GEOLOGICAL REPORT ON MACKLEM AND BOND TOWNSHIPS PROPERTY

TIMMINS, ONTARIO

GOLDEIDT EXPLORATIONS INC.

Robert Sibthorpe, B.Sc.

Toronto, Ontario May 14, 1983

Location and Access

The Macklem-Bond Townships property of Goldeidt Explorations Inc. consists of 54 claims located on the east short of Night Hawk Lake some 20 miles east of Timmins, Ontario. Access to the property is provided by Highway 101 and the Gibson Lake road which traverses the property in a north-south direction.

Ownership and Claims

The property is owned by:

Goldeidt Explorations Inc.
P. O. Box

The claims numbers of the property surveyed geologically are:

P529645 - P529069
P486658 - P486658
P530616 - P530618
P530623 - P530626
P530631 - P530632

This geological survey and report was prepared by Mr. Robert Sibthorpe. The author graduated in 1972 from the University of Toronto with a Bachelor of Science in Geology and has been engaged in work associated with the mining and exploration industry since that date. The survey was performed during April and May 1983. The survey was carried out along a picket line grid cut in 1981 and 1982 and used for geophysical surveys. North-south lines were spaced 400 feet apart.

PHYSIOGRAPHY AND RESOURCES

The low-lying clay plain on the west and extreme east portions of the claim group is characterized by muskegs and swamps and is forested largely by spruce and lesser poplar. Alder and cedar grow on wet lands and along water courses. Elevation rises eastwards from 900 ft. at Night Hawk Lake to 950 ft. A.S.L. where the north-south trending Frederick House Esker and associated glacial deltaic sand and gravel deposits form the road bed for the Gibson Lake Road. Esker deposits cover approximately 1,800 acres on surface and are densely forested by mature jackpine, a good source of lumber.

Drainage is typically poor east and west of the esker in areas underlain by clay. Roundelay and McGoshen Creeks and a third unnamed creek drain west into Night Hawk Lake on the west portion of the property. East of the esker, Crooked Creek drains eastward to Moose Lake in Bond Township. Night Hawk Lake and Moose Lake drain north to the Frederick House and Abitibi Rivers, respectively, which are part of the Arctic Watershed. The esker deposits are internally drained and support a number of small kettle lakes.

Three sand-gravel quarry permits have been issued covering claims 486668, 486677 and 529045 on the property and five others are within 1 mile of the property boundary. The Miller Paving Pit has been developed and is a nearby source of aggregate.

The City of Timmins is a well-established centre of gold and copper-zinc mining and labour, mining equipment and supplies are readily available. Hydro-electric power will likely be available at the north adjoining Asarco property which is currently under development.

PREVIOUS WORK NEAR AND ON GOLDEIDT PROPERTY

Prospecting in the Timmins-Porcupine camp was originally carried out in the Night Hawk Lake area and since then the area has been intensively explored for gold deposits. Geological mapping of Macklem and Bond Townships by government agencies is published in Leahy (1969, 1971) and Leahy and Hogg (1962), and previous exploration to 1979 is compiled by Hunt and Maharag (1980).

Considerable intermittent exploration from 1907 to present, north and west of the property, has been undertaken on the 10 by 2 mile wedge of altered mafic to ultramafic flows and plugs and metasediments hosting the Asarco and former Aquarius deposit, and the former Ronnoco Gold Mines, Gold Hawk Porcupine, and Porcupine Peninsula deposits.

The Ronnoco and Gold Hawk Porcupine Mines properties (held by Pamour Porcupine Mines) lie west of the property some 4 miles west-southwest on strike from the Asarco deposit. Over 50 holes have been diamond drilled and five shafts sunk to investigate gold-bearing quartz veins. The host rock lithology, common to these prospects, is typical of the Timmins camp and is a suite of carbonate-altered mafic and ultramafic rocks and aplite, quartz-feldspar and felsite intrusions. In late 1980 Pamour Porcupine Mines were shipping open pit ore from the Gold Hawk located on the east side of North Peninsula in Night Hawk Lake. The Porcupine Peninsula property adjoins the Gold Hawk property on the west and when last in production, the mine had underground reserves estimated at 1.4 million tons grading 0.11 oz. Au/ton developed through a shaft and winze to a depth of 1,000 ft. (Northern Miner Press, September 4, 1980).

South of the property, two shafts and several pits have been sunk to investigate gold showings in outcropping carbonate-altered volcanics on the former Black Hawk Porcupine Mines prospect.

Previous Exploration on Goldeidt Property

In 1945-1946, Auconda Porcupine Gold Mines Ltd. explored the west half of the Goldeidt property from Tincan Lake to Hand Island in Night Hawk Lake. A Magnetometer survey outlined the trend of a diabase dyke and traced a 2,500 ft. east-west trending anomaly interpreted to represent a sheared zone intruded by porphyry bodies (Keevil and Low, 1945). Ten diamond drill holes totalling 7,792 ft. were completed, of which four tested the metavolcanic-ultramafic intrusive contact and narrow zones of rhyolitic volcanics on claims 529066 to 529069 on the north-west corner of the property. Four holes cross-sectioned pillowed metavolcanic flows and fragmentals on claims 632918 and 632919 on the west margin of the property. Gold assays from nil to 0.01 oz./ton were reported (Leahy, 1917).

According to MNR assessment data map P.2071, Aquarius or Electra Porcupine Mines drilled one hole which intersected barren mafic metavolanics and ultramafic intrusive rocks on the north property boundary on claim 529067.

Exploration by Goldeidt - 1981/1982

Goldeidt Explorations Inc. conducted 18.4 miles of line cutting, horizontal loop electromagnetic (Max-Min II) and proton precession magnetometer surveys on the north portion of the property in September 1981 (Sibthorpe, 1981). The magnetometer survey confirmed the presence of the northeasterly-trending diabase dyke in the northwestern part of the grid. Northwest of the diabase dyke, contrast between magnetic highs and lows indicates the presence of ultramafics within the mafic metavolcanics. Minor variation in the magnetic relief is observed elsewhere on the grid and this is attributed to elevation changes in buried bedrock and variations in overburden thickness.

The Max-Min survey outlined two weak conductors. A weak bedrock conductor on the northwest portion of the grid was traced intermittently for 2,400 ft. and coincides with a magnetic low which we interpret to be the location of a serpentinized ultramafic intrusive or flow. The increased conductivity and decrease in magnetic susceptibility is attributed to carbonatization of the ultramafic rocks and/or carbonate alteration along their contact with mafic metavolcanic rocks. The weak conductor on the northeast portion of the grid is likely caused by overburden effects.

A 35-hole dual tube, reverse circulation overburden drilling and chemical sampling programme was carried out on the north half of the property in September and October, 1981 by Overburden Drilling Management Ltd. (Chernis and Averill, 1982). Two hundred and fifty-eight samples of clastic material were collected and processed by tabling and heavy media separation from the 5,284.3 ft. of drilling. Lithology of bedrock chips and mineralogy of heavy mineral concentrates were determined by binocular microscope. Analyses for Au, Ag, As, Cu, Ni, Pb and Zn were performed on bedrock samples and heavy mineral concentrates.

Elevated background levels of copper and nickel ranging up to 1,150 ppm Cu and 3,900 ppm Ni in holes drilled south of the northwest corner of the property confirm the presence of ultramafic rocks on the Goldeidt property and to the north on Asarco ground.

During the summer and fall of 1982 further geophysical surveys (magnetometer and VLF-EM) were carried out on the eastern portion of the property.

REGIONAL GEOLOGY

The Goldeidt property lies within the Superior Province of the Precambrian Shield at the west extremity of the Abitibi Greenstone Belt. The Abitibi belt, the most productive metallogenic belt in Canada, extends 400 miles from Chibougamau, Quebec in the east to Timmins, Ontario in the west and attains a maximum width of 200 miles. This metavolcanic-metasedimentary belt consists of east-west trending, steeply dipping, ultramafic to felsic volcanic flows and interflow sediments of Early Archean age. Generally conformable peridotite, dunite, diorite, and gabbro bodies intrude the volcanic sequence and the assemblage of volcanics, sediments and intrusives is unconformably succeeded by Timiskaming-age greywackes, argillites, conglomerates and arkoses.

