COMBINED ANNUAL AND FINAL REPORT OVER THE NONGA LAKE AND BIRRINDUDU U-Au & NORIL’SK STYLE Ni-Cu-PGE PROJECT

WISO & VICTORIA – BIRRINDUDU MINERAL FIELD, NORTHERN TERRITORY

Exploration Licence: 26200 & 26202

BY

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DISTRIBUTION

1. Northern Territory Department of Minerals & Energy
2. Frontier Uranium Pty Limited
PROJECT NAME: NONGA LAKE AND BIRRINDUDU

TENEMENTS: Exploration Licences 26200 and 26202

MINERAL FIELD: Wiso & Victoria – Birrindudu Mineral Field

LOCATION: BIRRINDUDU SE5211 1:250 000

Styles 4961 1:100 000
Ware 4860 1:100 000
Birrindudu 4761 1:100 000
Phibbs 4760 1:100 000

COMMODITIES: Gold, Uranium and Noril’sk style Ni-Cu-PGE
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1.0 NONGA LAKE AND BIRRINDUDU PROJECT

2.0 INTRODUCTION

The Nonga Lake & Birrindudu Projects are located approximately 420 km (260 miles) south east of Darwin, close to the junction of the Stuart and Roper Highways of Darwin in Northern Territory. The project comprises one Exploration Licence (EL 26115) which covers a total area of 1,529 km². The area can be reached via the Stuart Highway from Darwin.

This report describes the final results of literature research and target generation based on re-interpretation of magnetic/radiometric data carried out during the whole year of tenure over the Exploration Licence area.

During July 2011 consulting geologists Kastellco Geological Consultancy (“KGC”) conducted a review of existing historical exploration data within the Northern Territory Geological Survey Database. This was conducted for all the Project area to identify any high potential uranium and diamond exploration targets and resulted in the identification very little targets that warrant any further work.

On a regional basis the tenement is located in the highly prospective Davenport Mineral Field. Through detail interpretation of airborne magnetic from the Northern Territory Geological Survey magnetic and radiometric anomalies were identified and are represented in Figure 3 and 4.

Through this task, the project has demonstrated not to have any geophysical anomalies warranted for follow-up and subsequently to be totally relinquished.

3.0 LOCATION AND ACCESS

The lower south-east corner of EL 26200 is located approximately 452.5 kilometres due north-west of Tennant Creek, in Northern Territory. The lower south-east corner of EL 26202 is located approximately 490 kilometres due north-west of Tennant Creek.

The two Exploration Licences covers a combined area of 3,184 km². These areas can be reached via the Stuart Highway from Darwin and then via the Buntine Highway travelling south to reach the northern portion of the Exploration Licence areas.

The board physiographic units which occur within the tenement are dissected uplands passing into lowland plains. Dissected upland rim the tablelands and typically incorporate both Cretaceous and Proterozoic rocks.

The climate is semi-arid, tropical with a warm dry season from April to September and a hot wet season from October to March. The average annual rainfall is 1200 mm, most of which falls during the wet season. Temperatures are highest in October and November, when the mean maximum is 35-37°C and the mean minimum is 22-24°C.

The coolest months are June and July, when the mean maximum is 30-32°C and the mean minimum is 12-15 °C, with relative humidity is normally less than 50% during the dry season. The relatively soft climate of the region makes it possible to operate almost all-the-year-round.
4.0 TENEMENTS

The projects comprised of two granted exploration licence (EL) with the tenement details summarised in Table 1 and their locations are shown in Figures 1 and 2.

