

**Ground Geophysical Survey
Pine Creek, Northern Territory**

Survey Operations and Logistics Report

Prepared for

Element 92 Pty Ltd

Surveyed by:



Airborne and Ground Geophysics

GPX Surveys Pty Ltd

Job Number 2940

Surveyed September 2010

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GENERAL SURVEY INFORMATION

1.1 INTRODUCTION

In August 2010, GPX Surveys were awarded a contract to conduct an Induced Polarisation survey for Element 92 on it's Pine Creek area, Northern Territory. This report summarises the procedures, details and equipment used by GPX Surveys in the acquisition, verification and processing of the data.

Client:	Element 92 Pty Ltd
GPX Project Number:	2940
Survey Area:	Pine Creek, NT
Field Base:	Pine Creek, NT
Mobilisation:	5 th September 2010
Survey:	5 th – 10 th September 2010
Demobilisation:	11 th September 2010

1.2 SURVEY SUMMARY

On 5th September 2010 the GPX survey crew mobilised from Adelaide River to the field base at Pine Creek. The crew met with Costica Vieru client representative for Element 92 and were show the lines to de surveyed. The survey was conducted between 5th and the 10th September. The crew completed the survey on the 10th and demobilised on the 11th September.

Data acquisition was monitored during the survey and preliminary data checks were performed in the field. Digital data was emailed each day to GPX Surveys Perth office and after verification was sent to Element 92 representative Costica Vieru and consultant Russell Mortimer of Southern Geoscience.

1.3 SURVEY PERSONNEL

The following personnel were involved on this project:

Project Manager:	Ron Creagh
Field Manager:	Nick Mann
Field Assistants:	Martin Kraemer Jared Taylor
Technical Support:	Alan Talbot

SURVEY SPECIFICATIONS

Acquisition Specifications

Configuration:	Dipole-Dipole IP
Line Spacing:	Variable
Line Direction:	East-West
A Spacing:	50m
Geophysical Transmitter:	Zonge GGT-30
Geophysical Receiver:	GDD-16
Tx Current:	variable
Tx Frequency:	0.125Hz
Geophysical Receiver:	SmartEM24
Rx Readings:	Minimum 2/station
Field Data:	GDD format files.
Processed Data:	AMIRA/Geosoft Format

Current Electrodes

The following coordinates are GDA94 MGA52 and define the location of lines:

Line 836000E

803600	8464400
803600	8464450
803600	8464500
803600	8464550
803600	8464600
803600	8464650
803600	8464700
803600	8464750
803600	8464800
803600	8464150
803600	8464200
803600	8464250
803600	8464300
803600	8464350
803600	8464400
803600	8464450
803600	8464500
803600	8464550
803600	8464650
803600	8464700
803600	8464750
803600	8464800
803600	8464850
803600	8464900
803600	8464950
803600	8465000
803600	8465050

Line 8463700N

800800	8463700
800850	8463700
800900	8463700
800950	8463700
801000	8463700
801050	8463700
801100	8463700
801150	8463700
801200	8463700
800550	8463700
800600	8463700
800650	8463700
800700	8463700
800750	8463700
800800	8463700
800850	8463700
800900	8463700
800950	8463700
801050	8463700
801100	8463700
801150	8463700
801200	8463700
801250	8463700
801300	8463700
801350	8463700
801400	8463700
801450	8463700