Complex folding and faulting of these rocks occurred during the Kenoran (Algoman) Orogeny 2.5 b.y. ago. After deformation, north-south trending Matachewan diabase dykes were intruded. Emplacement of Late Archean granodiorite to granite plutons occurred contemporaneously with, and following, regional metamorphism to greenschist facies. East-northeast trending Keweenawan gabbro and diabase dykes and sills of Proterozoic age are the youngest rocks in the area.

Unconsolidated Wisconsinan glacial deposits represent the final geologic record in the area. The glacial strateigraphy comprises basal, bouldery and sandy till; locally distributed younger tills and glaciofluvial sediments deposited during ice margin fluctuation; esker and deltaic sand and gravel deposits formed during deglaciation; and proglacial Lake Ojibway glaciolacustrine fine sands and varbed clays. The Cochrane glacial advance deposited clay till on pre-existing glacial sediments. Clay deposits are of regional extent in this area and form the Great Clay Belt.

Geology of the Timmins Camp

The stratigraphy of Archean ultramafic to felsic volcanics and metasediments which host the important gold producers in the Timmins camp are subdivided from oldest to youngest into the Deloro, Tisdale and Porcupine Groups on the basis of stratigraphic succession and lithochemical affinities (Pyke, 1976; Karvinen, 1981). The Deloro group consists of the Red Stone Formation ultramafic flows, calc-alkaline andesite, basalt and fragmental rocks. followed by Boomeang Formation intermediate to felsic tuffs and sulphide facies iron formation. In the Tisdale Group, Goose Lake Formation Komatiitic basalts are succeeded by Schumacher Formation variolitic, tholeiitic basalt and interlayered carbonate-altered ultramafic flows. Krist Formation felsic volcanic tuff and tuff breccia tops this suite. Gabbro, diorite and serpentinized peridotite and dunite ultramafic bodies intrude the Deloro andTisdale Group rocks. This assemblage is unconformably overlain by Porcupine Group (Timiskaming-age) turbidite metasediments consisting of interlayered greywacke, siltstone, lesser conglomerate and graphitic argillites and slates. The ultramafic and mafic volcanic rocks of the Deloro and Tisdale Groups are isoclinally folded about north-south axes and, together with the Krist Formation of the Tisdale Group and the Porcupine metasediments, are refolded about east-west axes (Pyke, 1976). Leahy (1971) identifies five steeply dipping fault sets in the Night Hawk Lake area. In order of ascending age these are N70 E/S-dipping, N55 W, both of which are pre-epigenetic gold mineralization in age; N35 W, N-S and N65-70 E/N-dipping. The N70 E striking Destor-Porcupine Fault is of major regional significance as Porcupine metasediments are not exposed south of the fault.

Favourable Tisdale Group rocks south of Timmins on the east flank of the Shaw Dome have been identified on the west shore of Night Hawk Lake (Leahy, 1971). Stratigraphic relationships are obscure in the Night Hawk Lake area and it is uncertain whether Tisdale volcanics extend east of the lake. Government regional and township mapping by Pyke et al (1973) and Leahy (1971) show that the Goldeidt propety is underlain by mafic to intemediate volcanics, thin interbeds of rhyolite, ultramafic intrusives and diabase dykes. Pyke (1978) classifies the volcancis as tholeiitic and indicates the presence of komatiitic flows some 2 to 3 miles south of the property. Intensely carbonate-altered metavolcanics exposed south of the property and east of Bottley Lake may be of komatiitic affinity.

Leahy (1971) considers much of the metavolcanic flows and fragmentals mapped east of Night hawk Lake in the vicinity of the Goldeidt property to be intermediate in composition and these may correlate to a thick, younger assemblage of mafic and intermdiate metavolcanics found 6 miles to the east in Currie and Bowman Townships. A uniform, low relief regional magnetic pattern and low susceptibility signature characterize a 4-mile wide area of bedrock south of the regionally extensive diabase dyke which traverses the northwest portion of the property. A diabase dyke likely occupies an old, major fault zone. The N-S orientation and rectangular outline of this area of uniform magnetic low sharply contrasts to the regionally east-west trending linear patterns of higher magnetic susceptibility of bedrock beyond this distinctive area. North-south offsets in linear magnetic patterns at the edge of this magnetic low indicate the presence of regional fauls. Chips of intermediate volcanic composition were obtained from bedrock in overburden drilling ont he Goldeidt property in this area. The interpretation which best explains field and geophysical evidence is that this area is overlain by fault-bounded block of intermediate metavolcanics.

PLEISTOCENE GEOLOGY OF THE PROPERTY

Chernis and Averill (1982) full described the Pleistocene geology of the property and subdivided the Wisconsinan glacial stratigraphy into five units.

In ascending order, these glacial units are:-

1. Lower Till - a sandy till with a high component of locally derived pebbles and cobbles.

2. Lower Deglacial Sediments - glaciolacustrine grey silts and clays overlain by glaciofluvial sand and gravel.

3. Middle Till - grey, very clayey diamicton.

4. Upper Till - cobbly, sandy diamicton.

5. Upper Deglacial Sediments - subdivided into glaciofluvial corase clastics such as esker, sands and gravel in addition to glaciolacustrine fine sands and varved clays.

Three glacial advances are postulated by Chenis and Averill. Direction of ice transport for this area varied from S12 E to S45 E. They consider that the lowermost or oldest units (1-3 above) occur only as remnants restricted to bedrock depression beneath the esker where they were protected fromerosion during later glaciation. The upper till forms a continuous blanker across the property under the clay and coarse clastics except beneath the central channel area of the Frderick House Eske where it has been eroded by melt water. In theory the upper and middle tills would be less useful for exploration in contrast to the lower till because till material of these units is derived largely from previously deposited glacial sediments with consequent erradication or dilution of primary ore dispersal trains.

PROPERTY BEDROCK GEOLOGY (Map 1)

Surficial mapping, diamond and rotary overbruden drilling on and adjacent to the property have demonstrated that overburden, averaging 151 ft. n depth, mantles all of the property except for the shore of Night hawk Lake. In the vicinity of the Frderick House Esker, which traverses the centre of the property, overburden reches depths in excess of 245 ft. Consequently, bedrock lithology and structure is poorly udnerstood in detail and is based upon geophysical inference from regional and detailed magnetic studies, geologic extrapolation from outcrop mapping in Night Hakw Lake and from widely space sampling of bedrock in diamond and overburden drill holes.

The two dominant lithologies on the property are mafic metavolcanics (Unit 1) and intermediate metavolcanics (Unit 2) (Chernis and Averill, 1982; Leahy, 1971).

Massive to pillowed, spherulitic and amygdaloidal mafic metavolcancis (Unit 1) have been encountered in driling and in outcrop on High Hawk Lake on the northwest portion of the property and are believed to underlie portions of the east-central area of the property.

Two thin bands of massive rhyolitic volcanics (Unit 3) are interbedded with the mafic volcanics on the northwest portion of the grid. A serpentinized periidotite or dunite body (Unit 5) in this area has been identified by high magnetic susceptibility and intersected by drilling. Little is known about these ultramafic rocks and they may represent altered komatiite flows. A portion of this unit and/or its contact with mafic volcanics may be carbonatized (Unit 1e,h). Carbonatized horizons in mafic rocks were intersected in drilling ont he former Ronnoco Gold Mines Ltd. prospect (Pamour, 1973, 1981), 1 mile to the west on strike.

Approximately 75% of the property in the central and southwest areas is interpreted to be underlain by aphanitic to very fine-grained, albitized feldspathic intermediate metavolcanics and tuffs (Unit 2) identified in 15 overburden drill holes (Chernis and Averill, 1982). It is uncertain whether the albite alteration, observed as runs and irregular patches on plagioclase feldspars n the very fine grained volcanic chips under bicoular microscope, is deuteric or metamorphic in origin.

Two parallel, N70 E trending Keweenawan diabase dykes are known ont he northwest portion of the property, one through magnetic interpretation, the other by intersection by an overburden drill hole.

