



Report on Magnetometer Survey

C. McALLISTER PROPERTY

ELDORADO TOWNSHIP, ONTARIO

Porcupine Mining Division

Introduction :

(1973)

During April of this year, a Magnetometer Survey was completed over three claims that constitute part of the McAllister Property, Eldorado Township, Ontario.

The object of the magnetic survey was threefold:

(a) to further delineate the areal extent of a base metal-bearing sulphide zone (Pyrrhotite) located on mining claim P.353839; to locate the presence of any magnetic Ultramafic Intrusives or Diabase Dikes; and to aid in the resolution of the bedrock stratigraphy.

This report and accompanying plan map, at a scale of one inch to 200 feet, describes the results and give an interpretation of the aforementioned Magnetometer Survey.

Property Description :

Reference Map: O.D.M. Plan No. M276, ELDORADO TOWNSHIP.

The property described in this report consists of three, contiguous, unpatented mining claims all located in Eldorado Township, Porcupine Mining Division, Ontario; and further described as follows:

P.353746	1 claim
P.353839	1 "
P.353872	1 "
		<u>3 claims</u>

The Recorded Holder of the aforementioned three mining claims at the date of this report is Mr. Charles McAllister, P.O. Box 262, Schumacher, Ontario.

Location & Access :

The claim group is located in the northeast corner of Eldorado Township (longitude $81^{\circ}06'W$ / latitude $48^{\circ}21'N$) approximately 14 air-miles southeast of the city of Timmins, or 10 air-miles south-southeast of the "town" of South Porcupine.

Access to the property is readily gained from South Porcupine via dirt roads that pass within 100 feet of the northwest corner of the claim group.

Previous Work:

A small pit has been blasted into a rock outcrop containing base metal-bearing sulphides located on mining claim P.353839 at $29+20N/6+60E$. The sulphides (Pyrite, Pyrrhotite) occur as massive stringers within a sugary-weathering Siliceous Tuff (so-called Iron Formation), and have associated Chalcopyrite, and to a lesser extent Sphalerite & Galena mineralization; samples have also shown minor silver & nil gold values. The possible strike extensions of this mineralized zone are covered by overburden.

Geology :

The general area encompassing Eldorado Township has been mapped geologically during several different periods by the Ontario Department of Mines --- the regional geology is shown on Geological Compilation Series Map 2205, Timmins-Kirkland Lake Sheet. The detailed (latest mapping) geology of the area encompassing the McAllister claim group itself has been published (1969) as Preliminary Geological Map No.P.572, Eldorado Township at a scale of one inch to one-quarter mile.

The general Eldorado Township Region is also covered by G.S.C. Aeromagnetic Map 293 G (Rev.), "Timmins" at a scale of one inch to one mile.

Topographic relief in the general area encompassing the McAllister Property is low, and consists of rounded hills with numerous areas of alder swamp. The bedrock is almost completely masked by deep glacio-lacustrine deposits of clay, sand & gravel; on the McAllister claims, the rock outcrop is limited to four, small areas.

(a) Regional Geology :

Bedrock in the northern half of Eldorado Township has been interpreted to consist essentially of a thick sequence of mafic volcanics (Andesitic flows) with minor intercalated Siliceous Tuffs that strike northeasterly through the area. A large stock of Granitic Intrusives outcrops approximately three-quarters of a mile south of the property. A long, linear, northeasterly-striking Diabase Dike (400 ft. wide) cuts through the area approximately one-quarter mile south of claim P.353839.

(b) Economic Geology :

To date, the only economic mineral deposit found in the general region is the nickel mine of Inco-Noranda located in adjacent Langmuir Township ... this deposit (Langmuir Mine) consists of massive to disseminated sulphides (Pyrite, Pyrrhotite) containing lesser amounts of associated Pentlandite, Millerite & minor Chalcopryite; host rocks are a serpentized Ultrabasic Sill & adjacent felsic volcanics. The nickel mineralization is genetically related directly to said Ultrabasic Intrusive.

Many of the sulphide-bearing Iron Formations (Siliceous Tuffs) located in Eldorado Township -- such as that located on the McAllister Property -- have minor associated Chalcopryite, Sphalerite & Galena mineralization. To date, none of these sulphide occurrences have been of economic importance.

