

ENVIRONMENTAL IMPACT REPORT
PROPOSED PETROLEUM PRODUCTION
TEST BY STUART PETROLEUM NL AT
ACRASIA 1 (27° 14' 3.94" S 140° 59' 43.21" E)

Prepared for

Stuart Petroleum NL

by

Fatchen Environmental Pty Ltd

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1. PROPOSED ACTIVITIES

1.1 Introduction

Stuart Petroleum NL proposes an initial oil production test within the Cooper Basin at Acrasia 1 (27° 14' 3.94" S 140° 59' 43.21" E) (Figure 1). The activity will utilise the Acrasia 1 lease and pad area, and existing infrastructure within PEL 90. Further additions to the infrastructure will be a liquids holding and loading facility. Production of any sort is not as yet covered by a generic Statement of Environmental Objectives.

This initial production test is the first stage in moving to production.

- Initial production test: a short flow and shut-in operation to set initial reservoir and production parameters. Run over a few hours with limited oil quantities produced
- Extended production test: run for some months at or near expected full production rates. Production-level quantities of oil produced during the test. Some pumping likely to be involved.
- Full production: run potentially for some years at full production rates until reservoir depletion.

A maximum 2800 Bbl of oil are expected to be produced in this initial production test. This EIR provides an initial analysis of environmental risks as a basis for an initial SEO for this relatively small operation, in which impacts are limited both by the use of existing infrastructure and by the small volume of oil in question. Later extended production testing will be the subject of an expanded EIR, and is expected to require an expanded SEO, as the additional facilities required, and volumes produced, will be significantly larger than for the initial production testing.

Oil produced will be sold at the Acrasia 1 wellhead delivery point. Responsibility for the safe transportation of the oil is the prime responsibility of the transporter, under the *Dangerous Substances Act 1979* and the *Environmental Protection Act 1993*. However, under the *Petroleum Act 2000*, Stuart Petroleum has responsibility for ensuring minimisation of impacts, and cleanup and remediation of impacts such as transportation spills, within its licence area (PEL 90).

Oil will be transported from the wellhead via double trailer road train or equivalent (approximately 400bbl/train) along the existing Acrasia 1 rig road, via Reg Sprigg 1 well, some 15km distance to the Innamincka-Cordillo public road, and then via the public road system north or south, depending on buyer.

1.2 Production test description

1.2.1 Production test parameters

Formations to be production tested from Acrasia 1, and expected oil volumes, are:

Formation	Expected volume (Stock Tank Barrels)
Tinchoo	1200 STBO
Hutton	1600 STBO

The stratigraphy is given in Appendix 1. Each zone will be flowed for 12-36 hrs, then shut in for build-up over 12-72 hrs. The maximum total duration of the test would be 10 days, with a further 3-4 days for establishment.

1.2.2 Production and loading installations

It is emphasised that this production test is small scale and that facilities required are low-key. All production test installations will be entirely on the existing Acrasia 1 pad, the location and surrounds of which have been documented in the Acrasia 1 drilling EIR (Fatchen 2000) and will not require new pads or pad extensions.

A schematic of holding and loading facilities is given in Figure 2. Three 370 Bbl skid-mounted frac tanks, contractor-supplied, will be installed, manifolded for inflow and outflow. Tanks are intended

to be filled sequentially: on current best estimates, the three tanks are sufficient for 24-36 hrs flow. Tanks will be placed on the unlined pad surface, with a common bund provided around them.

Delivery to the tanks will be by hard pipe from the wellhead. Delivery from the tanks will be hard pipe to a dedicated diesel delivery pump, within its own bund, and then via flexible delivery hose for loading vehicles. All hard pipe will be steel, with no victualic nor threaded joints, and will be pressure-tested.

Filling systems and operation of the storage tanks and the tankers will be in accordance with AS1940 (*The Storage and Handling of Flammable and Combustible Liquids*). The loading area will be clearly defined but will not be lined or sealed since the proposed loading area has at least 50cm of clay material available as protection over the original gibber pavement, more than enough to absorb loading spillages without impact on the gibber mantle. Flexible delivery pipes have automatic shutoffs and will be fitted with dry-break couplings: spillage is unlikely, or minor at worst when hoses are disconnected. The worst case is of the order 1-2L for each trailer filling. Total spillage for seven fills of a double train should be well under 20L. The risk of a catastrophic failure of a road-train compartment is considered remote for such a low-volume operation. Accordingly, only a limited "speed-hump" bunding is intended for the loading area, as a guard against wash-off of minor spills.

All installations will be earthed to a common earthing stake, following AS3000 (*Wiring Rules*). Flexible hose will be conductive. Tankers prior to loading will also earth to the common stake.

1.3 Water handling and disposal

No water production is expected in the production test, the reasons being:

- Completion in the top of each zone
- Production rate will be restricted to minimise coning
- The test will be shut in if formation water in quantity appears from one or other zone.

