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PASTORAL RESOURCES AND THEIR MANAGEMENT IN THE NORTH-EASTERN GOLDFIELDS, WESTERN AUSTRALIA

An interpretation of findings from the rangeland survey of the North-Eastern Goldfields (Pringle, Van Vreeswyk and Gilligan 1994) prepared with support from the Kalgoorlie and North-Eastern Goldfields Land Conservation District Committees

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CONTENTS

Introduction

This report covers about 100,600 square kilometres of rangeland in the north-eastern Goldfields area of Western Australia (Fig. 1).

The area covered includes stations within the following 1:250,000 series map sheets (Fig. 2):

Sir Samuel	Duketon
Leonora	Laverton
Menzies	Edjudina

The survey area includes the towns of Agnew, Kookynie, Laverton, Leinster, Leonora and Menzies, extending from Riverina station and the northern end of Pinjin station in the south-west and south-east respectively to Yeelirrie and the south-west portion of Lake Wells stations in the north-west and north-east. It is approximately bounded by 27°S and 30°S latitudes, and 120°E and 123°E longitudes.

Fifty-one stations fell wholly (40) or partly (11) within the North-Eastern Goldfields rangeland survey area in 1990. The following stations fell wholly within the survey area (Figure 3):

Adelong	Jeedamya	Merolia	Riverina
Bandya	Kookynie	Mertondale	Sturt Meadows
Banjawarn	Laverton Downs	Minara	Tarmoola
Braemore	Leinster Downs	Mt Keith	Walling Rock
Clover Downs	Mt Celia	Mt Remarkable	Weebo
Depot Springs	Melita	Morapoi	White Cliffs
Edjudina	Melrose	Mt Weld	Yakabindie
Erlistoun	Menangina	Nambi	Yandal
Glenorn	Menangina South	Perrinvale	Yerilla
Ida Valley	Mendleyarri	Pinnacles	Yundamindra

Those stations only partly covered by the survey include those already partly covered in the Wiluna-Meekatharra report (Mabbutt et al. 1963); Albion Downs, Barwidgee, Lake Way and Wonganoo. Stations not previously surveyed and only partly covered in this survey are Credo, Dandaraga, Goongarrie, Kaluwiri, Lake Wells, Pinjin and Yeelirrie.

This report is a product of a rangeland survey in the North-Eastern Goldfields of Western Australia conducted jointly by the Department of Agriculture Western Australia (DAWA) and the Department of Land Administration (DOLA) with support and participation from the Kalgoorlie and North-Eastern Goldfields Land Conservation District Committees, between 1988 and 1990. In conjunction with the Department of Agriculture Technical Bulletin No. 87 (Pringle, Van Vreeswyk and Gilligan 1994) and accompanying land system maps it is intended for use by pastoralists and Government agencies involved with the pastoral industry. This report has a particular pastoral focus whereas Technical Bulletin No. 87 provides a more detailed description of the natural resources and their condition within the North-Eastern Goldfields survey area.

This report commences with a brief section in which rangeland survey information is put into a pastoral management context. It then describes the environment in terms of types of rangeland and climate. Types of rangeland are described in terms of pasture types, land systems and land types. A pasture type is a kind of land at a plant community or landform scale. It is what is seen out of the window of a vehicle and what monitoring sites are located on. A land system can be seen as a pattern of pasture types in a characteristic position in the landscape. Similar land systems are grouped into land types - these may be easier to deal with on a station plan if there are many land systems present.

The report includes a brief summary of current pastoral management. It describes how stations are set up, what stock are used and how the stock are run. This will provide background information for potential new pastoralists as well as providing an account of how pastoralism operated in the early 1990s.

The final section of the report consists of resource summaries for each of the stations (or parts thereof) covered by the survey. Brief land descriptions are presented, followed by more detailed information on the land systems and their range condition and suggested carrying capacities (scc). The scc presented is an estimate of sustainable pastoral productivity for each land system assuming zero feral animals and a population of kangaroos which might have been expected prior to pastoral development (i.e. only accessing natural surface water sources as available). They are not proposed for any regulatory purposes. In most years, carrying capacity is primarily determined by type of country and seasonal conditions (which are characteristically highly variable and unpredictable). The figures suggested in this report are for a 'normal year', to be carried over summer (see the 'Climate' section of this report).

This report is intended to be used by the pastoral industry, for the general information it provides, and also as a starting point for future reviews of station management. On a general level, there are numerous issues raised in the report that pastoralists might like to take a bit further through their Land Conservation District committees. There is also much information specific to individual stations that will help pastoralists review current paddock management strategies in station management planning.

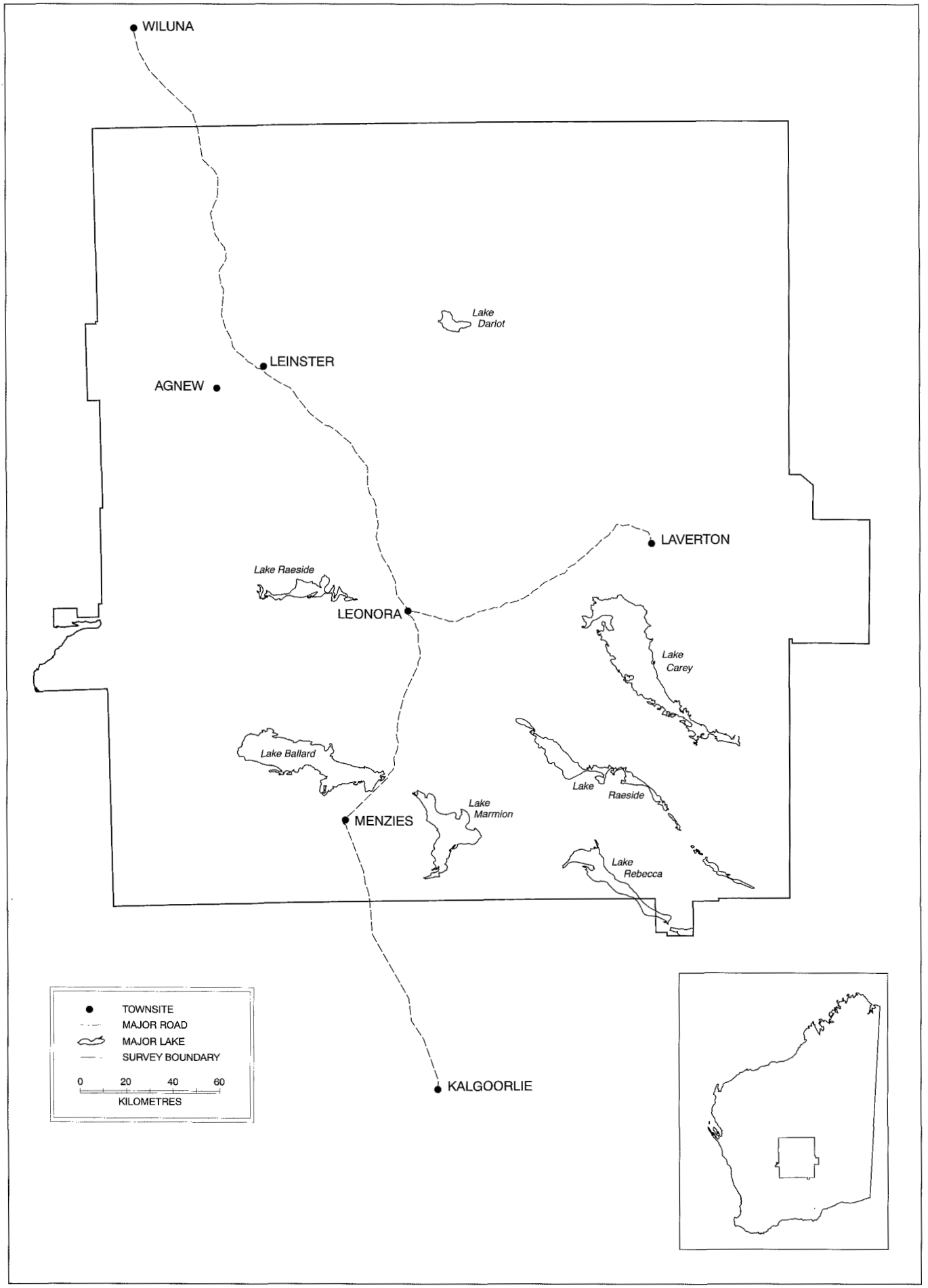


Figure 1. Location map, the North-Eastern Goldfields survey area.

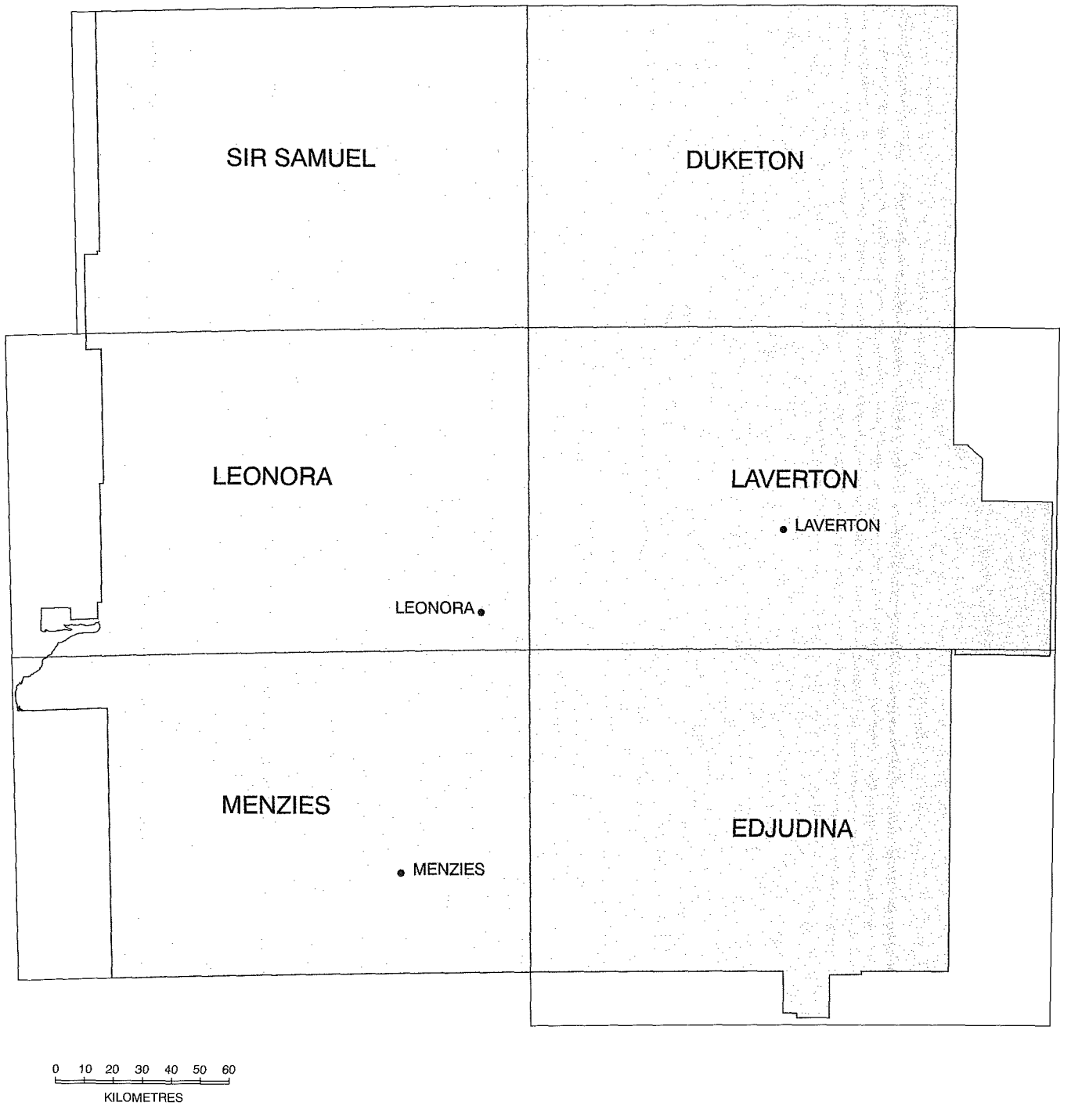


Figure 2. The six 1:250,000 map sheets covering the survey area.

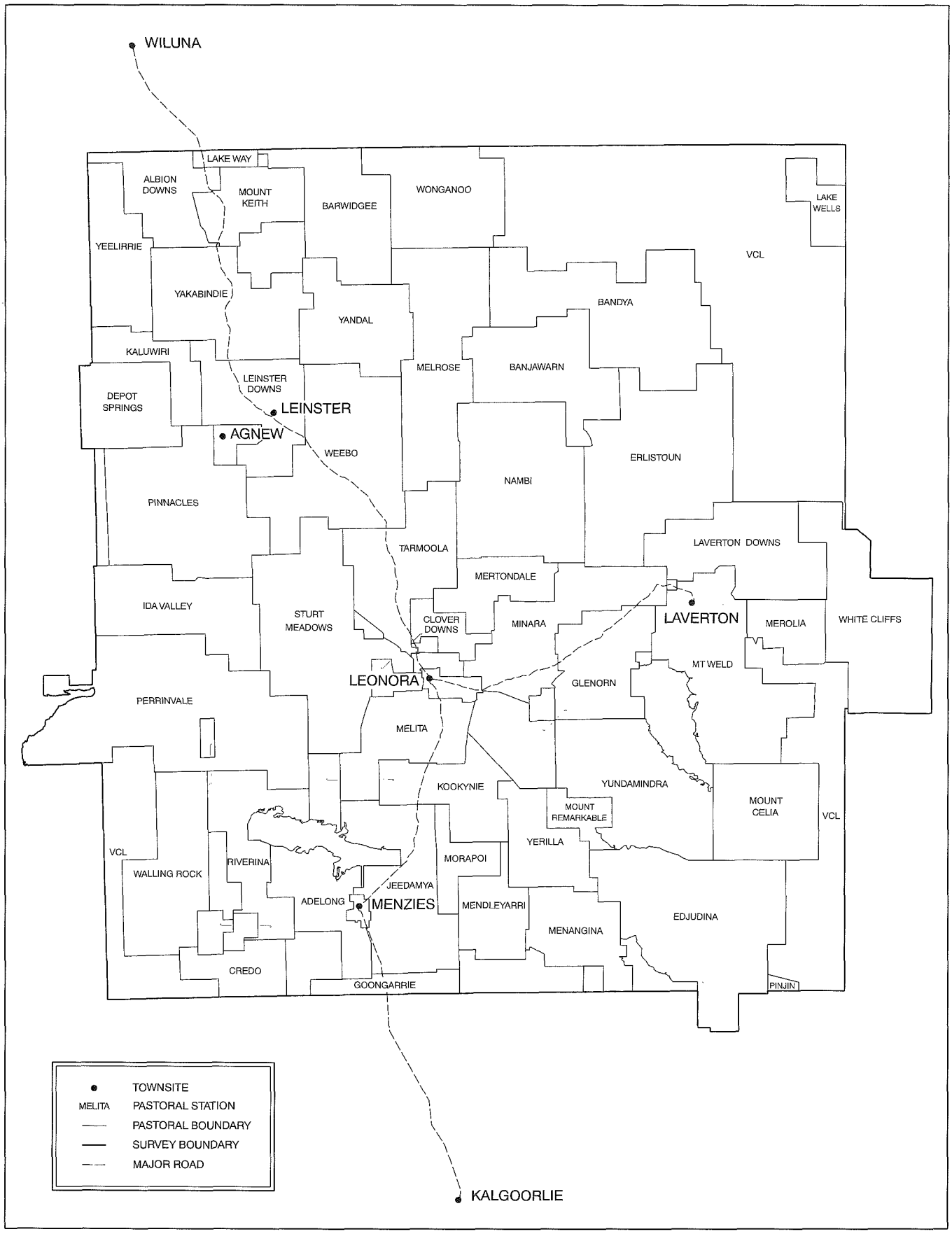


Figure 3. Pastoral stations within the survey area.

Chapter 1

Using rangeland survey information in pastoral management

Rangeland surveys provide information that is useful for pastoral management in three major areas:

- Description and assessment of the land.
- Matching management with current resources.
- Recognising and managing change.

(i) Description and assessment of the land

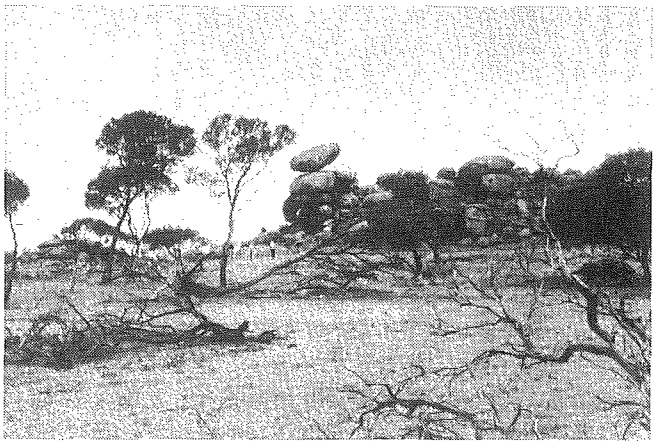
In chapter five of this report resources are described for each station in terms of land systems and their total areas and condition. There is also summary information for groups of land systems clustered according to land type (similar looking land systems) and pastoral value.

This information is provided on a station basis, paddock breakdowns will need to be generated by individual pastoralists. Assistance to do this is currently available from local district officers of the Department of Agriculture, Western Australia.

The area statements for the whole station indicate the extent of each land system occurring on each station. Suggested carrying capacities are given for each land system based largely on stocking rate workshops held in 1991 at Menangina and Sturt Meadows stations by the Kalgoorlie and North-Eastern Goldfields Land Conservation District Committees.

Contrasting pastoral value and drought durability

1 (a) This lake country on Mt Weld station supports an excellent mix of palatable perennial shrubs such as bladder saltbush, shy bluebush and sago bush. In good seasons it supports abundant ground feed, in poor seasons stock accessing fresh water survive on the perennials mentioned previously.



1 (b) This visually imposing tor field on Nambi station supports sparse perennial shrubs and stunted trees. Infertile and shallow gritty soils support only moderate amounts of ground feed in good seasons and in poor seasons this country has very little in the way of forage.

The range condition assessments provide insights into how the land has been managed historically. This information is particularly relevant as it indicates how the drought durability of stations has been affected. During prolonged dry times, range condition is important as it relates to the composition and abundance of palatable perennial shrubs and grasses. Range condition has most relevance in areas where palatable perennials are abundant, such as lake country, rather than in stony poverty bush country for instance. In other words, if there never were many palatable perennial plants in a particular type of country, there never was much drought durability.

Station plans and the 1:250,000 scale colour maps associated with Technical Bulletin 87 give both land system and range condition information on a paddock basis. Traverse assessments at kilometre intervals describe how the survey team assessed the condition of different areas of each station. This information may highlight historically over-used paddocks or parts of a station, or those areas in best condition. The maps and station plans also show areas that have been mapped as 'severely degraded and eroded' (sde). These are areas that need particularly sympathetic management, perhaps urgently if they are currently unstable. Under current land administration principles, these areas should be removed from grazing. Continued inappropriate land management practices will result in further deterioration. If negotiations with the land managers fail to produce a satisfactory response, this will result in the serving of a Soil Conservation Notice under the Soil and Land Conservation Act (1945).

(ii) Matching management with current resources

Management of pastoral stations involves a variety of considerations which have to be integrated into a long term strategy which allows for short term, opportunistic management responses to changes (e.g. a substantial germination of perennial saltbushes).

In chapter three of this report, the important influence of climate is discussed in terms of a broad climatic description and the implications for plant growth and pastoral management. Sequential seasonal scenarios are mentioned, and their implications for pastoral management are considered.

Future planning of fencing and locating of water points can be done 'according to country type' by using the station plans and 1:250,000 scale colour land system maps and the land descriptions in chapter two of this report.

The idea of fencing 'according to country type' revolves around the assumptions that:

(1) Areas of similar country require similar management and can be managed specifically and hence most efficiently.

(2) By avoiding a mix of country types, grazing animals cannot be as selective within the paddock and hence over-grazing (or perhaps under-utilisation) is minimised.

The strategic location of watering points can also help spread grazing more evenly across paddocks and hence reduce selective grazing. The ideas behind this assertion are:

(1) Troughs in paddock corners have relatively concentrated approaches and hence grazing pressure for the same number of sheep is greater at corner troughs than those more centrally located in a paddock.

(2) The location of water points can be used to make stock travel a few kilometres to graze favoured or fragile country and thus make more use of poorer country closer to the water point, whilst providing some protection to the favoured or fragile country.

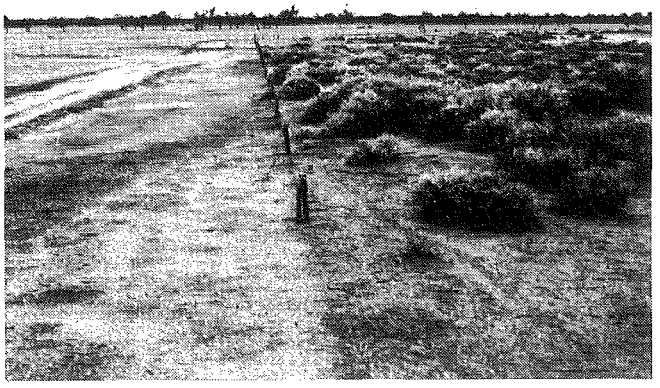
(3) Where pastoralists have observed wind effects on stock grazing patterns, the location of water points away from fences in the direction of prevailing winds will help prevent over-grazing of that part of the paddock. Presumably the greatest damage occurs in summer when ground feed is scarce and stock are grazing perennial plants. At this time prevailing winds are usually from the east. Evidence from the Nullarbor (Cridland and Stafford Smith 1993) and this survey suggest that while wind may be influential, other factors such as the mosaic of country types have a greater influence in the long term. Some of these ideas are summarised in Table 1. Some measures are temporary (e.g. reduce grazing pressure) whilst others are longer term measures. Prior to adopting these measures, the economic costs and benefits should be considered carefully (remembering environmental responsibilities).

Table 1. Factors affecting the uneven distribution of grazing pressure within a paddock

Factor	Effect	Prevention/remedial response
Saline stock water and/or forage	More frequent drinking and reduced grazing distance	Pipe fresh water into paddock. More water-points. Construct dams if country is suitable. Reduce total grazing pressure.
Prevailing wind	Sheep hang on waters against fences	Stock in seasons when wind is not a problem. Relocate waters so that stock graze away from waters into prevailing winds. Shut off problem waters and reduce total grazing pressure.
High temperatures	Increased moisture loss and hence more frequent drinking and reduced grazing distance	Avoid shearing in hottest months. Provide shade over trough to cool water. Avoid damage to tall shrubs and trees to maximise shade.
Preferred pastures and resting places	Preferential overgrazing and degradation of some pastures and under-utilisation of others	Relocate waters to make stock travel to preferred areas. Re-fence to land system or land type. Reduce total grazing pressure to a level appropriate to prevent degrading preferred pastures.
Inadequate water point distribution	Overgrazing near water points and/or under-utilised areas	If a very large paddock, fence to land type into smaller paddocks, and provide more water points, otherwise: Increase the accessible area near water points in the paddock by: 1. moving water points off fencelines and away from corners; 2. increasing the number of water points (including dams). Reduce total grazing pressure. Use a transportable trough system.

More information regarding water point location is available in **'Spacing water points in the southern pastoral areas of Western Australia'** (Burnside *et al.* 1990).

Historical degradation caused by poor siting of station infrastructure in fragile country



A watering point near a creek on preferentially grazed saltbush flats with fragile soils and with a (southern) fence nearby was a recipe for disaster on Pinnacles station. Despite the current managers' strategy of not grazing this area and controlling vermin such as goats, it is unlikely to respond in human time without costly cultivation works, which themselves can exacerbate soil erosion in some situations. Across the fence, vigorous saltbushes serve to demonstrate the degree of change that has occurred.

Land system maps in the form of station plans allow pastoralists to consider both the number and type of stock to put into paddocks based on the composition of each paddock. In general, pregnant ewes, lactating ewes and rams should be put into paddocks with good perennial shrubs and wethers put into more seasonal country. In good seasons it is less important what type of stock are put into particular paddocks. Good seasons can be used to spell paddocks with bluebush and saltbush shrublands.

Deciding on the number of stock to place in paddocks with a mixture of land types with different production values and stock preference values is difficult. It is a balancing act in which productivity and stock preference have to be balanced to prevent overgrazing. Preferential grazing of lake country in paddocks with large areas of spinifex or mulga was observed during the survey. Similarly, dung counts were considerably higher (approximately 10 times) at chenopod (saltbush/bluebush) sites than at mulga sites at the grazing trial on Coodardy station near Cue (Andrew Mitchell, personal communication). A specific case highlighted at a range monitoring site and remedied by refencing to country type was discussed by David Fitzgerald of Nambi station at the 5th Australian Soil Conservation Conference in Leonora in 1990.

Land system distributions within paddocks are also useful for locating monitoring sites (Holm *et al.* 1987). Firstly, sites representative of the paddock can be located on the basis of the paddock's composition of types of country. Land system maps and descriptions can also be used to locate monitoring sites in sensitive areas most likely to show change and provide an early warning system for the paddock. Descriptions of types of country which are useful to characterise a paddock are presented in the next chapter. At a finer scale, the 'Land system' and 'Ecological assessment' chapters of Technical Bulletin 87 will provide insights as to which plant communities or land units are appropriate to monitor.

Land in varying range condition is indicated by traverse ratings. Areas mapped as being severely degraded and eroded (sde) are also shown on the land system maps and station plans. Pastoral management should involve maintaining areas in good condition and promoting improving trend in other areas.

(iii) Recognising and managing change

The traditional idea of gradual and consistent change in condition in response to increasing or decreasing stocking rate has been largely replaced due to mounting contrary evidence (Smith 1978). In its place is a view that major change happens episodically, during drought or in an extremely good season (Westoby 1980). Inappropriate or continuously excessive grazing pressure can still bring about severe degradation in 'normal' years. The influence of climate on changes that occur in the rangelands is discussed in chapter three (Climate) of this report. The importance of climate on the rangelands should not be under estimated.

Changes in the land can be seen at a variety of scales, from the breakdown of individual bush mounds to changes over several kilometres.

Parts of the landscape most susceptible to degradation are described in the Geomorphology chapter of Technical Bulletin 87. Areas most susceptible to water erosion include breakaway footslopes, undulating sago bush and pearl bluebush plains, and flood out plains associated with major creek lines emerging from hill systems. Wind is not as damaging but wind erosion was notable on some sandy banks adjacent to lake beds.

The survey primarily focused on changes that occur at a plant community scale - which are often seen within about a 100 m radius. Grazing impacts and plant indicator species are described in the next chapter of this report according to groups of pasture types. 'Pasture type' is the term adopted in this report to describe this scale of plant/soil/landform association.

The main indicators of grazing impacts are:

- The density and mix of palatable plants.
- The overall perennial shrub cover in saltbush and bluebush plains.
- The density of 'woody weeds'.
- The prominence of palatable plants which are particularly sensitive to grazing.
- The health and stability of the soil.

Chapter 2

The rangelands

Land systems and the land types they have been grouped into are discussed first in this chapter. Secondly, groups of similar pasture types are discussed.

Why land types, land systems, pasture type groups and pasture types?

Land types are very broad groups of country which have similar landscapes and pastoral characteristics. Each land type consists of individual land systems, which are the units mapped in rangeland surveys. Land systems are areas with a recurring pattern of landform, soils, vegetation and drainage features. Sixty land systems are described in Technical Bulletin 87. For simplicity, this report generally focuses on land types.

Pasture type groups are broad groups of vegetation. Each consists of a number of similar pasture types which are particular vegetation communities. Pasture types occur at a landform scale (e.g. wanderrie bank or kopi dune). They are the building blocks of land systems. In Technical Bulletin No. 87, 36 pasture types are described. For simplicity, this report focuses on seven pasture type groups.

This classification described above is illustrated in the following description of a hypothetical piece of country (Figure 4a). It has hilly country at the top of the landscape (land type 1). The two land systems are similar, but differ in that Brooking has prominent ridges whilst Bevon has strongly undulating rises and low hills.

Downslope of land type 1 the relief becomes more subdued, low rises and undulating plains (land type 5). Nubev land system differs most from Violet land system in having more prominent saltbush/bluebush pastures in low lying areas, whilst Violet often has patchy wanderrie pastures. These differences translate to different pastoral characteristics and so land systems of land type 5 are discussed individually in section 2.1 of this report.

Undulating plains give way to flat mulga country (land type 11) downslope. In this example, Duketon and Tiger land systems both have distinctive wanderrie banks. They differ in that Tiger land

Figure 4a A sequence of land types and land systems from hills down to salt lakes.

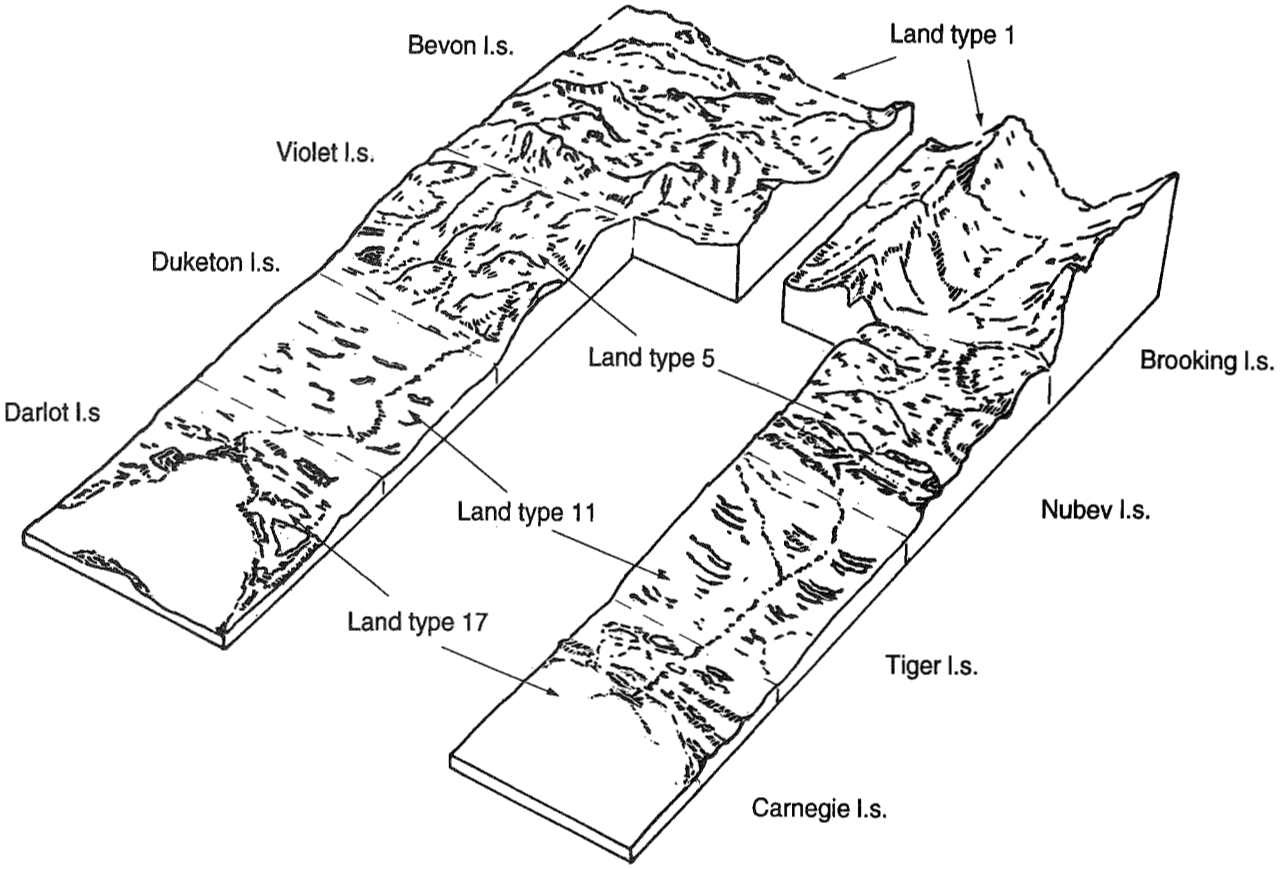
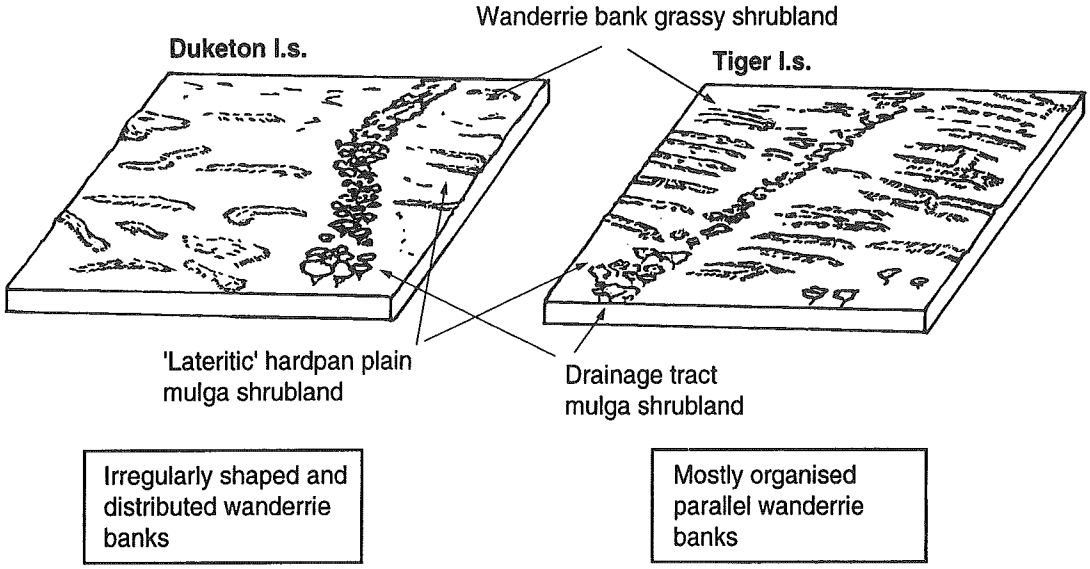


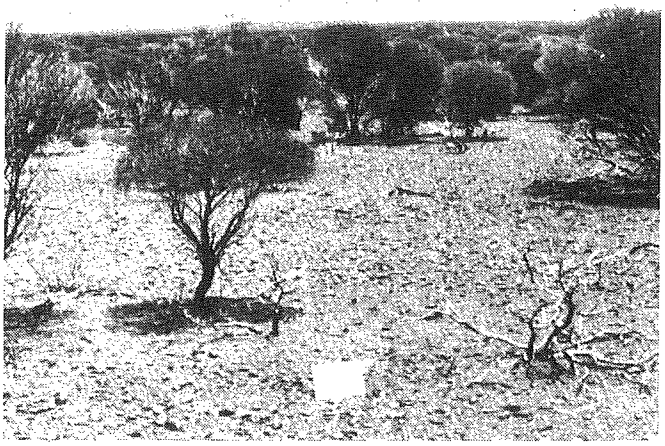
Figure 4b. The arrangement of the same pasture types differentiates between Duketon and Tiger land systems.



system has organised, often parallel and linear wanderrie banks, while in Duketon land system the banks are less organised and have different shapes.

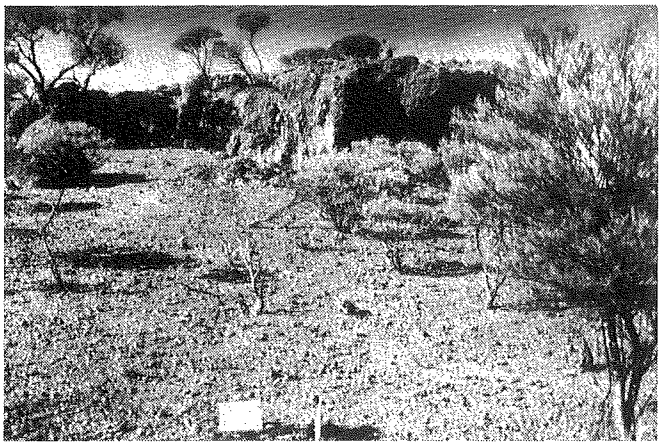
At the bottom of the landscape is lake country (land type 17). Here Carnegie land system differs from Darlot land system in having more extensive saltbush/bluebush pastures and far fewer sandy banks supporting wanderrie grasses or spinifex.

