DIAMOND DR.

010

TOWNSHIP: Bristol

REPORT NO.: 23

WORK PERFORMED BY: Preussag Ltd.

CLAIM NO.	HOLE NO.	FOOTAGE	DATE	NOTE
P 495307	TW-81-1	166.0	Sept/81	(1)
P 495309	TW-81-2	166.0	Sept/81	(1)
	TW-81-3	166.0	Sept/81	(1)
	TW-81-4	176.0	Sept/81	(1)
	TW-81-5	179.0	Sept/81	(1)
P 553054	TW-81-6	150.0	Sept/81	(1)
P 495309	TW-81-7	206.0	Sept/81	(1)
	TW-81-9	287.0	Sept/81	(1)
	TW-81-10	267.0	Sept/81	(1)
P 495307	TW-81-11	251.0	Oct/81	(1)
	10	2014.0		

NOTES: (1) #461-81

PREUSSAG CANADA LIMITED

TIMMINS WEST PROJECT

TIMMINS, ONTARIO

DIAMOND DRILLING - 1981

R.T. Chataway
October, 1981

R.T. Chataway

INTRODUCTION

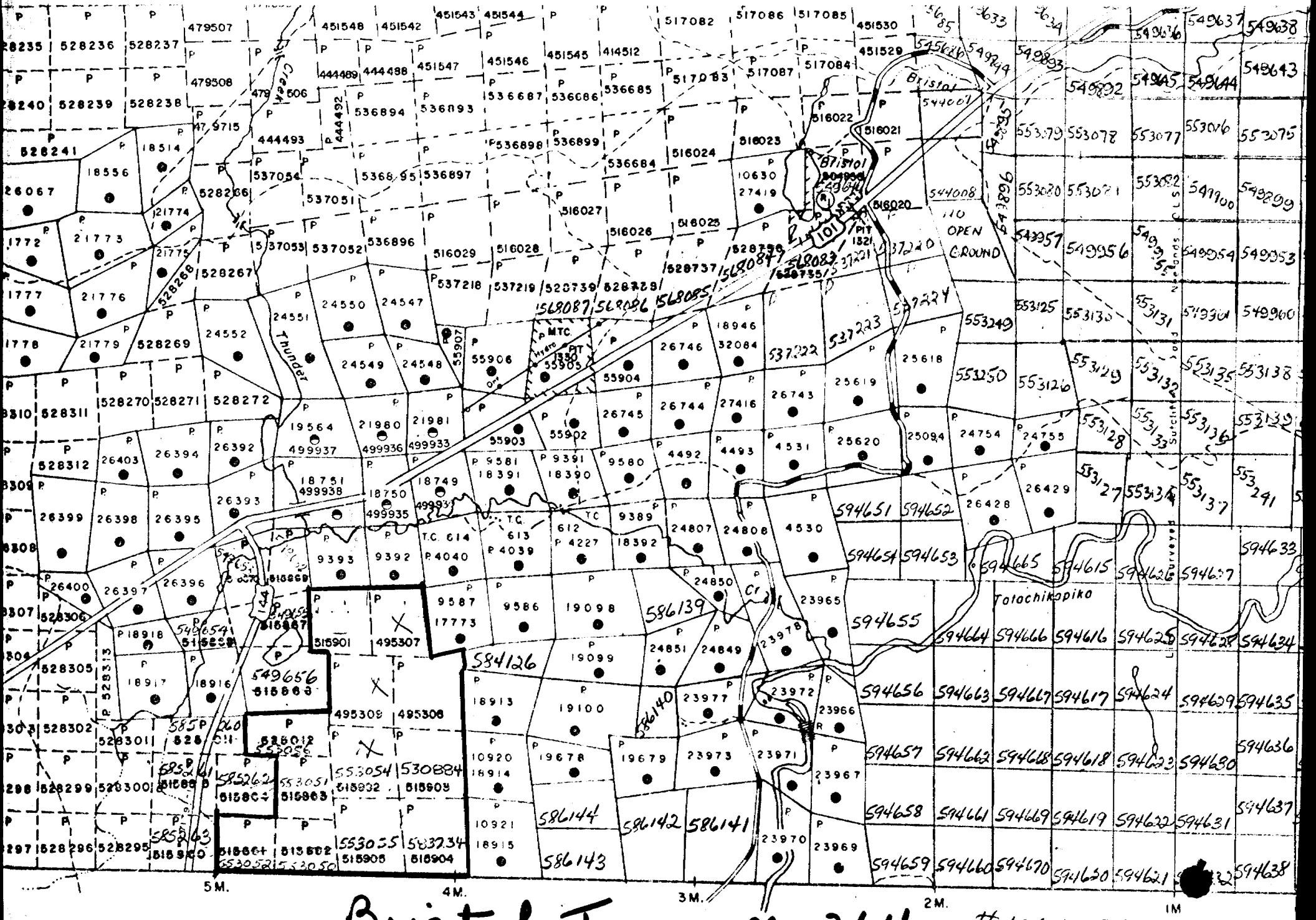
During the period September 2 to October 23, 1981 a total of 2371 feet was drilled by Dominik Drilling Ltd of Timmins, Ontario on the Timmins West property. This was comprised of eleven holes testing geophysical and geological targets. The diameter of the core was BQ (1-7/16").

DRILL LOCATIONS

The following chart summarizes drill hole locations.

D.D.D.	GRID CO-ORDINATES	AZIMUTH	DIP	LENGTH	CLAIM
TW-81-1	3360N/2+05E	120°	-45°	166'	495307
TW-81-2	3290N/1+95E	120°	-45°	166'	495309
TW-81-3	3000N/3+20E	120°	-45°	166'	495309
TW-81-4	3000N/2+70E	120°	-45°	176'	495309
TW-81-5	2760N/3+10E	120°	-45°	179'	495309
TW-81-6	2640N/3+80E	120°	-45°	150'	553054
TW-81-7	3180N/2+55E	300°	-45°	206'	495309
TW-81-8	3240E/1+90N	030	-60°	357'	586904
TW-81-9	3290N/1+70E	120°	-45°	287'	495309
TW-81-10	3000N/2+40E	120°	-50°	267'	495309
TW-81-11	3470N/1+50E	120°	-45°	251'	495307

Drill logs, sections and plans follow.



Bristol Twp. M-264

#461-81

Thornapple Twp. M-217

PREUSSAG

DIAMOND DRILL RECORD

HOLE N° TW-81-1

SHEET N° 1 OF 2

PROPERTY: TIMMINS WEST

LATITUDE: L 3360 N

DEPARTURE: 2+05 E

ELEVATION:

SECTION: 3360 N

DATUM: GRID B

DIP: -45° GRID EAST

BEARING: 120° TRUE

STARTED: September 3, 1981

COMPLETED: September 4, 1981

ULTIMATE DEPTH: 166 ft

PROPOSED DEPTH:

CORE SIZE: BQ

ACID TESTS	
Footage	Corrected Dip
Collar	-45°
166'	-32½
	-43½

DEPTH (Ft)			FORMATION	SAMPLE N°	FROM	TO	LENGTH	Au/oz/t
From	To	Length						
0.0	24.0	24.0	Overburden, sand, no boulders					
24.0	100.0	76.0	Mafic Metavolcanic					
			A fine grained greyish-green chloritic andesite. Fine stringers					
			of carbonate, some are quartzo-feldspathic with minor pyrite.					
			The carbonate stringers are 1 - 5 mm wide and occur with a					
			frequency of 5-10 per foot. Occasionally the fractures are filled					
			by ultramafics.					
			24.0 - 31.0 Broken rock, sub-outcrop					
			31.0 - 33.0 Feldspathic alteration with carbonate stringers					
			33.0 - 38.0 Carbonate stringers at 40° and 20° to the core					
			• axis. Minor pyrite (2%) from 34.5 - 35.5. Chlorite	7534	34.5	35.5	1.0	Nil
			alteration and trace pyrite 35.5 - 40.5.	7575	35.5	40.5	5.0	0.005
			38.0 - 48.0 Variable degree of feldspathic alteration and pyrite					
			up to 10%. Brecciated zones with pyrite at 40.5 -	7535 7576	40.5 42.0	42.0 45.5	1.5 3.5	0.039 0.03
			42.0, 10% pyrite, 45.5 - 46.7, 7% and 47.5 - 48.0, 10%	7536	45.5	48.0	2.5	0.18

Drilled By: Dominik Drilling

Date: September 4, 1981

Logged By: R.T. [redacted]away

PROPERTY TIMMINS WEST

PREUSSAG

DIAMOND DRILL RECORD

HOLE N° TW - 81 - 1

SHEET N° 2 OF 2

DEPTH			FORMATION	SAMPLE N°	FROM	TO	LENGTH	Au/oz/t
From	To	Length						
24.0	100.0	76.0	48.0 - 79.0 Less variable rock type, some carbonate stringers,					
			some feldspathic alteration with quartz-carbonate					
			stringers. Pyrite is disseminated and ranges up to					
			3%. Core angle at 55' is 50° to core axis.					
			48.0 - 53.0 - chloritic stringers of feldspathic	7577	48.0	53.0	5.0	Nil
			alteration, pyrite to 2%.					
			53.0 - 58.0 feldspathic alteration, pyrite to 3-5%,	7578	53.0	58.0	5.0	0.002
			carbonate stringers.	7537	74.5	76.5	2.0	Tr.
			79.0 -100.0 Moderately to strongly chloritized contact zone, no					
			pyrite and fewer carbonate stringers.					
100.0	166.0	66.0	Ultramafic intrusive.					
			Medium to very coarse grained, moderately to strongly chloritic,					
			greyish green rock. Some coarse crystalline biotite-pyroxenite-					
			magnetite zones 104-108, 130-136. Minor felspathic alteration at					
			116, 119.5. Little to no pyrite and few carbonate stringers. Core					
			angles at 130 ft - 45°, 165 ft - 45°. Minor epidote alteration					
			throughout.					
166.0			End of hole					
			Casing pulled.					

