Appendix 1

Quantec Titan 24 Interpretation Report

BC Geological Survey
Assessment Report
31730b

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Geophysical Survey Interpretation Report

Quantec Titan-24 Distributed Acquisition System DC RESISTIVITY & INDUCED POLARIZATION Surveys, Miner Mountain Project, Princeton, BC, on behalf of Sego Resources Inc., Vancouver, BC

(Revised)

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EXECUTIVE SUMMARY

Introduction

A Titan-24 survey was carried out over the Miner Mountain project area, British Columbia, Canada, during April 25 to May 14, 2009. The survey grid includes 13 DC/IP parallel lines along a total of 31.2 km (38.7 km with extension). Each line was surveyed with dipole spacing of 100 m and line separation of 200 m. Survey line length was approximately 2.4 km plus additional current injections up to 500 m beyond the end of the line. The data were inverted using the 2D inversion algorithms to produce maps of resistivity and chargeability of the subsurface.

Survey Objectives

The primary objective of the project is to locate potential copper mineralization targets to a depth of 750 m over the Miner Mountain survey area. The maps of resistivity and chargeability are used to identify and characterize the anomalous targets for focus drilling

Results

The resistivity distribution over the survey area can be characterized as a resistive low associated with the Princeton Group and a resistive high associated with the Nicola Group. The resistivity of the Princeton Group in the northwest part of the survey grid is generally less than 50 Ωm. The resistivity of the Nicola Group, which covers most of the survey area, is on the order of several hundreds of Ωm. These results are in agreement with the known geology of the area.

The chargeability maps show a relatively heterogeneous distribution of the anomalies over the survey area. The chargeability varies between 0 mrad to 20 mrad with a background chargeability of ~6 mrad. Chargeable anomalies, as high as 20 mrad, are mainly located in the western and eastern parts of the survey grid. A moderate elongated chargeable anomaly is resolved at a depth of ~400 m. The elongated anomaly has a SW-NE orientation and traverses the grid in the south part of the survey area.

Recommendations

Based on the reliability of the inversion results, in terms of the repeatability of the anomalies resolved in both IP inversions, the following potential chargeability targets are listed. Note that any drilling efforts based on these interpretations must incorporate other geophysical and geological models and information to validate these results.

The DC/IP survey was able to identify a total of twenty-five (25) potential targets with different priority levels. The potential targets are prioritized as High, Middle, and Low, based on their chargeability level and size. The chargeability levels are noted according to High (>15 mrad), Mid (10 mrad< >15 mrad), and Low (7 mrad < > 10 mrad). The depth of the anomalies are categorized according to Shallow (<100 m), Mid (100 m< >400 m), and Deep (< 400 m).

Based on the above criteria, a total of four (4) High priority, three (3) Mid-High priority, nine (9) Middle priority, two (2) Low-Mid priority, and seven (7) Low priority anomalies are classified in the following table.

Anomaly ID	Chargeability (High/Mod/Low)	Size (Small/Mid/large)	Depth (Shallow/Mid/Deep	Priority (High/Mid/Low)
PRINCETON GROUP				
IP5	High	Mid-Large	Mid-Deep	Mid-High
IP6	Mid	Small-Mid	Shallow-Mid	Mid
IP9	Low-Mid	Small	Shallow	Mid
IP8	Low	Small	Mid-Deep	Low
NICOLA GROUP				
IP7	Mid	Mid-Large	Shallow-Mid	Mid-High
IP1	High	Mid	Shallow	Mid
IP3	High	Mid	Mid	Mid
IP10	Low-Mid	Small-Mid	Shallow	Mid
IP11 and IP12	Low	Large	Mid-Deep	Mid
IP13 to IP18	Low-Mid	Large	Deep	Mid
IP24	Mid	Mid	Shallow-Mid	Mid
IP2	Mid	Small	Shallow	Low
IP4	Mid	Small	Shallow	Low
IP25	Low	Small	Shallow-Mid	Low
IP20 and IP21	Mid	Small	Shallow	Low
IP19	Low	Small	Shallow-Mid	Low
SCHISSLER GROUP[1]				
IP27 and IP32	High	Large	Mid-Deep	High
IP28 and IP33	High	Large	Mid-Deep	High
IP30	High	Mid	Mid-Deep	Mid-High
IP29 and IP31	Mid-High	Small	Shallow	Low-Mid

[1] This geological unit was coined by Sego Resources Inc. on the basis of the Titan 24 chargeability and resistivity anomalies observed over the eastern part of the survey area.

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1. INTRODUCTION

A Titan-24 survey was carried out on behalf of Sego Resources Inc., Vancouver, British Columbia, Canada, during the period of April 25 to May 14, 2009, over the Miner Mountain DC/IP project. The Miner Mountain property is located in the Quesnel Stikine Terrane approximately 3 km from Princeton, in the Similkameen region of British Columbia, Canada (Figure 1). The survey includes 13 DC/IP proposed lines along 31.2 km (38.7 km with extension) plus a test MT survey along 2 of the survey lines (Figure 2).

The Titan-24 survey is an array configuration with a simultaneously sampled contiguous e-field measurement. Each Titan-24 line was surveyed with a dipole spacing of 100 m and a line length of approximately 2.4 km. Additional 100 m spaced current injections up to 500 m beyond the end of the lines were carried out to increase the lateral and depth extents of the survey lines. The survey grid includes 13 parallel lines with 200 m line separation.

The objective of the Titan 24 DC/IP survey at the Miner Mountain Project is to map potential copper mineralization targets to a depth of 750 m within the survey area. The survey results are to assist the exploration programme to plan, prioritize and focus drilling on the targets that offer the largest tonnage potential.

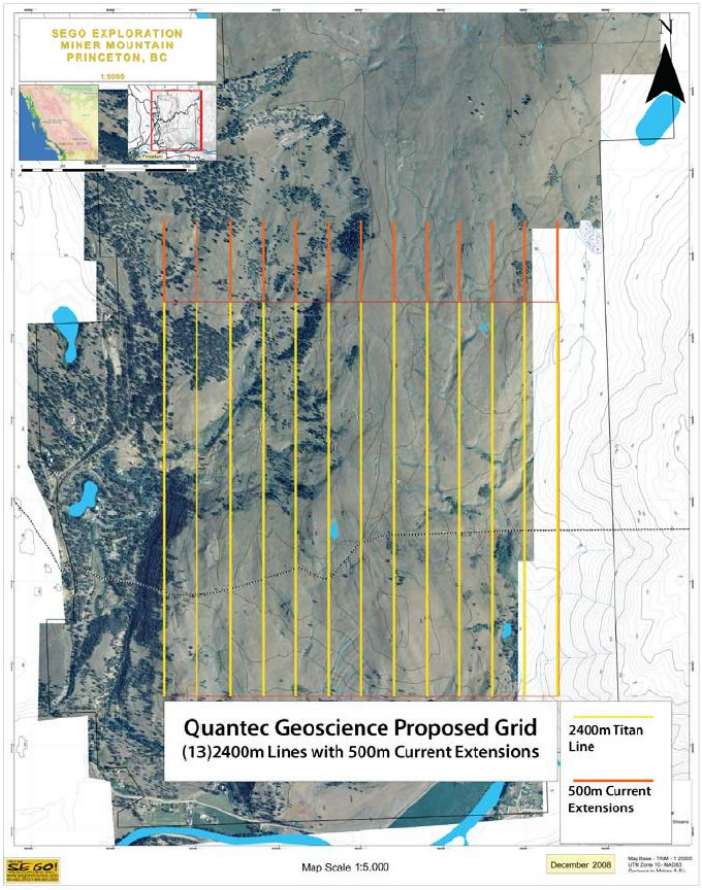

Figure 1, Miner Mountain Project general location map[2]

[2] *Project General Location Map obtained from Contract.*

The survey area is primarily underlain by volcanic and intrusive rocks of the Upper Triassic Nicola Group (Figure 2). To the west, the northerly trending boundary fault separates these rocks from sedimentary and volcanic rocks of the Eocene Princeton Group[3].

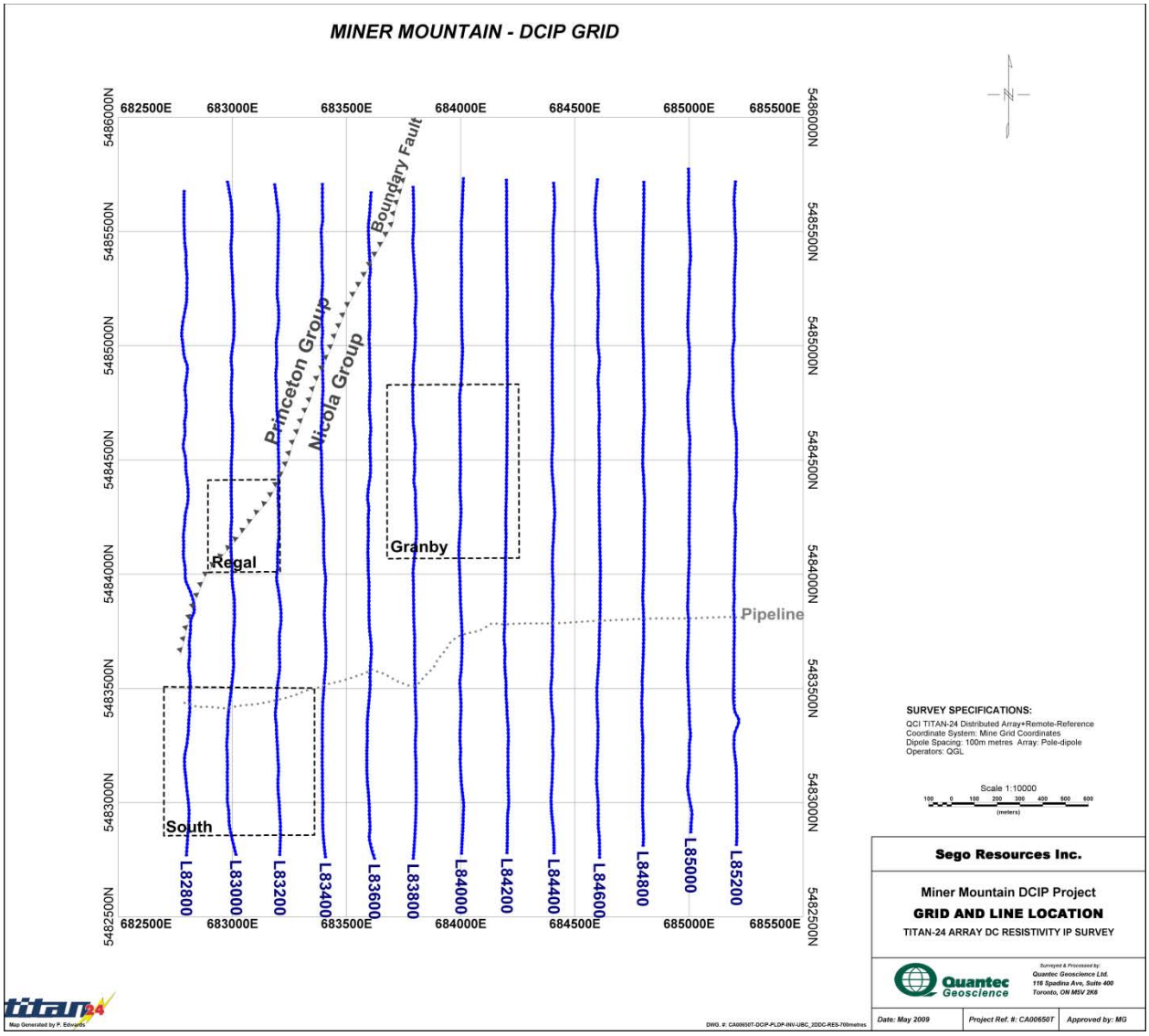

Figure 2, Titan-24 grid and lines location map. Three exploration zones superimpose the survey grid.

The Nicola Group consists of green and maroon to nearly black, massive and flow banded andesites, basalts and cherty tuffs. Weak alteration is ubiquitous and commonly consists of chlorite, hematite, hematite stained albite and epidote. Less common, but locally intense, are gypsum, sericite, silica and potassic alteration. Co-magmatic intrusions of diorite and microdiorite crosscut the volcanics and have similar styles of alteration. Aphanitic, mafic dykes are present but uncommon and only seen in drill core.

[3] *Vittorio, A.R., March 2009, Review and Recommendations; Miner Mountain Project, Near Princeton, B.C.*

The Princeton Group outcrops in the survey area are composed of oxidized buff to orange arkosic sandstones, conglomerates and, in places, coal measures. These beds are poorly lithified and easily eroded, and the contact with the underlying Nicola Group is a steep scarp which marks the boundary fault.

The survey grid covers two separate zones of copper-gold-silver porphyry style mineralization, the Granby zone in the central part of the grid and the South zone in the south-western part (Figure 2). The Regal zone, in the west central part of the grid, consists of oxide material which moved down slope from the Granby zone.

This report presents the results of the 2D inversion of the DC resistivity and IP chargeability data along 13 lines. Three 2D inversions were carried out along each line using inversion codes developed by the University of British Columbia[4] in Vancouver, Canada (UBC DCIP2D). The apparent resistivity data was inverted using the unconstrained 2D inversion with a homogenous half-space of average input data as the starting model. The apparent chargeability data was inverted with two different reference resistivity models. The first IP inversion utilizes a homogenous half-space of constant resistivity as the reference model (Null). The second IP inversion uses a reference resistivity model result from the inversion of the apparent resistivity data (Smooth). The results are illustrated and discussed along the survey lines as cross-sections and as interpolated plan maps at different depths over the survey area.

[4] Oldenburg, D. W. and Li, Y. ,1994, Inversion of induced polarization data, *Geophysics*, 59, 1327-1341.

2. SURVEY DESCRIPTION

2.1 GENERAL SURVEY DETAILS

2.1.1 DCIP Survey

- **Survey Array:** Dipole-Pole-Dipole Array (combines PDR & PDL using:
  a) Standard Current Injections
  b) Extended Injections
- **Receiver Configuration:** 24 Ex = Continuous In-line voltages
  13 Ey = Alternating (2-station) cross-line voltages[5]
- **Array Length:** 2.4 km
- **Number of Arrays/line:** 1
- **Dipole spacing:** 100 meters
- **Rx-Tx Separation:** N-spacing (Pn-Cn min) = 0.5 to 28.5
  Current electrodes at midpoints between potential electrodes.
- **Sampling Interval:** Ex = 100 meters
  Ey = 200 meters
- **Infinite Pole Location:** 682814E, 5492066N (WGS 84, Zone 10U)
  82814E, 92066N - Grid
- **Spectral Domain:** Tx = Frequency-domain square-wave current
  Rx = Full waveform time-series acquisition
  Data processing/output in frequency-domain

2.1.2 MT Surveys

- **Technique:** Tensor soundings, remote-referenced
- **Base Configuration:** 24 Ex = Continuous In-line E-fields
  13 Ey = Alternating (2-station) cross-line E-fields
  1 pair LF coils
  1 pair HF coils
- **Remote Configuration** 1 Ex = in line E-fields
  1 Ey = cross-line E fields
  1 pair LF coils
  1 pair HF coils
- **Array Length:** 2.4 km
- **Number of Arrays/line:** 1
- **Dipole Spacing:** 100m
- **Sampling Interval:** Ex = 100 meters
  Ey = 200 meters
- **Ex/Ey Sampling Ratio:** 24:13

[5] *Note: Cross-Line Ey voltages obtained for future reference purposes – not presented in cross-sectional plots.*

- **E/H Sampling Ratio:** Ex = 24:1
  Ey = 13:1
- **Remote-reference Measurements:** 1 Hx/Hy set (1 Ey/Ex set for verification/monitoring)
- **Remote Reference Position:** 681592E, 5464756N (WGS 84, Zone 10U)
- **Frequency bandwidth:** 0.01 to 10000 Hz.
- **Data Acquisition:** Full-waveform time-series acquisition
  Data processing/output in frequency-domain.

2.2 SURVEY COVERAGE

2.2.1 DCIP Survey

LINE	SET UP	Min P1	Max P2	Min Tx	Max Tx	Coverage (km)	Coverage (km) with Tx extension
82800	1	82800	85200	82750	85750	2.4	3.0
83000	1	82800	85200	82750	85750	2.4	3.0
83200	1	82800	85200	82750	85750	2.4	3.0
83400	1	82800	85200	82750	85750	2.4	3.0
83600	1	82800	85200	82750	85750	2.4	3.0
83800	1	82800	85200	82750	85750	2.4	3.0
84000	1	82800	85200	82750	85750	2.4	3.0
84200	1	82800	85200	82750	85750	2.4	3.0
84400	1	82800	85200	82750	85750	2.4	3.0
84600	1	82800	85200	82750	85750	2.4	3.0
84800	1	82800	85200	82850	85750	2.4	2.9
85000	1	82800	85200	82850	85750	2.4	2.9
85200	1	82800	85200	82850	85750	2.4	2.9
					TOTAL	31.2	38.7

Table I, Max and Min Pole-Dipole Electrode Position

2.2.2 MT Survey

LINE	SETUP	Min EXTENT (m)	Max EXTENT (m)	Coverage (km)
84200	1	82800	85200	2.4
84400	1	82800	85200	2.4
			TOTAL	**4.8**

Table II. MT Survey Coverage (Electrode to Electrode)

3. INVERSIONS AND THE RESULTS

In this section, results of the 2D inversion of the Titan-24 data are presented as cross-sections along each survey line. The observed anomalies are also presented and discussed as potential drilling targets.

The Titan-24 system acquired two types of geophysical data; direct current resistivity (DC), and induced polarization (IP). For demonstration purposes, two magnetotelluric (MT) measurements were also carried out along two DC/IP lines. Both MT and DC methods are used to resolve resistivity distribution of the subsurface by measuring the electric or electromagnetic fields, respectively. In this report, results of the 2D inversion of the MT data long one line is presented and discussed, for comparison purposes.

In the induced polarization method, electrical capacitance or chargeability of the subsurface is measured. Chargeability data can be used to locate zones of massive or disseminated mineralization in the subsurface. Sulphides and graphite minerals are considered as materials with strong chargeability response, therefore, the IP method is effectively used in base-metal explorations.

Detailed description of the DC, IP, and MT methods used in this survey can be found in Appendix E.

3.1 OVERVIEW OF INVERSION AND INTERPRETATION PROCEDURE

3.1.1 Inversion of Direct Current (DC) and Induced Polarization (IP) data

The Titan-24 DC and IP data were inverted to produce cross-sections of the true resistivity and chargeability variations along the survey lines. The UBC DCIP2D inversion code was used for the 2D inversion of the DC and IP data. Three 2D inversions were carried out along each line. Potential difference (voltage) and phase values were used as input data in the DC and IP inversions, respectively. The DC data was inverted using an unconstrained 2D inversion with a homogenous half-space of average input data as starting model. The IP data was inverted using two different reference models. In the first IP inversion, a homogenous half-space model of constant resistivity (Null) was used as the reference model. The second IP inversion utilized a reference resistivity model result from the inversion of the DC data (Smooth).

The parameters of the inversion procedure and model were selected based on the DC/IP survey parameters. The survey was carried out with dipole spacing of 100 m. Therefore, for the horizontal grid size in the inversion model, three cells were used between each dipole location. For the vertical mesh, a fine mesh of 20 m was used from the surface to a depth of 300 m. From 300 m to a depth of ~800 m a cell size of 50 m was used. Below 800 m the cell size increases exponentially. For each inversion, a few trials were carried out using different data error conditioning to find the optimum error value that allows the inversion process to converge while preserving the subtle features of the dataset. The error conditioning is dataset dependent and must be evaluated for each individual dataset. A summary of the inversion parameters for each dataset and each line is shown in Table III.

3.1.2 Inversion of Magnetotellurics (MT) data

For demonstration purposes, two MT profiles were measured along two DC/IP lines. Results of the 2D inversion of the MT data along line L84400 is presented here, for comparison with the DC inversion results. The MT data was inverted using two different 2D inversion algorithms. Un-rotated TE- and TM-mode apparent resistivity and phase data were used as input in the inversions.

The first inversion procedure was carried out using the Quantec proprietary Phil Wannamaker 2D inversion algorithm (PWM) using a modified regularization scheme. The second inversion was carried out using the 2D Randy Mackie inversion code (RLM). Both 2D inversions were completed using a flat-earth model (no topography) and a starting model utilizing a homogenous half-space of 100 Ω.m. Table III summarizes the parameters used in these inversions.

Line ID	Data Type (IP reference)	Number of Data	Error Floor (%)	Number of Iteration	RMS Error (%)
82800	DC	640	5	29	1
	IP (Smooth/Null)	690	10	(34/15)	1
83000	DC	622	5	15	1
	IP (Smooth/Null)	635	5	(17/21)	1
83200	DC	680	5	14	1
	IP (Smooth/Null)	670	5	(12/14)	1
83400	DC	701	5	14	1
	IP (Smooth/Null)	652	5	(11/11)	1
83600	DC	671	5	18	1
	IP (Smooth/Null)	590	5	(11/11)	1
83800	DC	693	5	28	1
	IP (Smooth/Null)	627	5	(13/15)	1
84000	DC	708	5	26	1
	IP (Smooth/Null)	705	5	(12/12)	1
84200	DC	701	5	24	1
	IP (Smooth/Null)	711	5	(12/12)	1
84400	DC	670	10	17	1
	IP (Smooth/Null)	713	5	(12/11)	1
	MT (PWM/RLM)	874	5	(50/50)	(3.0/3.2)
84600	DC	705	5	11	1
	IP (Smooth/Null)	718	5	(12/12)	1
84800	DC	685	5	12	1
	IP (Smooth/Null)	696	5	(30/26)	1
85000	DC	696	5	24	1
	IP (Smooth/Null)	691	5	(22/30)	1
85200	DC	696	5	16	1
	IP (Smooth/Null)	694	5	(11/14)	1

Table III. The DC, IP, and MT 2D inversions and parameters.

3.2 INVERSION RESULTS

The DC and IP 2D inversions were completed along 13 lines over the Miner Mountain survey area. Topography data along the survey lines were incorporated in the inversion process. Also, the MT inversion, using two different algorithms (PWM and RLM), was carried out along one line (Line L84400) using a flat-earth model. The survey lines are NS in direction with a nominal 200 m line separation (see Figure 2).

In the following sections, results of the 2D inversion of the DC, IP with Null resistivity reference model, and IP with Smooth resistivity reference model, along each line are illustrated and the observed anomalous features are described. Results of the MT 2D inversion along line L84400 are also displayed, for comparison purposes.

All sections and plan maps use a consistent and constant colour bar. The colour bars used in this interpretation are as illustrated in Figure 3. A logarithmic scale of 10 Ω.m to 1000 Ω.m for the resistivity and a linear colour scale of 0 milliradians (mrad) to 20 mrad for the chargeability cross-sections are used.

Cross-sections for each line are shown to a depth of ~800 m.

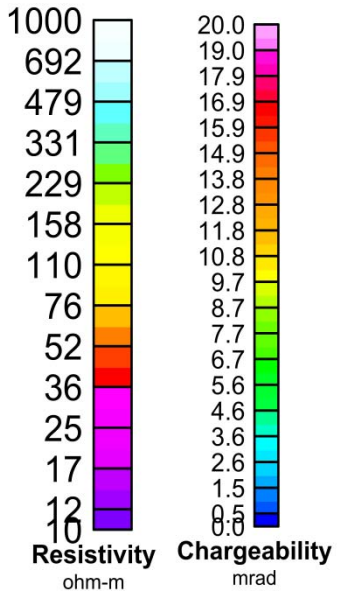

Figure 3. Interpretation colour bars.

3.2.1 Line L82800

Figure 4 displays the results of the 2D inversion of DC (top), IP using Null reference (middle), and IP using Smooth reference (bottom), data along line L82800. A very distinct resistivity contrast is observed at about 84050 m offset (DC1). This resistivity contact nearly coincides with the boundary fault that traverse the survey line at this location (Figure 2). The resistivity contact clearly borders the primarily volcanic rocks of the Nicola Group with resistivity of more than a few hundreds of Ωm in the southeast from the dominantly sedimentary materials of the Princeton Group with resistivity of less than 30 Ωm in the northwest. The resistivity contact appears to dip southward, however because the strike of the boundary fault sub parallel the survey line at this location the observed apparent dip is inconclusive.

Several IP anomalies have been resolved in both chargeability models, however with slightly differences in amplitude. The chargeability model with Null reference generally resolved the IP anomalies with higher amplitude, compared with the chargeability model with Smooth reference.

Anomaly IP1 is observed at the beginning of the line with a chargeability of more than 20 mrad. It nearly outcrops to the surface at ~82850 m offset. The extension of the anomaly to greater depths at this location must be treated with care. The geometry of the DC/IP survey produces a wedge-shape of no data coverage with depth at both ends of the survey line (edge effect). Therefore, the depth extent of the anomaly IP1 is not supported by the data.

Anomalies IP2 and IP4 are small scale shallow anomalies that outcrop at ~83050 m and ~83800 m offsets, respectively. They extend from the surface to ~100 m in depth. Anomalies IP3 and IP5 are deeper and larger features observed at ~400 m in depth with chargeability of more than 20 mrad. Anomaly IP3 is confined with depth while anomaly IP5 extends beyond the maximum depth of penetration of the survey. Therefore, the depth extents of anomaly IP5 must be treated with care.

Anomaly IP6 is an elongated feature resolved at a depth of ~150 m. Its highest chargeability value is observed at ~84900 m offset with a chargeability of more than 13 mrad. The anomaly exhibits larger lateral extents in the IP model with Null reference.

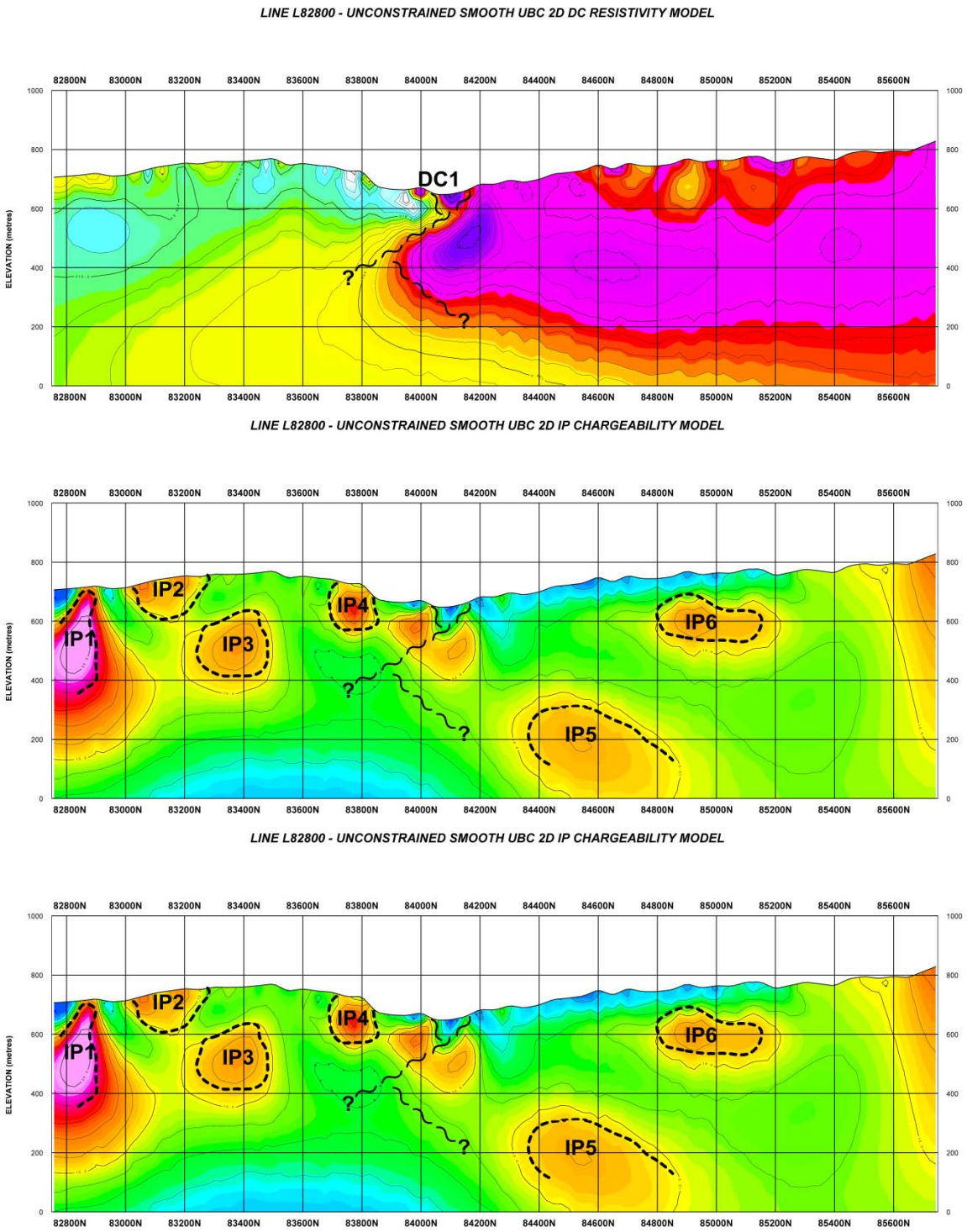

Figure 4. Results of the 2D inversion of the DC (top), IP Null reference (middle), and IP Smooth

reference (bottom) data along line L82800.

