(BODBMi KRBORT

GODFK:Y 51 PROWRKTY
N.I'S. 42-n-12/5

REGEVED
ran 1 $310 \%$
IAINING LANDS SETION

## 

The Godfrey 51 lyoperty, consisting of ninetcen contiguous clajms, numbered $P-410424,410425,410464,451641,498597,498598$ and 498964 to 498976, inclusive, was marred at a scale of $1: 2000$ ( 1 cm to 20 m ) from July to Rugust, 1977. Claims P-410424, 410425 and 410464 were previously mapped at $]^{\prime \prime}$ to $100^{\prime}$ in September and october 1974 by John J. Watkins.

IOCATION AND ACCISS:

Gonlfey in is located in nosthwe:t bolliey fownship, aproxjmately 25 km west of pirmins city centre. Access to the claim group is best obtajned hy helicopter fom timmins. The east daims can be reached from the Genrex Mine roud off 1 Hjghway 576 . Drill bads unsaitable for convent jomal vehtoular traffic also traverse the property; west from the Genex Mine road and north from the old Lally road, 400 m south of the property boundary. A camp was set up on the swampy west shore of steep lake.

TOPOGRATHY ANI NATURAL, KESOURCES:

The promerty is characterized by large ridges and areas of solid outcrop with low swamy or dift covered areas in between. Moss and linhen enver much nt the rxposume and stripuing was mecessary to
facillitate mamping.

The higher out crop ayeas have sparce growth of tack Pine, while Spruce and Bialsamprominate whewhere. Hirch, Poplar, Moose Maple and Tay





FRENIOUS WORK:

 surveys on the same group in loho. 'jhis wats followed by the drilling of three holes.

In 1964 , Consolidntod Brewis dillled twenty boles after conductjog mag and E.M. staveys, ald some taenching. Theis daim group corresiondied to the old Godfrey 51 clams plus p-451641, 498597, 498598, 498964, 498965 and 498976.

In the same yedr Cu-kam carried out mag and E.M. surveys on what are now daime r-498966, 498974, 498975 and 498976.
 Iremohing and five dill boles we: fut down on a group which now corresponds to clajnis p-498597, 494.98, 498904, $498965,49896,4,461641$ and the old godfrey Sl group.
 1951 and 195? for the O. D. M. Further work was dime in 1969 and 1970 by
K.S. Middeton again for the O.D.M. Grological mapping and a detailed


A high resolut jon magnetic test grid was cut for the G.S.C. and data gathered fom thjs survey was reported in 1973 . This grid was cut at





The codfrey $f_{i}$ group is underdajn by a sumence of mafic to felsic volcanica, striking mothwsuth to south-atst amd toping rast. This sequence is invated by a my fad of intrusione, including quatiz-albite porphyry, granite, gramphyra, galbro, quata-diorjto, tap dykra; and dialatat.

LITHOCOGIES:

Mafic volcaries -
The mafic volcanics are best exposed north and east of Steep Lake. Here, bxith massive amd pillowed flows of basalt ciop but. fillow and flow top hrecoins are sum, st, iking aproximately nor th-south and topping east. The pillows, up to 1 m in long dimension have well formed selvages up to 5 cm thick and ate enite verinular, The vesicles show a size gratation from 5cm at the core to ? 35 mu at the pillow rim. The massive flows are also vesicular in fleces am show a amilar :ive gradation. The pillowed units grade both laterally and vertirally matmassive flow and incifient pillows are observed in one outcrop.

In hatnd :hereimen, these volcanien are finc to medjum grained, dark green in colour and are carbonated, notibly in the flow top brecias.

Small well formed octabedra of marguetje are often obsorved in this unit.

South of step lake, the pillowed volcanics have very thin irragular selvages which are almest indistinguishable on the weathered surface. These mafic volcanices bave a felsic component which forms siliceous bands ard "clasts" in a dask whomitic matrix. Similat andsa are saron on the orjgiral gridmaped by whan watkins. The formation of this type of unit may be tho rosult of inumisublility mocossos and is rebatra more to the "curdy" rhyolite than the mafio volcanics. Astocentated with therse folsic bands we disseminated to djecontinuous "bands" of fyrite, but these don't appear to be tuffaceous.

Mafie volcanics ale again found soutlitwest of Steep lake on the original thrace clamsi, und alsu wfed to the eust by the Gencx Mine road. Watkins describes these as "masive, pillowed, pillow hreceia and anygdaloidal
 cast of the lavas are massive with mimor pillowed sections, schistose, chloritic and carbomated.

A "massif ${ }^{\prime}$ imbefinite" unit is possibly expessed mear $3+00 \mathrm{~W}$ on Line raon, associated with "immiscible" material. it shows no flow features and may be intrusive in mature, but is still related to the volcanic succession.

Marsaltic mallainl al:a oceurs at; raft: eamght up withjn the granopliyre.

