

## New Outcrops at Irak Deliver Peak Grades of 15.9% Copper, 6.17g/t Gold and 375g/t Silver From Rock Grab and Continuous Channel Assays

Copper and gold explorer Quintessential Resources Ltd (ASX:QRL) is pleased to announce assay results from rock grab and continuous channel assays from the Irak Prospect which is located within the Mal Porphyry copper-molybdenum-gold District, EL 1727 in Papua New Guinea.

New skarn outcrops that are strongly mineralised with copper and silver were discovered while following up the higher-grade copper, gold and silver anomalies documented in outcrop at Irak in late 2011. The 2012 peak assay results are reported in Table 1 and complete assays are shown in Appendix 1.

The Irak soil assays are expected forthwith and additional North - South oriented soil lines will be sampled to optimally delineate the soil anomalism.

TABLE 1:

Peak Assays From 1m Continuous Channel and Rock Outcrop Grab Samples at the Irak Prospect					
Sample	Type	Copper %	Silver g/t	Gold g/t	Moly ppm
681319	1 meter	4.40	174.0	0.16	159
681324	1 meter	2.04	126.0	6.17	25
681340	1 meter	5.20	47.8	0.07	559
681366	1 meter	4.55	67.0	0.06	37
681344	1 meter	4.33	58.0	0.12	335
681341	1 meter	4.21	42.6	0.16	115
681309	1 meter	2.56	152.0	0.09	109
681325	1 meter	2.31	118.0	0.13	61
681360	1 meter	1.95	46.9	0.15	75
681307	1 meter	0.66	149.0	0.3	247
681303	Grab	15.90	109.0	2.42	38
681326	Grab	12.90	303.0	0.2	126
681311	Grab	8.08	214.0	0.11	163
681302	Grab	2.92	271.0	0.08	118
681310	Grab	5.43	375.0	0.09	111
681338	Grab	0.03	1.4	0.02	1870

The recently discovered magnetite-sulphide skarn north of the historic outcrop is highly encouraging and demonstrates that mineralisation is widespread and open in several directions. Further geochemical exploration will be conducted to the west to investigate the anomalous float samples plus a likely sulphide breccia outcrop, and to the south to investigate the anomalous geochemistry.

Continued data evaluation at EL 1727 demonstrated Aeromagnetic Analytical Signal (AS) anomalies forming a quasi-circular annulus within and around the Irak grid. It also has a core of strong and complex 3D-IP resistivity (figure 1).

These Analytical Signal anomalies are quasi-coincident with three strong 3D-IP chargeability anomalies occurring at various depths below surface (Appendix 2).

This correlation of geophysical anomalies is highly encouraging and the strongest Analytical Signal anomaly is located in the central north and also off the grid, which has not been explored to date.

The prospectivity of the Irak area has been upgraded from the recent exploration and evaluation. Similarities to the OK Tedi porphyry copper - gold system have been demonstrated via significant sub-regional aeromagnetic and copper, molybdenum, gold and silver geochemical anomalies and higher grade copper-silver-gold mineralisation in outcrop.

Strong aeromagnetic analytical signal anomalies that occur at Malau and in other parts of the Mal District and EL 1727 are yet to be investigated and evaluated using detailed mapping and sampling.