Lithologic trends inferred magnetically and from pillow orientation in outcrop appear to be east-northeasterly and steeply south-dipping on the north half of the property whereas pillows in volcanics and bedding in tuffs and agglomerates is south-southeasterly and vertically to steeply south-dipping to the south of the property. In contrast to this mroe or less E-W trend, north-south pillow orientations on the lake shore in the southwest corner of the property are evidence of folding interpreted by Leahy (1969) to represent one of a series of sioclinal synforms mapped west and southwest of the property boundaries. These may be second-order structures related to a first-order fold which closes west of the property and is overturned to the north.

Two principal fault sets are interpreted from offsets in diabase dykes and inflections in regional magnetic patterns. The oldest set of four faults including two faults now occupied by Keweenawan diabase dykes, strike N70 E and are sinistrally dislocated by three younger N35 W trending faults. These faults correspond to Leahy's (1971) pre- and post-gold minealization faults, respectively.

Respectfully submitted

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APPENDIX I

DESCRIPTION OF BEDROCK SAMPLES

During the 1981 Reverse Circulation overburden drilling program a number of bedrock chip samples were obtained. Sample numbers correspond to locations ont he Geological Maps Nos. 1 and 2 accompanying this report.

TC-81-01-16 FELDSPATHIC VOLCANIC. Medium grey-green massive, porphyritic, amygdaloidal. Matrix grain size 0.05 mm. Hard, feldspathic. Mafic phenocrysts (altered to chlorite) to 0.2 mm make up 3-5% of sample (possibly amygdules?). Very minor calcite filed amygdules to 1.0 mm. Only part of sample reacts with HCl. Trace disseminated sulphides.

TC-81-02-02 FELDSPATHIC VOLCANIC. Light to medium grey-green, massive locally variolitic (at flow margins?). Grain size 0.5 mm. Hard, feldspathic to quartzofeldspathic. 3% light green quartz phenocrysts to 0.2 mm. Rock unreactive with HCl, exept for 2% calcite filled fractures. Trace diseminated pyrite.

TC-81-03 No bedrock

TC-81-04-02 INTERMEDIATE-MAFIC VOLCANIC. Dark green, massive, possibly ¼ 1% calcite filled anygdules. Matrix grain size ¼ 0.1 mm. Mafic phenocrysts (laths and radiating, fibrous) to 1.0 mm -chlorite-actinolite. Moderately soft. Chlorite-actinolite forms 40% of sample. Unreactive with HCl. Trace disseminated pyrite.

TC-81-05-05 INTERMEDIATE-MAFIC VOLCANIC. Dark green to black, massive. Grain size 0.01 mm. Moderately soft. 40% chlorite-actinolite. 2% interstitial carbonate. 2% vein carbonate. Trace disseminated sulphides.

TC-81-06 No bedrock.

TC-81-07-02 INTERMEDIATE-MAFIC VOLCANIC. Medium to dark green, massive. Grain size of matrix 0.1 mm. (chlorite-actinolite "phenocrysts" to 1.0 mm - 10% of sample). Moderately soft. Total of 30-40% chlorite-actinolite - includes "phenocrysts" and "matrix sized" chlorite-actinolite. Similar to bedrock in holes TC-81-04 and TC-81-05. 10-15% interstitial, very rective carbonate (appears to lend a lighter colour to some rock chips - dark coloured rock chips less rective). Trace disseminated sulphides.

TC-81-08-03 INTERMDIATE-MAFIC VOLCANIC. Medium green-grey massive, porphyritic. Matrix grain size 0.05 mm. Moderately hard. 35% chlorite-actinolite. Chloritic "phenocrysts" to 0.6 mm form 7-10% of sample. Minor feldspar phenocrysts to 0.1 mm. 1% or less vein carbonate. Harder than previous intermediate-mafic volcanic samples.

TC-81-09-17 LAMPROPHYRE. Light mottled green massive, porphyritic. Matrix grain size 0.2-0.5 mm. Slender, prismatic, medium green, unoriented mafic phenocrysts (diopside?) to 1.2 mm. Moderately hard. 60% feldspar -generally greyish white but some varieites have a pink tint -indicating potassium feldspar. 30% dipside - some chloritic alteration. 1% veinlets infilled with quartz.

TC-81-10-12 FELDSPATHIC VOLCANIC. Medium to dark grey-green, massive, amygdaloidal. Grain size ¼ 0.05 mm. Hard, feldspathic. 3% dark green to black chlorite phenocrysts (may be anygdules) to 0.5 mm. 1% amygdules to 0.2 mm and infilld with a yellow-green mineral. Unreactive with HCl.

TC-81-10-13 LAMPROPHYRE. Medium grey-green, massive, porphyritic. Matrix grain size 0.1-0.2 mm. Phenocrysts of chlorite (to 1.0mm) and dipside (to 0.5 mm). Moderately hard. 60% feldspare - grey white generally but some has a pinkish tint (potassium feldspar). 15% light green chlorite phenocrysts. 10% fresh, diopside phenocrysts. Possibly, to 10% quartz. Non-reactive with HCl.

TC-81-11 No bedrock.

TC-81-12-11 FELDSPATHIC VOLCANIC. Light grey-green, massive, fractured and veined, locally variolitic (flow margins?), very minor number of amygdules. Grain size ¼ 0.05 mm. Hard (retains steel when scratched). Feldspathic to quartzofeldspathic. Gradation in colour from light greyish white to light green - variolitic mateial may tend to be a lighter colour, or rock may be "bleached" due to veining. 60% of sample is light greyish white. Minor dark, chloritic, veinlets to 0.1 mm in width. 10% uartz vein material (very minotr carbonate) which appears locally to enclose angular fragments of the wall rock. 0.5% sulphides (pyrite and minor pyrrhotite) in eins and as disseminations to 0.7 mm size.

TC-81-13 No bedrock

TC-81-14-10 INTERMEDIATE-MAFIC VOLCANIC. Dark green, massive, anygdaloidal. Grain size ¼ 0.05 mm. Moderately hard. 5-10% amygdules to 0.5 mm size and infilled with a soft yellow-green mineral. Very minor amygduls to 1.0 mm and containing dark chlorite. Some rock chips display a yellowish (oxidized) appearance and may possess a poor schistosity. 2% quartz as vein fillings. Very minor chloritic veinlets. Sample non-reactive with HCl.

TC-81-15-09 INTERMEDIATE-MAFIC VOLCANIC. Dark green to black, massive, veined. Grain size 0.1 mm. Soft, dark coloured, feldspar-chlorite groundmass (minimum of 20% chlorite?). One percent small (0.1 mm or less), grey particles which may be rock fragments or altered feldspar. 15-20% white veinf uartz - veins 1 cm, or greater, in width. Unreactive with HCl. Possibly tuffaceous

TC-81-16-09 INTERMEDIATE-MAFIC VOLCANIC. Medium green-grey, massive, variolitic. Matrix grain size 0.05 mm. Rounded variolites to 1.2 mm are seen locally. Moderately hard. Matrix is composed of feldspar, 15-20% fibrous, radiating actinolite needles to 0.3 mm, as well as minor amounts of chlorite. Variolites are lighter in colour and harder than the groundmass. 7-10% interstitial, highly reactive carbonate. ¼ 1% carbonate vein material. 0.1% disseminated pyrite.

TC-81-17-11 VEIN QUARTZ-LIMONITIZED BEDROCK. Up to 60% white quartz vein material, 40% yellow brown, extensively linonitized, soft locally schistose (?) "rock" chips. 1-2% calcite - the calcite occurs as matrix material surrounding small quartz grains and possibly some rock fragments. 1% pyrite as cubes in quartz veins. Pyrite crystals have a black surface coating possibly representative of iron or manganese staining.

TC-81-18-10 INTERMEDIATE-MAFIC VOLCANIC. Medium grey-green, massive, highly altered. Grain size 0.05-0.1 mm. Moderately soft. Rock composed of feldspar and 20-30% chlorite-actinolite 5% of chlorite occurs as 0.1 mm sized relicts of mafic phenocrysts. 1% intestitial carbonate; 1% vein carbonate. Minor veinlets infilled with quartz and/or epidote.

TC-81-19-07 FELDSPATHIC VOLCANIC. Medium to light grey gree, massive locally variolitic, minor fracturing and veining. Grain size ¼ 0.05 mm. Moderately hard, feldspathic with minor chloritic material concentrated along microfractures. 5% vein material - predominantly quartz, minor carbonate. Host rock unreactive with HCl. Faint trace disseminated sulphides.

