EARTH
1b
PILLOWED
40°
C
TRENCH-PY
POD-RUSTY .01 oz/ton AU
OLD
TRENCH
DRAW
POP
B
A
2c
SIL
FELD
PORPH
SIL
2c
DIORITIC
IN
TRENCH "B"
AU ppb
CU ppb
2
220
38
2200
950
26000
2300
21000
R-samples
old sampling
F
R1
2ac
MASS
38°
2a
6" QTZ (15' STRIKE)
NO MIN
2e(?)
FLAT QTZ-NO MIN
PORPHYRITIC
2c
2ac
MASS
2ac
PINE
o/b
BLACK Y
TRENCH "A"
AU ppb
CU ppb
760
39000
2300
21000
1200
23000
220
25000
670
2200
R-samples
Tinkess-Haggberg
claim group
BAY
CHASE POINT
old sampling
R. Tinkess OP90-456

1

Chase Point
OP90-456

2 copies each.

Sample #	Type				Au oz/t	Cu ppm	Zn ppm		
140539	Grab			massive py		92	32		
140540	✓			massive py chlorite	.002	740	32		
140541	✓			highly altered tuff 30-40% py		120	46		
140542	✓			highly altered tuff minor qtz 10-20% py		28	47		
140543	✓			alteration, silicious, minor qtz + py	.002				
140544	✓			qtz minor py	.002				
140545	✓			highly sheared py + chalcopy			40		
140546	✓			✓ ✓ ✓ ✓			48		
141502	✓			sheared basalt py + chpy	.079				
141504	✓			✓ ✓ ✓ ✓	.085				
141505	✓			sheared basalt 50% py + chpy	.096				
141506	✓			qtz stringers + chlorite	.002				
141507	✓			qtz	.002				
141508	✓			[illegible] tuff 15-20% py	.002				

Ore zone

Sample #	Type	Length			Au oz/t	Cu	Zn		
140499	Grab			qtz vein minor py	.002				
140501	chip	3'		across vein, py, chpy, highly sheared & silt	.099				
140503	✓			✓ ✓ ✓ ✓	.029				

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Certificate of Analysis

28465 Mr. R. Tinkess

Date: October 17 19 90

Nestor Falls, Ontario
P0X 1K0

Work Order # : 181585
Project :

SAMPLE NUMBERS Accurassay	Customer	Gold ppb	Gold Oz/T	
279423	14502	2703	0.079	
279424	14504	2921	0.085	
279425	14505	3307	0.096	
279426	14506	46	<0.002	
279427	14507	12	<0.002	
279428	14508	49	<0.002	
279429	14509	13	<0.002	
279430	14511	<5	<0.002	
279431	14512	<5	<0.002	
279432	14513	10	<0.002	
279432	14513	9	<0.002	Check
279433	14514	<5	<0.002	
279434	14515	<5	<0.002	
279435	14516	<5	<0.002	
279436	14517	<5	<0.002	
279437	14518 float	741	0.022	
279438	14519 mine dump	41	<0.002	
279439	14520	8	<0.002	
279440	14521	19	<0.002	
279441	14522	<5	<0.002	
279441	14522	<5	<0.002	Check
279442	14523	<5	<0.002	
279443	14524	6	<0.002	
279444	14525	<5	<0.002	
279445	14526	<5	<0.002	
279446	14527	<5	<0.002	
279447	14528	67	0.002	
279448	14529	97	0.003	
279449	14530	22	<0.002	
279450	14531	<5	<0.002	
279450	14531	<5	<0.002	Check

Chase Point

qtz vein S of #1

shear zone E of #1

Boulder

4200 ppm cu.
380

Nose shore from mine landing

1300 ppm cu.

Per: Howard Latta

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Certificate of Analysis

Mr. R. Tinkess
NESTOR FALLS, ON
P0X 1K0

Date: October 25 19 90

36047

WORK ORDER: T900895
PROJECT:

SAMPLE NUMBERS ACCURASSAY	CUSTOMER	WEIGHT PULP (g)	GOLD Oz/T	RESIDUE Oz/T	TOTAL ASSAY Oz/T	PERCENT RECOVERY
534363	140501	853.0 g	0.026	0.0723	0.099	27
534364	140503	750.0 g	0.022	0.0075	0.029	74
534365	140510	694.0 g	<0.004	0.0010	<0.004	

Chip Pour

Boulder qtz vein 3' chip

LF-30

Per: Blaine Tinkess

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Certificate of Analysis

28533 Mr. R. Tinkess

Nestor Falls, Ontario
P0X 1K0

Date: November 9 19 90

Work Order # : 181610
Project :

