

63A.451



42A12SE0431 63A.451 GODFREY

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GEOLOGICAL REPORT

ON

GODFREY CLAIM GROUP

WORK CONDUCTED FOR

CU-KAM PORCUPINE MINES LTD

June 26, 1965

J.E. Steers

INTRODUCTION AND LOCATION

The following claims, P. 51862-3, P. 51895-97 incl., P. 52165 P. 52166, P. 52167, P. 52248-50 incl., P. 52448-51 incl., P. 55864-67 incl., P. 57186-91 incl., P. 58994, P. 58995-P. 59000 incl., P. 53816, P. 54975, P. 54978, are registered in the name of Cu-Kam Porcupine Mines Limited.

The claims are located in lots 5,6,7 concession ~~II~~^{V + VI}, lot 7 concession IV, of Godfrey Township.

Godfrey Township is located south of Jamieson Township and adjoins Robb Township at the northwest corner.

A producing mine, Kam Kotia, in Robb Township and two prospective mines, Canadian Jamieson and Genex Mines in Godfrey Township, all are within three miles of the map area.

Detailed mapping was carried out in the early fall of 1964 between September 21 and October 10. East-West lines cut at two hundred foot intervals were used for control and all pertinent data was plotted at a scale of one inch to two hundred feet.

ACCESS

Excellent access to the map area is furnished by the all-weather gravel road which provides access to the Kam-Kotia Mine.

The Lally road, between concession III and IV, also crosses the map area.

PREVIOUS WORK

Parks, mapping Niven's first baseline, was probably the first to report on the geology of Godfrey Township.

Burrows carried out some reconnaissance mapping in Godfrey Township.

Finley mapped Godfrey Township as part of the Kamiskotia Lake area.

N. Hogg began detailed mapping of Godfrey Township in 1949. His excellent work was plotted at a scale of 1" equals 1000 feet.

The outcrops in the region have been thoroughly prospected and numerous small trenches and test pits are to be found in the area.

TOPOGRAPHY

The western portion of the map area is a low rhyolite ridge lightly covered with sand and gravel and lightly wooded. The eastern portion is generally a heavily wooded low ^{lying} (lygin) swampy area which is drained by a meandering creek which flows north to the Mattagami river.

GENERAL GEOLOGY

The consolidated rocks are all of Precambrian age and are only partially exposed within the map area.

Recent diamond drilling has not thrown any light on the nature of the contact between the volcanic and sedimentary rocks but has shown that the sedimentary rocks are much more widespread than previously thought.

Sedimentary rocks were encountered in diamond drilling to the north of the map area, in Jamieson township by Northern Explorations and south of the area by Mespil Mines.

Overburden depths vary from nil on the west to in excess of one hundred feet in the central portion of the area.

TABLE OF FORMATIONS

Cenozoic

Recent - Peat, Humus, silt

Pleistocene - Sand, gravel, boulders, boulder clay,

Great Unconformity

PreCambrian

Quartz Diabase

Intrusive Contact

Gabbro ? Diorite

Intrusive Contact

Rhyolite - Massive, porphyritic, fragmental rhyolite, tuff?

Andesite - Pillow, massive

Sediments - Conglomerate, greywacke.

Precambrian

Five distinct rock types occur within the map area. Two of these types do not outcrop within the area but have been encountered in drilling.

Rhyolitic volcanics, conglomeratic sedimentary and diabasic intrusive rocks outcrop in the area and andesitic and gabbroic rocks have been encountered in drill holes.

Little is known of the relationship between the sedimentary and volcanic rocks in the map area. There are no contacts exposed and nowhere has a drill hole intersected a volcanic-sedimentary contact, except for thin beds of volcanics intercalated within the sedimentary band.

Sedimentary Rocks

A large portion of the map area is believed to be underlain by sedimentary rocks.

The sedimentary rocks which outcrop in the area are angular to sub-angular conglomerates or agglomerates with discontinuous lenses of massive greywacke. Pebbles and cobbles of rhyolite, chert, slate and granite are found in the conglomerate.

Greywacke, crystal tuff, and arkosic material form discontinuous bands in the conglomerate.

Attitudes of these beds cannot be determined from the limited surface exposure but diamond drilling appears to indicate that the beds have a northwesterly strike and ^{shallow} dip steeply to the east.

Massive, narrow graphite bands were encountered in two drill holes in the northern part of the map area.

Hogg (1955) states that the outcrops in lot 6 concession V are probably not connected with the large sedimentary area in the south part of the township but subsequent information from diamond drilling indicates that these outcrops are part of the extensive sedimentary area and that the area is much larger than previously postulated.