Pelsic Volcanics -

Massive, ${ }^{\prime \prime}$ y siliceous quartz-eye rhyolites striking approximateIy south-enst ap out in the :southern part of the poperty. They weather creamy-white and occassiomally show contorted flow laminations. On a fresh surface, they vary in colour with yollow, orange, crean, pink, light green,

 zones which may depesirat flow contacts. frase "interflow" unitas alto

potably overlying the mastive bhyolites we arricitic sichistose
 few millimetres to over 30 cm are round to sub-angular in shape. Spherulitic
 pyrite have also limetimited.

Fmbably the statigraphice aguivalent of the bhyolite fragmental is an "imaterible rhyolite-mmesite". This mit is nlon relosoly assooiated and possjbly genetically related to the mineralized rone. The unit is exposed on the orginal three clamin mapyed by watkins and also just. south of these claims at $6+30 \mathrm{~N}, 3+20 \mathrm{~W}$. A similar unit has also been noted at the east end of line $7+80 \mathrm{~N}$.

Gobs and 'stringers" of lhyolite in chloritic materjal and visa versa are characteristic of the unit. The rhyolite often shows banding, "curdy" and occatsiomilly spherulitic textures. Minor gossans are found soattered'thmuthout the horizon. As the mount of felsic material decreases the unjt afynt: mond faymental in hatmir. Watkins deseribes these as "chlorjtic rhyolite tuff:". The felsic muterial is completely absent in one exposure and it comble blassifird as a chloritic mafic volcanic, similar to the volcanies just south of stecp lake.

To the rast on claim p-498976, a unit texturally similar to "curdy" rhyolite cofos out. Here, possibly immisejble textures have been noted, along with highly contoted hams of coalesced spherules. A minor gossan with fyrite was mbserved mear the top of the unit, close to the contact with mafic volcanics. This unit, however, is belioved to overlie the Godfrey 51 mineralized zone.

Still further to the east, at the north-east corner of the property, the base of a very thick massive rhyolite unit is exposed. At the base, tongues of underlying mafic material is intemmixed with the fine grained grey rhyolite. The unit also has patches abundant in quartz-eyes.

Intradimy the valcanje succassion are small pluy: of medium
 granje (quartz-albite prphyry) cops out in thr south-contral, extreme east, and north-central fatts of the claim group. Blocks of this material are
 the worth fart of the gride at; well its beina grabat ionitl with the guartz-
 ogically similar containing chlmaral and subbohal gatins of quartz and feldopar with sparce mafics am sulphides. Allijte dominates in the guartzafbite pophlyry while k-fuldspar is the majn constituent of the pink granite.

Watkins noted a quastz-feld:par ;o:phyry along the gabbro-rhyolite





Gismophyre -
Whe most abundant dnd most variable rock type exposed on the pronity is the dianchayr. it occurs as a stock intioning volcanics south, south-west, and east of steep lake as well as croping out on the north-asat claims. In outcrop it is very massive and has a knobby-ijke texture.

Of the seven different phases noted, the most abundant is a dark grey-green, finc to mediun grained granophyre. This fairly siliceous variety occassionally contained pink-purple patches of feldspathic material, quartz eyes and ruhodral arajns of brown carbonate (ankerite?), especially near contacts. A lighter coloured type, with and without quartz eyes is also presont.
 generally coarse gained leucoxene-rich phase is exposed. Here the intrusion contains skelctal caystals of soft yellowy-brown leurcoxerne (after ilmenite?)
up to lem in length. Cubes of pyrite $5-1$ onm in size wore also noted. Banding on a seate of $30-30 \mathrm{~cm}$ per hand was observed betwoen eoarse and finer grained 1eveoxene-rich gramephyre at $6+80 \mathrm{~N}, 1+50 \mathrm{~W}$.

Gouth of steep lake, an clomgatc wone of pink granite (Type II)
 central core of the complex as omly grantional rontacts have leon ohsesved.


Mafic latrusives -
Two large bodies of gabbro weopy the west abd central parts
of the promerty. Watkins dessribus; the wertern budy as "modium to conarse grained, containing vaidable imome of magnetite, playioclase and mafic
 body, $1000 \mathrm{~m} x 250 \mathrm{~m}$ is similar except for its diabase texture in places. These intrusions are probmbly related to the kimiskot ia gathro complex.

Associated with the gabbro in the north-west. part of the grid is a quartz-diorite. Its contact with gabbro is somewhat gradational and may
 quartz eye thase of the granophyre the unit generally weathers a shade of pink and is quite massive. Texturally it shows wide variation, ranging from a unit with "aplotchy" wothe: of delatimitic matorial up 102 cm in diameter to a fajrly wajform equidabalat aok comtaining foldsiar, hormbonde, and
 of the 100 k .
'lxal whes -

several place: on the propriy. rhey are dark green, fine to medium grained, chloritic, carbonated and shew mo prefered orientation.
biabuse -
Several morth northewest trending diabase dykes ranging
in width from 20 m to bom, cross the property cutting all rock types. These dykes dre fine grained at the contacts, but do beoone guite coarse grained with a distinct diabasjc texture noar their cores. ome dyke doviates from the rest by striking nomal to the grineral trend (i.e. asist-west). This dyke is different as it :hows wh as a matetic low while the other dykes show a high magnetice for,omed, which allows correlat inn in arats of no out crop.

