SUMMARY

Exploration Licence 9358 Delta was granted to Delta Gold Exploration Pty Ltd on 13 May 1996 for 6 years. The Licence was transferred to Giants Reef Mining N.L. on 13 March 1997.

Under the provisions of section 28 of the Mining Act a waiver of reduction for Exploration Licence 9358 was granted to Giants Reef Mining enabling the retention of eight (8) blocks until 13 May 1999.

This report records the exploration work done on the four blocks relinquished from EL 9358 at the end of the third year of tenure.

Targets are gold and copper orebodies associated with ironstone masses and/or shear zone structures.

Work done over the three year period being reported included gridding, gravity readings, rock chip sampling, a detailed aeromagnetic survey and magnetic target modelling.
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FIGURES

1. Location and Surrounding Tenements
2. Year 3 Licence Area and Reductions
3. Exploration Activity Area & Rock Chip Sample Locations

APPENDICES

1. Aeromagnetic and Radiometric Survey Data - 2 Disks
2. Geophysical Report
3. Rock Chip Sample Assays
4. Geophysical Report
1. INTRODUCTION

EL 9358 was purchased by Giants Reef Mining N.L. from Delta Gold Exploration Pty Ltd in November 1996 and title was registered to Giants Reef in March 1997.

This report records the exploration work completed on the four blocks of EL 9358 that were surrendered at the end of the third year of tenure.

2. LOCATION

EL 9358 Delta is centred approximately 22 kilometres east-southeast of Tennant Creek. It is located on the Tennant Creek 1:100 000 scale map sheet.

Access is along the Gosse River road which runs east-west through the middle of the Licence, however access is limited during rainy periods.

Figure 1 shows the EL and surrounding tenements.

3. TENURE

EL 9358, covering 8 blocks, was granted to Delta Gold Exploration Pty Ltd on 13 May 1996 for a period of 6 years. After Delta ceased exploring in the Tennant Creek field in mid-1996, the Licence was purchased by Giants Reef Mining N.L. with transfer of title being registered on 13 March 1997.

The Licence is on NT Portion 1075, within Perpetual Pastoral Lease 1142, Tennant Creek Station.

Figure 2 shows the Licence area held in Year 3 and the blocks relinquished at the end of the year.

4. GEOLOGY

The regional geology of the Tennant Creek field has been detailed in many publications and will not be repeated here. Papers contained in AusIMM Monograph 14 (Geology of the Mineral Deposits of Australia and Papua New Guinea), Volume 1, pp 829-861 would give the reader a good introduction to the regional geology and styles of gold-copper mineralisation of the area. In 1996 the Northern Territory Geological Survey released a geological map and explanatory notes on the Tennant Creek 1:100 000 sheet.

Metasediments of the Palaeoproterozoic Warramunga Formation and porphyritic felsic volcaniclastic rocks of the Yungkulungu Formation (Flynn Sub-group) underlie the Licence, although basement exposure is limited.

The area lies across the easterly extension of the Eldorado-Juno-Nobes Nob trend of mines and mineral occurrences. The above mines are all to the west of EL 9358. To the east of the Licence, on the same trend, are the New Hope, The Plum and Desert Hope gold occurrences.

5. WORK DONE DURING THE TERM

5.1 Gridding

Two north-south grid lines were cleared, along AMG eastings 435000E and 436200E, for gravity profiles to be read over targets in the area retained. The northern ends of these lines are in the area being relinquished.
The lines were surveyed and optically levelled, by contractor Pete Youngs. The clearing was done using a front-end loader, lightly skimming the surface so as to remove small scrub and termite mounds, but leaving the rootstock intact for later regeneration. White-topped wooden dumpy pegs were put in at 100m intervals along the lines, with wire pin markers at the intervening 25m intervals.

Within the relinquished area, the sections of these lines are:

- Line 435000E: from 7819650N to 7821500N
- Line 436200E: from 7821600N to 7822000N

The locations of these grid lines is shown on Figure 3.