Table 1: Nonga Lake & Birrindudu Projects - Tenement Summary

<table>
<thead>
<tr>
<th>Project</th>
<th>Tenement Number</th>
<th>Status</th>
<th>Current Area</th>
<th>Current Holder</th>
<th>Granted Date</th>
<th>Expenditure Covenant ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonga Lake</td>
<td>EL26200</td>
<td>Granted</td>
<td>497</td>
<td>Frontier Uranium Pty Ltd</td>
<td>10/03/2008</td>
<td>$85,000</td>
</tr>
<tr>
<td>Birrindudu</td>
<td>EL26202</td>
<td>Granted</td>
<td>482</td>
<td>Frontier Uranium Pty Ltd</td>
<td>10/03/2008</td>
<td>$85,000</td>
</tr>
</tbody>
</table>

Figure 1: Nonga Lake & Birrindudu Projects – Topographic Map
5.0 GENERAL SETTING OF THE VICTORIA-BIRRINDUDU AND WISO BASINS

Deposition in the Birrindudu Basin began with sandstone transgressing over metamorphic and crystalline basement probably at about 1.7 Ga. This was accompanied by regionally extensive north-trending growth faults and volcanism, possibly indicating rifting. The Birrindudu and Tolmer groups represent the exposed basal section of this basin and may be as much as 6000 m thick locally. Apart from minor felsic volcanic rocks (tentatively assigned to undifferentiated Birrindudu Group) and carbonate rocks and shale in the upper Tolmer Group, these units are dominated by coarse clastic sedimentary rocks.

The Limbunya Group, which unconformably overlies both the Birrindudu Group and metamorphic basement, consists of 11 formations dominated by cyclic hypersaline carbonate and siliciclastic rocks. It probably exceeds 1300 m in thickness. Major basin-scale faults were active during deposition of the Limbunya Group, particularly the Stirling Sandstone. Several SHRIMP U-Pb zircon ages of about 1640 Ma were obtained from tuffaceous sediments in the Campbell Springs Dolostone and Fraynes Formation, indicating that they are the same age as rocks that host economic base metal mineralisation in the McArthur and Mount Isa Basins.

The Limbunya Group is unconformably overlain by the Wattie Group which forms the basal part of the Victoria Basin succession. This is predominantly a siliciclastic succession that contains minor carbonate intervals and rare tuffite. Regional thickness variations, with a maximum of 450 m, characterise the group.

The Wattie Group is conformably overlain by the Bullita Group, which contains five formations, including several carbonate units of regional extent. Recent NTGS stratigraphic drilling completed a stratatype section through the Bullita Group in the Victoria Basin. Drillhole 99VRNTGSDD1 intersected the Skull Creek and Timber Creek Formations. The absence of the Bardia Chert (previously mapped as a stratigraphic member of the Skull Creek Formation) confirmed it to be a Tertiary duricrust. The occurrence of epigenetic galena, pyrobitumen and live oil bleeds may indicate potential for Mississippi Valley-type, Century- and Irish-style mineralisation plays in the lower Bullita Group. Drillhole 99VRNTGSDD2 provided a stratatype section through the Kidman, Battle Creek and Bynoe Formations and Weaner Sandstone. Low-energy sub-tidally deposited clastics, and minor shallow-marine clastics and carbonates are typical. The Battle Creek Formation was found to contain poorly developed, thin black shale units. In the drill core, the Bynoe Formation contains dominantly sub-tidal facies. However, outcrop preserves a more cyclic depositional succession with thicker shallow marine evaporitic facies. In this regard, the upper Bullita Group has scope for syngenetic stratiform sediment-hosted base metals, similar to the McArthur River ore body.

The Bullita Group is unconformably overlain by the Tijunna Group. Both formations in this group consist of sandstone and mudstone with similar shale facies developed in each. The group varies in thickness up to 300 m.

The 950 m thick Auvergne Group unconformably overlies the Tijunna Group and disconformably overlies granite basement in drillhole intersections. The Auvergne Group consists of seven formations. The basal unit, Jasper Gorge Sandstone, is a transgressive nearshore marine sandstone that forms spectacular cliffs in outcrop. This is overlain by a siltstone deposited below storm wave base. Very shallow to emergent evaporitic carbonate platform conditions, punctuated
by brief episodes of wave action and storm deposition, followed. A shallow-marine shelf developed, initially dominated by clastics, but with progressively more carbonates deposition.

