

Nunavut Water  
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**Matrix Project  
Nunavut, Canada**

**Yearly Progress Report  
for  
Pacific Ridge Exploration, Ltd.**

**February 16, 2005**

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**Attachments:**

**Spreadsheet of Samples, Locations and Geochem**  
**Ground Geophysical Report**  
**Spreadsheet of 2004 Expenditures**

## Property Location and Description

The Matrix project is situated about 300 km WNW of Arviat in south central Nunavut Province, Canada (Fig 1). The claimblock lies about 20 km west of the north end of South Henik Lake (Fig 2). Late last field season, three additional claims (QPC4-6) were staked within the area of interest by Apex Geosciences for Newmont under a recommendation by Newmont geologist, Jeff Chambers. This brings the number of claims under the agreement to six.



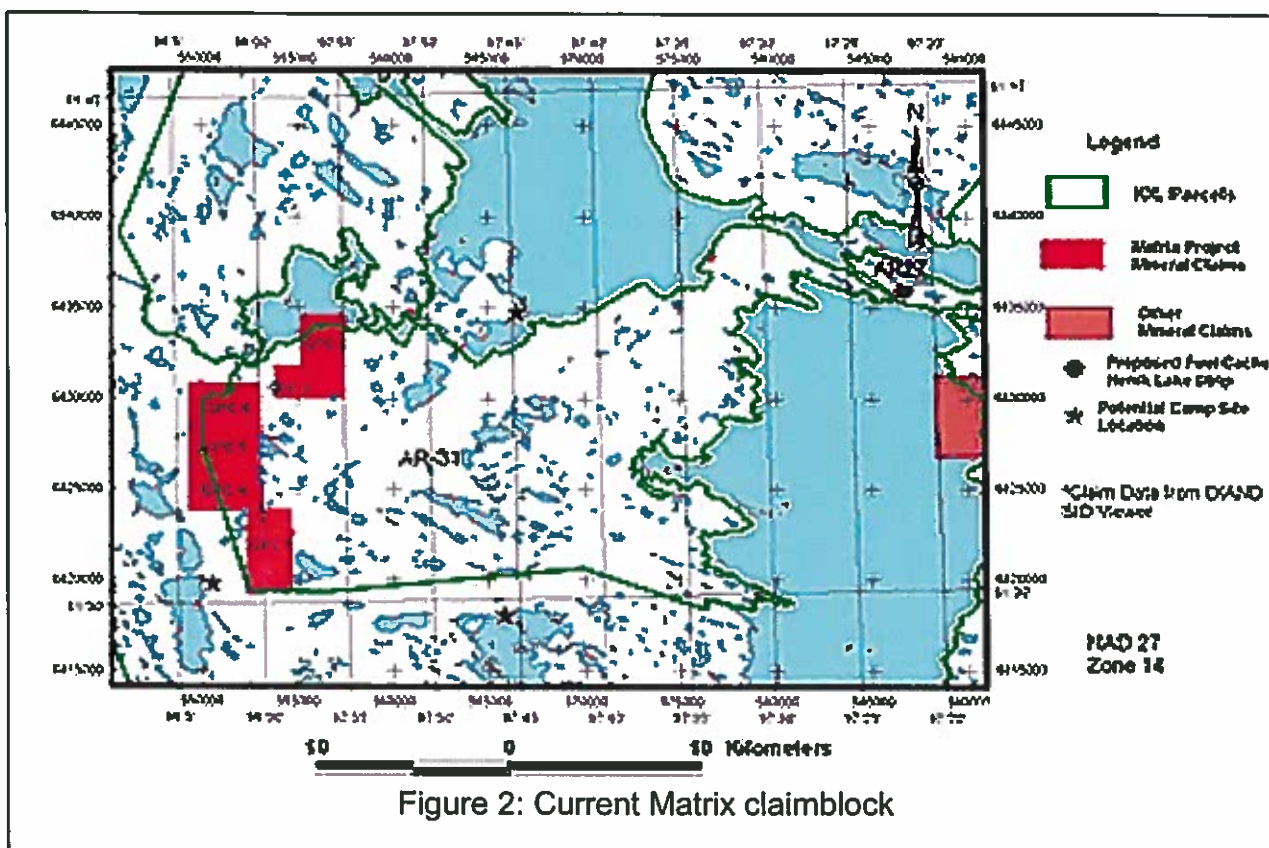


Figure 2: Current Matrix claimblock

#### Summary of Agreement with Pacific Ridge Exploration, Ltd. and Hunter Exploration Group

Newmont has a four-year option to earn a 60% interest by making a staged \$4.0 million exploration expenditure and cash payments totaling \$400,000. Newmont may then elect to make an additional \$10.0 million expenditure thereby increasing its interest to 70% or form a joint venture. In the event a joint venture is formed, Pacific Ridge and Hunter Exploration Group would equally share either a 40% or 30% interest as the case may be.

#### Summary of the Exploration Model

The type of deposits being sought at the Matrix project is decimeter to meter thick auriferous pyritic quartz pebble conglomerates similar to those of the Witwatersrand basin in the Republic of South Africa. Such gold reefs have generated about 1 Moz Au per square km, and their lateral extent is typically on the order of 100-500 square km.

At Matrix, current exploration efforts are focused on the basal units of the Paleoproterozoic Hurwitz sequence in the Padlei basin in southern Nunavut. This basin has an irregular outline, but trends SSW from the claimblock for a distance of about 70 km and is up to 50 km wide. Several smaller outlying basins are scattered throughout the region. Initial mapping and sampling at Padlei by Lawrence Aspler of the GSC in the 1990's indicated the presence of laterally extensive pyritic, auriferous conglomerate horizons in the lower Hurwitz. Pacific Ridge's more recent exploration program outlined further continuity of conglomerate-hosted gold mineralization with grab samples to 16.0 g/t gold. These results were confirmed by Newmont's brief field program in 2004.

