

CELEBRITY ENERGY CORPORATION
GEOPHYSICAL REPORT
ON A
MAGNETOMETER AND
VLF-ELECTROMAGNETOMETER SURVEY
JC I, II CLAIMS KAMLOOPS M.D.
Lat. $51^{\circ}08'N$ Long. $119^{\circ}54'W$

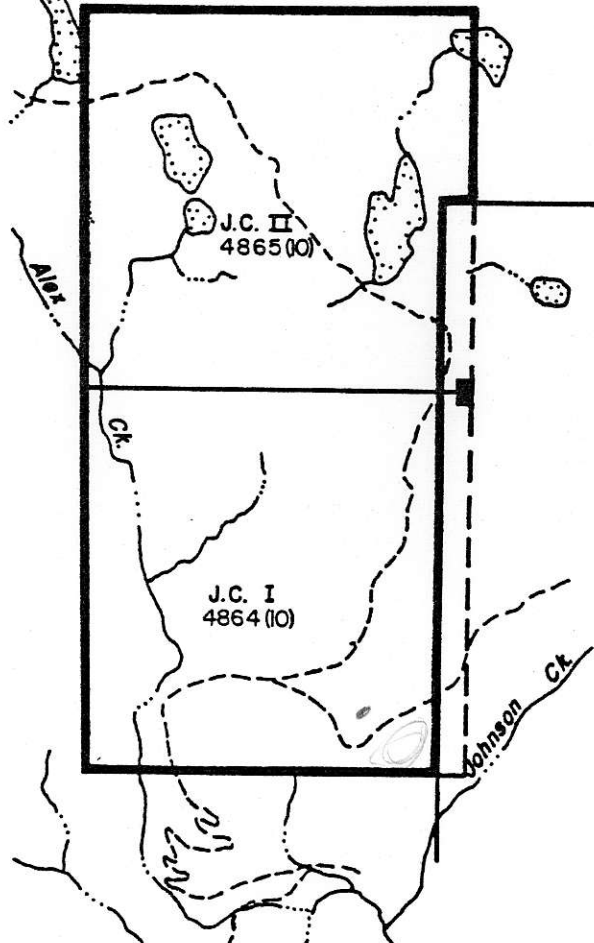
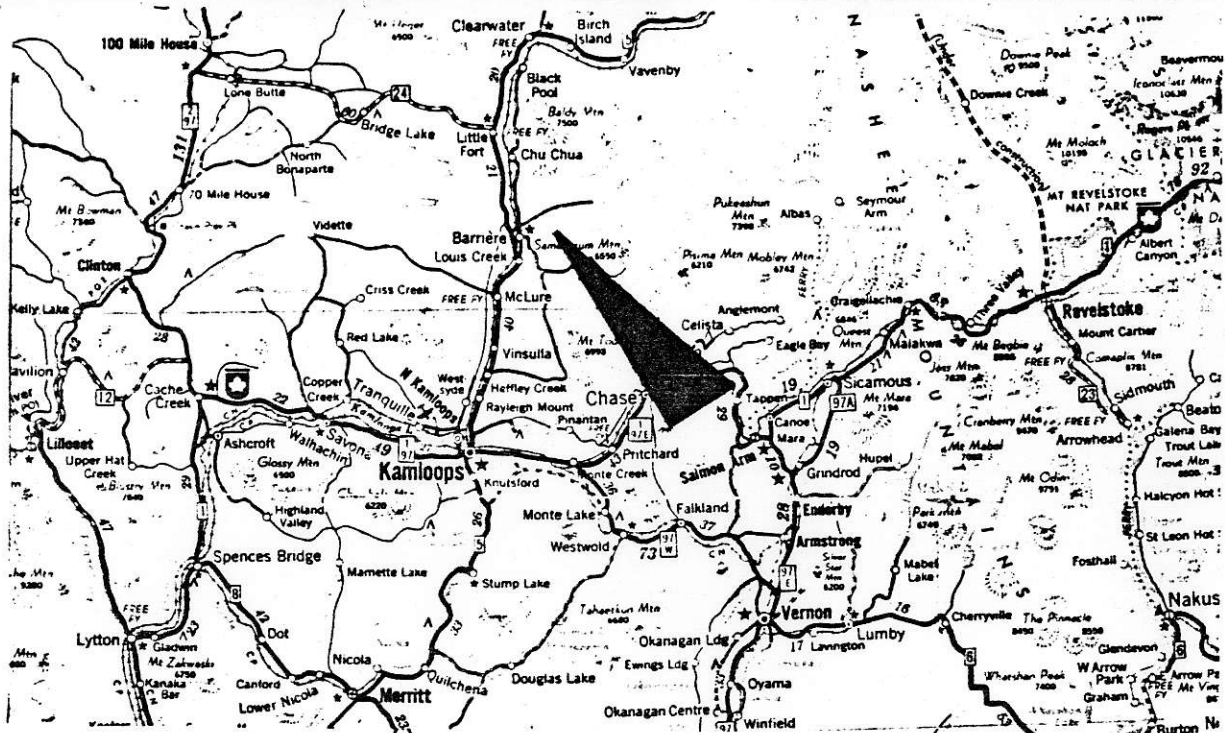
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Date of Work: July 11-20, 1984
Date of Report: Sept. 15, 1984