TC-81-20-16 FELDSPATHIC VOLCANIC (Crystal Tuff). Light grey to green-white massive, tuffaceous. Matrix grain size ¼ 0.05 mm. Hard, feldspathic. 30-40% euhedral to subhedral feldspar crystals to 0.5 mm. 2% interstitial carbonate. Unaltered.

TC-81-21-17 FELDSPATHIC VOLCANIC (Crystal Tuff). Light grey green, massive, tuffaceous. Matrix grain size ¼ 0.05 m. Hard feldspathic matrix. 20% (or greater) feldspar crystals to 0.7 mm - crystal boundaries are indistinct and appear to merge into the groundmass in some cases. 2% interstitial, rective carbonate. Faint trace disseminated sulphides (pyrite).

TC-81-22-15 FELDSPATHIC VOLCANIC. Light grey green, massive. Grain size ¼ 0.05 mm. Moderately hard, feldspathic. 5% interstitial reactive carbonate. Very minor micro-fracturing. Trace disseminated sulphides.

TC-81-23-04 FELDSPATHIC VOLCANIC. Medium grey green, massive, tuffaceous. Grain size 0.1 mm. Moderately hard. Feldspar and some quartz crystals in a feldspathic matrix - percentages of minerals undetermfined. To 2%, small (¼ 0.2 mm) white, angular fragements. 1% or less interstitial carbonate. 2-3% very rective vein carbonate. 0.5-1.0% pyrite as irregularly shaped concentrations to 1.5 mm.

TC-81-24 No bedrock

TC-81-25-06 FELDSPATHIC VOLCANIC. Medium grey green, massive, variolitic. Grain size of groundmass ¼ 0.05 mm. Moderately hard, feldspathic. Variolitic mateial is generally darker than the groundmass and contains abundant quartz veins. Variolitic material may represent flow or pillow margins. ¼ 1% of the smple may be chlorite filled amygdules to 1.0 mm. 7% vein material - predominantly quartz but minor carbonate. To 0.5% pyrite as fine disseminations in the rock itself, as concentrations (to 0.2 mm) associated with veining, and as local concentrations in variolitic rock chips.

TC-81-26-03 FELDSPATHIC VOLCANIC. Light grey green, massive, locally variolitic. Matrix grain size 0.05 mm or less. Hard, feldspathic. Some variolites are seen at the edges of what appears to be quartzitic bands and there may also be a slight icnrease in the grain size of the host rock as these bands are approached. Boundaries between the host rock and these quartzitic zones are quite indistinct - could possibly represent flow banding. Trace vein carbonate. 0.1% sulphides associated with minute quartz-carbonate veins or margins of flow bands.

TC-81-27-15 FELDSPATHIC VOLCANIC. Light grey green, massive. Matrix grain size 0.05-0.01 mm. Moderately hard, feldspathic. Slightly coarser grained than previous samples. Trce vein carbonate. Trce disseminated pyrite. May be tuffaceous but no direct evidence of this was observed.

TC-81-28-07 FELDSPATHIC VOLCANIC. Light grey green, massive, tuffaceous. Matrix grain size of 0.1 mm. Hard, feldspathic. 5% white, small (0.1 mm), angular parjticles which may be rock fragments or possibly feldspar or quartz crystals. Trace vein carbonate. Trace disseminated pyrite.

TC-81-29-06 FELDSPATHIC VOLCANIC. Light to medium grey green, massive, tuffaceious. Grain size of matrix appears to be approximately 0.1 mm although individual grains are not distinct. Moderately hard, feldspathic. 5% white, angular rock fragments (possibly quartz or feldspar crystals?) to 0.1 mm. 2% interstitial carbonate. Trce vein carbonate. Trce disseminated pyrite.

TC-81-30 No bedrock

TC-81-31-02 FELDSPATH VOLCANIC. Medium grey green, massive, variolitic (variolites to 0.7 mm). Grain size of matrix ¼ 0.05 mm. Most of this sample appears variolitic and the grain size estimate is of chips in which no variolites are recognized. Moderately hard, feldspathic. Some lighter coloured chips are present in which feldspar or quartz needles to 0.5 mm may be recognized, 1-2% interstitital carbonate 1-2% cabonate in composite quartz-carbonate veins. To 0.1% pyrite as disseminations and minor concentrations in quartz-carbonate veins.

TC-81-32-04 INTERMEDIATE-MAFIC VOLCANIC. Mottled green white, massive. Moderately hard. Grain size 0.2-0.4 mm, with 5-10% chloritic phenocrysts to 1.0 mm. Rock is composed of anhedral feldspar and mafic (pyroxene), locally chloritic minerals (proportions 60:40 to 70:30). Rock is unreactive with HCl. Faint trace of pyrite. Sample is coarser grainted than other intermediate-mafic volcanics but appears volcanic as opposed to intrusive.

TC-81-33 No bedrock

TC-81-34 No bedrock

TC-81-35-09 INTERMEDIATE MAFIC VOLCANIC. Dark green to black, massive, highly altered. Matrixgrain size 0.05-0.1 mm. Soft. Composed of feldspar and mafic minerals completely altered to chlorite. (60-70% feldspar, 30% chlorite). 1-2% reactive, interstitial carbonate.

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

2.55

42A10SW0204 2.5553 BOND

900

W8306.00142

The Mining Act #148658

Instructions - Please type or print. Enter credits claimed in the "Expend. Days Cr." columns. Do not use shaded areas below.

Type of Survey(s): GEOLOGICAL	Township or Area: MACKLEM & BOND
Claim Holder(s): GOLDEIDT EXPLORATIONS INC	Prospector's Licence No.: T 1120
Address: PO Box 36 TORONTO DOMINION CENTRE TORONTO	
Survey Company: GOLDEIDT EXPLORATIONS INC	Date of Survey (from & to): 20 Day / 4 Mo. / 83 Yr. — 10 Day / 5 Mo. / 83 Yr.
Name and Address of Author (of Geo-Technical report)	Total Miles of line Cut

Credits Requested per Each Claim in Columns at right

		Days per Claim
Special Provisions: For first survey: Enter 40 days. (This includes line cutting) For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	20
	Geochemical	
Man Days: Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	4
	Geochemical	
Airborne Credits: Note: Special provisions credits do not apply to Airborne Surveys.		Days per Claim
	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
	See attached List				

RECEIVED
MAY 18 1983
MINING LANDS SECTION

RECEIVED
MAY 31 1983
MINING LANDS SECTION

PORCUPINE MINING DIVISION
RECEIVED
MAY 24 1983
A.M. 7 8 9 10 11 12 1 2 3 4 5 6 P.M.

RECORDED
MAY 24 1983
Receipt No.

Total number of mining claims covered by this report of work: 54

Expenditures (excludes power stripping)

Type of Work Performed: Geological Survey.

Performed on Claim(s):

Calculation of Expenditure Days Credits

Total Expenditures: $ 9000 ÷ 15 = Total Days Credits: 167

Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Date: May 17/83 — Recorded Holder or Agent (Signature): R. Sibthorpe

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
1080	MAY 24/83	
	Date Approved as Recorded	Branch Director / Regional Mining Recorder

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: R. SIBTHORPE 47 LYND AV TORONTO

Date Certified: May 17/83 — Certified by (Signature): R. Sibthorpe

P486658	P529045	P530616
486659	529046	530617
486660	529047	530618
486661	529048	530623
486662	529049	530624
486663	529050	530625
486664	529051	530626
486665	529052	530631
486666	529053	530632
486667	529054	
486668	529055	
486669	529056	
486670	529057	
486671	529058	
486672	529059	
486673	529060	
486674	529061	
486675	529062	
486676	529063	
486677	529064	
	529065	
	529066	
	529067	
	529068	
	529069	

Expenditure Days Credit: 4 days per claim

Ontario

Ministry of Natural Resources

File _____

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) GEOLOGICAL

Township or Area MACKLEM & BOND TPS

Claim Holder(s) GOLDEIDT EXPLORATIONS

Survey Company GOLDEIDT EXPLORATIONS

Author of Report R. SIBTHORPE

Address of Author 47 LYND AV TORONTO

Covering Dates of Survey JUNE 81 - MAY 83
(linecutting to office)

