



41I09NE2006 2.19680 DANA

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REPORT ON
PROSPECTING and SAMPLING
RIVER VALLEY PROPERTY
DANA and PARDO TOWNSHIPS

2.19680

NTS: 41-I/9

CLAIM MAPS: G-2904
G-2911

November 1998

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RIVER VALLEY PGE DISCOVERIES

Lorne E. Luhta, November, 1998

Introduction

In late 1998, significant PGE (platinum group elements) mineralization was discovered by partners, Lorne Luhta, Bob Bailey and Ron Orchard in the northern part of the River Valley Gabbro-Anorthosite Intrusion. This intrusion is located near the village of River Valley, 80 Km northeast of Sudbury, Ontario (Fig.1). The River Valley Intrusion is an Early Proterozoic (2.5 Ga) layered complex in the Huronian-Nipissing magmatic belt which includes the East Bull Lake and the Shakespeare-Dunlop Intrusions to the west of Sudbury (Peck et al., 1995). Lately, PGE values of economic significance have been found in minor amounts of sulphide containing low nickel and copper grades in these latter intrusions. It was thought that the River Valley Intrusion would be as good a host or even better since that body is larger than the other two and would have a greater capacity to generate more PGE's. As well, anomalous PGE values were found in Ni, Cu occurrences in the southern part of the intrusion (assessment files, Sudbury Resident Geologists Office). Prospecting was done around a sulphide occurrence noted on Lumbers, 1973 Ontario Department of Mines Preliminary Map #P.844 in the northwest part of Dana Twp. These sulphides were shown to occur within a narrow north trending lobe of gabbroic rocks which strikes off the main body of the River Valley Intrusion. The prospecting resulted in the discovery of 4 zones of PGE mineralization along a strike length of 700 metres. This area is now called the Dana Lake PGE Area (Fig.2). PGE assays up to 12.6 g/T platinum + palladium + rhodium (Pt +Pd +Rh) were obtained from here. Further prospecting along a logging road which cut the north contact of the gabbro 6 km southeast of the Dana Lake Area resulted in the discovery of the Azen Creek Zone with total PGE values up to 2.7 g/T.

Property Description

The property consists of 18 contiguous staked mining claims consisting of 231 units covering an area of 3696 hectares or 9240 acres. The claims are located in the southwest corner of Pardo Twp. (Mining claim Map G-2911), the northwest corner of Dana Twp. (G-2904) and down through the centre of Dana Twp. and towards its eastern part. The claim numbers are: 1227988-1227991 incl., 1229216-1229224 incl. and 1229230-1229234 incl. The NTS map sheet for this area is 41 I/9. Mssrs. Luhta, Bailey and Orchard hold an equal (33 1/3 %) interest in the claim group.

Location and Access

The Dana Lake PGE area is located in the northwest corner of Dana Twp. (Fig.2) with its centre being at latitude 46 degrees, 42 minutes and longitude 80 degrees, 16.5 minutes. The UTM coordinates are 5172000m N and 555500m E. The area is accessed by traveling northwest and then north along Hwy 805 from River Valley a distance of 19.6 km from the Temagami River at the north end of the village. A right turn is made onto a logging road and is followed for 800 m. (Note; the South Pardo Road is 300 m. north of this road along Hwy 805.) Another right turn is made at a fork in the road and is followed for 200 metres to a skidder road. The Road Zone is located here on the west (right) side of the road. The other zones are accessed by the skidder road and subsequently a trail at an azimuth of 170 degrees. *The area is included within claim #1229230*

The Azen Creek Zone is located just south of the centre part of Dana Twp. (Fig.2). The latitude is 46 degrees and 39.5 minutes and the longitude is 80 degrees 13.6 minutes. The UTM coordinates are 5167400m N and 559200m E. The Azen Creek Zone is accessed by traveling northwest from the village of River Valley northwest along Hwy 805 a distance of 4 km from the Temagami River Bridge. A right turn (north) is made at a gated road just past Giroux's house on the hill. (It has a sign.) This logging road is followed for 1.5 km to a fork. Turning right, this road is followed north for 2.6 km to another fork. A left turn is made here and this road is followed westward and then northward for 300m from the intersection. The Azen Creek Zone is located adjacent to and on the right (east) side of the road. *The zone is included within claim # 1229222.*

Regional Geology

Ashwal and Wooden, 1988 described the River Valley Intrusion as being dominated by leuconorite and leucogabbro, with lesser anorthosite and mafic rocks. Rare ultramafic rocks are also present. The intrusion is approximately 100 square kilometres in size and is located at the Grenville Front in the southwestern part of the Grenville Province. Rocks in the core of the intrusion are black, coarse grained, massive, igneous textured leuconorites. The dark appearance is caused by fine oxide inclusions in plagioclase and is being quarried for building and facing stone. Davidson, 1986 showed that the Grenville Front in this region represents a complex Zone several kilometres wide of imbricate thrust faults and that the whole of the River Valley body is in the Grenville Province and its westernmost contact is an eastern dipping thrust fault. (This is in contrast to Lumbers, 1973 - ODM P.844 - who mapped the body on both sides of a lineament which he called the Grenville Front.)

At its western margin, in the Grenville Front Tectonic Zone, The River Valley Intrusion is in fault contact with greenschist metasedimentary units of the younger Huronian succession (Southern Province), including schistose meta-arenites of the Mississagi Formation. Davidson, 1986 inferred that the leucogabbroic rocks of the River Valley Intrusion have been thrust westward over the Huronian succession. To the north, the intrusive is in contact with younger mylonitic granitic rocks. Gneissic rocks of the Grenville Province lie to the east.

Metamorphic grade of the River Valley Intrusion varies from greenschist near the western margin to middle amphibolite or higher in the eastern portion.

The age of the River Valley Intrusion, 2560 Ma, is akin to the other Paleo-Proterozoic gabbro-anorthosite intrusions to the west i.e. the East Bull Lake and the Shakespeare-Dunlop intrusions located near the boundary between the Archean and the Southern Provinces even though the River Valley Intrusion is within the Grenville Province. Ashwal and Wooden, 1988, concluded that the River Valley Intrusion intruded into Archean aged rocks within the Grenville Province. Rocks of Archean age have been documented in the Grenville Province in the River Valley area up to 60 km southeast of the Front.

Previous Work

In 1968, Kennco Explorations (Canada) Ltd. conducted an airborne input and aeromagnetic survey over a large area in Janes, Davis, Henry and Dana Twps. Lumbers, 1971 wrote; "In 1969, Kennco Explorations (Canada) Limited explored sparsely disseminated sulphide mineralization in cataclastic rocks of the River Valley complex along the western and southern sides of Dana Lake in Dana Twp., by surface trenching". However, the assessment files in the Sudbury Resident Geologist's office show that the trenching and pitting was done by J.P. Patrie in 1969.

In 1982, the lands in Dana Twp. were withdrawn from staking as a result of the Bear Island Land Caution and were not re-opened until September, 1996.

Present Work ⁵

On ~~early~~ August, 1998 Mssrs. Luhta, Bailey and Orchard attempted to locate Patrie's trenches but failed. Four samples were taken in the approximate location. One sample with a trace of chalcopyrite was taken from a large gabbro boulder and assayed 1599 ppb Pt + Pd. And another from a bedrock source close by assayed 581 ppb Pt + Pd. In early September Bailey and Orchard staked a 16 unit claim (1229230) over the area which included the trenches. During ~~this time~~ ^{Sept 6-7} ~~Sept~~ ¹⁹⁹⁸ they located the southernmost pits and trenches which are now called the South Zone (Figs.3, 4 and 8). Four samples were taken from this area which ranged from 1344 ppb to 9291 ppb Pt + Pd; the average being 5279 ppb. Another sample was taken from a small gossan area beside the logging road. This sample assayed 1342 ppb Pt + Pt. The area that this sample was taken from is now called the Road Zone (Figs.3,4 and 5). Luhta, Bailey and Orchard then staked an additional 4 claims comprising 52 units over the north trending lobe of gabbro.

Between Sept.22 - 27 and Sept.30 and Oct.1, 1998, with assistance from the provincial government's OPAP program, the partners put in a compass and chained base line striking due north and 8 cross lines in the Dana Lake PGE Area. The pits and trenches were mapped and sampled as well as other outcrops in the area. All sample points were tied onto the grid. A total of 87 selected grab samples were taken and assayed for Au, Cu, Ni, Pt, Pd and Rh. Descriptions of and work done on the 4 PGE zones in the Dana Lake area are described below:

1) Road Zone (Figs.3, 4 and 5):

Patches of gossan in meta-pyroxinite and leucogabbro adjacent to granitic rocks are exposed in outcrop along side of a logging road. Scattered minor disseminated chalcopyrite and pyrrhotite are within the pyroxinite and gabbro. A total of 8 pits and trenches were drilled and blasted by the partners. A total of 23 selected grab samples were taken from these pits and trenches as well as outcrop areas to the west. The highest value obtained was 3.9 g/T total PGE's (Pt + Pd + Rh).

2) North Zone (Figs.3, 4 and 6)

Four old pits and trenches in meta-pyroxenite and leucogabbro containing sparsely disseminated pyrrhotite and chalcopyrite were located and cleaned out. A total of 12 selected grab samples were taken from here as well as exposed bedrock in the area. The highest assay from here was 4.3 g/T total PGE's from the southernmost point where 6 samples taken from here averaged 2.1 g/T total PGE's.

3) Trench Zone (Figs.3, 4 and 7)

An old boomerang shaped trench in meta-pyroxinite is located along line 0, forty-seven metres west of the baseline. Ten grab samples were taken at 1 metre intervals along the trench. These averaged 2.92 g/T total PGE's with the highest being 6.175 g/T. Another 15 selected grab samples were taken from exposed outcrop to the south of the trench in meta-pyroxenite and leucogabbro. The highest assay obtained from here was 5.1 g/T total PGE's. A sample was taken from gabbro with trace sulphides from the shore of a lake 120 metres SSW of the trench which

obtained an anomalous assay of 0.656 g/T.

4) South Zone (Figs.3, 4 and 8)

The highest grade PGE assays came from the South Zone. Twenty-five selected grab samples were taken from old pits, trenches and outcrop in meta-pyroxenite and leucogabbro containing disseminated chalcopyrite and minor pyrrhotite. The highest assay obtained was 12.6 g/T total PGE's. Nine samples were greater than 5 g/T, two were between 3 and 5 g/T and seven were between 1 and 3 g/T. The average was 3.934 g/T.

One sample was taken from an outcrop of leucogabbro containing a minor amount of sulphides on the west side of the South Pardo 1.6 km from the Road Zone. This sample assayed 0.269 g/T total PGE's (Fig.3).

During a property visit, Professor R. James of Laurentian University suggested that the PGE mineralization is related to the basal contact of the intrusion and that prospecting along the north contact was warranted. The only other access to the contact is 6 km east of the Dana Lake PGE Area along a logging road. On Oct.3, 1998 the partners drove along this road and gabbroic or noritic rocks containing traces of chalcopyrite were found just south of the contact. Six samples were taken and anomalous values of PGE's were obtained up to 322 ppb total Pt + Pd + Rh (Fig.9). A small gossan zone was discovered along a secondary road 300 metres to the northwest. One sample containing 2% chalcopyrite and pyrrhotite assayed 3057 ppb (3.057 g/T) total PGE's. A staking program was then initiated to cover this new zone and the area between it and the Dana Lake PGE Area as well as the contact further to the east.

Between Oct.18 and Oct.22, 1998 also with the aid of OPAP funding an area 25 x 8 metres around this gossan zone, now called the Azen Creek Zone, was stripped with a small backhoe. The outcrop was washed. Twenty-four plugger holes were drilled and the dust collected and assayed. Another 20 selected grab samples were taken. Four drill holes were blasted and 2 muck samples were taken. Of the total 46 samples taken, 29 assayed greater than 1.0 g/T total PGE's with the highest being 2.7 g/T (Fig.10). The average was 1.239 g/T total PGE's (Pt + Pd + Rh); however, a higher grade section could be calculated within this zone. The zone is still open in 3 directions.

Discussion

The rocks around the Dana Lake PGE area are medium to coarse grained and rarely pegmatitic leucogabbroic rocks. Within these rocks are irregularly shaped pods and bodies of fine to medium grained meta-pyroxenite. Granitic rocks are exposed at the Road Zone. The PGE mineralization is associated with disseminated chalcopyrite and pyrrhotite within meta-pyroxenites and the adjacent leucogabbros. Thin sections of mineralized meta-pyroxenite from the south zone were made and examined by Prof. James. This rock is composed mostly of pyroxene which has totally been replaced by amphiboles. The sulphides appear to be the product of magmatic segregation although some sulphide grains have been elongated by later shearing. It was found in our sampling that in order to obtain a significant PGE assay, the sample must contain chalcopyrite. Samples with only pyrrhotite mineralization contained very little PGE's. The Cu/Ni ratio of all of the assays for the Dana Lake area is 5.3/1. The Pd/Pt ratio is 3.2/1.

