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2.39741

REPORT ON

**ERI INVESTIGATION OF BEDROCK SURFACE
KETCHIKAN LAKE
LANDORE RESOURCES CANADA**

Submitted to:

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June 2008

08-1112-0024



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1.0 INTRODUCTION

This report is to present the results of a geophysical survey carried out by Golder Associates Ltd. (Golder) at the Junior Lake Property of Landore Resources Canada Inc. (Landore). The site is located in the “VW-zone” of the Junior Lake Property and is composed of a section of the north shore of Ketchikan Lake and extends south onto the lake surface. Ketchikan Lake is located approximately 250km Northeast of Thunder Bay, Ontario (Figure 1).

1.1 Background

It is understood that as part of Landore’s mining plan the elevation of the bedrock surface under Ketchikan Lake and along the lake’s north shore is required for planning purposes. To aid in this, an electrical resistivity imaging (ERI) survey was proposed. It was expected that the lake water and overburden would have a different electrical resistivity than the underlying bedrock and that this should permit profiling of the overburden-bedrock contact with this technique. The work performed was based on a written proposal (P81-1103) prepared by Golder for Landore. The intended purpose of the work was to profile the bedrock surface from approximately 100m onshore towards a baseline located near the center of the lake in order to provide Landore with information related to Ketchikan Lake and potential mining activity associated with the Junior Lake Property’s “VW-zone” which is in the exploration and pre-feasibility phase.

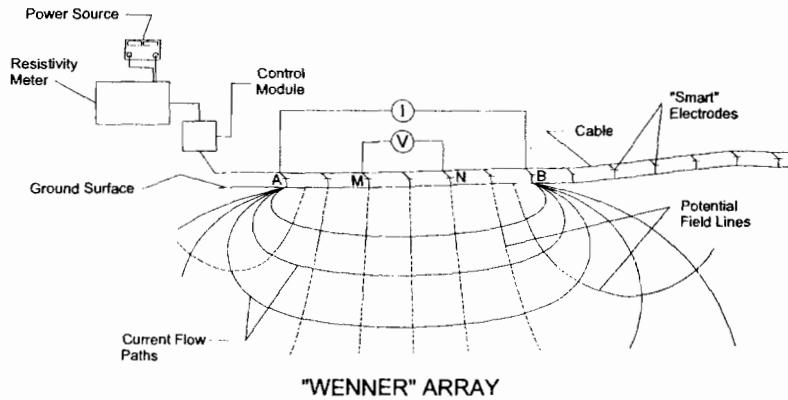
There were two ERI lines collected in addition to the 6 ERI lines proposed in the work plan. One of the lines was collected perpendicular to the others to aid in correlation purposes.

2.0 METHODOLOGY

The electrical resistivity imaging (ERI) method measures the electrical resistivity (reciprocal of conductivity) of the subsurface to infer rock/soil types, stratigraphy and soil conditions. The physical principles for this technique are the same as that established for direct-current (DC) resistivity, in which the apparent resistivity of the subsurface is calculated for increasing electrode separations, by applying a current to the ground using two electrodes and measuring the potential difference (voltage) between two different electrodes. Apparent resistivity of the subsurface is calculated from the potential to current ratio multiplied by a constant. The constant is a function of the electrode spacing and geometry. The depth of investigation is a function of electrode separation, with larger electrode separations providing information from greater depths at the cost of decreased resolution.

A schematic showing the electrode configuration and current/potential field of the Wenner array, used in this survey, is shown below. For the Wenner array, the electrodes are co-linear but with the potential electrodes (M and N) spaced between the current electrodes (A and B) such that the electrode separations between any adjacent pair are the same. During a survey, a psuedo-section

portraying the variation in apparent resistivity with depth is generated by both: taking measurements with increasing distance between the current and potential electrode pairs, and moving the centre point of the current and potential pairs along the array of electrodes.



The apparent resistivity (ρ_a), of the subsurface is calculated as:

$$\rho_a = 2\pi a \Delta V / I \text{ (Wenner)}$$

where: a = the electrode separation (distance between the AM, MN and NB electrodes),

ΔV = the change in recorded potential (MN) due to the applied current, and

I = the applied current (AB).

ERI differs from the traditional DC sounding techniques in that a "spread" of electrodes (typically 48, 72 or more) are staked along a survey line and connected to a resistivity meter by a cable fitted with multiple takeouts. The resistivity meter is a computer-controlled device consisting of a current supply capable of producing switched +/- constant current and a high impedance voltmeter. A software routine is loaded on to the resistivity meter and the electrodes are switched on and off as required throughout the measurement process. This equipment and procedure allows for automated collection of high-density data along the entire spread. The IRIS Syscal Switch 72-channel acquisition system was used for this investigation.

The result is a pseudo-section of apparent resistivity values versus apparent depth beneath the ERI survey line. These data are then inverted using RES2DINV to calculate a 2-dimensional resistivity model for the data set.

3.0 FIELD WORK

The field work was completed between March 4th and March 13th, 2008 by two geophysicists from Golder's Cambridge office. One geophysicist returned to Cambridge on March 7th after assisting in the program setup and preliminary modeling of the data. The field work consisted of laying out ERI system cables and recording data along lines oriented to the site grid from the north shore and extending onto the ice covered lake surface. For each line, the snow was compacted using snowshoes (onshore) and a snowmobile (offshore) on the day prior to data collection. Overnight the compacted snow hardened enough to allow field personnel to work along the line without requiring snowshoes. On the day of data collection, a measuring tape was laid along the line and an ice auger was used to cut holes in the ice at 5m intervals. Onshore, snow was shovelled away to expose the ground surface at 5m intervals and stainless steel electrodes were driven into the ground. The ERI system cables were then laid along the line and connected to the electrode with electrical wire. For the on ice portion of the survey, the electrical wires were weighted and suspended in the auger holes below the ice surface. The cables were then connected to the 72 channel acquisition system and the setup was tested before data collection began. While the data was being acquired from the initial setup the remainder of the line was prepared. Handheld GPS co-ordinates were recorded for key locations along the line and the snow along the line slated for the following day was compacted.

The survey lines were positioned as terrain allowed. In some cases, it was not feasible to start data collection 100m onshore due to the presence of an esker running roughly parallel to the north shore. In some locations the esker represented a physical barrier with slopes that were too steep to safely traverse. The composition of the esker (dry sand and gravel) is highly resistive to electrical currents and results in poor data quality.

4.0 RESULTS AND OBSERVATIONS

The results of the ERI survey are presented on Figures 2, 3, 4 and 5 and show the modeled data for ERI lines L2700 and L2900, ERI lines L3000 and L3100, ERI lines L3300 and L3500 and ERI lines L3700 and L900S, respectively. Location and elevation data for each respective ERI line are presented in Tables I through VIII. No results from drilling are available at this time. Schematic borehole logs would normally be presented on the ERI sections for correlation and verification purposes.