In Figure 4b, the differences between Duketon and Tiger land systems are illustrated. These similar land systems differ most in the arrangement of component pasture types. They have very similar pastoral characteristics and hence it is appropriate to consider them together in terms of pastoral management.

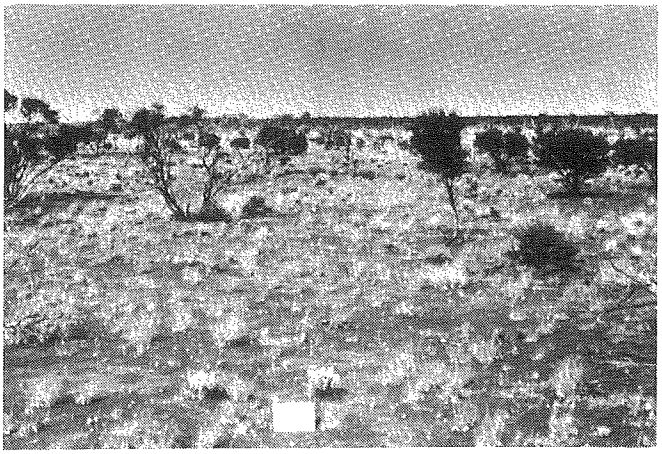


3(b) Downslope of Bevon or Brooking land systems one often encounters the gently undulating mulga country of Violet land system.

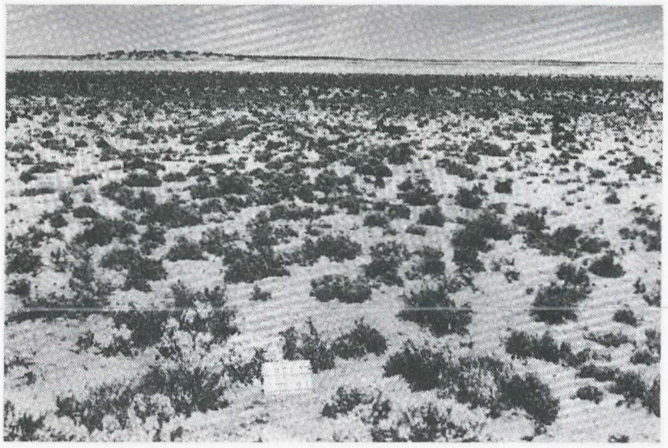
Travelling down the landscapes in Figure 4a



3(a) At the top of the landscape, this rugged stony country (Bevon land system) has small breakaways and supports sparse mulga.



3(c) The gravelly plains (Duketon land system) below undulating country often have wanderrie banks, areas slightly elevated above adjoining country, with sandier soils supporting wanderrie grasses such as woolly butt.



3(d) At the bottom of the landscape is some of the best pastoral country; lake country (Carnegie land system). Here saltbushes give way to samphires closer to the lake bed in the background.

2.1 Land types and their land systems

Land systems are characterised by:

(1) position in the landscape and dominant landforms;

(2) geology;

(3) distinctive patterns of landforms with their characteristic soil and pasture types.

They are listed in Table 2 according to the broader land types to which they belong.

Land type 1: Hills with acacia shrublands (4767 km², 4.7% of survey area)

Pastoral value in this land type is generally low (21 ha/dse) to very low (30 ha/dse). Soils on this type of country are usually shallow and very stony and do not support many palatable perennial shrubs. For this reason, this country's pastoral productivity is largely derived from seasonal flushes and drought durability is very low. Areas supporting saltbush and bluebush pastures are generally scattered and very small (where present) and hence are prone to preferential grazing and consequent degradation.

Stone mantles are extensive in this type of country and hence accelerated soil erosion is not generally a problem. Wethers run at low stocking rates are best suited to this type of country. In exceptionally good seasons stocking rates may be increased to take advantage of herbage whilst reducing grazing pressure on normally more heavily stocked parts of the station.

This country may provide refuge areas for goats in areas where substantial efforts have been made to eradicate them. It is difficult country to muster and integrated shooting and trapping are most likely to lead to the eradication of the last few goats in such areas.

Land systems:

Bevon:	Irregular low ironstone hills with stony lower slopes supporting mulga and poverty bush shrublands.
Brooking:	Prominent ridges of banded ironstone formation supporting mulga and poverty bush shrublands.
Hospital:	Large granite domes with fringing thickets.
Laminar:	Flat-topped hills and benched slopes with mulga and poverty bush shrublands.
Laverton:	Greenstone hills and ridges with acacia shrublands.
Mulline:	Greenstone hills supporting eucalypt and black oak woodlands and acacia shrublands.
Teutonic:	Hills and stony plains on acid volcanic rocks supporting mulga and poverty bush shrublands.
Wyarri:	Granite domes, hills and tor fields with gritty-surfaced fringing plains supporting mulga and granite wattle shrublands.

Major pasture type group:

6. Acacia, eremophila and cassia dominated shrublands on shallow stony soils, except Mulline land system; Pasture type 36: Greenstone hill (non-halophytic) eucalypt woodlands.

Land type 2: Low hills with eucalypt-acacia-chenopod (saltbush/bluebush) woodlands/ shrublands (1461 km², 1.5% of survey area)

This type of country consists of low greenstone hills which have considerably better soils (still usually shallow) than the more rugged hills of land type 1. Pastoral value is moderately high (12 ha/dse). Bluebushes such as pearl bluebush (*Maireana sedifolia*) and sago bush (*M. pyramidata*) are common and give this country good drought durability at low stocking rates. Seasonal production of herbage is generally excellent and any class of stock may be run on this country in fair seasons or better.

Soil erosion can be a problem in narrow alluvial tracts receiving concentrated flow off higher areas and therefore the placement of watering points in the vicinity of such alluvial tracts should be avoided if possible.

Land systems:

Graves:	Basalt and greenstone rises and low hills supporting eucalypt woodlands with prominent saltbush and bluebush understoreys. In the south west of the survey area.

Table 2. Land types, their land systems and pastoral value

Land type	Description and land systems
1	**Hills with acacia shrublands**
	Land systems - Bevon, Brooking, Hospital, Laminar, Laverton, Mulline, Teutonic and Wyarri.
	Pastoral value - low to very low (21 to 30 ha/dse)
2	**Low hills with eucalypt-acacia-chenopod woodlands/shrublands**
	Land systems - Graves, Lawrence and Leonora
	Pastoral value - moderately high (12 ha/dse)
3	**Breakaways and stony plains with mulga and poverty bush shrublands and minor chenopod shrublands**
	Land systems - Sherwood and Tooloo
	Pastoral value - moderately high (12 ha/dse)
4	**Breakaways and alluvial plains with predominantly saline soils and chenopod shrublands**
	Land systems - Crete, Gumbreak Hootanui and Yilgangi
	Pastoral value - Moderately high to high (12 to 8 ha/dse)
5	**Irregular plains and low rises supporting mulga, bowgada and chenopod shrublands**
	Land systems - Nubev (12 ha/dse), Violet (21 ha/dse) and Waguin (17 ha/dse)
	Pastoral value - Variable, see list above.
6	**Stony plains and lower alluvial plains with predominantly saline soils and chenopod shrublands**
	Land systems - Gransal, Gundockerta and Moriarty
	Pastoral value - moderately high (12 ha/dse)
7	**Alluvial plains with saline soils and weakly groved eucalypt woodlands with chenopod understoreys**
	Land systems - Campsite
	Pastoral value - moderately high (12 ha/dse)
8	**Stony plains and occasional low rises with mulga and poverty bush shrublands**
	Land systems - Felix, Sunrise and Windarra
	Pastoral value - low to moderate (21 to 17 ha/dse)
9	**Plains with gritty surfaces and low tors and domes on granite with acacia shrublands**
	Land systems - Bandy and Challenge
	Pastoral value - moderate (12 ha/dse)
10	**Wash plains on hardpan with mulga shrublands**
	Land systems - Hamilton, Helag, Jundee and Rainbow
	Pastoral value - low to moderate (21 to 17 ha/dse)
11	**Wash plains and sandy tracts on hardpan, with mulga shrublands and wanderrie grasses**
	Land systems - Duketon, Monk, Ranch, Tiger and Yanganoo
	Pastoral value - moderate to low (17 to 21 ha/dse)
12	**Plains with deep sandy soils supporting acacia shrublands (occasionally with mallees) and wanderrie grasses**
	Land systems - Ararak, Desdemona, Illaara and Yowie
	Pastoral value - moderate (17 ha/dse)
13	**Sandplains with spinifex hummock grasslands, acacia shrublands, heath and eucalypts**
	Land systems - Bullimore, Kirgella, Marmion and Pan
	Pastoral value - generally very low (50 ha/dse)
14	**Alluvial plains with saline soils and extensive chenopod shrublands**
	Land systems - Bunyip, Cyclops, Monitor, Steer, Sturt and Wilson
	Pastoral value - high to moderately high (8 to 12 ha/dse)
15	**Calcreted drainage plains with mixed chenopod and non-halophytic shrublands**
	Land systems - Cosmo, Cunyu, Melaleuca and Mileura
	Pastoral value - moderate to high (17 to 8 ha/dse)

Table 2. Land types, their land systems and pastoral value—*continued*

Land type	Description and land systems		
16	**Plains with calcrete inclusions fringing salt lake systems, with eucalypt-casuarina woodlands or shrublands**		
	Land systems	-	Deadman and Doney
	Pastoral value	-	moderate (17 ha/dse)
17	**Salt lakes and fringing alluvial plains with saline soils and chenopod shrublands**		
	Land systems	-	Carnegie and Darlot
	Pastoral value	-	high to moderately high (8 to 12 ha/dse)

Lawrence: Low greenstone hills with ironstone ridges supporting pearl bluebush shrublands with mixed eucalypt overstoreys. In the south-west of the survey area.

Leonora: Low greenstone hills and stony plains supporting mixed stony chenopod shrublands.

Major pasture type group:

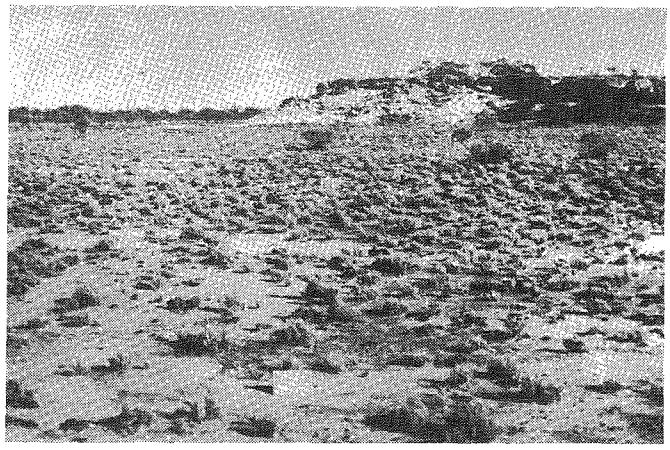
5. Chenopod low or mid shrublands on hillsides and stony plains ('stony saltbush/bluebush').

Land type 3: Breakaways and stony plains with mulga and poverty bush shrublands and minor chenopod (saltbush/bluebush) shrublands 3900 km², 3.9% of survey area)

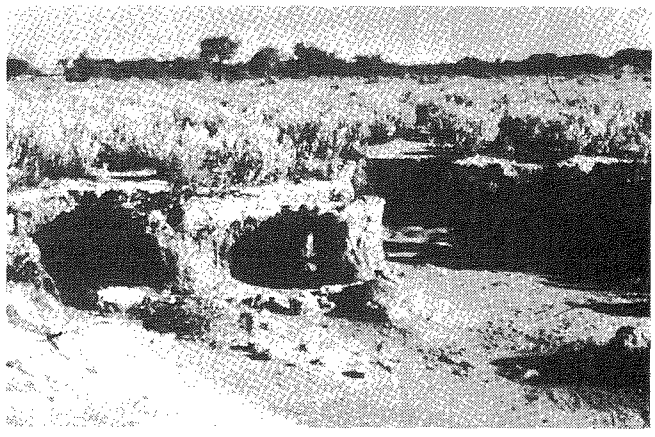
This type of country has moderately high pastoral value (12 ha/dse), largely owing to the occurrence of mixed saltbush/bluebush shrublands on alluvial plains below breakaways and in narrow lower drainage floors. Particular care is needed to prevent overgrazing and consequent soil erosion in these preferentially grazed areas. The saltbush/bluebush shrublands are preferentially grazed as they represent small areas of highly attractive forage in country dominated by scattered mulga and poverty bushes. Soils on the preferentially grazed areas are very fragile and soil erosion is encountered even in ungrazed areas. The placement of water points and fencing can partly overcome these degradation hazards by making stock walk out (at least 2 km) to these areas (if the stocking rate is conservative as well). Water points located on lower saltbush or sago bush drainage floors are likely to cause considerable degradation. Stock will be inclined to graze back up these fragile strips onto equally fragile breakaway footslopes whilst not grazing out into the mulga and poverty bush country at all.

Some pastoralists in the survey area set their stocking rates in this country according to how much saltbush/bluebush area is in the paddock and allocating zero stocking rates to the other vegetation types in the paddock. This allows for preferential grazing by keeping total grazing pressure low.

Fragile breakaway footslopes



4(a) The footslopes of breakaways often support abundant bladder saltbush shrublands reminiscent of lake country. However, the soils on breakaway footslopes are particularly susceptible to soil erosion and require careful management and monitoring to prevent degradation in these preferentially grazed areas.



4(b) This photograph was taken lying down on a track across saltbush pastures on breakaway footslopes. The sharp, almost vertical erosion faces and exposed roots indicate that erosion is active here, even though stock have had little or no impact on the area. Tracks through this type of country invariably result in active erosion.

Land systems:

Sherwood: Granite breakaways and extensive stony granitic plains, with saltbush/bluebush below breakaways and mulga and poverty bushes elsewhere.

Tooloo: Breakaways on sedimentary rocks with saline footslopes and extensive stony lower plains, supporting saltbush/bluebush below breakaways and mulga and poverty bushes elsewhere.

Major pasture type group:

6. Acacia, eremophila and cassia dominated shrublands on shallow, stony soils.

Land type 4: Breakaways and alluvial plains with predominantly saline soils and chenopod (saltbush/bluebush) shrublands (1730 km2, 1.7% of survey area)

This type of country has moderately high (12 ha/dse) to high (8 ha/dse) pastoral value as a result of its extensive areas of saltbush/bluebush shrublands. In particularly saline environments pastoral value may depend on the ability of pastoralists to supply (pipe in) fresh stock water. This is particularly the case where breakaway footslopes and lower plains extend down to salt lakes (e.g. Yilgangi land system).

In common with land type 3, breakaway footslopes in this country have very fragile soils and are susceptible to overgrazing. Waters should therefore be placed away (at least 2 km) from them. With fresh waters this country can support any class of stock in fair seasons or better.

Land systems:

Crete: Breakaways and lower plains on weathered granites supporting saltbush/bluebush shrublands.

Gumbreak: Breakaways with extensive saltbush/bluebush pasture on lower plains.

Hootanui: Breakaways, hills and ridges with extensive saline gravelly and stony lower plains supporting saltbush/bluebush shrubland.

Yilgangi: Low breakaways with saline gravelly lower plains supporting samphire/saltbush/bluebush shrublands.

Major pasture type group:

5. Chenopod low or mid shrublands on hillsides and stony plains ('stony saltbush/bluebush').

Land type 5: Irregular plains and low rises supporting mulga, bowgada and chenopod (saltbush/bluebush) shrublands (3762 km^2, 3.7% of survey area)

This country has variable pastoral value according to the extent of saltbush/bluebush shrublands occurring below low breakaways and in drainage floors. Given the variability between these land systems they are best discussed individually.

Land systems:

Nubev: Gently undulating stony plains, minor ironstone low rises and drainage floors with chenopod shrublands on drainage floors and mulga and poverty bushes elsewhere. This country has moderately high pastoral value (12 ha/dse), however, saltbush/bluebush shrublands on drainage floors need to be protected from preferential overgrazing.

Violet: Undulating stony and gravelly plains and low rises supporting mulga and poverty bush shrublands with minor areas of wanderrie grasses. Pastoral value is generally low (21 ha/dse) as a result of the scattered nature of palatable perennial shrubs. Wanderrie grasses and herbage provide substantial forage in good seasons, however, drought durability is poor. Drainage floors are mildly susceptible to soil erosion, elsewhere stone and gravel mantles enhance soil stability.

Waguin: Stony and sandy plains with occasional low breakaways, supporting acacia shrublands and small areas of saltbush/bluebush shrubland below breakaways. Pastoral value is moderate (17 ha/dse). Areas of saltbush/bluebush shrubs below breakaways are prone to overgrazing and consequent accelerated soil erosion. Elsewhere perennial shrubs are scarce and drought durability is reliant on the small areas of saltbush/bluebush shrubland. Light stocking rates at such times will prevent degradation in these areas.

Major pasture type group:

5. Chenopod low or mid shrublands on hillsides and stony plains ('stony saltbush/bluebush') and

6. Acacia, eremophila and cassia dominated shrublands on shallow, stony soils.

Land type 6: Stony plains and lower alluvial plains with predominantly saline soils and chenopod (saltbush/bluebush) shrublands (5276 km^2, 5.3% of survey area)

Extensive saltbush/bluebush shrublands have moderately high pastoral value (12 ha/dse) and good drought durability. Soil erosion is a hazard on convex slopes with light stone mantles. Increased and

accelerated run-off can instigate rilling and shallow gullying in drainage floors downslope. Any class of stock may be run on this country, pregnant ewes and rams do well in areas in fair or better seasonal and range condition.

Land systems:

Gransal: Stony plains and low rises on granite supporting mainly bluebush shrublands.

Gundockerta: Extensive, gently undulating calcareous stony plains supporting bluebush shrublands. Moderately susceptible to soil erosion.

Moriarty: Low greenstone rises and stony plains supporting saltbush/bluebush shrublands with patchy eucalypt overstoreys.

Major pasture type group:

5. Chenopod low or mid shrublands on hillsides and stony plains ('stony saltbush/bluebush').

Land type 7: Alluvial plains with saline soils and weakly groved eucalypt woodlands with chenopod understoreys (102 km², 0.1% of survey area)

Land systems:

Campsite: Saltbush/bluebush understoreys confer moderately high pastoral value (12 ha/dse) on this country. Lower units receiving run-on are slightly susceptible to soil erosion. This type of country is restricted to the south-west of the survey area.

Major pasture type group:

4. Chenopod (saltbush/bluebush) low shrublands on predominantly depositional plains.

Land type 8: Stony plains and occasional low rises with mulga and poverty bush shrublands (2541 km², 2.5% of survey area)

The sparse nature of palatable perennial shrubs confers low (21 ha/dse) to moderate (17 ha/dse) pastoral value and poor drought durability on this stony country. Forage availability is very seasonal although year round stocking of wethers at low stocking rates is also an option. Heavy stone mantles confer considerable stability to the soil and accelerated soil erosion is uncommon but does occasionally occur on drainage tracts subject to concentrated run-on.

Land systems:

Felix: Plains with quartz mantles supporting mulga and poverty bushes, locally with wanderrie grasses.

Sunrise: Stony plains supporting mulga and poverty bush shrublands.

Windarra: Plains with quartz mantles supporting mulga and poverty bush shrublands.

Major pasture type group:

6. Acacia, eremophila and cassia dominated shrublands on shallow, stony soils.

Land type 9: Plains with gritty surfaces and low tors and domes on granite with acacia shrublands (1126 km², 1.1% of survey area)

Palatable shrubs in this country give moderate (12 ha/dse) pastoral value to this country although drought durability is poor. Wethers are best suited to this country in anything but good seasons, when better classes of stock may be run.

Land systems:

Bandy: Gritty-surfaced plains and low outcrops of granite with scattered acacia and poverty bush shrublands.

Challenge: Gently undulating gritty-surfaced plains, occasional granite hills, tors and low breakaways, with acacia and poverty bush shrublands.

Major pasture type group:

6. Acacia, eremophila and cassia shrublands on shallow, stony soils.

Land type 10: Wash plains on hardpan with mulga shrublands (5756 km², 5.7% of survey area)

This country has low (21 ha/dse) to moderate (17 ha/dse) pastoral value depending on the density of palatable low shrubs below the mulga overstorey. Production of annual herbs and grasses provides abundant forage in good seasons, when any class of stock may be run. Otherwise, this country is best suited to wethers on a year round basis. The construction of tracks in this country can cause widespread shrub deaths caused by water starvation downslope if natural water flows are substantially obstructed. Soil erosion is rarely encountered in this country, but may be initiated by the inappropriate siting and construction of tracks, roads or fences.

A poorly sited and constructed track which has turned into a water course

This track was constructed without regular spoon drains to disperse harvested water back into the paddock. Running with the slope of the land, it has also quickly been scoured out by harvested water down to the hardpan. The harvesting of water causes starvation in areas that would have received that water, which can eventually kill all perennial shrubs in the affected area.

Land systems:

Hamilton: Hardpan plains and stony plains with mulga shrublands.

Helag: Hardpan plains and central drainage tracts with mulga shrublands and minor saltbush/bluebush shrublands on drainage tracts (which are prone to overgrazing and soil erosion).

Jundee: Hardpan plains with ironstone gravel mantles supporting mulga shrublands.

Rainbow: Hardpan plains supporting mulga shrublands.

Major pasture type group:

7. Mulga shrublands with sparse understoreys associated with hardpan plains.

Land type 11: Wash plains and sandy tracts on hardpan, with mulga shrublands and wanderrie grasses (11,115 km², 11.1% of survey area)

This mulga plains country differs most markedly from land type 10 in that it supports wanderrie grasses in sandy areas such as wanderrie banks. It has moderate (17 ha/dse) to low (21 ha/dse) pastoral value. Production of annual herbs and grasses as well as perennial wanderrie grasses is substantial in good seasons. This country, particularly where wanderrie grasses are abundant, is particularly productive in good summer seasons and can support any class of stock at such times. On a year round basis it is best suited to wethers, perhaps with a few more ewes in good summers when wanderrie grasses have responded well. Soil erosion is rarely encountered in this flat country with poorly developed drainage features. Obstruction of natural water flows can cause water starvation and consequent loss of vigour in vegetation downslope.

Land systems:

Duketon: Stony wash plains with mulga shrublands and wanderrie banks.

Monk: Hardpan plains with occasional sandy banks supporting mulga shrublands and wanderrie grasses.

Ranch: Hardpan plains and prominent broad drainage tracts supporting dense mulga shrublands and wanderrie grasses.

Tiger: Gravelly hardpan plains and sandy banks with mulga shrublands and wanderrie grasses.

Yanganoo: Hardpan plains and sandy tracts with groved mulga shrublands, hard spinifex and wanderrie grasses.

Major pasture type group:

2. Acacia shrublands on deep sandy soils, and
7. Mulga shrublands with sparse understoreys associated with hardpan plains.

Land type 12: Plains with deep sandy soils supporting acacia shrublands (occasionally with mallees) and wanderrie grasses (11, 366 km², 11.3% of survey area)

This country has moderate (17 ha/dse) pastoral value. Palatable perennial shrubs are generally sparse and hence drought durability is low and wethers are best suited for it on a year round basis. Production of wanderrie grasses in open shrublands can be very good in good seasons, with best responses in warmer months, when other classes of stock may be used for a short time. Drainage features on this generally flat country are poorly developed and soil erosion is rarely encountered.

Land systems:

Ararak: Broad plains with mantles of ironstone gravel supporting mulga shrublands with wanderrie grasses.

Desdemona: Extensive plains with deep sandy or loamy soils supporting mulga and wanderrie grasses.

Illaara: Plains with ironstone gravel or calcrete mantles supporting eucalypt woodlands and mulga-casuarina shrublands with patchy wanderrie grasses. In the south-west.

Yowie: Sandy plains supporting mulga and bowgada shrublands with patchy wanderrie grasses.

Major pasture type group:

2. Acacia shrublands on deep sandy soils.

Land type 13: Sandplains with spinifex hummock grasslands, acacia shrublands, heath and eucalypts (31,862 km², 31.7% of survey area)

Pastoral value in this country is generally very low (50 ha/dse). In isolation this land type is probably unsuitable (economically) for pastoral development. Short term improvement of pastures may be achieved by burning to encourage volunteer short-lived herbs, low shrubs and grasses. Prescribed burns need to be well controlled to prevent fires spreading to adjacent stations or damaging adjacent less fire-adapted vegetation and station infrastructure. Stocking rates need to be opportunistic and depend on the area and quality of forage regrowth which will generally decline with successive seasons as spinifex resumes dominance. Areas receiving run-on often support wanderrie grass understoreys which provide good seasonal forage.

Workshops conducted by the Wiluna and Sandstone Land Conservation District Committees (Tauss 1991, Williams and Tauss 1991) brought together local knowledge on management of this type of country. Booklets on these workshops' findings are available from offices of the Department of Agriculture, Western Australia.

Land systems:

Bullimore: Extensive sandplains supporting spinifex hummock grasslands.

Kirgella: Extensive sandplain, with scattered hummock grasslands and mulga and mallee shrublands.

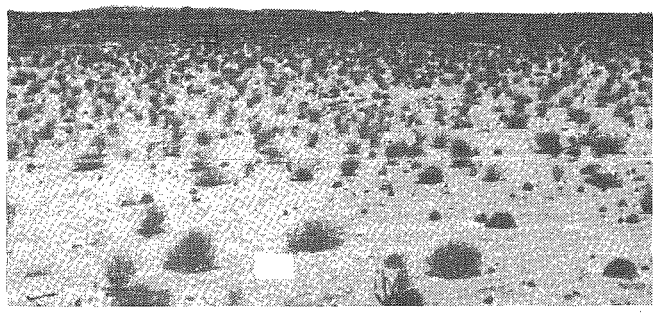
Marmion: Gently undulating sandplains with mixed shrublands, heaths and hummock grasslands mainly in the south west of the survey area.

Pan: Narrow dense mulga drainage tracts with claypans through spinifex sandplains. Greater pastoral value (30 ha/dse) than adjacent sandplains, but also preferentially grazed, and usually small in area.

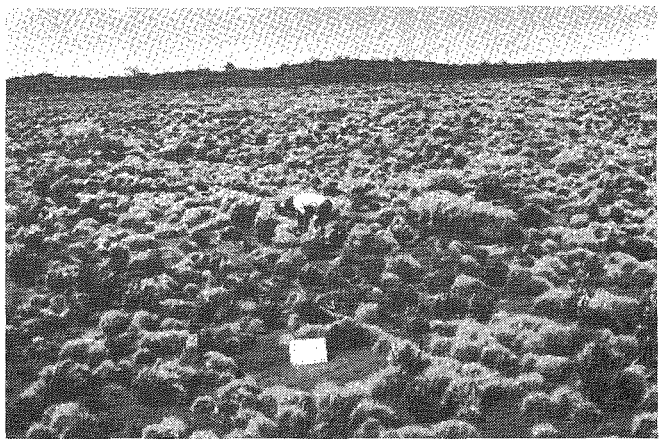
Major pasture type group:

1. Spinifex hummock grasslands on deep sands.

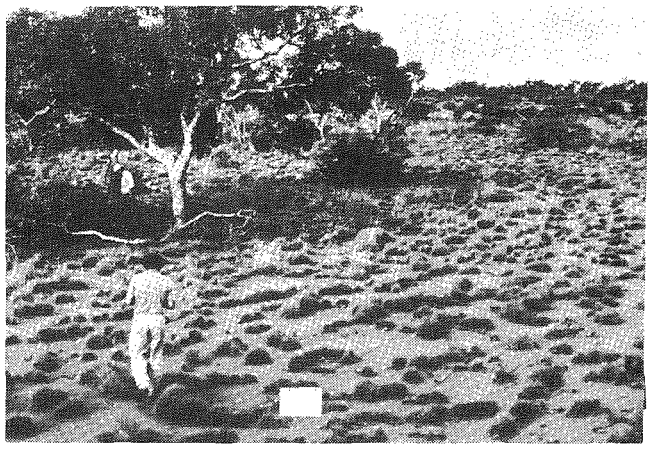
Burning spinifex can improve pastures for a while



6(a) This recently burnt sandplain supports a mixture of short-lived species including balsam (*Monotaxis luteiflora*), which is reportedly poisonous. Anecdotal evidence suggests that stock are only seriously affected by balsam (and some other similar plants) when stressed. This can occur, for instance, when stock are mustered in hot weather and walked considerable distances.



6(b) As spinifex returns, other grasses such as greybeard grass and short-lived shrubs die out. Sometimes shrubs not previously abundant respond to the fire and emerge with the spinifex in the new perennial community; here the emerging shrub is *Grevillea acacioides*. Like most perennial plants emerging with spinifex, it is unpalatable.

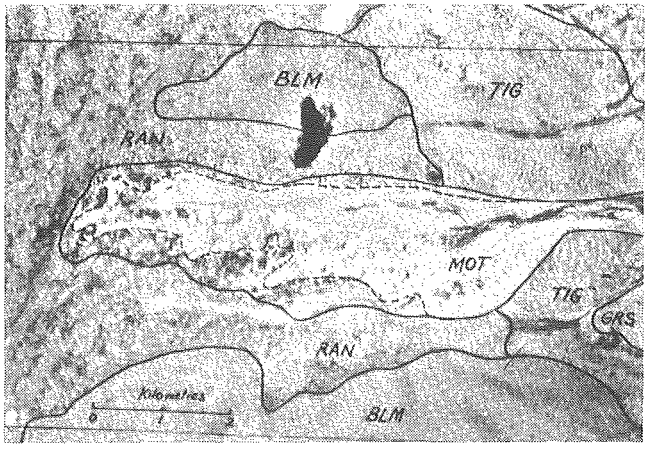


6(c) In this instance, five years after fire, young spinifex plants have become dominant below marble gums. The gums are rarely adversely affected by bushfires because of their leathery bark. This country now has very little pastoral value unless spinifex has set seed.

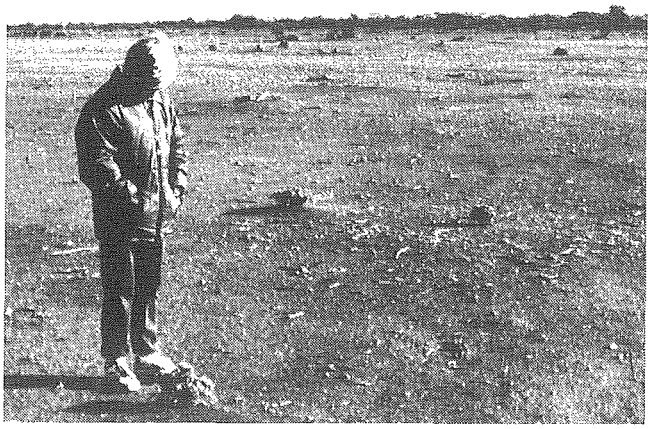
Land type 14: Alluvial plains with saline soils and extensive chenopod (saltbush/bluebush) shrublands (2165 km², 2.2% of survey area)

Extensive saltbush/bluebush shrublands give this type of country high (8 ha/dse) to moderately high (12 ha/dse) pastoral value and excellent drought durability when in good range condition. The perennial shrublands in this country are preferentially grazed and are prone to degradation and consequent accelerated soil erosion. Where possible, waters should be placed some distance (at least 2 km) away from areas subject to substantial water flows, or stock should be denied access at the point (e.g. fence dams) and the water should be piped away to less fragile country. Much of this country has been degraded by historical mismanagement and requires very careful management to improve or maintain perennial shrub cover and soil stability.

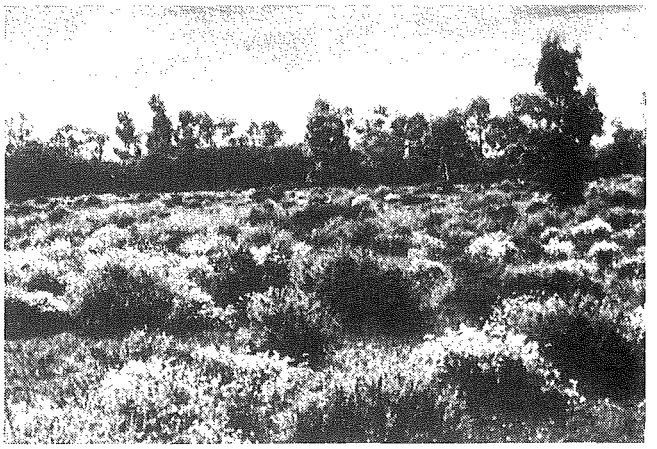
Land type 14 has suffered the worst historical degradation in the survey area



7(a) This section of an aerial photograph shows Monitor land system (MOT) draining right to left into Ranch land system (RAN). Monitor supports saltbush and bluebush pastures on fragile soils. In this instance historic degradation has seen the almost complete removal of vegetation and widespread soil erosion. The area within the dashed line is an example of severely degraded and eroded areas (sde) referred to in this report, including the individual station reports. Ranch land system has more stable soils and supports dense mulga shrublands which are not preferentially grazed.



7(b) This is a scene typical of this land type; few perennial plants remain and the soil surface is either uneven and loose or smooth and sealed.



7(c) Isolated areas of land type 14 such as on the north-western side of Sullivan's creek near Tarmoola homestead remind us of what this land type can look like. More conservative management, born of a better understanding of the capability of the land, aims to prevent unacceptable degradation such as shown in 7b.

Land systems:

Bunyip: Gilgaied drainage tracts supporting mixed saltbush/bluebush shrublands occasionally with a black oak overstorey, draining greenstone hills. (In the south of the area).

Cyclops: Saline alluvial plains with numerous drainage foci and sandy banks, supporting saltbush/bluebush shrublands.

*Monitor: Distributary alluvial fans and wash plains supporting mulga with saltbush/bluebush shrublands.

Steer: Gravelly alluvial plains with saltbush/bluebush shrublands.

Sturt: Saline alluvial plains with irregularly arranged drainage foci and sandy banks, supporting saltbush/bluebush shrublands.

*Wilson: Large creeks with extensive distributary fans, supporting mulga and saltbush/bluebush shrublands.

* These two land systems are the most extensively severely degraded and eroded land systems (proportional to their area) in the survey area.

Major pasture type groups:

4. Chenopod (saltbush/bluebush) low shrublands on predominantly depositional plains.

Land type 15: Calcreted drainage plains with mixed chenopod and non-halophytic shrublands (1267 km², 1.3% of survey area)

Pastoral value in this type of country ranges from moderate (17 ha/dse) to high (8 ha/dse) depending on the proportion of saltbush/bluebush shrublands. This type of country is preferentially grazed by stock, goats and kangaroos and hence its management requires control of all sources of grazing pressure (for it to be effective). Soil erosion is not common, although it may occur in areas between calcrete platforms that receive substantial run-on. Where saltbush/bluebush shrublands are extensive and in good range condition this country has excellent drought durability and can support all classes of stock on a year round basis.

Land systems:

Cosmo: Calcreted drainage axes through spinifex sandplains supporting spinifex with mulga in drainage areas and black oak on some calcrete platforms (17 ha/dse).

Cunyu: Calcrete platforms and intervening alluvial floors and minor areas of alluvial plains with acacia shrublands and minor saltbush/bluebush shrublands (12 ha/dse).

Melaleuca: Sandy-surfaced plains and calcareous plains supporting spinifex or wanderrie grasses below mixed tall shrublands (17 ha/dse).

Mileura: Calcrete platforms and saline alluvial plains supporting saltbush/bluebush shrublands (8 ha/dse).

Major pasture type groups:

3. Woodlands/shrublands on groundwater calcrete associated with ancient drainage valleys. Other diverse pasture type groups occur in this land type. For instance Cosmo land system includes substantial proportions of spinifex (pasture type group 1), whilst Mileura has large areas of saltbush/bluebush (pasture type group 4). This variability is reflected in different pastoral values assigned to the land systems.

Land type 16: Plains with calcrete inclusions fringing salt lake systems, with eucalypt-casuarina-acacia woodlands or shrublands (2380 km², 2.4% of survey area)

This country has moderate (17 ha/dse) pastoral value. Small areas of saltbush/bluebush shrublands in low lying areas adjacent to salt lakes may be preferentially grazed. Drought durability is generally poor and wethers are best suited to this country on a year round basis. Production of annual herbs and grasses is substantial in good seasons.