Total Miles of Line Cut _____

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

DAYS per claim

Geophysical
--Electromagnetic _____
--Magnetometer _____
--Radiometric _____
--Other _____
Geological 20
Geochemical _____

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: May 17/83 SIGNATURE: R Sibthorpe
Author of Report or Agent

Res. Geol. _____ Qualifications 2.4400

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

See attached list

(prefix) (number)

RECEIVED
MAY 18 1983
MINING LANDS SECTION

TOTAL CLAIMS 54

If space insufficient, attach list

OFFICE USE ONLY

837 (5/79)

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS – If more than one survey, specify data for each type of survey

Number of Stations _____ Number of Readings _____

Station interval _____ Line spacing _____

Profile scale _____

Contour interval _____

MAGNETIC

Instrument _____

Accuracy – Scale constant _____

Diurnal correction method _____

Base Station check-in interval (hours) _____

Base Station location and value _____

_____

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency _____
(specify V.L.F. station)

Parameters measured _____

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

_____

Base station value and location _____

_____

Elevation accuracy _____

INDUCED POLARIZATION RESISTIVITY

Instrument _____

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time _____ Frequency _____

– Off time _____ Range _____

– Delay time _____

– Integration time _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

_____

Corrections made _____

_____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

_____

Additional information (for understanding results) _____

_____

_____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

_____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken_____

_____

_____

Total Number of Samples_____

Type of Sample_____
(Nature of Material)

Average Sample Weight_____

Method of Collection_____

_____

Soil Horizon Sampled_____

Horizon Development_____

Sample Depth_____

Terrain_____

_____

Drainage Development_____

Estimated Range of Overburden Thickness_____

_____

_____

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis_____

_____

_____

_____

General_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

ANALYTICAL METHODS

Values expressed in: per cent ☐
p. p. m. ☐
p. p. b. ☐

Cu, Pb, Zn, Ni, Co, Ag, Mo, As,-(circle)

Others_____

Field Analysis (_____tests)

Extraction Method_____

Analytical Method_____

Reagents Used_____

Field Laboratory Analysis

No. (_____tests)

Extraction Method_____

Analytical Method_____

Reagents Used_____

Commercial Laboratory (_____tests)

Name of Laboratory_____

Extraction Method_____

Analytical Method_____

Reagents Used_____

General_____

_____

_____

_____

_____

_____

_____

_____

_____

Ministry of Natural Resources
Ontario

Geotechnical Report Approval

File 2.5553

June 13/83

Mining Lands Comments

- Expenditures - need financial breakdown + signed reciepts or cancelled cheques.

(sample locations, and assay results, if applicable).

☐ To: Geophysics

Comments

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☑ To: Geology - Expenditures Mr. Kustra

Comments

According to the report - analysis were done on bedrock & heavy mineral concentrate samples. If expenditures are claimed for analysis, we must have the analysis results, properly cross referenced to location, sample # & result.

CRK.

☑ Approved ☐ Wish to see again with corrections | Date July 13/83 | Signature CKustra

☐ To: Geochemistry

Comments

approved conditionally.

L.D.

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☐ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1593 (81/10)

Ministry of Natural Resources
Ontario

Technical Assessment Work Credits

File 2.5553

Date February 16, 1984

Mining Recorder's Report of Work No. 142

Recorded Holder	Goldeidt Explorations Ltd.
Township or Area	Macklem and Bond Twp.

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical Electromagnetic _____ days Magnetometer _____ days Radiometric _____ days Induced polarization _____ days Other _____ days Section 77 (19) See "Mining Claims Assessed" column Geological 20 days Geochemical _____ days Man days ☐ Airborne ☐ Special provision ☒ Ground ☒ ☒ Credits have been reduced because of partial coverage of claims. ☐ Credits have been reduced because of corrections to work dates and figures of applicant.	P 486658 to 77 incl. 529045 to 54 incl. 529058-59 529061 to 66 incl. 529068-69 530616 to 18 incl. 530623 to 26 incl. 530631-32 No credits allowed for expenditures of $9000.00 for Geological Survey completed on Mining Claims P 486658 to 77 incl. P 529045 to 69 incl, P530616 to 18 incl, P 530623 to 26 incl, P530631-32.

Special credits under section 77 (16) for the following mining claims

15 days credited	10 days credited
529055 to 57 incl.	P 529060

No credits have been allowed for the following mining claims

☒ not sufficiently covered by the survey ☐ Insufficient technical data filed

P 529067

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 77 (19) — (x)

828 (83/6)

Ministry of
Natural
Resources

Ontario

March 8/84

1984 02 17

Our File: 2.5553

Mr. Bruce Hanley
Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

Enclosed are two copies of a Notice of Intent with statements listing a reduced rate of assessment work credits to be allowed for a technical survey. Please forward one copy to the recorded holder of the claims and retain the other. In approximately fifteen days from the above date, a final letter of approval of these credits will be sent to you. On receipt of the approval letter, you may then change the work entries on the claim record sheets.

For further information, if required, please contact Mr. F.W. Matthews at 416/965-1380.

Yours very truly,

J. R. Morton
Acting Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

MEA
for

M. E. Anderson:dg

Encls:

cc: Goldeidt Exploration Inc.
P.O. Box 36
Toronto Dominion Centre
Toronto, Ontario
M5K 1C5

cc: Mr. G. H. Ferguson, Q.C.
Mining & Lands Commissioner
Toronto, Ontario

Ministry of Natural Resources

Ontario

Notice of Intent

for Technical Reports

1984 02 17

2.5553

An examination of your survey report indicates that the requirements of The Ontario Mining Act have not been fully met to warrant maximum assessment work credits. This notice is merely a warning that you will not be allowed the number of assessment work days credits that you expected and also that in approximately 15 days from the above date, the mining recorder will be authorized to change the entries on his record sheets to agree with the enclosed statement. Please note that until such time as the recorder actually changes the entry on the record sheet, the status of the claim remains unchanged.

If you are of the opinion that these changes by the mining recorder will jeopardize your claims, you may during the next fifteen days apply to the Mining and Lands Commissioner for an extension of time. Abstracts should be sent with your application.

If the reduced rate of credits does not jeopardize the status of the claims then you need not seek relief from the Mining and Lands Commissioner and this Notice of Intent may be disregarded.

If your survey was submitted and assessed under the "Special Provision-Performance and Coverage" method and you are of the opinion that a re-appraisal under the "Man-days" method would result in the approval of a greater number of days credit per claim, you may, within the said fifteen day period, submit assessment work breakdowns listing the employees names, addresses and the dates and hours they worked. The new work breakdowns should be submitted direct to the Land Management Branch, Toronto. The report will be re-assessed and a new statement of credits based on actual days worked will be issued.

2.5553
77384

1984 03 22 Our File: 2.5553

Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

RE: Geological Survey on Mining Claims P 486658 et al in the Townships of Macklem and Bond.

The Geological Survey assessment work credits as listed with my Notice of Intent dated February 17, 1984 have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours sincerely

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-6918

M.E. Anderson:sc

cc: Goldeidt Exploration Inc
P.O. Box 36
Toronto Dominion Centre
Toronto, Ontario
M5K 1C5

cc: Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario

cc: Resident Geologist
Timmins, Ontario

REGISTERED

January 30, 1984 Our File: 2.5553

Goldeidt Explorations Inc
P.O. Box 36
Toronto Dominion Centre
Toronto, Ontario
M5K 1C5

Dear Sirs:

RE: Geological Survey submitted on Mining Claims
P 486658 et al in the Townships of Macklem
and Bond

Enclosed is a copy of our letter dated August 2, 1983, requesting additional information for the above-mentioned survey.

Unless you can provide the required data by February 10, 1984, the mining recorder will be directed to cancel the expenditure work credits recorded on May 24, 1983.

For further information, please contact Mr. F.W. Matthews at (416)965-1380.

Yours very truly,

J.R. Morton
Acting Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-1380

R. Pichette:mc

Encl.

cc: Mining Recorder
Timmins, Ontario

Jan 6/84

August 2, 1983

2.5553

Goldeidt Explorations Inc
P.O. Box 36
Toronto Dominion Centre
Toronto, Ontario
M5K 1C5

Dear Sir:

RE: Geological Survey submitted on Mining Claims P-486658 et al in the Townships of Macklem and Bond

---

On May 24, 1983 you recorded assessment work credits for the above-mentioned survey and also for an expenditure of $9000.00. You have provided us with a report and maps for a geological survey only.

