



42A12SE0152 63.631 JAMIESON

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DOMINION GULF COMPANY
INTERPRETATION OF GROUND MAGNETOMETER DATA
JAMIESON I (5 CLAIM GROUP)
BASE MAP 42A/12S
PORCUPINE MINING DIVISION ONTARIO
N. R. Paterson October 26, 1955



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INTRODUCTION

This group of five claims, numbered P-38360-38364, lies in Lot 11, Concession II, Jamieson Township. It is reached by trail from the Timmins-Kamiskotia Lake road. The claim group forms part of Dominion Gulf Company's Jamieson I property, which lies to the east and north of the group.

Geological mapping was carried out in June 1955 by A. K. Temple. His report is listed in the references. Rocks outcropping on the claims are rhyolite and andesite. The latter exhibits intrusive relationships with the former. Diabase and extrusive andesite were encountered in drill holes put down by Walcora in the west and to the north of the claim group. No significant mineralization is visible in the group. Pyrite and pyrrhotite occur in sheared andesite in claim P-28074 to the southeast. Pyrite and chalcopyrite fill a crushed zone in andesite in claim P-37976 to the northwest.

A ground magnetometer survey was carried out in January 1955 by R. M. McDonald with the assistance of D. H. Peters. They used an Askania-Schmidt type vertical magnetometer with a sensitivity of roughly 20 gammas per scale division. Readings were made at 50-foot intervals on north-south lines spaced 200 feet apart. Twenty-five foot stations were read in regions of high magnetic gradient. The data were reduced and plotted by R. M. McDonald in the field and were later checked and contoured by the Company staff in Toronto.

The results of this survey and the interpretation of the data are presented on the attached map, at a scale of 1 inch to 200 feet, and with a contour interval of 100 gammas.

SUMMARY

Three chief magnetic zones are distinguished. These parallel the trend of the volcanics and are thought to be underlain by three different groups of rocks. In Zone 1, rhyolite predominates. It is intruded by andesite in the location shown as B2. Zone 2 consists of interbedded andesite and rhyolite. Zone 3 appears to be predominantly rhyolitic.

A series of small anomalies, A1 to A4, are thought to be caused by concentrations of magnetite in shears which strike at roughly 120° . A diabase dike (B1) is interpreted near the west boundary of the claim group. Cross faults or fractures, F1 to F5, are postulated to account for displacements and interruptions in the magnetics. The strike of these faults is between 10° and 40° . Anomalies A5 and A6 are thought to be caused by alteration of the volcanics by solutions from the diabase dike. Anomaly A7 is probably caused by a small andesitic intrusive.

RECOMMENDATIONS

Base metal occurrences in the Robb-Jamieson area are usually associated with shearing near the contact of andesite and rhyolite. A secondary influence may be north-south or northeast-southwest fracturing.

Shearing is evidenced in the 5-claim group in the neighbourhood of anomalies A1 to A4. Parallel shearing with weak mineralization is found on strike to the northwest and to the southeast. The shear zones interpreted in this report are considered to be favourable locations for sulphide mineralization. There is a possibility that similar

shears exist in the region between anomalies A2 and A4 and to the north of anomaly A1.

Base metals with significant gold values have been found in northeast-southwest fractures in S $\frac{1}{2}$, Lot 12, Concession I of Jamieson Township. The fractures interpreted in the 5-claim group are considered to be favourable locations for similar occurrences.

It is recommended that a ground electromagnetic survey be carried out on the 5-claim group to test for conducting sulphides. Attention should be paid particularly to the northwest-southeast shears and to fractures F1 to F5.

INTERPRETATION

Sufficient geological control exists to permit a fairly definite interpretation of the major magnetic features.

A diabase dike occurs in the western part of the claim group. The outline of the dike is roughly as shown by the area B1. Dip is approximately vertical. An andesitic intrusive coincides with part of the area numbered B2. Northwest shearing is evidenced by strong sericitization in the northern part of the outcrop area. A fracture striking at roughly 38° is interpreted from the displacement of geological contacts in the same location that fracture F3 is interpreted from the magnetics. Contacts separating the three magnetic zones are consistent with geological evidence.