3.2.2 Line L83000

Results of the DC and IP 2D inversions along line L83000 are shown in Figure 5. Anomaly DC2 marks the resistivity contrast between the Nicola Group and the Princeton Group. The location of the resistivity contrast corresponds well with the location of the boundary fault where it crosses the survey line. The contrast separates the resistivity of the Nicola Group with resistivities between 100 Ωm and 500 Ωm to the south from the Princeton Group with of one order of magnitude lower resistivity to the north. The northward apparent dip of the resistivity contrast is in agreement with the NW dip angle of the fault.

A number of chargeable anomalous features as high as ~13 mrad are identified in the chargeability models. This level of chargeability is considered as moderate when compared with the anomalies observed in line L82800. Anomaly IP7 is the most prominent elongated feature observed in the south part of the survey line. The anomaly starts from the beginning of the line and extends to ~83800 m offset with varying depth and thickness. In the Chargeability model with Smooth reference this anomaly extends beyond 84000 m offset. Even though both inversions converge and satisfy the RMS error criteria, close inspection of the model Norms show that the model Norm is much smaller in the model with Smooth reference. It indicates that this model is probably overly smoothed, which results in the smearing out the boundary of the anomaly. Also, the extension of the anomaly to great depth at the beginning of the line is not confirmed by the data because of the edge effect.

Two small scale isolated anomalies, IP8 and IP9, are resolved in chargeability models at depths of ~400 m and ~150 m, respectively. These anomalies are more pronounce in the model with Null reference.

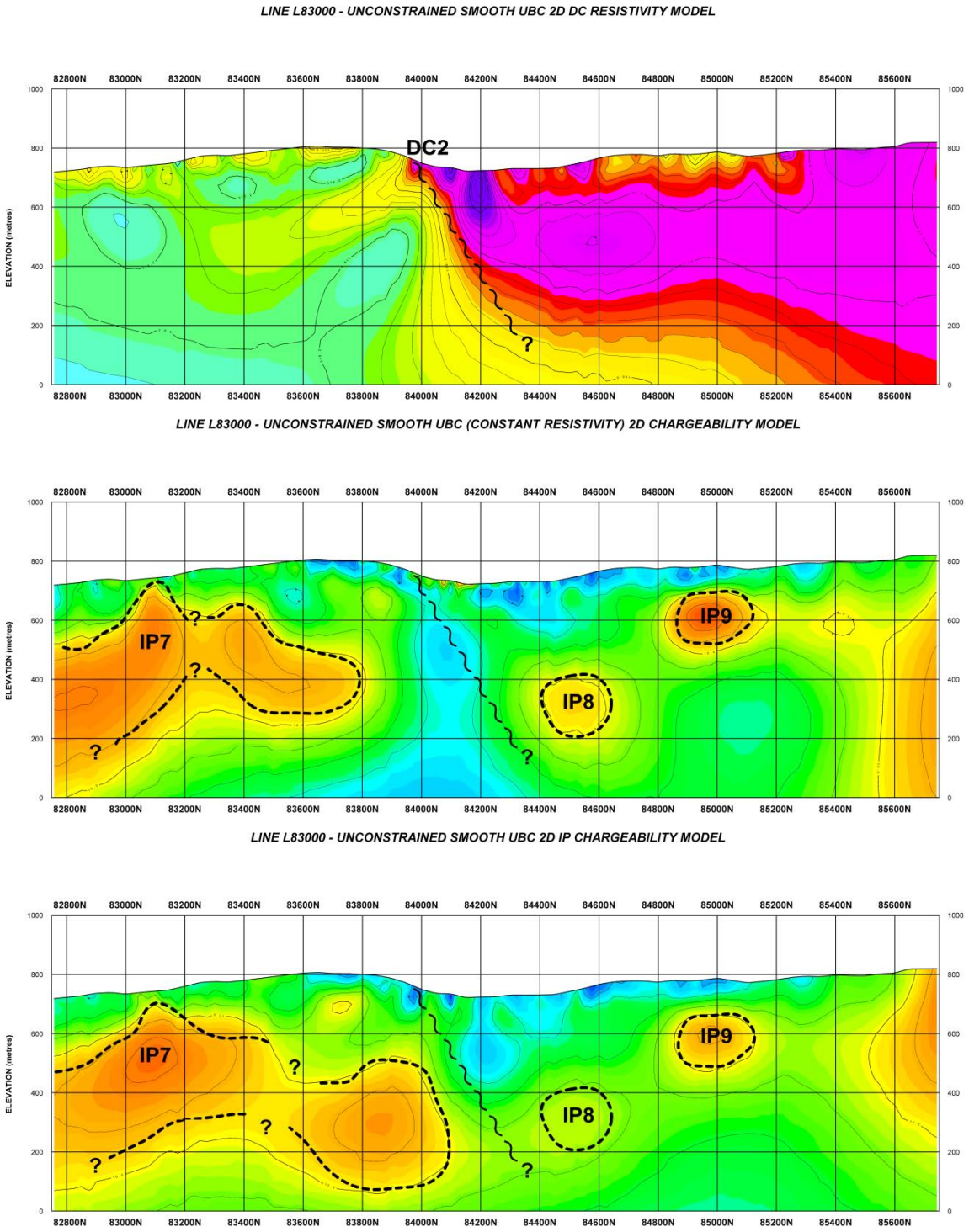

Figure 5. Results of the 2D inversion of the DC (top), IP Null reference (middle), and IP Smooth reference (bottom) data along line L83000.

3.2.3 Line L83200

Figure 6 illustrates the results of the 2D inversion of DC (top), IP using Null reference (middle), and IP using Smooth reference (bottom) data along line L83200. Strong resistivity contrast marked by anomaly DC3 coincides well with the boundary fault at ~84450 m offset. A resistive low anomaly, DC4, that outcrops in the south of the boundary fault within the Nicola Group is probably a detached structure associated with the folding and overthrusting of the Princeton Group.

Anomaly IP10 is confirmed in both chargeability models, however with differences in depth extent. This anomaly centres at a depth of ~200 m; however the anomaly appears to extend to a great depth in the Smooth model. The depth extent of the anomaly observed in the Smooth model could be artefact caused by the reference resistivity model. Also, two anomalies resolved in both ends of the survey line cannot be confirmed because of the edge effect.

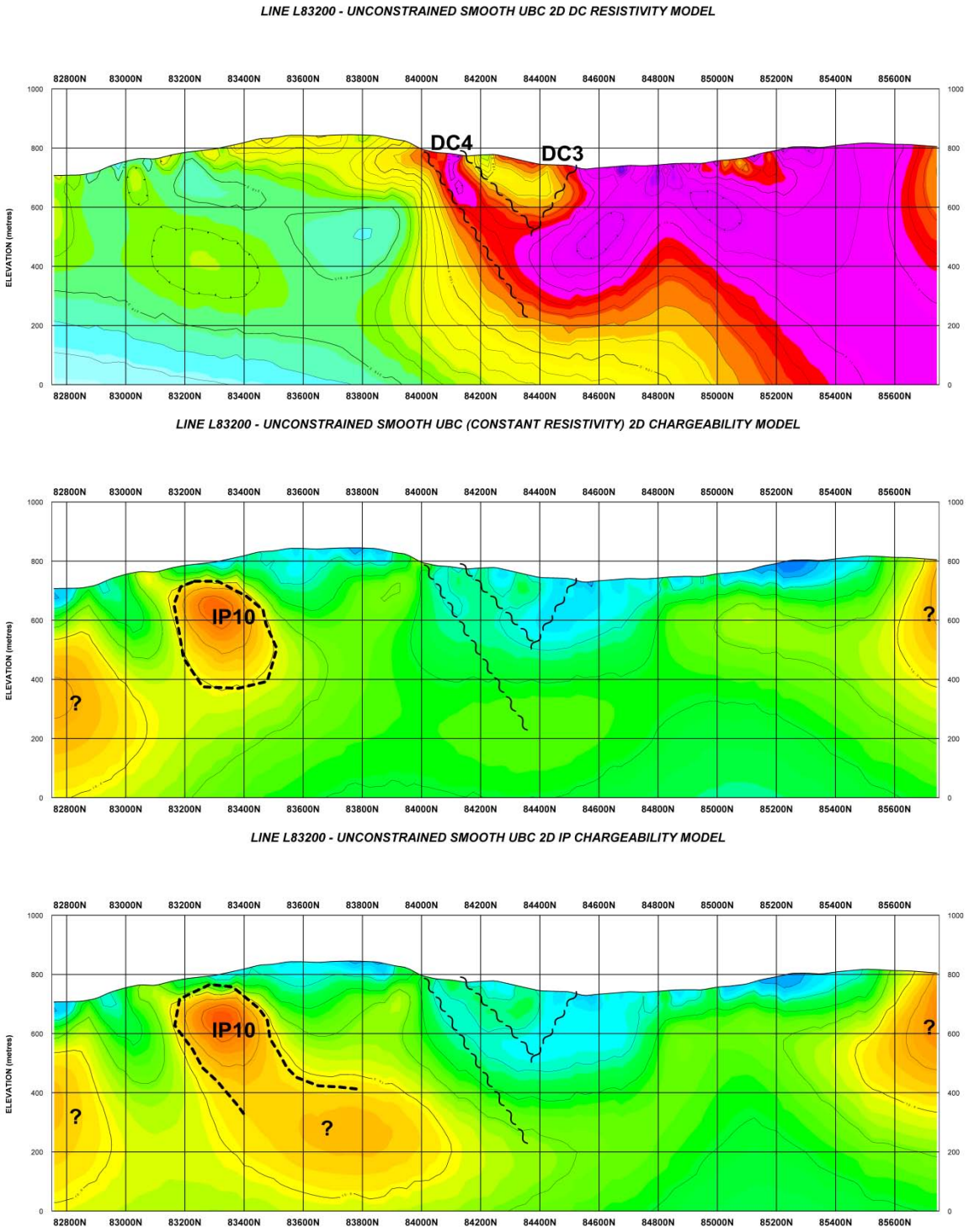

Figure 6. Results of the 2D inversion of the DC (top), IP Null reference (middle), and IP Smooth reference (bottom) data along line L83200.

3.2.4 Line L83400

Results of the DC and IP 2D inversions along line L83400 are shown in Figure 7. The boundary fault crosses the survey line at ~84950 m offset (anomaly DC5). The resistivity of the Nicola Group ranges between 100 Ωm and 300 Ωm and the resistivity of the Princeton Group vary between 10 Ωm and 50 Ωm.

A background chargeability of ~6 mrad is observed along the profile; except for a relatively large and slightly elevated chargeability feature that is observed in the south part of the survey line (Anomaly IP11). The anomaly has a moderate chargeability of ~10 mrad and extends from the beginning of the line to ~83800 m offset at a depth of ~400 m. The anomaly appears to ascend to a shallower depth or possibly outcrops at ~83250 m.

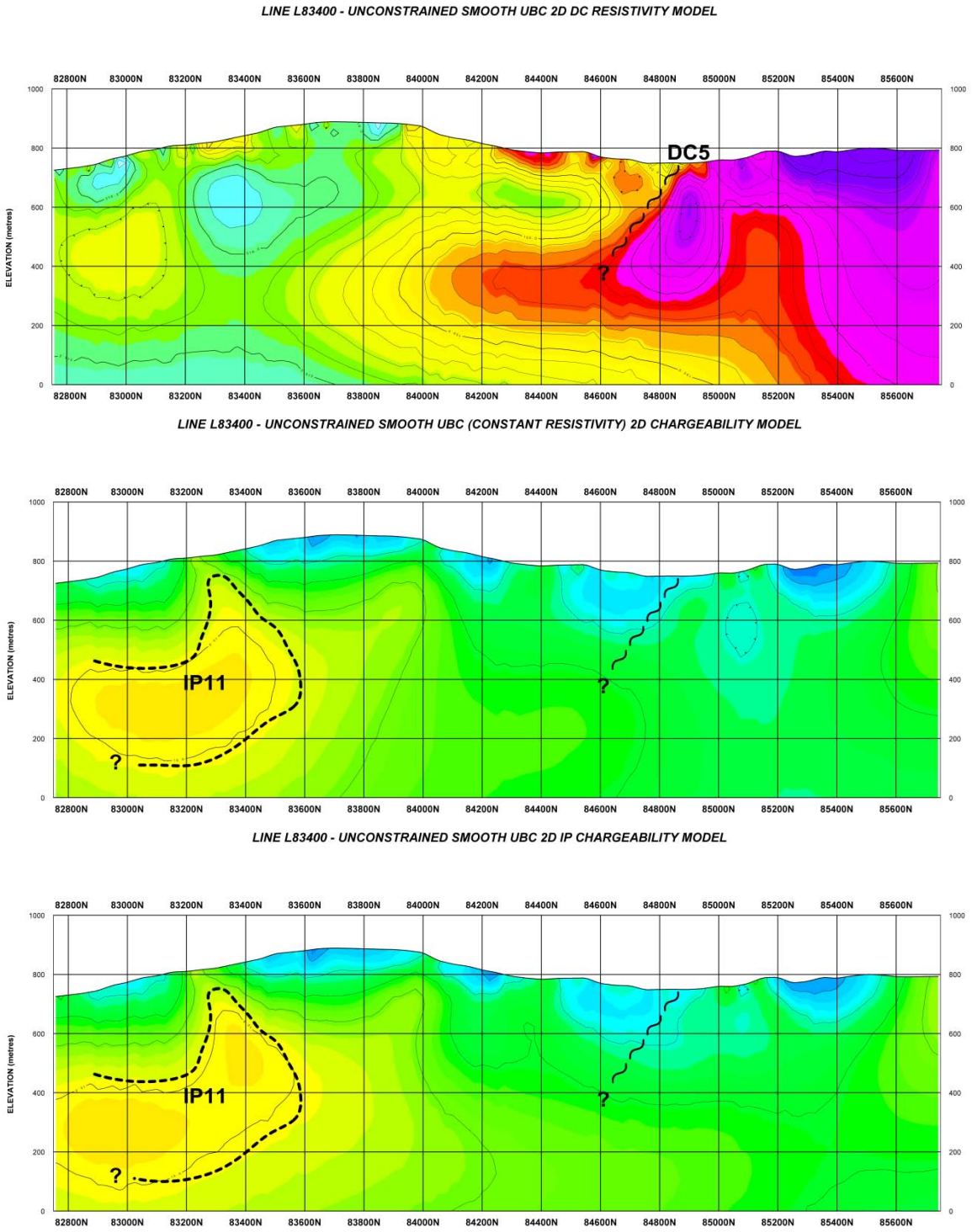

Figure 7. Results of the 2D inversion of the DC (top), IP Null reference (middle), and IP Smooth reference (bottom) data along line L83400.

3.2.5 Line L83600

In Figure 8 the results of the 2D inversion of the DC and IP data along line L83600 are shown. Boundary fault is identified by a strong resistivity contrast at ~85200 m offset (anomaly DC6). Background resistivity associated with the Nicola Group is in the order of 100 Ωm, which is relatively lower than the one observed in the western part of the survey grid.

The chargeability models display a uniform chargeability of ~6 mrad across the survey line; except for an elevated chargeability zone between 83400 m and 83700 m (Anomaly IP12). This anomaly is observed at a depth of ~400 m with a chargeability of ~10 mrad. It shows the same characteristics as the anomaly observed along line L83400.

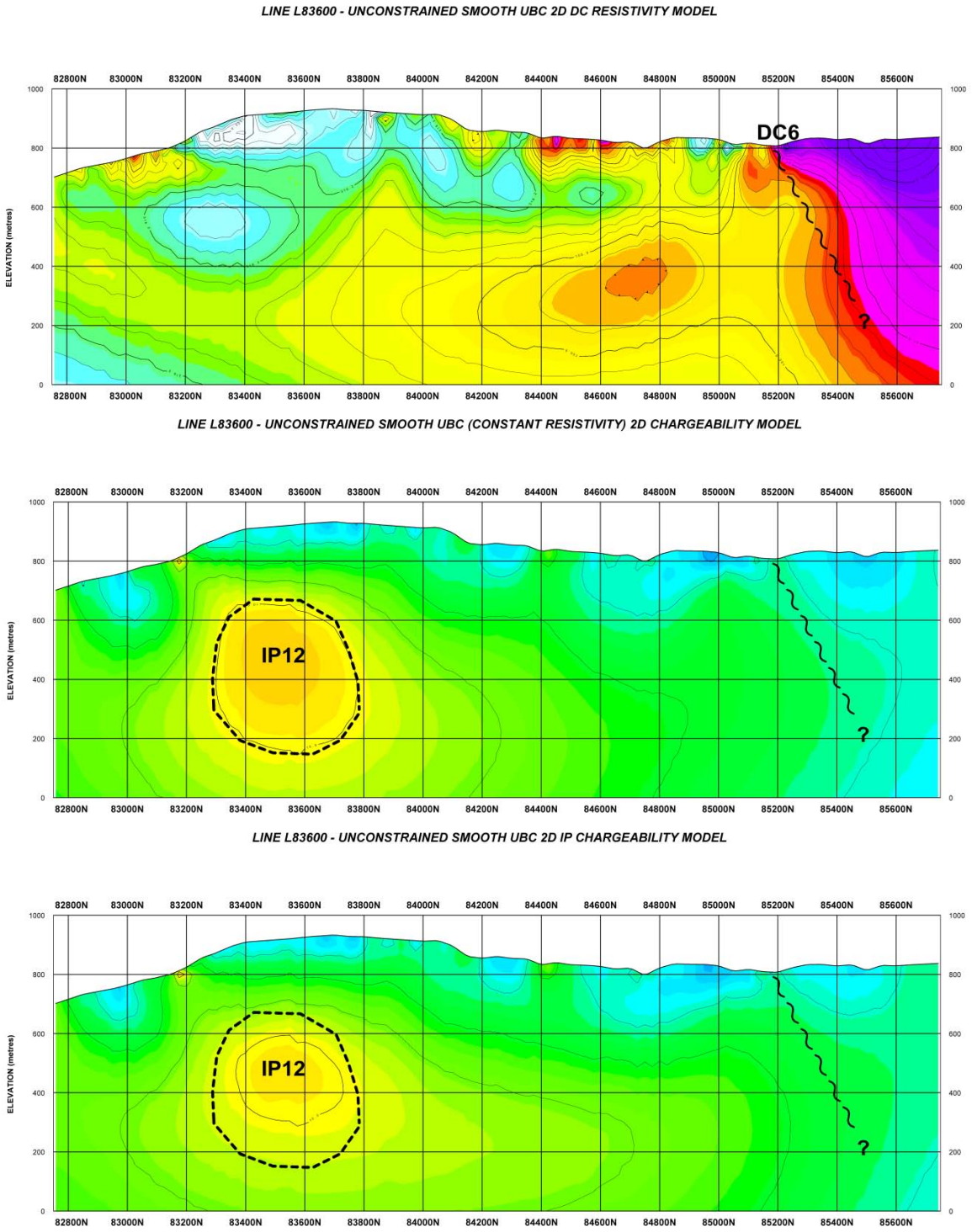

Figure 8. Results of the 2D inversion of the DC (top), IP Null reference (middle), and IP Smooth reference (bottom) data along line L83600.

3.2.6 Line L83800

A strong resistivity contrast along line L83800 is observed at ~85450 m offset (Figure 9; Anomaly DC7). According to the geology map the survey line ends a short distance from the boundary fault. Therefore, the resistivity contact observed along this line is either the off-line effects that bias the resolved 2D resistivity model or the boundary fault map is inaccurate at this location.

The south part of the chargeability models hosts a relatively extensive chargeable anomaly with a chargeability of ~10 mrad (Anomaly IP13). Depth to top of the anomaly ranges from 400 m to 500 m and the anomaly extends beyond the maximum depth of resolution of the survey.

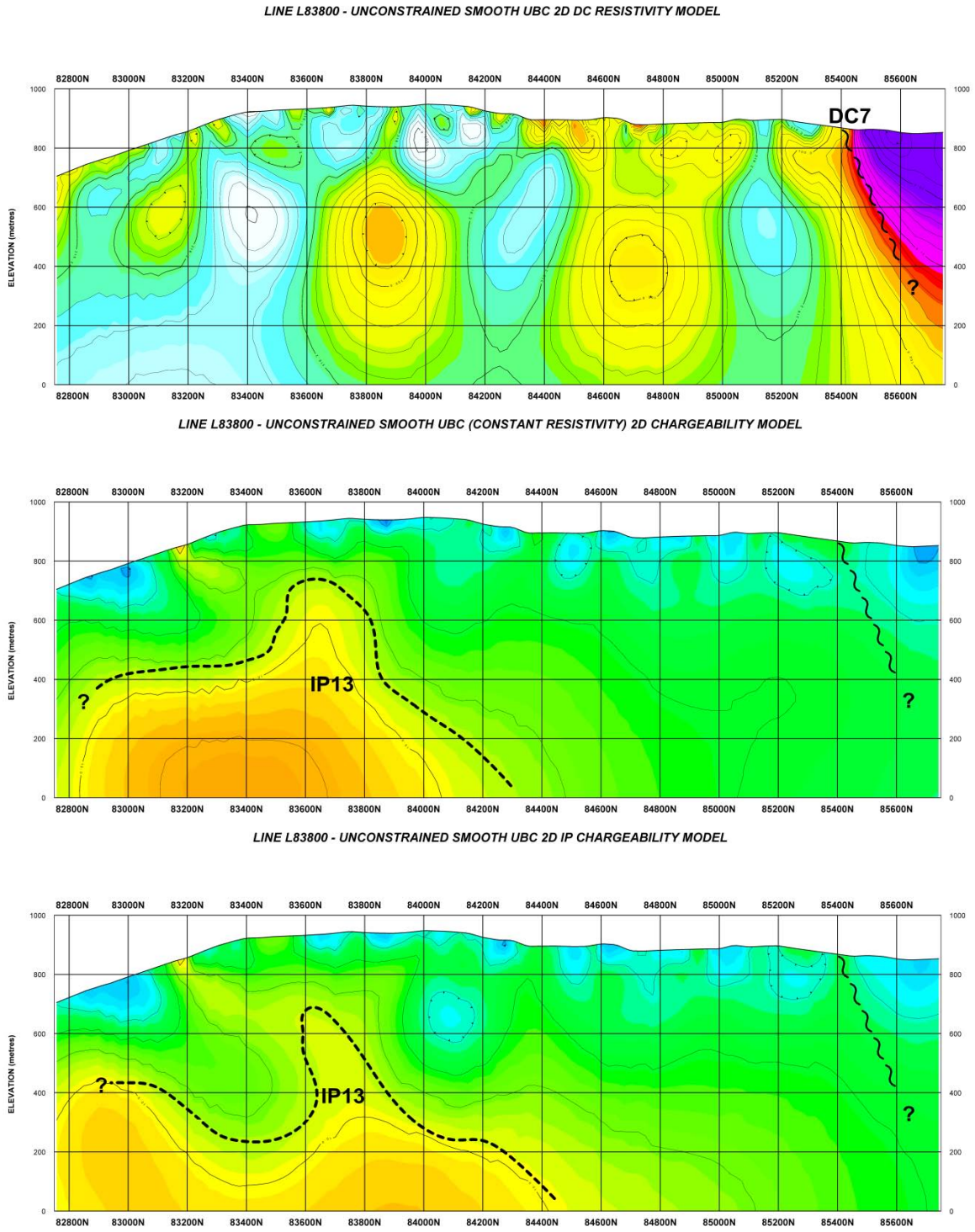

Figure 9, Results of the 2D inversion of the DC (top), IP Null reference (middle), and IP Smooth reference (bottom) data along line L83800.

3.2.7 Line L84000

Results of the DC and IP 2D inversions along line L84000 are displayed in Figure 10. The resistivity along the survey line varies from 100 Ωm to more than 1000 Ωm. This resistivity range is associated with the Nicola Group.

In the chargeability models, a large scale and relatively high chargeability feature is observed in the south part of the survey line (Anomaly IP14). Depth to top of the anomaly varies from 400 m to 500 m and it has an observed chargeability that peaks at 12 mrad. The anomaly extends to a depth great than the maximum penetration depth of the survey. This anomaly appears to be a part of a large elongated anomaly that is observed at great depths in the central south part of the survey grid (see Figure 7 to Figure 9; anomalies IP11 to IP13).

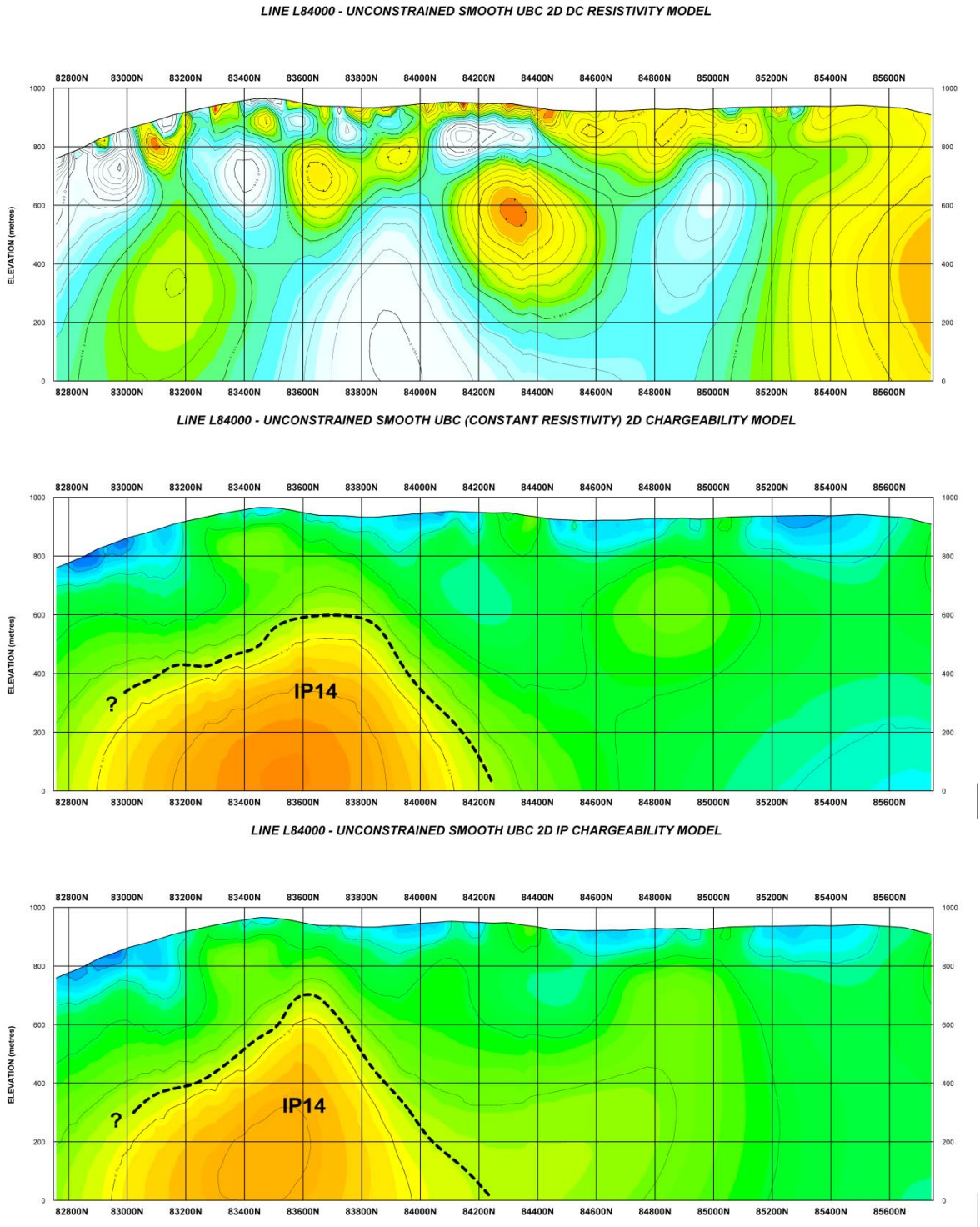

Figure 10. Results of the 2D inversion of the DC (top), IP Null reference (middle), and IP Smooth reference (bottom) data along line L84000.