Initially it was thought that the rocks around the Azen Creek Zone were pyroxenites because of their black colour; however, upon closer examination the rocks contain visible feldspars. They are gabbros or norites and the dark colour is due to the fine inclusions of oxides in the feldspars because of the effects of the higher grade of metamorphism in this area. The rocks also contain a minor amount of garnet. The average copper grade of all of the samples from the Azen Creek Zone is basically the same as those from the Dana Lake Area (1500 ppm); however, the nickel grade is higher and the Cu/Ni ratio is 2.2/1. The Pd/Pt ratio here is 3.3/1 which is about the same as the Dana Lake Area. Samples containing the same amount of sulphides in the Dana Lake zones would assay higher in PGE's. A small inclusion of coarse grained to pegmatitic hornblendite occurs within the stripped area at Azen Creek.

Conclusions and Recommendations for Exploration

The River Valley Gabbro-Anorthosite Intrusion was recognized as having the potential for hosting PGE mineralization. Economically significant PGE mineralization was discovered in late 1998 in two areas in the northern part of the intrusion six kilometres from each other. No prior exploration or prospecting for PGE mineralization has ever been done in the two areas and none has been done between the two areas.

Preliminary observations indicate that the genesis of the PGE mineralization corresponds to a magmatic model, whereby the PGE's were scavenged by immiscible, Cu-rich sulphide liquids within a body of PGE enriched magma and were deposited in the basal contact layer of the intrusion during cooling. The sulphur source for the magma could have been derived from older sulphide bearing Archean rocks within the Grenville Province.

During staking and working in the area it was observed that the claim group consists of about 10% outcrop. The remaining area is covered mostly by glacial till. A few areas of gravel and outwash sand occur. The Dana Lake Area is about 10% outcrop and the soil cover is shallow and is composed of till. The area around the Road Zone and North Zone has been recently logged. The area around the Trench Zone and South Zone were most probably left in its pristine state due to the proximity to lakes. No problems for obtaining permits to explore in this area are foreseen. All of the area around the Azen Creek Zone has been recently logged. The soil cover here is shallow and is composed of till.

Closely spaced lines should be cut in the Dana Lake Area for an orientation survey to determine if the PGE enriched sulphide mineralization could be detected by induced polarization. Also, since the PGE's are associated with copper mineralization, a detailed soil geochemical survey should be done over the Dana Lake Area to see if a copper anomaly exists in the soil over the mineralization. This information could be used to explore the area between the Dana Lake and Azen Creek. The Dana Lake Area showings should then be stripped, mapped and sampled. After line cutting over the rest of the property, a magnetometer survey, geological mapping and prospecting should be done on the claim group before I.P. and soil surveys are started so that the latter surveys are not done over rocks with no potential of hosting PGE mineralization. After all the information is compiled from the above work new targets could be stripped and/or drilled and the zones at Dana Lake could be drilled.

Since PGE mineralization is open in at least 3 directions in the stripped area at Azen Creek, additional stripping is recommended followed by washing, detailed mapping and sampling. A diamond drilling program should follow.

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I LORNE LUHTA graduated from Laurentian University with a Bachelor of Science in Geology in 1968 and a Master of Science degree in Geology in 1974. I have worked for mining companies in various positions both in field and mining geology until 1979. Between 1979 and 1997 I was Resident Geologist for the Ontario Geological Survey in Timmins, from 1997 to the present I have been a prospector and consulting geologist

Lorne Luhta
Nov. 1, 1998

HOLDERS of the LAND on which this work was performed:

LORNE LUHTA 33 1/3%

30 Hellen Ave.

South Porcupine, Ont. P0N1H0

ROBERT BAILEY 33 1/3%

174 RENE PLACE

TIMMINS, ONT. P4P1E8

RON ORCHARD 33 1/3%

80 BIRCH ST. NORTH

TIMMINS, ONT. P4X16C9

All of the above worked on the property to complete the work

LORNE LUHTA of 30 Hellen Ave.,

South Porcupine, Ont. P0N1H0

supervised the work

The work was performed on

Aug. 6, Sept 9 & 10, Sept. 22-27,

Sept 30, Oct. 1, Oct 18-22, 1998

Figure 1

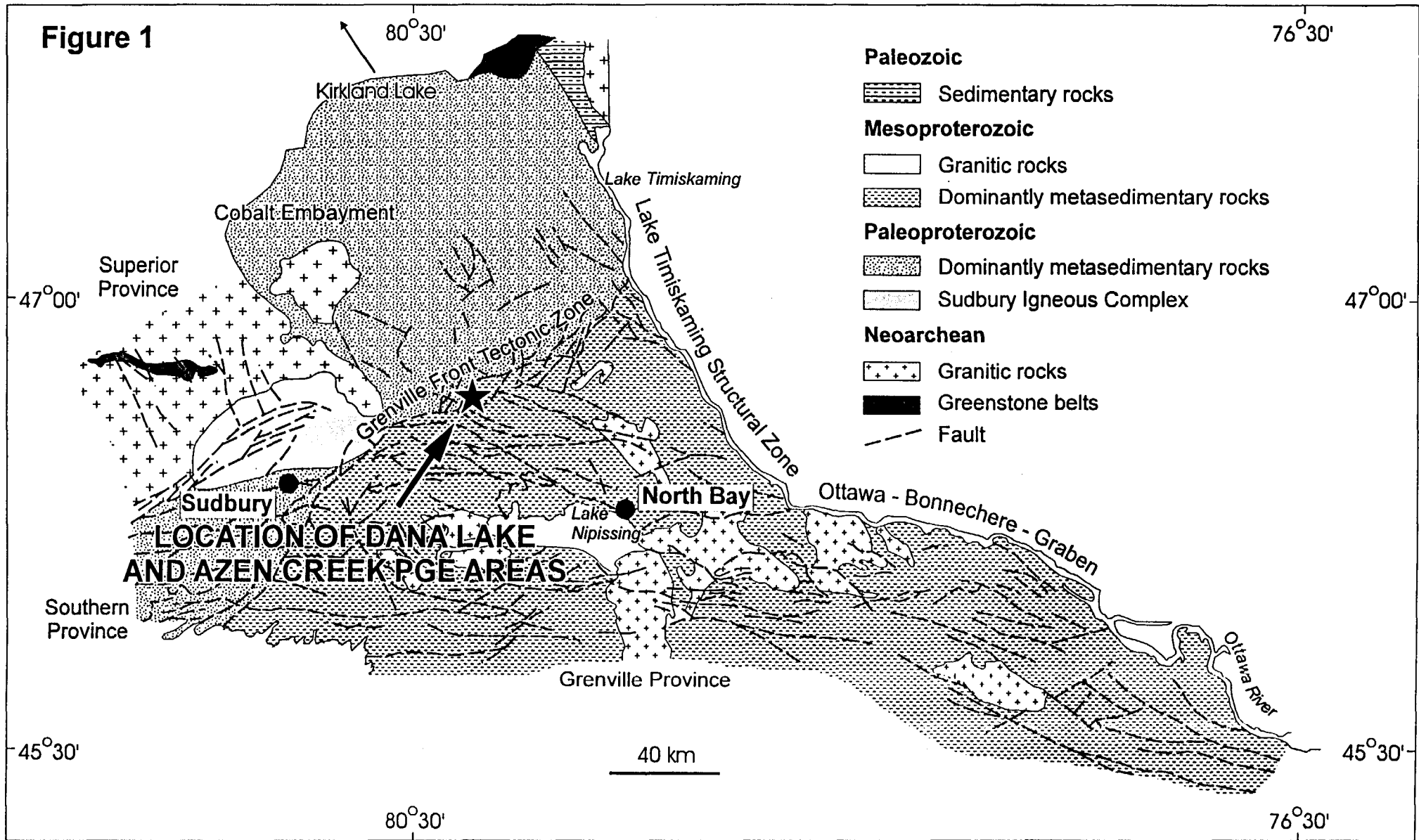







FIGURE 2: LOCATION OF DANA LAKE AND AZEN CREEK PGE AREAS

-  Gabbro / Anorthosite
-  Sample location
-  Highway, road
-  Claim number
-  1000 metres

