

AMALGAMATED ANNUAL REPORT FOR
MLS 150 & 151
WHITE RANGE GOLD MINE
NORTHERN TERRITORY
FOR THE YEAR ENDED 20th March 2017

Author : Red Dingo Corp Pty Ltd
Submission Date : 17th May 2017
Reporting Period : 21st March 2016 – 20th March 2017
Tenement : MLS 150 & 151
Amalgamated Reporting I.D. : GR 454
Map Sheets : Alice Springs 1:250,000 (SF5314)
Riddoch 1:100,000 (5851)

<u>Chapter</u>	<u>Title</u>	<u>Page No:</u>
1.0	Introduction	3
2.0	Location and Access	3
3.0	Tenure	3
4.0	Geology	4
4.1	Geophysics	8
5.0	Ore Reserves and Resource	9
6.0	Historic Mining	10
7.0	Previous Exploration	10
8.0	Previous Mining	11
9.0	Proposed Exploration	11
10.0	Activities 2015 / 2016	12
11.0	Proposed Activities 2016 / 2017	13
	References	14

List of Attached Figures

Figure	Title	
1	Location Plan White Range Gold Mine	15
2	Google Tenement Map MLS 150 & MLS 151	16

1.0 INTRODUCTION

This Annual Report documents activities undertaken for the Year 2016 / 17 on MLS 150 and MLS 151.

MLS 150 is the White Range Gold Mine.

MLS 151 is a bore field and pipeline easement to service a water supply for MLS 150.

2.0 LOCATION and ACCESS

These Tenements are located just east of Arltunga in the Eastern MacDonnell Ranges, approximately 130km east of Alice Springs in the Northern Territory and covers portions of the Mt Riddoch (SF58-51), 1:100,000 map sheet (Fig. 2.1). The tenement lies within the Ambalindum Perpetual Pastoral Lease on the Tropic of Capricorn.

Access is via the all weather Ross Highway for approximately 80km to the Arltunga Tourist Drive turnoff. Arltunga is a further 33km on a well formed unsealed road to the Ruby Gap Road turnoff. Approximately 10km down the Ruby Gap Road there is a turnoff to the White Range Gold Mine which is approximately a further 10km.

3.0 TENURES

Table 1: MLS 150 & 151 Summary

MLS	Area: Hectares	Grant Date	Expiry Date
150	558	21 st March 1989	20 th March 2034
151	20	17 th June 1996	16 th June 2021

4.0 GEOLOGY

The Geology of Arltunga and White Range has been very well documented some of which is as follows :

Report on a Journey from Adelaide to Hale River.	Brown H.Y.L.	1889
Geological Examination of Country in the Neighbourhood of Alice Springs.	Brown H.Y.L.	1890
Report on the White Range Properties.	Davidson A.A.	1890
Arltunga Goldfield & Harts Range Mica Field.	Brown H.Y.L.	1896
Record of Mining in the Northern Territory.	Playford, & Copley E.	1900
Reports of Arltunga Government Battery.	Corbin H.B.	1902
The Gold Discoveries near Winnecke's Depot & Mines on the Arltunga Goldfields.	Brown H.Y.L.	1903
Report on the Arltunga & Winnecke's Goldfields.	Matthews W.H.	1905
Arltunga Battery & Cyanide Works Records.	S.A. Dept. Mines	1913
Report on a Visit to the Excelsior Lease White Range.	Robinson A.D. The Bon C.R.	1932
The Geology of the Eastern MacDonnell Ranges	Madigan C.T.	1932
Report No: 20 Eastern Portion Arltunga Area.	Hossfield P.S.	1935/6
Report No: 28 The White Range Gold-Field.	Hossfield P.S.	1937
Report No: 39 The Glankroil Mine, Winnecke Gold-field, Eastern MacDonnell Ranges District. Aerial Geological & Geophysical Survey.	Hossfield P.S.	1937
Bulletin 26, The Geology & Mica-Fields of the Harts Range.	Joklik G.F.	1955
Report on the Examination of the White Range Gold Field.	Blockley	1957
A Report on the White Range Gold Prospect	Shepherd J. & Grenning P.J.	1962
Preliminary Examination of McIntyre's Adit & Nearby Workings Excelsior Lease, White Range.	Woolley D.R. & Rochow K.A.	1963