Light disseminated sulphide mineralization is common throughout the sediments. Pyrrhotite, pyrite and minor chalcopyrite are present in amounts ranging from about one to ten or fifteen percent.

Rhyolitic Volcanics

Rhyolitic volcanic rocks outcrop in the northwest and southwest parts of the map area. For the most part the rhyolites are relatively featureless and are massive to slightly porphyritic, occasionally fragmental and in the south include thin discontinuous lenses

of sheared, sericitized, carbonitized dacitic or rhyolitic tuffs.

Most exposures weather a creamy white, with a blocky surface.

The rhyolites are dark to light grey, sometimes a pale waxy yellowish colour indicating sericitic alteration.

Clear, prominent white or blue quartz phenocrysts are common.

Rhyolitic material encountered in drilling is megascopically identical to that exposed except that the lenses encountered are narrow and commonly show a rude to obscure banding. The banding is evident as colour banding and no mineralogical differences could be seen.

Two outcrops were seen where large, angular, blocky rhyolitic fragments were cemented in a massive rhyolitic matrix.

Andesitic Volcanics

Andesitic rocks are nowhere exposed in the area but highly sheared and carbonitized rocks of andesitic material were encountered in several drill holes.

The andesitic rocks are schistose, highly chloritic and contain minor to twenty percent or more calcareous material.

Light disseminated pyrite and occasionally pyrrhotite is common but not universally present.

The andesites are thought to be part of an intercalated sediment, rhyolite, andesite complex.

Gabbro

One drill hole encountered a coarse grained, equigranular rock which is composed chiefly of a dark green amphibole and a creamy white feldspar in about a 60-40 ratio. In places this intrusive rock exhibits a gabbroic texture.

The gabbro has been separated from the diabasic rocks of the area, from which the gabbro is indistinguishable, solely because it appears to be the source of a broad magnetic anomaly that does not correspond with the anomalies associated with known dikes.

Diabasic Gabbro

Several gabbroic, coarse grained dikes, sometimes exhibiting diabasic texture, and having sharp chill borders strike in a north northwesterly direction through the map area. The dikes have pronounced magnetic anomalies association with them.

Structural Geology

The most prominent structural feature is the incipient foliation which is vague in the rhyolites and well to highly developed in the sediments and andesites.

In general the strike is north west and the dip vertical to steep to the northeast.

No direct field evidence is available for the large fault postulated in the central part of the map area. Two small faults were mapped but could not be followed for any distance.


Economic Geology

Scattered, disseminated sulphide mineralization was encountered in all the rocks. The sedimentary rocks contain one to fifteen percent sulphides and numerous narrow quartz and quartz carbonate veins which sometimes contain small amounts of pyrite, chalcopyrite galena and sphalerite.

No concentrations of economic significance were encountered.