Date September 4, 1981

Logged By R. T. Chataway

PREUSSAG

DIAMOND DRILL RECORD

HOLE N° TW - 81 - 2

SHEET N° 1 OF 3

PROPERTY TIMMINS WEST

LATITUDE 3290 N

DEPARTURE 1 + 95 E

ELEVATION

SECTION 3240 N

DATUM GRID B

DIP -45° GRID EAST

BEARING 120° TRUE

STARTED September 5, 1981

COMPLETED September 8, 1981

ULTIMATE DEPTH 166 ft

PROPOSED DEPTH

CORE SIZE BQ

ACID TESTS	
Footage	Corrected Dip
Collar	-45°
166 ft	-44°

DEPTH From	DEPTH To	DEPTH Length	FORMATION	SAMPLE N°	FROM	TO	LENGTH	Au/oz/t
0.0	10.0	10.0	Overburden					
10.0	134.5	124.5	Mafic Metavolcanic					
			A light grey-green, slightly magnetic medium grained rock. Carbonate					
			stringers (1mm - 5mm) are frequently cutting the core at 30-50°.					
			Occasional quartz stringers (5mm) with a reddish stain.					
			10.0-22.0 Core is broken, strong epidote alteration.					
			22.0-40.5 Chlorite and epidote alteration. Rock is dark greenish-					
			grey. Carbonate stringers are abundant. Some feldspathic					
			zones at 27.0-28.0, 38.5-39.0. Variable pyrite content					
			to 5% over 1 foot.					
			40.5-68.0 Fairly uniform epidotized andesite with carbonate stringers					
			and traces of pyrite.					
			68.0-98.0 Moderate chloritic alteration, rock similar to section					
			22.0-40.5, carbonate stringers and feldspathic alteration					
			present. Disseminated pyrite to 3% in andesite and 5%					
			pyrite in quartz-carbonate stringers (1-5mm)					

Drilled By Dominik Drilling

Date September 9/81

Logged By R.T[redacted]ataway

PREUSSAG

PROPERTY TIMMINS WEST

DIAMOND DRILL RECORD

HOLE N° TW-81-2

SHEET N° 2 OF 3

DEPTH			FORMATION	SAMPLE N°	FROM	TO	LENGTH	Au/oz/t
From	To	Length						
10.0	134.5	124.5	but not all stringers.	7583	78.0	83.0	5.0	0.005
	(Cont'd)		83.0-88.0 Pyrite to 1% in andesite	7538	83.0	88.0	5.0	0.026
			88.0-93.0 Pyrite to 1% in andesite	7539	88.0	93.0	5.0	Nil
			93.0-98.0 Pyrite to 1% in andesite	7540	93.0	98.0	5.0	Nil
			98.0-134.5 Reddish syenite intrusive in andesite, up to 50% by					
			volume. Less syenite in section 128.0-134.5 at lower					
			contact. Pyrite occurs as semi-massive brecciated					
			seams to finely disseminated pyrite.					
			98.0-103.0 90% syenite, pyrite 2%	7541	98.0	103.0	5.0	Nil
			103.0-108.0 90% syenite, pyrite 5%	7542	103.0	108.0	5.0	0.003
			108.0-113.0 40% syenite, pyrite 1%	7543	108.0	113.0	5.0	0.006
			113.0-118.0 50% syenite, pyrite 4%	7544	113.0	118.0	5.0	0.10
			118.0-123.0 50% syenite, pyrite, semi-massive in places, to 15%	7545	118.0	123.0	5.0	0.15
			123.0-128.0 Syenite to 50%, pyrite to 10%	7546	123.0	128.0	5.0	0.14
			128.0-134.5 10% syenite, pyrite, 1%.	7547	128.0	134.5	6.5	0.004
			Core angles at 80' are 55°, at 130' are 45°.					
134.5	166.0	31.5	Ultramafic intrusive					
			A dark green moderately magnetic rock with variable chlorite					
			alteration and numerous carbonate stringers, (1mm).					
			Minor pyrite (3%) at 134.5-140.0	7584	134.5	138.5	4.0	0.005
			Course grained "books" of biotite and some magnetic grains from					

Date Sept 9/81

Logged By R.T. Chataway

PREUSSAG

DIAMOND DRILL RECORD

PROPERTY TIMMINS WEST

HOLE N° TW-81-2

SHEET N° 3 OF 3

DEPTH			FORMATION		SAMPLE N°	FROM	TO	LENGTH	Au/oz/t	
From	To	Length								
134.5	166.0	31.5	156.0 - 166.0							
	(Cont'd)									
166.0			End of hole							
			Casing pulled.							

Date Sept 9/81

Logged By R.T. Hataway

PREUSSAG

DIAMOND DRILL RECORD

HOLE N° TW - 81 - 3

SHEET N° 1 OF 2

PROPERTY TIMMINS WEST

LATITUDE 3000 N

DEPARTURE 3 + 20 E

ELEVATION

SECTION 3000 N

DATUM GRID B

DIP -45° GRID EAST

BEARING 120° TRUE

STARTED September 9, 1981

COMPLETED September 9, 1981

ULTIMATE DEPTH 166 ft

PROPOSED DEPTH

CORE SIZE BQ

ACID TESTS	
Footage	Corrected Dip
Collar	-45°
166'	-45°

DEPTH			FORMATION	SAMPLE N°	FROM	TO	LENGTH	Au/oz/t
From	To	Length						
0.0	35.0	35.0	Overburden					
35.0	78.0	43.0	Mafic metavolcanic breccia.					
			A slightly magnetic rock with disseminated pyrite 1-3%. Syenite					
			and ultramafic rock fragments are mixed in with the volcanics.					
			59.0-62.0 Minor carbonate stringers with quartz veining at	7548	59.0	62.0	3.0	Nil
			59.5-60.3, 61.0-62.0	7585	74.0	78.0	4.0	0.005
78.0	132.0	54.0	Syenite Porphyry	7549	78.0	83.0	5.0	0.001
			A light reddish-brown quartz-feldspar porphyry sheared with meta-	7550	83.0	88.0	5.0	Nil
			sediment inclusions. Disseminated pyrite to 3% in section 113.0-	7551	88.0	93.0	5.0	Nil
			119.0, otherwise minor pyrite.	7586	93.0	98.0	5.0	0.002
			Core angles at 65° to core axis at 100.0'	7587	98.0	103.0	5.0	Nil
				7588	103.0	108.0	5.0	0.002
				7552	108.0	113.0	5.0	0.004
				7553	113.0	116.0	3.0	0.002
				7554	116.0	119.0	3.0	0.003
				7555	119.0	123.0	4.0	Nil
132.0	166.0	34.0	Sericitic Argillite					
			A pale greenish-grey fairly hard metasediment. Occasional quartz					

Drilled By Dominik Drilling

Date Sept 10/81

Logged By R.T. [illegible]away

PREUSSAG

PROPERTY TIMMINS WEST

DIAMOND DRILL RECORD

HOLE N° TW - 81 - 3

SHEET N° 2 OF 2

DEPTH			FORMATION	SAMPLE N°	FROM	TO	LENGTH	Au/oz/t
From	To	Length						
132.0	166.0	34.0	veining (5 mm), no pyrite and no intrusive fragments. The rock is					
		(cont'd)	slightly banded at 55° to the core axis.					
166.0			End of hole					
			Casing pulled.					

