



DE GREY MINING LTD

CO-FUNDED DRILLING REPORT

For the Period

11 May 2020 to 21 May 2020

Abraham's Find Ni-Cu-PGE Prospect EIS Co-Funded Drilling - Final Report (R19)

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DGY_EIS_20200202_20210201_DMPFormat.zip
DGY_EIS_20200202_20210201_DMPFormat.zip |
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ATTACHMENTS SUBMITTED SEPARATELY

1. Bibliographic Data Sheet

Project Name: Turner River Gold Project
Combined Reporting Number: C16/2013
Tenement Numbers: E47/00891
Tenement Operator(s): DE GREY MINING LTD
Report Type: Co-Funded Drilling
Report Title: Abraham's Find Ni-Cu-PGE Prospect EIS Co-Funded Drilling - Final Report (R19)

Report Period: 11 May 2020 to 21 May 2020
Author: Allan KNEESHAW
Submitted By: Jane CAPP
Report Date: 11 May 2021

Map Sheets: *1:250,000 Map Sheet* *1:100,000 Map Sheet*
SF50-03 (ROEBOURNE) 2556 (YULE)

Target Commodity: COPPER, NICKEL, PLATINUM GROUP ELEMENTS
Prospects Drilled: Abrahams Find
PoW Number: 82221
Geophysical Survey Reg No:
Assays:

Abstract

Location: The Abraham's Find prospect is located in the Shire of East Pilbara approximately 60 km south of the town of Port Hedland, Western Australia. Access is from Port Hedland via the Northwest Coastal Highway and the Great Northern Highway. The Indee station gravel roads provide access to the area.

Geology: Regionally, the Indee/Langenbeck Suite of intrusions are interpreted to have been emplaced in the lower part of the DeGrey Group, straddling the interpreted boundary between the Constantine Sandstone and the Mallina Formation, but not necessarily at the base of the basin.

The lower part of the De Grey Group, particularly near the boundary between the Constantine and Mallina Formations, is considered to be the most prospective window for thick, potentially mineralised mafic-ultramafic intrusions of the Indee/Langenbeck Suite.

Work Done: A prospective section of the Abraham's Find sill has been tested for PGE(Ni-Cu) mineralisation with a single, deep diamond drill hole (IEDD001). The diamond hole has a total depth of 594.5m and is the first diamond hole into either of the Abrahams Find or Joshua sills.

Results: The hole was successful in that:

- Both of the PGE and base-metal sulphide horizons targeted by the drilling were intersected by EIDD001.
- A high-grade PGE intercept of **8m @ 1.56g/t PGE from 339m** down hole was returned from the upper part of the peridotite zone of the sill.
- In addition, a zone of disseminated low-grade Cu-sulphide mineralisation associated with the contact between the peridotite and pyroxenite units was intersected.
- The full thickness of the differentiated sill was able to be drilled in the one drill hole with the stratigraphic upper contact of the sill observed in drill core.

Conclusion: The EIS hole was successfully drilled through the entire thickness of the Abrahams Find sill. The down hole width of the sill is 450m and the interpreted true thickness is in the order of ~350m. In addition, the hole also intersected a second, thinner sill 65m down hole from the main sill that has an estimated true thickness of ~35m.

The Abrahams Find mafic-ultramafic body is interpreted to have been emplaced as a sill into Mallina Basin sediments prior to basin inversion and deformation. The sill shows clear, magmatic changes in composition from peridotite, through pyroxenite to gabbro from its base to the top. The sill is interpreted to be overturned and dips steeply to the south and, as such, the hole was drilled (stratigraphically) from the base to the top of the sill.

The variation in the magnetic susceptibility readings support the mineralogical observations and geochemical data. The change from peridotite to pyroxenite crystallisation is associated with PGE mineralisation and lower grade Cu(-Ni) magmatic sulphide mineralisation. The magmatic sulphides were readily observable, however the PGE mineralisation was not able to be identified from geological observations of the drill core.

There are remobilized sulphides within the sill, observed as distinct chlorite-pyrrhotite veins which overprint the host lithologies within the sill. The chlorite-pyrrhotite veins are interpreted to be late and related to later orogenic remobilisation and hydrothermal alteration during regional deformation.

Drilling Summary:

Hole Type	No. of Holes	Total Drilled (m)
RC/Diamond Tail	1	595

2. Introduction

The West Pilbara has known PGE (Pt, Pd, Au) mineralisation at Munni-Munni and Ni(-Cu) sulphide mineralisation Radio Hill, Mount Sholl and Sherlock intrusions.

The historic Three Kings project is located approximately 60km south of Port Hedland between the Yule and Turner Rivers (Figure 1). The potential of mafic-ultramafic intrusions within the area to host magmatic PGE(Ni-Cu) mineralisation was recognised in the early 2000's by De Grey Mining and was a cornerstone of the (then) new company's listing on the ASX in 2003.

Exploration returned very encouraging results with PGE mineralisation and subordinate Ni-Cu sulphide mineralisation discovered associated with a differentiated contact between peridotite and pyroxenite units within a series of layered ultramafic-mafic sills at the Joshua, Abraham's Find, Jacob and Grey Hills prospects.

However, exploration for potential PGE(Ni-Cu) mineralisation ceased by the end of 2005/early 2006 and the prospects have essentially been unexplored since then. The recent resurgence of exploration in the region is currently focussed on growing the known gold resources and discovering new gold deposits within the Mallina Basin with little work directed towards targeting potential PGE(Ni-Cu) mineralisation.

After exploration for PGE(Ni-Cu) mineralisation ceased in the Mallina Basin, the GSWA released two important publications: Record 2006/15 & Record 2008/13. These publications provided updates and a new understanding of the lithostratigraphy, geochronology, crustal evolution and mineralisation of the Pilbara Craton.

The magmatic PGE(Ni-Cu) hosted in the mafic-ultramafic sills at Three Kings is ascribed to the Indee and Langenbeck Suites and are the products of mantle melting that produced mafic-ultramafic magmas that intruded the Mallina Basin as sills and dykes in the early phases of crustal extension and basin evolution. It is not certain how the Indee and Langenbeck Suites correlate (if at all) with the other mafic-ultramafic intrusions in the West Pilbara that host PGE(Ni-Cu) mineralisation. Until recently, the knowledge imparted in the GSWA reports has not been widely applied to the more recent exploration within the region.