Please clarify if this expenditure entry on the Report of Work is in error. If not, please provide the cancelled cheques and certificates of analysis to this office as proof of expenditures as well as sample locations and assay values, if any.

For further information, please contact Mr. F.W. Matthews at (416)965-1380.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-1380

D. Kinvig:mc

cc: Mining Recorder
Timmins, Ontario

May 30, 1983 2.5553

Mr. William L. Good
Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

We have received reports and maps for a Geological survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims P486658 et al in the Townships of Macklem and Bond.

This material will be examined and assessed and a statement of assessment work credits will be issued.

We do not have a copy of the report of work which is normally filed with you prior to the submission of this technical data. Please forward a copy as soon as possible.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

A. Barr:mc

cc: Goldeidt Explorations Inc.
P.O. Box 36
Toronto Dominion Centre
Toronto, Ontario
M5K 1B5
Attention: Mr. R. Sibthorpe

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

The Mining Act

Instructions: – Please type or print.
– If number of mining claims traversed exceeds space on this form, attach a list.
Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

Type of Survey(s): GEOLOGICAL	Township or Area: MACKLEM & BOND
Claim Holder(s): GOLDEIDT EXPLORATIONS INC	Prospector's Licence No.: T1120
Address: P.O BOX 36 TORONTO DOMINION CENTRE TORONTO	
Survey Company: GOLDEIDT EXPLORATIONS INC	Date of Survey (from & to): 20 4 83 (Day Mo. Yr.) 10 5 83 (Day Mo. Yr.)
Name and Address of Author (of Geo-Technical report)	Total Miles of line Cut

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	20
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	4
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
	See attached List	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED
MAY 18 1983
MINING LANDS SECTION

Total number of mining claims covered by this report of work: 54

Expenditures (excludes power stripping)

Type of Work Performed:

Performed on Claim(s):

Calculation of Expenditure Days Credits

Total Expenditures			=	Total Days Credits
$ 9000	÷	15	=	167

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Date: May 17/83 — Recorded Holder or Agent (Signature): R. Sibthorpe

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Branch Director

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: R. SIBTHORPE 47 LYND AV TORONTO

Date Certified: May 17/83 — Certified by (Signature): R. Sibthorpe

1362 (81/9)

Assessment Work Breakdown

Man Days are based on eight (8) hour Technical or Line-cutting days. Technical days include work performed by consultants, draftsmen, etc..

Type of Survey	Technical Days		7	=	Technical Days Credits	+	Line-cutting Days	=	Total Credits	÷	No. of Claims	=	Days per Claim
	30	X	7	=	210	+		=	210	÷	54	=	4
Type of Survey	Technical Days		7	=	Technical Days Credits	+	Line-cutting Days	=	Total Credits	÷	No. of Claims	=	Days per Claim
		X	7	=		+		=		÷		=	
Type of Survey	Technical Days		7	=	Technical Days Credits	+	Line-cutting Days	=	Total Credits	÷	No. of Claims	=	Days per Claim
		X	7	=		+		=		÷		=	
Type of Survey	Technical Days		7	=	Technical Days Credits	+	Line-cutting Days	=	Total Credits	÷	No. of Claims	=	Days per Claim
		X	7	=		+		=		÷		=	

P486658	P529046	P530616
486659	529046	530617
486660	529047	530618
486661	529048	530623
486662	529049	530624
486663	529050	530625
486664	529051	530626
486665	529052	530631
486666	529053	530632
486667	529054	
486668	529055	
486669	529056	
486670	529057	
486671	529058	
486672	529059	
486673	529060	
486674	529061	
486675	529062	
486676	529063	
486677	529064	
	529065	
	529066	
	529067	
	529068	
	529069	

Expenditure Days Credit: 4 days per claim

2.5553

5

P486658	P529045	P530616
486659	529046	530617
486660	529047	530618
486661	529048	530623
486662	529049	530624
486663	529050	530625
486664	529051	530626
486665	529052	530631
486666	529053	530632
486667	529054	
486668	529055 1/4	
486669	529056 1/4	
486670	529057 1/4	
486671	529058	
486672	529059	
486673	529060 1/2	
486674	529061	
486675	529062	
486676	529063	
486677	529064	
	529065	
	529066	
	529067	
	529068	
	529069	

Expenditure Days Credit: 4 days per claim

D. K.

Ministry of Natural Resources
Ontario

Technical Assessment Work Credits

File 2.5553

Date

Mining Recorder's Report of Work No. 142

Recorded Holder: Goldcrest Explorations Ltd.

Township or Area: Macklem & Bond

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	P-486658 to 77 incl.
Electromagnetic _____ days	529045 to 54 incl.
Magnetometer _____ days	529058-59
Radiometric _____ days	529061 to 69 incl.
Induced polarization _____ days	530616 to 18 incl.
Other _____ days	530623 to 26 incl.
Section 77 (19) See "Mining Claims Assessed" column	530631-32
Geological 30 days	
Geochemical _____ days	
Man days ☐ Airborne ☐	
Special provision ☑ Ground ☑	
☑ Credits have been reduced because of partial coverage of claims.	
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

15 days Geology
P-529055 to 57 incl.

10 days Geology
P-529060

No credits have been allowed for the following mining claims

☐ not sufficiently covered by the survey ☐ Insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 77(19)—60:

B28 (83/6)

	Geol			Geol		2.553	Geol
			P 529045	✓			
P 486658	✓		46	✓		P 530616	✓
59	✓		47	✓		17	✓
60	✓		48	✓		18	✓
61	✓		49	✓		530623	✓
62	✓		50	✓		24	✓
63	✓		51	✓		25	✓
64	✓		52	✓		26	✓
65	✓		53	✓		530 631	✓
66	✓		54	✓		32	✓
67	✓		55	1/4			
68	✓		56	1/4			
69	✓		57	1/4			
70	✓		58	✓			
71	✓		59	✓			
72	✓		60	1/2			
73	✓		61	✓			
74	✓		62	✓			
75	✓		63	✓			
76	✓		64	✓			
77	✓		65	✓			
			66	✓			
			67	✓			
			68	✓			
			69	✓			

MAP SYMBOLOGY

Aerial Cableway
Boundary
Bridge
Building
Chimney
Cliff, Pit, Pile
Contours
Culvert
Falls
Fence, Hedge, Wall
Feature Cutline
Flooded Land
Marsh or Swamp
Mast
Mine Head Frame
Outcrop
Pipeline
Railroad
Road
Rapids
Reservoir
River, Stream, Canal
Spot Elevation
Tower
Transmission Line
Tunnel
Utility Poles
Wharf, Dock, Pier
Wooded Area

AREAS WITHDRAWN FROM DISPOSITION

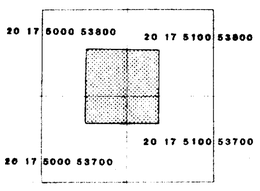
M.R.O. - MINING RIGHTS ONLY
S.R.O. - SURFACE RIGHTS ONLY
M.+S. - MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File