## Summary of Local Geology and 2004 Fieldwork

Geologic fieldwork during 2004 included 1) a field review of the general geology of the Hurwitz strata, 2) brief field visits to six localities with known auriferous conglomerates, 3) construction of preliminary stratigraphic sections at two mineral localities, 4) reconnaissance search for strike length continuity of auriferous conglomerates, 5) selective geochem sampling, and 6) geophysical orientation surveys at three localities.

The general geology of the Hurwitz group is presented in various papers by Lawrence Aspler who has mapped in the region under contract with the GSC. At present, only the lower part of the Hurwitz group, the portion lying below the White Rock orthoquartzite, appears to have potential to contain auriferous conglomerate reefs.

The geomorphology around Henik Lakes reflects the underlying geology. Archaean greenstones generally underlie flat, swampy lowlands. Resistive siliciclastic rocks of the Hurwitz sequence form low hills and ridges with 100-200 meters of relief.

The lower portion of the Hurwitz consists of 500 to 650 meters of well-lithified Paleoproterozoic clastic rocks overlying a basement of Archaean greenstones (mafic to felsic volcanic rocks, ironstones, etc). Pyritic, auriferous conglomerates within the lower Hurwitz are conjectured to be Wits analogues, and are the principal target.

The detailed stratigraphy of the lower Hurwitz clastic sequence is variable and still the subject of geologic controversy. In broad terms, however, it can be divided into a lower, reduced section, and an upper, oxidized one. Siliciclastics of the lower, reduced section are characterized by chloritic matrix and disseminated pyrite (1-2%) throughout most of the section. Strata of the upper, oxidized sequence are characterized by sericite and hematite including, locally, specularite.

There are numerous conglomerate beds throughout the lower Hurwitz section, but sampling suggests that gold is associated with pyritic pebble/cobble conglomerates near the top of the lower, reduced portion of the stratigraphy. This horizon is situated 0 to >200 meters above the basement contact.

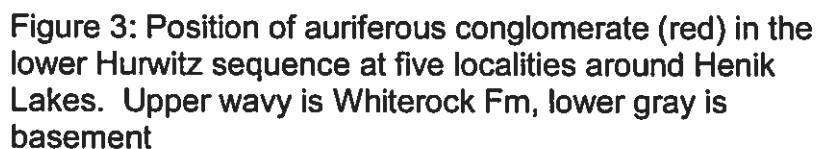
A compilation of the stratigraphic position of known auriferous conglomerate horizons is presented in Figure 3. At each locality, the approximate position of the auriferous reef is shown relative to two "fixed points": the Archaean basement and the White Rock orthoquartzite. Thickness of strata between these two points varies from place to place. The diagram only reflects the relative position of the auriferous horizon, not the overall thickness of the section. Significant changes in observable stratigraphy from one location to the next as well as a wide petrologic variability in the auriferous gravels suggests that the sites visited may be in the upper parts of an alluvial fan.

Two informal stratigraphic sections are shown in figure 4, one at the "north showing," the other at Squiggle Lake. Sections were measured using GPS locations and generalized dip measurements.

### Conclusions:

1. Stratigraphic sections are variable in thickness;
2. There are significant differences in the petrology of conglomeratic horizons between observed sections, though they are only 10 km apart;
3. The position of auriferous conglomerate relative to basement is variable. In the north showing, this position varies from resting directly on the basement to 50 meters above it indicating that the paleodepositional surface had highs and lows.
4. The following features are shared between section locations: the lower portion of the Hurwitz is unoxidized, pyritic, and immature containing chloritic siltstone and wacke, and arkosic arenites. The upper part is generally oxidized and mature containing orthoquartzites, well-rounded and well-sorted conglomerates.





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with Co (0.66 correlation coefficient). U is uniformly low at Matrix unlike the Witwatersrand, though.

One purpose of the 2004 field work was to assess the strike length of auriferous conglomerates. At none of the showings could the auriferous conglomerate be traced laterally for more than 300 to 400 meters. Furthermore, profound differences between section locations make it difficult to definitively correlate conglomerate from one to the next. Nevertheless, similar auriferous conglomerates were recognized at six different localities within a 10 x 30 km area. Since outcrop is poor, there exists the possibility of at least some continuity between occurrences. Therefore, it was felt that geophysical methods could help evaluate continuity. Late in the field session, orientation surveys were attempted in three localities. A summary of findings presented by Andrew Foley, Consulting Geophysicist for Newmont, is attached to this report. It appears IP and is useful in evaluating the trace of pyritic conglomerate. Radiometrics also show promise, but must be evaluated further. Although only one area was tested with TDEM, this appears to have the most hope in identifying the conglomerate and even providing a component of vertical control. Therefore, it was concluded that additional ground TDEM trials should be attempted in the spring. If these prove successful, airborne EM will follow.

Attached to this report is a spreadsheet of all expenses incurred and paid by Newmont at Matrix in 2004.

#### **Anticipated Field Program, 2005**

The field season for 2005 has been outlined and discussions/preparations are presently underway with Apex Geosciences to implement the program. Although no dates are yet firm, the program will look something like:

2-3 weeks (beginning as early as late March): ground geophysics including TDEM; goal will be to evaluate effectiveness and provide baseline for airborne EM

2 weeks (mid-April – late-May): airborne EM, if warranted by ground program

3-4 weeks (June – mid-July): field work to evaluate areas for drilling; will include some reconnaissance further into basin

~6 weeks (late July – September): 3000-5000m drilling in 4-6 locations basinward from auriferous conglomerate outcrops; additional claim staking may be required

It is anticipated costs associated with this program will be in the range of US\$500-800K.