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Homestake Explorations Limited

Geochemical Sampling Programme Olive Mine Property Mine Center Area Kenora Mining Division Ontario

U. Abolins P.Eng. August 15, 1985

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#### INTRODUCTION

This report describes a soil geochemical sampling programme carried out on the Olive-Preston Property of Homestake Explorations Limited. The soil samples were taken at 0, 50, 50 and 100 foot intervals north and south along grid lines from the axes of EM-16 conductive zones. The samples were taken from the "B" horizon where possible.

A total of 223 soil samples from 10 small grids were analyzed for gold, of which 23 or 10.3% are anomalous. One conductive horizon of 38 samples was also tested for zinc, but only two samples gave slightly anomalous values. Eleven rock samples were also analyzed and five returned anomalous gold values which correlate with the soil anomalies.

### LOCATION AND ACCESS

The Homestake Explorations Limited property, known as the Olive-Preston occurrence, is located 35 miles east of Fort Frances, Ontario. (NIS Reference:  $52C/10, 48^{\circ} 45$ 'N,  $92^{\circ} 40$ 'W). Highway 11 provides good access to the southern portion of the property. The central portion of the property and the original showing are accessible by a gravel road which extends for one mile north of Highway 11.

Two electrical power transmission lines bisect the property east-west and provide excellent control for mapping purposes. The CNR main line connecting Winnipeg to Thunder Bay also traverses the total length of the property in an east-west direction.

#### PROPERTY DESCRIPTION

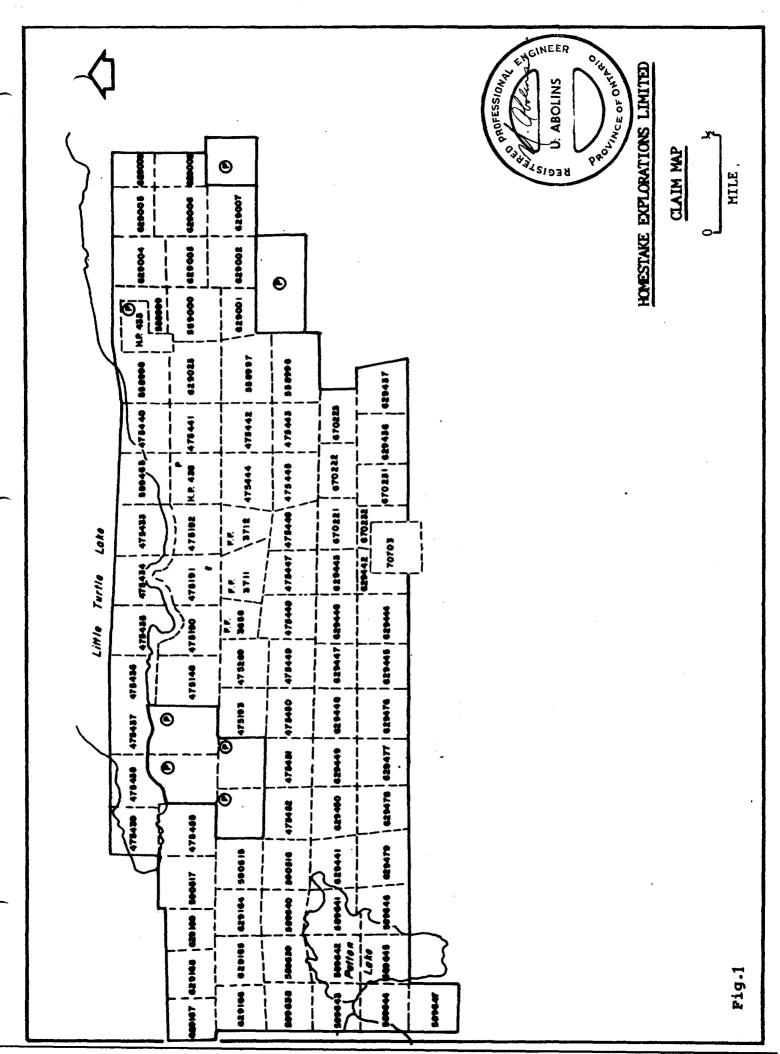
The property consists of 83 unpatented and 4 patented mining claims located in the Little Turtle Lake, Porter Inlet and Bad Vermillion Lake areas in the Kenora Mining Division. The dimensions of the property are approximately  $4.5 \times 1.5$  miles comprising 6.75 square miles or 4320 acres.

## Description of the claims

Unpatented Claim Numbers	No. of Claims	Expiry Date
475146 475190 - 475193 incl. 475269 475433 - 475452 incl. 475455 558996 - 559000 incl. 589465 589638 - 589647 incl. 590515 - 590517 incl. 629001 - 629009 incl. 629023 629164 - 629169 incl. 629436 - 629437 incl. 629441 - 629442 incl. 629443 - 629446 incl. 629447 - 629450 incl. 629476 - 629479 incl. 670221 - 670223 incl. 670231 - 670232 incl.	1 4 1 20 1 5 1 10 3 9 1 6 2 2 4 4 4 4 3 2	January 31, 1986 September 18, 1986 January 8, 1986 March 10, 1986 March 10, 1986 December 8, 1987 April 29, 1988 November 12, 1987 December 13, 1988 December 8, 1987 December 8, 1987 May 10, 1988 December 21, 1988 January 21, 1987 January 21, 1987 January 21, 1987 March 3, 1987
	83	

Claims 475146, 475190-475193 incl., 475269 are in the process of being brought to lease.