5.2 Gravity survey

Gravity readings were taken at 25m intervals along the grid lines described in section 5.1. The readings were made by contractor Pete Youngs, using a LaCoste-Romberg instrument. No gravity anomalies were evident in the relatively short lengths of surveyed lines in the relinquished blocks.

Appendix 1 is the tabulated gravity data for the sections of the surveyed lines in the relinquished area.

5.3 Rock chip sampling

Seven rock chip samples (59391-392 and 123795-799) were collected from outcrops in the relinquished area. None of these returned assay results that were regarded as anomalous.

The rock sample locations are shown on Figure 3. Assay results are in Appendix 2.

5.4 Aeromagnetic survey

A detailed aeromagnetic and radiometric survey was flown over EL 9358 late in 1998, by Kevron Geophysics Pty Ltd on behalf of Normandy Gold Pty Ltd. The survey covered an east-west strip approximately 60km long over the southern part of the Tennant Creek goldfield. Normandy presented Giants Reef with copies of the data collected over Giants Reef's tenements.

Key parameters of the survey were as follows:

- Flight line direction: north-south
- Flight line spacing: 50 metres
- Sensor height: 40 metres above ground surface
- In-line sampling intervals: 7 metres for magnetics, 140 metres for radiometrics

Two disks covering EL 9358, as supplied to Giants Reef by Normandy, are included with this report as Appendix 3.

5.5 Magnetic modelling and target identification

Consultant Geophysicist Dr Doug Barrett, of Barrett Geophysical Exploration Consultants Pty Ltd, Perth, WA, was engaged to make an assessment of the Kevron airborne magnetics data over EL 9358.

A software problem resulted in every second magnetic reading being absent from the data as initially supplied. This was later rectified but not before the modelling described here was completed.
Dr Barrett studied a number of magnetic features within EL 9358. Most of these are known prospects where Giants Reef or other companies have carried out various exploration work in the past. Two of these anomalies, called "Balo East" and "TC1 Anomaly 7", are in the relinquished area being reported.

The locations of these anomalies are shown on Figure 3.

5.3.1 Balo East
This prospect was explored by North Flinders Mines Ltd and Roebuck Resources N L, under EL 8173. Two old diamond drillholes were noted, which were probably drilled by Australian Development Ltd, some years earlier. The prospect area shows a south-dipping east-west contact between a porphyry body on the south and Warramunga Formation sediments on the north. The porphyry body extends for many kilometres east and west of the prospect. Vacuum drilling by North Flinders found some mild geochronological evidence in chert-like porphyries, with assays of 113 ppm Cu and 13 ppm Bi. Some ironstone scatter was observed at the surface, but no ironstone outcrop has been identified.

Magnetically the target area shows an east-west trend of magnetic highs, with another separate anomaly a little to the south. There are five anomalies of interest in the group, all similar to each other. The body selected for modelling is representative of the anomalies along the trend.

AMG location: 437345E 7820150N

5.3.2 TC1 Anomaly 7
This anomaly was modelled as possibly being derived either from a single ellipsoidal body, or from two separate ellipsoidal bodies. It lies in an area of Flynn Sub-group rocks.

AMG locations: 439523E 7820666N (single ellipsoidal body)  
439530E 7820516N (south body of paired sources)  
439588E 7820815N (north body of paired sources)

The locations are shown on Figure 3.

Appendix 4 contains extracts from the Barrett Geophysical Exploration Consultants report, including plan and section views of the magnetic models.

6. REHABILITATION
No work requiring rehabilitation measures was conducted within the four relinquished blocks. The cleared gravity grid lines were left to re-vegetate naturally.