The successful EIS submission originally planned two diamond holes to further test the mafic-ultramafic intrusion at Abraham's Find for potential PGE(Ni-Cu) mineralisation. Instead the company elected to drill one deep hole through the full thickness of the intrusion. The aims were to relate the results and knowledge derived from this hole to the other mafic-ultramafic intrusives near-by at the Joshua, Grey Hills and Jacob prospects and expand that knowledge to help identify new targets for potential PGE(Ni-Cu) mineralisation within the Indee and Langenbeck Suites which have extensive lateral extents under recent transported sheetwash cover between the Yule and Turner Rivers to the north and west of the Abrahams Find prospect (Figure 2).

3. Location and Access Details

The Abraham's Find prospect is located in the Shire of East Pilbara approximately 60 km south of the town of Port Hedland, Western Australia. Access is from Port Hedland via the Northwest Coastal Highway and the Great Northern Highway. The Indee station gravel roads provide access to the area.

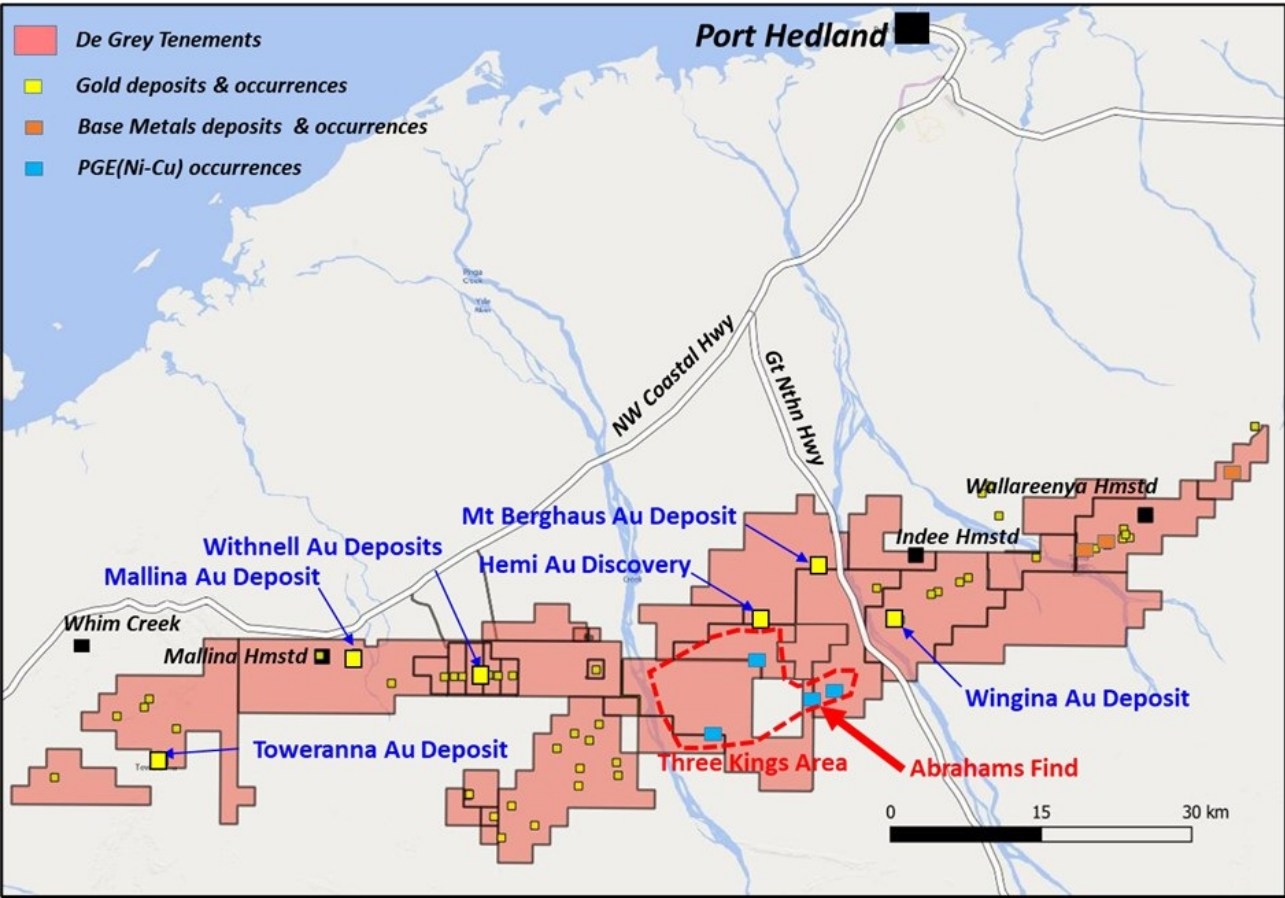


Figure 1: De Grey Mining's Tenements showing location of Abraham's Find

4. Tenement Details

Tenement Information

Tenement	Grant Date	Expiry Date	Holder	Expenditure (\$)	Area Size (KM2)	Area Size (BLK)
E 47/891-I	18/07/2002	17/07/2021	DOMAIN MINING PTY LTD	132000	123.2	44

Abraham's Find prospect is located tenement E 47/891, which is part of De Grey Mining's Turner River Gold Project (C16/2013).

5. Geology

5.1 Regional Geology

Regionally, the Indee/Langenbeck Suite of intrusions are interpreted to have been emplaced in the lower part of the DeGrey Group, straddling the interpreted boundary between the Constantine Sandstone and the Mallina Formation, but not necessarily at the base of the basin. The current interpretation of the basin stratigraphy is that the intrusives are less common (to absent) higher up in the sequence.

The gap between the emplacement of the intrusions and the basin formation and associated sedimentation is interpreted to be due to the "lag time" whilst mantle melting associated with crustal thinning initiated and generated enough melt volumes to begin magma ascent. Magmatism waned and then ceased as the basin progressively filled.

The lower part of the De Grey Group, particularly near the boundary between the Constantine and Mallina Formations, is considered to be the most prospective window for thick, potentially mineralised mafic-ultramafic intrusions of the Indee/Langenbeck Suite.

5.2 Local Geology

The Abrahams Find mafic-ultramafic body is interpreted to have been emplaced as a sill into Mallina Basin sediments prior to basin inversion and deformation. The sill shows clear, magmatic changes in composition from peridotite, through pyroxenite to gabbro from its base to the top. The sill is interpreted to be overturned and dips steeply to the south and, as such, the hole was drilled (stratigraphically) from the base to the top of the sill.

The sequence has been intruded by late felsic dykes interpreted to be related to regional granitic magmatism.

