



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 6183/3  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Cassini Resources Limited

### 1.3. Property details

Property:  
Mining Lease 69/72  
Mining Lease 69/73  
Mining Lease 69/74  
Mining Lease 69/75  
Exploration Licence 69/1505  
Exploration Licence 69/1530  
Exploration Licence 69/2201  
Exploration Licence 69/3163  
Exploration Licence 69/3164  
Exploration Licence 69/3165  
Exploration Licence 69/3168  
Exploration Licence 69/3169  
Local Government Area: Shire of Ngaanyatjaraku  
Colloquial name: West Musgrave Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
89.5		Mechanical Removal	Mineral Exploration

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 23 January 2020

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

**Vegetation Description** The vegetation of the application area is broadly mapped as the following three Beard vegetation associations:  
18: Low woodland; mulga between sand ridges;  
19: Low woodland; mulga (*Acacia aneura*); and  
236: Hummock grasslands, shrub steppe; mulga and mallee (marble gum) over hard spinifex (GIS Database).

Western Botanical (2018) undertook a detailed flora and vegetation survey of the broader West Musgrave project area and a review of previous surveys conducted, which included sections of the application area. The following twenty-nine vegetation associations were recorded in the broader West Musgrave project area:

- Calcrete *Corymbia opaca* Woodland
- Calcrete Mulga / *Melaleuca* Shrubland over Spinifex
- Calcrete Open Grassland
- Calcrete Platform Hummock Grassland Hummock Grassland
- Calcrete Platform Hummock Grassland Hummock Grassland with *Acacia eremophila* var. Numerous-nerved variant (A.S. George 11924) (P3)
- Calcrete Platform Hummock Grassland Hummock Grassland with *Allocasuarina helmsii*
- Calcrete Platform Hummock Grassland Hummock Grassland with *Melaleuca eleuterostachya*
- Hardpan Mulga Woodland
- Hardpan Mulga Woodland Drainage
- Mulga Grove
- *Eremophila duttonii* Shrubland
- Hardpan Chenopod Shrubland
- Claypan Playa
- Claypan Grassland
- *Aluta maisonneuvei* subsp. *maisonneuvei* low shrubland
- Sand Dune *Acacia - Grevillea* shrubland
- Sandplains with Wattles other than Mulga
- Sandplain Spinifex

- Sandplain Mulga
- Mulga Wanderrie
- Low Mallee Woodland
- *Acacia kempeana* with *Melaleuca glomerata* Shrubland
- *Acacia brachystachya* over Spinifex Shrubland
- Stony Mulga Shrubland
- Senna Shrubland
- *Acacia kempeana* Shrubland
- *Acacia cuthbertsonii* Shrubland
- Stony Ironstone Mulga Shrubland
- Mulga over *Maireana triptera* Shrubland

<b>Clearing Description</b>	West Musgrave Project. Cassini Resources Limited proposes to clear up to 89.5 hectares of native vegetation within a total boundary of approximately 35,355 hectares, for the purpose of mineral exploration. The project is located approximately 580 kilometres north-east of Laverton, in the Shire of Ngaanyatjaraku.
<b>Vegetation Condition</b>	Pristine: No obvious signs of disturbance (Keighery, 1994);  to  Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).
<b>Comment</b>	The vegetation condition was derived from vegetation surveys reviewed by Western Botanical (2014) and from analysis of aerial imagery. Majority of the area was in Excellent to Pristine condition.  Clearing permit CPS 6183/1 was granted by the Department of Mines and Petroleum (now the Department of Mines, Industry Regulation and Safety) on 7 August 2014 and was valid from 30 August 2014 to 30 August 2019. The permit authorised the clearing of up to 29.5 hectares of native vegetation within a boundary of approximately 3,956 hectares, for the purpose of mineral exploration.  CPS 6183/2 was granted on 16 May 2019, amending the permit to increase the amount of clearing authorised to 59.5 hectares, increase the clearing permit boundary to approximately 23,427 hectares and extend the permit duration for five years, to 30 August 2024.  The previous permit boundary fell wholly within the area covered by CPS 2028/2 which was granted to BHP Billiton Nickel West Pty Ltd (BHP) on 22 September 2011. Where possible Cassini Resources will utilise existing drill lines and tracks in this area.  On 5 November 2019, the Permit Holder applied to amend CPS 6183/3 to increase the amount of clearing by 30 hectares, increase the permit boundary and add tenure to the permit.