There is therefore no provision for dedicated separation, guard and evaporation pondages for this initial production test. There is likely to be some completion brine flowback. Brines and any formation water appearing contrary to expectations will be allowed to separate in stock tanks, for disposal at the end of the test by bottom drainage into the Acrasia 1 drilling sump.

1.4 Transportation and other infrastructure

Oil produced will be progressively transported by truck to the purchasers' receiving facilities. Purchasers are Santos (receiving facilities in the SA Cooper Basin beyond PEL90) and Inland Oil (receiving facilities in Queensland). The most probable trucking configuration is two-unit road trains with a total capacity of 400bbl per load, for 7 loaded movements over the maximum 10 days duration of the test. Transportation will be via existing roads, including portion of the Innamincka-Cordillo Downs public road, as well as immediate access via the existing Acrasia #1 rig road. The last is currently undergoing minor upgrading. Further upgrading will be necessary for later, extended production testing but is adequate for the limited movements expected as part of the current initial production test. Vehicle movements over the full 14 days are expected to be:

The Acrasia #1 drilling camp will be used to house the testing crew.

Transportation will be via existing roads, including portion of the Innamincka-Cordillo Downs public road, as well as immediate access via the existing Acrasia #1 rig road. The last is currently undergoing minor upgrading. Further upgrading will be necessary for later, extended production testing but is adequate for the limited movements expected as part of the current initial production test. Vehicle movements over the full 14 days are expected to be:

Installation	3 loaded, 3 unloaded tail roll truck movements	Tankage delivery
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	4 general truck movements	Delivery and installation
Oil transport	7 loaded, 7 unloaded double train movements	Oil delivery and return
Light vehicle	1/day movement	General purpose
Crew arrival/departure	Unknown	
Other	Minor movements of construction/earthmoving equipment for road maintenance, minor construction work at installation.	

1.5 Manning and responsibilities

The test will be manned and overseen on a 24-hr basis. Stuart Petroleum's nominated representative will be responsible for supervision of the initial site preparation, enforcement of vehicle movement limitations, tidiness and cleanliness of the site and access, and supervision and documentation of remediation works. The production-testing contractor will have immediate responsibility for the installation and the testing under the general direction and overall control of Stuart Petroleum. Ultimate responsibility for the road transportation of oil lies with the purchaser of the oil, but Stuart Petroleum will ensure that necessary impact avoidance and emergency response procedures or plans are in place within Stuart Petroleum's licence area.

2. SUMMARY OF LOCAL ENVIRONMENT

2.1 Biophysical environment

The regional context for the area has been described in the Acrasia 1 Drilling EIR (Fatchen Environmental 2000), available on the PIRSA website. In summary:

- The wellsite and access all lie within the Innamincka Regional Reserve, but in an area where the primary landuse has been livestock grazing. There are no special wilderness or conservation attributes known for the area, other than those which apply throughout the Regional Reserve generally. In particular, all areas lie outside the boundaries defining the areas of the Coongie Lakes Wetlands of International Importance under the 1971 Ramsar Convention. The area is not particularly remote, being at most 15km distant from the public access Innamincka-Cordillo Downs, and an equivalent distance from major cattle trucking yards to the northwest. The area is grazed by cattle, and a new pastoral dam has been developed near Acrasia 1. The area has been a focus of oil exploration, with seismic surveys intermittently from the 1960's to the late 1990's. Santos has two oil wells in the vicinity, Reg Sprigg 1 and the recent Reg Sprigg 2. A fourth well, Acrasia 2, is about to be drilled nearby. Wilderness values are affected accordingly.
- Part of the access within PEL 90 is in the Merninie Land System (Marree Soil Conservation Board 1997), which in this area is a gibber land system of long gradual and relatively gentle gibber slopes and drainage lines with small clayey floodouts. Slopes of greater than 1° (>2%) are likely to erode irreversibly if the gibber pavement is disturbed. This imposes limitations on the safe cleanup of spills. The remainder of access is on non-gibber landscapes
- The drainage systems within PEL 90 have no connection to the Cooper Creek system to the south and only tenuous at most connection to the Coongie Lakes to the west.
- There is no record of rare or threatened species under the SA NPWS Act or the EPBC Act about Acrasia 1 or its immediate access. The habitats show no special characteristics which might suggest a heightened possibility of such a species being present: if such species are in fact present, though undetected, they can be expected to be found throughout equivalent habitat in the general area, and in particular, throughout the Merninie Land System.

The environments along access are as already described for Acrasia 1. As with the wellsite and its surrounds, the access possesses no characteristics indicating particular conservation significance, or the possibility of particular significance. Impact significance and mitigation are generally a matter of "good housekeeping" rather than special protection needs, and in particular, the avoidance of significant transportation spills.

2.2 Heritage

There are no sites or items of non-indigenous heritage present. There is Aboriginal cultural material present in the general area. Production activities are proposed either for areas which have previously been cleared for use, or which were examined on the ground and cleared for use in June 2002 by representatives of the signatories to the CO-98E Native Title Agreement.

