



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

| | |
|-------------------------------|-----------------------------------|
| Purpose Permit number: | CPS 3387/1 |
| Permit Holder: | Shire of Laverton |
| Duration of Permit: | 17 January 2010 – 17 January 2015 |

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of gravel extraction and road maintenance and upgrades.

2. Land on which clearing is to be done

GREAT CENTRAL ROAD RESERVE (LAVERTON 6440) PIN 11691460
LOT 62 ON PLAN 31270 (Lot No. 62 URAREY-WARREN BORE BANDYA 6440)
CROWN RESERVE 6885 (LAVERTON 6440)
LOT 42 ON PLAN 238645 (LAVERTON 6440)
LOT 327 ON PLAN 42627 (LAVERTON 6440)
ERLISTOUN ROAD RESERVE (LAVERTON 6440) PIN 11691414
BANDYA ROAD RESERVE (LAVERTON 6440) PIN 11713956
LOT 26 ON PLAN 240220 (LAVERTON 6440)
UNALLOCATED CROWN LAND (LAVERTON 6440) PIN 959971
LOT 45 ON PLAN 220998 (BANDYA 6440)
LOT 55 ON PLAN 240377 (COSMO NEWBERY 6440)
LOT 37 ON PLAN 238200 (LAVERTON 6440)

3. Area of Clearing

The Permit Holder must not clear more than 141.14 hectares of native vegetation within the area shaded yellow on attached Plans 3387/1a, 3387/1b, 3387/1c, 3387/1d, 3387/1e, 3387/1f, 3387/1g, 3387/1h, 3387/1i, 3387/1j, 3387/1k, 3387/1l, 3387/m, 3387/1n, 3387/1o and 3387/1p.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

5. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for activities to the extent that the Permit Holder has the power to clear native vegetation for those activities under the *Local Government Act 1995* or any other written law.

6. Compliance with Assessment Sequence and Management Procedures

Prior to clearing any native vegetation under conditions 1, 2 and 3 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

7. Avoid, minimise etc clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- (a) avoid the clearing of native vegetation;
- (b) minimise the amount of native vegetation to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

8. Retain vegetative material and topsoil, ripping, revegetation and rehabilitation

- (a) The Permit Holder shall retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that is already cleared.
- (b) Prior to undertaking works pursuant to conditions 8(c), the Permit Holder shall rip compacted areas within the extraction site.
- (c) At an *optimal time* following clearing authorised under this Permit, lay the vegetative material and topsoil on the cleared area.
- (d) Within twenty four months of laying the vegetative material and topsoil on the cleared area in accordance with condition 8(c) of this Permit, the Permit Holder must:
 - (i) determine the species composition, structure and density of the area *rehabilitated*; and
 - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 8(d)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, the Permit Holder must *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.

PART III - RECORD KEEPING AND REPORTING

9. Records must be kept

- (a) The Permit Holder must maintain the following records for activities done pursuant to this Permit in relation to the clearing of native vegetation authorised under this Permit:
 - (i) the species composition, structure and density of the cleared area;
 - (ii) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (iii) the date that the area was cleared; and
 - (iv) the size of the area cleared (in hectares).
- (b) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 8 of this Permit:
 - (i) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
 - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares); and
 - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*.

10. Reporting

- (a) The Permit Holder must provide to the CEO, on or before 30 June of each year, a written report of records required under condition 9 of this Permit and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 17 October 2014, the Permit Holder must provide to the CEO a written report of records required under condition 9 of this Permit where these records have not already been provided under condition 10(a) of this Permit.

Definitions

The following meanings are given to terms used in this Permit:

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

local provenance means native vegetation seeds and propagating material from natural sources within #1 kilometres of the area cleared.

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

optimal time means the period from April to May for undertaking *planting*;

plant/ing means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

regenerate/ed/ion means *revegetation* that can be established from in situ seed banks contained either within the topsoil or seed-bearing *mulch*;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area