Patented Claim	No. of	
Numbers	Claims	
HP 438 FF 3711 - 3712 incl. FF 3658	1 2 1 4	



ຸ ຕ 1 Relief on the property is slight was large low lying areas interspersed with east-west trending ridges that exhibit topographic highs to 50 feet. Overburden is extensive, but probably does not exceed 30 feet in thickness.

The property is covered with a mature growth of spruce, balsam and jackpine, frequently locally dense. Poplar, ash and alders are found to occur in the low areas. Stands of red pine are present scattered throughout the property.

The north portion of the property is bounded by Little Turtle Lake. Numerous small beaver ponds are present scattered across the property. Patton Lake situated in the south-west corner of the property is the only other lake present and covers about 160 acres.

A severe hailstorm with tornado force winds passed across the property during the summer of 1984, resulting in extensive areas of downed and destroyed mature trees.

## EXPLORATION HISTORY

The property was first explored in the late 1800's and reports indicate that the Olive-Preston gold occurrence was discovered by "Doc" Gardener in 1885. The following is a short history of the Olive-Preston:

- 1896: Sold to W.A. Preston of Preston Gold Mining Company of Ontario Limited. Property transferred to a subsidiary company, Olive Gold Company of Seine River Limited.
- 1897-1900: The Olive Gold Company put down a 70° inclined shaft to a depth of 251 feet with levels at 60, 135 and 245 feet and a total of 1334 feet of drifting. A 25 stamp mill was erected.

Operations ceased on June 25, 1900. Production from 1897 to 1900 was 2699 oz. of gold from 6925 tons. (.39 oz Au/ton).

1935: Olive Gold Mines Limited pumped out the old workings and carried out some sampling.

1937: A 20 ton Straub amalgam mill was installed and 1,000 feet of drifting was carried out on the second level.

Production: 50 oz. of gold from 330 tons (.15 oz Au/ton).

1942: Leased to Goldorel Mining Co. Ltd. Workings dewatered to 135 foot level, 20 ton Hardings Mill installed.

> Hoist house and mill were destroyed by fire in August 1942. Operations stopped.

Production: 823 oz. of gold from 2169 tons (.38 oz Au/ton).

- 1958-1959: Property acquired by Olympus Mines Limited. Workings dewatered to approximately 145 feet below surface where a skip which was derailed in the 1942 fire was encountered in the shaft. Work stopped in early 1959.
- 1963-1964: Olympus Mines Limited optioned property to Proteus Minerals Ltd. Eleven drill holes totalling 3000 feet of drilling carried out along the structure.
- 1979-1980: Claims staked by R. Pitkanen and optioned to Sherrit Gordon Limited. One drill hole totalling 922 feet reported.
- 1983-1985: Property optioned to Homestake Explorations Limited. Exploration programme of 110 miles of geophysical and geological surveys, trenching, sampling and 8826 feet diamond drilling. 21,000 tons of proven/probable reserves grading 0.24 oz. Au/ton were calculated down to 300 feet below surface.

On the remainder of the property, signs of old prospecting are evident by numerous pits and trenches. Near the south-east corner of the property between the period 1916-1917, Port Arthur Copper Company mined 26,509 lbs. of copper from a single massive sulphide lens.

Additional work on this copper deposit between 1948 to 1956 carried out by Noranda and Stratmat Ltd., outlined a pyritic zone 75' x 800' with local concentrations of Cu and Zn. The best result was 1.5% Cu over 12 feet. Between 1956 to 1967 approximately 3400 feet of diamond drilling was carried out on the Company's claims which adjoin the Port Arthur copper deposit to the west. This work was carried out by Stratmat Ltd., Satellite Metal Mines Ltd. and Ronda Copper Mines Limited. The drilling results indicated disseminated sulphide zones with no significant base metal values.

#### REGIONAL GEOLOGY

The property is located in the southwestern portion of the Superior Province in what is described by Poulsen (1983) as the Wabigoon Subprovince. The Olive-Preston Mine is located in the Mine Centre - Fort Frances area which lies within a wedge shaped greenstone fault block along the southwestern margin of the Wabigoon Subprovince (Poulsen, 1983). The northern boundary of this block is the Quetico Fault and the southern boundary is marked by the Seine River - Rainy River Fault. This east-west trending fault network is associated with a 3 to 6 mile thick sequence of volcanic rocks which extends for some 300 miles, from Rainy Lake in the west through Atikokan to the Beardmore and Geraldton areas in the east.

In the Mine Center area, steeply north dipping, mafic and intermediate metavolcanics with intercalated gabbroic sills, turbiditic metasediments, felsic volcanics and iron formation comprise the volcanic sequence which is cut by granodioritic, monzonitic and trondhjemitic intrusions. The rocks are metamorphosed to assemblages characteristic of the lower to upper amphibolite facies and are folded into antiforms and synforms which do not reflect the stratigraphic order (Poulsen 1983).

The majority of the gold deposits in the Mine Center area occur as discontinuous tabular quartz-carbonate veins in ductile shear zones. The veins have been exploited intermittently in the area since 1893 and range from a few inches to a few feet in width. Approximately 90% of these gold occurrences commonly occur in acidic intrusive rocks ranging from trondhjemite to quartz monzonite. A second type of gold occurrence in the Mine Center area are the more continuous and conformable quartz veins occurring in felsic tuffs and metasedimentary rocks. The Olive-Preston Mine is an example of this type.

