



2003 ANNUAL REPORT

TO

**PRIMARY INDUSTRIES AND
RESOURCES SA
(Petroleum)**

ON

Pipeline Licence No 11

Berri to Mildura Pipeline

March 2004

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1. Introduction

This report has been prepared by Origin Energy Asset Management (OEAM) on behalf of Envestra Ltd, the owner of the Berri to Mildura Pipeline and is submitted in accordance with the requirements of Pipeline Licence 11 and Petroleum Regulations 2000.

OEAM operates and manages the Berri Mildura Pipeline on behalf of Envestra in accordance with the legislative requirements in South Australia, all relevant codes, standards and Pipeline Licence 11.

As required by Pipeline Licence 11 an annual review of pipeline operations for the 2003 calendar year is provided herein.

2. Pipeline Throughput

The pipeline throughput for the year 2003 was 7,203,326 standard cubic metres.

3. Statement of Expenditure

Commercial in Confidence

4. Safety and Environment

There was no reported safety or environmental incidents on the Berri to Mildura Pipeline for 2003.

4.1 Business Risk Assessment

As part of a move by OEAM towards a risk based management approach and to meet the requirements of AS2885.3, a risk assessment was performed on the Berri Mildura Pipeline operations and activities. The risk assessment built upon previous risk assessments in the OEAM group and its team included operations, maintenance and management. It was facilitated by an independent consultant.

The risk assessment was directed at risks to employee and public safety, property damage, budget impacts, loss of revenue, business interruption, prosecution and environmental damage.

Twenty four actions were generated by the risk assessment and were all addressed throughout 2003. A large number of these actions focused on addressing issues associated with ensuring that potential injury to personnel working on the pipeline are minimised.

4.2 Environmental Management

To comply with the requirements of Australian Standard AS2885 "Pipelines - Gas & Liquid Petroleum" and the Petroleum Act 2000, OEAM have a Statement of Environmental Objectives to aid operators in the management and control of regrowth vegetation along the pipeline easement. In accordance with the requirements of AS2885, line of sight between pipeline marker posts shall be preserved along the pipeline easement to safeguard against any third party damage to the asset.

4.3 Environmental Audit

An environmental audit of the Berri Mildura Pipeline easement was undertaken during April 2003. The audit encompassed the entire length of the pipeline from the Berri City Gate to the Mildura City Gate, offtake and regulation compound.

The entire pipeline route was inspected using "ground truthing" survey techniques, assessing the operational and related impacts of pipeline operations in relation to the natural environment, facilities and health and safety.

In addition to the environmental survey, consultation with landowners, utilities, emergency services, Origin Energy contractors and civil contractors was initiated with a view to actioning pipeline location, development, emergency response and environmental issues.

The audit has found that generally the pipeline easement has presented a high level of stable regrowth considering limited summer rainfall. The audit did identify some minor issues which have all been addressed.

5. Inspection and Maintenance Activities

5.1 Routine Inspection and Maintenance

Routine maintenance on the pipeline has been carried out in accordance with the maintenance schedule contained in the Operations and Maintenance Manual. This has consisted of right of way inspections (refer below), 3 monthly inspections of critical instruments, 6 monthly maintenance of valves and other mechanical elements and an annual maintenance of electrical and instrumentation elements.

Integrity inspections of the pig launcher and receivers for Main Line Valve 3 were conducted during July 2003. Both pressure vessels were found to be in good working order.

5.2 Non-Routine Maintenance

Non-routine maintenance has consisted of right of way repairs including minor erosion and trench subsidence as well as maintenance of marker signs.

6. Corrosion Control

To mitigate corrosion, the Berri Mildura pipeline is coated with a protective extruded butyl mastic and polyethylene coating system which serves to isolate the external pipeline surfaces from corrosive elements in the surrounding environment. Field joints are coated with a normal field applied tape system. Secondary protection at coating imperfections is achieved by applying cathodic protection.

The effectiveness of the cathodic protection is monitored by carrying out a full line potential survey. These are conducted on a six monthly basis. Routine checks of test points along the pipeline showed that all sections of the pipeline are at fully protected potentials. A summary of the CP survey results conducted during 2003 is included in Appendix 1.

Both surveys in 2003 found the pipeline to be fully protected with AS/NZ 2831.1. The 14 surge arrestors previously installed between test points 1 and 18 required to keep the earthing material isolated from the pipeline, appear to be working correctly and have assisted in stabilising cathodic protection levels between Berri off take and Main Line Valve 2 facilities.