At first glance, Zone 2 appears to represent a band of andesite some 1400 feet wide, lying between rocks of lower susceptibility - probably rhyolite. Confirmation is found from the geology. Area B2 represents a small andesitic intrusive, Anomaly A7 is probably

caused by a similar body. Displacements of the contacts between the zones point to cross fractures striking at 10° to 40° . Support is found for these from the geology of neighbouring areas and from the air-photos. Fracture F1 is well displayed in the magnetics where it crosses the diabase dike. Closer examination reveals that the south contact of Zone 2 is more irregular than could be accounted for by fracturing. Magnetic highs and lows are scattered throughout the southern part of the zone. Only the northern part of the zone is regular and can be safely interpreted as a continuous andesitic band.

The series of magnetic highs forming the south contact is thought to represent a series of andesitic intrusives, only roughly paralleling the main geological trend, offset in a number of places by later northeast-southwest fractures. In the central region, lower intensities suggest that rhyolite is present. Anomaly A4 is of lower intensity than any of the other anomalies directly attributable to andesite and probably represents rhyolite locally altered by shearing. Continuing from anomaly A4 northwest along the strike of the known shearing in the area (roughly 120°), anomaly A3 is encountered. The shape of this anomaly is suggestive of shearing here also. A similar shear may be responsible for the abrupt change in strike of the diabase dike in the northwest corner of the claim group. Anomalies similar to A2 occur in Zone 1. These (A1 and A2) are also attributed to shearing in rhyolite. The north shear is coincident with strong sericitization in the adjacent outcrop. All of the shears are on strike with others seen in the Cummings Option to the northwest (see, "References" - report on ground magnetics). Shears unaccompanied by concentrations of magnetite may occur in the region between anomalies A4 and A2, or to the north of A1.

Anomalies A5 and A6 appear to be due to alteration of the country rock by solutions originating in the diabase dike B1. The south drill hole encountered basic rock in a position roughly corresponding to A6.

Shearing and fracturing are thought to be both pre-diabase and to precede any mineralization that may have occurred. Movement in the northeast-southwest fractures may have continued to a much later date.

N. R. Paterson

NRP:bh

ATTACHMENTS

DGC Ground Magnetometer Survey - Portion of Jamieson I - Jamieson Township, Province of Ontario - Scale 1" - 200' - October 26, 1955 - and Interpretation.

REFERENCES

1. DGC Detailed Geology - Jamieson I (5 Claim Group) - 42A/12S - Porcupine-Kirkland, Ontario - A. K. Temple - August 30, 1955.
2. DGC Interpretation of Ground Magnetometer Data - Cummings Option - 42A/12S - Porcupine-Kirkland, Ontario - N. R. Paterson - August 25, 1955.



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D O M I N I O N G U L F C O M P A N Y

DETAILED GEOLOGY - JAMIESON 1 (5 CLAIM GROUP)

BASE MAP 42A/12S

PORCUPINE-KIRKLAND

ONTARIO

A. K. Temple

August 30, 1955

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ABSTRACT

Jamieson I (5 claim group) comprises five claims situated in Lot 11, Concession II, Jamieson Township, and adjacent to the south half of Dominion Gulf Company's Jamieson I group.

The claims are accessible by trail, either from the Timmins-Kamiskotia Road, or from the Little Kamiskotia River.

The rocks outcropping on the claims are rhyolite and andesite. The latter exhibits intrusive relationships to the former. Diabase and extrusive andesite were encountered in drill holes put down by Walcora in the west and to the north of the five claim group.

No significant mineralization is visible in the claim group. A pyrite-pyrrhotite showing in sheared andesite at the rhyolite-andesite contact to the southeast of P-38360 may extend into the property.

RECOMMENDATIONS

Magnetometer, electromagnetic, geochemical and geological surveys have been completed over the property. The results of the electromagnetic and geochemical surveys are not available at this time of writing.