Land systems:

Deadman: Calcareous plains supporting acacia, black oak and mallee shrublands or woodlands.

Doney: Calcareous plains with eucalypt woodlands adjacent to salt lake systems.

Major pasture type group:

3. Woodlands/shrublands on groundwater calcrete associated with ancient drainage valleys (Deadman) and

2. Acacia shrublands on deep sandy soils (Doney).

Land type 17: Salt lakes and fringing alluvial plains with saline soils and chenopod (saltbush/bluebush) shrublands (9994 km², 9.9% of survey area)

This type of country supports saltbush/bluebush shrublands which give it good drought durability when it is in good range condition. The extent of chenopod shrublands influence the pastoral value of this country; where sandy banks are widespread (Darlot land system), pastoral value is moderately high (12 ha/dse), elsewhere (Carnegie land system) it is high (8 ha/dse).

The emergence of polypipe reticulation technology (and to a lesser extent dams) in recent decades has allowed substantial areas of previously ungrazed lake country to be developed. Previously, fresh stock water was very difficult to obtain in this country.

The alluvial plains on this country are fairly flat, and hence water erosion is only a problem in small areas of more concentrated flow. Reductions in perennial plant cover, on the other hand, increase the exposure of the soil surface to wind erosion.

This type of country is suitable for any class of stock but is probably best reserved for use by pregnant and lactating ewes or rams. Lake country represents the 'haystack' country type on which best stock can be brought through prolonged dry spells with minimal losses. Its maintenance in good range condition therefore bestows drought durability upon the station as a whole.

Land systems:

Carnegie: Salt lakes with fringing chenopod plains and dunes of kopi or sand.

Darlot: Alluvial plains and extensive sandy banks fringing salt lakes.

Major pasture type group:

4. Chenopod (saltbush/bluebush) low shrublands on predominantly depositional plains.

2.2 Pasture type groups

Pasture types, as discussed previously, are the building blocks of land systems and land types within any paddock. It is the pasture type (or 'plant community') that one looks at to gauge range condition. Each pasture type will have its characteristic increaser and decreaser species (Table 3), and a particular susceptibility to soil erosion.

Common pasture types in land type 10 (mulga hardpan plains) include mulga groves/intergroves, dense mulga drainage lines, open mulga plains, and occasional wanderrie banks and stony mulga-poverty bush plains. The different arrangements of these pasture types were used to develop land systems, here they are used to consider pastoral management impacts on rangeland.

The indicator value groups in Table 3 are clearly a simplification of the variety of species responses to grazing. One of the most obvious problems with this classification is that it does not take into account any degree of sensitivity. For instance, shy bluebush is easily removed from saltbush/bluebush communities, whilst rhagodia and pearl bluebush can withstand considerable grazing pressure before they decline. More detailed information regarding many of the common species found in this area is contained in **'Arid shrubland plants of Western Australia'** (Mitchell and Wilcox 1988, 1994).

Pasture types are termed 'site types' in DAWA Technical Bulletin No. 87. In that report, grazing impacts are discussed for most pasture types, and detailed quantitative data are presented for some. Seven of the eight pasture type groups (which are comprised of 36 pasture types) are discussed in this report (Table 4). Reference is only made to individual pasture types when necessary. Pasture type 8 is not discussed; it consists of two distinctive but minor pasture types.

Pasture type group 1: Spinifex hummock grasslands on deep sands

Pastoral and range condition characteristics

Not much is known about grazing impacts on this pasture type group. Of particular interest is whether the mix and abundance of palatable short-lived species can be significantly altered (to be less productive) by either failure to defer grazing after fire or by the frequency and timing of prescribed burns. If these fears are unfounded, the strategic use of grazing opportunities of burnt spinifex plains may help reduce grazing pressure on traditionally more heavily utilised pasture types. Some very productive responses to burning were observed on Erlistoun, Bandya, Yeelirrie and Banjawarn stations. Stock, kangaroos and feral herbivores appeared to favour these pastures and were in very good condition. Wilcox (1972) suggests that sheep can be run on burnt spinifex sandplain for four to five years before spinifex emerges and excludes palatable species. It can then take another ten years before enough fuel has accumulated to carry another prescribed burn, although responses are typically variable and fairly unpredictable.

Prescribed burning is likely to improve pastoral production in the short term. There is, however, always a chance of a rapid regrowth of *Acacia* shrubs which would suppress subsequent recruitment of a few, more palatable, perennial shrubs such as cotton bush (*Ptilotus obovatus*). Dense regrowth of acacias such as sugar brother (*Acacia coolgardiensis*) can also slow down the accumulation of enough grass to fuel a subsequent fire.

Anecdotal evidence has been collated by the Wiluna and Sandstone Land Conservation District Committees (Tauss 1991, Williams and Tauss 1991), however this evidence has yet to be confirmed by formal research.

Pasture type group 2: Acacia tall shrublands on deep sandy soils

This group consists of acacia tall shrublands dominated by mulga (*Acacia aneura*), bowgada/wanyu (*A. ramulosa*/*A. linophylla*) and sugar brother (*A. coolgardiensis*). The density of tall shrubs tends to suppress understorey shrubs and grasses in some pasture types of this group (e.g. pasture type 2. Sandplain acacia shrublands).

Range condition characteristics

Perennial grasses are not good indicators of range condition as only woolly butt (*Eragrostis eriopoda*) and buck wanderrie (*Eriachne helmsii*) are consistently true perennials in this survey area. The first species is very tolerant of grazing whilst the second is rarely grazed.

Table 3. Species range condition indicator values

Decreaser	Species which decline in number and vigour with increasing grazing pressure (e.g. shy bluebush - *Maireana platycarpa* - or mulga bluebush - *M. convexa*).
Increaser	Species which increase/invade as grazing pressure increases (e.g. needle bush - *Hakea preissii*, or sandbank poverty bush - *Eremophila margarethae*).
No indicator value	Species which are largely unaffected by grazing and which usually only decline after natural disturbances such as hail damage or fire (e.g. mulga - *Acacia aneura* - and bowgada - *A. ramulosa*).
Intermediate	Species which, under grazing, may initially increase relative to decreasers, but which by virtue of their being moderately palatable, are also removed under continued increase of grazing pressure (e.g. three-winged bluebush - *M. triptera*).

Table 4. Pasture type groups and their component pasture types (from Pringle *et al.* 1994)

Pasture type group	Pasture type
1. Spinifex hummock grasslands on deep sands	1. Sandplain spinifex hummock grasslands (SASP)
2. Acacia shrublands on deep sandy soils	2. Sandplain acacia shrublands (SACS)
	3. Mulga wanderrie grassy shrublands (MUWA)
	4. 'Lateritic' mulga wanderrie grassy shrublands (LMWS)
	5. Wanderrie bank mulga grassy shrublands (WABS)
	6. Calcareous plain eucalypt mallee/acacia woodlands/shrublands (CEAS)
3. Woodlands/shrublands on groundwater calcrete associated with ancient drainage valleys	7. Calcyphytic casuarina acacia woodlands/shrublands (CCAS)
	8. Calcrete platform woodlands/shrublands (CAPW)
4. Chenopod (saltbush/bluebush) low shrublands on predominantly depositional plains	9. Plain mixed halophyte low shrublands (PXHS)
	10. Eucalypt chenopod woodlands (PECW)
	11. Samphire low shrublands (SAMP)
	12. Sandy bank lake shrublands (SBLS)
	13. Kopi dune woodlands (KOPI)
	14. Frankenia low shrublands (FRAN)
	15. Bladder saltbush low shrublands (BLSS)
	16. Silver saltbush low shrublands (SSAS)
	17. Sago bush low shrublands (PSAS)
	18. Mixed chenopod shrublands with mulga overstoreys (MHHS)
	19. Mulga shrublands with scattered chenopod low shrubs (HMCS)
	20. Mulga drainage line shrublands/woodlands with chenopod understoreys (DMCS)
5. Chenopod low or mid shrublands on hillsides and stony plains ('stony saltbush/bluebush')	21. Calcyphytic pearl bluebush shrublands (CPBS)
	22. Stony bluebush mixed shrublands (SBMS)
	23. Upland small bluebush species shrublands (USBS)
6. Acacia, eremophila and cassia dominated shrublands on shallow, stony soils	24. Sandy granitic acacia shrublands (SGRS)
	25. Granite hill mixed shrublands (GRHS)
	26. Breakaway mixed shrublands (BRXS)
	27. Stony plain acacia-eremophila shrublands (SAES)
	28. Stony ironstone mulga shrublands (SIMS)
	29. Greenstone hill acacia shrublands (GHAS)
7. Mulga shrublands with sparse understoreys associated with hardpan plains	30. Hardpan plain mulga shrublands (HPMS)
	31. 'Lateritic' hardpan mulga shrublands (LHMS)
	32. Mulga groves on hardpan plains (GRMU)
	33. Drainage tract mulga shrublands (DRMS)
	34. Mulga shrublands with claypan grass understoreys (CPMG)
8. Miscellaneous pasture types with little in common with other types	35. Creek bank woodlands/shrublands (CBKW)
	36. Greenstone hill (non-halophytic) eucalypt woodlands (GNEW)

Broad-leaf wanderrie (*Monachather paradoxa*) and soft wanderrie (*Thyridolepis mitchelliana* and *T. multiculmis*) only develop into perennial plants following successive good seasons. Their failure to appear in good seasons-particularly in warmer months of the year-might indicate that grazing has been too heavy in the past and these species have not been able to set seed successfully.

The following shrub species may be used to assess and monitor range condition:

Wilcox bush (*Eremophila forrestii*) was rarely observed to have been heavily grazed, however, fence effects clearly reveal that it is grazed and may be grazed out under extreme grazing pressure. In such circumstances, poverty bush increasers were often abundant.

Observations around the old shearing shed on Wanjarri Nature Reserve indicate that wanderrie grasses regenerate more easily than the shrub component (which provides some limited drought forage if the vegetation is in good condition).

Decreasers			Increasers		
Canthium lineare			*Eremophila margarethae*	-	sandbank poverty bush
Enchylaena tomentosa	-	ruby saltbush	*Eremophila gilesii*	-	turkey bush
Maireana convexa	-	mulga bluebush	*Eremophila foliosissima*		
Maireana georgei	-	George's bluebush			
Ptilotus obovatus	-	cotton bush			
Sida calyxhymenia	-	tall sida			
Spartothamnella teucriiflora	-	mulga broombush			

Hacker (1986) identified sealing of the soil surface as an indicator of overgrazing. In such circumstances seasonal ground feed is likely to be reduced and germination of perennial shrubs and grasses is unlikely to occur. Healthy types of soil surfaces are cryptogam crusts (lichens, algae and mosses) and loose sand.

Pasture type group 3: Woodlands or shrublands on groundwater calcretes associated with ancient drainage valleys

This group consists of tall acacia shrublands, or black oak or eucalypt woodlands on calcrete platforms or plains, found in low lying areas, but occasionally occur on weathered greenstone hillsides in the south of the survey area. The low and mid shrub strata are often well developed whilst perennial grasses are uncommon.

Range condition characteristics

The understorey shrub composition in these communities is very variable, reflecting variation in soil characteristics. Grazing induced changes occur in the low shrub stratum, possibly involving combinations of the following species:

Decreasers			Increasers		
Atriplex spp.	-	saltbushes	*Acacia hemiteles*	-	tan wattle
Enchylaena tomentosa	-	ruby saltbush	*Cassia nemophila*	-	desert cassia
Maireana georgei	-	George's bluebush	*Dodonea lobulata*	-	hop bush
Ptilotus obovatus	-	cotton bush			

Pasture type group 4: Chenopod (saltbush/ bluebush) low shrublands on predominantly depositional plains

This group of pasture types includes the most pastorally valuable plant communities. Production of annual forbs and grasses in good seasons is usually excellent, whilst palatable perennial shrubs provide abundant forage in drier times.

These communities are generally low shrublands, however, they often grade upslope into mulga. In the south of the survey area they often have an eucalypt tree or mallee overstorey, usually gimlet (*Eucalyptus salubris*) or salmon gum (*E. salmonophloia*). The composition of the low shrubs is closely related to two variables; soil characteristics and grazing history. The influence of soil salinity is clearly illustrated in zonations around salt lakes. The zones moving upslope are often (by dominant component):

bare lake bed
samphire
frankenia/saltbush
mixed bluebushes and saltbushes
sago bush
sago bush and mulga
mulga and poverty bushes (not in this group of pasture types)

It is important when assessing vegetation condition that this pattern is recognised - the scarcity of saltbush may be related to soil characteristics rather than grazing history.

Range condition characteristics

The most reliable indicators of grazing impact are the cover and abundance of sensitive decreaser species. Moderate reductions in them may not necessarily have direct impacts on wool or meat production except in prolonged poor seasons, however less change has to occur for the land to become degraded. This reduces the margin for error in making management decisions.

Some of the more useful indicator species in this group are listed below:

Decreasers			Increasers		
Atriplex bunburyana	-	silver saltbush	*Acacia victoriae*	-	prickly acacia
Atriplex vesicaria	-	bladder saltbush	*Cassia nemophila*	-	desert cassia
Maireana atkinsiana	-	bronze bluebush	*Hakea preissii*	-	needle bush
Maireana georgei	-	George's bluebush			
Maireana platycarpa	-	shy bluebush			

There are also species such as three-winged bluebush (*Maireana triptera*), grey fan leaf or sunglasses bush (*Lawrencia squamata*) and sago bush (*M. pyramidata*) which behave as increaser species initially, but may be grazed out under sustained excessive grazing.

Soil erosion is a minor problem in most of these communities and can be minimised by the maintenance of perennial shrub cover. In communities associated with large creeks where surface run-on after storms is intense, water erosion can strip the sandy top layer of soil leaving an infertile, scalded clay layer exposed. The stability of the soil is also critical to sustained seasonal production of annual forbs and grasses, which further highlights the importance of maintaining perennial shrub cover.

During the survey it was noticed on a number of occasions that palatable biennials such as fluffy bindii (*Sclerolaena eurotioides*) and silky bindii (*S. eriacantha*) are uncommon in degraded areas, are often restricted to the protective niches of other less palatable shrubs in better range condition, and occur between perennial bush mounds in areas in good range condition. Whilst the presence and abundance of these species is seasonally driven to a large extent, they should be conspicuous in good seasons. Some bindiis, such as yellow bindii (*S. cuneata*), are unpalatable and replace more palatable herbage, which places greater pressure on perennials.

Pasture type group 5: Chenopod low or mid shrublands on hillsides and stony plains ('stony saltbush/bluebush')

This group of pasture types has most species in common with pasture type group four which occurs downslope of it. They both occur on soils with higher levels of nutrients, the former by alluvial deposition, the latter by weathering of parent rocks (mostly greenstones but also granites).

Most of these communities are low or mid shrublands with scattered mulga (*Acacia aneura*) or black oak (*Casuarina cristata*). In the south of the survey area there is often a well developed mallee or eucalypt tree overstorey. The most common overstorey species in stony chenopod country is Goldfields blackbutt (*Eucalyptus lesouefii*).

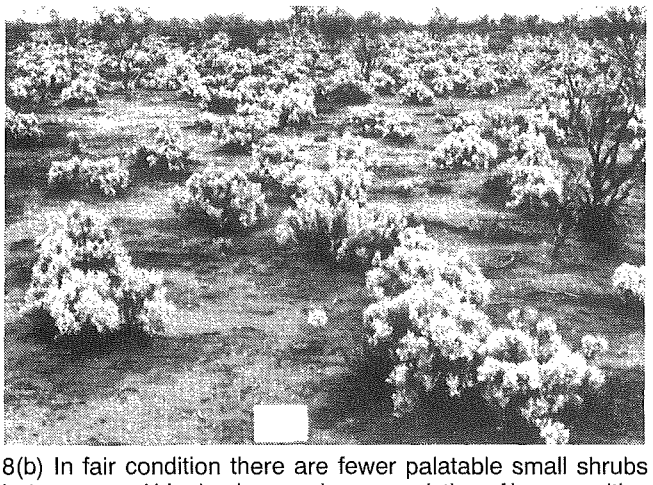
Range condition characteristics

Like group four communities, grazing induced changes occur in the low and mid shrub level. Many of the communities in this group are dominated by either sago bush (*Maireana pyramidata*) or pearl bluebush (*M. sedifolia*). These species are very long-lived and tolerant to grazing. It is the abundance and mix of species occurring between these tolerant dominant shrubs that change more readily as a result of grazing pressure. The changes generally do not include major invasions of increaser species and hence overgrazing leads to a loss in cover and increases the likelihood of accelerated soil erosion. Some of the species likely to reflect grazing impacts are listed below:

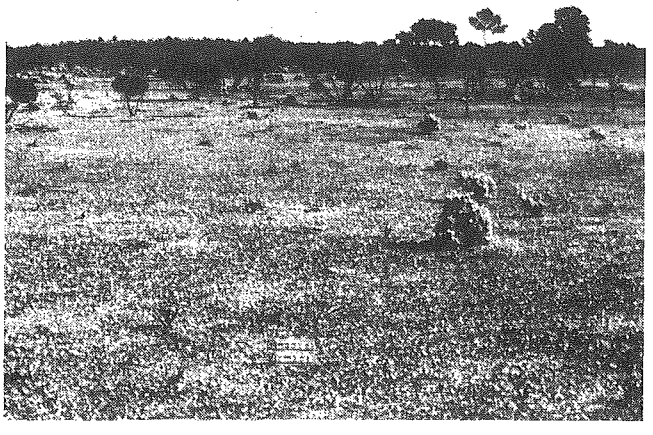
Decreasers	Intermediates	Increasers
Atriplex vesicaria - bladder saltbush	*Maireana triptera* - three-winged bluebush	*Cassia nemophila* - desert cassia
Enchylaena tomentosa - ruby saltbush	*Ptilotus obovatus* - cotton bush	*Dodonea lobulata* - hop bush
Maireana georgei - George's bluebush	*Solanum lasiophyllum* - flannel bush	*Hakea preissii* - needle bush

Range condition in pearl bluebush shrublands

8(a) In good range condition pearl bluebush shrubs are interspersed with more palatable (and more easily removed) species such as bladder saltbush and George's bluebush. The soil surface is usually covered in lichens, liverworts, mosses and algae in less stony areas, and ground feed is abundant in fair seasons or better.

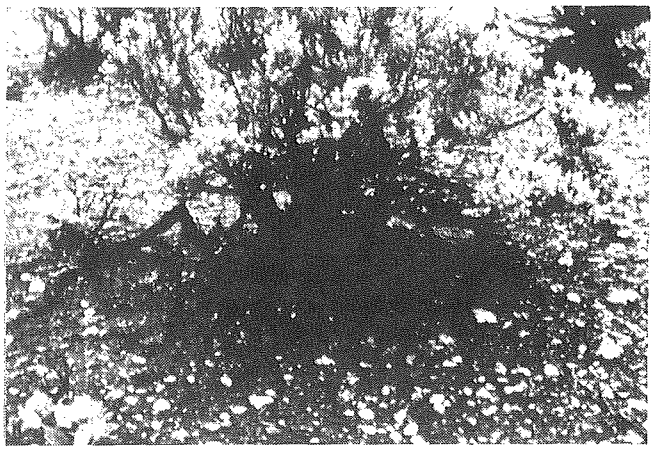


8(b) In fair condition there are fewer palatable small shrubs between pearl bluebushes, perhaps consisting of less sensitive species such as cotton bush and three-winged bluebush. The soil is still generally stable although unhealthy patches devoid of ground feed even in good seasons may occur.

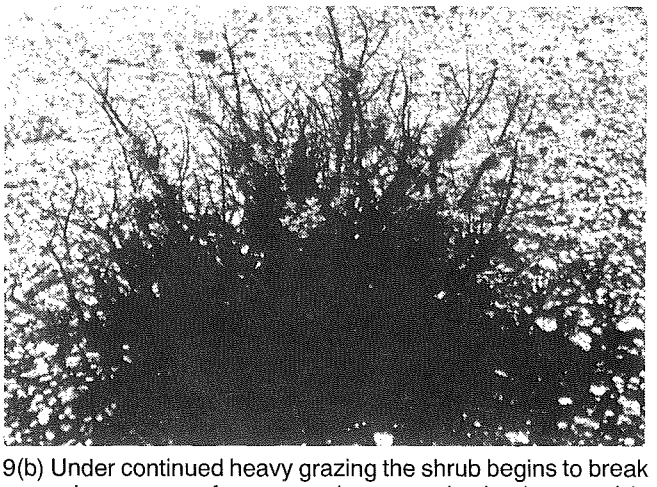


8(c) In poor condition, only a few pearl bluebushes remain, provided increasers such as desert cassia or needle bush (not pictured) have not invaded. Here soils are protected by a heavy mantle of stones, elsewhere soil erosion is common.

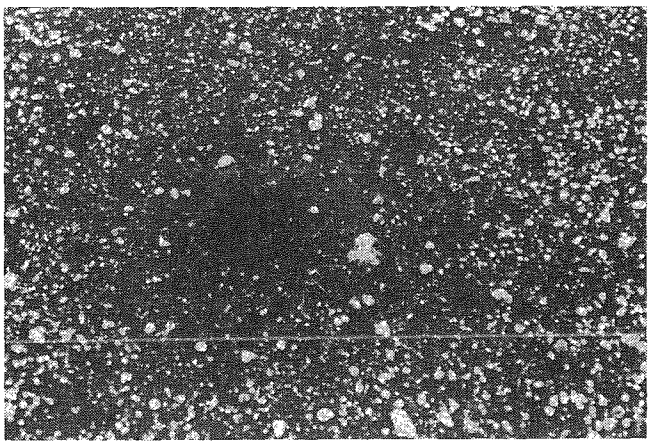
The death of a shrub and the loss of a fertile patch by continued overgrazing



9(a) A heavily grazed pearl bluebush, with new foliage concentrated near the centre of the plant and numerous dead sticks protruding. The mound of soil that characteristically develops under these plants helps water infiltrate down to the roots and acts as a zone of accumulation for litter and other detritus that makes these areas more fertile than the flatter (run off) areas between shrubs. Here the mound under the shrub is beginning to break down and some roots are exposed.



9(b) Under continued heavy grazing the shrub begins to break up and exposure of roots continues as the bush mound is stripped away by rain, hooves and running surface water. If this is widespread, the breakdown of bush mounds means less resistance to water flows, which become quicker and straighter. This makes running water more capable of causing further erosion both on site and downslope.



9(c) When the pearl bluebush has died and been washed away nothing remains of the bush mound but a small area with slightly less stone mantle; it may be a bit depressed by soil erosion compared to more stable adjacent areas. New shrubs cannot establish as nutrients and soil have been lost in the destruction of the bush mound.

Pasture type group 6: Acacia, eremophila and cassia dominated shrublands on shallow, stony soils

This group of pasture types occurs on a variety of upland landforms ranging from stony plains to banded ironstone ridges. Soils are characteristically shallow and infertile.

Range condition characteristics

Such is the natural variability in this group that it is difficult to assess range condition (grazing impacts). Monitoring the changes is easier, for it does not require an assessment of site potential. Grazing impacts generally involve changes in the palatable low shrub component, but can also involve an increase in unpalatable poverty bushes and cassias as evidenced in some holding paddocks near homesteads and shearing sheds. Some of the indicator species are listed below:

Decreasers			Increasers		
Dodonea rigida			*Cassia helmsii*	-	crinkled leaf cassia
Enchylaena tomentosa	-	ruby saltbush	*Cassia sturtii*	-	variable cassia
Eremophila forrestii	-	Wilcox bush	*Eremophila fraseri*	-	turpentine bush
Eremophila latrobei	-	warty-leaf eremophila			
Maireana convexa	-	mulga bluebush			
Maireana georgei	-	George's bluebush			
Maireana thesioides	-	lax bluebush			
Ptilotus obvatus	-	cotton bush			
Ptilotus schwartzii	-	horse mulla mulla			
Sida calyxhymenia	-	tall sida			
Spartothamnella teucriiflora	-	mulga broombush			

Soil erosion is not usually a problem in these pasture types as stone mantles are generally quite heavy.

Pasture type group 7: Mulga shrublands with sparse understoreys associated with hardpan plains

This is the dominant group through the centre of the survey area where hardpan wash plains are extensive. Soils are generally shallow (< 60 cm deep) red earths on hardpan and slopes are usually less than 1%. Mulga is the dominant overstorey species, occurring in loose groves often consisting of no more than three or four plants. Gidgee trees (*Acacia pruinocarpa*) compete with mulga for dominance of the overstorey in the far north of the survey area.

In the far south of the survey area, eucalypts and black oak replace mulga on soils which are often more calcareous than further north.

Range condition characteristics

Grazing affects the understorey species composition. Excessive grazing usually leads to a loss in species richness and density in the understorey without increases in unpalatable species. Occasionally *Eremophila* spp. increase under excessive grazing. Some of the more common indicator species are listed below:

Decreasers			Increasers
Canthium lineare			*Eremophila* aff. *gilesii*
Cassia chatelainiana	-	green cassia	*Eremophila metallicorum*
Enchylaena tomentosa	-	ruby saltbush	
Eremophila forrestii	-	Wilcox bush	
Eremophila latrobei	-	warty-leaf eremophila	
Maireana convexa	-	mulga bluebush	
Maireana georgei	-	George's bluebush	
Sida calyxhymenia	-	tall sida	
Spartothamnella teucriiflora	-	mulga broombush	

Chapter 3

Climate

Introduction

The North-Eastern Goldfields is one of the driest areas of station country in Western Australia. This is largely because it lies in the north-eastern part of the areas receiving regular winter rainfall from the south-west and in the south-eastern part of areas receiving summer thunderstorms from the north-west.

Rainfall occurs in both summer and winter with slightly more summer rainfall in the north of the survey area. The area is also characteristically hot during summer, with daily maxima over 40°C being quite common for days at a time. Conversely, the area can be very cold during winter - Yeelirrie is famed for being the coldest place in the State during winter.

Winds are usually weak and are controlled by atmospheric conditions. During summer easterly to south easterly winds predominate due to the influence of anticyclonic high pressure systems moving eastwards across the continent. In winter the prevailing winds are from the west to north-west and are usually weaker (< 10 km/h) than those prevailing in summer (11-30 km/h).

Relative humidity is at a maximum at dawn and reaches a minimum during the afternoon when temperature reaches its maximum.

Rainfall effectiveness and seasons

Rain is clearly the dominant driving force behind plant growth over time. Temperature plays an important role in its ability to suppress growth (due to cold) in winter, and increase the rate of evaporative loss of soil moisture in summer. Thus patterns of plant growth reflect both the pattern of rainfall and the weather subsequent to rain. Another important factor is the timing of rain; a big storm does less good than a similar amount of rain spread over a couple of cloudy days (soaking rains). Similarly, rainfall events are most effective when they occur in sequences, perhaps a few weeks apart (follow-up rains). Quite conceivably a single summer thunderstorm can do more damage than good. The soil is usually fairly bare and so erosion can occur more easily. Secondly, the rain may induce germination of seeds which are destined to die because of high temperatures and lack of follow-up rain, thus also depleting soil seed reserves.

It would be tremendous if rainfall could be prescribed like management, however it cannot, and it is very difficult to predict. It is therefore very important to appreciate long term average patterns, and perhaps more importantly, how variable these patterns are.

On average, the growing season in winter lasts for about two months in total, whilst in summer it lasts for about ten days to a fortnight. The average length of winter seasons increases southwards from Wiluna (40 days) through Leonora (50 days) and Menzies (60 days) to Kalgoorlie (80 days). There is not as clear a summer pattern as higher rainfall in the north is offset by higher temperatures and hence more rapid loss of soil moisture.

An equally important aspect of climate in this survey area is the probability of receiving a successful summer (20 consecutive days of plant growth) or winter (30 consecutive days of plant growth). In most places there is about a two-thirds to three-quarters chance of having a successful (not brilliant) winter in any year. The chances of a successful winter increase as you travel south and west across the survey area.

In contrast to winter, the chances of receiving a successful summer season are relatively poor. In general there is less than a quarter chance.

Another measure of these season's variability is the variation in average season length. In both summer and winter the variation is nearly as great as the average which means that pastoralists cannot tell how good or bad a good or bad season will be. In general, there have been many years of below average rainfall and relatively few really good years. There is also no clear sequence in runs of good or bad years.

Seasons usually break around May in winter and January or February when effective summer seasons occur. The end of June is generally the latest an effective winter will start, however, the starting date for effective summer seasons can be as early as November and as late as early March.

Seasons and management decisions

Management decisions based on predictions of how the next season will turn out are subject to chance. However, bearing in mind recent seasonal conditions (particularly the amount of ground feed available and the general vigour of perennial shrubs and grasses), it is possible to look at historical rainfall records and make better than even chance predictions that will affect how many and what type of stock to put into particular paddocks.

Following a failed winter it is unlikely that there will be a good summer

The failure of a winter is particularly serious because the next break of season proper is probably more than eight months away (next winter) as there is only a low chance (less than a quarter) of the summer being effective. Furthermore, grazing pressure on shrubs will increase as the weather becomes hotter and drier, and stock may tend to hang on waters and degrade the surrounding country.

In short, the outlook after a failed winter is very gloomy and total grazing pressure should be reduced accordingly. Failure to do so is likely to result in degradation and poor stock performance per head and per hectare. This is a good time to screen herds or flocks and get rid of poorer animals.

Following a failed summer, chances are that winter will see some improvement.

This is not an unusual situation, most summers are poor and ground feed is usually sporadic both in space (patchy) and time (short-lived). Some confidence in a reasonable winter is warranted, however, by early to mid June stocking levels may need to be reduced if the season has not broken. The key in this situation is to keep a close eye on both the condition of the country and perhaps the behaviour of animals, particularly whether they tend to hang on the water point. It is generally acknowledged in station country that damage to the land is more difficult to repair than to inflict.

Following a good summer, chances are that the good run will last through winter.

This scenario probably presents one of the best opportunities for improvement in the health of the land. All of the perennial plants that germinated during the summer face a reasonable chance of lasting the winter and facing the next summer with about a year's growth behind them. Spelling in these circumstances is likely to enhance recruitment of palatable perennial shrubs.

This situation also allows for the build-up of stock numbers if they have been well below the long term capacity of the land. Care should be taken in monitoring the land so that improvement in animal production is in balance with improvements in range condition - a balance between 'cashing in' on the season and 'putting some away' (protecting new recruits) for the next, inevitable, poor season.

Following a successful winter, chances are that the summer will be disappointing.

This scenario is the norm; fair to good winters and, more often than not, poor summers. In these circumstances, stock numbers should be set on the basis that ground feed is going to be in short supply for much of the summer, once the weather warms up and the easterly winds get going.

Monitoring of perennial shrub vigour and perhaps the extent to which animals hang on water points should give a reasonable warning if the country is beginning to struggle with existing total grazing pressure.

Seasons and destocking

There are two main reasons to destock or substantially lighten total grazing pressure (including goats and kangaroos). The first is to prevent or minimise degradation, the second is to help the land improve.

It is no longer accepted that by simply increasing or decreasing total grazing pressure in a paddock, the condition will necessarily decline or improve. We now recognise windows for improvement or damage.

Degradation can occur at any time, but is most likely to occur during prolonged dry spells.

If degradation occurs during fair or better seasons it indicates that the country is being pushed particularly hard. This should stand out clearly in comparison to adjacent well managed areas. When seasons are poor the intensity of grazing is more difficult to assess visually.

The problem with prolonged dry spells is fairly simple. There is very little or no ground feed and grazing pressure is concentrated on perennial plants which are already under stress from a soil moisture deficit. Some plants drop their leaves and become dormant, those that try to maintain foliage are prone to damage from overgrazing.

Perennial vegetation can also be degraded with the break of season following a poor season if ground feed is sparse. Perennial shrubs are stressed, but pick up after rain, producing new growth in an effort to restore their vigour. If they are grazed heavily at this time, they may not survive; while deferment of grazing will enhance the chance of perennial shrubs rapid recovery of vigour at this time.

Substantial improvements in the condition of the land usually require a sequence of good seasons.

Quite obviously, the country cannot improve without soil moisture to promote seed germination and plant growth. Thus destocking a paddock over a poor season may prevent degradation, but is unlikely to promote an improvement until good seasons return.

When an effective summer season occurs, it is likely that the winter seasons before and after it were/will be effective too. In this case, recruits have at least a year to build up their reserves before they have to face a failed season and presumably increased grazing pressure.

Destocking during a good season is probably less important than destocking as soon as a sequence of good seasons comes to an end.

During good seasons (and assuming a healthy soil) there is usually not very much grazing pressure on perennial shrubs as a whole. Particularly palatable species may be grazed, but generally stock prefer the ground feed. Some perennial species' seedlings in the ground feed may be grazed. The critical time arises when the short-lived species begin to wilt and perennial recruits become relatively more conspicuous and attractive to stock and other animals such as goats and kangaroos. It is then that a reduction in total grazing pressure is most likely to be effective.

Chapter 4

Current pastoral management

Stations in the survey area average about 200,000 ha, the smallest is about 13,000 ha, whilst the largest is about 400,000 ha. All stations run sheep, usually between 5000 and 15,000 dry sheep equivalents (dse). A small number of stations also run cattle. Merinos are the favoured breed of sheep, whilst Hereford and Angus cattle are preferred breeds of cattle.

Stations are generally well developed, with watered paddocks covering most of their area. Large areas of spinifex sandplain, where the cost of development is often not justifiable, are often undeveloped. Paddocks are usually rectangular with fences aligned north-south and east-west, with water points on fence-lines or in paddock corners as often as not. Paddocks are generally 5 to 10 km long and wide, with two to four water points. Tracks are usually located along fence lines, which are sometimes positioned parallel to overland flow. In such cases track erosion and local water starvation problems occur.

The design of paddocks on most stations preceded the relatively recent trend towards fencing according to country type. Some pastoralists favour a mix of country types in paddocks in the belief that stock utilise different parts of paddocks at different times of the year, hence spelling all areas for some time. Evidence on numerous stations indicates that mixing country types in paddocks leads to overgrazing in better types and under-utilisation in poorer types.

Traditionally, stations have been run as family businesses, however, that has changed in recent years. Mining companies now own most of the pastoral leases on the greenstone belt between Leonora and Wiluna. They generally run the stations with sheep and usually expect them to run as viable enterprises. Aboriginal peoples have also purchased a small number of leases. They generally have a non-Aboriginal manager and the people for whom the leases were bought do not necessarily become involved in the day to day running of such leases.

The more traditional family run stations are currently run by skeleton staffs, with few stations employing jackeroos or jillaroos in the current downturn in the wool industry. Pastoralists and their families also have increasingly sought employment in the mining industry to supplement station incomes in the current trying economic circumstances. Traditionally, these family businesses would employ between one and four station hands, and perhaps a teacher/governess for young children.

Pastoralists usually distribute their stock by placing ewes, rams and weaners in better types of country (e.g. lake country) and wethers in less preferred types (e.g. stony poverty bush country). Rams are often kept in small paddocks of high pastoral value near homesteads, where it is easier to keep an eye on them.

In particularly good seasons, some pastoralists redistribute grazing pressure, taking stock off areas of high pastoral value to maximise the benefits of seasonal conditions. Apart from such occasions, most pastoralists do not generally shift many stock between annual shearings.

Shearing is generally conducted in early summer (November-December) or autumn (March-April). One aspect of these times is that mustering is done when stock are regularly watering; but not during the hottest months. Rams are generally separated from ewes at shearing and put back into ram paddocks.

Following shearing, pastoralists consider which stock to keep and which to sell, and where to place pregnant ewes for lambing. Pastoralists generally try to move stock back into paddocks soon after shearing to minimise the period of intense grazing pressure around shearing sheds. Despite this, many paddocks around shearing sheds are in worse condition than most other parts of stations.

If sheep are sold between annual station shearings, extra shearings are often held. This is largely to comply with restrictions regarding the spread of lice and weeds.

Following annual shearings, pastoralists turn their attention to general maintenance.

Lambing is usually planned for winter, to take advantage of seasonal herbage which supports lactating ewes. Generally lambs are marked and mulesed when they are about four to six weeks old. Some pastoralists may wait a couple of weeks more to ensure that all lambs have dropped, but this may mean lambs are bigger and more difficult to handle.