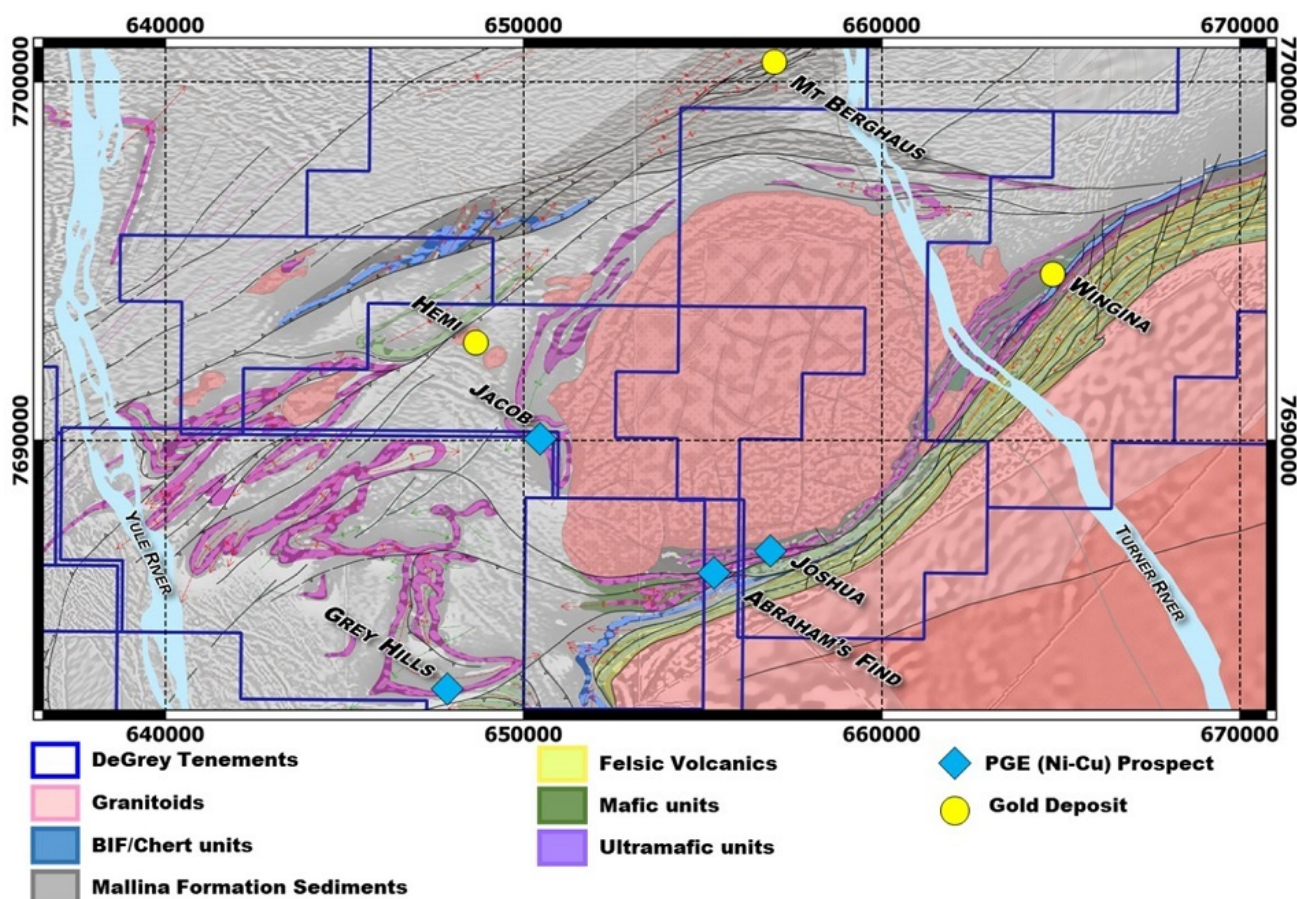


Figure 2: Geological Setting of Abraham's Find and other PGE(Ni-Cu) Prospects

6. Previous Exploration

Exploration for PGE(Ni-Cu) mineralisation has been relatively limited when compared to that for other commodities in the region such as gold, base metals, tin and, more recently, lithium. In the last 20-30 years De Grey Mining, Impala Platinum (in JV with DeGrey Nov 2003 – Mar 2006), CRA and PolyMetal are the only groups that have done work that may have targeted or delineated potential PGE(Ni-Cu) mineralisation in the footprint of the Three Kings area.

Historic work by Inco in the 1970's had a base metals and Ni focus, but potential PGE mineralisation does not appear to have been part of their exploration programme.

Whilst gold and base metals have nearly always been routinely assayed in all surface geochemical datasets, most groups (including De Grey) have not analysed their surface geochemical samples for Pt & Pd. CRA and Poly Metal appear to have been the only explorers who analysed the surface geochemistry for Pt & Pd. When De Grey first started exploration in the Pilbara in the early 2000's the previous Pt & Pd surface geochemistry results were used to help target PGE(Ni-Cu) mineralisation in areas of outcropping mafic-ultramafic rocks (Figure 3).

Induced Polarisation (IP) surveys and drilling to test targets defined by surface mapping of outcropping mafic-ultramafic sills and surface geochemical anomalies were the key exploration tools (Figure 4). IP appears to have been effective at mapping out chargeable units within the mafic-ultramafic sills, helping to prioritise areas for drilling. De Grey / Impala drilled all of the known holes to date that targeted PGE(Ni-Cu) mineralisation within the mafic-ultramafic sills in the Three Kings area.

Large areas of sheetwash have hindered the effectiveness of previous surface geochemical sampling away from areas of outcrop. With no effective way of prioritising the >65km of potentially prospective intrusions, there have been no IP surveys completed away from the known outcropping and subcropping mafic-ultramafic sills at the Joshua, Abraham's Find and Jacob prospects.

A portion of a VTEM survey flown by De Grey in 2006 as part of a wider regional programme covered the Joshua and Abraham's Find prospects but did not identify any conductors in the intrusions.

Historic drilling was focused on the Joshua, Abraham's Find, Grey Hills and Jacob prospects. Most of which was at the Joshua prospect, located ~2.5km east of Abrahams Find. Joshua is an excellent small-scale example of mineralised mafic-ultramafic sill where PGE and Ni-Cu sulphide mineralisation is associated with the contact between an early peridotitic and late pyroxenitic phase of a differentiated sill. Based on magmatic facing directions derived from geological and geochemical data, the Joshua and Abrahams Find sills are interpreted to be structurally overturned (Figures 6 & 7).

Abrahams Find is known to host PGE(Ni-Cu) mineralisation, but when compared to the well drilled ~800m long Joshua prospect, the ~2.25km long differentiated sill at Abrahams Find is poorly explored and under-drilled (Figure 5). This factor, combined with a lack of surviving RC chips and no historical drill core, prompted De Grey geologists to motivate for support from the Company to propose an EIS hole to be drilled through the whole width of the differentiated mafic-ultramafic sill at Abrahams Find.

