



ANNUAL TECHNICAL REPORT
Group Reporting GR 361
“ALBARTA SOUTH PROJECT”

1st February 2016 to 31st January 2017

EL's 27709, 28136, 28940 & 30669

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1 SUMMARY

This is the second Group Reporting of Core Exploration's (CXO) Albarta South Project (GR361) comprising four exploration licences (EL's 27709, 28136, 28940 & 30669), which are held 100% by DBL Blues Pty Ltd a wholly owned subsidiary of CXO.

The project area is dominated by parts of the Aileron and Irindina Provinces as well as the Amadeus Basin. The basement in the area consists of sedimentary and igneous rocks of the Aileron Province of Palaeo-Proterozoic age (1865-1500Ma). The rocks have been metamorphosed to upper green-schist to lower amphibolite facies during the Strangways Orogeny (1740-1690 Ma).

Exploration work in previous years discovered significant silver (and base-metal) anomalism at Blueys / Inkheart on EL 28136 hosted in Bitter Springs Formation and Heavitree Quartzite of the Amadeus Basin where it has been overthrust by basement. Exploration work had included the development of cost-efficient surface sampling which lead to the discovery of a similar silver and base metal anomaly on EL 27709 called Black Gate. CXO also progressed preparation for a diamond drilling program at Inkheart in 2015, but regrettably did not get it completed in 2015 or 2016. Cultural Heritage clearance surveys were undertaken as part of this, however.

In the current reporting period, the company did not undertake any new on-ground work in the project area, beyond a review of the project data by the new Exploration Manager. CXO awaits a recovery of the base metals market before committing any significant resources to the project, but a preliminary plan has been put in place to roll out the surface sampling methodology across the broader GR361 tenure when the market dictates.

2 INTRODUCTION

This report covers second year of full joint reporting of exploration activities completed within GR 361 "Albarta South" up until 31st January 2017. GR 361 is located within the Riddock (5851), Laughlen (5751), Undoolya (5750) & Fergusson Range (5850) 100,000 map sheets, and is located within the ALICE SPRINGS (SF53-14) 250,000 map sheet.

Access from Alice Springs east along the Ross Highway to Arltunga the station tracks.

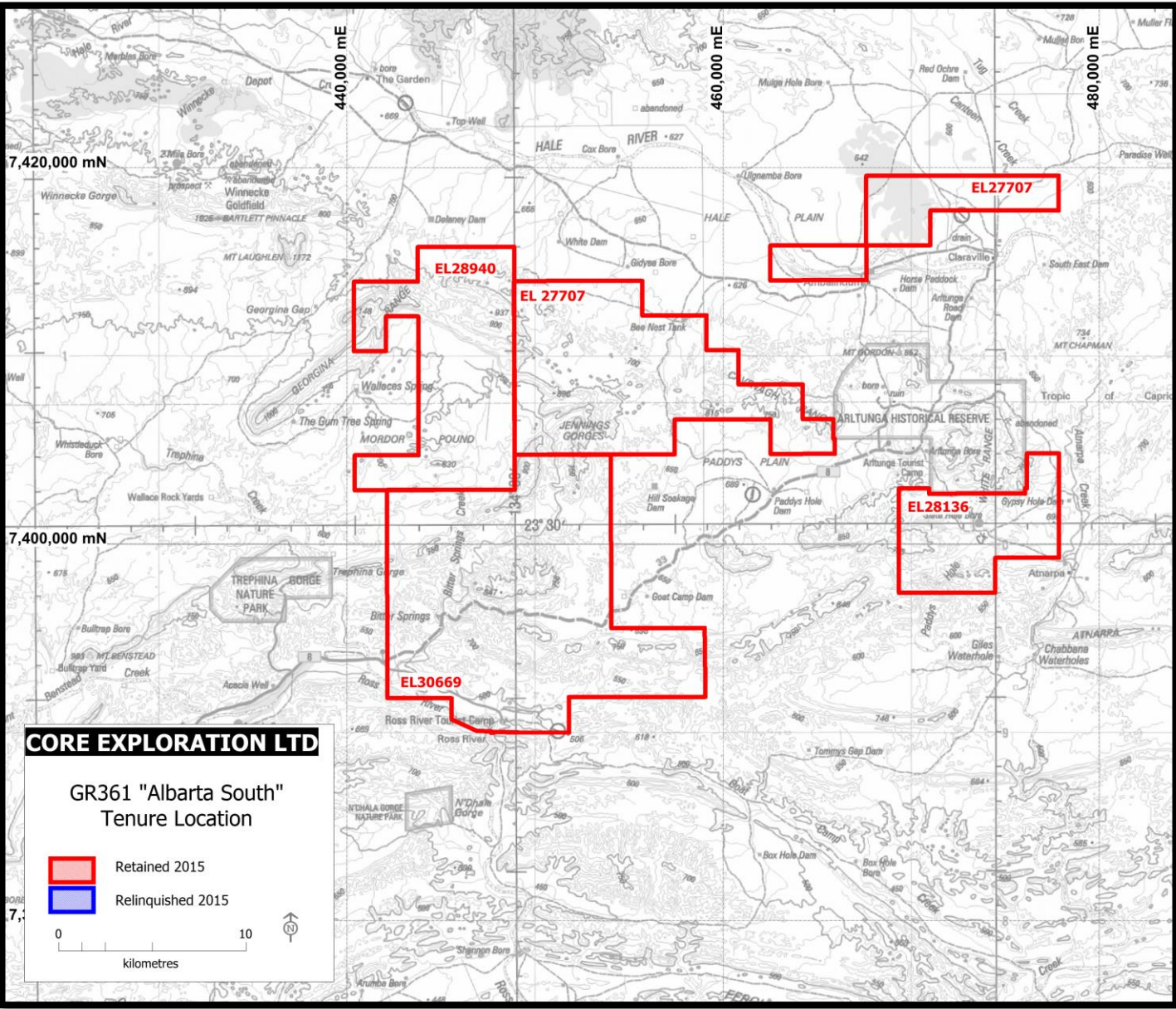


Figure 2.1: Location Map of GR 361 Tenure

3 TENURE

GR361 includes EL's 27709, 28136, 28940 & 30669 that are all held by DBL Blues Pty Ltd, a wholly owned subsidiary of CXO Exploration Ltd (CXO).

Originally, a number of these tenements were held in Joint venture with other third parties, however, CXO negotiated outright purchase of all joint venture tenements covered by GR361 on 28th October 2014. Group Reporting of the Albarta South tenure was granted by NT DME on 19th February 2015 with a reporting year defined as 1 February to 31 January each year.

EL 30669 was granted on 10th August 2015 and added to the GR 361 group reporting on 15 October 2015.

The tenement package overlies the Amberlindum, The Garden and Loves Creek Pastoral Leases. Tenure details are tabulated in Table 3.1 and illustrated in Figure 2.1.

EL	OWNER	GRANTED	YEAR	BLOCKS	AREA (KM ²)
27709	DBL Blues (100%)	20/05/2010	6	44	138.6
28136	DBL Blues (100%)	16/02/2011	6	14	42.62
28940	DBL Blues (100%)	07/03/2012	6	26	81.94
30669	DBL Blues (100%)	10/08/2015	2	55	170.44
				139	433.6

Table 3.1: Tenure Details for GR361

4 GEOLOGY AND MINERALISATION

GR 361 covers both the Proterozoic Aileron Province and the Neoproterozoic Irindina Province and the contact between the two domains in the Central Arunta Region. The Aileron Province rocks mostly comprise variably metamorphosed sediments, volcanics, calcsilicates, amphibolites and granite (Figure 4.1). Detailed geology of the Aileron Province is covered by Murrell (1989) and Zhao & Cooper (1992).

The Irindina Province is a Neoproterozoic to Cambrian aged province that has been highly metamorphosed and multiply-deformed by the Larapinta Event and the Alice Springs Orogeny. The bulk of the units within the Irindina Province are interpreted as forming the Harts Range Metamorphic Complex which includes Irindina Gneiss (which includes the Naringa Calcareous Member, the Stanovos Gneiss Member and the Riddock Amphibolite) and the stratigraphically overlying Brady Gneiss (Maidment 2005). The Virginia Prospect is interpreted to be within the Riddock Amphibolite. The Riddock Amphibolite is described as a variably deformed metagabbro or metadolerite, interlayered with layered, quartz rich amphibolite, metapsammopelitic rock, and minor marble calc-silicate rock and quartzo-feldspathic gneiss (Scrimgeour IR, 2013). It is also interpreted to be interlayered with the Irindina Gneiss in places.

CXO has studied the recent investigations undertaken by Geoscience Australia (GA) and the Geological Survey of the Northern Territory, in conjunction with other explorers in the region, all of whom suggest Iron Oxide Copper Gold (IOCG) affinities can be attributed to the Aileron Province. This recently suggested IOCG terrain represents a newly-recognised Proterozoic copper-gold province characterised by a long belt of structurally deformed granite and sedimentary sequences that contain variable amounts of quartz veining, strong iron and fluorite alteration, and outcropping copper- silver- gold mineralisation.

The Irindina Province has become an area of greater interest for mineral exploration in the last decade due to some recent discoveries by exploration companies. Mithril Resources (MTH) have identified a number of Cu-Co and Cu-Ni prospects within the Irindina Province including at Basil where an inferred resource of 26.5 Mt @ 0.57 % Cu, 0.05% Co at a 0.3% Cu cut off was identified (MTH ASX release 21-03-2012). Studies of the Basil Cu-Co deposit (Sharrad et al., 2013) suggest a volcanic – exhalative (VHMS) on the seafloor emplacement history for the deposit which was metamorphosed by the Ordovician Larapinta Event, making it a metamorphosed VHMS style deposit hosted within the Riddock Amphibolite.

Rare earth mineralisation associated with thorium bearing Allanite has been documented at Blueys Folly on EL 28029 which is adjacent to EL 28136. It can occur in a number of settings, local examples being pegmatite dykes (plug-like to lenticular sub-vertical bodies and sheet-like apophysis that intrude the surrounding amphibolite facies metamorphic rocks and within amphibolite and marble (calc-silicate) units adjacent to these pegmatites (Murrell, 1988). Murrell estimated that Blueys Folly contained several million tonnes of pegmatite grading about of 0.4% allanite. This is a sub-economic grade. The north-east strike extent of the Blueys Folly REE geology continues up EL 28029, where two anomalous areas are identified.

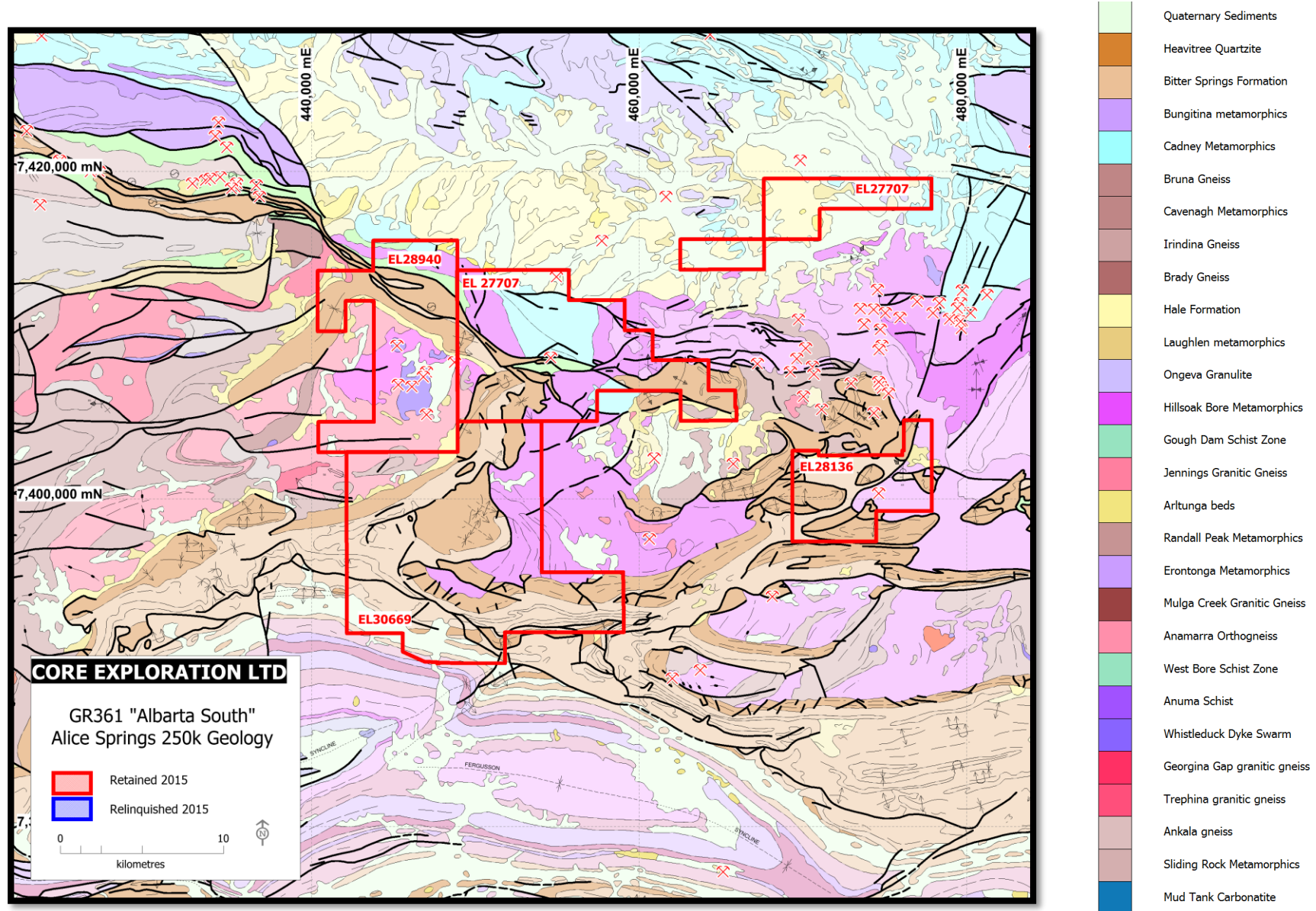


Figure 4.1: GR 361 on an extract from Alice Springs 1:250,000 Geology

Amadeus Basin

GR 361 covers part of the northern margin of the Amadeus Basin (Figure 4.1). The Amadeus Basin is a Neoproterozoic to Cambrian sedimentary basin which extends over a large area in the south of the Northern Territory. Within the Albarta Project area the main rock units of the Amadeus Basin are the Neoproterozoic Heavitree Quartzite, and dolomites, dolomitic siltstones, evaporates and limestone of the overlying Bitter Springs Formation. The Amadeus Basin was highly deformed by the Alice Springs Orogeny (300-400Ma). CXO's tenements cover the northeastern contact of the basin with the Aileron Province which is structurally complex as it is part of the Arltunga Nappe Complex, which formed during the Alice Springs Orogeny.