3. ENVIRONMENTAL RISKS AND RISK MINIMISATION

3.1 Downhole risks

No downhole environmental risks are anticipated. The main sources of risk have been dealt with in the Acrasia #1 EIR and additions, providing for drill and completion of the Acrasia #1 well. There is understood to be no gas associated with the completed well.

3.2 Risks to the natural environment

3.2.1 Processes creating risks

The primary risks to the natural environment arise from:

- Catastrophic failure of storage facilities, including fire
- Spills during loading
- Spills during transportation
- Impacts of spills extending downslope or downstream beyond the initially affected area
- Hydrocarbon pollution of stock or natural waters
- Deterioration of access under increased traffic and potential erosion issues resulting from the deterioration
- Limitations on remediation of spill affected areas, particularly on the gibber landscapes.

Other risks to the natural environment appear to be low.

Table 1 summarises possible risks, their avoidance or amelioration, and suggested environmental objectives to be pursued during operations.

3.3 Risk minimisation

3.3.1 Spillages at wellhead

The highest risk of spillages at the wellhead come from road tanker filling operations, and from storage tank overflow. Specific procedures will be developed and implemented to mitigate tank storage, bund compound and road tanker filling overflow risks. These procedures will include requirements for emergency manual isolation of the inflow and outflow, and for the design and integrity management of bund containment systems. In particular, attendance at the equipment will be required at all times during road tanker filling. Active management of storage tank filling will also be undertaken.

Bunding will be provided as a secondary containment about the test tanks (Figure 2). The volume enclosed by the bund will be sufficient to cope with catastrophic failure of all three tanks. A major spill into the bund would be pumped out using portable equipment and taken offsite for salvage.

The bunding is envisaged as sufficient secondary containment not to require additional bunds, catches etc. to avoid spillage into general drainage, or towards the (distant) camp or other ignition sources.

The loading pump will have its own secondary containment bund, both to isolate any pump-related spill and also to limit and simplify firefighting around the pump.

To minimise loss of fluids for production items located outside these banded areas, the following will apply:

- High containment integrity systems will be used. Steel piping will be used: product containment integrity will be assured by compliance with AS4041 (*Pressure Piping*) and pressure testing to withstand the highest forecast production operating pressures and production conditions.
- Piping and equipment systems will be appropriately routed and guarded to prevent mechanical interference and damage which might cause a lessening of containment integrity. Procedures including signage will be provided to restrict access to only authorised personnel.
- Installation and operation will provide for preventing overpressure from thermal or production shock effects
- Regular inspections will apply
- Systems will be manually operated within their design capability and following appropriate procedure
- An appropriate emergency response plan will be developed and implemented.

3.3.2 Fire

The primary strategy for fires at the storage and loading facility is containment and isolation. The separations indicated in Figure 2 should prevent an escalating event as well as allow for the safe manual use of appropriate shutoff devices. The use of high integrity delivery equipment should limit initial losses.

In an emergency event where an item of plant is on fire, production flows will be manually isolated where it is safe to do so. In the case of a fire associated with the storage tanks, it is intended to simply let it burn out. There will be provision for firefighting first attack using fire extinguishers if the fire is at the loading pump or at the tanker, but if initial attack is not successful, fires in these situations will also be allowed to burn out. Personnel will be evacuated as necessary. Specific procedures will be developed as part of the site's emergency response plan, and approval to accept this plant loss strategy, under the requirements of AS1940, will be sought from PIRSA.

Ignition potential will be minimised by providing earthing in accordance with AS3000.

Transportation fires will be left to burn out. Emergency response plans will be drawn up, but the reality of the remoteness of the locality and the shortage of ready water sources and distance away of specialised firefighting equipment mean that, in real terms, a transportation fire which cannot be extinguished with initial attack equipment (truck-mounted fire extinguishers) will have progressed too far by the time major liquids-fire equipment could be brought to the scene. Emergency response plans will, however, provide for the use of earthmoving equipment to contain and extinguish any secondary fires started by the transportation fire.

3.3.3 Erosion from traffic

Some further degradation of Acrasia rig road access will occur with the movement of road trains. However, this will be only a small increment, and some upgrading of the access is already underway. The upgrade, while not sufficient for full production-level transportation, will allow the safe if slow movement of the anticipated oil traffic, without increased damage to road environs through bulldusting or other erosion and without significantly increased safety risks.

3.3.4 Particular limitations in gibber

The gibber areas regarded as presenting the highest transportation spill hazard are on the Acrasia #1 rig access road, due to the currently uneven road surface and narrow carriageway. Upgrading of this access will reduce the hazard.

Gibber areas present a particular problem in spill remediation if any slope is present. Generally, small spills will have least permanent impact if they are simply left to bio-remediate, as this does not entail disturbance of gibbers. Large spills on flat (<2% slope) surfaces, large enough to require additional treatment, could be land-farmed in place, or contaminated soil removed for landfarming or other disposal elsewhere, but on sloping surfaces such actions will inevitably lead to accelerated and irreversible erosion: the remediation in the long term is likely to have more impact than the original spill. It is proposed to leave large spills in sloping gibber surfaces in place, but provide separation pondages in depositional areas downslope to catch contaminated runoff and sediment. Temporary fencing of a major spill and the catches would be necessary to prevent impact on stock.