Historic DeGrey drill core from a more mafic differentiated sill from the Grey Hills prospect, approximately 9km to the WSW, previously thought to be lost, was able to be successfully located. The historic core was able to be reviewed in conjunction with the new hole, this core will also be submitted to the core library.

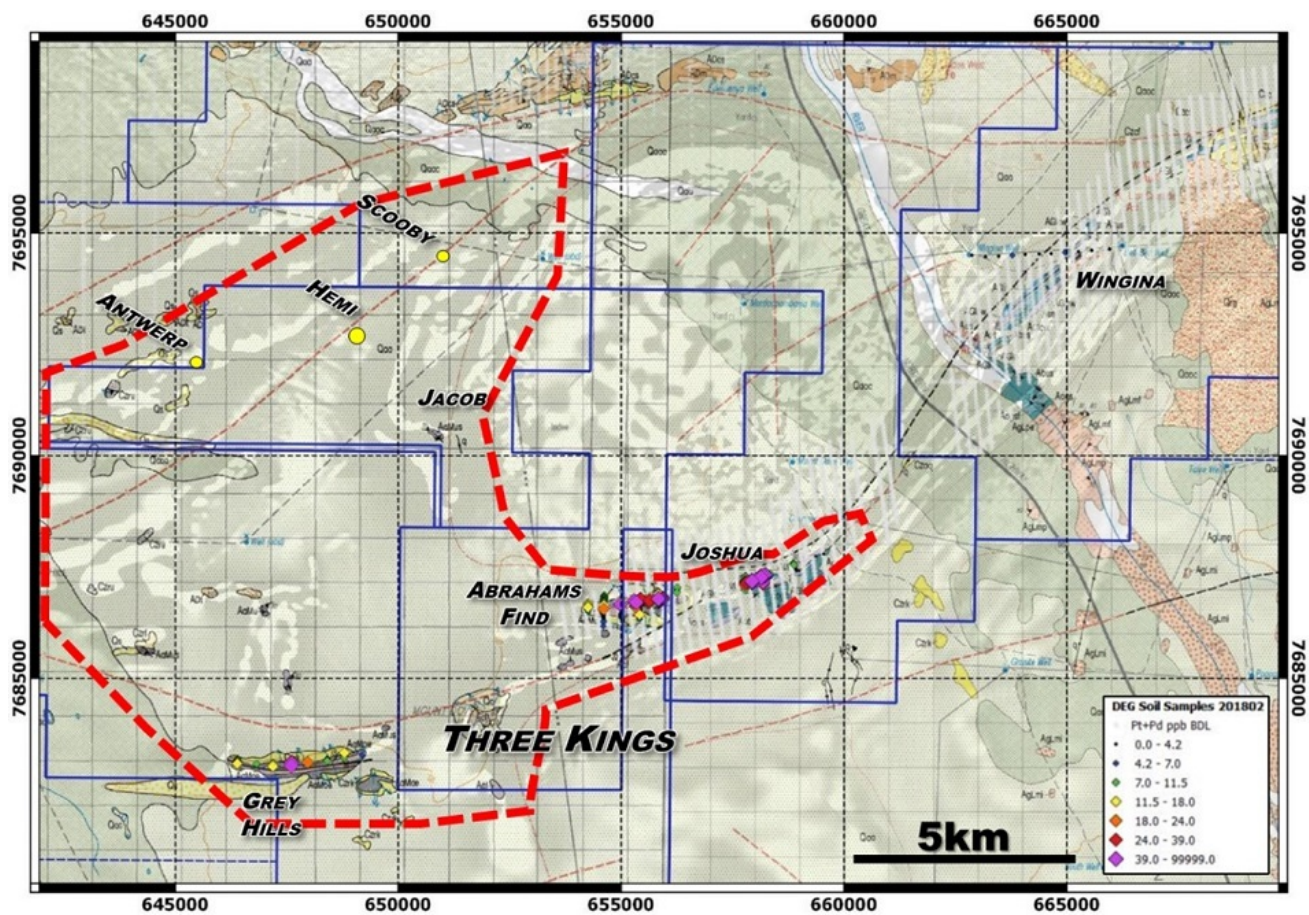


Figure 3: Historic surface geochemistry (Pt Pd ppb) overlay on GSWA outcrop map and 1VD amag

