ASSESSMENT WORK REPORT (2012)

AIRBORNE MAGNETIC-RADIOMETRIC SURVEY REPORT ON HUMMER CLAIMS GROUP

AT HOME CREEK AREA

NTS Map Sheet No: 115J13 Latitude: 62°48' N Longitude: 139°49' W

Whitehorse Mining District YUKON TERRITORY

Work date: June 01, 2012 to Dec 01, 2012

Claims owner: Canadian Dehua International Mines Group Inc.

By: Raymond Xie Date: Aug.22, 2012

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1. INTRUDUCTION

Hummer Claims Group (Hummer Property), including 368 claims, located at east of the White River and south of the Yukon River (Figure 1). It is approximately 140 km south of Dawson, 75 km northeast of Beaver Creek, in Whitehorse Mining District, Yukon Territory. NTS Map Sheets is 115J13. The property is 100 % hold by *Canadian Dehua International Mines Group Inc. (Dehua Mines)*. Its Latitude and Longitude are 62°48' N and 139°49' W respectively.

In summer of 2010, an airborne survey was carried out by Precision GeoSurveys Inc. The survey was suspended due to weather and other conditions, and it was resumed and completed in 2012. Magnetic and radiometric data were collected to serve in the exploration of the Hummer blocks which has geological settings that are prospective for porphyry-type copper and gold ore deposits.



Fig.1 Location of Hummer Claims

2. HUMMER CLAIMS GROUP

Hummer property has an area of 78.5 square kilometers, including 368 claims (Table 1, Fig 2). Access to property is by helicopter from Carmacks or Dawson city.

Table 1 List of Hummer	Claims	Group
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CLAIM NAME AND NO.	GRANT NO.	EXPIRY DATE	RENEW TO
HUMMER 1-40	YD20501-YD20540	18/03/2013	18/03/2014
HUMMER 41-368	YD22344-YD22671	13/04/2013	13/04/2014

368 claims

Note: * Renew date based on acceptance of this report.



Fig.2 Distribution Map of Hummer Claims

3. AIRBORNE MAGNETIC AND RADIOMETRIC SURVEY

Bell 206 BIII Jet Ranger mounted magnetometer, spectrometer and related AGIS equipment was used by *Precision GeoSurveys Inc*. The survey lines were flown at 100 m spacing at N $0^{\circ}/180^{\circ}$ heading, and the tie lines were flown at 1 km spacing at a heading EW $90^{\circ}/270^{\circ}$ (Figures 3). The average survey elevation was 30 meters vertically above ground surveyed.

The geodetic system used for this survey is WGS 84 and the area is contained in zone 7N.



Fig.3 Plot of Airborne Magnetic Survey Lines

3.1 Base Station

Two magnetic base stations were set up before every flight to ensure that diurnal activity is recorded during the survey flights. In this case, the base stations were located in the bushes close to the east side of the property.

The base stations were installed at a magnetically noise-free area, away from metallic items such as steel objects, vehicles, or power lines. The magnetic variations recorded

from the stationary base station are removed from the magnetic data recorded in flight to ensure that the anomalies seen are real and not due to solar activity.

For monitoring and recording of the Earth's diurnal magnetic field variation, Precision GeoSurveys operates two GEM GSM-19T magnetometer base stations continuously throughout the airborne data acquisition survey. The GSM-19T has an accuracy of ± -0.2 nT at 1 Hz.

3.2 Equipment

For this survey, a magnetometer, spectrometer, base stations, laser altimeter, and a data acquisition system were required to carry out the survey and collect quality, high resolution data. The survey magnetometer is carried in an approved "stinger" configuration to enhance flight safety and improve data quality in this mountainous terrain.

AGIS

The Airborne Geophysical Information System, AGIS, is the main computer used in data recording, data synchronizing, displaying real-time QC data for the geophysical operator, and the generation of navigation information for the pilot display system.

Magnetometer

The magnetometer used by Precision GeoSurveys is a Scintrex cesium vapor CS-3 magnetometer. The CS-3 is a high sensitivity/low noise magnetometer with automatic hemisphere switching and a wide voltage range, the static noise rating for the unit is +/-0.01 nT. On the AGIS screen the operator can view the raw magnetic response, the magnetic fourth difference, aircraft position, and the survey altitude for immediate QC of the magnetic data. The magnetic data are recorded at 10 Hz. A magnetic compensator is also used to remove noise created by the movement of the helicopter as it pitches, rolls and yaws within the Earth's geomagnetic field.

Spectrometer

The IRIS, or Integrated Radiometric Information System is a fully integrated, gamma radiation detection system containing 8.4 litres of NaI (T1) downward looking crystals. The IRIS is equipped with upward-shielding high density RayShield® gamma-attenuating material to minimize cosmic and solar gamma noise. Real time data acquisition, navigation and communication tasks are integrated into a single unit that is installed in the rear of the aircraft. Information such as total count, counts of various radioelements (K, U, Th, etc.), temperature, cosmic radiation, barometric pressure, atmospheric humidity and survey altitude can all be monitored on the AGIS screen for immediate QC. All the radiometric data are recorded at 1 Hz.