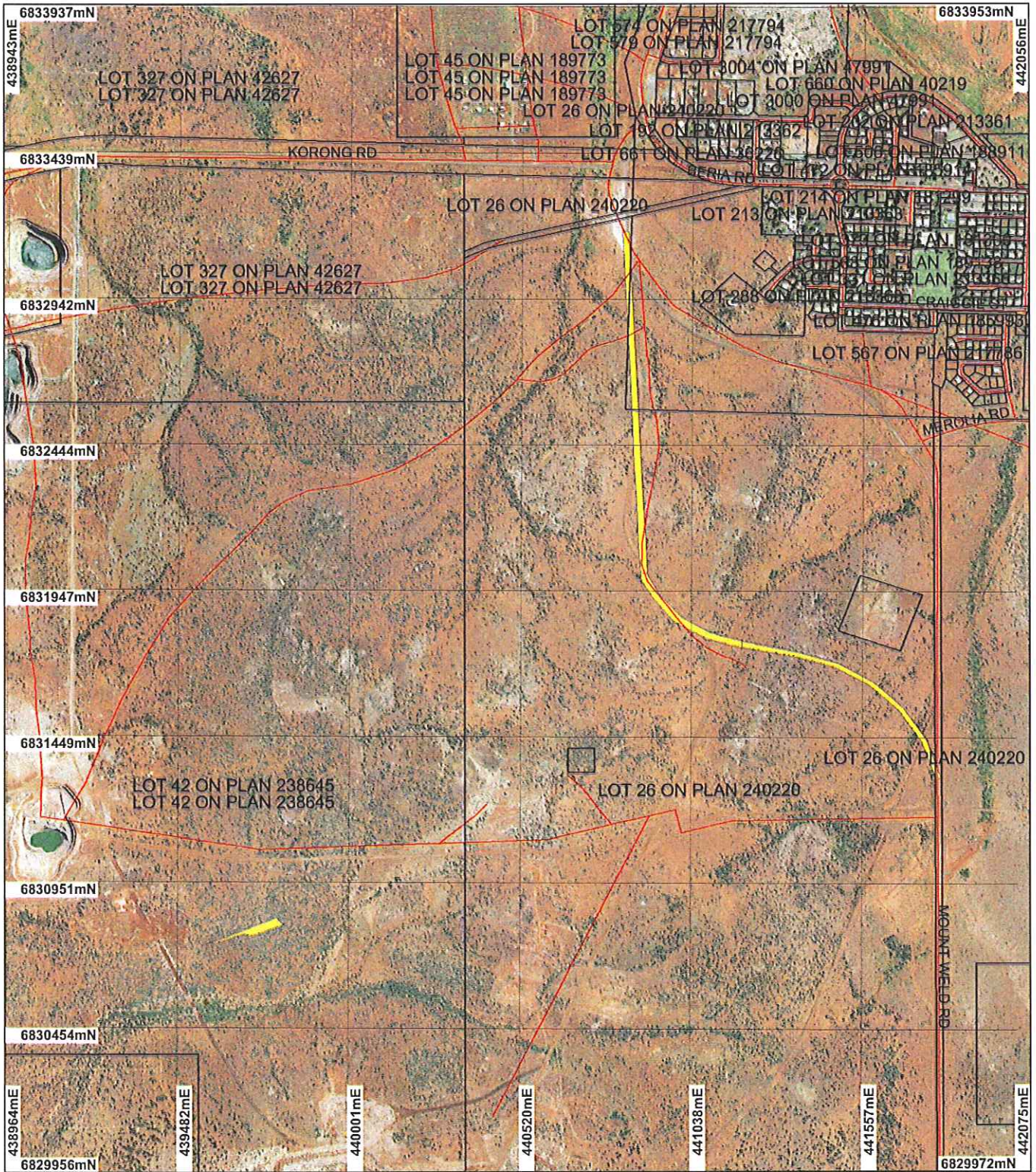


Keith Claymore
A/ ASSISTANT DIRECTOR
NATURE CONSERVATION DIVISION

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

17 December 2009

Plan 3387/1a



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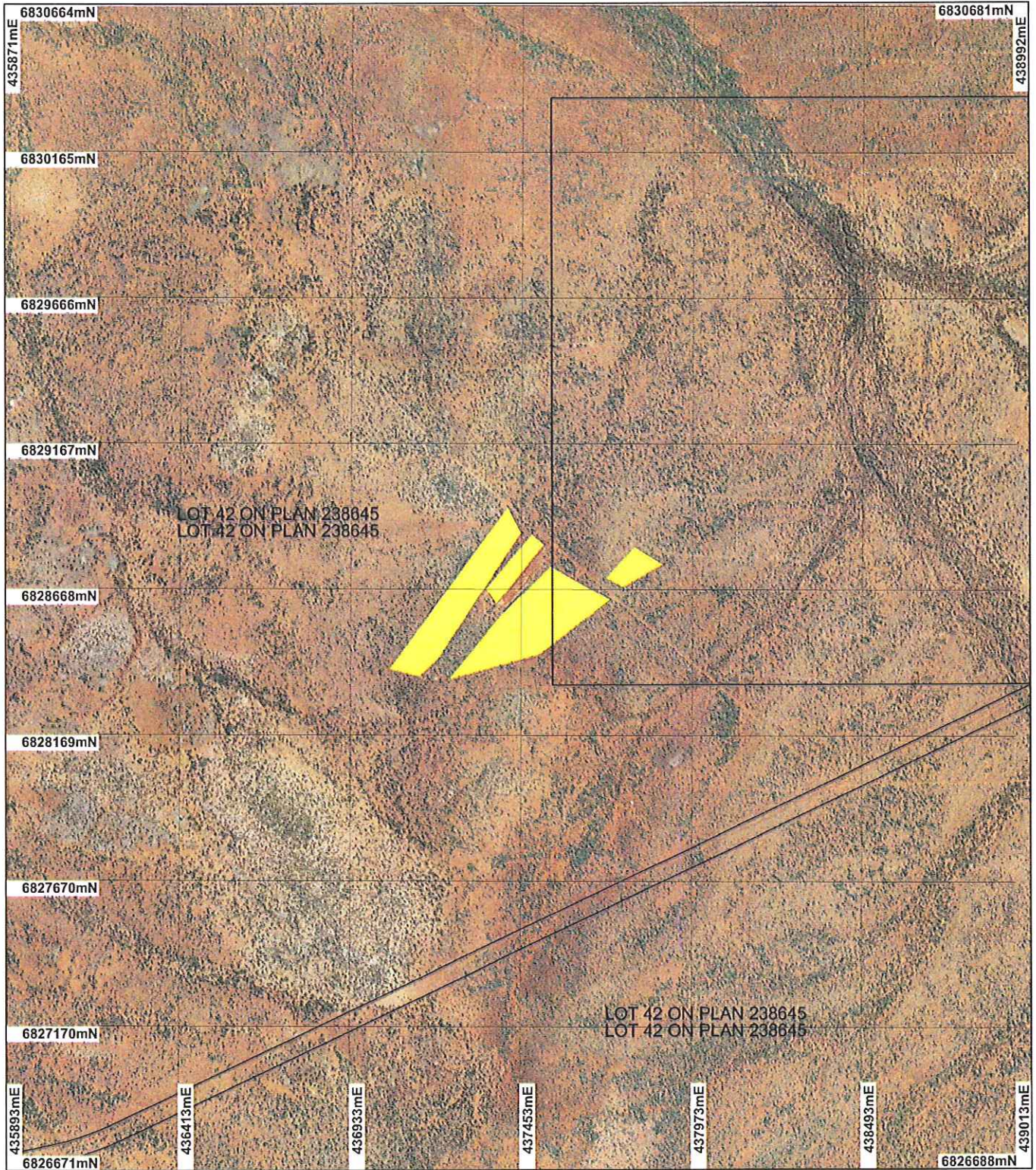
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 (Approximate when reproduced at A4)
 Geocentric Datum Australia 1994
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K Claymore Date 17/12/09
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Kinchyama Date 17/12/09

K Claymore

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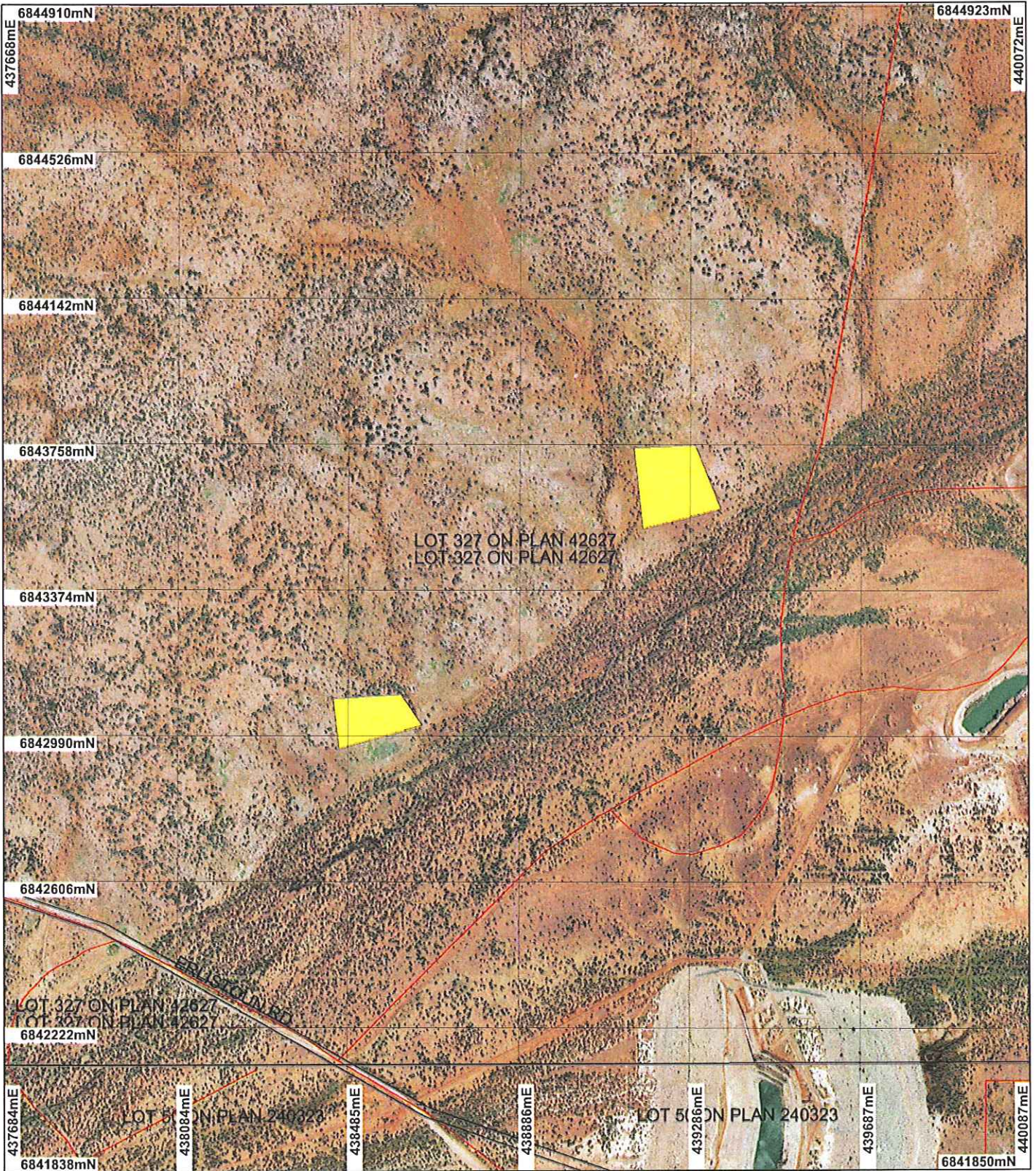
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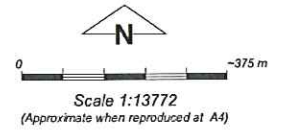
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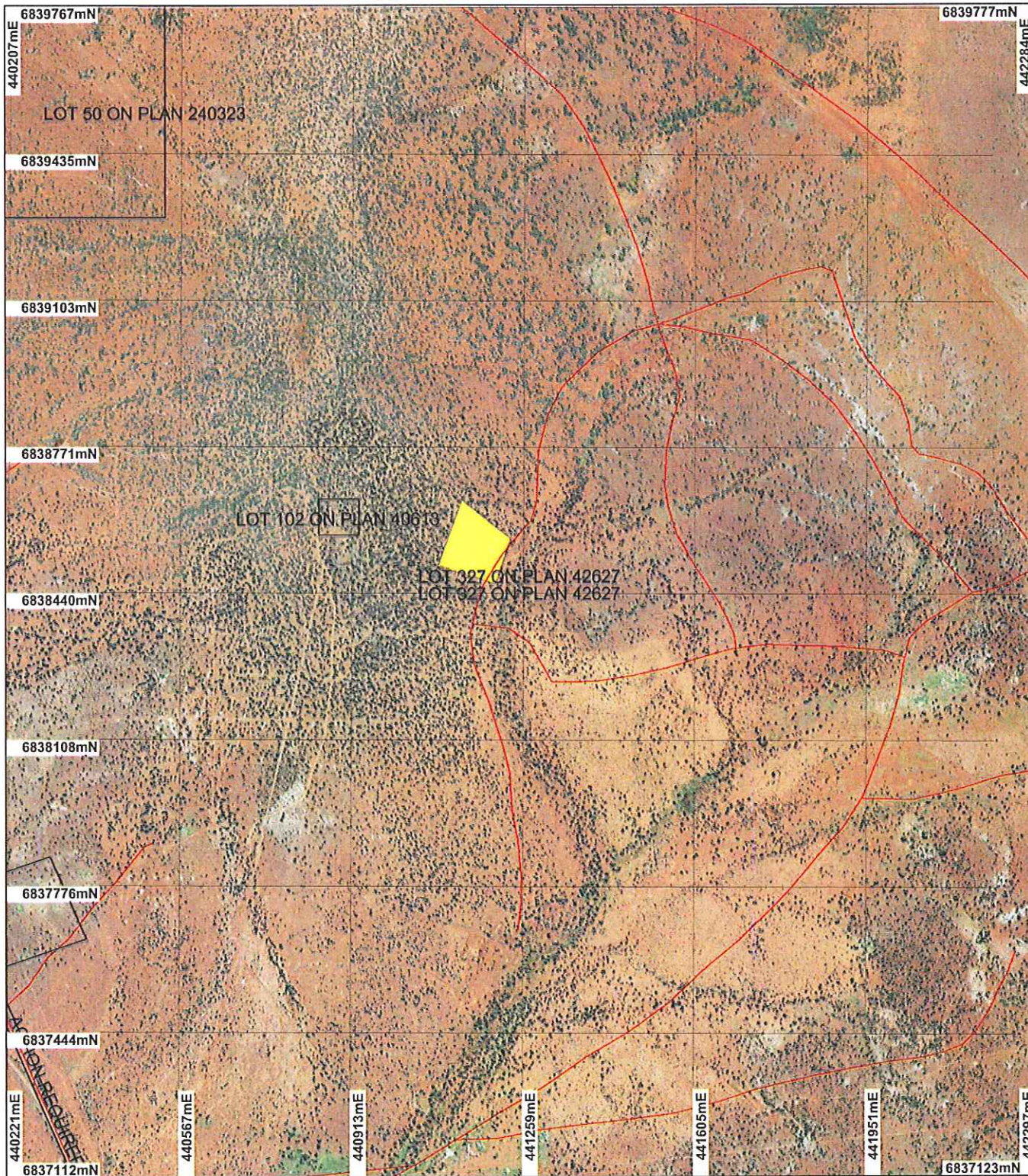


