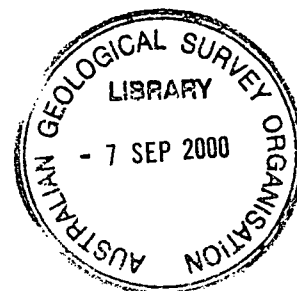


AGSO Record

1999/56



1999 LACHLAN & MARS DEN SEISMIC SURVEY

**West Wyalong
New South Wales**

FIELD ACQUISITION AND OPERATIONS REPORT

Kin 496

FOR

AUSTRALIAN NATIONAL SEISMIC IMAGING RESOURCE (ANSIR)

BY

TERRACORP PTY. LTD.

September 1999

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1999/56 C.1.

1999 LACHLAN & MARSDEN SEISMIC SURVEY

West Wyalong

NSW

FINAL REPORT - OPERATIONS

By

S.P.C. TOBIN and S.BARBOUR

Of

TERRACORP PTY. LTD.

**23 FELSPAR STREET
WELSHPOOL, WESTERN AUSTRALIA 6106**

FOR

ANSIR

GPO BOX 378 CANBERRA ACT 2601

TABLE OF CONTENTS

1.	INTRODUCTION	Page
1.1	Geographical Area	4
1.2	Weather	4
1.3	Logistics	4
1.4	Recording	5
2.	SURVEY	
2.1	Surveying	6
2.2	Line Clearing	6
2.3	Chaining	6
2.4	Permitting	6
3.	RECORDING	
3.1	Introduction	7
4.	FIELD PROCESSING	
4.1	Introduction	8
4.2	Experimental	8
5.	PERSONNEL LIST	10
6.	APPENDIX	
A)	Equipment	11
B)	Tape Listings	14
C)	Crew Safety Meeting	16
D)	Monthly Injury Summary	21
E)	Daily Operational Reports	See Marker
F)	Chaining Notes	See Marker
G)	Parameter Sheets	See Marker
H)	DSS Survey Report	See Marker

1. INTRODUCTION

Terracorp under its facilities management agreement with ANSIR was contracted to conduct the 1999 Lachlan and Marsden Seismic Surveys located around West Wyalong, NSW. In total 206.47 kms of ~~80~~ and ~~160~~ fold, 160 & 240 channel data was recorded between 11th September 1999 and 29th September 1999. ^{60, 80 and 120 fold}

This report covers various field operations relating to experimentals, line clearing, chaining, surveys, recording and field processing.

Mr David Johnstone of ANSIR supervised the contract.

1.1 Geographical Area

The area of operation is situated in the vicinity of West Wyalong, NSW. The program was planned to run along existing roads to minimise line clearing, and simplify permitting. In areas where the lines deviated from roadways permission was sought from local landowners. Where necessary lines were then slashed to provide safe vehicular and line worker access. Generally the topography was flat farming country intersected by several rivers. Shire roads were used providing good access on the wide verges.

David Johnstone of ANSIR supervised the program and was assisted by Tim Cox of Terracorp who liaise^d with local authorities on access issues.

1.2 Weather

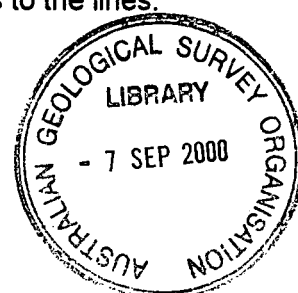
The weather was generally good, with only one day 17th September lost due to rain. Rains were recorded on several days however production was not affected.

1.3 Logistics

Terracorp's crew mobilised from Kalgoorlie Western Australia on the morning of the 6th September 1999. The five day trip had the crew arrive in West Wyalong on the 10th September 1999 to commence the 1999 Lachlan Seismic Survey.

Three vibes were trucked from Time Transport yard in Boulder to National Rails yard in Kalgoorlie by Radford's Transport where they were loaded together with the container of line equipment for transport to Parkes in NSW. Radford's trucked the fourth vibe to West Wyalong and then delivered all equipment from Parkes to site.

The Charles Sturt Motel in West Wyalong provided accommodation and meals, this location was central to the area of operations and provides good access to the lines.



Road crossings were carried out by Terracorp's accredited personnel. Prior to the cable being laid across the road, warning signs were located each side of the crossing to warn oncoming motorists. All signage was in accordance with Australian standards.