SAMPLE NUMBERS Accurassay	Customer	Gold ppb	Gold Oz/T	
280101	140534	6	<0.002	Boulder
280102	140535	766	0.022	Boulder
280103	140536	3861	0.112	Boulder
280104	140537			
280105	140539			
280106	140540	78	0.002	Chase Point
280107	140541			Chase Point
280108	140542			Chase Point
280109	140543	<5	<0.002	Chase Point
280110	140544	<5	<0.002	Chase Point
280110	140544	<5	~~Check~~ <0.002	
280111	140545			
280112	140546			
280112	140546		~~Check~~	

LF-30

Per: Howard Licht

ORIGINAL

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Certificate of Analysis

R. Tinkess

36270 NESTOR FALLS, ONTARIO
POX 1KO

Date: November 14 19 90

Work Order # : 181610
Project :

SAMPLE NUMBERS		Copper	Zinc
Accurassay	Customer	ppm	ppm
280104	140537		15
280105	140539	92	32
280106	140540	740	32
280107	140541	120	46
280108	140542	28	47
280111	140545		40
280112	140546		48

Boulder.
Chase Point

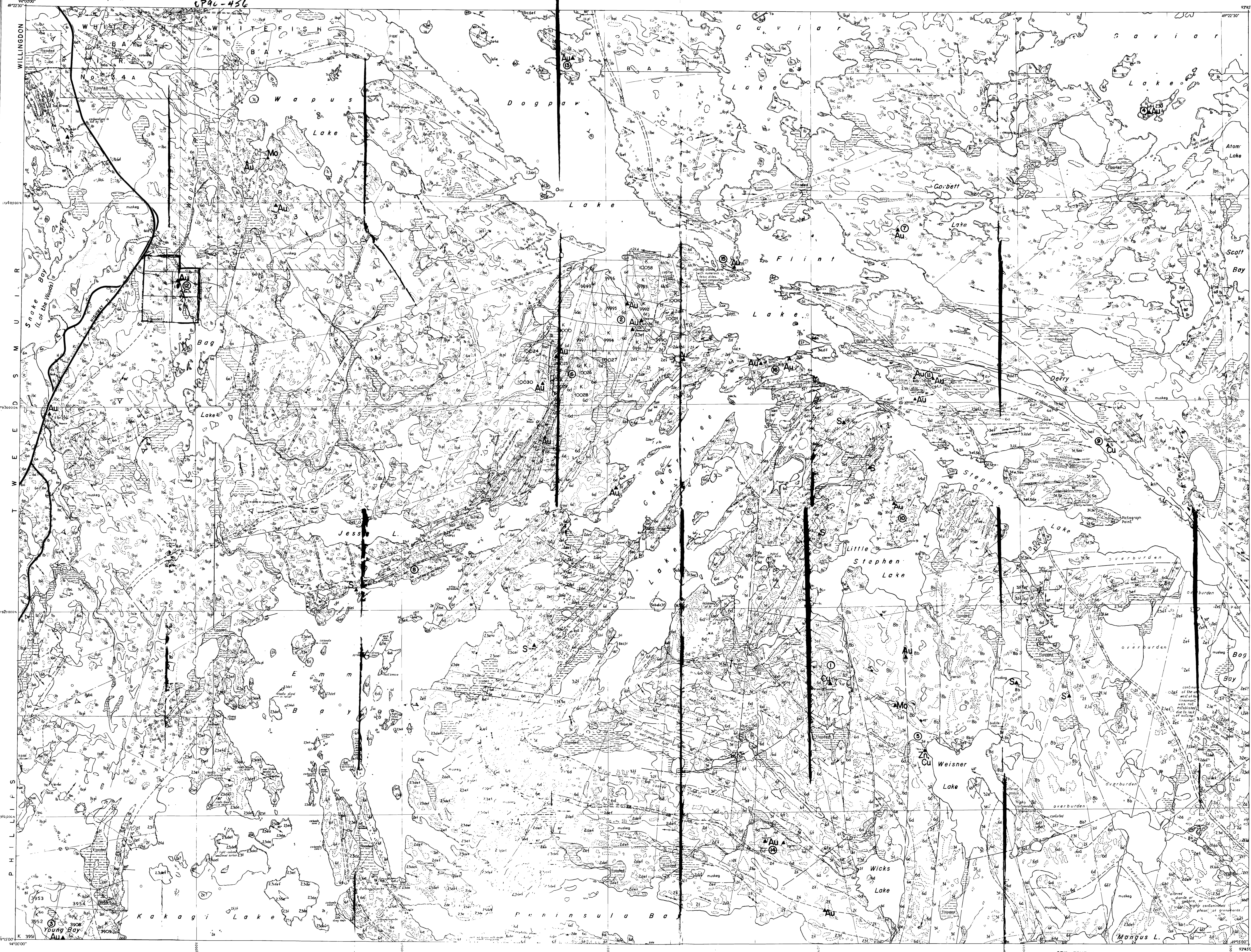
LF-30

Per: Howard Latta

ORIGINAL

R. TINKESS
BAG LAKE PROJECT
OP96-456

• Work area



ONTARIO DEPARTMENT OF MINES AND NORTHERN AFFAIRS

PRELIMINARY MAP P.731
GEOLOGICAL SERIES

CEDARTREE LAKE AREA

DISTRICT OF KENORA

Scale 1 inch to ½ mile

NTS Reference: 52 F/5SW
ODM-GSC Aeromagnetic Map: 1169G
ODM Geological Compilation Series Map: 2115