P G Simpson  
EXPLORATION MANAGER  
GIANTS REEF MINING N.L.
Blocks relinquished at end of Year 3
APPENDIX 1

TABULATED GRAVITY DATA

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APPENDIX 2

ROCK SAMPLE ASSAYS

Analysis Summary

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<th>SAMPLE NUMBERS</th>
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<th>ANALYSIS REPORT NO.</th>
<th>No. of Samples</th>
<th>DATE</th>
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<td>To 59392</td>
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<td>8DN0612</td>
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<td>Assaycorp</td>
<td>AC 37400</td>
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Mr. P. Simpson  
GIANTS REEF MINING N.L.  
PO BOX 1244  
TENNANT CREEK  
NT  0861

ANALYSIS REPORT  : FINAL

Your Reference  : 13777  
Our Reference  : 8DN0612

Samples Received  : 08/07/98  
Results Reported  : 15/07/98

Number of Samples  : 9  
Report Pages  : 1 to 1

This report relates specifically to the samples tested in so far as the samples supplied are truly representative of the sample source.

If you have any enquiries please contact the undersigned quoting our reference as above.

Report Codes:  
N.A.  -Not Analysed  
L.N.R.  -Listed But Not Received  
I.S.  -Insufficient Sample

Approved Signature:

for  
Mr Russell Holtham  
Manager - Darwin Mineral Chemistry  
AMDEL LIMITED  
A.C.N. 008 127 802
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**UNITS**

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C. P. Simpson
GIANTS REEF MINING N.L.
# Report Code: AC 37400

Samples Received: 14/07/97
Number of Samples: 6

## Giants Reef Mining NL

PO BOX 1244
Tennant Creek NT 0881

Reference: 10130
Project: 
Cost Code: 

---

### Sample Preparation:

---

## Assay Data:

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<th>Technique</th>
<th>Precision &amp; Accuracy</th>
<th>Detection Limit</th>
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Report Comment: This cover sheet is an integral part of the report. This report can only be reproduced in full.

Authorisation: Ray Wooldridge
Report Dated: 17/07/97
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Method:
- FA50
- FA50
- G300A
- G300A
- G300A
- G300A
APPENDIX 3

2 x DISKS

AEROMAG SURVEY, OCTOBER 1999
data as received from
Normandy Tennant Creek Pty Ltd

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<th>Disk 1</th>
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<th>Disk 2</th>
<th>Radiometrics:</th>
<th>Aeromagnetics:</th>
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<td>EL9358t.DAT</td>
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<td>EL93588k.DAT</td>
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June 1999

GIANTS REEF MINING N.L.
APPENDIX 4

GEOPHYSICAL REPORT

excerpt Barrett Geophysical Exploration Consultants Pty Ltd Report:

TENNANT CREEK AREA
INTERPRETATION OF NORMANDY AEROMAGNETIC DATA
FLOWN OVER GRM TENEMENTS
D M Barrett PhD AIG
April 1999
TENNANT CREEK AREA
INTERPRETATION OF NORMANDY AEROMAGNETIC DATA
FLOWN OVER GRM TENEMENTS

A Report for Giants Reef Mining NL

by

D. M. Barrett PhD AIG
Consulting Geophysicist

April 1999
INTRODUCTION

This report concerns an interpretation of aeromagnetic data acquired by Normandy Poseidon in the Tennant Creek area, Northern Territory. Normandy released located data from their survey to GRM where it covered ground held by the latter. At the request of Mr Nick Byrne of GRM, a geophysical interpretation was carried out on the released aeromagnetic data to look for possible ironstone bodies.

Processing of the Aeromagnetic Data
The survey was flown along NS flight lines with a flight line spacing of 50 metres. The quality of the data should therefore be higher than any airborne data previously available to GRM. While this may be true, the digital data as received only recorded measurements of the Total Magnetic Intensity (TMI) at intervals of about 14 metres along the flight lines. For normal fixed wing surveys the sample interval is more like 7 metres. There was also no information regarding the aircraft height. In all the models, the interpreted depths are therefore the depths below the sensor on the aircraft, not the depths below ground level. Assuming that the flying height was 40 metres, this height should be subtracted from all the depths appearing in the magnetic models to arrive at the depths of the interpreted bodies below surface.