Line 8465300N

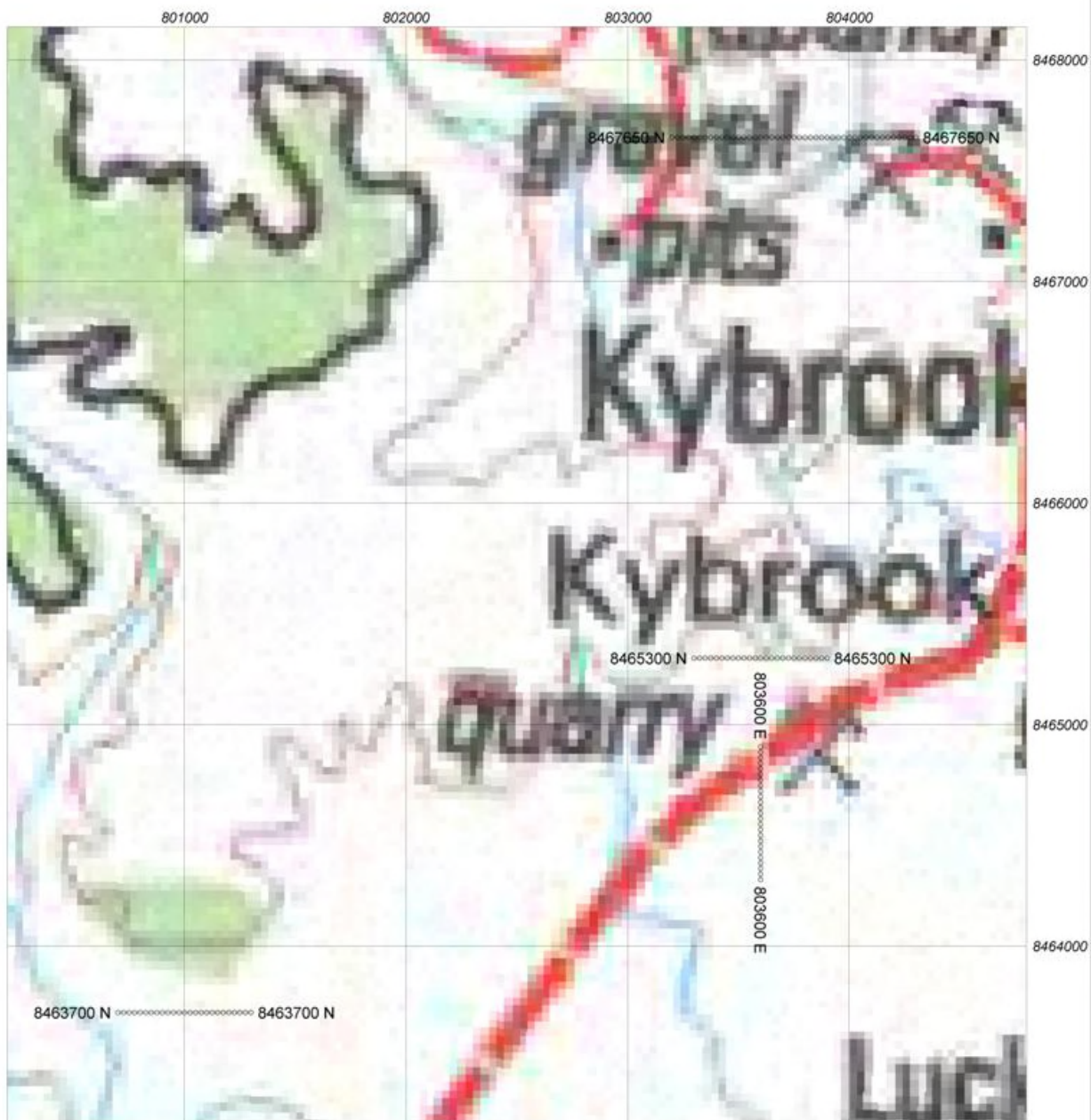
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803750	8465300
803800	8465300
803150	8465300
803200	8465300
803250	8465300
803300	8465300
803350	8465300
803400	8465300

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803900	8465300
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804000	8465300
804050	8465300

Line 8467500N

803300	8467650
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803400	8467650
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803800	8467650
803850	8467650
803900	8467650
803950	8467650
804000	8467650
804050	8467650
804100	8467650
804150	8467650
804200	8467650
803050	8467650
803100	8467650
803150	8467650
803200	8467650
803250	8467650
803300	8467650
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803800	8467650
803850	8467650
803900	8467650
803950	8467650
804050	8467650
804100	8467650
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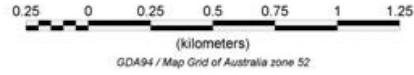


**ELEMENT 92 PTY LTD
GROUND GEOPHYSICAL SURVEY
PINE CREEK NORTHERN TERRITORY
LINE LOCATION MAP**

September, 2010



GPX Surveys
4 Hehr Street, Belmont
Western Australia. +618 9477 5111



PRODUCTION REPORTS

GPX SURVEYS Survey Operations Summary

CLIENT: Element 92
LOCATION: Pine Creek
JOB #: 2940
MONTH: September, 2010

Production Days 5.8
Standby Days 0.0
Down Days 0.0
Mobilisation 1.2

Total Days 7.0

Crew Leader: Nick Mann

DATE	SURVEY TYPE	AREA	PRODUCTION	COMMENTS
05-09-2010	Dipole-dipole	Pine Creek	0.2 Mobilisation 0.8 Production	Mobilised Adelaide River to Pine Creek. Met with Costica Vieru and he showed Nick the lines which were re-arranged slightly to suit survey type. Dug and built all pits on Line 4. Laid out pot wires on same.
06-09-2010	Dipole-dipole	Pine Creek	1.0 Production	Dug and built all pits Line 3. Laid electrode wires Line 4. Set up Tx on same and tested electrodes – low current all round, 0.8-1.2A. Read Line 4, reasonably clean for low current. Moved wires and Tx to Line 3. Nick went to Katherine late afternoon to purchase more salt, foil and supplies.
07-09-2010	Dipole-dipole	Pine Creek	1.0 Production	Dug and built all electrodes Line 2. Tested Line 3 – 3 dipoles did not work. We built these up and made them okay. Read Line 3.
08-09-2010	Dipole-dipole	Pine Creek	1.0 Production	Dug and built first of 2 spreads on Line 1. Rockier ground and bigger pits to counter current issues took a little longer than on previous lines. Moved wires and Tx to Line 2. Tested electrodes and had to build up

				2 to get current. Read Line 2.
09-09-2010	Dipole-dipole	Pine Creek	1.0 Production	Dug and built 2 nd spread on Line 1. Rolled in all wire on Line 2 for big move to Line 1. Rolled out all wire on Line 1. Tested electrodes on first spread, Line 1, and 4 required building up. We watered all the rest also. Watered 2 nd spread on Line 1 again.
10-09-2010	Dipole-dipole	Pine Creek	1.0 Production	Read all 4 pot spreads on Line 1. Packed all wire and gear and left site.
11-09-2010	Dipole-dipole	Pine Creek	1.0 Mobilisation	Mobilised out of Pine Creek.