LEGEND

CENOZOIC
RECENT
Swamp and stream deposits (unconsolidated)

PLEISTOCENE
Sand, gravel, boulders, clay (unconsolidated)

Unconformity

PRECAMBRIAN
PROTEROZOIC
MAFIC INTRUSIVE ROCKS
10 10 Diabase

Intrusive Contact

ARCHEAN
LATE MAFIC DIKES
9 9 Gabbro, diorite, lamprophyre

Intrusive Contact

LATE FELSIC INTRUSIVE ROCKS
8 8a Foliated granodiorite

ODMNA 4839

200

MARGINAL NOTES

LOCATION AND ACCESS:

The map-area lies about midway between the towns of Kenora and Fort Francis. Highway 71 provides direct access to an extensive lake system and most parts of the map-area are readily accessible by boat. Nestor Falls air base offers a functioning landing strip and float-equipped aircraft operate from Kakabikitchiwan Lake.

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Exploration for base metals in the map-area was initiated in 1956 when Kennco Explorations (Canada) Limited drilled four holes for an aggregate of 1,600 feet (488 m) east of Blacky Bay. In 1968, Selco Mining Corporation Limited drilled one short hole near a contact between peridotite and felsic pyroclastics in the central area of Kakagi Lake; the drilling followed an airborne INPUT geophysical survey in the previous year (Company records). Canadian Nickel Company Limited was active in the north-central part of the map-area in 1969 and drilled several holes totalling about 1,000 feet (305 m) (Regional Geologist's Files, Ontario Ministry of Natural Resources, Kenora).

In 1970, Amax Exploration, Incorporated carried out airborne and ground magnetic and electromagnetic surveys, geological mapping, and soil sampling covering an 18-claim group located on the southeastern shore of Kakagi Lake (Regional Geologist's Files, Ontario Ministry of Natural Resources, Kenora), and on a strike east of the area that was the scene of the earlier Kennco activity. HBOG Mining Limited has, since 1972, carried out further detailed geophysical surveys and trenching on the former Amax claim group (Regional Geologist's Files, Ontario Ministry of Natural Resources, Kenora), and also general exploration in the map-area.

GENERAL GEOLOGY:

The geology of the Crow Lake area has been previously described in the regional reconnaissance mapping by Burwash (1933). Part of Phillips Township is included in the regional geological mapping by Fraser (1943). Stratigraphic studies in the general area of Kakagi Lake by Goodwin (1965) have contributed to a broader appraisal of the regional volcano-tectonic framework. Geological mapping of the present map-area ties on to the north with that of Davies and Morin (1972).

Most of the map-area is occupied by a complex mafic-felsic metavolcanic sequence, the salient features of which are:

(i) a basal platform, more than 15,000 feet (4,570 m) thick, consisting mainly of massive and pillowed basalt and andesite flows. A variolitic pillowed basalt unit (1e), up to 800 feet (244 m) thick, provides a stratigraphic marker within the upper part of the mafic volcanic pile in the east-central part of the map-area; locally, similar minor variolitic flows are also found intercalated within felsic pyroclastics.

(ii) a remarkable formation of interbedded chert (unit 2m) and felsic tuff, tuffwacke and arkosic tuffwacke (unit 2k) comprised of primary and partly water-reworked felsic pyroclastic material. A pyritiferous graphitic argillite unit (2n), 10 feet (3 m) to 20 feet (6 m) thick, is located near the base of the formation. The formation attains its maximum thickness of about 6,000 feet (1,830 m) on the southern shore of Kakagi Lake east of Blacky Bay. The chert is derived from silica that is probably of volcanic exhalative origin.

(iii) a dominantly felsic pyroclastic accumulation that stratigraphically represents the upper component of the mafic-felsic volcanic sequence and which is more than 5,000 feet (1,524 m) thick. A wide variety of tuffs, lapilli-tuffs, tuff-breccia, and pyroclastic breccia are present. The pyroclastic rock terminology used is based mainly on size limits of volcanic fragments: tuff (up to 2 mm); lapilli-tuff (2 mm to 64 mm); and tuff-breccia and pyroclastic breccia (more than 64 mm). The site of a major paleo-vent or caldera may coincide with a conspicuous accumulation of collapse-breccia (unit 2j) that is found on the large island in central Kakagi Lake, 8,000 feet (2,450 m) west of Chase Point.

