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DRIFT PROSPECTING PROGRAM

PROPERTY VISIT SUMMARY

KEMESS
(94D/15, 94E/2)

Steve Sibbick
August 30, 1991

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PROPERTY VISIT SUMMARY

KEMESS PROPERTY

Visited by: Steve Sibbick
Date: August 14-16, 1991

The following is a summary of a visit to the Kemess property which I undertook between August 14 and August 16, 1991. The geologists on site (Mike Harris and Brian Bower) and the senior geologists (Mark Rebagliati and Dave Copeland) expressed great interest in my visit and the possibility that the Kemess property would be a site for a Drift Prospecting study in 1992. Further, they allowed me full access to all information dealing with the property under the reasonable condition that all confidential information I viewed would remain confidential. A recent information leak at the SIB property caused a significant drop in the El Condor share price and resulted in the firing/reassignment of the *entire* SIB camp.

The Kemess property is approximately 500 units in size and is located roughly 30 kilometres southeast of the Sturdee Airstrip. Access to the property is by road; either a 10 hour drive from Mackenzie / Fort St. James or a one hour drive from the Sturdee Airstrip. El Condor Resources presently operates and controls the property through a combination of joint venture and wholly-owned claims. Work in progress consists of line cutting a large east-west grid (100 m spacings) across the whole property, IP along this grid, prospecting (1 man) and drilling of the North and South Kemess zones.

As the property is very large, it has been divided into four sections by El Condor: North, South, East and West. North and South are divided by a feature known as the Headwall, a high ridge (1900 metres) which is dominated by steep slopes and cliffs to the north and more gently sloping to the south. The north side of the Headwall is cut by four large cirques, known locally as the West, Central, East and Far East Cirques. Mineralization in the North Kemess is found within the ridges dividing the cirques and consists of *'large, low grade mineralization of pyrite and chalcopyrite'* (description by El Condor geologists). Mineralization is hosted within volcanics and a volcanic breccia which are believed to form a roof pendant to an underlying monzonite intrusive, although this is speculative. Hematitic and jarositic alteration along surface contacts of the monzonite and volcanics/breccia is intense, forming red and yellow coloured talus slopes. Extensive 'ferricrete' layers have been observed in the overburden (talus?) in the North Kemess. Approximately fifty drill holes have been drilled into the North Kemess area. Present exploration activity in this area consists of fill-in drilling with the aimed at defining higher-grade pockets of mineralization which can be added to the South Kemess deposit. Just south of the Headwall, near its eastern extremity, lies another zone of porphyry mineralization known as the East Kemess. This is a recently discovered zone consisting of disseminated chalcopyrite in volcanics(?) which outcrop along steep cirque ridges. IP, lithogeochem and mapping are planned for the near future. The West Kemess is located on the 'Rat' claims, which cover a northwest-trending ridge which extends from the South Kemess (see below) to the south shore of Duncan Lake (see map) consists of several attractive looking gossans, a 'geochemical anomaly' defined by Cominco (of which all records but its approximate location have been lost), several IP targets defined and drilled by Cominco (with uninteresting results), and some recently discovered mineralization. Exploration plans for the West Kemess include IP and prospecting. Interestingly, two kilometres to the east of the West Kemess (approximately 1 km north of the El Condor camp and 2 km north of the South Kemess mineralization) are a series of galena and sphalerite bearing veins, about which very little is known.

South Kemess is receiving the most attention at this time. Most of my visit was concentrated over this deposit. It consists of a tabular, flat-lying (sill?) of mineralized monzonite which is underlain by Takla Group basalts and cherts. Primary mineralization within the monzonite consists of pyrite and chalcopyrite. Gold mineralization in the South Kemess is highest in quartz-hematite shears/stockworks. The greater the intensity of the shearing/stockwork, the greater the Au content. This alteration looks very much like K-spar alteration, in fact, the deposit is K-poor and quartz rich. The South Kemess appears to be hosted within a monzonite sill, possibly emplaced along a low-angle fault. Cu and Au grades drop rapidly once into the underlying basalts and cherts.. At present, the South Kemess deposit is open laterally to the east and west, but its vertical extent appears limited to the thickness of the monzonite intrusive (sill?). An IP anomaly on the east side of Kemess Creek suggests that mineralization may extend from the known deposit to this location. However, this area is blanketed by a thick layer of swampy overburden (outwash over till?) which blankets the bedrock.

A supergene cap forms the upper portion of the monzonite and may in places be up to 15 metres thick (El Condor prediction). Native copper, cuprite, malachite and chalcocite are all present within this supergene zone. The upper 1-2 metres of this cap cousists of a deeply weathered, hematite-jarosite-clay rich saprolite which is again overlain by a variable thickness of overburden composed of till, colluvium and colluviated till. There is often a gradational contact between the upper unit of the supergene zone and the overburden. Soil geochemical response to the South Kemess deposit is strong; values greater than 300 ppb Au and 1350 ppm Cu overlie the mineralization.

