010

VLF-EM SURVEY

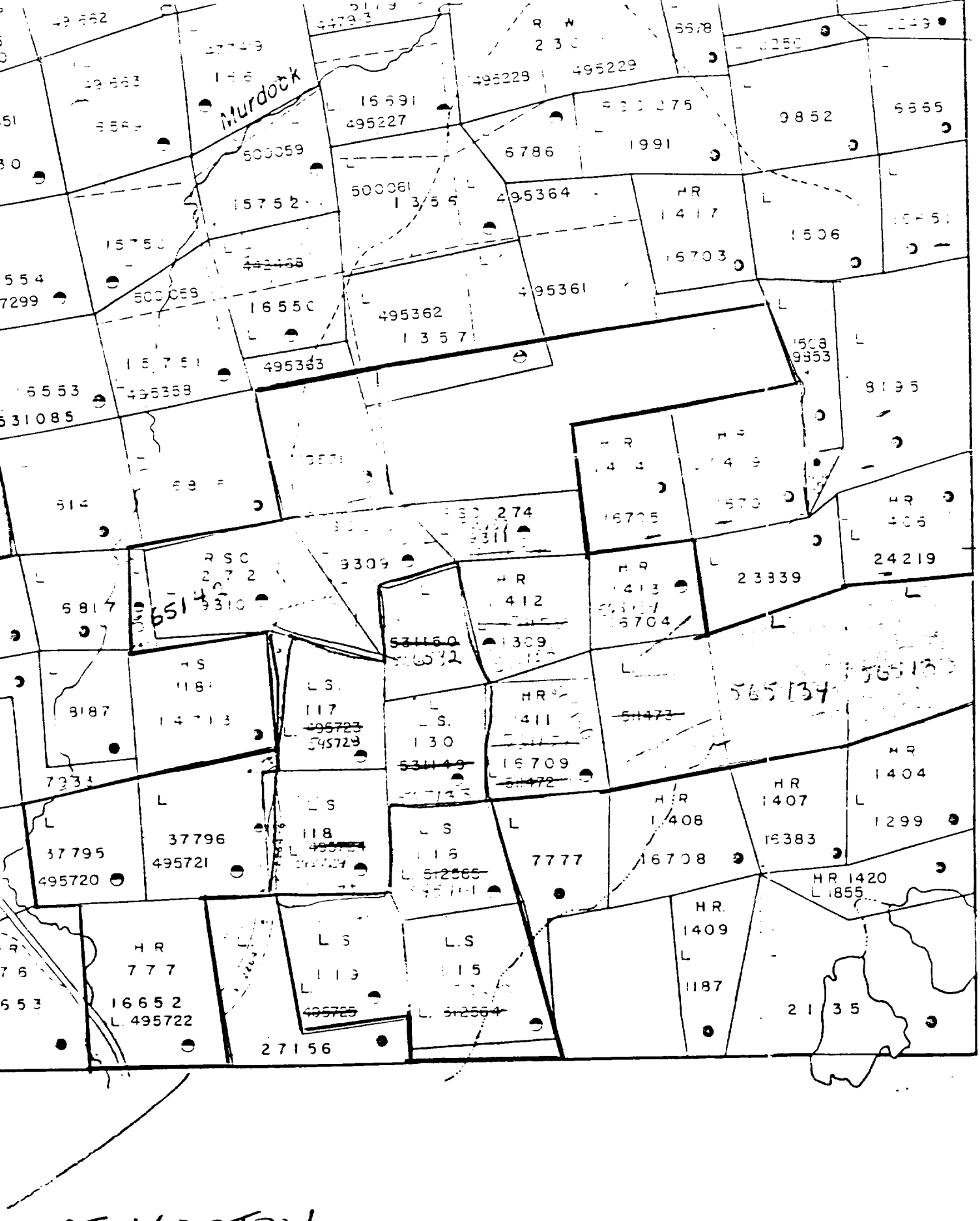
DYMENT-KIDSTON GROUP "A"

Jomi Minerals and Expediting Ltd.
Tarzwell, Ontario
October 2, 1981

L.M.Dyment
Tarzwell
Ontario

L.D.