Differentiated ultramafic to mafic sills are conspicuously present within the felsic pyroclastic assemblage. Individual composite sills consist of two or more of the following units: peridotite (unit 4g), orthopyroxenite (unit 4e), clinopyroxenite (unit 4d), gabbro (unit 4b), and leuco- or anorthositic gabbro (unit 4c). Pyroxene peridotite and olivine pyroxenite (unit 4f) may occur as transitional phases of the peridotites. Of significance is an occurrence, in the general area located 14,000 feet (4,267 m) southeast of Chase Point, of area located 14,000 feet (4,267 m) southeast of Chase Point, of an ultramafic-mafic composite sill that lies within mafic flows. Many of the numerous mafic sills that are intercalated with mafic flows are also composite and they may consist entirely or in part of gabbro and clinopyroxenite units.

The northwestern and southwestern parts of the map-area are, respectively, occupied by granitic intrusive rocks of the Alneau Batholith and the Pipestone Batholith. The latter is compositionally more complex, with abundant mafic xenolithic material and hybrid phases; east of Highway 71, the batholith consists mainly of quartz-poor syeno- and monzodioritic phases.

Adjacent to the granite batholiths are broad contact zones in which the metavolcanics have been metamorphosed to amphibolite facies metamorphic rank, in contrast to the greenschist facies metamorphic rank prevalent elsewhere in the metavolcanic belt.

STRUCTURAL GEOLOGY:

The distribution of rock-units of the metavolcanic belt is strongly affected by the five large-scale east-trending, tight isoclinal folds which have near-vertical axial planes and which plunge, generally, N to NNE at angles varying from 70 degrees to vertical. An intense schistosity, tectonic flattening and stretching is particularly developed in the axial and closure (nose) zones of the folds. Oblique, strike-slip, and axial-plane faults are present in the map-area and several prominent sets of sub-vertical faults, with significant displacements, may be recognized from an inspection of the map. Structural deformation in the metavolcanic belt is evidently the result of several tectonic events of which the most important is probably coincidental with the emplacement of the granite batholiths.

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Two of the author's grab-samples taken from a strong vertically dipping, rusty schist zone exposed on the southeastern shore of the island near the east-central boundary of the map-area (F.M. Martin claim), were analyzed by the Mineral Research Branch, Ontario Division of Mines and yielded 0.34 ounce and 0.04 ounce gold per ton respectively. The schist zone, which is about 15 feet (4.6 m) wide and is traced for 150 feet (45.7 m) strikes generally N85E and lies within a broad zone of shearing that is in the hinge of Blacky Bay Syncline. In the light of current interest in large-tonnage, low-grade gold deposits (this gold occurrence is extremely interesting) and strong shear and schist zones that are associated with fold and fault structures in the map-area merit further investigation.

Sulphide mineralization was not observed within the ultramafic-mafic intrusive suite of rocks. Minor occurrences of cross-fibre picrolite asbestos in serpentinized peridotite sill rocks were encountered in the northern part of the map-area; picrolite asbestos occurs as cross-fibre material in fractures in an ultramafic intrusion that is located on the mainland, 8,000 feet (2,440 m) southwest of Cliff Point.

Sulphide mineralization, mainly pyrite, is found in the thin graphitic argillite beds near the base of the chert-felsic pyroclastic formation. Chalcopyrite and sphalerite are reported (Davies and Morin 1972) to occur in a felsic pyroclastic unit east of Weisner Lake, in the Cedartree Lake area: this same unit extends southward into the present map-area and may be correlative with the chert-felsic pyroclastic formation occupying the south limb of Blacky Bay Syncline.

REFERENCES:

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1933: Geology of the Kakagi Lake Area; Ontario Dept. Mines, Vol.42, pt.4, p.41-92 (published 1934). Accompanied by Map 42b, scale 1 inch to 1 mile.