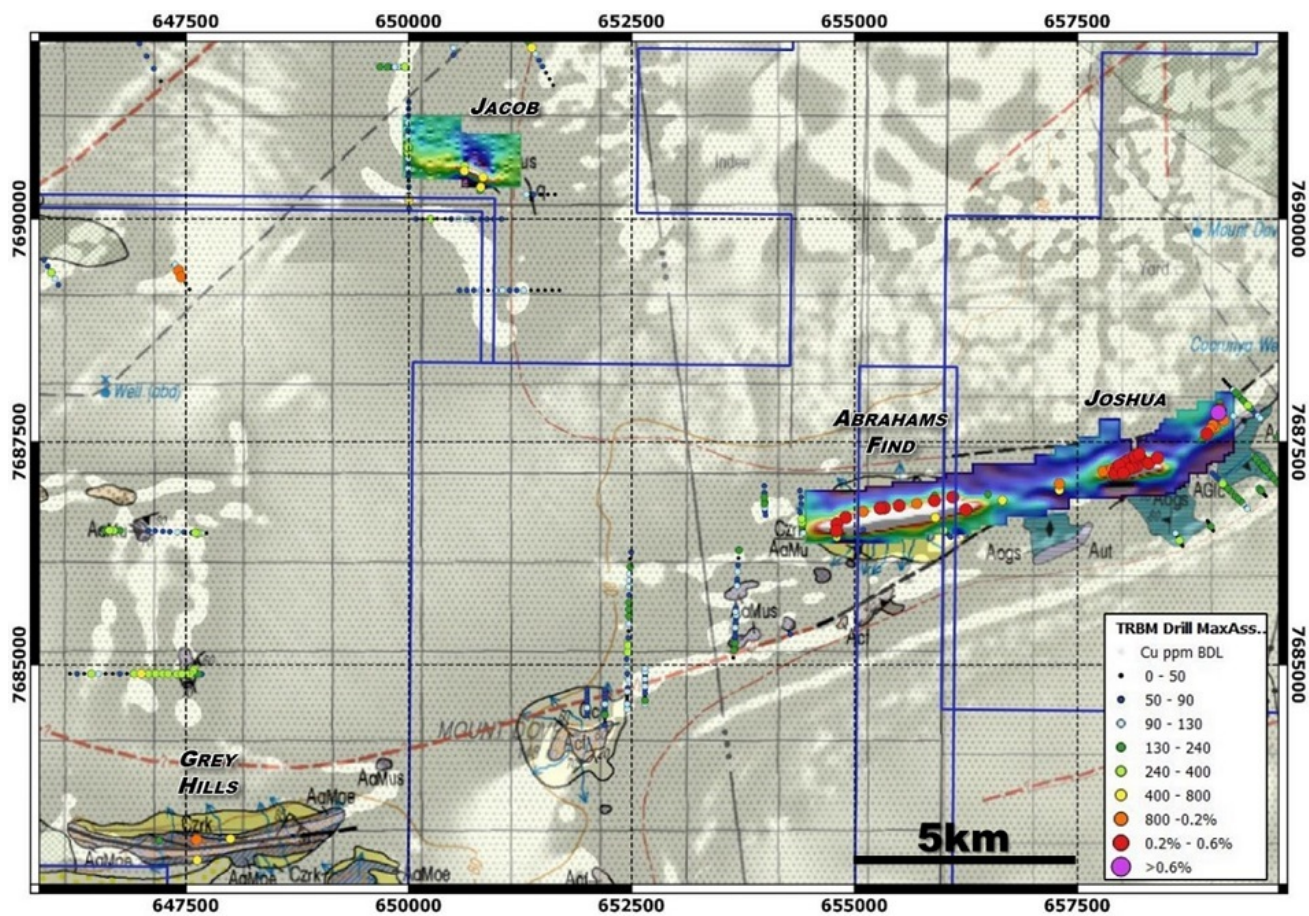


Figure 4: Historic drill data (Cu ppm) and IP grids (chargeability)

Abraham's Find & Joshua – Previous Drilling Results

3PGE (Pt+Pd+Au ppm)

ABRAHAM'S FIND

IERC020	6m @ 0.85ppm 3PGE
IERC032	7m @ 1.71ppm 3PGE
IERC033	7m @ 0.31ppm 3PGE
IERC079	2m @ 1.78ppm 3PGE

JOSHUA

IERC004	6m @ 1.56ppm 3PGE
IERC005	6m @ 2.50ppm 3PGE
IERC012	6m @ 1.26ppm 3PGE
IERC013	9m @ 1.17ppm 3PGE
IERC014	5m @ 1.98ppm 3PGE
IERC015	6m @ 2.09ppm 3PGE

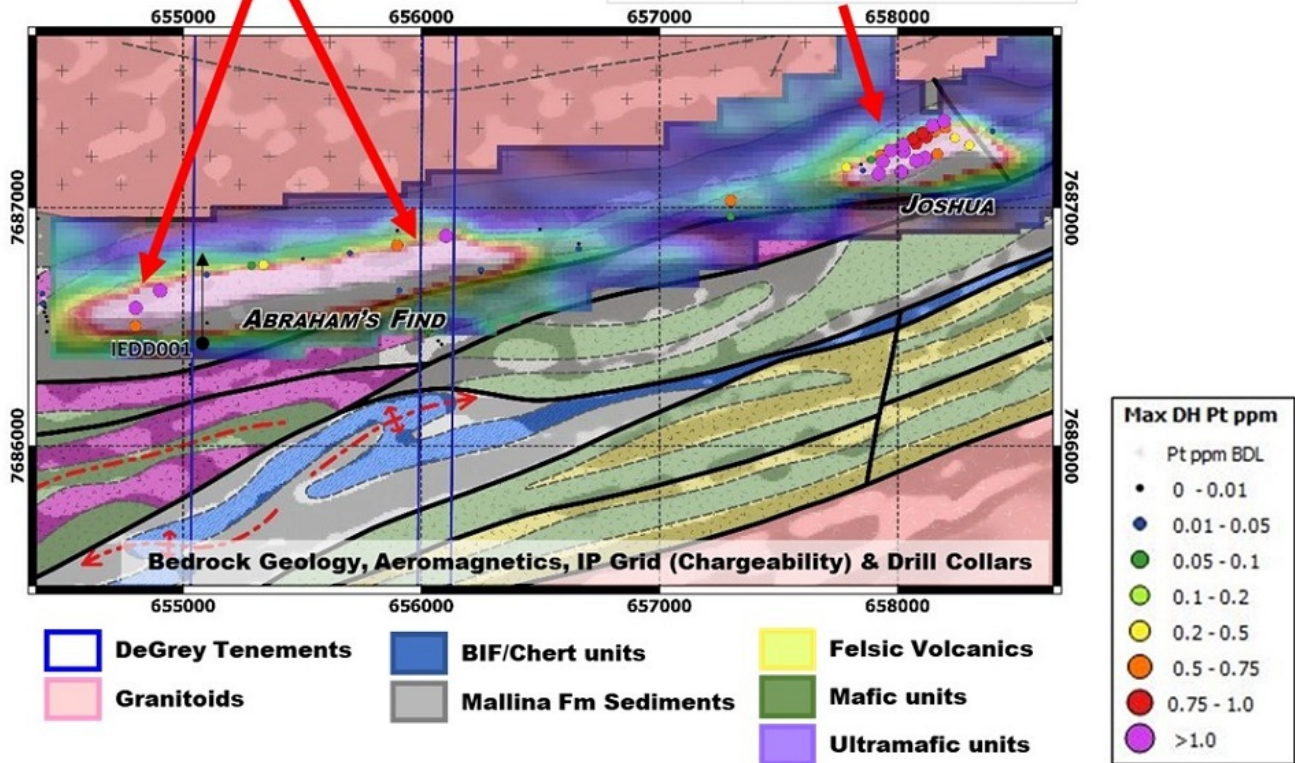


Figure 5: Historic drilling showing 3PGE (Pt Pd Au ppm) results over IP grid (chargeability)

7. Current Exploration

A prospective section of the Abraham's Find sill has been tested for PGE(Ni-Cu) mineralisation with a single, deep diamond drill hole (IEDD001). The diamond hole has a total depth of 594.5m and is the first diamond hole into either of the Abrahams Find or Joshua sills.

Historic DeGrey drill core from a more mafic differentiated sill from the Grey Hills prospect, approximately 9km to the WSW, previously thought to be lost, was able to be successfully located. The historic core from holes IEDH001 and IEDH002 was able to be reviewed in conjunction with the new hole.