Laser Altimeter

The pilot is provided with terrain guidance and clearance with an Acuity AccuRange AR3000 laser altimeter. This is attached at the aft end of the magnetometer boom. The AR3000 sensor is a time-of-flight sensor that measures distance by a rapidly modulated and collimated laser beam that creates a dot on the target surface. The maximum range of the laser altimeter is 300 m off of natural surfaces with 90% reflectance and 3 km off

special reflectors. Within the sensor unit, reflected signal light is collected by the lens and focused onto a photodiode. Through serial communications and analog outputs, the distance data are transmitted and collected by the AGIS at 10 Hz.

3.3 Data Acquisition Magnetometer Checks

At the start of the survey, airborne magnetometer system tests were conducted. The three tests conducted were the compensation flight, heading error test, and the lag test.

Compensation Flight Test

During aeromagnetic surveying noise is introduced to the magnetic data by the aircraft itself. Movement in the aircraft (roll, pitch and yaw) and the permanent magnetization of the aircraft parts (engine and other ferric objects) are large contributing factors to this noise. To remove this noise a process called magnetic compensation is implemented. The magnetic compensation process starts with a test flight at the beginning of the survey. These maneuvers provide the data that are required to calculate the necessary parameters for compensating the magnetic data.

Heading Error Test

To determine the magnetic heading effect a cloverleaf pattern flight test is conducted. The cloverleaf test is flown in the same heading as the survey and tie lines. For each direction, it must fly over a recognizable feature on the ground in order to estimate the heading error.

Lag Test

Followed by the compensation flight, a lag test is conducted. This is performed to determine the relationship between the time the digital reading was recorded by the instrument and the time for the position fix for fiducial of the reading was obtained by the GPS system.

The test was flown in the four orthogonal headings over an identifiable magnetic anomaly at survey speed and height. A lag of 6 fiducials (0.6 seconds) was determined from the lag test.

3.4 Data Processing

After all the data are collected after a survey flight several procedures are undertaken to ensure that the data meet a high standard of quality. All data were processed using Pico Envirotec software and Geosoft Oasis Montaj geophysical processing software.

Magnetic Processing

Before any processing and editing of the raw magnetic data, the data obtained from the compensation flight test must be applied to the raw magnetic data first.

Filtering is applied to the laser altimeter data to remove vegetation clutter and to show the actual ground clearance.

The processing of the magnetic data involved the correction for diurnal variations. The base station data collected is edited, plotted and merged into a Geosoft (.gdb) database daily. The airborne magnetic data is corrected for diurnal variations by subtracting the

observed magnetic base station deviations. Following the diurnal correction was a lag correction. Lastly, a heading correction was applied to the data.

The corrected magnetic data from the survey and tie lines was used to level the data all together. Two forms of leveling are applied to the corrected data: conventional leveling and micro-leveling. Lastly, micro-leveling is applied to the corrected conventional leveled data. This will remove any residual line-direction-related noise, and any low amplitude component of flight line noise, that still remains in the data after tie line leveling.

Radiometric Processing

Calibrating the spectrometer system in the helicopter is the first and vital step before the airborne radiometric data can be processed. Once calibration of the system has been complete, the radiometric data are processed by windowing the full spectrum to create channels for U, K, Th and total count. A 5-point Hanning filter was applied to the Cosmic window before going any further with processing the radiometric data.

Aircraft background and cosmic stripping corrections were applied to all three elements, upward uranium channels, and total count.

The background radon contribution is first removed followed by Compton stripping. Spectral overlap corrections are applied on to potassium, uranium, and thorium as part of the Compton stripping process. Lastly, attenuation corrections are applied to the data which involves nominal survey altitude corrections.

With all corrections applied to the radiometric data, the final step is to convert the corrected potassium, uranium, and thorium to apparent radioelement concentrations.

Fig.4, 5 presents total magnetic intensity and total radioactivity count of Hummer claims group.

Reference

• Precision GeoSurveys Inc. Airborne Geological survey Report Gonzo-Block Property report.2010-2012



Fig.4 Total Magnetic Intensity, Hummer Block



Fig. 5 Total Radioactivity Count, Hummer block





Appendix I

Statement of Expenditure for Hummer Claims Group

Total work expenditure in 2012: **\$ 37190.07** Applied for Hummer Property Assessment in 2012: **\$36,800**

item	unit cost	unit	amount
airborne magnetic survey			\$28,119.00
Manpower expense			\$2,400.00
Accommodation			\$1,500.00
Helicopter rent			\$4,321.07
Transportation			\$850.00
Data interpretation			
Other supplies			
Consulting			
Sample assay			
Office supplies			
Insrrance			
Safety and labor protection			

2012 Working Expenditure on HUMMER Claim Group

Total:

\$37,190.07

Statement of Qualification

I, Rongju Xie, do hereby certify that:

I am a geologist employed by *Canadian Dehua International Mine Group Inc.* and Dehua's Yukon project manager.

I graduated from *Guilin University of Technology*, Guilin, Guangxi, China in 1984, granted B.Sc. in geology.

In 1987, I acquired M.Sc. degree from China University of Geosciences (Wuhan);

In 2000, I acquired PhD in Geosciences from Central South University, Changsha, China.

I studied in Geology and worked in mineral prospection more than 20 years, and have related working experience both in China and Canada.

I involved in Dehua's exploration project in Yukon from the beginning, and carried out data collection, assessment report composition of this one.

Rongju Xie

Geologist Canadian Dehua International Mines Group Inc.