Pastoralists generally keep a close watch on lambing, and marking and mulesing is a period of intense activity. Spring is not as hectic, most activity involves general station maintenance, particularly checking the condition of water points in readiness for expected hot, dry summers.

Summer is a critical time for pastoralists, as ground feed is generally sparse, the weather is hot and dry, and stock rely on water points for survival. Whilst water points may only be checked every six to ten days in cooler parts of the year, pastoralists generally try to check waters every three or four days in summer to prevent stock losses on malfunctioning waters. Summer is a trying time, days are not only hot and dry, they are also long. Equipment rapidly heats up in the sun and is difficult to work with, and pastoralists' resources are sometimes stretched to the limit. When the weather becomes cooler, those pastoralists who shear in autumn get ready again for the annual muster.

On a longer term basis, pastoralists consider formal rangeland monitoring, fencing and other infrastructural developments and the spelling of paddocks. Fences last up to 80 years, however, some pastoralists have organised replacement programs. Other pastoralists appear not to be replacing fences, opting to prop them up with star pickets. The maintenance of station infrastructure, including

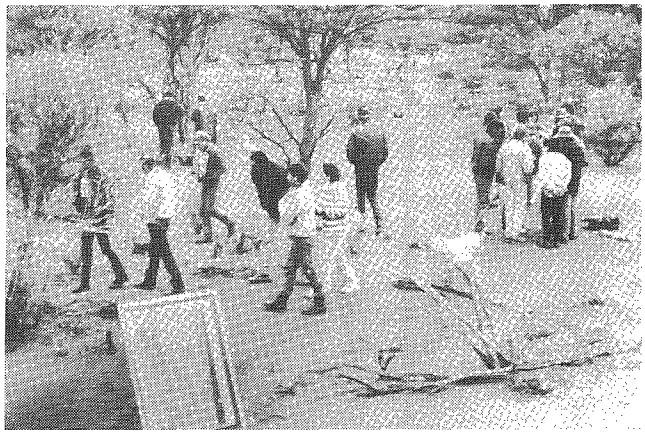
programed replacement, is essential for good pastoral management and is not adequately addressed on some stations. This may result in considerable problems in future.

Most pastoralists spell paddocks on an opportunistic basis as they see fit, if at all. This is possibly a practical approach, as spelling will only be highly effective for a few periods in any decade, when seasons are favourable and natural ecosystems resilience to grazing can be bolstered. To gain maximum benefit from spelling, control of grazing pressure by goats and kangaroos is necessary.

One of the most contentious issues in rangeland management is the management of severely degraded and eroded areas. In most cases, the environmental debt was incurred by a previous manager. Most pastoralists manage these areas sensitively and are quite prepared to comply with recommendations from the Department of Agriculture on how they should be managed. Continual failure to adopt appropriate management in such areas can eventually lead to the serving of a Soil Conservation Notice. However, this is rare.

The positive attitude of pastoralists in the survey area to the management of severely degraded and eroded areas is part of a local resource conservation ethic. This ethic has spread and intensified with the emergence of Land Conservation District Committees (LCDCs), although a strong land ethic is not a new phenomenon to the region (John Morrissey and Don Burnside, personal communications). Pastoralists' involvement in LCDCs has often commenced with regeneration projects, but the range of issues and activities with which they have become involved has broadened as the movement has matured (Don Burnside, personal communication). LCDCs are now setting the agenda to some extent in the Kalgoorlie District Office of the Department of Agriculture's annual programs. This is a healthy situation in the face of possible times of change, with pastoralists exhibiting a commitment to the environment in a coordinated manner (A. Williams, personal communication).

Young pastoral managers attend a pastoral management workshop



In mid 1988 the survey team provided technical support for a workshop around Leonora run by local pastoralists and the Department of Agriculture. Young pastoralists from as far as the Nullarbor attended the workshop. They learnt about and discussed how best to manage pastures for long term prosperity.

A recently published book on recommended pastoral management practices, **'Mulga, merinos and managers'** is recommended reading for both experienced and new pastoral managers (North-Eastern Goldfields and Kalgoorlie Land Conservation District Committees 1993).

Chapter 5

Individual station reports

Station reports are presented as tables, and in alphabetical order. The areas included are those that were legally defined as part of the pastoral lease(s) comprising each station at the time of the survey. They do not include areas such as stock routes and road reserves. In the case of stations with considerable lengths of legal boundary defined by lake edges, the edges have been re-mapped more accurately and hence actual areas inside the legally defined boundaries are more accurate than current legal lease areas.

Generally, the areas calculated after digitising the land system boundaries have been accepted only if they fall within 1% of the legal station area. Correction factors have then been uniformly applied across all land systems to bring the area into line with the exact legal area of each station.

The individual station reports consist of some preliminary information such as area surveyed, Land Conservation District and Shire. On a small number of stations the survey covered only part of their area, either because the remainder had been surveyed previously (e.g. Barwidgee station) or because most of the station fell outside the six 1:250,000 scale map sheets comprising the survey area (e.g. Credo station). Where only a small amount of a station fell outside the map sheet boundaries (e.g. Perrinvale station), the survey boundaries were amended to completely cover the station.

The first table in each station report deals with land types, i.e. groups of similar land systems. It gives a general impression of the types of country and their extent on each station.

The second table provides more detailed information at a land system scale. For each land system (sorted into groups according to pastoral value), there is information on its area, how much has been mapped as severely degraded and eroded (sde), how many traverse assessments were made on it, and what its condition was, based on these traverse assessments. The final piece of information is the suggested carrying capacity (scc) for that land system over the summer period assuming a 'fair' winter has just passed.

The areas of severely degraded vegetation with soil erosion (sde) were first interpreted from aerial photographs and LANDSAT images. Wherever possible these areas were visited and the interpretation was checked on the ground. They are shown on station plans and on the coloured map series accompanying Technical Bulletin No. 87. Their management is a matter of concern and if not already addressed, needs attention immediately.

Range condition has been derived by combining the individual assessments of soil and vegetation condition whilst traversing, into a single index. The combinations of soil and vegetation condition that produce the range condition scores used are presented in Table 5 below.

The suggested carrying capacities (scc) have been calculated according to the following procedure:

land system area less sde area	x	stocking rate for good range condition	=	dry sheep equivalents for a "normal year", to be carried over summer

The stocking rates were derived following workshops held by the Kalgoorlie and North-Eastern Goldfields Land Conservation District Committees (Pringle *et al.* 1992). The results were checked against the opinions of experienced rangeland advisers and the results from grazing trials held at Yerilla, Coodardy and Boolathana stations. There was general agreement between these three sources of information.

In order to simplify matters, land systems were grouped according to pastoral value to avoid having to deal with (potentially) 60 different stocking rates (i.e. one for each land system) (Table 6).

Preliminary findings from a ten year grazing trial recently completed on a saltbush/bluebush land system at Boolathana station near Carnarvon indicate that at conservative (light) stocking rates, wool production was not higher in areas in good range condition compared with production from areas in poor range condition. This was the case even in the wettest and driest years of the trial (Holm 1994). On this basis, only the 'good' range condition stocking rates have been used to calculate suggested carrying capacities in the station reports. Areas of severe degradation and erosion have all been assigned zero carrying capacity.

It remains to be seen how applicable these findings are to other land systems and regions. The maintenance of abundant perennial shrubs is likely to be an important factor in preventing soil erosion in fragile land systems such as Wilson, Monitor and Gundockerta in this survey area (Pringle *et al.* 1994).

If perennial shrub density is not as important to sustainable pastoral production as once thought (Holm 1994, Wilson and MacLeod 1991), there are other reasons (such as broad nature conservation and resource management goals) for maintaining the abundance of perennial shrubs (Department of Conservation and Land Management 1992, Department of Conservation and Environment 1987).

Forage availability (and hence carrying capacity and potential animal production) varies substantially during years and between years (Holm 1994). This

Table 5. Combinations of the extent of soil erosion and vegetation condition that produce range condition scores 1 to 4

		Condition of vegetation				
		Very good (1)	Good (2)	Fair (3)	Poor (4)	Very poor (5)
Extent of soil erosion	Nil (0)	Good 1	Good 1	Fair 2	Poor 3	Poor 3
	Minor (1,2)	Good 1	Good 1	Fair 2	Poor 3	Very poor 4
	Moderate (3)	Fair 2	Fair 2	Poor 3	Very poor 4	Very poor 4
	Severe (4,5)	Poor 3	Poor 3	Very poor 4	Very poor 4	Very poor 4

Where: Extent of erosion is defined as:

minor soil erosion = **< 25% of site affected around traverse vehicle**

moderate soil erosion = **25 to 50% affected**

severe soil erosion = **> 50% affected**

and vegetation classes are defined as:

Rating Condition indicators for vegetation

(1) **Excellent or very good**. For the land unit-vegetation type, the site's cover and composition of shrubs, perennial herbs and grasses is near optimal, free of obvious reductions in palatable species or increases in unpalatable species liable to reduce production potential.

(2) **Good**. Perennials present include all or most of the palatable species expected; some less palatable or unpalatable species may have increased; but total perennial cover is not very different from the optimal.

(3) **Fair**. Moderate losses of palatable perennials and/or increases in unpalatable shrubs or grasses, but most palatable species and stability desirables still present; foliar cover is less than on comparable sites rated 1 or 2 unless unpalatable species have increased.

(4) **Poor**. Conspicuous losses of palatable perennials; foliar cover is either decreased through a general loss of perennials or is increased by invasion of unpalatable species.

(5) **Very poor**. Few palatable perennials remain; cover is either greatly reduced, with much bare ground arising from loss of stability desirables, or has become dominated by a proliferation of unpalatable species.

'Stability desirables' are plants that are generally not grazed by stock, do not increase under excessive grazing pressure, but help prevent soil erosion and keep natural processes (such as water infiltration) going (e.g. black oak and hop mulga).

variability makes a single **recommendation** about carrying capacity rather meaningless and perhaps misleading to both land managers and administrators. The **suggested** carrying capacity (scc) figures presented in the station reports are situation specific. They apply to the situation where a fair (modal) winter has just passed and a poor (modal) summer is expected in the next season. Given that this specific situation is most likely, the sccs also represent a crude approximation of long term sustainable carrying capacity. On an annual basis however, an optimal carrying capacity may be substantially higher or lower than the scc, reflecting the variability in seasons experienced in the area.

For the reasons stated above, caution is recommended if these situation specific suggested carrying capacities are adopted for regulatory or administrative purposes.

Spinifex and heath dominated sandplain land systems (Bullimore, Kirgella and Marmion) were rated at 50 ha/dse. This is not necessarily meant as a year in year out rate. In this land type, forage species may persist for up to four years after fire, before spinifex

Table 6. Suggested stocking rates for land systems grouped according to pastoral value

Land system group	Suggested stocking rate (ha/dse)
High	8
Moderately high	12
Moderate	17
Low	21
Very low - hills	30
- spinifex sandplain	50

takes over again (Wilcox 1972). However, no single rate or set of rates can be given for burnt spinifex because the regrowth varies from fire to fire, partly reflecting different sequences of seasons after the fire. Some pastoralists do not consider areas of this land type in their paddocks when setting stocking rates, treating them as a bonus if there is some feed (David Fitzgerald, personal communication). Some stations have very large areas of this land type, and they use them. It was thus felt that some rate was needed.

A grazing trial at Boolathana station near Carnarvon suggests that some saltbush/bluebush plains can safely carry sheep at 5 ha/dse (Holm 1994). It was felt that lake country in this survey area is not as productive as the Gascoyne floodplains and hence a rate of 8 ha/dse was used. This is partly due to more reliable winter rainfall in the Carnarvon area than in this survey area; about every third or fourth winter is poor (on average) in the survey area, while on the Gascoyne coast the figure is more like every tenth year (Holm, personal communication).

The third table in each station report is a summary of the second table. Information is presented for groups of land systems clustered according to pastoral value.

Finally, summary range condition information for the station as a whole is presented. Throughout the station reports there has been rounding of figures, which explains why there may be very slight discrepancies in the figures. Given the broad brush treatment of suggested carrying capacities for instance, it would be inappropriate to present figures down to single dry sheep equivalents for each station.

For practical reasons, areas of lake bed have been extracted from the land systems of which they are a part and have been treated as a separate land system (with a scc of zero) in the tables of each station report.

ADELONG STATION

PASTORAL LEASE 3114/801

Area: 109,736 ha

Area surveyed: Whole Station

Land Conservation District: Kalgoorlie

Shire: Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 1090 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	2	3,304	3.0
2	Hills with chenopods	1	228	0.2
4	Breakaways and chenopod plains	1	339	0.3
5	Undulating mulga country	1	1,795	1.6
6	Undulating chenopod country	2	4,675	4.3
8	Stony non-chenopod plains	1	172	0.2
9	Granite plains and rises	1	744	0.7
10	Mulga hardpan plains	1	108	0.1
12	Sandy acacia plains with wanderrie	1	11,640	10.6
13	Spinifex sand plains	2	45,371	41.3
14	Chenopod drainage systems	1	4,982	4.5
16	Calcareous plains near salt lakes	2	15,807	14.4
17	Lake country	2	20,570	18.7

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	339	0.3	0	0.0	3	100	0	0	0	42
High	14	Bunyip	4,982	4.5	0	0.0	25	24	32	28	16	623
High	17	Carnegie	15,110	13.8	0	0.0	20	75	20	5	0	1,889
Moderately high	2	Leonora	228	0.2	0	0.0	0	0	0	0	0	19
Moderately high	6	Gransal	1,866	1.7	0	0.0	3	33	67	0	0	156
Moderately high	6	Moriarty	2,809	2.6	0	0.0	16	56	19	19	6	234
Moderate	5	Waguin	1,795	1.6	0	0.0	4	75	25	0	0	106
Moderate	8	Windarra	172	0.2	0	0.0	0	0	0	0	0	10
Moderate	9	Bandy	744	0.7	0	0.0	3	100	0	0	0	44
Moderate	16	Deadman	6,596	6.0	0	0.0	21	48	29	19	5	388
Moderate	16	Doney	9,211	8.4	0	0.0	10	80	20	0	0	542
Low	1	Bevon	397	0.4	0	0.0	2	100	0	0	0	19
Low	10	Rainbow	108	0.1	0	0.0	1	100	0	0	0	5
Low	12	Yowie	11,640	10.6	0	0.0	14	71	21	7	0	554
Very low	1	Laverton	2,907	2.6	0	0.0	4	25	25	50	0	97
Very low	13	Bullimore	6,175	5.6	0	0.0	2	100	0	0	0	124
Very low	13	Marmion	3,9196	35.7	0	0.0	40	78	15	8	0	784
Nil	17	Lake bed	5,460	5.0	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	20,431	18.6	0	0.0	48	50	25	17	8	2,554
Moderately high	4,903	4.5	0	0.0	19	53	26	16	5	409
Moderate	18,518	16.9	0	0.0	38	63	24	10	3	1,090
Low	12,145	11.1	0	0.0	17	76	18	6	0	578
Very low	48,278	44.0	0	0.0	46	74	15	11	0	1,005
Nil	5,460	5.0	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	0 (0 % of station)
No. of ratings	168
% good	63
% fair	21
% poor	13
% very poor	4
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	5640

ALBION DOWNS STATION

PASTORAL LEASE 3114/737

Area: 140,785 ha

Area surveyed: 105,212 ha (75%)

Land Conservation District: Wiluna

Shire: Wiluna / Leonora

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 7422 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
3	Breakaways and stony plains	1	13,457	12.8
5	Undulating mulga country	2	2,116	2.0
6	Undulating chenopod country	1	154	0.1
8	Stony non-chenopod plains	2	2,017	1.9
10	Mulga hardpan plains	1	5,158	4.9
11	Mulga with some wanderrie banks	3	24,026	22.8
12	Sandy acacia plains with wanderrie	2	8,452	8.0
13	Spinifex sand plains	1	47,489	45.1
15	Calcreted old drainage systems	2	1,194	1.1
17	Lake country	1	1,149	1.1

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	15	Mileura	248	0.2	0	0.0	0	0	0	0	0	31
High	17	Carnegie	1,149	1.1	0	0.0	0	0	0	0	0	144
Moderately high	3	Sherwood	13,457	12.8	406	3	22	27	27	45	0	1,088
Moderately high	6	Gransal	154	0.1	0	0.0	0	0	0	0	0	13
Moderately high	15	Cunyu	946	0.9	0	0.0	2	0	0	50	50	79
Moderate	5	Waguin	1,194	1.1	0	0.0	1	0	100	0	0	70
Moderate	8	Felix	89	0.1	0	0.0	2	100	0	0	0	5
Moderate	8	Windarra	1,929	1.8	0	0.0	8	25	50	25	0	113
Moderate	10	Hamilton	5,158	4.9	0	0.0	14	21	64	14	0	303
Moderate	11	Monk	19,863	18.9	87	0.4	30	3	7	83	7	1,163
Moderate	11	Ranch	1,072	1.0	0	0.0	0	0	0	0	0	63
Moderate	11	Yanganoo	3,092	2.9	0	0.0	0	0	0	0	0	182
Moderate	12	Ararak	6,135	5.8	0	0.0	7	0	86	14	0	361
Moderate	12	Desdemona	2,317	2.2	0	0.0	4	25	75	0	0	136
Low	5	Violet	922	0.9	0	0.0	2	50	50	0	0	44
Very low	13	Bullimore	47,489	45.1	0	0.0	6	17	17	67	0	950

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	1,397	1.3	0	0.0	0	0	0	0	0	175
Moderately high	14,556	13.8	406	2.8	24	25	25	46	4	1,180
Moderate	40,848	38.8	87	0.2	66	14	38	46	3	2,396
Low	922	0.9	0	0.0	2	50	50	0	0	44
Very low	47,489	45.1	0	0.0	6	17	17	67	0	950

Station summary

Severely degraded and eroded (ha)	493	(0.5 % of station)
No. of ratings	98	
% good	17	
% fair	34	
% poor	46	
% very poor	3	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	4750	

Note: The remainder of this station has been covered by the CSIRO Land Resources Series (Mabbutt *et al.* 1963) and by the current DAWA/DOLA survey of the Sandstone-Yalgoo-Paynes Find area (report in preparation).

BANDYA STATION

PASTORAL LEASE 3114/1213

Area: 300,917 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Leonora/Laverton

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 3675 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	5	22,533	7.5
3	Breakaways and stony plains	1	20,300	6.7
4	Breakaways and chenopod plains	1	5,617	1.9
5	Undulating mulga country	3	35,563	11.8
6	Undulating chenopod country	1	891	0.3
8	Stony non-chenopod plains	3	12,707	4.2
9	Granite plains and rises	2	2,785	0.9
10	Mulga hardpan plains	2	8,345	2.8
11	Mulga with some wanderrie banks	3	26,907	8.9
12	Sandy acacia plains with wanderrie	2	68,127	22.6
13	Spinifex sand plains	2	76,350	25.4
14	Chenopod drainage systems	3	17,274	5.7
15	Calcreted old drainage systems	3	3,517	1.2

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	14	Steer	12,157	4.0	0	0.0	26	62	23	12	4	1,520
Moderately high	3	Sherwood	20,300	6.7	40	0.2	27	48	41	11	0	1,688
Moderately high	4	Hootanui	5,617	1.9	0	0.0	2	0	0	100	0	468
Moderately high	5	Nubev	11,960	4.0	0	0.0	9	56	33	11	0	997
Moderately high	6	Gransal	891	0.3	0	0.0	0	0	0	0	0	74
Moderately high	14	Monitor	266	0.1	0	0.0	0	0	0	0	0	22
Moderately high	14	Wilson	4,851	1.6	801	16.5	14	0	0	14	86	337
Moderately high	15	Cunyu	874	0.3	0	0.0	1	0	0	100	0	73
Moderate	5	Waguin	1,329	0.4	0	0.0	0	0	0	0	0	78
Moderate	8	Felix	9,913	3.3	0	0.0	17	59	41	0	0	583
Moderate	8	Windarra	1,954	0.6	0	0.0	4	0	75	25	0	115
Moderate	9	Bandy	163	0.1	0	0.0	0	0	0	0	0	10
Moderate	9	Challenge	2,622	0.9	0	0.0	4	0	100	0	0	154
Moderate	10	Hamilton	2,643	0.9	0	0.0	0	0	0	0	0	155
Moderate	11	Monk	9,761	3.2	4	0.0	16	0	50	50	0	574
Moderate	11	Ranch	70	0.0	0	0.0	0	0	0	0	0	4
Moderate	12	Ararak	39,797	13.2	0	0.0	56	64	29	7	0	2,341
Moderate	12	Desdemona	28,330	9.4	0	0.0	31	10	48	42	0	1,666
Moderate	13	Pan	1,062	0.4	0	0.0	0	0	0	0	0	62
Moderate	15	Cosmo	1,918	0.6	0	0.0	4	50	25	0	25	113
Moderate	15	Melaleuca	726	0.2	0	0.0	3	100	0	0	0	43
Low	1	Bevon	18,193	6.0	0	0.0	17	88	12	0	0	866
Low	1	Teutonic	2,387	0.8	0	0.0	8	50	50	0	0	114

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Low	5	Violet	22,275	7.4	0	0.0	19	63	21	16	0	1,061
Low	8	Sunrise	840	0.3	0	0.0	4	0	75	25	0	40
Low	10	Jundee	5,702	1.9	0	0.0	7	14	43	29	14	272
Low	11	Tiger	17,076	5.7	0	0.0	19	42	53	5	0	813
Very low	1	Brooking	194	0.1	0	0.0	0	0	0	0	0	6
Very low	1	Laverton	1,665	0.6	0	0.0	2	0	0	100	0	55
Very low	1	Wyarri	95	0.0	0	0.0	0	0	0	0	0	3
Very low	13	Bullimore	75,288	25.0	0	0.0	12	75	17	8	0	1,506

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	12,157	4.0	0	0.0	26	62	23	12	4	1,520
Moderately high	44,759	14.9	841	1.9	53	34	26	17	23	3,659
Moderate	100,287	33.3	4	0.0	135	40	40	19	1	5,898
Low	66,472	22.1	0	0.0	74	54	35	10	1	3,166
Very low	77,242	25.7	0	0.0	14	64	14	21	0	1,570

Station summary

Severely degraded and eroded (ha)	845	(0.3 % of station)
No. of ratings	302	
% good	45	
% fair	34	
% poor	16	
% very poor	5	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	15,810	

BANJAWARN STATION

PASTORAL LEASE 3114/1212

Area: 190,172 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Leonora/Laverton

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 0 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	2	2,185	1.1
3	Breakaways and stony plains	1	31,464	16.5
5	Undulating mulga country	3	1,014	0.5
6	Undulating chenopod country	1	6,317	3.3
8	Stony non-chenopod plains	1	5,540	2.9
9	Granite plains and rises	1	2,043	1.1
10	Mulga hardpan plains	2	2,997	1.6
11	Mulga with some wanderrie banks	3	26,044	13.7
12	Sandy acacia plains with wanderrie	2	32,575	17.1
13	Spinifex sand plains	2	46,427	24.4
14	Chenopod drainage systems	2	3,566	1.9
15	Calcreted old drainage systems	1	4,249	2.2
17	Lake country	2	25,752	13.5

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	14	Cyclops	825	0.4	0	0.0	0	0	0	0	0	103
Moderately high	3	Sherwood	31,464	16.5	114	0.4	47	70	17	4	9	2,613
Moderately high	5	Nubev	797	0.4	0	0.0	5	0	40	60	0	66
Moderately high	6	Gransal	6,317	3.3	0	0.0	9	0	44	56	0	526
Moderately high	14	Wilson	2,741	1.4	0	0.0	7	0	29	57	14	228
Moderately high	15	Cunyu	4,249	2.2	0	0.0	9	0	44	56	0	354
Moderately high	17	Darlot	20,423	10.7	0	0.0	31	81	13	6	0	1,702
Moderate	5	Waguin	89	0.0	0	0.0	0	0	0	0	0	5
Moderate	8	Windarra	5,540	2.9	0	0.0	13	8	31	62	0	326
Moderate	9	Challenge	2,043	1.1	0	0.0	0	0	0	0	0	120
Moderate	10	Hamilton	720	0.4	0	0.0	3	100	0	0	0	42
Moderate	11	Duketon	475	0.2	0	0.0	0	0	0	0	0	28
Moderate	11	Monk	24,808	13.0	108	0.4	22	41	32	23	5	1,453
Moderate	11	Ranch	761	0.4	0	0.0	0	0	0	0	0	45
Moderate	12	Ararak	386	0.2	0	0.0	0	0	0	0	0	23
Moderate	12	Desdemona	32,188	16.9	0	0.0	60	58	35	7	0	1,893
Moderate	13	Pan	49	0.0	0	0.0	0	0	0	0	0	3
Low	5	Violet	128	0.1	0	0.0	0	0	0	0	0	6
Low	10	Jundee	2,276	1.2	0	0.0	3	0	100	0	0	108
Very low	1	Laverton	198	0.1	0	0.0	0	0	0	0	0	7
Very low	1	Wyarri	1,986	1.0	0	0.0	1	0	100	0	0	66
Very low	13	Bullimore	46,378	24.4	0	0.0	4	75	25	0	0	928
Nil	17	Lake bed	5,330	2.8	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	825	0.4	0	0.0	0	0	0	0	0	103
Moderately high	65,991	34.7	114	0.2	108	54	22	19	5	5,489
Moderate	67,060	35.3	108	0.2	98	49	33	17	1	3,938
Low	2,404	1.3	0	0.0	3	0	100	0	0	114
Very low	48,563	25.5	0	0.0	5	60	40	0	0	1,001
Nil	5,330	2.8	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	222	(0.1 % of station)
No. of ratings	214	
% good	51	
% fair	29	
% poor	18	
% very poor	3	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	10,645	

BARWIDGEE STATION

PASTORAL LEASE 3114/772

Area: 276,396 ha

Area surveyed: 166,341 ha (60%)

Land Conservation District: North Eastern Goldfields

Shire: Wiluna/Leonora

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 1066 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	3	5,398	3.2
2	Hills with chenopods	1	353	0.2
3	Breakaways and stony plains	1	6,226	3.7
5	Undulating mulga country	2	16,489	9.9
6	Undulating chenopod country	1	531	0.3
8	Stony non-chenopod plains	2	7,536	4.5
9	Granite plains and rises	1	183	0.1
10	Mulga hardpan plains	3	14,162	8.5
11	Mulga with some wanderrie banks	4	17,120	10.3
12	Sandy acacia plains with wanderrie	2	12,773	7.7
13	Spinifex sand plains	2	57,334	34.5
14	Chenopod drainage systems	2	1,482	0.9
15	Calcreted old drainage systems	4	9,606	5.8
17	Lake country	1	17,149	10.3

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	14	Cyclops	1,047	0.6	0	0.0	2	50	0	50	0	131
High	14	Steer	435	0.3	0	0.0	0	0	0	0	0	54
High	15	Mileura	3,189	1.9	0	0.0	6	33	50	17	0	399
Moderately high	2	Leonora	353	0.2	0	0.0	0	0	0	0	0	29
Moderately high	3	Sherwood	6,226	3.7	0	0.0	16	69	31	0	0	519
Moderately high	5	Nubev	3,329	2.0	0	0.0	1	0	0	100	0	277
Moderately high	6	Gransal	531	0.3	0	0.0	3	67	0	33	0	44
Moderately high	15	Cunyu	3,148	1.9	0	0.0	3	0	0	100	0	262
Moderately high	17	Darlot	17,149	10.3	0	0.0	24	62	17	21	0	1,429
Moderate	8	Felix	1,270	0.8	0	0.0	2	0	0	100	0	75
Moderate	8	Windarra	6,266	3.8	0	0.0	16	44	56	0	0	369
Moderate	9	Challenge	183	0.1	0	0.0	0	0	0	0	0	11
Moderate	10	Hamilton	6,445	3.9	0	0.0	2	0	50	50	0	379
Moderate	11	Duketon	1,918	1.2	0	0.0	7	57	14	29	0	113
Moderate	11	Monk	6,742	4.1	0	0.0	12	17	25	58	0	397
Moderate	11	Ranch	3,554	2.1	0	0.0	5	60	0	40	0	209
Moderate	12	Ararak	8,113	4.9	0	0.0	10	60	20	20	0	477
Moderate	12	Desdemona	4,660	2.8	0	0.0	17	6	76	18	0	274
Moderate	13	Pan	150	0.1	0	0.0	1	100	0	0	0	9
Moderate	15	Cosmo	142	0.1	0	0.0	0	0	0	0	0	8
Moderate	15	Melaleuca	3,127	1.9	0	0.0	11	100	0	0	0	184
Low	1	Bevon	3,605	2.2	0	0.0	8	50	50	0	0	172

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Low	5	Violet	13,160	7.9	0	0.0	12	8	33	58	0	627
Low	10	Jundee	6,288	3.8	0	0.0	7	29	29	43	0	299
Low	10	Rainbow	1,428	0.9	0	0.0	6	33	17	50	0	68
Low	11	Tiger	4,906	2.9	0	0.0	11	0	9	91	0	234
Very low	1	Laverton	1,429	0.9	0	0.0	3	0	33	67	0	48
Very low	1	Wyarri	364	0.2	0	0.0	0	0	0	0	0	12
Very low	13	Bullimore	57,184	34.4	0	0.0	10	70	20	10	0	1,144

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	4,671	2.8	0	0.0	8	38	38	25	0	584
Moderately high	30,735	18.5	0	0.0	47	60	19	21	0	2,560
Moderate	42,570	25.6	0	0.0	83	42	35	23	0	2,505
Low	29,387	17.7	0	0.0	44	20	27	52	0	1,400
Very low	58,976	35.5	0	0.0	13	54	23	23	0	1,204

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	195	
% good	42	
% fair	29	
% poor	29	
% very poor	0	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	8250	

BRAEMORE STATION

PASTORAL LEASE 3114/554

Area: 13,104 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Leonora

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 2373 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	2	242	1.8
2	Hills with chenopods	1	1,724	13.2
5	Undulating mulga country	2	2,379	18.2
6	Undulating chenopod country	1	5,761	44.0
10	Mulga hardpan plains	2	1,366	10.4
11	Mulga with some wanderrie banks	2	1,631	12.4

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Moderately high	2	Leonora	1,724	13.2	0	0.0	7	0	29	57	14	144
Moderately high	5	Nubev	1,100	8.4	0	0.0	17	0	59	41	0	92
Moderately high	6	Gundockerta	5,761	44.0	0	0.0	30	20	47	30	3	480
Moderate	11	Monk	807	6.2	0	0.0	3	33	67	0	0	47
Low	1	Teutonic	7	0.1	0	0.0	0	0	0	0	0	0
Low	5	Violet	1,279	9.8	0	0.0	9	56	44	0	0	61
Low	10	Jundee	1,028	7.8	0	0.0	4	0	50	50	0	49
Low	10	Rainbow	339	2.6	0	0.0	2	50	0	50	0	16
Low	11	Tiger	824	6.3	0	0.0	5	20	60	20	0	39
Very low	1	Brooking	235	1.8	0	0.0	1	0	0	100	0	8

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
Moderately high	8,585	65.5	0	0.0	54	11	48	37	4	716
Moderate	807	6.2	0	0.0	3	33	67	0	0	47
Low	3,477	26.5	0	0.0	20	35	45	20	0	165
Very low	235	1.8	0	0.0	1	0	0	100	0	8

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	78	
% good	18	
% fair	47	
% poor	32	
% very poor	3	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	940	

CLOVER DOWNS STATION

PASTORAL LEASE 3114/717

Area: 60,893 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Leonora

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 5630 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	2	312	0.5
3	Breakaways and stony plains	1	2,853	4.7
5	Undulating mulga country	2	4,275	7.0
6	Undulating chenopod country	2	9,398	15.4
8	Stony non-chenopod plains	1	405	0.7
10	Mulga hardpan plains	3	6,090	10.0
11	Mulga with some wanderrie banks	3	26,722	43.9
12	Sandy acacia plains with wanderrie	1	781	1.3
14	Chenopod drainage systems	1	1,029	1.7
17	Lake country	2	9,028	14.8

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	17	Carnegie	8,986	14.8	0	0.0	21	57	19	19	5	1,123
Moderately high	3	Sherwood	2,853	4.7	8	0.3	8	0	0	75	25	237
Moderately high	5	Nubev	2,216	3.6	0	0.0	5	0	20	60	20	185
Moderately high	6	Gransal	3,562	5.8	0	0.0	4	0	50	50	0	297
Moderately high	6	Gundockerta	5,836	9.6	0	0.0	2	0	0	100	0	486
Moderately high	14	Wilson	1,029	1.7	382	37.1	0	0	0	0	0	54
Moderate	8	Windarra	405	0.7	0	0.0	3	0	67	33	0	24
Moderate	10	Hamilton	3,273	5.4	0	0.0	2	0	0	100	0	193
Moderate	11	Monk	24,405	40.1	327	1.3	42	0	26	64	10	1,416
Moderate	11	Ranch	279	0.5	0	0.0	0	0	0	0	0	16
Low	1	Bevon	214	0.4	0	0.0	0	0	0	0	0	10
Low	5	Violet	2,059	3.4	0	0.0	0	0	0	0	0	98
Low	10	Jundee	2,021	3.3	0	0.0	0	0	0	0	0	96
Low	10	Rainbow	796	1.3	0	0.0	4	0	0	25	75	38
Low	11	Tiger	2,038	3.3	0	0.0	6	0	33	67	0	97
Low	12	Yowie	781	1.3	0	0.0	0	0	0	0	0	37
Very low	1	Brooking	98	0.2	0	0.0	0	0	0	0	0	3
Nil	17	Lake bed	42	0.1	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	8,986	14.8	0	0.0	21	57	19	19	5	1,123
Moderately high	15,497	25.4	390	2.5	19	0	16	68	16	1,259
Moderate	28,361	46.6	327	1.2	47	0	28	64	8	1,649
Low	7,909	13.0	0	0.0	10	0	20	50	30	376
Very low	98	0.2	0	0.0	0	0	0	0	0	3
Nil	42	0.1	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	717	(1.2 % of station)
No. of ratings	97	
% good	12	
% fair	23	
% poor	54	
% very poor	11	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	4410	

CREDO STATION

PASTORAL LEASE 3114/1084

Area: 202,162 ha

Area surveyed: 64,869 ha (32%)

Land Conservation District: Kalgoorlie

Shire: Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 6653 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	1	50	0.1
2	Hills with chenopods	1	5,781	8.9
5	Undulating mulga country	1	800	1.2
6	Undulating chenopod country	1	6,669	10.3
9	Granite plains and rises	1	1,294	2.0
12	Sandy acacia plains with wanderrie	1	9,166	14.1
13	Spinifex sand plains	1	29,657	45.7
14	Chenopod drainage systems	1	5111	7.9
16	Calcareous plains near salt lakes	2	3,305	5.1
17	Lake country	1	3,038	4.7

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	14	Bunyip	5,111	7.9	0	0.0	9	22	44	33	0	639
High	17	Carnegie	30,38	4.7	0	0.0	0	0	0	0	0	380
Moderately high	2	Graves	5,781	8.9	0	0.0	29	83	14	3	0	482
Moderately high	6	Moriarty	6,669	10.3	0	0.0	11	9	64	27	0	556
Moderate	5	Waguin	800	1.2	0	0.0	1	100	0	0	0	47
Moderate	9	Bandy	1,294	2.0	0	0.0	0	0	0	0	0	76
Moderate	16	Deadman	3,137	4.8	0	0.0	0	0	0	0	0	185
Moderate	16	Doney	167	0.3	0	0.0	0	0	0	0	0	10
Low	12	Yowie	9,166	14.1	0	0.0	9	100	0	0	0	436
Very low	1	Hospital	50	0.1	0	0.0	0	0	0	0	0	2
Very low	13	Marmion	29,657	45.7	0	0.0	9	100	0	0	0	593

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	8,149	12.6	0	0.0	9	22	44	33	0	1,019
Moderately high	12,449	19.2	0	0.0	40	62	28	10	0	1,038
Moderate	5,398	8.3	0	0.0	1	100	0	0	0	318
Low	9,166	14.1	0	0.0	9	100	0	0	0	436
Very low	29,707	45.8	0	0.0	9	100	0	0	0	595

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	68	
% good	68	
% fair	22	
% poor	10	
% very poor	0	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	3410	