Several gold "showings" have been reported in Eldorado Township; however, no details re their mode of occurrence has been given.

Magnetometer Survey :

During the period April 26-28 inclusive, 1973 a magnetic survey was completed over the three claims described in this Report, and parts of the adjacent area. The survey was carried out on a grid system of picket lines (bearing N65°W) established at 400-foot intervals from 12+00 N to 36+00 N; stations (pickets) were established by chaining at 100-foot intervals along each picket line; readings were taken at each 100-foot station; and in areas of anomalous magnetic highs at 50-foot intervals.

The entire survey was carried out utilizing a McPhar M700 Fluxgate Magnetometer ... please refer to attached brochure for instrument details.

In general, the area surveyed exhibits a fairly uniform, higher background magnetic relief (500 to 1000 gammas) over large areas, with several substantial areas of lower magnetic relief (160 to 500 gammas). Those areas of generally higher background readings are considered to represent Andesitic flows containing minor disseminated Magnetite mineralization; those areas of lower background magnetic relief probably represent more intermediate or felsic volcanics.

The survey also located four, local zones of magnetic highs (Anomalies A, B, C, & D), and one, isolated zone of magnetic lows (Anomaly E). The aforementioned anomalous zones are shown on the accompanying plan map, and are further described as follows: ...

1. Anomaly A:

This well-defined, linear-shaped anomaly has a peak high of 5600 gammas located on picket line 28+00 N at station 7+00 E; the strike length of the anomalously high mag reading is approximately 600 ft., and width is 150 feet.

The center of the mag anomaly is located approximately 100 ft. south and to the east of the ^{aforementioned} previously described trench which contains massive sulphide stringers (Pyrite, Pyrrhotite) and associated base metal mineralization within a Siliceous Tuff horizon. Pyrrhotite mineralization in the trench is magnetic.

The cause of this magnetic anomaly has not been positively determined; however, it is considered to be either: (a) more massive concentrations of Pyrrhotite than that exposed in the adjacent trench; or (b) local stringers or thin bands of Magnetite mineralization (Cherty Iron Formation).

2. Anomaly B :

The peak high of this very localized linear-shaped anomaly is 3800 gammas located at 32+00 N/11+00 E; the strike length is approximately 250 ft., and width is 60 feet. This mag anomaly is situated in an area completely covered by overburden; therefore, its cause is currently unknown.

It is possible that Anomaly B actually represents the fault-displaced northerly strike extension of Anomaly A.

3. Anomaly C :

The center of this anomaly (peak high of 2200 gammas) is on line 24+00 N at 11+50 E. Although not positively determined, the cause of this rather long (1200 ft) & wide (200 ft.), weak magnetic anomaly is considered to be disseminated Magnetite mineralization within a Diabase Dike.

4. Anomaly D :

The peak high of this anomalous zone (1750 gammas) is located at 24+00N/19+00 E. This rather weak anomaly is located in an area of overburden; therefore, its cause is currently unknown.

From geological considerations, this anomaly is interpreted as representing a local, eroded remnant of a Diabase Dike ... probably the fault-displaced northerly strike extension of Anomaly D.

5. Anomaly E (Magnetic Low) :

This is a very localized, elliptical-shaped area of magnetic lows (minus 640 gammas) centered at 28+00 N/3+00 W. The area is covered by overburden; therefore, the cause of this magnetic low has not as yet been positively determined.

From geological considerations, this anomalous low is interpreted as representing an outlying Granitic Intrusive plug related to a large granitic intrusive stock located approximately one mile south.

Summary & Conclusions:

The Magnetometer Survey completed on the 3-claim property of C. McAllister located four zones of anomalously high magnetic readings (designated as Anomalies A, B, C & D), and one zone of low magnetics (Anomaly E).