The Geology of the Amadeus Basin, Central Australia	Wells A.T. Ranford L.C. Cook P.J. Forman D.J.	1967
Geology of the Northeastern Part of the Amadeus Basin.	Wells A.T. Ranford L.C. Stewart A.J. Cook P.F. Shaw R.D.	1967
Regional Geology & Structure of the North-eastern Margin of the Amadeus Basin, NT.	Forman D.J. Milligan E.N. & McCarthy W.R.	1967
Progress Report on the Arltunga Nappe.	Stewart A.J.	1969
Final Report on A.P.1724.	Ransom D.M.	1970
Progress Reports on detailed studies in the Arltunga Nappe Complex.	Shaw R.D. Stewart A.J. Yar Khan M. Funk J.L.	1971
Potassium-Argon Dates from the Arltunga Nappe.	Stewart A.J.	1971
The Arltunga Nappe Complex MacDonnell Ranges N.T.	Forman D.J.	1971
Annual Report EL 49	Centamin Ltd.	1971
The Structure & Microfabric of a Part of the Arltunga Nappe Complex, Central Aust.	Yar Khan M.	1972
Deformation of the Crust & Mantle in Central Australia.	Forman D.J. & Shaw R.D.	1973
The Gravity Effects of three large uplifted granulite Blocks in Separate Australian Shield Areas.	Antiloff W. & Shaw R.D.	1973
Summary of Information on Mineral Deposits of the Arunta Block.	Stewart A.J. Shaw R.D. Warren R.G.	1974
Rubidium-Strontium dates & Extraneous Argon In the Arltunga Nappe Complex.	Armstrong R.L. & Stewart A.J.	1975
Precambrian Structures & Metamorphic of Central Australia & Tennant Creek.	Stewart A.J. Warren R.G. Langworthy A.P. Offe L.A. Glikson A.Y. Wells A.T. LeMessurier P. Gardner J.E.F.	1976
The Mineral Potential of Arunta Block	Stewart A.J. Warren R.G.	1977
The Age of the Stuart Dyke Swarm & it's Bearing on The Onset of Late Precambrian Sedimentations in Central Aust.	Black L.P. Shaw R.D. & Offe L.A.	1980
Geological Evolution of the Arltunga Nappe	Shaw R.D. Stewart A.J. Black L.P.	1981

Geology of the Arltunga - Harts Range Region.	Shaw R.D. Stewart A.J. Rickard M.J.	1982
Study of a Polymetamorphic Complex in the Arunta Complex, Central Aust.	Allen A.R. & Stubbs D.	1982
Detailed Description of the Geology of the Arltunga Historic Reserve & a Review of the Gold Mining Potential of the White Range Gold Field NTGS 1983 / 16	Mackie A.W.	1983
Metamorphic & Tectonic Evolution of Granulites, Aruntu Block, Central Aust.	Warren R.G.	1983
Geo-chronology of Proterozoic Events in the Arunta Inlier, Central Australia.	Black L.P. Shaw R.D. & Stewart A.J.	1983
The Arunta Inlier.	Shaw R.D. Stewart A.J. & Black L.P.	1984
Ages of the Arunta, Tennant Creek & Georgetown Inliers of Northern Aust.	Black L.P. & McCulloch M.T.	1984
A Crustal Thrust System in an Intracratonic Tectonic Environment.	Teyssier C.	1985
High Strain Zones in the Continental Crust: the Central Australian example.	Teyssier C.	1985
White Range Property Examination Report.	Stephenson J.	1985
Structural Evolution of the Harts Range Area & It's Implication for the Development of the Arunta Block, Central Aust.	Ding P. & James P.R.	1985
Explanatory Notes Illogwa Creek 1:250,000 Geological Series 2 nd Edition SF 53 / 15.	Shaw R.D. & Freeman M.J.	1985
Geology & Fluid Inclusion Decrepitation Studies at the Arltunga Goldfield N.T.	Burlinson K.G. & Mackie A.W.	1985
Arltunga Geology & History.	Mackie A.W.	1986
The Geology of White Range Gold Mineralization.	Carthew S. & B.	1987
Explanatory Notes Huckitta 1:250,000 Geology Series, SF 53/11.	Freeman M.	1987
Annual Report Exploration License 4799	Rogers M.C.	1987
Crustal Scale Ductile Fault Systems in the Arunta Inlier, Central Australia.	Collins W.J. & Teyssier C.	1987