DANDARAGA STATION

PASTORAL LEASE 3114/1054

Area: 351,940 ha

Area surveyed: 20,227 ha (6%)

Land Conservation District: Sandstone

Shire: Sandstone

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 0 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
6	Undulating chenopod country	1	73	0.4
8	Stony non-chenopod plains	1	1,032	5.1
9	Granite plains and rises	1	716	3.5
10	Mulga hardpan plains	1	22	0.1
11	Mulga with some wanderrie banks	1	9,072	44.8
12	Sandy acacia plains with wanderrie	1	3,548	17.5
13	Spinifex sand plains	1	3,594	17.8
15	Calcreted old drainage systems	1	1,407	7.0
17	Lake country	2	763	3.8

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	15	Mileura	1,407	7.0	0	0.0	0	0	0	0	0	176
High	17	Carnegie	196	1.0	0	0.0	0	0	0	0	0	24
Moderately high	6	Gransal	73	0.4	0	0.0	0	0	0	0	0	6
Moderate	8	Windarra	1,032	5.1	0	0.0	0	0	0	0	0	61
Moderate	9	Challenge	716	3.5	0	0.0	0	0	0	0	0	42
Moderate	10	Hamilton	22	0.1	0	0.0	0	0	0	0	0	1
Moderate	11	Monk	9,072	44.8	0	0.0	0	0	0	0	0	534
Moderate	12	Desdemona	3,548	17.5	0	0.0	0	0	0	0	0	209
Very low	13	Bullimore	3,594	17.8	0	0.0	0	0	0	0	0	72
Nil	17	Lake bed	567	2.8	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	1,603	7.9	0	0.0	0	0	0	0	0	200
Moderately high	73	0.4	0	0.0	0	0	0	0	0	6
Moderate	14,390	71.1	0	0.0	0	0	0	0	0	847
Very low	3,594	17.8	0	0.0	0	0	0	0	0	72
Nil	567	2.8	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	0	
% good	0	
% fair	0	
% poor	0	
% very poor	0	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	1130	

DEPOT SPRINGS STATION

PASTORAL LEASE 3114/585

Area: 122,208 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Sandstone

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 45 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	4	3,221	2.6
3	Breakaways and stony plains	1	18,203	14.9
4	Breakaways and chenopod plains	1	5,310	4.3
6	Undulating chenopod country	1	1,908	1.6
8	Stony non-chenopod plains	2	6,730	5.5
9	Granite plains and rises	2	2,117	1.7
10	Mulga hardpan plains	2	4,784	3.9
11	Mulga with some wanderrie banks	3	44,974	36.8
12	Sandy acacia plains with wanderrie	1	5,191	4.2
13	Spinifex sand plains	1	23,450	19.2
14	Chenopod drainage systems	1	3,994	3.3
15	Calcreted old drainage systems	3	2,327	1.9

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	5,310	4.3	0	0.0	12	17	42	25	17	664
High	14	Cyclops	3,994	3.3	0	0.0	5	0	60	40	0	499
High	15	Mileura	1,184	1.0	0	0.0	3	33	67	0	0	148
Moderately high	3	Sherwood	18,203	14.9	0	0.0	16	25	44	31	0	1,517
Moderately high	6	Gransal	1,908	1.6	0	0.0	5	60	20	20	0	159
Moderate	8	Windarra	5,730	4.7	0	0.0	7	0	43	57	0	337
Moderate	9	Bandy	266	0.2	0	0.0	0	0	0	0	0	16
Moderate	9	Challenge	1,851	1.5	0	0.0	2	0	50	50	0	109
Moderate	10	Hamilton	1,960	1.6	0	0.0	4	25	25	50	0	115
Moderate	11	Duketon	301	0.2	0	0.0	0	0	0	0	0	18
Moderate	11	Monk	42,212	34.5	0	0.0	79	13	43	42	3	2,483
Moderate	11	Yanganoo	2,461	2.0	0	0.0	3	100	0	0	0	145
Moderate	12	Desdemona	5,191	4.2	0	0.0	7	0	71	29	0	305
Moderate	15	Cosmo	932	0.8	0	0.0	0	0	0	0	0	55
Moderate	15	Melaleuca	212	0.2	0	0.0	0	0	0	0	0	12
Low	1	Laminar	165	0.1	0	0.0	0	0	0	0	0	8
Low	8	Sunrise	1,000	0.8	0	0.0	0	0	0	0	0	48
Low	10	Jundee	2,824	2.3	0	0.0	0	0	0	0	0	134
Very low	1	Brooking	1,358	1.1	0	0.0	0	0	0	0	0	45
Very low	1	Laverton	1,417	1.2	0	0.0	0	0	0	0	0	47
Very low	1	Wyarri	281	0.2	0	0.0	1	0	100	0	0	9
Very low	13	Bullimore	23,450	19.2	0	0.0	6	100	0	0	0	469

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	10,487	8.6	0	0.0	20	15	50	25	10	1,311
Moderately high	20,111	16.5	0	0.0	21	33	38	29	0	1,676
Moderate	61,116	50.0	0	0.0	102	14	43	41	2	3,595
Low	3,989	3.3	0	0.0	0	0	0	0	0	190
Very low	26,506	21.7	0	0.0	7	86	14	0	0	570

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	150	
% good	20	
% fair	42	
% poor	35	
% very poor	3	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	7340	

EDJUDINA STATION

PASTORAL LEASE 3114/876

Area: 329,451 ha

Area surveyed: Whole Station

Land Conservation District: Kalgoorlie

Shire: Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 17,937 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	3	9,603	2.9
2	Hills with chenopods	2	11,404	3.5
4	Breakaways and chenopod plains	2	13,550	4.1
5	Undulating mulga country	3	2,467	0.7
6	Undulating chenopod country	2	59,898	18.2
8	Stony non-chenopod plains	1	2,963	0.9
9	Granite plains and rises	1	2,904	0.9
10	Mulga hardpan plains	2	29,369	8.9
11	Mulga with some wanderrie banks	1	5,791	1.8
12	Sandy acacia plains with wanderrie	2	32,462	9.9
13	Spinifex sand plains	1	34,637	10.5
14	Chenopod drainage systems	1	3,018	0.9
16	Calcareous plains near salt lakes	1	43,746	13.3
17	Lake country	2	77,637	23.6

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	14	Steer	3,018	0.9	0	0.0	5	20	80	0	0	377
High	17	Carnegie	56,366	17.1	0	0.0	58	86	10	3	0	7,046
Moderately high	2	Lawrance	1,248	0.4	0	0.0	2	0	100	0	0	104
Moderately high	2	Leonora	10,157	3.1	0	0.0	18	6	56	39	0	846
Moderately high	4	Crete	6,126	1.9	0	0.0	15	53	40	7	0	511
Moderately high	4	Yilgangi	7,424	2.3	0	0.0	13	54	46	0	0	619
Moderately high	5	Nubev	1,022	0.3	0	0.0	0	0	0	0	0	85
Moderately high	6	Gransal	957	0.3	0	0.0	1	0	100	0	0	80
Moderately high	6	Gundockerta	58,941	17.9	1363	2.3	133	28	47	19	7	4,798
Moderate	5	Waguin	1,057	0.3	0	0.0	3	0	100	0	0	62
Moderate	8	Windarra	2,963	0.9	6	0.2	9	22	56	22	0	174
Moderate	9	Bandy	2,904	0.9	0	0.0	10	40	40	20	0	171
Moderate	11	Monk	5,791	1.8	0	0.0	0	0	0	0	0	341
Moderate	12	Desdemona	20	0.0	0	0.0	0	0	0	0	0	1
Moderate	16	Deadman	43,746	13.3	0	0.0	50	56	32	12	0	2,573
Low	5	Violet	388	0.1	0	0.0	0	0	0	0	0	18
Low	10	Jundee	7,932	2.4	0	0.0	12	25	25	42	8	378
Low	10	Rainbow	21,437	6.5	311	1.5	18	17	33	50	0	1,006
Low	12	Yowie	32,442	9.8	0	0.0	29	76	24	0	0	1,545
Very low	1	Brooking	3,411	1.0	0	0.0	2	0	100	0	0	114
Very low	1	Laverton	3,036	0.9	0	0.0	2	0	100	0	0	101

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Very low	1	Wyarri	3,157	1.0	0	0.0	16	19	56	25	0	105
Very low	13	Kirgella	34,637	10.5	0	0.0	11	100	0	0	0	693
Nil	17	Lake bed	21,272	6.5	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	59,384	18.0	0	0.0	63	81	16	3	0	7,423
Moderately high	85,875	26.1	1,363	1.6	182	29	48	18	5	7,043
Moderate	56,481	17.1	6	0.0	72	47	39	14	0	3,322
Low	62,199	18.9	311	0.5	59	48	27	24	2	2,947
Very low	44,240	13.4	0	0.0	31	45	42	13	0	1,013
Nil	21,272	6.5	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	1680 (0.5 % of station)
No. of ratings	407
% good	44
% fair	38
% poor	15
% very poor	2
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	21,750

ERLISTOUN STATION

PASTORAL LEASE 3114/693

Area: 339,335 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Laverton

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 5737 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	4	24,991	7.4
3	Breakaways and stony plains	1	21,523	6.3
4	Breakaways and chenopod plains	2	4,680	1.4
5	Undulating mulga country	3	18,065	5.3
6	Undulating chenopod country	2	8,641	2.5
8	Stony non-chenopod plains	3	22,459	6.6
9	Granite plains and rises	1	3,015	0.9
10	Mulga hardpan plains	2	17,733	5.2
11	Mulga with some wanderrie banks	4	35,174	10.4
12	Sandy acacia plains with wanderrie	2	30,049	8.9
13	Spinifex sand plains	2	105,849	31.2
14	Chenopod drainage systems	3	14,759	4.3
15	Calcreted old drainage systems	3	7,088	2.1
17	Lake country	2	25,310	7.5

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	1,057	0.3	0	0.0	0	0	0	0	0	132
High	14	Steer	10,092	3.0	0	0.0	29	76	10	7	7	1,261
High	15	Mileura	4,446	1.3	0	0.0	5	60	20	20	0	556
High	17	Carnegie	24,487	7.2	0	0.0	40	98	2	0	0	3,061
Moderately high	3	Sherwood	21,523	6.3	558	2.6	54	52	28	15	6	1,747
Moderately high	4	Hootanui	3,623	1.1	0	0.0	2	100	0	0	0	302
Moderately high	5	Nubev	10,857	3.2	0	0.0	21	71	24	5	0	905
Moderately high	6	Gransal	6,544	1.9	0	0.0	13	69	8	15	8	545
Moderately high	6	Gundockerta	2,096	0.6	0	0.0	9	22	33	44	0	175
Moderately high	14	Monitor	3,287	1.0	1503	45.7	13	8	23	8	62	149
Moderately high	14	Wilson	1,380	0.4	269	19.5	6	0	17	33	50	93
Moderately high	15	Cunyu	270	0.1	0	0.0	0	0	0	0	0	23
Moderate	5	Waguin	1,621	0.5	0	0.0	3	100	0	0	0	95
Moderate	8	Felix	2,399	0.7	0	0.0	3	100	0	0	0	141
Moderate	8	Windarra	14,598	4.3	0	0.0	33	30	39	30	0	859
Moderate	9	Challenge	3,015	0.9	0	0.0	10	10	70	20	0	177
Moderate	10	Hamilton	2,758	0.8	0	0.0	1	0	100	0	0	162
Moderate	11	Monk	10,090	3.0	50	0.5	17	12	47	35	6	591
Moderate	11	Ranch	19,238	5.7	474	2.5	29	24	48	10	17	1,104
Moderate	11	Yanganoo	2,508	0.7	0	0.0	0	0	0	0	0	148
Moderate	12	Ararak	21,618	6.4	0	0.0	49	80	16	4	0	1,272
Moderate	12	Desdemona	8,431	2.5	0	0.0	21	52	43	5	0	496

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Moderate	13	Pan	176	0.1	0	0.0	0	0	0	0	0	10
Moderate	15	Cosmo	2,372	0.7	0	0.0	0	0	0	0	0	140
Low	1	Bevon	14,793	4.4	0	0.0	9	100	0	0	0	704
Low	5	Violet	5,588	1.6	0	0.0	7	100	0	0	0	266
Low	8	Sunrise	5,463	1.6	59	1.1	0	0	0	0	0	257
Low	10	Jundee	14,975	4.4	0	0.0	16	62	19	12	6	713
Low	11	Tiger	3,338	1.0	0	0.0	6	33	67	0	0	159
Very low	1	Brooking	7,267	2.1	0	0.0	4	100	0	0	0	242
Very low	1	Laverton	851	0.3	0	0.0	3	33	0	67	0	28
Very low	1	Wyarri	2,080	0.6	0	0.0	2	50	50	0	0	69
Very low	13	Bullimore	105,673	31.1	0	0.0	13	69	31	0	0	2,113
Nil	17	Lake bed	824	0.2	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	40,081	11.8	0	0.0	74	86	7	4	3	5,010
Moderately high	49,581	14.6	2,329	4.7	118	48	24	15	13	3,939
Moderate	88,823	26.2	524	0.6	166	46	36	14	4	5,195
Low	44,155	13.0	59	0.1	38	74	18	5	3	2,099
Very low	115,871	34.1	0	0.0	22	68	23	9	0	2,452
Nil	824	0.2	0	0.0	0	0	0	0	0	0

Station summary	
Severely degraded and eroded (ha)	2,912 (0.9 % of station)
No. of ratings	418
% good	57
% fair	25
% poor	12
% very poor	6
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	18,700

GLENORN STATION

PASTORAL LEASE 3114/990

Area: 219,076 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Leonora / Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 28,154 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	5	15,718	7.2
2	Hills with chenopods	1	7,760	3.5
3	Breakaways and stony plains	1	580	0.3
4	Breakaways and chenopod plains	2	8,741	4.0
5	Undulating mulga country	2	13,779	6.3
6	Undulating chenopod country	2	10,170	4.6
8	Stony non-chenopod plains	2	3,592	1.6
10	Mulga hardpan plains	3	31,802	14.5
11	Mulga with some wanderrie banks	3	63,717	29.1
12	Sandy acacia plains with wanderrie	1	8,840	4.0
13	Spinifex sand plains	1	5,382	2.5
14	Chenopod drainage systems	3	10,199	4.7
15	Calcreted old drainage systems	2	4,058	1.9
17	Lake country	2	34,737	15.9

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	14	Cyclops	3,316	1.5	0	0.0	8	100	0	0	0	414
High	14	Steer	519	0.2	0	0.0	0	0	0	0	0	65
High	15	Mileura	3,034	1.4	0	0.0	10	80	20	0	0	379
High	17	Carnegie	30,244	13.8	0	0.0	43	65	28	5	2	3,780
Moderately high	2	Leonora	7,760	3.5	0	0.0	17	29	47	24	0	647
Moderately high	3	Sherwood	580	0.3	0	0.0	0	0	0	0	0	48
Moderately high	4	Hootanui	3,214	1.5	0	0.0	0	0	0	0	0	268
Moderately high	4	Yilgangi	5,527	2.5	0	0.0	10	30	60	10	0	461
Moderately high	5	Nubev	5,594	2.6	0	0.0	12	0	42	58	0	466
Moderately high	6	Gransal	2,842	1.3	0	0.0	6	33	17	33	17	237
Moderately high	6	Gundockerta	7,328	3.3	0	0.0	21	19	38	38	5	611
Moderately high	14	Monitor	6,365	2.9	2,567	40.3	27	0	0	74	26	317
Moderate	8	Windarra	1,523	0.7	0	0.0	0	0	0	0	0	90
Moderate	10	Hamilton	918	0.4	0	0.0	3	0	67	33	0	54
Moderate	11	Monk	36,116	16.5	0	0.0	41	20	37	44	0	2,124
Moderate	11	Ranch	18,674	8.5	58	0.3	17	0	24	76	0	1,095
Moderate	15	Melaleuca	1,024	0.5	0	0.0	4	100	0	0	0	60
Low	1	Bevon	6,589	3.0	0	0.0	5	0	0	100	0	314
Low	1	Teutonic	306	0.1	0	0.0	0	0	0	0	0	15
Low	5	Violet	8,184	3.7	0	0.0	12	0	8	92	0	390
Low	8	Sunrise	2,069	0.9	0	0.0	0	0	0	0	0	99

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Low	10	Jundee	24,320	11.1	0	0.0	43	19	35	44	2	1,158
Low	10	Rainbow	6,564	3.0	142	2.2	17	0	41	59	0	306
Low	11	Tiger	8,927	4.1	0	0.0	14	0	50	50	0	425
Low	12	Yowie	8,840	4.0	0	0.0	25	24	48	28	0	421
Very low	1	Brooking	41	0.0	0	0.0	0	0	0	0	0	1
Very low	1	Laverton	8,601	3.9	0	0.0	8	0	38	62	0	287
Very low	1	Wyarri	182	0.1	0	0.0	0	0	0	0	0	6
Very low	13	Bullimore	5,382	2.5	0	0.0	1	0	0	100	0	108
Nil	17	Lake bed	4,493	2.1	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	37,112	16.9	0	0.0	61	72	23	3	2	4,638
Moderately high	39,211	17.9	2,567	6.5	93	15	30	45	10	3,055
Moderate	58,254	26.6	58	0.1	65	18	32	49	0	3,423
Low	65,801	30.0	142	0.2	116	12	36	51	1	3,128
Very low	14,205	6.5	0	0.0	9	0	33	67	0	402
Nil	4,493	2.1	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	2,767 (1.3 % of station)
No. of ratings	344
% good	24
% fair	31
% poor	41
% very poor	3
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	14,650

GOONGARRIE STATION

PASTORAL LEASE 3114/929

Area: 100,685 ha

Area surveyed: 32,314 ha (32%)

Land Conservation District: Kalgoorlie

Shire: Menzies / Kalgoorlie-Boulder

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 0 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	1	0	0.0
2	Hills with chenopods	1	61	0.2
9	Granite plains and rises	1	1,201	3.7
13	Spinifex sand plains	2	16,710	51.7
14	Chenopod drainage systems	1	2,382	7.4
16	Calcareous plains near salt lakes	1	6,044	18.7
17	Lake country	2	5,915	18.3

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	14	Bunyip	2,382	7.4	0	0.0	4	25	0	75	0	298
High	17	Carnegie	5,653	17.5	0	0.0	9	78	22	0	0	707
Moderately high	2	Graves	61	0.2	0	0.0	0	0	0	0	0	5
Moderate	9	Bandy	1,201	3.7	0	0.0	1	100	0	0	0	71
Moderate	16	Deadman	6,044	18.7	0	0.0	14	43	43	14	0	356
Very low	1	Laverton	0	0.0	0	0.0	0	0	0	0	0	0
Very low	13	Bullimore	1,864	5.8	0	0.0	0	0	0	0	0	37
Very low	13	Marmion	14,847	45.9	0	0.0	11	82	9	9	0	297
Nil	17	Lake bed	262	0.8	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	8,035	24.9	0	0.0	13	62	15	23	0	1,005
Moderately high	61	0.2	0	0.0	0	0	0	0	0	5
Moderate	7,246	22.4	0	0.0	15	47	40	13	0	427
Very low	16,711	51.7	0	0.0	11	82	9	9	0	334
Nil	262	0.8	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	39	
% good	62	
% fair	23	
% poor	15	
% very poor	0	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	1770	

IDA VALLEY STATION

PASTORAL LEASE 3114/489

Area: 180,667 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 0 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	1	11,856	6.6
2	Hills with chenopods	1	104	0.1
3	Breakaways and stony plains	1	24,430	13.5
6	Undulating chenopod country	2	21,219	11.7
8	Stony non-chenopod plains	1	5,709	3.2
9	Granite plains and rises	2	5,568	3.1
10	Mulga hardpan plains	3	6,533	3.6
11	Mulga with some wanderrie banks	2	45,994	25.5
12	Sandy acacia plains with wanderrie	2	27,860	15.4
13	Spinifex sand plains	2	20,707	11.5
14	Chenopod drainage systems	1	2,159	1.2
15	Calcreted old drainage systems	1	523	0.3
17	Lake country	1	8,005	4.4

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	17	Carnegie	8,005	4.4	0	0.0	0	0	0	0	0	1,001
Moderately high	2	Leonora	104	0.1	0	0.0	0	0	0	0	0	9
Moderately high	3	Sherwood	24,430	13.5	279	1.1	27	22	52	11	15	2,013
Moderately high	6	Gransal	21,010	11.6	0	0.0	17	88	12	0	0	1,751
Moderately high	6	Gundockerta	209	0.1	0	0.0	0	0	0	0	0	17
Moderately high	14	Wilson	2,159	1.2	499	23.1	10	0	30	70	0	138
Moderate	8	Windarra	5,709	3.2	0	0.0	10	30	70	0	0	336
Moderate	9	Bandy	259	0.1	0	0.0	1	100	0	0	0	15
Moderate	9	Challenge	5,309	2.9	0	0.0	13	69	31	0	0	312
Moderate	10	Hamilton	5,830	3.2	56	1	9	22	33	33	11	340
Moderate	11	Monk	45,231	25.0	0	0.0	55	27	55	15	4	2,661
Moderate	11	Ranch	763	0.4	0	0.0	3	100	0	0	0	45
Moderate	12	Desdemona	516	0.3	0	0.0	0	0	0	0	0	30
Moderate	15	Melaleuca	523	0.3	0	0.0	2	0	0	100	0	31
Low	10	Jundee	256	0.1	50	19.4	2	50	0	50	0	10
Low	10	Rainbow	447	0.2	0	0.0	0	0	0	0	0	21
Low	12	Yowie	27,344	15.1	0	0.0	51	55	35	10	0	1302
Very low	1	Wyarri	11,856	6.6	0	0.0	16	19	44	38	0	395
Very low	13	Bullimore	13,988	7.7	0	0.0	3	100	0	0	0	280
Very low	13	Marmion	6,719	3.7	0	0.0	1	100	0	0	0	134

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	8,005	4.4	0	0.0	0	0	0	0	0	1,001
Moderately high	47,912	26.5	778	1.6	54	39	35	18	7	3,928
Moderate	64,141	35.5	56	0.1	93	36	47	14	3	3,770
Low	28,047	15.5	50	0.2	53	55	34	11	0	1,333
Very low	32,562	18.0	0	0.0	20	35	35	30	0	809

Station summary

Severely degraded and eroded (ha)	884	(0.5 % of station)
No. of ratings	220	
% good	41	
% fair	40	
% poor	16	
% very poor	3	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	10,840	

JEEDAMYA STATION

PASTORAL LEASE 3114/1121

Area: 197,470 ha (207,190 ha; see note at end of this station report)

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 200 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	5	7,374	3.6
2	Hills with chenopods	2	3,405	1.6
4	Breakaways and chenopod plains	3	2,920	1.4
5	Undulating mulga country	1	1,089	0.5
6	Undulating chenopod country	3	20,960	10.1
8	Stony non-chenopod plains	1	5,343	2.6
9	Granite plains and rises	1	5,480	2.6
10	Mulga hardpan plains	3	13,807	6.7
11	Mulga with some wanderrie banks	1	5,065	2.4
12	Sandy acacia plains with wanderrie	1	60,924	29.4
13	Spinifex sand plains	1	32,010	15.4
14	Chenopod drainage systems	2	1,167	0.6
15	Calcreted old drainage systems	1	1,116	0.5
16	Calcareous plains near salt lakes	2	12,514	6.0
17	Lake country	2	34,017	16.4

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	1,942	0.9	0	0.0	8	50	50	0	0	243
High	14	Bunyip	392	0.2	0	0.0	0	0	0	0	0	49
High	15	Mileura	1,116	0.5	0	0.0	3	67	33	0	0	139
High	17	Carnegie	28,131	13.6	0	0.0	69	71	17	10	1	3516
Moderately high	2	Graves	1,351	0.7	0	0.0	0	0	0	0	0	113
Moderately high	2	Leonora	2,053	1.0	0	0.0	1	0	100	0	0	171
Moderately high	4	Hootanui	435	0.2	0	0.0	0	0	0	0	0	36
Moderately high	4	Yilgangi	543	0.3	0	0.0	0	0	0	0	0	45
Moderately high	6	Gransal	7,008	3.4	180	2.6	14	64	21	0	14	569
Moderately high	6	Gundockerta	5,325	2.6	0	0.0	15	7	67	20	7	444
Moderately high	6	Moriarty	8,627	4.2	0	0.0	22	18	64	18	0	719
Moderately high	14	Monitor	775	0.4	244	31.6	5	0	20	0	80	44
Moderate	5	Waguin	1,089	0.5	0	0.0	0	0	0	0	0	64
Moderate	8	Windarra	5,343	2.6	0	0.0	10	40	40	10	10	314
Moderate	9	Bandy	5,480	2.6	0	0.0	8	50	50	0	0	322
Moderate	10	Helag	548	0.3	0	0.0	0	0	0	0	0	32
Moderate	11	Monk	5,065	2.4	197	3.9	5	0	60	40	0	286
Moderate	16	Deadman	12,467	6.0	0	0.0	13	85	15	0	0	733
Moderate	16	Doney	46	0.0	0	0.0	0	0	0	0	0	3
Low	1	Bevon	799	0.4	0	0.0	0	0	0	0	0	38
Low	10	Jundee	8	0.0	0	0.0	0	0	0	0	0	0

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Low	10	Rainbow	13,251	6.4	159	1.2	26	0	73	27	0	623
Low	12	Yowie	60,924	29.4	0	0.0	94	48	46	6	0	2,901
Very low	1	Brooking	609	0.3	0	0.0	1	100	0	0	0	20
Very low	1	Hospital	765	0.4	0	0.0	0	0	0	0	0	25
Very low	1	Laverton	3,047	1.5	0	0.0	3	0	67	33	0	102
Very low	1	Wyarri	2,154	1.0	0	0.0	4	75	25	0	0	72
Very low	13	Marmion	32,010	15.4	0	0.0	8	62	38	0	0	640
Nil	17	Lake bed	5,886	2.8	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	31,582	15.2	0	0.0	80	69	21	9	1	3947
Moderately high	26,117	12.6	424	1.6	57	25	51	12	12	2141
Moderate	30,038	14.5	197	0.7	36	53	36	8	3	1754
Low	74,982	36.2	159	0.2	120	38	52	11	0	3562
Very low	38,585	18.6	0	0.0	16	56	38	6	0	859
Nil	5,886	2.8	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	780	(0.4 % of station)
No. of ratings	309	
% good	46	
% fair	41	
% poor	10	
% very poor	3	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	12,260	

Note: Part of Jeedamya station's boundary is legally defined by the edge of Lake Ballard, which has been mapped more accurately than previously, and results in a different (more accurate) approximation of the area (207,190 ha) within the legally defined boundaries. An application for amendment to legal area has been lodged at the Deperatment of Land Administration.

KALUWIRI STATION

PASTORAL LEASE 3114/1232

Area: 297,089 ha

Area surveyed: 74,564 ha (25%)

Land Conservation District: Sandstone

Shire: Sandstone/Leonora

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 0 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	1	883	1.2
3	Breakaways and stony plains	1	2,698	3.6
4	Breakaways and chenopod plains	1	717	1.0
5	Undulating mulga country	1	188	0.3
6	Undulating chenopod country	1	1,500	2.0
8	Stony non-chenopod plains	1	1,176	1.6
9	Granite plains and rises	1	764	1.0
10	Mulga hardpan plains	1	1,132	1.5
11	Mulga with some wanderrie banks	2	16,551	22.2
12	Sandy acacia plains with wanderrie	1	1,327	1.8
13	Spinifex sand plains	1	45,801	61.4
14	Chenopod drainage systems	1	252	0.3
15	Calcreted old drainage systems	2	1,404	1.9
17	Lake country	1	172	0.2

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	717	1.0	0	0.0	0	0	0	0	0	90
High	14	Cyclops	252	0.3	0	0.0	1	0	0	100	0	32
High	15	Mileura	497	0.7	0	0.0	0	0	0	0	0	62
High	17	Carnegie	172	0.2	0	0.0	0	0	0	0	0	22
Moderately high	3	Sherwood	2,698	3.6	0	0.0	2	100	0	0	0	225
Moderately high	6	Gransal	1,500	2.0	0	0.0	2	0	100	0	0	125
Moderately high	15	Cunyu	907	1.2	0	0.0	0	0	0	0	0	76
Moderate	5	Waguin	188	0.3	0	0.0	0	0	0	0	0	11
Moderate	8	Windarra	1,176	1.6	0	0.0	0	0	0	0	0	69
Moderate	9	Challenge	764	1.0	95	12.4	5	0	20	60	20	39
Moderate	10	Hamilton	1,132	1.5	0	0.0	6	0	50	50	0	67
Moderate	11	Monk	8,844	11.9	0	0.0	10	0	10	70	20	520
Moderate	11	Yanganoo	7,707	10.3	0	0.0	7	29	14	57	0	453
Moderate	12	Desdemona	1,327	1.8	0	0.0	4	0	50	50	0	78
Very low	1	Wyarri	883	1.2	0	0.0	0	0	0	0	0	29
Very low	13	Bullimore	45,801	61.4	0	0.0	8	75	25	0	0	916

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	1,638	2.2	0	0.0	1	0	0	100	0	206
Moderately high	5,105	6.8	0	0.0	4	50	50	0	0	426
Moderate	21,138	28.3	95	0.4	32	6	25	59	9	1,237
Very low	46,684	62.6	0	0.0	8	75	25	0	0	945

Station summary

Severely degraded and eroded (ha)	95	(0.1 % of station)
No. of ratings	45	
% good	22	
% fair	27	
% poor	44	
% very poor	7	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	2810	

KOOKYNIE STATION

PASTORAL LEASE 3114/552

Area: 145,659 ha

Area surveyed: Whole station

Land Conservation District: North Eastern Goldfields

Shire: Leonora/Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 8253 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	5	15,059	10.3
2	Hills with chenopods	1	2,643	1.8
3	Breakaways and stony plains	1	11,901	8.2
4	Breakaways and chenopod plains	3	5,307	3.6
5	Undulating mulga country	1	7,911	5.4
6	Undulating chenopod country	3	13,225	9.1
8	Stony non-chenopod plains	2	3,764	2.6
10	Mulga hardpan plains	3	34,261	23.5
11	Mulga with some wanderrie banks	2	4,280	2.9
12	Sandy acacia plains with wanderrie	1	30,362	20.8
13	Spinifex sand plains	2	12,475	8.6
15	Calcreted old drainage systems	1	328	0.2
17	Lake country	2	4,143	2.8

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	4,241	2.9	0	0.0	0	0	0	0	0	530
High	17	Carnegie	3,601	2.5	0	0.0	0	0	0	0	0	450
Moderately high	2	Leonora	2,643	1.8	0	0.0	1	100	0	0	0	220
Moderately high	3	Sherwood	11,901	8.2	0	0.0	8	12	38	38	12	992
Moderately high	4	Hootanui	1,007	0.7	0	0.0	2	50	50	0	0	84
Moderately high	4	Yilgangi	60	0.0	0	0.0	0	0	0	0	0	5
Moderately high	5	Nubev	7,911	5.4	98	1.2	29	7	10	62	21	651
Moderately high	6	Gransal	8,572	5.9	0	0.0	12	17	58	25	0	714
Moderately high	6	Gundockerta	2,030	1.4	0	0.0	9	89	11	0	0	169
Moderately high	6	Moriarty	2,624	1.8	0	0.0	1	0	100	0	0	219
Moderately high	15	Cunyu	328	0.2	0	0.0	0	0	0	0	0	27
Moderate	8	Windarra	3,011	2.1	0	0.0	6	0	83	17	0	177
Moderate	10	Hamilton	1,480	1.0	0	0.0	3	0	67	33	0	87
Moderate	11	Monk	946	0.6	0	0.0	0	0	0	0	0	56
Low	1	Bevon	11,621	8.0	0	0.0	19	26	42	32	0	553
Low	1	Teutonic	932	0.6	0	0.0	0	0	0	0	0	44
Low	8	Sunrise	753	0.5	0	0.0	0	0	0	0	0	36
Low	10	Jundee	13,413	9.2	92	0.7	41	10	39	37	15	634
Low	10	Rainbow	19,367	13.3	72	0.4	28	0	32	61	7	919
Low	11	Tiger	3,334	2.3	0	0.0	1	0	0	100	0	159
Low	12	Yowie	30,362	20.8	0	0.0	34	53	44	3	0	1,446
Very low	1	Brooking	300	0.2	0	0.0	0	0	0	0	0	10

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Very low	1	Laverton	781	0.5	0	0.0	0	0	0	0	0	26
Very low	1	Wyarri	1,424	1.0	0	0.0	1	0	0	100	0	47
Very low	13	Bullimore	1,604	1.1	0	0.0	0	0	0	0	0	32
Very low	13	Marmion	10,871	7.5	0	0.0	0	0	0	0	0	217
Nil	17	Lake bed	542	0.4	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	7,842	5.4	0	0.0	0	0	0	0	0	980
Moderately high	37,074	25.5	98	0.3	62	24	26	39	11	3,081
Moderate	5,438	3.7	0	0.0	9	0	78	22	0	320
Low	79,783	54.8	164	0.2	123	22	39	32	6	3,791
Very low	14,981	10.3	0	0.0	1	0	0	100	0	332
Nil	542	0.4	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	262	(0.2 % of station)
No. of ratings	195	
% good	22	
% fair	36	
% poor	34	
% very poor	8	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	8500	

LAKE WAY STATION

PASTORAL LEASE 3114/1164

Area: 233,736 ha

Area surveyed: 17,070 ha (7%)

Land Conservation District: Wiluna

Shire: Wiluna

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 0 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	2	514	3.0
5	Undulating mulga country	1	9	0.1
8	Stony non-chenopod plains	2	2,315	13.6
10	Mulga hardpan plains	1	1,487	8.7
11	Mulga with some wanderrie banks	1	1,362	8.0
12	Sandy acacia plains with wanderrie	2	2,925	17.1
13	Spinifex sand plains	1	8,422	49.3
17	Lake country	1	35	0.2

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Moderately high	17	Darlot	35	0.2	0	0.0	0	0	0	0	0	3
Moderate	8	Felix	476	2.8	0	0.0	3	0	67	33	0	28
Moderate	8	Windarra	1,839	10.8	0	0.0	0	0	0	0	0	108
Moderate	10	Hamilton	1,487	8.7	0	0.0	0	0	0	0	0	87
Moderate	11	Monk	1,362	8.0	0	0.0	5	0	40	60	0	80
Moderate	12	Ararak	2,544	14.9	0	0.0	2	0	100	0	0	150
Moderate	12	Desdemona	382	2.2	0	0.0	0	0	0	0	0	22
Low	1	Bevon	190	1.1	0	0.0	0	0	0	0	0	9
Low	5	Violet	9	0.1	0	0.0	1	0	0	100	0	0
Very low	1	Laverton	324	1.9	0	0.0	0	0	0	0	0	11
Very low	13	Bullimore	8,422	49.3	0	0.0	0	0	0	0	0	168

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
Moderately high	35	0.2	0	0.0	0	0	0	0	0	3
Moderate	8,090	47.4	0	0.0	10	0	60	40	0	475
Low	199	1.2	0	0.0	1	0	0	100	0	9
Very low	8,746	51.2	0	0.0	0	0	0	0	0	179

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	11	
% good	0	
% fair	55	
% poor	45	
% very poor	0	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	670	

LAKE WELLS STATION

PASTORAL LEASE 3114/1239

Area: 237,969 ha

Area surveyed: 51,659 ha (22%)

Land Conservation District: North Eastern Goldfields

Shire: Laverton

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 0 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	1	2,736	5.3
3	Breakaways and stony plains	2	1,205	2.3
5	Undulating mulga country	2	764	1.5
11	Mulga with some wanderrie banks	1	986	1.9
12	Sandy acacia plains with wanderrie	1	1,400	2.7
13	Spinifex sand plains	2	30,480	59.0
15	Calcreted old drainage systems	1	1,337	2.6
17	Lake country	2	12,750	24.7