Photo 1 : Sample 681326 12% copper + 303g/t silver



Photo 2 : Sample 681311  
8.08% Copper + 214 g/t silver

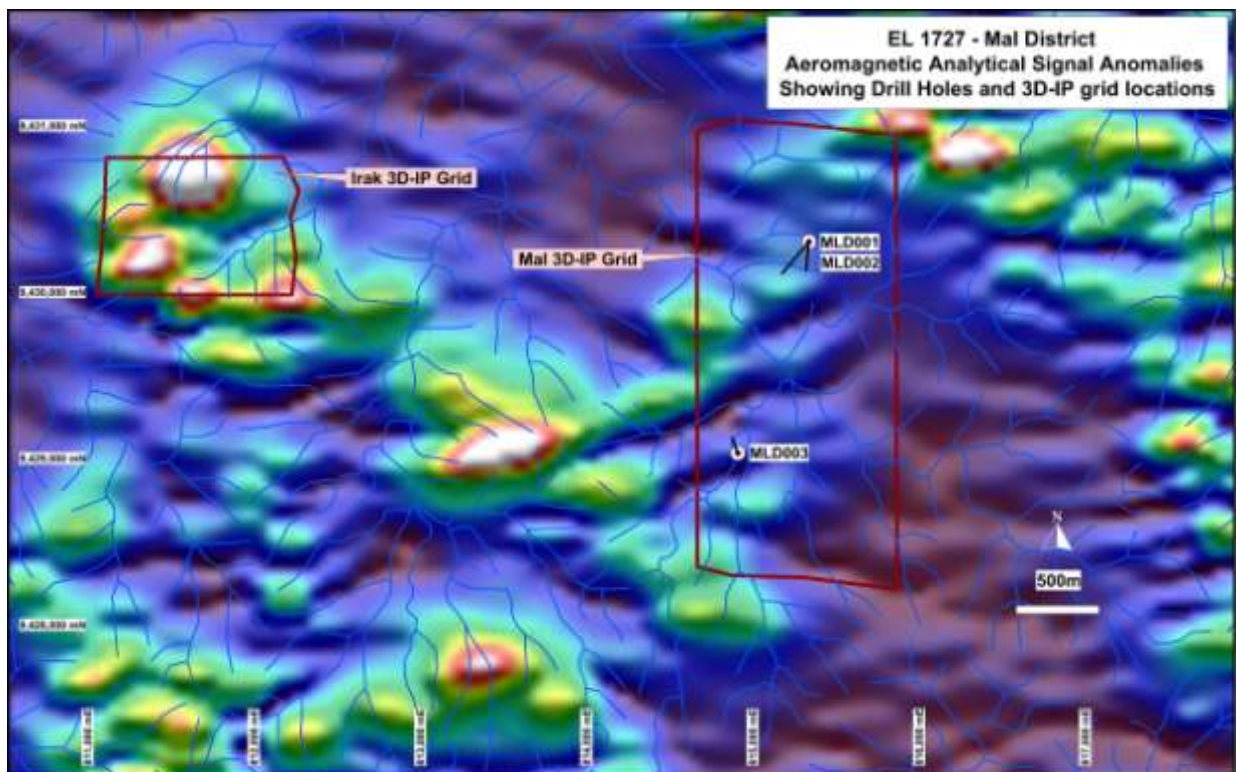


Figure 1 : Aeromagnetic Signal Anomalies over the Mal District EL1727 Bismarck

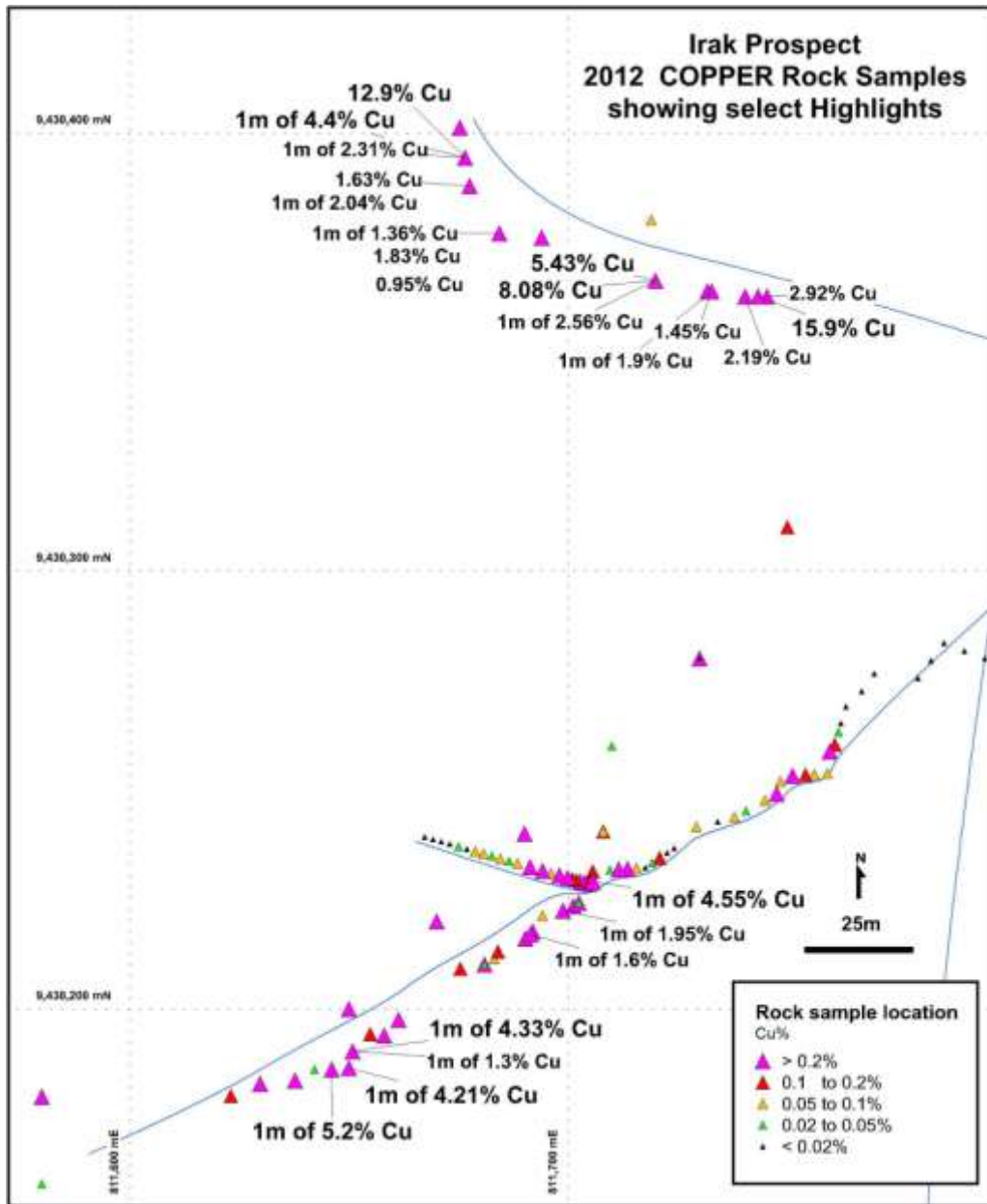


Figure 2 : Copper Assays from outcrop at Irak Prospect, Mal District, EL1727

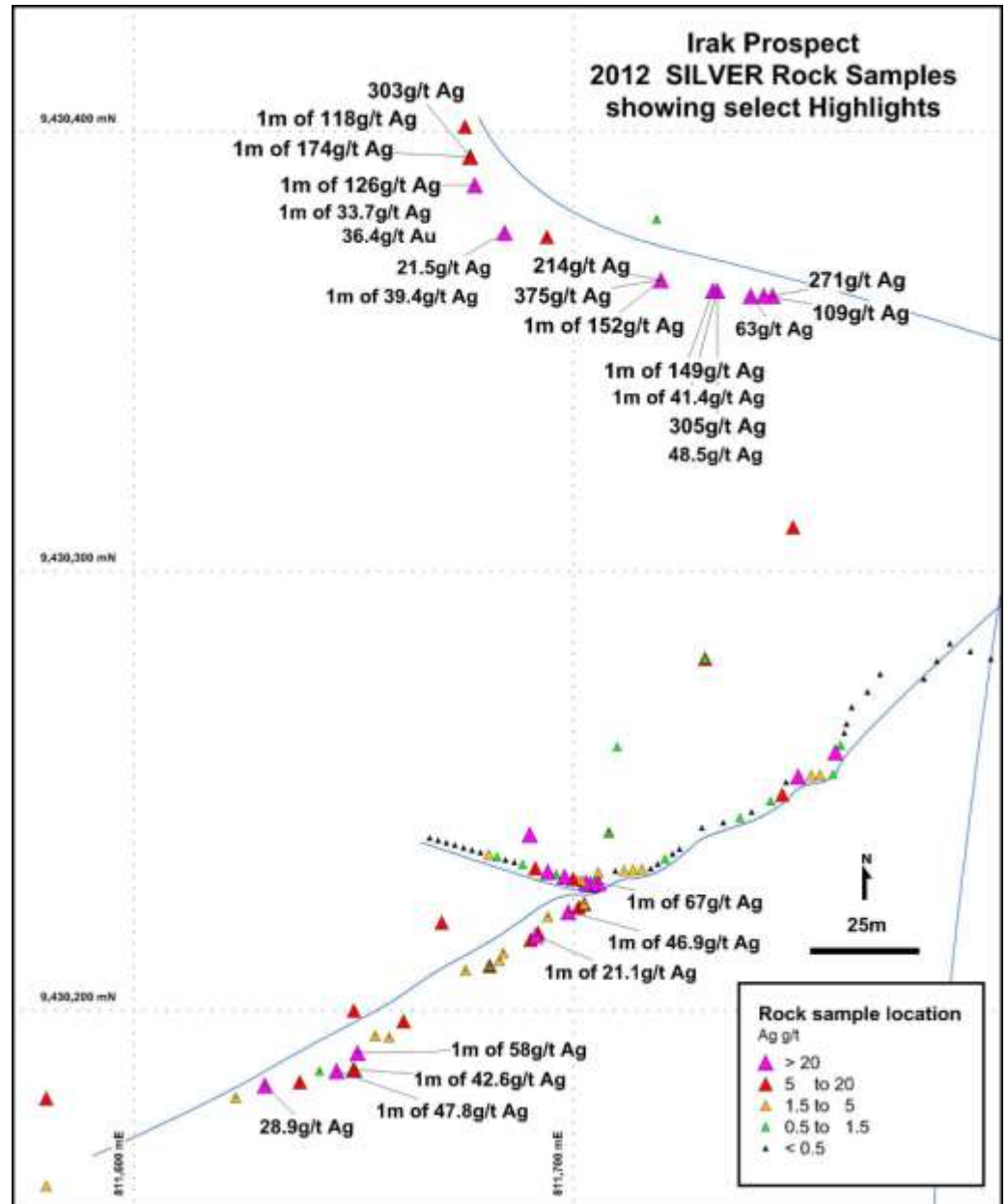


Figure 3 : Silver Assays from outcrop at Irak Prospect, Mal District, EL1727

For more information and to register to receive ASX announcements via email please visit [www.quintessentialresources.com.au](http://www.quintessentialresources.com.au)