Bernhardt Twp.
Otto Twp.
Grenfell Twp
Lake Twp
TECK TP. 1" = 40 chains (½ mile)
1977



MENT-KIDSTON

SUMMARY

In the month of July and the beginning of August, 1981, a Radem VLF-EM survey was carried out over two claims (565134 & 565135) in Teck Twp., Larder Lake mining division. These two claims are part of a twenty-five claim group referred to as Dyment-Kidston group A.

LOCATION AND ACCESS

Claim 565135 is located on the Teck-Lebel boundary, two miles directly south of Kirkland Lake. Claim 565134 is directly west of claim 565135. In the summer of 1981, a baseline was continued from the entire claim group (group A) western boundary at Hwy 112 and Murdock Creek, to the Teck-Lebel boundary at claim 565135 to give good control for the geophysical survey and to provide useful access to the extreme eastern end of the claim group.

PREVIOUS WORK

There is no record of work filed on this ground in the Kirkland Lake District Geologist's assessment files. The ground, however, was held for years by one of the old-time, well-respected prospectors of the area, Dennis Duffy. Rumor has it that gold values were obtained by Mr. Duffy on this ground.

SURVEY METHOD AND INSTRUMENT DATA

The geophysical survey was conducted over compass and chain lines at 400 ft. intervals with stations every 100 ft. As previously mentioned, a baseline was cut, chained and picketed for good control. The township line between Teck and Lebel has also been surveyed and cut out at that point providing even greater control. The instrument used in the survey is a Crone Radem.

Electromagnetic prospecting methods rely on the measurement of the secondary field generated by conducting bodies in the ground when subjected to a primary electromagnetic field. The Radem VLF-EM method is a passive instrument operating in the very low radio frequency range (17.8-22.3 Khz.), which utilizes powerful radio transmitters at various locations throughout the world as the source of the primary electromagnetic signal. The radiation from these transmitters contains both electric and magnetic componenets which may energize subsurface conductors which in turn will create secondary fields.

In order to obtain maximum coupling with conductive zones, a transmitting station which is roughly on strike with the general geological structure was selected.

The VLF-EM system has proved to be an extremely useful mapping tool in locating faults, shear zones, geological contacts and other conductors due to massive sul-

phides and/or graphite, etc. Its limitations are more evident in areas of flat-lying, highly conductive overburden material, where the relatively high EM frequencies may be severely attenuated, causing not only a loss of depth penetration but inaccurate conductivity estimates as well. Conversely, the high frequency has the advantage of being able to detect the more poorly conductive (disseminated) zones of mineralization which may not be seen with the lower frequency EM systems. In areas of relatively rough topographic relief, steep hills and valleys may give rise to cross-overs which are not necessarily due to changes in ground conductivity. These effects may be minimized by filtering the regional topographic trend from the VLF profiles, or, more simply, by contouring the filed strength values obtained.

GEOLOGY OF THE AREA

From the Teck geology map (ODM 1945-1) you could not arouse much interest in this area of Teck Twp. In the opinion of Bill Gerrie, however, then consultant for Iso Uranium (circa 1950) working on the neighboring property (Dane Copper) in Lebel Twp, the information on the ODM Lebel sheet was more complete and accurate than that on the south east corner of Teck Twp. The author of this report is in complete agreement with Mr. Gerrie on this point. In traversing the two claims in question during

the geophysical survey, a real geological smorgasbord was observed: Beefstring spinifex, Komatiitic conglomerate, peridotite dikes, massive quartz (three separate locations), altered ultramafics, massive sulphides, tourmaline-lead-chalcopyrite mineralization. Obviously the ground must be properly mapped geologically as it certainly isn't just "pink and green".

GEOPHYSICAL OBSERVATIONS

A) Although topographically suspect because of swampy conditions in the vicinity of this anomaly, the author believes it to be a shear zone. It displays a fairly long lineament on the far south east portion of Teck air photo (59-4805).

B & C) Excellent conductors with good field strength correlation. Noticeable magnetic attraction in the area of the cross-overs. Believed to be extension of massive sulphides surface showing to the west of #4 post of claim 565134.

D) Small shear zone noted in pits and trenches at the location of this anomaly.

E) Cross-overs on L76E and 80E located in centre of beaver pond. At line 84E the cross-over is in the vicinity of an ultramafic dike striking

north-south. It would appear to be a conductive overburden anomaly but further prospecting in the neighborhood of 84E and along the township line should be carried out.