The modeled resistivity for all eight ERI lines is constrained to a range of 0 to 1500 Ohm-meters for comparison purposes. Water conductivity measurements collected in 2007 translate to a resistivity of approximately 150 Ohm-meters. The resistivity of the bedrock was estimated to be greater than 600 Ohm-meters, however conductive zones of bedrock (e.g. massive sulphide / shear zones) could be significantly lower and low resistivity zones do appear on all of the profiles.

The interpreted bedrock elevations presented on Figures 2 through 5 for the eight ERI lines are based on the high contrast between the resistivity of the water and overburden material and the resistivity of the bedrock as noted above. The zones of low resistivity contrast at depth mask the contact between the overburden and bedrock and the interpreted bedrock elevation in these locations is in question but has been interpreted with respect to nearby ERI lines.

With respect to the interpreted bedrock surface the following observations are made:

- On ERI line L2700 (Figure 2) there is a low resistivity contrast zone near the north end, located between the 950S and 1000S gridlines. A second low resistivity contrast zone is located between the 1150S and 1200S gridlines.
- On ERI Lines L2900 (Figure 2) and L3000 (Figure 3) the low resistivity contrast zone is between the 1000S and 1100S gridlines.
- On ERI Line L3100 (Figure 3) the low resistivity contrast zone is between the 1050S and 1150S gridlines.
- On ERI line L3300 (Figure 4) there are two low resistivity contrast zones. The first is located between the 900S and 950S gridlines and the second is located between the 1050S and 1100S gridlines.
- On ERI line L3500 (Figure 4) there are three low resistivity contrast zones. The first is located between the 700S and 800S gridlines, the second is located between the 850S and 950S gridlines and the third is located between the 1025S and 1100S gridlines.
- On ERI Line L3700 (Figure 5) there are three low resistivity contrast zones. The first two zones appear to be merging at the estimated bedrock surface and are located between the 800S and 900S gridlines. The third low resistivity contrast zone has a smaller expression at the estimated bedrock surface and is located between the 1050S and 1100S gridlines.
- On ERI line L900S (Figure 5) there are four low resistivity contrast zones. The first low resistivity contrast zone is located between the 3300E and 3400E gridlines, the second is located between the 3400E and 3500E gridlines, the third is located between the 3500E and 3550E gridlines and the fourth is located between the 3650E and 3700E gridlines.

High resistivity zones near surface at the north of ERI lines L2900 and L3100 may be due to frozen ground but the interpreted bedrock elevations approaching these locations indicate the bedrock is near surface. Bedrock outcrops were noted at the shoreline near ERI line L3100.

The low resistivity contrast zones along the interpreted bedrock surface have limited the interpretation of the ERI data in those areas. There is an overall trend in the data showing the interpreted bedrock elevation to be near surface (330m asl) at the north shore and dropping to 320m asl towards the 1000S gridline. South of the 1000S gridline the bedrock appears to drop down to 300m asl as shown on lines L2700 through L3100. For ERI line L3300 this drop off occurs closer to the 1100S gridline. The interpreted bedrock surface appears shallower in the eastern part of the lake. The interpreted bedrock elevation along ERI lines L3500, L3700 and L900S is fairly consistent at a level of 320m asl in the lake and near surface (330m asl) at the shorelines. The interpreted bedrock elevations have been contoured and are shown on Figure 6.

A comparison with the airborne anomaly map provided by Landore shows some correlation between anomalous low resistivity zones, however the correlation is not consistent.

The low resistivity contrast zones appear to trend in bands striking east-west. There appear to be distinct bands of low resistivity at the estimated bedrock surface as shown on Figure 7. The most distinct band is present on ERI lines L2700 through L3700 between the 950S to 1050S gridlines. The second band is present on ERI lines L3300 through L3700 between the 850S and 950S gridlines. The third band of low resistivity contrast is only present on ERI line L3500 and L3700 between the 700S and 800S gridlines. These bands appear connected at depth however this may be due to edge effects of the modeling process.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The interpreted bedrock contour map is shown in Figure 6. The interpretation indicates shallow bedrock along the north shore and within the eastern arm of Ketchikan Lake. The bedrock appears to be deeper toward the centre of the lake.

There appears to be zones of low resistivity beneath the overburden / bedrock contact which are interpreted to trend in an east-west orientation. These zones are shown in Figure 7.

The lack of borehole information available for the area of investigation limits the correlation and verification process. It is recommended that a limited borehole investigation program be implemented in the area to provide correlation information for the ERI data. If possible the borehole investigation should include some of the locations in the low resistivity contrast zones identified on Figures 2 through 5. The interpretation could then be refined to produce a better model of the bedrock surface.

The results presented are based on an interpretation of electrical resistivity data with the underlying assumption that the overburden material will have a low electrical resistivity and that the bedrock will have a high electrical resistivity.

6.0 CLOSURE

This report was prepared for the exclusive use of Landore Resources Canada Inc. Any use which a third party makes of this report, or any reliance on, or decisions to be made based on it, are the responsibilities of such third parties. Golder accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

We trust that this report provides the information required at this time. If there are points requiring clarification or if we can be of further service, please contact the undersigned.