Blackburn (1973), Harris (1971), Wood et al. (1980), Poulsen (1980b, 1981). . Lithological Map of the Mine Centre-Fort Frances Area. Based on mapping by AL ONE TH FORT FRANCES - MINE CENTRE AREA 5 LITHOLOGICAL MAP RANT RIVER DISTRICT <u>я</u> Я Lia) Mata Mila, em 3 3 [2a) 🖡 Badding , tops .moun { inclined , overlaned) vition laves, tops have 2 Internatiole Metovolconce Geological contect I Malic Melovolconics **3** Felsic Melevolconci SYMBOLS Ī // 4 Ş LAKE var phosed tapili - tuff, huff, (4b) scimolite - chiarite achest conformity (Bb) konditionnia (Bc) grania (Ba) Tomaita (Bb) konditionnia (Bc) grania gnaiss, quartzolatdispathic gnaiss (9a) Congiomerate , (9b) arkore, subarkose, Littur erente , bithic erkose. ert-magnetile ; (5b) pyrite rinc states ; (5c) state , sit (10a) Grante , granodiorite , (10b) monzant monzodorite , quart monzante , quartz monzodorite . Dabase , gataro , lamaraphyre , quarte teldipar porphyry one . (64 (7a) Gabbro , metogobbro , (7b)ler anorthourin , (7c) quoris gabbro , (7d) metodrabose , amphiboleia (64) Biotite schief (6b) biolitic Schafs, mylonites, colociasites (5a) Cherl, chert-m uble ; (6c) wache DESCRIPTION pyrtholite , pyr mognetic octi (4a) Meton Contect LEGEND mlaci Fault Contact -Intrusted ł Infrance. LITHOLOGIC UNIT HOR ROCK A somephosed 12 Fault Rocks Cyte Recht INCOMPTO 1 Cesk D mite Fig.2 1 Ō Ū

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#### ROPERTY GEOLOGY

The property geology consists dominantly of alternating mafic, intermediate, and felsic volcanic rocks with interbedded units of volcaniclastic sedimentary rocks. The general trend of the rocks throughout the property is east-west  $(70^{\circ}-80^{\circ} \text{ astronomic})$  with steep dips toward the north.

To the north the property is bounded by the Quetico Fault which runs through Little Turtle Lake. This east-west trending fault is a major structure which can be traced for approximately 180 miles. Many of the rocks on the property have developed a bedding plane foliation that is sympathetic to the direction of faulting. North of the Quetico Fault the rocks form part of a migmatite complex. Here, mafic to intermediate metavolcanic rocks with complex geology are intruded by granitic rocks. It is believed that these rocks are older than the volcanic rocks on the property.

To the south the property is bounded by a 1 mile thick unit of metamorphosed granitic intrusive rocks, monzonitic to trondhjemitic in composition. It is within this unit that many of the areas gold occurrences are located. This granitic unit has intruded the margins of a large anorthositic body located in Bad Vermillion Lake.

The property is made up of three stratigraphic groups which from south to north are described as:

- 1) mafic-intermediate-felsic volcanic group.
- 2) felsic volcanic-clastic sedimentary group.
- 3) mafic volcanic-clastic sedimentary group.

Although the stratigraphic relationship is unclear, the felsic-intermediate-mafic volcanic rocks in the south-central portion of the property may represent a volcanic center with the northern rocks representing wanning stages of volcanism.

The southern intermediate-felsic volcanic group is a sequence approximately 1500 feet thick composed of alternating mafic, intermediate, (andesite) and felsic (rhyolite) flows. This unit continues off the property to the southwest where it extends for approximately 16 miles to Swell Bay. The mafic rocks are most predominant in the western end of this group where units up to 800 feet thick are interfingered with felsic flows. Easterly the mafic units become thinner (150 feet thick) and display cross-cutting features through the intermediate and felsic rocks. Detailed mapping of these units is necessary to establish their genesis as intrusive or flow rocks. The rhyolite flows appear continuous and massive and occur up to 1000 feet thick. The andesite flows are thinner (up to 400 feet thick) and display discontinuous lengths. Intermediate tuffaceous units up to 300 feet thick form continuous mappable units interbedded with the felsicintermediate volcanic stratigraphy. At many of the andesite-rhyolite contacts sulphide mineralization has been encountered as evidenced in numerous pits and trenches. On patented claim FF 4261, 26,509 lbs. of copper was mined from a single sulphide lens between 1916 and 1917. Since that time many companies have explored this group or rocks for massive sulphide type mineralization. This southern intermediate-felsic volcanic group of rocks is therefore considered low priority for gold exploration and can be defined as a base metal horizon.

The central felsic volcanic-clastic sedimentary group is 1500 to 3000 feet thick and is composed of alternating felsic volcanic flows (rhyolite) and intermediate to felsic tuffaceous rocks. The felsic flows are characterized by massive and foliated quartz-eye rhyolite which occur in units up to 800 feet thick. The tuffaceous rocks consist of intermediate tuff grading into rhyolite and lapilli tuff units, 700 feet thick. Mafic volcanic (intrusive?) units up to 200 feet thick occur intercalated with the felsic volcanic rocks. Further studies are required to define these units as flows or intrusive sills. Only limited exploration has been carried out on this group of rocks and further detailed work in warranted.

