TECHNICAL SUMMARY

This map was compiled from data acquired during an airborne gamma-ray spectrometer survey carried out by Fugro utilizing an Aerospatiale AS355F1 helicopter (registration C-FHNB). The survey operations were carried out from October 8, 2001 to October 21, 2001.

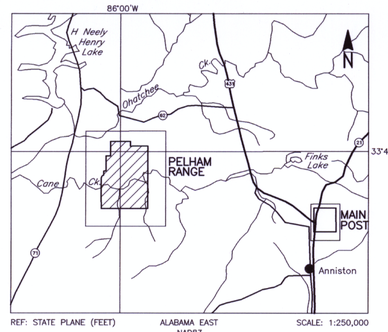
Flight path was recovered using a post-flight differential Global Positioning System. A vertically mounted video camera was used for verification of the flight path. The average traverse line spacing was 33 feet. The nominal helicopter height was at an average ground clearance of 33 feet.

The gamma-ray spectrometry data were recorded at a 1.0 second sample rate into 512 channel spectra using an Exploranium GR820 spectrometry system. The NaI detector crystal volume was 2048 cu in. The full spectrum data were first subjected to statistical noise reduction using Noise Adjusted Singular Value Decomposition (NASVD) [1], then extracted to windows corresponding to thorium (2410 – 2810 kev), uranium (1660 – 1860 kev), potassium (1370 – 1570 kev), total radioactivity (400 – 2815 kev), ^{60}cobalt (1070-1410 kev), ^{137}cesium (600 – 730 kev), low energy (400 – 1370 kev), and high energy (1370 – 2810 kev). After removal of the background, the data were corrected for spectral interferences, changes in temperature, pressure and departures from the 33 feet nominal survey elevation. The data were then converted to standard concentration units and ratios which were interpolated to a 8.2 feet square grid for display as colour interval maps.

1 Hovgaard, J. and Grasty, R.L.; Reducing statistical noise in airborne gamma-ray data through spectral component analysis; in Proceeding of Exploration 97; P. 753-764.

cps
>200.0
190.0
180.0
170.0
160.0
150.0
140.0
130.0
120.0
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
<5.0

LOCATION MAP



REF: STATE PLANE (FEET) ALABAMA EAST NAD83 SCALE: 1:250,000

IT CORPORATION

PELHAM RANGE, FORT McCLELLAN, ALABAMA

RADIOACTIVITY–CESIUM (^{137}Cs) (cps)

FUGRO SURVEY	REF: STATE PLANE (FEET)	GEOPHYSICIST:
DATE: NOVEMBER, 2001	JOB: 6014	FIGURE 4.3

Fugro Airborne Surveys

1/4 0 1/2 Mi

Scale 1:12 000

FUGRO AIRBORNE SURVEYS

D-03