Yours truly,

GOLDER ASSOCIATES LTD



Wayne Mulder, P.Geo.
Geophysicist



Mark Monier-Williams, M.Sc.
Associate

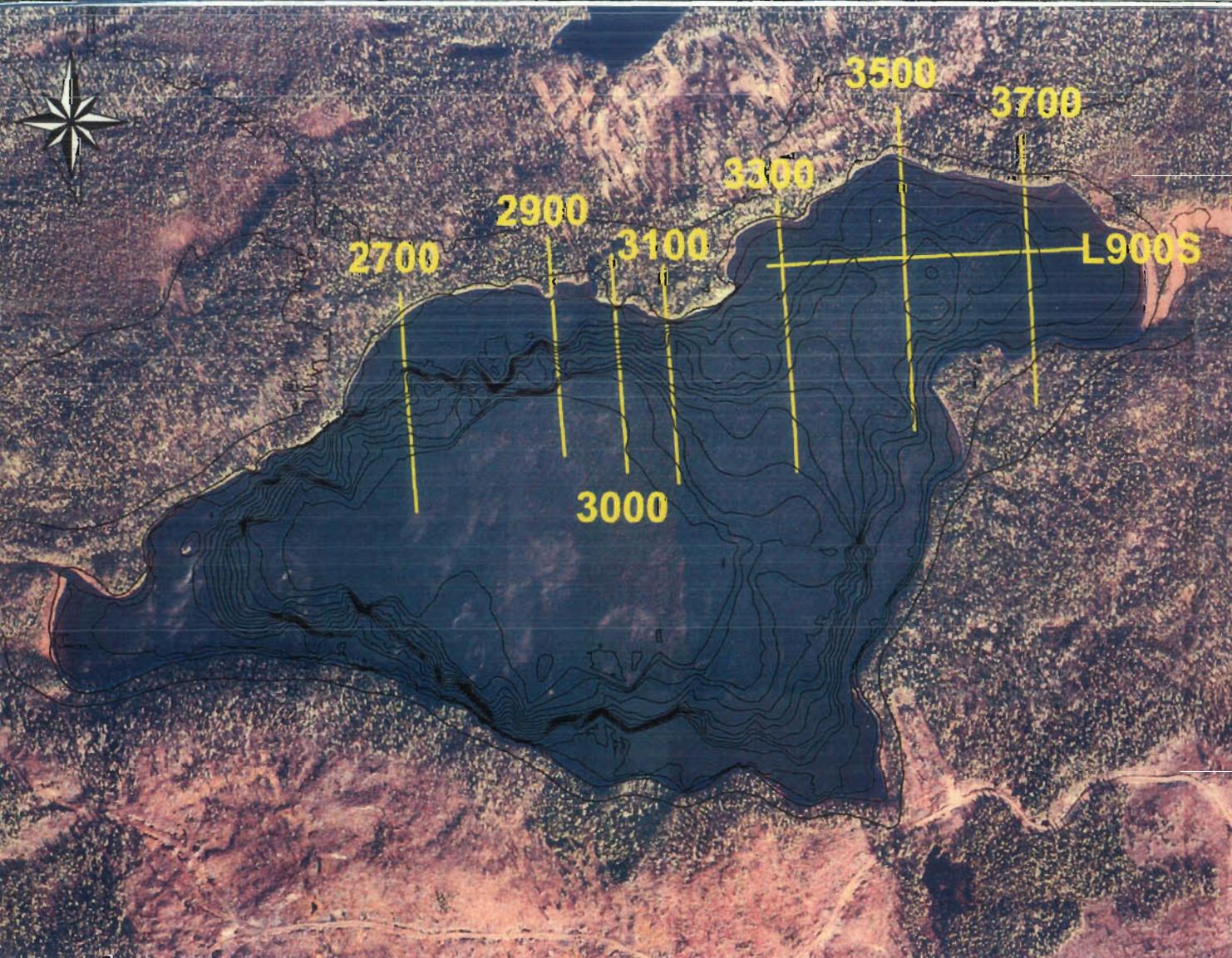
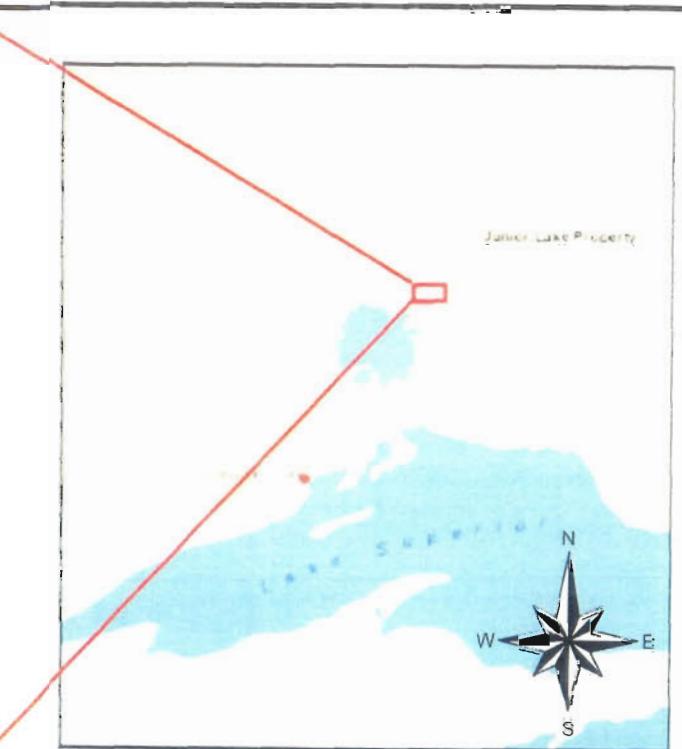
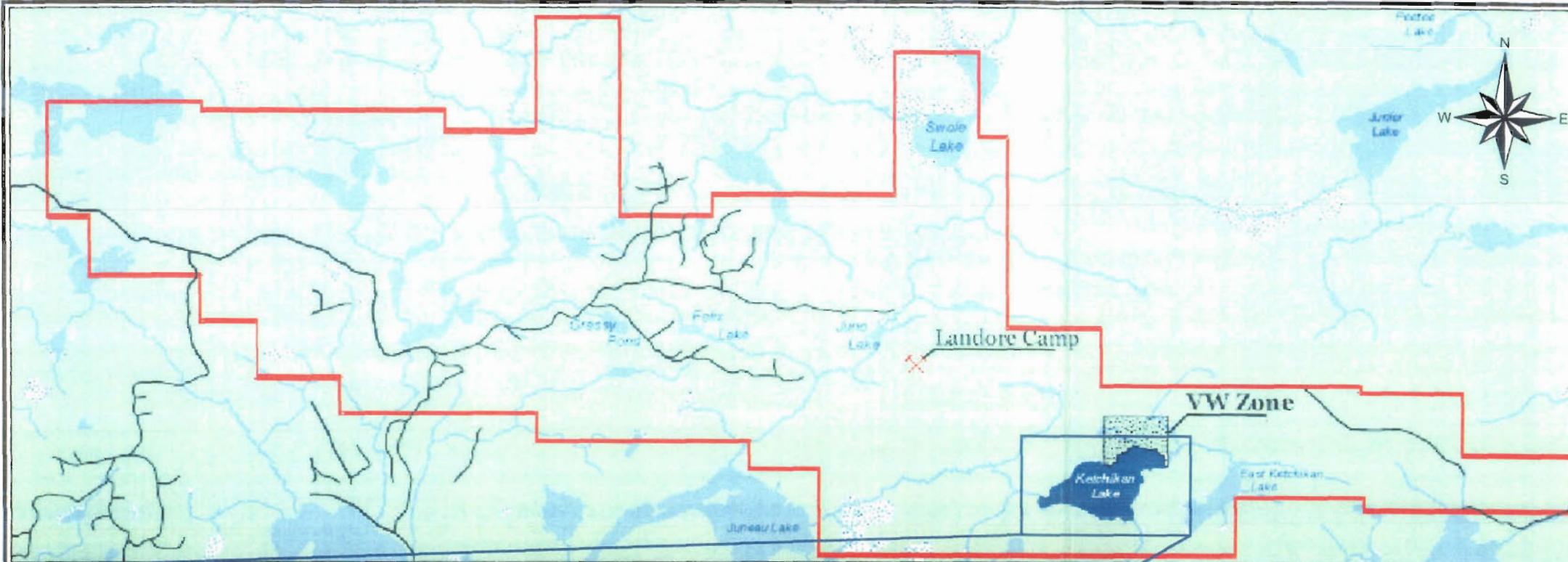
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TABLE IV
ERI Line L3100 Location and Elevation Data
Ketchikan Lake