Date Sept 10/81

Logged By R.T. Shataway

PREUSSAG

DIAMOND DRILL RECORD

HOLE N° TW - 81 - 4

SHEET N° 1 OF 2

PROPERTY TIMMINS WEST

LATITUDE 3000 N

DEPARTURE 2 + 70 E

ELEVATION

SECTION 3000 N

DATUM GRID B

DIP -45° GRID EAST

BEARING 120° TRUE

STARTED September 10, 1981

COMPLETED September 10, 1981

ULTIMATE DEPTH 176 ft

PROPOSED DEPTH

CORE SIZE BQ

ACID TESTS	
Footage	Corrected Dip
Collar	-45°

DEPTH			FORMATION	SAMPLE N°	FROM	TO	LENGTH	Au/oz/t
From	To	Length						
0.0	92.0	92.0	Overburden - mostly sand					
92.0	126.0	34.0	Mafic - Syenite Shear Zone					
			A strongly sheared but competent rock that appears ribbon-banded					
			with abundant carbonate-filling.					
			96.0-101.0 Sheared, pyrite to 10% on seams	7562	96.0	101.0	5.0	Nil
			101.0-106.0 Sheared, pyrite to 10% on seams	7563	101.0	106.0	5.0	Nil
			106.0-111.0 Sheared, pyrite to 5-10%	7564	106.0	111.0	5.0	0.04
			111.0-116.0 Sheared, pyrite to 5-10%	7565	111.0	116.0	5.0	0.002
			116.0-121.0 Sheared, pyrite to 5-10%	7566	116.0	121.0	5.0	Nil
			121.0-126.0 Mafic metavolcanics, less pyrite	7567	121.0	126.0	5.0	Nil
126.0	153.0	27.0	Mafic Tuff					
			A greyish green fairly soft rock with carbonate stringers and	7568	126.0	131.0	5.0	Nil
			fractures filled with carbonate and minor pink feldspars.	7630	137.0	142.0	5.0	Nil

Drilled By Dominik Drilling

Date September 12/81

Logged By R.T. [redacted]away

PREUSSAG

PROPERTY TIMMINS WEST

DIAMOND DRILL RECORD

HOLE N° TW-81-4

SHEET N° 2 OF 2

DEPTH			FORMATION		SAMPLE N°	FROM	TO	LENGTH	Au/oz/t	
From	To	Length								
153.0	176.0	23.0	Mafic Metavolcanic							
			A sheared, slightly magnetic rock with chlorite-epidote alteration							
			and carbonate stringers and carbonate-feldspar fracture fillings.							
			Some minor ultramafic intrusive fragments along shear planes.							
			Disseminated pyrite to 3-5%.							
176.0			End of hole							
			Casing pulled.							

Date September 12/81

Logged By R.J. Chataway

PREUSSAG

HOLE N° TW - 81 - 5.

PROPERTY TIMMINS WEST

DIAMOND DRILL RECORD

SHEET N° 1 OF 2

LATITUDE 2760 N | SECTION 2760 N | STARTED September 11, 1981

DEPARTURE 3 + 10 E | DATUM GRID B | COMPLETED September 13, 1981

DIP -45° GRID EAST | ULTIMATE DEPTH 179 ft.

ELEVATION | BEARING 120° TRUE | PROPOSED DEPTH

CORE SIZE BQ

ACID TESTS	
Footage	Corrected Dip
Collar	-45°

DEPTH			FORMATION	SAMPLE N°	FROM	TO	LENGTH	Au/oz/t
From	To	Length						
0.0	11.0	11.0	Overburden					
11.0	101.0	90.0	Mafic metavolcanic - Syenite.					
			A dark greyish-green magnetic meta-andesite with narrow carbonate	7579	29.0	34.0	5.0	0.002
			stringers and reddish-brown fractures. Feldspar porphyry at	7580	34.0	39.0	5.0	0.002
				7581	62.0	67.0	5.0	Nil
			39.0-46.0, 63.0, 70.5, 80.0-101.0.					
			Quartz veining at 30.0-30.5, 33.5-33.6, 35.0-35.5, 55.4-56.0,	7556	80.0	83.0	3.0	Tr
				7557	83.0	88.0	5.0	Nil
			64.0-64.1, 72.5-75.0. Traces of pyrite along fractures and	7558	88.0	93.0	5.0	0.001
				7559	93.0	98.0	5.0	0.001
			veining, generally pyrite in more mafic unit (1-3%).	7560	98.0	101.0	3.0	0.003
			80-101 less porphyry intrusive mixed with mafic metavolcanic.	7590	131.0	136.0	5.0	Nil
				7591	146.0	151.0	5.0	0.005
				7592	169.0	174.0	5.0	Nil
101.0	179.0	78.0	Feldspar Porphyry					
			A very hard siliceous syenite, brick red to greyish-pink in colour	7561	101.0	104.0	3.0	0.004
			with numerous barren quartz veins at 30° and 60° to core axis.	7581	104.0	109.0	5.0	0.005
			Phenocrysts make up 50-75% of the rock by volume.	7582	118.0	123.0	5.0	0.002

Drilled By Dominik Drilling | Date Sept 12/81 | Logged By R.T. Chataway

PREUSSAG

PROPERTY TIMMINS WEST

DIAMOND DRILL RECORD

HOLE N° TW - 81 - 5

SHEET N° 2 OF 2

DEPTH			FORMATION	SAMPLE N°	FROM	TO	LENGTH	Au/oz/t
From	To	Length						
101.0	179.0	78.0	Coarse feldspar (2 mm) consist of 5% white finer quartz and					
		(Cont'd)	feldspar phenos are in the matrix. Very finely disseminated					
			pyrite ranges up to 1%.					
179.0			End of hole.					
			Casing stuck in hole					

Date Sept 12/81

Logged By R.T. Chataway

PREUSSAG

DIAMOND DRILL RECORD

HOLE N° TW - 81 - 6

SHEET N° 1 OF 1

PROPERTY TIMMINS WEST

LATITUDE 2640 N

DEPARTURE 3 + 80 E

ELEVATION

SECTION 2640 N

DATUM GRID B

DIP -45° GRID EAST

BEARING 120° TRUE

STARTED September 14, 1981

COMPLETED September 15, 1981

ULTIMATE DEPTH 150 ft

PROPOSED DEPTH

CORE SIZE BQ

ACID TESTS	
Footage	Corrected Dip
Collar	-45°

DEPTH			FORMATION	SAMPLE N°	FROM	TO	LENGTH	Au/oz/t
From	To	Length						
0.0	10.0	10.0	Overburden					
10.0	150.0	140.0	Feldspar porphyry					
			A medium grained pinkish-brown massive intrusive with a very	7569	36.0	41.0	5.0	Nil
				7570	51.0	56.0	5.0	Nil
			hard matrix. Minor changes in mafic mineral content of	7571	76.0	81.0	5.0	0.002
				7572	94.0	99.0	5.0	Nil
			porphyry. Water seams reported at 75.0' and 150.0'	7573	108.5	113.5	5.0	Nil
				7574	126.0	131.0	5.0	Nil
150.0			End of hole					
			Casing pulled					

Drilled By Dominik Drilling

Date Sept 15/81

Logged By R.T. [redacted]taway

PREUSSAG

DIAMOND DRILL RECORD

HOLE N° TW - 81 - 7

SHEET N° 1 OF 2

PROPERTY TIMMINS WEST

LATITUDE 3180 N

DEPARTURE 2 + 55E

ELEVATION

SECTION 3120 N

DATUM GRID B

DIP -45° GRID WEST

BEARING 300° TRUE

STARTED September 16, 1981

COMPLETED September 17, 1981

ULTIMATE DEPTH 206 ft.

PROPOSED DEPTH

CORE SIZE BQ

ACID TESTS	
Footage	Corrected Dip
Collar	-45°

DEPTH			FORMATION	SAMPLE N°	FROM	TO	LENGTH	Au/oz/t
From	To	Length						
0.0	26.0	26.0	Overburden.					
26.0	104.0	78.0	Mafic to Dacitic Metavolcanic.					
			A dark grey-green, fairly hard magnetic rock with chlorite and					
			epidote alteration and carbonate.					
			26.0-44.0 Strong epidote alteration with minor feldspathic	7593	30.0	35.0	5.0	Nil
				7594	35.0	40.0	5.0	Nil
			alteration. Pyrite ranges from a trace to 5%. Magnetic	7595	40.0	45.0	5.0	Nil
				7596	45.0	50.0	5.0	Nil
			44.0-67.5 Magnetite and epidote grains, pyrite from trace to 2%	7597	50.0	55.0	5.0	Nil
			with some in 1" semi-massive bands.	7598	55.0	60.0	5.0	0.002
			67.5-104.0 Strong epidote, feldspathic alteration occasionally.	7599	60.0	65.0	5.0	Nil
				7600	65.0	70.0	5.0	Nil
			Pyrite 1-2% from 67.5 - 93.0. Trace pyrite from 93.0 -	7601	70.0	75.0	5.0	Nil
				7602	75.0	80.0	5.0	Nil
			104.0. In places calcite-filled amygdules.	7603	80.0	85.0	5.0	Nil
				7604	85.0	88.0	3.0	Nil
				7605	88.0	91.0	3.0	Nil
				7606	91.0	93.0	2.0	Nil
				7607	93.0	98.0	5.0	Nil
				7608	98.0	104.0	6.0	Nil
104.0	206.0	101.0	Mafic Metavolcanic					
			A dark grey-green mafic metavolcanic with numerous carbonate stringers.					
			Pervasive epidote alteration. Very weakly magnetic. Feldspathic					

Drilled By Dominik Drilling Date ~~Sept 17/81~~ Logged By R.T. Chataway

PREUSSAG

PROPERTY TIMMINS WEST

DIAMOND DRILL RECORD

HOLE N° TW-81-7

SHEET N° 2 OF 2

DEPTH			FORMATION		SAMPLE N°	FROM	TO	LENGTH	Au/oz/t	
From	To	Length								
104.0	206.0	101.0	rock from 143.0 - 152.0							
		(Cont'd)								
206.0			End of hole							
			Casing pulled.							