The Iwupataka Complex: A Key Area of the Proterozoic & Paleozoic Thrust System in the South Arunta Block & it's Kinematic Significance.	Amri C. Hobbs B.E. & Ralser S.	1987
Structural Control on the Gold Mineralisation Arltunga, N.T.	Wilson C.J.L.	1987
Annual Report Exploration of EL 4799.	Ogierman J. & Rogers M.C.	1988
Structural & Lithological Controls on the Gold Mineralisations at Arltunga, N.T.	Dirks P.H. Wilson C.J.L.	1988
White Range Gold Preliminary Environmental Report.	McIntosh A.H.	1988
Annual Report EL4799.	Rogers M.C.	1989
Relationships Between Deformation & Basin Evolution In the Intracratonic Amadeus Basin, Central Aust.	Korsch R.J. & Lindsay J.F.	1989
Tectonic Evolution of the Arltunga Nappe Complex.	Dunlap W.J. Teyssier C. & McDougall I.	1990
Annual Report 21/3/89 to 20/3/90.	Wakelin-King G.A.	1991
Geological Report on Gold-Bearing Quartz Veins Of White Range.	Kirschner D.L.	1991
Deformation History of the White Range Duplex,	Kirschner D.L.	1991
Analysis of Dislocation Creep Microstructures in Heavytree Quartzite Deformed in the Ruby Gap Duplex, Central Aust.	Hirth G. Dunlap W.J. & Teyssier C.	1991
Structure, Kinematics & Cooling History of the Arltunga Nappe Complex, Central Aust. Central Aust. with Implications for Fold Reorientation.	Dunlap W.J.	1992
Vein Growth Mechanisms & Fluid Sources Revealed by Oxygen Isotope Laser Microprobe.	Kirschner D.L. Teyssier C. & Sharp Z.D.	1993
Orthorhombically Arranged Vein Arrays	Kirschner D.L. Teyssier C.	1993
Effect of Deformation on Oxygen Isotope Exchange In the Heavytree Quartzite, Ruby Gap Duplex.	Kirschner D.L. Teyssier C. Gregory R.T. & Sharp Z.D.	1995
Thermal & Structural Evolution of Intracratonic Arltunga Nappe Complex, Central Aust.	Dunlap W.J. Teyssier C. McDougall I. & Baldwin S.	1995

4.1 GEOPHISYCS

Report on Induced Polarization & Magnetometer Surveys, Rankins Prospect & White Range	Gedde R.W.	1969
Arltunga Detailed Airborne Magnetic & Radiometric Survey.	Taylor R.J.	1977
Austirex Geophysical Survey Results.	T.V. Harvey & Associates	1988
Skytem Survey Reward Minerals Ltd	Geoforce	2008

5.0 ORE RESERVES AND RESOURCES

At the commencement of mining by White Range Gold NL in 1989, the probable ore reserves were stated as :

850,000 tonnes @ 4.7 g Au/t (*M Rogers & Associates December 1989*)

Mining from 1989 to 1991 was approximately 530,000 tonnes.
In November 1991, the remaining reserves were quoted as

Proved Ore Reserves :	160,000 tonnes
Measured Resource :	180,000 tonnes
Total Reserves and Resource	340,000 tonnes

Ore reserves and resources are based on drill intercepts with an average spacing of 7.5m on sections at 10m intervals. Approximately 65% of total drilling was open hole percussion and 35% reverse circulation percussion.

Samples were split at one metre intervals and open hole percussion samples were assayed for gold by acid digest on 40g charges with Atomic Absorption Spectrometry (AAS) determination. Reverse circulation samples were assayed by fire assay on 50g charges and economic grades are checked by acid digest on 35g charges with AAS determination. At various stages assays are repeated by splitting primary drill samples.