Sedimentation in the Victoria Basin was terminated by regional uplift prior to the Cryogenian (Neoproterozoic). The basin is unconformably overlain by remnant outcrops of several thousand metres of Neoproterozoic glacial and fluvioglacial rocks assigned to the Wolfe Creek Basin, the Cambrian Kalkarindji Continental Flood Basalt, sedimentary rocks of the Ord, Daly and Wiso Basins and patchy cover of basin-margin Mesozoic sandstone. Diamond-bearing kimberlites were intruded into the Timber Creek area of the Victoria Basin at 179 ± 2 Ma.

The McArthur Basin is considered to have potential for carbonate-hosted base metal deposits. Some uneconomic copper occurrences are located near the contact with the overlying Antrim Plateau Volcanics and limestone.

It is possible that future exploration could locate commercial copper deposits. The Antrim Plateau Volcanics are prospective for semi-precious stones such as amethyst, agate and prehnite, as well as for economic barite deposits. Recent exploration has focused on diamonds. A broad zone of micro-diamonds has been located in the central part of the Victoria Basin and diamondiferous pipes are currently being investigated at Timber Creek.

The Wiso Basin is a huge structural downwarp (160,000km²) lying west of the Tennant Region and north of the Arunta Region. Except for the southernmost depocentre, the fault-controlled Lander Trough, the basin is largely covered by a sheet-like Palaeozoic succession generally less than 300 m thick. Very little drilling has occurred in the basin and the best well control lies immediately north of the Lander Trough. Seismic and gravity survey data suggest 2,000-3,000 metres of Cambrian to Devonian sediment within the Trough. In this area little is known of source rock potential or maturity. However some structuring has been recognised within this basinal area which is considered prospective for hydrocarbons.

North of the Lander Trough an attenuated Cambrian to Ordovician succession has been intersected by drilling but this huge area is largely unexplored. The sedimentary section is immature for hydrocarbon generation but it has potential for phosphate and base metal deposits. This greenfields basin is completely under explored for minerals and petroleum and interpretation of new aeromagnetic data over the entire basin will help define the geology and economic potential.

The Wiso basins comprise predominantly shallow marine carbonate or clastic sequences underlain by sub-aerial Early Cambrian flood basalt. The basins are gently to moderately folded and contain minor base metal mineralisation. Indications of Mississippi Valley-type lead-zinc occurrences are widespread in the Georgina Basin (eg Box Hole Mine), but more geological work is needed to reliably assess the potential for such mineralisation.

There is a reasonable potential for economic phosphate deposits in the parts of the Georgina and Wiso basins. The Antrim Plateau Volcanics in the Dorisvale area (Daly Basin) contain considerable undeveloped barite resources and may be prospective for Norilsk-style nickel deposits.
6.0 PREVIOUS EXPLORATION

Exploration tenements held by PNC Exploration (Australia) Pty. Ltd. (PNC) comprising The Granites-Tanami Project were located south of EL 26200 and EL 26202. PNC held several exploration licences that included from north to south - Browns Range Dome – Supplejack Downs West – Mt. Junction (“Don Uranium Show”) – Larrangani Bluff/Coomarie Dome – Killi Killi Hills Uranium Project.