Paige McNeil  
Managing Director & Company Secretary

Mark Hepburn  
Investor Relations

T: + 61 8 6278 3202  
E: [info@quintessentialresources.com.au](mailto:info@quintessentialresources.com.au)

T: + 61 8 6141 3540  
E: [mark@mhcornerstone.com.au](mailto:mark@mhcornerstone.com.au)

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by, or compiled under the supervision of Dr Salam Malagun - Member of the Aust. Inst. of Geoscientists. Dr Malagun is the Technical Director of Quintessential Resources Ltd and a full time employee of the Company. Dr Malagun has sufficient experience which is relevant to the type of mineralisation and type of deposit under consideration to qualify as Competent Person as defined in the 2004 Edition of the Australasian Code of Reporting Exploration Results, Mineral Resources and Ore Resources. Dr Malagun consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

## Appendix 1:

2012 Continuous Channel and Rock Grab Assays from Irak Prospect											
Sample	Length or Grab	Cu %	Ag g/t	Au g/t	Mo ppm	Sample	Length or Grab	Cu %	Ag g/t	Au g/t	Mo ppm
681301	G	0.08	-	x	5	681335	G	0.12	4.2	0.03	<b>381</b>
681302	G	<b>2.92</b>	<b>271.0</b>	0.08	118	681336	G	0.50	28.9	0.07	15
681303	G	<b>15.90</b>	<b>109.0</b>	<b>2.42</b>	38	681337	2m	0.80	13.2	0.12	<b>217</b>
681304	G	<b>2.19</b>	63.0	0.09	51	681338	1m	0.03	1.4	0.02	<b>1870</b>
681305	1m	<b>1.90</b>	41.4	0.06	101	681339	G	0.06	2.6	0.01	73
681306	G	<b>1.45</b>	48.5	0.1	79	681340	1m	<b>5.20</b>	47.8	0.07	<b>559</b>
681307	1m	0.66	<b>149.0</b>	0.3	<b>247</b>	681341	1m	<b>4.21</b>	42.6	0.16	115
681308	G	0.53	<b>305.0</b>	0.28	44	681342	1m	0.68	14.7	0.11	<b>284</b>
681309	1m	<b>2.56</b>	<b>152.0</b>	0.09	109	681343	1m	<b>1.30</b>	14.7	0.05	<b>483</b>
681310	G	<b>5.43</b>	<b>375.0</b>	0.09	111	681344	1m	<b>4.33</b>	58.0	0.12	<b>335</b>
681311	G	<b>8.08</b>	<b>214.0</b>	0.11	163	681345	1m	0.06	2.6	0.01	79
681312	1m	0.34	10.0	0.01	26	681346	1m	0.11	3.9	0.01	<b>229</b>
681313	1m	1.36	39.4	0.1	193	681347	G	0.22	4.6	0.12	<b>172</b>
681314	G	0.95	19.6	0.05	146	681348	G	0.33	8.4	0.02	29
681315	G	<b>1.83</b>	21.5	0.18	27	681349	1m	0.14	3.5	0.02	10
681316	1m	0.25	2.8	0.02	16	681350	1m	0.47	9.2	0.03	28
681317	1m	0.65	33.7	0.09	21	681351	1m	0.03	0.5	X	16
681318	3m	0.27	7.8	0.08	9	681352	2m	0.02	0.6	X	50
681319	1m	<b>4.40</b>	<b>174.0</b>	0.16	159	681353	2m	0.09	1.8	0.01	12
681320	2m	0.31	4.1	0.01	8	681354	1m	0.16	2.6	0.02	11
681321	1m	0.20	13.7	0.05	48	681355	1m	0.23	6.0	0.02	23
681322	1m	0.21	11.3	0.02	10	681356	1m	<b>1.60</b>	21.1	0.21	109
681323	G	<b>1.63</b>	36.4	0.03	20	681357	4m	0.35	6.0	0.04	39
681324	1m	<b>2.04</b>	<b>126.0</b>	<b>6.17</b>	25	681358	3m	0.08	1.6	0.02	57
681325	1m	<b>2.31</b>	<b>118.0</b>	0.13	61	681359	1m	0.94	12.8	0.06	138
681326	G	<b>12.90</b>	<b>303.0</b>	0.2	126	681360	1m	<b>1.95</b>	46.9	0.15	75
681327	G	0.63	18.6	<b>1.61</b>	35	681361	1m	0.10	1.0	X	16
681328	G	0.07	2.0	0.02	3	681362	1m	0.63	10.0	0.03	333
681329	G	0.03	1.0	0.09	71	681363	2m	0.37	5.3	0.03	39
681330	G	0.02	1.9	0.05	54	681364	1m	0.05	1.7	0.01	173
681331	G	0.01	2.4	1.04	35	681365	1m	0.13	3.3	0.02	<b>237</b>
681332	G	0.01	1.1	0.07	18	681366	1m	<b>4.55</b>	67.0	0.06	37
681333	1m	0.01	0.9	0.2	11	681367	1m	0.19	3.0	0.03	<b>235</b>
681334	1m	0.01	0.6	0.02	25	681368	1m	0.06	1.1	0.01	6

## Appendix 2:

### Additional Information Relating to the Irak Prospect

The 3D-IP geophysical survey conducted in 2011 by QRL demonstrated:

- Intense chargeability, conductivity and resistivity anomalies over multiple sectors of the gridded area, reflecting the electrical properties of the subsurface rocks and mineralisation.
- Eight of the nine conductive structures (to >700m long) trend NE/ENE, suggesting they are important conduits for mineralisation.
- Two very intense chargeability anomalies (> 50 m.s) plunge below the level of the model and along with a third anomaly, are located around the periphery of a lopsided but quasi circular, strong chargeability low. This pattern could reflect a porphyry type intrusion surrounded by an alteration halo.
- A very steep E to NE plunging pipe shaped conductivity anomaly, approximately 200m diameter, is located along the intersection of two chargeability anomalies (described below). The pipe is in a zone of structural weakness at the southern edge of the Irak hilltop, where a series of major NW and NE (+N) trending structures intersect.
- A NW trending, elongated hourglass shaped, upper resistivity and lower chargeability anomaly plunges to depth on the western side of the grid and is associated with the conductivity pipe noted above.
- A plate to bowl shaped zone of very high resistivity (> 15,000 ohm.m) occurs at depth in the eastern sector of the grid and may represent silicification and quartz veining associated with gold mineralisation.

NB: Chargeability anomalies may be related to disseminated sulphides including pyrite and copper sulphides or graphite; conductivity anomalies may be related to semi-massive sulphide occurrences or clay and resistivity may be related to silicification and quartz veining or specific unaltered rocks.

The main NE trending conductivity structure is located 40 metres to the north of this copper mineralisation and it runs parallel to the creek. Various other structures have nearby rock analyses to 7.58 g/t gold that require additional trench sampling and geological mapping.