Open hole drill collars were surveyed and reverse circulation drill holes were surveyed at the collar and down the hole. Geology and assays were plotted on cross sections, ore lenses were rationalized and interpreted by plotting level plans using customized Surpac mining software. Criteria for the limits of ore lenses were 2 g Au/t cutoff over minimum 2m horizontal width and 10m strike length.

Ore volumes were computed from lens shapes on bench plans at 5m vertical intervals. Tonnage conversion was based on an average specific gravity of 2.5. Grade estimate of ore lenses on bench plans was based on the arithmetic mean of drill intercepts using a top cut of 15 g Au/t. Global pit grades are tonnage weighted on a bench by bench basis.

6 HISTORIC MINING (1886 to 1970)

Mining commenced in the Arltunga region around 1886 after the mistaken perception that Rubies had been discovered at Ruby Gap approximately 35km away causing a “Ruby Rush” of hopeful miners. When it was discovered that the Rubies were actually Garnet, attention was diverted to Quartz reefs around Arltunga and in particular White Range.

Mining occurred in the following areas of MLS 150 :

AMALGAMATED
BILLYCAN
BOULDER
CENTRAL
EXCELSIOR
EXCELSIOR EXTENDED
HOLLY OAK
LUCES
NORTH BLOCK
OVERSIGHT
SOUTH BLOCK
WEST BLOCK

7.0 PREVIOUS EXPLORATION (1985 to 1989)

Whilst most of the drilling undertaken from 1987 to 1989 concentrated on “Resource” drilling, exploration drilling was undertaken in the following regions which have not as yet been mined.

REGION	HOLES	METRES
Black Devil	15	648
Boulder	1	34
Central	11	404
Eastern Schist region	8	466
Excelsior South	8	343
Holly Oak	33	1095
North Block East	19	702
Oversight	13	468
South Block	30	1093
West of West Block	20	598

8.0 PREVIOUS MINING (1886 to 1992)

Mining at White Range, between 1886 and 1970 was by shaft mining, predominantly, on specific quartz veins.

Modern mining from 1989 to 1991 by White Range Gold NL was by open pit method undertaken on the side of a steeply sloping quartzite range some 200 metres in vertical height. Some 530,000 tonnes of ore was extracted from 5 open cut pits in the regions of :

EXCELSIOR
EXTENDED
LUCES
NORTH BLOCK
WEST BLOCK

9.0 PROPOSED EXPLORATION

To date, the boundaries of mineralization of the White Range deposit have not been established. The exploration potential of the White Range Mineral Lease has been reviewed by Independent consultants :

J Gilfillan Associates Pty Ltd (1991)
Dr Chris Giles (1991)
Dr David Kirschner & Dr Christian Teyssier (1991)

J Gilfillan's February 1991 assessment indicates a high likelihood of success in defining a resource in the order of a further 400,000 tonnes. The potential ore would be of similar grade and at a similar waste to ore stripping ratio to that previously mined. An additional 100,000 to 200,000 tonnes of resource potential beneath the barren metatonalite cover is also indicated, albeit at a slightly higher waste to ore stripping ratio.

Most of the potential 400,000 tonnes of additional resource is located within a one kilometer radius of the ROM Pad and is mineable by open pit. The main target areas are mapped but undrilled quartz veins in gullies between existing pits and in an area immediately west of the present open pits.

With the aim of defining further ore resources at White Range, Dr Chris Giles was commissioned in August 1991 to assess and to plan a drilling program. Giles' report proposes a drilling program with good potential for the discovery of 200,000 tonnes of additional ore mainly from one area and at currently mined grades. Giles report was prepared following two site visits, inspection of targets in the field and a review of geological interpretations.

The main target areas are exposed quartz veins mineable by open pit methods and located within one kilometer of the ROM Pad.