SAND and GRAVEL

(G) Gravel File 10558
(P) M.T.C. Pit 1121
(Q) QUARRY PERMIT

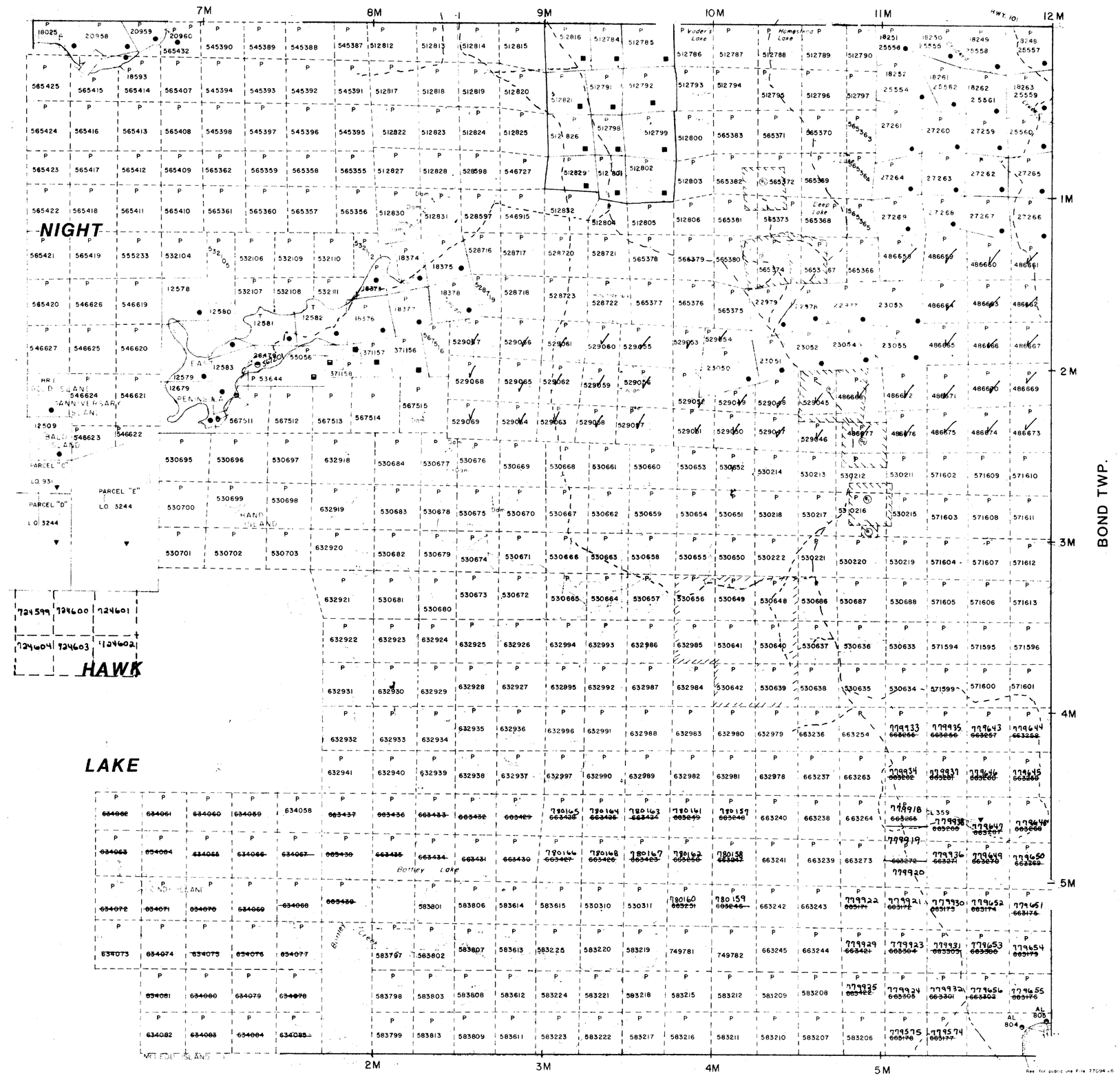
KEY PLAN
For O.B.M. Map



Scale

200

GERMAN TWP.



LEGEND

HIGHWAY AND ROUTE No.
OTHER ROADS
TRAILS
SURVEYED LINES
TOWNSHIPS, BASE LINES ETC.
LOTS, MINING CLAIMS, PARCELS, ETC.
UNSURVEYED LINES
LOT LINES
PARCEL BOUNDARY
MINING CLAIMS ETC.
RAILWAY AND RIGHT OF WAY
TRANSMISSION LINES
NON-PERENNIAL STREAM
FLOODING OR PONDING RIGHTS
SUBDIVISION OR COMPOSITE PLAN
RESERVATIONS
ORIGINAL SHORELINE
MARSH OR MUSKEG
MINES
TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
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	OC
RESERVATION	Ⓡ
CANCELLED	Ⓒ
SAND & GRAVEL	Ⓖ

NOTE MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1

Metres 500 0 1000 Metres
Chains 10 0 10 20 30 40 50 60 70 Chains
Feet 500 0 1000 2000 3000 4000 5000 Feet

SCALE 1:20 000

Reserve flooding rights on Night Hawk Lake to Ontario Hydro to elevation 903.5', T.B.N.O.Ry. datum

site preparation MNR
May 2, 1983

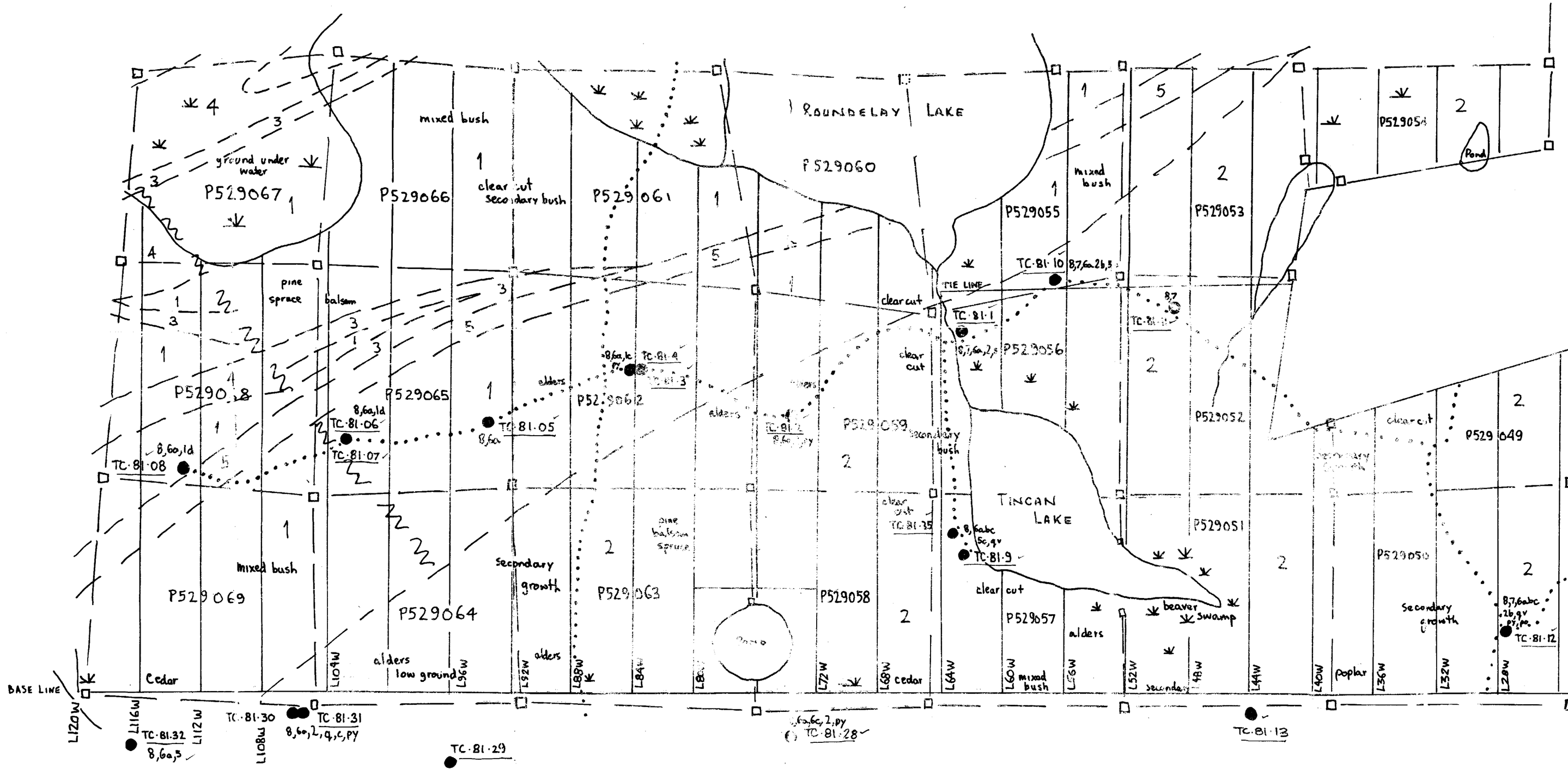
DATE OF ISSUE
JAN 17 1984
Ministry of Natural Resources
TORONTO