A summary of the stratigraphy of the Amadeus Basin sediments, its deformation history and prospective mineralisation styles is shown in Figure 4.2. This table is cut out of a Remote Geoscience Report submitted to the NTGS as part of an Annual Report submitted by Atom Energy for EL 24249 prepared in 2009. CXO's Blueys and Inkheart Prospect (EL28136) is believed to be hosted within the Gillen Formation sediments.

Previous Exploration for sediment hosted Cu and base metals has been active in the Amadeus Basin for three decades. Different phases in the exploration cycle have controlled the degree of interest in base metal exploration within the Amadeus Basin. In the mid to late eighties a boom in Amadeus Basin exploration occurred following the interest in sedimentary hosted copper mineralisation, possibly due to the discovery of the Nifty copper deposit in the 1980's. Companies such as BHP, Rio/CRA and Normandy/Posidon have all explored for sedimentary hosted copper or Sedex-MVT Pb-Zn in the Amadeus Basin. Their typical exploration technique was to test the BSF-HTQ contact, surface geochemical anomalism and electrical geophysics. All three company's exploration ended after shallow RAB testing of surface geochemical anomalies. CXO's discovery at Inkheart has demonstrated that shallow drilling of the oxidised zone under surface geochemical anomalies is not necessarily an effective strategy when testing for the source of the surface anomaly within the BSF. To date, the bulk of the mineralisation discovered at Inkheart is found within the primary fresh sediments of the BSF offset from the surficial peak geochemical anomalism. Mineralisation models discussed and explored for by previous explorers includes Sedex-MVT Pb-Zn, sediment hosted copper (Nifty Cu deposit in Western Australia and the world-class Kupferschiefer and Zambian Cu-Co deposits) and unconformity uranium.

Within EL28136, CXO has identified and drilled the Inkheart Prospect where the mineralisation is best described as silver rich (argentiferous) galena + pyrite ± chalcopyrite within quartz veining within weakly carbonate altered sedimentary units within the Bitter Springs Formation (BSF). At the prospect the BSF is in direct contact with Aileron Province granites and amphibolite which have been over thrust probably during the Alice Springs Orogeny. The Inkheart Prospect is bound by a NE striking contact with the Heavitree Quartzite, the basal stratigraphic unit of the Amadeus Basin sediments. The Inkheart Prospect was first identified by CXO through regional scale soil sampling which detected high Ag in soil anomalism with patchy coincident Cu and Pb anomalism. The mineralisation style at Inkheart is still in the infancy stage of development with diamond drilling interpreted to be the next stage required to identify in situ mineral, alteration and lithological relationships which will provide further evidence as to the controlling factors to mineralisation at the prospect.

Mordor

The Mordor Alkaline Igneous Complex (MAIC) intrudes the high-grade Palaeoproterozoic Arlunga granitic gneisses of the Arunta Orogen (Figures 4.3 & 4.4), and is situated close to the Woolanga Gravity Lineament. The gravity feature is an inferred deep-seated southeast-trending structure (Langworthy and Black 1978). The Complex has previously been described by Barraclough 1981 and by Langworthy and Black 1978 who interpreted it as a poly-phase intrusion of likely kimberlitic affinity. The MAIC has a sensitive high resolution ion microprobe (SHRIMP) II zircon U–Pb date of 1132 ± 5 Ma (Hoatson and Claoué-Long 2002). It is believed to be associated with the ca. 1150–1130 Ma Teapot Event (Black et al. 1983), a period of elevated crustal temperature (amphibolite facies) in the southern part of the Arunta Orogen (Black et al. 1983), which may be related to magmatism associated with the Musgrave Orogeny (Close et al. 2004).

The Neoproterozoic (ca. 820 Ma) Heavitree Quartzite of the Amadeus Basin unconformably overlies both the Arunta Orogen and the MAIC. The Heavitree Quartzite has been preferentially eroded and retreated over the MAIC, forming a three-sided box-shaped canyon surrounded by a steep escarpment called the Georgina Range. This three-sided box-shaped morphology inspired earlier geologists to name the area “Mordor Pound” owing to the resemblance to the fictional “Mordor” of J.R.R. Tolkien.

The Mordor Alkaline Igneous Complex covers about 35 km² in area. The complex is an unusual composite intrusive body that consists of two major phases: a very coarse grained (up to 5 cm-sized phenocrysts), relatively homogenous syenite body to the northwest, and an ultramafic–mafic phase, referred to from here on as the Mordor Mafic–Ultramafic Intrusion or MMUI, consisting of a diverse assemblage of layered pyroxene-rich cumulates with widely varying proportions of other cumulus phases including olivine, phlogopite, apatite, ilmenite, and potassium feldspar. Field relationships, including isolated pods and cross-cutting apophyses of the ultramafic–mafic phase in the syenitic phase, suggest that the ultramafic–mafic phase has intruded the essentially coeval syenitic phase.

Numerous pegmatite dykes and lesser quartz- and quartz carbonate veins crosscut the ultramafic cumulates, which are also offset by minor faulting. The pegmatites possibly represent a late-stage residual melt. The veining and faulting is probably associated with the later Alice Springs Orogeny (450–300 Ma; e.g., Haines et al. 2001). The syenitic phase forms the western part of the MAIC in a circular shape that makes up about 60% of the complex, and consists of a relatively uniform, leucocratic, coarse-grained K-feldspar syenite with accessory clinopyroxene and phlogopite. K-feldspar laths have a weak planar preferred orientation that may indicate a magmatic lamination.

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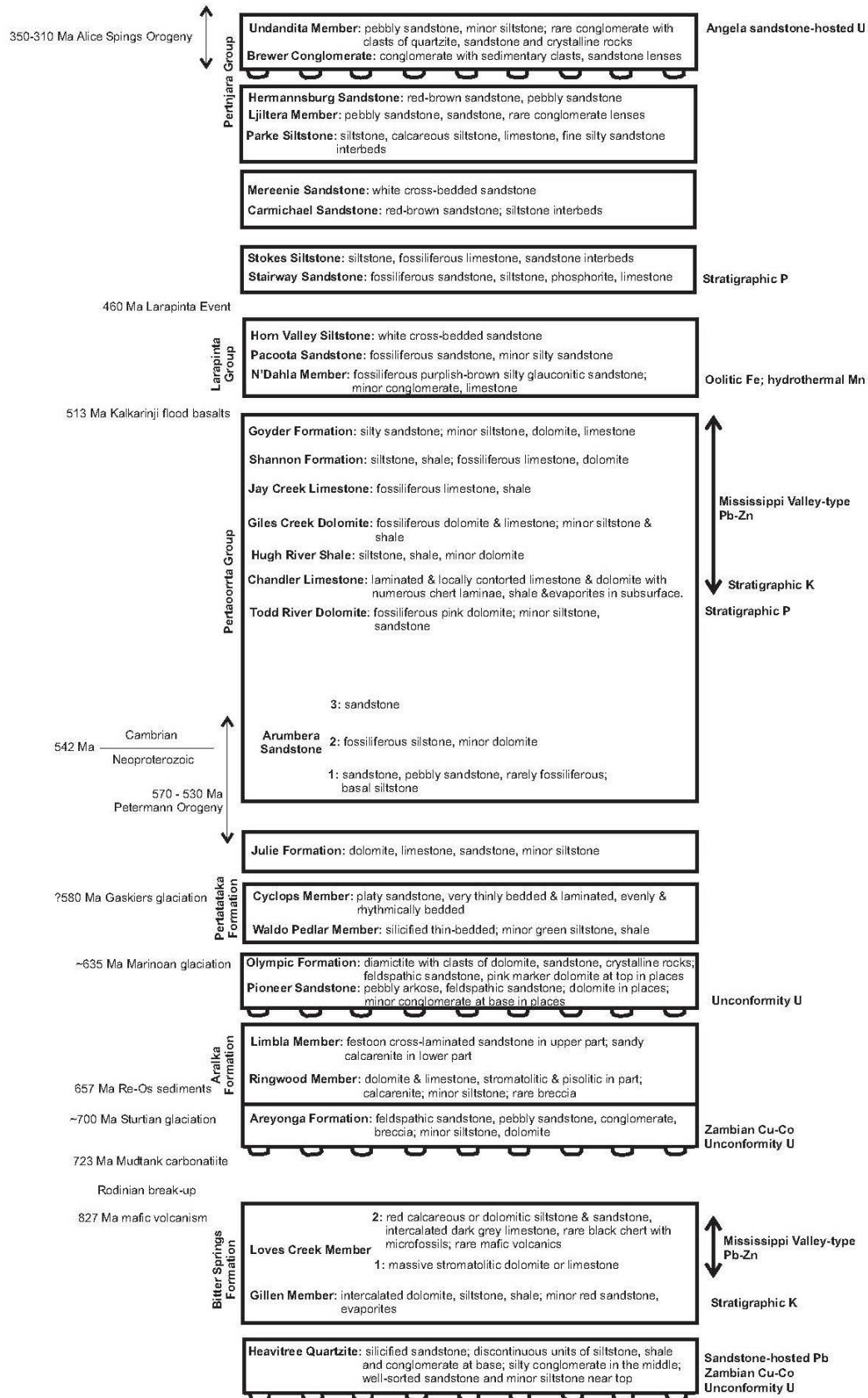


Figure 4.2 Amadeus Basin sediments originally prepared by Remote Geoscience Report submitted to the NTGS as part of an Annual Report submitted by Atom Energy for EL 24249 prepared in 2009

The Mordor Mafic–Ultramafic Intrusion or MMUI forms the remaining 40% of the complex and consists predominantly of phlogopite-bearing feldspathic pyroxenites and clinopyroxene syenites (historically called “mafic shonkinites”) with lesser pyroxenites and minor wehrlites. The massive pyroxenite units commonly form rounded hills, boulders, and low ridges, and display igneous lamination, modal layering, and cryptic layering (terminology of Irvine 1982). The clinopyroxene syenites are poorly exposed owing to their high phlogopite content, and occur as rubbly subcrop with thin residual soil cover. These syenites consist of 40–50% phlogopite, 30–40% augite, 5–10% K-feldspar, 5–10% apatite, and traces of zircon, magnetite, and ilmenite. (Rock names present a particular problem at Mordor in view of the large number of atypical mineral assemblages and historical use of obscure nomenclature.

Barnes et al. have attempted to use standard International Union of Geological Sciences (IUGS) terminology as far as possible, supplemented by cumulus terminology where necessary). The larger outcrops of olivine and pyroxene-rich cumulate ultramafic rocks in the vicinity of Mt. Doom have a roughly concentric distribution. These bodies were interpreted as a younger intrusive phase within a composite multi-phase intrusion by Langworthy and Black (1978).

Field evidence for modal layering and igneous lamination suggests that the ultramafic rocks are likely to be contiguous undercover, forming a ring-like distribution of inward-dipping stratiform cyclic units, centered on about GDA 447300 mE and 740720 mN (Fig.4.2). The units contain a subtle but pervasive inward dipping conformable igneous lamination, which leads us to the conclusion that they represent distinct conformable layers within the predominantly more mafic intrusion.

Layering dips steeply at the margins and shallow toward the center, suggesting that the ultramafic–mafic phase is a funnel-shaped intrusion. A marginal zone of the ultramafic-mafic phase in the Braveheart region (Fig. 4.3) comprises a very distinctive “porphyritic shonkinite” unit, which consists of large idiomorphic phenocrysts of K-feldspar within a matrix identical to the mafic shonkinite. The phenocrysts are identical to those within the main syenite mass, and this unit is interpreted as the result of incorporation of phenocrysts during injection of the mafic phase of the intrusion into still partially molten syenite.

The complex is criss-crossed by a swarm of intersecting dykes, similar in composition to the mafic syenites, and interpreted by previous authors as the result of late migration of expelled interstitial magma during later stages of solidification of the cumulate pile.