It is recommended that no further work be done at present on this property, but that the property be held until the results of the electromagnetic survey in the north of Jamieson I have been evaluated by drilling, at which time the five claim group can be reviewed.

INTRODUCTION

Jamieson I (5 claim group) comprises five claims, numbered P-38360-64, situated in Lot 11, Concession II, Jamieson Township, and attached to the south part of Dominion Gulf Company's Jamieson I property.

The claim group is accessible from the north by canoe along the Little Kamiskotia River and thence by trail from either Cummings Landing or from the portage, and also by old drill road leaving the Timmins-Kamiskotia Road approximately half a mile south of the Little Kamiskotia River. The claims are accessible from the south by trail leaving the Timmins-Kamiskotia Road just west of Godfrey Creek.

Previous work on the claims includes a diamond drilling program by Walcora; Hole #3 was drilled in Claim P-38364, and Hole #2 in the claim adjacent to the west of P-38361. The core from Holes #2 and #3 is on the property. Hole #1, not shown on the map accompanying this report, was collared 420 feet from #2, southeast along the base line. Four holes were sunk on the patented Claim P-3078 to the north of P-38364; the core from these holes is not available.

The present investigation was undertaken to locate and map all outcrops on the property, using control of picket lines spaced at 200-foot interval. Thorough search for outcrop and recording of topography was carried out by R. Hodgins and F. Faulkner in May 1955, and the geology was mapped by A. K. Temple in June 1955.

TOPOGRAPHY

The south part of the claim group is low lying and covered by spruce-cedar swamp. To the north lies slightly higher ground covered by a poplar-spruce-birch growth. Stands of spruce have been cut, leaving areas of slash.

The whole property is underlain by clay. In the northern higher poplar covered ground, the clay is hard and dry, grey in colour, whilst in the swamp, a soft blue-grey plastic clay underlies several feet of humus.

Outcrop occupies approximately 1% of the five claims. The outcrop occurs on the higher poplar covered ground.

GEOLOGY

Table of Formations

Diabase

Andesite

Rhyolite.

Description of Formations

Rhyolite Rhyolite outcrops in Claims P-38362, -63 and -64. The large outcrop in P-38362 and -63 consists mainly of fragmental rhyolite, a massive, white weathering rock of hard, white, angular to subrounded fragments in a grey matrix. The rhyolite exposed north of the fragmental rhyolite is a sheared sericite rich rock with numerous quartz phenocrysts. Massive rhyolite outcrops in P-38364.

Andesite Andesite outcrops in similar areas to rhyolite and also in the southeast corner of P-38360. The rock type was encountered in the Walcora diamond drill holes.

Extrusive andesite was found only in the diamond drill holes and is recognized by the occurrence of flow breccias and amygdaloidal lava.

All the outcropping andesite is massive in character without evidence of extrusive origin. The rock is chloritic, dark green in colour, and may have disseminated carbonate rhombs and accessory pyrite. Contacts with rhyolite in P-38362 strike NW and are either sharp or the rhyolite is fragmented and included in the andesite. The contacts indicate the andesite to be intrusive into rhyolite. Lineation cross cuts both andesite and rhyolite.

Diabase Diabase was encountered in four diamond drill holes put down by Walcora, as indicated on the map accompanying this report. The diabase in drill Holes #2 and #3 is a massive, with chilled margins. Two easterly hading, N-S trending, dykes appear to traverse the western part of the property.

Structure

The rhyolite exposed in the claim group is part of a NW trending rhyolite horizon, exposed both to the SE and NW in Jamieson I, and the patented Field claims, respectively. The presence of extrusive andesite in diamond drill holes indicates a rhyolite-andesite contact traversing the SW of the claim group. The massive andesite intruding the rhyolite is probably of local extent.

The lineation of both andesite and rhyolite trends WNW and dips to the NE. The lineation crosses andesite-rhyolite contact without disturbance. The imposition of the lineation post dates the andesite intrusion.

Andesite in the south of Claim P-38362 is slightly displaced along a NE or NNE trending minor fault.

The principal joint direction strikes NE to NNE; minor quartz veinlets may occupy the joint planes.