ASTRO

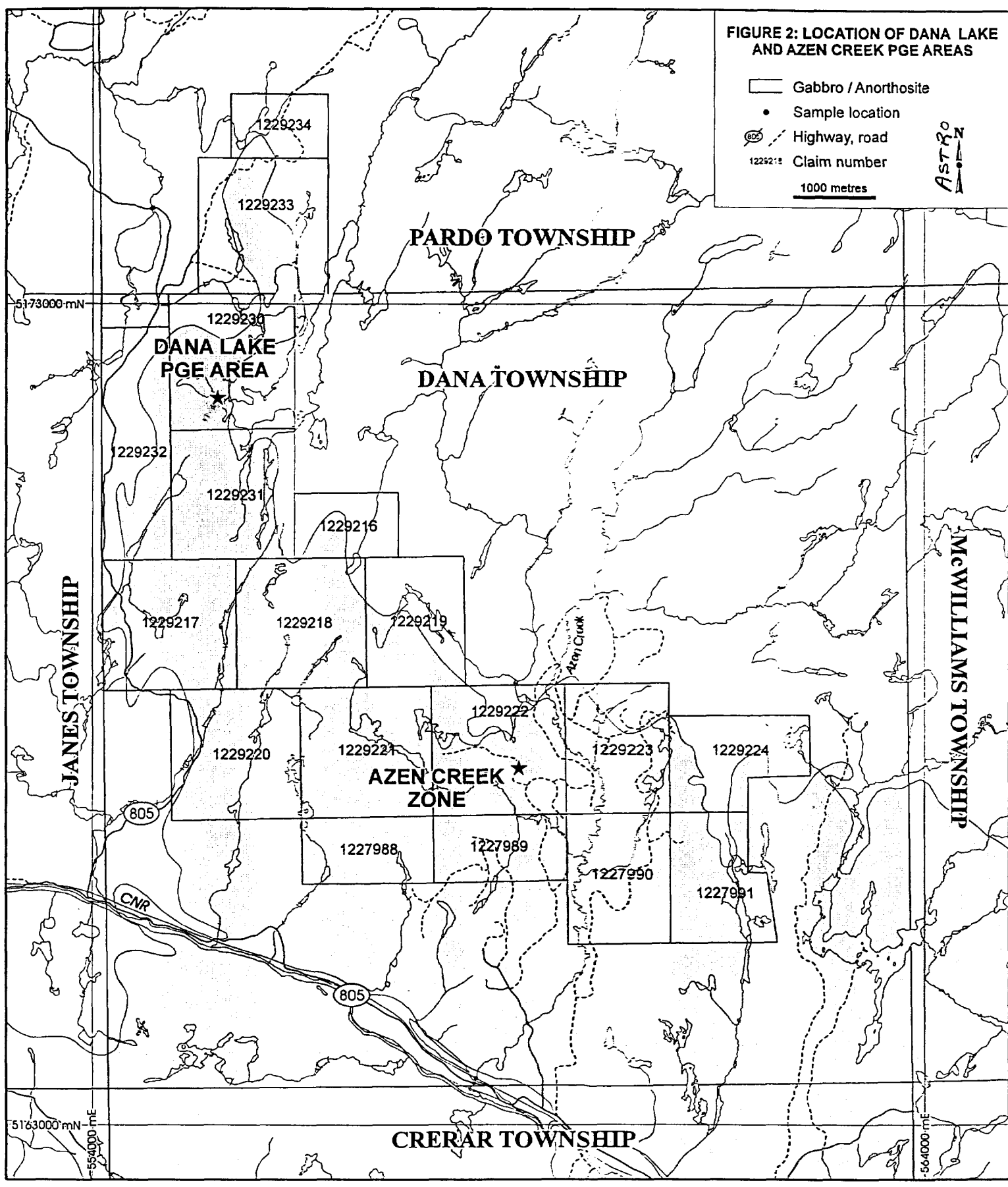


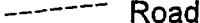
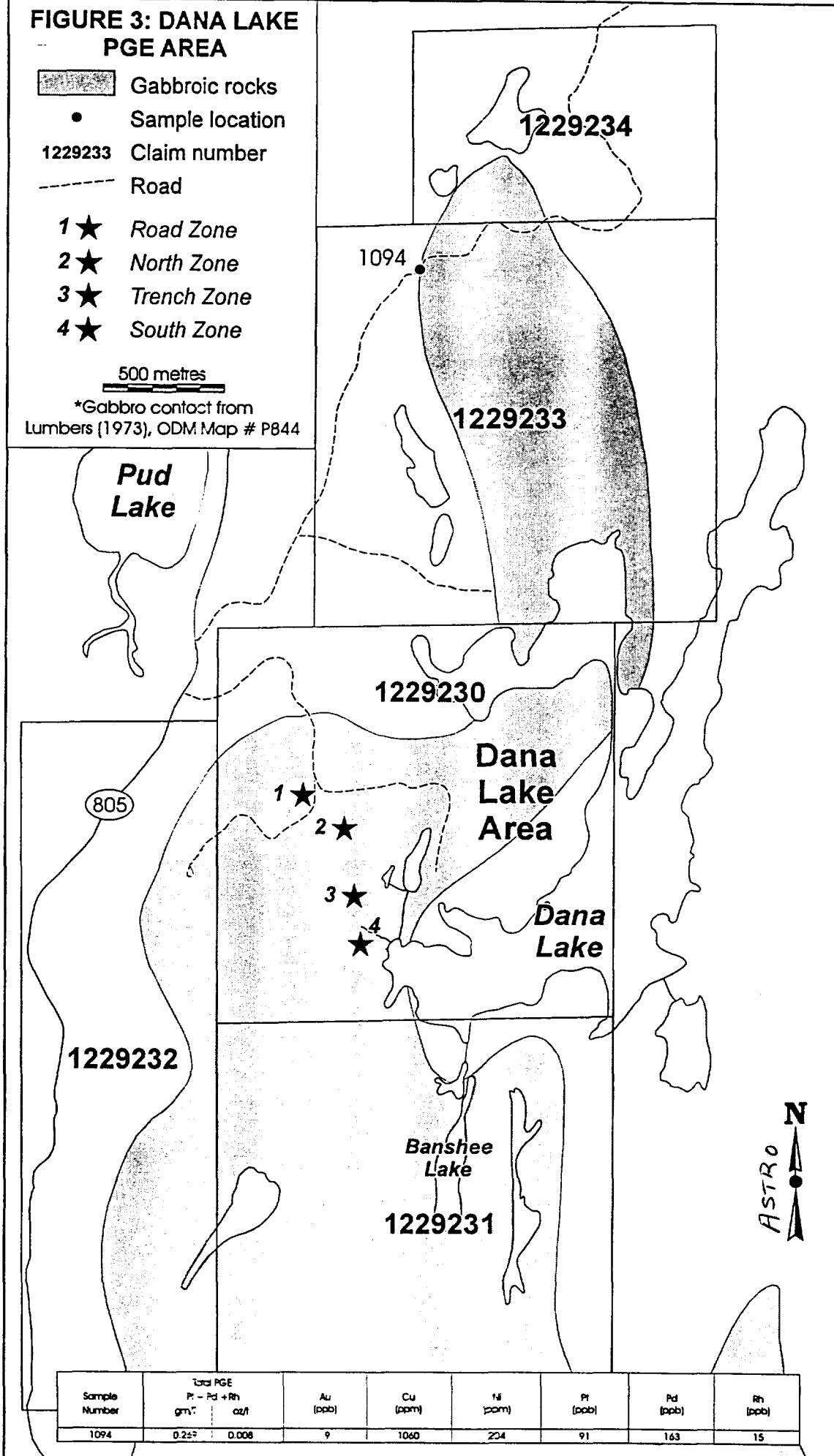


FIGURE 3: DANA LAKE PGE AREA

-  Gabbroic rocks
-  Sample location
- 1229233 Claim number
-  Road
- 1 ★ Road Zone
- 2 ★ North Zone
- 3 ★ Trench Zone
- 4 ★ South Zone

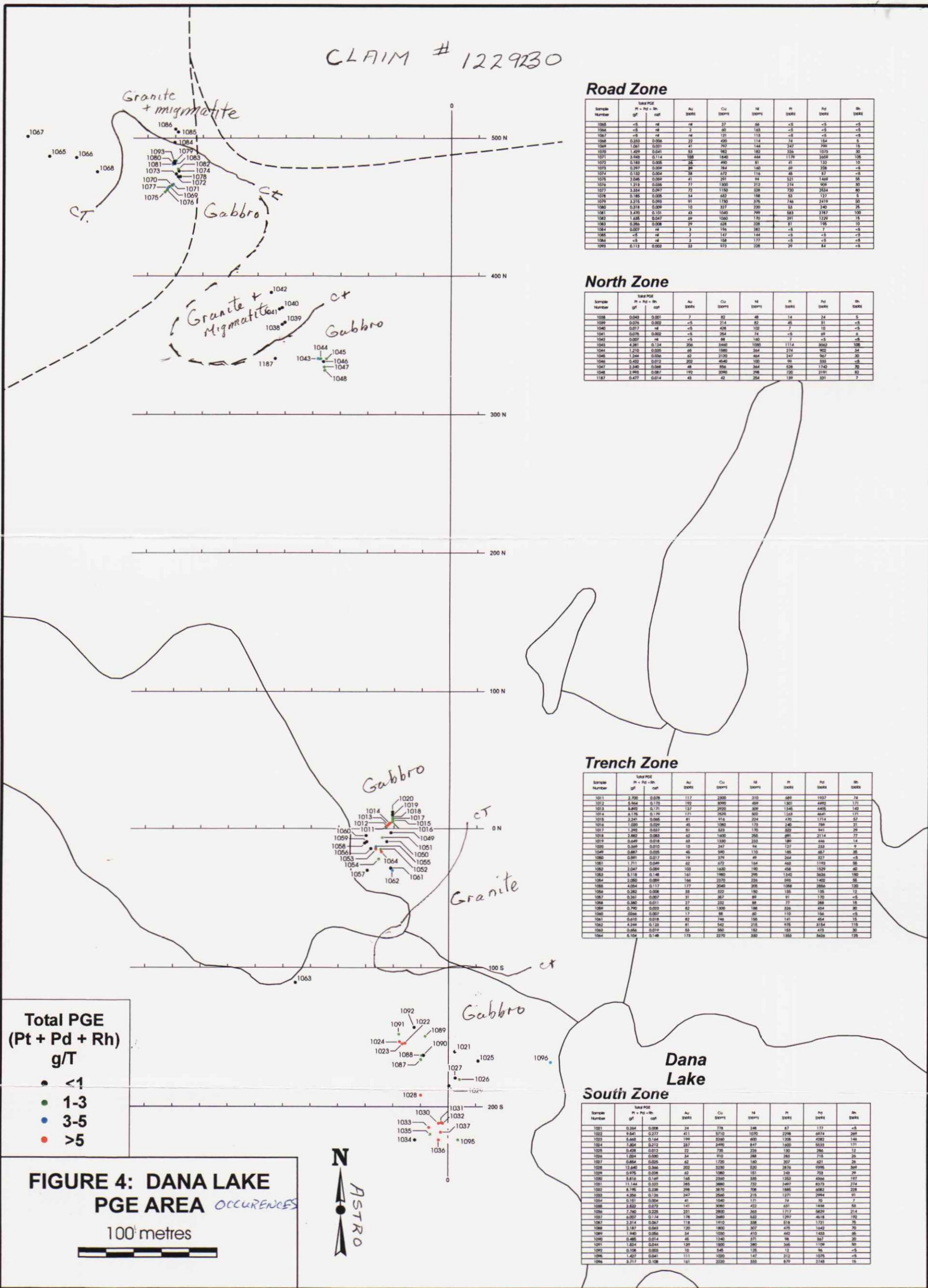
500 metres

*Gabbro contact from Lumbers (1973), ODM Map # P844



Sample Number	Total PGE		Au (ppb)	Cu (ppm)	Ni (ppm)	Pt (ppb)	Pd (ppb)	Rh (ppb)
	Pt - Pd + Rh (ppb)	g/t						
1094	0.25 [±]	0.008	9	1060	204	91	163	15

CLAIM # 1229230



Road Zone

Sample Number	Total PGE		Au (ppm)	Cu (ppm)	Ni (ppm)	Pb (ppm)	Zn (ppm)
	Pt + Pd + Rh (g/T)	cut					
1065	<5	nd	nd	27	66	<5	<5
1066	<5	nd	2	60	163	<5	<5
1067	<5	nd	nd	121	113	<5	<5
1068	0.233	0.026	22	450	114	74	184
1069	1.081	0.031	41	797	144	247	790
1070	1.429	0.041	53	962	282	326	1073
1071	3.543	0.114	103	1840	484	1179	2609
1072	0.183	0.026	26	490	81	41	133
1073	0.267	0.029	39	764	160	89	238
1074	0.132	0.024	26	472	119	46	137
1075	2.045	0.089	41	291	94	531	1469
1076	1.219	0.038	77	1302	213	214	909
1077	3.334	0.097	72	1150	338	750	2534
1078	0.185	0.026	34	432	158	53	127
1079	3.215	0.092	91	1750	376	746	2419
1080	0.318	0.029	10	327	220	53	240
1081	3.470	0.101	45	1040	799	583	2187
1082	1.488	0.047	66	1000	170	391	1229
1083	0.268	0.028	29	428	229	81	156
1084	0.007	nd	3	156	282	<5	<5
1085	<5	nd	2	147	144	<5	<5
1086	<5	nd	3	158	177	<5	<5
1089	0.113	0.020	33	973	238	29	84

North Zone

Sample Number	Total PGE		Au (ppm)	Cu (ppm)	Ni (ppm)	Pb (ppm)	Zn (ppm)
	Pt + Pd + Rh (g/T)	cut					
1038	0.043	0.007	7	82	46	14	24
1039	0.076	0.022	<5	214	82	46	31
1040	0.077	nd	<5	428	102	7	10
1041	0.076	0.022	<5	264	74	<5	39
1042	0.007	nd	<5	68	140	7	<5
1043	4.281	0.124	256	3440	1090	1114	3062
1044	1.210	0.028	68	1880	384	234	902
1045	1.244	0.026	62	2120	404	247	967
1046	0.432	0.072	209	4640	180	99	333
1047	2.340	0.068	48	764	364	138	1342
1048	2.968	0.087	102	2040	298	220	2191
1187	0.477	0.074	43	42	284	189	331

Trench Zone

Sample Number	Total PGE		Au (ppm)	Cu (ppm)	Ni (ppm)	Pb (ppm)	Zn (ppm)
	Pt + Pd + Rh (g/T)	cut					
1011	2.290	0.078	117	2390	310	689	1937
1012	5.914	0.173	192	3090	409	1301	4492
1013	8.469	0.173	137	2520	274	1248	4465
1014	8.176	0.179	171	2020	802	1203	4641
1015	2.241	0.066	81	816	234	470	1714
1016	1.000	0.029	46	1060	170	140	78
1017	1.299	0.037	61	623	150	322	941
1018	2.892	0.089	62	1400	266	891	2114
1019	0.448	0.019	68	1380	233	380	446
1020	0.349	0.010	10	247	94	127	233
1021	0.887	0.029	46	980	110	186	387
1022	0.891	0.017	19	374	49	264	327
1023	1.711	0.049	62	872	164	460	1193
1024	2.247	0.099	103	1630	190	456	1529
1025	8.118	0.148	161	1960	295	1340	3638
1026	2.090	0.060	164	2370	220	662	1402
1027	4.094	0.117	177	2560	295	1088	2856
1028	0.263	0.008	18	322	180	128	128
1029	0.267	0.007	31	367	89	91	170
1030	0.360	0.011	27	332	88	77	288
1031	0.340	0.009	62	1060	188	328	454
1032	0.006	0.007	17	88	60	110	156
1033	0.610	0.018	82	746	156	141	454
1034	1.054	0.030	34	842	215	178	2154
1035	0.686	0.019	53	660	182	153	473
1044	6.104	0.146	173	2270	380	1350	3638

South Zone

Sample Number	Total PGE		Au (ppm)	Cu (ppm)	Ni (ppm)	Pb (ppm)	Zn (ppm)
	Pt + Pd + Rh (g/T)	cut					
1021	0.264	0.008	24	778	248	87	177
1022	0.841	0.277	411	6710	1070	2298	2074
1023	0.440	0.146	199	3240	400	1206	4282
1024	2.868	0.212	237	3490	847	1600	5033
1025	0.426	0.012	22	726	228	180	278
1026	1.054	0.030	34	842	268	263	718
1027	0.884	0.025	62	1220	140	207	481
1028	2.460	0.366	202	3280	520	976	2996
1029	0.675	0.028	62	1060	181	248	708
1030	0.810	0.147	148	2360	388	1283	3366
1031	11.144	0.323	268	3860	720	2497	6373
1032	6.195	0.128	798	6610	798	1495	4084
1033	4.358	0.128	247	2540	218	1271	2994
1034	0.191	0.009	41	546	179	74	26
1035	2.222	0.073	141	2090	422	671	1436
1036	2.740	0.229	237	3800	343	1717	3829
1037	0.007	0.124	176	2460	422	1977	4616
1038	2.874	0.063	118	1910	388	518	1721
1039	3.187	0.063	120	1800	307	478	1442
1040	4.490	0.056	42	1200	420	420	1420
1041	0.445	0.014	48	1340	371	98	367
1042	1.824	0.044	139	1800	280	346	1129
1043	0.108	0.020	18	448	126	12	46
1044	1.427	0.041	111	1020	147	312	1076
1045	3.717	0.108	181	2220	343	879	2348

Figure 5: Road Zone

Sample Number	Total PGE Pt + Pd + Rh		Au (ppb)	Cu (ppm)	Ni (ppm)	Pt (ppb)	Pd (ppb)	Rh (ppb)
	g/T	oz/t						
1065	<.015	nil	nil	37	66	<5	<5	<5
1066	<.015	nil	2	60	163	<5	<5	<5
1067	<.015	nil	nil	121	113	<5	<5	<5
1068	0.233	0.006	22	420	114	74	154	5
1069	1.061	0.031	41	797	144	247	799	15
1070	1.429	0.041	53	982	182	326	1073	30
1071	3.943	0.114	103	1840	444	1179	2659	105
1072	0.183	0.005	26	490	81	41	132	10
1073	0.297	0.009	39	784	160	69	228	<5
1074	0.132	0.004	38	672	116	45	87	<5
1075	2.045	0.059	41	291	94	521	1469	55
1076	1.213	0.035	77	1300	212	274	909	30
1077	3.334	0.097	72	1150	328	720	2534	80
1078	0.185	0.005	34	632	158	53	127	5
1079	3.215	0.093	91	1730	375	746	2419	50
1080	0.318	0.009	10	327	220	53	240	25
1081	3.470	0.101	43	1040	799	583	2787	100
1082	1.635	0.047	69	1060	170	391	1229	15
1083	0.286	0.008	29	628	328	81	195	10
1084	0.007	nil	3	196	282	<5	7	<5
1085	<.015	nil	2	147	144	<5	<5	<5
1086	<.015	nil	3	158	177	<5	<5	<5
1093	0.113	0.003	33	973	228	29	84	<5