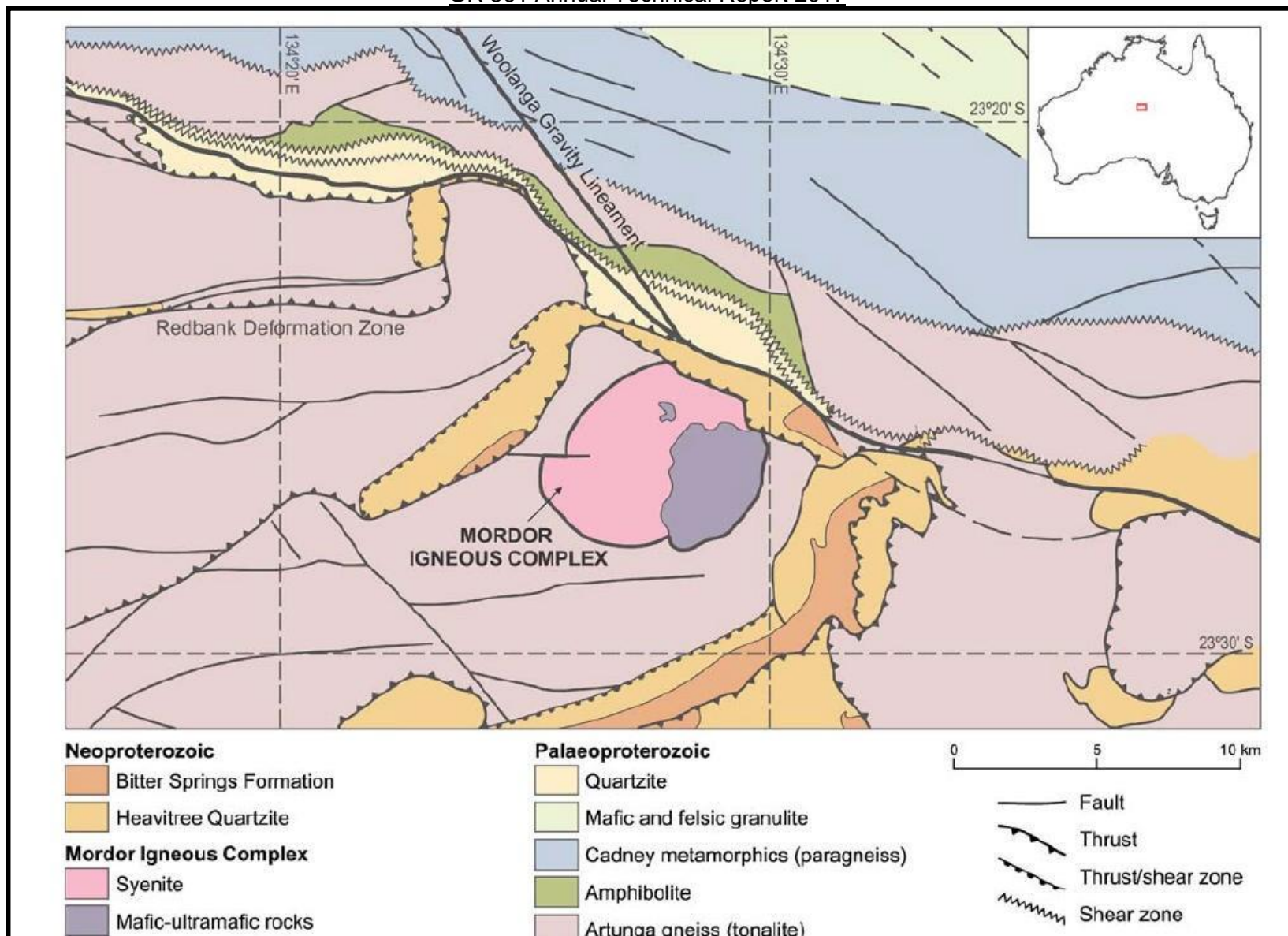


Figure 4.3: Regional geology of the Central Arunta block showing location of the Mordor Alkaline Igneous Complex (Barnes et al. 2008)

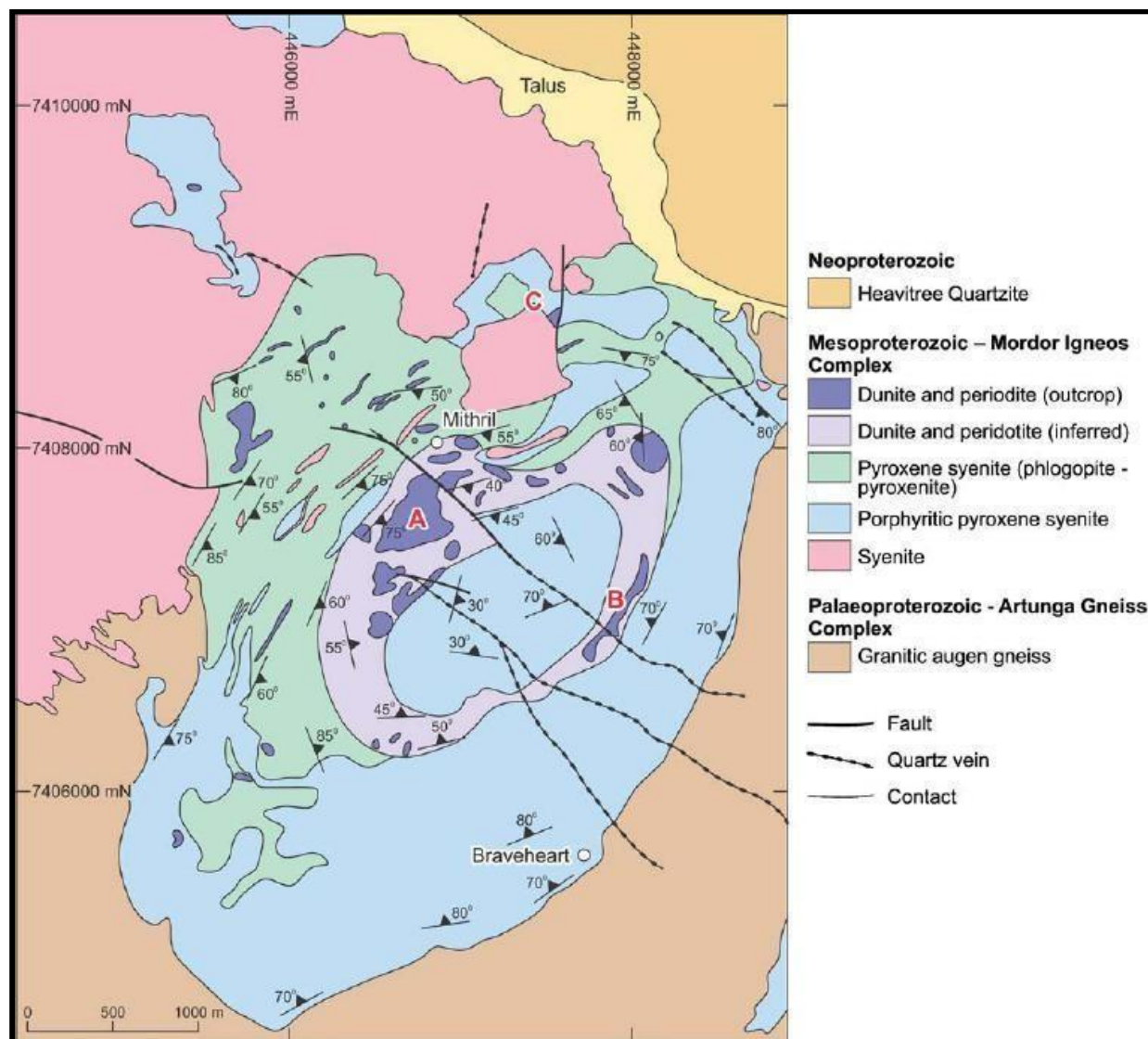


Figure 4.4: Mordor Geology (after Barraclough, 1981)

5 PREVIOUS EXPLORATION

Blueys / Inkheart EL 28136

The base metal mineralisation at Blueys prospect was discovered during regional mapping by Geopeko in 1983. The initial work consisted of soil sampling, rock chip sampling, and petrology. Soil sampling delineated highly anomalous silver values, with rock chip samples returning maximum values of 6.55 kg/t Ag, 18% Cu, 0.8 g/t Au and 27.5% Pb. An airtrack percussion drilling programme was completed in 1986 by Petrocarb Exploration (drillholes BSA1 – 9 for a total of 178m). The results indicated that the high soil and rock chip values came from a shallow discontinuous zone of supergene enrichment. The best result was 1 m at 55 g/t Ag and 0.48% Cu.

A RC percussion drilling programme (11 holes for 433m) was completed by Silver Standard in 2001 together with rock chip sampling. The best drill intersections, although anomalous, were of sub-economic grade. The better intersections included:

- 1 m at 45 g/t Ag and 0.55% Pb from 9 m in drill hole BS02
- 1 m at 77 g/t Ag, 0.11% Pb and 0.13% Sb from 11 m in drill hole BS05
- 1 m at 300 g/t Ag, 4.1% Pb and 0.14% Sb from 27 m in drill hole BS06
- 1 m at 260 g/t Ag and 0.27% Sb from 24 m in drill hole BS07
- 1 m at 150 g/t Ag, 0.46% Cu and 0.19% Sb from 2 m in drill hole BS09.

A ground EM survey was also completed over an area surrounding the Blueys Prospect. Western Desert Resources flew a combined radiometric/magnetic survey over the area in 2007/2008. A SkyTEM helicopter survey was also completed in 2008. Neither EM survey outlined any significant anomalies associated with the Blueys mineralisation. Two diamond holes were drilled on the most significant SkyTEM targets and they intersected black graphitic and pyritic shales in the Bitter Springs Formation.

CXO in 2013 collected 930 soil samples at and around the Blueys and Inkheart Prospects at 200 × 200m and 50 × 50m spacing (Figure 5.1). The program was planned to test the Blueys prospect to ascertain the level of anomalism in soils in the area of known mineralised samples, as well as to more coarsely sample the surrounding area to identify further targets.

The soil data confirmed silver anomalism in soils associated with copper and lead within the Bitter Springs Formation at both the Blueys and new Inkheart Prospects. Mapping has also identified that the reactive carbonate rocks (Neoproterozoic BSF), common at the Blueys Prospect, contain visual copper carbonate minerals (malachite and azurite) and high-grade silver geochemistry. CXO believes the reactive carbonate characteristics of the Bitter Springs Formation to be an ideal host unit for mineralisation. At the Blueys Prospect, the silver soil anomalies match the location of BSF wrapping around basement granites and amphibolites.

The Blueys and Inkheart Prospects occur in the same geological setting, within the Neoproterozoic Bitter Springs Formation, at the contact with Proterozoic basement. The Inkheart Prospect has a dominant north-east orientation consistent with the regional structural trend. The silver in soil anomaly at the Inkheart Prospect extends to over 2,000m with a peak of 19,552ppb Ag. Scope exists to extend the length of the soil anomaly to both the north-east and south-west and thicken the width of the anomaly to the north-west.

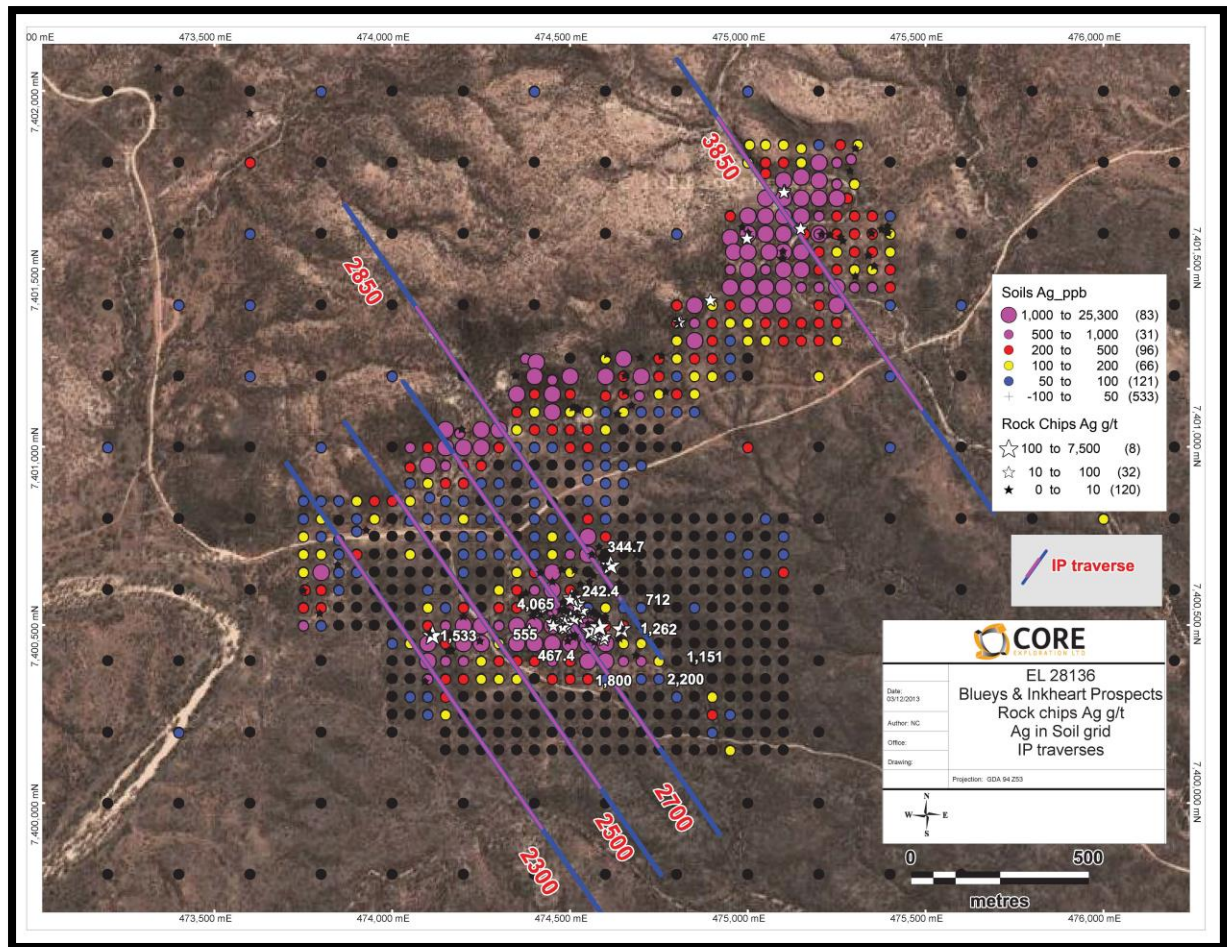


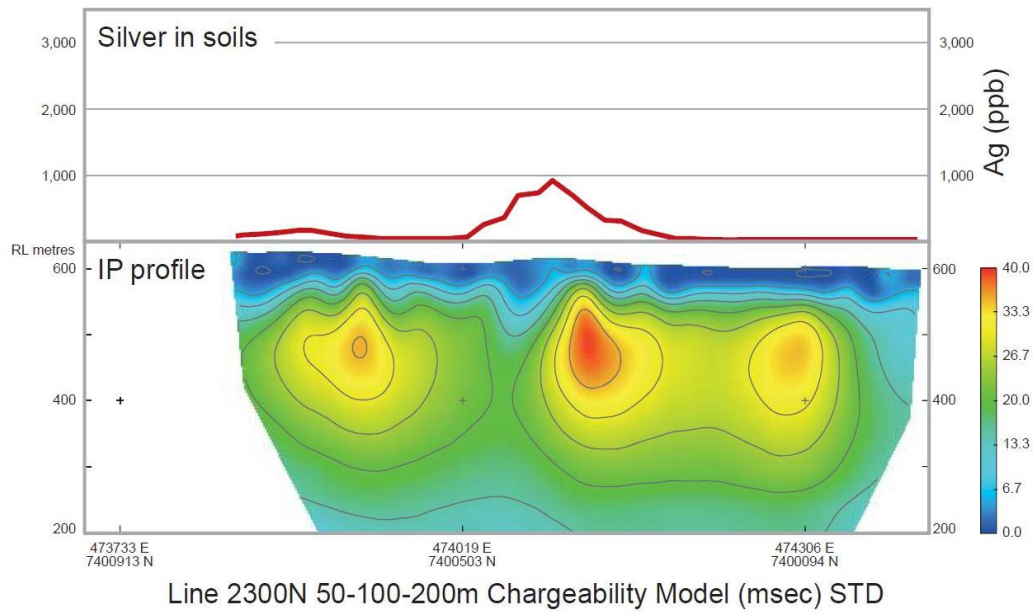
Figure 5.1. Induced Polarisation (IP) lines collected over Blueys and Inkheart Prospects, within Ag in soil displayed and rock chips with Ag g/t displayed