1.4 Recording

On the morning of the 11th September 1999 the crew unpacked, checked the equipment numbers and proceeded to line 99AGS-L1 where the spread was layed. Mr Ray Shaw carried out experimental recording on the morning of the 12th September 1999. Production commenced the same afternoon with three vibes on line, three mono sweeps 6 to 90 Hz, 10 sec. sweeps 20 sec. listening time.

Line 99AGS-L1 was completed on the 15th September, the spread was moved to the high resolution Marsden Project line 99MAR-R1. This line was 2.88km long with the station intervals at 10 metres, 2 sweeps per VP. Two hours of sweep parameters experimental were recorded to determine optimum parameters. . Recording took 3.75 hours with another 2 hours taken to pick up the spread.

On the 18th September recording commenced on line 99AGS-L2 at station 1016. This line was recorded from station 1016 to station 1302 at 120 fold, the remainder at 60 fold. The crew completed line 99AGS-L2 on the 20th September. Picked up the spread and moved to line 99AGS-L3.

Line recording commenced on 99AGS-L3 on the 21st September at station 1000. The line was recorded at 60 fold with the exception of stations 1990 and 2212 at 120 fold due to major bends. Line 99AGS-L3 was completed on the 25th September. Spread was then moved to 99AGS-L1 a distance of approximately 70kms.

The crew relayed spread on line 99AGS-L1 from station 1424. This station now corresponded with stn 2772 On line 99WR-HR1, a high resolution line at 10 metre station interval. The crew completed experimental on the 25th September and commenced recording on the 26th September. The spread was picked up and packed in the container on the 28th september.

The crew demobilises to Victoria on the 29th September 1999. The vibes and container were collected the following week and transported to Canberra for storage.

2 SURVEYING

2.1 Surveying

All Field Surveying was contracted to Dynamic Satellite Surveys (DSS) of Yeppoon, Queensland. See DSS Final Report Appendix "H".

2.2 Line Clearing

Line clearing was kept to an absolute minimum

2.3 Chaining

DSS carried out the chaining of the seismic line. . Plastic pin markers were placed at 40 metre intervals along the seismic traverse. Even numbered pin markers were marked with the station number. Permanent markers were placed on fences as close to the start, end and intersections of lines as possible. The requirement was for a PM to be placed at least every 5 Kms. P.M.'s were also placed on road verges. The permanent marker consisted of a full star iron driven into the ground and concrete placed around the base. The PM was then fitted with a stamped aluminium tag bolted to the top. The tag was marked with the line number and closest VP number.

2.4 Permitting

Bruce Golbey and Andrew Owen of ANSIR conducted permitting.

*David Johnston (ANSIR) and Tina Cox (TERRACORP)
conducted permitting*

3.0 Recording

3.1 Introduction

The first production profile was recorded on Line 99AGS-L1 on the 12th September 1999. The final day's production took place on the 27th September 1999.

Recording Parameter sheets are detailed in Appendix G of this report. These cover all aspects of the parameters for the line.

Details of recording equipment are detailed in appendix A of this report.

A list of tapes forms Appendix B of this report.

4. FIELD PROCESSING

4.1 Introduction.

ANSIR's Geophysicists handled all field processing. An infield processing base was established at the Charles Sturt Motel. The ANSIR Geophysicists were handed tapes and supporting documentation daily for QC.

4.2 Experimental Program

Dr Ray Shaw conducted Experimentals

A copy of the experimental logs is as follows:

Point Source Files 1 – 5 189 active channels @ Stn 1070, 10 sec 6-100Hz, 1 sweep.

Stacked Tests Files 6 – 45 Record each sweep individually, Stn 1070-1077

3 vibes, 5 sweeps per VP, 6-100 Hz, 15m pad to pad, first vibe 1m in front of peg, 8m m/ups.

High Frequency Sweeps Stn 1080-1087, 3 sweeps of 10 sec.