The northern, mafic volcanic-clastic sedimentary group is the largest sequence occurring up to 4500 feet thick. This group is composed dominantly of mafic volcanic rocks with intercalated units of felsic to intermediate tuffaceous rocks. It is within this sequence that the most detailed gold exploration has been carried out to date. The mafic rocks consist of generally fine grained to coarse grained basalt which has been metamorphosed to display gabbroic and amphibolitic textures. It is still uncertain whether all the mafic rocks are flows as many of the textures suggest mafic intrusive similarities. Locally many of the mafic rocks are severely foliated and sheared displaying talc-chlorite schists. This deformation is attributed to the Quetico Fault. The felsic to intermediate tuffaceous rocks form generally marrow, (200 foot thick), continuous units. The intermediate variety are described as feldspar ash, quartz-feldspar ash, carbonate-feldspar ash, and quartz-carbonate ash tuff. The felsic tuffs are described as rhyolitic and lapilli. Often the intermediate and felsic tuffs grade into one another along strike. A gold bearing cherty carbonate tuff with bedding plan foliation has been identified in three areas. The location and size of these units are described below:

- a) <u>Olive Zone</u>: 2800 feet north of baseline between lines 87W and 156W. This unit is 7200 feet long and 50 to 200 feet thick.
- b) <u>South Zone</u>: 1800 feet north of baseline, between lines 132W and 171 W. This unit is 3900 feet long and 50 to 2000 feet thick.
- c) <u>East Zone</u>: 700 feet north of baseline, between lines 0 to 42W. This unit is 4200 feet long and approximately 200 feet thick.

The Olive zone has been studied in detail and will be discussed in the following chapter. Both the South and East Zones have only been prospected and require additional exploration to fully evaluate. On the South Zone between lines 138W and 141W, a small shaft is located and disseminated sulphides analysed .05 oz Au/ton. These felsic pyroclastic units have proved to be the prime host for the gold mineralization which has been encountered to date on the property.

The Olive Zone represents the host for the gold mineralization that was mined as far back as 1897 at the Olive Mine. Detailed mapping and stripping along this zone (figure 3) reveals a cherty pyroclastic unit which extends for 1700 feet in length. In the east this unit is only 60 feet wide but steadily thickens to the west where widths of 200 feet are shown. From the main Olive shaft to the east, a distance of 800 feet, one cycle of the pyroclastic unit is present displaying a strong bedding plane foliation,  $(080^{\circ} - 090^{\circ}$  Astronomic) dipping steeply  $(75^{\circ})$  to the north. It is within this cycle that gold occurs closely associated with very fine grained quartz veins and veinlets. The quartz veins are conformable within the pyroclastic unit and display pinching and swelling along strike, varying in size from 1 to 8 inches. Several parallel  $\frac{1}{2}$  to 1 inch thick quartz veinlets, also occur closely associated to the thicker veins displaying an overall thickness for the mineralized zone of 1.5 to 3.5 feet. Sampling along this quartz vein system returned gold values ranging from trace to over 9 oz/ton. The gold is fine grained and generally occurs along oxidized foliation planes, once associated with sulphides. Pyrite, pyrrhotite and chalcopyrite are the dominant sulphides which combine to form concentrations of approximately 1%.

To the west of the main shaft for 900 feet, the pyroclastic unit thickens and forms three separate cycles. The previously described cycle which hosts the gold bearing quartz veins continues to the west and forms the "north cycle", a 100 foot thick unit of strongly foliated, carbonated, cherty tuff. The "central cycle" occurs up to 40 feet thick and is composed of fine grained massive tuff with 3 to 8 foot thick bands of disseminated sulphides, (pyrrhotite, pyrite), containing low gold values. The "south cycle" is 70 feet thick and is described as a deformed, cherty, carbonated pyroclastic unit. To date, west of the shaft, gold is only associated to the "north cycle" where conformable quartz veins were mined on two underground levels.

Intercalated with the pyroclastic rocks of the Olive Zone are 20 foot thick, discontinuous massive quartz eye rhyolite flows. In the drill holes, quartz feldspar porphyry dykes were found to occur below the main shaft in the pyroclastic units. The pyroclastic units of the Olive Zone are bound by mafic volcanic rocks which display foliation, local shearing and folding. These mafic volcanic rocks display coarse grained textures and may locally resemble an intrusive gabbro or amphibolite.

Another felsic pyroclastic unit occurs 100 feet north from the eastern end of the Olive Zone. This unit is semi-parallel to the Olive Zone and strikes at  $070^{\circ}$  astronomic and dips  $50^{\circ}$  to the north. It has been traced for 500 feet along strike and measures approximately 40 feet wide. A gold bearing milky white to smokey quartz vein containing less than 1% pyrite, occurs conformably within this zone and varies in width from 1 to 5 feet. Three small shafts are located on this vein and samples taken near the shafts report trace to over an ounce in gold. By projecting this unit westward it encounters the Olive Zone at 400 feet east of the main shaft. Here high gold values have been encountered along the Olive Zone for approximately 250 feet. The junction of these two structures implies a NW plunge which is consistent with other structural evidence derived from mapping the pyroclastic and mafic volcanic rocks.

#### GEOCHEMICAL SURVEY

Ten conductive zones were sampled during the current programme. The axes of the conductive zones were located with an EM-16 along previously cut picket lines. Samples were taken on the axis or crossover of the conductive zone and at 50, 100 and 200 foot intervals north and south. An auger was used to take the samples and an effort was made to sample the "B" horizon which in almost all cases, was a fine reddish to reddish brown sandy soil. The "A" horizon consisted of a whitish to whitish grey fine sandy soil except in areas of swampy ground where a layer of fine glacial clay was present. The clay layer was generally more than four feet thick.

A total of 223 soil samples and 11 rock samples were taken and analyzed for gold. Attached as Appendix "A" to this report are copies of the assay results. Twenty three soil samples or 10.3% returned anaomalous values in gold ranging from 10 to 515 ppb. Five of the rock samples returned anomalous values in gold and generally confirmed anomalous soil areas. Thirty eight of the soil samples were also analyzed for zinc, but only two samples were found to be slightly anomalous.