Dr David Kirschner was a PhD student of Dr Christian Teyssier and later became Professor at St Louis University. In February 1991, Dr Kirschner provided a very detailed report, which forms part of Annual Report CR1993/027, titled "Deformation History of the White Range Duplex, Central Australia, with Implications for Fold Reorientation", with attached appendix 2 "Structural Geology Report". David Kirschner also confirmed the likelihood of defining further resources in the region immediately east of existing workings east of the Quartzite Metatonalite contact

Dr Christian Teyssier is a professor in the Department of Geology and Geophysics at the University of Minnesota and has undertaken several published geological studies and papers on Central Australia. We had Dr Teyssier visit the site in July 2014 together with Dr Donna Whitney, who is a metamorphic petrologist also at the University of Minnesota, to consult further in respect of our interest in further exploration for this site. They have introduced us to Tectonicist Professor Dr Patrice Rey from Sydney University who visited with us in August 2015 to discuss bringing some of his students to site to assist with mapping.

10.0 Activities 2016 / 2017

During the past twelve months the site has been on care and maintenance.

Proposed Sampling Program.

A proposed sampling program has been submitted to the Department on a number of occasions over the past 2 years in an endeavor to establish that the old Heap Leach Waste Rock Stockpiles do not present any contamination risk which would allow us to continue using this material for local repairs and maintenance both on site and off site and for sale.

Ongoing Weed Control.

We have continued the removal of any Athol Pine Trees in the Tailings Storage Facility continued and of more recent times herbicide has been applied in case some of the regrowth may relate to partial root systems that may have remained as a result of removal. Our program addressing any outbreaks of Ruby Dock (*Acetosa vesicaria*) and Kapok Bush (*Aerva javanica*) continue.

Water Sampling.

The Department had their Technical people visit to undertake some on site independent water sampling, the results of which we understand supported the system we have been using. Further Water Sampling was undertaken this year from the 3 Water Table Monitoring Bores, (*Piezometers*) down stream of the Tailings Storage Facility. The results of these tests were provided by Low Ecological Services and or Intermin Resources Ltd.

11.0 Proposed Activities 2017 / 2018

Continued weed control will be maintained along with adequate erosion control as advised by Low Ecological Services Pty Ltd along with the immediate removal of any class A & B Declared Weeds.

Any rocks containing sulphides or which seem to be releasing acid will be retrieved and placed in temporary safe storage in the Tailings Storage Facility.