8. Current Exploration Summary

8.1 Drilling

Hole Design and Targeting

Hole IEDD001 was drilled from the south, from the interpreted base of the intrusion, through and past the upper margin (structurally the lower contact) of the differentiated sill as per the hole design based on the geological model (Table 1, Figures 8 & 9).

The hole was collared with RC in sediments and unfortunately the lower stratigraphic contact between the sill and the sediments (structurally the upper contact) was encountered earlier than anticipated and before drilling was planned to change over to diamond core.

The hole was designed to test underneath two historic RC holes that were drilled too shallowly and failed to intersect the interpreted zones of PGE(Ni-Cu) mineralisation.

Hole Specifications

Drilling contractor Topdrill Pty Ltd was engaged to drill both the RC pre-collar and the diamond tail. The RC pre-collar was 5.25" in diameter and drilled to a depth of 90.7m with an aid of a booster/auxiliary. The diamond tail was started with a hole diameter of HQ and drilled for 97.9m (188.6m depth), before changing over to NQ2 which was drilled for another 405.9m to the end of hole at 594.5m total depth.

A north seeking REFLEX gyro was also used to measure the downhole dip and deviation for both the RC and diamond sections of the hole.

Table 1: IED001 - EIS Drill Hole Details

Prospect	HoleID	Drill Type	Diameter	Depth from	Depth to	Total type	Drill Date Start	Drill Date End
Abraham's Find	IEDD001	RC	5.25"	0	90.7	90.7	11/05/2020	11/05/2020
Abraham's Find	IEDD001	DD	HQ	90.7	188.6	97.9	14/05/2020	15/05/2020
Abraham's Find	IEDD001	DD	NQ2	188.6	594.5	405.9	15/05/2020	21/05/2020

Assay Methods

All drill hole sampling was undertaken in an industry standard manner.

- After logging and photography, drill core was cut in half, with one half being sent to the lab for analysis and the other half retained for geological review.
- RC samples were collected in calico bags on a continuous 1m basis from a rig mounted cone splitter fitted under a cyclone.
- Diamond core sampling was nominally on continuous 1m intervals, except where adjusted for geological contacts and other boundaries. Away from the visually more prospective zones, diamond core samples were taken every 5m to collect representative data through the entire hole.

All samples were submitted to ALS in Perth for assay. Multi-element analysis was carried out on all samples.

- For the RC samples the assay method was via 4-acid digestion (with HF) and ICPAES finish (ALS method ME-ICP61).
- Every fifth sample from the RC drilling was analysed using an ICPAES/MS finish (ALS method ME-MS61).
- All of the diamond core samples were analysed using 4-acid digest with an ICPAES/MS finish (ALS method ME-MS61).
- Samples from both the RC and diamond core drilling were submitted for Platinum Group Elements (PGE) analysis. Pt, Pd and Au were analysed by a 50g charge fire assay with a ICPAES analysis (ALS method PGM-ICP24).
- In addition to the methods listed above, samples were also processed for spectral analysis at ALS via a Terraspec unit prior to pulverising. Spectral data in the visible / near-infrared (VNIR) and short wave infrared (SWIR) regions are collected and sent to aiSIRIS™ for interpretation.

Geology

The EIS hole was successfully drilled through the entire thickness of the Abrahams Find sill. The down hole width of the sill is 450m and the interpreted true thickness is in the order of ~350m. In addition, the hole also intersected a second, thinner sill 65m down hole from the main sill that has an estimated true thickness of ~35m.

The Abrahams Find mafic-ultramafic body is interpreted to have been emplaced as a sill into Mallina Basin sediments prior to basin inversion and deformation. The sill shows clear, magmatic changes in composition from peridotite, through pyroxenite to gabbro from its base to the top (Figure 10). The sill is interpreted to be overturned and dips steeply to the south and, as such, the hole was drilled (stratigraphically) from the base to the top of the sill.

The peridotite is fairly uniform in the lower half of the sill with thin section descriptions confirming the olivine-rich composition with subordinate clinopyroxene/amphibole and serpentinisation. Late veinlets of silicified serpentinite with magnetite are visually prominent and cross-cut the peridotite (Figures 11 & 12). Sulphides are very minor, typically ~0.2mm and of magmatic origin often consisting of pyrrhotite, chalcopyrite, pentlandite and magnetite.

The peridotite gradationally changes composition to pyroxenite (Figures 13 & 14), within which cumulate textures unit gradually become more pronounced before the transition in composition to gabbro. There is a wide zone of disseminated magmatic sulphides (2% to 10%) comprising predominantly pyrrhotite in hand sample (Figure15). The

zone of disseminated sulphides is best developed in the core of the pyroxenite unit between 420m and 440m down hole.

Unfortunately the lower stratigraphic contact of the sill was drilled with RC so the nature of the lower contact could not be determined. However, the upper contact is clearly intrusive and is expressed with a garnetiferous inner edge of the upper part of the sill and the enclosing sediments show clear evidence of hornfelsing (Figure 16). The upper garnet bearing mafic margin of the sill is interpreted to have assimilated some wall rock material, allowing the formation of garnets that are otherwise typically absent from the rest of the sequence.

The variation in the magnetic susceptibility readings support the mineralogical observations and geochemical data. The change from peridotite to pyroxenite crystallisation is associated with PGE mineralisation and lower grade Cu(-Ni) magmatic sulphide mineralisation. The magmatic sulphides were readily observable, however the PGE mineralisation was not able to be identified from geological observations of the drill core.

The second, thinner sill is interpreted to be of the same generation as the main body, just emplaced at a higher stratigraphic level and "quenched" as, although it shows similar geochemical compositional variations from the base to the top, the mineralogical changes in hand sample are not as distinct as the main body due to finer grain sizes in the rock.

There are remobilized sulphides within the sill, observed as distinct chlorite-pyrrhotite veins which overprint the host lithologies within the sill. The chlorite-pyrrhotite veins are interpreted to be late and related to later orogenic remobilisation and hydrothermal alteration during regional deformation.

The sequence has been intruded by late felsic dykes interpreted to be related to regional granitic magmatism.

A suite of photographs that were taken of key geological units and features with limited summary descriptions are presented as an appendix. In addition, a total of 24 samples were taken for preparation as polished thin sections by Richard (Dick) England. The report on the observations from the thin sections is presented as an appendix.

Assay Results

The EIS hole returned a strong zone of PGE mineralisation (Pt, Pd & Au) for a combined intercept of **8m @ 1.56g/t PGE from 339m** down hole. The high-grade PGE mineralisation is hosted within a wider, low-grade intercept of 18m @ 0.82g/t PGE from 330m down hole. Low-grade copper mineralisation was also returned from the hole (Table 2).