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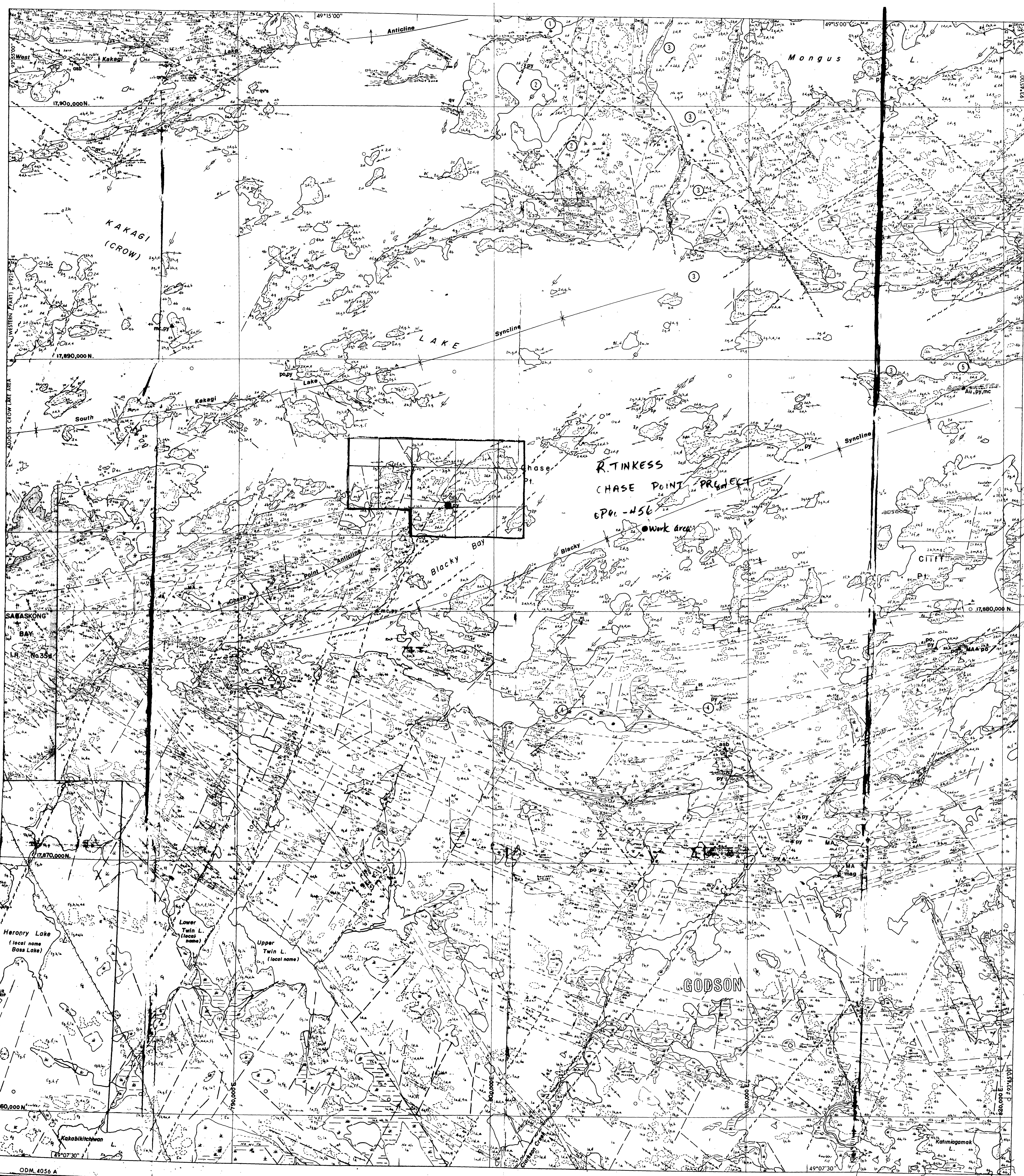

Ontario
Division of Mines

HONOURABLE LEO BERNIER, Minister of Natural Resources
W. Q. MACNEE, Deputy Minister of Natural Resources
G. A. Jewett, Executive Director, Division of Mines — E. G. Pye, Director, Geological Branch

PRELIMINARY MAP P.921
GEOLOGICAL SERIES

CROW LAKE AREA
(Eastern Part)

DISTRICT OF KENORA

Scale 1 inch to ¼ mile

NTS Reference: 52 E/1E, 52 F/4W
ODM-GSC Aeromagnetic Map: 1168G, 1176G
ODM Geological Compilation Series Map: 2115

LEGEND(1)

CENOZOIC
QUATERNARY
RECENT
Swamp, stream, and lake deposits (unconsolidated)

PLEISTOCENE
Clay, silt, sand, gravel, boulder till (unconsolidated)

Unconformity

PRECAMBRIAN
MIDDLE TO LATE PRECAMBRIAN (PROTEROZOIC)
MAFIC INTRUSIVE ROCKS
[6] 6 Diabase (dikes)

Intrusive Contact

EARLY PRECAMBRIAN (ARCHEAN)
FELSIC INTRUSIVE ROCKS
[5]
- 5a Granite
- 5b Granite, inclusion-rich or hybrid
- 5c Granite migmatite
- 5d Porphyritic quartz monzonite, monzonitic granite
- 5f Felsite, aplite, pegmatite (dikes and sills)
- 5g Quartz monzodiorite, monzodiorite, granodiorite

Intrusive Contact

METAMORPHOSED MAFIC AND ULTRAMAFIC INTRUSIVE ROCKS
[4]
- 4a Amphibolite
- 4b Gabbro, hornblende gabbro
- 4c Leucogabbro, anorthositic gabbro
- 4d Clinopyroxenite
- 4e Orthopyroxenite
- 4f Olivine pyroxenite, pyroxene peridotite
- 4g Peridotite

Intrusive Contact

METAMORPHOSED FELSIC INTRUSIVE ROCKS
[3]
- 3a Feldspar porphyry
- 3b Quartz-feldspar porphyry
- 3c Felsite dikes sills