PNC provides a summary of previous uranium, gold and base metal exploration to 1986 within The Granites-Tanami region. ‘During the 1960’s the BMR undertook regional airborne magnetic, radiometric and gravity surveys over much of The Granites-Tanami region. The first reported uranium exploration in The Granites-Tanami region took place in 1960 when New Consolidated Goldfields (Australasia) Pty. Ltd. discovered uranium in the Killi Killi Hills area. The mineralisation was located in radioactive conglomerate and was found to be associated with rare earth minerals –xenotime and ?fluorencite. Maximum assays of 0.23% U₃O₈ and 5% rare earths were recorded from selected samples. Subsequent work in the same area by Queensland Mines in 1969 failed to locate economic mineralisation. The next phase of exploration was during the 1970’s. No deposits of note were located during this period.’ This exploration is summarised in Tables 2 and 3 of CR1991-0102. Most of this work was done within the Billiluna, Tanami and The Granites 1:250,000 map sheets.
The Mineral Reserves Group of Canada (listed as Energy Reserves Group in Table 3, CR1991-0102) was targeting vein unconformity mineralisation in the lower Proterozoic Killi Killi Beds of The Granites-Tanami region during 1980-81 and discovered the “Don Uranium Show” in the Gardiner Range (max 4.65% U and 2ppm Au). The mineralised Killi Killi Beds consist of shales and greywackes adjacent to the unconformity with the Gardiner sandstone. The mineralisation comprised polymetallic vein-related uranium, gold, nickel and cobalt, with associated autunite and (?) metatorbernite. They also located mineralised carbonaceous shale.

The main gold fields in the area are at Tanami (about 187 kilometres south of the southern tip of Nongra Lake—within EL 26200) and The Granites Gold mine (stratabound Lower Proterozoic Gold mineralisation). PNC state gold mineralisation within the area is epigenetic, occurring as small lenticular granite veins that are hosted by tightly folded, thin bedded, fine grained siliceous sediments, minor greywacke and intercalated basalt of the Mount Charles Beds. PNC note copper mineralisation has been recorded from several localities in the Tanami complex. The mineralisation is mostly malachite and azurite, with traces of chalcopyrite, occurring as thin smears in joints and fractures.

PNC located two radiometric anomalies, designated Anomaly A and Anomaly B, in Area 14 situated in the north-eastern margin of the Browns Range Dome (EL 4833). Area 14 is located approximately 20 kilometres south of the S18° 40’ 00.0”, E129° 20’ 00.0, near the southern margin of EL 26202. Lithological associations of a broadly similar style to Area 14 potentially exist within the northern and eastern portions of EL 26200. Area 14 consists of scattered outcrops of probable Middle Proterozoic granite and pegmatite overlaid by Pargee Sandstone. Two types of granite occur in the area: massive granite that is extensively jointed, has numerous slickensides and forms rugged, angular hills and, a foliated gneissic granite that generally forms low, rounded hills with a foliation in harmony with the margin of the Browns Range Dome. This latter granite may be a high grade metamorphic equivalent of precursor feldspathic sedimentary units with the metamorphism resulting from intrusion of the massive granites that were probably derived from a deep crustal source. PNC noted the lack of magnetic response of the granites makes recognition of similar lithologies difficult. The overlying Pargee Sandstone is extensively cross-bedded and rippled and indicative of a high energy, possible aeolian environment.

A radiometric survey detected Anomaly A (max 350 cps) and Anomaly B (max 900 cps) associated with backgrounds of 25-30 cps in the Pargee Sandstone to 40-60 cps in the granite/pegmatite.

Anomaly A is hosted within jointed, unfoliated granite and is approximately 20 metres in length and up to 3 metres in width. Local to the anomaly there is extensive silicification with a band of specular hematite and iron staining coincident with the radiometric maximum. Minor brecciation is also present with angular pieces of granite set within a silicified matrix. Anomaly B is similar to Anomaly A in all respects, though significantly the Pargee Sandstone is presenting adjacent to the radiometric zone, implying an unconformable relationship. However the Pargee Sandstone truncates the anomaly. Overall Anomaly B is approximately 75 metres in length and up to 5 metres in width. PNC interprets the extensive silicification, minor brecciation and hematite-rich zones associated with both radiometric anomalies to be of alteration of hydrothermal origin.

The two samples collected from Anomaly A assayed 125 and 65ppm uranium, both had <4ppm thorium and both had slightly elevated, 35 and 45 ppm, lead. Three samples were collected from Anomaly B, they assayed 350, 525, 350ppm uranium, all had <4ppm thorium, elevated lead (132, 295, 130ppm), elevated lanthanum (115, 125, 110ppm); two samples had elevated (710, 325ppm) yttrium.
PNC concluded that the two uranium-rich anomalies of probable hydrothermal origin within the granitic rocks of Area 14 are significant in that they provide models for future exploration.