The PGE mineralisation is hosted within the upper zone of the peridotitic portion of the sill (Figure 18). As discussed in the geology section, apart from being hosted entirely within the peridotite, there was no obvious visual change associated with the PGE mineralisation.

The various geological units plot distinctly in a range of ternary plots (Figure 19) and the down hole geochemical plots illustrate clear relationships between the chemical and compositional changes in the magma and enclosing rock units. A series of down-hole geochemical plots is presented in an appendix.

The following observations can be made about the PGE and base-metal mineralisation:

- The PGE mineralisation comprises Pt, Pd and Au. The higher grades of Au also have associated high Te results in the range of 2-5g/t Te.
- There is a distinct, gradational drop in the levels of Cr in the magma at the commencement of PGE crystallisation.
- There is also an increase in Cu tenor around the same time the PGE mineralisation starts to wane with no concomitant increase in S.
- Sulphides do not start to crystallise in tangible amounts until after the magma changes in composition from peridotite to pyroxenite, at which point Cu, Ag, Te and Au show strong correlation with high S levels indicating crystallisation in sulphide species.
- Except for volumetrically insignificant magmatic sulphides in the peridotite, there is little to no Ni hosted outside of the silicate minerals except where there is high Cu (>0.25% Cu) in sulphides.

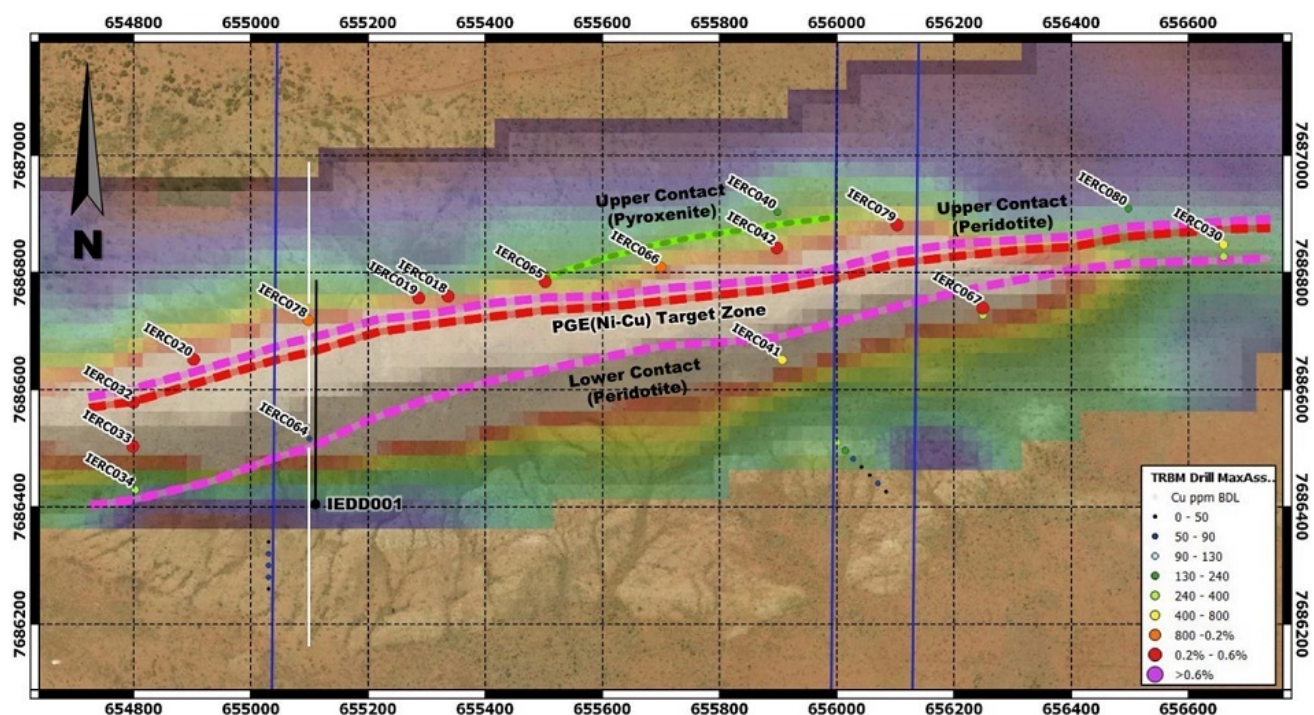


Figure 8: Location of IEDD001 on the historic IP chargeability survey and key geological horizons

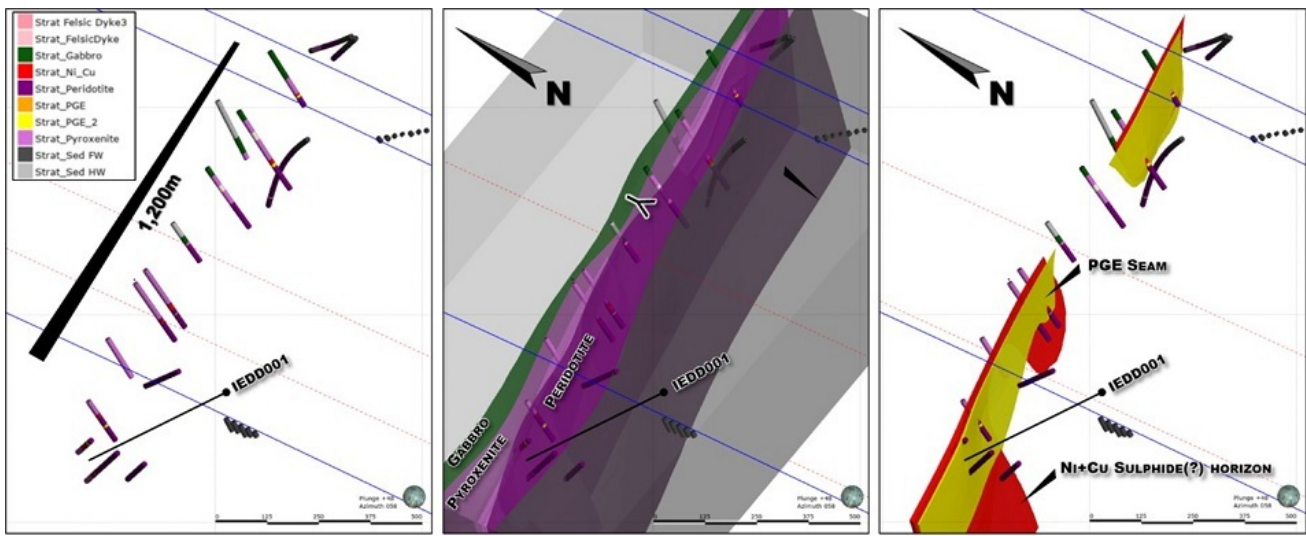


Figure 9: Isometric 3D view of Abraham's Find prospect looking NE.