The located data were read into Geosoft software and a line gridding routine was used to produce grids in ER-Mapper format. A grid cell size of 10 metres was used for the gridding. From these grids, the first vertical derivative and analytic signal of the TMI was computed.

The properties covered by the Normandy surveys together comprise a substantial area of ground and a considerable number of anomalies were picked as possible ironstone candidates. Most large or very magnetic ironstone bodies have already been identified in the area. The images were studied to attempt to identify less magnetic anomalies or anomalies of smaller areal extent which may nevertheless be viable economic targets.

It was not practical to produce magnetic models of all the anomalies picked. A selection of only the more important anomalies were modelled using the Potent, three-dimensional inversion programme.

A large number of anomalies of possible interest have been identified on the large tenement EL9358. Many of these give somewhat greater interpreted depths indicating increased thickness of cover.

Plan and section views of the models may be found in the Appendix. The results of the modelling with brief comments are summarised in Table 1.
DISCUSSION AND CONCLUSIONS

Various images of the Normandy aeromagnetic data covering GRM tenements were studied to identify anomalies which may be caused by ironstone bodies. Selected anomalies were modelled to obtain positional and depth information on the bodies causing the anomalies as well as their inferred magnetic properties.

There is generally good agreement between the positions of bodies interpreted from the magnetic modelling and images of the analytic signal. The peak of the analytic signal should follow the edges of the body rather than its centre though, for bodies whose depth is of the same order or larger than its width, a maximum is produced over the centre of the body. In some instances the projections of the magnetic bodies are located a little to the south of the positions indicated by the analytic signal. The reason for this is not entirely understood at present since I have used the same software on theoretical anomalies and the correlation is excellent. I would recommend using the magnetic model locations in preference to the analytic signal when available.

An attempt has also been made in Table 1 to prioritise the anomalies. This is a difficult exercise and is somewhat subjective. Other geological and drilling information not available to me should of course be used to modify this classification.

Finally, a number of the anomalies model with depths that appear to be too shallow or yield unrealistic parameters. An initial ground check should assist in determining whether some of these may be due to cultural features.

Doug Barrett

April 1999
<table>
<thead>
<tr>
<th>ANOMALY NAME</th>
<th>AMPLITUDE (nT)</th>
<th>APP. SUSCEP. (SI)</th>
<th>INTERP. DEPTH (m)</th>
<th>INFERRRED LATERAL DIMENSIONS OF BODY (m)</th>
<th>PRIORITY</th>
<th>COMMENTS</th>
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<td>100</td>
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<td>470 x 120 and 220</td>
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Representative anomaly of several lying along a curvilinear trend. The area around Baloo itself is complex and looks interesting since the southern anomaly appears separate from the main trend. There are five anomalies of potential interest along this trend. The depths of the anomalies appear to be similar and indicate that they may not have visible surface expressions.

In this first model, normally and reversely magnetised bodies were used to model the positive and negative anomalies separately. The fit is reasonable but the real situation is obviously more complex: Anomaly is considered of 1st priority as it appears to be distinct from an elongate trend through the area.

An alternative model run for this anomaly assuming a single body with remanence. The quality of the fit is similar to or better than for Model 1 and poses a dilemma regarding the siting of drill holes.
EL9358 - AEROMAGNETIC ANOMALY 'BALOO E'

MODEL: MODEL 1: ELLIPSOIDAL BODY
CALCULATION MODE: TOTAL MAGNETIC INTENSITY

OBSERVED: 
RESIDUAL: 