Copper mineralisation is hosted in a hornblende diorite stock that is dominant on Irak Hill. Strong pervasive magnetite prevails in the copper mineralised zone. Strong bluish purple azurite +/- bornite mineralisation is localised in a 10-15m wide zone with malachite and chalcopyrite. Traces of molybdenum with crystalline quartz/magnetite also occur along a 2-3m wide E-W trending fault.

### Independent Geophysical Consultant's Irak Prospect 3D-IP Interpretation Report

The Irak prospect occurs within the topographic rim of the Mal Porphyry Copper District. It is defined by low level anomalous copper and gold in stream sediments with the best assay in rock chip samples of over 20 g/t gold. Check rock chip sampling of up to 1.5 g/t gold were located in gossanous rock. Alteration in the Irak zone is possibly more potassic and mineralisation could be peripheral to this zone.

The three dimensional Induced Polarisation survey (3DIP) covers approximately one square kilometre and shows narrow electrical conductivity structures up to 700 metres in length. Some of the structures (C1 to C9) are parallel and adjacent to anomalous copper in rock chip samples (Figures 1 and 2). The "C1" structure is parallel to significant copper in rock samples which include 4.7%, 3.0% and 2.6% Cu which occur 40 metres to the south. Follow-up sampling and trench sampling and drilling is required to test for mineralisation along this structure.

A pipe like conductivity body at anomaly (C10) extends to over 400 metres depth and requires surface sampling and drill testing to depth (Figures 1 and 7).

Six of the nine defined conductivity structures (C1, C2, C3, C4, C6, C7) trend NE-SW and indicate possible important conduits for the emplacement of mineralisation. The C6 structure has a coincident rock sample of 7.58 g/t gold at surface and requires additional trench sampling and mapping.

Three discrete chargeability anomalies (CH1, CH2 & CH3) are interpreted to represent disseminated sulphides including pyrite and chalcopyrite (refer to Figures 2 and 3). These anomalies (> 50 m.s) occur on the margins of extremely high zones of resistivity (> 15,000 Ω.m).

The resistivity anomalies (Figure 2,4,5,7 and 8) may represent vuggy and massive silica grading out to alteration and coincident lower resistivity halo. The interpreted silica bodies associated with high resistivity correlate with gold mineralisation within other known high-sulphidation epithermal deposits including Wafi-Golpu and Martabe in North Sumatra.

The three dimensional geophysical IP survey helps model sub-surface geology and define targets for potential gold and copper mineralisation. Surface geology and geochemistry show that the Irak prospect is highly prospective. The sub-surface mapping of silica as shown in the higher resistivities presents targets for drill testing to over 200m depth. Structurally controlled conductivity anomalies have been interpreted in nine areas and may represent conduits for mineral deposition. Three chargeability anomalies present targets for potential copper and other sulphide minerals requiring follow-up surface geochemical sampling and sub-surface drill testing.