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**CELEBRITY ENERGY CORP.
J.C. I & II CLAIMS
LOCATION AND CLAIMS MAP**

*Glen E. White
geophysical consulting
&
services ltd.*

INTRODUCTION

Glen E. White Geophysical Consulting and Services Ltd. conducted a program of magnetometer and VLF-electromagnetometer surveying on the JC claims on behalf of Celebrity Energy Corp. This survey consists of approximately 44 kilometres of coverage of each survey on 23 lines.

PROPERTY

The property consists of two modified grid system claims, the J.C. I and II, of 20 units each in Kamloops Mining Division. According to the records at the Vancouver Sub-mining Recorder's office, claims details are as follows:

| <u>CLAIM NAME</u> | <u>UNITS</u> | <u>REC.NO.</u> | <u>EXPIRY DATE</u> |
|-------------------|--------------|----------------|--------------------|
| J.C. I | 20 | 4864 | Oct.26,1984 |
| J.C. II | 20 | 4865 | Oct.26,1984 |

LOCATION AND ACCESS

The property is located in the North Thompson area about 45 km. northeast from the town of Kamloops, B.C. The specific location would be Latitude 51°08'North; Longitude 119°54'West.

Access from Kamloops is by Highway 5 from Kamloops north to the small settlement of Louis Creek. From here the Skwaam Bay Road is followed to the east. At a point about 25 km. from Louis Creek, a logging access road branches to the north and by a network of local roads provides access through the east-central part of the J.C. claims.

The terrain on the property is generally subdued and rolling with some steeper areas. Vegetation consists of a general coniferous cover with moderate underbrush.

HISTORY AND GENERAL GEOLOGY

The history, regional and property geology is described by G.H. Rayner in his report on the J.C. claims dated Feb. 13, 1984.

History and Previous Work

"The area underlain by rocks of the Eagle Bay formation has been known to be prospective for massive sulphide volcanogenic deposits for many years before there was any understanding of their genesis.

Mineralization on the Adams Plateau in the Keystone (Kamad) area and around Skwaam Bay has been under investigation and development at various times over the years.

Probably the most advanced of these properties is the Keystone lying some 3 km. to the south-east of the J.C. along the general trend of the Eagle Bay formation. Here Kamad Silver Co. Ltd. is preparing to place a mill on the property. Strongly renewed interest in the district has been sparked by the recent discovery of high grade massive sulphide mineralization on the Rea Gold Corporation ground lying immediately to the east of the J.C. Property. Surface sampling on the Rea discovery has shown good grade base metal mineralization with very significant values in gold. Work is continuing on this deposit under the guidance of Corporation Falconbridge Copper.

On the J.C. Claims themselves, there seems to be no record of previous work. The general overburden cover in the area has undoubtedly been a strong deterrent to traditional prospecting."

Regional Geology

"Regionally the bulk of the district is underlain by the Eagle Bay formation of Late Devonian to Early Mississippian Age. This unit is a diverse assemblage of sedimentary and volcano-sedimentary rocks.