The infill soil sampling at Blueys defined the dimensions of approximately 700m x 400m with a peak of ~ 25,000ppb. Blueys includes a sizeable footprint (500m x 250m) greater than 100ppb Ag. The soil anomaly coincides with the contact between the host BSF and Palaeo-Proterozoic basement.

These very high values are spectacular when considering that 100ppb is commonly regarded as an anomalous silver in soils value and are an indicator of mineralisation at depth. The majority of soils samples are highly residual and should reflect the underlying geochemistry of the geology. Both the Blueys and Inkheart's soil anomalies are very tight and coherent with extremely high values in the CXO of the anomaly grading to low background values.

Geological mapping and rock chip sampling at Blueys has identified a broad zone of pervasive stock-work veining associated with malachite and azurite (copper) and galena (lead/silver) minerals at surface. Therefore, mapping and sampling planned at the relatively new Inkheart Prospect will also focus on the barite rich veins as well as the iron rich gossans identified in previous mapping to define the source of the high silver values in the vicinity of the high silver in soil samples.

LINE 2300 BLUEYS



LINE 2500 BLUEYS

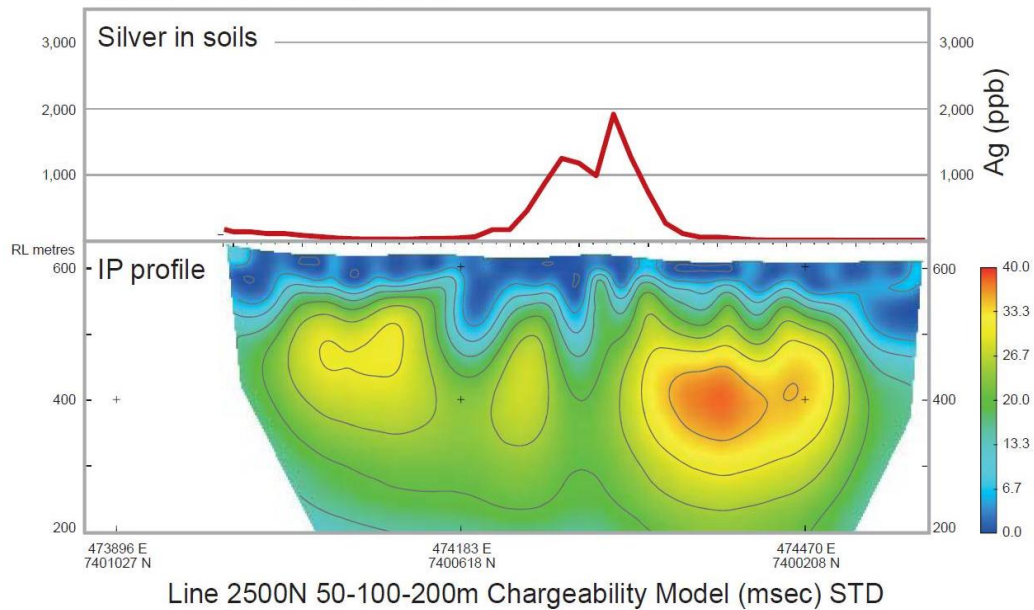
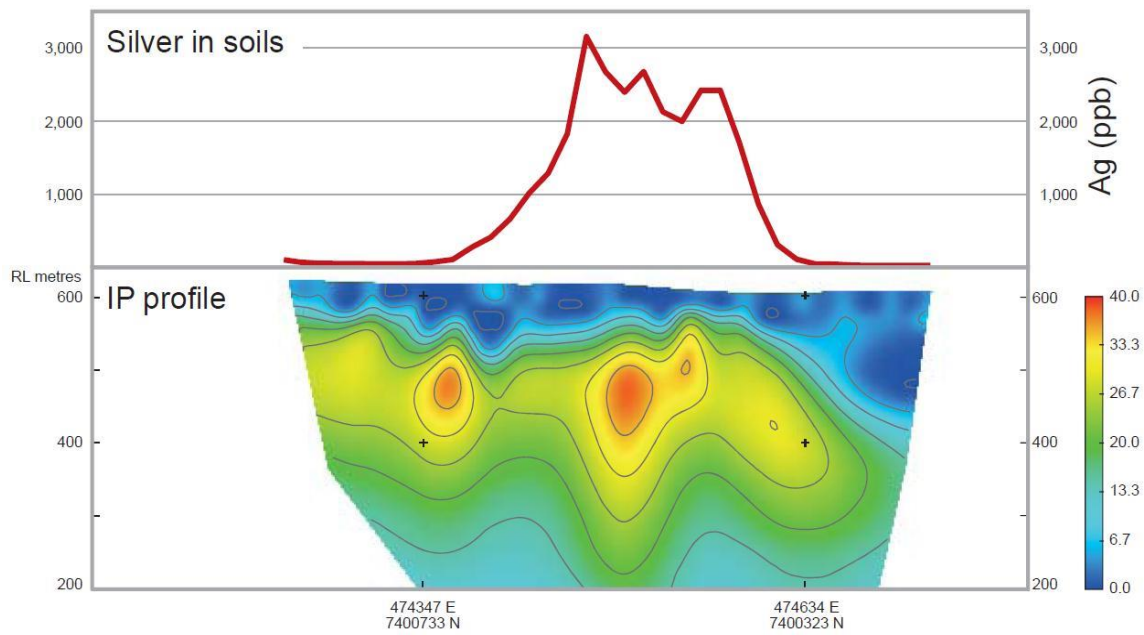


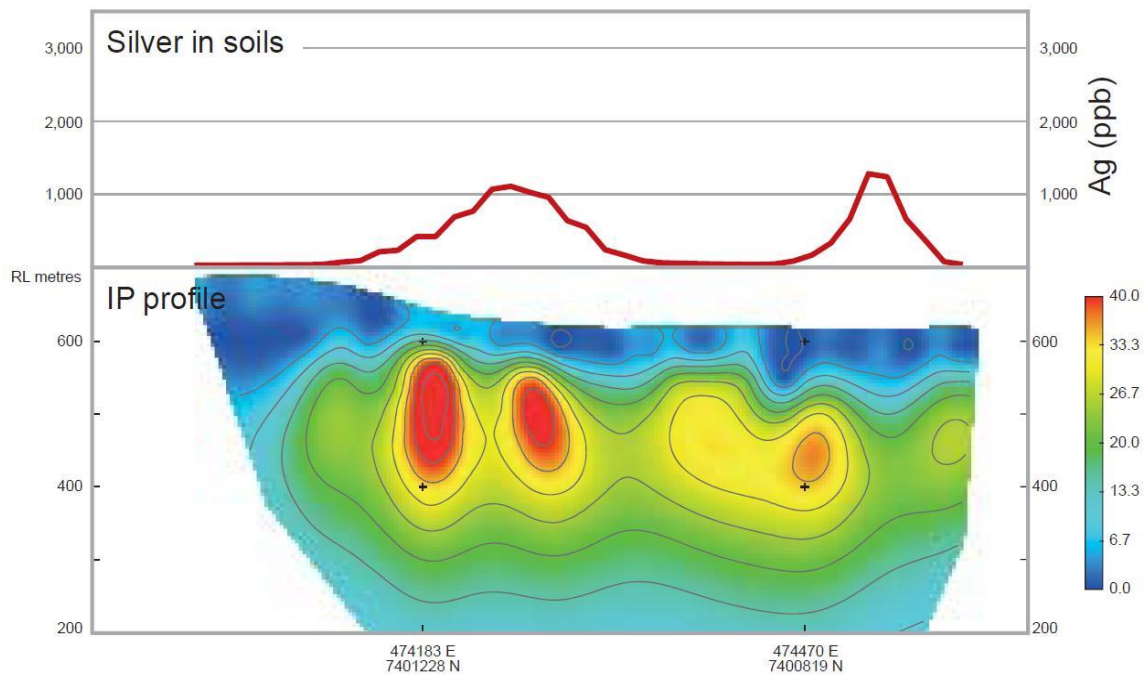
Figure 5.2: Sections 2300 and 2500 highlighting chargeability (non levelled against resistivity data) from the Induced Polarisation data with the Ag in soil data grid

LINE 2700 BLUEYS



Line 2700N 50-100-200m Chargeability Model (msec) STD

LINE 2850 INKHEART & BLUEYS



Line 2850N 50-100-200m Chargeability Model (msec) STD

Figure 5.3: Sections 2700 and 2850 highlighting chargeability (non levelled against resistivity data) from the Induced Polarisation data with the Ag in soil data grid

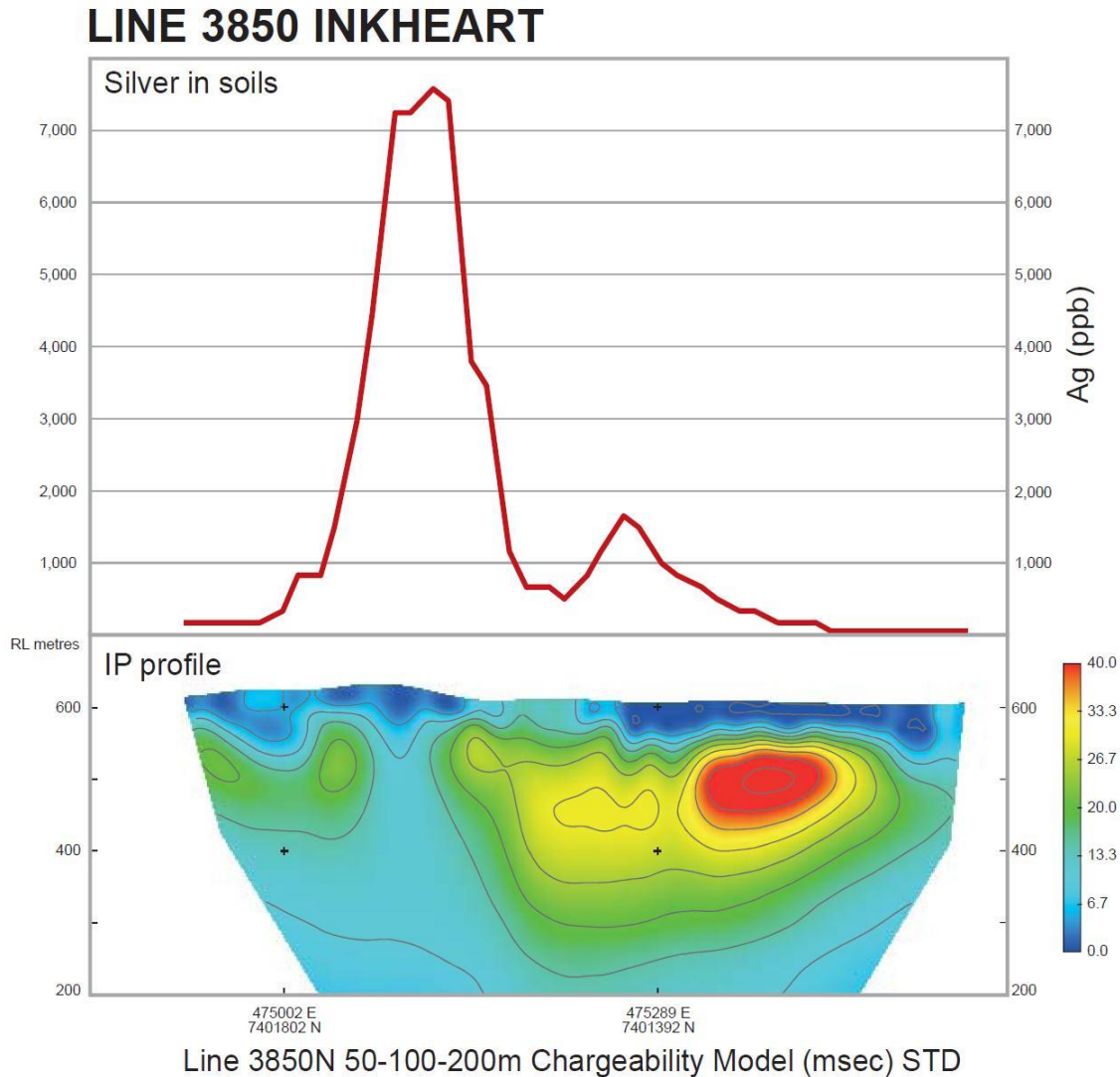


Figure 5.4: Section 3850 highlighting chargeability (non levelled against resistivity data) from the Induced Polarisation data with the Ag in soil data grid

Mineralisation is likely to be in the form of disseminated galena, minor sphalerite, secondary copper carbonates azurite and/or malachite and primary copper sulphides at depth in the form of chalcopyrite. Mineralisation is expected to be hosted in a vein network, possibly along structures as well as replacement of dolomitic host units caused by acidic fluid flow. At Blueys the structures hosting the mineralisation are interpreted to be steeply dipping to sub-vertical in an east-west trend. At Inkheart the host geology and structures run in a north-east to south-west direction and are sub-vertical to steeply dipping to the south east.