### 3. Assessment of application against Clearing Principles

#### Comments

The Permit Holder has applied to amend the clearing permit to increase the amount of clearing by 30 hectares from 59.5 hectares to 89.5 hectares, increase the permit boundary by approximately 11,928 hectares from approximately 23,427 hectares to approximately 35,355 hectares, and to add tenure to the permit.

The clearing permit application area is located within the Central subregion of the Interim Biogeographic Regionalisation for Australia (IBRA) Central Ranges Bioregion and the Mann-Musgrave Block subregion of the Central Ranges IBRA bioregion (GIS Database).

A search of the available databases showed that there are no known Threatened Ecological Communities or Priority Ecological Communities within proximity to the application area (GIS Database).

There are no Threatened flora species known to occur within the permit area (GIS Database). A number of Priority flora have the potential to occur within the area (Western Botanical, 2017; 2018) and a flora management condition requiring flora surveys be undertaken prior to clearing, in accordance with Cassini Resources Limited's Exploration Management Plan, may minimise potential impacts to Priority flora.

There are no recent records of conservation significant fauna species occurring in the permit area (GIS Database). A number of conservation significant fauna species are likely to occur, or have previously been recorded within the permit area, including; Bilby (*Macrotis lagotis* – Threatened), Brush-tailed Mulgara (*Dasycercus blythi* – Priority 4), Great Desert Skink (*Liopholis kintorei* – Threatened), Southern Marsupial Mole (*Notoryctes typhlops* – Priority 4), Striated Grasswren (*Amytornis striatus striatus* – Priority 4), Central Long-eared Bat (*Nyctophilus major tor* – Priority 3) and a number of migratory birds (Western Wildlife, 2018). A fauna survey of the West Musgrave Project area recorded the presence of Brush-tailed Mulgara, Great Desert Skink, Striated Grasswren and Southern Marsupial Mole (Western Wildlife, 2018). It is unlikely that the proposed clearing will have a significant impact on the Striated Grasswren or Central Long-eared Bat due to

the highly mobile nature of the species and it is unlikely that the proposed clearing will have a significant impact on the Southern Marsupial Mole due to the subterranean nature of the species. However, the proposed clearing has the potential to impact burrowing species and the implementation of a fauna management condition may minimise potential impacts to Bilby, Great Desert Skink and Brush-tailed Mulgara.

The permit area is not within or in close proximity to a Public Drinking Water Source Area, and there are no permanent watercourses or wetlands within the additional permit areas (GIS Database). The additional 30 hectares of proposed clearing, for the purpose of mineral exploration, is not likely to result in appreciable land degradation, cause a deterioration in the quality of surface or underground water, or cause, or exacerbate, the incidence or intensity of flooding.

The permit area is not located within a conservation reserve or DPaW managed land (GIS Database). The proposed clearing is within the 'Ranges of the Western Desert', an area which is listed on the Register of National Estate for its unique natural values (GIS Database). The ranges of the Western Desert cover an area of approximately 8 million hectares. It is unlikely that the clearing of 89.5 hectares will have any significant impact on the natural values of this area.

The amendment application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.51O of the *Environmental Protection Act 1986*, and the proposed clearing may be at variance to Principles (a) and (b), is not likely to be at variance to Principles (c), (d), (g), (h), (i) and (j) and is not at variance to Principle (e) and (f).

**Methodology** Western Botanical (2017)  
Western Botanical (2018)  
Western Wildlife (2018)

GIS Database:

- DPaW Tenure
- Hydrography, Lakes
- Hydrography, Linear
- IBRA Australia
- Imagery
- Pre-European Vegetation
- Public Drinking Water Source Areas
- Threatened and Priority Ecological Communities boundaries
- Threatened and Priority Ecological Communities buffers
- Threatened and Priority Flora
- Threatened Fauna

### **Planning Instrument, Native Title, previous EPA decision or other matter.**

#### **Comments**

There is one native title claim (WC2004/003) over the area under application (DPLH, 2019). This claim has been determined by the Federal Court on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2019). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Water and Environmental Regulation and the Department of Biodiversity, Conservation and Attractions, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The amendment application was advertised on 25 November 2019 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