3.3.5 Community resources and safety

There will be little if any degradation of the Innamincka-Cordillo Downs public road through the movement of a maximum 7 road trains. Any such degradation will be short-term and incremental only.

There will be a marginal increase in public risk from the presence of oil tankers. Adherence to legislation governing transportation provides the main risk mitigation. Signage warning of trucks entering will be placed at the intersection of the Acrasia access road and the Innamincka-Cordillo Downs road.

3.3.6 Aboriginal heritage

Risks to Aboriginal cultural heritage are minor, and primarily relate to damage incurred in the cleanup of transportation spills. All installations and transport routes are on areas already cleared for use by signatories to the CO-98E Native Title Agreement.

3.3.7 Non-indigenous heritage

In the absence of any particular non-indigenous heritage items or relationships, the activities pose no risk to non-indigenous cultural aspects.

3.3.8 Hydrocarbon pollution to stock and natural waters

Formation water is not expected to be produced. Some completion brines will be separated from production test oil in the storage tanks, and will be returned to the drill sump. There will therefore be no opportunity for the actual production to affect natural or stock waters. There is a possibility of transportation spills resulting in some hydrocarbon pollution of natural and surface stock waters. The absolute hazard is relatively low, given the small amounts of oil to be transported, but the risk will be minimised by not transporting oil in conditions conducive to accidents nor across areas likely to transport spills into water bodies:

- No night movements
- No movement in wet conditions
- No fording of flowing streams

Table 1: Risks, impacts and management in relation to environmental objectives

Environmental objective	Possible impact	Main sources of risk	Avoidance, management, mitigation
Avoid disturbance to sites of Aboriginal and non-indigenous heritage significance	Intrusion or physical site damage to areas of Aboriginal and non-indigenous heritage significance	Access upgrades, construction, vehicle and people movement	Use of existing access limits scope for impact. Construction is entirely on existing pad. Borrow for road maintenance taken either from existing borrow sources, or from new sources cleared by indigenous stakeholders.
Minimise disturbance to vegetation and habitat	Physical damage to soils, vegetation and habitat; fires; oil spillage	Access upgrades; natural limits on rehabilitation; fires at well or in transit; spillages and spread of spilled oil	Use of existing access; part construction of formation on Acrasia 1 rig road to reduce erosion risks from breakup of rolled or other surfaces under additional traffic. Borrow for maintenance taken either from existing pits, or from sources checked for low erosion hazard. See procedures to limit risks of spills, under "Avoid spills" (below)
Minimise soil impacts Minimise disturbance to gibber surfaces	Accelerated soil erosion. Potential start-up of long term irreversible erosion on gibber slopes >2%	Existing access deterioration	The recent drilling by Santos at Reg Sprigg 2 and by Stuart Petroleum at Acrasia 1 has necessitated construction of formation on parts of the existing Reg Sprigg 1 access road to stop dust generation and widening of the right of way by vehicles avoiding dust. Part construction of formation on Acrasia 1 rig road has been undertaken to reduce breakup of existing surface from increased traffic. Existing access route will be followed; other risks minimised accordingly. No new pad construction is required. Access between main road and gibber areas will be routinely maintained. (Some upgrading and rehabilitation of this road was undertaken for Acrasia 1 drilling.
Avoid disturbance to rare, endangered, vulnerable species	Oil contamination	Oil loading spills; transport spills	No such species known to be present along access within lease area; if present, then associated with common habitat and can be expected to be widespread in district.
Avoid impacts on high biological value or wilderness value areas	Oil contamination in high biological or wilderness value areas; fires originating from oil spillages extending into high value areas	Oil loading spills; transport spills; secondary fires from transportation fires	No high biological value areas within lease near access. Three oil wells/wellsites in the immediate vicinity, a fourth about to commence, together with pastoral dam construction and proximity to Cordillo Downs-Innamincka road limit wilderness values. There is only a tenuous downstream connection at best between the lease area and the Ramsar "triangle". Over most of the lease roads, the carriageway is normally sufficiently distant from drainage lines for even extreme events such as complete single road train spill not to reach watercourses, other than at immediate crossings

Table 1 cont...