### Conductive Zone AA

This zone occurs within mafic volcanic flows, to the north east of the Olive vein structure. Three anomalous gold values of 15, 25 and 65 ppb. were picked-up on one line. The values occur in a flat overburden covered area at the north side of a basic volcanic ridge. These values appear to be associated with the extension of the north-east Olive quartz vein. More sampling is required to delineate the quartz vein zone.

### Conductive Zone AA!

A conductive zone occuring in a low lying area between felsic tuffs and mafic volcanic flows. This conductive zone is on-strike of the Olive vein structure. One sample returned a value of 360 ppb. Au but is isolated and cut off by non-anomalous values.

### Conductive Zone BB

This conductive zone occurs in a low lying area between mafic volcanic and felsic tuff ridges. No anomalous assays were obtained on the three lines sampled.

#### Conductive Zone DD

The zone occurs in a low lying area to the north of a large felsic tuff ridge. One anomalous value of 50 ppb. Au was picked up on the western most line of the three lines sampled. This conductive zone is roughly on strike, 900 feet to the east of AA' where a 360 ppb Au sample was taken. The area between the two zones should be sampled.

## Conductive Zone EE

The conductive zone occurs in a low lying area believed to be underlain by mafic volcanics. No anomalous values were picked-up.

### Conductive Zone FF

This conductive zone occurs in a low lying area between a mafic volcanic ridge on the south and a granitic ridge on the north. One sample returned an assay of 10 ppb Au, but appears to be isolated as it is cut off in all directions.

#### Conductive Zone GG

The zone occurs in an overburden covered area within felsic tuffs. Two lines returned anomalous assays of 10, 15, 25 and 25 ppb. Au which are very closely associated with the conductive axis of the zone. The area immediately to the east and on strike was found to be anomalous in gold from humus samples taken in 1983. More sampling is definitely required to trace the extent of the anomalous gold values.

### Conductive Zone HH

A complex conductive zone occuring in a low lying area which appears to be associated with an interfingered sequence of felsic tuffs and mafic flows. Four samples returned values of 10, 10, 85, and 515 ppb. Au. The 85 ppb. Au assay is an isolated value which is open in three directions and occurs adjacent to a felsic tuff ridge. The 515 ppb. Au assay is directly associated with an old water covered pit at the contact of felsic tuffs and mafic flows, and is flanked by 10 ppb Au assays. The samples were also analyzed for zinc but no anomalous values were encountered. More sampling for Au is required for both anomalous areas.

#### Conductive Zone II

The zone occurs in an extensive low lying area which is interpreted to be underlain by mafic flows. The soil samples were all clay, but nonetheless, two assays were anomalous of 10 and 35 ppb.Au. Both are centered about the conductive axes on separate lines. More sampling is required to define the zone.

#### Zone MS

A zone of pyritiferous felsic tuffs trenched for gold along a strike length of about 1200 feet. Too close to a major hydro power line to give a geophysical anomaly. Tested by a drill hole in 1984; which revealed a massive sulphide zone within altered felsic tuffs and intersection of 0.47% Zn and 0.59 oz. Ag across 4.3 feet. Two sample lines and several In strike samples returned eight anomalous assays ranging from 10 to 160 ppb. Au. The samples were also analyzed for zinc but only two assays were slightly anomalous at 133 and 153 ppm Zn. More sampling should be done to properly delineate the zone.

## Conclusions and Recommendations

The soil sampling programme, although of a limited extent, identified six zones that are anomalous in gold. The anomalous zones identified as AA, AA', DD, HH, II, GG, and MS on the enclosed map, should be sampled in detail along strike of the anomalous values and/or conductive zones before any further work is commenced.

Uldis Abolins P.Enton U. ABOLINC AGINEER OLINCE OF ONT

## REFERENCES

Page, C.E. 1983	Geological, Geophysical, Geochemical Report on the Mine Center Area Claims, Fort Frances Area, Kenora Mining Division, Ontario. Company Report.
Poulsen, K.H. 1983	Structural setting of Vein-Type Gold Mineralization in the Mine Center-Fort Frances Area: Implications for the Wabigoon Subprovince. Ontario Geological Survey, Misc. Paper 110; A.C. Colvine, Editor.
All Authors All Year;	Ontario Ministry Natural Resources, Division of Mines, Work Assessment Files.

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#### CERTIFICATE

I, Uldis Abolins of 340 Burnett Avenue, in the City of North York, in the Municipality of Toronto, in the Province of Ontario,

DO HEREBY CERTIFY:

- That I am a graduate of the University of Toronto with 1. the degree of B.A.Sc. in Geological Engineering.
- 2. That I have actively practised my profession in mineral exploration since graduation in 1967.
- That I am a Registered Professional Engineer in the 3. Provinces of Ontario and Quebec.
- That I have no interest either directly or indirectly 4. in the said property nor do I expect to receive any.
- That permission is hereby given to Homestake Explorations 5. Limited to reproduce this report for use with a Statement of Material Facts or Prospectus.

Media Abolins, B.A.Sc., P.Eng.

Dated at the Municipality of Toronto Province of Ontario This 15th Day of August 1985.

APPENDIX A

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Assay Results

CONTRACT LABORATORIES

# TECHNICAL SERVICE LABORATORIES DIVISION OF BURGENER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. LAW 1A2

TELEPHONE: (416) 625 -1544 TELEX 06 - 960215

# **CERTIFICATE OF ANALYSIS**

SAMPLE(S) FROM Harbinson Mining & Oil Group Suite 916 111 Richmond St.W. Toronto Ontario M5H 2G4

**REPORT No.** T1611-1

ATTn 1

SAMPLE(S) OF ROCK & SOIL

. . . . .