Cable	Node	Easting	Northing	Chainage	Bedrock Elevation	Node Elevation	Cable	Node	Easting	Northing	Chainage	Bedrock Elevation	Node Elevation
Cable 1	1	435590.3	5580577.6	900	n/a	335.8	Cable 3	37	435603.8	5580398.5	1080	312.2	331.0
	2	435590.6	5580573.6	904	n/a	335.8		38	435604.1	5580393.5	1085	311.5	331.0
	3	435590.9	5580568.6	909	n/a	335.8		39	435604.5	5580388.5	1090	310.4	331.0
	4	435591.3	5580563.6	914	n/a	335.8		40	435604.9	5580383.5	1095	305.0	331.0
	5	435591.7	5580558.6	919	n/a	335.8		41	435605.3	5580378.5	1100	302.4	331.0
	6	435592.1	5580553.6	924	n/a	336.6		42	435605.6	5580373.5	1105	301.6	331.0
	7	435592.5	5580548.6	929	n/a	337.4		43	435606.0	5580368.5	1110	301.8	331.0
	8	435592.8	5580543.6	934	n/a	337.2		44	435606.4	5580363.5	1115	301.2	331.0
	9	435593.2	5580538.6	939	n/a	337.0		45	435606.8	5580358.4	1120	300.4	331.0
	10	435593.6	5580533.6	944	n/a	336.7		46	435607.2	5580353.4	1125	299.6	331.0
	11	435594.0	5580528.6	949	n/a	336.5		47	435607.5	5580348.4	1130	298.9	331.0
	12	435594.3	5580523.6	954	n/a	336.0		48	435607.9	5580343.4	1135	298.3	331.0
	13	435594.7	5580518.6	959	n/a	335.4		49	435608.3	5580338.4	1140	297.8	331.0
	14	435595.1	5580513.6	964	n/a	334.8		50	435608.7	5580333.4	1145	297.3	331.0
	15	435595.5	5580508.6	969	332.1	334.2		51	435609.0	5580328.4	1150	296.8	331.0
	16	435595.8	5580504.1	974	331.4	333.6		52	435609.4	5580323.4	1155	296.5	331.0
	17	435596.2	5580498.5	979	330.0	332.3		53	435609.8	5580318.4	1160	296.2	331.0
	18	435596.6	5580493.5	984	327.9	331.0		54	435610.2	5580313.4	1165	n/a	331.0
Cable 2	19	435597.0	5580488.5	989	321.5	331.0	Cable 4	55	435610.5	5580308.4	1170	n/a	331.0
	20	435597.4	5580483.5	994	313.6	331.0		56	435610.9	5580303.4	1175	n/a	331.0
	21	435597.7	5580478.5	999	312.4	331.0		57	435611.3	5580298.4	1180	n/a	331.0
	22	435598.1	5580473.5	1004	311.0	331.0		58	435611.7	5580293.4	1185	n/a	331.0
	23	435598.5	5580468.5	1009	309.6	331.0		59	435612.1	5580288.4	1190	n/a	331.0
	24	435598.9	5580463.5	1014	308.0	331.0		60	435612.4	5580283.4	1195	n/a	331.0
	25	435599.2	5580458.5	1019	307.1	331.0		61	435612.8	5580278.4	1200	n/a	331.0
	26	435599.6	5580453.5	1024	307.0	331.0		62	435613.2	5580273.4	1205	n/a	331.0
	27	435600.0	5580448.5	1029	306.6	331.0		63	435613.6	5580268.4	1210	n/a	331.0
	28	435600.4	5580443.5	1034	306.1	331.0		64	435613.9	5580263.4	1215	n/a	331.0
	29	435600.7	5580438.5	1039	306.1	331.0		65	435614.3	5580258.4	1220	n/a	331.0
	30	435601.1	5580433.5	1045	305.7	331.0		66	435614.7	5580253.4	1225	n/a	331.0
	31	435601.5	5580428.5	1050	305.3	331.0		67	435615.1	5580248.4	1230	n/a	331.0
	32	435601.9	5580423.5	1055	305.4	331.0		68	435615.4	5580243.4	1235	n/a	331.0
	33	435602.3	5580418.5	1060	306.3	331.0		69	435615.8	5580238.5	1240	n/a	331.0
	34	435602.6	5580413.5	1065	308.6	331.0		70	435616.2	5580233.4	1245	n/a	331.0
	35	435603.0	5580408.5	1070	311.0	331.0		71	435616.6	5580228.4	1250	n/a	331.0
	36	435603.4	5580403.5	1075	312.0	331.0		72	435617.0	5580223.4	1255	n/a	331.0

Note: n/a - data not available



LEGEND (JUNIOR LAKE PROPERTY)

- V W Zone
- Landcore Camp
- Landcore Property Boundary
- Roads
- Rivers
- Waterbody
- Wetland Area
- Wooded Area

REFERENCES (JUNIOR LAKE PROPERTY)

Base data - MNR NRVIS, obtained 2004
Produced by Golder Associates Ltd under license from
Ontario Ministry of Natural Resource. ** Queen's Printer 2007

Projection: Transverse Mercator Datum: NAD83 Coordinate System: UTM Zone 27

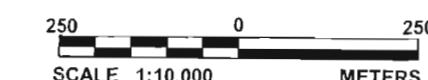


LEGEND (KETCHIKAN LAKE)

- INVESTIGATED LINES
- LAKE SHORELINE
- TOPOGRAPHY AND BATHYMETRY CONTOURS

REFERENCES (KETCHIKAN LAKE)