Economic Geology and Mineralization

No significant mineral showings occur on the claims. A pyrite-pyrrhotite occurrence is exposed immediately SE of P-38360 in Jamieson I and the patented claim P-38074 of Mrs. Burke. The WNW trending mineralized shear zone may extend into the five claim group.

GEOCHEMICAL SURVEY

A geochemical soil sampling survey has been carried out over parts of the property in July 1955 by C. Markerth, R. Duck and A. K. Temple. The analytical results of the survey are not yet available.

A. K. Temple

AKT:bh
Duplicate - Mr. Wyckoff

ATTACHMENTS

1. DGC Map - Detailed Geology - Jamieson I (5 Claim Group) - Scale 1" - 200' - by A. K. Temple.
2. DGC Sample Record Sheet.

REFERENCES

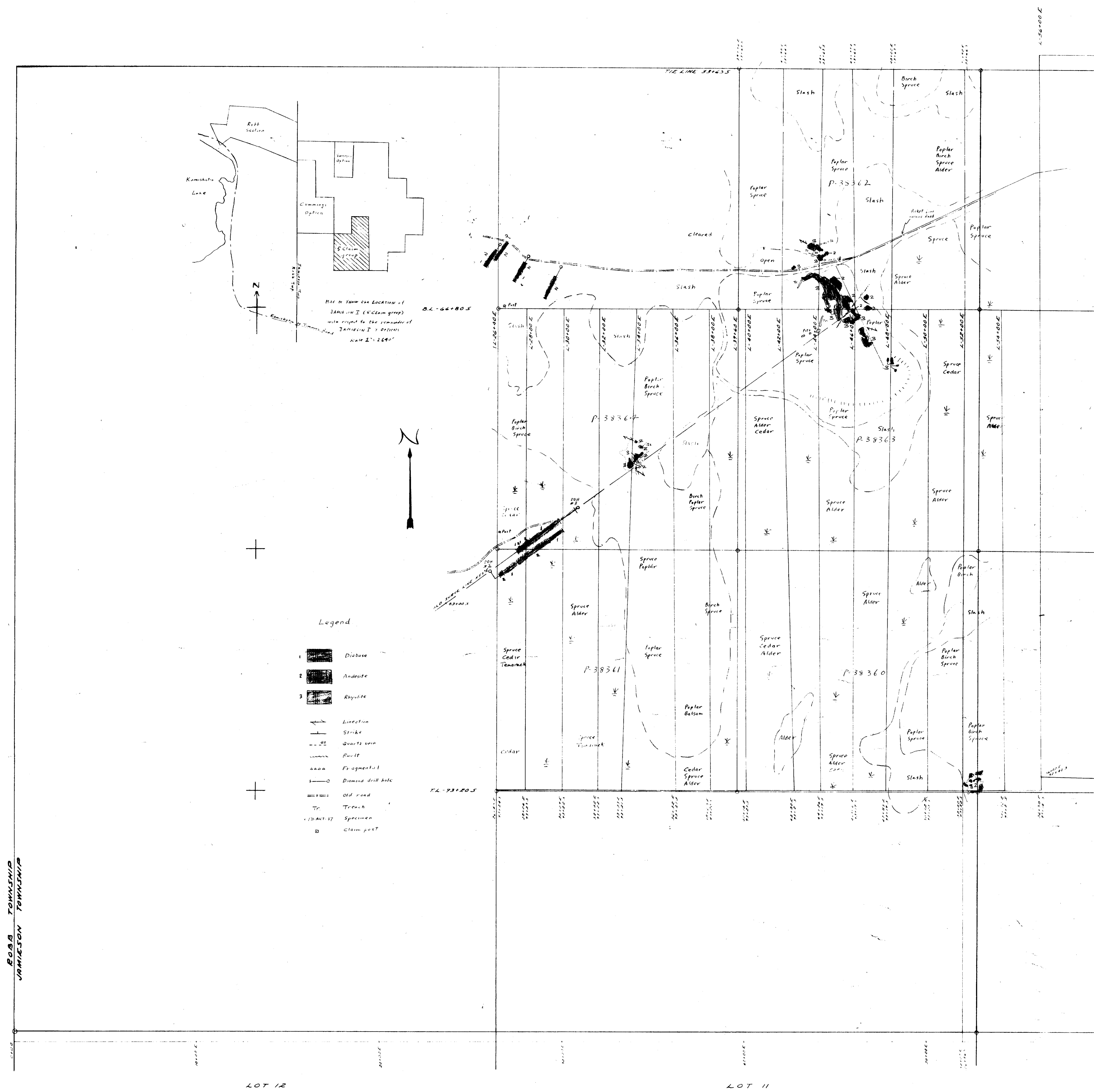
1. Diamond Drilling Program, Jamieson Township, by Walcora Mines Ltd., (presented for assessment work and available for inspection at the office of the ODM Resident Geologist, Timmins).
2. DGC Laboratory Report - Petrographic Examination of Five Thin Sections Jamieson I, by A. R. Graham, July 29, 1955.