Inv# 29054 P.O. /

Gold (Au) ppb FA/AA

\_

<5 <5 <5 <5 <5 <5 <5 <5 <5 5 <5 <5 360

Soil-5101	an
Soil-5102	
Soil-5103	
Soil-5104	
Soil-5105	
Soil-5106	
Soil-5107	
Soil-5108	
Soil-5109	
Soil-5110	
Soil-5111	
Soil-5112	
Soil-5113	

Samples	s, Pulps and Rejects discarded after two montl	s Invoice to	١	ha	
DATE	July 2/85	SIGNED .		Attabum	🕅

. CONTRACT LABORATORIES

## TECHNICAL SERVICE LABORATORIES DIVISION OF BURGENER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. LAW 1A2

TELEPHONE: (416) 625-1544 TELEX 06-960215

# CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM

## Harbinson Mining & Oil Group Suite 916 111 Richmond St.W. Toronto Ontario M5H 2G4 /

REPORT No. **T1611-2** 

ATTn /

SAMPLE(S) OF ROCK & SOIL

Inv# 29054 P.O. /

Gold (Au) ppb FA/AA

Soil-5114	<5
Soil-5115	<5
Soil-5116	<5
Soi1-5117	<5
Soil-5118	<5
Soil-5119	<5
Soil-5120	<5
Soil-5121	<5
Soil-5122	<5
Soil-5123	<5
Soil-5124	<5
<b>Soil-5125</b>	<5
Soil-5126	<5
<b>Soil-5127</b>	<5
Soil-5128	<5
Soil-5129	<5
Soil-5130	<5
Soil-5131	<5
Soil-5132	<5
Soil-5133	<5
Soil-5134	<5
DATT_JT24	<b>`</b>

Samples.	Pulps and Rejects discarded after two months	Invoice to	١	Í.	
DATE	July 2/85	SIGNED		Maham	🕅

• CONTRACT LABORATORIES

# TECHNICAL SERVICE LABORATORIES DIVISION OF BURGENER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. LAW 1A2

TELEPHONE: (416) 625 -1544 TELEX 06 - 960215

# **CERTIFICATE OF ANALYSIS**

SAMPLE(S) FROM Harbinson Mining & Oil Group Suite 916 111 Richmond St.W. Toronto Ontario M5H 2G4 ATTn 1

REPORT No. T1611-3

ROCK & SOIL

Inv# 29054 P.O. /

Gold (Au) ppb FA/AA

15

Soil-5135

SAMPLE(S) OF

<b>~</b> .					
Samples	s, Pulps and Rejects discarded after two months	Invoice to	N	for a	
DATE	July 2/85	SIGNED _		attebran	
		_			

• CONTRACT LABORATORIES

## TECHNICAL SERVICE LABORATORIES DIVISION OF BURGENER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. LAW 1A2

TELEPHONE: (416) 625-1544 TELEX 06-960215

# **CERTIFICATE OF ANALYSIS**

SAMPLE(S) FROM

ATTN SAMPLE(S) OF	Harbinson Mining & Oil Group Suite 916 111 Richmond St.W. Toronto Ontario M5H 2G4 Mr. C.E. Page

REPORT No. T1734-1

Copies to B. McGuinty White Ri

Zinc (Zn) ppm

	Gold (Au) ppb FA/AA
5136-10	<5
5137-10	<5
5138-10	<5
5139-10	<5
5140-10	50
5141-10	<5
5142-10	5
5143-10	<5
5144-10	<5
5145-10	5
5146-10	<5
5147-10	<5
5148-10	<5
5149-10	<5
5150-10	<5
5151-10	<5
5152-10	<5
5153-10	<5
5154-10	<5
5155-10	<5

Samples, Pulps and Rejects discarded after two months July 16/85

DATE \_

5 Bur SIGNED

• CONTRACT LABORATORIES

# TECHNICAL SERVICE LABORATORIES DIVISION OF BURGENER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. LAW 1A2

TELEPHONE: (416) 625-1544 TELEX 06 - 960215

# **CERTIFICATE OF ANALYSIS**

SAMPLE(S) FROM Harbinson Mining & Oil Group Suite 916 111 Richmond St.W. Toronto Ontario M5H 2G4 ATTn Mr. C.E. Page SAMPLE(S) OF SOIL

29217

REPORT No. T1734-2

Copies to B. McGuinty White Ri

	Gold (Au) ppb FA/AA	Zinc (Zn) ppm	
5156-10	<5		
5157-10	<5		
5158-10	<5 5 <5 5		
5159-10			
 5160-10			
5100 10	J		
5161-10	<5		
5162-10	<5		
5163-10	<5 5 35		
5164-10	35		
5165-10	5		
	5		
5166-10	<5		
5167-10	<5		
5168-10	5		
5169-10	<5 5 5 5		
5170-10	5		
	5		
5171-10	<5		
5172-10	10		
5173-10	<5		
5174-10	<5 5 5		
5175-10			

Samples, Pulps and Rejects discarded after two months JULY 16/85	1001
ATE	SIGNED Del Burger

For any enquiries on this report, please contact Customer Service Department - Edith Anzil

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• CONTRACT LABORATORIES

## TECHNICAL SERVICE LABORATORIES Division of Burgéner Technical Enterprises Limited

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. LAW 1A2

TELEPHONE: (416) 625-1544 TELEX 06-960215

# CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM

**2921**7

Toronto Ontario M5H 2G4 ATTn Mr. C.E. Page AMPLE(S) OF SOIL	Copies to B. McGuinty White R
Harbinson Mining & Oil Group	REPORT No.
Suite 916 111 Richmond St.W.	T1734-3

