EXPLORATION LICENCE 28128

KELLY WELL PROJECT

ANNUAL & FINAL REPORT

FOR THE PERIOD 14/2/2011 TO 17/3/2014

YEAR 3

BY

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Datum: GDA94, MGA Zone 53

Target Commodities: Gold, Copper and Phosphate

1:250,000 Tennant Creek SE 5314

1:100,000 Kelly 5658, Tennant Creek 5758
ABSTRACT

The Kelly Well Project is located approximately 35 kilometres southwest of Tennant Creek in the central part of the Northern Territory. EL28128 is 100% held by WDR Base Metals Pty Ltd but it is being explored as part of a larger project in the Rover field with contiguous tenements EL24471 and EL25581 which are in Joint Venture with TNG Ltd.

EL28128 is considered to be prospective for gold, copper associated with ironstones similar to that found in the Tennant Creek goldfield and phosphate mineralisation associated with the Wiso Basin.

During the second term of the licence, the only work carried out has been processing and interpretation of an airborne EM survey, which was part of a larger survey of the area. Approximately 11.2 line kilometres were surveyed. There were issues with the original processing of the data, which delayed the final interpretation.

The licence is still considered prospective for the targeted mineralisation however due to the company’s increased focus in iron ore and the expense of pursuing this opportunity, the decision was made to relinquish the licence in full. As a result no fieldwork was completed during the final reporting period.
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1. LOCATION AND ACCESS

EL28128 is located approximately 35 kilometres southwest of Tennant Creek in the central part of the Northern Territory (Figure 1). The EL covers an area of 184.59 square kilometres (58 sub blocks).

Access to, and within, the area is by the sealed Stuart Highway south from Tennant Creek, and then by unsealed station tracks leading west from the Stuart Highway. The licence is located within the boundaries of Perpetual Pastoral Lease 1142 – Tennant Creek Station.

The area has an arid, tropical climate with long, hot summers and short, mild winters. Rainfall can occur throughout the year but the majority of falls occur in summer with the annual rainfall being about 400mm.
2. **TENURE**

EL28128 was granted to WDR Base Metals Pty Ltd (a wholly owned subsidiary of Western Desert Resources Ltd) for six years on 14/2/2011. The licence was surrendered in full by WDR on the 17th March 2014.

3. **REGIONAL GEOLOGY**

The tenement is located on the western margin of the Tennant Creek Inlier (Donnellan et al 1999). The central part of the Inlier is comprised of the Tennant Creek Province of Palaeoproterozoic age. This consists of a flysch sequence, the Warramunga Formation, which has been intruded by granitoids. The sedimentary sequence is overlain by extrusive volcanic rocks and associated sediments of the Flynn Subgroup.

The Warramunga Formation hosts the gold-copper-bismuth mineralisation of the Tennant Creek goldfield. The mineralisation is associated with ironstone.

The Middle Cambrian Wiso Basin covers the basement rocks west of the Tennant Creek Inlier. This is a sedimentary sequence consisting of the Montejinni Limestone and the Hooker Creek Formation (sandstone and siltstone).

4. **LOCAL GEOLOGY**

Due to a thick cover of younger sediments over most of the tenement area, there is little exposure of Cambrian or Proterozoic rocks (Figure 2). There is a small outcrop in the central-south eastern portion of the lease which contains a circular outcrop of the Unimbra Sandstone, which is part of the Hatches Creek Group which overlies the Flynn SubGroup. Targeting the prospective Warramunga Formation will therefore rely heavily on geophysical data in this area.

The magnetic signature of the tenement area is uniformly subdued.
Figure 2: Local Geology (based on NTGS 250K geological sheet)
5. **PREVIOUS EXPLORATION**

The tenement has been held as part of larger surrounding tenement in the past, but there has been no record of any significant exploration other than regional airborne surveys in this area (eg. Noblex (1972-1976) and Occidental Minerals (1980-1981)).

6. **EXPLORATION ACTIVITIES - PREVIOUS**

**Year 1**

Western Desert Resources commissioned a HELITEM survey with Fugro Airborne Surveys over EL28128 and adjacent tenements during the first reporting period. The survey was flown from April 30 to May 1, 2011. Approximately 11.2km of the total surveyed area was on EL28128. The location of the lines is shown in Figure 3.

The purpose of the survey was to determine the existence and locations of bedrock conductors and for better understanding of the subsurface geology. The EM data and the magnetic data were processed to produce images and profiles that are indicative of the magnetic and conductive properties of the survey areas.

A consultant was engaged to interpret the results of the survey, and it became clear that the data had been incorrectly processed. Fugro was engaged to reprocess the data before an interpretation of the survey could be completed.

**Year 2**

During the second reporting period Fugro was engaged to reprocess the data from the HELITEM survey completed in the previously. A consultant was then engaged to interpret the data. One Priority 2 target was identified within EL28128 located at 384,455mE and 7,796,490mN. See Figure 4.
Figure 3: Location of EM lines on aeromagnetic image (and geology boundaries as for Figure 2)
Figure 4: Location of EM lines and interpreted targets over magnetic image
7. **EXPLORATION ACTIVITIES – CURRENT PERIOD**

Exploration activities as previously planned for the current reporting period did not eventuate due to focus on other operations within the Northern Territory. The decision was subsequently made to relinquish the licence in full.

8. **REFERENCES**


Bennett, A., 2013. EL28128 Kelly Well Project Annual Report for the period 14 February 2012 to 13 February 2013, Year 2. *Western Desert Resources Limited*.