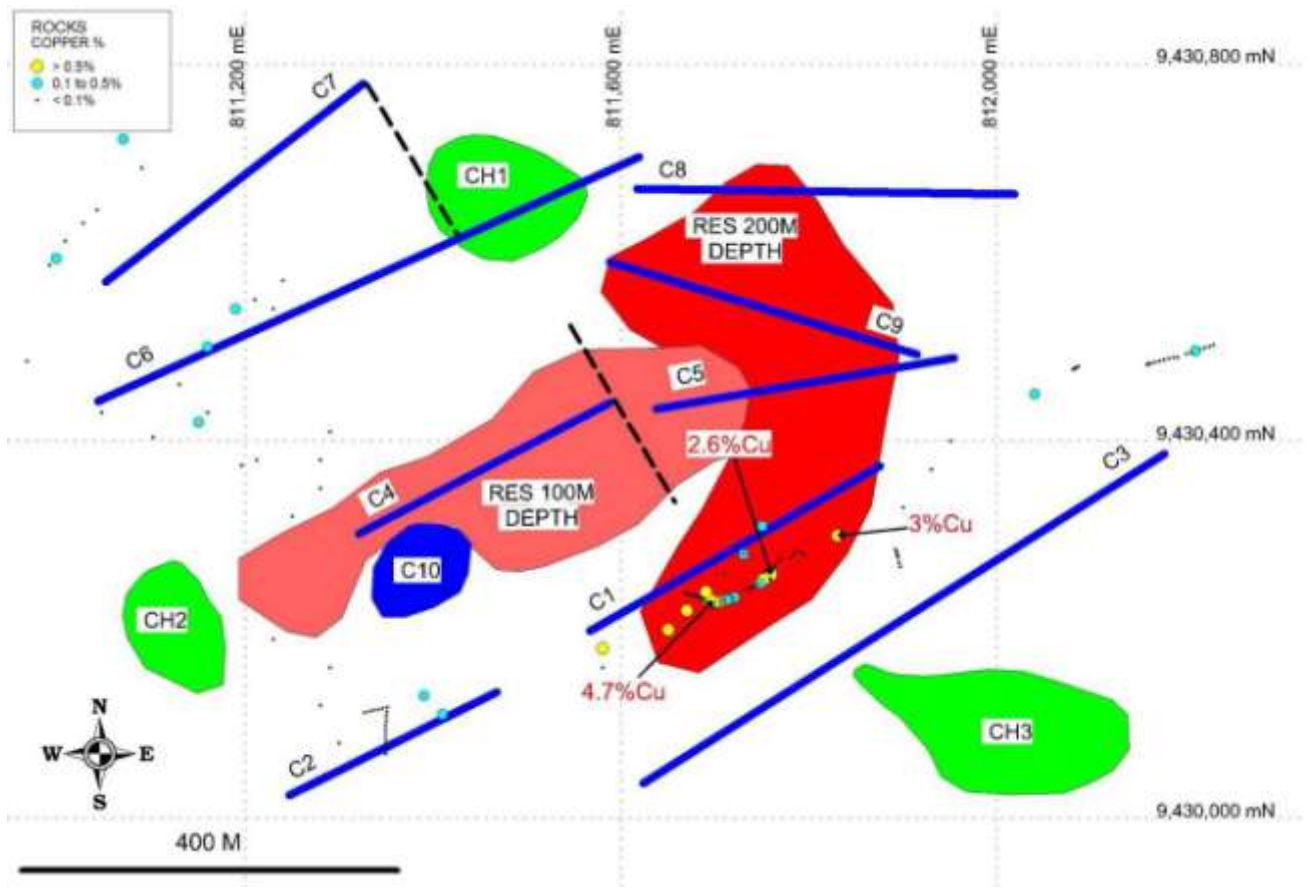


Figure 1: Irak prospect 3DIP interpretation

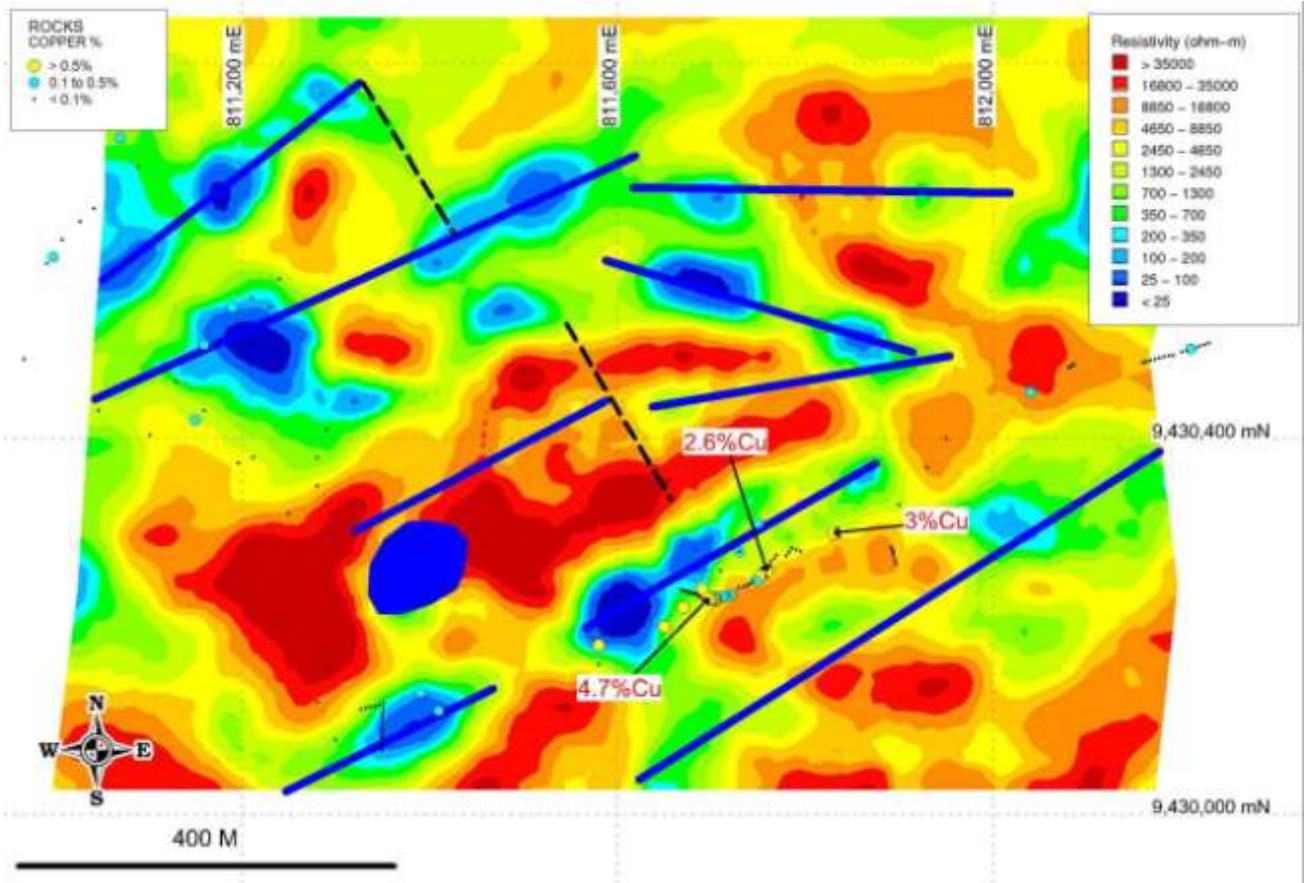


Figure 2: Irak prospect resistivity image at 75m depth with interpreted structures