Drift cover over the remainder of the Kemess property appears typical for this environment. Bedrock is exposed on the crests of steep ridges and cirques while felsenmeer and talus cover less vertical slopes. Felsenmeer and talus grade into colluvium (consisting of till mixed with talus) on the lower slopes. Variable deposits of glacial material (till, outwash, etc.) blanket the lowermost slopes and valley floors. Within the cirques of the North Kemess area, extensive layers of 'ferricrete', or iron-cemented talus/colluvium are present. South of the South Kemess deposit, in the Attichika Creek valley, are extensive deposits of glaciofluvial sediment and till, along with several stagnant ice featnres.

The exploration strategy employed by El Condor involves using IP to define targets, then follow up of these targets with prospecting, lithogeochemistry and mapping. Soil geochemistry has played a very small role in exploration on the property, a result of the excellent bedrock exposure and/or thin talus or colluvium covering most of the property. Interestingly, the South Kemess deposit was discovered (by St. Phillips Resources) through the use of stream sediments.

Sampling Program

During my visit to the property, I sampled five soil profiles across the South Kemess deposit. Four of these profiles where taken at locations where colluvium or till overlies the supergene cap of the deposit. The fifth profile was taken in a thick (two metre) section of till. No bedrock or supergene material was visible at this site. Twenty-eight samples where taken from the five profiles. These samples are presently being prepared for analysis which will consist of a total acid - ICP analysis of the -80+230 and -230 mesh fractions, a weak (Na-acetate) extraction for hydromorphic Cu, and possibly XRD analysis of B horizon soils to determine the presence of sericite, hematite and jarosite. The goal of these analyses are to provide information on the distribution of elements within the soils and supergene material and to asses the influence which the supergene cap has had on the development of the soil, with particular reference to the hydromorphic movement of Cu and the physical movement of minerals associated with the supergene cap.

Drift Prospecting Problems at the Kemess Property

1) Is the intensely weathered, saprolitic upper 1-2 metres of the South Kemess supergene cap a product of post-glacial or preglacial weathering? If it is pre-glacial in origin, how did it survive glaciation? Was it transported down ice to any extent?

2) Are the highly anomalous soils (Cu=1350 ppm, Au=300 ppb) developed within till and colluvium and lying above the supergene cap derived from an upice/upslope source or are they derived hydromorphically from the underlying supergene mineralization.

3) What is the geochemical effect of the extensive 'ferricrete' layers in the North Kemess area? Do they act as geochemical 'traps' which concentrate Cu, Au and pathfinder elements? How does the low pH water draining from this area effect stream sediment geochemistry? Could this natural acid rock drainage process serve as a guide for studies of acid mine drainage?

4) How far can glacial dispersion be traced from mineralization at the South and North Kemess deposits? The North and South Kemess deposits are located in two significantly different physiographic settings (North Kemess within a cirque - compressional ice flow; South Kemess at the break-in-slope between a ridge and valley bottom - extensional ice flow?): how have these two physiographies effected the glaciation and subsequent glacial transport of mineralized rock from these deposits? Are there significant differences in the style of dispersion from these two deposits as a result?

Recommendations made to El Condor

1) The IP anomaly on the east side of Kemess Creek may represent an extension of the South Kemess deposit which was more deeply eroded during glaciation and covered with a thick layer of glacial material. The IP high appears to be located in an area of compressional flow (high glacial erosion/deposition) while the South Kemess deposit is situated in a 'pressure shadow' or area of extensional (low erosion/deposition) glacial flow. Detailed investigation of the drift overlying this area may indicate whether mineralization exists at depth below the overburden.

2) A 'geochemical anomaly' delineated by Cominco on the West Kemess is locally derived, as the underlying surficial cover is composed of highly angular clasts and weathered, broken outcrop. However, as the elements or their concentrations composing this 'geochemical anomaly' are unknown, it is impossible to infer more.

3) Gossanous rock on the property may concentrate anomalous levels of Cu, Au, etc. while the underlying unweathered bedrock reports low or background concentrations of these elements. This will generate false anomalies and result in wild goose (anomaly) chases.