DELIVERABLES

- Field processed geophysical data was available each evening. Digital data was emailed to the contractors Perth office each day.
- Field processed items as requested by the company's contract supervisor or its nominee and agreed by the contractor or the contractor's contract representative.
- Production report.
- A logistics report detailing the acquisition and processing activities undertaken by the contractor on behalf of the company.
- Copies of all maps generated to verify the quality of the data.
- Any and all items supplied by the company for the purposes of this survey.
- Digital files in AMIRA/GEOSOFTformat which contain all principal facts for the survey, including raw instrument output dumps and processed line files.
- Final report and data CD.

CONTRACTOR INFORMATION

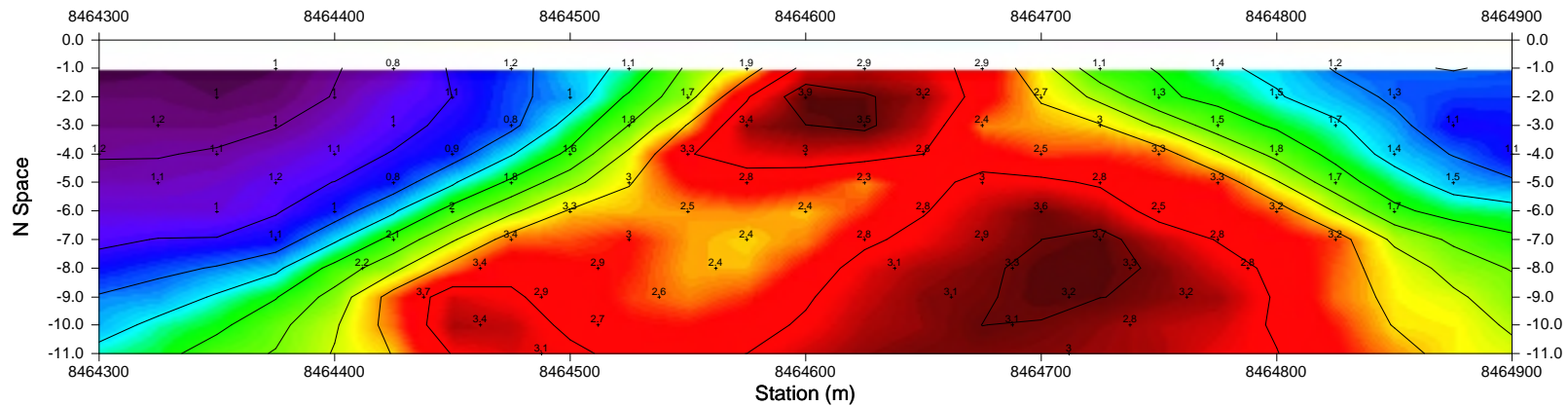
GPX Surveys Pty Ltd ABN 48 110 619 602

Address: 4 Hehir Street,
Belmont WA 6104 Australia
Postal: PO Box 808,
Cloverdale WA 6985

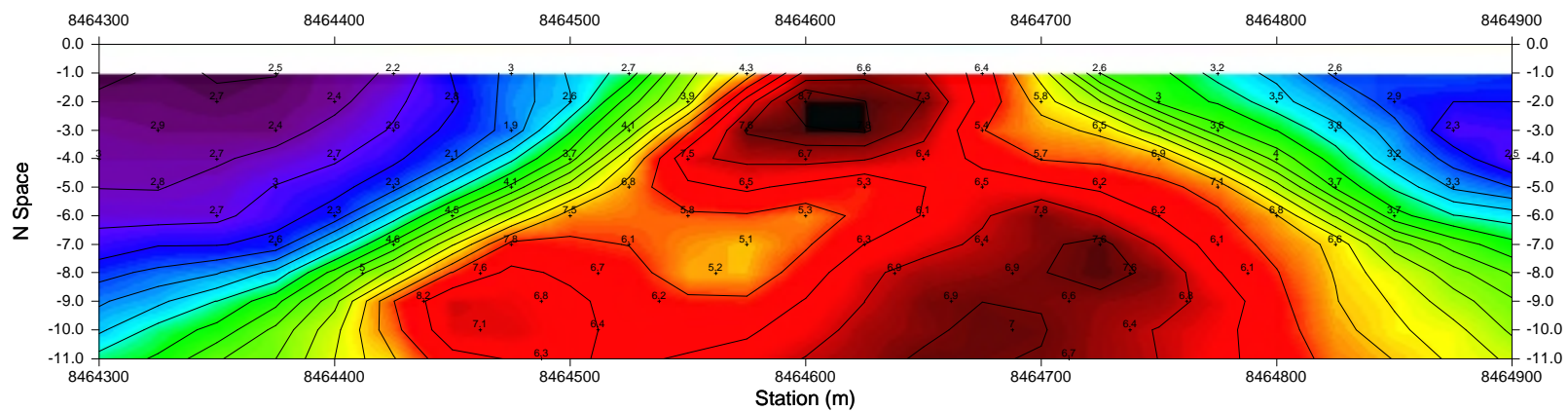
T +61 8 9477 5111
F +61 8 9477 5211
info@gpxsurveys.com.au
www.gpxsurveys.com.au