3.2.8 Line L84200

In Figure 11 the results of the 2D inversion of DC and IP data along line L84200 are shown. In the resistivity cross-section, relatively shallow and low resistivity materials of ~100 Ωm overly more resistive rocks with resistivity of more than several hundreds of Ωm. In the chargeability models, Anomaly IP15 in the south part of the cross-section denotes the continuation of the elongated chargeable anomaly that has already been observed in the southern part of the survey area. It has a maximum chargeability of ~12 mrad and the depth to the top of the anomaly varies from 500 m to 600 m.

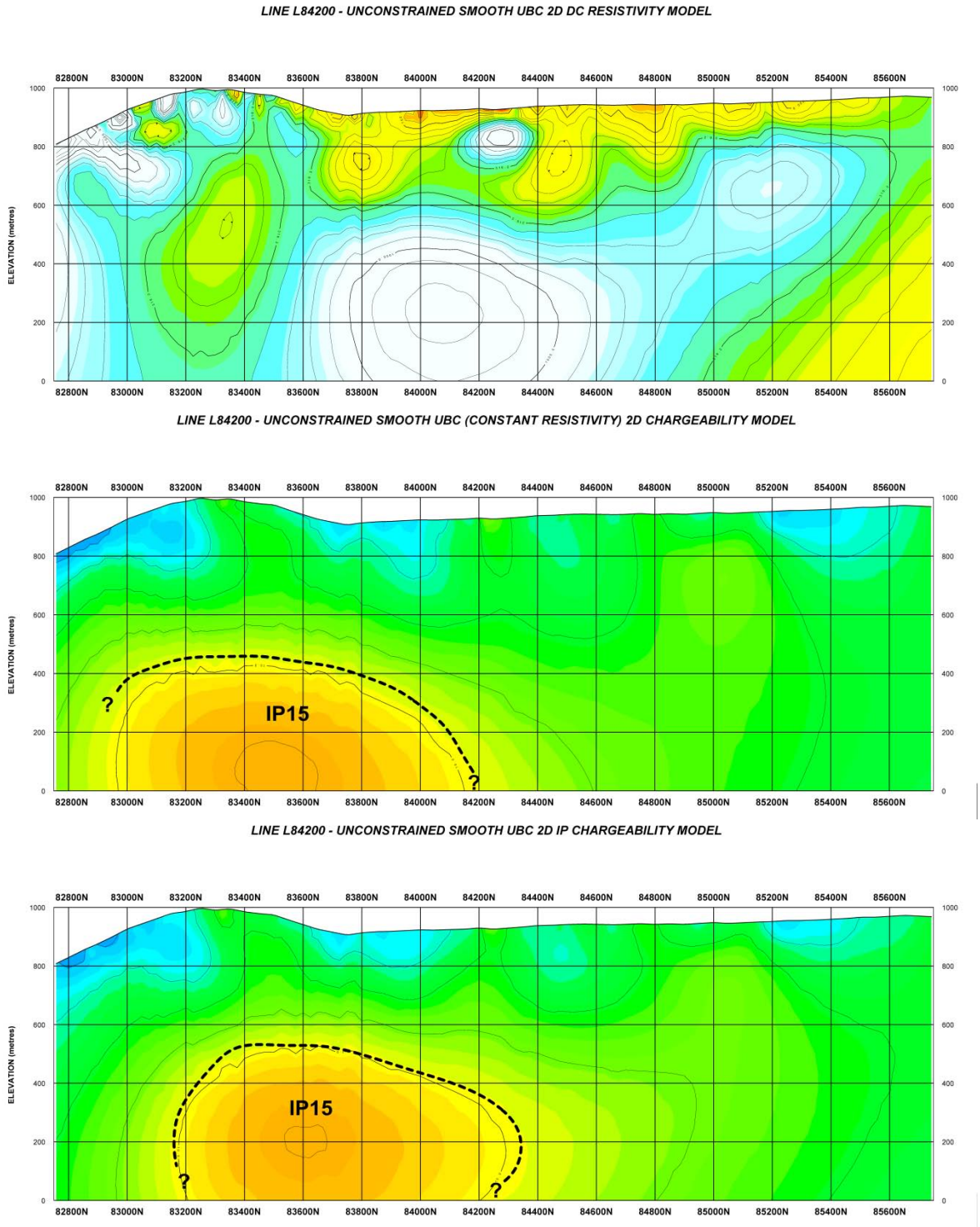

Figure 11. Results of the 2D inversion of the DC (top), IP Null reference (middle), and IP Smooth reference (bottom) data along line L84200.

3.2.9 Line L84400

Figure 12 displays results of the DC and IP 2D inversions along line L84400. Resistivity of the shallow subsurface from the beginning of the line to ~85250 m offset varies from 100 Ωm to 150 Ωm. The bottom of this moderately resistive layer undulates along the survey line and overlies resistive materials with resistivity of several hundreds of Ωm. Note that in the current extension zone (from 85200 m offset to the end of the line) there is no receiver dipole. Therefore, the very resistive subsurface observed in the shallow part of the model in this area is likely inversion artefact due to no shallow data control.

Anomaly IP16 resolved in the chargeability models is the extension of the elongated chargeable anomaly observed in the southern part of the survey area. It has a chargeability of ~12 mrad and extends from 83200 m to 84400 m offset.

Results of the 2D inversion of the test MT measurements carried out along line L84400 are shown in Figure 13. Two different inversion algorithms, PWM and RLM, were used in the inversions and the resistivity cross-sections along the survey profile are plotted in the same colour scale as in the DC inversion results, for comparison purposes. Note that the MT resistivity model covers profile length up to 85200 m offset only and not the current extension portion.

Both the PWM and the RLM inversions resolved a conductive anomalous feature at ~28900 m offset at a depth of ~200 m (Anomaly MT1). This anomaly was not resolved in the inversion of the DC data because of the edge effect inherent in DC survey coverage. The shallow and moderate resistive layer that was observed in the DC model is reproduced here with slightly different depth extent.

Anomaly MT2 that is observed in the PWM inversion with a resistivity of ~100 Ωm has been resolved in the RLM inversion with different continuity. This feature is also resolved in the DC inversion with different characteristics and amplitude (Figure 12; DC8).

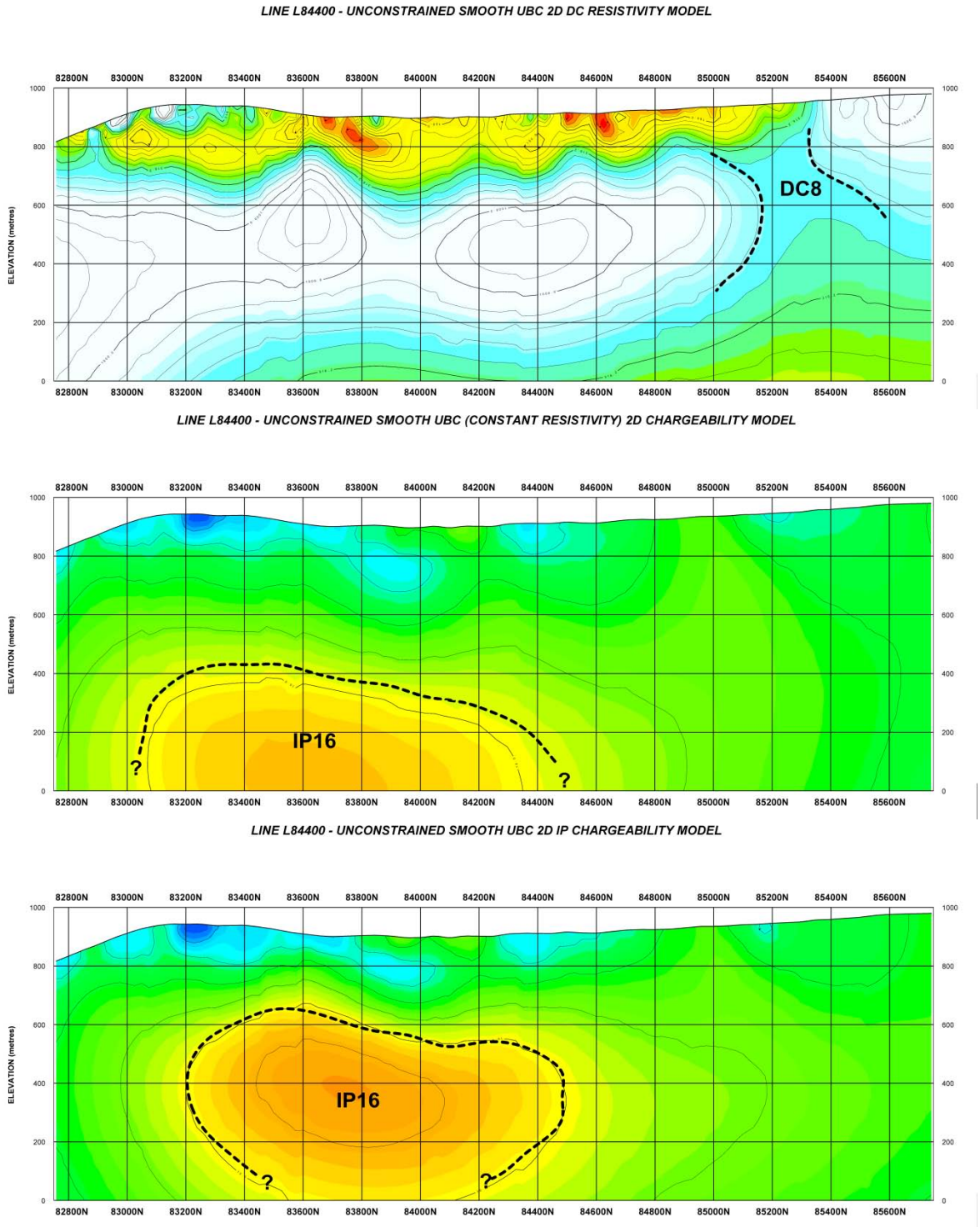

Figure 12. Results of the 2D inversion of the DC (top), IP Null reference (middle), and IP Smooth reference (bottom) data along line L84400.

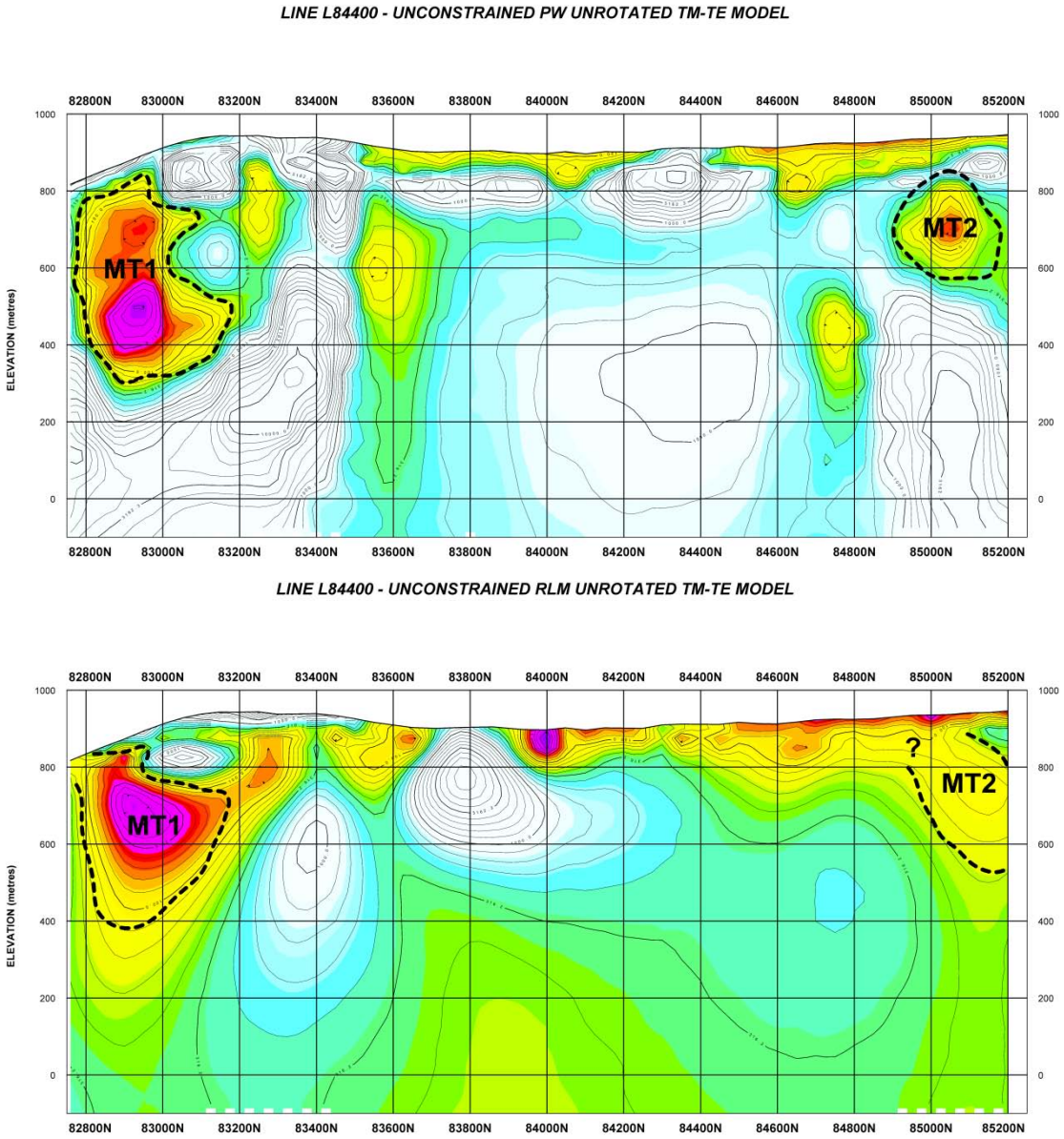

Figure 13. Results of the 2D inversion of the MT data using PWM (top) and RLM (bottom) inversion codes along line L84400.

3.2.10 Line L84600

In Figure 14 the results of the 2D inversion along line L84600 are displayed. A shallow and moderate resistivity layer of ~100 Ωm overlies resistive rocks with resistivity of more than 700 Ωm. A sharp resistivity gradient separates the moderate and the high resistivity layers. In the chargeability models, a background chargeability of ~6 mrad is observed throughout the survey line. Anomaly IP17 with chargeability of ~12 mrad marks the continuation of the elongated and wide chargeable anomaly that has been observed in the southern part of the survey area (Figure 7 to Figure 12; Anomalies IP11 to IP16). The anomaly is resolved at a greater depth in the Null model, compared with the Smooth model.

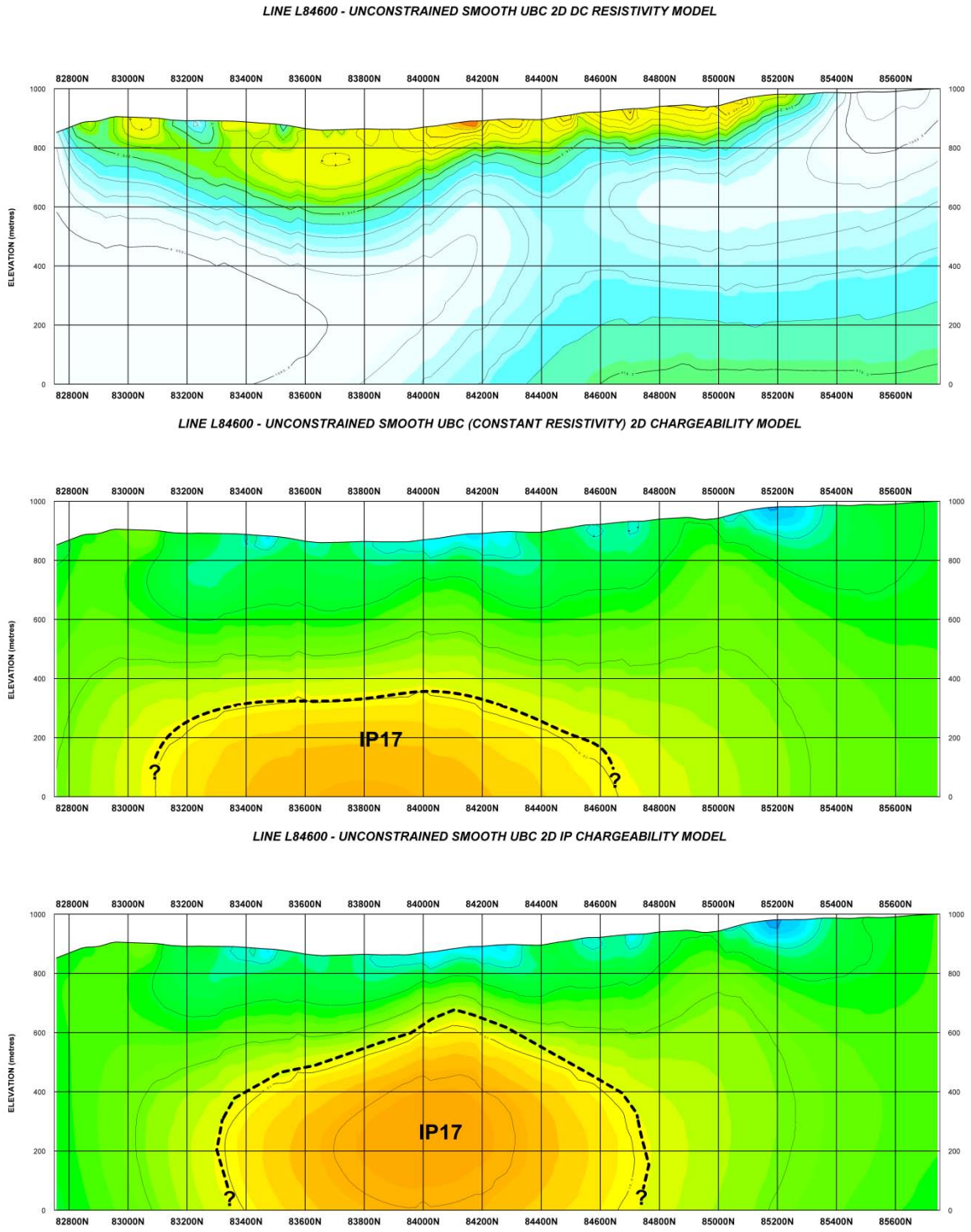

Figure 14. Results of the 2D inversion of the DC (top), IP Null reference (middle), and IP Smooth reference (bottom) data along line L84600.

3.2.11 Line L84800

Except for a few small scale shallow moderate resistive features, the resistivity is uniformly distributed along the survey line (Figure 15). The subsurface is generally characterized as high resistivity of more than 500 Ωm.

The chargeability models, however, illustrate a number of chargeable anomalous features. Anomaly IP18 is the extension of the deep elongated anomaly that has been observed across the southern part of the survey area. Several small scale isolated anomalies are observed from the surface to a depth of ~100 m (Anomalies IP19 to IP22). Larger scale anomalies, IP23, IP24, and IP25, are resolved in the south, centre, and north part of the chargeability cross-section at the depths of 100 m, 200 m, and 350 m, respectively. The very small scale surficial anomaly, IP26, observed at ~85550 m offset is located in the area with no shallow data coverage and is likely inversion artefact.

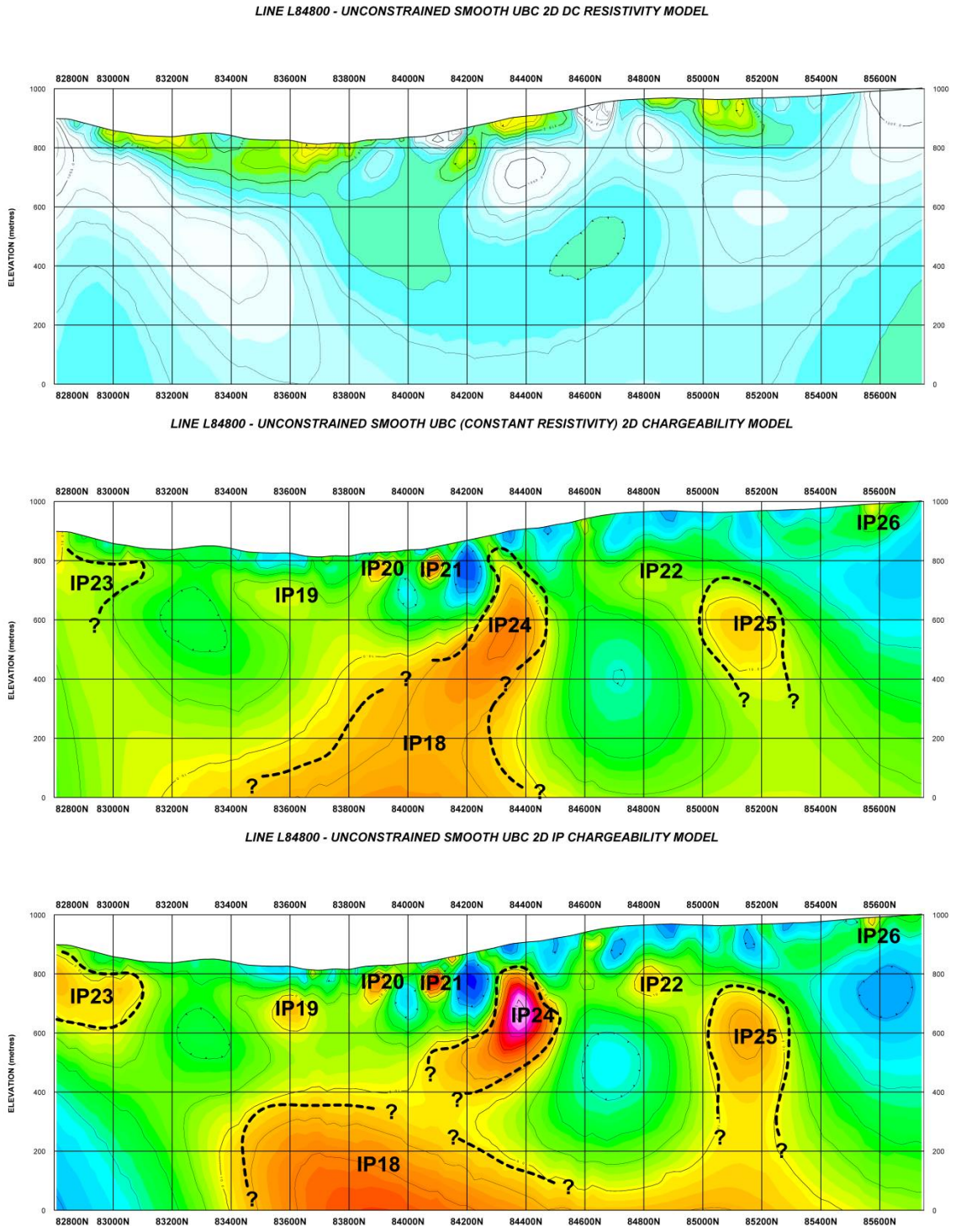

Figure 15. Results of the 2D inversion of the DC (top), IP Null reference (middle), and IP Smooth reference (bottom) data along line L84800.

3.2.12 Line L85000

The results of the 2D inversion along line L85000 are shown in Figure 16. The resistivity cross-section displays a consistently high resistivity of more than 700 Ωm across the survey line.

In the chargeability models, large scale chargeable anomalies with chargeability as high as more than 20 mrad are observed. Anomaly IP27 is mainly located within the zone with no data control, due to edge effect, and must be treated with care. A large scale anomaly, IP28, is resolved in approximately centre of the survey line. The anomaly has an irregular shape and the shallowest depth to top of the anomaly is considered to be at ~250 m in depth at ~83800 m offset. The anomaly appears to connect with a shallower and less chargeable anomaly, IP29, which nearly intercepts the surface.

Also, anomaly IP28 is seems to connect with another anomaly, IP30, to the north. Anomaly IP30 has been resolved in both IP models with slightly differences in location and chargeability magnitude. Based on the Null model, the anomaly is centred at ~84600 m offset with depth to top of the anomaly at ~400 m.

A small scale isolated anomaly, IP31, with chargeability of more than 20 mrad is resolved at less than 100 m depth at ~83250 m offset. The anomaly does not appear to outcrop to the surface.