The highest magnetic readings detected were associated with linear-shaped Anomalies A & B; approximately 4800 gammas & 3000 gammas respectively above the surrounding background (800 gammas) values. Both anomalies are located in overburden-covered areas; therefore, their cause has not been positively determined. Anomaly A is located adjacent to a sulphide-bearing (Py, Po) Siliceous Tuff horizon that has associated base metal (Cu,Zn,Pb,Ag) mineralization ... Anomaly B appears to be the fault-displaced strike extension of Anomaly A. The cause of Anomalies A & B is considered to be either: (a) massive concentrations of Pyrrhotite mineralization; or (b) thinly banded, lean Iron Formation (Magnetite & Chert layers).

Because of nearby base metal mineralization associated with local Pyrrhotite stringers, Anomalies A & B could be of economic interest if said anomalous zones were due to more massive Pyrrhotite concentrations.

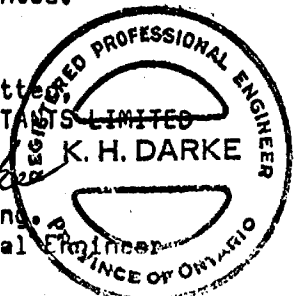
Magnetic Anomalies C & D have peak readings approximately 1000 - 1500 gammas above background values which is typical of the regional Diabase Dikes prevalent in this area ... because of their generally linear shape, etc. these latter two mag anomalies are considered to be Diabase Dikes and thus of no economic interest.

Anomaly E (magnetic low) is considered to represent a small Granitic plug, and thus is of no economic interest.

Recommendations:

It is recommended that further work be conducted in the vicinity of Anomalies A & B to determine their cause. Because of the substantial overburden cover in that area, said work should initially consist of an Electromagnetic Survey at 200-foot line-spacing; with follow-up diamond drilling if warranted.

Respectfully submitted,
KENNETH H. DARKE CONSULTANTS LIMITED
K. H. Darke
K. H. DARKE
K.H. Darke, P.Eng.
Consulting Geological Engineer



Timmins, Ontario
August 10, 1973



42A06SE0098 2.1276 ELDORADO

900

GEOPHYSICAL - GEOLC 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 GEOPHYSICAL
 Township or Area ELDORADO TOWNSHIP
 Claim holder(s) Charles McAllister K-16429
P.O. Box 262; Schumacher, Ont.
 Author of Report K.H. Darke, P.Eng.
 Address P.O. Box 983; Timmins, Ont. P4N 7H6
 Covering Dates of Survey April 26-28, 1973
 (linecutting to office)
 Total Miles of Line cut 4.7

MINING CLAIMS TRAVERSED List numerically

P	353746
(prefix)	<u>3</u> (number covered)
P	353839
P	353872

SPECIAL PROVISIONS CREDITS REQUESTED

DAYS
per claim

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

ENTER 20 days for each
additional survey using
same grid.

Geophysical _____
 -Electromagnetic _____
 -Magnetometer 40
 -Radiometric _____
 -Other _____
 Geological _____
 Geochemical _____

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

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

DATE: Aug. 10, 1973 SIGNATURE: K.H. Darke
Author of Report or Agent

PROJECTS SECTION

Res. Geol. _____ Qualifications 63-2388

Previous Surveys L.D.

Checked by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

TOTAL CLAIMS 3

If space insufficient, attach list

OFFICE USE ONLY

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 226 Number of Readings 249
Station interval 100 ft. (some at 50 ft.)
Line spacing 400-foot
Profile scale or Contour intervals Contour Interval: 500 gammas
(specify for each type of survey)

MAGNETIC

Instrument McPhar M700 Fluxgate Magnetometer
Accuracy - Scale constant + or - 5 gammas
Diurnal correction method Check of Base Stations at no greater than one hour intervals.
Base station location on Base Line 0+00 at 400-foot intervals

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 _____
Time domain _____ Frequency domain _____
Frequency _____ Range _____
Power _____
Electrode array _____
Electrode spacing _____
Type of electrode _____