VERIFICATION PLOTS

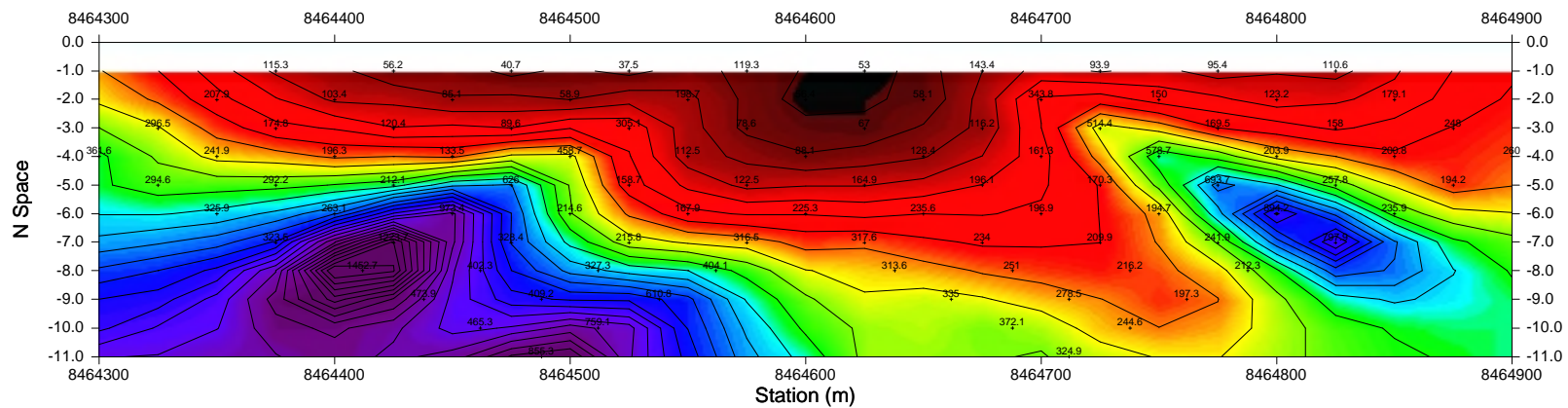
Chargeability



Channel 1

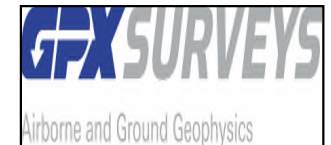


Apparent Resistivity



ACQUISITION PARAMETERS

TRANSMITTER : GGT-30
 FREQUENCY : 0.125Hz
 A SPACE : 50 Metres
 METHOD : Time Domain
 TX CURRENT : Variable
 ARRAY : Dipole-Dipole
 INSTRUMENT : GDD-16