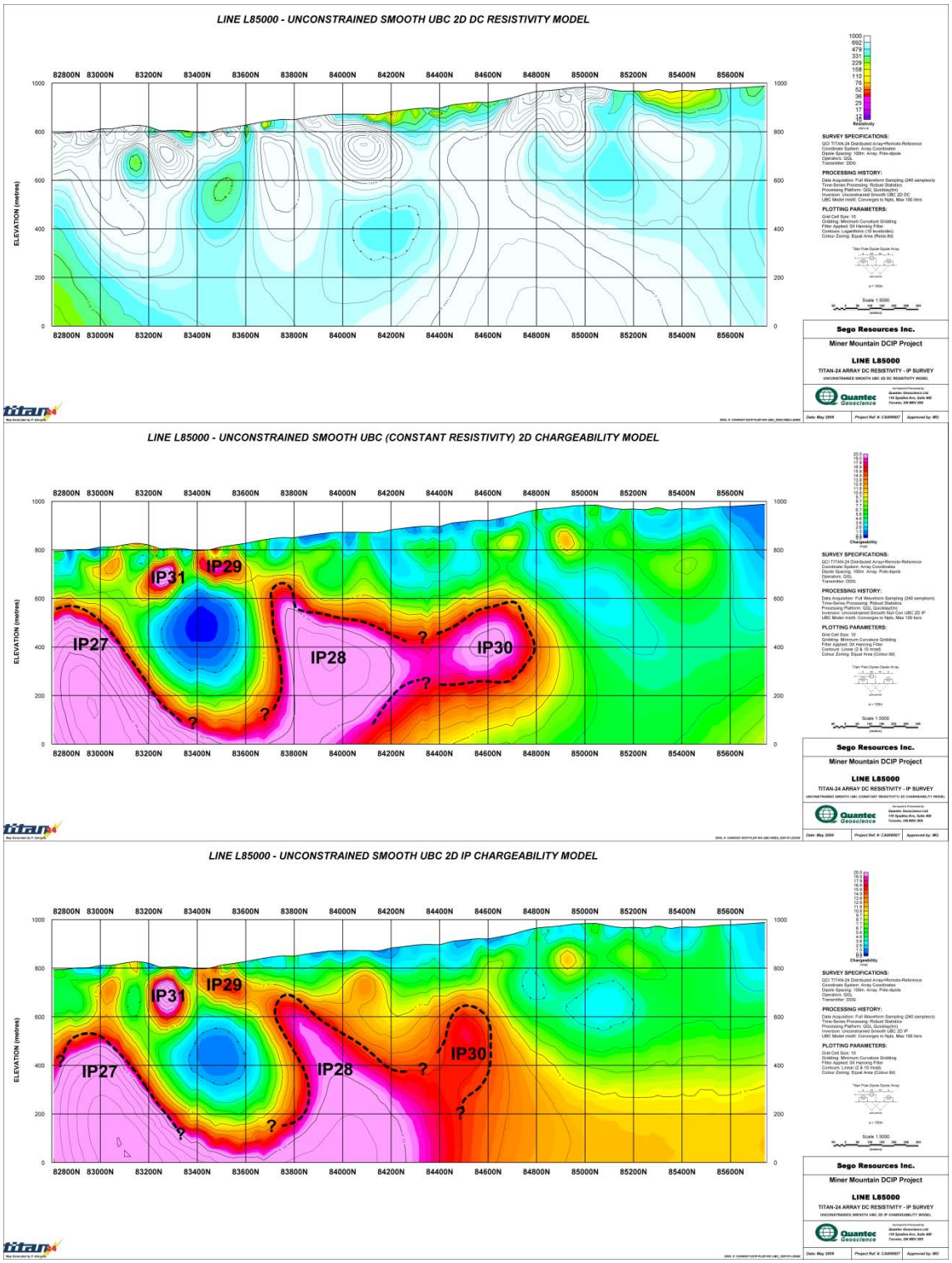

Figure 16. Results of the 2D inversion of the DC (top), IP Null reference (middle), and IP Smooth reference (bottom) data along line L85000.

3.2.13 Line L85200

Except for a small shallow thin layer in a part of the resistivity cross-section the resistivity is characterized as uniform and more than 700 Ωm throughout the survey line.

Two very large and likely connected chargeable anomalies (Anomalies IP32 and IP33) are observed in the chargeability models. There are differences in the location and extents of the anomalies resolved in the two chargeability models. In the Null model, the anomalies are connected and extend from the beginning of the survey line to ~84500 m offset. In the Smooth model, the anomalies reduce the chargeability in the middle and appear as two connected large anomalous chargeable features. In this model, the anomaly IP33 extends to ~84900 m offset and get closer to the surface with depth to top of ~150 m.

Both IP inversions converge and satisfy the global RMS misfit criteria. However, close inspection of the calculated IP responses for both chargeability models show that the Null model has a better agreement with the observed data at depths, when compared with the response from the Smooth model. Also, note that the southern extension of the anomaly IP32 with depth observed in both models lies within the area with no data control and is not supported by the data.

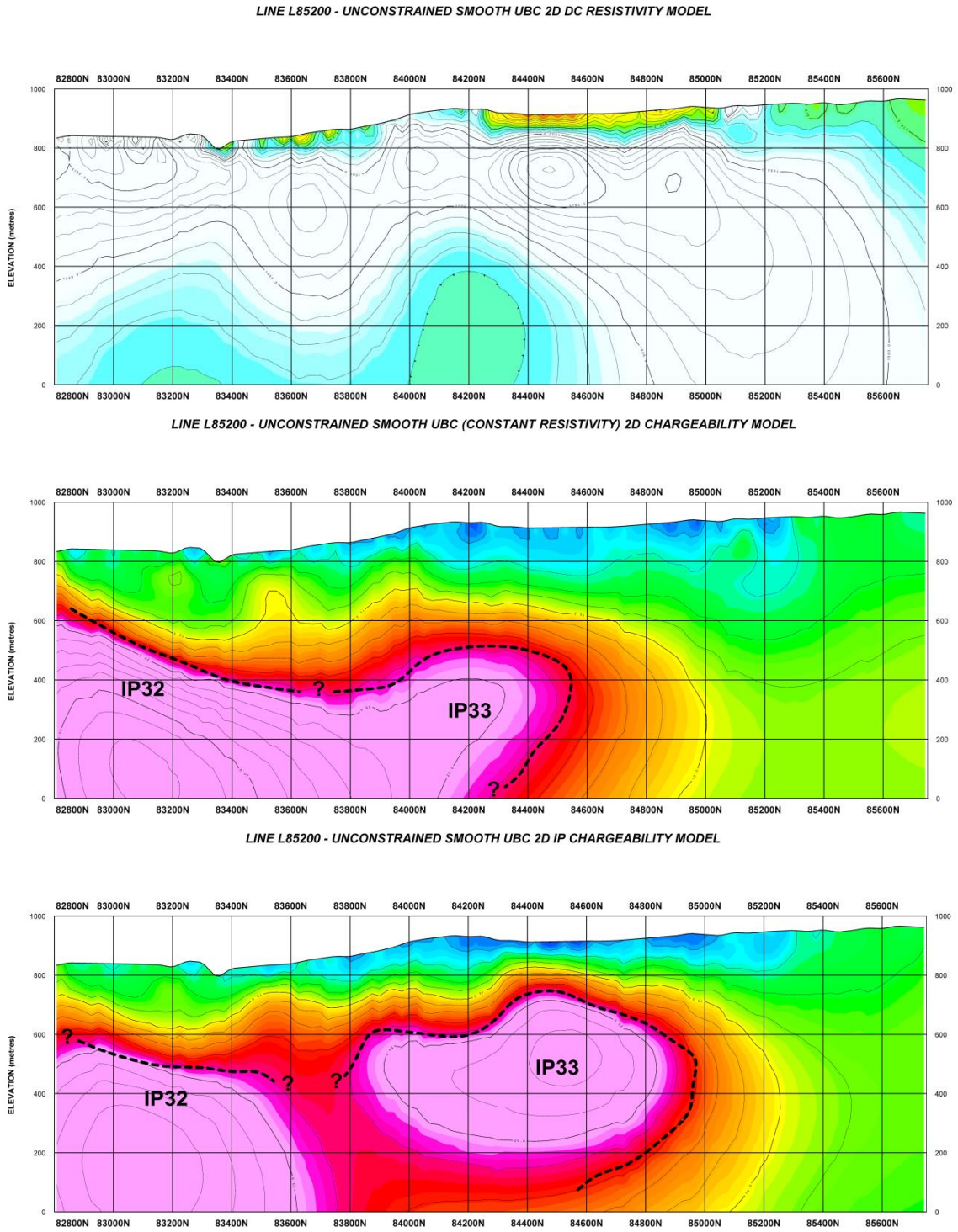

Figure 17. Results of the 2D inversion of the DC (top), IP Null reference (middle), and IP Smooth reference (bottom) data along line L85200.

3.3 INTERPRETATION

The results of the 2D inversions along the lines are interpolated and shown as plan maps, at selected depths, over the survey area. In this report, the results from Null model only are used in interpretation of the chargeability data. The results from the Smooth model generally resemble the Null model, however with minor differences at some locations. The differences could be introduced by the resistivity reference used in the IP inversion with Smooth reference.

Figure 18 through Figure 21illustrate resistivity distribution over the survey area at the depths of 0 m, 200 m, 400 m, and 600 m, respectively. The results show a very good correlation with the surface geology. The sedimentary rocks of the Princeton Group with the resistivity of less than 50 Ωm are clearly separated from the Nicola Group by a sharp resistivity contact. Small relative change in surface location of the boundary fault with respect to the resistivity contact to a depth of 400 m is an indicator of a relatively large dip angle of the fault over the survey area. Scattered small scale low resistive anomalies are observed at the surface of the survey area. However, a relatively uniform resistivity low and resistivity high distributions associated with the Princeton Group and the Nicola Group, respectively, are observed at the greater depths.

Maps of chargeability distribution over the survey area at the depths of 0 m, 200 m, 400 m, and 600 m are shown in Figure 22 to Figure 25, respectively. In the chargeability maps, the anomalies are denoted using the same anomaly ID previously used in the chargeability cross-sections. The surface chargeability map (0 m) shows background chargeability of 0 mrad to ~5 mrad. There are several small scale chargeable anomalous features that outcrop to the surface, mainly in the western and eastern parts of the survey grid. Note that the anomalies that are observed at the surface from 85200 m offset to the end of the survey area are located in the current extension zone with no receiver dipoles. Therefore, the surface anomalies in this area are not supported by the data.

At a depth of 200 m the background chargeability increases to ~6 mrad (Figure 23). Several small to mid-size chargeable anomalies are resolved in the western and eastern parts of the survey grid. There is no difference observed in the chargeability distribution between the Princeton Group and the Nicola Group however, an elongated chargeability low anomaly is observed along the boundary fault that separates these two groups.

The elongated chargeability low anomaly along the boundary fault is relatively preserved down to 400 m in depth (Figure 24). The chargeable anomalies previously observed at the depth of 200 m in the western and eastern parts of the survey area are more pronounce at 400 m in depth with larger lateral extents and higher chargeability of more than 20 mrad. A moderately chargeable and elongated feature with SW-NE orientation and chargeability of ~10 mrad is observed at the southwest part of the survey (Anomaly M1). This anomaly extends across the whole survey area at a depth of 600 m (Figure 25; Anomaly M2).

At a depth of 600 m, a large and strong chargeable anomaly is observed along the three most eastern survey lines (Figure 25). The anomaly starts in the southeast part of the grid and extends towards the north. Eastern boundary of the anomaly has not been resolved because of the lack of the survey grid coverage.

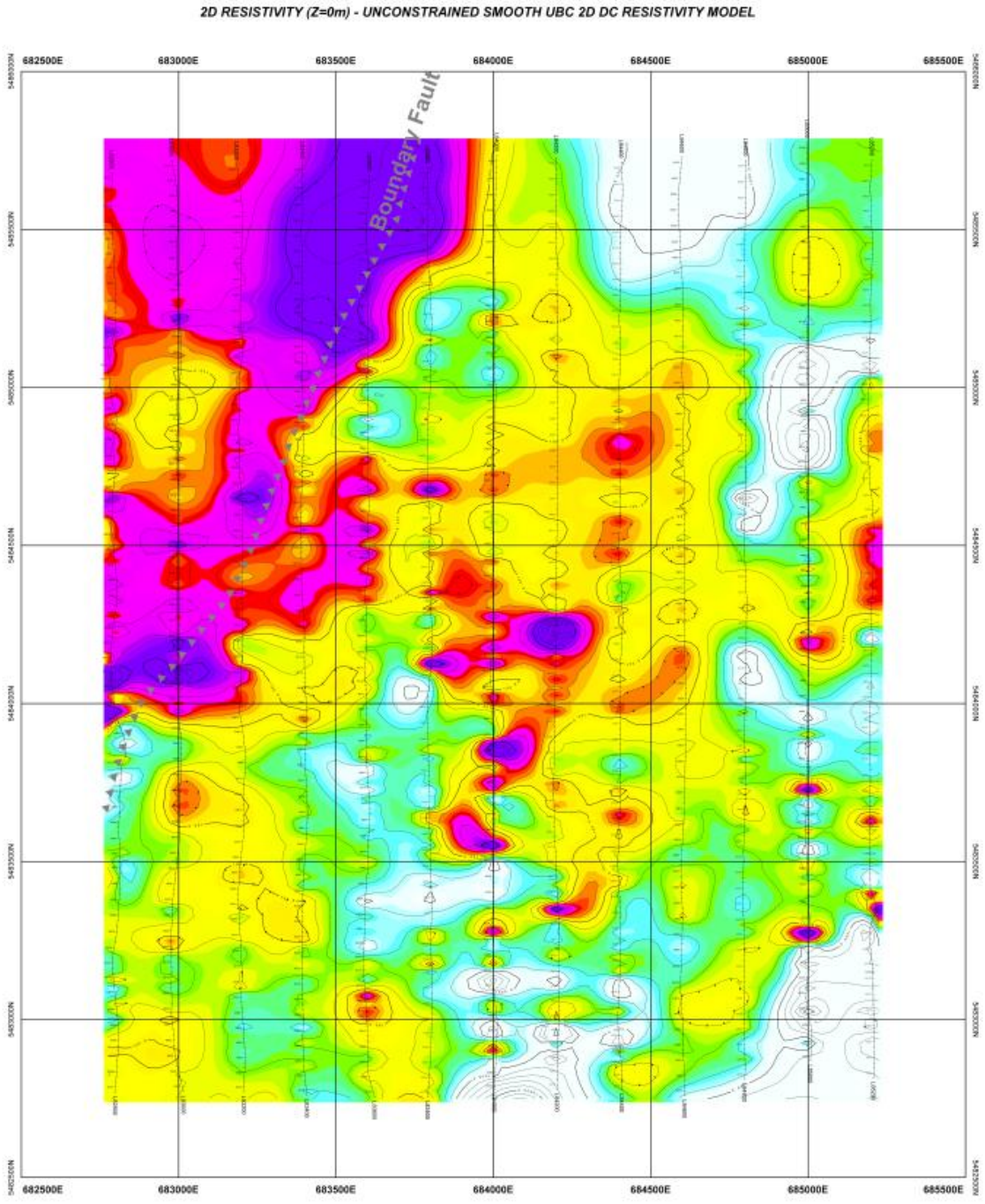

Figure 18. Plan map of the DC 2D inversion results for a depth of 0 m.

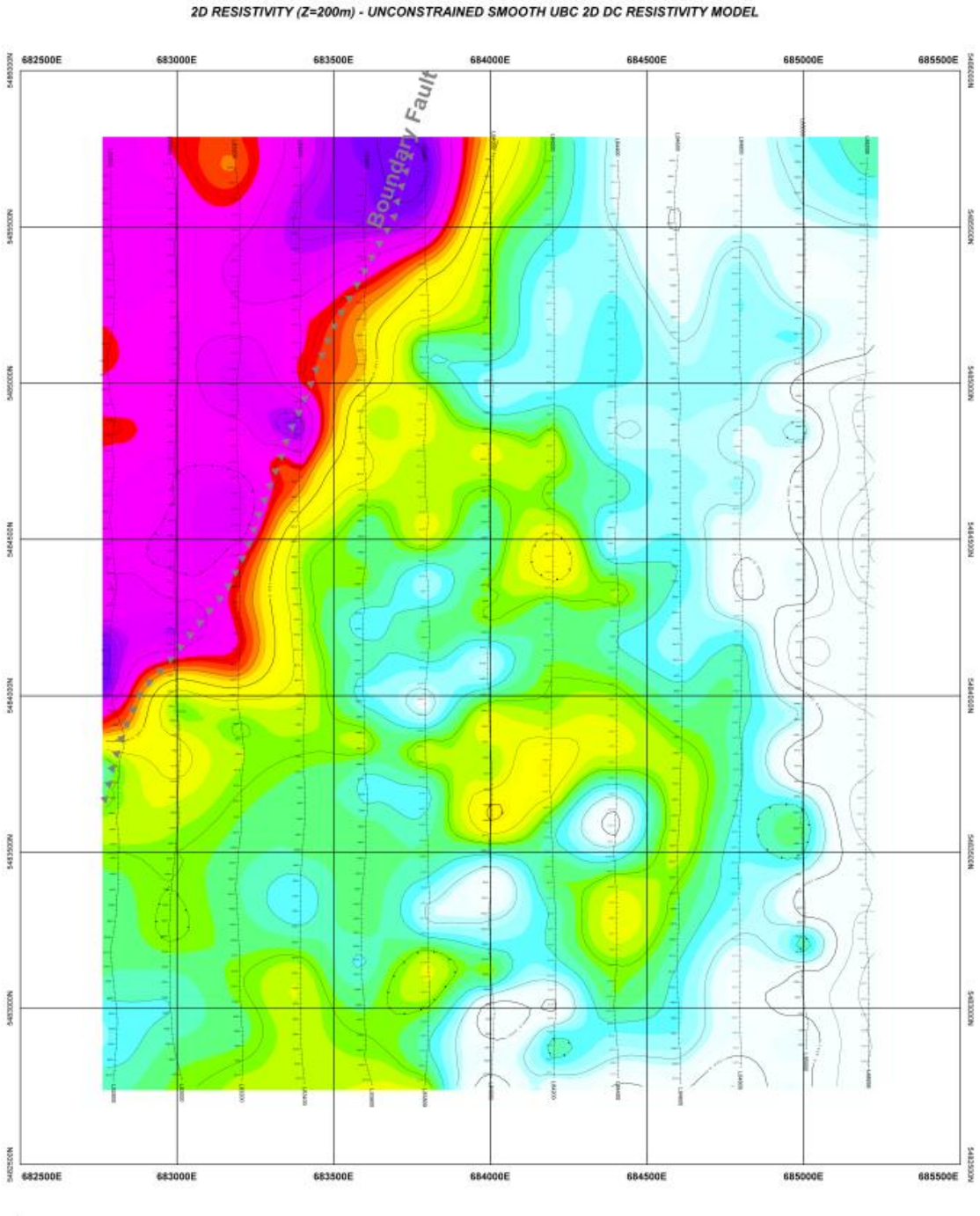

Figure 19. Plan map of the DC 2D inversion results for a depth of 200 m.

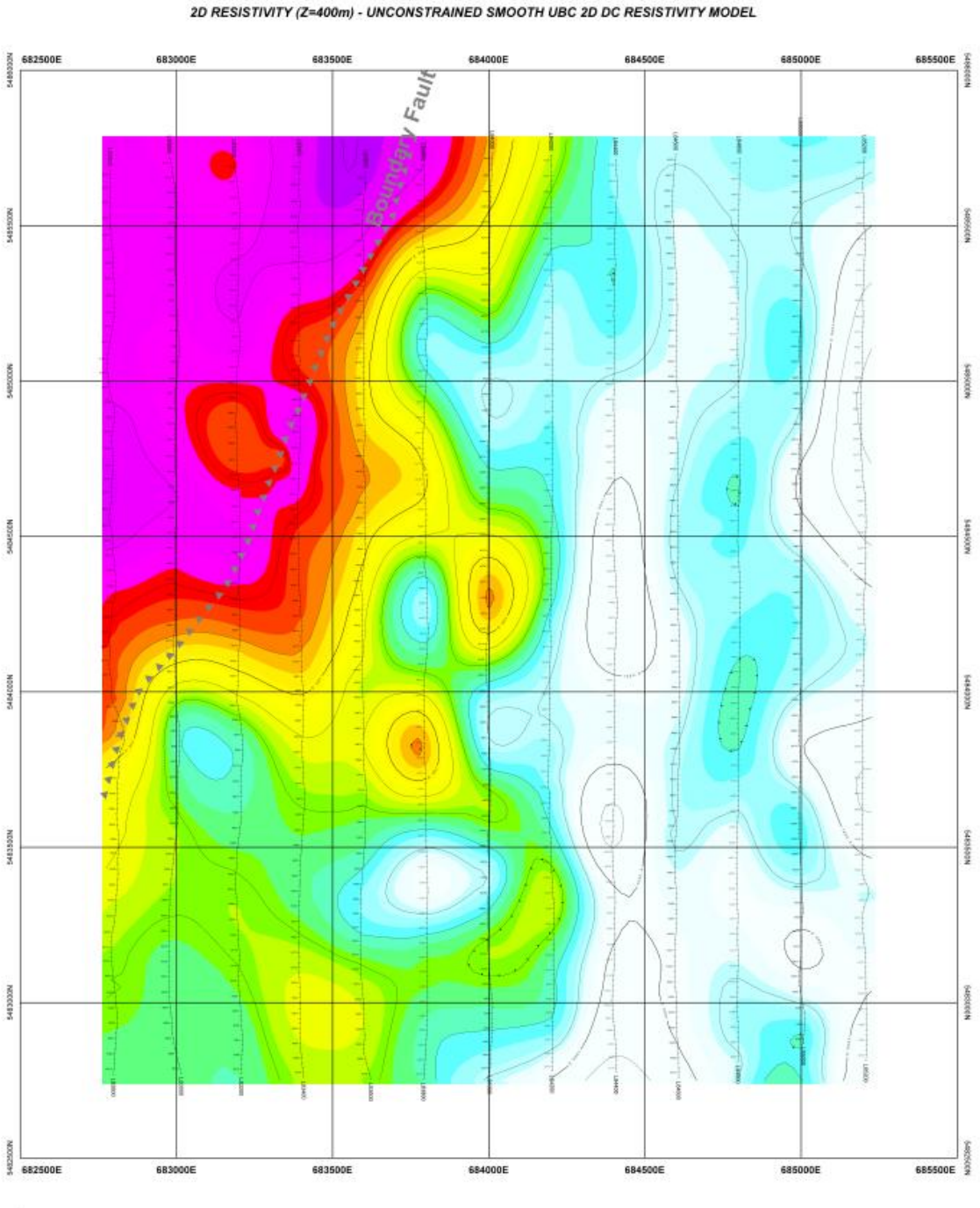

Figure 20. Plan map of the DC 2D inversion results for a depth of 400 m.

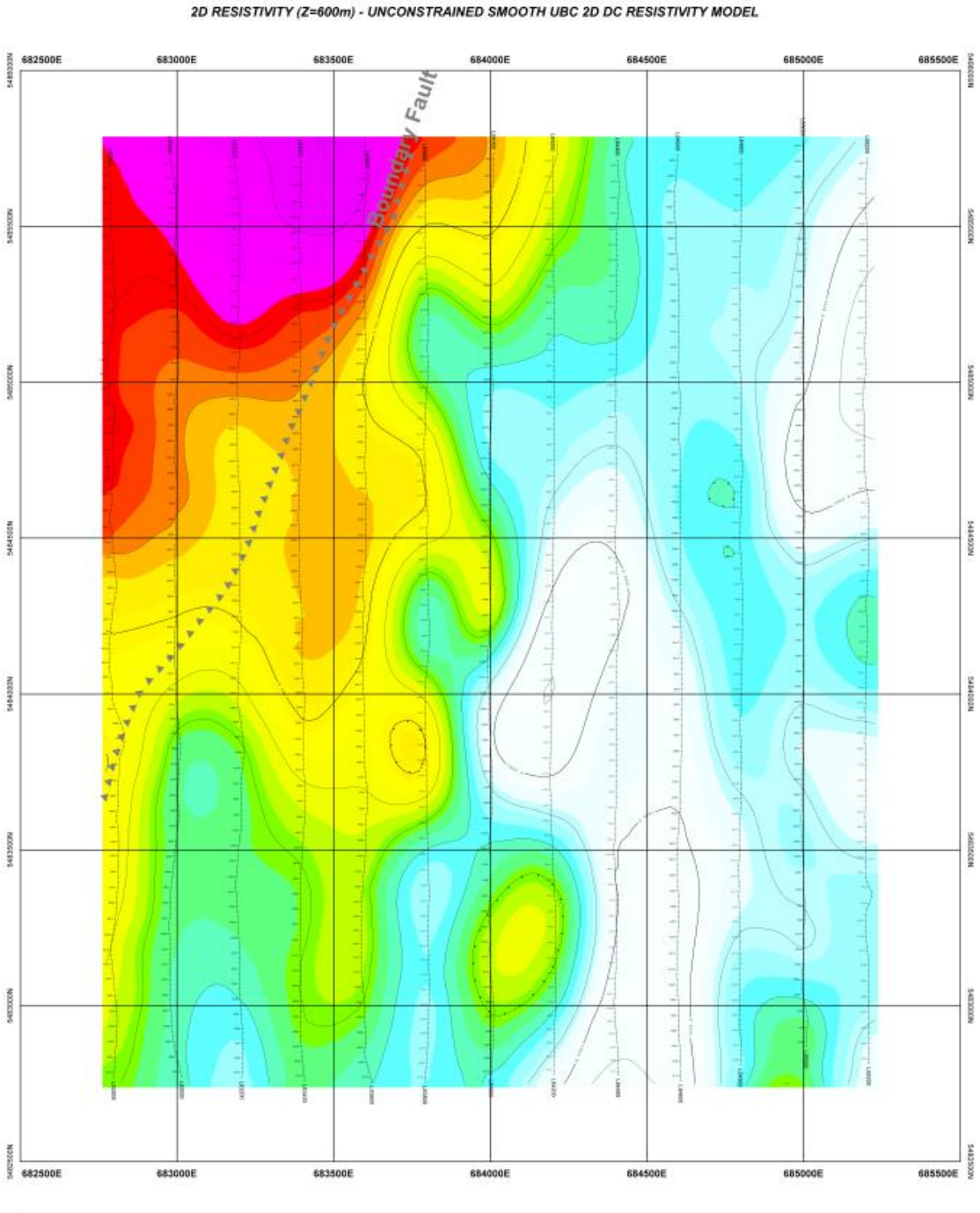

Figure 21. Plan map of the DC 2D inversion results for a depth of 600 m.

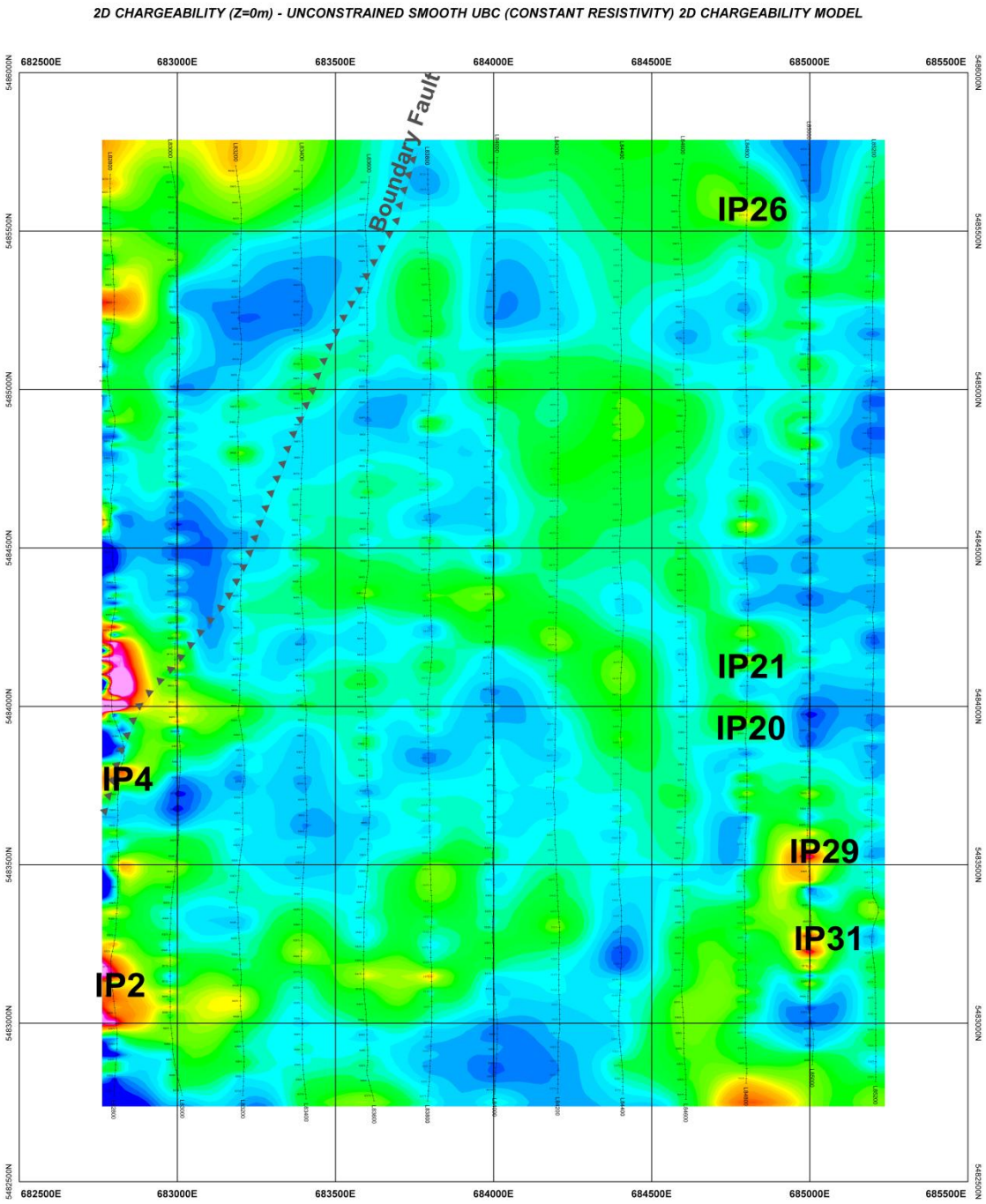

Figure 22. Plan map of the IP 2D inversion (Null reference) results for a depth of 0 m.