Sept 17/81

Date

R.T. Hathaway

Logged By

PREUSSAG

DIAMOND DRILL RECORD

HOLE N° TW - 81 - 9

SHEET N° 1 OF 2

PROPERTY TIMMINS WEST

LATITUDE 3290 N

DEPARTURE 1 + 75 E

ELEVATION

SECTION 3240 N

DATUM GRID B

DIP -45° GRID EAST

BEARING 120° TRUE

STARTED September 25, 1981

COMPLETED September 26, 1981

ULTIMATE DEPTH 287 feet

PROPOSED DEPTH

CORE SIZE BQ

ACID TESTS	
Footage	Corrected Dip
Collar	-45°

DEPTH			FORMATION	SAMPLE N°	FROM	TO	LENGTH	Au/oz/t
From	To	Length						
0.0	10.0	10.0	Overburden					
10.0	227.0	217.0	Mafic to Dacitic metavolcanic.					
			A light to dark grey-green magnetic moderately hard rock with					
			chlorite and epidote alteration and carbonate stringers.					
			10.0-29.0 A chloritic-magnetic dark greyish-green mafic volcanic.					
			Minor epidote alteration carbonate stringers through-					
			out. A narrow (1") feldspathic-quartz vein at 26.0 ft.					
			Reddish-brown alteration on some fractures. Pyrite (1%)					
			disseminated in rock with traces of chalcopyrites.					
			29.0-98.0 An altered mafic metavolcanic similar to section 10.0-					
			29.0 except for stronger epidote alteration. Strong					
			carbonate occurs at 76.5-84.5, 91.0-93.0 with fine					
			grained magnetite in andesite. Pyrite occurs as fine					
			grained disseminations ranging from 1-3% in this					
			section. Reddish brown alteration occurs at 36.0-37.5,					
			51.0-52.0 and 64.0-67.0					

Drilled By Dominik Drilling

Date Sept 26, 1981

Logged By R.T. [illegible]taway

PREUSSAG

PROPERTY TIMMINS WEST

DIAMOND DRILL RECORD

HOLE N° TW - 81 - 9

SHEET N° 2 OF 2

DEPTH From	DEPTH To	DEPTH Length	FORMATION	SAMPLE N°	FROM	TO	LENGTH	Au/oz/t
10.0	227.0	217.0	98.0-185.5 Abundant carbonate stringers cutting the core.					
		(Cont'd)	Feldspathic alteration near fractures. Pyrite varies					
			from 1-5% occasionally as medium grained cubes.					
			149.0-154.0 tr. py in mafics	7615	149.0	154.0	5.0	Nil
			154.0-159.0 pervasive feldspar 3% Py	7616	154.0	159.0	5.0	0.002
			159.0-164.0 vuggy carbonate. 2% Py	7617	159.0	164.0	5.0	Nil
			164.0-169.0 chlorite, epidote alteration	7618	164.0	169.0	5.0	0.002
			169.0-174.0 chlorite, epidote alteration	7619	169.0	174.0	5.0	Nil
			174.0-179.0 feldspathic alt. Py 5%	7620	174.0	179.0	5.0	Nil
			179.0-184.0 trace py	7621	179.0	184.0	5.0	Nil
			185.5-227.0 Strong epidote alteration similar to section 29.0-	7622	184.0	189.0	5.0	Nil
				7623	189.0	194.0	5.0	Nil
			98.0 with epidote and quartzo-feldspathic alteration	7624	194.0	199.0	5.0	0.002
			zones prominent. Disseminated pyrite up to 10% but	7625	199.0	204.0	5.0	Nil
				7626	204.0	209.0	5.0	Nil
			generally 1-3% in the mafic volcanics. Weakly	7627	209.0	214.0	5.0	Nil
			magnetic with carbonate stringers throughout.	7628	214.0	219.0	5.0	Nil
				7629	219.0	224.0	5.0	Nil
227.0	287.0	60.0	Ultramafic					
			A dark greenish grey medium grained magnetic intrusive with chloritic					
			alteration and carbonate stringers. From 268.5-269.5 and 281.0-					
			283.0 is quartzo-feldspathic breccia. Sections of coarse grained					
			biotite-epodite-chlorite occur at 237.0-240.0, 255.5-268.5, 272.0-275.0					
			and 283.0-287.0					
287.0			End of Hole					
			Casing Pulled					

Date Sept 26, 1981

Logged By R.T. Whataway

PREUSSAG

DIAMOND DRILL RECORD

HOLE N° TW-81-10

SHEET N° 1 OF 2

PROPERTY TIMMINS WEST

LATITUDE 3000N

DEPARTURE 2 + 40 E

ELEVATION

SECTION 3000N

DATUM GRID B

DIP -50° GRID EAST

BEARING 120° TRUE

STARTED September 28, 1981

COMPLETED September 28, 1981

ULTIMATE DEPTH 267 feet

PROPOSED DEPTH

CORE SIZE BQ

ACID TESTS	
Footage	Corrected Dip
Collar	-50°

DEPTH			FORMATION	SAMPLE N°	FROM	TO	LENGTH	Au/oz/t
From	To	Length						
0.0	70.0	70.0	Overburden					
70.0	230.0	160.0	Sheared Mafic Matavolcanic.					
			A sheared and partly brecciated mafic metavolcanic with					
			syenite injections and quartz-feldspar dykes. The mafic units					
			are slightly magnetic and have abundant carbonate stringers.	7631	77.0	82.0	5.0	Nil
			Trace to minor pyrite occurs along shear planes.					
			100.0-120.0 Mostly syenite with mafic inclusions	7632	102.0	107.0	5.0	Nil
				7633	110.5	112.5	2.0	Nil
			120.0-150.0 Mostly mafic with syenite	7634	142.0	147.0	5.0	Nil
				7635	147.0	151.0	4.0	Nil
			150.0-197.0 Mostly syenite with fault breccia at 162.0 and	7636	151.0	156.0	5.0	Nil
			175.0	7637	156.0	161.0	5.0	Nil
			210.0-230.0 Mostly mafic metavolcanic with injected syenite or	7638	161.0	166.0	5.0	Nil
			feldspathic alteration on fractures. Slightly	7639	177.0	182.0	5.0	0.005
			magnetic and epidote alteration evident. Trace to	7640	182.0	187.0	5.0	0.002
			1% pyrite noted along fractures. Carbonate stringers					
			are common.					

Drilled By Dominik Drilling

Date September 29, 1981

Logged By R.T. Chataway

PREUSSAG

PROPERTY TIMMINS WEST

DIAMOND DRILL RECORD

HOLE N° TW-81-10

SHEET N° 2 OF 2

DEPTH			FORMATION	SAMPLE N°	FROM	TO	LENGTH	Au/oz/t
From	To	Length						
230.0	258.0	28.0	Ultramafic intrusive.					
			A magnetic-rich, chlorite altered rock with mafic inclusions.					
258.0	267.0	9.0	Dacite metavolcanic.					
			Similar rock to mafics but harder and epidotized.					
267.0			End of hole					
			Casing pulled.					

Date September 29, 1981

Logged By R.T. Ataway

PREUSSAG

DIAMOND DRILL RECORD

HOLE N° TW-81-11

SHEET N° 1 OF 2

PROPERTY TIMMINS WEST

LATITUDE 3470 N | SECTION 3480 N | STARTED October 21/81

DEPARTURE 1+50 E | DATUM GRID B | COMPLETED October 23/81

ELEVATION | DIP -45° GRID EAST | ULTIMATE DEPTH 251 ft.

BEARING 120° TRUE | PROPOSED DEPTH

CORE SIZE BQ

ACID TESTS	
Footage	Corrected Dip
Collar	-45°

DEPTH From	DEPTH To	DEPTH Length	FORMATION	SAMPLE N°	FROM	TO	LENGTH	Au/oz/t
0.0	4.0	4.0	Overburden					
4.0	251.0	247.0	Mafic Metavolcanic					
			A greyish green magnetic fairly hard dacitic andesite with minor					
			chlorite, strong epidote and calcium carbonate throughout.	12801	32.5	37.5	5.0	Nil
			Felsite-rich accumulations and feldspathic shears are common.	12802	66.0	71.0	5.0	Nil
			Pyrite is variable ranging from trace to less than 1/2% to	12803	71.0	76.0	5.0	Nil
			5% in narrow shears.	12804	86.0	91.0	5.0	Nil
			98-193.0 Strong epidote and felsic accumulations and					
			feldspathic alteration common. Carbonate stringers	12805	129.5	134.5	5.0	Nil
			are frequent and often cross-cutting.					
			193.0-251.0 Chloritic mafic metavolcanic.					
			A dark grey-green strongly chloritic rock with strong					
			epidote alteration. Calcium carbonate stringers are	12806	196.0	201.0	5.0	Nil
			numerous, feldspathic filled fractures were noted.	12807	201.0	206.0	5.0	Nil
			Pyrite occurs, as fine grained disseminations up to	12808	215.0	220.0	5.0	Nil
			2%. The rock is weakly magnetic	12809	220.0	225.0	5.0	Nil