Intrusive Contact

METAVOLCANICS AND METASEDIMENTS
FELSIC TO INTERMEDIATE METAVOLCANICS AND INTERCALATED METASEDIMENTS
[2]
- 2a Rhyolite and rhyodacite
- 2b Rhyolite-rhyodacite tuff
- 2c Dacite
- 2d Dacitic tuff
- 2e Dacitic crystal tuff
- 2f Silicic lapilli-tuff
- 2g Dacitic lapilli-tuff
- 2h Pyroclastic breccia and tuff-breccia
- 2j Pyroclastic breccia ("collapse-breccia" facies)
- 2k Arkosic tuffwacke, felsic tuffwacke
- 2m Chert and cherty tuff
- 2n Argillite (black, graphitic)
- 2p Massive hornblende dacite (may in part be subvolcanic intrusive)
- 2v Sericite schist (derived from felsic pyroclastics)

MAFIC TO INTERMEDIATE METAVOLCANICS
[1]
- 1a Amphibolite
- 1b Massive basalt-andesite lava
- 1c Coarse-grained basalt(2)
- 1d Porphyritic (plagioclase feldspar) basalt
- 1e Subvolcanic basalt and trap dikes
- 1f Tuff
- 1g Lapilli-tuff
- 1p Pillowed basalt-andesite lava
- 1v Variolitic pillowed andesite-basalt lava

[ank.] ankerized rock

[c c c] carbonatized rock

1. This is basically a Field Legend and may be changed as a result of subsequent laboratory investigations.
2. May in part be intrusive.

GEOLOGICAL AND MINING SYMBOLS

- Glacial striae.
- Glacial fluting.
- Small bedrock outcrop.
- Area of bedrock outcrop.
- Bedding, top unknown; (inclined, vertical).
- Bedding, top (arrow) from grain gradation; (inclined).
- Lava flow; top (arrow from pillows shape and packing.
- Schistosity; (inclined, vertical).
- Gneissosity; (inclined, vertical).
- Foliation; (inclined, vertical, dip unknown).
- Banding; (inclined, vertical).
- Lineation with plunge.
- SLICK Slickensides with plunge.
- Geological boundary, observed.
- Geological boundary, position interpreted.
- Fault.
- Lineament or fault.
- Jointing; (inclined, vertical).
- Drag folds with plunge.
- Anticline, syncline, axial trace, with plunge.
- Drill hole; (inclined).
- Shaft.
- Adit.
- MA Magnetic attraction.
- Mineral Occurrence.

METAL AND MINERAL REFERENCE

asb	asbestos	po	pyrrhotite
Au	gold	py	pyrite
mag	magnetite	q	quartz
mc	malachite	qv	quartz vein
		serp	serpentine

LIST OF PROPERTIES FOR P.920 AND P.921

1. Brown, A.A.
2. Canadian Nickel Company Limited
3. HBOG Mining Limited
4. Kennco Explorations (Canada) Limited [1956]
5. Martin, F.M.

Date in square brackets denotes date of last major work on unclaimed parcels of land on which no mineral deposit has been discovered.

SOURCES OF INFORMATION

Geology by ~~L. Kaye and~~ assistants, 1973.
Survey lines are shown only for property owned as of November 30, 1973 and coincide with survey lines shown on Claim Maps M.2102 and M.2475.
Base map derived from Forest Resources Inventory, Ontario Division Lands, with minor revisions by L. Kaye.
ODM-GSC Aeromagnetic Map 1168G, Kakagi Lake Sheet.
ODM-GSC Aeromagnetic Map 1176G, Morson Sheet.
Magnetic declination approximately 6°3'E, 1973.

Issued 1974.

Information from this publication may be quoted if credit is given to the Ontario Division of Mines. It is recommended that reference to this map be made in the following form:

Kaye, L.
1974: Crow Lake Area (Eastern Part), District of Kenora; Ontario Div. Mines, Prelim. Map P.921, Geol. Ser., scale 1 inch to ¼ mile. Geology 1973.

R. TINKESS BOULDER PROJECT OP90-456

8 shafts

MARGINAL NOTES

LOCATION AND ACCESS:

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[illegible] mineralization in the area. Most of the known gold occurrences are associated with quartz veins and stringers in shear zones in basaltic flows, or in strongly schistose zones in felsic to intermediate pyroclastic rocks. Of about 40 grab-samples collected by the author during the field season and analysed for [illegible] by the Mineral Research Branch, Ontario Division of Mines, all yielded at least a trace of gold. Two of the author's samples collected near the shafts at the Trojan Mine and Mascotte Mine prospects yielded 0.13 ounce and 0.10 ounce gold per ton, respectively.

