AEROMAGNETIC SURVEY SPECIFICATIONS

Introduction

Below reflects some of the specifications used in carrying out our aeromagnetic survey with a Nigeria index map showing the areas that have been covered;

**MAGNETIC SURVEY SPECIFICATIONS**

- Magnetic Data Recording Interval: 0.1 seconds or less (\_7m)
- Sensor Mean Terrain Clearance: 80 meter
- Flight Line Spacing: 500 meters
- Tie Line Spacing: 5000 meters
- Flight Line Trend: 135 degrees
- Tie Line Trend: 45 degrees

**EQUIPMENT SPECIFICATIONS**

- Magnetometers: 3 x Scintrex CS3 Cesium Vapour
- Data Acquisition System: FASDAS
- Magnetic Counter: FASDAS
- Barometric Altimeter: ENVIRO BARO/DIGIQUARTZ

**NAVIGATION SPECIFICATIONS**

- Flight Path Tracking: Digital
- Flight Path Navigation: Novatel 3151R/Omnistar RTDGPS
- Flight Path Recovery: Digital
- Flight Path Processing: Real Time Differential GPS
- Aircraft Supplied by: Fugro Airborne Surveys
- Aircraft 1: Cessna Caravan 208B ZS-FSA
- Aircraft 2: Cessna Caravan 208 ZS-MSJ
- Aircraft 3: Cessna 406 ZS-SSC
## PLOTTING SPECIFICATIONS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projection</td>
<td>Universal Transverse Mercator</td>
</tr>
<tr>
<td>Spheroid</td>
<td>Clarke 1880 (Modified)</td>
</tr>
<tr>
<td>Central Meridian</td>
<td>33 Degrees East</td>
</tr>
<tr>
<td>Central Scaling Factor</td>
<td>0.9996</td>
</tr>
<tr>
<td>Datum</td>
<td>Arc 1960</td>
</tr>
<tr>
<td>X Bias</td>
<td>500 000 meters</td>
</tr>
<tr>
<td>Y Bias</td>
<td>0 meters</td>
</tr>
<tr>
<td>Grid Mesh Size</td>
<td>50 meters</td>
</tr>
<tr>
<td>Survey Date</td>
<td>07/12/06 - 31/05/07</td>
</tr>
<tr>
<td>Data Acquisition by</td>
<td>Fugro Airborne Surveys</td>
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<tr>
<td>Data Processing by</td>
<td>Fugro Airborne Surveys.</td>
</tr>
</tbody>
</table>
PRODUCTS

Magnetics;
- Magnetic Total field, shaded relief (nT)
- (Horizontal gradient enhanced and IGRF removed),
- Reduced to Pole magnetic shaded relief image (nT)
- (horizontal gradient enhanced and IGRF removed)
- Magnetic vertical gradient (nT/m) (calculated)
- Magnetic horizontal gradient (nT/m) (measured)
- Analytical signal (nT) (calculated)

The enhanced products both measured and calculated help to:
1. Identify Basement faults and structural features
2. Calculate total thickness of the sedimentary loads which can be equated to the depth-to-Basement especially where there are few or no volcanic and intrusive features