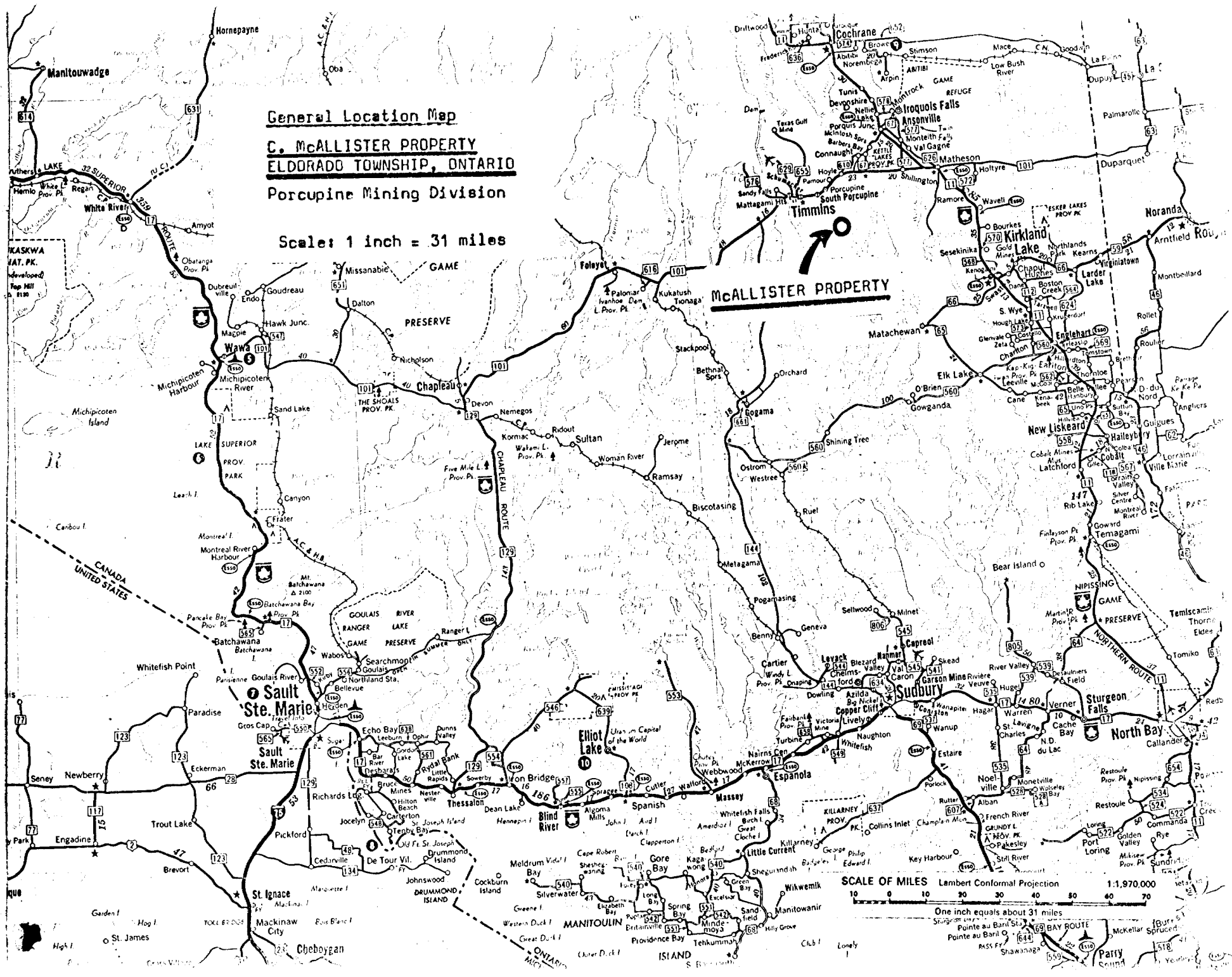
General Location Map

C. McALLISTER PROPERTY
ELDDORADO TOWNSHIP, ONTARIO

Porcupine Mining Division

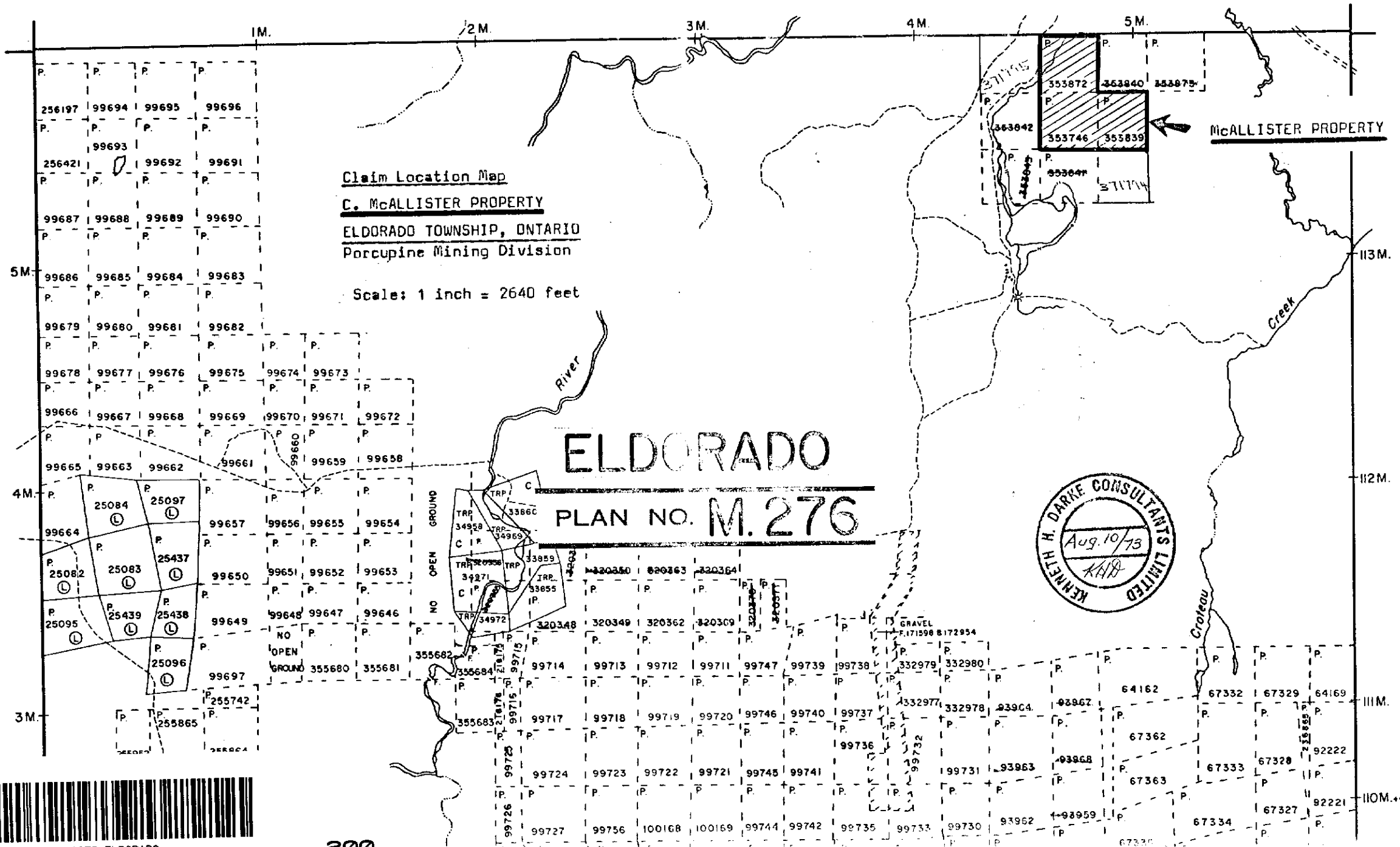
Scale: 1 inch = 31 miles

McALLISTER PROPERTY