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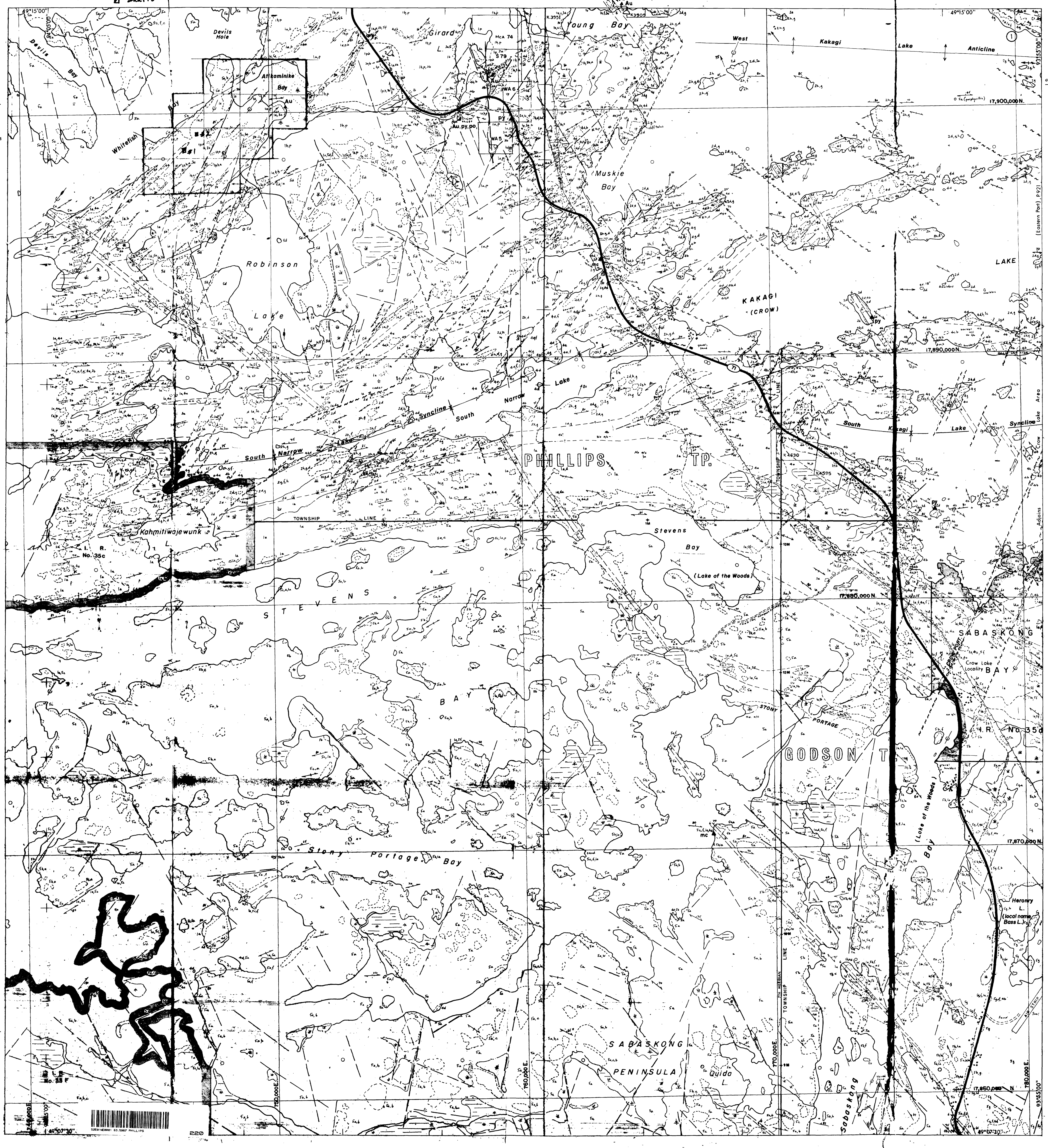

Ontario
Division of Mines

HONOURABLE LEO BERNIER, *Minister of Natural Resources*
W. Q. MACNEE, *Deputy Minister of Natural Resources*
G. A. Jewett, Executive Director, Division of Mines *E. G. Pye, Director, Geological Branch*

PRELIMINARY MAP P.920
GEOLOGICAL SERIES

CROW LAKE AREA
(Western Part)

DISTRICT OF KENORA

Scale 1 inch to ¼ mile

NTS Reference: 52 F/4W
ODM-GSC Aeromagnetic Map: 1168G
ODM Geological Compilation Series Map: 2115

LEGEND[1]

CENOZOIC
QUATERNARY
RECENT
Swamp, stream, and lake deposits (unconsolidated)

PLEISTOCENE
Clay, silt, sand, gravel, boulder till (unconsolidated)

Unconformity

PRECAMBRIAN
MIDDLE TO LATE PRECAMBRIAN (PROTEROZOIC)
MAFIC INTRUSIVE ROCKS
6 — 6 Diabase (dikes)