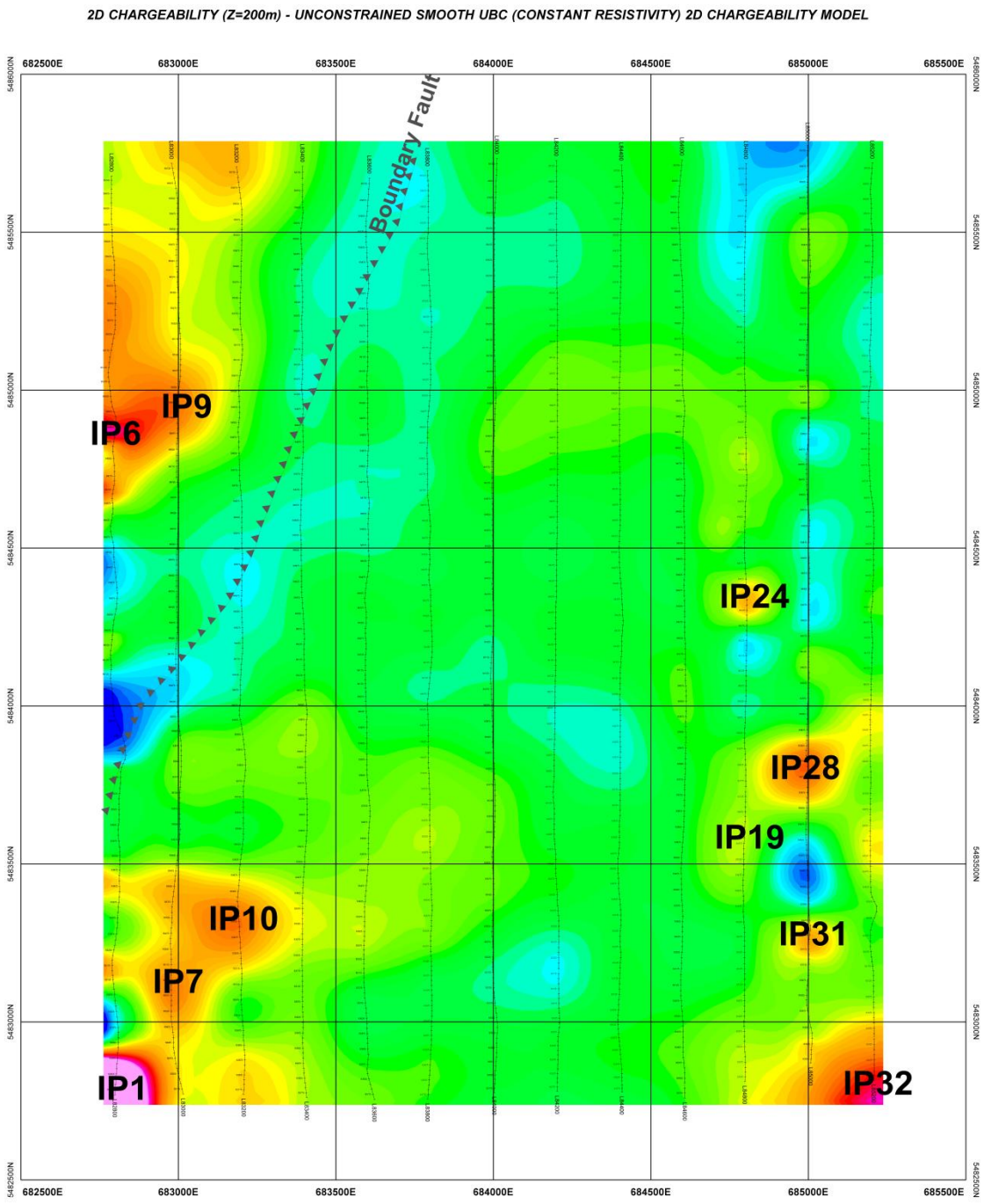

Figure 23. Plan map of the IP 2D inversion (Null reference) results for a depth of 200 m.

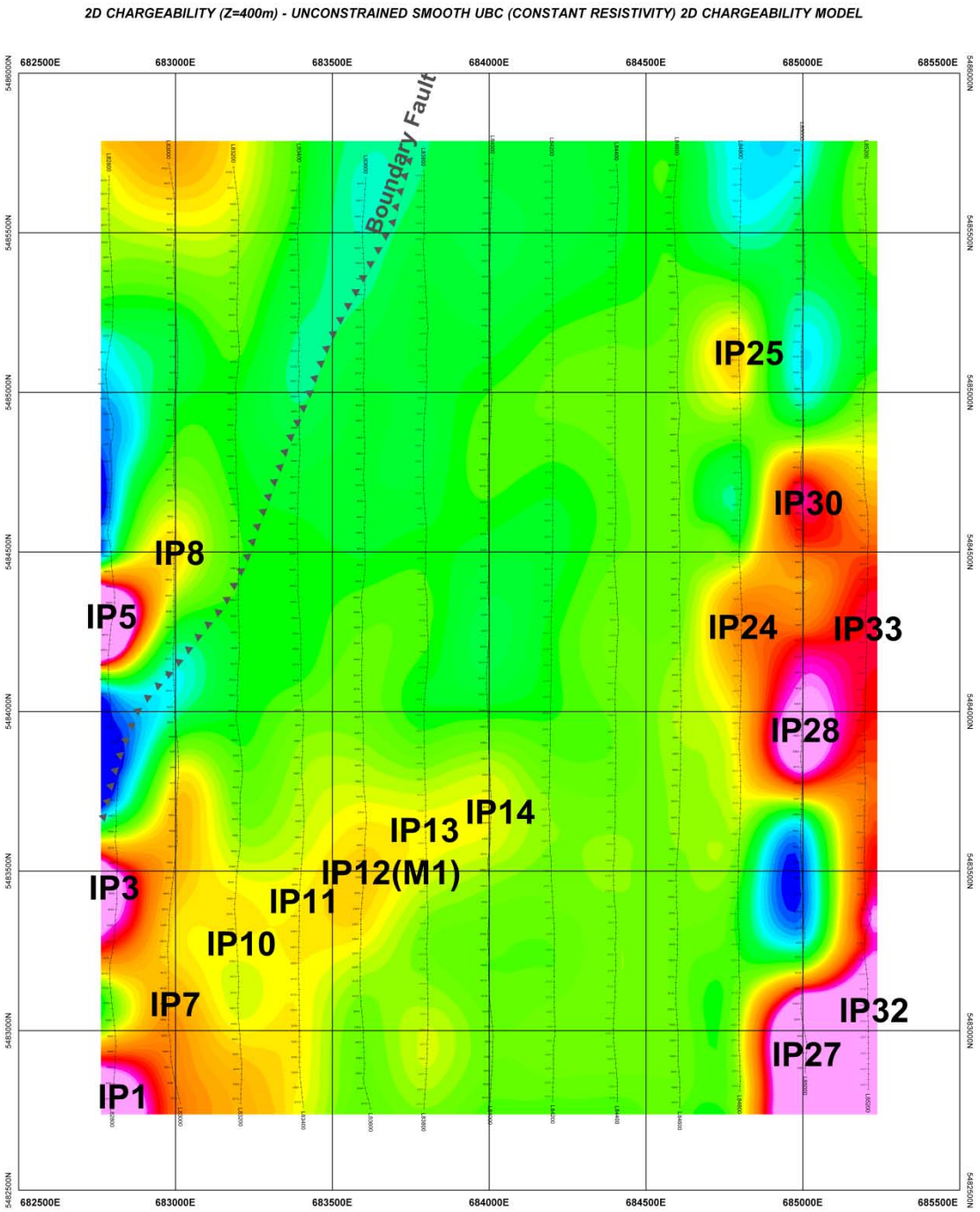

Figure 24. Plan map of the IP 2D inversion (Null reference) results for a depth of 400 m.

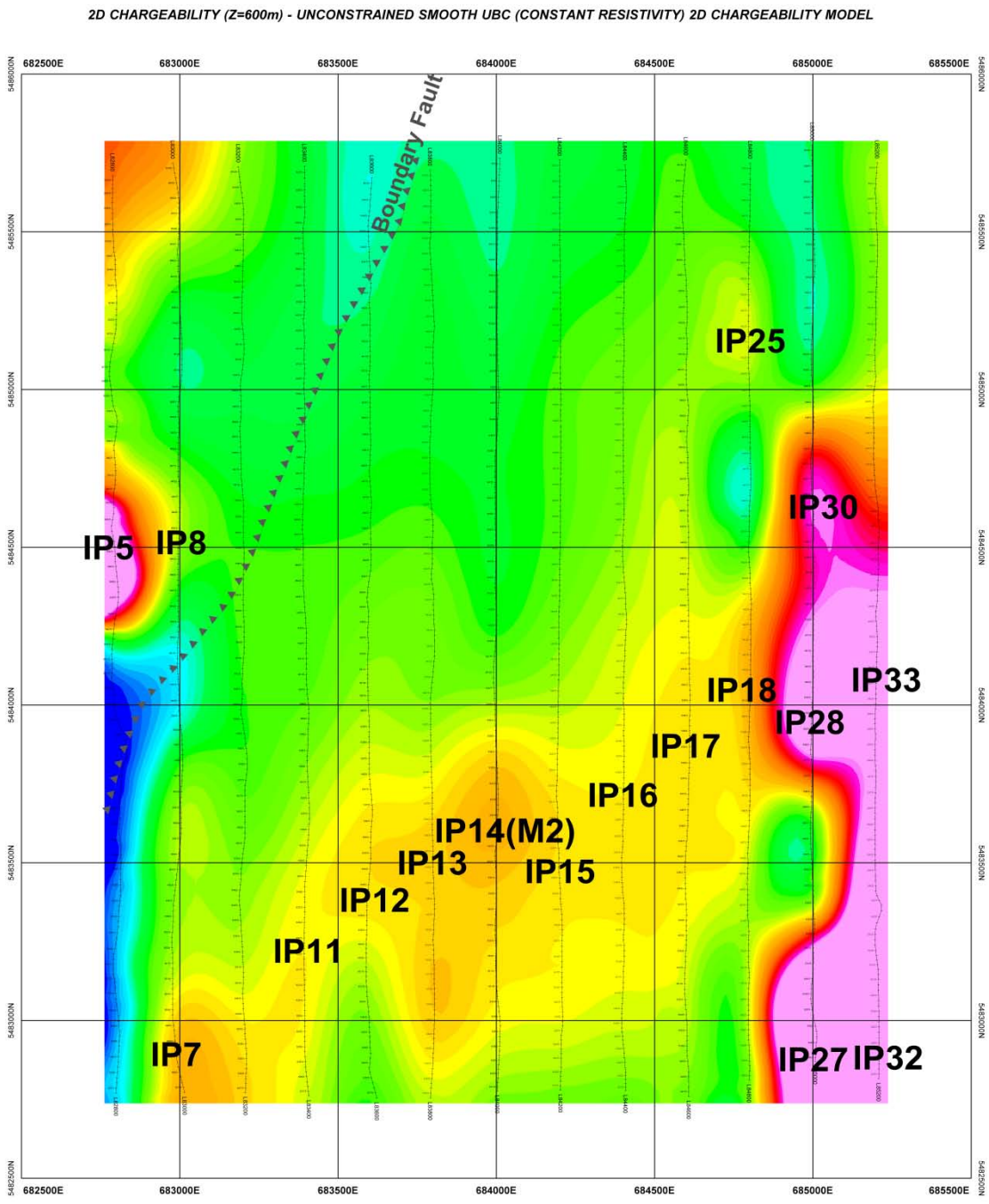

Figure 25. Plan map of the IP 2D inversion (Null reference) results for a depth of 600 m.

4. CONCLUSIONS AND RECOMMENDATIONS

A Titan-24 survey was carried out over the Miner Mountain DC/IP project area. The survey grid includes 13 DC/IP parallel lines along 31.2 km (38.7 km with extension). Each line was surveyed with dipole spacing of 100 m and line separation of 200 m. Survey line length was approximately 2.4 km plus additional current injections up to 500 m beyond the end of the line. The data were inverted using the 2D inversion algorithms to produce maps of resistivity and chargeability of the subsurface. These maps are used to locate potential copper mineralization targets to a depth of 750 m within the survey area.

4.1 CONCLUSIONS

The resistivity variations over the survey area show a good correlation with the surface geology. The sedimentary rocks of the Princeton Group with the resistivity of less than 50 Ωm are clearly separated from the Nicola Group by a sharp resistivity contrast. Scattered small scale low resistive anomalies are observed at the surface of the survey area. However, a relatively uniform resistivity low and resistivity high distributions associated with the Princeton Group and the Nicola Group, respectively, are observed at the greater depths.

There is no definite difference observed in the chargeability distribution between the Princeton Group and the Nicola Group. However, an elongated chargeability low anomaly is observed along the boundary fault that separates these two groups. The surface chargeability shows a background chargeability of 0 mrad to ~5 mrad. There are several small scale chargeable anomalous features that outcrop to the surface, mainly in the western and eastern parts of the survey grid.

At a greater depth of 200 m, the background chargeability increases to ~6 mrad. Several small to mid-size chargeable anomalies are resolved in the western and eastern parts of the survey grid at this depth. These anomalies are more pronounce at 400 m in depth with larger lateral extents and higher chargeability of more than 20 mrad. A moderately elongated chargeable feature with SW-NE orientation and chargeability of ~10 mrad is observed at the southwest part of the survey area. This anomaly extends across the whole survey area at a depth of 600 m. A large and strong chargeable anomaly is observed along the three most eastern survey lines at 600 m in depth. The anomaly starts in the southeast part of the grid and extends towards the north.

4.2 RECOMMENDATIONS

The resistivity distribution over the survey area can simply be categorized as a resistive low associated with the Princeton Group and a resistive high associated with the Nicola Group. The resistivity of the Princeton Group in the northwest part of the survey grid is generally less than 50 Ωm while the resistivity of the Nicola Group, which covers most of the survey area, is usually on the order of several hundreds of Ωm. These results are in agreement with the known geology of the area.

The chargeability distribution, however, shows a complex and heterogeneous characteristic. Based on the reliability of the inversion results, in terms of the repeatability of the anomalies resolved in both IP inversions, the following potential chargeability targets are listed in Table IV. Note that any drilling efforts based on these interpretations must incorporate other geophysical and geological models and information to validate these results.

The DC/IP survey was able to identify a total of twenty-five (25) potential chargeability targets with different priority levels. The potential targets are prioritized as High, Middle, or Low, based on their chargeability level and size. The chargeability levels are noted according to High (>15 mrad), Mid (10 mrad< >15 mrad), and Low (7 mrad < > 10 mrad). The depth of the anomalies are categorized according to Shallow (<100 m), Mid (100 m< >400 m), and Deep (< 400 m).

Based on the above criteria, a total of four (4) High priority, three (3) Mid-High priority, nine (9) Middle priority, two (2) Low-Mid priority, and seven (7) Low priority anomalies are classified in Table IV.

Anomaly ID	Chargeability (High/Mod/Low)	Size (Small/Mid/large)	Depth (Shallow/Mid/Deep	Priority (High/Mid/Low)
PRINCETON GROUP				
IP5	High	Mid-Large	Mid-Deep	Mid-High
IP6	Mid	Small-Mid	Shallow-Mid	Mid
IP9	Low-Mid	Small	Shallow	Mid
IP8	Low	Small	Mid-Deep	Low
NICOLA GROUP				
IP7	Mid	Mid-Large	Shallow-Mid	Mid-High
IP1	High	Mid	Shallow	Mid
IP3	High	Mid	Mid	Mid
IP10	Low-Mid	Small-Mid	Shallow	Mid
IP11 and IP12	Low	Large	Mid-Deep	Mid
IP13 to IP18	Low-Mid	Large	Deep	Mid
IP24	Mid	Mid	Shallow-Mid	Mid
IP2	Mid	Small	Shallow	Low
IP4	Mid	Small	Shallow	Low
IP25	Low	Small	Shallow-Mid	Low
IP20 and IP21	Mid	Small	Shallow	Low
IP19	Low	Small	Shallow-Mid	Low
SCHISSLER GROUP[6]				
IP27 and IP32	High	Large	Mid-Deep	High
IP28 and IP33	High	Large	Mid-Deep	High
IP30	High	Mid	Mid-Deep	Mid-High
IP29 and IP31	Mid-High	Small	Shallow	Low-Mid

Table IV: Anomalies and priorities.

[6] This geological unit was coined by Sego Resources Inc. on the basis of the Titan 24 chargeability and resistivity anomalies observed over the survey area.

Respectfully Submitted
QUANTEC GEOSCIENCE LTD.

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Appendix 2

DDH Logs 2009 – 2010

Sego Resources *DDH-MM-09-11*

N	E	Z
5484501	684010	944

Length	Dip	Azimuth
241.46	-90	360

Geologists	Core Size
S.Daly and D.Takagawa	NQ

From (m)	To (m)	Rock Code	Geology	From	To	Cu_ppm	Au_PPB
0	15.85		Casing				
15.85	30.47	Ad	Dark green where locally fresh, and mainly bleached pale olive-green epidotized. Blocky to intermittently broken. Mildly shattered with calcite stringers. Locally brecciated with calcite filling. Hematite staining on shears and fractures. Frequent intermittent magnetite zones and sometimes massive magnetite. K-spar alteration at 29.74-29.8m (thin section). Abundant epidote so propylitic. Frequent joints at 45 degrees to core axis and magnetite subparallel to this (magnetite stringers). Magnetite stringers displaced by later calcite stringers ie at 29.17m. Locally crushed. 29.45-32.92m: mainly intensely broken, probable fault zone. 34.67-35.97: intensely fractured and broken, also. 29.74-29.8m is pervasively altered fragmental volcanic, petrographic sample.	15.85 20.73 23.77 26.8	20.73 23.77 26.8 29.87	2501.2 750.9 668.7 1689.9	17.3 6.7 4.9 8.9
30.47	38.95	Md	**Fault Zone –** Apparent MD. Intermittent broken, faulted and sheared. Medium grey t o medium greenish grey. Moderately to intensely shattered. 4-5% sparse local quartz stringers albite and quartz-rich in part (see alteration section).	29.87 32.92 35.97	32.92 35.97 39.01	2054 847.9 1654.7	19.8 26.1 24.2
38.95	42.43	Md	**Fault Zone –** Med grey to med greenish grey. Moderately to intensely shattered. Intermittently sheared and faulted. 4-5% sparse local qtz stringers. Albite and quartz-rich in parts (see alteration section). Very broken fault zone.	39.01	42.33	4207.6	135.2
38.95	41.31	ND	Rock type not determined.				
41.31	55.45	Md	In part, pale grey to pale pinkish-grey and in part pale grey to medium-grey. Intensely shattered and welded together by hairline calcite stringers. Mostly intensely fractured and very broken. Locally, massively albitized with mafics nearly washed away. Moderately bleached. Weakly to moderately apparently albitized. Local quartz stringer	42.33 45.11 46.73 48.16	45.11 46.73 48.16 51.2	6279.8 8899.5 227.7 125.2	316.8 527.3 11.7 4.4

			at 60 degrees to core axis, with sparse chalcopyrite, at 53.1m. Weak local magnetism. Petographic sample at 46.65-46.7m, is microsyenite. (K-Spar Flooding?)	51.2	55.42	4203.8	104
55.45	63.4	Md	**Fault Zone –** Medium to dark grey. Amygdaloidal(?), with frequent calcite amygdules. Intensely faulted and shattered throughout. Mostly very broken, with frequent gouge and breccia and intensely shattered zones. 62.85-63.4m has weak magnetism.	55.42 60.35	60.35 63.4	2428.8 191.8	211.8 8.4
63.4	67.3	Md	Pale pinkish-grey to medium to dark grey, well mineralized microdiorite Intermittently porphyritic with plagioclase and mafic phenocrysts. Mildly to moderately shattered, with hairline calcite stringers. Mostly regular blocky and very locally broken. Local bleaching with K-spar flooding present 63.4-65.1m	63.4	66.45	7464.5	429.9
67.3	69.58	Dk	Very shattered, medium grey to pale green porphyritic intermediate dyke. 7-8% 0.5 up to 2mm mafic phenocrysts (suspect hornblende due to some tabular crystal habit) with 2-3% suspect (locally non-present) hematized sulfides. Petrographic sample 68.4-68.5m is described as a porphyritic microdiorite but could be a dyke.	66.45	69.49	1510.5	29.4
69.58	86.36	Md	**Fault Zone –** Light to medium greenish-grey, probable MD. Local 2-3% chalcopyrite (69.58-70.92), mainly barren-looking. Moderately altered to epidote, chlorite and hematite. Non-magnetic. Note: faulted and intensely shattered throughout with frequent gouge-breccia and black veining (at 77.63m=~3cm). Mylonite present Core regular blocky and intermittently very broken. Local strong K-spar alteration. Petrographic sample 77.4-77.46 is described as a porphyritic rock.	69.49 72.54 75.59 78.64 79.96 81.68 83.6	72.54 75.59 78.64 79.96 81.68 83.6 86.2	5539.1 8267.2 10000 315.7 355.2 280.4 320.8	241.9 542.1 373.8 28.8 49.5 24.9 10.9
86.36	104.8	Ar	**Tectonic Breccia -** Pale greyish pale green with pale pink/cream patches. Pervasive moderate-intensely altered rock with local intensely argillic altered areas. The alteration is so great that it is very difficult to discern original rock type, although some areas hint that it could be a volcanic . Intensely shattered with Qtz and Clay stringers. ~10% disseminated Py. 86.36-96.27m. Chl alteration becomes stronger near the end of this interval Frequent sheared and faulted zones (see structure section) Petrographic sample from 93.34-93.4m is a porphyritic andesite, so it indicates it was a probable andesite zone.	86.2 88.3 90.83 93.88 96.93 99.97	88.3 90.83 93.88 96.93 99.97 103.02	392.1 347.5 352.1 350.6 176.4 183.4	19.7 25 21.1 15.6 8.6 6
104.8	108.2	Ar	**Fault Zone –** with ~90% as fault gouge breccia (light grey in colour) bearing trace Chl and 2-3% pervasively disseminated Py. Intense pervasive argillic alteration.	103.02 106.07	106.07 108.33	230.6 262.6	3.4 12
108.2	119.7	Ar	**Tectonic Breccia –** Alternating med to dark green cemented sections pervasively moderately chloritized with pale grey brecciated sections moderate to intense pervasive argillic alteration cut by frequent (4-5%) gypsum stringers with average	108.33 111.33 114.38	111.33 114.38 116.87	81.5 106.6 158.9	2.8 3.7 3.6

			8 mm width with core axis of ~40-60 TCA. Note: from 108.33 there is much more competent coring with 40-60 cm intact core pieces. No apparent magnetism. Probable altered andesite. Petrographic sample 114.91-115.03m is fragmental andesite.	116.87	118.75	159.2	1.7
119.7	121.92	Ad	Medium to dark grey, probable andesite, though locally looks like micro-diorite.	118.75	121.31	290.6	0.5
121.92	127.41	Ar	**Tectonic Breccia –** Mainly medium to dark green chloritic rock with pale greenish grey argillic shattered zones (intensely shattered and recemented), and with local brecciation. These latter zones are cut by frequent gypsum stringers up to 9 cm thick. Both chloritization and argillic alteration are moderate to intense. Gypsum stringers commonly 40- 60 degrees to core axis. 120.35 m to 121.9 is weakly magnetic. Competently coring with up to 30-40 cm core sticks. Probable altered andesite, and 125.36-125.43 is altered . andesite (petrographic sample). Also, intense albite alteration (argillic probably after albite.)	121.31 124.36	124.36 127.41	247.2 145.1	1.6 2.4
127.41	134.51	Ar	**Tectonic Breccia –**Med greyish blue and light greyish blue/white (suspect MD before texture was obliterated). Pervasively and intensely sheared/shattered. Pervasive and intense argillic alteration with frequent gypsum stringers with no calcite stringers. Py disseminations and Py stringers present with a range of concentration between 1-8%. Darker grey rock has more Py (and this is where the Py stringers are found as well). The lighter/white rocks have very low to near non-present Py. Shear fabric is 50-60 degrees average TCA. Competently coring with Up to 60-70 cm long core sticks. No apparent magnetism.	127.41 130.45	130.45 133.5	101.9 66.5	2.9 2.1
134.51	136.55	Ar	**Tectonic Breccia –** Olive green with zones of patchy black and cream coloured intervals. (Suspect) MD as most original texture is mostly obliterated by alteration. Some small areas suggest MD texture, as well as porphyritic andesite. Pervasive intense shattering. Pervasive moderate to intense Epd and Chl. Sparse hairline Ca stringers. Sparse hairline Ca stringers. Moderate patchy hematite on fracture surfaces. Only less Altered interval in this unit is weakly magnetic, from 136 to 136.46. Core regular blocky to locally very blocky to broken. Probably altered andesite.	133.5	136.55	221.9	7.4
136.55	141.55	Ad	**Fault Zone –** Intensely broken throughout and faulted and shattered calcite-filled probable andesite. Local intense argillic alteration from 139.65 to 140.03m. Also, very local suspect K-spar from 136.55-137.33m.	136.55 139.6	139.6 142.65	768.3 2689.5	15.7 24.3
141.55	143.77	Ar	**Fault Zone –** Intensely fractured and shattered with moderate epidote alteration.	142.65	145.69	137.5	4.2
143.77	145.69	Ad	Probable altered andesite. Hairline to 3mm calcite stringers. Pale to medium grey with				

			slight greenish tinge with patches of dark grey. Texture suggests that there was a pervasive weak-moderate epidote alteration and then a mostly pervasive weak-moderate argillic overprint afterwards. Very weak local magnetism present (mostly close to top of this unit). Competently coring.				
145.69	151.26	Ad	Pervasive moderate to intense Epd and local moderate Chl. Moderate consistent patches of Ksp. Weakly shattered and filled with hairline to 5 mm calcite stringers. Gathering from fresh spots, it appears to be andesite. Fairly competent coring with 40-60 cm average core pieces. Moderate very local magnetism.	145.69 148.74	148.74 151.79	310.4 1066.9	13.8 75.4
151.26	154.28	Ad	Mainly dark grey, locally medium grey to slightly green apparent finely porphyritic andesite, intensely shattered throughout. Shatter cracks are calcite-filled, with hairline to 2mm thick calcite stringers. Pervasive moderate chloritic alteration. No magnetism. Petrographic sample 153.02-153.12 is altered andesite.	151.79	154.84	935.7	10
154.28	163.91	Ad	Mainly dark greenish-grey to intermittent strong olive-green apparent andesite, with pervasive moderate chloritic alteration and intermittent strong epidote alteration. Moderately shattered, with calcite stringer filling. Regular blocky coring. Local weak magnetism in chloritic zones. Epidote locally , zones at 45 degrees to the core axis. Albite, local, at 75-90 degrees to the core axis.	154.84 157.89 160.93	157.89 160.93 163.98	439.7 318 978.3	8.5 14.8 54
163.91	172.64	Ad	Mainly dark greenish grey altered apparent andesite with pervasive mod-intense chloritic alteration, with intermittent narrow local epidote shoots averaging 1 cm thick, and intermittent short argillic and/or k-spar zones. Fairly pervasively moderately shattered, with some hairline calcite stringer fillings. Core regular blocky to competent. No magnetism. Argillic zones probably after albite.	163.98 167.03 170.08	167.03 170.08 172.64	1146.9 660.5 865.1	39.4 13.9 11.2
172.64	176	Ar	**Fault Zone –** Mainly pale grey, moderate to intense to intensely argillic (probably argillic albite) zone. Local dark greenish-grey moderate to intensely chloritic rock and locally intensely hematized rock. Intermittent gouge zones. Core regular blocky. No magnetism. Intermittently intensely broken	172.64 175.28	175.28 176.56	549.1 333.9	10.7 7.8
176	182.1	Ar	**Fault Zone –** From 176m, consistently pale grey fault zone with dark grey streaks outlining the shearing trend. Locally moderate and intensely argillicly altered, 176-181m.	176.56 178.96 181.39	178.96 181.39 182.27	278.8 345.2 16.7	9.5 10.7 0.5
182.1	207.58	Ad	Porphyritic medium greenish (moderate chloritization) grey with pale olive green bleached rock (pervasive where it is bleached) with pervasive moderate epidotization with less significant intervals of brownish deep red (likely caused by the presence of hematite and Ksp) Moderately shattered with Ca stringer filling – hairline to 10 mm with local	182.27 185.32 188.37 191.41	185.32 188.37 191.41 194.46	320.9 116.3 60.2 18.5	0.5 0.8 0.5 0.5