7. Right of Way Management

7.1. Right of Way Patrols

Aerial surveys are not carried out on this pipeline.

Ground patrols are carried out monthly in accordance with the maintenance schedule for the pipeline.

7.2. Landholder Contacts

There are 25 landowners/occupiers along the South Australian section of the Berri Mildura Pipeline. Contact was made with all 25 landowners and occupiers.

A landholder/occupier liaison scheme is in place whereby each owner or occupier is visited annually. This is to ensure that ongoing communication is maintained with landowners and occupiers and to identify and address any issues arising. Additional contacts were made with respective landholders and/or occupiers in the course of routine pipeline operations and maintenance activities (eg: corrosion surveys through properties, line valve maintenance, routine patrols).

All landowners/occupiers will be next visited by Origin Energy in May 2004 during which time their obligations to the pipeline easement, general pipeline safety and their awareness of the location of the pipe through the property will be discussed.

In addition to the annual visit, all landowners are sent letters outlining the pipeline safety awareness on a six monthly basis.

An external consultant was engaged to update Origin Energy landowner database to enable both pipeline easement and land management records to be updated following changes in land ownership.

7.3. Community Awareness Programme

In addition to the landowner visits, a formal annual Community Awareness Programme for the Berri Mildura Pipeline is also in place. The awareness programme involves visiting fire authorities, police, ambulance, councils, earthmoving contractors and various community members and highlighting pipeline safety and awareness. The focus of the visits is to improve their awareness of pipeline operations and to provide the community with key contacts to enable sound management of activities in the vicinity of the pipeline assets.

Furthermore, a newspaper advertisement is regularly featured in the local print media highlighting public awareness of the pipeline and its importance to the local community. A next article is planned to be published in mid 2004.

7.4. Pipeline Location Service

OEAM provides a free service to locate its pipelines for other utilities and third parties carrying out civil work in the vicinity. This is administered through the Dial Before You Dig (1100) organisation. Approximately 50 locations were requested during 2003. All locations resulted in supervision of third party activity within the pipeline easement. All works carried out within the pipeline easement were conducted under OEAM's "Work Permit System". The works are constantly supervised to ensure the safety and integrity of the pipeline system and personnel.

8. Emergency Management

8.1. Emergency Response Plan

The Emergency Response Plan ("Plan") for the pipeline is reviewed annually in conjunction with conducting the annual emergency exercise. Thereafter any changes or improvements that may arise as a result of the exercise recommendations are incorporated into the Plan. The Plan was extensively revised. A map of the pipeline route and above ground facilities together with a register for all known hazards has been incorporated into the revised Plan.

8.2. Emergency Response Exercise

OEAM emergency response training requires that one emergency exercise is carried out every year, either being a desktop exercise or a field emergency simulation. At the conclusion, a comprehensive report identifying any areas of change or improvement to the Emergency Response Plan must be produced.

In February 2004 OEAM conducted a desktop emergency exercise, codename "Exercise Vortex". The exercise scenario involved responding to a pipeline leak caused by heavy rainfall producing a washout of a canal area thereby exposing the

pipeline. Where the pipeline had been exposed, the pipeline moved and subsequently caused a weld to fail at a weld joint. The emergency site was situated within Lyrup Canal, near Lyrup Township, SA. The emergency response team was to restore the operation of the pipeline by means of applying a suitable repair strategy. Overall, the objectives of the exercise were fulfilled and no major deficiencies were found. The exercise did identify some minor actions for improvement which have been summarised in the completed final report. These actions are currently being investigated and addressed.

9. Compliance Issues

Every endeavour is made to ensure that design, manufacture, construction, operation and maintenance and testing of appropriate facilities are carried out in accordance with AS 2885, the Petroleum Act 2000 and Petroleum Regulations 2000. No significant non-conformances occurred on the pipeline during 2003.

10. Management Systems

OEAM utilises a number of management systems to ensure effective operations and management of the pipeline. Some of these are listed below:

- An Origin Energy Health Safety and Environment Management System that governs all Origin Energy operations as they impact occupational health, safety and environmental matters.
- A National Gas Transmission Pipeline Operations and Maintenance Procedure Manual containing nationally recognised standards and practices for the operation and maintenance of transmission pipelines managed by OEAM. These are continually reviewed and periodically updated as appropriate.
- A Document Management System which allows the controlled updating, distribution and viewing of pipeline documentation.
- A Management of Change System that assesses all proposed changes to the pipeline across all engineering disciplines, operational parameters and documentation. This system interfaces with the Document Management System to ensure relevant documentation affected by the change is updated and distributed.
- An audit programme that assesses contractor and operational management performance.
- Conformance against the Safety and Operating Plan developed for the Berri-Mildura Pipeline.