	Gold (Au) ppb FA/AA	Zinc (Zn) ppm
5176-10	5	
5177-10	<5	36
5178-10	10	16
5179-10	515	29
5180-10	15	17
5181-10	<5	51
5182-10	<5	55
5183-10	<5	48
5184-10	85	66
5185-10	5	51
5186-10	5	40
5187-10	· <5 5	44
5188-10	5	42
5189-10	<5	47
5190-10	5	38
5191-10	5	41
5192-10	<5	44
5193-10	<5	40
5194-10	<5	55
5195-10	5	38

Samples, Pulps and Rejects discarded after two months July 16/85		ADEA	СТА
DATE	SIGNED	1 d'al Barger	

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## TECHNICAL SERVICE LABORATORIES DIVISION OF BURGENER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. LAW 1A2

TELEPHONE: (418) 625-1544 TELEX 06-960215

> REPORT No. T1734-4

## **CERTIFICATE OF ANALYSIS**

SAMPLE(S) FROM

29217

Copies to B. McGuinty White R

	Suite 916	Mining & Oil 111 Richmond	Group St.W.
	Toronto Oni M5H 2G4	tario	
ATTN SAMPLE(S) OF	Mr. C.E. Pa SOIL	age	

	Gold (Au) ppb FA/AA	Zinc (Zn) ppm
5196-10	<5	51
5197-10	<5	12
5198-10	<5	38
5199-10	<5 5	38
5200-10	5	37
5101-4	<5	38
5102-4	5	133
5103-4	<5	18
5104-4	<5	12
5105-4	5	11
5106-4	<5	37
5107-4	15	14
5108-4	5	13
5109-4	15	64
5110-4	10	153
5111-4	5 .	71
5112-4	5 · · · · · · · · · · · · · · · · · · ·	26
5113-4	10	59
5114-4	10	23
5115-4	10	11

Samples, Pulps and Rejects discarded after two months July 16/85

28 Bur SIGNED

For any enquiries on this report, please contact Customer Service Department - Edith Anzil

DATE \_

•	CHEMICAL	RESEARCH	AND	ANALYSIS
-	•••••			

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## TECHNICAL SERVICE LABORATORIES DIVISION OF BURGENER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. LAW 1A2

TELEPHONE: (418) 625-1544 TELEX 06-960215 ı

# CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM Durham Resources Ste. 916 111 Richmond St. W. Toronto Ontario M5H 2G4 ATTN / SAMPLE(S) OF poor a goil

ROCK & SOIL

REPORT No. T1733-1

Inv# 29144 P.O. /

Gold (Au) ppb FA/AA

	•			-
Ro	ck-	-27	85	
Ro	ck-	-27	86	
	<b>i1-</b>			
So	<b>i1-</b>	-51	17	-4
50	11-	·51	18	-4
So	<b>il-</b>	-51	19	-4
So	<b>i1-</b>	-51	20	-4
50	11-	-51	21	-4
80	11-	-51	22	-4

Sam	ples, Pulps and Rejects discarded after two months	here a	
DATE	July 9/85	SIGNED	Ī

•	CHEMICAL	RESEARCH	AND	ANALYSIS

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## TECHNICAL SERVICE LABORATORIES DIVISION OF BURGENER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. LAW 1A2

TELEPHONE: (416) 625-1544 TELEX 06-960215

# CERTIFICATE OF ANALYSIS

ATTN / SAMPLE(S) OF ROCK & SOIL	Inv# 29144 P.O. /
SAMPLE(S) FROM Durham Resources Ste. 916 111 Richmond St. W. Toronto Ontario M5H 2G4	REPORT No. <b>T1733-2</b>

	Gold (Au) ppb FA/AA
Soil-5123-4	<5
Soil-5124-4	<5
Soil-5125-4	<5
Soi1-5126-4	5
Soi1-5127-4	<5
Soil-5128-4	10
Soil-5129-4	15
Soil-5130-4	25
soil-5131-4	5

Samples, Pulps and Rejects discarded after two months	$\langle \rho \rangle$	_
DATEJuly 9/85	SIGNED	

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## TECHNICAL SERVICE LABORATORIES DIVISION OF BURGENER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. LAW 1A2

TELEPHONE: (416) 625-1544 TELEX 06-960215

## CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM Durham Resources Ste. 916 111 Richmond St. W. Toronto, Ontario M5H 2G4

REPORT No.

T-1854

Inv. #29315

SAMPLE(S) OF ROCK

	Rocks	Gold (Au) ppb FA/AA	Silver (Ag) ppm	Zinc (Zn) ppm	
	2787	<5			
	2788	<5			
	2789	<5			
	2790	<5			
	2791	<5			
-	2792	160	27.0	300	
	2793	10	2.0	41	
	2794	10		•-	
	2795	40			

Samples, Pu	ulps and Rejects discarded after two months	Copies to Harbinson Mining	
DATE	July 24, 1985	Copies to Harbinson Mining 	CTA

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## TECHNICAL SERVICE LABORATORIES DIVISION OF BURGENER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. LAW 1A2

TELEPHONE: (416) 625-1544 TELEX 06-960215

## **CERTIFICATE OF ANALYSIS**

SAMPLE(S) FROM Durham Resources Ste. 916 111 Richmond St. W. Toronto Ontario M5H 2G4	REPORT No. T1810-1
ATTN /	
SAMPLE(S) OF SOIL	Inv# 29271 · P.O. /

	Gold (Au) ppb FA/AA
L18-2W 0+30	5.
1+00	<5
1+50N	<5
2+00N	<5
2+50N	<5
3+50N	<5
4+50N	<5
L21W 32=30N	<5
32+80N	10 .
33+30N	5.
33+80N	<5
34+30	<5
34+80N	<5
35+25N	<5
L24W 21+00N	<5
22+00N	<5
22+50N	<5
23+00N	<5
23+50N	<5
24+00N	<5
L24W 25+00N	<5