CXO undertook a program of geophysics to assist in the targeting of drill holes to test the mineralisation at Blueys and Inkheart. Induced polarisation (IP) was collected in NW/SE orientated lines across the Blueys and Inkheart Prospects (Figures 5.1 – 5.4). The IP was designed to detect as chargeable features areas of disseminated sulphides where the introduced electrical charge put into the ground can be carried. IP also allows the inverse (or resistivity) to be detected effectively the inverse of the conductivity collected by EM surveys. Results can then be normalised against each other in that a disseminated or sulphide rich area at depth should be chargeable and conductive as such the IP can detect chargeable areas, but if they are also resistive in the IP data then they are a lower priority.

In 2014 CXO completed two phases of drilling which included 13 RC holes at Blueys and 22 RC holes at Inkheart identifying Pb-Ag-Zn mineralisation within quartz \pm carbonate veining in a bleached altered shale. Visible galena was common in mineralised zones. Petrological analysis was undertaken on a limited number of Inkheart samples to investigate the alteration minerals and determine if any silver bearing minerals could be identified. Results confirmed the quartz dominant alteration system with minor carbonate veining. No specific silver bearing sulphides were identified so it is assumed that the silver is forming within the galena minerals (argentiferous galena).

Drilling at Blueys identified thin high grade intersections secondary mineralization at ~22m downhole (-60 degree drilling) beneath the main outcropping Blueys mineralization. Drill hole BLRC011 intersected 1m @ 1070 g/t Ag and 8.21% Pb from 24m down hole whilst drill hole BLRC010 drilled from the same pad as BLRC011 intersected 2m @ 843 g/t Ag and 5.9% Pb. Drill holes BLRC001 and BLRC006 designed to test the main IP chargeability anomaly at depth intersected 10m @ 28 g/t Ag from 50m which is above the main zone of chargeability. The main chargeability feature is believed to be caused by pyritic black shale intersected further down hole and was not found to be mineralised. BLRC008 and BLRC009 were drilled at the western end of the Blueys Prospect to test for mineralisation beneath a high grade silver rock chip within the silica alteration zone. The best results was 10m @ 19 g/t Ag from 15m in BLRC008. Holes BLRC004 – 005 and BLRC008 – 009 were all drilled into the interpreted silica alteration zone on the central and western side of the Blueys Prospect. No significant silica alteration was intersected below the first ~5m suggesting that the silica alteration was more of a silcrete cap. The best assay result for BLRC013, which was the only hole drilled at Blueys in the second phase of drilling, was 3m @ 42g/t Ag & 0.4% Pb [48-51m] from within quartz + carbonate veined sediments.

Drilling at Inkheart was undertaken in both phases of drilling. Initially 5 holes were drilled which returned good base-metal and silver intersection. Subsequently an additional 17 holes were drilled to better understand the mineralising system and the scale of the anomalies. Inkheart was first identified in regional 75micron soil sampling collected as a regional step out from the outcropping Blueys Prospect. Infill soils to 50m spacing confirmed the high Ag in soil with zones of coincident Cu and Pb in soil anomalies. Preliminary mapping at the soil anomalies determined that the highest Ag in soil peaks were located within pervasively outcropping Heavitree Quartzite on a steep north east striking ridge. Within the Heavitree Quartzite, rock chips identified the bulk of the unit to be barren of metals, but occasional thin (<5mm) veinlets and fracture fills contained an iron rich \pm carbonate unit with weak to moderate grades of silver. The eastern side of the broad Ag anomaly has coincident Cu and Pb anomalies. Initial mapping at these areas identified an iron and manganese rich gossan within the Bitter Springs Formation. Samples of this gossan contain low levels of Cu (~0.2%) and Pb (~0.2%). CXOs initial phase of drilling at Inkheart (IKRC001-005) was targeting these coincident soil anomalies on the eastern edge of the broad Ag in soil anomaly with coincident Cu and Pb soil anomalism. Results of the first phase of drilling at Inkheart identified primary Pb + Ag + Zn mineralisation below the oxidised zone associated with bleached shale (possibly due to quartz \pm carbonate alteration) with coarse quartz, interpreted to be veining (Figure 5.5). Visible galena was common in mineralised zones.

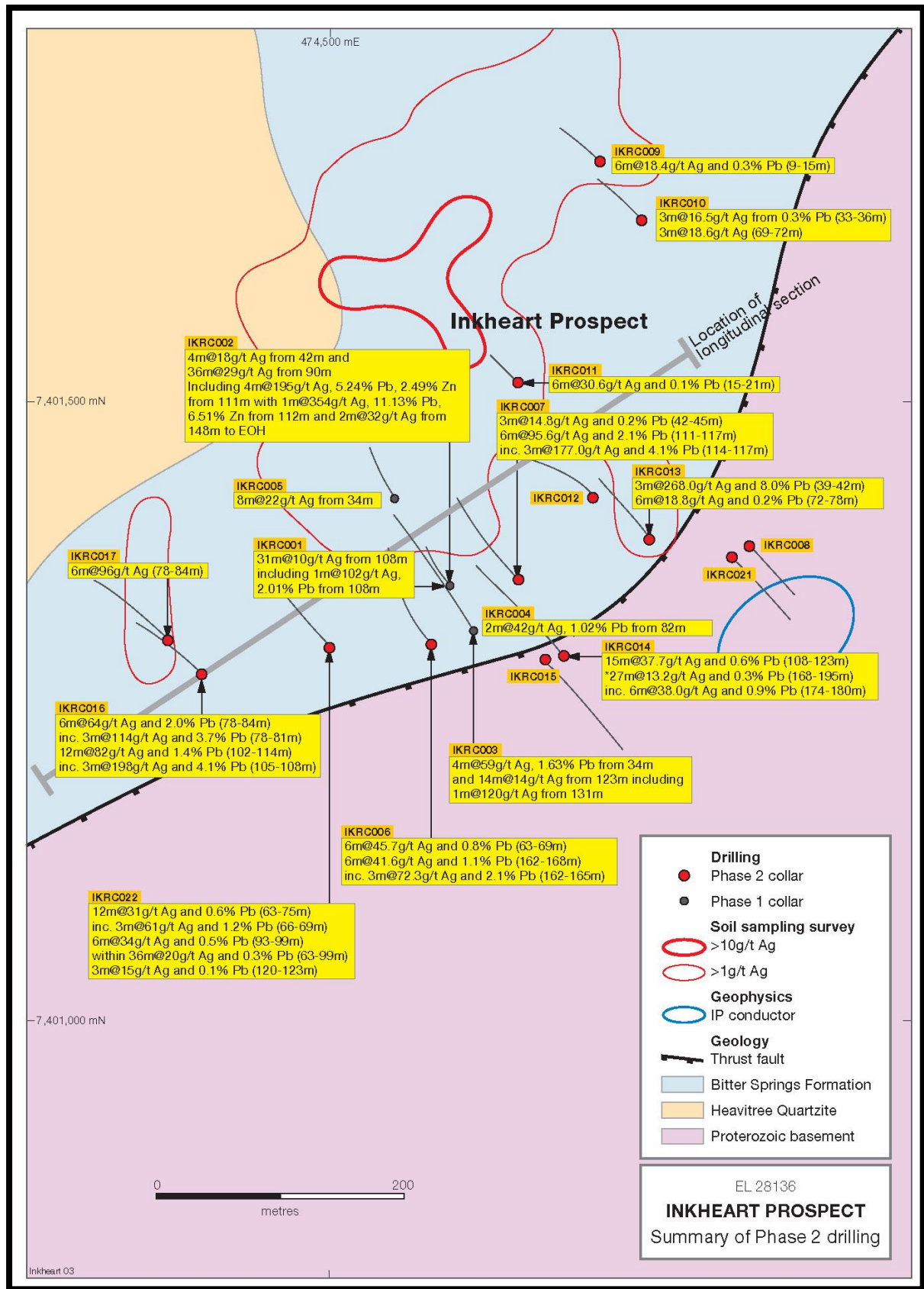


Figure 5.5: Drill hole locations and significant assays overlain on geology, phases 1 & 2 of drilling at Inkheart

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Hole ID	From	To	Ag g/t	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Interval
BLRC001	5	10	14.2	121.2	1832.8	30.2	79.8	5
BLRC001	31	39	15.96	147.75	3423.88	40.09	231.63	8
BLRC002	4	13	32.58	681.44	393	75.4	145.67	9
BLRC003	5	11	15.33	675	434	27.2	173.33	6
BLRC003	24	27	14.57	183.33	1257.67	33.13	205	3
BLRC004	3	7	15.78	271	95.75	27.15	164	4
BLRC004	13	22	11.79	85	439.56	63.69	19	9
BLRC004	111	113	23.3	209	1911.5	47.6	258.5	2
BLRC005	1	5	10.53	282.25	118.75	62.18	170.25	4
BLRC005	17	19	10.45	153	415	26.1	58.5	2
BLRC006	50	60	27.6	357.6	2977.5	120.59	129.1	10
BLRC006	69	70	13.9	115	3192	17.9	62	1
BLRC007	24	25	14.3	47	963	34.6	42	1
BLRC007	39	43	81.975	707.75	16882	302.55	1034.75	4
BLRC008	15	25	19.09	224.2	3772	88.3	30.6	10
BLRC008	74	75	12.4	96	3495	24.3	130	1
BLRC009	9	11	11.4	204.5	2594	38.05	32.5	2
BLRC010	22	29	257.31	2110.43	18146.29	1216.05	344.14	7
BLRC010	38	39	142.2	664	11406	598	323	1
BLRC010	53	54	12.9	93	3793	35.3	2248	1
BLRC011	15	16	11.3	221	2206	16.2	86	1
BLRC011	24	31	116.43	545.43	10911.86	319.38	121	7
BLRC011	46	47	14.9	147	2098	45.6	2540	1
BLRC011	49	50	10.8	107	2008	30.3	3788	1
BLRC011	75	76	11.8	116	1719	15.9	3780	1
BLRC012	24	25	11.4	152	700	17.2	535	1
BLRC013	48	57	26.8	183	3657.68	67	366.33	9
BLRC013	75	78	10.4	79	1154	36.3	1933	3
IKRC001	108	112	34.5	563.5	5539	212.4	148.75	4
IKRC001	126	127	16.6	298	194	53.8	79	1
IKRC001	132	139	14.46	142.58	2973.29	52.75	95.29	7
IKRC002	42	46	17.7	53	714.25	33.88	66.75	4
IKRC002	90	92	18.8	322.5	469	55.8	307	2
IKRC002	99	101	13.2	101	2084	18.4	993	2
IKRC002	106	107	10.5	267	555	23.1	113	1
IKRC002	110	115	159.16	1637.8	42134.8	748.72	20030.6	5
IKRC002	121	126	25.08	313	3446	117.24	104.6	5

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Hole ID	From	To	Ag g/t	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Interval
IKRC002	149	150	32.3	572	796	172.7	149	1
IKRC003	60	63	75.97	636.33	21449	247.6	205	3
IKRC003	69	70	13.6	342	75	143.2	85	1
IKRC003	104	105	13.3	49	2994	5.7	48	1
IKRC003	123	125	14.75	182	4288	51.4	236	2
IKRC003	131	132	120.3	2577	331	250.6	248	1
IKRC004	82	84	41.5	297	10199.5	43.4	275	2
IKRC004	95	96	13.6	177	2422	34.4	162	1
IKRC005	35	41	26.69	456.33	838.67	107.78	188	6
IKRC006	63	69	45.7	459	7880	214.65	1781.5	6
IKRC006	162	168	41.65	393.5	10666.5	173.25	59	6
IKRC006	174	177	14.2	117	2130	65.1	334	3
IKRC007	42	45	14.8	283	2111	102.6	38	3
IKRC007	111	117	95.6	751.5	21160.5	242.35	197.5	6
IKRC009	9	15	18.45	172.5	2739.5	26.95	584.5	6
IKRC010	33	36	16.5	451	3170	106	506	3
IKRC010	69	72	18.6	1630	19	71.6	323	3
IKRC011	15	21	30.55	482	1456	230.55	35	6
IKRC013	39	42	268.6	2835	80684	762.7	346	3
IKRC013	72	78	18.85	298	1987	50.6	185.5	6
IKRC014	108	123	37.68	497.2	5919	113.04	2501.6	15
IKRC014	174	180	38.05	258	8575	86	109	6
IKRC016	78	84	64.25	499.5	20093	193.5	1983	6
IKRC016	102	114	82.45	1172	13690.25	372.9	3288.5	12
IKRC017	78	84	95.8	1604.5	43	189.8	63	6
IKRC022	63	75	31.175	423.25	5834.75	62	500.25	12
IKRC022	93	99	34.05	423.5	5335	47.9	2497	6
IKRC022	120	123	14.7	192	743	86.8	46	3

Table 6.1: Drilling intervals from phase 1 & 2 RC programs at Blueys and Inkheart Prospects (calculated using 10g/t Ag cut off with 3m internal dilution)

The phase 2 drilling program at Inkheart focused on increasing the known extent of mineralisation at Inkheart by drilling along the ~1.2km strike of the Ag in soil anomaly. Results identified an ~400m “heart” of the mineralised zone with smaller generally lower grade intersections regularly intersected along the full length of the Inkheart anomaly. The intercept zones are also regularly elevated in Cu and Sb.