11. Reports Generated in 2003

Origin Energy generated the following reports during 2003:

- PL 11 Annual Report for 2002, submitted in March 2003;
- Encroachment on Easement Incident Investigation, submitted in June 2003.

12. Reported Incidents

There was one minor encroachment on the pipeline easement by a landowner during June 2003. The encroachment consisted of an excavation approximately 2.7m long, 200mm wide and 300mm deep. It is located within the Paringa Township district, SA and is situated within a landowner's property.

The purpose of the excavation was to enable the property owner to locate his water pipe enabling him to check if there was a water blockage problem. It was confirmed that the excavation was done by hand. On previous occasions the landowner had requested supervision for two other dig ups along the easement.

An incident investigation revealed that the landowner thought that as this did not differ from previous works approved by OEAM he could proceed. An onsite visit reiterated that this was not the case and he agreed to seek approval in future for any works on the pipeline easement.

13. Other Significant Activities

13.1. Crop Loss Compensation

The last outstanding crop loss and projected future loss claim by the landholder along the pipeline has been resolved in December 2003. The claim arose from alleged poor reinstatement of the pipeline trench during construction. No further action is necessary in this regard.

13.2. Hadow Pipelines Operations Services Audit

PIRSA has organised an independent audit which occurred during March 2003. The audit focused on compliance with the operating requirements in AS2885. The audit concluded that the pipeline meets the protection criteria with respect to external interference protection requirements. The audit also noted two areas that need to be addressed by OEAM in relation to a Safety and Operating Plan for the pipeline and a fracture control plan/failure analysis for the pipeline. The Safety and Operating Plan has been completed. No action is necessary with respect to fracture control plan/failure analysis.

13.3. Hazardous Zone Area Survey

An electrical equipment hazardous areas survey for the pipeline was conducted by an external consultant during December 2003. The purpose of the survey was to check the compliance with relevant Australian Standards of all electrical wiring and installations, focusing especially on installations in hazardous areas for all gate and delivery stations. No major non-conformances were found and only a few minor items were identified, which are being rectified.

13.4. Operational Audit

The annual pipeline operational audit was conducted by OEAM Technical Services during the last week of October 2003. This assessment has been conducted using AS2885.3 to determine compliance thereby ensuring that sound pipeline management principles and techniques are being used. The assessment included a review of the pipeline licence conditions, emergency management processes, safety and operating plan, records management and an inspection of the physical asset.

The audit has found that the pipeline is generally well maintained and operated in accordance with AS2885.3. Some minor items were noted during the audit, which are currently being addressed.

13.5. First on Site Training

OEAM arranged for "first on site" emergency response training in Berri Township for OEAM's local contractors and employees. The training has taken place in November 2003. The focus of the training was on operating main line valves, roles and responsibilities of emergency personnel in case of emergency and familiarising with locations of all the above ground facilities. OEAM resolved that all staff will undergo regular refresher training.

14. Known or Foreseeable Activities Affecting the Pipeline

Nil

15. Future Operations

Future operations planned for the next 24 months will include:

- Continue environmental monitoring and audits as required by the Statement of Environmental Objectives for the pipeline.
- Continue routine inspection and maintenance activities, including regular liaison with landowners and third parties along the pipeline route.
- Continue community awareness programme seminars with all landowners, occupiers and interested third parties.
- Continue monitoring the level of cathodic protection along the entire pipeline.
- Conduct an operational audit on contractor and management systems to assess compliance with operating and maintenance procedures.
- Carry out the actions recommended in the hazardous zone areas survey.