Environmental objective	Possible impact	Main sources of risk	Avoidance, management, mitigation
Avoid storage and loading facility spills; rapid cleanup and impact minimisation following spills	Pollution through local oil spills, tank or filling point overflows	Oil storage, pumping, loading facilities	<p>High containment integrity systems using steel piping and complying with AS4041 <i>Pressure Piping</i>. Piping pressure tested to the highest forecast production operating pressures and production conditions.</p> <p>Frac tanks banded with bands sufficiently large to provide for catastrophic tank failure. Delivery pump and manifold(s) separately banded to cope with local failure</p> <p>Hard-piped to pump and loading point. Loading point with clay pad over gibber surface.</p> <p>Flexible hose with cutoffs for train loading; any minor spillages at loading point to be left to evaporate and bio-remediate. Where contamination is major, disposal of contaminated soils into drilling sump.</p> <p>Procedures in place for minimising overflow and loading spill risks, and integrity management.</p> <p>Attendance at equipment at all times during road tanker filling. Active management of storage tank filling.</p> <p>Filling systems, storage tank operation and tanker procedures in accordance with AS1940 <i>The Storage and Handling of Flammable and Combustible Liquids</i></p>
Minimise fire risk at facility; prevent the spread of any fires to wellhead	Loss of resource (also OH&S considerations not covered in this EIR)	Spillage, overflow, ignition sources	<p>Minimisation of ignition potential through earthing facility and tanker in accordance with AS3000.</p> <p>Containment and isolation of fires. Maintenance of separation distances of well, tanks, pump and tanker to avoid escalating events and to allow manual shutoff/isolation of fuel. Bunding as above. First attack extinguishers present for fires at loading pump or at tanker.</p> <p>Tank fires, or fires where first attack failed, allowed to burn out (approval will be sought under AS1940)</p>

Table 1 cont...

Environmental objective	Possible impact	Main sources of risk	Avoidance, management, mitigation
Avoid transportation spills; minimise the likelihood of spread of a transportation spill; minimise impacts of fire from any transportation spill	Pollution through transportation oil spills; spread of spills; secondary fires from transportation fire	Road crashes, movement in unsafe (eg wet) situations, spillage in periods or locations where oil can be easily spread, particularly wet areas and flowing watercourses.	<p>Procedures to limit risks of major spill, or to remediate, to include:</p> <ul style="list-style-type: none"> --Full trains will only move in daylight hours --No movement on wet roads or in wet conditions --No fording of flowing watercourses <p>In the event of a spill in transit within the lease area, contaminated soil on sandplain or dune will be either landfarmed in place for bio-remediation, or in extreme cases removed for pit disposal. Contaminated soil from spillage at a watercourse crossing will be removed</p> <p>Purchaser/transportation company will be required to have spill contingency and emergency response plans in place, and conform to Dangerous Substances Act 1979 and Environment Protection Act 1993</p> <p>Actual transportation fires permitted to burn out. Earthmoving equipment will be brought to a transportation fire to contain and extinguish secondary fires resulting.</p>
Minimise visual impacts	Visual impacts through obtrusive access and development and/or visible long-term persistence of facility and access.	Access and facility construction	Access already exists, alterations only incremental (some formation). Facility is out of sight and most access is masked from the Innamincka-Cordillo Downs road.
Minimise public and third party risks Minimise workforce hazards	Creation of new public and workforce risks: road train collisions, spills, fire	Oil transport; fire hazard at loading point	<p>Signage on rig road/public road intersection prohibiting entry, warning against trespassing, and warning of danger associated with petroleum activity and truck movements. Limitations on road train movements as above.</p> <p>Protection of wellhead by cutoff valves. Firefighting provisions (extinguishers) for loading area and pump banded area. Separation of wellhead, pump, tanks and loading sufficient for isolating major fires. Fully earthed storage and loading facilities.</p>
Minimise adverse impact on livestock; Avoid contamination of stockwaters with hydrocarbons	Interference with stock; pollution of stock water	Formation water or brines disposal with hydrocarbons present polluting stock water	Site is relatively distant from areas of stock concentration and handling, from current watering points, and clear of fences. No formation water of any quantity is expected: test will be halted if formation water appears. Drilling brines will be separated in frac tanks and returned to existing Acrasia 1 drilling sump. No water will be released to evaporation or other storage.

4. SITE CLEANUP AND REMEDIATION

The initial production test equipment is not expected to be in use for later, extended production testing, for which a new installation will be purpose built. If so, the tanks and other material will be removed and replaced by the new facility. Remediation or rehabilitation of the initial production test site will simply become incorporated with the eventual completion or rehabilitation of the Acrasia #1 pad, as described in the Acrasia #1 Drilling EIR.

5. REFERENCES

Marree Soil Conservation Board (1997) "Marree Soil Conservation Board District Plan"
ISBN073084203 7

Fatchen TJ (2000) "Declaration Of Environmental Factors & Environmental Impact Report:
proposed petroleum exploration drilling by Stuart Petroleum NL at Acrasia 1 (27° 14' 3.94"
S 140° 59' 43.21" E) " Prepared for Stuart Petroleum NL by Fatchen Environmental Pty Ltd
Adelaide, June 2000 SP-00-01