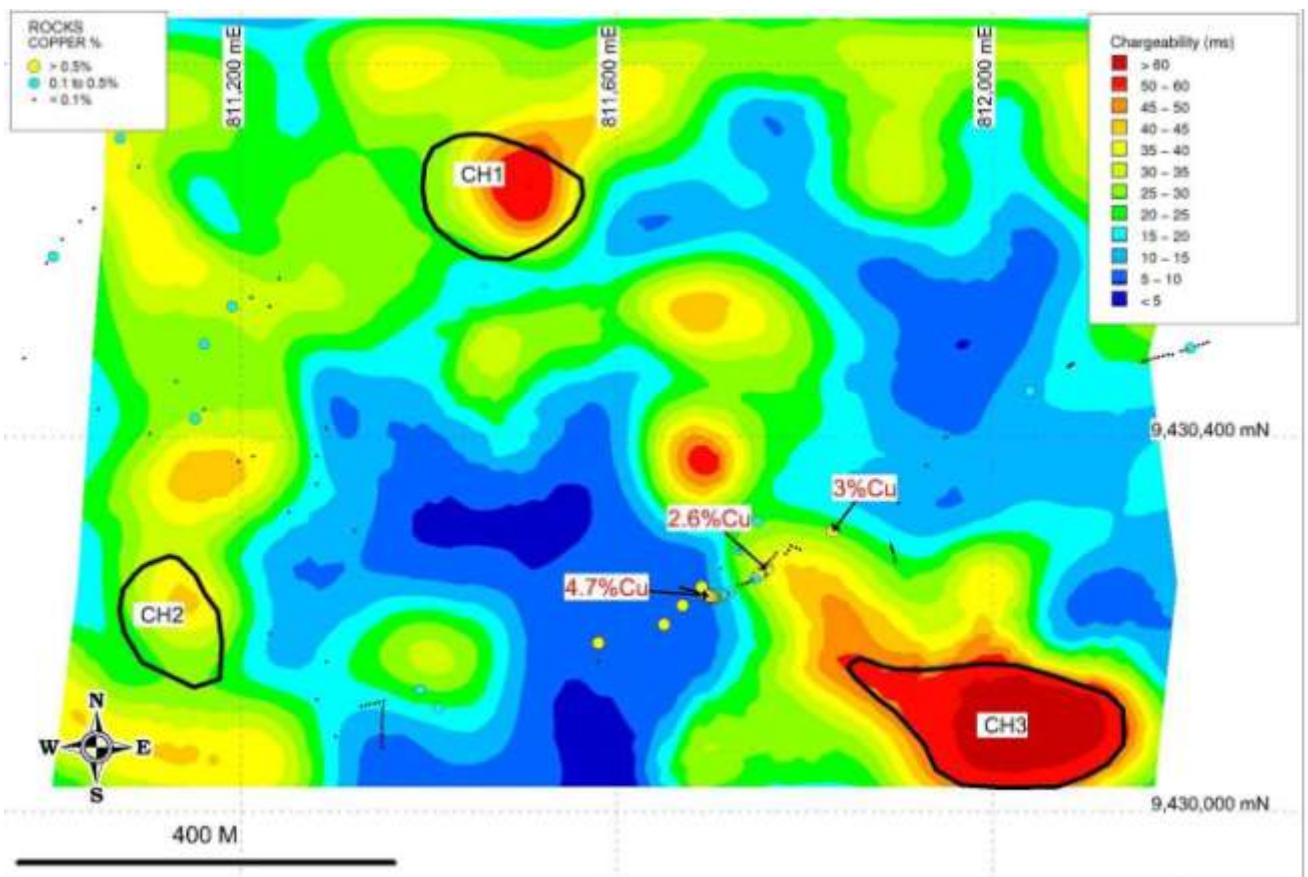


Figure 3: Irak prospect chargeability image at 75m Depth

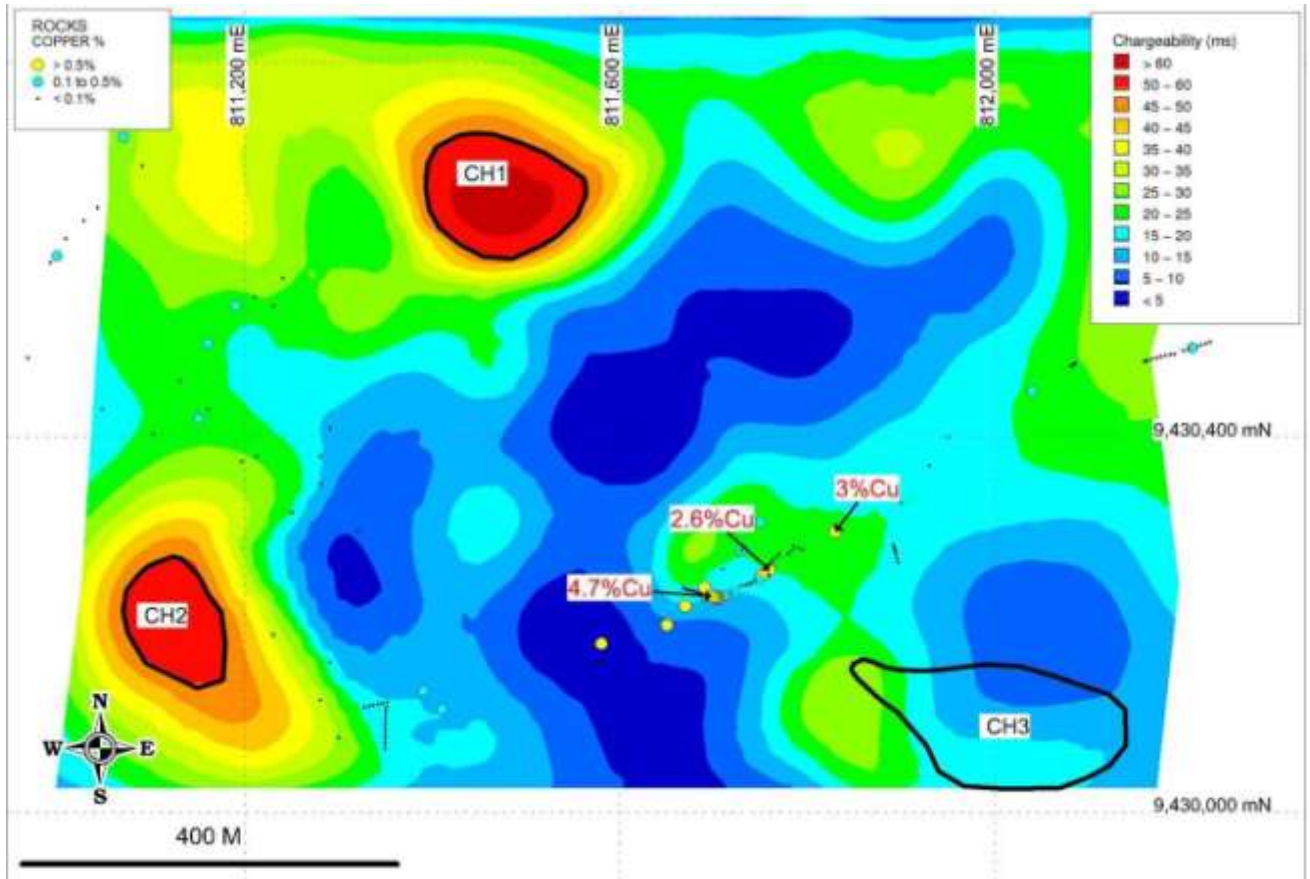


Figure 3: Irak prospect chargeability Image at 200m depth

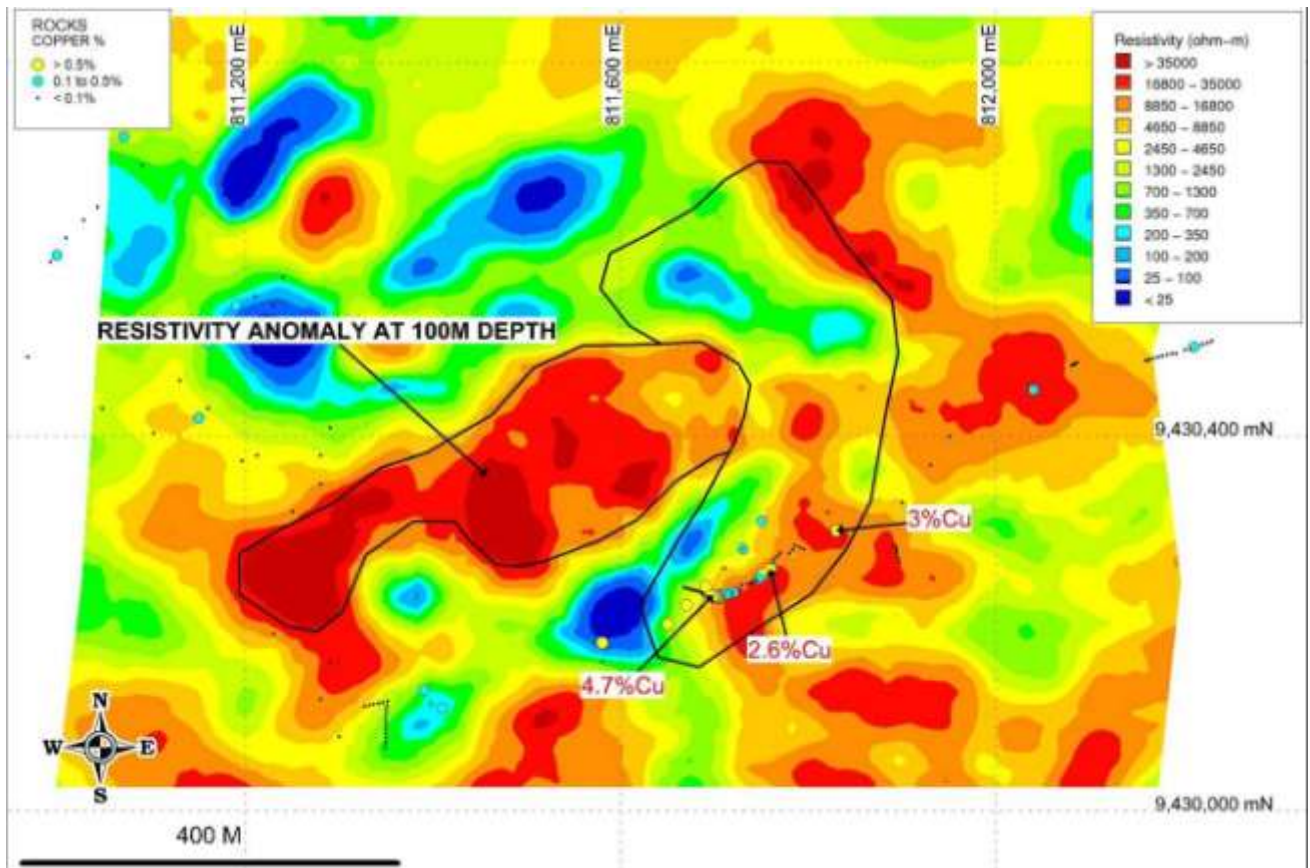


