indo energy limited

Project Update
Agadez Exploration

February 2013

Summary

Uranium mineralisation has been known to occur in the Palaeo/Mesozoic Tim Mersoï Basin in Central Niger (West Africa) since the 1960s when the Arlit deposits were identified.

Uranium production commenced in 1971. Since then, two mining companies, Société des Mines de l'Aïr (Somaïr) and Compagnie Minière d'Akouta (Cominak), have produced over 130,000t of U_3O_8 (290Mlb). In 2011 they produced 4,900t of U_3O_8 (10.8Mlb).

Figure 1: Niger location map

The Imouraren Deposit which Areva is currently bringing into production was identified in the 1970s and is reported to contain reserves of 210,000t of U_3O_8 at an average grade of 0.09% U_3O_8.

In 2010 Paladin expanded its African uranium interests into Niger and in particular the Tim Mersoï Basin, through the takeover of NGM Resources Ltd, which, through its wholly owned subsidiary Indo Energy Limited (IEL), holds three prospective exploration concessions.

Paladin regards this area as one of the world's most prospective regions for uranium exploration, comparable to Namibia in Southern Africa and the Athabasca Basin in Canada.

Location and Access

Agadez is the main population centre in the Tim Mersoï Basin and is located approximately 1,000km north-east of Niamey by road. There are no regular flights from Niamey to Agadez and the drive takes approximately 14 hours.

The Basin area is desert, with minimal vegetation. Access by unsealed roads or cross country is relatively easy and sand dunes are the main impediment to access.

Final product from the current mines in the area is trucked to Cotonou in Benin and shipped from there to Dunkerque.

Exploration History

Geologists working for the French government commenced work in the Tim Mersoï Basin in 1957 with the first airborne survey flown in 1959. Follow-up work in the 1960s, which included drilling, led to the discovery of sandstone deposits in Carboniferous sediments in the Arlit area.

Somaïr was founded in 1968 and commenced mining the Tarat deposits in 1971. The Cominak mine was founded in 1974 and mining commenced at Guezouman in 1978. From 1974 to 1977 the Imouraren Deposit was drilled out by Cogema (now AREVA).

In the 1980s and 1990s uranium exploration decreased dramatically due to low uranium prices. In 2002, total production reached the 100,000tU (117,900t of U_3O_8) milestone.

Due to low reserves, exploration on the mining leases in the Arlit area recommenced in 2001 and work at the Imouraren Deposit restarted in 2006. Imouraren is currently expected to commence production in 2014.

Total uranium production from Somaïr and Cominak in 2011 was 4,900t U_3O_8 (10.8Mlb).

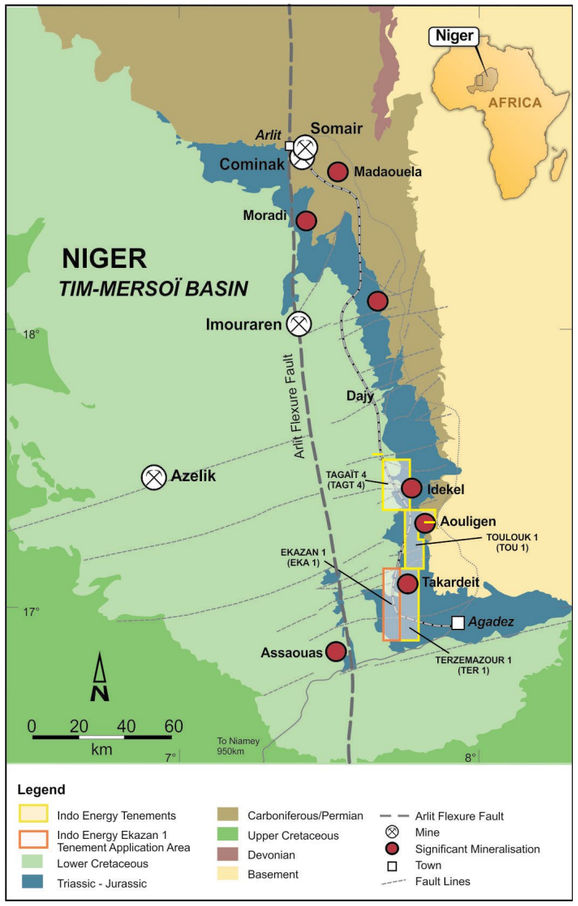

Figure 2: Regional geology and permit location.