DOMINION GULF COMPANY
Rock Specimen Record Sheet

Property or Twp. Jamieson I. (5 claim group) Base Map No. 42A/12S Prov. Ontario
 To accompany ~~XXXXXXXXXXXXXXXXXX~~ geology report ~~XXXXXXXXXXXXXXXXXX~~ ENTITLED
Detailed Geology - Jamieson I. (5 claim group)
 By A. K. Temple Date August 30/55
 (stroke out reports not applicable; state reasons for any lab. work at bottom of sheet)

Received in Central File by Date Stored at
 Lab. Reports by (1) Dated
 (2) Dated

C.F. No.	Field No.	Location	Field Name	Misc. Notes, Assay No., Results, Purpose, c/s, etc.
12880	171- AKT-21	DDH #3 - 7770S		
		3085E @ 32°	Andesite	
81	22	@ 104°	"	
82	23	@ 177°	"	
83	24	@ 180°	"	
84	25	@ 181°	Diabase	
85	27	@ 112°	"	
86	29	@ 451°	"	
87	30	@ 469°	Andesite	
88	34	DDH #2 - 8110S		
		0/40W of L26/40		
		@ 91°	Diabase	
89	35	@ 482°	Andesite	
90	36	6335S, 4375E	Rhyolite	
91	38	6410S, 4410E	Andesite	



Legend

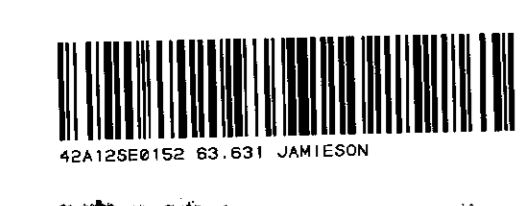
[Solid Black]	Diabase
[Brick Pattern]	Andesite
[Dotted]	Rhyolite
[Dashed Line]	Linearation
[Dashed Line with Circles]	Strike
[Dashed Line with Circles]	Quartz vein
[Wavy Dashed Line]	Fault
[Dotted Area]	Fragmental
[Circle]	Diamond drill hole
[Double Line]	Old road
[Dashed Line with 'T']	Trench
[Circle with 'D']	Specimen
[Circle]	Claim post