AusQuest Limited held ELs 22642, 22643 and 22644 as part of the Antrim Project in the Northern Territory. The southern portion of EL 22644 overlapped the western portion of EL 26200. The vast majority of the area held under EL 22644 covered Lower Cambrian Antrim Plateau Volcanics; the southern limit of this EL also included a portion of the Palaeoproterozoic Birrindudu Basin.

AusQuest selected the area on the basis of ‘striking geological, geochemical, and geophysical analogies between the Cambrian Antrim continental flood basalts of northwest Australia and host rocks to the world’s largest concentrations of magmatic Ni-Cu-PGE sulphides at Noril’sk in Russia.’ AusQuest also considered the region prospective for diamonds. Exploration comprised heavy mineral and magnetic/gravity testing of a number of magnetic ‘holes’ identified in the flat lying basalts that were modelled as possible post-Middle Cambrian Kimberlite pipes.

BHP Billiton (BHPB) under a farm-in and joint venture with AusQuest identified, within EL 22644, eight apparent ‘holes in the blanket-like magnetic character of the Antrim basalt that were interpreted as potential post-Antrim kimberlitic pipe. Composite heavy mineral loam samples were collected over 7 of these features and follow-up ground magnetic and gravity surveys were conducted over two anomalies. Only one spinel grain was recovered from the heavy mineral samples and probe results failed to indicate any kimberlitic affinities.

Rio Tinto Exploration Pty. Ltd. (Rio Tinto) under a subsequent farm-in and joint venture with AusQuest drilled one RC hole at AnomalyANT033 and another at Anomaly ANR006 within EL 22644. The holes were assayed for a variety of elements including uranium. Hole RC03BIR005 was drilled to a depth of 70 metres to test anomaly ANT033. Drill samples were collected at 1 metre or 2 metres intervals and the highest U value was 18ppm and the majority was 8ppm or less. From 22 metres to the end of hole was highly ferruginous weathered basalt. The basalt was veined with quartz and calcite and was pervasively altered to iron oxide. The magnetic susceptibilities were low and could have been due to the oxidation of magnetite into haematite within the basalt or it may have been a non-magnetic basalt plug. Hole RC03BIR006 was drilled to a depth of 52 metres to test anomaly ANR006. Drill samples were collected at 1 metre or 2 metres intervals and the highest U value was 28ppm.

This diamond exploration program did not encounter any kimberlitic rocks or indicator minerals. The geophysical anomalies originally interpreted as possible kimberlitic pipes were thought to be explained by flow geometry (possible less-magnetic plugs) within the Antrim Terrain, or possibly by magnetic remanence.

BHP Billiton (BHPB), in addition to the diamond exploration program, also entered into a separate base metal exploration joint venture with AusQuest within EL 22642 and EL 22644. An RC/diamond drilling program was undertaken over several magnetic anomalies interpreted to be related to potential feeder structures for the Ni-Cu-PGE depleted Antrim basalt pile. The holes were drilled on the premise that the depleted base metal component of the basalts could have trapped sulphide cumulates in flow-through style feeder systems, similar to proposed models for the rich Noril’sk Ni-Cu-PGE deposits in Siberia.

Diamond drill hole ANTD001 was drilled in EL 22644 to a total depth of 756 metres and targeted a deep-seated, linear ‘Magnetic Rib’ feature. The ‘Rib’ was interpreted from both magnetic and ground gravity data as either a sill within the sedimentary rock sequence underlying the Antrim pile or as a substantial thickening in the basalt pile. The hole encountered 14 metres of soil and transported lateritic material and then drilled to 470.1 metres through a sequence of basalt flows. The basalt flows range from 13 metres to 231.5 metres in thickness with the latter flow overlain by a distinctive interflow
sequence composed of 3.3 metres of lithic sandstone, mudrock and stromatolitic limestone and 4.8 metres of amygdaloidal basalt breccia with a lithic sandstone matrix. The basalt sequence overlies a 3 metres thick stromatolitic limestone and mudrock unit. Underlying this unit is a matrix-supported polymictic conglomerate that unit unconformably overlies a quartz-sandstone dominated sequence that may be equivalent to one of the units of Supersequence 1 or possibly belong to an older, Mesoproterozoic sequence within the Wattie Group.