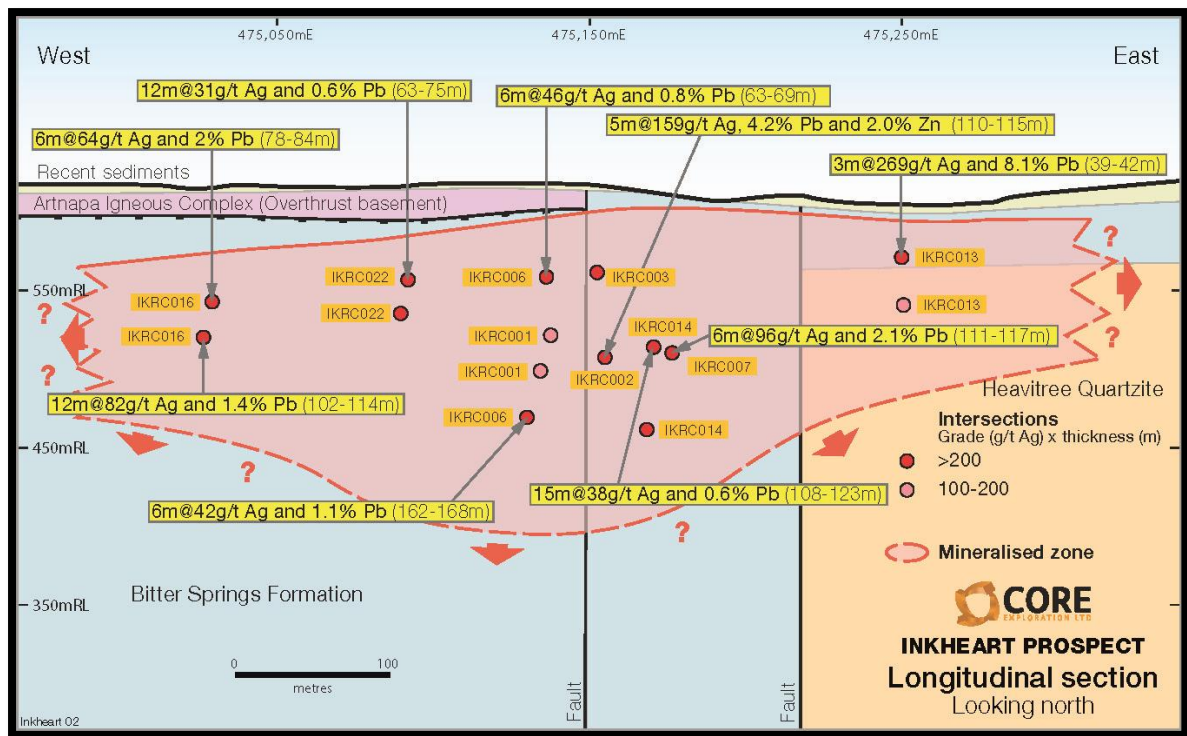


Figure 5.6. Long section of significant drill results (>100g/t x m Ag) and interpreted mineralised zone and geology at Inkheart

The drillholes were typically drilled on a -60° angle to the NW attempting to drill perpendicular to the strike of the NE soil anomaly. There are some consistencies in the downhole depths of the mineralised zones (i.e at ~60-65m, 80-85m and 110-115m) which may indicate a local lateral control of mineralised zone, but this is only a preliminary interpretation (Figures 5.7 & 5.8). A number of holes located on the western side of the drilling traverses when drilling NW intersected Heavitree Quartzite at shallow depths. Interestingly at the BSF – HTQ contact elevated Pb-Ag mineralisation was intersected, the contact was only intersected in shallow oxidised conditions not in primary fresh sediments. One possible mineralisation model currently untested at Inkheart is that mineralisation used the BSF- HTQ contact as either a conduit or a mechanical trap focusing metal. This is consistent with the soil anomalism being concentrated at the interpreted BSF-HTQ contacts surface expression. Unfortunately, the deeper holes at Inkheart which intersected mineralisation within the BSF (i.e. holes IKRC002, IKRC006, IKRC007, IKRC016, IKRC017, IKRC022) did not reach the BSF-HTQ contact (due in part to increasing ground water issues in the drilling) which may be where further mineralisation is concentrated. In this structural contact model, the current intersections within the primary BSF sediments would represent offshoots of the main mineralised structure along either more permeable sedimentary bands or reactivated fracture/veined zones (Figures 5.7 & 5.8).

The mineralised zones at Inkheart are open to the north east, at depth and potentially to the south west. CXO believes there is potential for further mineralisation over a much larger area within the target BSF geology. This reinforces the tenement wide and regional potential of the BSF for the discovery of economic base-metal deposits.

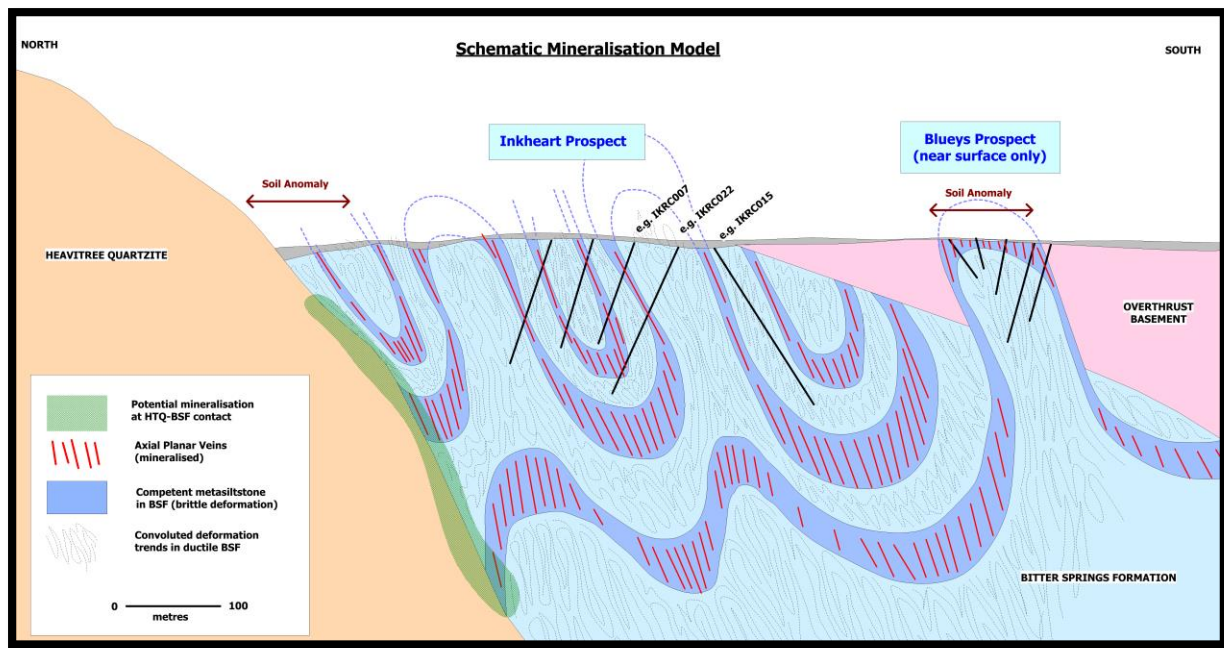


Figure 5.7: Conceptual cross section interpreting Blueys and Inkheart Prospect setting, with untested target zone at HTQ-BSF contact at depth

Orientation surface sampling on EL 28136

In an attempt to provide a more cost effective surface sampling procedure CXO purchased a Niton XL3t GOLDD+ (SN: 61847) handheld XRF analyser in early 2015 and undertook orientation work at Inkheart to devise an optimal sampling and analysis methodology for application across its tenure in the NT.

A total of 99 orientation samples were collected on EL 28136. Sampling methodologies trialled included varying the sieve screen mesh size and sample depth. The attached data files contain the sample site details and handheld XRF results. In summary it was determined the optimal sampling methodology involved using a -20# sieve of soil obtained from 10cm depth. Analysis was optimal when the soil sample was wrapped in a single layer of gladwrap; analysed with the Niton mounted in a portable Niton stand and connected directly to a computer in a controlled environment (air-conditioned); and run for 30 seconds for each of the the three spectrums.

Mordor EL 28940

An important contribution to Mordor mineralisation and geology was made by CRA in 1997. CRA produced a detailed report outlining their diamond drilling, ground and airborne geophysical surveys and surface sampling. Several prospects were generated and tested (Braveheart). Some potentially prospective areas, defined by several IP anomalies, appeared to have been neglected.

Tanami Gold was the first company to obtain significant mineralisation in a drill hole with a best intercept of 2m @ 1.1 g/t Pt+Pd+Au at the Mithril prospect. Tanami Gold recorded several anomalous hits, and suggested that Mordor was a genuine stratiform reef style PGE mineralisation (www.tanami.com.au, 2002). The drill holes tested surface geochemistry soil

anomalies, and have not been followed up with further depth or strike testing. These areas remain a priority for follow up work.

During CXO's period of tenure, exploration activities were confined to office work only, no field work was conducted. As Mordor is a unique example of a central Australian lamprophyric alkaline intrusive, it has been widely studied by both mining companies and earth scientists. It was decided therefore to initially concentrate on learning about this prospect, reviewing what exploration has taken place, and most importantly generating exploration ideas. CXO Exploration completed work on existing magnetic and Landsat imagery to see if any shear related mineralisation or lineaments had been overlooked by previous explorers. Radiometrics, in particular, potassium (K) were examined to highlight the alkaline area of the pyroxene syenites "mafic shonkinites", as this may map out the non-prospective ground that may be under cover. The favoured PGE model considers the ultramafics (high MgO) as being the most likely host rock for mineralisation. Areas of elevated Mg may likewise map out obscured ultramafics using Aster imaging. One interpreted area of interest is the occurrence of thin pegmatite dykes within the complex having returned anomalous amounts of Hf (NTGS data). Little is known about this occurrence, and is proposed to be followed up in due course.

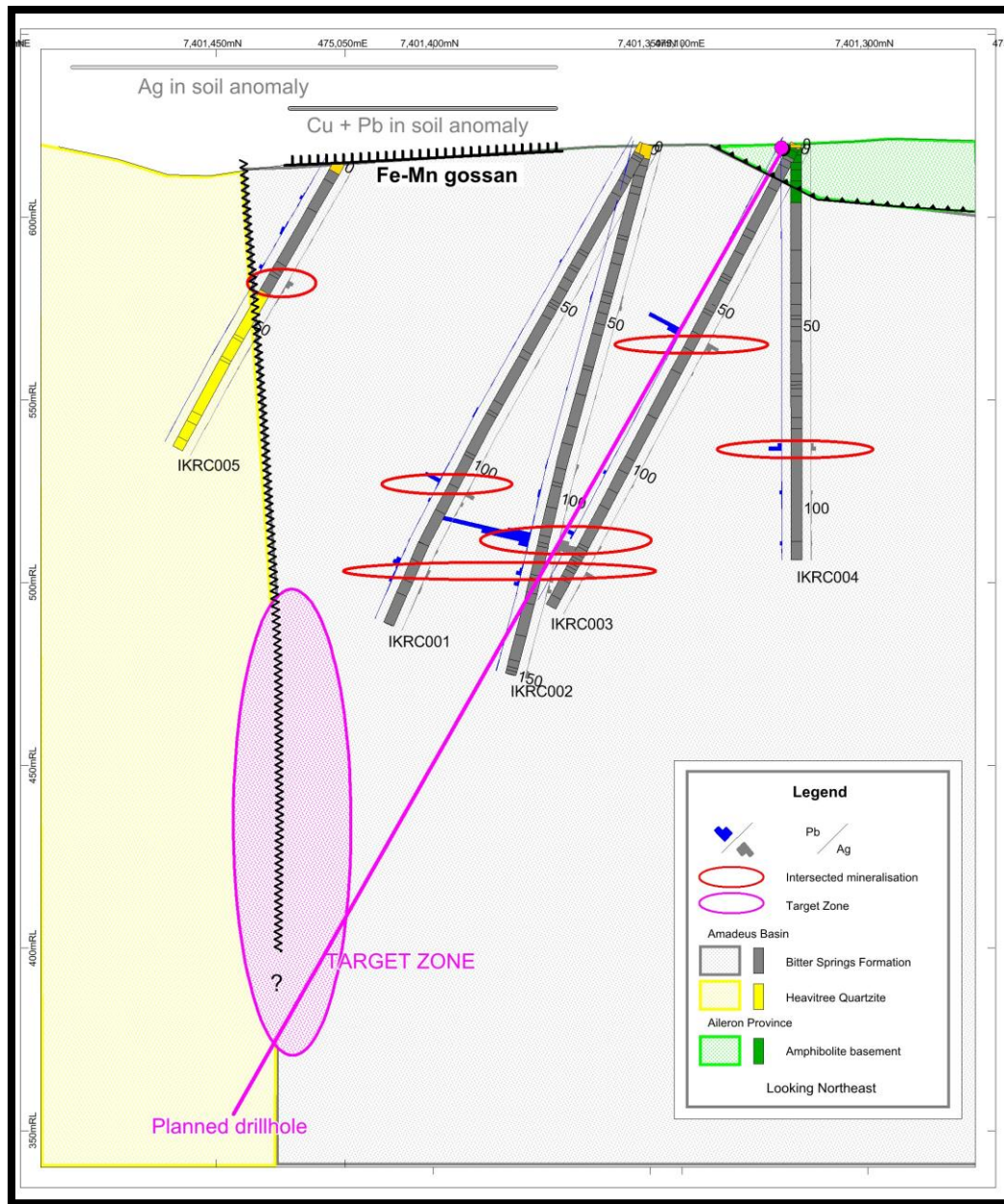


Figure 5.8: Conceptual cross section of Inkheart Prospect looking northeast with potential untested target zone at HTQ-BSF contact in primary zone

Paddies Plain EL 27709

The south-eastern portion of EL27709 was held by Esso Exploration as EL1325 between 1976 and 1978 (CR1978/0029 and CR1979/0031). Esso were exploring for uranium and no work was done in the current tenement. Alcoa Australia explored the Hale River Basin to the north of EL27709 from 1979 to 1983 under EL1860. Exploration was undertaken for roll-front uranium deposits (Howard, 1980 and 1981). Some zones of uneconomic uranium mineralization were discovered but they are located outside of EL27709.