6. FIGURES

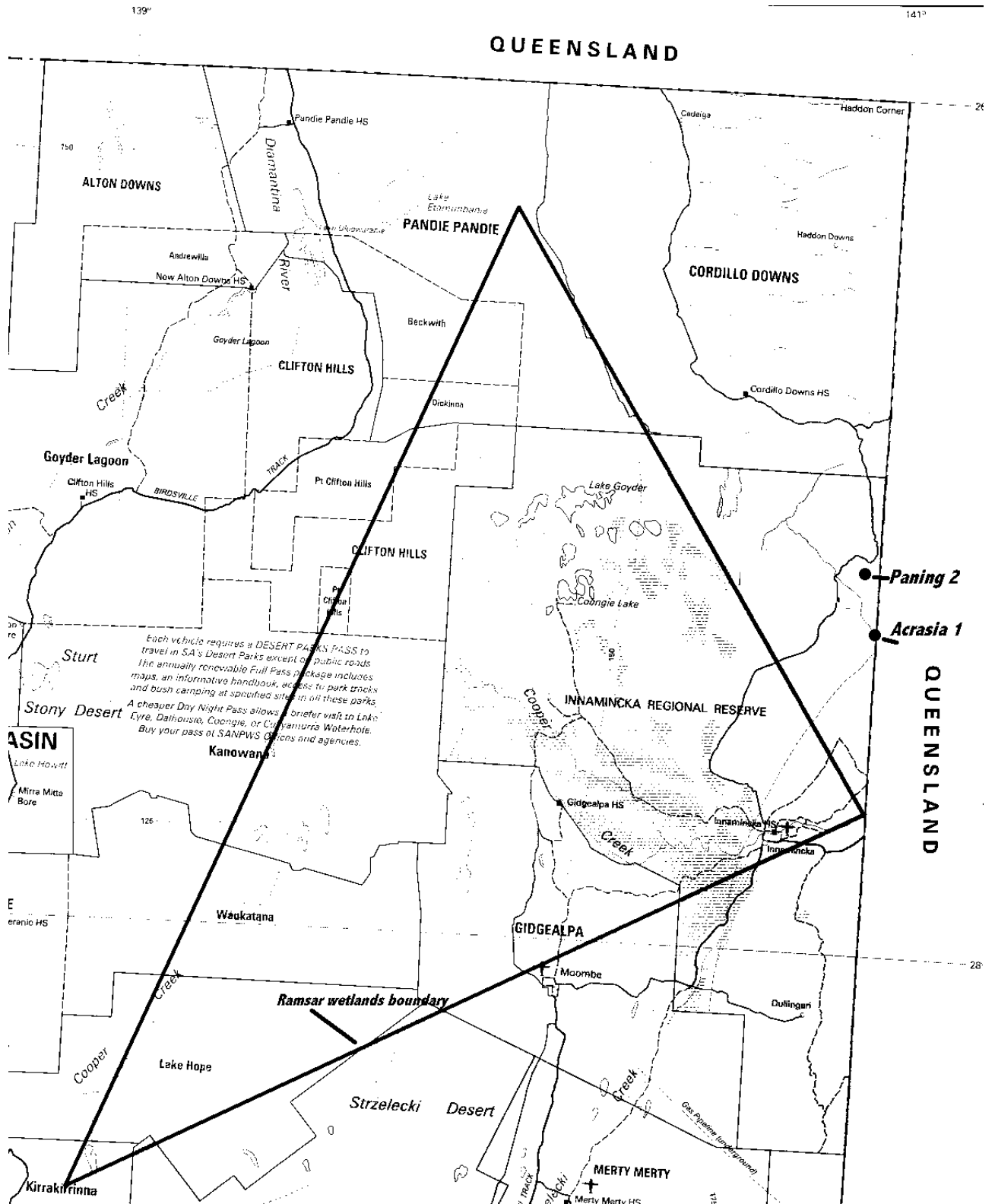


Figure 1. General location of Acrasia 1 wellsite in relation to Innamincka Regional Reserve, Ramsar Wetlands and local infrastructure. (Map base: DENR Pastoral areas 1:250000, 1993)