Tenure

IEL holds three Exploration Permits with extensions granted until December 2015 covering an area of almost 740km² as shown in Figure 2.

Tagaït 4 (TA4)	246.9km²
Toulouk 1 (TOU1)	246km²
Terzemasour 1 (TER1)	242.8km²
Total	**735.7km²**

The licence extensions follow the mandated halving of each of the original concessions and this was granted for three years in December 2012. In January 2013 Paladin reapplied for the western portion of concession TER1 (EKA1), shown in Figure 2, which was surrendered as part of the halving. The application for Ekazan 1 (EKA1), 245.6km², is in the process of granting.

The Government of Niger retains a 10% free carried interest in the concessions and has the right to purchase a further 30% at the feasibility stage.

Regional Geology

The Carboniferous to Cretaceous Tim Mersoï Basin hosts all of the commercial uranium deposits in Niger. It lies unconformably on the Air Massif Precambrian basement and dips generally to the west (Figure 2). The Air Massif trends north from Agadez to Algeria where it merges with the Hoggar Massif, then west and south west into Mali and Mauritania to collectively form the Touareg Shield.

This sedimentary sequence generally thins to the south and thickens to the west. The structural configuration is thought to be mainly controlled by N-S and NNE-SSW faulting, possibly caused by Hercynian tectonics. IEL's concession area covers the contact zone of the Air Massif with the Tim Mersoï basin.

The main groups or series in order of decreasing age are:

- Carboniferous Terada and Tagora, which host the coal measures of the Sonichar mine
- Permian Izegouande
- Jurassic Goufat and Wagadi (Agadez Sandstone group)
- Cretaceous Irhazer

The surface geology over the IEL permits is dominantly represented by the Agadez group, which is further subdivided into five formations; Teloua, Mousseden, Tchirezrine I, Abinky and Tchirezrine II. The contact between the Mousseden (Goufat series) and the Tchirezrine I (Wagadi series) is regionally marked by a prominent uranium anomaly seen in the airborne radiometrics and very often associated with the occurrence of secondary uranium minerals.

The presence of volcanic analcimolite units is thought to be of importance in terms of forming an impermeable barrier within the Agadez sandstones and to act as either a stratigraphic trap or as a potential source of uranium.

Mineralisation

The uranium deposits generally occur in medium to coarse-grained sandstones deposited in a continental fluvial or marginal marine sedimentary environment (Figure 3).

Favourable sandstone horizons are commonly bounded by more impermeable units (shale or tuffaceous beds) that restricted vertical migration of fluids. These horizons also commonly contain a suitable reducing agent for the precipitation of uranium e.g. carbonaceous detrital plant debris.

In Niger, the Lower Carboniferous formations particularly the Guezouman (Akouta deposit), Tarat (Arlit deposit) and Madaouela (Madaouela deposit), host the most important uranium occurrences, although economic mineralisation is known throughout the whole succession up to the Lower Cretaceous formations, Tchirezrine II (Imouraren deposit) and Assaouas (Azelik deposit). The Lower Carboniferous also host coal deposits at Tchighozerine, immediately adjacent to the Toulouk 1 permit.