Figure 4: Irak prospect resistivity image at 100m depth



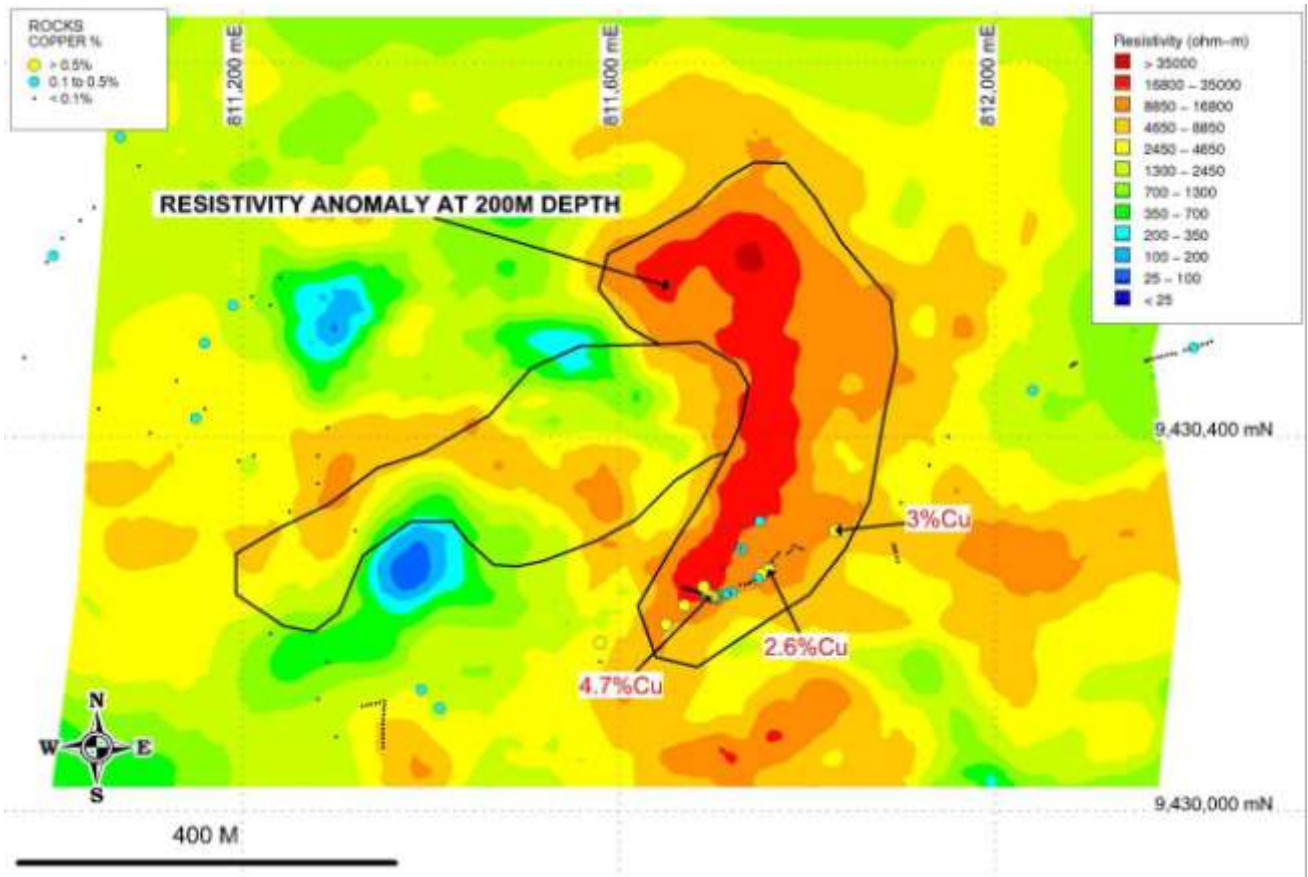


Figure 5: Irak prospect resistivity image at 200m depth

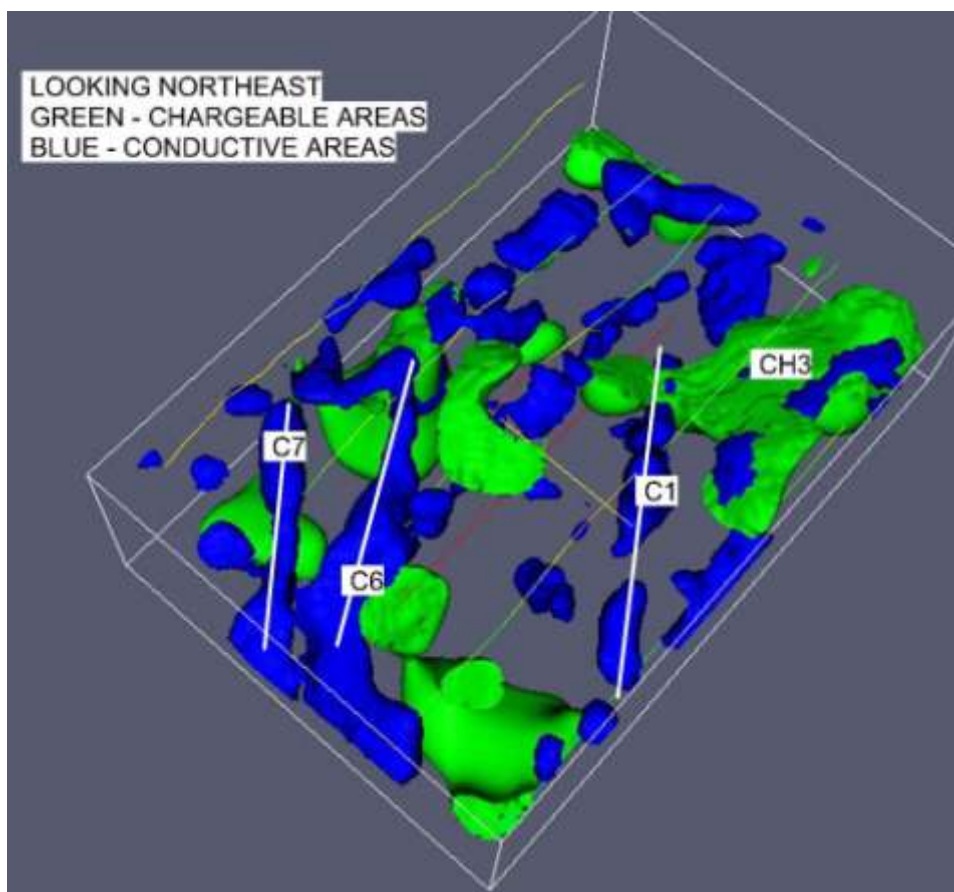


Figure 6: Irak prospect chargeability and conductivity models.