POTENT V3.10A PROFILE DRAWN AT 17:15 19/03/1999 FOR BARRETT GEOPH
OBSERVATIONS: EL9358 - AEROMAGNETIC ANOMALY 'BALOO E'
PROFILE #2;
MODEL: MODEL 1: ELLIPSOIDAL BODY
CALCULATION MODE: TOTAL MAGNETIC INTENSITY
OBSERVED:          CALCULATED:          INDIVIDUAL BODY:
RESIDUAL:          POTENT v3.10A       PROFILE DRAWN AT 17:15 19/03/1999 FOR BARRETT GEOPH
OBSERVATIONS: EL935B: AEROMAGNETIC ANOMALY "BÁŁOO E"
PROFILE #3: MODEL 1: ELLIPSOIDAL BODY
MODEL: CALCULATION MODE: TOTAL MAGNETIC INTENSITY
OBSERVED: CALCULATED:
RESIDUAL: INDIVIDUAL BODY:
POTENT V3.10A PROFILE DRAWN AT 17:15 19/03/1999 FOR BARRETT GEOPL
GIANTS REEF MINING N.L.
EL9358
AEROMAGNETIC ANOMALY "BALOO EAST"
NORMANDY DATA
MODEL 1: ELLIPSOIDAL BODY

POTENT v3.19A Model Summary Report created at for Barrett Geophysical Exploration Consultants Pty Ltd

Inducing field - Intensity = 51000
Azimuth = 5
Inclination = -50

Body type abbreviations and the shape parameters have the following significance:
Ellipsd ELLIPSOID A, B, C are axes lengths

Model title: MODEL 1: ELLIPSOIDAL BODY

<table>
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<th>Dip</th>
<th>Plunge</th>
<th>Susc.</th>
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NOTE
Since data on the aircraft height was unavailable, all depths refer to depths below the aircraft sensor and not below ground level.
OBSERVATIONS:  EL9358 - AEROMAGNETIC ANOMALY "TC1-7"
MODEL:  MODEL 1: ELLIPSOIDAL BODIES
CONTOURS OF:  OBSERVED FIELD;  CONTOUR INTERVALS: 5.0000, 25.000
POTENT v3.10A  PLAN DRAWN AT 15:00 22/03/1999 FOR BARRETT GEOPHYS
OBSERVATIONS: EL9358 - AEROMAGNETIC ANOMALY "TC1-7"
PROFILE #1: MODEL 1: ELLIPSOIDAL BODIES
CALCULATION MODE: TOTAL MAGNETIC INTENSITY
OBSERVED: CALCULATED: INDIVIDUAL BODY:
RESIDUAL: POTENT V3.10A PROFILE DRAWN AT 15:01 22/03/1999 FOR BARRETT GEOPH
Observations: EL9366 - Aeromagnetic Anomaly "TC1-7"
Profile #2: Model: Model 1: Ellipsoidal Bodies
Calculation Mode: Total Magnetic Intensity
Observed: Calculated: Individual Body:
Residual: _________ _________
POTENT v3.10A Profile drawn at 15:01 22/03/1999 for Barrett Geoph
EL9358 - AEROMAGNETIC ANOMALY "TC1-7"

MODEL 1: ELLIPSOIDAL BODIES
TOTAL MAGNETIC INTENSITY

OBSERVED: ___________________________ CALCULATED: ___________________________
RESIDUAL: ___________________________ INDIVIDUAL BODY: ___________________________

POTENT V3.10A
PROFILE DRAWN AT 15:05 22/03/1999 FOR BARRETT GEOPH
GIANTS REEF MINING N.L.
EL9358
AEROMAGNETIC ANOMALY "TC1-7"
NORMANDY DATA
MODEL 1: ELLIPSOIDAL BODIES

POTENT v3.10A Model Summary Report created at Perth
for Barrett Geophysical Exploration Consultants Pty Ltd

Inducing field - Intensity = 5,000
Azimuth = 5
Inclination = -50

Body type abbreviations and the shape parameters have the following significance:
Ellpsd  ELLIPSOID   A, B, C are axes lengths

Model title: MODEL 1: ELLIPSOIDAL BODIES

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<th>Plunge</th>
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<th>Rem f</th>
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NOTE
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**Observations:**
EL9358 - AEROMAGNETIC ANOMALY 'TC1-7'