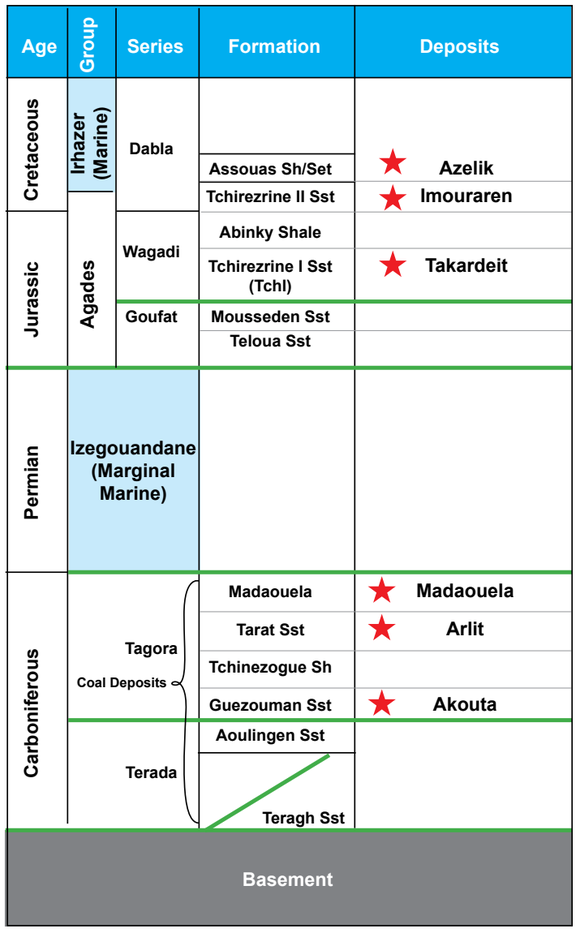

Figure 3: Stratigraphic column for the IEL permits area and stratigraphic location of the main deposits.

Project Status/Results

Prior to Paladin's takeover, IEL had completed 256 rotary mud exploration drillholes totaling 10,509m. Based on this, NGM announced a low grade resource at Takardeit of 11Mlb U_3O_8 at 210ppm at a cutoff of 120ppm U_3O_8 (TER1 Lease).

Paladin developed an exploration programme to identify high grade uranium mineralisation in the lower Carboniferous stratigraphy as well as in shallow Jurassic sediments.

A drilling programme started in March 2011 and finished in early July with a total of 11,813m in 51 drill holes. Numerous downhole radiometric anomalies were encountered, mainly in the prospective Carboniferous strata. This initial drilling programme was wide spaced, with hole spacing of 400m to 800m along profiles up to 8km apart. Although the anomalism was generally narrow (less than 1m), counts were locally often high (up to 19,700cps = approximately 0.77% eU_3O_8) and anomalous strata could be correlated at distances of up to 8km. Based on the results of this drilling campaign, there were a substantial number of follow-up targets identified for the next drilling programme. The best intersection was encountered in hole TOU016 at 230m showing 1.4m at 0.25% eU_3O_8.

An in-house evaluation of the Takardeit resource indicated the presence of a higher grade resource controlled by a previously unrecognised paleochannel system.

Due to the security situation caused by Al-Qaeda activities, no expatriate personnel from Paladin have been able to visit the project site. On-ground exploration has been carried out by local staff, with technical guidance from Perth head office.

No drilling was carried out in 2012 due to worsening of the security situation. However this is now judged to be improving and an intense drilling programme of up to 25,000m is planned for 2013.

The local IEL field crew carried out prospecting and geological mapping in 2012 to prepare for the 2013 drilling.

Camels in the Terzemasour tenement.

Development

Paladin firmly believes that it can identify new and potentially economic uranium mineralisation during the next two to three years. Average exploration expenditure for this work is estimated to be in the region of $5 million per year. Any newly-discovered resource could be drilled out in three to four years time before commencement of a feasibility study. This is expected to cost an additional US$10 million over two years.

Paladin ultimately aims to develop a mining operation producing 2,000t of U_3O_8 per year.

Agadez flourishes as a market town as well as a centre for uranium transportation.

The Agadez Grand mosque. Made of clay, it was originally built in 1515 and restored in 1844.

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The information in this document relating to exploration and mineral resources is, except where stated, based on information compiled by David Princep B.Sc who is a Fellow of the AusIMM. Mr Princep has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves", and as a Qualified Person as defined in NI 43-101. Mr Princep is a full-time employee of Paladin Energy Ltd and consents to the inclusion of this information in the form and context in which it appears.

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