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	15	Mileura	1,337	2.6	0	0.0	8	88	12	0	0	167
High	17	Carnegie	12,713	24.6	0	0.0	13	100	0	0	0	1,589
Moderately high	3	Sherwood	468	0.9	0	0.0	0	0	0	0	0	39
Moderately high	3	Tooloo	737	1.4	0	0.0	0	0	0	0	0	61
Moderately high	5	Nubev	756	1.5	0	0.0	0	0	0	0	0	63
Moderately high	17	Darlot	38	0.1	0	0.0	0	0	0	0	0	3
Moderate	5	Waguin	8	0.0	0	0.0	0	0	0	0	0	0
Moderate	11	Yanganoo	986	1.9	0	0.0	0	0	0	0	0	58
Moderate	12	Desdemona	1,400	2.7	0	0.0	0	0	0	0	0	82
Moderate	13	Pan	1,823	3.5	0	0.0	0	0	0	0	0	107
Low	1	Laminar	2,736	5.3	0	0.0	0	0	0	0	0	130
Very low	13	Bullimore	28,657	55.5	0	0.0	0	0	0	0	0	573

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	14,050	27.2	0	0.0	21	95	5	0	0	1,756
Moderately high	1,999	3.9	0	0.0	0	0	0	0	0	166
Moderate	4,217	8.2	0	0.0	0	0	0	0	0	247
Low	2,736	5.3	0	0.0	0	0	0	0	0	130
Very low	28,657	55.5	0	0.0	0	0	0	0	0	573

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	21	
% good	95	
% fair	5	
% poor	0	
% very poor	0	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	2870	

LAVERTON DOWNS STATION

PASTORAL LEASE 3114/932

Area: 194,530 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Laverton

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 404 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	4	2,894	1.5
2	Hills with chenopods	1	443	0.2
3	Breakaways and stony plains	1	12,067	6.2
5	Undulating mulga country	3	8,217	4.2
6	Undulating chenopod country	2	5,790	3.0
8	Stony non-chenopod plains	1	8,627	4.4
10	Mulga hardpan plains	2	2,593	1.3
11	Mulga with some wanderrie banks	4	11,963	6.1
12	Sandy acacia plains with wanderrie	2	12,605	6.5
13	Spinifex sand plains	1	114,112	58.7
14	Chenopod drainage systems	2	470	0.2
15	Calcreted old drainage systems	1	1,710	0.9
17	Lake country	1	13,040	6.7

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	15	Mileura	1,710	0.9	0	0.0	6	67	33	0	0	214
High	17	Carnegie	13,040	6.7	0	0.0	22	95	5	0	0	1,630
Moderately high	2	Leonora	443	0.2	0	0.0	3	0	0	100	0	37
Moderately high	3	Sherwood	12,067	6.2	0	0.0	27	74	15	7	4	1,006
Moderately high	5	Nubev	1,119	0.6	0	0.0	3	0	33	67	0	93
Moderately high	6	Gransal	1,857	1.0	0	0.0	7	14	14	71	0	155
Moderately high	6	Gundockerta	3,933	2.0	0	0.0	12	0	17	75	8	328
Moderately high	14	Monitor	317	0.2	68	21.3	0	0	0	0	0	21
Moderately high	14	Wilson	153	0.1	0	0.0	2	0	0	50	50	13
Moderate	5	Waguin	4,923	2.5	0	0.0	4	75	25	0	0	290
Moderate	8	Windarra	8,627	4.4	55	0.6	23	17	43	26	13	504
Moderate	10	Hamilton	1,591	0.8	0	0.0	1	0	100	0	0	94
Moderate	11	Monk	2,531	1.3	0	0.0	6	83	0	17	0	149
Moderate	11	Ranch	45	0.0	0	0.0	0	0	0	0	0	3
Moderate	11	Yanganoo	5,434	2.8	0	0.0	2	100	0	0	0	320
Moderate	12	Ararak	12,300	6.3	0	0.0	15	40	53	7	0	724
Moderate	12	Desdemona	304	0.2	0	0.0	2	100	0	0	0	18
Low	1	Bevon	2,143	1.1	0	0.0	4	100	0	0	0	102
Low	5	Violet	2,175	1.1	0	0.0	4	25	0	75	0	104
Low	10	Jundee	1,001	0.5	0	0.0	4	0	0	100	0	48
Low	11	Tiger	3,953	2.0	0	0.0	9	11	33	44	11	188
Very low	1	Brooking	213	0.1	0	0.0	0	0	0	0	0	7

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Very low	1	Laverton	78	0.0	0	0.0	1	0	100	0	0	3
Very low	1	Wyarri	460	0.2	0	0.0	5	40	60	0	0	15
Very low	13	Bullimore	114,112	58.7	0	0.0	9	100	0	0	0	2,282

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	14,750	7.6	0	0.0	28	89	11	0	0	1,844
Moderately high	19,889	10.2	68	0.3	54	39	15	41	6	1,653
Moderate	35,756	18.4	55	0.2	53	42	38	15	6	2,102
Low	9,272	4.8	0	0.0	21	29	14	52	5	442
Very low	114,863	59.0	0	0.0	15	73	27	0	0	2,307

Station summary

Severely degraded and eroded (ha)	123	(0.1 % of station)
No. of ratings	171	
% good	50	
% fair	22	
% poor	24	
% very poor	4	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	8350	

LEINSTER DOWNS STATION

PASTORAL LEASE 3114/899

Area: 142,820 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Leonora

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 7361 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	4	17,617	12.3
3	Breakaways and stony plains	1	3,803	2.7
4	Breakaways and chenopod plains	1	790	0.6
5	Undulating mulga country	3	7,217	5.1
6	Undulating chenopod country	1	7,542	5.3
8	Stony non-chenopod plains	2	4,183	2.9
10	Mulga hardpan plains	2	22,792	16.0
11	Mulga with some wanderrie banks	5	23,072	16.2
12	Sandy acacia plains with wanderrie	2	20,486	14.3
13	Spinifex sand plains	2	28,110	19.7
14	Chenopod drainage systems	1	1,305	0.9
15	Calcreted old drainage systems	1	1,889	1.3
17	Lake country	1	4,013	2.8

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	790	0.6	0	0.0	0	0	0	0	0	99
High	15	Mileura	1,889	1.3	0	0.0	11	36	18	45	0	236
High	17	Carnegie	4,013	2.8	0	0.0	3	100	0	0	0	502
Moderately high	3	Sherwood	3,803	2.7	0	0.0	2	0	0	100	0	317
Moderately high	5	Nubev	2,359	1.7	0	0.0	3	33	33	33	0	197
Moderately high	6	Gransal	7,542	5.3	0	0.0	8	0	75	25	0	628
Moderately high	14	Monitor	1,305	0.9	0	0.0	0	0	0	0	0	109
Moderate	5	Waguin	280	0.2	0	0.0	0	0	0	0	0	16
Moderate	8	Windarra	3,338	2.3	0	0.0	7	43	29	29	0	196
Moderate	11	Duketon	1,013	0.7	0	0.0	3	33	33	33	0	60
Moderate	11	Monk	2,742	1.9	0	0.0	4	0	75	25	0	161
Moderate	11	Ranch	2,814	2.0	0	0.0	9	11	33	56	0	166
Moderate	11	Yanganoo	3,789	2.7	0	0.0	6	17	33	50	0	223
Moderate	12	Ararak	5,198	3.6	0	0.0	8	25	62	12	0	306
Moderate	12	Desdemona	15,288	10.7	0	0.0	15	47	33	20	0	899
Moderate	13	Pan	124	0.1	0	0.0	0	0	0	0	0	7
Low	1	Bevon	11,988	8.4	0	0.0	18	61	22	17	0	571
Low	5	Violet	4,578	3.2	0	0.0	2	0	100	0	0	218
Low	8	Sunrise	845	0.6	0	0.0	2	0	50	50	0	40
Low	10	Jundee	16,348	11.4	0	0.0	34	26	24	50	0	778
Low	10	Rainbow	6,444	4.5	0	0.0	23	0	35	65	0	307
Low	11	Tiger	12,714	8.9	0	0.0	26	38	38	23	0	605

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Very low	1	Brooking	694	0.5	0	0.0	0	0	0	0	0	23
Very low	1	Laverton	4,781	3.3	0	0.0	5	20	60	20	0	159
Very low	1	Wyarri	154	0.1	0	0.0	6	0	50	50	0	5
Very low	13	Bullimore	27,986	19.6	0	0.0	1	100	0	0	0	560

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	6,692	4.7	0	0.0	14	50	14	36	0	837
Moderately high	15,009	10.5	0	0.0	13	8	54	38	0	1,251
Moderate	34,586	24.2	0	0.0	52	29	40	31	0	2,034
Low	52,917	37.1	0	0.0	105	29	31	40	0	2,519
Very low	33,615	23.5	0	0.0	12	17	50	33	0	747

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	196	
% good	28	
% fair	35	
% poor	37	
% very poor	0	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	7390	

MELITA STATION

PASTORAL LEASE 3114/389&670

Area: 133,357 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Leonora / Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 1002 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	3	458	0.3
2	Hills with chenopods	1	6,463	4.8
3	Breakaways and stony plains	1	3,996	3.0
4	Breakaways and chenopod plains	1	3,601	2.7
5	Undulating mulga country	3	4,585	3.4
6	Undulating chenopod country	2	10,390	7.8
8	Stony non-chenopod plains	1	3,173	2.4
9	Granite plains and rises	1	513	0.4
10	Mulga hardpan plains	2	7,893	5.9
11	Mulga with some wanderrie banks	2	11,545	8.7
12	Sandy acacia plains with wanderrie	1	56,876	42.6
13	Spinifex sand plains	1	11,708	8.8
17	Lake country	2	12,157	9.1

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	3,601	2.7	0	0.0	13	77	23	0	0	450
High	17	Carnegie	11,069	8.3	0	0.0	16	56	38	6	0	1,384
Moderately high	2	Leonora	6,463	4.8	123	1.9	14	14	29	36	21	528
Moderately high	3	Sherwood	3,996	3.0	0	0.0	3	0	0	67	33	333
Moderately high	5	Nubev	3,496	2.6	208	5.9	5	0	20	80	0	274
Moderately high	6	Gransal	5,767	4.3	0	0.0	22	23	55	18	5	481
Moderately high	6	Gundockerta	4,623	3.5	0	0.0	6	0	17	50	33	385
Moderate	5	Waguin	1,064	0.8	0	0.0	0	0	0	0	0	63
Moderate	8	Windarra	3,173	2.4	0	0.0	6	0	50	50	0	187
Moderate	9	Bandy	513	0.4	0	0.0	0	0	0	0	0	30
Moderate	11	Monk	8,285	6.2	0	0.0	13	46	8	38	8	487
Low	1	Bevon	60	0.0	0	0.0	0	0	0	0	0	3
Low	1	Teutonic	97	0.1	0	0.0	0	0	0	0	0	5
Low	5	Violet	24	0.0	0	0.0	0	0	0	0	0	1
Low	10	Jundee	5,245	3.9	0	0.0	5	0	0	100	0	250
Low	10	Rainbow	2,648	2.0	0	0.0	5	0	20	80	0	126
Low	11	Tiger	3,260	2.4	0	0.0	3	0	100	0	0	155
Low	12	Yowie	56,876	42.6	0	0.0	86	40	48	13	0	2,708
Very low	1	Laverton	301	0.2	0	0.0	0	0	0	0	0	10
Very low	13	Marmion	11,708	8.8	0	0.0	0	0	0	0	0	234
Nil	17	Lake bed	1,089	0.8	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	14,670	11.0	0	0.0	29	66	31	3	0	1,834
Moderately high	24,345	18.3	330	1.4	50	14	36	36	14	2,001
Moderate	13,035	9.8	0	0.0	19	32	21	42	5	767
Low	68,209	51.1	0	0.0	99	34	46	20	0	3,248
Very low	12,009	9.0	0	0.0	0	0	0	0	0	244
Nil	1,089	0.8	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	330	(0.2 % of station)
No. of ratings	197	
% good	33	
% fair	39	
% poor	24	
% very poor	4	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	8090	

MELROSE STATION

PASTORAL LEASE 3114/872

Area: 248,454 ha (see note at the end of this station report)

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Leonora

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 5877 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	4	11,701	4.7
2	Hills with chenopods	1	950	0.4
3	Breakaways and stony plains	1	1,135	0.5
5	Undulating mulga country	3	6,166	2.5
6	Undulating chenopod country	1	9,887	4.0
8	Stony non-chenopod plains	2	17,506	7.0
9	Granite plains and rises	2	471	0.2
10	Mulga hardpan plains	2	6,694	2.7
11	Mulga with some wanderrie banks	5	54,372	21.9
12	Sandy acacia plains with wanderrie	2	42,121	17.0
13	Spinifex sand plains	1	43,134	17.4
14	Chenopod drainage systems	2	8,623	3.5
15	Calcreted old drainage systems	3	16,238	6.5
17	Lake country	3	29,454	11.9

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	14	Cyclops	3,210	1.3	0	0.0	9	33	22	44	0	401
High	14	Steer	5,414	2.2	0	0.0	8	75	0	25	0	677
High	15	Mileura	2,828	1.1	0	0.0	6	0	50	50	0	353
High	17	Carnegie	904	0.4	0	0.0	1	100	0	0	0	113
Moderately high	2	Leonora	950	0.4	0	0.0	0	0	0	0	0	79
Moderately high	3	Sherwood	1,135	0.5	0	0.0	3	0	0	100	0	95
Moderately high	5	Nubev	1,736	0.7	0	0.0	0	0	0	0	0	145
Moderately high	6	Gransal	9,887	4.0	0	0.0	21	29	48	24	0	824
Moderately high	15	Cunyu	11,572	4.7	0	0.0	27	0	37	63	0	964
Moderately high	17	Darlot	26,042	10.5	0	0.0	37	49	41	11	0	2,170
Moderate	5	Waguin	209	0.1	0	0.0	0	0	0	0	0	12
Moderate	8	Windarra	17,242	6.9	0	0.0	29	14	3	83	0	1,014
Moderate	9	Bandy	85	0.0	0	0.0	0	0	0	0	0	5
Moderate	9	Challenge	386	0.2	0	0.0	0	0	0	0	0	23
Moderate	10	Hamilton	2,778	1.1	0	0.0	6	33	33	33	0	163
Moderate	11	Duketon	7,141	2.9	0	0.0	16	19	50	31	0	420
Moderate	11	Monk	33,851	13.6	0	0.0	42	7	69	24	0	1,991
Moderate	11	Ranch	2,868	1.2	0	0.0	3	33	67	0	0	169
Moderate	11	Yanganoo	1,675	0.7	0	0.0	4	0	25	75	0	99
Moderate	12	Ararak	17,115	6.9	0	0.0	49	43	41	16	0	1,007
Moderate	12	Desdemona	25,007	10.1	0	0.0	35	43	43	14	0	1,471
Moderate	15	Melaleuca	1,837	0.7	0	0.0	3	33	33	33	0	108
Low	1	Bevon	2,503	1.0	0	0.0	1	100	0	0	0	119

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Low	5	Violet	4,220	1.7	0	0.0	1	0	100	0	0	201
Low	8	Sunrise	264	0.1	0	0.0	0	0	0	0	0	13
Low	10	Jundee	3,916	1.6	0	0.0	7	14	43	43	0	186
Low	11	Tiger	8,837	3.6	0	0.0	17	18	59	24	0	421
Very low	1	Brooking	1,475	0.6	0	0.0	0	0	0	0	0	49
Very low	1	Laverton	4,014	1.6	0	0.0	1	0	100	0	0	134
Very low	1	Wyarri	3,709	1.5	0	0.0	7	0	57	43	0	124
Very low	13	Bullimore	43134	17.4	0	0.0	8	38	38	25	0	863
Nil	17	Lake bed	2,508	1.0	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	12,355	5.0	0	0.0	24	42	21	38	0	1,544
Moderately high	51,323	20.7	0	0.0	88	27	40	33	0	4,277
Moderate	110,195	44.4	0	0.0	187	27	42	31	0	6,482
Low	19,740	7.9	0	0.0	26	19	54	27	0	940
Very low	52,332	21.1	0	0.0	16	19	50	31	0	1,170
Nil	2,508	1.0	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	341	
% good	27	
% fair	41	
% poor	32	
% very poor	0	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	14,410	

Note: Following a revision of this station's plan subsequent to finalisation of these data the area is now 248,811 ha.

MENANGINA STH STATION

PASTORAL LEASE 3114/741, 398/567, 398/518, 398/630 and 398/717

Area: 45,599 ha (see note at the end of this station report)

Area surveyed: 33,745 ha (74%)

Land Conservation District: Kalgoorlie

Shire: Kalgoorlie/Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 388 ha.

Table1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
2	Hills with chenopods	1	125	0.4
5	Undulating mulga country	1	1,520	4.5
6	Undulating chenopod country	2	594	1.8
9	Granite plains and rises	1	529	1.6
13	Spinifex sand plains	1	10,039	29.7
16	Calcareous plains near salt lakes	2	18,423	54.6
17	Lake country	2	2,515	7.5

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	17	Carnegie	2,443	7.2	0	0.0	0	0	0	0	0	305
Moderately high	2	Leonora	125	0.4	0	0.0	0	0	0	0	0	10
Moderately high	6	Gransal	99	0.3	0	0.0	0	0	0	0	0	8
Moderately high	6	Gundockerta	495	1.5	0	0.0	0	0	0	0	0	41
Moderate	5	Waguin	1,520	4.5	0	0.0	0	0	0	0	0	89
Moderate	9	Bandy	529	1.6	0	0.0	0	0	0	0	0	31
Moderate	16	Deadman	17,145	50.8	0	0.0	0	0	0	0	0	1,009
Moderate	16	Doney	1,278	3.8	0	0.0	0	0	0	0	0	75
Very low	13	Kirgella	10,039	29.7	0	0.0	0	0	0	0	0	201
Nil	17	Lake bed	73	0.2	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	2,443	7.2	0	0.0	0	0	0	0	0	305
Moderately high	719	2.1	0	0.0	0	0	0	0	0	59
Moderate	20,471	60.7	0	0.0	0	0	0	0	0	1,204
Very low	10,039	29.7	0	0.0	0	0	0	0	0	201
Nil	73	0.2	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	0	
% good	0	
% fair	0	
% poor	0	
% very poor	0	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	1770	

Note: Subsequent to finalisation of these data, areas of 398/630, 398/518 and 3114/741 have been surrendered to the Crown and 5518 ha has been transferred from 398/567 to another pastoral lease. Details of these changes are available from the Department of Land Administration.

MENANGINA STATION

PASTORAL LEASE 3114/697

Area: 117,032 ha (see note at the end of this station report)

Area surveyed: Whole Station

Land Conservation District: Kalgoorlie

Shire: Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 476 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	3	2,247	1.9
2	Hills with chenopods	1	1,611	1.4
4	Breakaways and chenopod plains	2	2,715	2.3
5	Undulating mulga country	2	2,072	1.8
6	Undulating chenopod country	2	13,472	11.5
8	Stony non-chenopod plains	1	137	0.1
9	Granite plains and rises	1	2,462	2.1
10	Mulga hardpan plains	2	10,182	8.7
11	Mulga with some wanderrie banks	1	319	0.3
12	Sandy acacia plains with wanderrie	2	22,370	19.1
13	Spinifex sand plains	1	9,802	8.4
15	Calcreted old drainage systems	1	1,255	1.1
16	Calcareous plains near salt lakes	1	25,887	22.1
17	Lake country	2	22,502	19.2

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	2,240	1.9	0	0.0	9	67	33	0	0	280
High	15	Mileura	1,255	1.1	0	0.0	5	20	20	40	20	157
High	17	Carnegie	16,106	13.8	0	0.0	58	71	28	2	0	2,013
Moderately high	2	Leonora	1,611	1.4	0	0.0	7	14	0	57	29	134
Moderately high	4	Yilgangi	475	0.4	0	0.0	0	0	0	0	0	40
Moderately high	6	Gransal	12,810	10.9	0	0.0	20	35	40	20	5	1,068
Moderately high	6	Gundockerta	662	0.6	0	0.0	3	67	33	0	0	55
Moderate	5	Waguin	2,047	1.7	0	0.0	10	60	30	10	0	120
Moderate	8	Windarra	137	0.1	0	0.0	1	100	0	0	0	8
Moderate	9	Bandy	2,462	2.1	0	0.0	8	75	25	0	0	145
Moderate	11	Monk	319	0.3	0	0.0	2	0	100	0	0	19
Moderate	12	Desdemona	596	0.5	0	0.0	0	0	0	0	0	35
Moderate	16	Deadman	25,887	22.1	0	0.0	69	70	28	3	0	1,523
Low	5	Violet	25	0.0	0	0.0	0	0	0	0	0	1
Low	10	Jundee	0	0.0	0	0.0	0	0	0	0	0	0
Low	10	Rainbow	10,182	8.7	0	0.0	17	53	29	12	6	485
Low	12	Yowie	21,775	18.6	0	0.0	35	60	37	3	0	1,037
Very low	1	Hospital	167	0.1	0	0.0	3	67	33	0	0	6
Very low	1	Laverton	604	0.5	0	0.0	1	0	100	0	0	20

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Very low	1	Wyarri	1,476	1.3	0	0.0	2	100	0	0	0	49
Very low	13	Kirgella	9,802	8.4	0	0.0	24	67	33	0	0	196
Nil	17	Lake bed	6,396	5.5	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	19,600	16.7	0	0.0	72	67	28	4	1	2,450
Moderately high	15,558	13.3	0	0.0	30	33	30	27	10	1,297
Moderate	31,448	26.9	0	0.0	90	68	29	3	0	1,850
Low	31,981	27.3	0	0.0	52	58	35	6	2	1,523
Very low	12,048	10.3	0	0.0	30	67	33	0	0	271
Nil	6,396	5.5	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	274	
% good	62	
% fair	30	
% poor	6	
% very poor	2	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	7390	

Note: Subsequent to finalisation of these data, there has been an amendment to the legal plan area of this station to 99,718 ha, associated with a land transfer at the sale of the lease. Details of the changes are available from the Department of Land Administration.

MENDLEYARRI STATION

PASTORAL LEASE 3114/473

Area: 87,167 ha

Area surveyed: Whole Station

Land Conservation District: Kalgoorlie

Shire: Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 203 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	2	158	0.2
3	Breakaways and stony plains	1	1,430	1.6
5	Undulating mulga country	1	350	0.4
6	Undulating chenopod country	1	1,923	2.2
9	Granite plains and rises	1	471	0.5
10	Mulga hardpan plains	1	1,572	1.8
11	Mulga with some wanderrie banks	1	7	0.0
12	Sandy acacia plains with wanderrie	1	19,982	22.9
13	Spinifex sand plains	3	12,268	14.1
16	Calcareous plains near salt lakes	1	9,478	10.9
17	Lake country	2	39,528	45.3

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	17	Carnegie	14,191	16.3	0	0.0	43	79	21	0	0	1,774
Moderately high	3	Sherwood	1,430	1.6	0	0.0	0	0	0	0	0	119
Moderately high	6	Gransal	1,923	2.2	0	0.0	6	83	17	0	0	160
Moderate	5	Waguin	350	0.4	0	0.0	0	0	0	0	0	21
Moderate	9	Bandy	471	0.5	0	0.0	0	0	0	0	0	28
Moderate	11	Yanganoo	7	0.0	0	0.0	0	0	0	0	0	0
Moderate	16	Deadman	9,478	10.9	0	0.0	19	100	0	0	0	558
Low	10	Rainbow	1,572	1.8	0	0.0	2	100	0	0	0	75
Low	12	Yowie	19,982	22.9	0	0.0	28	96	4	0	0	952
Very low	1	Hospital	82	0.1	0	0.0	1	100	0	0	0	3
Very low	1	Laverton	76	0.1	0	0.0	0	0	0	0	0	3
Very low	13	Bullimore	512	0.6	0	0.0	0	0	0	0	0	10
Very low	13	Kirgella	9,678	11.1	0	0.0	11	91	9	0	0	194
Very low	13	Marmion	2,078	2.4	0	0.0	0	0	0	0	0	42
Nil	17	Lake bed	25,337	29.1	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	14,191	16.3	0	0.0	43	79	21	0	0	1,774
Moderately high	3,352	3.8	0	0.0	6	83	17	0	0	279
Moderate	10,307	11.8	0	0.0	19	100	0	0	0	607
Low	21,554	24.7	0	0.0	30	97	3	0	0	1,027
Very low	12,425	14.3	0	0.0	12	92	8	0	0	252
Nil	25,337	29.1	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	110	
% good	89	
% fair	11	
% poor	0	
% very poor	0	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	3940	

MEROLIA STATION

PASTORAL LEASE 3114/1145

Area: 66,371 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Laverton/Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 0 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	1	4,970	7.5
3	Breakaways and stony plains	1	5	0.0
4	Breakaways and chenopod plains	2	1,543	2.3
5	Undulating mulga country	3	5,567	8.4
8	Stony non-chenopod plains	1	605	0.9
10	Mulga hardpan plains	2	3,480	5.2
11	Mulga with some wanderrie banks	1	537	0.8
12	Sandy acacia plains with wanderrie	1	24,441	36.8
13	Spinifex sand plains	1	25,104	37.8
17	Lake country	1	119	0.2

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	17	Carnegie	119	0.2	0	0.0	5	100	0	0	0	15
Moderately high	3	Sherwood	5	0.0	0	0.0	0	0	0	0	0	0
Moderately high	4	Crete	656	1.0	0	0.0	7	100	0	0	0	55
Moderately high	4	Hootanui	887	1.3	0	0.0	1	100	0	0	0	74
Moderately high	5	Nubev	85	0.1	0	0.0	0	0	0	0	0	7
Moderate	5	Waguin	1,460	2.2	0	0.0	2	100	0	0	0	86
Moderate	8	Windarra	605	0.9	0	0.0	0	0	0	0	0	36
Moderate	11	Yanganoo	537	0.8	0	0.0	0	0	0	0	0	32
Moderate	12	Ararak	24,441	36.8	0	0.0	22	91	9	0	0	1,438
Low	1	Bevon	4,970	7.5	0	0.0	8	62	38	0	0	237
Low	5	Violet	4,023	6.1	0	0.0	5	100	0	0	0	192
Low	10	Jundee	956	1.4	0	0.0	0	0	0	0	0	46
Low	10	Rainbow	2,524	3.8	0	0.0	13	62	31	8	0	120
Very low	13	Bullimore	25,104	37.8	0	0.0	15	100	0	0	0	502

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	119	0.2	0	0.0	5	100	0	0	0	15
Moderately high	1,633	2.5	0	0.0	8	100	0	0	0	136
Moderate	27,043	40.7	0	0.0	24	92	8	0	0	1,592
Low	12,473	18.8	0	0.0	26	69	27	4	0	595
Very low	25,104	37.8	0	0.0	15	100	0	0	0	502

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	78	
% good	87	
% fair	12	
% poor	1	
% very poor	0	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	2840	

MERTONDALE STATION

PASTORAL LEASE 3114/1181

Area: 88,904 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Laverton/Leonora

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 237 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	3	4,802	5.4
3	Breakaways and stony plains	1	11,225	12.6
4	Breakaways and chenopod plains	1	2,542	2.9
5	Undulating mulga country	3	9,680	10.9
6	Undulating chenopod country	1	387	0.4
8	Stony non-chenopod plains	1	6,001	6.7
9	Granite plains and rises	1	163	0.2
10	Mulga hardpan plains	1	7,054	7.9
11	Mulga with some wanderrie banks	3	16,653	18.7
12	Sandy acacia plains with wanderrie	1	4,414	5.0
13	Spinifex sand plains	1	25,982	29.2

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	2,542	2.9	0	0.0	8	38	50	12	0	318
Moderately high	3	Sherwood	11,225	12.6	137	1.2	16	0	38	50	12	924
Moderately high	5	Nubev	4,188	4.7	0	0.0	12	17	42	33	8	349
Moderately high	6	Gransal	387	0.4	0	0.0	5	100	0	0	0	32
Moderate	5	Waguin	673	0.8	0	0.0	0	0	0	0	0	40
Moderate	8	Windarra	6,001	6.7	0	0.0	20	0	65	35	0	353
Moderate	9	Bandy	163	0.2	0	0.0	1	100	0	0	0	10
Moderate	11	Monk	15,488	17.4	0	0.0	26	0	27	73	0	911
Moderate	11	Yanganoo	456	0.5	0	0.0	2	100	0	0	0	27
Moderate	12	Desdemona	4,414	5.0	0	0.0	4	50	50	0	0	260
Low	1	Bevon	4,439	5.0	0	0.0	6	0	17	83	0	211
Low	5	Violet	4,820	5.4	0	0.0	2	50	50	0	0	230
Low	10	Jundee	7,054	7.9	0	0.0	18	6	17	78	0	336
Low	11	Tiger	710	0.8	0	0.0	0	0	0	0	0	34
Very low	1	Laverton	191	0.2	0	0.0	2	0	0	100	0	6
Very low	1	Wyarri	172	0.2	0	0.0	1	0	100	0	0	6
Very low	13	Bullimore	25,982	29.2	0	0.0	9	67	22	11	0	520

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	2,542	2.9	0	0.0	8	38	50	12	0	318
Moderately high	15,800	17.8	137	0.9	33	21	33	36	9	1,305
Moderate	27,194	30.6	0	0.0	53	9	42	49	0	1,601
Low	17,023	19.1	0	0.0	26	8	19	73	0	811
Very low	26,346	29.6	0	0.0	12	50	25	25	0	532

Station summary

Severely degraded and eroded (ha)	137	(0.2 % of station)
No. of ratings	132	
% good	17	
% fair	34	
% poor	46	
% very poor	2	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	4570	

MINARA STATION

PASTORAL LEASE 3114/1128

Area: 181,248 ha (see note at the end of this station report)

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Leonora/Laverton

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 6159 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	3	13,142	7.3
2	Hills with chenopods	1	8,266	4.6
3	Breakaways and stony plains	1	8,709	4.8
4	Breakaways and chenopod plains	1	4,227	2.3
5	Undulating mulga country	3	23,996	13.2
6	Undulating chenopod country	2	20,772	11.5
8	Stony non-chenopod plains	3	3,974	2.2
9	Granite plains and rises	1	673	0.4
10	Mulga hardpan plains	3	13,586	7.5
11	Mulga with some wanderrie banks	4	23,619	13.0
12	Sandy acacia plains with wanderrie	1	2,480	1.4
13	Spinifex sand plains	2	40,085	22.1
14	Chenopod drainage systems	2	12,472	6.9
15	Calcreted old drainage systems	1	325	0.2
17	Lake country	3	4,923	2.7

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	14	Steer	1,757	1.0	0	0.0	0	0	0	0	0	220
High	17	Carnegie	3,885	2.1	0	0.0	5	60	40	0	0	486
Moderately high	2	Leonora	8,266	4.6	0	0.0	11	0	18	82	0	689
Moderately high	3	Sherwood	8,709	4.8	0	0.0	28	21	50	29	0	726
Moderately high	4	Hootanui	4,227	2.3	0	0.0	4	25	50	0	25	352
Moderately high	5	Nubev	19,380	10.7	113	0.6	39	13	38	44	5	1,606
Moderately high	6	Gransal	7,045	3.9	0	0.0	19	11	37	42	11	587
Moderately high	6	Gundockerta	13,727	7.6	0	0.0	19	0	53	42	5	1,144
Moderately high	14	Monitor	10,714	5.9	3,663	34.2	23	4	30	17	48	588
Moderately high	17	Darlot	540	0.3	0	0.0	0	0	0	0	0	45
Moderate	5	Waguin	266	0.1	0	0.0	0	0	0	0	0	16
Moderate	8	Felix	255	0.1	0	0.0	1	0	0	100	0	15
Moderate	8	Windarra	2,826	1.6	0	0.0	7	29	43	29	0	166
Moderate	9	Bandy	673	0.4	0	0.0	0	0	0	0	0	40
Moderate	10	Hamilton	1,666	0.9	0	0.0	1	0	0	100	0	98
Moderate	11	Monk	9,566	5.3	0	0.0	18	11	0	78	11	563
Moderate	11	Ranch	3,588	2.0	0	0.0	8	0	38	62	0	211
Moderate	11	Yanganoo	2,667	1.5	0	0.0	1	0	100	0	0	157
Moderate	12	Ararak	2,480	1.4	0	0.0	7	0	43	43	14	146
Moderate	13	Pan	836	0.5	0	0.0	4	50	25	25	0	49
Moderate	15	Cosmo	325	0.2	0	0.0	0	0	0	0	0	19
Low	i	Bevon	4,228	2.3	0	0.0	4	0	0	100	0	201

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Low	5	Violet	4,349	2.4	0	0.0	11	0	55	45	0	207
Low	8	Sunrise	893	0.5	0	0.0	0	0	0	0	0	43
Low	10	Jundee	11,626	6.4	0	0.0	19	5	58	37	0	554
Low	10	Rainbow	294	0.2	0	0.0	2	0	50	50	0	14
Low	11	Tiger	7,797	4.3	0	0.0	15	0	40	60	0	371
Very low	1	Brooking	734	0.4	0	0.0	0	0	0	0	0	24
Very low	1	Laverton	8,179	4.5	0	0.0	21	5	24	62	10	273
Very low	13	Bullimore	39,248	21.7	0	0.0	3	67	33	0	0	785
Nil	17	Lake bed	498	0.3	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	5,642	3.1	0	0.0	5	60	40	0	0	706
Moderately high	72,608	40.1	3,776	5.2	143	10	40	38	12	5,737
Moderate	25,151	13.9	0	0.0	47	13	23	57	6	1,480
Low	29,187	16.1	0	0.0	51	2	47	51	0	1,390
Very low	48,162	26.6	0	0.0	24	12	25	54	8	1,082
Nil	498	0.3	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	3,776 (2.1 % of station)
No. of ratings	270
% good	10
% fair	37
% poor	44
% very poor	8
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	10,400

Note: A lease area ammendment after the finalisation of these data has occurred, the current lease area at June 1994 is 187,903 ha. Details of lease area changes are available from the Department of Land Administration.