Metamorphic levels are generally low, however, some units reach green schist levels.

The Eagle Bay Formation hosts a number of massive sulphide deposits. To date, none of these has been brought to profitable production, however, the various sulphide zones and showings clearly demonstrate the potential of the formation for massive sulphide mineralization.

Three of the more important of these known deposits are the new Rea Gold discovery 2.5 km. to the east, the Homestake (Kamad) deposit 4 km. to the southeast and the Bay area at Skwaam Bay on Adams Lake some 6 km. to the southeast.

The J.C. Claims lie along the regional trend from these three mineral zones and appear to be underlain by the same units either at surface or at depth."

Property Geology

"Exposure on the J.C. Claims is sparse although the general depth of overburden seems to be shallow.

Projecting the contacts of the regional scale B.C. Department of Mines mapping it would appear that the southern 30 percent or so of the property is underlain by foliated rusty weathering phyllite. This unit is considered to be a distal equivalent of intermediate to acid metavolcanic rocks mapped from Johnson Creek to Barrier River (B.C. Department of Mines Paper 1981-1).

To the north, the central part of the claims, again from the B.C. Department mapping, appear to be underlain by a dark grey to black phyllite with some interbedded grit, sandstone, siltstone and argillite. A single exposure believed to be of this unit was noted during the examination. It consisted of thinly platy black phyllite with a rusty

weathering surface. No sulphides were noted but the rusty weathering may reflect fine pyrite.

The northern portion of the property is mapped as underlain by Tertiary basalt flows. These rocks are post-ore and represent a serious hinderance to exploration on the northern part of the ground. The area in which they occur consists of flat plateau-like terrain. Older phyllites are seen in outcrop within the southern portion of the plateau suggesting that the basalts may not be very thick and may in fact be intermittent."

THE MAGNETOMETER SURVEY

The magnetometer survey was carried out utilizing two GSM-8 proton precession magnetometers. One of these was operated in conjunction with a CMG MR-10 base magnetometer recorder to allow diurnal and micropulsation variation removal. Operator precautions of demagnetization and consistency were observed and field clock to base magnetometer timing skew was maintained within one second per day. Corrected, unfiltered data are plotted on each of the base maps.

V.L.F. ELECTROMAGNETOMETER SURVEY

This survey was conducted using a Geonics EM-16 V.L.F. electromagnetometer. This instrument acts as a receiver only. It utilizes the primary electromagnetic fields generated by VLF marine communications stations. These stations operate at a frequency between 15 - 25 KHZ, and have a vertical antenna-current resulting in a horizontal primary field. Thus, this VLF-EM measures the dip-angle of the secondary field induced in a conductor.

For maximum coupling, a transmitter station located in the same direction as the geological strike should be selected, since the direction of the horizontal electromagnetic field is perpendicular to the direction of the transmitting station.

Readings were taken at 20 m intervals and the data filtered in the field by the operator as described by D.C. Fraser, Geophysics Vol. 34, No. 6 (December 1969). The advantage of this method is that it removes the dc and attenuates long spatical wave lengths to increase resolution of local anomalies, and phase shifts the dip-angle data by 90 degrees so that cross-overs and inflections will be transformed into peaks to yield contourable quantities.

DISCUSSION OF RESULTS

Magnetometer Survey

The magnetics survey over the property, illustrated in profile form on Figure 2 and contour form on Figure 3, shows the presence of two very distinct geologic zones. The north-western area of the property shows very strong magnetic features, attaining highs of 9000 gammas above background. These responses are probably due to the higher content of magnetic minerals in the mapped olivine basaltic flows. The clearly delineated boundary of the magnetic response allows the southward extent of these flows on the J.C. claims to be mapped in an area where little outcrop is reported to exist. These flows are thought to be post-ore and an impediment to exploration within the underlying phyllites (Rayner, 1984).

The major area of the claims, in contrast to the area described above, is of very low magnetic relief. This area is mapped as phyllites with interbedded sandstone, siltstone and argillite. These rocks are of very uniform and probably of very low magneties minerals content and present little more than 200 gammas contrast over the survey area. As a result, little structure or differentiation is interpretable within these rocks. An exception to this occurs in the south-eastern portion of the property where a mild magnetics high exists. A schistose conglomerate is mapped in this area and some pyrite was observed in outcrop.