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Karl Claymore Date 12/1/2009

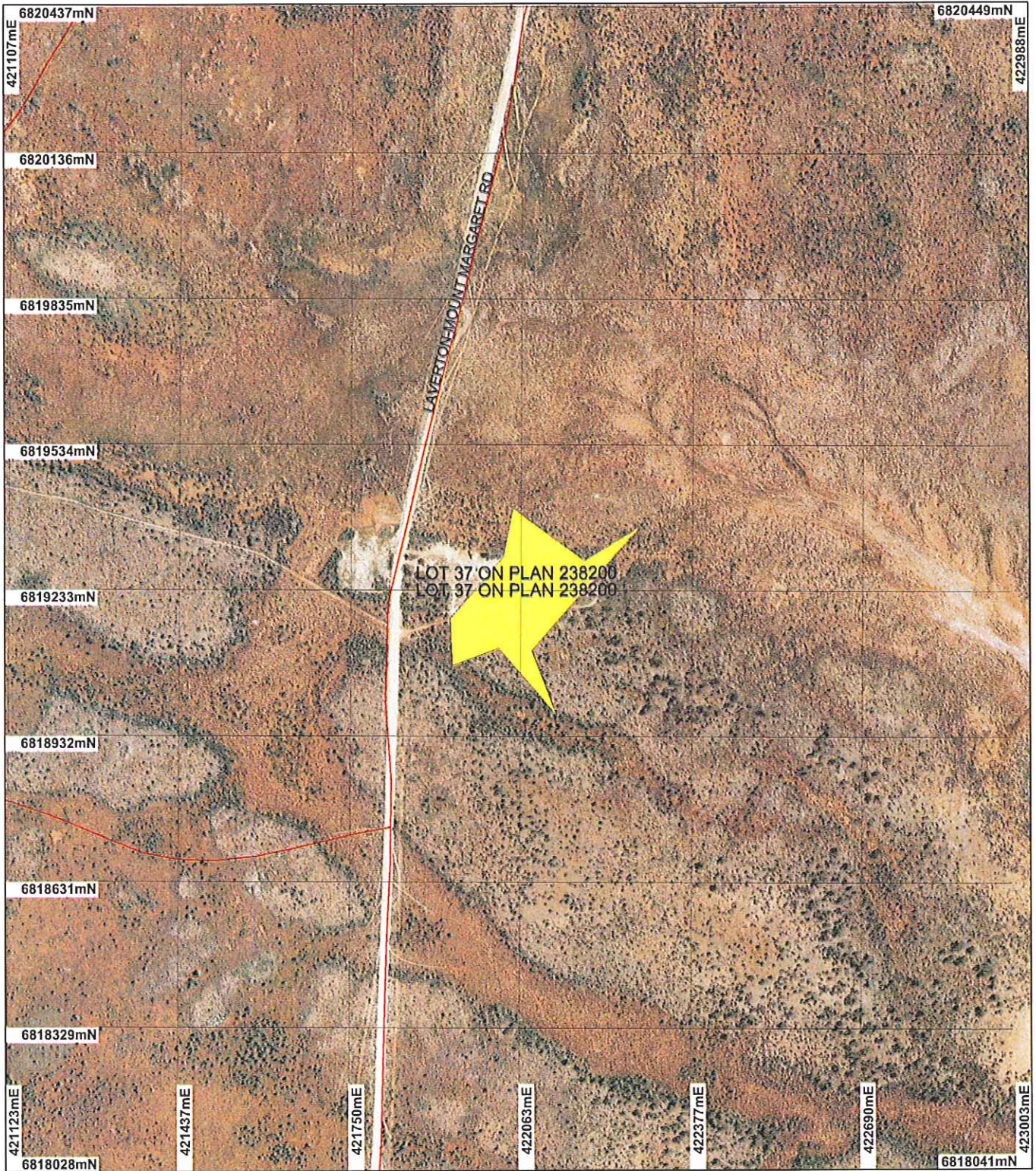
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Scale 1:10788

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K Claymore Date 12/12/07

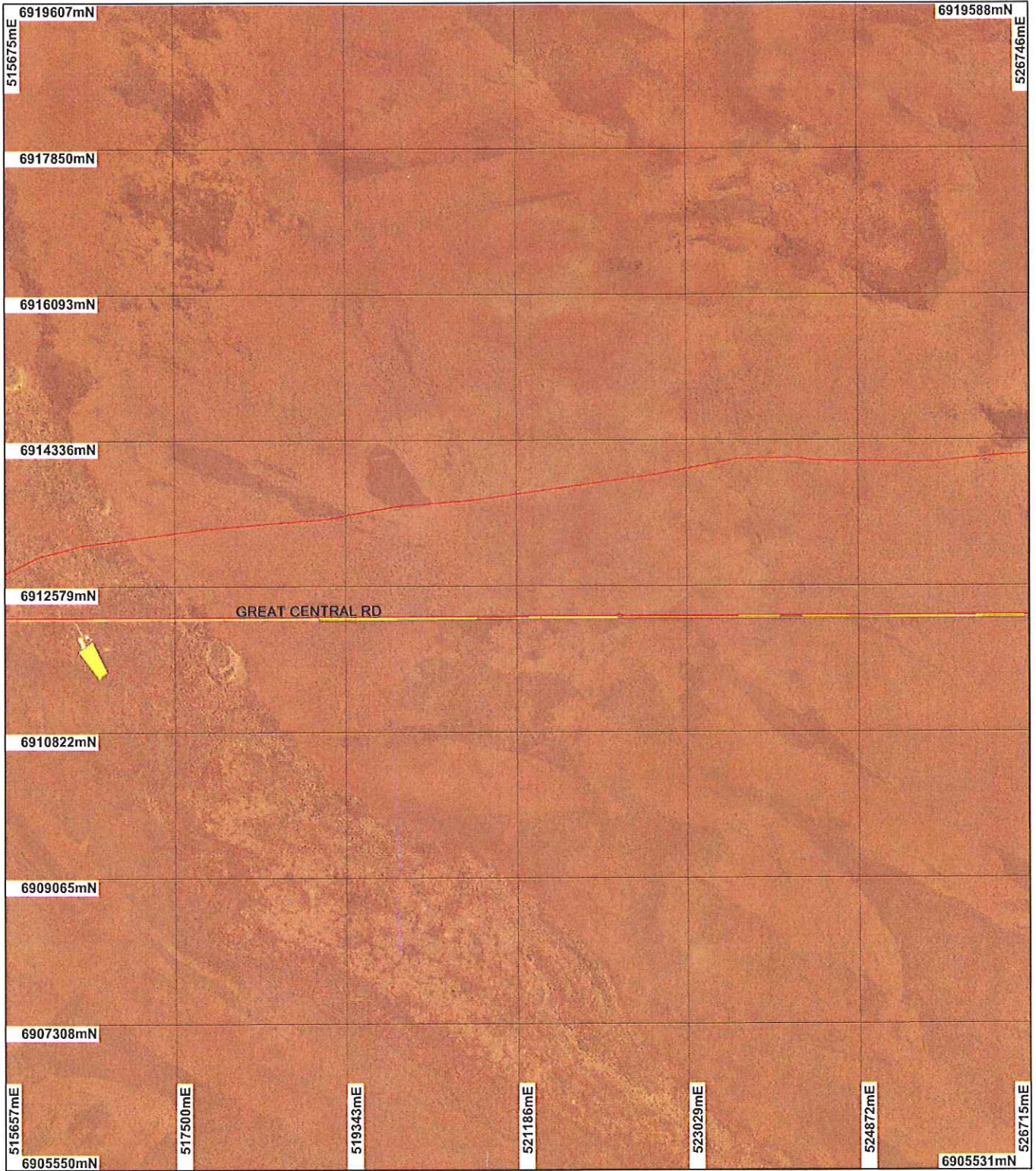
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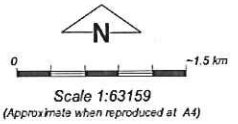
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Keith Claymore Date 17/12/07