CLAIM # 1229230

○ Trenches, pits

Total PGE
(Pt + Pd + Rh)
g/T

- <1
- 1-3
- * 3-5
- >5

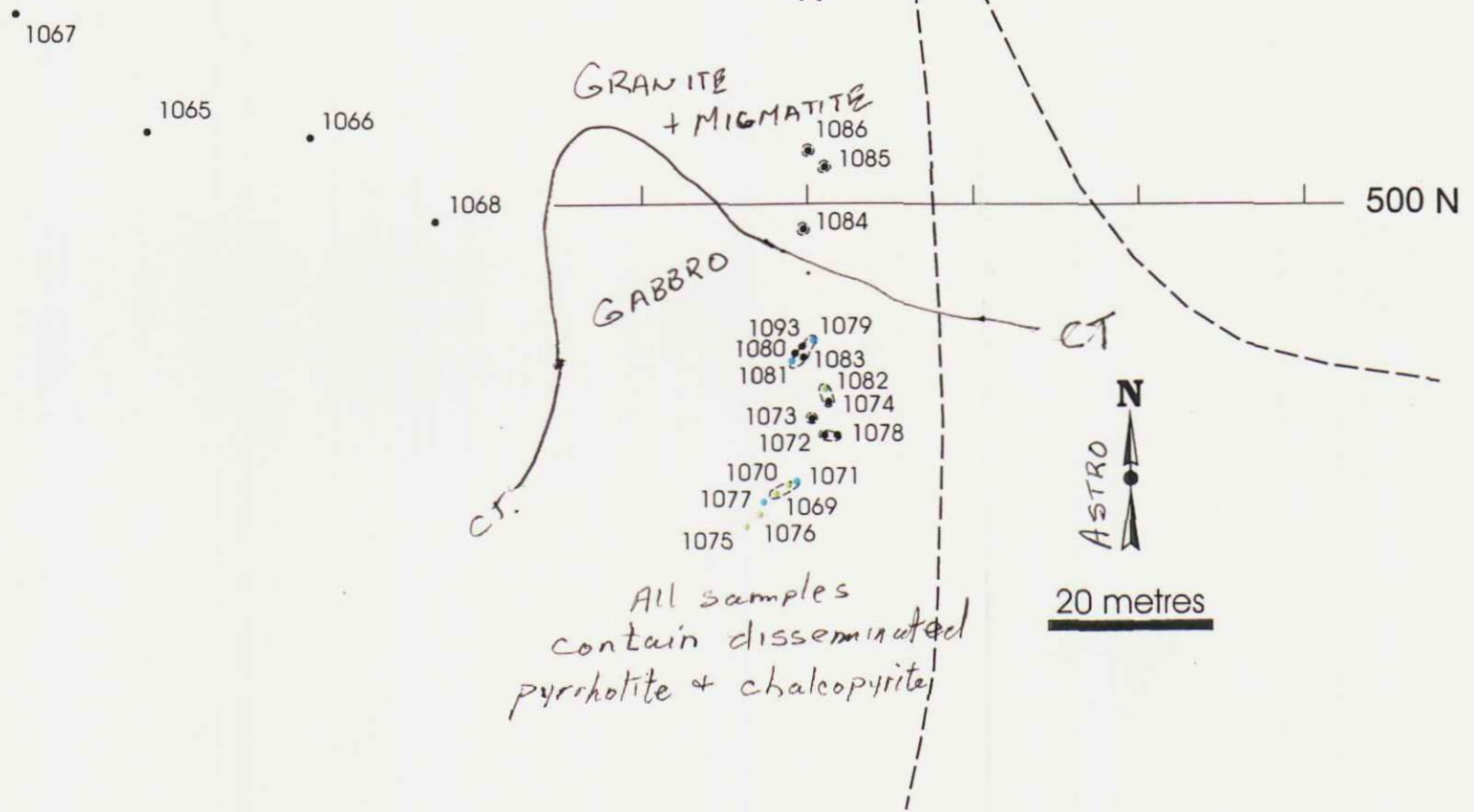



Figure 6: North Zone

Sample Number	Total PGE Pt + Pd + Rh		Au (ppb)	Cu (ppm)	Ni (ppm)	Pt (ppb)	Pd (ppb)	Rh (ppb)
	g/T	oz/t						
1038	0.043	0.001	7	82	48	14	24	5
1039	0.076	0.002	<5	214	82	45	31	<5
1040	0.017	nil	<5	428	102	7	10	<5
1041	0.075	0.002	<5	254	74	<5	69	6
1042	0.007	nil	<5	88	160	7	<5	<5
1043	4.281	0.124	206	3460	1030	1114	3062	105
1044	1.210	0.035	65	1580	264	274	902	34
1045	1.244	0.036	62	2120	464	247	967	30
1046	0.432	0.012	202	4540	100	99	333	<5
1047	2.340	0.068	48	856	364	528	1742	70
1048	2.993	0.087	192	2090	298	720	2191	82
1187	0.477	0.014	43	912	254	139	331	7

CLAIM # 122930

 Trenches, pits

**Total PGE
(Pt + Pd + Rh)
g/T**

- <1
- 1-3
- 3-5
- >5

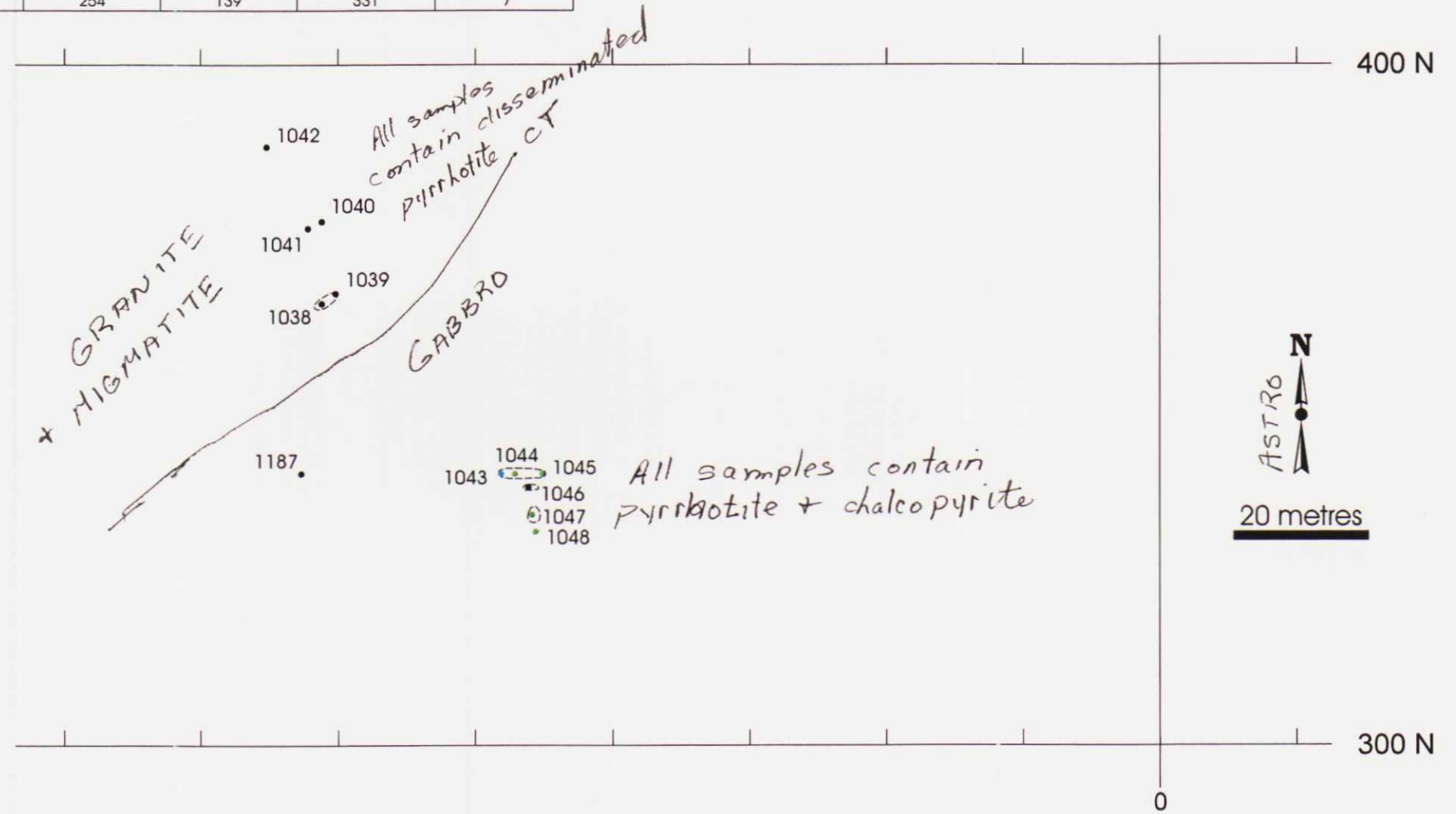


Figure 7: Trench Zone

Sample Number	Total PGE Pt + Pd + Rh		Au (ppb)	Cu (ppm)	Ni (ppm)	Pt (ppb)	Pd (ppb)	Rh (ppb)
	g/T	oz/t						
1011	2.700	0.078	117	2300	310	689	1937	74
1012	5.964	0.173	192	3090	459	1301	4492	171
1013	5.892	0.171	137	2920	309	1345	4405	142
1014	6.175	0.179	171	2520	502	1363	4641	171
1015	2.241	0.065	81	916	224	470	1714	57
1016	1.020	0.029	45	1080	173	240	759	21
1017	1.292	0.037	51	523	170	322	941	29
1018	2.882	0.083	62	1600	255	691	2114	77
1019	0.649	0.018	63	1330	233	189	446	14
1020	0.369	0.010	10	247	94	127	233	9
1049	0.887	0.025	45	590	110	185	657	35
1050	0.591	0.017	19	379	49	264	327	<5
1051	1.711	0.049	62	672	164	463	1193	55
1052	2.047	0.059	103	1630	190	458	1529	60
1053	5.118	0.148	161	1980	295	1342	3626	150
1054	2.050	0.059	166	2370	226	593	1402	55
1055	4.034	0.117	177	2040	205	1058	2856	120
1056	0.282	0.008	33	322	150	135	135	12
1057	0.261	0.007	31	357	89	91	170	<5
1058	0.380	0.011	27	232	88	77	288	15
1059	0.790	0.023	82	1300	188	326	434	30
1060	0.266	0.007	17	88	60	110	156	<5
1061	0.610	0.018	82	746	155	141	454	15
1062	4.244	0.123	81	542	215	975	3154	115
1063	0.656	0.019	53	550	152	153	473	30
1064	5.104	0.148	173	2270	330	1353	3626	125