EL3558 covered the northern and central parts of EL27709 and was held by Uranerz Australia during 1982. Some reconnaissance work was done for uranium within the strongly sheared retrogressed zones in the basement, no anomalies were found (Booth et al, 1983).

The eastern part of the tenement was covered by EL4674 from 1985 to 1989. Exploration for gold was undertaken by two local prospectors (G. Bohning and E. Bowman). Initial work included prospecting and metal detecting (Carthew, 1986). Further prospecting of the Cavenagh Range area was undertaken during the second year. The John Bull prospect was also visited and sampled (Carthew, 1988). A drilling programme was undertaken in late 1987-early 1988 to test the Pattersons Gully (John Bull) prospect and the Cavanagh Range/Whites Gully area (Murrell, 1988). Thirty-seven RC percussion holes were completed. The best results were from hole PG-3 at Pattersons Gully with 3m at 1.9g/t Au from 46m downhole. This hole also had elevated base metal values (Pb up to 0.11%). No work was undertaken in the final year and the EL was surrendered (Murrell, 1989).

EL5100 covered the northern part of EL27709 and was held by Conapaira Metals. Some reconnaissance activities were carried out during 1988 but nothing substantial was achieved (Garside, 1988). Ramsgate Resources explored the western part of the area under EL5486 during 1988 (James, 1988). Some rock chip sampling was completed in the current EL, however Ramsgate concentrated their activities on the Mordor Complex.

A portion of the eastern side of the area was covered by EL5809 which was explored by White Industries from 1988 to 1990. Stream sediment sampling (-80#, heavy mineral and BLEG) was undertaken but the results were disappointing. Some reconnaissance rock chip sampling also proved discouraging (Stidolph, 1989). In 1990 White Industries was granted EL6596 which covered the same ground previously held under EL4674. A field inspection of the Cavenagh Range area was carried out, however the most prospective ground was held under claim and the tenure was surrendered (Murrell, 1991).

The eastern half of the tenement was held by Shandona Pty Ltd (Alice Springs prospectors) under EL8785 from 1996 to 1998. Some stream sediment samples were collected and panned for gold with poor results. The reports on this work were not available.

CRA Exploration explored the Mordor complex under EL9371 from 1995 to 1997. This EL also covered the western part of the current tenement. CRA followed up a GEOTEM conductive anomaly near the fault contact between basement and Heavitree Quartzite within EL27709 (McCoy et al, 1997). Limonitic float in the vicinity returned 0.12% Cu. CRA postulated that the anomaly might be related to mineralization within the Amadeus Basin sequence (Bitter Springs Formation). No further work was done.

EL22625 was held by Tanami Exploration from 2001 to 2005 and covered all of the current tenement. Little exploration was carried out by Tanami during this period. Minor rock chip sampling was carried out during a visit to the John Bulls Surprise gold prospect. The best result was 3.5g/t Au from a sample of the mullock (Rohde, 2005).

Cullen Resources undertook some reconnaissance work in the area during 2008 under EL25620. The Patterson's Gully prospect was visited and rock chip samples collected which returned low values for gold – maximum 45ppb Au (Hamilton et al, 2008).

Since taking over management of EL 27709, CXO has completed a thorough review of historical exploration work. The Arltunga-Winnecke Goldfields have been extensively explored for gold by various companies, including well-funded modern gold explorers Normandy NFM and Tanami Gold. The gold at Arltunga and Winnecke is contained within

massive white quartz veins which contain pyrite and rare chalcopyrite. The veins are hosted by various rock units in the Arunta basement and overlying Amadeus Basin. Their emplacement has been interpreted to be related to the ca.320 Ma Alice Springs orogeny. These auriferous veins extend beyond and between the two known goldfields, including at Patterson's (also known as John Bulls Surprise). The greatest problem with this gold system is the extreme variability of results from the same vein and between adjacent prospects. Rock chips from known prospects can frequently return >10 g/t Au, but drilling results have consistently failed to return economic grades and widths, despite intersecting the veins. CXO also undertook a field trip to the Patterson Prospect during the 2011-2012 reporting period. Four rock chip samples were collected from outcropping quartz veins within the tenure. Gold values were generally low.

CXO Exploration undertook a detailed review of GIS datasets and mineral potential modelling based on epigenetic vein hosted gold systems during the 2013-2014 reporting period. A number of geological features were identified as potentially having an important role in the development of gold bearing epigenetic quartz veins:

- North-easterly structures
- Retrogressive alteration
- Outcropping quartz dominant vein systems
- Contacts between the Heavitree Quartzite and Palaeoproterozoic basement
- Zones of dilation along regional structures including inflections and fault jogs
- Zones of demagnetization associated with retrogressive alteration

Each of these features were identified within various datasets (Landsat, Google Earth, regional magnetics, Aster data) and incorporated into a mineral potential model within the company's GIS system. Each geological feature was given a weighting according to how likely it is to influence the development of the targeted epithermal quartz veins.

A comparison was then made between known occurrences of epithermal gold mineralisation, elevated gold in rock chip samples from previous explorers and the geological environment as determined from the interpretation exercise. The results indicated a number of areas that were previously unidentified as target areas for further work including soil sampling, rock chip sampling and mapping.

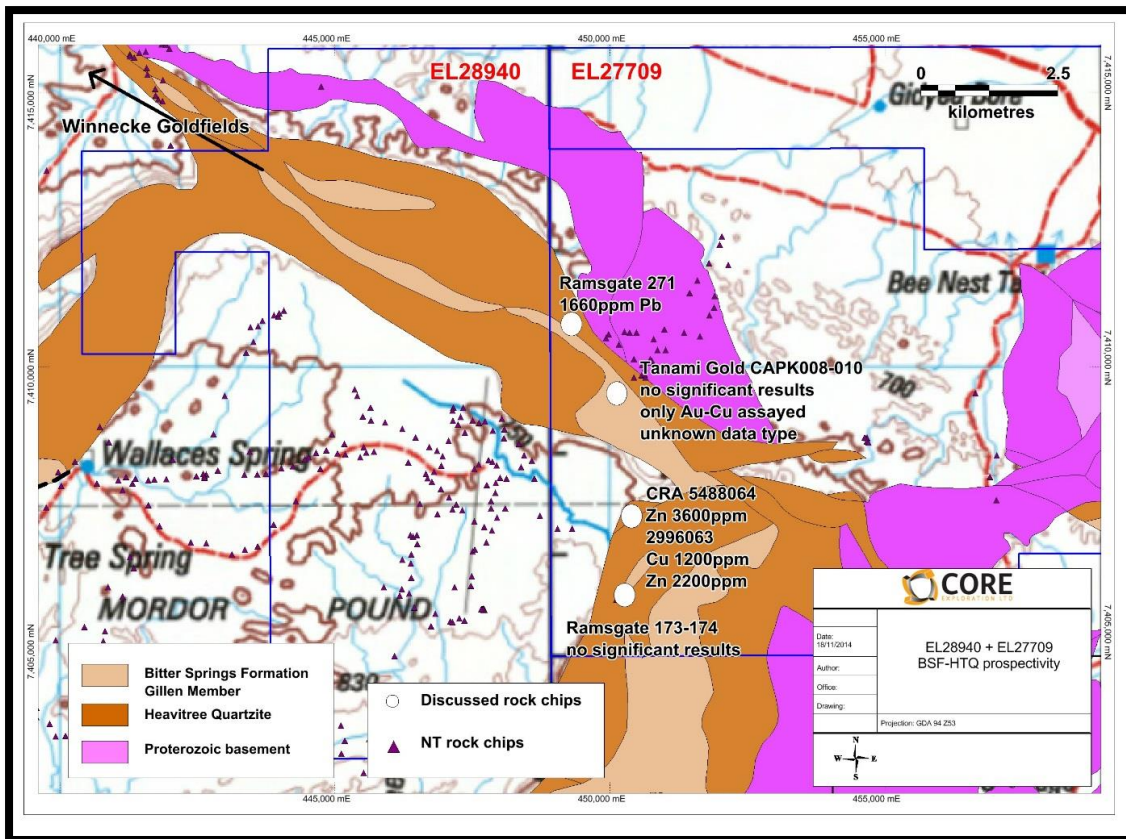


Figure 5.9: Map of EL28940 + EL27709 with Amadeus Basin sediments highlighted and relevant historic rock-chips



Figure 5.10: Outcropping quartz veins on EL 27709, potential hosts for gold mineralisation.

Black Gate Surface Sampling EL 27709

Geological mapping and soil / rock-chip sampling was undertaken on EL 27709 in an area which has a similar geological setting to Blueys/Inkheart with basement overthrust on Bitter Springs and Heavitree Quartzite Formations (Figure 6.1). This area has now been termed “Black Gate”. A total of 601 samples were collected and analysed using the Niton handheld XRF as described above. QAQC involved collecting a duplicate sample for every twentieth sample number and running a Niton Standard on every twenty-fifth sample number. Laboratory check sampling was undertaken on 25 Black Gate samples which were submitted to Intertek Genalysis for Ag, Cu, Pb & Zn using their TL7 partial leach method. The Check Samples confirmed the anomalism is real however the absolute numbers vary due to the analysis of different medium (XRF is a total analysis a very small volume whereas the TL7 is only a partial digest of the grain surface over a greater sample volume).

As illustrated in Figures 6.3-6.5, anomalous lead, zinc and silver occurs at Black Gate over >1 kilometre of strike length and results are a similar order of magnitude to that at Blueys / Inkheart at a similar sampling density (Figure 6.2). Gossanous outcrop was mapped however the majority of the silver anomalism was offset from the gossans. The zinc anomalism was much stronger than that seen at Blueys / Inkheart. Further work including IP geophysical techniques and drill testing is warranted.

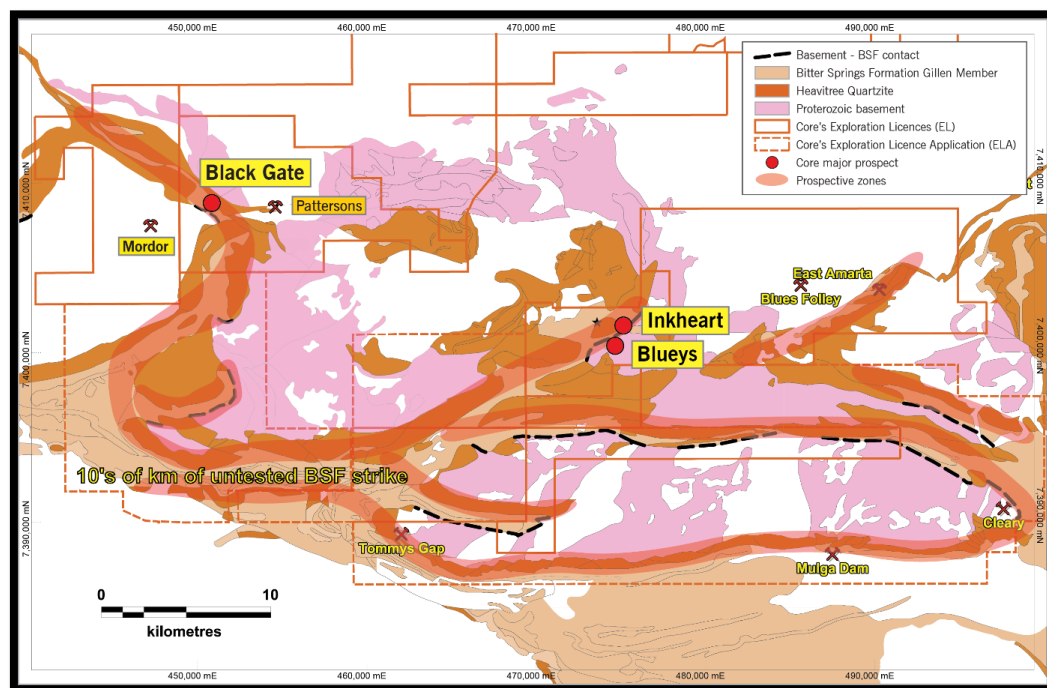


Figure 6.1: Black Gate and Inkheart Prospect location and CXO's tenements overlain on regional geology and highlighted interpreted prospective zones.