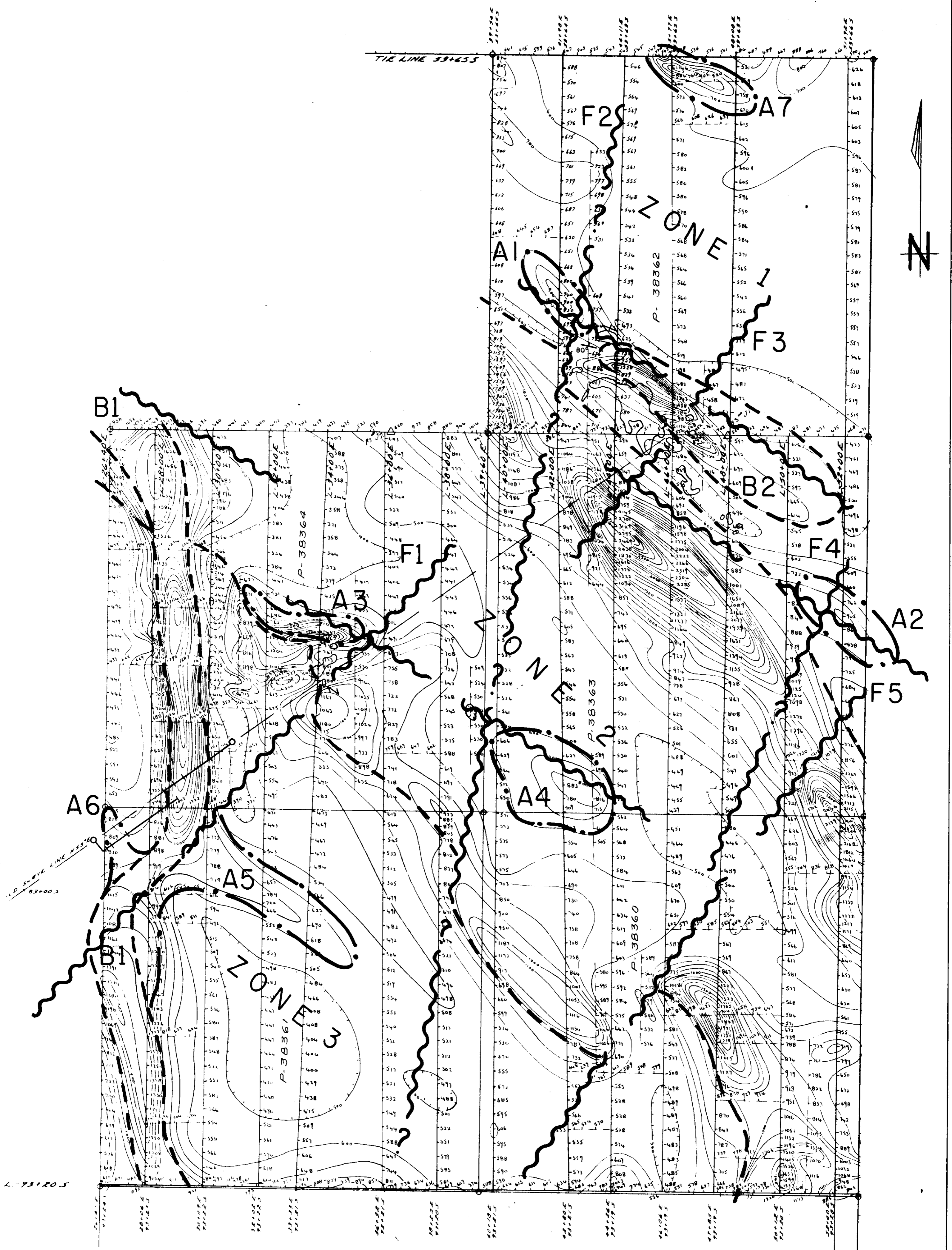
R0818 TOWNSHIP
JAMIESON TOWNSHIP

LOT 12

LOT 11

DENNIS GOLF COMPANY
 DETAILED GEOLOGY - JAMIESON I (S. Clear group)
 BASE MAP 42A/145
 PARADISE - KINKLAND - ONTARIO
 GEOL. BY A. TERRY 7 AUGUST 1985
 TOPOGRAPHY BY R. HOBBS / FALLNER SCALE 1:200





LEGEND

- Outcrop
- Strike of schistosity.
- Strike and dip of contact.
- D.D.H.
- Contact interpreted from magnetics.
- Outline of magnetic anomaly.
- Shear or fracture.

Contour Interval = 100 gammas

DOMINION GULF COMPANY
 GROUND MAGNETOMETER SURVEY
 PORTION OF
JAMIESON I
 JAMIESON TWP PROV. OF ONT.
 SCALE 1"=200' DATE AUG. 25, 1955.
 To accompany Interpretation Report by
 Dr. N. Paterson, dated Oct 26, 1955.