SCALE OF MILES Lambert Conformal Projection 1:1,970,000

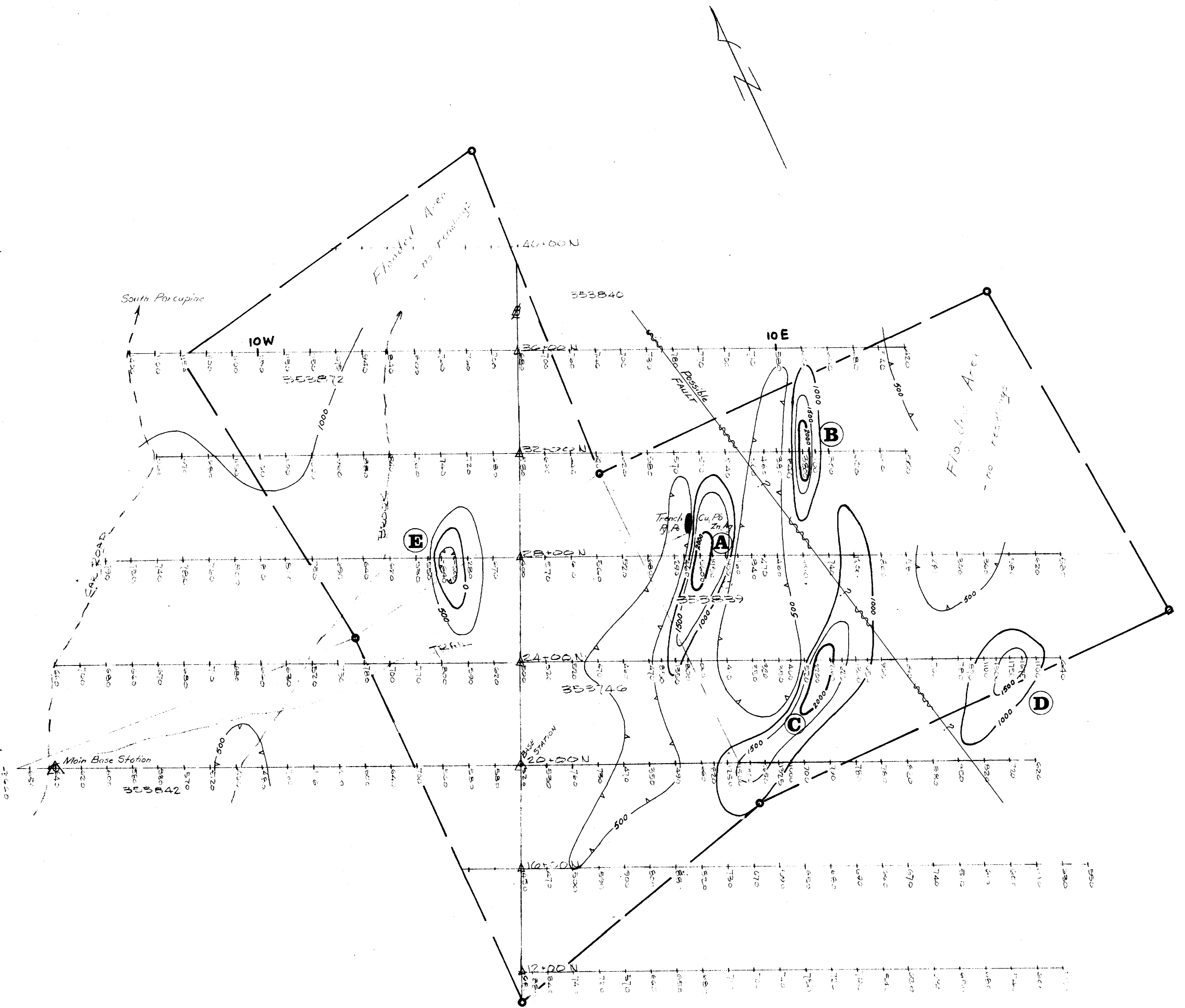
One inch equals about 31 miles



Tp. - M.261



42A06SE0098 2.1276 ELDORADO



Checked & Approved
 K. H. DARKE CONSULTANTS LIMITED
 AUG 10 1973
 K. H. DARKE
 REGISTERED PROFESSIONAL ENGINEER
 PROVINCE OF ONTARIO

PLAN SHOWING
 MAGNETOMETER SURVEY
 METALLIC CLAIMS
 ELDOORADO TWP., ONT.

CONTOUR INTERVAL: 500'
 INSTRUMENT: McPHAR M700 FLUXGATE MAG.
 OPERATOR: R. McAllister
 DATE: AUG 26-28, 1973

DRAWN BY: C. McAllister
 Aug 10, 1973

