



2004 ANNUAL REPORT

TO

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

ON

Pipeline Licence No 11

Berri to Mildura Pipeline

March 2005

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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 2004 calendar year is provided herein.

2. Pipeline Throughput

The pipeline throughput for the year 2004 was 7,143,823 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 2004.

4.1 Five Yearly AS 2885 Risk Assessment

A five year review of the risk assessment for the Berri-Mildura Natural Gas Transmission Pipeline was completed in October 2004 to meet the requirements of AS 2885.3 and a copy submitted to PIRSA. No major issues were identified during the risk assessment.

To minimise the risk of a pipeline loss of integrity, the following four actions were recommended:

- Install Armco barriers at the Berri Offtake station to protect the station from vehicles.
- Install Armco barriers at the Mildura Gate Station to protect the station from vehicles.
- Reinstate marker posts that have been removed within the Gregurke property and improve liaison with land owner.
- Consider carrying out periodic dig ups of joints to ensure adherence of coating and excavate and repair all defects from 5 yearly DCVG surveys.

The Armco barriers at Berri Offtake station and Mildura Gate Station are due to be installed by the end of the first quarter of 2005. A number of solutions are being considered for the Gregurke property signage problems and talks have commenced with the land owner. A solution is expected to be implemented by the end of July 2005.

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 and these objectives have been complied with. 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.

4.2.1 Environmental Audit

An environmental audit of the Berri Mildura Pipeline easement was undertaken during April 2004. 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 found that along the pipeline easement area:

- Some regrowth of native and non-native vegetation occurred
- Small amounts of soil had been lost
- Rabbits had dug burrows

All of these issues have since been addressed.

4.3 Fitness of Purpose Report

A Fitness for Purpose Report was conducted on the pipeline in December of 2004 as required by the Petroleum Act 2000. It included a review of the pipeline AS 2885 risk assessment, a physical assessment of the buried pipeline and above ground facilities and an assessment of the management systems in place, for the ongoing maintenance and operation of the pipeline.

A physical assessment of the above ground facilities identified them to be in good condition. The condition of the below ground pipe work has been verified by pipeline coating inspections, excavations of DCVG defects and continuous cathodic protection monitoring. Through these mechanisms it has been demonstrated that the pipeline is in good condition. The management systems employed by OEAM in the operation and maintenance of the Berri to Mildura Pipeline are robust and regularly audited. Environmental management plans, procedures and reports for the BMP demonstrated that processes are in place to manage the environmental objectives specified for the BMP.

Based on the physical assessment of the Berri to Mildura Pipeline, a review of the management systems by which the Pipeline is operated and maintained and a review of any other relevant information, the Berri to Mildura Pipeline has been assessed as being in good condition and fit for current and future purpose.

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), 6 monthly maintenance of valves and other mechanical equipment and an annual maintenance of electrical and instrumentation components.

5.2 Non-Routine Maintenance

A small leak at a plug valve at MLV3 was detected and repaired during April 2004. A process of servicing and regreasing the valve was adequate to seal the leak. The annual leakage survey conducted in June, detected one small leak on a joint of a ball valve connected to a pressure gauge at MLV2 and this leak was repaired onsite.

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 2004 is included in Appendix 1.

From the Cathodic Protection Survey it was identified that additional surge protection devices at various earthing bed installations near the Berri end of the pipeline were required. A review of the previously installed earthing system to provide electrical safety was causing minor interference with a small section of the pipeline near the Berri Township. This was not deemed as being significant but does require rectification and as such planning during September for this work was completed. Onsite installation of the additional surge protection units will occur during the CP survey in May 2005 as a result of the long lead time in obtaining these units, which arrived in late January 2005.

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 2005 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.

Landowners on the Gregurke Properties have removed pipeline markers from their paddocks, for farming requirements. Consultation has begun with the Gregurke Landowner's and a project underway to find an amicable solution for all parties. A ground patrol of the pipeline over the Gregurke properties will occur in April, which will enable the finalisation of a solution that will be implemented by the end of July 2005.

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.

Contact was made with local councils, utilities including ETSA and Telstra, local contractors and the fire and police departments along the pipeline to ensure their ongoing awareness of the pipeline system and its location.

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. The last article published, was on 14 September 2004 and the next article is scheduled for publication in March 2005.

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. In total 19 locations were requested during 2004. 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.

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 October 2004 OEAM conducted a desktop emergency exercise, codename “Exercise Turkey”. The exercise scenario involved responding to a pipeline leak caused by a land owner striking the pipeline whilst digging fence post holes with a vertical auger. The pipeline had a hole in it with a diameter of 45mm and a dent in the pipeline 900mm long. The emergency site was centred near the road crossing Buggle Hut road on the private property of Nevil Gregurke between MLV2 and MLV3. The emergency response team was to restore the operation of the pipeline by means of applying a suitable repair strategy.

The exercise was conducted in “real time” and simulated the interruption to the supply of natural gas to the top 20 major industrial customers within the City of Mildura and surrounding townships of Irymple, Red Cliffs and Karadoc. 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 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 non-conformances occurred on the pipeline during 2004.

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 2004

Origin Energy generated the following reports during 2004:

- PL 11 Annual Report for 2003, submitted in March 2004
- Fitness for Purpose Report
- Five Yearly AS 2885 Risk Assessment Review
- Quarterly compliance with SEO reports

12. Known or Foreseeable Activities Affecting the Pipeline

Nil

13. Future Operations

Future operations planned for the next 24 months will include:

- Five yearly review of MAOP of the BMP system
- Five yearly review of Over Pressure Protection Systems Review
- Emergency Response Exercise
- 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 and install additional surge protection devices.
- Conduct an operational audit on contractor and management systems to assess compliance with operating and maintenance procedures.