Contractor Dominik Drilling Date October 23/81 Logged By R.T. [redacted]taway

PREUSSAG

PROPERTY TIMMINS WEST

DIAMOND DRILL RECORD

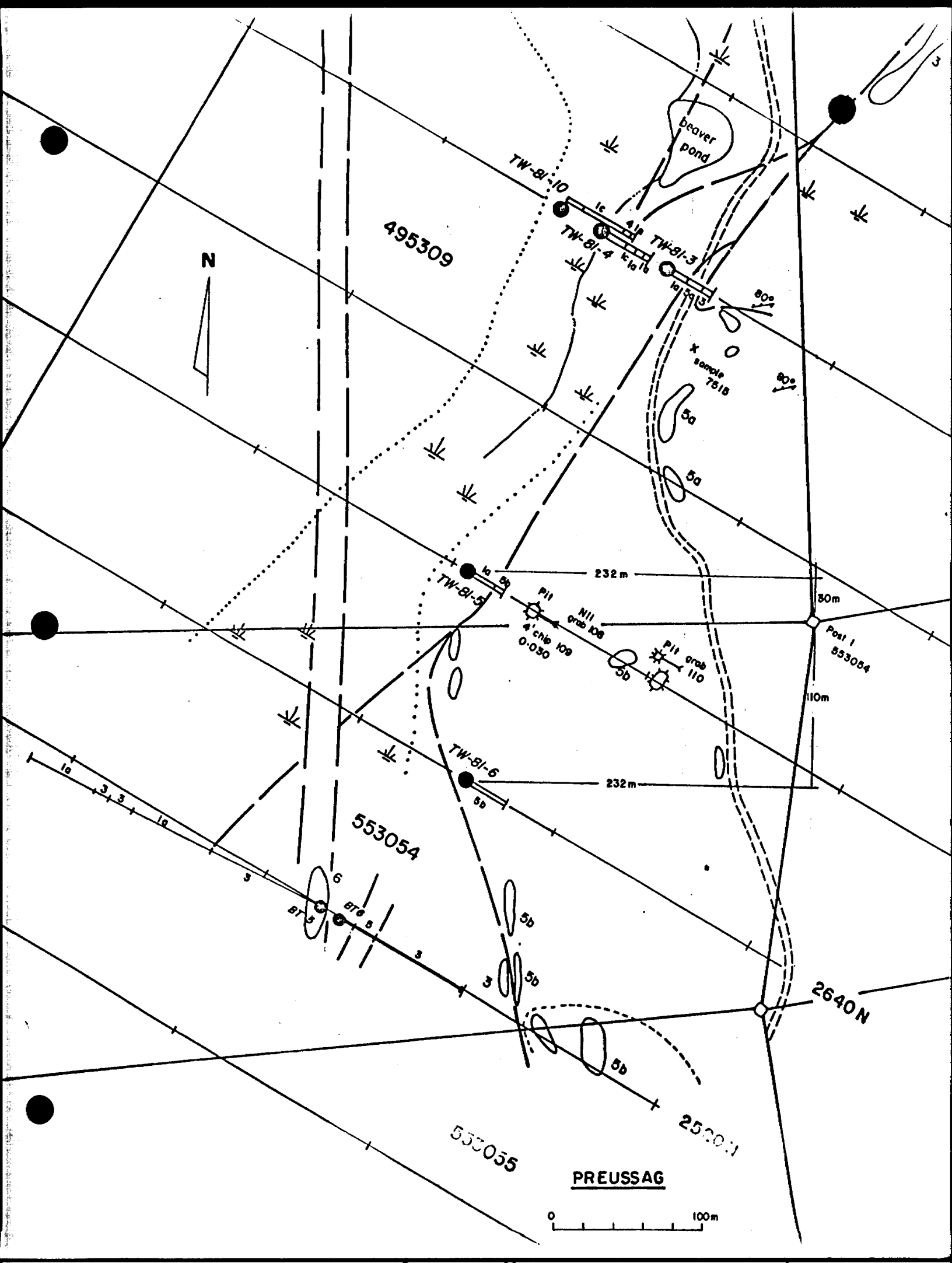
HOLE N° TW-81-11

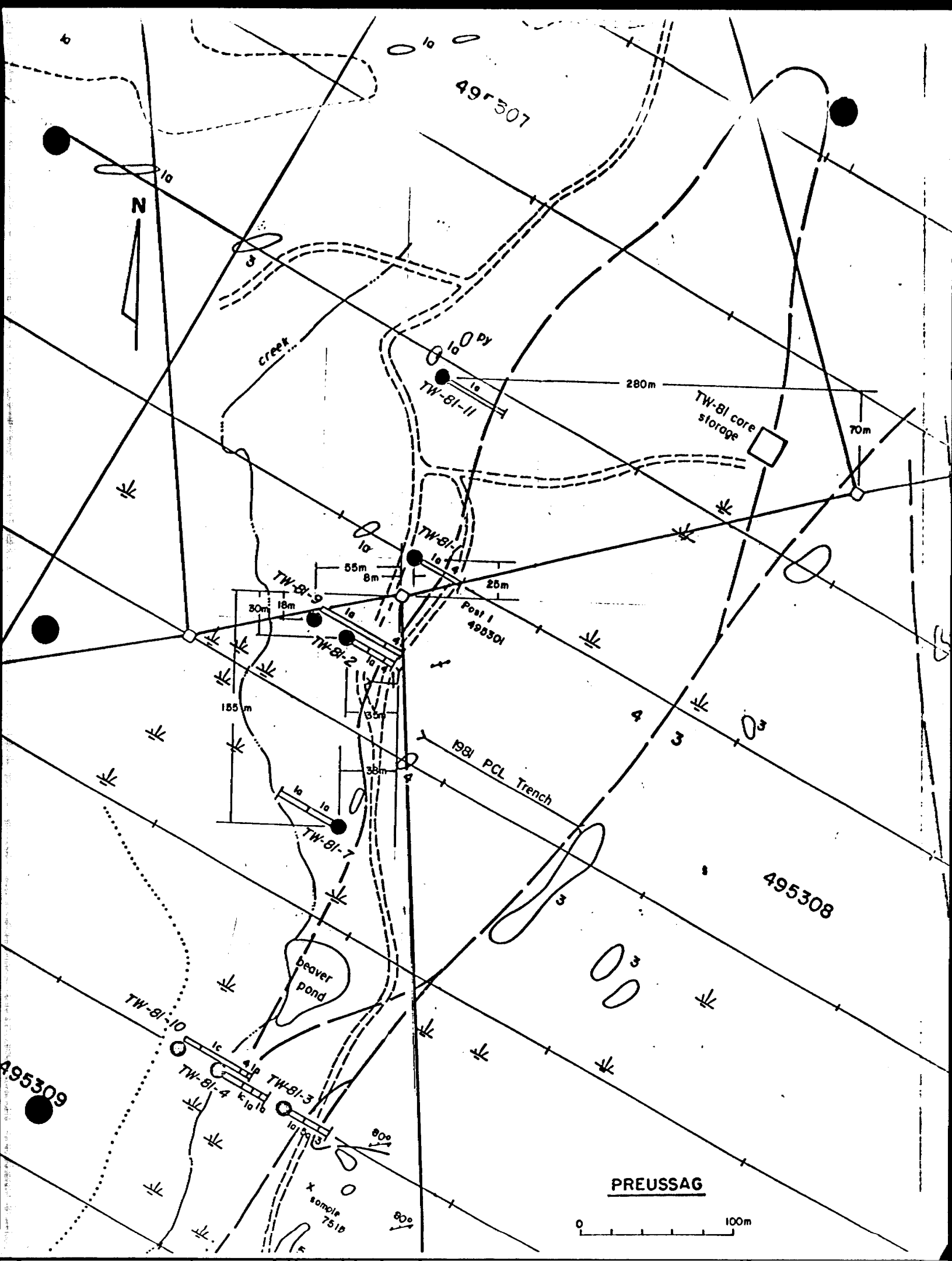
SHEET N° 2 OF 2

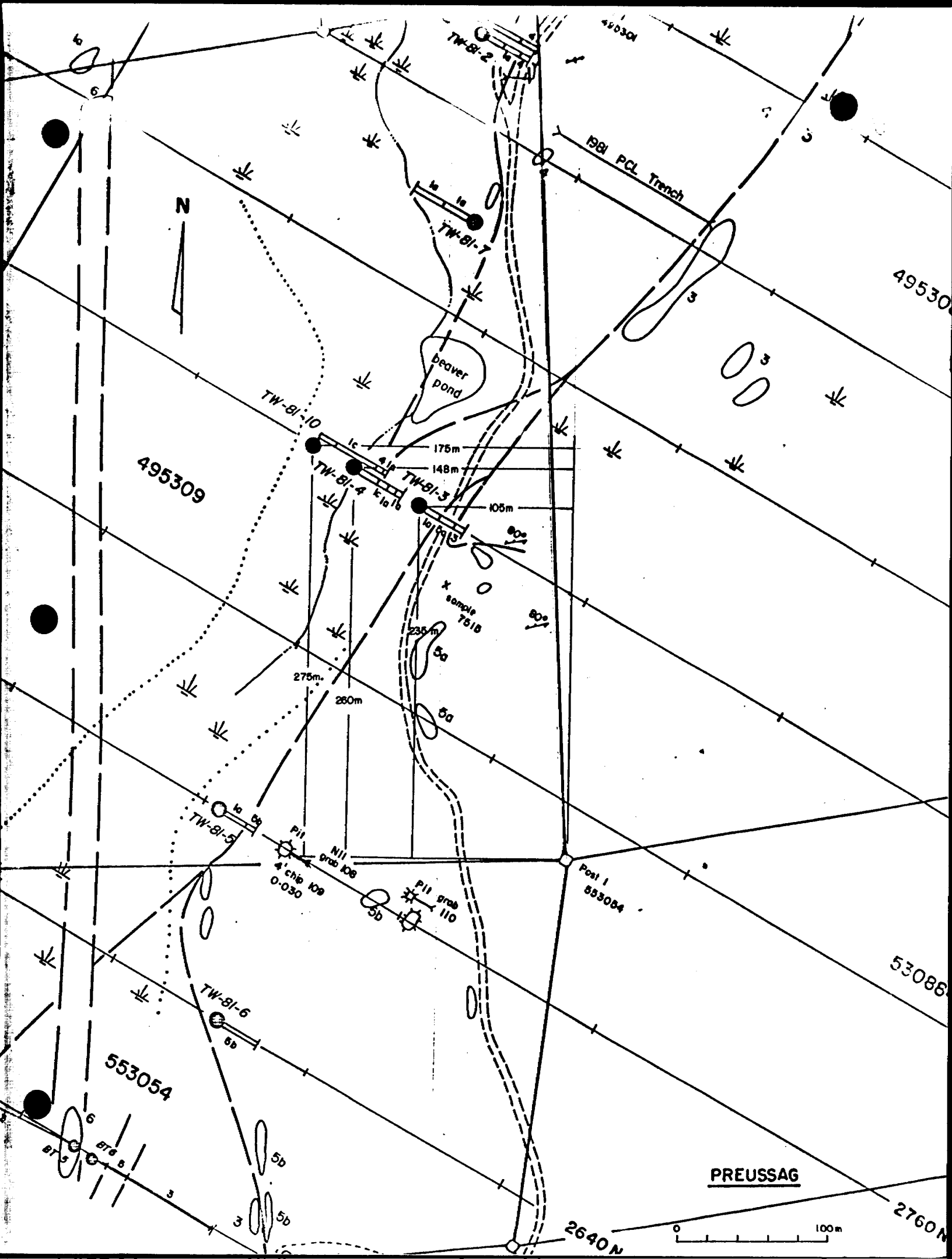
DEPTH			FORMATION	SAMPLE N°	FROM	TO	LENGTH	Au/oz/t
From	To	Length						
4.0	251.0	247.0		12810	235.0	240.0	5.0	Nil
		(Cont'd)		12811	240.0	245.0	5.0	Nil
251.0			End of hole					
			Casing pulled					