APPENDIX 1 - CATHODIC PROTECTION SURVEY RESULTS (OCT 2003)

Test Point Number	Location	Oct 2003	May 2003	Oct 2002	Under Value
		On Potential	On Potential	On Potential	
1	Berri City Gate	-1160	-1259	-1267	-850
2	Existing Gas Pipeline Crossing	-1244	-1229	-1295	-850
3	Easement	-1255	-1327	-1371	-850
4	Hardwick Rd	-1310	-1343	-1355	-850
5	Jury Rd	-1368	-1334	-1338	-850
6	Easement	-1330	-1300	-1345	-850
7	Tipper St - Gas Pipeline Crossing	-1312	-1266	-1312	-850
8	JC Smith Rd - Gas Pipeline Crossing	-1293	-1334	-1394	-850
9	JC Smith Rd - Gas Pipeline Crossing	-1338	-1357	-1370	-850
9a	JC Smith Rd - Gas Pipeline Crossing	-1397	-1354	-1367	-850
10	Jellet Rd - Gas Pipeline Crossing	-1360	-1270	-1313	-850
11	Shiel & Skellon Rd's	-1315	-1277	-1316	-850
12	Sturt Highway	-1346	-1337	-1355	-850
13	West Bank of Murray River - Berri Dump	-1346	-1390	-1407	-850
14	Lagoon Dr - Lyrup	-1400	-1337	-1288	-850
15	Brown St - Lyrup	-1311	-1267	-1373	-850
16	Brown St - Lyrup	-1261	-1268	-1318	-850
17	Brown St - Lyrup	-1245	-1203	-1240	-850
18	Old Lyrup Main Rd - Paddock	-1398	-1388	-1324	-850
19	Loxton/Mildura Rd - MLV2	-1419	-1424	-1475	-850
20	Paddock at Fenceline	-1324	-1385	-1308	-850
21	Buglehut Rd	-1263	-1355	-1365	-850
22	Goulden Rd	-1241	-1341	-1385	-850
23	Taldra Rd	-1206	-1324	-1329	-850
24	Gregurkie's Paddock - Walk In 1.2 km	-1163	-1303	-1357	-850
25	Bede Rd	-1153	-1265	-1323	-850
26	Sturt Highway - SA/Vic Border	-1142	-1260	-1287	-850
27	Sturt Highway - Murray Sunset Nat. PK.	-1172	-1305	-1303	-850

28	Sturt Hwy - Murray Sunset Nat. Pk.	-1185	-1229	-1323	-850
29	Settlement Rd - Off Sturt Hwy	-1189	-1273	-1287	-850
30	Sturt Hwy - Inside fenceline of property	-1144	-1246	-1270	-850
31	Sturt Hwy & Nunns Rd	-1067	-1204	-1260	-850
32	Sturt Hwy & Duncans Rd	-1082	-1197	-1226	-850
33	Sturt Hwy & Karween North Rd - MLV3	-1141	-1239	-1235	-850
34	Sturt Hwy - Inside fenceline of property	-1139	-1206	-1211	-850
35	Sturt Hwy - Inside fenceline of property	-1166	-1182	-1218	-850
36	Sturt Hwy - Inside fenceline of property	-1358	-1168	-1178	-850
37	Sturt Hwy & Bailey Rd	-1164	-1148	-1166	-850
38	Sturt Hwy - Inside fenceline of property	-1182	-1168	-1190	-850
39	Sturt Hwy & Barkers Ln	-1143	-1139	-1139	-850
40	Sturt Hwy & Werrimul North Rd	-1148	-1132	-1102	-850
41	Sturt Hwy & Beers Ln	-1165	-1156	-1035	-850
42	Sturt Hwy & Lepodevins Rd	-1146	-1143	-1148	-850
43	Sturt Hwy & Karrawinna North Rd	-1157	-1122	-1119	-850
44	Sturt Hwy & Rogers Ln	-1192	-1149	-1148	-850
45	Sturt Hwy (Lucas Property) - MLV4	-1153	-1146	-1144	-850
46	Odea's Ln & Wheelers Rd	-1162	-1142	-1088	-850
47	Odea's Ln & Gaims Ln	-1166	-1160	-1157	-850
48	Odea's Ln & Piritta North Rd	-1148	-1107	-1151	-850
49	Odea's Ln & Pratts Rd	-1162	-1120	-1132	-850
50	Odea's Ln & Governemnt Rd	-1169	-1114	-1162	-850
51	Odea's Ln & Meridian Rd	-1135	-1126	-1133	-850
52	Box Ave - Koorlong State Forest	-1159	-1116	-1125	-850
53	Oak Ave - Koorlong	-1169	-1236	-1163	-850
54	San Mateo Ave - Koorlong	-1167	-1147	-1138	-850
55	Benetook Ave	-1127	-1138	-1157	-850
56	Benetook Ave	-1186	-1156	-1167	-850
57	Twentieth St	-1186	-1137	-1169	-850
58	Mildura City Gate	-1142	-1145	-1152	-850

Potential Summary and Graph for Berri-Mildura Pipeline October 2003