CONCLUSION

During the winter field season lines should be cut and a magnetometer survey done. Although the regional strike according to ODM 1945-1 shows north-south orientation, enough evidence was found of some structural trends east-west both in the EM survey and from field observation. Following completion of the magnetometer survey, coupled with the results of this EM survey, a follow up with proper geological mapping can then most usefully be done.

Certificate

I, Leslie Michael Dyment, residing in the township of Marquis, Ontario, and having a mailing address Jomi Minerals & Expediting Ltd., RR#1, Tarzwell, Ontario, do hereby certify:

(1) That I am a Mining Technician having taken the two year course at Haileybury School of Mines, Haileybury, Ontario,

(2) That I have been employed in all phases of mining exploration and developement for 19 years,

(3) That I did personally accumulate and set forth the facts and knowledge in the accompanying report and maps,

(4) That the accompanying report is true.

Dated January 22, 1981
Tarzwell, Ontario

Leslie Michael Dyment

Ontario

Ministry of

GEOPHYSICAL – GEC
TECHNICAL

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MINING LANDS S

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) VLF - EM
Township or Area Teck Twp.
Claim Holder(s) Jocelyne Kidston

Survey Company Tomi Minerals & Expediting Ltd.
Author of Report L. M. Dyment
Address of Author RR#1 TARZWELL, Ont P0K1W0
Covering Dates of Survey July 31, Aug 1, Aug 2
(linecutting to office)
Total Miles of Line Cut 3100' (baseline only)

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	20
–Magnetometer	
–Radiometric	
–Other	
Geological	
Geochemical	

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

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

DATE: Oct. 2/81 SIGNATURE: L.M. Dyment
Author of Report or Agent

Res. Geol. _____ Qualifications 2 2703

Previous Surveys

File No.	Type	Date	Claim Holder
			L.D.

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
	565134
	565135

RECEIVED
OCT - 5 1981
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

TOTAL CLAIMS 2

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 120 Number of Readings 120

Station interval 100' Line spacing 400'

Profile scale 1" = 40'

Contour interval

MAGNETIC

Instrument

Accuracy – Scale constant

Diurnal correction method

Base Station check-in interval (hours)

Base Station location and value

ELECTROMAGNETIC

Instrument VLF Crone - Radem

Coil configuration Vertical

Coil separation Infinite

Accuracy Dip Angle ± ½° Fld Strength ± 2%

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

Frequency Cutler, Maine 17.8 KZ
(specify V.L.F. station)

Parameters measured Tilt Angle, Field Strength

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

Bernhardt Twp. M.327

Grenfell Twp. M.351

Lebel Twp. M.359

Otto Twp. M.379

THE TOWNSHIP OF

TECK

DISTRICT OF TIMISKAMING

LARDER LAKE MINING DIVISION

SCALE: 1-INCH = 20 CHAINS

DISPOSITION OF CROWN LANDS

- PATENT, SURFACE AND MINING RIGHTS
- " , SURFACE RIGHTS ONLY
- " , MINING RIGHTS ONLY
- LEASE, SURFACE AND MINING RIGHTS
- " , SURFACE RIGHTS ONLY
- " , MINING RIGHTS ONLY
- LICENCE OF OCCUPATION
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES
- CANCELLED C.

NOTES

400' surface rights reservation along the shores of all lakes and rivers

Areas shown thus for slime disposal

Mining claim L 5779 – Mining Rights subject to Sec 36 of the Mining Act (RSO 1950)

AREAS WITHDRAWN FROM STAKING

S R – Surface Rights Section	Order No	Date	Disposition	M R – Mining Rights File
(R) 43 RSO 1970	W 76/80	7/2/80	S R	171760