CLAIM # 1229230

○ Trenches, pits

Total PGE
(Pt + Pd + Rh)
g/T

- <1
- 1-3
- 3-5
- >5

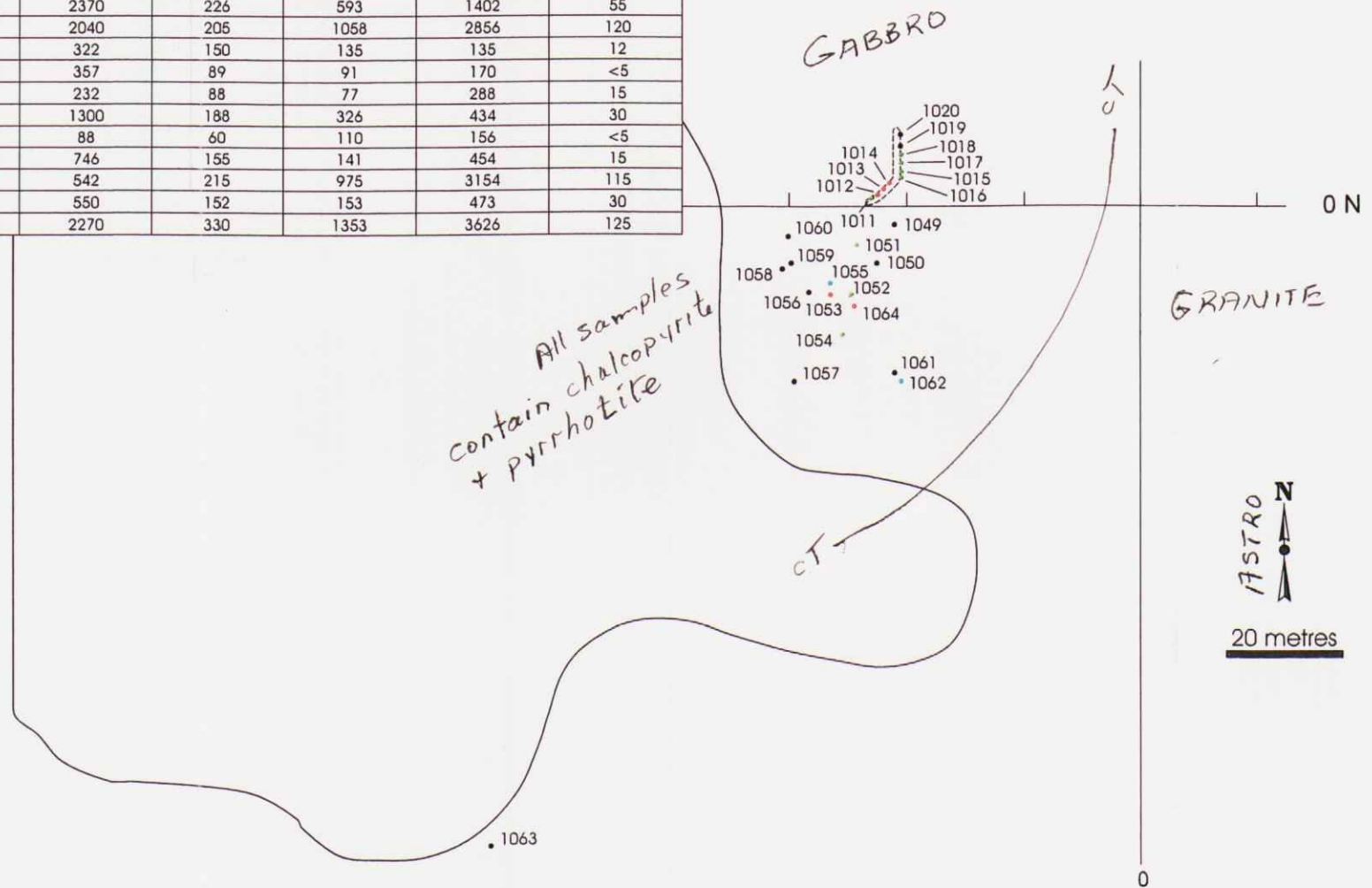
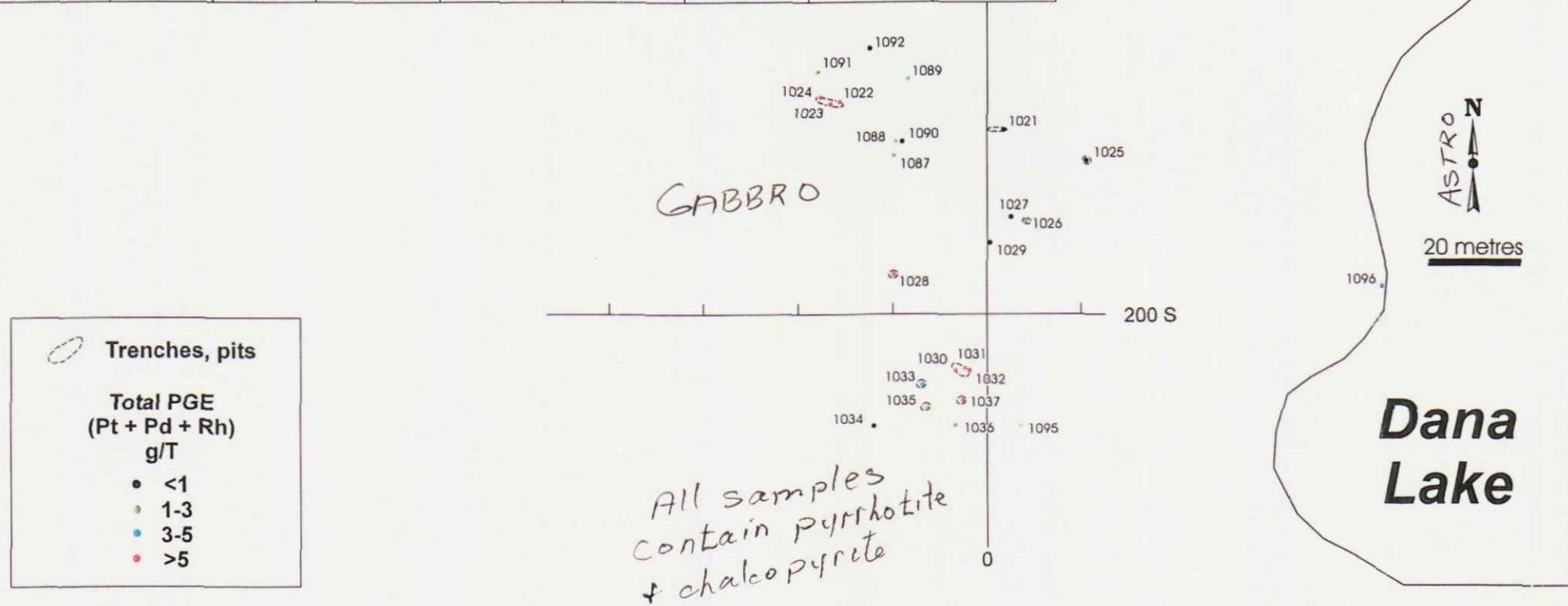


Figure 8: South Zone

Sample Number	Total PGE Pt + Pd + Rh		Au (ppb)	Cu (ppm)	Ni (ppm)	Pt (ppb)	Pd (ppb)	Rh (ppb)
	g/T	oz/t						
1021	0.264	0.008	24	778	248	87	177	<5
1022	9.541	0.277	411	5710	1070	2298	6974	269
1023	5.663	0.164	199	3260	600	1205	4282	146
1024	7.304	0.212	237	3490	847	1600	5533	171
1025	0.428	0.012	22	735	226	130	286	12
1026	1.024	0.030	34	910	288	283	715	26
1027	0.854	0.025	62	1720	160	207	621	26
1028	12.640	0.366	202	3230	520	2876	9395	369
1029	0.975	0.028	62	1080	151	243	703	29
1030	5.816	0.169	165	2360	335	1253	4366	197
1031	11.144	0.323	285	3880	732	2497	8373	274
1032	8.195	0.238	298	3870	708	1885	6082	228
1033	4.356	0.126	247	2560	215	1271	2994	91
1034	0.151	0.004	41	1040	171	74	70	7
1035	2.522	0.073	141	3080	422	631	1838	53
1036	7.760	0.225	231	2800	363	1717	5829	214
1037	6.007	0.174	178	2680	532	1297	4518	192
1087	2.314	0.067	118	1910	338	518	1721	75
1088	2.187	0.063	120	1800	307	475	1642	70
1089	1.940	0.056	34	1030	410	442	1433	65
1090	0.485	0.014	45	1240	371	98	367	20
1091	1.524	0.044	139	1500	280	365	1109	50
1092	0.108	0.003	10	545	125	12	96	<5
1095	1.427	0.041	111	1020	147	312	1075	40
1096	3.717	0.108	161	2220	333	879	2743	95

CLAIM #122 923 0



All samples contain pyrrhotite + chalcopyrite

Figure 9: Azen Creek Area

Sample Number	Total PGE Pt + Pd + Rh		Au (ppb)	Cu (ppm)	Ni (ppm)	Pt (ppb)	Pd (ppb)	Rh (ppb)
	gm/t	Oz/t						
1097	0.305	0.008	142	1850	259	149	144	12
1098	0.089	0.002	26	420	100	31	58	<5
1099	0.084	0.002	33	2070	126	45	39	<5
1100	3.057	0.087	78	3460	2000	792	2145	120
1101	0.322	0.009	103	3480	390	158	149	15
1102	0.239	0.007	57	3210	379	111	118	10
1103	0.169	0.005	67	1190	47	82	87	<5