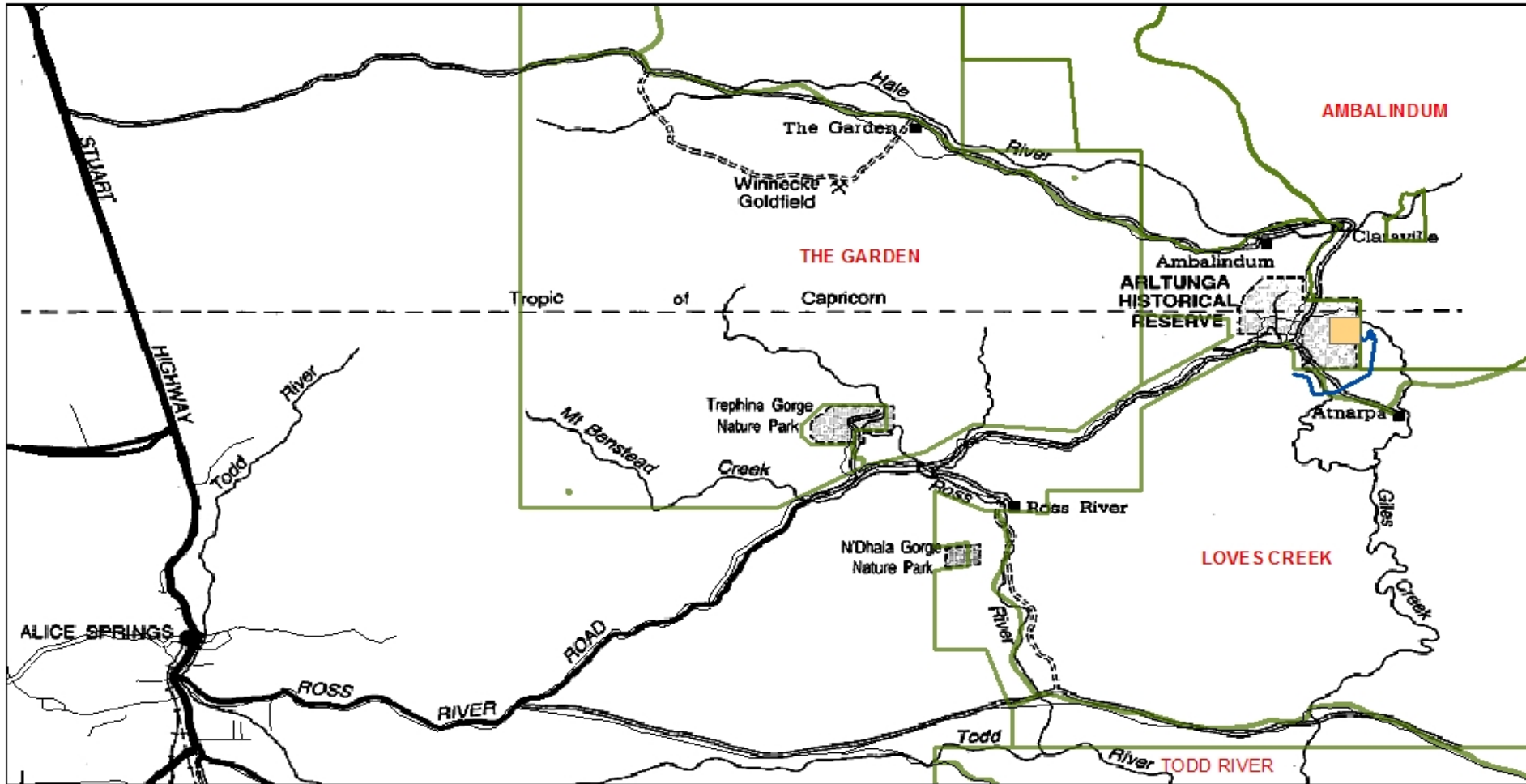
It is hoped that permission, which has been sought for over 18 months now, to sample the old Heap Leach Stockpiles for possible contamination, may be approved by the Department so an MMP can be submitted for this sampling work to be undertaken.

We are hopeful that the Department may approve an MMP, which will be lodged when the sampling program has been approved, to enable samples to be taken from the old Heap Leach Waste Rock Stockpile to establish it's non-contaminated status allowing us to seek approval to use this material for things like access road maintenance, erosion control and for sale.

12.0 REFERENCES

Dr. D Kirschner & Dr C Teyssier
S. & B. Carthew, Rocks Prospecting Pty Ltd
J Stephenson, Placer Prospecting Pty Ltd
White Range Gold Mine Ltd
Berthe
Price
Lister & Hobbs
Hanmer
A.W. Mackie
Hossfield
Passchier & Simpson
Korsch & Lindsay
Forman & Shaw
Rutland
Stewart
Majorbanks
Means
Dunlap
Burg

M Rogers & Associates
J Gilfillan & Associates
Dr C Giles
W.J. Collins & C. Teyssier
Bouchez
Platt
Lisle
Law
Goldstein
Wells
Green & Usdansky
Simpson & Schmid
Boyer & Elliot
Yar Khann
Hobbs
Fry
Lister & Snoko
Tullis



DATA SOURCE:

Background: Geo Data Topo

Projection: Universal Transverse Mercator (UTM)

Map Grid of Australia (MGA), Zone 53

Horizontal Datum: Geodetic Datum of Australia (GDA94)

For further information, please contact:

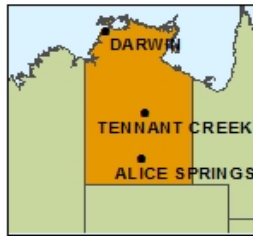
Low Ecological Services P/L

Phone: (08) 89555 222

Fax: (08) 89555 722

Web: <www.lowecol.com.au>

lowecol@lowecol.com.au



Legend

- Station track
- Sealed road
- Unsealed road
- ▭ Pastoral Properties

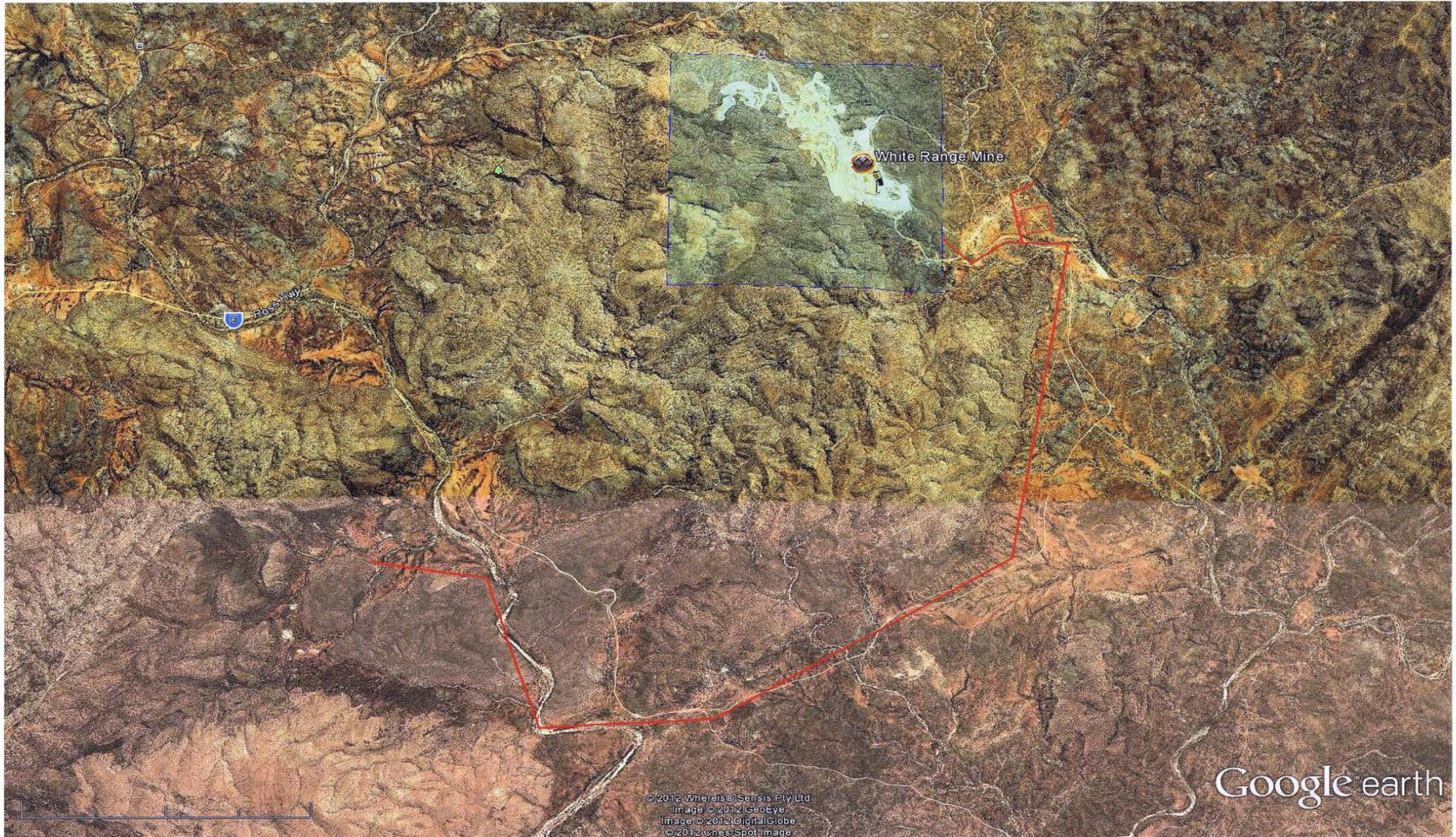
- ▭ MLS150
- ▭ MLS151

RED DINGO CORPORATION

Location Map

White Range Gold Mine

Low Ecological Services P/L



© 2012 Whereis® Satsis Fly Ltd
Image © 2012 GeoEye
Image © 2012 DigitalGlobe
© 2012 OneSpot Image

Google earth

Google earth

miles
km