K Claymore

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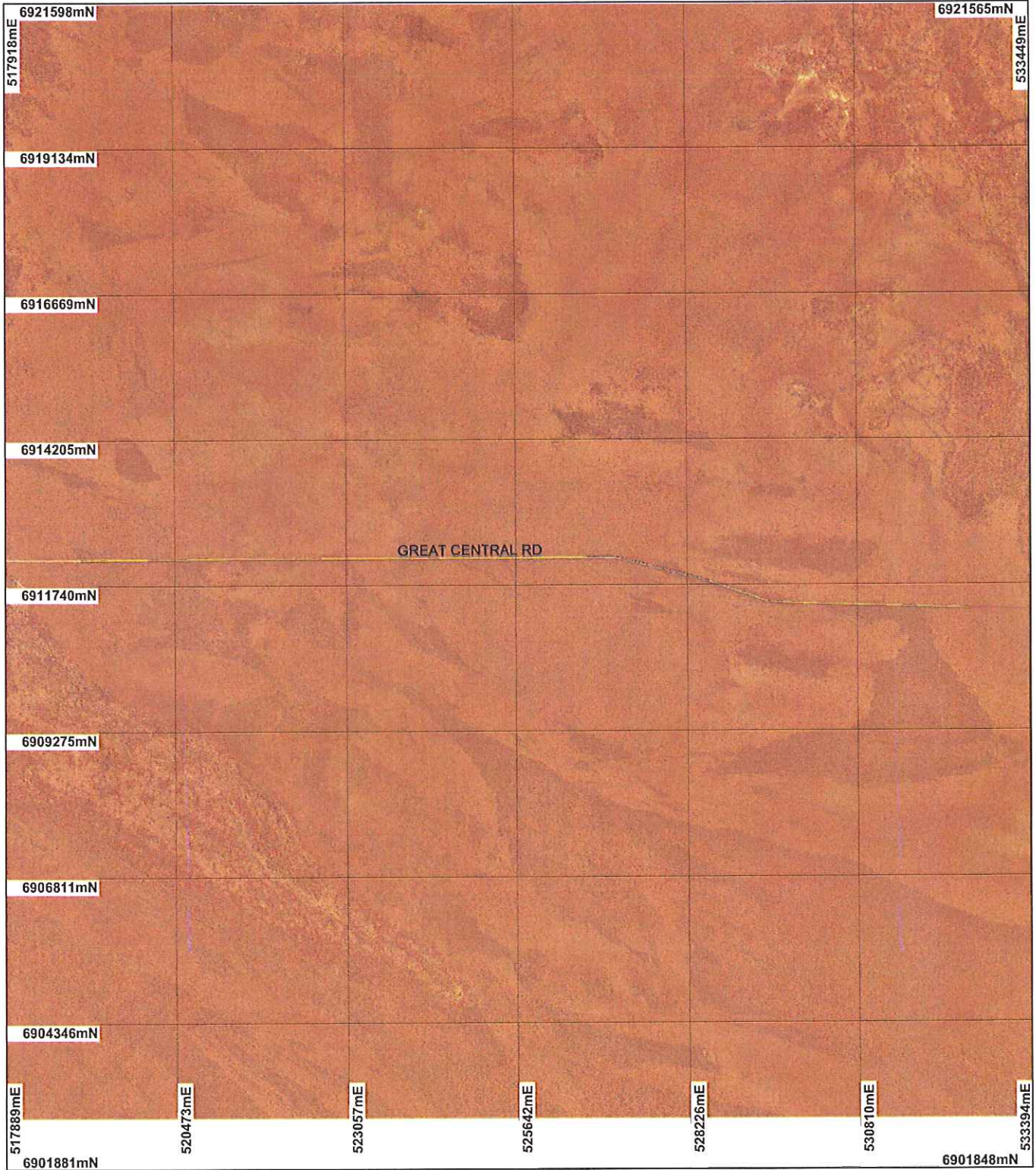
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Scale 1:88588

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K Claymore Date *12/10/09*

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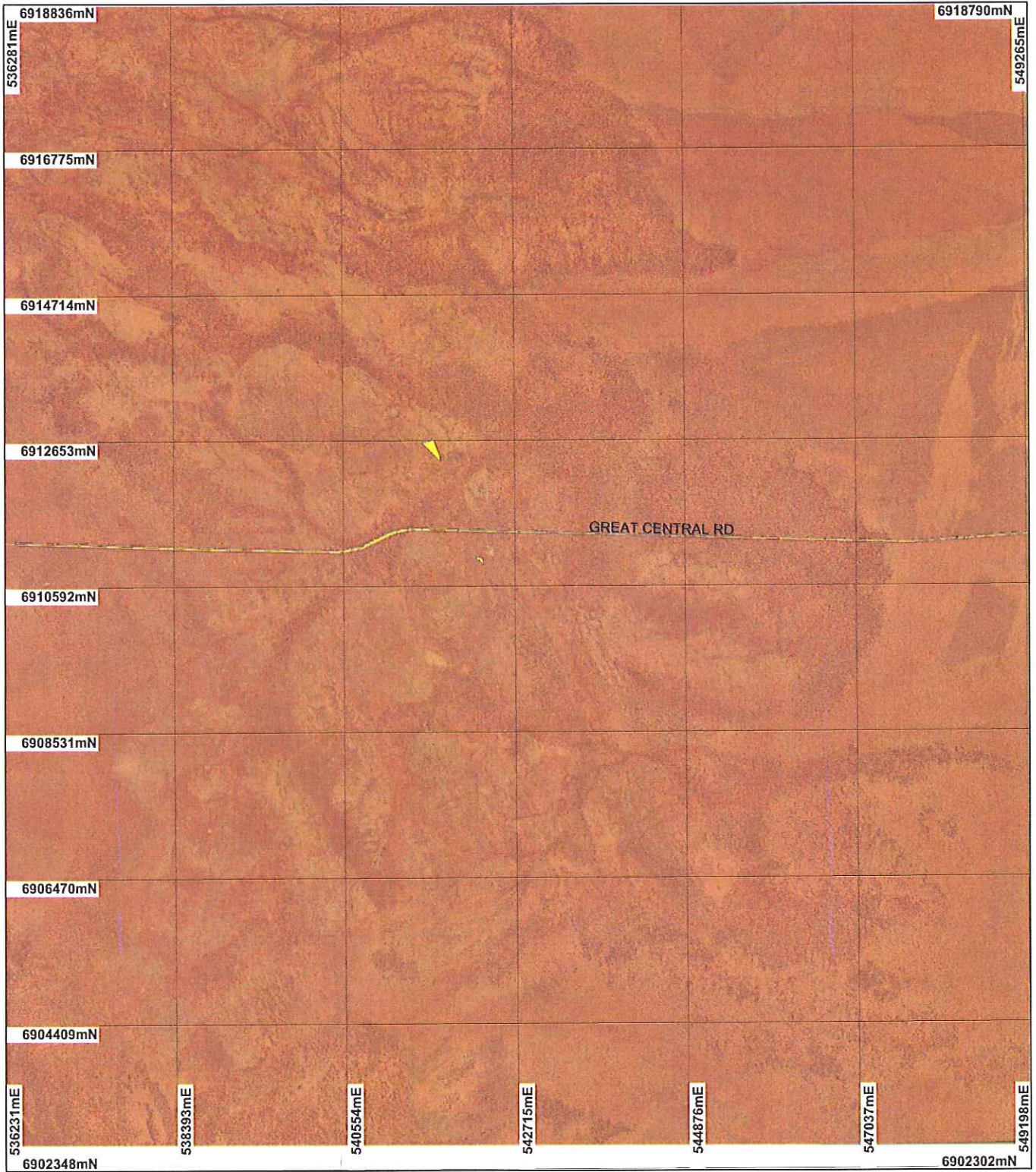
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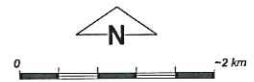
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(Approximate when reproduced at A4)