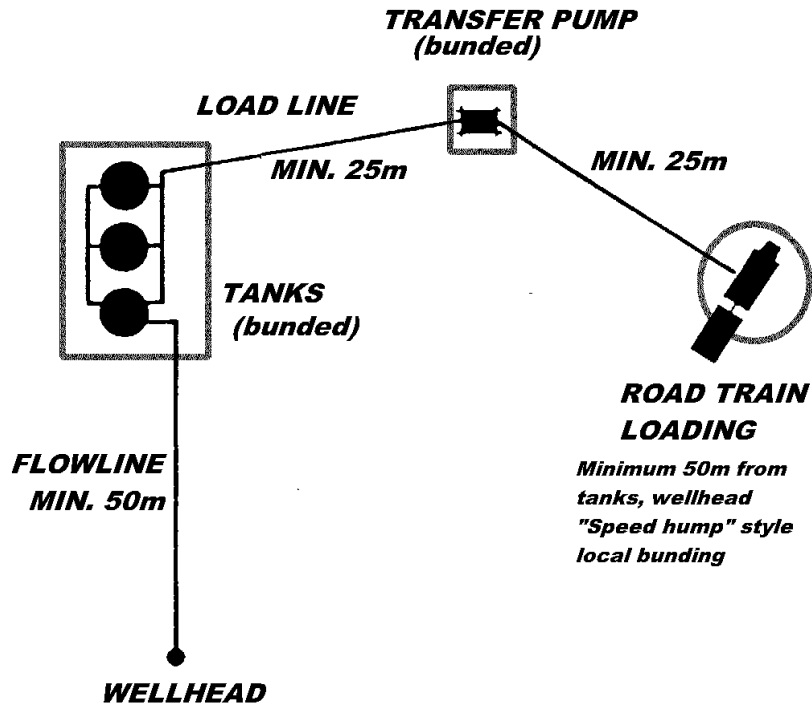


Figure 2. Schematic of loading station

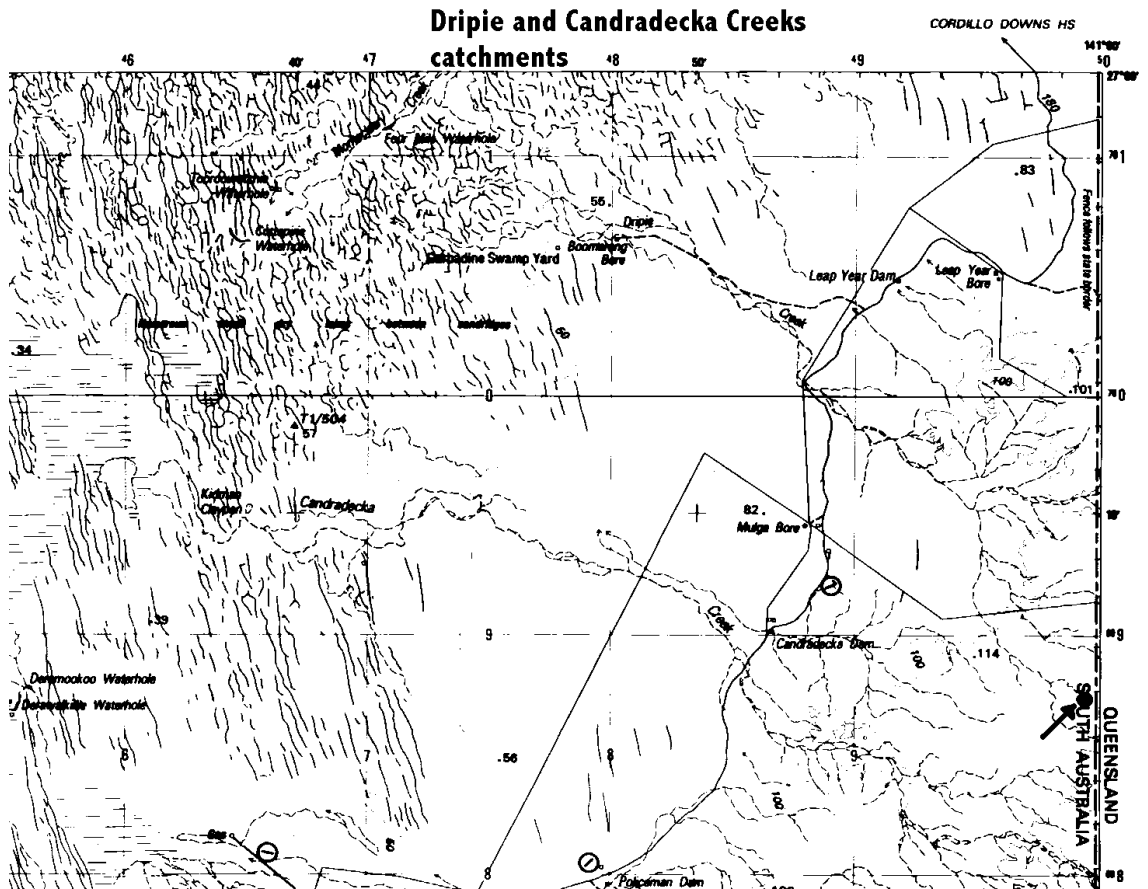
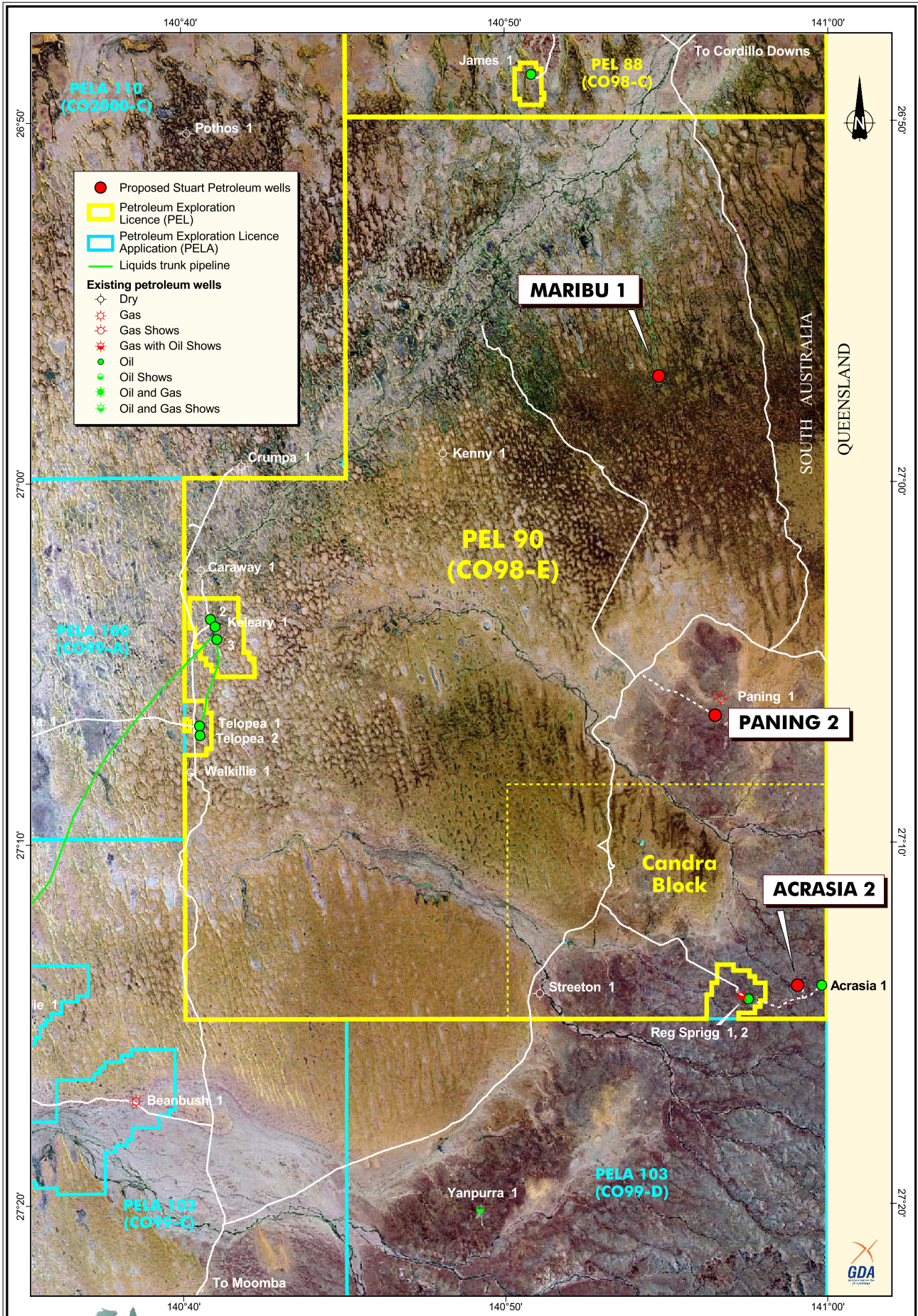