Respectfully submitted

MESPI MINES LIMITED



John E. Steers,
Geologist

JES/jf

LOT 7

LOT 6

0+00 BASE LINE

30 E BASE LINE

CON. VI

CON. V

CON. IV

P 52250

P 53816

P 58994

P 58995

P 57191

P 51862

P 52249

P 59000

P 58996

P 58997

P 51863

P 51896

P 52248

P 58999

P 58998

CON-WEST - CHANCE

P 51897

P 51895

P 55866

P 55864

P 52167

P 52164

P 55867

P 55865

P 54975

24 S

26 S

28 S

30 S

32 S

34 S

36 S

38 S

40 S

42 S

44 S

46 S

48 S

50 S

52 S

54 S

56 S

58 S

60 S

62 S

64 S

66 S

68 S

70 S

72 S

74 S

76 S

78 S

P 52166

P 52165

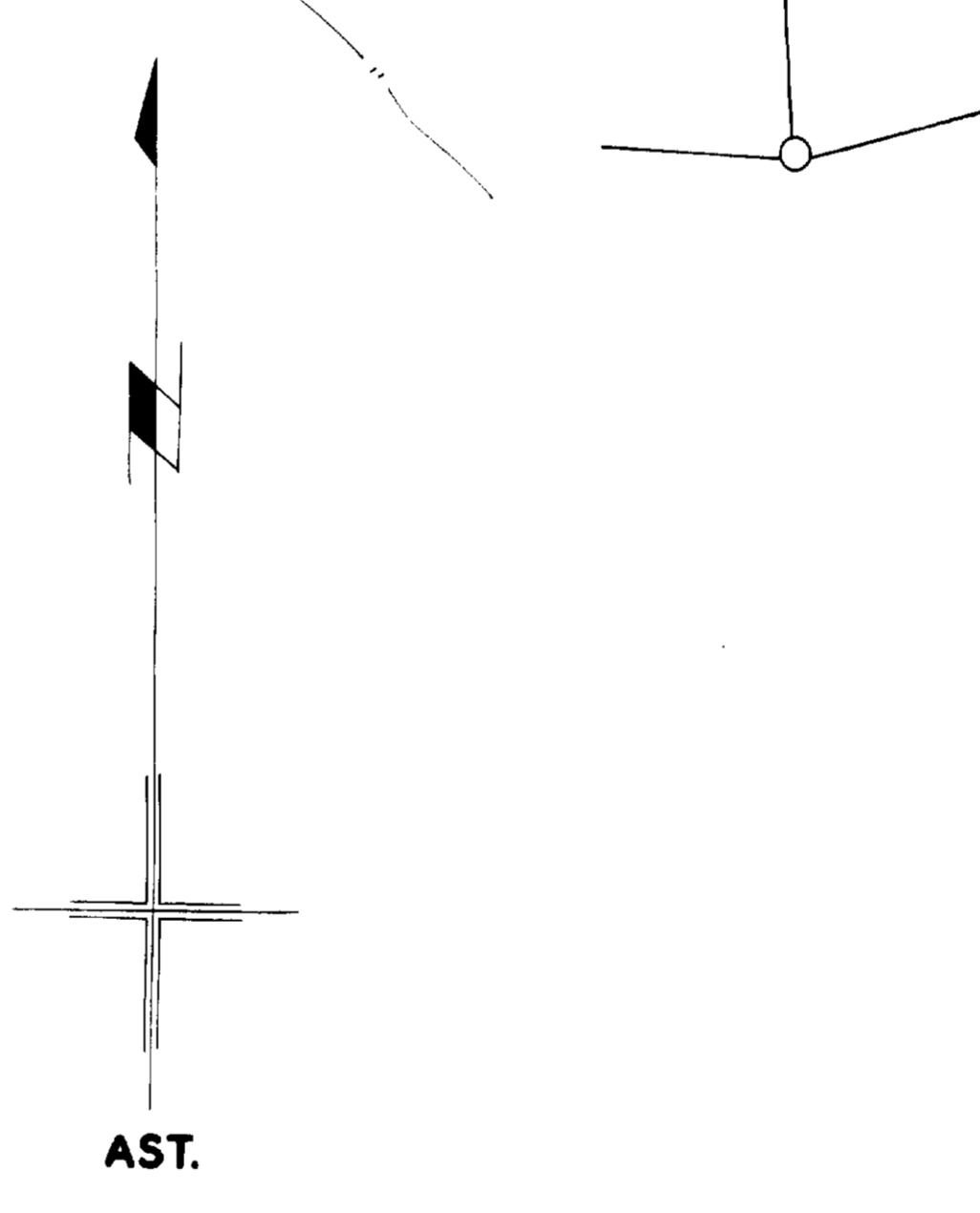
P 52448

P 54978

P 52449

P 52450

P 52451

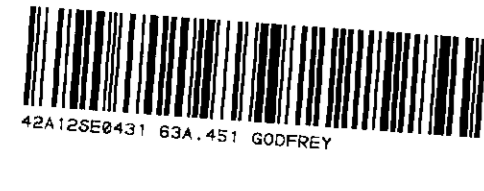


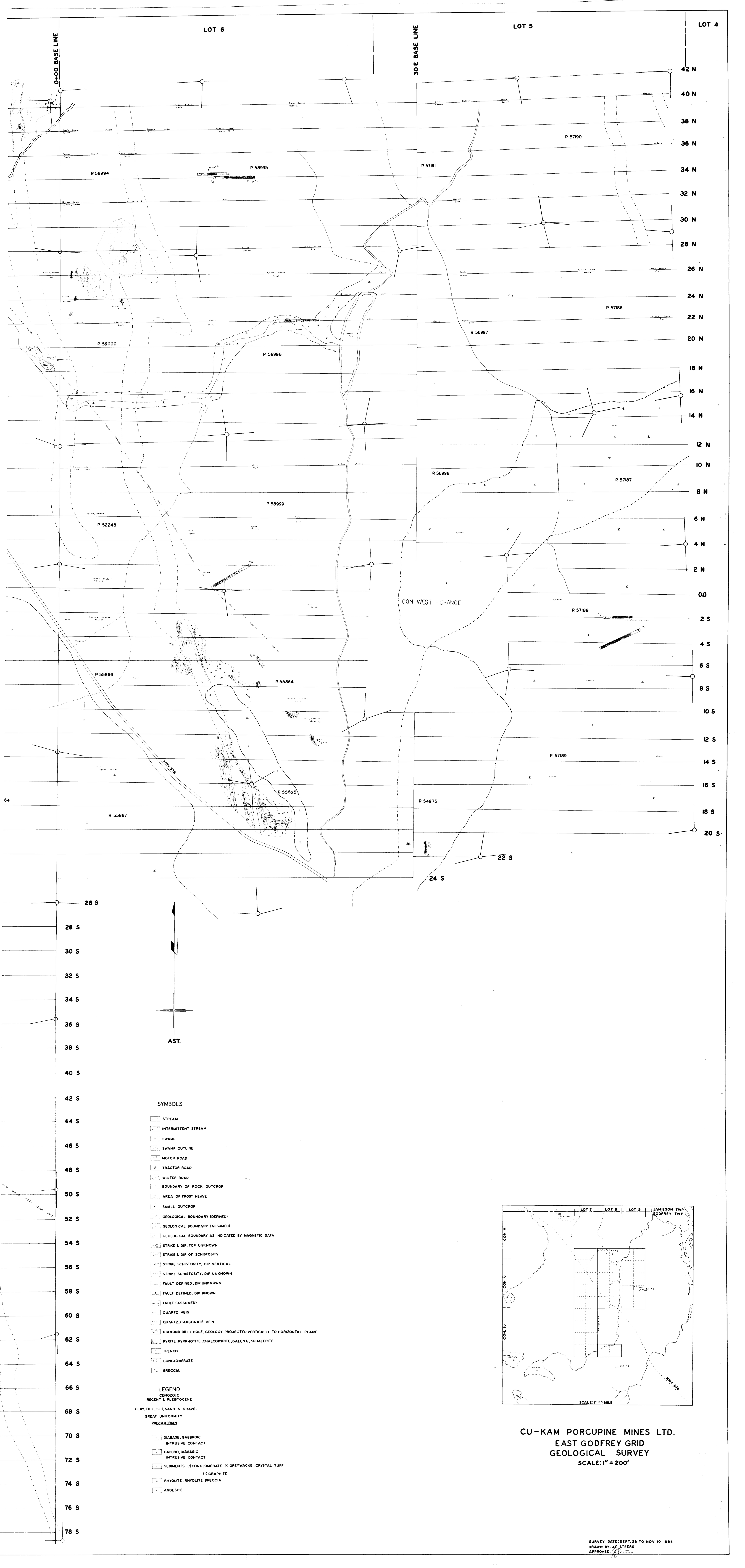
SYMBOLS

- STREAM
- INTERMITTENT STREAM
- SWAMP
- SWAMP OUTLINE
- MOTOR ROAD
- TRACTOR ROAD
- WINTER ROAD
- BOUNDARY OF ROCK OUTCROP