089612.19680

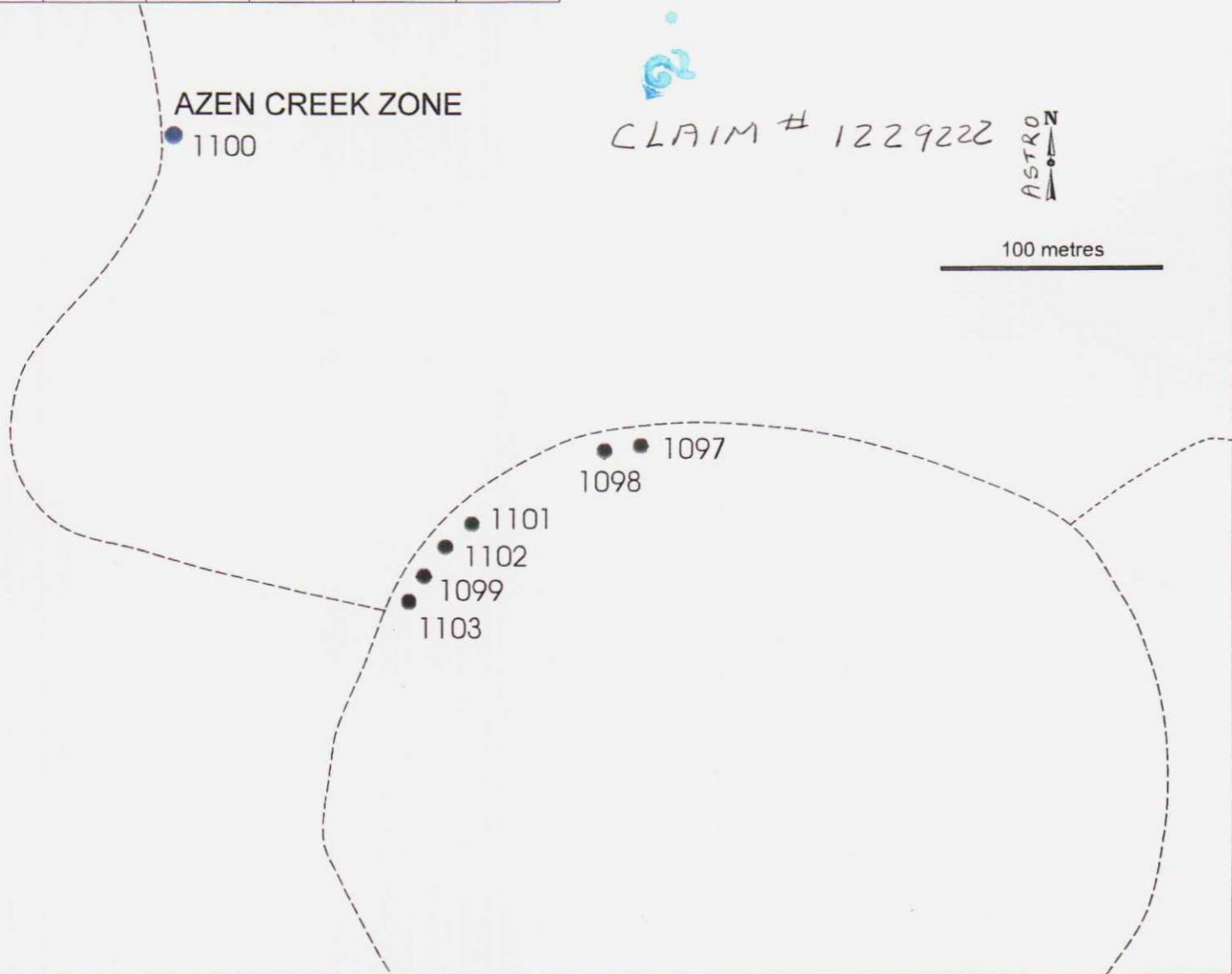
AZEN CREEK ZONE

● 1100

CLAIM # 1229222



100 metres



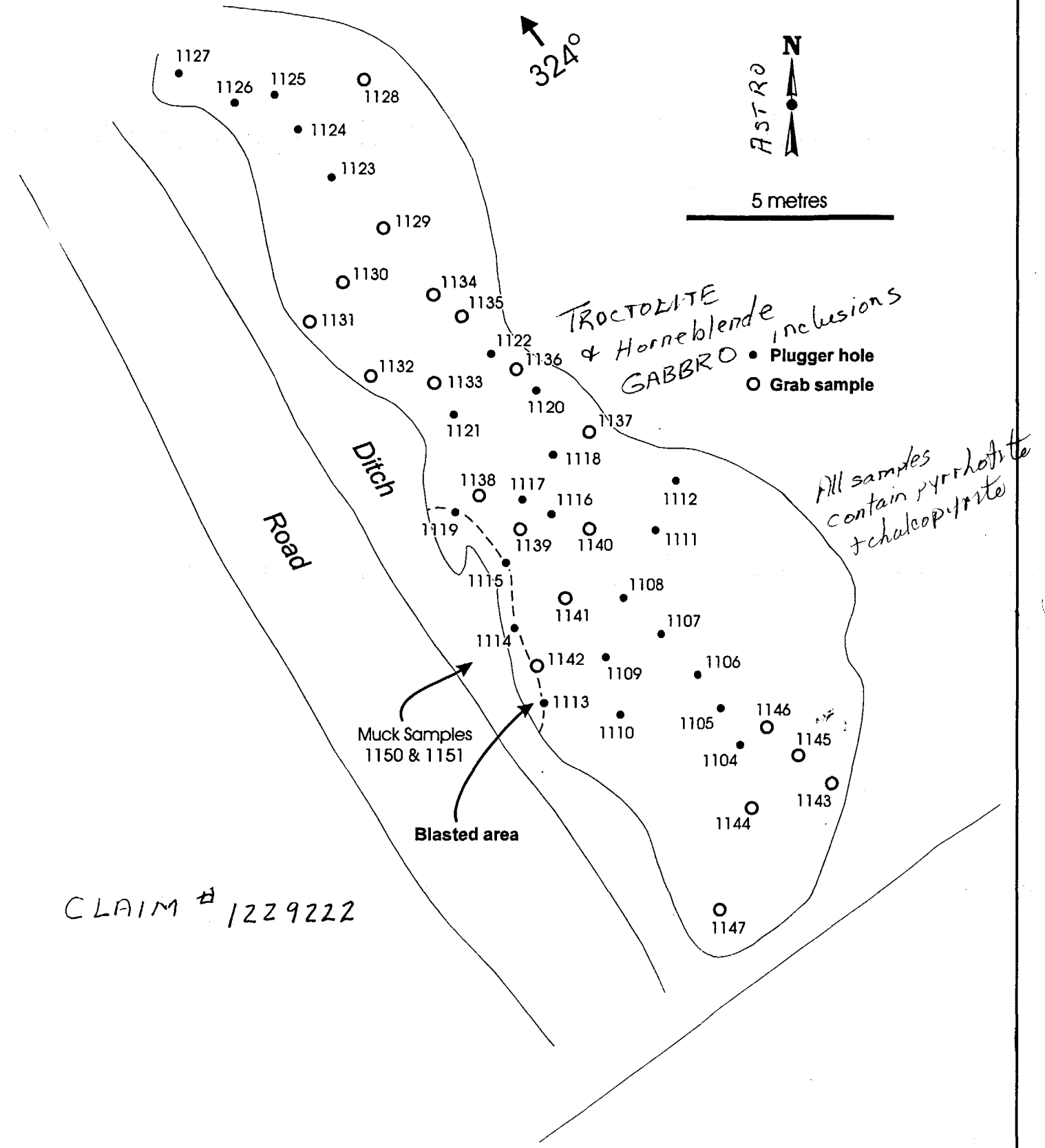
○ Trenches, pits

**Total PGE
(Pt + Pd + Rh)
g/T**

- <1
- 1-3
- 3-5
- >5

Figure 10: Azen Creek Zone

Sample Number	Total PGE Pt + Pd + Rh		Au (ppb)	Cu (ppm)	Ni (ppm)	Pt (ppb)	Pd (ppb)	Rh (ppb)
	g/T	oz/t						
1104	0.541	0.016	22	1600	650	118	413	10
1105	2.697	0.078	141	3050	1120	533	2107	57
1106	0.666	0.019	31	1550	664	153	494	19
1107	0.432	0.013	15	706	428	108	317	7
1108	0.033	0.001	nil	170	74	14	19	<5
1109	0.339	0.010	15	1190	368	82	245	12
1110	0.078	0.002	nil	360	110	15	63	<5
1111	2.197	0.064	106	1960	1110	547	1599	51
1112	0.022	0.001	nil	146	90	5	17	<5
1113	0.029	0.001	nil	112	60	10	19	<5
1114	1.648	0.048	67	2060	1100	310	1293	45
1115	0.617	0.018	27	858	378	135	465	17
1116	1.429	0.041	58	1580	758	286	1107	36
1117	1.514	0.044	77	1780	950	338	1142	34
1118	0.788	0.023	43	1060	430	187	574	27
1119	2.091	0.061	105	2380	1050	523	1517	51
1120	2.345	0.068	129	2990	1490	497	1786	62
1121	1.427	0.041	72	2220	1230	326	1065	36
1122	0.686	0.020	27	1070	650	170	489	27
1123	0.617	0.018	39	1260	670	123	461	33
1124	1.425	0.041	72	2150	1120	278	1109	38
1125	1.627	0.047	62	1950	1070	298	1279	50
1126	2.614	0.076	75	3240	1990	603	1922	89
1127	1.181	0.034	31	1520	700	379	766	36
1128	0.059	0.002	nil	150	92	9	50	<5
1129	1.132	0.033	43	1390	678	305	782	45
1130	0.563	0.016	17	966	558	142	394	27
1131	1.977	0.057	79	2310	850	370	1550	57
1132	1.359	0.039	57	1960	810	307	1011	41
1133	1.849	0.054	77	3440	1430	382	1421	46
1134	1.465	0.042	41	1630	881	346	1073	46
1135	2.236	0.065	67	3070	1630	621	1533	82
1136	1.344	0.039	58	20000	931	334	972	38
1137	2.164	0.063	115	2790	1260	422	1692	50
1138	1.687	0.049	75	2220	1190	420	1226	41
1139	0.737	0.021	70	1460	509	166	554	17
1140	1.721	0.050	99	2260	872	379	1294	48
1141	1.552	0.045	70	1860	734	355	1171	26
1142	0.841	0.024	46	401	261	278	549	14
1143	1.300	0.038	67	2560	980	281	993	26
1144	1.114	0.032	67	1450	618	261	819	34
1145	1.821	0.053	62	1880	816	465	1308	48
1146	1.051	0.030	43	2490	1050	201	804	46
1147	0.017	NIL	2	154	64	<5	17	<5
1150	2.160	0.063	111	3830	852	492	1611	57
1151	1.795	0.052	67	2160	1030	418	1322	55





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Assaying - Consulting - Representation

Geochemical Analysis Certificate

8W-4299-RG1

Company: L. LUHTA

Date: NOV-19-98

Project:

Attn:

We hereby certify the following Geochemical Analysis of 11 Grab samples submitted NOV-03-98 by .

Sample Number	Au Au Check PPB PPB	Co PPM	Cu PPM	Ni PPM	Pt PPB	Pd PPB	Rh PPB
---------------	------------------------	-----------	-----------	-----------	-----------	-----------	-----------

1187	43	-	42	912	254	139	331	7
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2-19680

One assay ton portion used for precious metals.

Certified by

1 Cameron Ave., P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705)642-3244 Fax (705)642-3300



Established 1928

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A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Geochemical Analysis Certificate

8W-4159-RG1

Company: **L. LUHTA**

Date: NOV-03-98

Project:

Attn:

We hereby certify the following Geochemical Analysis of 6 Rock samples submitted OCT-26-98 by .

Sample Number	Au PPB	Au Check PPB	Cu PPM	Ni PPM	Pt PPB	Pd PPB	Rh PPB
1150	111	120	3830	852	492	1611	57
1151	67	-	2160	1030	418	1322	55

8.19330

One assay ton portion used for gold.

Certified by Denis Charbon



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Established 1928

Geochemical Analysis Certificate

8W-4156-RG1

Company: **L. LUHTA**
Project: PGE
Attn: L. Luhta

Date: OCT-30-98

We hereby certify the following Geochemical Analysis of 6 Grab samples submitted OCT-23-98 by .

Sample Number	Au PPB	Au Check PPB	Cu PPM	Ni PPM	Pt PPB	Pd PPB	Rh PPB
1144	67	53	1450	618	261	819	34
1145	62	-	1880	816	465	1308	48
1146	43	-	2490	1050	201	804	46
1147	2	-	154	64	<5	17	<5
1148	57	62	18	72	<5	<5	<5
1149	63	-	16	100	<5	<5	<5

2.19680

One assay ton portion used for gold.

Certified by Denis Chantre



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Geochemical Analysis Certificate

8W-4151-RG1

Company: **L. LUHTA**
Project: PGE
Attn: L. Luhta

Date: NOV-03-98

We hereby certify the following Geochemical Analysis of 8 Rock samples submitted OCT-03-98 by .

Sample Number	Au PPB	Au Check PPB	Cu PPM	Ni PPM	Pt PPB	Pd PPB	Rh PPB
1136	58	60	20000	931	334	972	38
1137	115	-	2790	1260	422	1692	50
1138	75	-	2220	1190	420	1226	41
1139	70	-	1460	509	166	554	17
1140	99	99	2260	872	379	1294	48
1141	70	-	1860	734	355	1171	26
1142	46	-	401	261	278	549	14
1143	67	58	2560	980	281	993	26

2.19680

One assay ton portion used for gold.

Certified by Denis Charro



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Geochemical Analysis Certificate

8W-4155-RG1

Company: **L. LUHTA**
Project: PGE
Attn: L. Luhta

Date: OCT-30-98

We hereby certify the following Geochemical Analysis of 8 Grab samples submitted OCT-23-98 by .

Sample Number	Au PPB	Au Check PPB	Cu PPM	Ni PPM	Pt PPB	Pd PPB	Rh PPB
1128	Ni l	-	150	92	9	50	<5
1129	43	-	1390	678	305	782	45
1130	17	-	966	558	142	394	27
1131	79	82	2310	850	370	1550	57
1132	57	-	1960	810	307	1011	41
1133	77	74	3440	1430	382	1421	46
1134	41	-	1630	881	346	1073	46
1135	67	-	3070	1630	621	1533	82

[Faint signature or stamp]

One assay ton portion used for gold.

Certified by *Denis Chantre*



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Geochemical Analysis Certificate

8W-4158-RG1

Company: **L. LUHTA**
Project: PGE
Attn: L. Luhta

Date: NOV-03-98

We hereby certify the following Geochemical Analysis of 11 Drill Cutting samples submitted OCT-26-98 by .

Sample Number	Au PPB	Au Check PPB	Cu PPM	Ni PPM	Pt PPB	Pd PPB	Rh PPB
1117	77	72	1780	950	338	1142	34
1118	43	-	1060	430	187	574	27
1119	105	-	2380	1050	523	1517	51
1120	129	-	2990	1490	497	1786	62
1121	72	-	2220	1230	326	1065	36
1122	27	22	1070	650	170	489	27
1123	39	-	1260	670	123	461	33
1124	72	-	2150	1120	278	1109	38
1125	62	-	1950	1070	298	1279	50
1126	75	81	3240	1990	603	1922	89
1127	31	-	1520	700	379	766	36

One assay ton portion used for gold.

Certified by Denis Chabre



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Geochemical Analysis Certificate

8W-4157-RG1

Company: **L. LUHTA**
Project: PGE
Attn: L. Luhta

Date: NOV-03-98

We hereby certify the following Geochemical Analysis of 13 Drill Cutting samples submitted OCT-26-98 by .

Sample Number	Au PPB	Au Check PPB	Cu PPM	Ni PPM	Pt PPB	Pd PPB	Rh PPB
1104	22	-	1600	650	118	413	10
1105	141	137	3050	1120	533	2107	57
1106	31	-	1550	664	153	494	19
1107	15	-	706	428	108	317	7
1108	Ni1	-	170	74	14	19	<5
1109	15	-	1190	368	82	245	12
1110	Ni1	-	360	110	15	63	<5
1111	106	120	1960	1110	547	1599	51
1112	Ni1	-	146	90	5	17	<5
1113	Ni1	-	112	60	10	19	<5
1114	67	-	2060	1100	310	1293	45
1115	27	-	858	378	135	465	17
1116	58	-	1580	758	286	1107	36

2.19880

One assay ton portion used for gold.

Certified by Denis Chantre



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Geochemical Analysis Certificate

8W-2989-RG1

Company: **L. LUHTA**
Project: PGE
Attn: L. Luhta

Date: OCT-19-98

We hereby certify the following Geochemical Analysis of 9 Grab samples submitted OCT-05-98 by .

Sample Number	Au PPB	Au Check PPB	Cu PPM	Ni PPM	Pt PPB	Pd PPB	Rh PPB
1095	111	-	1020	147	312	1075	40
1096	161	-	2220	333	879	2743	95
1097	142	141	1850	259	149	144	12
1098	26	-	420	100	31	58	<5
1099	33	-	2070	126	45	39	<5
1100	78	-	3460	2000	792	2145	120
1101	103	99	3480	390	158	149	15
1102	57	-	3210	379	111	118	10
1103	67	-	1190	47	82	87	<5

2.19680

One assay ton portion used for gold.

Certified by

1 Cameron Ave., P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705)642-3244 Fax (705)642-3300



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Geochemical Analysis Certificate

8W-2970-RG1

Company: **L. LUHTA**
Project: PGE
Attn: L. Luhta

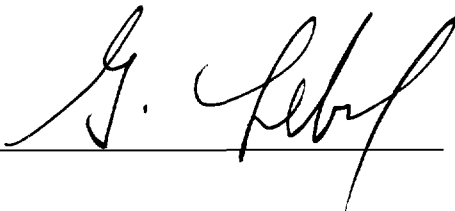
Date: OCT-14-98

We hereby certify the following Geochemical Analysis of 8 Grab samples submitted OCT-02-98 by .

Sample Number	Au PPB	Au Check PPB	Cu PPM	Ni PPM	Pt PPB	Pd PPB	Rh PPB
1087	118	127	1910	338	518	1721	75
1088	120	-	1800	307	475	1642	70
1089	34	-	1030	410	442	1433	65
1090	45	-	1240	371	98	367	20
1091	139	-	1500	280	365	1109	50
1092	10	5	545	125	12	96	<5
1093	33	-	973	228	29	84	<5
1094	9	-	1060	204	91	163	15

2.19680

One assay ton portion used for gold.

Certified by 



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Established 1928

Assaying - Consulting - Representation

Geochemical Analysis Certificate

8W-2955-RG1

Company: **L. LUHTA**
Project: PGE
Attn: L. Luhta


Date: OCT-19-98

We hereby certify the following Geochemical Analysis of 22 Grab samples submitted OCT-01-98 by .