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Karl Claymore Date 17/12/02

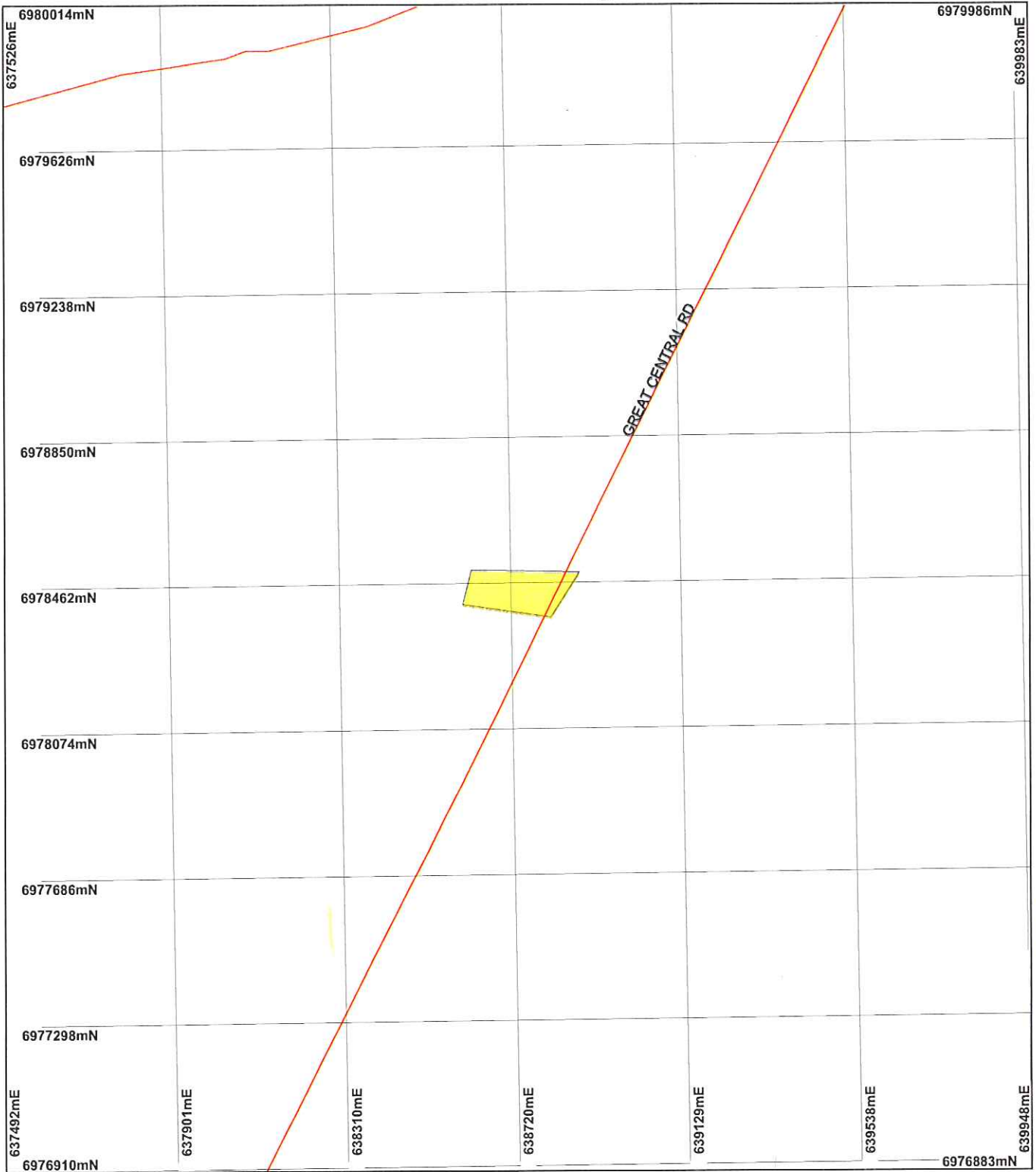
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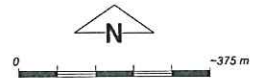
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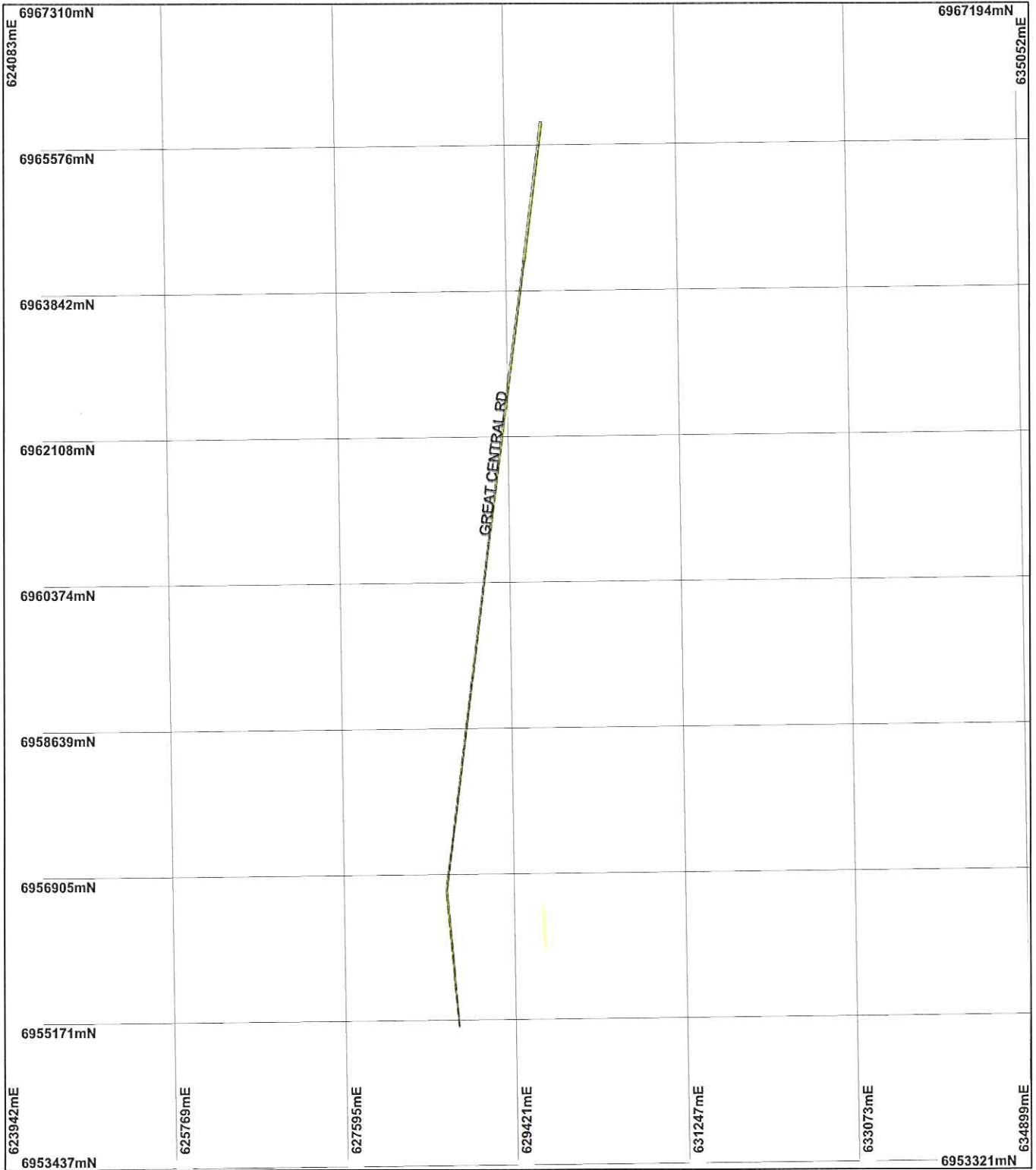
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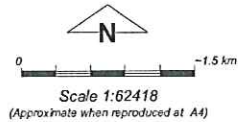
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Keith Claymore 17/1/2009

K Claymore

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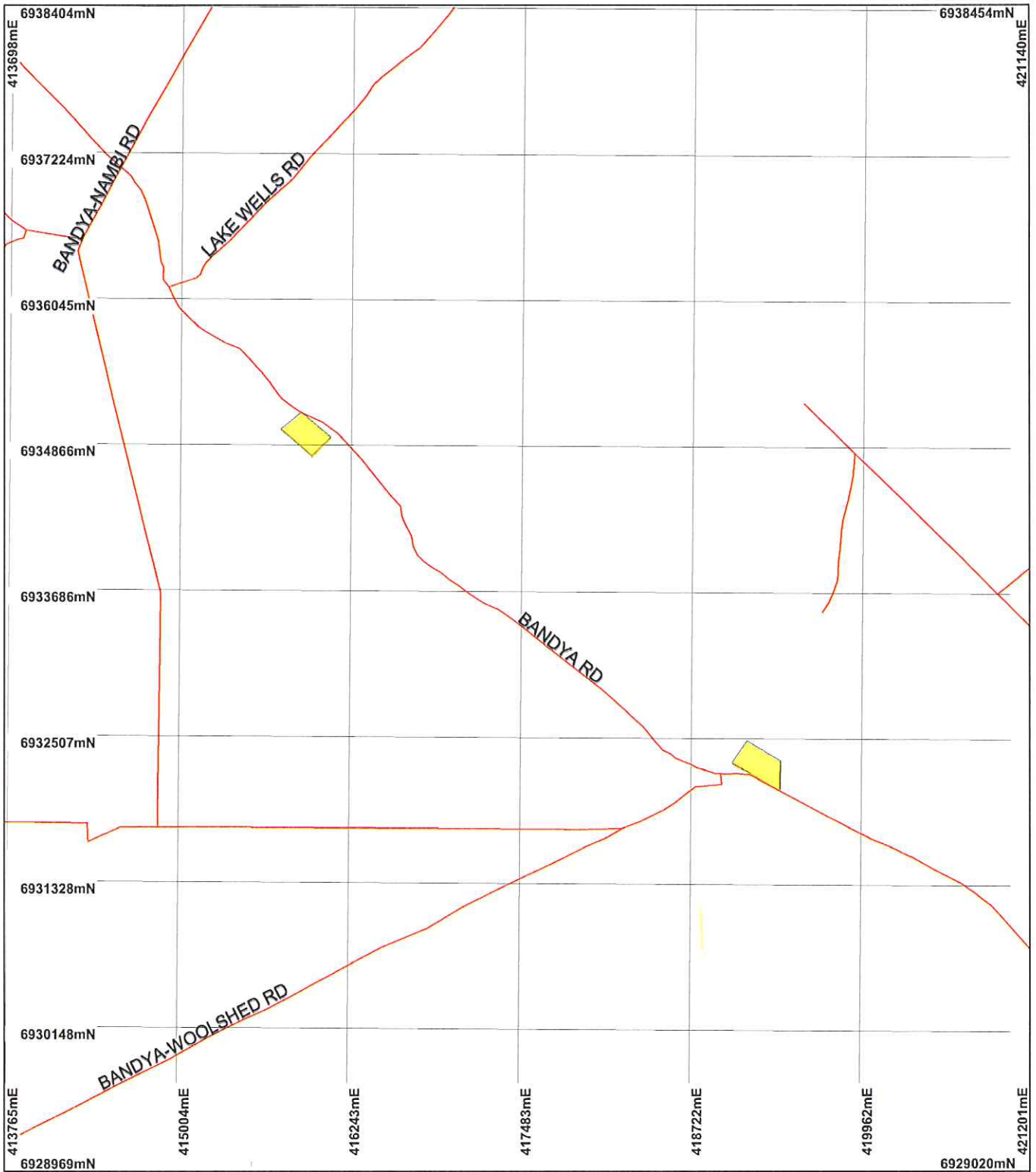
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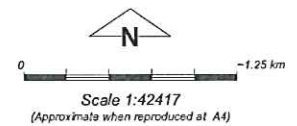
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Keith Claymore Date *12/1/09*