Diamond drill hole ANTD003 (EL 22642) drilled basalt to 85 metres and then a mudrock-dominated sedimentary succession that includes minor limestone and black pyritic mudstone containing trace amounts of sphalerite.

Drilling failed to intersect any Ni-Cu-PGE mineralisation or sill-like bodies.

AusQuest undertook a review of previous mineral exploration across the broader Antrim Project area. They stated the only significant result in the literature was a discovery by Ashton Mining of a regionally extensive microdiamond anomaly at the western end of the Limbunya arch, at least partially within EL 22749. The southern margin EL 22749 was located approximately 35 kilometres north of the northern margin of EL 26202. However, after much follow-up work, Ashton failed to locate the source of the microdiamond anomaly.

EL 26202 encompasses a considerable portion of the area covered held under EL 22750 and EL 22751 by AusQuest Limited. The south-western corner of EL 26200 includes part of eastern margin of AusQuest's EL 22751. ELs 22749, 22750 and 22751 were part of AusQuest Limited's Antrim Project in the Northern Territory. The broader Antrim Project Area was considered prospective for Noril'sk-style Ni-Cu-PGE sulphide deposits and for diamonds. The diamond exploration program identified 11 magnetic anomalies of interest within the Antrim Plateau Basalt. Under a joint venture agreement with BHP Billiton (BHPB) composite heavy mineral samples were collected over all 11 of these features and follow-up ground magnetic and gravity surveys were conducted over 5 anomalies and ground magnetics only over an additional 1 anomaly.

Probe results for spinel and ilmenite grains failed to indicate any kimberlitic affinities. In the absence of encouraging heavy mineral sampling indicators, the results from magnetic and gravity modelling were considered by BHPB to be of insufficient interest to warrant drill testing in their own right.

Subsequent drilling of 4 anomalies in 2003 by Rio Tinto Exploration under a joint venture agreement, intersected vesicular basalts, and possible mafic plugs. No kimberlitic lithologies or geochemistry was encountered. The ground was not considered a core component of AusQuest's Ni-Cu-PGE Project and this fact, coupled with the lack of positive diamond exploration results, resulted in the tenements being reduced by relinquishment on 2 occasions and finally surrendered.

7.0 FRONTIER EXPLORATION DURING THE TERM OF LICENCE

During July 2011 consulting geologists Kastellco Geological Consultancy ("KGC") conducted a review of existing historical exploration data within the Northern Territory Geological Survey Database. This was conducted for all the Project areas to identify any high potential base metal and uranium exploration targets and resulted in the identification of several targets that warrant further work.

Work during this term included literature searches and data base compilation. Open file company reports were obtained from the Northern Territory Geological Survey and a review of past exploration data and geological concepts undertaken.
The targeting was undertaken at a high level to identify areas of interest that stand out in the regional re-interpreted geophysical data. Historical prospects were reviewed to determine the effectiveness of the previous exploration and evaluate remaining potential within the Exploration Licence area.

On a regional basis the tenement is located in the highly prospective Davenport Mineral Field. Through detail interpretation of airborne magnetic from the Northern Territory Geological Survey magnetic and radiometric anomalies were identified and are represented in Figure 3 and 4.

Through this task, the project has demonstrated not to have any geophysical anomalies warranted for follow-up and subsequently to be totally relinquished.

Figure 3: Nonga Lake & Birrindudu Projects Areas showing TMI Image
Figure 4: Nonga Lake & Birrindudu Projects showing Uranium Channel Map

8.0 REFERENCE