IEDD001	Depth From (m)	Depth To (m)	Width (m)	PGE g/t (Au, Pt & Pd)	Te g/t	Ni %	Cu %
	330	348	18	0.82			
<i>incl.</i>	339	347	8	1.56			
<i>and</i>	345	348	3		2.69		
	353	359	6	0.13			0.17
	364	380	16				0.1
	365	368	3	0.12			
	398	410.52	12.52		0.45		0.17
<i>incl.</i>	398	401.5	3.5		0.62	0.07	0.3
	422.46	441	18.54		0.45		0.12
<i>incl.</i>	422.46	424	1.54		1.85		0.36

Table 2: Key intercepts from IEDD001

8.2 Review of Historic Drill Holes (IEDH001 & IEDH002)

Background and Context

As part of the planning of the Abrahams Find hole, a search was made for the historic diamond core holes that were drilled in the Grey Hills area in 2004 by De Grey Mining. The drill core was successfully located and new sampling, assay and data collection was carried out as an addition to the work completed under the original EIS proposal.

It was important to locate and include the historic holes as, excluding the single diamond hole drilled by De Grey Mining under the EIS programme, the two holes at Grey Hills are the only other diamond holes that have drilled one of the mafic-ultramafic sills of the Langenbeck Suite between the Turner River and the Yule River (Figure 20 & Table 3).

The Grey Hills holes were drilled as a pair of holes (IEDH001 & IEDH002) to obtain complete geological coverage across the outcropping mafic-ultramafic unit mapped at surface.

Sampling & Assay Methods

The historic core was in good condition and was able to be sampled and have magnetic susceptibility data collected. The sampling and analysis of the diamond core followed the same procedure as the that used for the IES hole (IEDD001).

The core was sampled historically with a mix of quarter and half core samples taken over 0.2m to 0.5 m intervals. The historic samples

were analysed for Au, Al, Co, Cr, Cu, Fe, Mg, Ni, Pd, Pt and S – although not all samples were analysed for S.

The historic 0.2m intervals were taken at the start of every metre as lithgeochemical samples and, where there appeared to be alteration (typically talc and carbonate) and/or sulphides, the core sampling was done on continuous 0.5m intervals.

The sampling carried under the recent EIS work comprised a nominal 0.25m sample taken every 5m (avoiding the originally sampled intervals) and analysed for the full 4-Acid digest ICP-MS/AES. assay suite for lithgeochemical characterisation.

Despite the historic sampling returning no Ni, Cu or PGE results of economic note across the 0.5m continuous sampling domains, new samples were elected to be taken from every second 0.5m interval to provide a more complete dataset to interpret the geochemistry of the mafic-ultramafic sill at Grey Hills.

Geological Observations and Assay Results

Similar to the Abrahams Find sill, the Grey Hills mafic-ultramafic sill shows magmatic differentiation from peridotite to pyroxenite to gabbro. However the magmatic textures are not as well developed at Grey Hills and there is also a lack of any significant sulphides in the historic holes.

Similar to Abrahams Find, the Grey Hills core shows little or no structure apart from minor, narrow shears. In contrast to Abrahams Find, there is strong carbonate spotting and development of talc and serpentinite within the historic holes when compared to the EIS hole.

Geochemically both holes show evidence of differentiation from ultramafic to mafic compositions in many elements (Mg, Ni, Co, Cr, Al & Ca), with both holes indicating a magmatic facing up-hole (Figure 21 & Figure 22).

The sill is interpreted to have been folded as a steep upright, east-west trending fold as indicated by the divergent facing information. The sill appears to have a truncated geological profile on the southern limb (IEDH002) but there was no evidence for the truncation to be structural (shearing).

Neither hole returned any results of significance in terms of Ni, Cu or PGE's. However there were some zones PGE of enrichment associated with the contact between the magmatic units, typically returning values in the range of 0.1 to 0.3ppm PGE_3E (Pd+Pt+Au) over widths of 5m to 20m.

Prospect	Hole ID	Drill Type	Diameter	Depth From	Depth To	Total Type	Drill Start Date	Drill End Date
Grey Hills	IEDH001	RC	5.25"	0	97	97.00	18/01/2004	
	IEDH001	DD	NQ	97	299.5	202.50		18/01/2004
Grey Hills	IEDH002	RC	5.25"	0	126	126.00	27/01/2004	
	IEDH002	DD	NQ	126	249.2	123.20		27/01/2004

Lease ID	Hole ID	Grid MGA	East MGA	North MGA	RL MGA	Survey Method	Dip	Azim MGA
E47/891	IEDH001	MGA94_Z50	647620	7683038	102.38	DGPS-G	-60	180
E47/891	IEDH002	MGA94_Z50	647626	7682810	93.967	DGPS-G	-60	0

Table 3: Collar data for historic Grey Hills diamond holes

9. Conclusion and Recommendations

Work by previous explorers including De Grey Mining in the early to mid-2000's discovered PGE(Ni-Cu) mineralisation associated with disseminated sulphides adjacent with the contact between units of peridotite and pyroxenite in differentiated mafic-ultramafic sills at the Abrahams Find and Joshua prospects, located approximately 60km south of Port Hedland in the Pilbara, Western Australia.

A prospective section of the Abraham's Find sill has been tested for PGE(Ni-Cu) mineralisation with a single, deep diamond drill hole (IEDD001). The diamond hole has a total depth of 594.5m and is the first diamond hole into either of the Abrahams Find or Joshua sills. The hole was successful in that:

- Both of the PGE and base-metal sulphide horizons targeted by the drilling were intersected by IEDD001.
- A high-grade PGE intercept of 8m @ 1.56g/t PGE from 339m down hole was returned from the upper part of the peridotite zone of the sill.
- In addition, a zone of disseminated low-grade Cu-sulphide mineralisation associated with the contact between the peridotite and pyroxenite units was intersected.
- The full thickness of the differentiated sill was able to be drilled in the one drill hole with the stratigraphic upper contact of the sill observed in drill core.

Historic drill core from a more mafic differentiated sill from the Grey Hills prospect, approximately 9km to the WSW, previously thought to be lost, was able to be successfully located. The historic core was able to be reviewed in conjunction with the new hole, this core will also be submitted to the core library.

10. Appendices

No Appendices as text are available