Intrusive Contact

EARLY PRECAMBRIAN (ARCHEAN)
FELSIC INTRUSIVE ROCKS
5
- 5a Granite
- 5b Granite, inclusion-rich or hybrid
- 5c Granite migmatite
- 5d Porphyritic quartz monzonite, monzonitic granite
- 5f Felsite, aplite, pegmatite (dikes and sills)
- 5g Quartz monzodiorite, monzodiorite, granodiorite

Intrusive Contact

METAMORPHOSED MAFIC AND ULTRAMAFIC INTRUSIVE ROCKS
4
- 4a Amphibolite
- 4b Gabbro, hornblende gabbro
- 4c Leucogabbro, anorthositic gabbro
- 4d Clinopyroxenite
- 4e Orthopyroxenite
- 4f Olivine pyroxenite, pyroxene peridotite
- 4g Peridotite

Intrusive Contact

METAMORPHOSED FELSIC INTRUSIVE ROCKS
3
- 3a Feldspar porphyry
- 3b Quartz-feldspar porphyry
- 3c Felsite dikes sills

Intrusive Contact

METAVOLCANICS AND METASEDIMENTS
FELSIC TO INTERMEDIATE METAVOLCANICS AND INTERCALATED METASEDIMENTS
2
- 2a Rhyolite and rhyodacite
- 2b Rhyolite-rhyodacite tuff
- 2c Dacite
- 2d Dacitic tuff
- 2e Dacitic crystal tuff
- 2f Silicic lapilli-tuff
- 2g Dacitic lapilli-tuff
- 2h Pyroclastic breccia and tuff-breccia
- 2j Pyroclastic breccia ("collapse-breccia" facies)
- 2k Arkosic tuffwacke, felsic tuffwacke
- 2m Chert and cherty tuff
- 2n Argillite (black, graphitic)
- 2p Massive hornblende dacite (may in part be subvolcanic intrusive)
- 2v Sericite schist (derived from felsic pyroclastics)

MAFIC TO INTERMEDIATE METAVOLCANICS
1
- 1a Amphibolite
- 1b Massive basalt-andesite lava
- 1c Coarse-grained basalt[2]
- 1d Porphyritic (plagioclase feldspar) basalt
- 1e Subvolcanic basalt and trap dikes
- 1f Tuff
- 1g Lapilli-tuff
- 1p Pillowed basalt-andesite lava
- 1v Variolitic pillowed andesite-basalt lava

ank. — ankerized rock
c c c — carbonatized rock

1. This is basically a Field Legend and may be changed as a result of subsequent laboratory investigations.
2. May in part be intrusive.

GEOLOGICAL AND MINING SYMBOLS

- Glacial striae.
- Glacial fluting.
- Small bedrock outcrop.
- Area of bedrock outcrop.
- Bedding, top unknown; (inclined, vertical).
- Bedding, top (arrow) from grain gradation; (inclined).
- Lava flow; top (arrow from pillows shape and packing.
- Schistosity; (inclined, vertical).
- Gneissosity; (inclined, vertical).
- Foliation; (inclined, vertical, dip unknown).
- Banding; (inclined, vertical).
- Lineation with plunge.
- SLICK Slickensides with plunge.
- Geological boundary, observed.
- Geological boundary, position interpreted.
- Fault.
- Lineament or fault.
- Jointing; (inclined, vertical).
- Drag folds with plunge.
- Anticline, syncline, axial trace, with plunge.
- Drill hole; (inclined).
- Shaft.
- Adit.
- MA Magnetic attraction.
- ▲ Mineral Occurrence.

METAL AND MINERAL REFERENCE

asb	asbestos	po	pyrrhotite
Au	gold	py	pyrite
mag	magnetite	q	quartz
mc	malachite	qv	quartz vein
		serp	serpentine

LIST OF PROPERTIES FOR P.920 AND P.921

1. Brown, A.A.
2. Canadian Nickel Company Limited
3. HBOG Mining Limited
4. Kennco Explorations (Canada) Limited [1956]
5. Martin, F.M.

Date in square brackets denotes date of last major work on unclaimed parcels of land on which no mineral deposit has been discovered.

SOURCES OF INFORMATION

Geology by L. Kaye and assistants, 1973.
Survey lines are shown only for property owned as of November 30, 1973 and coincide with survey lines shown on Claim Maps M.2102 and M.2475.
Base map derived from Forest Resources Inventory, Ontario Division Lands, with minor revisions by L. Kaye.
ODM-GSC Aeromagnetic Map 1168G, Kakagi Lake Sheet.
ODM-GSC Aeromagnetic Map 1176G, Morson Sheet.
Magnetic declination approximately 6°3'E, 1973.

Issued 1974.

Kaye, L.
1974: Crow Lake Area (Western Part), District of Kenora; Ontario Div. Mines, Prelim. Map P.920, Geol. Ser., scale 1 inch to ¼ mile. Geology 1973.