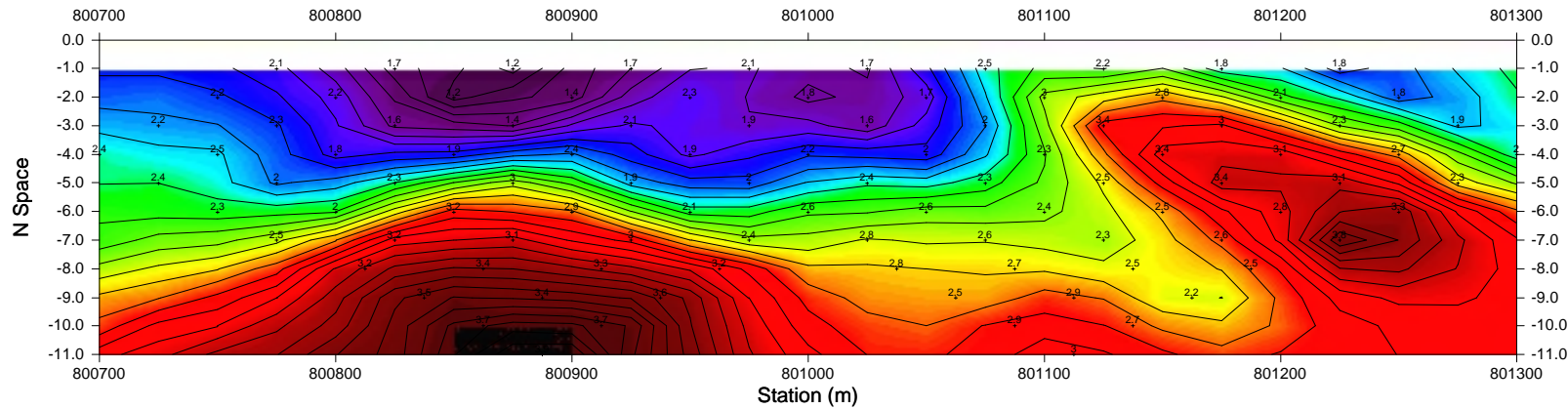
ELEMENT 92 PTY LTD

**PINE CREEK PROJECT
INDUCED POLARIZATION SURVEY
DIPOLE-DIPOLE ARRAY
LINE 803600E**

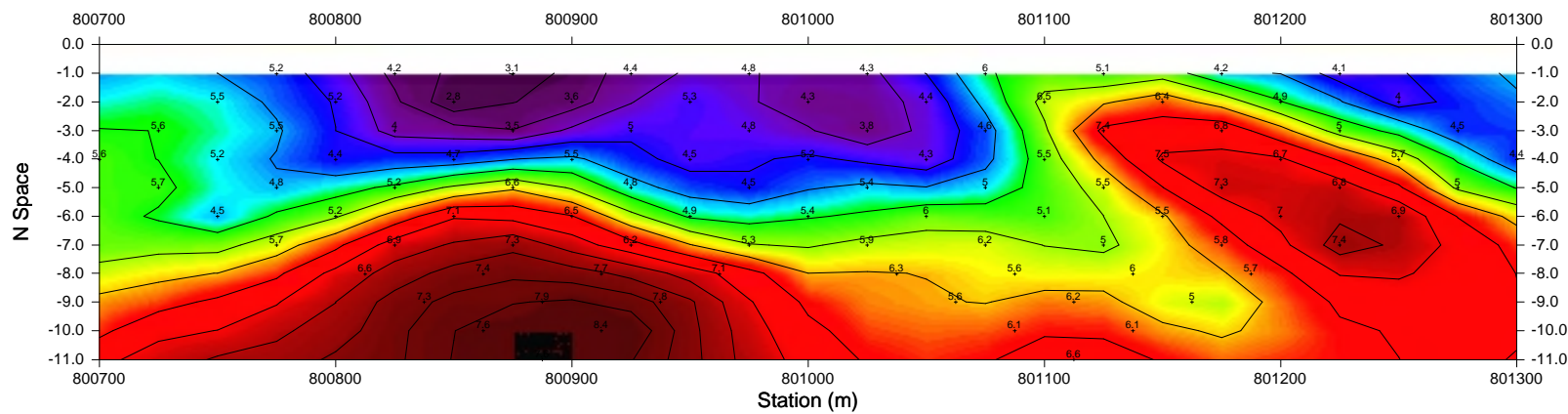
Drawn : RBC

Job No.: 2940

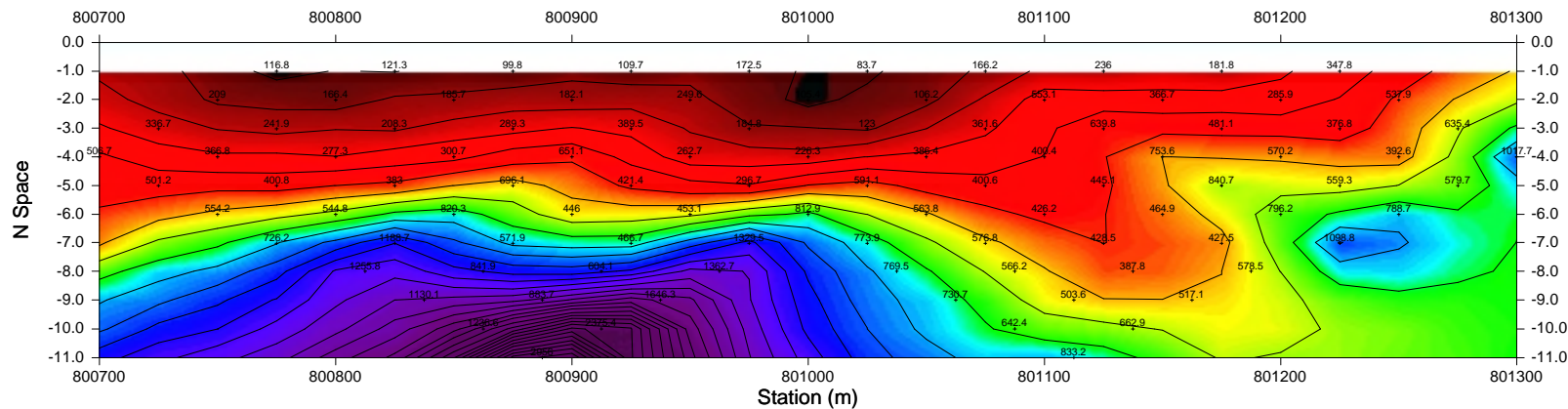
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Channel 1