Sample Number	Au PPB	Au Check PPB	Cu PPM	Ni PPM	Pt PPB	Pd PPB	Rh PPB
1065	Nil	-	37	66	<5	<5	<5
1066	2	-	60	163	<5	<5	<5
1067	Nil	-	121	113	<5	<5	<5
1068	22	-	420	114	74	154	5
1069	41	-	797	144	247	799	15
1070	53	-	982	182	326	1073	30
1071	103	110	1840	444	1179	2659	105
1072	26	-	490	81	41	132	10
1073	39	-	784	160	69	228	<5
1074	38	-	672	116	45	87	<5
1075	41	-	291	94	521	1469	55
1076	77	-	1300	212	274	909	30
1077	72	93	1150	328	720	2534	80
1078	34	-	632	158	53	127	5
1079	91	89	1730	375	746	2419	50
1080	10	-	327	220	53	240	25
1081	43	-	1040	799	583	2787	100
1082	69	-	1060	170	391	1229	15
1083	29	-	628	328	81	195	10
1084	3	-	196	282	<5	7	<5
1085	2	-	147	144	<5	<5	<5
1086	3	-	158	177	<5	<5	<5

2.19680

One assay ton portion used for gold.

Certified by 



Swastika Laboratories

A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Established 1928

Geochemical Analysis Certificate

8W-2907-RG1

Company: **L.LUTHA**
Project: PGE
Attn: L.Lutha

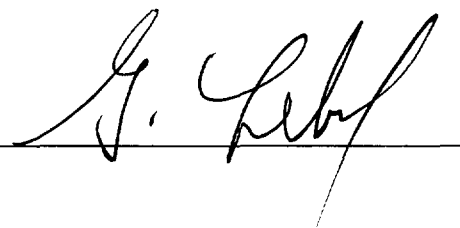
Date: OCT-14-98

We hereby certify the following Geochemical Analysis of 7 Grab samples submitted SEP-25-98 by .

Sample Number	Au PPB	Au Check PPB	Cu PPM	Ni PPM	Pt PPB	Pd PPB	Rh PPB
1058	27	-	232	88	77	288	15
1059	82	75	1300	188	326	434	30
1060	17	-	88	60	110	156	<5
1061	82	-	746	155	141	454	15
1062	81	-	542	215	975	3154	115
1063	53	-	550	152	153	473	30
1064	173	185	2270	330	1353	3626	125

2.19680

One assay ton portion used for gold.

Certified by 

1 Cameron Ave., P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705)642-3244 Fax (705)642-3300



Swastika Laboratories

A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Established 1928

Geochemical Analysis Certificate

8W-2904-RG1

Company: **L. LUHTA**
Project: PGE
Attn: L. Luhta

Date: OCT-14-98

We hereby certify the following Geochemical Analysis of 9 Grab samples submitted SEP-28-98 by .

Sample Number	Au PPB	Au Check PPB	Cu PPM	Ni PPM	Pt PPB	Pd PPB	Rh PPB
1049	45	-	590	110	185	657	35
1050	19	-	379	49	264	327	<5
1051	62	96	672	164	463	1193	55
1052	103	-	1630	190	458	1529	60
1053	161	158	1980	295	1342	3626	150
1054	166	-	2370	226	593	1402	55
1055	177	185	2040	205	1058	2856	120
1056	33	-	322	150	135	135	12
1057	31	-	357	89	91	170	<5

One assay ton portion used for gold.

Certified by

1 Cameron Ave., P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705)642-3244 Fax (705)642-3300



Swastika Laboratories

A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Established 1928

Geochemical Analysis Certificate

8W-2859-RG1

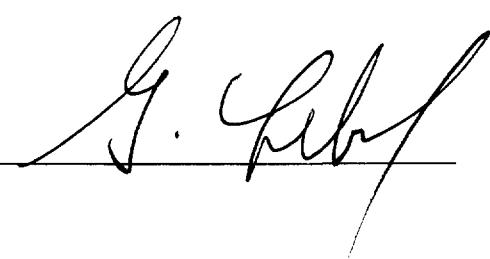
Company: **LORNE LUHTA**
Project: PGE
Attn: L.Luhta

Date: OCT-09-98

We hereby certify the following Geochemical Analysis of 11 Rock samples submitted SEP-24-98 by .

Sample Number	Au PPB	Au Check PPB	Cu PPM	Ni PPM	Pt PPB	Pd PPB	Rh PPB
1038	7	-	82	48	14	24	5
1039	<5	<5	214	82	45	31	<5
1040	<5	-	428	102	7	10	<5
1041	<5	-	254	74	<5	69	6
1042	<5	-	88	160	7	<5	<5
1043	206	213	3460	1030	1114	3062	105
1044	65	-	1580	264	274	902	34
1045	62	-	2120	464	247	967	30
1046	202	-	4540	100	99	333	<5
1047	48	-	856	364	528	1742	70
1048	192	123	2090	298	720	2191	82

8.15.98

Certified by 



Swastika Laboratories

A Division of TSL/Assayers Inc.

Established 1928

Assaying - Consulting - Representation

Geochemical Analysis Certificate

8W-2844-RG1

Company: **L. LUHTA**
Project: PGE
Attn: L. Luhta


Date: OCT-09-98

2.19680

We hereby certify the following Geochemical Analysis of 27 Grab samples submitted SEP-23-98 by .

Sample Number	Au PPB	Au Check PPB	Cu PPM	Ni PPM	Pt PPB	Pd PPB	Rh PPB
1011	117	-	2300	310	689	1937	74
1012	192	216	3090	459	1301	4492	171
1013	137	-	2920	309	1345	4405	142
1014	171	-	2520	502	1363	4641	171
1015	81	-	916	224	470	1714	57
1016	45	-	1080	173	240	759	21
1017	51	-	523	170	322	941	29
1018	62	-	1600	255	691	2114	77
1019	63	-	1330	233	189	446	14
1020	10	-	247	94	127	233	9
1021	24	-	778	248	87	177	<5
1022	411	394	5710	1070	2298	6974	269
1023	199	-	3260	600	1205	4282	146
1024	237	-	3490	847	1600	5533	171
1025	22	-	735	226	130	286	12
1026	34	-	910	288	283	715	26
1027	62	-	1720	160	207	621	26
1028	202	-	3230	520	2876	9395	369
1029	62	-	1080	151	243	703	29
1030	165	-	2360	335	1253	4366	197
1031	285	262	3880	732	2497	8373	274
1032	298	285	3870	708	1885	6082	228
1033	247	-	2560	215	1271	2994	91
1034	41	-	1040	171	74	70	7
1035	141	-	3080	422	631	1838	53
1036	231	-	2800	363	1717	5829	214
1037	178	-	2680	532	1297	4518	192

One assay ton portion used.

Certified by 



Swastika Laboratories

A Division of TSL/Assayers Inc.

Assaying - Consulting - Representation

Established 1928

Geochemical Analysis Certificate

8W-2638-RG1

Company: **L. LUHTA**
Project: PGE
Attn: L. Luhta

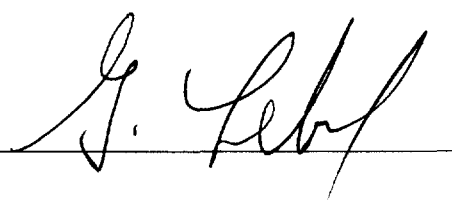
Date: SEP-14-98

We hereby certify the following Geochemical Analysis of 10 Grab samples submitted SEP-08-98 by .

Sample Number	Au PPB	Au Check PPB	Cu PPM	Ni PPM	Pt PPB	Pd PPB
1001	144	-	2020	433	571	1819
1002	202	206	2600	404	2640	5451
1003	51	-	1400	350	357	987
1004	405	370	6240	1120	2160	7131
1005	31	-	622	260	305	1037
1006	12	-	251	160	<5	39
1007	7	-	98	164	<5	<5
1008	5	3	34	32	<5	7
1009	34	-	51	34	5	<5
1010	3	-	64	140	10	<5

8 W 2638 RG1

One assay ton portion used.

Certified by 



Swastika Laboratories

A Division of TSL/Assayers Inc.

Established 1928

Assaying - Consulting - Representation

Geochemical Analysis Certificate

8W-2247-RG1

Company: **L. LUHTA**

Date: AUG-13-98

Project:

Attn: L. Luhta

We hereby certify the following Geochemical Analysis of 4 Rock samples submitted AUG-06-98 by .

Sample Number	Au PPB	Au Check PPB	Pt PPB	Pd PPB
#1	Nil	-	7	10
#2	137	117	504	1095
#3	55	-	171	410
#4	34	-	12	19

2.19600

One assay ton portion used.

Certified by

TOTAL COSTS per CLAIM

CLAIM # 1229230

FIELD WORK		5850.00
REPORT WRITING	2450/2	1225.00
SUPPLIES & RENTALS	1253.63/2	626.82
TRANSPORTATION:	5100 km @ .30/km	1530.00
SHIPPING	64.03 x 63%	40.34
FOOD & LODGING	76 x 2429.29 x 69% =	1676.20
ASSAY COSTS	5311.48 x 63% =	<u>3346.22</u>
	TOTAL	14294.60

CLAIM # 1229222

FIELD WORK		3711.15
REPORT WRITING	2450/2	1225.00
SUPPLIES & RENTALS	1253.63/2	626.83
TRANSPORTATION	1300 km @ 0.30/km	390.00
SHIPPING	64.03 x 37%	23.69
FOOD & LODGING	55 x 2429.29 x 31% =	753.08
ASSAY COSTS	5311.48 x 37% =	<u>1965.25</u>
	TOTAL	8695.00

RECEIVED
 SEP 01 1999
 GEOSCIENCE ASSESSMENT
 OFFICE

PROVINCIAL RECORDING
 OFFICE - SUDBURY
RECEIVED
 SEP - 1 1999
 A.M. 11:00 P.M.
 7 8 9 10 11 12 1 2 3 4 5 6

Loene Lupton

FIELD WORK COSTS

2.19.80

CLAIM #				#
Aug. 5/98	prospecting	3 man days	@ 150/day	450
Sept 20 ⁶⁺⁷ /98	prospecting	4 man days	@ 150/day	600
(2 days)				
Sept. 22-27/98	prospecting	2 man days	@ 150/day	300
(6 days)				
	trenching	2 man days	@ 150/day	300
	linecutting	6 man days	@ 150/day	900
	sampling + mapping	4 man days	@ 350/day	1400
	sampler helper	4 man days	@ 150/day	600
Sept 30/98	prospecting	1 man day	@ 150/day	150
	sampling + mapping	1 man day	@ 350/day	350
	sampler helper	1 man day	@ 150/day	150
Oct. 1/98	prospecting	1 man day	@ 150/day	150
	sampling & mapping	1 man day	@ 350/day	350
	sampler helper	1 man day	@ 150/day	150
TOTAL				5850. ⁰⁰

CLAIM # 1229222

Oct. 18-22/98	backhoe stripping	21 hr @ 45/hr + G.S.T		\$ 1011.15
(5 days)				
	Drilling for samples + blasting	2 man days	@ 150/day	300.00
	Washing outcrop	4 man days	@ 150/day	600.00
	Mapping + sampling	3 man days	@ 350/day	1050.00
	sampler helper	3 man days	@ 150/day	450.00
	prospecting	2 man days	@ 150/day	300.00
TOTAL				3711.15

Gene Lutz



Declaration of Assessment Work Performed on Mining Land

Mining Act, Subsections 66(2) and 66(3), R.S.O. 1990

Transaction Number (office use)

W9970.00268

Assessment Files Research Imaging



41I09NE2006 2.19680 DANA

900

Sections 65(2) and 66(3) of the Mining Act. Under section 8 of the Mining Act, this work and correspond with the mining land holder. Questions about this collection and Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

Instructions: - For work performed on Crown Lands before recording a claim, use form 0240. - Please type or print in ink.

2.19680

1. Recorded holder(s) (Attach a list if necessary)

Table with 2 columns: Name, Client Number, Address, Telephone Number. Contains entries for LORNE LUHTA, SOUTH PORCUPINE, ONT. and RON ORCHARD, TIMMINS, ONT.

2. Type of work performed: Check (✓) and report on only ONE of the following groups for this declaration.

- Geotechnical: prospecting, surveys, assays and work under section 18 (regs)
Physical: drilling stripping, trenching and associated assays
Rehabilitation

Work Type: Prospecting, Mapping and Sampling
Line cutting, Stripping, Trenching
Report and map preparation
Dates Work Performed: From Day 06 Month 08 Year 1998 To Day 22 Month 10 Year 1998
Township/Area: DANA TWP.
M or G-Plan Number: G-2904

- Please remember to: - obtain a work permit from the Ministry of Natural Resources as required; - provide proper notice to surface rights holders before starting work; - complete and attach a Statement of Costs, form 0212; - provide a map showing contiguous mining lands that are linked for assigning work; - include two copies of your technical report.