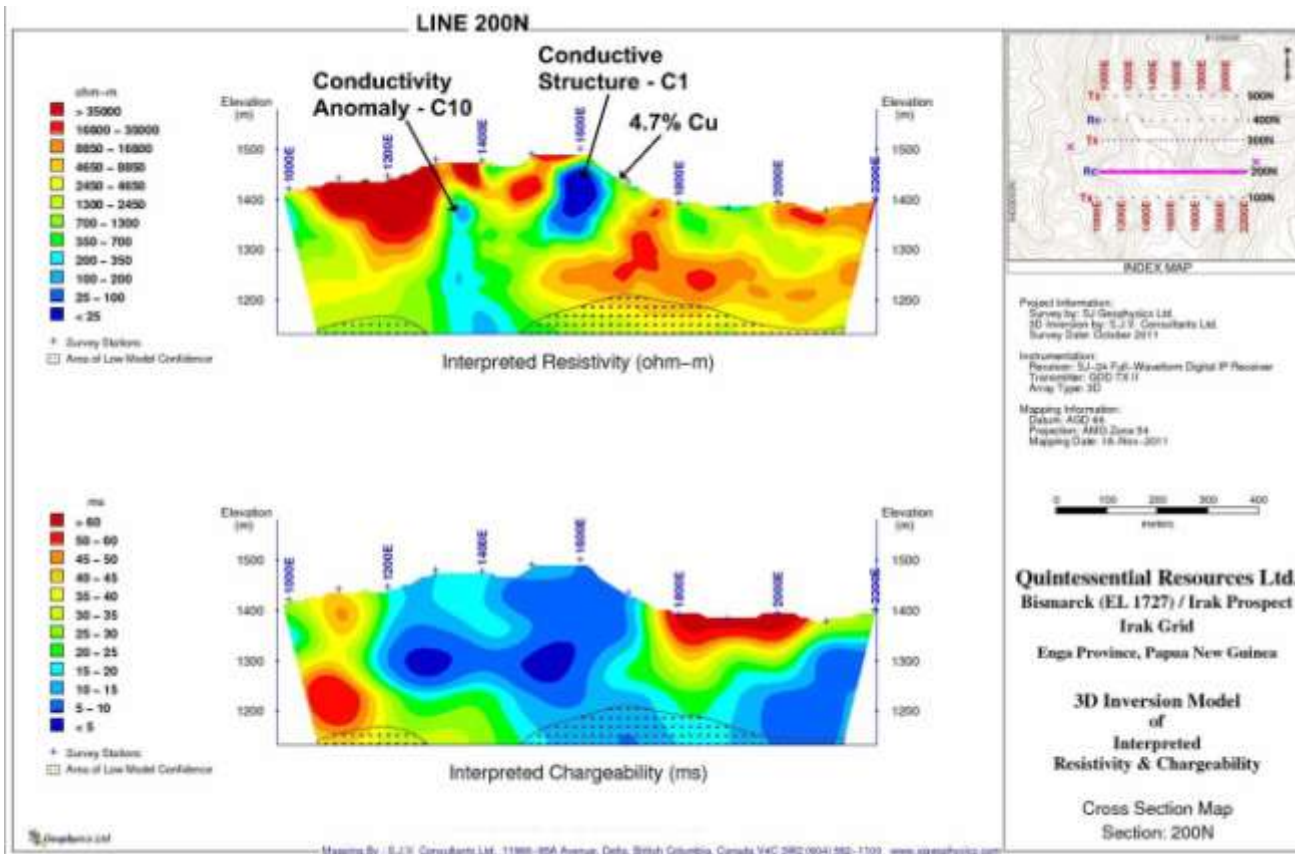


Figure 7: Irak prospect chargeability and resistivity line 200N

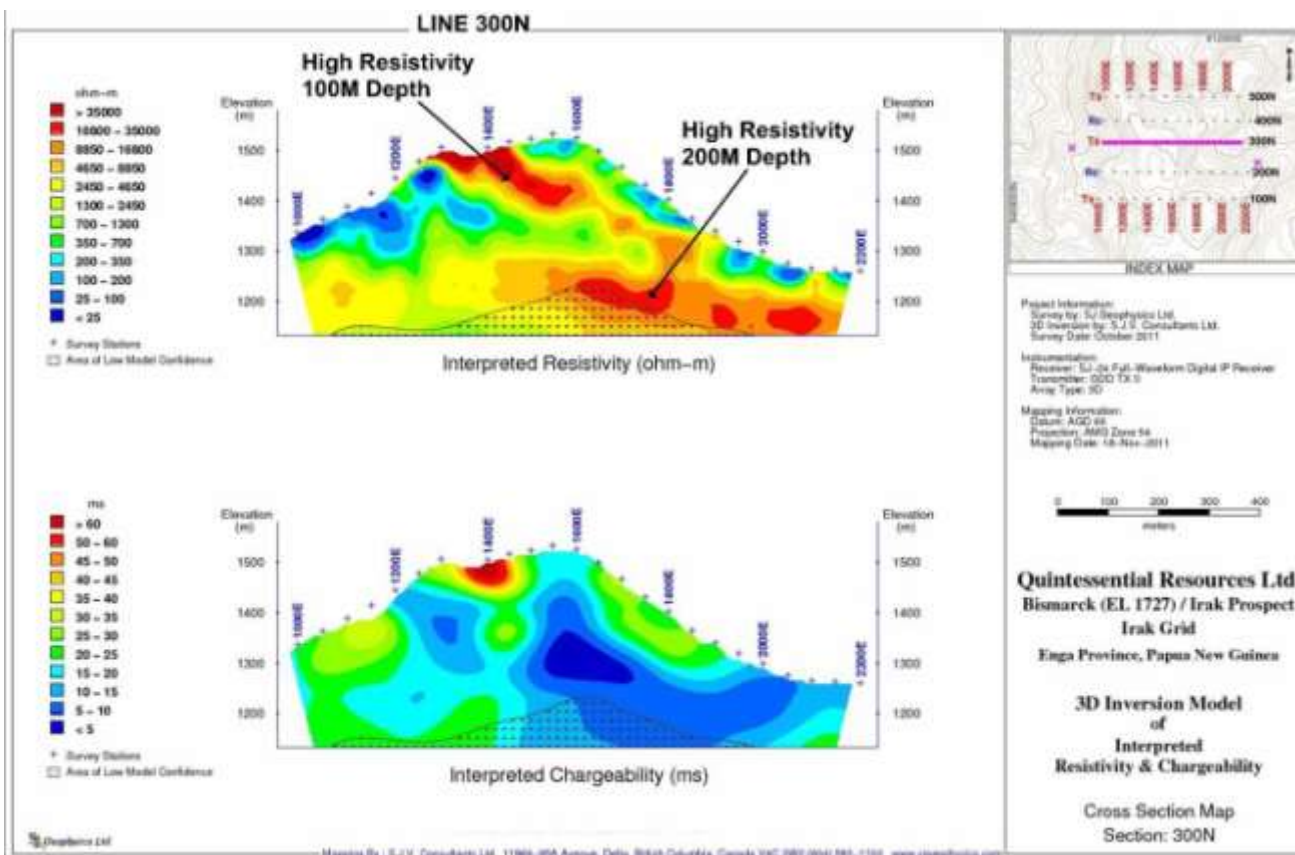


Figure 8: Irak prospect chargeability and resistivity line 300N.