**Model:**
MODEL 2: ELLIPSOIDAL BODY

**Contours of:**
OBSERVED FIELD; CONTOUR INTERVALS: 5.0000, 25.000

POTENT V3.10A PLAN DRAWN AT 17:26 22/03/1999 FOR BARRETT GEOPHYS
OBSERVATIONS: EL9356 - AEROMAGNETIC ANOMALY "TC1-7"
MODEL: MODEL 2: ELLIPSOIDAL BODY
CONTOURS OF: CALCULATED FIELD; CONTOUR INTERVALS: 5.0000, 25.000
POTENT V3.10A PLAN DRAWN AT 17:31 22/03/1999 FOR BARRETT GEOPHYSI
OBSERVATIONS: EL9358 - AEROMAGNETIC ANOMALY *TC1-7*
MODEL: MODEL 2: ELLIPSOIDAL BODY
CONTOURS OF: RESIDUAL FIELD; CONTOUR INTERVALS: 5.0000, 25.000
POTENT V3.10A PLAN DRAWN AT 17:32 22/03/1999 FOR BARRETT GEOPHYSI
EL9358 - AEROMAGNETIC ANOMALY "TC1-7"

PROFILE #1:
MODEL:
CALCULATION MODE:

OBSERVED:
RESIDUAL:

CALCULATED:
INDIVIDUAL BODY:

POTENT V3.10A PROFILE DRAWN AT 17:27 22/03/1999 FOR BARRETT GEOF...
Observations: EL9356 - AEROMAGNETIC ANOMALY "TCT-7"
Profile #2:
Model: MODEL 2: ELLIPSOIDAL BODY
Calculation Mode: Total Magnetic Intensity
Observed: Calculated:
Residual: Individual Body:
Potent V3.10a Profile drawn at 17:27 22/03/1999 for Barrett Geoph
OBSERVATIONS: EL9358 - AEROMAGNETIC ANOMALY 'TC1-7''
PROFILE #3:
MODEL: MODEL 2: ELLIPSOIDAL BODY
CALCULATION MODE: TOTAL MAGNETIC INTENSITY

OBSERVED: --- CALCULATED: ---
RESIDUAL: INDIVIDUAL BODY: ---

POTENT V3.10A PROFILE DRAWN AT 17:27 22/03/1999 FOR BARRETT GEOPH
OBSERVATIONS: ELD358 - AEROMAGNETIC ANOMALY "TC1-7"
PROFILE #4;
MODEL: MODEL 2: ELLIPSOIDAL BODY
CALCULATION MODE: TOTAL MAGNETIC INTENSITY

OBSERVED: CALculated:  
RESIDUAL:

POTENT V3.10A PROFILE DRAWN AT 17:29 22/03/1999 FOR BARRETT GEOPH
GIANTS REEF MINING N.L.
EL9358
AEROMAGNETIC ANOMALY “TC1-7”
NORMANDY DATA
MODEL 2: ELLIPSOIDAL BODY

POTENT v3.10A Model Summary Report created at for Barrett Geophysical Exploration Consultants Pty Ltd

Inducing field - Intensity = 51000
Azimuth = 5
Inclination = -50

Body type abbreviations and the shape parameters have the following significance:
Ellipsoid ELLIPSOID A, B, C are axes lengths

Model title: MODEL 2: ELLIPSOIDAL BODY

<table>
<thead>
<tr>
<th>No.</th>
<th>Type</th>
<th>X</th>
<th>Y</th>
<th>Depth</th>
<th>Strike</th>
<th>Dip</th>
<th>Plunge</th>
<th>Susc.</th>
<th>Rem f</th>
<th>Rem az</th>
<th>Rem inc</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ellipsd</td>
<td>439523</td>
<td>7820666</td>
<td>103</td>
<td>41</td>
<td>81</td>
<td>-5</td>
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<td>13</td>
<td>160</td>
<td>321.77</td>
<td>412.30</td>
<td>58.15</td>
<td></td>
</tr>
</tbody>
</table>

NOTE
Since data on the aircraft height was unavailable, all depths refer to depths below the aircraft sensor and not below ground level.