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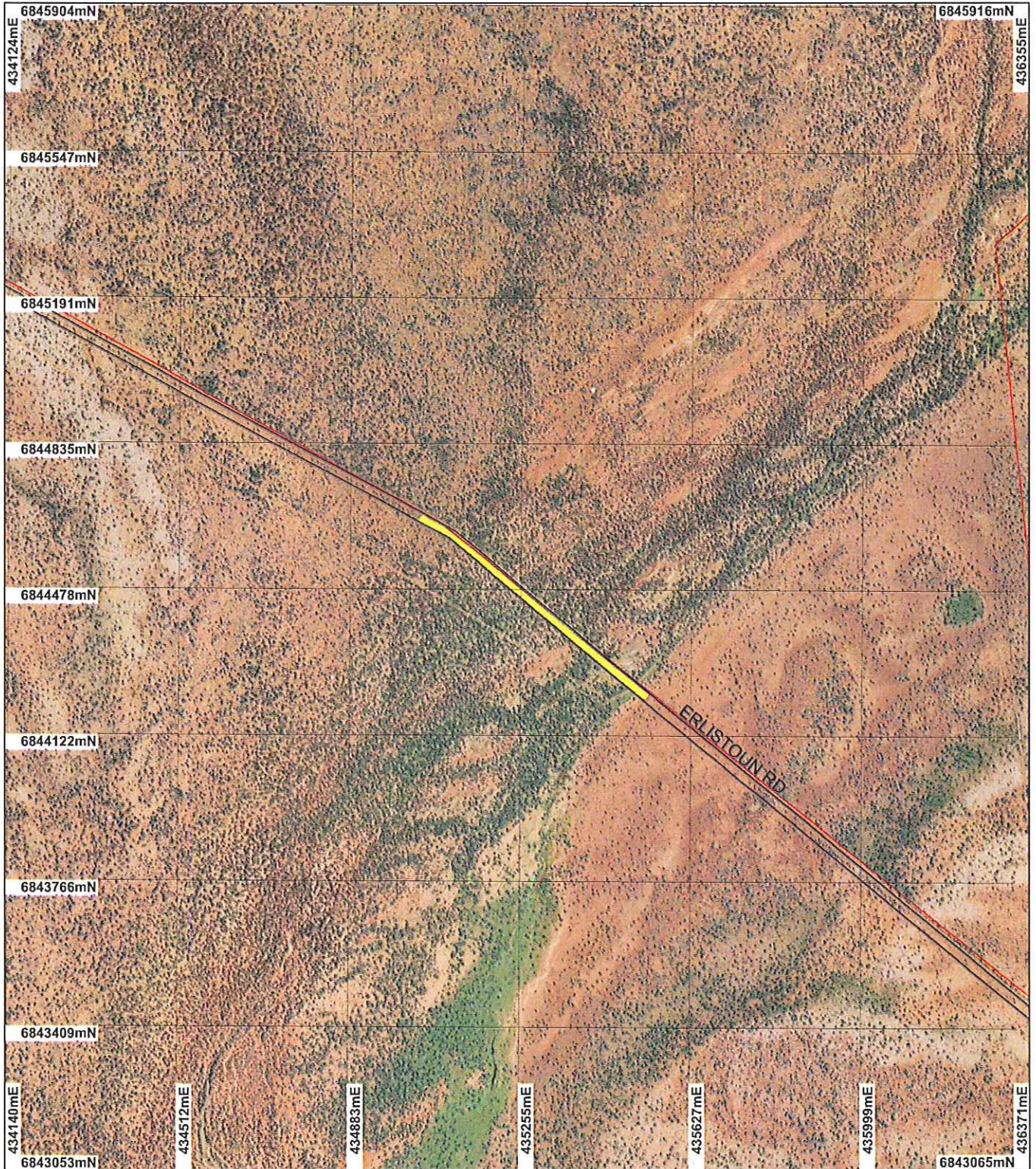
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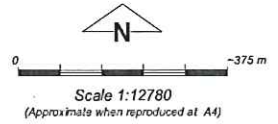
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Plan 3387/1m



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- Clearing Instruments**
- Areas Approved to Clear
 - Road Centrelines
 - Cadastre
 - Leaverton 50cm Orthomosaic - Landgate 2008



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Kate Claymore Date *12/12/09*
 K Claymore

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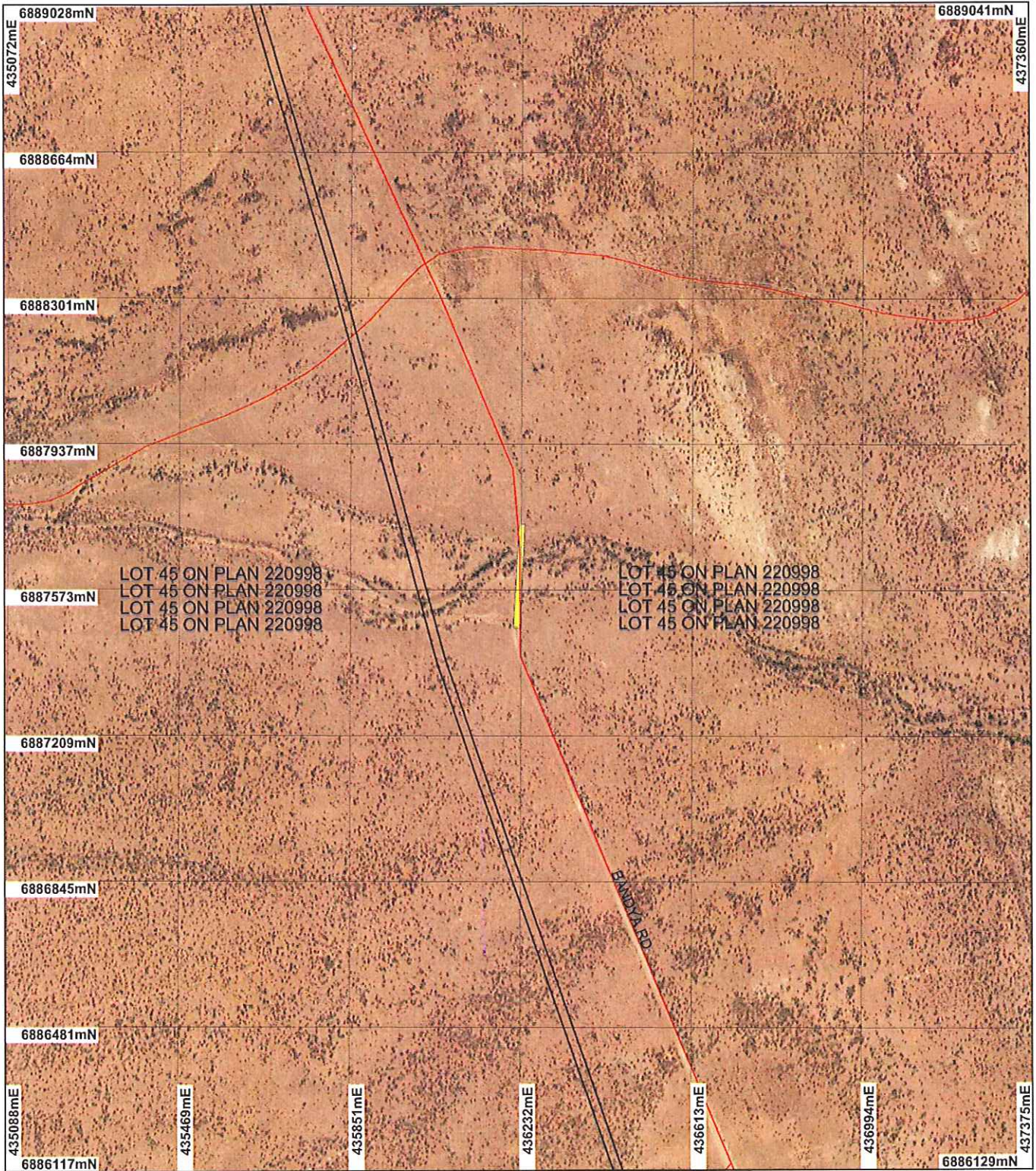
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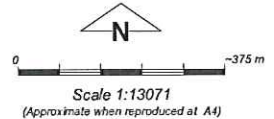
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Keir Claymore Date *12/12/07*