MINERMITZATION: (See Figure I)

Main showing -
The main showing is exposed on the original three elaims and is doseribed by watkiris as follows: " a mineralizod zone containing chalcofyrite, shatmite, pyrite and minor pyrrbotite ocours along a north-south striking rhyolite-andesite contact. The chalcopyrite occurs as blotches and narrow stringers in the rhyolite and andesite. Sphalerite occurs as irregular blotches in the mbesite. From the consolidated brewis; drilling, the mineralization appears to occur as lesses up to 20 feet ( $6,1 \mathrm{~m}$ ) wide along the rhyoliteandesite contact and dipfing about $-80^{\circ}$ east. A 60,000 gamma magnetic expression roughly corresponds to the zone of mineralization". Several tienches and drjal holes have investigated this haijaon.

Besides; the man :howimg, mothing :pectacolar was found during the survey, but a fow gens:ans were moted. A rust.y zone oontaning pyrite was



Another two gros.unti with minos pys ite wred located at line $3+00 \mathrm{~N}$,
 possibly is the stratiaraphic equivalent to the "imniscimle rhyolite-andesite".

A re-examinat ion of the sonth-oast elaim of the original grid
 contajed disseminated to fatirly massive pyrite with the odd speck of pyrrhotite. Two trenches wore locited.

Two minor gossans containing pyrite were observed to the east at $14+50 \mathrm{~N}, 14+00 \mathrm{E}$ within rhyolitic material similar to "curdy" rhyolite, near the contact with the overlying mafic volcanics.

Several pits were found in the Type I granite near $3+30 \mathrm{~N}, 1+80 \mathrm{E}$ where quartz veins carrying pyrite and traces of chalcopyrite were observed.

STRUCTURAL GEOLOGY:

The entire volcanic succession appears to be a monoclinal sequence striking south to south-east and dipping and topping east. Much of the sequence has been lost due to the number of intrusions. The intrusions have no doubt deformed the sequence, but no evidence of major folding is indicated.

A relatively well developed schistosity is present in the volcanics, notably the felsic agglomerates and tuffs and "curdy" rhyolites. The strike of the schistosity varies from approximately $90^{\circ}$ to $135^{\circ}$ while dips change $10^{\circ}$ each side from vertical.

Only very minor faults (actually slips) were noted, with movement less than 10 m . The major fault indicated by Hogg's work; striking south-easterly across the property does not appear to exist.


## KHFHKMNCH:

Hogg, N. (1954); robolofy of confacy Pownshif; fatirio bupartment of mines


Kormick, L.J.; McGrath, P.H., Molroyd, M. 马.; hood, P.J.; (1975); Evaluation of lligh Resolution metnmanetic Survey Data Over a Pest kange in the Jimmins Area, mario; ronl. Survey of Canada, Paler 75-18
 Turnbull and Gooifry rownships, District of cochrane; ontario Divisjon of Mimes ofk ralls

Watkine, J.J. (1g/A); leport on the Geology of the Godfrey 51 Claim Group, confiey fromahif; Texasgulf Inc. rilesp


## Ministry of <br> Natural <br> Resources

60 Wilson Avenue, Timmins, Ontario, February 14, 1979.

Lands Administration Branch
Mining Lands Section
Ministry of Natural Resources
Room 1617, Whitney Block
Queen's Park, Toronto
M7A 1W3

Notification of recording
of assessment work credits

RECEIVED
FEB101m

MINING LANDS SECTION

Date of recording of work $\qquad$ February 13, 1979.

Recorded holder: $\qquad$ Texasgulf Canada Limited, Address: P.O. Box 175, Suite 5000, Commerce Court, Toronto, Ontario. M5I IE7
Township or Area: $\qquad$ Godfrey Township

| Type of survey and number of Assessment days credit per claim | Mining clalms |
| :---: | :---: |
| Geophysical |  |
| Electromagnetic_days | P-498597-498598, |
| Magnetometer__days |  |
| Radiometric _____ days |  |
| Induced polarization____days |  |
| Section 86 (18) _ days |  |
| Geological_20_days | , |
| Geochemical__days |  |
| Man days $\square \quad$ Airborne $\square$ |  |
| Special provision $\square$ Ground $\square$ |  |

Notice to recorded holder:

X Survey reports and maps in duplicate be submitted to the Lands Administration Branch, Toronto within 60 days from the date of recording of this work.Reports and maps are being forwarded to the Lands Administration Branch with this letter.



(ater