Figure 3. Dripie Creek and Candradecka Creek catchments showing location of Acrasia #1 (arrowed) (Natmap SG 54-14)

Figure 4. Local infrastructure and roads (PDF image)



- Proposed Stuart Petroleum wells
 - Petroleum Exploration Licence (PEL)
 - Petroleum Exploration Licence Application (PELA)
 - Liquids trunk pipeline
- Existing petroleum wells**
- Dry
 - ⊗ Gas
 - ⊗ Gas Shows
 - ⊗ Gas with Oil Shows
 - Oil
 - Oil Shows
 - Oil and Gas
 - Oil and Gas Shows



0 2 4 6 8 10 Kilometers
Datum GDA94- Map projection MGA Zone 54

Cooper Basin - South Australia
PEL 90 (CO98-E) over Landsat 5 Image
REGIONAL INFRASTRUCTURE

7. APPENDIX: WELL STRATIGRAPHY AND CONSTRUCTION OUTLINE

Tinchoo and Hutton formations for testing indicated

Stuart Petroleum

Well: Acrasia # 1

Stratigraphic Column

	Depth (m)	Formation	
	250		
Recent to Late Cretaceous	500	Surficial & Winton	
	750		
Late Cretaceous		Mackunda	9 5/8" Casing shoe @ 924m BRKB
Early Cretaceous	1000	Allaru	
		Loolabuc	
	1250	Wallumbilla	
	1500		
		Cadna - Owie	
		Murta	
Early Cretaceous to Late Jurassic		Namur	
Late Jurassic	1750	Westbourne	
		Adon	
Mid - Late Jurassic		Birkhead	
Mid Jurassic	2000	Hutton	Test
Early Jurassic		Pbolwarina	
Mid Triassic	2250	Tinchoo	Test
Early Triassic		Wimma	
		Paning	
Early Triassic - Late Permian		Callamurra	
Early Permian - Late Carboniferous		Merrimelia	
	2530		7" Casing shoe @ 2351m BRKB