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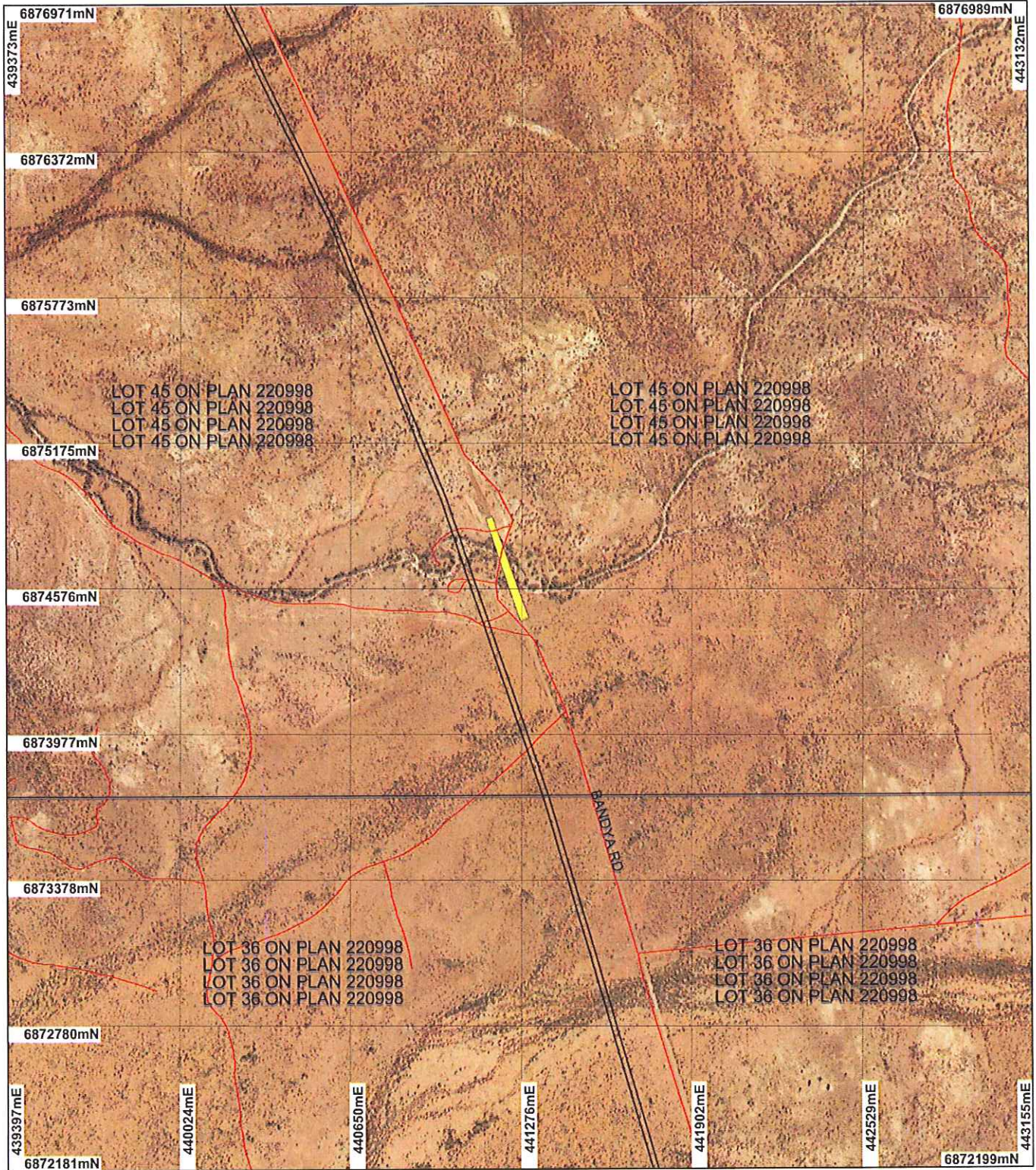
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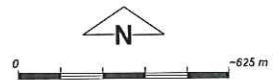
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Scale 1:21495
(Approximate when reproduced at A4)
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Kim Claymore Date 12/12/09
K Claymore

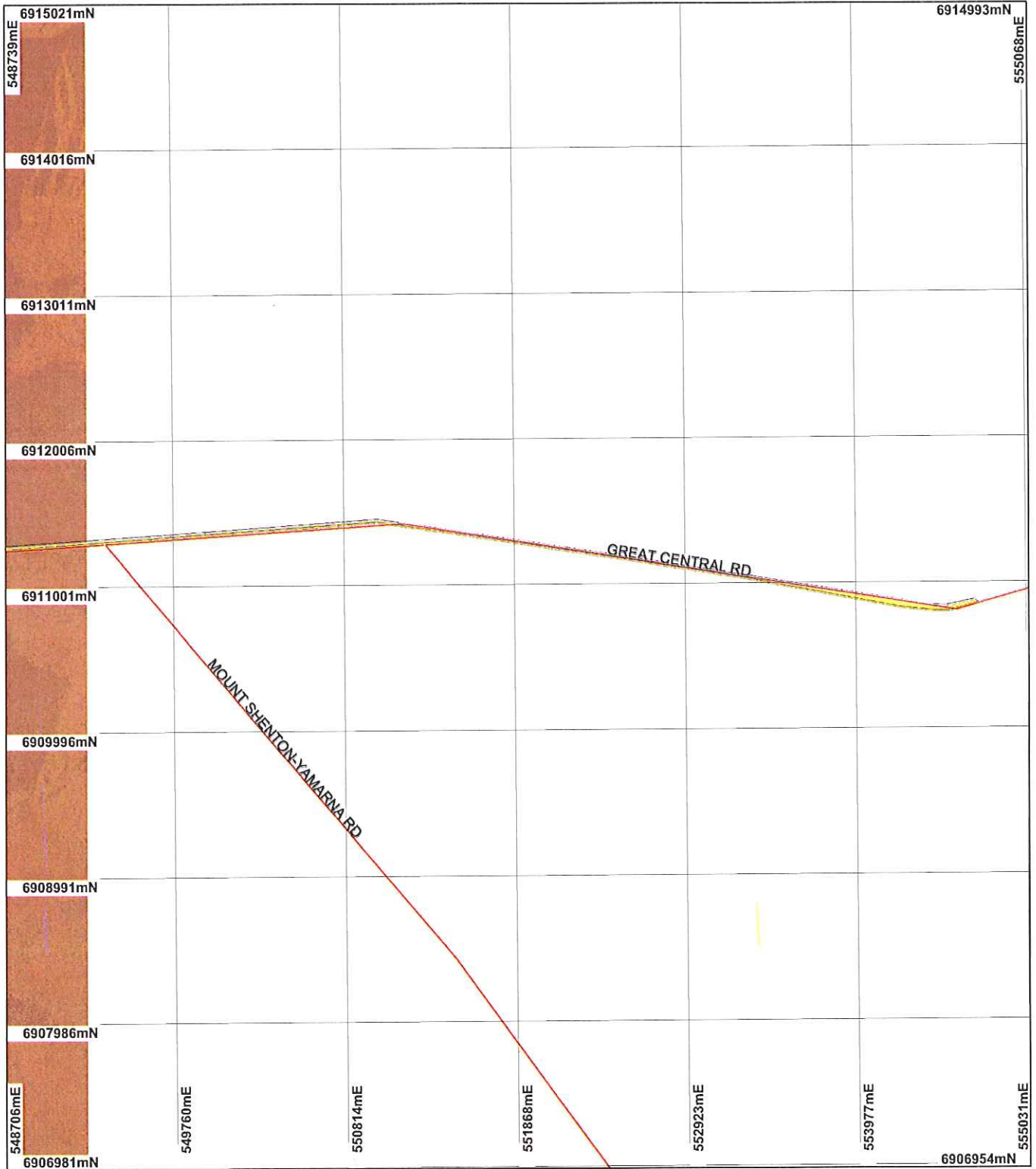
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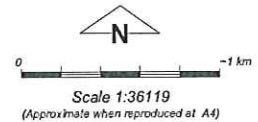
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| <ul style="list-style-type: none"> Clearing Instruments Areas Approved to Clear Road Centrelines Cadastre Mount Varden 1.4m Orthomosaic - Landgate 2002 | <ul style="list-style-type: none"> McMillan 1.4m Orthomosaic - Landgate 2002 Jutson 1.25m Orthomosaic - Landgate 2004 Laverton 50cm Orthomosaic - Landgate 2006 Edjudina 1.4m Orthomosaic - Landgate 2003 |
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Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

Keith Claymore Date *17/12/09*

K Claymore

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Department of Environment and Conservation

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1. Application details

1.1. Permit application details

Permit application No.: 3387/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Laverton

1.3. Property details

Property: ROAD RESERVE (LAVERTON 6440)
LOT 327 ON PLAN 42627 (LAVERTON 6440)
LOT 62 ON PLAN 31270 (Lot No. 62 URAREY-WARREN BORE BANDYA 6440)
LOT 42 ON PLAN 238645 (LAVERTON 6440)
CROWN RESERVE 6885 (LAVERTON 6440)
LOT 327 ON PLAN 42627 (LAVERTON 6440)
ROAD RESERVE (LAVERTON 6440)
LOT 26 ON PLAN 240220 (LAVERTON 6440)
UNALLOCATED CROWN LAND (LAVERTON 6440)
LOT 45 ON PLAN 220998 (BANDYA 6440)
LOT 55 ON PLAN 240377 (COSMO NEWBERY 6440)
LOT 37 ON PLAN 238200 (LAVERTON 6440)
ROAD RESERVE (LAVERTON 6440)