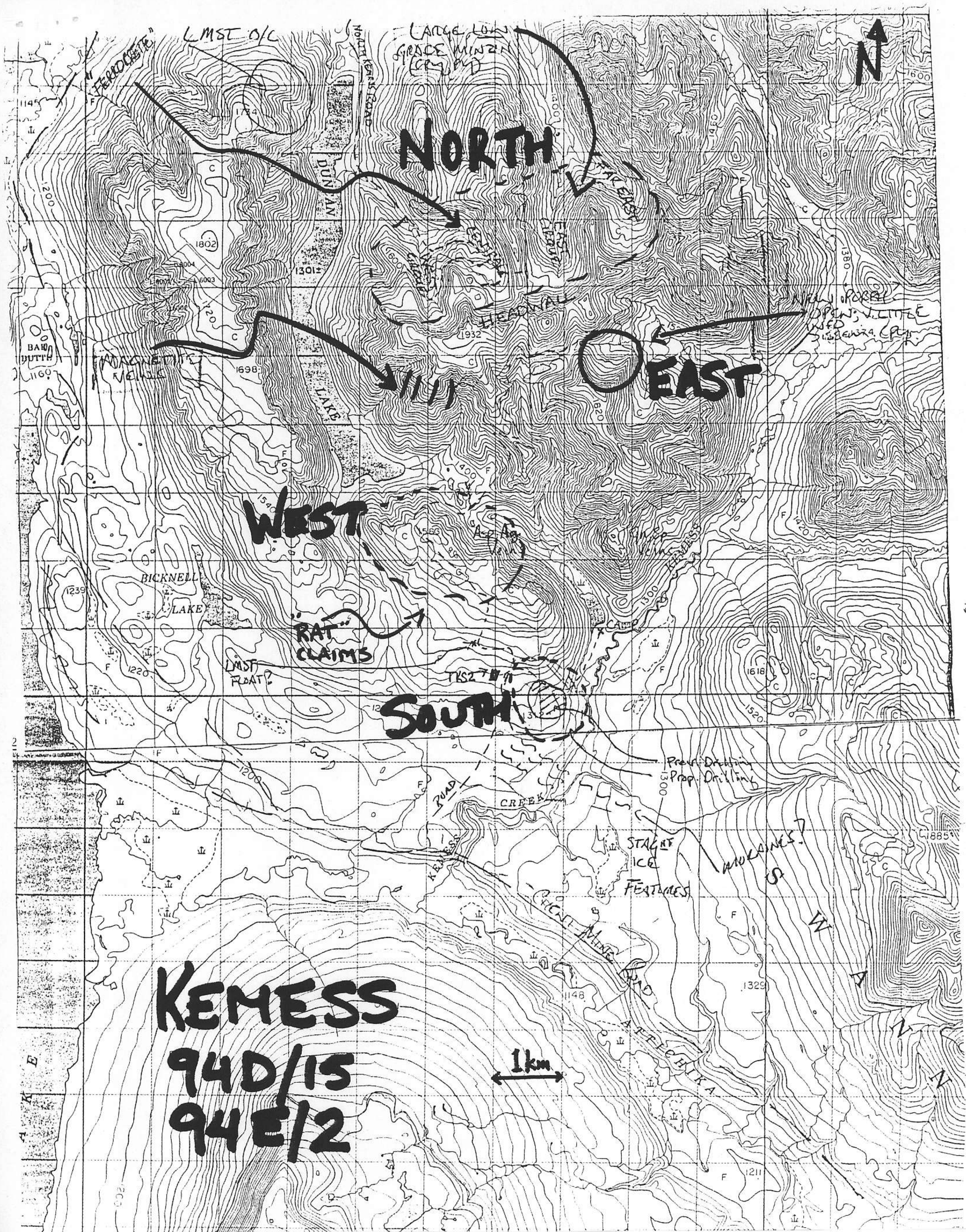
4) Anomalies in talus, colluvium and felsenmeer will have a very local source, either directly upslope or immediately beneath the anomaly.

Drift Prospecting Recommendations for the Kemess Property

1) The South Kemess area offers the best potential for a Drift Prospecting study. It contains a defined mineral deposit (South Kemess) in an area of high mineral potential. The deposit lies at the edge of a wide valley which may host similar mineralization buried beneath the surficial deposits. The presence of the supergene cap provides a unique aspect to this study in terms of lithological, geochemical and mineralogical tracing of glacial dispersal from the deposit. However, the types of overburden and their distribution within this valley should be studied before additional commitments are made to this area.

2) The North Kemess area offers the potential for specific studies of geochemical and glacial processes, namely the study of glacial dispersal (rate of anomaly decay, etc.) and the geochemical behavior of 'ferricrete'. The low grade, disseminated nature of the North Kemess mineralization may complicate studies of glacial dispersal due to a number of possible sources of mineralization. Additional drilling by El Condor may help alleviate this problem.

3) The East and West Kemess areas offer the least potential for a Drift Prospecting study. Although both contain mineralization, it is poorly defined and at the prospecting stage. Further, the surficial cover consists of talus and thin colluvium.



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NORTH
EAST
WEST
SOUTH
LMST O/C
"FERRICRETE"
LARGE LOW GRADE MINZN (CPY, PY)
NORTH KEMESS ROAD
DUNCAN
LAKE
HEADWALL
MAGNETITE VEINS
BICKNELL
LAKE
"RAT" CLAIMS
LMST FLOAT?
CAMP
Prev. Drilling
Prop. Drilling
ROAD
CREEK
KEMESS
STAG ICE FEATURES
MORAINES?
CHEVRON MINE ROAD
ATTYCHIKA
1km
KEMESS
94D/15
94E/2