Samples, Pulps and Rejects discarded after two months

<u>July 18/85</u>

ingo SIGNED

For any enquiries on this report, please contact Customer Service Department - Edith Anzil

DATE \_

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## TECHNICAL SERVICE LABORATORIES DIVISION OF BURGENER TECHNICAL ENTERPRISES LIMITED

1301 FEWSTER DRIVE, MISSISSAUGA, ONT. LAW 142

TELEPHONE: (416) 625-1544 TELEX 06-960215

# **CERTIFICATE OF ANALYSIS**

SAMPLE(S) FROM Durham Resources Ste. 916 111 Richmond St. W. Toronto Ontario M5H 2G4	REPORT No. T1810-2
ATTN / SAMPLE(S) OF	Inv# 29271
SOIL	P.O. /

	Gold (Au) ppb FA/AA
30+50N	<5
31+00N	<5
31+50N	<5
32+00N	<5
32+50N	<5
33+00N	<5
34+00N	<5
L24W 34+50N	<5
35+00N	<5
L27W 20+20N	<5
21+20N	<5
21+70N	<5
22+20N	<5
22+70N	<5
23+20N	<5
24+20N	• <5
L33W 0+00	<5
0+50N	<5
0+50\$	<5
1+005	<5
1+00N	<5

Samples, Pi	ulps and Rejects discarded after two months		1	
DATE	July 18/85	SIGNED	6 I Burger	🕅



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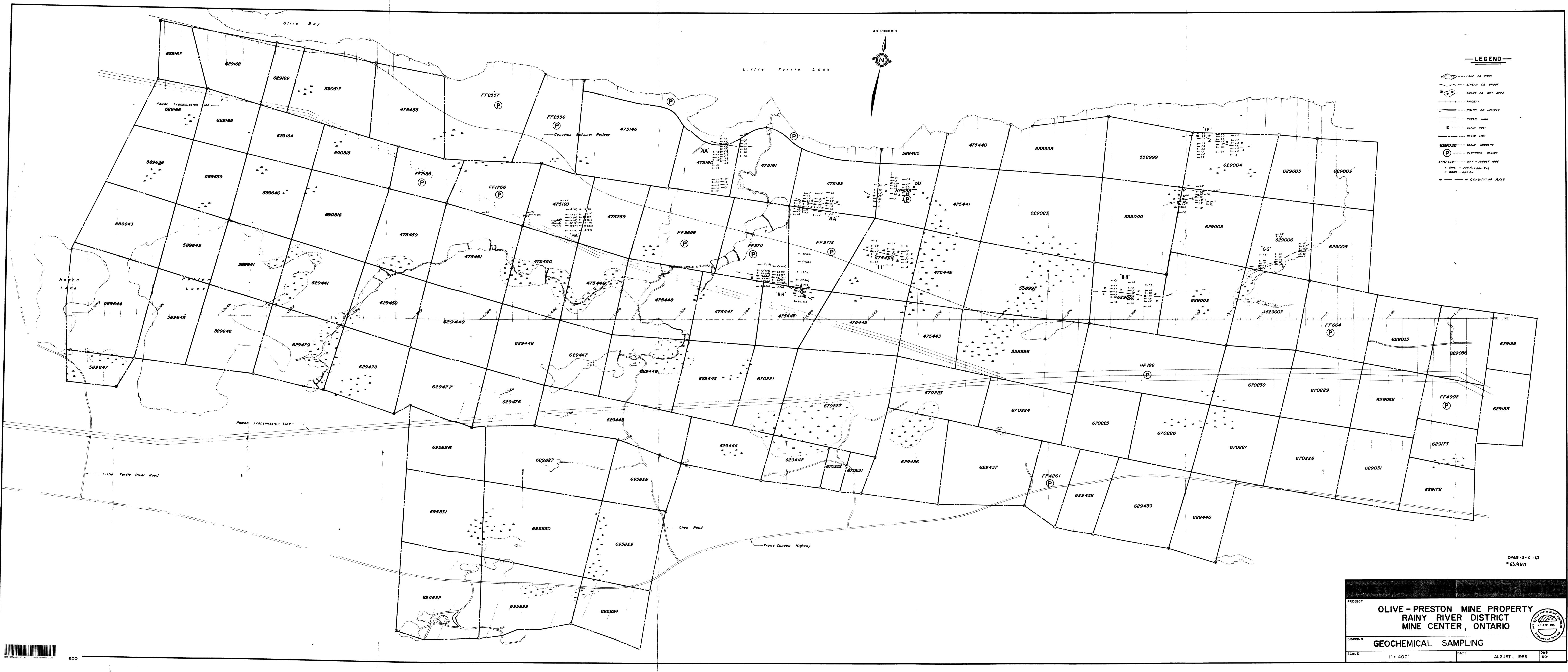
08/07/87

THIS SUBMITTAL CONSISTED OF VARIOUS REPORTS, SOME OF WHICH HAVE BEEN CULLED FROM THIS FILE. THE CULLED MATERIAL HAD BEEN PREVIOUSLY SUBMITTED UNDER THE FOLLOWING RECORD SERIES. (THE DOCUMENTS CAN BE VIEWED IN THESE SERIES):

Comparisons :

TORONTO FILE :

RECONNAISSANCE GEOLOGICAL MAPPING
PROGRAMME MINE CENTRE AREA - BARBER
LAKE PROPERTY
ABOLINS, U.
SEPT. A85



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