Date October 23/81

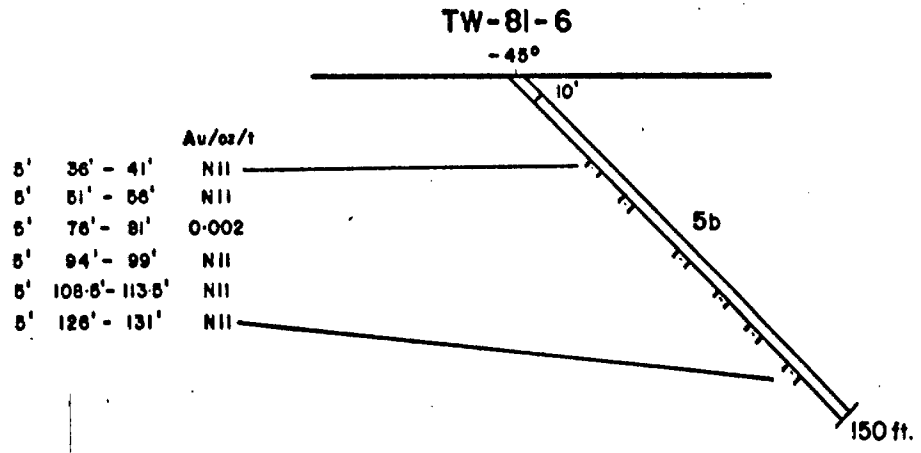
Logged By R.T. Chalaway


beaver pond
TW-81-10
TW-81-4
TW-81-3
TW-81-5
TW-81-6
495309
553054
553035
N
1c
4b
1a
1b
5a
5b
80°
x sample 7818
232 m
50m
110m
P11
N11 grab 108
4' chip 108 0.050
P11 grab 110
Post 1 553054
1a
3
3
1a
6
BT 5
BTS 5
2640N
2500N
PREUSSAG
0
100m


49r307
N
creek
TW-81-11
280m
TW-81 core storage
70m
TW-81-1
55m
8m
25m
TW-81-9
30m
18m
TW-81-2
Post 1
495301
155m
35m
38m
1981 PCL Trench
TW-81-7
495308
beaver pond
TW-81-10
TW-81-4
TW-81-3
495309
80°
x sample 7518
PREUSSAG
0
100m


1981 PCL Trench
N
beaver pond
TW-81-1
TW-81-2
TW-81-3
TW-81-4
TW-81-5
TW-81-6
TW-81-10
175m
148m
105m
235m
275m
260m
sample 7518
Pit
Nil
4' chip 109
0.030
grab 108
Pit grab 110
Post 1
553084
495309
553054
PREUSSAG
2640N
2760N
100m

375E 390E GRID D



LEGEND

PRECAMBRIAN

Mafic Intrusive Rocks

6 Quartz diabase

Felsic Intrusive Rocks

5 Syenite a Quartz feldspar porphyry
b Feldspar porphyry

Ultramafic Rocks

4 Pyroxenite

Metasediments

3 Argillite

Felsic Metavolcanics

2 Rhyolite

Mafic Metavolcanics

1 Andesite a massive lava
b pillow lavas
c pink feldspathized shear

IF Iron Formation

S Sulphides, py - pyrite

Scale 1:750

10 0 10 20 30 40 50 Metres

PREUSSAG CANADA LIMITED

TIMMINS WEST
Project 43

Drill Section

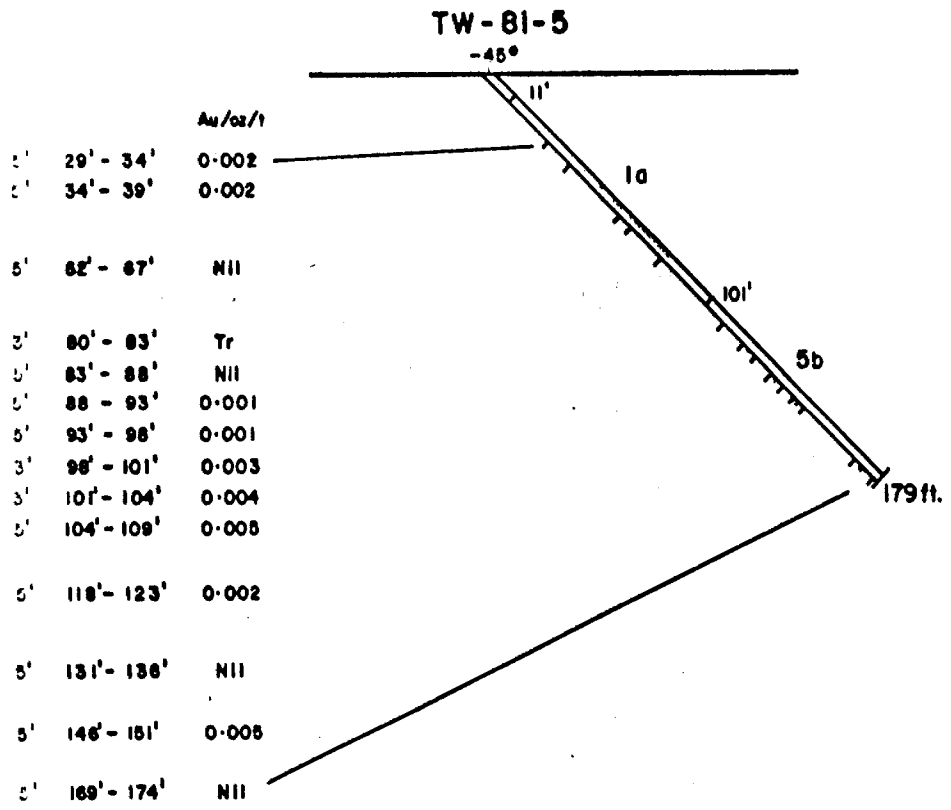
2640 N

RTC

Date Oct. '81 RTC NTS 42/A/5

300E 315E

GRID B



LEGEND

PRECAMBRIAN

Mafic Intrusive Rocks
- 6 Quartz diabase

Felsic Intrusive Rocks
- 5 Syenite a Quartz feldspar porphyry
  b Feldspar porphyry

Ultramafic Rocks
- 4 Pyroxenite

Metasediments
- 3 Argillite

Felsic Metavolcanics
- 2 Rhyolite

Mafic Metavolcanics
- 1 Andesite a massive lava
  b pillow lavas
  c pink feldspathized sheor
- IF Iron Formation
- S Sulphides, py - pyrite