Colloquial name: Erlistoun Road Reserve

1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|--------------------|-----------|--------------------|----------------------------------|
| 57.63 | | Mechanical Removal | Extractive Industry |
| 83.51 | | Mechanical Removal | Road construction or maintenance |

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

| Vegetation Description | Clearing Description | Vegetation Condition | Comment |
|---|--|---|---|
| <p>The following Beard vegetation associations are mapped as occurring within the road reserves and gravel pit locations under application:</p> <ul style="list-style-type: none"> - Beard 24: Low woodland; Allocasuarina cristate - Beard 676: Succulent steppe; samphire - Beard 24: Low woodland; Allocasuarina cristate - Beard 39: Shrublands; mulga scrub - Beard 84: Hummock grasslands, open low tree & mallee steppe; marble gum & mallee (Eucalyptus youngiana) over hard spinifex Triodia basedowii between sandhills - Beard 85: Hummock grasslands, open low tree & mallee steppe; marble gum & mallee (Eucalyptus youngiana) over hard spinifex on sandplain | <p>The vegetation over the length of the various road reserves and gravel pit locations varies in condition from completely degraded to very good (Keighery, 1994). The majority of the vegetation under application consists of spinifex, small shrubs and scattered mulga trees.</p> | <p>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)</p> | <p>The condition and description of the vegetation under application was determined via information provided from the applicant and aerial imagery.</p> |

- Beard 1239: Hummock grasslands, open medium tree & mallee steppe; marble gum & mallee (*E. youngiana*) over hard spinifex *Triodia basedowii* on sandplain
 - Beard 18: Low woodland; mulga (*Acacia aneura*)
 - Beard 389: Succulent steppe with open low woodland; mulga over saltbush
- (Shepherd et al. 2007).

| | | | |
|-----------|-----------|--|-----------|
| see above | see above | Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994) | see above |
| see above | see above | Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994) | see above |
| see above | see above | Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994) | see above |

3. Assessment of application against clearing principles

Comments

The proposed clearing of 141.14 hectares is for the purpose of upgrading and maintaining roads and to extract gravel for usage in the road works. Aerial imagery and information provided by the applicant (Trim ref: DOC101949) suggests that the vegetation under application ranges in its condition from completely degraded to very good (Keighery, 1994) condition. The clearing within road reserves is required in order to raise road surfaces above the level of the surrounding land to alleviate flooding during high rainfall events and improve safety in some areas.

The clearing is spread over various road reserves and gravel pits, with the largest area to be cleared being within the Great Central Road Reserve which corresponds to maps g, h, i and k. The total area to be cleared within this road reserve, within four locations, is 75.2ha. These sections of road are impassable during flooding events and the road formation will have to be raised considerably to allow for heavily defined drainage (Trim Ref: DOC101949). The total area of all clearing within road reserves is 83.51ha. While short term erosion may result in areas of clearing within road reserves, given that the purpose of the clearing is to raise roads and install heavily defined drainage, erosion issues are unlikely to increase significantly. The applicant has advised that vegetation cleared within Great Central Road Reserve will be used to rehabilitate the gravel pits in the area and other barren section of land.

There are 15 gravel pits proposed for clearing under this application. It is possible that not all of the gravel pits will require materials to be excavated. These gravel pits occur throughout the Shire of Laverton, with the largest pit to be excavated being 7.2ha in size. The total area of all pits proposed to be cleared is approximately 57.63ha.

There are nine Beard vegetation associations that are mapped as occurring within the various road reserve and gravel pit locations under application. All of these vegetation associations retain in excess of 99% of pre-European levels of vegetation within the Shire and Bioregion (Shepherd et al. 2007), which is well above the 30% threshold level supported by the EPA and recommended in the National Objectives Targets for Biodiversity Conservation; below which species loss appears to accelerate exponentially at an ecosystem level (EPA, 2000).

No rare or priority listed flora species have been mapped as occurring within any of the areas under application. However the areas have not been surveyed to determine the absence or presence of rare or priority flora. The closest priority flora species recorded to any of the areas under application was *Comesperma viscidulum* (P4), which was recorded 600 metres from the eastern end of the Great Central Road Reserve, corresponding to map i. As the area is disturbed due to the presence of the existing road, and given that the aforementioned flora species has been recorded at several locations throughout the region (WA Herbarium 1998

-), the conservation status is unlikely to change should clearing impact this species.

There were no known records of threatened fauna within a 10km radius of any of the areas under application except for locations corresponding to maps a, k and j. The closest recorded fauna species was the Banded Hare-wallaby, Mernine (*Lagostrophus fasciatus fasciatus*) (VU), which was recorded 480 metres east of road reserve corresponding to map location a. Given that the majority of the clearing is to occur adjacent to already disturbed areas and the local area (10km radius) is well vegetated, the vegetation at locations corresponding to maps a & k is unlikely to be significant habitat for fauna species.

There are minor non-perennial watercourses that cross Great Central Road (corresponding to map f) and occur within close proximity to the gravel pit. Beasley creek runs through Erlistoun road (corresponding to map m) and there are minor non-perennial watercourses scattered throughout the local area that are within close proximity to locations corresponding to maps a, b, c & d. The clearing within the Bandy Road locations, corresponding to maps n & o, has two watercourses that cross this section of road, Doris creek crosses the northern section and Gum Creek crosses the southern section. The two gravel pits that occur adjacent to Bandy Road Reserve also have a minor non-perennial watercourse that runs adjacent to both gravel pits. As the clearing is required to raise roads and improve safety, and given that drainage structures will be put in place within road reserves, the impacts on watercourses crossing existing road infrastructure are not likely to increase significantly. Clearing of gravel pits adjacent to watercourses may impact on hydrology dynamics in the short term, however the applicant will rehabilitate and revegetate all gravel pits as a condition of the permit.

The gravel pit proposed to be cleared at the location corresponding to map b is within the buffer to priority 3 PEC 'Mount Jumbo Range vegetation complex'. However, given that the size of the gravel pit to excavated within the buffer is relatively small (~ 6ha), and all gravel pits will be rehabilitated as a condition of the permit; the impact on the PEC is expected to be minimal.

Given that the proposed clearing of native vegetation is spread over the length of several road reserves where rare and priority flora species and fauna species are not prevalent and both the bioregion and Shire are well vegetated, it is considered unlikely that there will be any significant environmental impacts as a result of clearing activities for road upgrades and maintenance. To minimize the potential impacts of clearing within the gravel pits, a condition will be placed on the permit to ensure that gravel pits are rehabilitated after use.

Methodology

References:

- EPA (2000)
- Keighery (1994)
- Shepherd et al. (2007)
- WA Herbarium (1998 -)
- GIS Databases:
 - Dec tenure (28 October 2009)
 - Mount Varden 1.4m Orthomosaic – Landgate 2002
 - Laverton 50cm Orthomosaic – Landgate 2006
 - Juston 1.25m Orthomosaic – Landgate 2004
 - Edjudina 1.4m Orthomosaic – Landgate 2003
 - McMillian 1.4m Orthomosaic – Landgate 2002
 - Pre European Vegetation - DA 01/01
 - SAC Biodatasets - accessed 25 November 09
 - Soils, Statewide DA 11/99
 - NLWRA, Current Extent of Native Vegetation 20 Jan 2001
 - Clearing Regulations, Environmentally Sensitive Areas 30 May 2005
 - EPP Lakes Policy Area - DEP 14/05/97
 - EPP, Wetlands 2004 (DRAFT) - EPA 21/7/04
 - Hydrography linear - DOW 13/7/06
 - Hydrography linear (hierarchy) - DoW 13/7/06
 - Groundwater Salinity Statewide DoW 13/07/06
 - Hydrogeology, statewide - DOW 13/07/06
 - Hydrographic catchments, catchments - DoW 01/06/07
 - Hydrography, linear - DOW 13/7/06
 - Mean Annual Rainfall (30-09-2001)
 - Salinity Risk LM 25m - DOLA 00
 - Topographic contours statewide - DOLA and ARMY 12/09/02

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments

Shire has obtained access to the lands under application through the compulsory acquisition of land under the Local Government Act 1995.

The Department of Regional Development and Lands has no objection to clearing within unallocated crown land (Trim ref: DOC101949).

4. Assessor's comments

Comment

The clearing application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986 and has found:

- Principle (f) to be at variance
- All other principles are not likely to be at variance

5. References

- EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority, Western Australia.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Shepherd, D.P. (2007). Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.

6. Glossary

| Term | Meaning |
|-------|--|
| BCS | Biodiversity Coordination Section of DEC |
| CALM | Department of Conservation and Land Management (now BCS) |
| DAFWA | Department of Agriculture and Food |
| DEC | Department of Environment and Conservation |
| DEP | Department of Environmental Protection (now DEC) |
| DoE | Department of Environment (now DEC) |
| DMP | Department of Mines and Petroleum (ex DoIR) |
| DRF | Declared Rare Flora |
| EPP | Environmental Protection Policy |
| GIS | Geographical Information System |
| ha | Hectare (10,000 square metres) |
| TEC | Threatened Ecological Community |
| WRC | Water and Rivers Commission (now DEC) |