VLF-Electromagnetometer Survey

A number of good conductors were detected in this survey. The inphase and quadrature data is illustrated on Figure 4 and the Frazer Filtered inphase data is posted and contoured on Figure 5.

The most clearly defined of the responses is labelled Conductor A on Figure 5. This zone is well correlated with the southeastern boundary of the magnetic highs and thus with the edge of the basaltic flows. The relationship between the underlying phyllites, the basaltic flows and the VLF-EM conductor are not clear. One possibility is that the conductor represents a major north-east trending structure within the phyllites, which also forms the southeastern boundary of the flows. The conductor weakens and terminates to the northwest and is intersected by a less strong northeasterly zone labelled Conductor B. A similar intersecting northeasterly leg is seen with the flanking Conductor C.

It should be noted that a number of conductors exist within the area of the basaltic flows and that it is unlikely that the VLF-EM survey would detect phyllite sourced conductors through the flows and overburden. It is therefore likely that these anomalies arise from conductive contrasts within the flows or result from thinning of the flows.

A very strong system of conductors occurs in the southeastern area of the grid. These zones labelled Conductors D, E and F occur in the area of the mapped schistose conglomerate and magnetic high described above.

CONCLUSIONS AND RECOMMENDATIONS

Glen E. White Geophysical Consulting and Services Ltd. conducted a program of magnetometer and VLF-electromagnetometer surveying on the J.C. claims on behalf of Celebrity Energy Corp.

Glen E. White

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The magnetometer survey clearly defined the limits of the olivine basaltic flows and detected a moderate high of interest in the southeastern area of the grid.

A number of conductors were delimited by the VLF-EM survey. The most prominent of these is a northeasterly trend which may be sourced within the phyllites and follows the southeastern edge of the basaltic flows. A system of conductors detected in the southeastern area of the grid are also important exploration targets. Conductor E is the strongest and most continuous of these and is well correlated with a mild magnetic high.

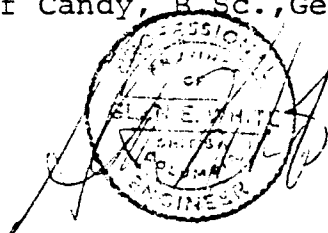
~~Two targets defined in this survey warrant diamond drill testing. As well, it is recommended that the large loop pulse electromagnetometer technique, which has been used successfully in this geological environment, be undertaken in the search for deep seated massive sulphides.~~

The first of the possible diamond drill targets is Conductor E. This conductor would be tested by a diamond drillhole situated at station 4+80S on line 1200E and drilled at an angle, arrived at from local topography, to intersect the zone 25 metres below station 500S. The second recommended diamond drillhole would test Conductor A at its strongest point on line 300E. The drillhole would be collared at station 9+20N in order to intersect the zone 20 metres beneath station 9+40N.

Respectfully submitted,



Cliff Candy, B.Sc., Geophysicist



Glen E. White B.Sc., P.Eng.,
Consulting Geophysicist

GSM-8 PROTON PRECESSION MAGNETOMETERSPECIFICATIONS

RESOLUTION: 1 gamma

ACCURACY: ± 1 gamma over operating range

RANGE: 20,000-100,000 gamma in 23 overlapping steps

GRADIENT TOLERANCE: Up to 5000 gamma/metre

OPERATING MODES: MANUAL PUSHBUTTON, new reading every 1.85 sec., display active between readings
CYCLING, pushbutton initiated, 1.85 sec. period
SELFTEST, pushbutton controlled, 7 sec. period

OUTPUT: VISUAL: 5 digit 1 cm (0.4") high Liquid Crystal Display, visible in any ambient light
DIGITAL: Multiplied precession frequency and gating pulse
ANALOG: Optional 0-99 or 0-999 gamma

EXTERNAL TRIGGER: Permits externally triggered operation with periods longer than 1.85 sec. (optional minimum period 0.9 sec.)