MORAPOI STATION

PASTORAL LEASE 3114/1003

Area: 53,916 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 8 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	2	937	1.7
2	Hills with chenopods	1	370	0.7
3	Breakaways and stony plains	1	829	1.5
4	Breakaways and chenopod plains	2	2,434	4.5
5	Undulating mulga country	1	580	1.1
6	Undulating chenopod country	2	4,423	8.2
8	Stony non-chenopod plains	1	111	0.2
9	Granite plains and rises	1	407	0.8
10	Mulga hardpan plains	2	7,374	13.7
11	Mulga with some wanderrie banks	1	597	1.1
12	Sandy acacia plains with wanderrie	1	17,496	32.5
13	Spinifex sand plains	2	7,015	13.0
16	Calcareous plains near salt lakes	1	891	1.7
17	Lake country	2	10,451	19.4

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	726	1.3	0	0.0	0	0	0	0	0	91
High	17	Carnegie	4,260	7.9	0	0.0	11	27	73	0	0	532
Moderately high	2	Leonora	370	0.7	0	0.0	0	0	0	0	0	31
Moderately high	3	Sherwood	829	1.5	0	0.0	0	0	0	0	0	69
Moderately high	4	Hootanui	1,709	3.2	0	0.0	2	0	100	0	0	142
Moderately high	6	Gransal	2,512	4.7	0	0.0	4	0	25	50	25	209
Moderately high	6	Gundockerta	1,910	3.5	328	17.2	11	0	0	45	55	132
Moderate	5	Waguin	580	1.1	0	0.0	0	0	0	0	0	34
Moderate	8	Windarra	111	0.2	0	0.0	2	0	50	50	0	7
Moderate	9	Bandy	407	0.8	0	0.0	0	0	0	0	0	24
Moderate	11	Yanganoo	597	1.1	0	0.0	0	0	0	0	0	35
Moderate	16	Deadman	891	1.7	0	0.0	3	0	33	67	0	52
Low	1	Bevon	278	0.5	0	0.0	0	0	0	0	0	13
Low	10	Jundee	364	0.7	0	0.0	0	0	0	0	0	17
Low	10	Rainbow	7,010	13.0	0	0.0	21	0	48	33	19	334
Low	12	Yowie	17,496	32.5	0	0.0	31	10	77	13	0	833
Very low	1	Wyarri	660	1.2	0	0.0	3	33	67	0	0	22
Very low	13	Bullimore	1,623	3.0	0	0.0	0	0	0	0	0	32
Very low	13	Marmion	5,392	10.0	0	0.0	2	0	100	0	0	108
Nil	17	Lake bed	6,191	11.5	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	4,985	9.2	0	0.0	11	27	73	0	0	623
Moderately high	7,331	13.6	328	4.5	17	0	18	41	41	583
Moderate	2,587	4.8	0	0.0	5	0	40	60	0	152
Low	25,147	46.6	0	0.0	52	6	65	21	8	1,197
Very low	7,675	14.2	0	0.0	5	20	80	0	0	162
Nil	6,191	11.5	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	328	(0.6 % of station)
No. of ratings	90	
% good	8	
% fair	57	
% poor	23	
% very poor	12	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	2720	

MT CELIA STATION

PASTORAL LEASE 3114/1034

Area: 153,025 ha

Area surveyed: Whole Station (155,780 ha, see note at the end of this station report)

Land Conservation District: Kalgoorlie

Shire: Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 41 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	2	1,524	1.0
2	Hills with chenopods	1	2,390	1.5
4	Breakaways and chenopod plains	2	17,908	11.5
5	Undulating mulga country	1	757	0.5
6	Undulating chenopod country	2	3,542	2.3
9	Granite plains and rises	1	2,632	1.7
10	Mulga hardpan plains	1	1,324	0.8
11	Mulga with some wanderrie banks	1	2,624	1.7
12	Sandy acacia plains with wanderrie	1	4,641	3.0
13	Spinifex sand plains	2	56,743	36.4
16	Calcareous plains near salt lakes	2	23,136	14.9
17	Lake country	2	38,558	24.8

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	17	Carnegie	24,648	15.8	0	0.0	28	100	0	0	0	3,081
Moderately high	2	Leonora	2,390	1.5	0	0.0	19	0	37	58	5	199
Moderately high	4	Crete	16,683	10.7	0	0.0	28	79	7	14	0	1,390
Moderately high	4	Yilgangi	1,226	0.8	0	0.0	2	100	0	0	0	102
Moderately high	6	Gransal	136	0.1	0	0.0	0	0	0	0	0	11
Moderately high	6	Gundockerta	3,406	2.2	0	0.0	19	53	37	5	5	284
Moderate	5	Waguin	757	0.5	0	0.0	0	0	0	0	0	45
Moderate	9	Bandy	2,632	1.7	0	0.0	2	100	0	0	0	155
Moderate	11	Monk	2,624	1.7	0	0.0	4	25	75	0	0	154
Moderate	16	Deadman	23,105	14.8	0	0.0	36	75	19	6	0	1,359
Moderate	16	Doney	31	0.0	0	0.0	0	0	0	0	0	2
Low	10	Rainbow	1,324	0.8	0	0.0	4	25	0	75	0	63
Low	12	Yowie	4,641	3.0	0	0.0	11	36	64	0	0	221
Very low	1	Laverton	648	0.4	0	0.0	2	0	50	50	0	22
Very low	1	Wyarri	876	0.6	0	0.0	1	0	100	0	0	29
Very low	13	Bullimore	1,394	0.9	0	0.0	0	0	0	0	0	28
Very low	13	Kirgella	55,349	35.5	0	0.0	16	94	6	0	0	1,107
Nil	17	Lake bed	13,910	8.9	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	24,648	15.8	0	0.0	28	100	0	0	0	3,081
Moderately high	23,841	15.3	0	0.0	68	50	24	24	3	1,986
Moderate	29,148	18.7	0	0.0	42	71	24	5	0	1,715
Low	5,965	3.8	0	0.0	15	33	47	20	0	284
Very low	58,267	37.4	0	0.0	19	79	16	5	0	1,186
Nil	13,910	8.9	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	172	
% good	65	
% fair	21	
% poor	13	
% very poor	1	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	8250	

Note: The legal boundary of Mt Celia was more accurately mapped during this survey and has resulted in a different (more accurate) approximation of the area within the defined legal boundaries. Subsequent to digitising of the survey information, Mt Celia has been amalgamated with, and become part of, Mt Weld station.

MT KEITH STATION

PASTORAL LEASE 3114/549

Area: 98,335 ha

Area surveyed: Whole Station

Land Conservation District: Wiluna

Shire: Wiluna

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 12 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	5	3,237	3.3
3	Breakaways and stony plains	1	10,251	10.4
5	Undulating mulga country	2	2,371	2.4
6	Undulating chenopod country	1	477	0.5
8	Stony non-chenopod plains	2	3,027	3.1
9	Granite plains and rises	1	509	0.5
10	Mulga hardpan plains	1	5,687	5.8
11	Mulga with some wanderrie banks	2	11,371	11.6
12	Sandy acacia plains with wanderrie	2	7,907	8.0
13	Spinifex sand plains	1	52,811	53.7
15	Calcreted old drainage systems	2	687	0.7

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Moderately high	3	Sherwood	10,251	10.4	0	0.0	17	53	29	18	0	854
Moderately high	6	Gransal	477	0.5	0	0.0	2	100	0	0	0	40
Moderate	5	Waguin	74	0.1	0	0.0	0	0	0	0	0	4
Moderate	8	Felix	481	0.5	0	0.0	2	50	50	0	0	28
Moderate	8	Windarra	2,546	2.6	0	0.0	6	0	83	17	0	150
Moderate	9	Bandy	509	0.5	0	0.0	0	0	0	0	0	30
Moderate	11	Monk	10,935	11.1	0	0.0	6	0	50	50	0	643
Moderate	11	Yanganoo	436	0.4	0	0.0	1	0	0	100	0	26
Moderate	12	Ararak	4,344	4.4	0	0.0	14	29	50	21	0	256
Moderate	12	Desdemona	3,562	3.6	0	0.0	11	0	9	91	0	210
Moderate	15	Cosmo	173	0.2	0	0.0	0	0	0	0	0	10
Moderate	15	Melaleuca	514	0.5	0	0.0	0	0	0	0	0	30
Low	1	Bevon	1,627	1.7	0	0.0	0	0	0	0	0	77
Low	1	Teutonic	682	0.7	0	0.0	1	0	100	0	0	32
Low	5	Violet	2,297	2.3	0	0.0	4	50	25	25	0	109
Low	10	Jundee	5,687	5.8	0	0.0	3	33	33	33	0	271
Very low	1	Brooking	190	0.2	0	0.0	0	0	0	0	0	6
Very low	1	Laverton	141	0.1	0	0.0	0	0	0	0	0	5
Very low	1	Wyarri	598	0.6	0	0.0	0	0	0	0	0	20
Very low	13	Bullimore	52,811	53.7	0	0.0	2	50	50	0	0	1,056

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
Moderately high	10,728	10.9	0	0.0	19	58	26	16	0	894
Moderate	23,575	24.0	0	0.0	40	12	42	45	0	1,387
Low	10,293	10.5	0	0.0	8	38	38	25	0	489
Very low	53,739	54.6	0	0.0	2	50	50	0	0	1,087

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	69	
% good	29	
% fair	38	
% poor	33	
% very poor	0	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	3860	

MT REMARKABLE STATION

PASTORAL LEASE 3114/418

Area: 41,656 ha

Area surveyed: Whole Station (40,407 ha; see note at the end of this station report)

Land Conservation District: Kalgoorlie

Shire: Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 0 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	1	32	0.1
2	Hills with chenopods	1	127	0.3
4	Breakaways and chenopod plains	1	837	2.1
8	Stony non-chenopod plains	1	298	0.7
10	Mulga hardpan plains	2	2,174	5.4
11	Mulga with some wanderrie banks	1	8,776	21.7
12	Sandy acacia plains with wanderrie	1	3,547	8.8
17	Lake country	2	24,615	60.9

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	17	Carnegie	12,263	30.3	0	0.0	35	71	23	6	0	1,533
Moderately high	2	Leonora	127	0.3	0	0.0	1	0	100	0	0	11
Moderately high	4	Yilgangi	837	2.1	0	0.0	0	0	0	0	0	70
Moderate	8	Windarra	298	0.7	0	0.0	0	0	0	0	0	18
Moderate	11	Monk	8,776	21.7	0	0.0	22	0	64	36	0	516
Low	10	Jundee	14	0.0	0	0.0	0	0	0	0	0	1
Low	10	Rainbow	2,160	5.3	0	0.0	8	25	75	0	0	103
Low	12	Yowie	3,547	8.8	0	0.0	12	33	67	0	0	169
Very low	1	Wyarri	32	0.1	0	0.0	0	0	0	0	0	1
Nil	17	Lake bed	12,353	30.6	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	12,263	30.3	0	0.0	35	71	23	6	0	1,533
Moderately high	964	2.4	0	0.0	1	0	100	0	0	81
Moderate	9,074	22.5	0	0.0	22	0	64	36	0	534
Low	5,721	14.2	0	0.0	20	30	70	0	0	273
Very low	32	0.1	0	0.0	0	0	0	0	0	1
Nil	12,353	30.6	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	78	
% good	40	
% fair	47	
% poor	13	
% very poor	0	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	2420	

Note: Part of Mt Remarkable station's boundary is legally defined by the edge of Lake Raeside, which has been mapped more accurately than previously, and results in a different (more accurate) approximation of the area (40,406 ha) within the defined legal boundaries. An amendment to the legal lease area may be warranted by the lessee.

MT WELD STATION

PASTORAL LEASE 3114/1021

Area: 245,711 ha

Area surveyed: Whole Station (see note at the end of this station report)

Land Conservation District: North Eastern Goldfields

Shire: Laverton

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 9314 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	4	26,850	10.9
2	Hills with chenopods	1	8,064	3.3
3	Breakaways and stony plains	1	1,894	0.8
4	Breakaways and chenopod plains	3	10,920	4.4
5	Undulating mulga country	3	21,787	8.9
6	Undulating chenopod country	2	22,499	9.2
8	Stony non-chenopod plains	2	10,224	4.2
10	Mulga hardpan plains	2	29,044	11.8
11	Mulga with some wanderrie banks	2	17,422	7.1
12	Sandy acacia plains with wanderrie	2	11,256	4.6
13	Spinifex sand plains	2	47,456	19.3
14	Chenopod drainage systems	4	12,427	5.1
15	Calcreted old drainage systems	1	803	0.3
16	Calcareous plains near salt lakes	1	2,030	0.8
17	Lake country	2	23,035	9.4

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	231	0.1	0	0.0	3	100	0	0	0	29
High	14	Cyclops	1	0.0	0	0.0	0	0	0	0	0	0
High	14	Steer	1,759	0.7	0	0.0	3	0	67	0	33	220
High	15	Mileura	803	0.3	0	0.0	5	100	0	0	0	100
High	17	Carnegie	22,398	9.1	0	0.0	34	85	12	3	0	2,800
Moderately high	2	Leonora	8,064	3.3	71	0.9	7	43	29	14	14	666
Moderately high	3	Sherwood	1,894	0.8	0	0.0	2	100	0	0	0	158
Moderately high	4	Crete	10,671	4.3	72	0.7	12	42	42	17	0	883
Moderately high	4	Yilgangi	18	0.0	0	0.0	0	0	0	0	0	1
Moderately high	5	Nubev	8,192	3.3	0	0.0	13	15	54	23	8	683
Moderately high	6	Gransal	1,336	0.5	0	0.0	1	100	0	0	0	111
Moderately high	6	Gundockerta	21,164	8.6	1,214	5.7	43	26	40	26	9	1,662
Moderately high	14	Monitor	10,253	4.2	2,644	25.8	18	22	6	28	44	634
Moderately high	14	Wilson	415	0.2	188	45.5	0	0	0	0	0	19
Moderate	5	Waguin	712	0.3	0	0.0	0	0	0	0	0	42
Moderate	8	Windarra	608	0.2	0	0.0	0	0	0	0	0	36
Moderate	11	Monk	16,353	6.7	993	6.1	37	0	38	49	14	904
Moderate	12	Ararak	9,546	3.9	0	0.0	15	60	40	0	0	562
Moderate	16	Deadman	2,030	0.8	0	0.0	0	0	0	0	0	119
Low	1	Bevon	12,980	5.3	0	0.0	11	55	45	0	0	618
Low	5	Violet	12,884	5.2	0	0.0	13	15	69	15	0	614

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Low	8	Sunrise	9,617	3.9	0	0.0	21	24	24	43	10	458
Low	10	Jundee	22,438	9.1	0	0.0	28	46	39	11	4	1,068
Low	10	Rainbow	6,606	2.7	0	0.0	4	0	25	50	25	315
Low	11	Tiger	1,069	0.4	0	0.0	0	0	0	0	0	51
Low	12	Yowie	1,711	0.7	0	0.0	4	75	25	0	0	81
Very low	1	Brooking	5,664	2.3	0	0.0	12	75	25	0	0	189
Very low	1	Laverton	6,812	2.8	0	0.0	10	30	30	40	0	227
Very low	1	Wyarri	1,394	0.6	0	0.0	1	100	0	0	0	46
Very low	13	Bullimore	35,361	14.4	0	0.0	0	0	0	0	0	707
Very low	13	Kirgella	12,094	4.9	0	0.0	2	100	0	0	0	242
Nil	17	Lake bed	637	0.3	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	25,191	10.3	0	0.0	45	82	13	2	2	3,149
Moderately high	62,005	25.2	4,189	6.8	96	29	33	23	15	4,817
Moderate	29,248	11.9	993	3.4	52	17	38	35	10	1,663
Low	67,304	27.4	0	0.0	81	36	40	20	5	3,205
Very low	61,325	25.0	0	0.0	25	60	24	16	0	1,411
Nil	637	0.3	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	5182 (2.1 % of station)
No. of ratings	299
% good	39
% fair	32
% poor	20
% very poor	8
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	14,250

Note: Subsequent to finalisation of these data, 6,655 ha was transferred to 398/809 and Mt Celia station was incorporated into this station. A new area has subsequently been calculated. Details of these changes are available from the Department of Land Administration.

NAMBI STATION

PASTORAL LEASE 3114/538

Area: 294,160 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Laverton

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 85 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	3	5,066	1.7
3	Breakaways and stony plains	1	13,415	4.6
4	Breakaways and chenopod plains	1	24	0.0
5	Undulating mulga country	3	5,422	1.8
6	Undulating chenopod country	1	24,487	8.3
8	Stony non-chenopod plains	1	21,043	7.2
9	Granite plains and rises	2	563	0.2
10	Mulga hardpan plains	2	28,566	9.7
11	Mulga with some wanderrie banks	2	62,552	21.3
12	Sandy acacia plains with wanderrie	2	25,659	8.7
13	Spinifex sand plains	1	35,118	11.9
14	Chenopod drainage systems	1	200	0.1
15	Calcreted old drainage systems	2	6,593	2.2
17	Lake country	3	65,454	22.3

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	24	0.0	0	0.0	0	0	0	0	0	3
High	15	Mileura	5,919	2.0	0	0.0	16	44	6	50	0	740
High	17	Carnegie	21,784	7.4	0	0.0	12	100	0	0	0	2,723
Moderately high	3	Sherwood	13,415	4.6	1	0.0	19	0	21	68	11	1,118
Moderately high	5	Nubev	2,355	0.8	0	0.0	7	0	14	86	0	196
Moderately high	6	Gransal	24,487	8.3	319	1.3	50	20	54	22	4	2,014
Moderately high	14	Monitor	200	0.1	0	0.0	0	0	0	0	0	17
Moderately high	17	Darlot	27,425	9.3	0	0.0	44	80	14	7	0	2,285
Moderate	5	Waguin	34	0.0	0	0.0	0	0	0	0	0	2
Moderate	8	Windarra	21,043	7.2	0	0.0	26	12	42	46	0	1,238
Moderate	9	Bandy	186	0.1	0	0.0	0	0	0	0	0	11
Moderate	9	Challenge	377	0.1	0	0.0	0	0	0	0	0	22
Moderate	10	Hamilton	16,434	5.6	0	0.0	43	5	33	60	2	967
Moderate	11	Monk	62,402	21.2	211	0.3	116	24	51	21	4	3,658
Moderate	11	Yanganoo	150	0.1	0	0.0	0	0	0	0	0	9
Moderate	12	Ararak	717	0.2	0	0.0	3	33	67	0	0	42
Moderate	12	Desdemona	24,943	8.5	0	0.0	27	85	15	0	0	1,467
Moderate	15	Melaleuca	673	0.2	0	0.0	0	0	0	0	0	40
Low	1	Bevon	2,409	0.8	0	0.0	2	0	50	50	0	115
Low	5	Violet	3,033	1.0	0	0.0	2	0	50	50	0	144
Low	10	Jundee	12,132	4.1	0	0.0	19	0	32	68	0	578
Very low	1	Laverton	1,828	0.6	0	0.0	0	0	0	0	0	61

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Very low	1	Wyarri	829	0.3	0	0.0	0	0	0	0	0	28
Very low	13	Bullimore	35,118	11.9	0	0.0	5	40	40	20	0	702
Nil	17	Lake bed	16,245	5.5	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	27,727	9.4	0	0.0	28	68	4	29	0	3,466
Moderately high	67,881	23.1	320	0.5	120	38	32	28	3	5,630
Moderate	126,958	43.2	211	0.2	215	26	42	29	3	7,456
Low	17,573	6.0	0	0.0	23	0	35	65	0	837
Very low	37,775	12.8	0	0.0	5	40	40	20	0	791
Nil	16,245	5.5	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	531	(0.2 % of station)
No. of ratings	391	
% good	31	
% fair	36	
% poor	30	
% very poor	3	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	18,180	

PERRINVALE STATION

PASTORAL LEASE 3114/1019

Area: 400,540 ha

Area surveyed: Whole Station

Land Conservation District: Kalgoorlie

Shire: Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 359 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	4	38,322	9.6
2	Hills with chenopods	2	3,271	0.8
3	Breakaways and stony plains	1	6,100	1.5
4	Breakaways and chenopod plains	1	3,271	0.8
5	Undulating mulga country	3	5,582	1.4
6	Undulating chenopod country	3	24,525	6.1
8	Stony non-chenopod plains	1	4,095	1.0
9	Granite plains and rises	2	9,008	2.2
10	Mulga hardpan plains	3	26,753	6.7
11	Mulga with some wanderrie banks	1	7,698	1.9
12	Sandy acacia plains with wanderrie	1	133,412	33.3
13	Spinifex sand plains	1	96,244	24.0
14	Chenopod drainage systems	1	914	0.2
15	Calcreted old drainage systems	2	7,521	1.9
16	Calcareous plains near salt lakes	1	4,769	1.2
17	Lake country	3	29,054	7.3

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	3,271	0.8	0	0.0	4	100	0	0	0	409
High	15	Mileura	777	0.2	0	0.0	0	0	0	0	0	97
High	17	Carnegie	24,805	6.2	0	0.0	27	78	19	0	4	3,101
Moderately high	2	Graves	1,253	0.3	0	0.0	0	0	0	0	0	104
Moderately high	2	Leonora	2,017	0.5	0	0.0	0	0	0	0	0	168
Moderately high	3	Sherwood	6,100	1.5	0	0.0	6	83	17	0	0	508
Moderately high	5	Nubev	1,210	0.3	0	0.0	1	0	100	0	0	101
Moderately high	6	Gransal	21,111	5.3	0	0.0	22	32	59	9	0	1,759
Moderately high	6	Gundockerta	1,630	0.4	1,335	81.9	8	0	0	75	25	25
Moderately high	6	Moriarty	1,784	0.4	0	0.0	5	80	20	0	0	149
Moderately high	14	Monitor	914	0.2	775	84.7	2	0	0	50	50	12
Moderately high	17	Darlot	2,407	0.6	0	0.0	6	67	33	0	0	201
Moderate	5	Waguin	3,905	1.0	0	0.0	5	100	0	0	0	230
Moderate	8	Windarra	4,095	1.0	147	3.6	8	25	38	25	12	232
Moderate	9	Bandy	8,088	2.0	0	0.0	14	86	14	0	0	476
Moderate	9	Challenge	920	0.2	0	0.0	6	67	33	0	0	54
Moderate	10	Hamilton	2,532	0.6	0	0.0	1	0	100	0	0	149
Moderate	11	Monk	7,698	1.9	0	0.0	13	69	31	0	0	453
Moderate	15	Melaleuca	6,744	1.7	0	0.0	7	43	43	14	0	397
Moderate	16	Deadman	4,769	1.2	0	0.0	5	100	0	0	0	281

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Low	1	Bevon	11,042	2.8	62	0.6	17	94	6	0	0	523
Low	5	Violet	467	0.1	0	0.0	3	100	0	0	0	22
Low	10	Jundee	3,710	0.9	0	0.0	10	60	0	40	0	177
Low	10	Rainbow	20,512	5.1	16	0.1	37	19	49	16	16	976
Low	12	Yowie	13,341,2	33.3	117	0.1	103	48	42	8	3	6,347
Very low	1	Brooking	13,772	3.4	0	0.0	10	40	40	10	10	459
Very low	1	Laverton	5,651	1.4	0	0.0	1	0	100	0	0	188
Very low	1	Wyarri	7,857	2.0	0	0.0	10	20	60	20	0	262
Very low	13	Marmion	96,244	24.0	0	0.0	23	57	17	17	9	1,925
Nil	17	Lake bed	1,843	0.5	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	28,853	7.2	0	0.0	31	81	16	0	3	3,607
Moderately high	38,427	9.6	2,110	5.5	50	40	36	18	6	3,027
Moderate	38,751	9.7	147	0.4	59	68	25	5	2	2272
Low	169,143	42.2	195	0.1	170	48	36	11	5	8,045
Very low	123,524	30.8	0	0.0	44	43	34	16	7	2,834
Nil	1,843	0.5	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	2,452 (0.6 % of station)
No. of ratings	354
% good	52
% fair	32
% poor	10
% very poor	5
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	19,790

PINJIN STATION

PASTORAL LEASE 3114/742

Area: 127,135 ha

Area surveyed: 5954 ha (5%)

Land Conservation District: Kalgoorlie

Shire: Kalgoorlie

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 0 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
2	Hills with chenopods	1	192	3.2
4	Breakaways and chenopod plains	1	13	0.2
6	Undulating chenopod country	2	3,519	59.1
16	Calcareous plains near salt lakes	1	1,514	25.4
17	Lake country	1	716	12.0

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	17	Carnegie	716	12.0	0	0.0	0	0	0	0	0	90
Moderately high	2	Leonora	192	3.2	0	0.0	0	0	0	0	0	16
Moderately high	4	Yilgangi	13	0.2	0	0.0	0	0	0	0	0	1
Moderately high	6	Gransal	546	9.2	0	0.0	0	0	0	0	0	46
Moderately high	6	Gundockerta	2,972	49.9	0	0.0	0	0	0	0	0	248
Moderate	16	Deadman	1,514	25.4	0	0.0	0	0	0	0	0	89

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	716	12.0	0	0.0	0	0	0	0	0	90
Moderately high	3,724	62.5	0	0.0	0	0	0	0	0	311
Moderate	1,514	25.4	0	0.0	0	0	0	0	0	89

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	0	
% good	0	
% fair	0	
% poor	0	
% very poor	0	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	490	

PINNACLES STATION

PASTORAL LEASE 3114/775

Area: 283,158 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Leonora/Sandstone

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 3312 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	3	13,266	4.7
2	Hills with chenopods	1	603	0.2
3	Breakaways and stony plains	1	14,480	5.1
5	Undulating mulga country	2	526	0.2
6	Undulating chenopod country	1	9,499	3.4
8	Stony non-chenopod plains	2	11,024	3.9
9	Granite plains and rises	2	11,363	4.0
10	Mulga hardpan plains	1	5,796	2.0
11	Mulga with some wanderrie banks	2	143,681	50.7
12	Sandy acacia plains with wanderrie	3	24,653	8.7
13	Spinifex sand plains	1	1,892	0.7
14	Chenopod drainage systems	2	10,063	3.6
15	Calcreted old drainage systems	1	12,043	4.3
17	Lake country	3	24,269	8.6

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	15	Mileura	12,043	4.3	0	0.0	42	17	57	21	5	1,505
High	17	Carnegie	20,113	7.1	0	0.0	36	53	33	11	3	2,514
Moderately high	2	Leonora	603	0.2	0	0.0	0	0	0	0	0	50
Moderately high	3	Sherwood	14,480	5.1	100	0.7	27	7	52	33	7	1,198
Moderately high	5	Nubev	317	0.1	0	0.0	0	0	0	0	0	26
Moderately high	6	Gransal	9,499	3.4	0	0.0	9	0	33	56	11	792
Moderately high	14	Monitor	2,786	1.0	274	9.8	4	0	0	25	75	209
Moderately high	14	Wilson	7,277	2.6	3229	44.4	19	11	5	53	32	337
Moderately high	17	Darlot	477	0.2	0	0.0	0	0	0	0	0	40
Moderate	8	Windarra	8,510	3.0	0	0.0	24	0	21	71	8	501
Moderate	9	Bandy	665	0.2	0	0.0	0	0	0	0	0	39
Moderate	9	Challenge	10,698	3.8	0	0.0	11	0	18	73	9	629
Moderate	10	Hamilton	5,796	2.0	0	0.0	4	0	50	25	25	341
Moderate	11	Monk	14,3681	50.7	46	0.0	208	8	50	39	3	8,449
Moderate	12	Ararak	220	0.1	0	0.0	0	0	0	0	0	13
Moderate	12	Desdemona	21,332	7.5	125	0.6	35	11	66	23	0	1,248
Low	1	Bevon	410	0.1	0	0.0	0	0	0	0	0	20
Low	5	Violet	209	0.1	0	0.0	0	0	0	0	0	10
Low	8	Sunrise	2,514	0.9	0	0.0	7	0	0	100	0	120
Low	11	Tiger	0	0.0	0	0.0	0	0	0	0	0	0
Low	12	Yowie	3,101	1.1	0	0.0	4	75	25	0	0	148
Very low	1	Laverton	541	0.2	0	0.0	0	0	0	0	0	18

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Very low	1	Wyarri	12,314	4.3	0	0.0	21	0	52	48	0	410
Very low	13	Bullimore	1,892	0.7	0	0.0	0	0	0	0	0	38
Nil	17	Lake bed	3,680	1.3	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	32,156	11.4	0	0.0	78	33	46	17	4	4,019
Moderately high	35,438	12.5	3,603	10.2	59	7	30	42	20	2,652
Moderate	190,902	67.4	170	0.1	282	7	48	41	4	11,220
Low	6,234	2.2	0	0.0	11	27	9	64	0	298
Very low	14,748	5.2	0	0.0	21	0	52	48	0	466
Nil	3,680	1.3	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	3,773 (1.3 % of station)
No. of ratings	451
% good	12
% fair	45
% poor	38
% very poor	6
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	18,660

RIVERINA STATION

PASTORAL LEASE 3114/1017

Area: 154,695 ha

Area surveyed: Whole Station (157,031 ha; see note at the end of this station report)

Land Conservation District: Kalgoorlie

Shire: Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 18,660 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	6	19,146	12.2
2	Hills with chenopods	3	11,644	7.4
3	Breakaways and stony plains	1	17	0.0
4	Breakaways and chenopod plains	2	467	0.3
5	Undulating mulga country	2	1,633	1.0
6	Undulating chenopod country	2	14,158	9.0
7	Eucalypt-chenopod plains	1	1,436	0.9
8	Stony non-chenopod plains	2	512	0.3
9	Granite plains and rises	1	3,822	2.4
10	Mulga hardpan plains	1	11,667	7.4
11	Mulga with some wanderrie banks	1	893	0.6
12	Sandy acacia plains with wanderrie	1	37,219	23.7
13	Spinifex sand plains	1	28,083	17.9
14	Chenopod drainage systems	2	8,212	5.2
16	Calcareous plains near salt lakes	2	7,481	4.8
17	Lake country	2	10,641	6.8

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	240	0.2	0	0.0	0	0	0	0	0	30
High	14	Bunyip	7,192	4.6	0	0.0	8	50	38	12	0	899
High	17	Carnegie	8,816	5.6	0	0.0	8	88	12	0	0	1,102
Moderately high	2	Graves	2,985	1.9	0	0.0	23	61	9	17	13	249
Moderately high	2	Lawrance	57	0.0	0	0.0	1	0	100	0	0	5
Moderately high	2	Leonora	8,602	5.5	61	0.7	28	32	32	11	25	712
Moderately high	3	Sherwood	17	0.0	0	0.0	1	100	0	0	0	1
Moderately high	4	Yilgangi	228	0.1	0	0.0	0	0	0	0	0	19
Moderately high	5	Nubev	845	0.5	0	0.0	0	0	0	0	0	70
Moderately high	6	Gransal	5,885	3.7	0	0.0	5	40	0	20	40	490
Moderately high	6	Moriarty	8,273	5.3	0	0.0	35	20	26	23	31	689
Moderately high	7	Campsite	1,436	0.9	0	0.0	3	0	67	33	0	120
Moderately high	14	Monitor	1,019	0.6	185	18.1	5	0	0	40	60	70
Moderate	5	Waguin	788	0.5	0	0.0	1	0	100	0	0	46
Moderate	8	Windarra	315	0.2	0	0.0	0	0	0	0	0	19
Moderate	9	Bandy	3,822	2.4	0	0.0	12	42	50	0	8	225
Moderate	16	Deadman	7,401	4.7	0	0.0	2	100	0	0	0	435
Moderate	16	Doney	80	0.1	0	0.0	1	0	100	0	0	5
Low	1	Bevon	6,695	4.3	0	0.0	13	77	8	8	8	319
Low	1	Mulline	6,976	4.4	0	0.0	17	0	35	35	29	332

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Low	8	Sunrise	197	0.1	0	0.0	0	0	0	0	0	9
Low	10	Rainbow	11,667	7.4	184	1.6	17	59	12	6	24	547
Low	11	Tiger	893	0.6	0	0.0	0	0	0	0	0	43
Low	12	Yowie	37,219	23.7	0	0.0	92	87	10	2	1	1,772
Very low	1	Brooking	870	0.6	0	0.0	1	100	0	0	0	29
Very low	1	Hospital	969	0.6	0	0.0	2	100	0	0	0	32
Very low	1	Laverton	1,583	1.0	0	0.0	0	0	0	0	0	53
Very low	1	Wyarri	2,053	1.3	0	0.0	1	100	0	0	0	68
Very low	13	Marmion	28,083	17.9	0	0.0	27	96	4	0	0	562
Nil	17	Lake bed	1,824	1.2	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	16,248	10.3	0	0.0	16	69	25	6	0	2,031
Moderately high	29,347	18.7	246	0.8	101	33	23	19	26	2,425
Moderate	12,406	7.9	0	0.0	16	44	50	0	6	730
Low	63,647	40.5	184	0.3	139	72	13	7	8	3,022
Very low	33,558	21.4	0	0.0	31	97	3	0	0	744
Nil	1,824	1.2	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	430	(0.3 % of station)
No. of ratings	303	
% good	60	
% fair	18	
% poor	10	
% very poor	13	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	8950	

Note: Part of Riverina station boundary is legally defined by the edge of Lake Ballard, which has been mapped more accurately than previously, and results in a different (more accurate) approximation of the area (157,031 ha) within the defined legal boundaries. An amendment to the legal lease area may be warranted by the lessee.

STURT MEADOWS STATION

PASTORAL LEASE 3114/967

Area: 299,250 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Leonora

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 7712 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	3	11,137	3.7
2	Hills with chenopods	1	3,518	1.2
3	Breakaways and stony plains	1	15,033	5.0
4	Breakaways and chenopod plains	1	3,877	1.3
5	Undulating mulga country	3	3,668	1.2
6	Undulating chenopod country	2	16,703	5.6
8	Stony non-chenopod plains	2	8,858	3.0
9	Granite plains and rises	1	1,083	0.4
10	Mulga hardpan plains	3	17,564	5.9
11	Mulga with some wanderrie banks	4	65,780	22.0
12	Sandy acacia plains with wanderrie	2	38,511	12.9
13	Spinifex sand plains	2	27,769	9.3
14	Chenopod drainage systems	4	31,942	10.7
15	Calcreted old drainage systems	2	7,385	2.5
17	Lake country	2	46,423	15.5

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	3,877	1.3	317	8.2	6	0	0	67	33	445
High	14	Cyclops	12,789	4.3	0	0.0	36	47	31	14	8	1,599
High	14	Sturt	4,341	1.5	0	0.0	3	67	0	0	33	543
High	15	Mileura	4,377	1.5	0	0.0	11	45	0	55	0	547
High	17	Carnegie	32,749	10.9	85	0.3	43	60	30	9	0	4,083
Moderately high	2	Leonora	3,518	1.2	91	2.6	10	0	10	70	20	286
Moderately high	3	Sherwood	15,033	5.0	191	1.3	14	14	43	21	21	1,237
Moderately high	5	Nubev	2,743	0.9	0	0.0	5	0	20	60	20	229
Moderately high	6	Gransal	15,456	5.2	0	0.0	15	53	47	0	0	1,288
Moderately high	6	Gundockerta	1,247	0.4	0	0.0	1	0	0	100	0	104
Moderately high	14	Monitor	6,335	2.1	1,538	24.3	11	0	18	73	9	400
Moderately high	14	Wilson	8,477	2.8	2,609	30.8	21	0	0	38	62	489
Moderate	5	Waguin	427	0.1	0	0.0	0	0	0	0	0	25
Moderate	8	Windarra	6,906	2.3	0	0.0	12	17	50	33	0	406
Moderate	9	Bandy	1,083	0.4	0	0.0	2	0	100	0	0	64
Moderate	10	Hamilton	10,265	3.4	53	0.5	19	0	68	32	0	601
Moderate	11	Duketon	1,501	0.5	0	0.0	0	0	0	0	0	88
Moderate	11	Monk	61,859	20.7	408	0.7	126	29	39	25	6	3,615
Moderate	11	Ranch	407	0.1	0	0.0	0	0	0	0	0	24
Moderate	12	Desdemona	5,015	1.7	0	0.0	1	0	100	0	0	295
Moderate	15	Melaleuca	3,008	1.0	0	0.0	5	100	0	0	0	177
Low	1	Bevon	296	0.1	0	0.0	0	0	0	0	0	14

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Low	5	Violet	498	0.2	0	0.0	1	0	0	100	0	24
Low	8	Sunrise	1,952	0.7	0	0.0	2	0	50	50	0	93
Low	10	Jundee	3,515	1.2	0	0.0	3	0	33	67	0	167
Low	10	Rainbow	3,784	1.3	0	0.0	12	0	50	50	0	180
Low	11	Tiger	2,012	0.7	0	0.0	4	0	100	0	0	96
Low	12	Yowie	33,496	11.2	0	0.0	51	33	65	2	0	1,595
Very low	1	Laverton	2,573	0.9	0	0.0	1	0	100	0	0	86
Very low	1	Wyarri	8,268	2.8	0	0.0	6	0	83	17	0	276
Very low	13	Bullimore	16,068	5.4	0	0.0	9	56	44	0	0	321
Very low	13	Marmion	11,702	3.9	0	0.0	1	100	0	0	0	234
Nil	17	Lake bed	13,674	4.6	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	58,133	19.4	402	0.7	99	50	24	19	6	7,217
Moderately high	52,809	17.6	4,430	8.4	77	13	22	39	26	4,033
Moderate	90,471	30.2	460	0.5	165	27	43	26	5	5,295
Low	45,553	15.2	0	0.0	73	23	62	15	0	2,169
Very low	38,610	12.9	0	0.0	17	35	59	6	0	917
Nil	13,674	4.6	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	5,292 (1.8 % of station)
No. of ratings	431
% good	29
% fair	39
% poor	24
% very poor	8
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	19,630

TARMOOLA STATION

PASTORAL LEASE 3114/968

Area: 172,662 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Leonora

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 13,978 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	5	26,257	15.2
2	Hills with chenopods	1	3,221	1.9
3	Breakaways and stony plains	1	4,614	2.7
4	Breakaways and chenopod plains	1	471	0.3
5	Undulating mulga country	3	18,553	10.7
6	Undulating chenopod country	2	20,120	11.7
8	Stony non-chenopod plains	3	4,745	2.7
9	Granite plains and rises	1	964	0.6
10	Mulga hardpan plains	3	17,576	10.2
11	Mulga with some wanderrie banks	2	57,104	33.1
12	Sandy acacia plains with wanderrie	2	9,809	5.7
13	Spinifex sand plains	1	5,759	3.3
14	Chenopod drainage systems	2	3,469	2.0