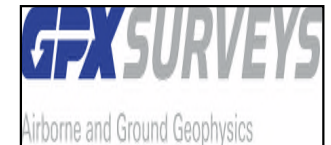


Apparent Resistivity



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TRANSMITTER : GGT-30
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 METHOD : Time Domain
 TX CURRENT : Variable
 ARRAY : Dipole-Dipole
 INSTRUMENT : GDD-16



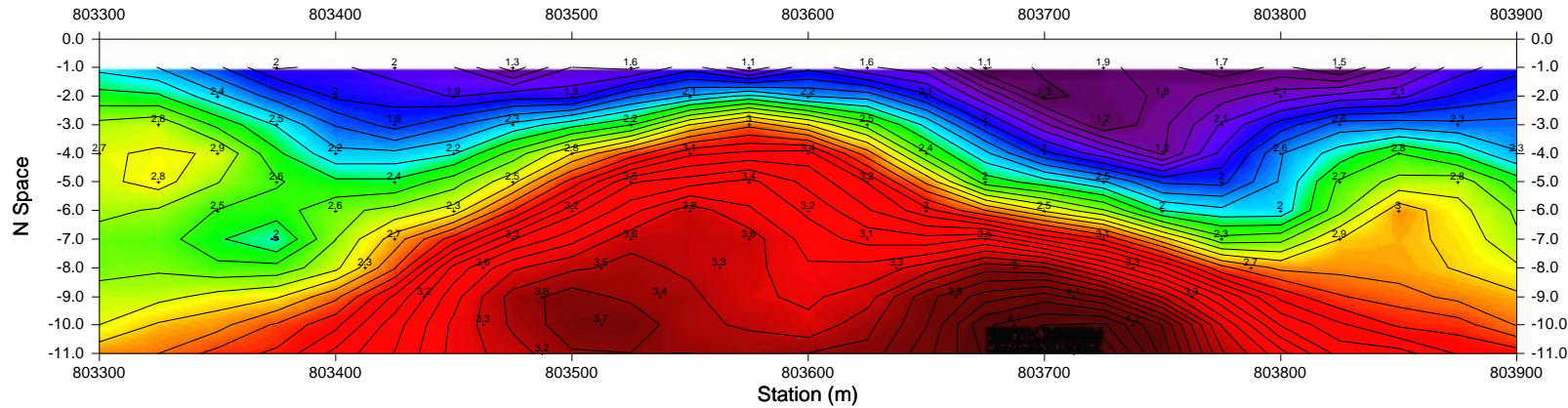
ELEMENT 92 PTY LTD

PINE CREEK PROJECT
INDUCED POLARIZATION SURVEY
DIPOLE-DIPOLE ARRAY
LINE 8463700N