			Qtz. With the first appearance of Qtz at 188.96 m. Occasional faulting (see structure section for more info). The lighter coloured core intervals appear to be andesitic in texture, however, this may be due to the texture being disguised by the bleaching. i.e. the bleaching blends in the groundmass with the phenocrysts. The darker intervals have the phenocrysts highlighted between the groundmass and phenocrysts making the apparent MD texture more pronounced. Fairly competent coring with 50-60 cm core sticks and locally fairly blocky Non-magnetic throughout. Possible weak albite. Local fragmental volcanic 188.37-189.70m. Fault, 195.1-196.1m, very broken. Local fragmental, 206.65-206.96m. Apparent finely porphyritic and/or amygdaloidal texture. Overall, looks like an andesite. Petrographic sample 192.09-192.18m, is amygdaloidal andesite.	194.46 197.51 200.56 203.61	197.51 200.56 203.61 206.65	130.5 34.4 59 255.9	1.2 0.5 0.5 4.5
207.58	215.58	Ad	Medium grey bleached rock, less altered than previous zone. Same finely porphyritic unit (andesite).	206.65 209.7 212.75	209.7 212.75 215.8	103.2 13 7.9	0.5 4.9 0.5
215.58	224.16	Ad	Same as 182.1-207.58m unit.	215.8 218.84 221.95	218.84 221.95 225	51.5 144 152.6	0.5 0.5 2.1
224.16	225.33	Ar	**Fault Zone –** Pale grey, moderately bleached, moderate argillic zone with local shearing and faulting. Original rock type obliterated. Core regular blocky. Argillic alteration probably after albite. Petrographic sample, 224.81-224.9m is a fragmented fine grained volcanic rock.				
225.33	228.5	Ad	Med grey with greenish tinge andesite with light green spots (Epd) mildly bleached, moderately shattered with hairline to 5 mm Ca stringers. Sparse Hem on fractures. Trace to 0.5% with very locally 8-10% disseminated Py. Trace suspect Cpy observed. Non-magnetic. Pervasive moderate chloritization with spotty weak Epidotization. Competently coring.	225	228.05	67	0.7
228.5	240.18	Ad	Dark grey to bleached pale green apparently finely calcite amygdaloidal andesite. Weak to moderately shattered with hairline to 5 mm Calcite stringers. Bottom half of this interval pervasively, moderately epidotized. Local K-spar. Non-magnetic. Competently coring with 40-78cm long core sticks. Also, some quartz stringers.	228.05 231.04 234.09 237.13	231.04 234.09 237.13 240.18	91.6 79.5 59.2 173.5	0.8 0.5 0.5 9.5
240.18	241.46	Ctu	Med grey mild to moderately shattered with mostly Cal with some qtz (90%vs10%) stringers hairline to 5 mm. Non-magnetic throughout. Regular blocky. Disseminated pyrite 3-4%. Possible tuff. Petrographic sample, 241.25-241.36m is coarse and fine tuff.	240.18	241.46	494.6	7.6
	EOH						

Sego Resources *DDH-MM-10-14*

N	E	Z
5484551	684010	941

Length	Dip	Azimuth
200.25	90	0

Geologists	Core Size
S.Daly and D.Takagawa	HQ

From (m)	To (m)	Rock Code	Geology
0	12.8	Casing	
12.8	17	Ad	Medium grey to medium greenish-grey, intermediate volcanic rock, with sparse calcite stringers and moderately oxidized with limonite and occaisonal hematite on fractures. Very blocky to broken. Very local intense epidote. Barren. Weak to moderate magnetism. Local magnetite stringers.
17	36.5	Ad	Medium grey intermediate volcanic, mainly mildly, locally moderately shattered with mainly calcite stringer filling. Local intermittent, apparent very mild albitization, especially from 34-36.5m. Mineralization mainly disseminated (very finely divided) , 1/2-1% pyrite and chalcopyrite. Local tiny chalcopyrite blebs in calcite stringers. Mainly strong magnetism, with some magnetite stringers at 25 degrees to the core axis at 31.17 and 32.8m. Weak local chlorite. Core regular blocky-locally broken.
36.5	41.76	Ad	Pale to light grey bleached and apparently moderate albitized intermediate volcanic rock. Also, moderately to intensely chloritized. Moderately to intensely shattered, with hairline calcite stringer filling. Trace very fine disseminated pyrite and 2-3% magnetite, locally. Only local strong magnetism. No magnetism in more intensely albitized zones. Very blocky-broken throughout.
41.76	41.95	Ad	**Fault zone -** Very local chlorite alteration in sheared zone, 41.76-41.95m.
41.95	43.93	Ad	Medium grey intermediate volcanic, mildly shattered, with white and pink calcite stringers. Trace very fine disseminated pyrite and 2-3% magnetite.
43.93	47.94	Ad.	Mainly medium grey slightly bleached and weakly albitized intermediate volcanic rock. Locally patchy pale grey moderately albitized. Mainly strongly magnetic but locally non-magnetic in moderate albitized zones. Trace fine disseminated pyrite and 2-3% magnetite.
47.94	49.1	Ad	**Fault zone -** Mainly very broken gouge-breccia and hematite-stained shears.
49.1	53.2	Ad	Mainly medium grey slightly bleached and weakly albitized intermediate volcanic rock. Locally patchy

From	To	Cu_ppm	Au_PPB
12.8	14.33	273.1	10.3
14.33	17.37	579.2	59.4
17.37	20.42	330.8	13.1
20.42	23.47	415.9	48.1
23.47	26.52	608.1	58.5
26.52	29.57	287.6	16.8
29.57	32.61	294.3	17.4
32.61	35.66	123.7	9.2
35.66	38.71	66.9	3.6
38.71	41.76	179.8	12.1
41.76	44.81	365.1	11
44.81	47.85	265.8	2.6
47.85	50.9	193.6	20.6
50.9	53.95	582.5	49.4

			pale grey moderately albitized. Mainly strongly magnetic but locally non-magnetic in moderate albitized zones. Trace fine disseminated pyrite and 2-3% magnetite.				
53.2	64.5	Ad	Mainly medium grey intermediate volcanic rock, moderate and moderate-intensely shattered, with calcite filling hairline to pseudo-breccia matrix. Local moderate magnetism. No sulfides.	53.95 57 60.05	57 60.05 63.09	35.8 134.1 108.8	0.9 7.2 3.7
64.5	66.14	Ad	Mainly medium greenish-grey intermediate volcanic rock, moderately shattered with hairline to 2mm calcite stringers. Intermittent weak to moderate magnetism. No sulfides seen. Local epidote patches on fractures.	63.09	66.14	253.9	9.1
66.14	68.11	Ad	Very blocky-very broken, with some hematite-stained shears and local gouge-breccia. Dark greenish-grey intermediate volcanic rock. At 66.40-66.50, strong epidote alteration. Intermittent weak to moderate magnetism.	66.14	69.19	253	6.6
68.11	69.19	Ad	Mainly medium grey intermediate volcanic rock, moderately shattered with hairline to 2mm calcite stringers. Intermittent weak to moderate magnetism. No sulfides seen. Very locally, micro-diorite-looking. At 70m, fabric at 40-45 degrees to the core axis, outlined by parallel magnetite stringers.				
69.19	69.2	Ar	Mylonite – Related to above fault zone (?)	69.19	72.24	442.3	36.1
69.2	72.24	Ad	Same as 68.11 – 69.19				
72.24	86.14	Ad	Mainly pale to medium grey, slightly bleached. Mildly shattered with hairline to 2mm calcite stringer filling. Locally sheared and/or faulted, with strongly broken zones. . Weak to moderate magnetism. Very sparse, very fine disseminated pyrite only. Local K-spar alteration.	72.24 75.29 78.33 81.38	75.29 78.33 81.38 84.43	188.7 239 219.3 237.5	10.9 8 5 9.4
86.14	88.24	Ar	**Fault zone -** Local intermittent very broken core up to 88.24m, fractured and/or faulted.	84.43	87.48	216.6	4.1
88.24	94.11	Md	Mainly medium greenish grey to pale grey, slightly bleached, with local chloritic alteration, and intermittent but very local intense epidote/hematite (propylitic) zones, patchy. Very mildly shattered, and with 1-2% calcite stringers. Mainly moderate magnetism. No sulfides seen.	87.48 90.52	90.52 93.57	205.7 197.4	5.9 7.9
94.11	98.28	Md	Pale grey-medium grey, apparently weakly albitized to K-spar enriched. Intermittent moderate magnetism. Mildly shattered and with 1-2% calcite stringers, hairline to 3mm. Very local epidote stringers at 90 degrees to the core axis.	93.57 96.62	96.62 99.67	301 276.2	12 8.1
98.28	98.89	Md	**Fault zone -** Locally sheared, with hematite on shears.				
98.89	99.67	Md	Same as 94.11 – 98.28				
99.67	100.58	Md	**Fault zone -** Locally sheared, with hematite on shears.	99.67	102.72	249.7	18

100.58	101	Md	Same as 94.11 – 98.28				
101	101.95	Md	**Fault zone -** Locally sheared, with hematite on shears.				
101.95	105.28	Md	Same as 94.11 – 98.28	102.72	105.77	220.9	17.1
105.28	113.67	Md	Medium grey to medium-greenish to dark reddish grey, vague microdiorite, mildly to moderately shattered with consistent hairline calcite stringer filling. Partly bleached to pale grey, locally weakly chloritic and with frequent hematite fracture coatings. Weak local magnetism. Gouge-breccia at the lithological contact with the andesite	105.77 108.81 **111.86**	108.81 111.86 **114.91**	210.5 176.6 **228.3**	12 8.5 **7.2**
113.67	118.82	Ad.	Medium orangey-grey, intermediate volcanic rock, with intermittent moderate K-spar. Moderately shattered, with hairline to 3mm calcite stringer filling. Non-magnetic.	114.91	117.96	229.2	19.9
118.82	124.4	Ad.	Medium olive-green to dark greenish-grey, epidote, chlorite and local k-spar altered rock. Moderate to intense epidote and chlorite alteration (propylitic). Very local magnetism.	117.96 121.01	121.01 124.05	285.5 355.3	11.5 11.2
124.4	131.42	Ad.	Medium greenish to orangey to dark grey rock. k-spar, and local chlorite and epidote, all weak alteration. Mildly to moderately shattered with hairline to 3mm calcite stringers. Non-magnetic.	124.05 127.1	127.1 130.15	342.3 827.6	5.3 7.5
131.42	132.2	Ar	**Fault zone -** Pale greenish to locally reddish-grey, gouge-breccia. Local intense shattering, 131.42-131.79m and very fine gouge-breccia, 132.16-132.20m. Non-magnetic.	130.15	133.2	858.2	30.7
132.2	139.39	Ad	Medium to dark greenish-grey, locally moderate-intensely chloritic, and very locally k-spar enriched. Moderately shattered throughout, with hairline to 3mm calcite stringer filling. Local magnetism Very local microdiorite (dike?) at 134m. Locally very porphyritic towards 137.1m.	133.2 136.25	136.25 139.29	434.3 519	10.2 22.1
139.39	141.7	Ad	Medium greenish-grey, with intermittent epidote and very local moderate chloritic alteration. Local epidote stringers and very local K-spar. Local strong magnetism as magnetite filling an incipient breccia.	139.29	142.34	350	14.9
141.7	152.5	Ad	Mainly medium grey to medium greenish-grey. Local chloritic, weak alteration. Local moderate magnetism. Mildly shattered, with calcite and/or gypsum towards 151.5m.	142.34 145.39 148.44	145.39 148.44 151.49	404.6 302.4 399.7	5 11.8 22.6
152.5	153.64	Ar	**Tectonic Breccia -** Mainly very pale grey to white apparently albite-rich rock with sericite alteration. Strong fabric at 30-55 degrees to the core axis. Pyrite-rich zone. Non-magnetic. Sparse gypsum.	151.49	154.53	242.7	29.4
153.64	154.33	Dk	Medium grey to medium brown porphyritic rock with plagioclase phenocrysts in a dense groundmass. Upper contact at 75 degrees to core axis. Lower contact at 40 degrees to core axis. 6mm chill margin at lower contact. Consistently weak magnetism.				
154.33	162.27	Ar	**Tectonic Breccia -** Very pale grey, apparent albite-sericite rich rock, with strong fabric commonly at 30-60 degrees YCA outlined by albite and gypsum or anhydrite layers. Gypsum is either conformable to the	154.53 157.58	157.58 160.63	163.6 160.2	12.2 7.3

			albite fabric or cross-cutting it indicating it is later than the albite.This zone has ubiquitous finely disseminated pyrite cubes, approx. 2-3% and in stringers. Totally non-magnetic. Gypsum stringers at 70-90 degrees to the core axis. Gypsum stringers parallel to albite/sericite strong fabric at 155.92,157.22.158.05,160.3	160.63	163.67	191.8	14.2
162.27	163.27	Ar	**Tectonic Breccia -** Mainly medium grey, locally medium pinkish grey, with local moderate apparent albitization. Cut by sparse 1-5 mm gypsum stringers.				
163.27	171.27	Ar	**Tectonic Breccia -** Mainly very pale grey to white apparently albite-rich rock with sericite and/or possible kaolin alteration. Albite is intense. Albite layered fabric is at mainly 50-60 degrees to the core axis and locally 70 degrees. The 8-10% gypsum stringers are sub-parallel to the fabric or cross-cutting so obviously later than the albite. Also, 8-10% ubiquitous tiny pyrite cubes, commonly in stringers, and trace to 0.5% chalcopyrite. Very competent core. 167.85 Gypsum stringer parallel to albite/sericite strong fabric	163.67 166.73 169.77	166.73 169.77 172.82	315.7 118.8 417.8	7.4 11.6 11.4
171.27	173.63	Ad	**Tectonic Breccia -** Pale grey to medium greenish-grey, moderately albitized intermediate volcanic rock. Cut by 3-4% 2-7mm gypsum stringers,at 50-70 degrees to the core axis. Contains 6-8% disseminated pyrite and a trace of chalcopyrite.	172.82	175.87	86.1	6.2
173.63	177.4	Ar	**Tectonic Breccia -**Mainly very pale grey to white apparently albite-rich rock with sericite/kaolin alteration. Albite Strong fabric at 55-60 degrees to the core axis. Cut by 8-10% white gypsum stringers, locally very abundant. Disseminated and stringer pyrite 6-8% and with a trace of chalcopyrite. Very competent core.	175.87	178.92	271.5	9.8
177.4	186.93	Ad	Mainly medium grey to medium greenish-grey, with overall creamy light pinkish 'foggy' look, moderately albitized Ad, and the albitization becomes more intermittent towards 186.93m. Cut by 8-10% 1-8mm white gypsum stringers,at 45-60 and 70-80 degrees to the core axis. Albite layering less pronounced than before but locally at 45-55 degrees to the core axis. Disseminated pyrite 0.5% (big drop). Intermittent weak chlorite alteration. Very competent core.	178.92 181.97 185.01	181.97 185.01 188.06	262.9 379.5 487.3	8 15.8 28.3
186.93	191.11	Ad	Medium grey to medium greenish grey, slightly bleached overall, and with very local chlorite alteration (weak) and very sparse epidote. Cut by 1-10mm white gypsum stringers, 1%, at 55-70 degrees to the core axis. Local 5cm patch of pale pink calcite at 189.05m. Trace very finely divided disseminated pyrite. This textural Md may be a central part of a volcanic flow.	188.06	191.11	366	21.4
191.11	195.3	Ad	Dark grey to medium greenish-grey. Local intermittent albite and epidote (the latter intense but very local). Mildly shattered, and filled with 2-3% calcite stringers (lost the gypsum stringers here). Stringers commonly at 60-80 degrees to the core axis. Locally strong epidote occurs as a halo on a 2cm wide calcite stringer. Pyrite 1% and trace chalcopyrite.	191.11	194.16	527.8	31.6
195.3	197.7	Ad	Pale to medium greenish-grey, altered apparent intermediate volcanic, with weak intermittent epidote and albite alteration. Mildly to moderately shattered, with 3-4% calcite stringers. Trace disseminated pyrite. Moderate epidote alteration.	194.16	197.21	573.9	32.8
197.7	200.25	Ar	**Tectonic Breccia -** Very pale grey to pale pinkish-grey, strongly albitized rock, and with strong sericite alteration of the albite, locally. Slight preferred fabric at 45 degrees to the core axis. No gypsum stringers. Pyrite, 0.5 – 1%, disseminated and in stringers.	197.21	200.25	259.5	23

Sego Resources *DDH-MM-10-15*

N	E	Z
5484600	684009	937

Length	Dip	Azimuth
125.7	90	0

Geologists	Core Size
S.Daly and D.Takagawa	HQ

From (m)	To (m)	Rock Code	Geology	From	To	Cu_ppm	Au_PPB
0	13.11	Casing					
13.11	21.75	Ad	Medium to dark grey intermediate volcanic rock, probable andesite. Mild fracture zone, quite blocky to broken.	13.11	14.33	92.8	17.7
				14.33	17.37	130.3	9.3
				17.37	20.42	70.9	2.1
21.75	23	Ad	**Fault Zone –** Intermediate volcanic, probable andesite, Mildly shattered with hairline to 2mm calcite stringer filling Calcite stringers 2-3% Intensely blocky to broken throughout,strong fault/fracture zone with intermittent gouge-breccia and occasional shearing, Medium to dark grey, locally olive-green epidote patches.	20.42	23.47	144.9	26.7
23	23.13	Dk	dark grey feldspar porphyry dyke, fresh				
23.13	44.81	Ad	**Fault Zone –** same as 21.75 – 23 Albitization @ 36.6 – 37.80, Large Ca Stringer @ 41.78 cm 2cm wide and 35 TCA	23.47	29.57	252.8	46.6
				29.57	32.61	197.8	10.7
				32.61	35.66	607.6	41.3
				35.66	38.71	473.2	50.5
				38.71	41.75	651.2	76.2
				41.75	44.81	1043.7	205
44.81	52.65	Ad	Dark grey to olive-green, altered intermediate volcanic, probable andesite. Moderate-intense epidote alteration, patchy and from hairline to 2mm spider-webby stringers (epidote 45-50% of rock). Chlorite alteration, weak. Calcite stringers 3-10mm, 1-2%. Locally porphyritic near 52.65m. Local moderate magnetism. Core quite blocky.	44.81	47.85	234.6	15.5
				47.85	50.9	272.2	10.1
				50.9	53.95	269.9	56.6

52.65	61.24	Ad	Mainly medium grey intermediate volcanic rock, with intermittent (two) strong epidote zones, patchy. Second epidote zone has 2cm quartz-chlorite stringer cutting it, and several 8-10mm chlorite stringers. Subject to weak to moderate chlorite alteration also. Mildly shattered and with 1% calcite hairline stringers. Local weak to moderate magnetism. No magnetism in epidote zones. Core intermittently very blocky to quite broken (fracture zone).	53.95	57	259.9	23.9
				57	60.05	492.2	25.4
				60.05	63.09	314	34.1
				63.09	66.14	228.9	14.9
67	99.2	Ad	Medium grey to medium greenish-grey, intermediate volcanic, locally finely porphyritic with plagioclase tabular phenocrysts. Very mildly shattered with 1-2% calcite stringer filling. Very local epidote alteration (weak). Magnetism weak up to 74.7m. From 74.7-77.51m moderate magnetism. Then, 77.51-99.57 weak to moderate magnetism. Local weak chlorite alteration in diffuse patches. Mainly regular blocky but intermittently broken with local gouge-breccia.	66.14	69.19	662.3	86.6
				69.19	72.24	989.7	175.1
				72.24	75.29	447.7	15.7
				75.29	78.33	359.9	14.2
				78.33	81.38	195.2	10.2
				81.38	84.43	297.6	6.8
				84.43	87.48	267.9	11.9
				87.48	90.53	483.9	8.1
				90.53	93.57	787.7	28.5
				93.57	96.62	391.7	10.8
				96.62	99.67	101.2	2.4
99.2	108.81	Ad	**Fault Zone** Mainly very blocky to intermittently broken zone, with frequent gouge-breccia areas and some shearing, hematite-stained. Medium grey to medium greenish-grey intermediate volcanic, moderately shattered, with 3-4% calcite hairline stringer filling. Non-magnetic.	99.67	102.72	369.7	10.1
				102.72	105.77	300.6	11.6
				105.77	108.81	263.6	13.2
108.81	118.24	Md	Mainly medium grey, microdiorite. Mildly shattered with calcite stringer filling.	108.81	111.86	265.7	23.2
				111.86	114.91	182.9	29.4
				114.91	117.96	267.8	14.8
118.24	125.72	Ad	Mainly medium grey to 121m, then dark grey to the end of the hole, intermediate volcanic. Mildly shattered throughout, with 1-2% mainly hairline, locally 5mm calcite stringers. Mainly competently coring. Intermittent weak magnetism. Locally broken.	117.96	121.01	400.8	8.6
				121.01	124.05	349	7.5
				124.05	125.72	230.3	3.7

Sego Resources *DDH-MM-10-16*

N	E	Z
5484500	684060	945

Length	Dip	Azimuth
133.2	90	0

Geologists	Core Size
S.Daly and D.Takagawa	HQ

From (m)	To (m)	Rock Code	Geology
0	7.32	Cas	
7.32	17.7	Ad	Medium grey intermediate volcanic rock with fairly frequent rounded calcite grains, most likely amygdules so this probably an amygaloidal andesite. Hematite and limonite on frequent fractures-in the surface oxide zone. Intermittent moderate to strong magnetism. Local epidote patches. Core very blocky to broken.
17.7	25.6	Ad	Medium grey intermediate volcanic rock, mostly without amygdules. Quite blocky to locally broken but more competent than the last unit. Weak limonite on fractures up to 18.40m. This seems to be the limit of the iron oxide zone. Very local K-spar or hematite-stained albite (very weak). Calcite stringers, hairline, 0.5%. Intermittent moderate magnetism.
25.6	31.63	Ad	Medium greenish-grey to light pinkish grey to dark greenish-grey intermediate volcanic rock with intermittent Moderate-intense chloritic qalteration and intermittent K-spar or hematite-stained albite, locally moderate to intense and up to 0.64m altered zone. Intermittent moderate magnetism. No magnetism in main albite zone.
31.63	36.41	Ad	Medium pinkish grey, mainly intermediate volcanic which has been moderately-intensely flooded with K-spar (approximately 45-50% of the rock is converted to K-spar). Core becoming much more competent. Very local moderate to intense magnetism, but no magnetism in intensely flooded zones
36.41	44.1	Ad	**Fault-fracture zone.** Same lithological/allteration description as above, except core intermittently very blocky to broken throughout. Mainly non-magnetic. Local strongly magnetic 43.83-44.1m .
44.1	50.32	Ad	Medium grey to medium greenish-grey intermediate volcanic, locally weak to moderate chloritic. Local very sparse K-spar. Local moderate magnetism. Fragments of pink K-spar altered rock.