- AREA OF FROST HEAVE
- SMALL OUTCROP
- GEOLOGICAL BOUNDARY (DEFINED)
- GEOLOGICAL BOUNDARY (ASSUMED)
- GEOLOGICAL BOUNDARY AS INDICATED BY MAGNETIC DATA
- STRIKE & DIP, TOP UNKNOWN
- STRIKE & DIP OF SCHISTOSITY
- STRIKE SCHISTOSITY, DIP VERTICAL
- STRIKE SCHISTOSITY, DIP UNKNOWN
- FAULT DEFINED, DIP UNKNOWN
- FAULT DEFINED, DIP KNOWN
- FAULT (ASSUMED)
- QUARTZ VEIN
- QUARTZ, CARBONATE VEIN
- DIAMOND DRILL HOLE, GEOLOGY PROJECTED VERTICALLY TO HORIZONTAL PLANE
- PYRITE, PYRRHOTITE, CHALCOPYRITE, GALENA, SPHALERITE
- TRENCH
- CONGLOMERATE
- BRECCIA

LEGEND

- GENOZOIC**
- RECENT & PLEISTOCENE**
- CLAY, TILL, SILT, SAND & GRAVEL
- GREAT UNIFORMITY**
- PRECAMBRIAN**
- DIABASE, GABBRIC INTRUSIVE CONTACT
- GABBRIO, DIABASIC INTRUSIVE CONTACT
- SEDIMENTS (CONGLOMERATE (H) GREYWACKE, CRYSTAL TUFF)
- GRAPHITE
- RHYOLITE, RHYOLITE BRECCIA
- ANDESITE