- Conduct leakage survey of the entire pipeline.
- Carry out the actions recommended in the hazardous zone areas survey.

APPENDIX 1 - CATHODIC PROTECTION SURVEY RESULTS (OCT 2004)

Test Point Number	Location	Oct 2004	May 2004	Oct 2003	Under Value
		On Potential	On Potential	On Potential	
1	Berri City Gate	-1165	-1132	-1160	-850
2	Existing Gas Pipeline Crossing	-1140	-1041	-1244	-850
3	Easement	-1273	-1292	-1255	-850
4	Hardwick Rd	-1254	-1302	-1310	-850
5	Jury Rd	-1228	-1261	-1368	-850
6	Easement	-1240	-1255	-1330	-850
7	Tipper St - Gas Pipeline Crossing	-1213	-1111	-1312	-850
8	JC Smith Rd - Gas Pipeline Crossing	-1252	-1262	-1293	-850
9	JC Smith Rd - Gas Pipeline Crossing	-1290	-1259	-1338	-850
9a	JC Smith Rd - Gas Pipeline Crossing	-1338	-1311	-1397	-850
10	Jellet Rd - Gas Pipeline Crossing	-1226	-1212	-1360	-850
11	Shiel & Skellon Rd's	-1230	-1212	-1315	-850
12	Sturt Highway	-1312	-1289	-1346	-850
13	West Bank of Murray River - Berri Dump	-1320	-1282	-1346	-850
14	Lagoon Dr - Lyrup	-1215	-1278	-1400	-850
15	Brown St - Lyrup	-1250	-1267	-1311	-850
16	Brown St - Lyrup	-1204	-1262	-1261	-850
17	Brown St - Lyrup	-1100	-1193	-1245	-850
18	Old Lyrup Main Rd - Paddock	-1300	-1277	-1398	-850
19	Loxton/Mildura Rd - MLV2	-1367	-1385	-1419	-850
20	Paddock at Fenceline	-1200	-1265	-1324	-850
21	Buglehut Rd	-1219	-1225	-1263	-850
22	Goulden Rd	-1196	-1197	-1241	-850
23	Taldra Rd	-1146	-1213	-1206	-850
24	Gregurkie's Paddock - Walk In 1.2 km	-1095	-1152	-1163	-850
25	Bede Rd	-1141	-1138	-1153	-850
26	Sturt Highway - SA/Vic Border	-1110	-1064	-1142	-850
27	Sturt Highway - Murray Sunset Nat. PK.	-1118	-1098	-1172	-850

28	Sturt Hwy - Murray Sunset Nat. Pk.	-1180	-1103	-1185	-850
29	Settlement Rd - Off Sturt Hwy	-1169	-1117	-1189	-850
30	Sturt Hwy - Inside fenceline of property	-1125	-1101	-1144	-850
31	Sturt Hwy & Nunns Rd	-1096	-1083	-1067	-850
32	Sturt Hwy & Duncans Rd	-1080	-1092	-1082	-850
33	Sturt Hwy & Karween North Rd - MLV3	-1165	-1120	-1141	-850
34	Sturt Hwy - Inside fenceline of property	-1130	-1103	-1139	-850
35	Sturt Hwy - Inside fenceline of property	-1135	-1092	-1166	-850
36	Sturt Hwy - Inside fenceline of property	-1120	-1502	-1358	-850
37	Sturt Hwy & Bailey Rd	-1115	-1072	-1164	-850
38	Sturt Hwy - Inside fenceline of property	-1130	-1120	-1182	-850
39	Sturt Hwy & Barkers Ln	-1069	-1120	-1143	-850
40	Sturt Hwy & Werrimul North Rd	-1100	-1076	-1148	-850
41	Sturt Hwy & Beers Ln	-1130	-1154	-1165	-850
42	Sturt Hwy & Lepodevins Rd	-1135	-1131	-1146	-850
43	Sturt Hwy & Karrawinna North Rd	-1070	-1084	-1157	-850
44	Sturt Hwy & Rogers Ln	-1160	-1114	-1192	-850
45	Sturt Hwy (Lucas Property) - MLV4	-1140	-1100	-1153	-850
46	Odea's Ln & Wheelers Rd	-1070	-1101	-1162	-850
47	Odea's Ln & Gaims Ln	-1110	-1140	-1166	-850
48	Odea's Ln & Piritta North Rd	-1150	-1131	-1148	-850
49	Odea's Ln & Pratts Rd	-1120	-1119	-1162	-850
50	Odea's Ln & Governemnt Rd	-1159	-1139	-1169	-850
51	Odea's Ln & Meridian Rd	-1120	-1122	-1135	-850
52	Box Ave - Koorlong State Forest	-1105	-1115	-1159	-850
53	Oak Ave - Koorlong	-1175	-1148	-1169	-850
54	San Mateo Ave - Koorlong	-1480	-1115	-1167	-850
55	Benetook Ave	-1145	-1115	-1127	-850
56	Benetook Ave	-1143	-1118	-1186	-850
57	Twentieth St	-1150	-1130	-1186	-850
58	Mildura City Gate	-1140	-1132	-1142	-850

Graph 4 - Potential Survey Graph for the Berri-Mildura Pipeline
2004