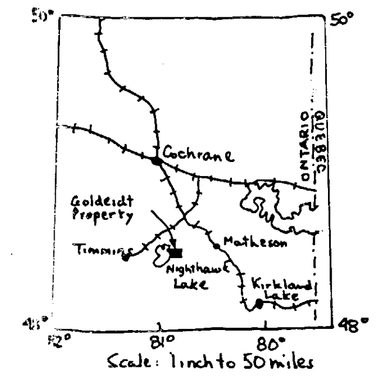
TOWNSHIP
MACKLEM

M N R ADMINISTRATIVE DISTRICT
TIMMINS
MINING DIVISION
PORCUPINE
LAND TITLES / REGISTRY DIVISION
COCHRANE

Ministry of Natural Resources — Land Management Branch
Ontario

Date: MAY 1982
updated to Circulation November 23, 1983
Number: G-3997





LEGEND

CENOZOIC/QUATERNARY
PLEISTOCENE/WISCONSIAN

8 Glaciolacustrine: Clay, fine sand

7 Glaciofluvial: Sand and gravel

6 a Upper Till
b Middle Till
c Basal Till

PRECAMBRIAN/PROTEROZOIC

5 Keweenawan Diabase

4 Mafic to Ultramafic Intrusives
a Serpentinized ultramafics - peridotite and dunite
b Gabbro and diorite
c Lamprophyre dikes

3 Felsic Metavolcanics
Undifferentiated
a. Massive rhyolitic
b Breccia to agglomeratic fragments
c Quartz Feldspar Dikes

2 Intermediate Metavolcanics
Undifferentiated
a. Massive flows
b Pillowed flows
c Porphyritic flows

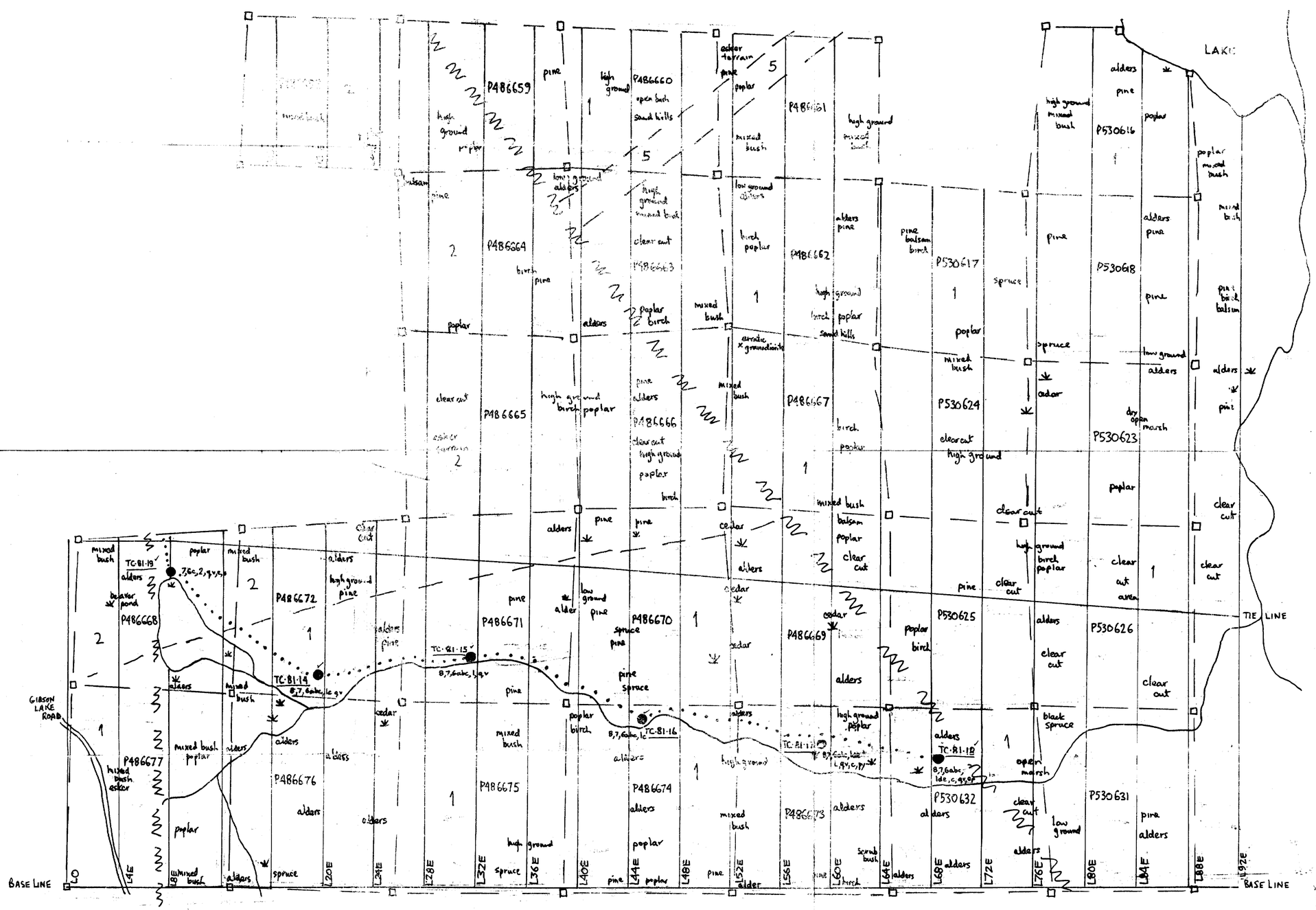
1 Mafic to Ultramafic Metavolcanics
Undifferentiated
a Massive flows
b Pillow flows
c Spherulitic, amygdaloidal flows
d Porphyritic flows
e Carbonitized horizon
f Tuff
h Ultramafic flows

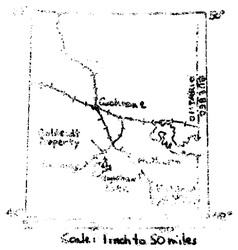
SYMBOLS

Geological boundary
Interpreted or deduced from geophysics
× Glacial erratic, float
Fault - assumed
TC-81-3 Reverse Circulation Overburden Drill Hole and number
Swamp
gravel road
Bush road

GOLDCREST EXPLORATION INC.

MACKLEM & BOND TOWNSHIPS PROPERTY
GEOLOGICAL MAP
NORTHWEST AREA
Scale: 1 INCH = 400 FEET
Map No. 1 Surveyed 7/82 R. Sibthorpe B.Sc.
Date: May 1983 Drawn and Surveyed by: R. SIBTHORPE





LEGEND

CENOZOIC/QUATERNARY
PLEISTOCENE/WISCONSIAN

- 8 Glaciolacustrine: Clay, fine sand
- 7 Glaciofluvial: Sand and gravel
- 6
  - a Upper Till
  - b Middle Till
  - c Basal Till

PRECAMBRIAN/PROTEROZOIC

- 5 Keweenawan Diabase
- 4 Mafic to Ultramafic Intrusives
  - a Serpentinized ultramafics — peridotite and dunite
  - b Gabbro and diorite
  - c Lamprophyre dikes
- 3 Felsic Metavolcanics
  Undifferentiated
  - a Massive rhyolitic
  - b Breccia to agglomeratic fragments
  - c Quartz-feldspar Dikes
- 2 Intermediate Metavolcanics
  Undifferentiated
  - a Massive flows
  - b Pillowed flows
  - c Porphyritic flows
- 1 Mafic to Ultramafic Metavolcanics
  Undifferentiated
  - a Massive flows
  - b Pillow flows
  - c Spherulite, amygdaloidal flows
  - d Porphyritic flows
  - e Carbonatized horizon
  - f Tuff
  - h Ultramafic flows

SYMBOLS

- Geological boundary (Geophysics)
- Glacial erratic or float
- Fault - assumed
- TC-81-3 Reverse Circulation Overburden Drill hole and number
- Swamp // gravel road .·. Bushroad

GOLDFIDT EXPLORATION INC.

MACKLEM & BOND TOWNSHIPS PROPERTY
GEOLOGICAL MAP
NORTHEAST PORTION
Scale: 1 INCH = 400 FEET
Map No. 1 Surveyed: 7/82 R.S. Holthorpe B.Sc.
Date: May 1983 Drawn and Surveyed by: R.S. Holthorpe