Contour Data and Aerial Photograph Supplied by Client



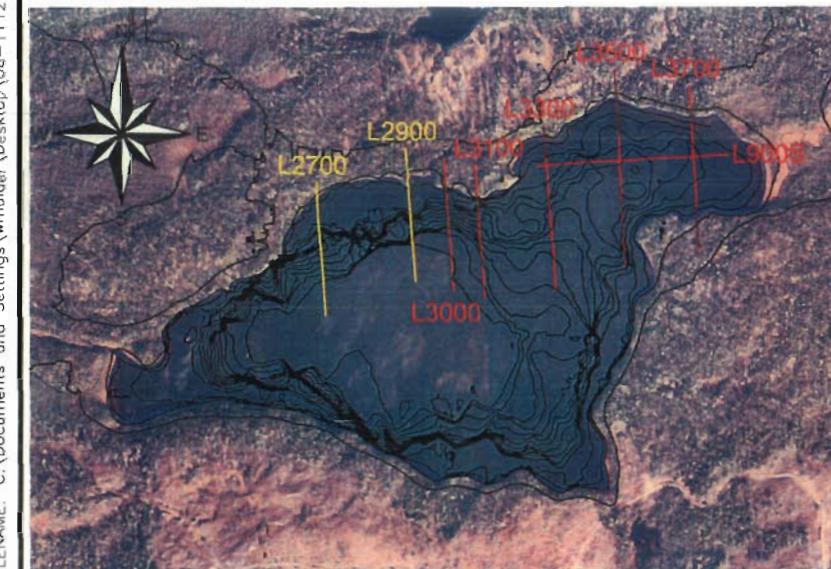
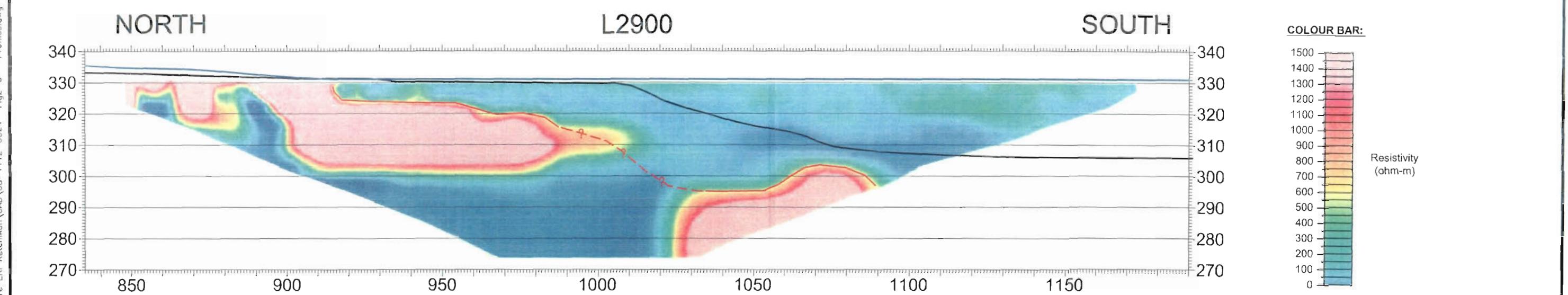
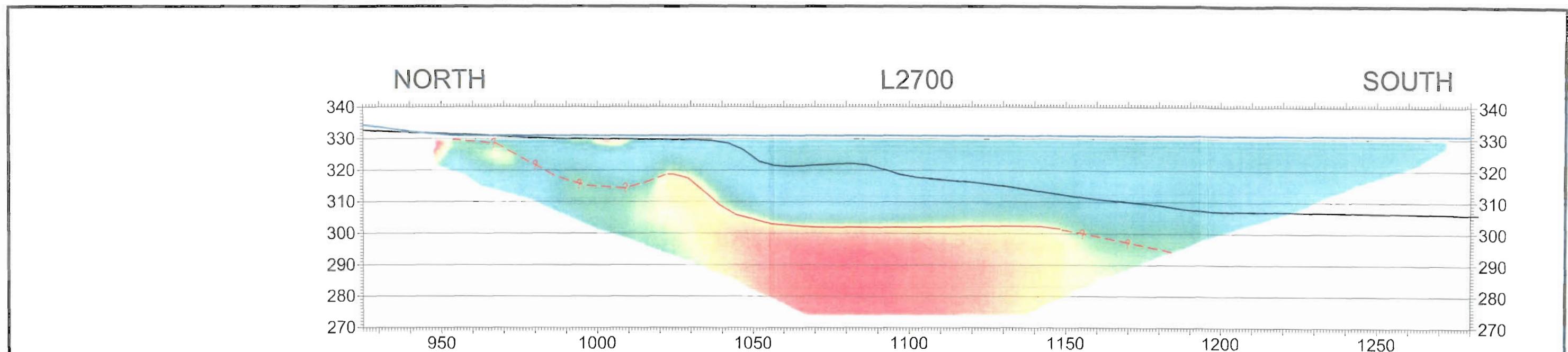
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PROJECT No. 08-1112-0024 REV.

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DATE	May. 13, 2008	
DESIGN	WEM	
CAD	WEM/BB	
CH/CK		
REVIEW		

KETCHIKAN LAKE SITE PLAN ERI LINE LAYOUT

LANDORE RESOURCES CANADA
INC. KETCHIKAN LAKE

FIGURE
1



MAP LEGEND:

- LAKE SHORELINE
- TOPOGRAPHY AND BATHYMETRY CONTOURS
- LOCATION OF ERI LINES PROFILED
- LOCATION OF OTHER ERI LINES

MAP SCALE:

500
1:20000
0
500
METERS

PROFILE LEGEND:

- TOPOGRAPHY AND BATHYMETRY ELEVATION (DTM DATA)
- TOPOGRAPHY ELEVATION (FIELD DATA)
- INTERPRETED BEDROCK ELEVATION

PROFILES SCALE:

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1:1000 METERS

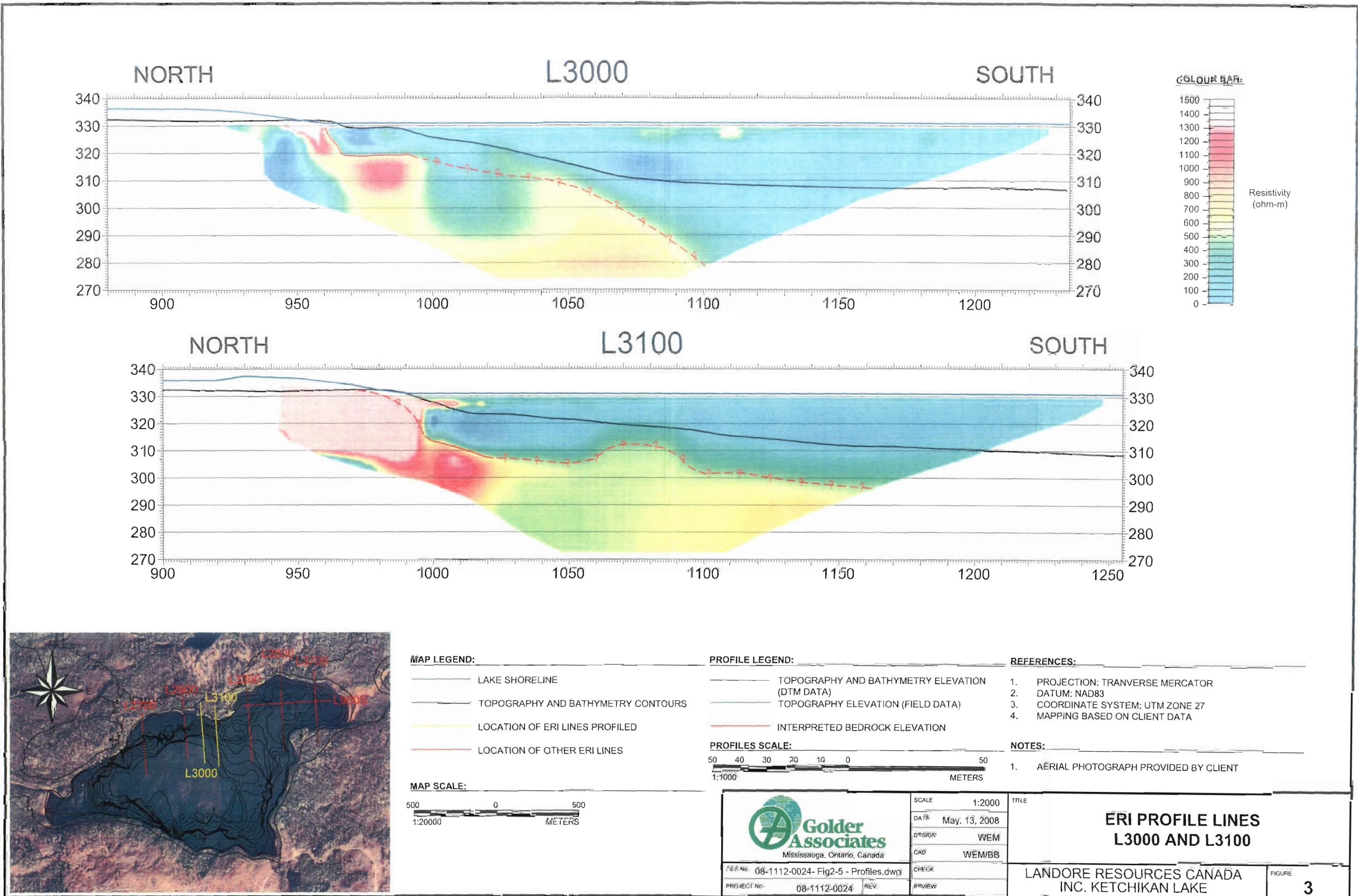
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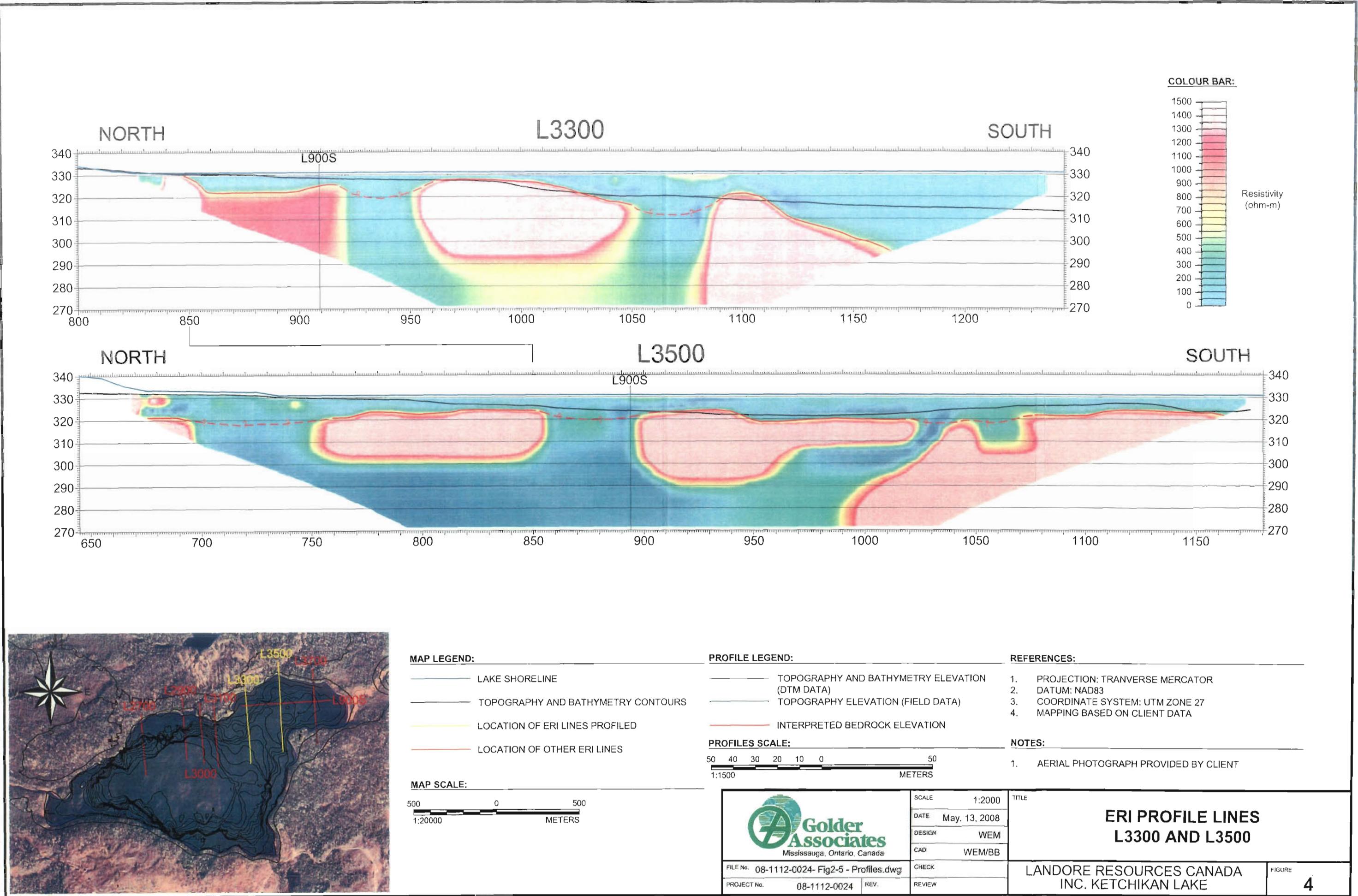
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2. DATUM: NAD83
3. COORDINATE SYSTEM: UTM ZONE 27
4. MAPPING BASED ON CLIENT DATA