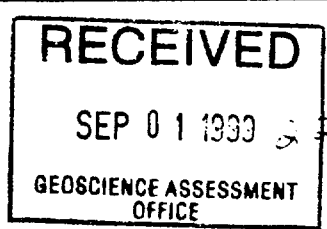
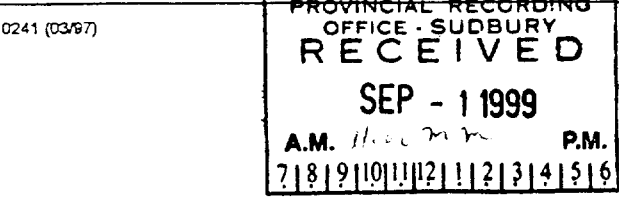
3. Person or companies who prepared the technical report (Attach a list if necessary)

Table with 2 columns: Name, Telephone Number, Address, Fax Number. Contains entry for LORNE LUHTA, SOUTH PORCUPINE, ONT. Includes a 'RECORDED' stamp dated SEP 01 1999.

4. Certification by Recorded Holder or Agent

I, LORNE LUHTA, do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Signature of Recorded Holder or Agent: Lorne Luhta
Date: Aug. 30 / 99
Agent's Address, Telephone Number, Fax Number



land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of work to be distributed at a future date
eg TB 7827	16 ha	\$26,825	N/A	\$24,000	\$2,825
eg 1234567	12	0	\$24,000	0	0
eg 1234568	2	\$ 8,892	\$ 4,000	0	\$4,892
1 1229230	16	14295	6400	6400	1495
2 1229231	16	0	6400	6400	
3					
4					
5 1229222	16	8695	6400		2295
6					
7					
8					
9					
10					
11					
12					
13					
14					
15			19200		
Column Totals	48	22990	19200	6400	3790

I, LORNE LUHTA (Print Full Name), do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Record Holder or Agent Authorized in Writing

Date

Lorne Luhta

Aug. 30/99 *L*

6. Instructions for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

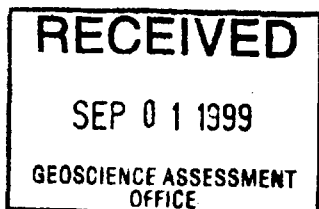
Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp

Deemed Approved Date	Date Notification Sent
Date Approved	Total Value of Credit Approved
Approved for Recording by Mining Recorder (Signature)	

0241 (03/97)



Personal information collected on this form is obtained under the authority of subsection 6(1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, the information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to the Chief Mining Recorder, Ministry of Northern Development and Mines, 6th Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

2.19680

Work Type	Units of Work Depending on the type of work, list the number of hours/days worked, metres of drilling, kilometres of grid line, number of samples, etc.	Cost Per Unit of work	Total Cost
Backhoe stripping	21 hours	45/hr + G.S.T	1011.15
trenching	4 man days	150/day	600.00
outcrop washing	4 man days	150/day	600.00
Line cutting	6 man days	150/day	900.00
prospecting	13 man days	150/day	1950.00
geological identification			
Sampling & mapping	9 days	350/day	3150.00
Sampling helper	9 days	150/day	1350.00
Report writing & drafting	7 days	350/day	2450.00
Associated Costs (e.g. supplies, mobilization and demobilization).			
Rental pluggers, water pump			717.48
tracing paper			35.65
Explosives, battery, electrical tape			494.58
Gas for pump			5.92
Assay Costs			5311.48
Transportation Costs			
6 trips Temmins Verner (return)		6400km @	
16 trips Verner to Sg (return)		0.30/km	1920.00
Shipping samples			64.03
Food and Lodging Costs			
3 people, Verner			2429.29
Total Value of Assessment Work			22989.58

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SEP 01 1999
GEOSCIENCE ASSESSMENT OFFICE

Calculations of Filing Discounts:

1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK x 0.50 = Total \$ value of worked claimed.

Note:

- Work older than 5 years is not eligible for credit.
- A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

Certification verifying costs:

I, LORNE LUHTA (please print full name), do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying Declaration of Work form as LORNE LUHTA (recorded holder, agent, or state company position with signing authority) I am authorized to make this certification.

PROVINCIAL RECORDS OFFICE - SUDBURY
RECEIVED
SEP - 1 1999
A.M. 11:00 AM
7 1 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4

Signature: Lorne Luhta Date: Aug 30/99

Geoscience Assessment Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (888) 415-9845
Fax: (877) 670-1555

December 1, 1999

LORNE EINO LUHTA
30 HELEN STREET
SOUTH PORCUPINE, ON
P0N-1H0

Visit our website at:
www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm

Dear Sir or Madam:

Submission Number: 2.19680

Status

Subject: Transaction Number(s): W9970.00268 Approval After Notice

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. **WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.**

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice. Allowable changes to your credit distribution can be made by contacting the Geoscience Assessment Office within this 45 Day period, otherwise assessment credit will be cut back and distributed as outlined in Section #6 of the Declaration of Assessment work form.

Please note any revisions must be submitted in **DUPLICATE** to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact **LUCILLE JEROME** by e-mail at lucille.jerome@ndm.gov.on.ca or by telephone at (705) 670-5858.

Yours sincerely,



ORIGINAL SIGNED BY
Blair Kite
Supervisor, Geoscience Assessment Office
Mining Lands Section

Work Report Assessment Results

Submission Number: 2.19680

Date Correspondence Sent: December 01, 1999

Assessor: LUCILLE JEROME

Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W9970.00268	1229230	DANA	Approval After Notice	November 30, 1999

Section:

9 Prospecting PROSP

10 Physical PSTRIIP

10 Physical PTRNCH

Assessment work credit has been approved as outlined on the attached Distribution of Assessment Work Credit sheet.

The assessment credit is being reduced by \$970.00. The TOTAL VALUE of assessment credit that will be allowed, based on the information provided in this submission, is \$22,020.00 as outlined in the 45 day notice.

Correspondence to:

Resident Geologist
Sudbury, ON

Assessment Files Library
Sudbury, ON

Recorded Holder(s) and/or Agent(s):

LORNE EINO LUHTA
SOUTH PORCUPINE, ON

ROBERT JAMES BAILEY
TIMMINS, ONTARIO

RONALD JAMES ORCHARD
TIMMINS, ONTARIO

Distribution of Assessment Work Credit

The following credit distribution reflects the value of assessment work performed on the mining land(s).

Date: December 01, 1999

Submission Number: 2.19680

Transaction Number: W9970.00268

<u>Claim Number</u>	<u>Value Of Work Performed</u>
1229230	14,295.00
1229222	7,725.00
Total: \$	22,020.00

DANA



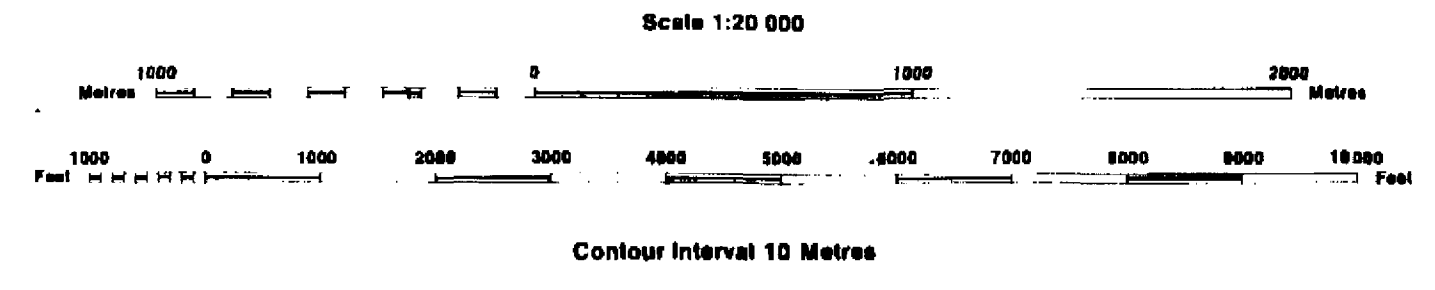
Ministry of Natural Resources

Ministry of Northern Development and Mines

INDEX TO LAND DISPOSITION

PLAN G-2904 TOWNSHIP DANA

M.N.R. ADMINISTRATIVE DISTRICT NORTH BAY MINING DIVISION SUBBURY LAND TITLES/REGISTRY DIVISION NIPISSING



SYMBOLS

- Boundary Township, Meridian, Baseline
Road allowance; surveyed; shoreline
Lot/Concession; surveyed; unsurveyed
Parcel; surveyed; unsurveyed
Right-of-way; road; railway; utility
Reservation
Cliff, Pit, Pile
Contour Interpolated; Approximate; Depression
Control point (horizontal)
Flooded land
Mine head frame
Pipeline (above ground)
Railway; single track; double track; abandoned
Road; highway, county, township; access; trail, bush
Shoreline (original)
Transmission line
Wooded area

AREAS WITHDRAWN FROM DISPOSITION

Table with columns: Description, Order No., Date, Disposition, File. Includes entries for M.R.O. - MINING RIGHTS ONLY, S.R.O. - SURFACE RIGHTS ONLY, and M.+S. - MINING AND SURFACE RIGHTS.

A.P. 16080 JUNE 1/88 TO MAY 31/84

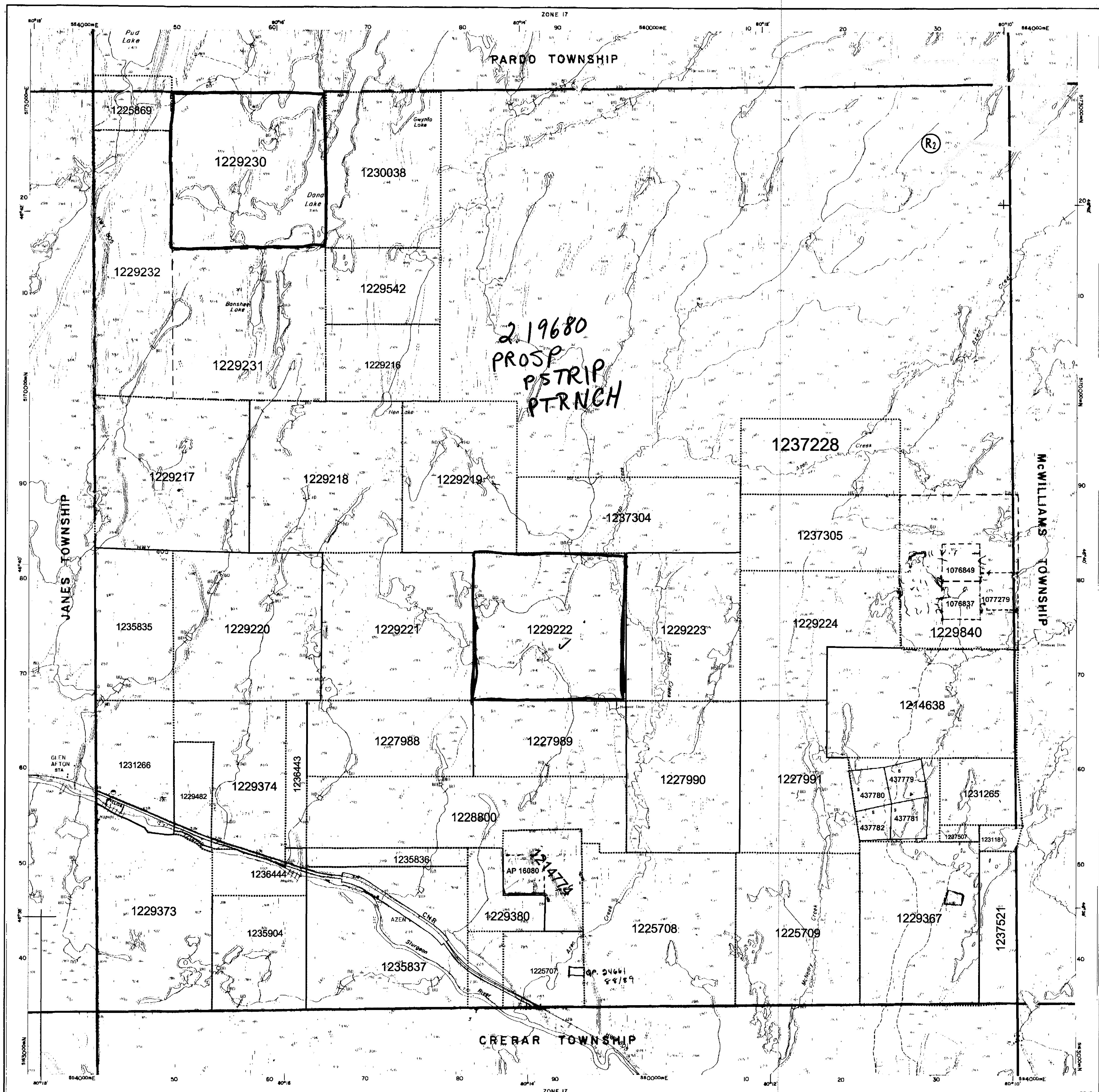
NOTES

SUBDIVISION OF THIS TOWNSHIP INTO LOTS AND CONCESSIONS WAS ANNULLED.

DISPOSITION OF CROWN LANDS

- Patent Surface & Mining Rights, Surface Rights Only, Mining Rights Only
Lease Surface & Mining Rights, Surface Rights Only, Mining Rights Only
Licence of Occupation
Order-in-Council
Cancelled
Reservation
Sand & Gravel
LAND USE PERMIT

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER...



2,19680 PROSP PSTRIP P-TRNGH