**Methodology** DPLH (2019)

## 4. References

- DPLH (2019) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <http://maps.daa.wa.gov.au/AHIS/> (Accessed 10 November 2019).
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Western Botanical (2017) Desktop Assessment of Conservation Significant Flora for the West Musgraves Region, WA. Report prepared for Cassini Resources, by Western Botanical, December 2017.
- Western Botanical (2018) Detailed Flora and Vegetation Survey, West Musgraves Project – Interim Report. Report prepared for OZ Minerals Limited, by Western Botanical, August 2018.
- Western Wildlife (2018) West Musgrave Project: Level 2 Vertebrate Fauna Survey June 2018 – Interim Report, West Musgraves Project. Report prepared for OZ Minerals Limited, by Western Wildlife, September 2018.

## 5. Glossary

### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>DAA</b>	Department of Aboriginal Affairs, Western Australia (now DPLH)
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia (now DPIRD)
<b>DBCA</b>	Department of Biodiversity, Conservation and Attractions, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia (now DBCA and DWER)
<b>DoEE</b>	Department of the Environment and Energy, Australian Government
<b>DER</b>	Department of Environment Regulation, Western Australia (now DWER)
<b>DMIRS</b>	Department of Mines, Industry Regulation and Safety, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia (now DMIRS)
<b>DPIRD</b>	Department of Primary Industries and Regional Development, Western Australia
<b>DPLH</b>	Department of Planning, Lands and Heritage, Western Australia
<b>DRF</b>	Declared Rare Flora
<b>DoE</b>	Department of the Environment, Australian Government (now DoEE)
<b>DoW</b>	Department of Water, Western Australia (now DWER)
<b>DPaW</b>	Department of Parks and Wildlife, Western Australia (now DBCA)
<b>DSEWPaC</b>	Department of Sustainability, Environment, Water, Population and Communities (now DoEE)
<b>DWER</b>	Department of Water and Environmental Regulation, Western Australia
<b>EPA</b>	Environmental Protection Authority, Western Australia
<b>EP Act</b>	<i>Environmental Protection Act 1986</i> , Western Australia
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal Act)
<b>GIS</b>	Geographical Information System
<b>ha</b>	Hectare (10,000 square metres)
<b>IBRA</b>	Interim Biogeographic Regionalisation for Australia
<b>IUCN</b>	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
<b>PEC</b>	Priority Ecological Community, Western Australia
<b>RIWI Act</b>	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
<b>TEC</b>	Threatened Ecological Community

### Definitions:

{DBCA (2019) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia}:-

#### T **Threatened species:**

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the *Biodiversity Conservation Act 2016* (BC Act).

**Threatened fauna** is that subset of 'Specially Protected Fauna' listed under schedules 1 to 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for Threatened Fauna.

**Threatened flora** is that subset of 'Rare Flora' listed under schedules 1 to 3 of the *Wildlife Conservation (Rare Flora) Notice 2018* for Threatened Flora.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

#### CR **Critically endangered species**

Threatened species considered to be "facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines".

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for critically endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.

**EN Endangered species**  
Threatened species considered to be “*facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for endangered flora.

**VU Vulnerable species**  
Threatened species considered to be “*facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for vulnerable fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for vulnerable flora.

#### **Extinct Species:**

**EX Extinct species**  
Species where “*there is no reasonable doubt that the last member of the species has died*”, and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

Published as presumed extinct under schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for extinct fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for extinct flora.

**EW Extinct in the wild species**  
Species that “*is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form*”, and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

#### **Specially protected species:**

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

**MI Migratory species**  
Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

Published as migratory birds protected under an international agreement under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

**CD Species of special conservation interest (conservation dependent fauna)**  
Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with

the ministerial guidelines (section 14 of the BC Act).

Published as conservation dependent fauna under schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

OS

**Other specially protected species**

Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Published as other specially protected fauna under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

P

**Priority species:**

Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

P1

**Priority One - Poorly-known species**

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

P2

**Priority Two - Poorly-known species**

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

P3

**Priority Three - Poorly-known species**

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

P4

**Priority Four - Rare, Near Threatened and other species in need of monitoring**

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

**Principles for clearing native vegetation:**

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.
- (d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

- (e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.
- (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.
- (h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.
- (i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.
- (j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.