From	To	Cu_ppm	Au_PPB
7.32	12.19	387.4	10.6
12.19	14.33	1188.2	24
14.33	17.37	573.3	14.6
17.37	20.42	931.5	26.2
20.42	23.47	1361.6	20.7
23.47	26.52	856.8	12.5
26.52	29.57	1983.2	35.9
29.57	32.61	3210.7	66.1
32.61	35.66	4906.6	76.2
35.66	38.71	4513.7	109
38.71	41.75	3337.7	112.4
41.75	44.81	3092.7	134.9
44.81	47.85	690.5	17.4
47.85	50.9	811	28.4

50.32	57.06	Md	**Fault-fracture zone.** Mainly extremely blocky to intensely broken, locally with gouge-breccia, and strongly hematized. Medium greenish-grey MD. Only very locally weak magnetic.	50.9 53.95	53.95 57	258.5 241.8	9 5.4
57.06	61.27	Md	Medium grey to locally medium greenish-grey. Very mildly shattered with ½ to 1% calcite stringers, hairline to 3mm. Competently coring. Mainly pervasive weak to moderate magnetism.	57	60.05	534.4	5.9
61.27	68.45	Ad	Medium grey rock with local pale pinkish-grey zones with weak K-spar Mildly shattered, with hairline to 4mm calcite stringers. Mainly competently coring. Local faulting. Intermittent moderate magnetism.	60.05 63.09 66.14	63.09 66.14 69.19	557.5 1027 1091.1	9.2 207.8 98
68.45	74.2	Ad	Medium grey to pale pinkish-grey, occaisonally intermittently mildly altered to K-spar Fairly frequent 4-60mm calcite stringers. Mildly shattered, with calcite stringers 3-4%. Intermittent weak to moderate magnetism (quite local).	69.19 72.24	72.24 75.29	6660.4 10000	134.9 130.1
74.2	76.2	Ad	**Fault-fracture zone.** Mainly very blocky to broken, fault to fracture zone with local gouge-breccia and strong hematization of fractures and shears. Mainly medium grey andesite with local pale pinkish K-spar Locally reddish core from fracture-derived hematite. Calcite stringers, 1-3mm, 1-2%. Very local moderate Magnetism	75.29	78.33	2969.3	24.7
76.2	77.86	Md	**Fault-fracture zone.** Micro-diorite, pale greenish grey, hematized. (faulted as above)				
77.86	78.33	Md	Pale greenish grey microdiorite. .				
78.33	90.34	Ar	Probable albite, possible K-spar alteration. Intermittent very pale green apparent epidote, mild alteration. Locally incipiently brecciated. Overall very mildly, locally moderately shattered (breccia zones). Intermittently competently coring to broken, locally. Mostly non-magnetic. Local fault at 81.3m at 65 degrees to core axis, with 4cm gouge-breccia.	78.33 81.38 84.42 87.48	81.38 84.42 87.48 90.52	4754.6 5200.9 5423.2 1935.1	43.8 54.2 39.9 26.2
90.34	91.43	Dk	Porphyritic andesite dyke, medium brownish to pale greenish grey (the latter color at the two contacts). Both contacts chilled. Phenocrysts of plagioclase and a mafic mineral. Upper contact at 60 degrees to the core axis, lower contact at 70 degrees to the core axis. Mildly shattered, with 1-2% hairline calcite stringers. Very local very weak magnetism.	90.52	93.57	2340.9	18.8
91.43	101.1	Ad	Mainly pale pinkish-grey moderately to intensely K-spar enriched intermediate volcanic rock. Mainly moderately shattered, with 4-5% mainly hairline calcite stringers with mostly random orientation. Occasional 10-15mm calcite veins, one offset by a hairline stringer. Consistently, Non-magnetic. This mineralized zone stops in the very pale grey albitized and pyrite zone at depth, Competently coring. Local bornite/covellite	93.57 96.62 99.67 102.72 105.77	96.62 99.67 102.72 105.77 108.81	6348.1 1809.8 2996.9 3148.4 4346.3	77.9 35.8 139.8 66.4 515.8

101.1	109.08	Ar	Tectonic Breccia – Pale orangey grey moderate to intense albite-rich rock. Local layering at 55-60 degrees to the core axis at 101.94m.	108.81	111.86	176.1	4.2
109.08	109.92	Ar	**Tectonic Breccia –** Mainly dark green to very locally very pale grey altered rock. Mainly moderately chloritic. Very locally albitized, and pyrite-enriched. Very local weak magnetism.				
109.92	117.53	Ar	**Tectonic Breccia –** Mainly pale grey intensely albitized rock, with albite commonly converted to sericite. Intermittent medium to dark green weakly to moderately to moderately chloritized rock. Ubiquitous euhedral pyrite cubes. Strong layered fabric (@ 110.68, 113,113.54,115.07 at mainly 35-40 degrees TCA locally up to 55 degrees). Approximately 2-3% gypsum stringers, mainly subparallel to the albite layering. Competently coring, consistently non-magnetic.	0 111.86 114.91	111.86 114.91 117.96	176.1 125.9 156.4	4.2 7.4 12
117.53	128.7	Ad	**Tectonic Breccia –** Altered intermediate volcanic (probable andesite-locally unaltered), intermittent pale green moderately chloritized, with intermittent moderate pale grey albite. Overall somewhat pyrite enriched, especially in the albite zones (still euhedral pyrite cubes). Locally mildly shattered with very hairline calcite stringers. Competently coring. Local gypsum stringers, 127.6-128.7m, 3-4%. Consistently non-magnetic. Strong Albite layering @ 126.3	117.96 121 124.05	121 124.05 127.1	388.2 417.4 1401.3	13.1 12.5 22.4
128.7	133.2	Ad	Mainly medium grey intermediate volcanic, with local pink K-spar, 132.4-133.20m. Mildly shattered with white gypsum stringers 4-5%. Still competently coring. Very locally, weak to moderate magnetism. Gypsum stringers at 40-50 degrees to the core axis.	0 130.15	130.15 133.2	609.9 2395.8	14.2 29.7
	EOH						

Sego Resources *DDH-MM-10-17*

N	E	Z
5484500	684110	947

Length	Dip	Azimuth
108.81	90	0

Geologists	Core Size
S.Daly and D.Takagawa	NQ

From (m)	To (m)	Rock Code	Geology
0	14.94	Cas	Casing
14.94	15.11	Ti	Till with granitic and dyke cobbles NB: Propylitic alteration is common in this hole, except for the albite-gypsum zones which have about 10X more pyrite than the propylitic zones.
15.11	26	Ad	**Fault/fracture zone,** very blocky to mainly broken, with frequent gouge-breccia zones. Medium grey to salmon-pink intermediate volcanic rock with apparent local K-spar alteration, from 19.3 to 19.83m. Mildly shattered overall, and locally intensely in the K-spar zone, with sparse calcite filling overall (<0.5%).. Very local weak to moderate magnetism.
26	38.89	Ad	Mainly pale to medium grey with local pinkish-grey to pale greenish-grey. Local K-spar. Mildly shattered with 2 to 3% calcite stringers. Core mainly regular blocky to locally very blocky close to 39m. Very local weak magnetism. Pyrite, disseminated, local 3-5%, average trace to 1%.
38.89	42.1	Ad	**Fault/fracture zone, v**ery blocky to mainly broken, with some gouge-breccia zones. Mainly medium brownish to pale pinkish grey with frequent K-spar enrichment. Moderately shattered with about 1% very hairline calcite stringers. Non-magnetic. Probable intermediate volcanic.
42.1	44.66	Ad	Mainly medium grey to medium brownish-grey, with local apparent K-spar, moderately shattered with 2 to 3% calcite stringer filling, hairline to 1mm. Mainly moderate magnetism.
44.66	47.85	Ad	**Fault zone with frequent gouge-breccia zones** and very blocky to broken throughout. Mainly medium grey to locally red, K-spar locally. Very local olive green epidote. Moderately shattered throughout with 1-2% calcite stringer filling, hairline to 8mm. Very local moderate magnetism. Possible andesite.

From	To	Cu_ppm	Au_PPB
15.11	17.37	790.9	28.5
17.37	20.42	253.3	19.5
20.42	23.47	280	25
23.47	26.52	599.7	18
26.52	29.57	609.8	32.1
29.57	32.61	528.5	24.9
32.61	35.66	533.2	31.5
35.66	38.71	252.1	15.4
38.71	41.76	813.7	19.3
41.76	44.81	542.8	6.8
44.81	47.85	502.5	15

47.85	60.35	Ad	Mainly medium grey to local pale pinkish-grey, intermediate volcanic, with local apparent K-spar alteration. Mildly shattered, with 2 to 3% calcite stringer filling, hairline to 3cm. Core regular blocky to locally very blocky. Mostly non-magnetic, very local weak to moderate magnetism. Local trace to 1% disseminated pyrite.	47.85 50.9 53.95 57	50.9 53.95 57 60.05	793.5 507.1 882.7 1153.5	20.2 23.3 58.7 150.3
60.35	64.7	Ad	**Fault Zone** Has fairly frequent gouge-breccia zones or local shearing, and is moderately-intensely shattered. Core quite blocky to locally broken. Non-magnetic. Pale pinkish to medium grey partially altered intermediate volcanic, with apparent local K-spar and weak chloritic alteration. Probable andesite.	60.05	63.09	205.4	28.3
64.7	68	Ad	Mainly medium brownish-grey, moderately shattered, intermediate volcanic. Calcite stringer filling, mainly very hairline to very local 8mm. Core quite blocky. Mostly non-magnetic. Very local weak chloritic alteration.	63.09	66.14	300.5	13.8
68	69.47	Ad	Mainly pale brownish-grey, apparently K-spar enriched intermediate volcanic, bleached, and intensely shattered, with mainly hairline calcite stringer filling, 4 to 5%. Competently coring. Non-magnetic. Probable altered intermediate volcanic rock.	66.14	69.19	197.7	13.4
69.47	71	Ar	**Tectonic Breccia** - Pale grey to pale greenish-grey, albite and chlorite-altered rock, with a distinct crudely layered fabric at 30 to 40 degrees to the core axis. Disseminated pyrite common in this zone. Non-magnetic. 4-5% disseminated pyrite.	69.19	72.24	256	29.4
71	76.06	Ad	Pale brownish to greenish-grey, with intermittent chlorite and apparent K-spar alteration. Chlorite is moderate and K-spar is weak. Moderately to intensely shattered, with 4 to 5% hairline to 1mm calcite stringer filling. Competently coring. Non-magnetic. Probable andesite.	72.24	75.29	383.9	16
76.06	80.27	Ar	**Tectonic Breccia** – Pale greenish-grey to pale grey mainly albite, locally chlorite-rich rock. Albite alteration intense, chlorite is weak. This zone is crudely layered, with the main fabric at 25-30 and 50 degrees to the core axis. Approximately 6 to 8% disseminated pyrite cubes and some stringers. Non-magnetic. Some gypsum stringers.	75.29 78.33	78.33 81.38	179.8 144.3	10.2 6.2
80.27	84.93	Ad	**Fault Zone** Pale greenish-grey more competent portion of a fault zone. Likely original rock type was an andesite. Intensely brecciated and shattered with some intervals (< 30%) of fault gouge breccia. Intense albite alteration with average fabric orientation being 30-50 degrees TCA. Peppered with disseminated med-grained Py with a few ~0.5 cm wide medium-grained Py stringers within this interval (82.15 and 82.56) . 1-2 mm random gypsum stringers with rare (3 within this interval) 1-2 cm wide gypsum stringers with the orientation more or less with the general fabric. Note: from 83.4m to 84.93 is an introduction of moderate to intense pervasive chlorite alteration Upper contact at 30-45 degrees to the core axis.	81.38	84.43	117.6	6.2
84.93	90.53	Ar	**Fault Zone** Mainly non-coherent fault gouge zone from 84.93 to 88.19m. (<20% is coherent). Pale greenish grey with some (<40%) med dark grey zones (mostly found within the incoherent core). Hematite staining	84.43 87.48	87.48 90.53	147.6 212.9	7.4 9.9

			on fracture surfaces and infill. No presence of gypsum stringers (if any were present, they were obliterated.) in The incoherent zones. 1-2% gypsum stringers are present in the coherent zone below in this interval. Shattered albite-rich rock below the incoherent gouge material.				
90.53	108.81 EOH	Ad	Medium greenish-grey intermediate volcanic pervasively weak to moderately chloritized. Weak to moderate to moderate intermittent shattering with 1-2% calcite infill. Local thin gouge filled faults throughout. Competent coring. Non-magnetic. ~ 20% blebs of mafics. ~ less than half of them are hematite blebs.	90.53	93.57	222.3	3.2
				93.57	96.62	406.7	7.1
				96.62	99.67	245.2	4.7
				99.67	102.72	235.6	3.2
				102.72	105.77	257.7	3.4
				105.77	108.81	295.8	17.2

Sego Resources *DDH-MM-10-19*

N	E	Z
5484230	683895	956

Length	Dip	Azimuth
127.1	90	-50

Geologists	Core Size
S.Daly and D.Takagawa	NQ

From (m)	To (m)	Rock Code	Geology
0	3.05	Casing	
3.05	3.26	ChTu	Medium to dark grey andesite, probably a cherty tuff with limonitized stringers throughout randomly. Moderately magnetic. No apparent sulphides. Fracture controlled moderate limonite.
3.26	26.95	Brb	Deep red with tinge of purple (hematized) with very local dark grey non-hematized brick red unit with 1-3 mm olivine rounded and sometimes tabular in habit (as high as 30% to as low as 5% mostly 15-20%) with <1 to 4 mm amygdaloidal calcite and calcite stringers ~ 4-5% as amygdules and 0.5-1% as stringers. Intense pervasive hematization gives a unique colour to this unit.Intermittent weak magnetism and moderate pervasive magnetism in the non-hematized parts. Bottom contact at 25 degrees to the core axis.
26.95	35.4	Ar	**Brown gouge-breccia,** and pale green cemented breccia with seriate texture of breccia fragments
35.4	35.66	Ad	Hematized and intensely chloritized andesite
35.66	36.1	Dk	Mainly pale green andesitic dike, with two chill margins.
36.1	40.36	Md	MD, medium greenish-grey.
40.36	42.26	Ar	**Fault Zone -** dark red hematized gouge breccia.
42.26	44.81	Ad	strongly sheared moderately to intensely chloritized and hematized apparent andesite

From_	To_	Cu_ppm	Au_PPB
3.05	5.18	18	0.5
5.18	8.23	9.5	0.5
8.23	11.28	8.5	0.5
11.28	14.33	123	0.5
14.33	17.37	460.1	0.5
17.37	20.42	429.4	0.5
20.42	23.47	156.9	0.5
23.47	26.52	9.3	2.8
26.52	29.57	41.6	3.2
29.57	32.61	129	4.1
32.61	35.66	151.3	977
35.66	38.71	128.3	12
38.71	41.76	74.5	8.8
41.76	44.81	185.2	57.2
44.81	47.85	133.6	7.2

44.81	45.96	Ar	**Fault Zone –** gouge breccia, pale grey.	47.85	50.9	122.7	7.5
45.96	50.64	Ad	strongly sheared moderately to intensely chloritized and hematized apparent andesite.				
51.01	59.1	MdAd	Alternating medium grey andesite and MD. Mildly shattered, with 1 to 2% calcite stringer filling. quite blocky. Weak local Kspar alteration at MD. MD locally porphyritic with abundant plagioclase phenocrysts. Non-magnetic. Propylitic alteration, with trace disseminated pyrite.	50.9 53.95 57	53.95 57 60.05	172.8 349.9 544.6	25.2 13.3 26.6
59.1	67.72	Md	Pale to medium green (chlorite) grey with local creamish pink tinge (Kspar/albite) with local light green (epidote) MD and at parts dark black (deep red when streaked) specularite(Hematite) blebs. The appearance varies according to the alteration that the MD was subjected to (see alteration section for breakdown of the particular alterations).	60.05 63.01	63.09 66.14	502 450.6	14.6 13.3
67.72	69.19	Fz	**Fault and sheared zone, intensely broken**. This latter zone is probable lower contact of the solid microdiorite zone.	66.14	69.19	5788.6	262.2
69.19	89.16	MdAd	Pale to medium green (chlorite) grey with local creamish pink tinge (Kspar/albite) with local light green (epidote) MD and at parts dark black (deep red when streaked) specularite blebs. The appearance varies according to the alteration that the MD was subjected to (see alteration section for breakdown of the particular alterations). From 72m and downwards it is moderate and pervasive chloritization. Above that is Weak to weak moderate pervasive chloritization. Weak pervasive Kspar alteration throughout. Moderate blebby Ksp alteration from 69.5m to 71.1 m. Weak-moderate fracture coating of hematite throughout interval. From 69.19 to 69.5 m is moderate patchy epidote. From 79.9 to 81.18 m is moderate to intense black specularite brecciating the MD (note: specularite could be hematized magnetite as it is strongly magnetic. At 75.90 m is a 2 – 3 cm dolomite stringer. 73.24 to 73.66 is a moderate to intense sericitic altered zone. There is a 25 degrees TCA sericite stringer ~ 3 to 4 cm wide at 73.55 m. 81.18m-89.16m is medium green with slight grey tinge at parts. Moderate pervasive chloritization, weak pervasive spotty Kspar, rare weak spotty epidotization of plagioclase at parts. (closer to the end of this interval. Also, from 81.18m to 89.16m is 0.5% cal stringers in random orientation. Spotty weak-moderate hematite fracture coating. Non-magnetic. Mainly microdiorite with local andesite. Sparse bornite and chalcopyrite, very fine grained.	69.19 72.24 75.29 78.33 81.38 84.43	72.24 75.29 78.33 81.38 84.43 87.48	1566.1 867.4 1607.9 1097.8 439 434.6	48.4 56.4 94.5 93.4 28.4 20.1
89.16	90.02	Ar	**Cemented MD breccia**. Brecciated by specularite/hematized magnetite fluids. ~ 40% fluids, and 60% MD fragments	87.48	90.53	1216.7	38.7
90.02	106.22	Md	**Fault Zone –** This interval is moderately magnetic. Heavily broken up and faulted interval with over half of the interval interval with over half of the interval (~75%) either being broken up extensively or as fault gouge. Frequent intermittent gouge breccia. Apparent MD. Blebby local magnetite at about the 99m mark. Non-magnetic except for strong magnetism in the brecciated specularite/magnetite zones above.	90.53 93.57 96.62 99.67 102.72	93.57 96.62 99.67 102.72 105.77	3780.5 1816.5 797.2 6397.6 10000	211.9 214.5 82.7 920.5 1211.1

106.22	116.35	Md	**Tectonic Breccia –** Apparent MD, however, most of the texture is obliterated by albitization. Pervasive moderate-intense albitization of core giving the unit a creamish pale grey pink colour. At 106.27 there is a 3 cm qtz veinlet at 50 degrees TCA. Mainly local weak-moderate and very locally moderate chloritic alteration. Also, intermittent local narrow gouge breccia. 4-5% fine Py in clusters and in the fabric (i.e. stringer like). Trace Cpy with similar habit. Non-mag	105.77 108.81 111.86 114.91	108.81 111.86 114.91 117.96	4584.5 1147.8 1116.5 725.3	214.6 63.3 54.4 257.7
116.35	122.8	Md	Pale to medium greenish grey mainly fine grained microdiorite, locally finely porphyritic. Local trace epidote stringers. Mildly shattered. Weak-moderate fracture controlled hematite.121.13 m there is light pink 4 cm Calcite stringer, 70 degrees TCA. Spotty weak Kspar. At 124.05 m there is a 6 cm pink calcite vein with 30 TCA124.42 = qtz stringer 2 cm wide and 50 TCA. Non-mag. Very local volcanic-looking.	117.96	121.01	743.4	91.8
122.8	127.1 EOH	Ar	**Fault Zone** From the beginning of this and to 20.6 cm below there is fault gouge breccia with a lower contact of 30 TCA 6-8% disseminated Py. Pale pink-greenish grey andesite pervasive moderate albitization. Weak local chlorite. Weak fracture controlled hematite. Non-mag. Overall, very broken-intensely broken and sheared zone, with shears hematized. Possible microdiorite but hard to say with the alteration.	121.01 124.05	124.05 127.1	703.4 1437.2	77.7 126.3

Sego Resources *DDH-MM-09-12*

N	E	Z
5483194	682886	791

Length	Dip	Azimuth
103.2	-90	360

Geologists	Core Size
S.Daly and D.Takagawa	NQ

From (m)	To (m)	Rock Code	Geology
0	5.3	Casing	
5.3	23	Md	Mainly medium grey, locally bright pinkish-grey, equigranular to porphyritic (mainly equigranular, very locally porphyritic) micro-diorite with intermittent finer grained phases. Also, intermitttent intrusive breccia fragments, some angular to sub-rounded, 3-6cm or more in diameter, with a fine grained micro-diorite matrix. Fragments often pink, contrasting with the grey matrix, thus fragments altered before brecciated. Mildly shattered, with calcite stringers. Intermittent disseminated pyrite. Regular blocky core. Very local very broken core. 0-23m non-magnetic.
23	67	MdAd	Mainly medium grey, locally bright pinkish-grey porphyritic augite porphyry flow, auto-brecciated and with local zones of pink micro-diorite, possible intrusive fingers (contact zone of flow with intrusive Md. From 23-24.5m non-magnetic. From 24.5-51m somewhat magnetic (intermittent). Locally porphyritic and amygdaloidal (calcite amygdules), ie at 56.6 and 67m strong amygdule zone, with adjacent chilled zone (flow to porphyry?). Still mildly shattered with sparse calcite stringers. From 51-67m non-magnetic., Intrusive fingers end at about 67m.

From	To	Cu_ppm	Au_PPB
5.49	8.53	624.3	107.7
8.53	11.58	169.7	3916.1
11.58	14.63	312.8	77.1
14.63	17.68	183	15.5
17.68	20.73	89.5	13.1
20.73	23.77	10.6	3.7
23.77	26.82	117.6	5.6
26.82	29.87	5.6	2.2
29.87	32.92	38.6	2.3
32.92	35.97	332.1	27
35.97	39.01	80.4	12
39.01	42.06	166.9	9.3
42.06	45.1	184.3	6.7
45.1	48.16	246.8	18.1
48.16	51.21	116.3	8.5
51.21	54.25	37.2	3.1
54.25	57.3	151.3	5
57.3	60.35	224	6.9

				60.35	63.4	91.7	3.2
				63.4	66.45	149.5	5.7
67	95.56	Ad	Mainly medium grey, locally porphyritic flow. Locally very porphyritic, 67.48-68.55m. Mildly shattered up to 85m. Non-magnetic 67-95.56m.	66.45	69.49	85.2	3.9
				69.49	72.54	35.8	3.2
				72.54	75.59	68.5	4.4
				75.59	78.64	95.3	10.4
				78.64	81.69	128.8	2.6
				81.69	84.73	70.1	1.9
				84.73	87.78	2.9	0.5
				87.78	90.83	1.9	1.8
				90.83	93.88	21.9	0.5
95.56	97.44	Ad	Mainly very pale creamy grey moderate to intense albite altered dark grey andesite. Non-magnetic.	93.88	96.93	30.1	0.8
97.44	103.02m	Ad	Medium grey andesite. Core quite blocky-broken. Non-magnetic.	96.93	99.97	39.7	0.5
				99.97	103.42	2.4	0.5

Sego Resources *DDH-MM-09-13*

N	E	Z
5483194	682886	791

Length	Dip	Azimuth
151.79	-73	65

Geologists	Core Size
S.Daly and D.Takagawa	NQ

From (m)	To (m)	Rock Code	Geology	From	To	Cu_ppm	Au_PPB
0	3.45	Cas					
3.45	13.7	Md	Med grey to Med greyish-pink Microdiorite, with fairly frequent moderate local pervasive Ksp alteration. 0-9 meters sparse Cal stringers. 9 metres to end of unit is mildly shattered infilled with hairline to 3 mm calcite stringers with 1% overall calcite.0-11.9 m is a weathered zone (intense limonite and local hematite on fracture surfaces). Overall, blocky to locally broken. 10-15% pyroxene phenocrysts. Weakly magnetic throughout interval. Weak and local epidotizing of plag phenocrysts	0 5.49 8.53 11.58	5.49 8.53 11.58 14.63	536.7 249.1 196.2 447.7	45 47.5 42.3 179
13.7	16.49	Ad	Medium grey, moderately shattered, with 1-8mm thick calcite stringers. Non-magnetic. Very blocky to locally broken	14.63	17.68	136	11.8
16.49	23.26	Md	Light to medium grey, locally pale pinkish-grey with K-spar patches and very locally pale greenish thin chlorite stringers.Mildly to moderately shattered with calcite filling, hairline to 3mm thick calcite filling. Local shearing and faulting. Non-magnetic. Regular blocky and very locally broken	17.68 20.73	20.73 23.77	177 49.5	20.1 4.5
23.26	24.55	Ad	Medium grey and moderately shattered andesite with hairline to 3 mm calcite stringers. Trace to 0.5% disseminated And blebby Py. Very weak large patchy areas of Ksp altered areas. Non-magnetic. Regular blocky to locally broken	23.77	26.82	17.8	2.4
24.55	25.95	Md	Medium grey to pale salmon pink MD intermittently pervasive moderate Ksp. Mildly				

			shattered with hairline To 3 mm Ca stringers. 1-3 mm pyroxenes and plag phenocrysts at parts. Non-magnetic. Regular blocky to locally broken.				
25.95	28	Ad	Medium grey Ad locally porphyritic whereas some parts are very fine-grained. Mildly shattered with 1-10 mm calcite stringers. Intermittent pervasive moderate Ksp alteration. Trace disseminated Py, trace blebby Py and trace Py in Ca stringers. Non-magnetic. Regular to very blocky.	26.82	29.87	150.6	8.3
28	29.53	Md	Medium greensih pinkish grey Md with moderate local pervasive Ksp and moderate local Chl. Moderately shattered with hairline to 3 mm Ca stringers. Weak local pervasive Epd. Locally faulted. Trace disseminated Py, trace blebby Py and trace Py in Ca stringers. Non-magnetic. Regular blocky (20-30 cm Long core sticks)				
29.53	36.6	Dk	Pale grey to pale greenish grey to medium greenish grey dike intermittently finely porphyritic with 1-2 mm long euhedral plag laths with frequent round 1-2 mm calcite grains. Chill margin at lower contact over 6 cm. Sharp upper and lower contacts. Upper contact = 40 degrees and lower contact = 60 degrees TCA Mainly moderately to intensely shattered with hairline to 10 mm calcite stringers. Weak, local chl, weak local Epd as shoots and patches. Very weakly magnetic. Regulay blocky to competently coring with up To 100 cm core pieces.	29.87 32.92	32.92 35.97	15.5 35.5	1.7 2.3
36.6	51.06	Md	Mainly medium to dark grey with greenish to pinkish and local red (hematite staining) MD. Hematite stained and Kspar enriched zones. Local weak spotty Epd alteration. Mildly to moderately shattered with hairline to 3 mm Cal stringers.. Competent coring with 40-65 cm long core sticks. Sparse intermittent moderate patchy Kspar alteration. Sparse moderate Hem (along fractures, but not broken up core). Trace disseminated and blebby Py. From 46.8 m to end of this unit are purple stained Cal stringers. Mainly non-magnetic, local weak magnetism.	35.97 39.01 42.06 45.11 48.16	39.01 42.06 45.11 48.16 51.21	164.2 99.1 184.1 108.5 111.5	11.1 8.1 7.4 4.3 3.4
51.06	51.9	Ad	Dark grey andesite mildly shattered with hairline to 2 mm calcite stringers of which some are purple- stained. Consistent hairline hem staining (i.e. like stringers). Very local moderate Chl. No magnetism Regular blocky.	51.21	54.25	43.5	4.2
51.9	53.02	Md	Mainly medium grey, locally greenish grey, microdiorite, with local weak chloritic alteration. Mildly shattered, with hairline to 3mm calcite stringer filling. Regular blocky. Non-magnetic.				
53.02	56.8	Ad	Medium grey to medium greenish grey andesite, weakly fairly pervasively chloritic. Mildly to moderately shattered, with hairline to 2mm calcite stringers. Competently	54.25	57.3	100.7	6.8

			coring with 40-50cm long core sticks. Non-magnetic.				
56.8	60.72	Md	Mainly medium grey, locally salmon pink, olive-green and pale green, K-spar enriched, with a patch of epidote and local weak chloritic alteration. Mildly shattered, with hairline to 3mm calcite stringer filling. Competently coring with up to 58cm long core stick. Non-magnetic.	57.3	60.35	38.9	2.7
60.72	61.54	Ad	Medium grey to medium greenish grey andesite, locally weakly chloritic. Mildly shattered, with hairline to 3mm calcite stringer filling. Core regular blocky to competently coring. Non-magnetic.	60.35	63.4	168.2	2.1
61.54	62.48	Md	Mainly medium grey, locally salmon pink K-spar enriched microdiorite. Mildly to moderately shattered, with hairline to 10mm calcite stringers. Competently coring with 40-50cm long core Regular blocky. Non-magnetic.				
62.48	63.65	Ad	Mainly medium grey, locally dark grey andesite. Mildly shattered, with hairline to 3mm Calcite stringer filling. Competently coring. Non-magnetic. Local salmon pink K-spar.				
63.65	77.9	Md	Mainly medium grey with local intermittent pinkish grey and very local purplish to red MD. Intermittent moderate patchy Ksp and patchy purple calcite, weak local patchy Chl (blebby like habit). Mildly shattered With 1 to 8 mm calcite stringers as well as hematite filling. Regular blocky to competent coring. Non-magnetic Note: One bleb of Cpy found at 70.67 m amongst an area with very abundant Py. (Py>Cpy by ~ 10:1) Jointing of core stick bearing Cpy is 55 degrees to LCA and 70 degrees to UCA.	63.4 66.45 69.49 72.54 75.59	66.45 69.49 72.54 75.59 78.64	152.2 75 73.4 136.2 54.4	1.5 2 3.3 4.2 1.1
77.9	84.44	Ad	Mainly light to medium greenish grey locally pinkish. Intermittently weakly to moderately pervasively chloritized. Sparse patchy moderate Ksp. Mainly very mildly shattered infilled with hairline to 3 mm calcite Stringers. 78.06 m to 78.7 m is moderately to intensely shattered with hairline to 10 mm calcite stringers moderately chloritized. Non-magnetic. Regular blocky to competently coring. Hematite stringers.	78.64 81.69	81.69 84.73	61.7 97.2	2.5 0.5
84.44	87.24	Md	Mainly medium grey with local medium greenish grey. Local frequent streaky weak-moderate chlorite. Mildly shattered with hairline to 8 mm calcite stringers, with some being hematite stained. Non-magnetic. Competently coring.	84.73	87.78	16.4	1.1
87.24	109.29	Ad	Mainly medium grey locally light greenish grey weakly to moderately chloritic and locally olive green epidote moderate patchy fracture masses with hematite healing (i.e. filling in the fractures). Weak to moderate intermittent patchy Ksp. Pervasively moderately shattered with hairline to 8 mm calcite stringers. Strong local Hematite on	87.78 90.83 93.88 96.93	90.83 93.88 96.93 99.97	2.5 2.1 34.7 5.1	0.5 2.6 1.2 0.9

			fractures. Mainly regular blocky and locally very blocky to broken. Non-magnetic Locally finely porphyritic.	99.97 103.02 106.07	103.02 106.07 109.29	86.3 42.8 63.8	1.6 1.6 1.6
109.29	111.73	Fz	Mainly dark greenish grey, intense fault zone. Locally intensely chloritic. Overall intensely sheared To brecciated. Local gouge/breccia, 111.33-111.73m, at 60 degrees to core axis. Calcareous matrix in fault. Average shearing angle overall 50-60 degrees to core axis. Non-magnetic. Core regular blocky.	109.29	112.17	52.9	2.6
111.73	117.57	Ad	Mainly medium grey locally light greenish grey weakly to moderately chloritic Weak to moderate intermittent patchy Ksp. Pervasively moderately shattered with hairline to 8 mm calcite stringers. Mainly fairly blocky. Non-magnetic. Very local dike fragment 4 cm long found close to 115.5 m	112.17 115.21	115.21 118.26	59.9 229.9	2.6 8.3
112.25	112.61	Dk	Pale greenish dike finely porphyritic with two chill margins with both 35 degrees TCA. Trace of finely disseminated Py.				
117.57	118.21	Md	Light medium greenish grey MD with very local fracture controlled weak chlorite. Moderately shattered with hairline to 3 mm calcite stringers. Regular blocky. Non-magnetic. Common weak-moderate Kspar blebs.				
118.21	119.8	Ad	Medium greenish grey Ad very local weak chlorite. Moderately shattered to locally faulted with hairline to 3 mm calcite stringers. Non-magnetic, regular blocky.Note: last 5 cm of this interval is a short section of MD	118.26	121.31	107.5	3.1
119.8	120.15	Dk	Pale greenish grey finely porphyritic with a narrow lower chill margin. UCA=45, LCA=20 weakly magnetic Regular blocky.				
120.15	120.65	Ad	Medium greenish grey Ad very local weak chlorite. Mildly shattered with hairline to 2 mm calcite stringers. Non-magnetic. Regular blocky.				
120.65	120.75	Dk	Pale greenish grey finely porphyritic with a pale green chill margin at upper contact . UCA = 15. LCA = 35. Local chloritic alteration at lower contact. Mildly shattered. Moderately magnetic.				
120.75	121.14	Md	Medium grey to medium pinkish grey MD. Pervasive moderate Kspar alteration. Weak frequent spots of Chl within Kspar alteration. Mildly shattered with hairline to 2 mm cal stringers. Regular blocky, non-magnetic.				