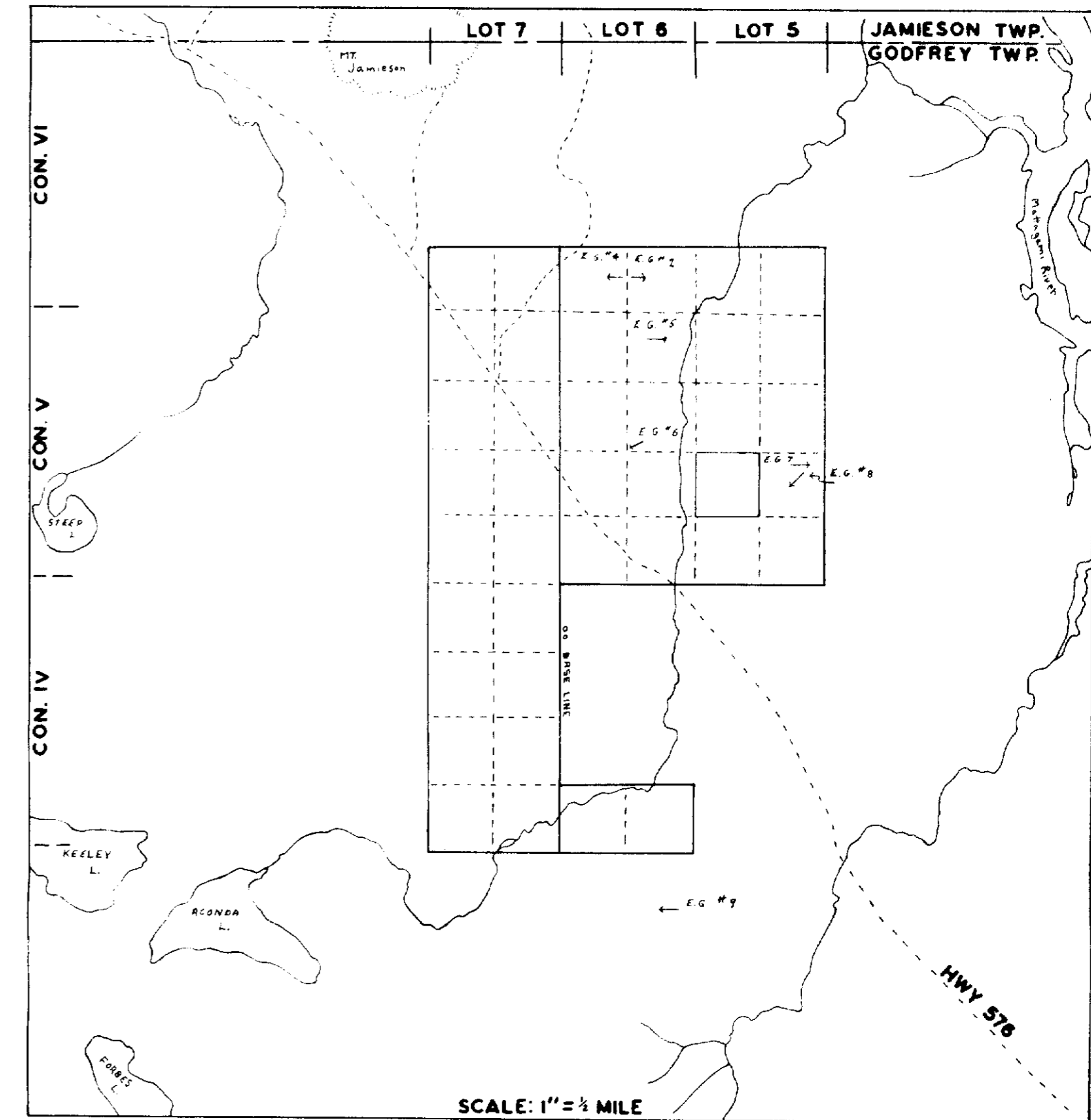


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- PRE-CAMBRIAN
- DIABASE, GABBROIC INTRUSIVE CONTACT
- GABBRO, DIABASIC INTRUSIVE CONTACT
- SEDIMENTS (-) CONGLOMERATE (+) GREYWACKE, CRYSTAL TUFF
- (-) GRAPHITE
- (+) RHYOLITE, RHYOLITE BRECCIA
- ANDESITE



CU-KAM PORCUPINE MINES LTD.
EAST GODFREY GRID
GEOLOGICAL SURVEY
SCALE: 1" = 200'