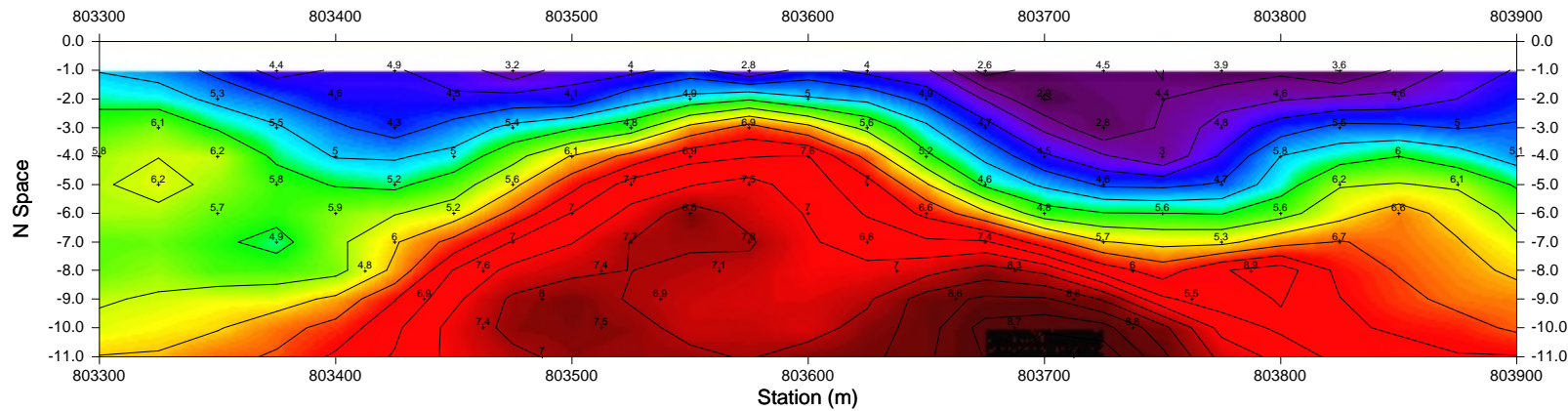
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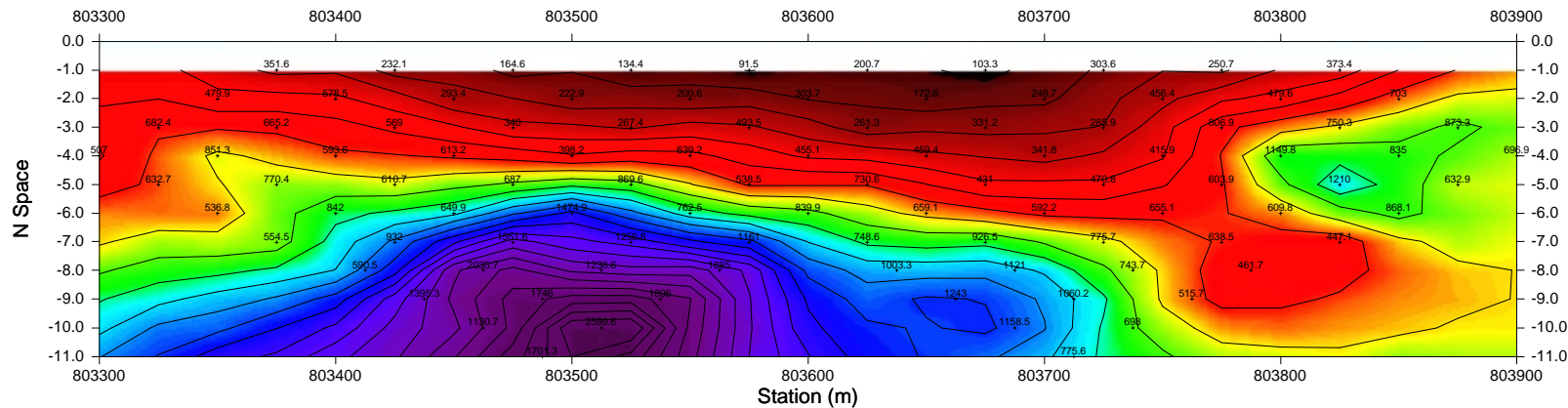
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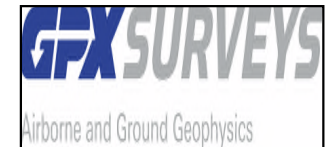


Apparent Resistivity



ACQUISITION PARAMETERS

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 A SPACE : 50 Metres
 METHOD : Time Domain
 TX CURRENT : Variable
 ARRAY : Dipole-Dipole
 INSTRUMENT : GDD-16