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	471	0.3	0	0.0	0	0	0	0	0	59
Moderately high	2	Leonora	3,221	1.9	0	0.0	3	0	33	67	0	268
Moderately high	3	Sherwood	4,614	2.7	109	2.4	7	0	29	57	14	375
Moderately high	5	Nubev	8,945	5.2	181	2	23	13	39	43	4	730
Moderately high	6	Gransal	15,727	9.1	262	1.7	26	4	23	69	4	1,289
Moderately high	6	Gundockerta	4,393	2.5	109	2.5	3	33	0	67	0	357
Moderately high	14	Monitor	568	0.3	0	0.0	3	0	0	33	67	47
Moderately high	14	Wilson	2,901	1.7	687	23.7	11	0	9	36	55	185
Moderate	5	Waguin	81	0.0	0	0.0	0	0	0	0	0	5
Moderate	8	Felix	1,093	0.6	0	0.0	0	0	0	0	0	64
Moderate	8	Windarra	3,062	1.8	0	0.0	13	0	15	77	8	180
Moderate	9	Challenge	964	0.6	0	0.0	2	0	0	100	0	57
Moderate	10	Hamilton	8,865	5.1	292	3.3	19	37	37	21	5	504
Moderate	11	Monk	56,765	32.9	4	0.0	95	3	23	55	19	3,339
Moderate	12	Desdemona	9,108	5.3	0	0.0	8	38	50	12	0	536
Low	1	Bevon	10,244	5.9	0	0.0	16	6	50	44	0	488
Low	1	Teutonic	883	0.5	0	0.0	0	0	0	0	0	42
Low	5	Violet	9,527	5.5	0	0.0	12	0	25	67	8	454
Low	8	Sunrise	590	0.3	0	0.0	3	0	0	100	0	28
Low	10	Jundee	5,887	3.4	0	0.0	19	0	11	89	0	280
Low	10	Rainbow	2,823	1.6	0	0.0	1	0	0	100	0	134
Low	11	Tiger	339	0.2	0	0.0	0	0	0	0	0	16

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Low	12	Yowie	701	0.4	0	0.0	0	0	0	0	0	33
Very low	1	Brooking	1,377	0.8	0	0.0	0	0	0	0	0	46
Very low	1	Laverton	12,752	7.4	0	0.0	27	4	59	33	4	425
Very low	1	Wyarri	1,002	0.6	0	0.0	1	0	0	100	0	33
Very low	13	Bullimore	5,759	3.3	0	0.0	0	0	0	0	0	115

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	471	0.3	0	0.0	0	0	0	0	0	59
Moderately high	40,369	23.4	1,348	3.3	76	7	25	54	14	3,251
Moderate	79,938	46.3	296	0.4	137	10	26	50	15	4,685
Low	30,994	18.0	0	0.0	51	2	26	71	2	1,475
Very low	20,890	12.1	0	0.0	28	4	57	36	4	619

Station summary

Severely degraded and eroded (ha)	1,644 (1 % of station)
No. of ratings	292
% good	7
% fair	28
% poor	53
% very poor	11
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	10,090

WALLING ROCK STATION

PASTORAL LEASE 3114/999

Area: 185,368 ha

Area surveyed: Whole Station

Land Conservation District: Kalgoorlie

Shire: Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 810 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	6	8,443	4.6
2	Hills with chenopods	2	8,729	4.7
3	Breakaways and stony plains	1	274	0.1
4	Breakaways and chenopod plains	1	490	0.3
5	Undulating mulga country	1	18	0.0
6	Undulating chenopod country	2	3,909	2.1
7	Eucalypt-chenopod plains	1	6,290	3.4
8	Stony non-chenopod plains	1	1	0.0
9	Granite plains and rises	1	10,667	5.8
10	Mulga hardpan plains	2	2,489	1.3
12	Sandy acacia plains with wanderrie	2	47,681	25.7
13	Spinifex sand plains	1	53,223	28.7
14	Chenopod drainage systems	1	461	0.2
16	Calcareous plains near salt lakes	2	11,472	6.2
17	Lake country	2	31,221	16.8

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	490	0.3	0	0.0	3	100	0	0	0	61
High	17	Carnegie	25,365	13.7	0	0.0	69	97	0	3	0	3,171
Moderately high	2	Graves	3,653	2.0	0	0.0	7	100	0	0	0	304
Moderately high	2	Lawrance	5,076	2.7	0	0.0	16	94	6	0	0	423
Moderately high	3	Sherwood	274	0.1	0	0.0	0	0	0	0	0	23
Moderately high	6	Gransal	1,816	1.0	0	0.0	12	83	17	0	0	151
Moderately high	6	Moriarty	2,094	1.1	0	0.0	3	100	0	0	0	174
Moderately high	7	Campsite	6,290	3.4	0	0.0	13	69	31	0	0	524
Moderately high	14	Monitor	461	0.2	0	0.0	0	0	0	0	0	38
Moderate	5	Waguin	18	0.0	0	0.0	0	0	0	0	0	1
Moderate	9	Bandy	10,667	5.8	0	0.0	15	100	0	0	0	627
Moderate	10	Helag	2,050	1.1	0	0.0	5	60	40	0	0	121
Moderate	12	Illaara	1,266	0.7	0	0.0	4	75	25	0	0	74
Moderate	16	Deadman	8,572	4.6	0	0.0	0	0	0	0	0	504
Moderate	16	Doney	2,899	1.6	0	0.0	0	0	0	0	0	171
Low	1	Bevon	432	0.2	0	0.0	0	0	0	0	0	21
Low	1	Mulline	28	0.0	0	0.0	0	0	0	0	0	1
Low	8	Sunrise	1	0.0	0	0.0	0	0	0	0	0	0
Low	10	Rainbow	439	0.2	0	0.0	0	0	0	0	0	21
Low	12	Yowie	46,415	25.0	0	0.0	33	100	0	0	0	2,210

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Very low	1	Brooking	1,849	1.0	0	0.0	0	0	0	0	0	62
Very low	1	Hospital	1,469	0.8	0	0.0	1	100	0	0	0	49
Very low	1	Laverton	880	0.5	0	0.0	2	100	0	0	0	29
Very low	1	Wyarri	3,787	2.0	0	0.0	2	100	0	0	0	126
Very low	13	Marmion	53,223	28.7	0	0.0	10	100	0	0	0	1,064
Nil	17	Lake bed	5,857	3.2	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% *Good*	% *Fair*	% *Poor*	% V. *poor*	
	ha	%	ha	%						
High	25,854	13.9	0	0.0	72	97	0	3	0	3,232
Moderately high	19,664	10.6	0	0.0	51	86	14	0	0	1,637
Moderate	25,472	13.7	0	0.0	24	88	12	0	0	1,498
Low	47,315	25.5	0	0.0	33	100	0	0	0	2,253
Very low	61,207	33.0	0	0.0	15	100	0	0	0	1,330
Nil	5,857	3.2	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	195	
% good	94	
% fair	5	
% poor	1	
% very poor	0	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	9950	

WEEBO STATION

PASTORAL LEASE 3114/153

Area: 285,233 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Leonora

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 9910 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	4	25,975	9.1
2	Hills with chenopods	1	12	0.0
3	Breakaways and stony plains	1	13,465	4.7
4	Breakaways and chenopod plains	3	7,142	2.5
5	Undulating mulga country	2	17,902	6.3
6	Undulating chenopod country	2	22,988	8.1
8	Stony non-chenopod plains	2	10,664	3.7
9	Granite plains and rises	2	1,010	0.4
10	Mulga hardpan plains	2	24,964	8.8
11	Mulga with some wanderrie banks	5	47,683	16.7
12	Sandy acacia plains with wanderrie	2	13,635	4.8
13	Spinifex sand plains	2	74,403	26.1
14	Chenopod drainage systems	3	10,682	3.7
15	Calcreted old drainage systems	2	789	0.3
17	Lake country	3	13,919	4.9

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	1,309	0.5	0	0.0	0	0	0	0	0	164
High	14	Steer	7,550	2.6	0	0.0	10	30	10	50	10	944
High	15	Mileura	490	0.2	0	0.0	0	0	0	0	0	61
High	17	Carnegie	217	0.1	0	0.0	0	0	0	0	0	27
Moderately high	2	Leonora	12	0.0	0	0.0	1	100	0	0	0	1
Moderately high	3	Sherwood	13,465	4.7	58	0.4	17	18	41	41	0	1,117
Moderately high	4	Hootanui	2,161	0.8	0	0.0	0	0	0	0	0	180
Moderately high	4	Yilgangi	3,671	1.3	0	0.0	11	9	0	91	0	306
Moderately high	5	Nubev	9,157	3.2	0	0.0	24	0	21	58	21	763
Moderately high	6	Gransal	22,835	8.0	0	0.0	24	4	25	62	8	1,903
Moderately high	6	Gundockerta	153	0.1	0	0.0	0	0	0	0	0	13
Moderately high	14	Monitor	1,472	0.5	468	31.8	5	0	0	20	80	84
Moderately high	14	Wilson	1,661	0.6	215	13	5	20	80	0	0	120
Moderately high	15	Cunyu	299	0.1	0	0.0	3	0	67	33	0	25
Moderately high	17	Darlot	13,329	4.7	0	0.0	8	75	12	12	0	1,111
Moderate	8	Windarra	6,483	2.3	0	0.0	16	12	12	62	12	381
Moderate	9	Bandy	135	0.0	0	0.0	0	0	0	0	0	8
Moderate	9	Challenge	874	0.3	0	0.0	3	0	0	100	0	51
Moderate	10	Hamilton	5,187	1.8	0	0.0	1	0	100	0	0	305
Moderate	11	Duketon	8,958	3.1	0	0.0	6	0	0	83	17	527
Moderate	11	Monk	27,115	9.5	211	0.8	45	16	22	44	18	1,563

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Moderate	11	Ranch	8,333	2.9	0	0.0	12	25	58	17	0	490
Moderate	11	Yanganoo	1,747	0.6	0	0.0	1	0	100	0	0	103
Moderate	12	Ararak	2,576	0.9	0	0.0	2	0	100	0	0	152
Moderate	12	Desdemona	11,059	3.9	0	0.0	13	54	31	15	0	651
Moderate	13	Pan	132	0.0	0	0.0	1	100	0	0	0	8
Low	1	Bevon	16,470	5.8	13	0.1	18	0	28	72	0	784
Low	1	Teutonic	1,642	0.6	0	0.0	4	0	0	100	0	78
Low	5	Violet	8,745	3.1	0	0.0	9	22	33	44	0	416
Low	8	Sunrise	4,181	1.5	57	1.4	13	0	8	85	8	196
Low	10	Jundee	19,777	6.9	426	2.2	49	2	24	73	0	921
Low	11	Tiger	1,530	0.5	0	0.0	0	0	0	0	0	73
Very low	1	Laverton	5,211	1.8	0	0.0	4	0	25	75	0	174
Very low	1	Wyarri	2,652	0.9	0	0.0	3	0	67	33	0	88
Very low	13	Bullimore	74,271	26.0	0	0.0	4	100	0	0	0	1,485
Nil	17	Lake bed	373	0.1	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	9,567	3.4	0	0.0	10	30	10	50	10	1,196
Moderately high	68,213	23.9	742	1.1	98	13	26	50	11	5,623
Moderate	72,600	25.5	211	0.3	100	20	27	42	11	4,259
Low	52,346	18.4	495	0.9	93	3	23	73	1	2,468
Very low	82,134	28.8	0	0.0	11	36	27	36	0	1,747
Nil	373	0.1	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	1,448 (0.5 % of station)
No. of ratings	312
% good	14
% fair	25
% poor	54
% very poor	8
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	15,290

WHITE CLIFFS STATION

PASTORAL LEASE 3114/1148

Area: 257,870 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Laverton

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 0 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
3	Breakaways and stony plains	1	12,556	4.9
4	Breakaways and chenopod plains	1	10,398	4.0
5	Undulating mulga country	1	2,940	1.1
6	Undulating chenopod country	1	19	0.0
11	Mulga with some wanderrie banks	1	3,015	1.2
12	Sandy acacia plains with wanderrie	1	23	0.0
13	Spinifex sand plains	3	206,137	79.9
14	Chenopod drainage systems	1	277	0.1
16	Calcareous plains near salt lakes	1	1,235	0.5
17	Lake country	1	21,270	8.2

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	17	Carnegie	21,270	8.2	0	0.0	43	98	2	0	0	2,659
Moderately high	3	Sherwood	12,556	4.9	163	1.3	30	27	50	7	17	1,033
Moderately high	4	Crete	10,398	4.0	0	0.0	6	100	0	0	0	867
Moderately high	6	Gundockerta	19	0.0	0	0.0	0	0	0	0	0	2
Moderately high	14	Wilson	277	0.1	0	0.0	0	0	0	0	0	23
Moderate	5	Waguin	2,940	1.1	0	0.0	1	100	0	0	0	173
Moderate	11	Yanganoo	3,015	1.2	91	3	5	40	20	40	0	172
Moderate	12	Ararak	23	0.0	0	0.0	1	0	0	100	0	1
Moderate	13	Pan	478	0.2	0	0.0	0	0	0	0	0	28
Moderate	16	Deadman	1,235	0.5	0	0.0	2	100	0	0	0	73
Very low	13	Bullimore	17,1289	66.4	0	0.0	8	75	12	12	0	3,426
Very low	13	Kirgella	34,370	13.3	0	0.0	8	88	12	0	0	687

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	21,270	8.2	0	0.0	43	98	2	0	0	2,659
Moderately high	23,250	9.0	163	0.7	36	39	42	6	14	1,925
Moderate	7,691	3.0	91	1.2	9	56	11	33	0	447
Very low	205,659	79.8	0	0.0	16	81	12	6	0	4,113

Station summary

Severely degraded and eroded (ha)	254	(0.1 % of station)
No. of ratings	104	
% good	71	
% fair	18	
% poor	6	
% very poor	5	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	9140	

WONGANOO STATION

PASTORAL LEASE 3114/1060

Area: 265,874 ha

Area surveyed: 182,742 ha (69%)

Land Conservation District: North Eastern Goldfields

Shire: Wiluna

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 0 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	4	3,898	2.1
3	Breakaways and stony plains	1	10,702	5.9
5	Undulating mulga country	3	12,241	6.7
6	Undulating chenopod country	1	1,413	0.8
8	Stony non-chenopod plains	1	4,649	2.5
9	Granite plains and rises	1	8,852	4.8
10	Mulga hardpan plains	2	6,470	3.5
11	Mulga with some wanderrie banks	4	12,865	7.0
12	Sandy acacia plains with wanderrie	2	28,816	15.8
13	Spinifex sand plains	1	89,348	48.9
14	Chenopod drainage systems	2	1,506	0.8
17	Lake country	1	1,982	1.1

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	14	Steer	165	0.1	0	0.0	0	0	0	0	0	21
Moderately high	3	Sherwood	10,702	5.9	0	0.0	15	20	40	40	0	892
Moderately high	5	Nubev	30	0.0	0	0.0	0	0	0	0	0	3
Moderately high	6	Gransal	1,413	0.8	0	0.0	2	0	50	0	50	118
Moderately high	14	Wilson	1,340	0.7	0	0.0	2	0	50	0	50	112
Moderately high	17	Darlot	1,982	1.1	0	0.0	3	100	0	0	0	165
Moderate	5	Waguin	2,171	1.2	0	0.0	0	0	0	0	0	128
Moderate	8	Windarra	4,649	2.5	0	0.0	8	12	38	50	0	273
Moderate	9	Challenge	8,852	4.8	0	0.0	10	10	30	60	0	521
Moderate	10	Hamilton	2,668	1.5	0	0.0	6	0	67	33	0	157
Moderate	11	Duketon	3,485	1.9	0	0.0	5	0	80	20	0	205
Moderate	11	Monk	4,460	2.4	0	0.0	4	0	75	25	0	262
Moderate	11	Yanganoo	2,457	1.3	0	0.0	0	0	0	0	0	145
Moderate	12	Ararak	9,750	5.3	0	0.0	6	17	50	33	0	574
Moderate	12	Desdemona	19,066	10.4	0	0.0	27	11	63	26	0	1,122
Low	1	Bevon	3,056	1.7	0	0.0	4	0	75	25	0	146
Low	5	Violet	10,039	5.5	0	0.0	15	7	40	53	0	478
Low	10	Jundee	3,802	2.1	0	0.0	6	0	50	50	0	181
Low	11	Tiger	2,464	1.3	0	0.0	4	0	50	50	0	117
Very low	1	Brooking	295	0.2	0	0.0	0	0	0	0	0	10
Very low	1	Laverton	130	0.1	0	0.0	0	0	0	0	0	4
Very low	1	Wyarri	417	0.2	0	0.0	0	0	0	0	0	14
Very low	13	Bullimore	89,348	48.9	0	0.0	7	14	29	57	0	1,787

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	165	0.1	0	0.0	0	0	0	0	0	21
Moderately high	15,468	8.5	0	0.0	22	27	36	27	9	1,290
Moderate	57,558	31.5	0	0.0	66	9	56	35	0	3,387
Low	19,361	10.6	0	0.0	29	3	48	48	0	922
Very low	90,190	49.4	0	0.0	7	14	29	57	0	1,815

Station summary

Severely degraded and eroded (ha)	0	(0 % of station)
No. of ratings	124	
% good	11	
% fair	49	
% poor	38	
% very poor	2	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	7440	

YAKABINDIE STATION

PASTORAL LEASE 3114/649

Area: 195,173 ha (see note at the end of this station report)

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Leonora

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 17,749 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	4	6,123	3.1
3	Breakaways and stony plains	1	13,766	7.1
4	Breakaways and chenopod plains	1	2,284	1.2
5	Undulating mulga country	3	7,038	3.6
6	Undulating chenopod country	1	2,562	1.3
8	Stony non-chenopod plains	2	4,572	2.3
10	Mulga hardpan plains	2	5,511	2.8
11	Mulga with some wanderrie banks	5	26,604	13.6
12	Sandy acacia plains with wanderrie	2	6,695	3.4
13	Spinifex sand plains	2	89,136	45.7
14	Chenopod drainage systems	1	1,572	0.8
15	Calcreted old drainage systems	3	11,299	5.8
17	Lake country	2	18,009	9.2

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	2,284	1.2	0	0.0	6	33	67	0	0	286
High	15	Mileura	3,058	1.6	0	0.0	10	0	50	50	0	382
High	17	Carnegie	16,694	8.6	0	0.0	36	72	14	11	3	2,087
Moderately high	3	Sherwood	13,766	7.1	54	0.4	12	33	58	8	0	1,143
Moderately high	5	Nubev	1,418	0.7	0	0.0	3	0	33	67	0	118
Moderately high	6	Gransal	2,562	1.3	0	0.0	4	0	50	50	0	214
Moderately high	14	Wilson	1,572	0.8	338	21.5	5	0	0	80	20	103
Moderately high	15	Cunyu	2,953	1.5	0	0.0	12	33	50	17	0	246
Moderately high	17	Darlot	1,316	0.7	0	0.0	6	100	0	0	0	110
Moderate	5	Waguin	887	0.5	0	0.0	0	0	0	0	0	52
Moderate	8	Windarra	4,406	2.3	0	0.0	12	8	58	33	0	259
Moderate	10	Hamilton	1,337	0.7	0	0.0	0	0	0	0	0	79
Moderate	11	Duketon	847	0.4	0	0.0	0	0	0	0	0	50
Moderate	11	Monk	16,705	8.6	0	0.0	17	29	29	41	0	983
Moderate	11	Ranch	777	0.4	0	0.0	0	0	0	0	0	46
Moderate	11	Yanganoo	8,250	4.2	1	0.0	10	20	40	20	20	485
Moderate	12	Ararak	143	0.1	0	0.0	0	0	0	0	0	8
Moderate	12	Desdemona	6,552	3.4	0	0.0	11	64	18	18	0	385
Moderate	13	Pan	1,097	0.6	0	0.0	11	55	27	0	18	65
Moderate	15	Melaleuca	5,288	2.7	0	0.0	7	57	14	29	0	311
Low	1	Bevon	2,778	1.4	0	0.0	0	0	0	0	0	132
Low	5	Violet	4,734	2.4	0	0.0	21	0	48	43	10	225

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Low	8	Sunrise	167	0.1	0	0.0	1	0	0	100	0	8
Low	10	Jundee	4,174	2.1	0	0.0	13	15	31	54	0	199
Low	11	Tiger	25	0.0	0	0.0	0	0	0	0	0	1
Very low	1	Brooking	280	0.1	0	0.0	0	0	0	0	0	9
Very low	1	Laverton	2,085	1.1	0	0.0	3	0	100	0	0	70
Very low	1	Wyarri	981	0.5	0	0.0	0	0	0	0	0	33
Very low	13	Bullimore	88,039	45.1	0	0.0	6	67	17	17	0	1,761

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	22,036	11.3	0	0.0	52	54	27	17	2	2,755
Moderately high	23,587	12.1	392	1.7	42	33	38	26	2	1,934
Moderate	46,289	23.7	1	0.0	68	37	32	25	6	2,723
Low	11,876	6.1	0	0.0	35	6	40	49	6	565
Very low	91,385	46.8	0	0.0	9	44	44	11	0	1,873

Station summary

Severely degraded and eroded (ha)	393	(0.2 % of station)
No. of ratings	206	
% good	35	
% fair	34	
% poor	27	
% very poor	4	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	9850	

Note: Subsequent to finalisation of these data there has been an amendment to this lease's area to 195,161 ha.

YANDAL STATION

PASTORAL LEASE 3114/677

Area: 155,501 ha (see note at the end of this station report)

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Leonora

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 0 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	4	11,241	7.2
2	Hills with chenopods	1	1,091	0.7
3	Breakaways and stony plains	1	874	0.6
5	Undulating mulga country	2	7,542	4.9
6	Undulating chenopod country	1	3,732	2.4
8	Stony non-chenopod plains	2	15,061	9.7
10	Mulga hardpan plains	2	16,888	10.9
11	Mulga with some wanderrie banks	5	19,345	12.4
12	Sandy acacia plains with wanderrie	2	9,923	6.4
13	Spinifex sand plains	1	29,334	18.9
14	Chenopod drainage systems	2	7,035	4.5
15	Calcreted old drainage systems	2	5,982	3.8
17	Lake country	2	27,452	17.7

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	14	Steer	4,408	2.8	0	0.0	6	0	83	17	0	551
Moderately high	2	Leonora	1,091	0.7	0	0.0	0	0	0	0	0	91
Moderately high	3	Sherwood	874	0.6	0	0.0	0	0	0	0	0	73
Moderately high	5	Nubev	3,232	2.1	0	0.0	4	0	0	100	0	269
Moderately high	6	Gransal	3,732	2.4	0	0.0	3	0	33	67	0	311
Moderately high	14	Monitor	2,626	1.7	548	20.9	6	17	33	50	0	173
Moderately high	15	Cunyu	5,434	3.5	0	0.0	13	15	62	23	0	453
Moderately high	17	Darlot	20,983	13.5	87	0.4	34	18	53	24	6	1,741
Moderate	8	Felix	6,633	4.3	0	0.0	17	24	41	35	0	390
Moderate	8	Windarra	8,429	5.4	0	0.0	20	15	40	45	0	496
Moderate	10	Hamilton	3,684	2.4	0	0.0	7	57	14	14	14	217
Moderate	11	Duketon	2,538	1.6	0	0.0	11	0	64	36	0	149
Moderate	11	Monk	11,100	7.1	0	0.0	25	12	36	48	4	653
Moderate	11	Ranch	923	0.6	0	0.0	1	0	100	0	0	54
Moderate	11	Yanganoo	569	0.4	0	0.0	0	0	0	0	0	33
Moderate	12	Ararak	6,147	4.0	0	0.0	9	44	44	11	0	362
Moderate	12	Desdemona	3,776	2.4	0	0.0	5	20	60	20	0	222
Moderate	15	Melaleuca	548	0.4	0	0.0	0	0	0	0	0	32
Low	1	Bevon	9,948	6.4	0	0.0	14	43	21	29	7	474
Low	5	Violet	4,310	2.8	0	0.0	18	28	50	17	6	205
Low	10	Jundee	13,205	8.5	0	0.0	26	0	38	62	0	629
Low	11	Tiger	4,215	2.7	0	0.0	6	0	0	100	0	201

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Very low	1	Brooking	218	0.1	0	0.0	0	0	0	0	0	7
Very low	1	Laverton	565	0.4	0	0.0	0	0	0	0	0	19
Very low	1	Wyarri	511	0.3	0	0.0	0	0	0	0	0	17
Very low	13	Bullimore	29,334	18.9	0	0.0	6	50	0	50	0	587
Nil	17	Lake bed	6,469	4.2	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	4,408	2.8	0	0.0	6	0	83	17	0	551
Moderately high	37,972	24.4	636	1.7	60	15	48	33	3	3,111
Moderate	44,346	28.5	0	0.0	95	20	42	36	2	2,608
Low	31,678	20.4	0	0.0	64	17	34	45	3	1,509
Very low	30,627	19.7	0	0.0	6	50	0	50	0	630
Nil	6,469	4.2	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	636	(0.4 % of station)
No. of ratings	231	
% good	18	
% fair	42	
% poor	38	
% very poor	3	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	8410	

Note: A revision of this station's plan subsequent to finalisation of these data has resulted in a new area of 155,319 ha.

YEELIRRIE STATION

PASTORAL LEASE 3114/620

Area: 244,552 ha

Area surveyed: 134,168 ha (55%)

Land Conservation District: Sandstone

Shire: Wiluna

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 0 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	1	2,163	1.6
3	Breakaways and stony plains	1	11,741	8.8
5	Undulating mulga country	1	1,398	1.0
6	Undulating chenopod country	1	224	0.2
8	Stony non-chenopod plains	1	1,695	1.3
9	Granite plains and rises	1	86	0.1
10	Mulga hardpan plains	1	191	0.1
11	Mulga with some wanderrie banks	2	28,283	21.1
12	Sandy acacia plains with wanderrie	1	3,067	2.3
13	Spinifex sand plains	1	78,195	58.3
15	Calcreted old drainage systems	3	4,543	3.4
17	Lake country	1	2,581	1.9

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	15	Mileura	2,853	2.1	0	0.0	2	0	100	0	0	357
High	17	Carnegie	2,581	1.9	0	0.0	6	50	50	0	0	323
Moderately high	3	Sherwood	11,741	8.8	27	0.2	19	58	32	11	0	976
Moderately high	6	Gransal	224	0.2	0	0.0	0	0	0	0	0	19
Moderately high	15	Cunyu	9	0.0	0	0.0	0	0	0	0	0	1
Moderate	5	Waguin	1,398	1.0	0	0.0	2	100	0	0	0	82
Moderate	8	Windarra	1,695	1.3	0	0.0	3	0	67	33	0	100
Moderate	9	Challenge	86	0.1	0	0.0	0	0	0	0	0	5
Moderate	10	Hamilton	191	0.1	0	0.0	0	0	0	0	0	11
Moderate	11	Monk	10,742	8.0	19	0.2	11	55	45	0	0	631
Moderate	11	Yanganoo	17,541	13.1	0	0.0	17	29	41	29	0	1,032
Moderate	12	Desdemona	3,067	2.3	0	0.0	3	67	33	0	0	180
Moderate	15	Melaleuca	1,682	1.3	0	0.0	3	67	33	0	0	99
Very low	1	Wyarri	2,163	1.6	0	0.0	1	100	0	0	0	72
Very low	13	Bullimore	78,195	58.3	0	0.0	8	50	12	38	0	1,564

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	5,434	4.1	0	0.0	8	38	62	0	0	680
Moderately high	11,974	8.9	27	0.2	19	58	32	10	0	996
Moderate	36,402	27.1	19	0.1	39	44	41	15	0	2,140
Very low	80,358	59.9	0	0.0	9	56	11	33	0	1,636

Station summary

Severely degraded and eroded (ha)	46	(0 % of station)
No. of ratings	75	
% good	48	
% fair	37	
% poor	15	
% very poor	0	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	5450	

YERILLA STATION

PASTORAL LEASE 3114/707

Area: 101,611 ha

Area surveyed: Whole Station

Land Conservation District: North Eastern Goldfields

Shire: Menzies

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 945 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	4	1,835	1.8
2	Hills with chenopods	1	3,259	3.2
3	Breakaways and stony plains	1	1,930	1.9
4	Breakaways and chenopod plains	2	7,429	7.3
5	Undulating mulga country	2	3,476	3.4
6	Undulating chenopod country	2	28,515	28.1
8	Stony non-chenopod plains	1	6	0.0
9	Granite plains and rises	1	254	0.2
10	Mulga hardpan plains	4	29,118	28.7
11	Mulga with some wanderrie banks	1	260	0.3
12	Sandy acacia plains with wanderrie	1	22,927	22.6
13	Spinifex sand plains	1	35	0.0
17	Lake country	2	2,566	2.5

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	1,793	1.8	0	0.0	3	0	33	67	0	224
High	17	Carnegie	1,894	1.9	0	0.0	0	0	0	0	0	237
Moderately high	2	Leonora	3,259	3.2	0	0.0	12	0	17	75	8	272
Moderately high	3	Sherwood	1,930	1.9	0	0.0	0	0	0	0	0	161
Moderately high	4	Yilgangi	5,637	5.5	0	0.0	4	50	50	0	0	470
Moderately high	5	Nubev	3,473	3.4	0	0.0	9	0	56	44	0	289
Moderately high	6	Gransal	19,124	18.8	67	0.4	37	14	65	19	3	1,588
Moderately high	6	Gundockerta	9,392	9.2	0	0.0	21	19	48	29	5	783
Moderate	5	Waguin	4	0.0	0	0.0	0	0	0	0	0	0
Moderate	8	Windarra	6	0.0	0	0.0	0	0	0	0	0	0
Moderate	9	Bandy	254	0.2	0	0.0	1	100	0	0	0	15
Moderate	10	Hamilton	249	0.2	0	0.0	0	0	0	0	0	15
Moderate	10	Helag	461	0.5	0	0.0	2	100	0	0	0	27
Moderate	11	Monk	260	0.3	0	0.0	0	0	0	0	0	15
Low	1	Bevon	150	0.1	0	0.0	2	0	100	0	0	7
Low	10	Jundee	3,398	3.3	8	0.2	7	29	43	14	14	161
Low	10	Rainbow	25,009	24.6	27	0.1	41	20	56	24	0	1,190
Low	12	Yowie	22,927	22.6	0	0.0	28	64	36	0	0	1,092
Very low	1	Brooking	275	0.3	0	0.0	0	0	0	0	0	9
Very low	1	Laverton	1,001	1.0	0	0.0	1	0	0	100	0	33
Very low	1	Wyarri	410	0.4	0	0.0	0	0	0	0	0	14
Very low	13	Bullimore	35	0.0	0	0.0	0	0	0	0	0	1
Nil	17	Lake bed	673	0.7	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	3,687	3.6	0	0.0	3	0	33	67	0	461
Moderately high	42,814	42.1	67	0.2	83	13	52	31	4	3,563
Moderate	1,233	1.2	0	0.0	3	100	0	0	0	72
Low	51,484	50.7	35	0.1	78	36	49	14	1	2,450
Very low	1,721	1.7	0	0.0	1	0	0	100	0	57
Nil	673	0.7	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	102	(0.1 % of station)
No. of ratings	168	
% good	25	
% fair	49	
% poor	24	
% very poor	2	
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	6600	

YUNDAMINDRA STATION

PASTORAL LEASE 3114/942

Area: 220,663 ha

Area surveyed: Whole Station (223,077 ha; see note at the end of this station report)

Land Conservation District: North Eastern Goldfields

Shire: Leonora

Approximate area of various reserves, freehold and Vacant Crown Land within the managed area = 9361 ha.

Table 1. Summary of land types

No.	Land type	No. of land systems	Area (ha)	(% of station)
1	Acacia hills	4	24,055	10.8
2	Hills with chenopods	1	11,671	5.2
4	Breakaways and chenopod plains	3	25,726	11.5
5	Undulating mulga country	1	876	0.4
6	Undulating chenopod country	2	28,415	12.7
8	Stony non-chenopod plains	2	9,564	4.3
9	Granite plains and rises	1	12,143	5.4
10	Mulga hardpan plains	3	40,155	18.0
11	Mulga with some wanderrie banks	3	38,945	17.5
12	Sandy acacia plains with wanderrie	1	8,351	3.7
13	Spinifex sand plains	1	437	0.2
14	Chenopod drainage systems	2	9,545	4.3
16	Calcareous plains near salt lakes	1	258	0.1
17	Lake country	2	12,937	5.8

Table 2. Rangeland inventory and condition summary

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
High	4	Gumbreak	225	0.1	0	0.0	0	0	0	0	0	28
High	14	Steer	5,825	2.6	777	13.3	5	80	20	0	0	631
High	17	Carnegie	11,484	5.1	0	0.0	11	100	0	0	0	1,436
Moderately high	2	Leonora	11,671	5.2	0	0.0	17	35	35	29	0	973
Moderately high	4	Hootanui	8,235	3.7	0	0.0	15	13	53	33	0	686
Moderately high	4	Yilgangi	17,266	7.7	0	0.0	33	48	39	12	0	1,439
Moderately high	5	Nubev	876	0.4	0	0.0	3	0	33	67	0	73
Moderately high	6	Gransal	4,139	1.9	99	2.4	10	0	20	40	40	337
Moderately high	6	Gundockerta	24,276	10.9	125	0.5	63	29	35	32	5	2,013
Moderately high	14	Wilson	3,720	1.7	1597	42.9	23	0	26	4	70	177
Moderate	8	Windarra	9,147	4.1	0	0.0	20	10	65	25	0	538
Moderate	9	Challenge	12,143	5.4	0	0.0	20	5	55	35	5	714
Moderate	10	Hamilton	12,570	5.6	0	0.0	38	18	39	39	3	739
Moderate	11	Duketon	1,586	0.7	0	0.0	0	0	0	0	0	93
Moderate	11	Monk	29,719	13.3	0	0.0	24	12	50	38	0	1,748
Moderate	16	Deadman	258	0.1	0	0.0	0	0	0	0	0	15
Low	1	Bevon	8,649	3.9	0	0.0	17	41	35	24	0	412
Low	8	Sunrise	416	0.2	0	0.0	3	33	33	33	0	20
Low	10	Jundee	16,998	7.6	0	0.0	24	12	54	33	0	809
Low	10	Rainbow	10,587	4.7	0	0.0	5	40	20	40	0	504
Low	11	Tiger	7,640	3.4	0	0.0	5	20	60	20	0	364
Low	12	Yowie	8,351	3.7	0	0.0	3	0	100	0	0	396

Table 2 continued ...

Pastoral potential	Land type	Land system	Area				Traverse summary					Scc+
			Total		Sde*		No. assess-ments	% Good	% Fair	% Poor	% V. poor	
			ha	%	ha	%						
Very low	1	Brooking	5,726	2.6	0	0.0	8	25	62	12	0	191
Very low	1	Laverton	4,201	1.9	0	0.0	5	0	80	20	0	140
Very low	1	Wyarri	5,479	2.5	0	0.0	5	20	80	0	0	183
Very low	13	Kirgella	437	0.2	0	0.0	3	100	0	0	0	9
Nil	17	Lake bed	1,452	0.7	0	0.0	0	0	0	0	0	0

* Area mapped as being severely degraded and eroded.

+ Suggested carrying capacity (dry sheep equivalents) over summer, following a 'fair' winter season.

Table 3. Rangeland inventory and condition summarised by pastoral potential

Pastoral potential	Area				Traverse summary					Scc
	Total		Sde		No assess-ments	% Good	% Fair	% Poor	% V. poor	
	ha	%	ha	%						
High	17,535	7.9	777	4.4	16	94	6	0	0	2,095
Moderately high	70,182	31.5	1,821	2.6	164	26	35	25	14	5,698
Moderate	65,424	29.3	0	0.0	102	13	50	35	2	3,847
Low	52,641	23.6	0	0.0	57	25	47	28	0	2,507
Very low	15,843	7.1	0	0.0	21	29	62	10	0	523
Nil	1,452	0.7	0	0.0	0	0	0	0	0	0

Station summary

Severely degraded and eroded (ha)	2,598 (1.2 % of station)
No. of ratings	360
% good	25
% fair	42
% poor	26
% very poor	7
Suggested carrying capacity (dse), over summer, following a 'fair' winter season.	14,670

Note: Part of Yundamindra station's boundary is legally defined by the edge of salt lakes which have been mapped more accurately than previously, and result in a different (more accurate) approximation of the area (223,077 ha) within the defined legal boundaries. An amendment to the legal lease area may be warranted by the lessee.

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