POWER REQUIREMENTS: 12V 0.7A peak, 5mA standby

POWER SOURCE: INTERNAL: 12V 0.75Ah NiCd rechargeable battery 3,000 readings per full charge
EXTERNAL: 12-32V

BATTERY CHARGER: Input: 110/220V 50/60Hz; output: 14V 75mA DC

OPERATING TEMPATURE: -35 to +55C

DIMENSIONS: CONSOLE: 15x8x15cm (6x3 $\frac{1}{4}$ x6")
SENSOR: 14x7cm dia (5 $\frac{1}{2}$ x3" dia)
STAFF: 175cm (70") extended, 53cm (21") collapsed

WEIGHT: 2.7kg (6 lb) per standard complete with batteries

A P P E N D I XInstrument SpecificationsELECTROMAGNETOMETERA. Instrument

- (a) Type - Geonics VLF - EM
- (b) Make - Ronka EM 16

B. Specifications

- Measurement -
- (i) Utilizes primary fields generated by VLF marine communication stations measures the vertical field components in terms of horizontal field present.
 - (ii) Frequency range 15-25 KHZ
 - (iii) Range of measurement - in phase $\pm 150\%$
or $\pm 90^\circ$
- quadrature
 $\pm 40\%$
 - (iv) Method of reading - null detection by earphone, real and quadrature from mechanical dials.
 - (v) Accuracy - $\pm 1\%$ resolution

C. Survey Procedures

- Method
- (a) Select closest VLF station perpendicular to traverse lines.
 - (b) In-phase dial measures degree of tilt from vertical position.
 - (c) Quadrature dial calibrated in percent - null.
 - (d) Station plot - plot values read at station surveyed.
 - (e) Manually filter dip-angle data.

COST BREAKDOWN

B. Robertson July 11-20

| | |
|---------------------------------------------|---------------|
| 9½ days @ 420/day | \$3,990.00 |
| Instrument Lease 9½ days @ \$65/day | 617.50 |
| Data Processing and Map Plotting | 650.00 |
| Interpretation and Report Compilation | 870.00 |
| Drafting and Reproduction | <u>385.00</u> |
| | \$6,512.50 |

STATEMENT OF QUALIFICATIONS

Name: CANDY, Clifford, E.
Profession: Geophysicist
Education: B.Sc., Geophysics
University of British Columbia
Professional Associations: Society of Exploration Geophysicists
British Columbia Geophysical Society
Experience: Six years Geophysicist with Glen E.
White Geophysical Consulting and Services
Ltd., with work in B.C., Yukon, Quebec,
Saskatchewan, southwestern U.S.A. and
Ireland.

STATEMENT OF QUALIFICATIONS

NAME: WHITE, Glen E., P.Eng.

PROFESSION: Geophysicist

EDUCATION: B.Sc. Geophysicist - Geology
University of British Columbia.

PROFESSIONAL ASSOCIATIONS: Registered Professional Engineer,
Province of British Columbia.

Associate member of Society of Exploration Geophysicists.

Past President of B.C. Society of Mining Geophysicists.

EXPERIENCE: Pre-Graduate experience in Geology - Geochemistry - Geophysics with Anaconda American Brass.

Two years Mining Geophysicist with Sulmac Exploration Ltd. and Airborne Geophysics with Spartan Air Services Ltd.

One year Mining Geophysicist and Technical Sales Manager in the Pacific north-west for W.P. McGill and Associates.

Two years Mining Geophysicist and supervisor Airborne and Ground Geophysical Divisions with Geo-X Surveys Ltd.

Two years Chief Geophysicist Tri-Con Exploration Surveys Ltd.

Twelve years Consulting Geophysicist.

Active experience in all Geologic provinces of Canada.

Glen E. White

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- (1) Rayner, G. H. (1984),
A report on the J.C.1 and J.C.11 Mineral Claims,
Celebrity Energy Corp., Feb.1984.
- (2) Preto, V.A. et al; 1980, in Geological Fieldwork 1979,
B.C. Mineral Resources Branch, Paper 1980-1.
- (3) Preto, V.A.; (1981), in Geological Fieldwork 1980, B.C.
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