Scale 1 : 750

10 0 10 20 30 40 50 Metres

PREUSSAG CANADA LIMITED

TIMMINS WEST
Project 43

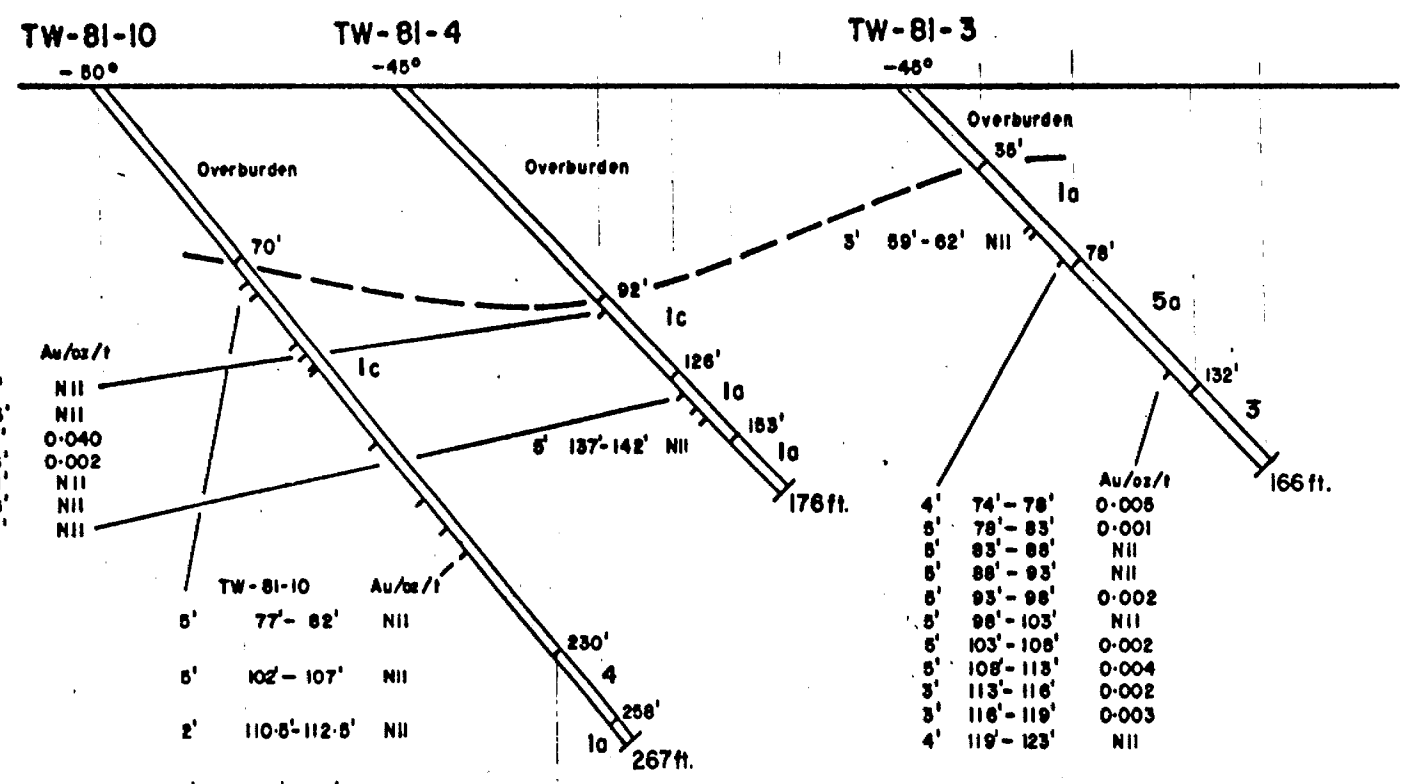
Drill Section

2760 N

Date Oct. '81 RTC NTS 42/A/5

270E 285E

GRID B



TW-81-4		Au/oz/t
5'	96'-101'	Nil
5'	101'-106'	Nil
5'	106'-111'	0·040
5'	111'-116'	0·002
5'	116'-121'	Nil
5'	121'-126'	Nil
5'	126'-131'	Nil

TW-81-10		Au/oz/t
5'	77'-82'	Nil
5'	102'-107'	Nil
2'	110·5'-112·5'	Nil
5'	142'-147'	Nil
4'	147'-151'	Nil
5'	151'-156'	Nil
5'	156'-161'	Nil
5'	161'-166'	Nil
5'	177'-182'	0·005
5'	182'-187'	0·002

	Au/oz/t	
4'	74'-78'	0·005
5'	78'-83'	0·001
5'	83'-88'	Nil
5'	88'-93'	Nil
5'	93'-98'	0·002
5'	98'-103'	Nil
5'	103'-108'	0·002
5'	108'-113'	0·004
3'	113'-116'	0·002
3'	116'-119'	0·003
4'	119'-123'	Nil

LEGEND

PRECAMBRIAN

Mafic Intrusive Rocks

6 Quartz diabase

Felsic Intrusive Rocks

5 Syenite a Quartz feldspar porphyry
b Feldspar porphyry

Ultramafic Rocks

4 Peridotite

Metasediments

3 Argillite

Felsic Metavolcanics

2 Rhyolite

Mafic Metavolcanics

1 Andesite a massive lava
b pillow lavas
c pink feldspathized shear

IF Iron Formation

S Sulphides, py-pyrite

Scale 1:750

10 0 10 20 30 40 50 Metres

PREUSSAG CANADA LIMITED

TIMMINS WEST
Project 43

Drill Section

3000 N

RTC

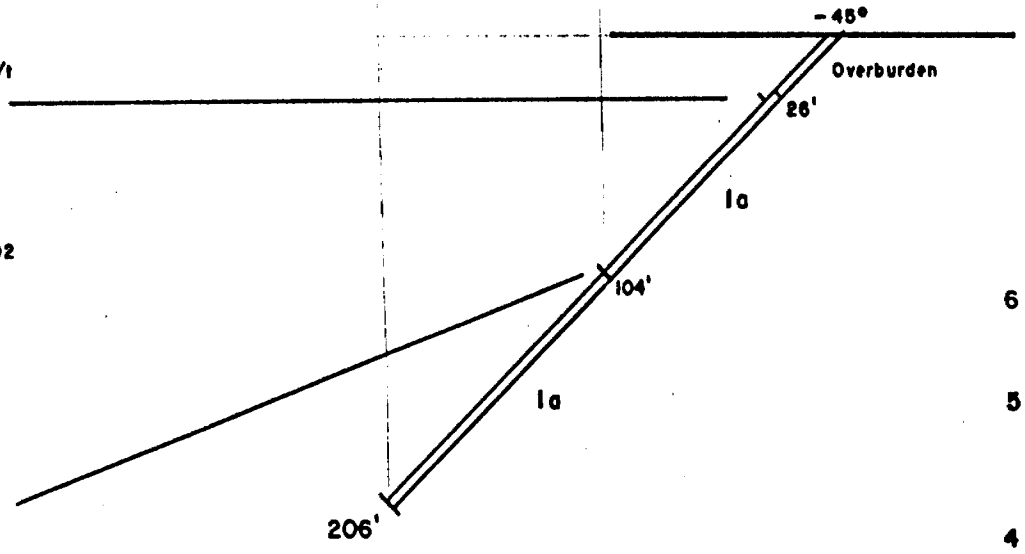
Date Oct.'81 RTC NTS 42/A/5

240E 255E GRID B

SECTION 3180N

TW-81-7

-45°



		Au/oz/t
5·0'	30·0' – 35·0'	Nil
5·0'	35·0' – 40·0'	Nil
5·0'	40·0' – 45·0'	Nil
5·0'	45·0' – 50·0'	Nil
5·0'	50·0' – 55·0'	Nil
5·0'	55·0' – 60·0'	0·002
5·0'	60·0' – 65·0'	Nil
5·0'	65·0 – 70·0	Nil
5·0'	70·0' – 75·0'	Nil
5·0'	75·0' – 80·0'	Nil
5·0'	80·0' – 85·0'	Nil
3·0'	85·0' – 88·0'	Nil
3·0'	88·0' – 91·0'	Nil
2·0'	91·0' – 93·0'	Nil
5·0'	93·0' – 98·0'	Nil
6·0'	98·0' – 104·0'	Nil