DATE OF ISSUE
OCT 21 1981
Ministry of Natural Resources
TORONTO

2.4182

PLAN NO.– M. 392

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

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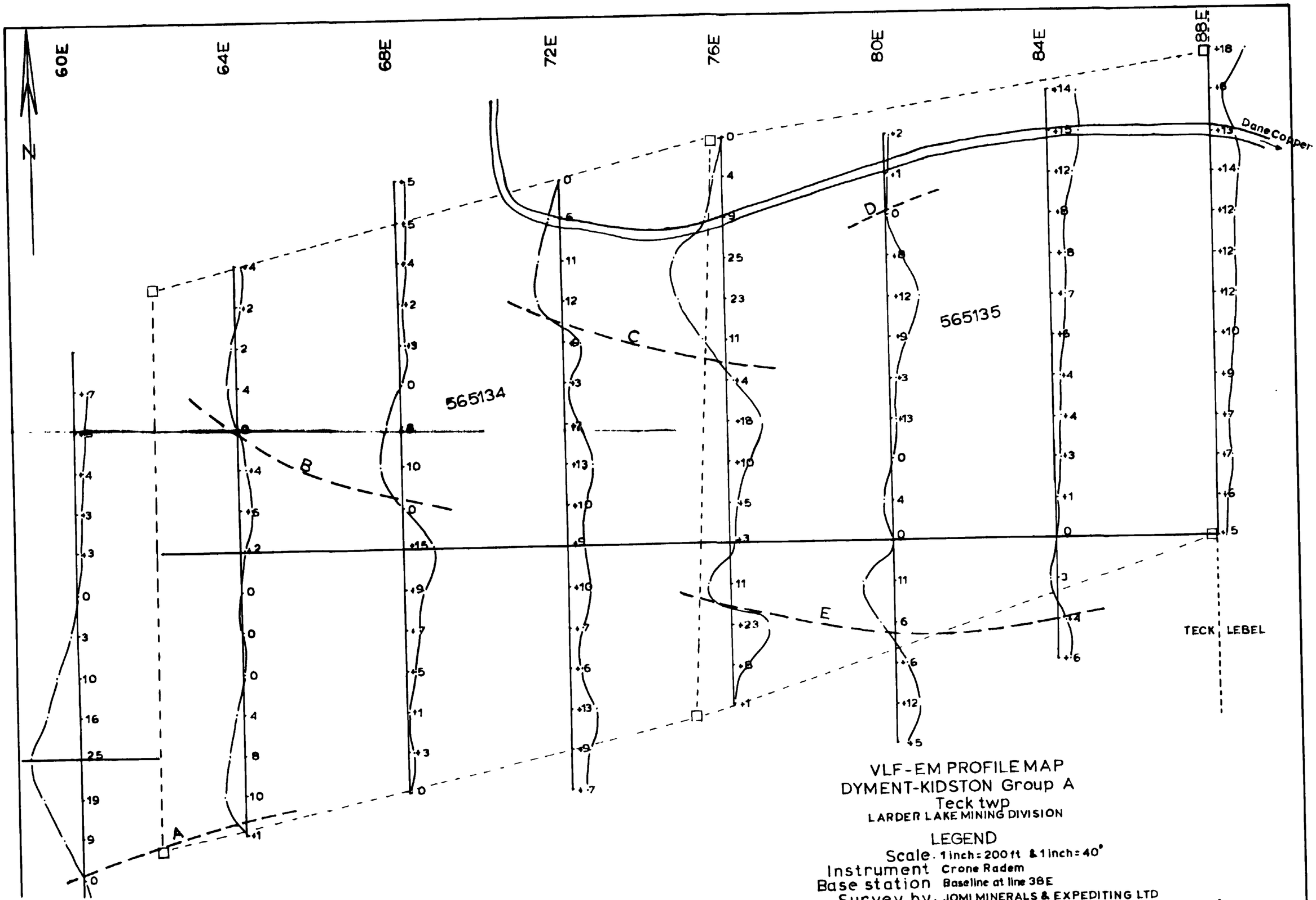

VLF-EM PROFILE MAP
DYMENT-KIDSTON Group A
Teck twp
LARDER LAKE MINING DIVISION

LEGEND

Scale. 1 inch = 200 ft & 1 inch = 40°
Instrument Crone Radem
Base station Baseline at line 38E
Survey by. JOMI MINERALS & EXPEDITING LTD
Station: Cutler Maine

Oct 2/81

60E 64E 68E 72E 76E 80E 84E 88E

N

565134

565134

Dome Copper

TECK LEBEL

VLF-EM FIELD STRENGTH MAP
DYMENT-KIDSTON Group A
Teck twp.
LARDER LAKE MINING DIVISION

LEGEND

Scale: 1 inch = 200 ft
Instrument: Crone Radem
Base station: 0+00 at line 38E
Survey by: JOMI MINERALS & EXPEDITING LTD
Station: Cutler Maine

Lon Dyment Oct 2/81