121.14	129.89	Ad	Mainly medium grey with frequent local (i.e. intermittent zones)olive green moderate epidote. Local pale pink moderate Kspar. Mildly shattered with hairline to 5 mm calcite stringers. Regular blocky to competently coring. Non-magnetic.	121.31 124.36	124.36 127.41	5.5 2.6	2.1 1.2
129.89	132.47	Md	Medium to dark grey, microdiorite. Mildly shattered, with hairline to 7mm calcite stringer filling. Non-magnetic,regular blocky. Locally ubiquitous tiny yellow grains, perhaps sericite alteration of feldspars?	127.41 130.45	130.45 133.5	12 197.7	0.9 3.2
132.47	137.25	Ad	Mainly medium grey, locally medium greenish grey, andesite. Mildly shattered, with hairline to 5mm calcite stringers. Non-magnetic. Core regular blocky to competently coring.	133.5 136.55	136.55 139.6	52 75	1.9 3.6
137.25	138.58	Md	Mainly medium grey to locally medium reddish grey microdiorite. Locally, moderate hematite on fractures. stringers. Regular blocky to competently coring.				
138.58	139.06	Dk	Pale greenish grey dike finely porphyritic with suspect plag. Mildly shattered with hairline to 2 mm calcite stringers. Moderate constant magnetism. No visible sulphides.				
139.06	140.22	Ad	Medium grey mildly shattered with hairline to 3 mm calcite stringer. Non-magnetic, regular blocky.	139.6	142.29	138	9.1
140.22	140.6	Dk	Pale greenish grey weakly to non-magnetic, mildly shattered. Very weak, local spotty Chl. Trace finely divided and disseminated Py				
140.6	142.29	Ad	Mainly pale pinkish to pale greenish grey locally dark grey porphyritic andesite. Frequent moderate patchy Hematite staining. Weak local patchy chlorite. Mildly shattered with hairline to 5 mm calcite stringers. Non-magnetic. Regular blocky.				
142.29	143.63	Md	Very variegated medium greenish grey to pale grey to medium grey MD intensely shattered. Local weak fracture controlled hematite and weak local patchy chlorite. Calcite stringer 4-5%. Non-magnetic. Regular blocky to locally broken. Blebby Cpy, Bn and Py and occurs locally as clusters from 142.97 m to 143.24 m.	142.29	143.63	536.8	7.3
143.63	144.44	Ar	Pale pinkish to tan colour to pale greenish grey extremely altered rock. Original rock	143.63	144.44	158.8	4.2

			texture is obliterated moderately to intensely shattered. Locally faulted. Very highly calcareous. Consistent patchy weak- moderate chlorite. 15 mm calcite stringer cut by 5 micro-faults causing extension of the stringer by 4 cm. Non-magnetic. Regular blocky. This interval is intensely bleached				
144.44	151.79	AdBx	Mainly dark grey to locally pale grey to pale pinkish grey and very locally olive green andesitic groundmass with MD (intrusive) breccia. Spotty patchy weak Epidote, Spotty weak intermittent Chl. Frequent moderate Hematite fracture coating. Moderately shattered with hairline to 5 mm calcite stringers. Non-magnetic. Regular blocky.	144.44 147.35	147.35 151.79	162.2 47.5	2.7 1.9

Sego Resources *DDH-MM-10-18*

N	E	Z
5484454	684061	948

Length	Dip	Azimuth
90.53	90	0

Geologists	Core Size
S.Daly and D.Takagawa	NQ

From (m)	To (m)	Rock Code	Geology
0	13.72	Casing	Casing
13.72	18.61	Ad	Medium green grey intermediate volcanic with weak pervasive chloritic alteration. Mildly shattered with 1% calcite stringers, random, hairline to 1 mm. Non-magnetic.
18.61	20.84	Ad	Fault/fracture zone. Quite blocky-broken, medium light pinkish grey, moderate K-spar altered intermediate volcanic intermittent narrow gouge-breccia, weakly faulted. Ad. Non-magnetic.
20.84	29.18	Ad	Mainly medium grey with pale pinkish tinge, probable intermediate volcanic with moderate K-spar alteration. Very mildly shattered with 0.5% calcite hairline to 2 mm stringer filling. Calcite stringers At 20-50 degrees TCA. Non-magnetic.
29.18	30.34	Md	Medium greenish grey, mainly with pale pink. Weak-moderate K-spar alteration. Very mildly shattered with hairline 1 mm calcite stringer fillings. Weak very local magnetism, mostly non-magnetic. Patchy local Hematite ~5%.
30.34	38.4	Md	Fault/fracture zone. Mainly very blocky intensely broken core with frequent gouge breccia zones. Mainly medium grey MD with sparse local weak K-spar alteration and trace epidote alteration. Weak very local magnetism, mostly non-magnetic.
38.4	40.68	Md	Pale green grey with slight pinkish tinge. Pervasive moderate Kspar with 1-2% epidote stringers 1-3 mm wide. Note: the Epd is mainly found within the interval of 38.4 m to 40.5 m. Mildly to moderately shattered with hairline calcite stringers, 0.5%. There are some hematite stains on the fracture surfaces proximal to the end of this interval. Non-magnetic intense Calcite stringers
40.68	40.96	Dk	Dark grey to black dike with calcareous spots throughout this Interval. ~ 1 mm in diameter. Upper contact is roughly 45 degrees TCA. rare epidote spots. No apparent sulphides. Slightly magnetic

From_	To_	Cu_ppm	Au_PPB
13.72	17.37	1197.7	70.8
17.37	20.42	3220	152.8
20.42	23.47	1323.8	32.8
23.47	26.52	1487.2	18
26.52	29.57	2828.4	80.7
29.57	32.61	4479.3	341.6
32.61	35.66	399.9	9
35.66	38.71	292	2.9
38.71	41.76	163.9	1.1

40.96	42.52 Md	Same MD as 38.4 to 40.68. Non-magnetic	41.76	44.81	237.1	3.7
42.52	43.93 Fz	Heavily faulted area with mainly fault gouge breccia. Non-magnetic				
43.93	44.5 Md	Same MD as 38.4 to 40.68. Non-magnetic				
44.5	44.68 Dk	Upper contact is 25 degrees TCA. Lower is likely 35 degrees.. no obvious contact is visible for the lower contact. Lithology description is the same as the one above. Slightly magnetic				
44.68	46.94	Same MD as 38.4 to 40.68. Non-magnetic	44.81	47.85	1547.3	15.7
46.94	48.42 Dk	Med to dark grey dike intensely shattered with hairline calcite 10-15%. also ~1 mm calcite spots. Very slightly magnetic.				
48.42	52.68 Md	Dark grey to pale grey with greenish tinge mainly bleached MD.Moderately pervasively chloritized with local Weak-moderate hematite fracture surface staining. Mildly to moderately shattered with hairline to 1 mm Calcite stringers. Locally slightly magnetic.	47.85 50.9	50.9 53.95	341.5 297.9	4.8 5.9
52.68	65.6 Ad	Pale grey with pale greenish grey with tinges of creamy pink and local dark green Ad gone through intense albitization with local non albitized (the dark green part) but chloritized. Weak to moderate pervasive chloritization (the chloritization begins at about 59 m) There is a layering of albite with 40 to 50 degrees TCA fabric. There is some shearing parallel to the fabric. Local moderate hematite staining and fracture infilling. 4-6% disseminated Py with trace cpy. Non-mag in the albitized. Very slightly in chloritized	53.95 57 60.05 63.09	57 60.05 63.09 66.14	166.1 194.8 178 287.9	18 16.8 99.9 23
65.6	67.3 Ad	Pale to medium greenish grey Ad mildly shattered with 0.5% hairline white opaque, hard stringers non. reactive to acid, hence qtz. Mildly chloritic. Stringer and patchy albite 2-3%. Non-magnetic	66.14	69.19	577.4	125.8
67.3	71.55 Ad	Medium to dark greenish grey finely porphyritic andesite with 0.5 mm plagioclase, some of which are tabular. Local weak to moderate chloritic alteration. Weakly shattered with hairline to 2 mm 0.5% calcite stringers. Non-magnetic	69.19	72.24	684.4	187.8
71.55	73.35 Ad	Olive to dark green Ad moderate epidote and chlorite alteration. Epidote patchy and chlorite mainly pervasive. Sparse epidote and calcite stringers mainly hairline with one 15 mm in width. Mildly shattered. Non-magnetic	72.24	75.29	509.9	21.6
73.35	74.42 Ar	Fault Zone, Pale grey brown of which about half is gouge. Original rock type is indiscernable, but was likely Ad.				
74.42	88.29 Ad	Medium green and pale grey with slight light pink tinge. This unit interchanges between the chloritized Non-albitized medium green andesite and the albitzed pale grey with slight light pink tinge andesite.	75.29 78.33	78.33 81.38	357.1 187.8	6.2 6.4

		These units are roughly 1 to 1.5 m long and their distribution appear to controlled by local faults that are 30 cm to ~ 100 cm long. These faults likely acted as conduits for the altering fluids. Moderate intermittent pervasive chloritization (where preserved) and moderate intermittent pervasive albitization. Calcite stringers 0.5 to 1% in chloritized intervals, but none in albitized intervals. Albite layers at ~ 84 m is 50 TCA, at 85.5 m is 70 TCA. Entire unit appears to be non-magnetic.	81.38 84.43	84.43 87.48	271 292.7	7.1 19.8
88.29	90.53 Dk	Pale grey green intermediate 0.5 to 1 mm plag epidotizing (~ 5%) with 0.5 to 1 mm mafics (~ 5%) porphyritic dike with ~ 1 % clay and calcite stringers. Non-magnetic. Moderate pervasive albitization.	87.48	90.53	144.7	3.6

Sego Resources *DDH-MM-10-20*

N	E	Z
5484500	684060	945

Length	Dip	Azimuth
215.49	90	-50

Geologists	Core Size
S.Daly and D.Takagawa	NQ

From (m)	To (m)	Rock Code	Geology
0	15.85	Casing	
15.85	20.52	MD	Medium to olive green MD with local moderate epidote stringers with stringers and halos of moderate To locally strong magnetite. Magnetite stringer is 35 degrees TCA. Weak spotty Kspar. Moderate to locally strong magnetism. Very mildly shattered with 0.5% calcite stringers 1 mm to 2 mm.
20.52	28.23	Ad	Medium to dark grey with slight green tinge Ad quite blocky to broken with moderate pervasive Kspar alteration, spotty weak-moderate chlorite, patchy locally strong magnetite, weak-moderately shattered with calcite stringers, hairline to 10 mm locally vuggy stringers. Moderate magnetism with locally weak and strong magnetism.
28.23	33.8	MD	Medium green to medium greenish grey MD weakly pervasively chloritized, locally strong epidote stringers (epdt stringers most concentrated at 32.2 to 32.61 m) Weak-moderate fracture controlled hematization. 0.5% hairline calcite stringers. Local weak magnetite stringers. Moderate magnetism with variations in degree somewhat throughout the interval. i.e. some parts have stronger but others are weaker magnetism. Weak-moderate spotty Kspar.
33.8	36.92	Ad	Medium greyish green Ad with moderate local epidote stringers (1 cm wide, 10 deg. TCA, 34.06 m) and Multiple 3-4 mm blebby Cpy bearing epidote stringer (2 cm wide, 60 deg. TCA, 35.66 m) both are Epdt, Chl , Calcite (with a pink tinge), +/- Cpy, +/- Py bearing (mineral abundance in that order). Weak-moderate locally patchy Ksp, weak pervasive Chl, locally moderate, weak pervasive Epdt, locally moderate (as fracture infill), mildly shattered with hairline to 1 mm calcite and Epdt stringers (0.5%) Non-magnetic.
36.92	46.85	Ad	Faulted interval with medium greyish green Ad with frequent fault gouge breccia and broken up intervals. 0.5% hairline calcite stringers with one veinlet (~ 2 cm wide, 45 deg. TCA, 44.24 m) (Chl, Epd, pink Cal, 2-4mm blebby Cpy). Local weak-moderate patchy Ksp, weak spotty Chl, weak local fracture controlled

From_	To_	Cu_ppm	Au_PPB
15.85	17.37	489.4	9.4
17.37	20.42	469.9	11.8
20.42	23.47	1481.7	120.8
23.47	26.52	1801.6	51.3
26.52	29.57	877.6	352.4
29.57	32.61	1356.8	526.2
32.61	35.66	1850.8	994.6
35.66	38.71	1655.1	212.8
38.71	41.76	1325.5	69.4
41.76	44.81	2322.2	219.5

		hem stains. Very local moderate epdt stringers. Weak local magnetite stringers. Weak magnetism. locally strong magnetism. Broken up with gouge breccia from 45.02 to 46.13 m, gouge breccia for 25 cm. blebby Cpy found in veinlet at 43.89m	44.81	47.85	1820.8	274
46.85	58.84 MdAd	Mainly medium grey to locally pale olive green mainly andesite with frequent MD apparent injections. very local epidote (chlorite stringers are very weak), also very local pink K-spar zones, mainly diffuse stringers, very weak also. Mildly shattered with 1-2 % hairline- 6 mm calcite stringer fillings. Competently Coring. 46.85 to 49.03 m is mainly weakly magnetic and locally strong magnetism.	47.85 50.9 53.95	50.9 53.95 57	1480.7 965.9 857.6	187.9 28.2 18.4
58.84	73.2 MdAd	Mainly medium pinkish grey to very local olive-green mainly intermediate volcanic with local MD injections (less than in the last zone). Weak-moderate fairly pervasive Kspar alteration. Core partly regular blocky to very blocky to broken. Very local gouge breccia found at 60.05 m – 66.25 m. very local very weak epidote Cpy, epidote, qtz, chl stringer at 68.84 m with 40 deg. TCA, 6 cm. Mildly shattered with 1% calcite Stringers hairline to 2 mm. Mainly non-magnetic, locally weak-moderate magnetism.	57 60.05 63.09 66.14 69.19	60.05 63.09 66.14 69.19 73.24	633 986 2712.3 1165.8 1594.5	15.7 20.1 65.9 24.4 46.9
73.2	75.5 Ad	Mainly salmon pink-medium grey intermediate volcanic with moderate-intense K-spar pervasive enrichment , very local magnetite bands, core quite blocky. Very local very weak epidote stringers. Sparse 0.5% calcite stringers 0.5 mm to 3 mm. Mainly weak, locally strong magnetism.	73.24	75.29	552.6	29.5
75.5	84.06 MdAd	Mainly medium grey intermediate volcanic with fairly local MD injections. Mainly weakly-locally moderately shattered with hairline to 20 mm calcite stringer fillings. Core regular blocky-locally broken with hematite stain on some fracture and apparent shears. Non-magnetic. 82 m – 2 to 10 mm calcite stringer very low angle TCA (0degrees) bearing consistent Cpy ~ 1% of stringer.	75.29 78.33 81.38	78.33 81.38 84.43	1100.8 1085 997.6	102.6 58.1 252.6
84.06	86.8 Ad	Medium greyish green Ad heavily broken up and faulted. With some low angle faulting e.g. 5 deg. TCA at 74.43 m. Gouge breccia for the last 15 cm interval (i.e. 86.65 to 86.8 m). Weak spotty Ksp, weak-moderate spotty chl throughout, weak-moderate local hematite fracture controlled stains. Local weak magnetism.	84.43	87.48	635.2	31.5
86.8	93.95 Ad	Mainly medium grey intermediate volcanic with mostly local injections of MD. There is one 90 cm long interval of MD from 91.3 to 92.2 m. Hairline to 15 mm calcite stringers/veinlets. Weak and weak-moderate local Kspar enriched sections. Spotty throughout weak-moderate chlorite alteraion. Local moderate magnetite stringers. Local weak-moderate hematite fracture controlled alteration. Weak-moderate local epidote alteration (pervasive along MD of this section). Local weak and very local strong magnetism.	87.48 90.53	90.53 93.57	1095.4 1056.5	41.3 77.2
93.95	98.71 Ft	Pale grey green faulted and broken up fault zone with some coherent Ad. Pervasive moderate chlorite patche , very local moderate Ksp, moderately-intensely shattered with 1-2% calcite stringers. Frequent gouge interval local weak-moderate hematite fracture controlled staining. Local very weak magnetism.	93.57 96.62	96.62 99.67	634.3 483	21.2 109.1
98.71	109.7 Ad	Medium grey to medium greenish grey intermediate volcanic. Mildly-moderately shattered with hairline to	99.67	102.72	717	149.5

		3 mm 2-4 % calcite stringers. Intermittent weak to moderate chloritic alteration. Core regular blocky to locally quite blocky. Very weak local fracture coating hematite. Non-magnetic.	102.72 105.77	105.77 108.81	653.6 195.6	65.2 73
109.7	113.94 Ad	Pale pinkish to pale greenish grey intermediate volcanic with mainly moderate to intense pervasive Ksp. Mildly to moderately shattered. It becomes moderately shattered from 112.4 to 113.94 m. 2% calcite and ~1 % wider qtz stringers (up to 10 mm). Spotty weak chlorite. No magnetism.	108.81 111.86	111.86 114.91	381.4 241	30.5 20
113.94	115.8 Fz	Pale greenish grey intensely shattered to faulted with some gouge breccia with 2%calcite and 4% qtz fracture infilling, hairline to 8 mm wide, . Apparent locally strong albite. Spotty weak chlorite alteration. Regular blocky to quite broken. Non-magnetic.	114.91	117.96	374.1	25
115.8	125.46 Ad	Olive green to medium greenish grey intermediate volcanic. Pervasive moderate to intense chlorite. Intermittent weak to moderate epidote alteration. Moderately shattered with hairline to 3-4% 15 mm calcite stringers with local qtz stringers. Core regular blocky to intermittently locally broken. Moderate intermittent fracture controlled hematite alteration. Non-magnetic except for locally strong magnetism at 118.02 for a magnetite stringer.	117.96 121.01	121.01 124.05	369.9 828.5	28.8 40.7
125.46	133.57 Ad	Apparent volcanic unit with the texture nearly completely obliterated by the intense pervasive albitization and at parts albite going to sericite, intermittent moderate. Colour of this unit varies due to pink albite bands. Very pale grey to creamy pink and dark grey with a slight tinge of green. The angle of the strong general Fabric is 35 to 45 degrees TCA. From 127.86m to 129.65 m is nearly all gouge, the upper contact is 35 degrees TCA. The upper 60 cm of this interval (125.46 to 126.06 m) has 4-5% qtz stringers with hematite on the outer margins of the qtz stringers, 1-3 mm wide. No calcite stringers except for some rare qtz stringers. Qtz = 0.1% total. Non-magnetic	124.05 127.1 130.15	127.1 130.15 133.2	365.4 175.3 135.7	23.3 12 27.6
133.57	136.16 Ad	Pale greenish grey moderate to moderate-intensely shattered, locally moderately albitized. Very sparse Qtz stringers present, 0.1%, 1-2 mm wide. No calcite stringers present. There is a fault contact right at the lower contact of this interval with 40 mm gouge breccia and 50 degrees TCA. Spotty weak chlorite alteration. Very local weak magnetism.	133.2	136.25	125.9	4.3
136.16	147.2 Ad	Medium grey andesite with abundant disseminated Py increasing from 140.15 m. Mildly shattered with 2-3% calcite stringers from hairline to 3 mm stringers. Very local qtz infilling. Spotty weak chlorite. 141.08 m to 141.52 is a dike with 3 cm upper&lower chill margins. Pale grey to medium brown porphyritic dike (probably plag porphyry). Upper contact is 50 degrees, lower is 25 degrees. Intensely shattered with qtz+/- plag infilling. Non-magnetic.	136.25 139.29 142.34 145.4	139.29 142.34 145.4 148.44	204 300.5 264.1 238.9	1.5 6.4 12.3 17.4
147.2	148.86 Ad	**Fault Zone** – Medium grey to medium green andesite moderately shattered with 1-2% qtz stringers and incipiently brecciated with local broken and/or breccia zones. Non-magnetic				
148.86	160.63 Ad	Medium grey intermediate volcanic moderately shattered with mostly hairline and very locally 20 mm calcite stringers 3 to 4%, mostly calcite, occasionally qtz stringers. Very local moderate Ksp and spotty	148.44 151.49	151.49 154.53	315.5 504.2	8 11.7

		weak chlorite, local weak epidiote and epdidote stringers. Weak-moderate fracture controlled hematite. blebby Cpy found in veinlet at 159.66 m. Mainly non-magnetic. Very local, strong magnetism due to rare Mt stringers.	154.53 157.58	157.58 160.63	282.8 527.1	13.5 16.9
160.63	175.87 Ad	Medium grey to locally medium greenish grey andesite mildy (locally intensely) shattered with hairline to locally 15 mm (mainly ~1 mm)1-2% calcite stringers. Moderately chloritic and moderately fracture controlled hematite in intensely shattered zones between 162.86m and 163.36 m. 166.6 m is moderate patchy, local Kspar and sparse trace of Cpy. Local weak and moderate magnetism. Weak-moderate frequent epidote stringers and from 170.4 m to 174.68m is v. weak pervasive Kspar alteration.	160.63 163.68 166.73 169.77 172.82	163.68 166.73 169.77 172.82 175.87	521.6 606 710 315.8 173.1	15.5 6.2 9.8 7.6 5.5
175.87	176.73 Fz	Light to light medium grey intensely crushed fault zone with ~80% as fault gouge crackled with calcite stringers where rock is somewhat coherent. Local weak hematite stain also on fract-surfaces. Local weak chlorite blebs. Non-magnetic.	175.87	178.92	302	7.8
176.73	180.93 Ad	Medium grey with faint pink and green tinge porphyritic andesite. Mildly to moderately shattered with hairline to 3 mm wide calcite stringers. Weak pervasive Ksp alteration with weak-moderate spotty chlorite alteration, weak fracture controlled hematite stains. Local weak magnetism.	178.92	181.97	245.7	1.9
180.93	188.43 Ad	Medium grey -green porphyritic andesite moderately shattered with hairline to 4 mm calcite stringers with rare quartz stringers (0.1% total). Moderate fracture controlled hematization. Weak-moderate spotty chlorite blebs throughout interval. Very rare weak Epdt stringers. Weak local zones of Kspar blebs. Very local weak magnetism (mainly for the first 50 cm of this unit). Local weak-moderate magnetism.	181.97 185.01	185.01 188.06	346.9 347.2	2.8 5.6
188.43	192.01 Ad	Medium to light grey slightly porphyritic andesite with abundant disseminated blebby Py (20-25%) moderately shattered with mainly hairline ranging up to 3 mm calcite stringers~1%. Rare calcite patches form where they can widen up to 10 mm. Rare very weak spotty chlorite spots. Non-magnetic.	188.06	191.11	261.6	15.6
192.01	192.77 Dk	Medium grey with a tinge of medium green intermediate dike with upper and lower TCA of 40 and 35, respectively. Similar Py content and calcite stringer ~1% characteristics suggests that this was a fairly early dike. Moderately shattered with mainly hairline to upwards of 3 mm patches. Non-magnetic Also, there are wide Py stringers along with disseminations. Rare, very weak spotty chlorite spots. Non-mag	191.11	194.96	195.8	22.5
192.77	195.78 Ad	188.43 to 192.01 m unit is continued as it was truncated by the intermediate dike above. Although, the Py content appears to increase to ~ 25-30%. Abundant wide web networks of Py sulphides along with disseminated Py increase total Py content. Also, trace qtz stringers within the last 2 m of this interval. However, calcite stringers are still dominant ~ 1%. Non-magnetic				
195.78	201.32 Ar	medium to light grey with creamish tan intensely shattered and brecciated altered rock. Some intervals are coarsely porphyritic and appear to be MD. Intensely and pervasively albitized, weak spotty altered to clay. 2-3% qtz stringers hairline to average 3 mm. Stringers here are qtz with no calcite present. Abundant Py present (see sulphides section). (some core sticks are around 100 cm long) non-magnetic	194.96 197.21	197.21 200.25	222.7 162.4	24.2 14.7

201.32	205.31 Ad	Medium to dark green with faint pinkish sections (likely Ad) moderate-intensely shattered with hairline to 3 mm calcite stringers, 2-3%. Moderate amounts of patchy Ksp (or Fe-stained albitized fragments). Moderate patchy chlorite. At 204.2 m there is a 6 cm wide dark purple section that could be hornfelsing. The alteration, Ksp presence and the suspect hornfelsing all indicate high heat present here. Core sticks are quite coherent with long unbroken intervals (some up to 80 cm intervals) Non-magnetic	200.25 203.3	203.3 206.35	327.1 476.8	31.1 26.7
205.31	207.6	A rainbow suite of colours (green, dark purple, cream, salmon pinkish orange) highly altered rock where the original texture is obliterated. Intensely shattered with qtz stringers in the salmon pinkish orange rocks and calcite stringers in the dark green sections for a total of 3-4% stringers. Moderate patchy Ksp, locally Intense pervasive Ksp (from 206.6m to 207.6m), weak-moderate patchy chlorite, local weak-moderate hornfelsing. Core sticks are quite coherent with long unbroken intervals (35-50 cm intervals) Non-magnetic.	206.35	209.4	150.1	14.8
207.6	215.49	Medium greenish grey andesite, moderately shatterd with 1-2% calcite stringers hairline to up to 18 mm calcite stringers. Weak spotty chlorite, weak-moderate intermittent patchy Kspar which looks like Kspar breccia fragments rather than sporadic alteration. Rare weak spotty specularite. Non-magnetic.	209.4 212.45	212.45 215.49	134 79.9	9.2 14