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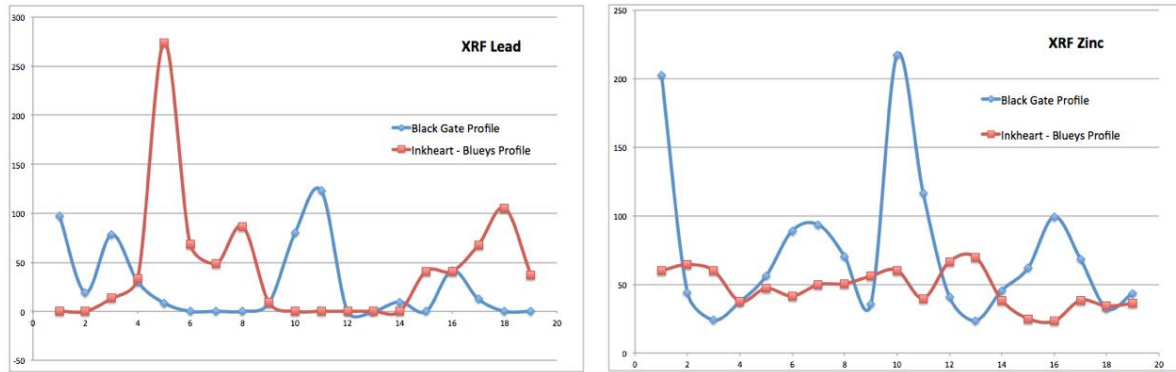


Figure 6.2: Comparative XRF soil profiles (Inkheart/Blueys (red) and Black Gate (Blue)

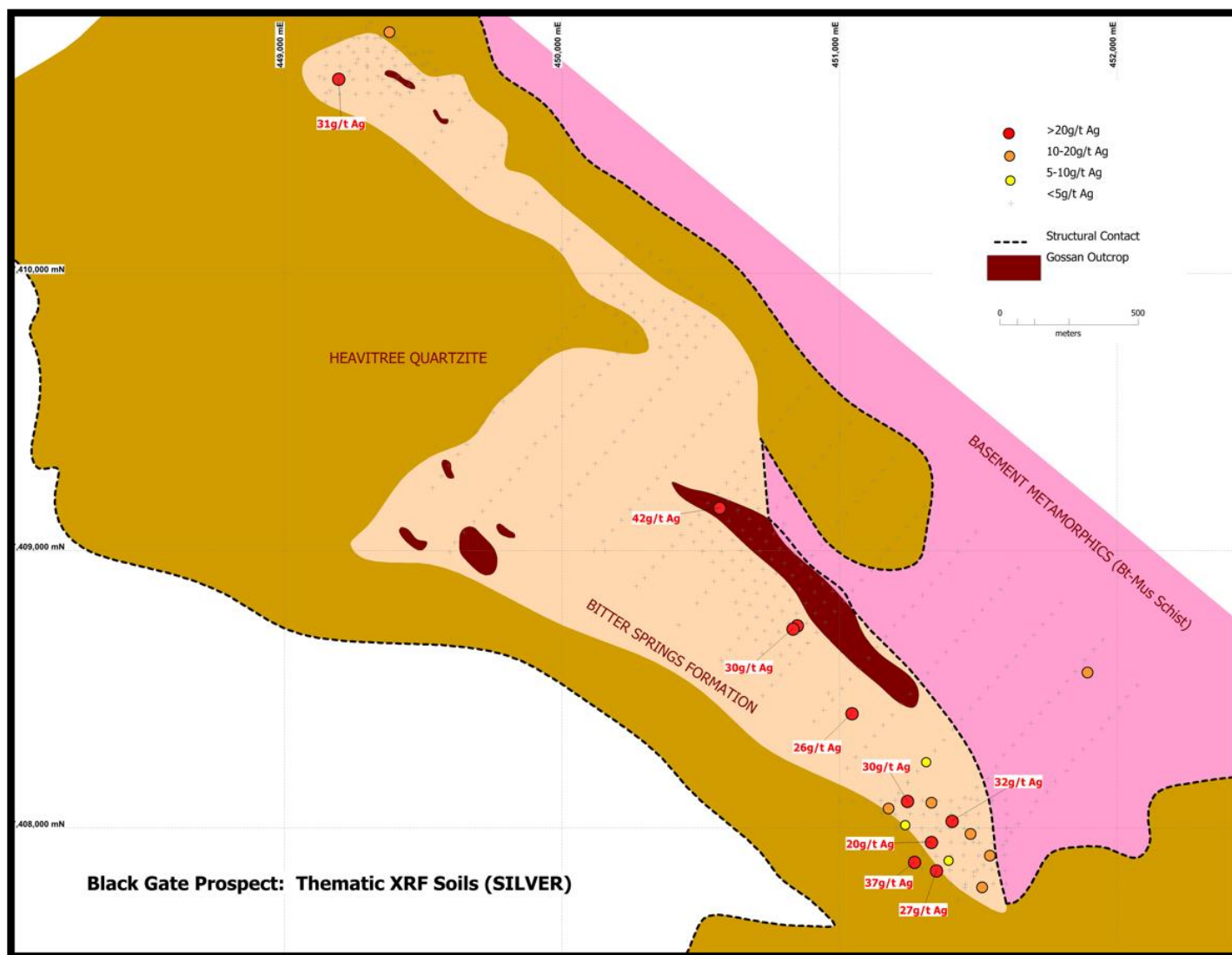


Figure 6.3: Black Gate XRF soils / rock-chips (Thematic Silver)

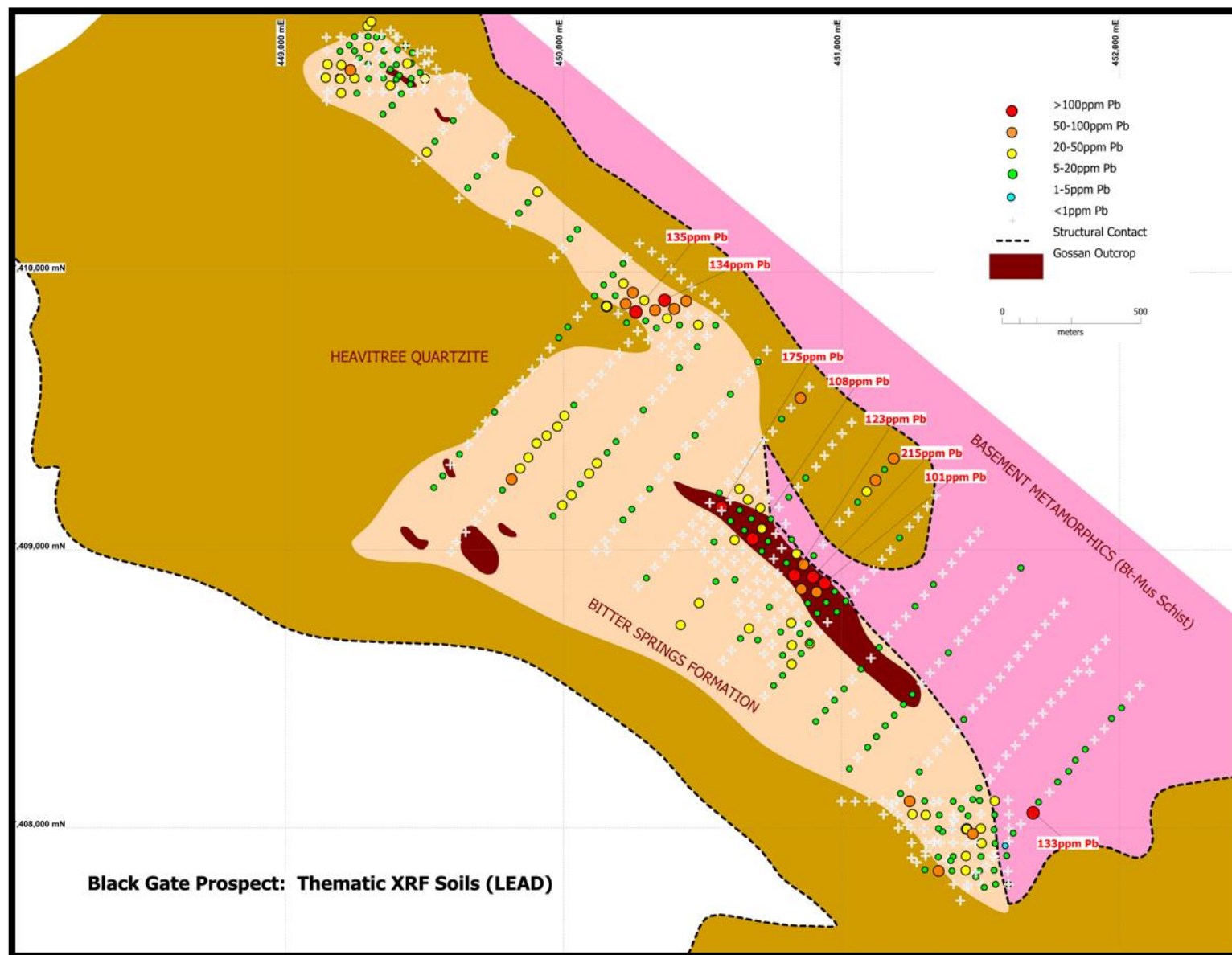


Figure 6.4: Black Gate XRF soils / rock-chips (Thematic Lead)

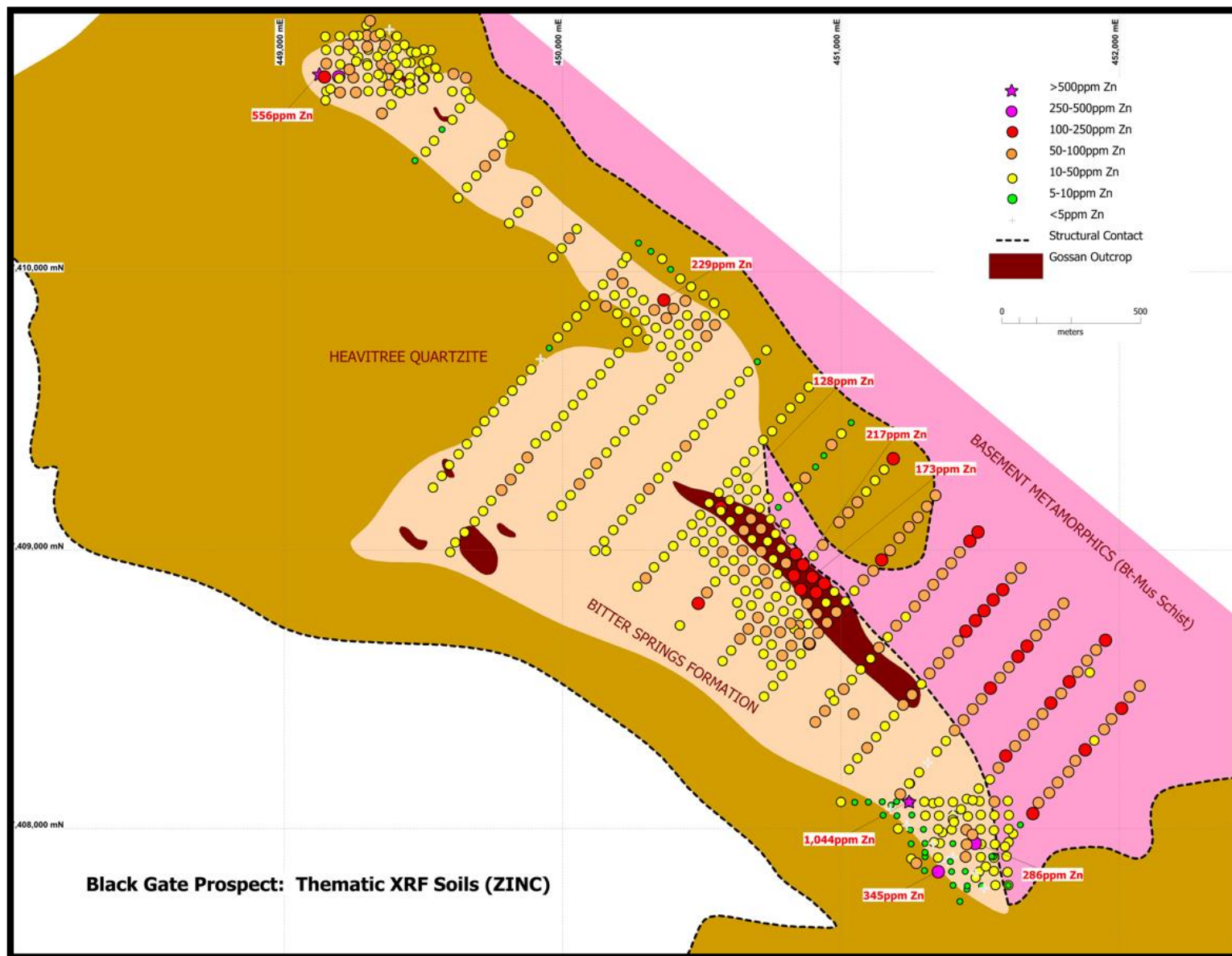


Figure 6.5: Black Gate XRF soils / rock-chips (Thematic Zinc)

6 EXPLORATION WORK 2016

During the 2016 reporting period, no ground-based work was undertaken on the Albarta South Project. Ongoing review of exploration potential and prospectivity was conducted by CXO's new Exploration Manager of the existing data held. CXO has decided to become more active in the lithium commodity space and in particular considers the pegmatites of the Arunta Block prospective.

The depressed base metals market meant minimal work was conducted over the Albarta South Project in this reporting period. Instead, CXO was successful in applying for and obtaining grant over 8 out of 9 Exploration Licences, and successfully acquired 100% of a joint venture held with the focus of Lithium-based exploration around Bynoe and Barrow Creek regions of the NT. In July 2016, approval for three lithium-focussed drilling programs was received, with the first commencing in July. Each drilling program has independent approval which has absorbed the majority of CXO's resources and funding over this time.

7 CONCLUSIONS & RECOMMENDATIONS

Orientation work in previous years has CXO encouraged with the new surface sampling technique. This led to the discovery of a significant silver and base-metal anomaly at Black Gate, which was the first area outside of Blueys/Inkheart that CXO has applied this technique. Further work is now required, which should include broader roll-out of the sampling grid along the favourable horizon, and potentially IP geophysics and drill testing at Black Gate. It is evident that this cost-effective methodology is applicable to the northern margin of the Amadeus Basin where this geological setting is common. Application of the surface sampling technique is also recommended for Mordor Pound (EL 28940).

It is anticipated exploration work will recommence on GR361 during 2017 and will likely include soil geochemistry and geological mapping to assess targets identified by the CSIRO study and assist generating new targets. As discussed above, CXO will have a focus on the lithium potential of the Arunta pegmatites, largely within the Barrow Creek-Anningie pegmatite fields.

8 REHABILITATION

No ground disturbing work or rehabilitation was undertaken in the reporting period on GR361.

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