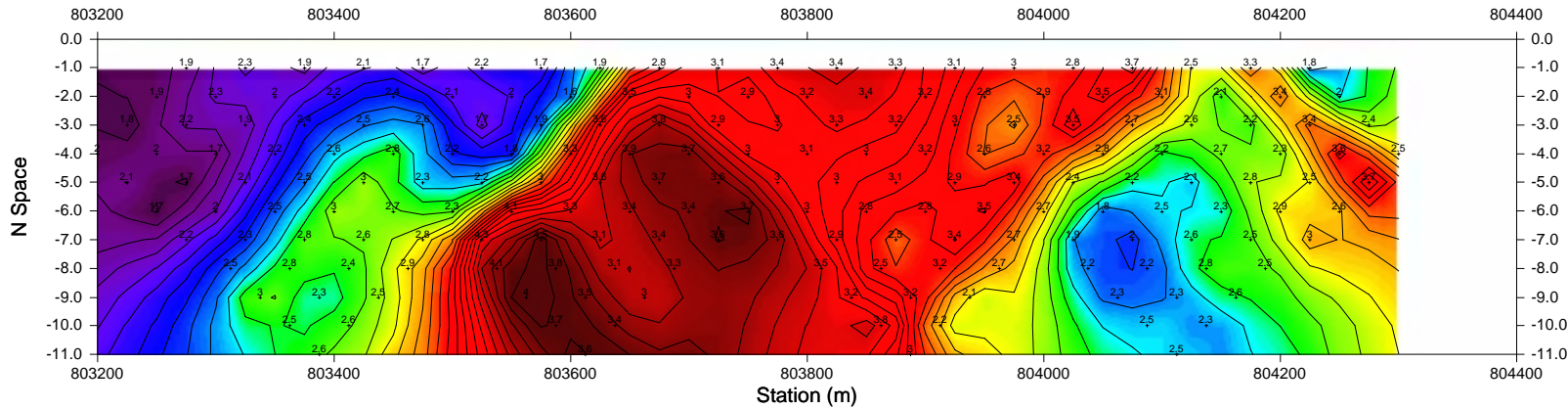
ELEMENT 92 PTY LTD

PINE CREEK PROJECT
INDUCED POLARIZATION SURVEY
DIPOLE-DIPOLE ARRAY
LINE 8465300N

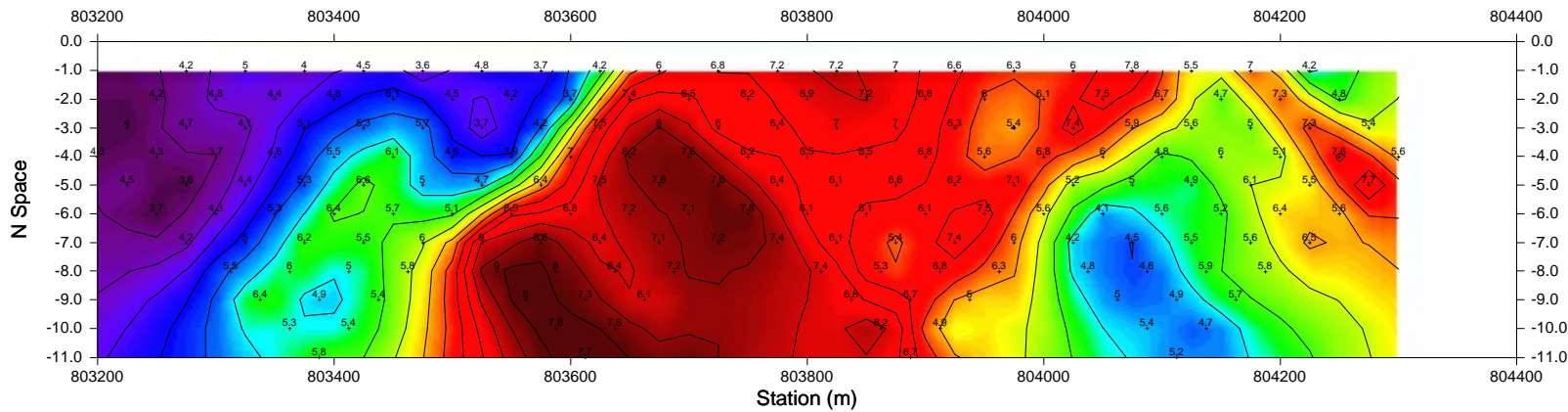
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Job No.: 2940

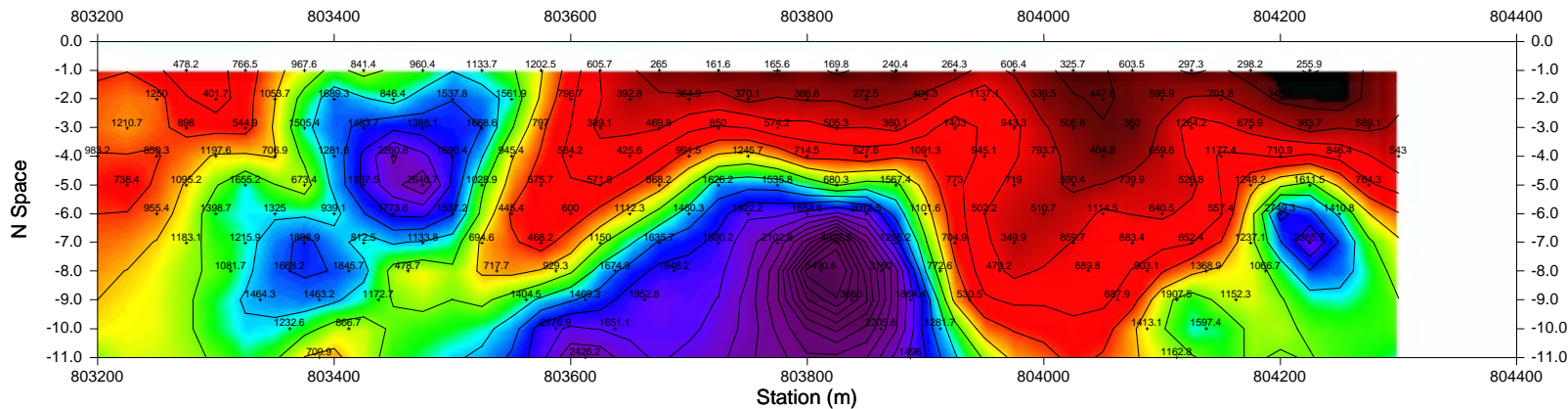
Chargeability



Channel 1

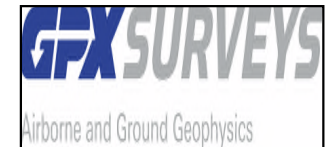


Apparent Resistivity



ACQUISITION PARAMETERS

TRANSMITTER : GGT-30
 FREQUENCY : 0.125Hz
 A SPACE : 50 Metres
 METHOD : Time Domain
 TX CURRENT : Variable
 ARRAY : Dipole-Dipole
 INSTRUMENT : GDD-16



ELEMENT 92 PTY LTD

PINE CREEK PROJECT
INDUCED POLARIZATION SURVEY
DIPOLE-DIPOLE ARRAY
LINE 8467650N

Drawn : RBC

Job No. : 2940