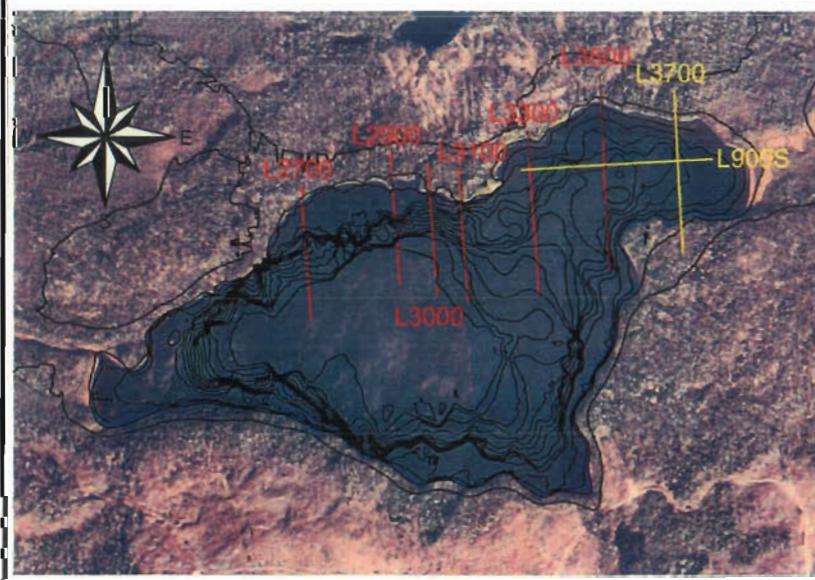
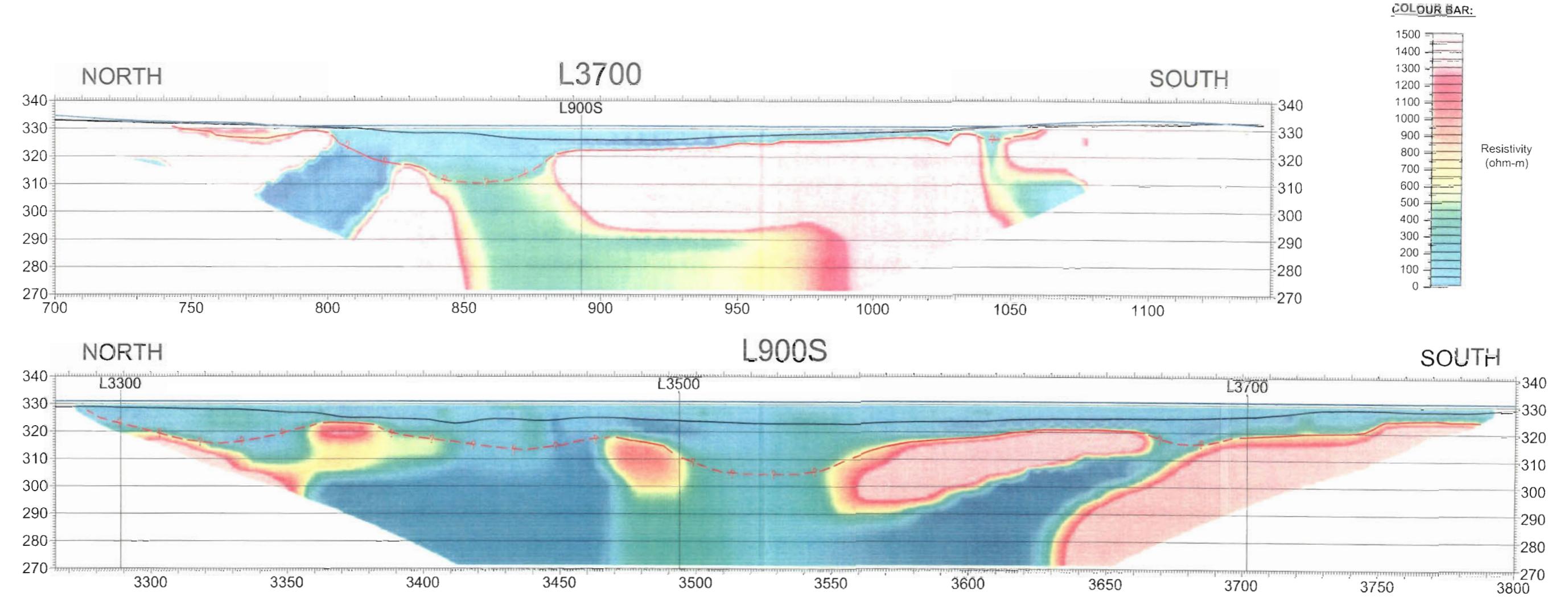
NOTES:

1. AERIAL PHOTOGRAPH PROVIDED BY CLIENT

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	CAD WEM/BB	
	CHECK	
	REVIEW	
		LANDORE RESOURCES CANADA INC. KETCHIKAN LAKE
		FIGURE 2







MAP LEGEND:

- LAKE SHORELINE
- TOPOGRAPHY AND BATHYMETRY CONTOURS
- LOCATION OF ERI LINES PROFILED
- LOCATION OF OTHER ERI LINES

MAP SCALE:

500 0 500
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PROFILE LEGEND:

- TOPOGRAPHY AND BATHYMETRY ELEVATION (DTM DATA)
- TOPOGRAPHY ELEVATION (FIELD DATA)
- INTERPRETED BEDROCK ELEVATION

PROFILES SCALE:

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REFERENCES:

1. PROJECTION: TRANVERSE MERCATOR
2. DATUM: NAD83
3. COORDINATE SYSTEM: UTM ZONE 27
4. MAPPING BASED ON CLIENT DATA

NOTES:

1. AERIAL PHOTOGRAPH PROVIDED BY CLIENT



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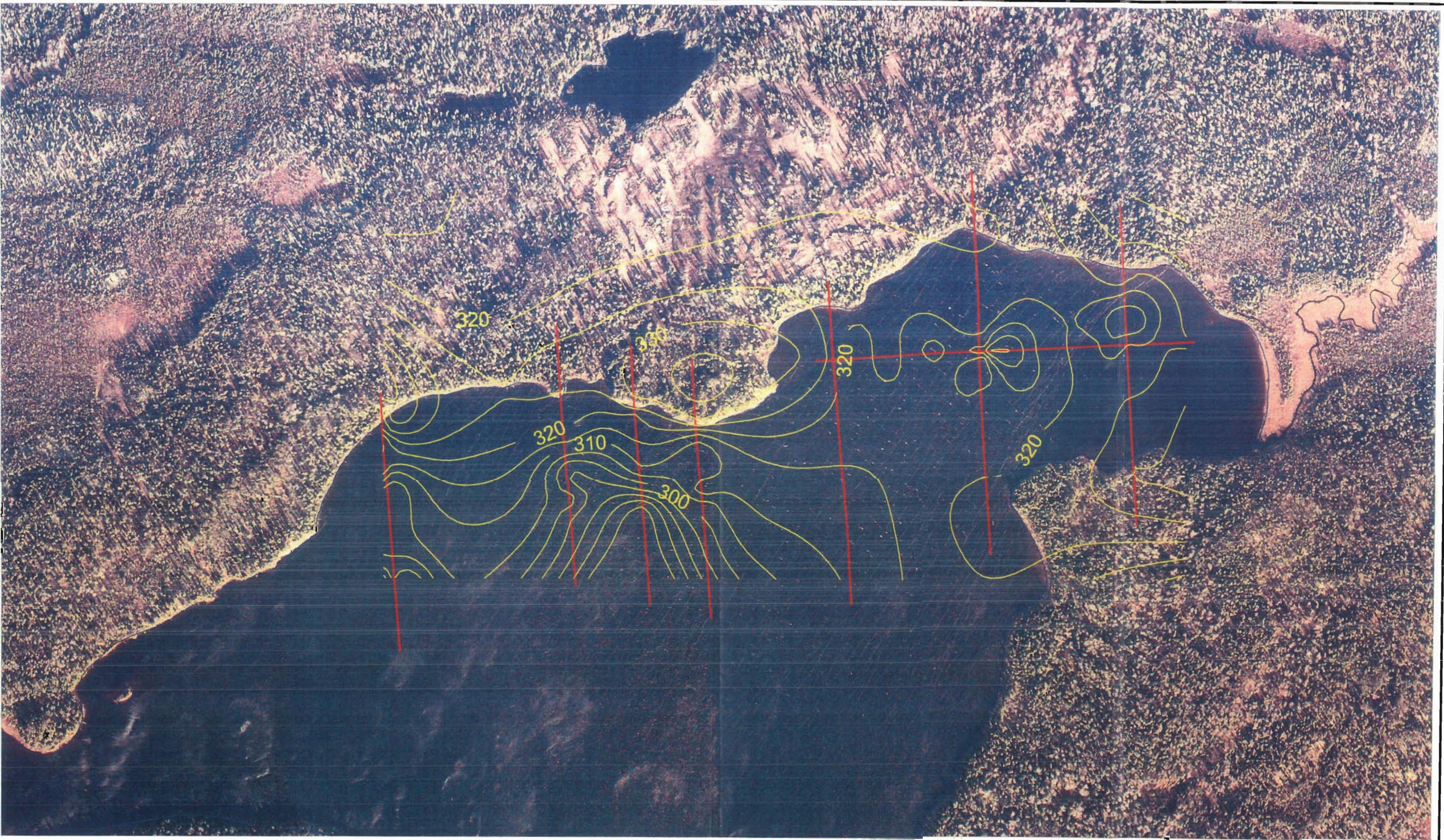
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CHECK _____
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**ERI PROFILE LINES
 L3700 AND L900S**