LEGEND

PRECAMBRIAN

Mafic Intrusive Rocks

6 Quartz diabase

Felsic Intrusive Rocks

5 Syenite a Quartz feldspar porphyry
b Feldspar porphyry

Ultramafic Rocks

4 Pyroxenite

Metasediments

3 Argillite

Felsic Metavolcanics

2 Rhyolite

Mafic Metavolcanics

1 Andesite a massive lava
b pillow lavas
c pink feldspathized sheor

IF Iron Formation

S Sulphides, py-pyrite

Scale 1:750

10 0 10 20 30 40 50 Metres

PREUSSAG CANADA LIMITED

TIMMINS WEST
Project 43

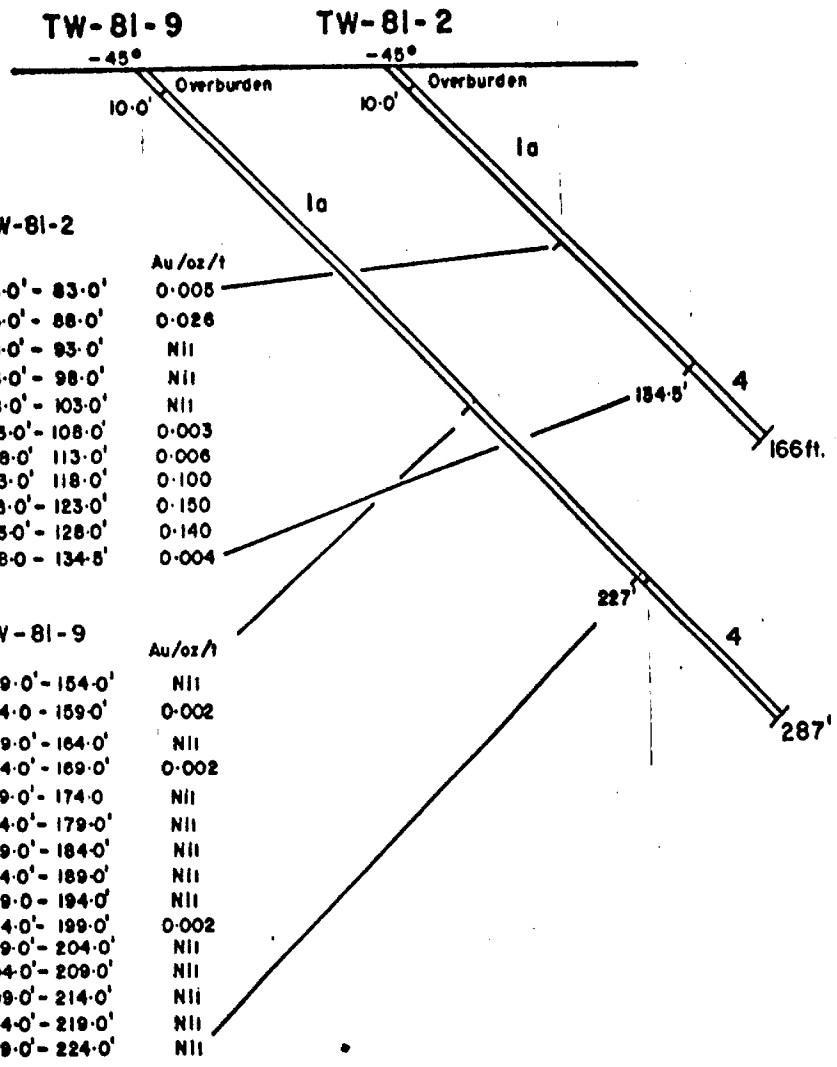
Drill Section

3120N

165E 180E 195E

GRID B

SECTION 3290 N



TW-81-2

		Au/oz/t
5·0'	78·0' - 83·0'	0·005
5·0'	83·0' - 88·0'	0·026
5·0'	88·0' - 93·0'	Nil
5·0	93·0' - 98·0'	Nil
5·0'	98·0' - 103·0'	Nil
5·0'	103·0' - 108·0'	0·003
5·0'	108·0' 113·0'	0·006
5·0'	113·0' 118·0'	0·100
5·0'	118·0' - 123·0'	0·150
6·0'	123·0' - 128·0'	0·140
6·5'	128·0 - 134·5'	0·004

TW-81-9

		Au/oz/t
5·0'	149·0' - 154·0'	Nil
5·0'	154·0 - 159·0'	0·002
5·0'	159·0' - 164·0'	Nil
5·0'	164·0' - 169·0'	0·002
5·0'	169·0' - 174·0	Nil
5·0'	174·0' - 179·0'	Nil
5·0'	179·0' - 184·0'	Nil
5·0'	184·0' - 189·0'	Nil
5·0'	189·0 - 194·0'	Nil
5·0'	194·0' - 199·0'	0·002
5·0'	199·0' - 204·0'	Nil
5·0'	204·0' - 209·0'	Nil
5·0'	209·0' - 214·0'	Nil
5·0'	214·0' - 219·0'	Nil
5·0'	219·0' - 224·0'	Nil

LEGEND

PRECAMBRIAN

Mafic Intrusive Rocks

6 Quartz diabase

Felsic Intrusive Rocks

5 Syenite a Quartz feldspar porphyry
b Feldspar porphyry

Ultramafic Rocks

4 Pyroxenite

Metasediments

3 Argillite

Felsic Metavolcanics

2 Rhyolite

Mafic Metavolcanics

1 Andesite a massive lava
b pillow lavas
c pink feldspathized shear

IF Iron Formation

S Sulphides, py - pyrite

Scale 1 : 750

10 0 10 20 30 40 50 Metres

PREUSSAG CANADA LIMITED

TIMMINS WEST
Project 43

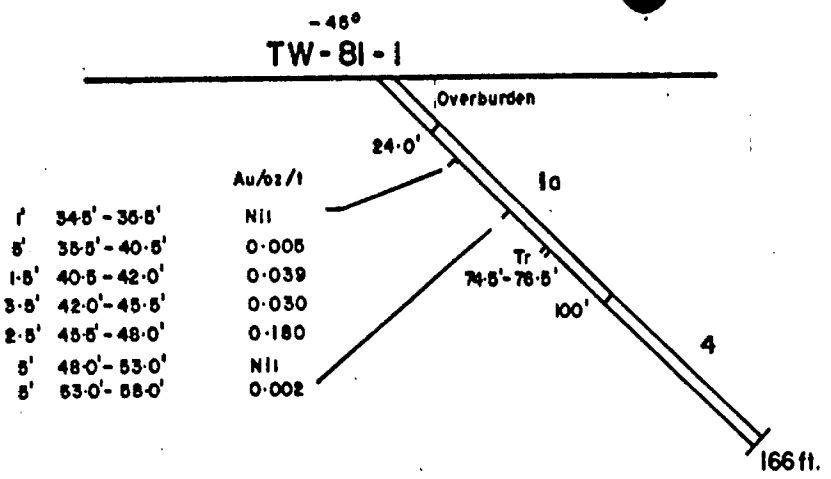
Drill Section

3240N

Date Oct. '81 RTC NTS 42/A/5

195E 210E

GRID B



LEGEND

PRECAMBRIAN

Mafic Intrusive Rocks

6 Quartz diabase

Felsic Intrusive Rocks

5' Syenite a Quartz feldspar porphyry
b Feldspar porphyry

Ultramafic Rocks

4 Pyroxenite

Metasediments

3 Argillite

Felsic Metavolcanics

2 Rhyolite

Mafic Metavolcanics

1 Andesite a massive lava
b pillow lavas
c pink feldspathized sheor

IF Iron Formation

S Sulphides, py - pyrite

Scale 1 : 750

10 0 10 20 30 40 50 Metres

PREUSSAG CANADA LIMITED

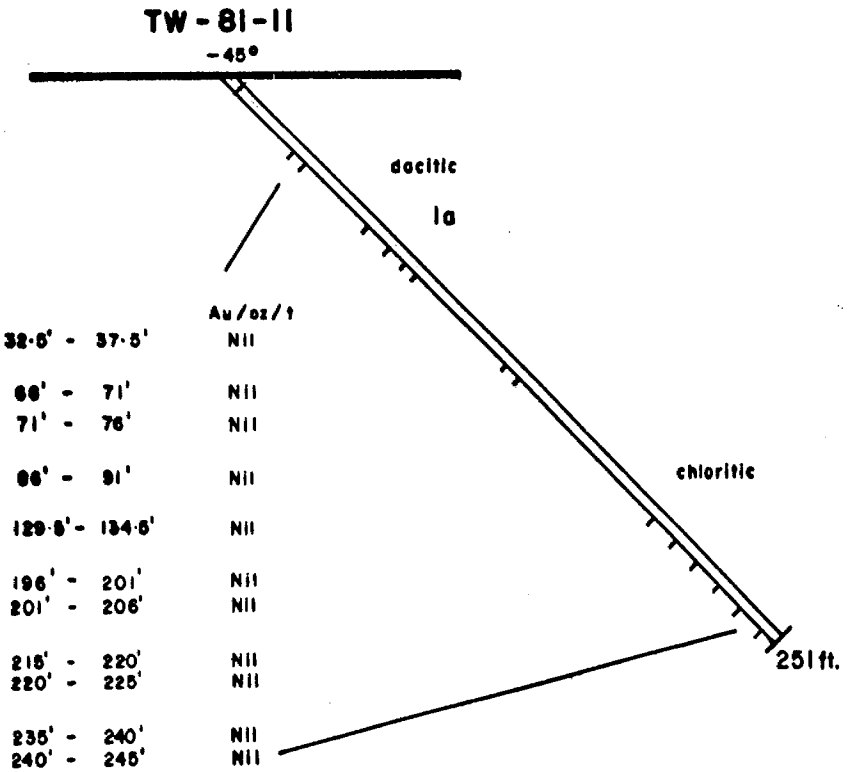
TIMMINS WEST
Project 43

Drill Section

3360 N

Date Oct. '81 RTC NTS 42/A/5

150 E 165E GRID B



			Au/oz/t
5'	32.5'	37.5'	Nil
5'	66'	71'	Nil
5'	71'	76'	Nil
5'	86'	91'	Nil
5'	129.5'	134.5'	Nil
5'	196'	201'	Nil
5'	201'	206'	Nil
5	215'	220'	Nil
5'	220'	225'	Nil
5'	235'	240'	Nil
5'	240'	245'	Nil

LEGEND

PRECAMBRIAN

- Mafic Intrusive Rocks
- 6 Quartz diabase

Felsic Intrusive Rocks

- 5 Syenite a Quartz feldspar porphyry
  b Feldspar porphyry

Ultramafic Rocks

- 4 Pyroxenite

Metasediments

- 3 Argillite

Felsic Metavolcanics

- 2 Rhyolite

Mafic Metavolcanics

- 1 Andesite a massive lava
  b pillow lavas
  c pink feldspathized shear
- IF Iron Formation
- S Sulphides, py - pyrite

Scale 1 : 750

10 0 10 20 30 40 50 Metres

PREUSSAG CANADA LIMITED

TIMMINS WEST
Project 43

Drill Section
3480 N

Date Oct. '81 RTC NTS 42/A/5