LANDORE RESOURCES CANADA
 INC. KETCHIKAN LAKE

FIGURE
5



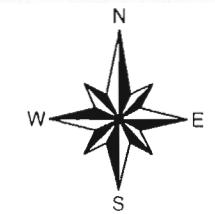
Legend

- Lake Shoreline
- ERI Lines
- Estimated Bedrock Elevation

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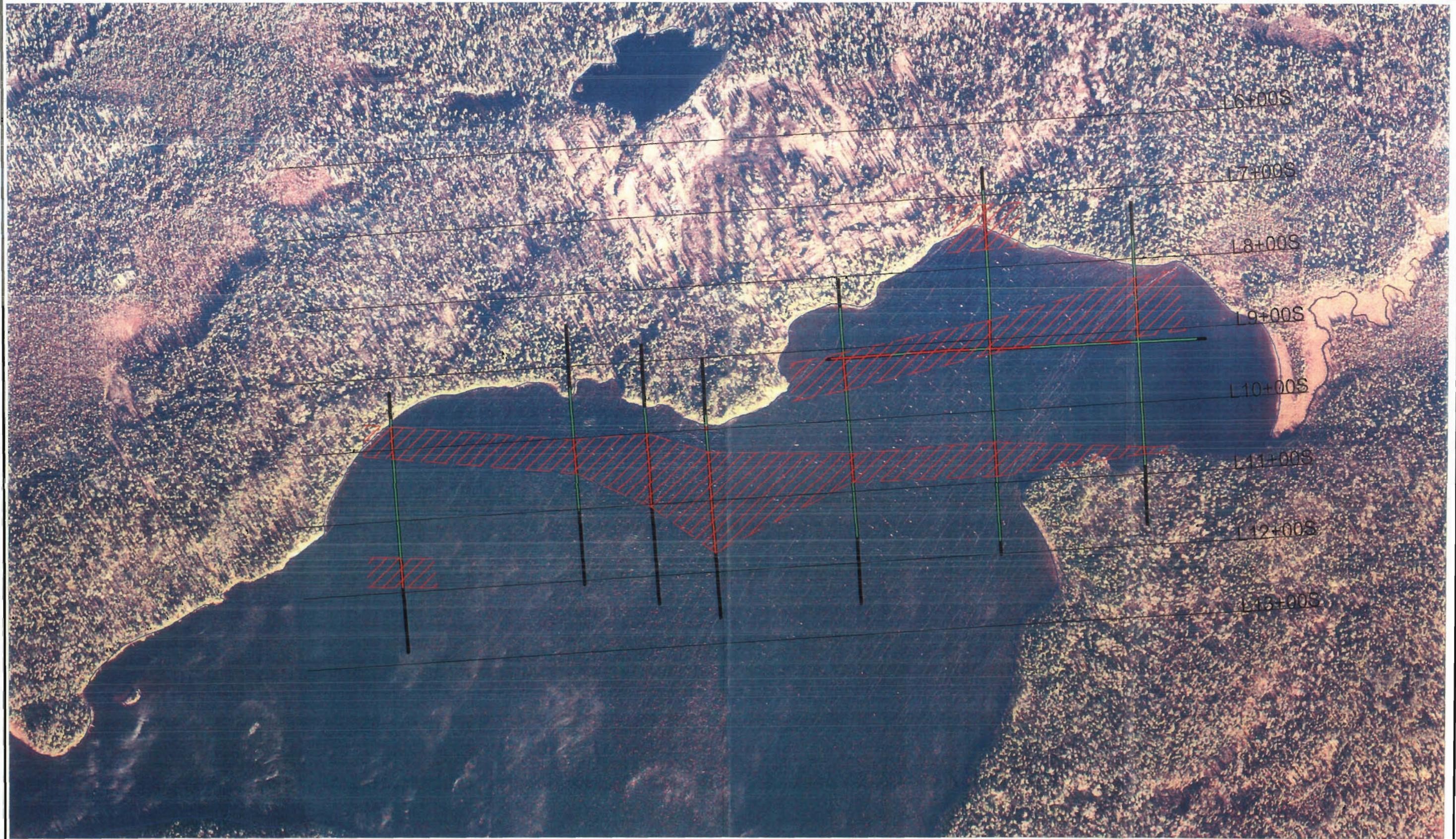
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REVIEW	REVIEW	REVIEW	REVIEW	LANDORE RESOURCES CANADA INC. KETCHIKAN LAKE





Legend

Lake Shoreline	High Resistivity Contrast on ERI Line
ERI Lines	Low Resistivity Contrast on ERI Line
	Low Resistivity Contrast zones

REFERENCES

Air Photo Supplied by Client
Projection: Transverse Mercator Datum: NAD83 Coordinate System: UTM Zone 27
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TITLE
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LOW RESISTIVITY CONTRAST ZONES**
LANDORE RESOURCES CANADA
INC. KETCHIKAN LAKE