Files 46-53, 6-80 Hz

Files 54-61, 6-100 Hz

Files 62-69, 6-120 Hz

16m move ups, 3 m behind the peg for vibe 1, 15m pad to pad

Files 70-77 Varisweep

Time File # Comments

06:19:41	1	POINT SRC TEST VIB 2
06:22:17	2	POINT SRC TEST VIBE 1
06:28:52	1	POINT SOURCE TEST VIBE 2 6-100HZ 10 SEC
06:31:05	2	POINT SOURCE TEST VIBE 1 6-100HZ 10 SEC
06:32:20	3	POINT SOURCE TEST VIB 3 6-100HZ 10SEC
06:33:52	4	POINT SOURCE TEST VIBE 0 6-100HZ 10 SEC
06:35:17	5	POINT SOURCE TEST VIBE 2 6-100HZ 10 SEC
07:05:42	6	FIRST SWEEP 1070
07:06:49	7	2ND SWEEP 1070
07:07:34	8	3RD SWP 1070
07:08:10	9	4TH SWP 1070
07:08:54	10	5TH SWP 1070
07:09:48	11	1ST SWP 1071
07:10:25	12	2ND SWP 1071
07:11:09	13	3RD SWP 1071
07:11:53	14	4TH SWP 1071
07:12:39	15	5TH SWP 1071
07:13:31	16	1ST SWP 1072
07:14:14	17	2ND SWP 1072
07:14:56	18	3RD SWP 1072
07:15:47	19	4TH SWP 1072
07:16:29	20	5TH SWP 1072
07:18:36	21	1ST SWP 1073

07:19:11	22	2ND SWP 1073
07:19:46	23	3RD SWP 1073
07:20:23	24	4TH SWP 1073
07:21:06	25	5TH SWP 1073
07:22:01	26	1ST SWP 1074
07:22:36	27	2ND SWP 1074
07:23:14	28	3RD SWP 1074
07:23:58	29	4TH SWP 1074
07:24:44	30	5TH SWP 1074
07:25:43	31	1ST SWP 1075
07:26:31	32	2ND SWP 1075
07:27:10	33	3RD SWP 1075
07:27:49	34	4TH SWP 1075
07:28:35	35	5TH SWP 1075
07:29:51	36	1ST SWP 1076
07:30:35	37	2ND SWP 1076
07:31:22	38	3RD SWP 1076
07:32:12	39	4TH SWP 1076
07:32:53	40	5TH SWP 1076
07:34:15	41	1ST SWP 1077
07:34:50	42	2ND SWP 1077
07:35:34	43	3RD SWP 1077
07:36:28	44	4TH SWP 1077
07:37:11	45	5TH SWP 1077
07:43:06	46	3 VIBS 3 SWPS 6-80HZ
08:03:49	54	3 VIBS 3 SWPS 6-100HZ
08:05:23	55	3 VIBS 3 SWPS 6-100HZ
08:06:57	56	3 VIBS 3 SWPS 6-100HZ
08:08:31	57	3 VIBS 3 SWPS 6-100HZ
08:10:05	58	3 VIBS 3 SWPS 6-100HZ
08:11:39	59	3 VIBS 3 SWPS 6-100HZ
08:13:13	60	3 VIBS 3 SWPS 6-100HZ
08:14:47	61	3 VIBS 3 SWPS 6-100HZ
08:19:22	62	3 VIBS 3 SWPS 6-120HZ
08:20:56	63	3 VIBS 3 SWPS 6-120HZ
08:22:30	64	3 VIBS 3 SWPS 6-120HZ
08:24:04	65	3 VIBS 3 SWPS 6-120HZ
08:25:38	66	3 VIBS 3 SWPS 6-120HZ
08:27:12	67	3 VIBS 3 SWPS 6-120HZ
08:28:46	68	3 VIBS 3 SWPS 6-120HZ
08:30:20	69	3 VIBS 3 SWPS 6-120HZ
08:37:21	70	3 VIBS 3 SWPS VARISWEEP PACKAGE 6-48Hz 20-100Hz 10-80Hz
08:38:55	71	3 VIBS 3 SWPS VARISWEEP PACKAGE 6-48Hz 20-100Hz 10-80Hz
08:40:29	72	3 VIBS 3 SWPS VARISWEEP PACKAGE 6-48Hz 20-100Hz 10-80Hz
08:42:03	73	3 VIBS 3 SWPS VARISWEEP PACKAGE 6-48Hz 20-100Hz 10-80Hz
08:43:37	74	3 VIBS 3 SWPS VARISWEEP PACKAGE 6-48Hz 20-100Hz 10-80Hz
08:45:11	75	3 VIBS 3 SWPS VARISWEEP PACKAGE 6-48Hz 20-100Hz 10-80Hz
08:46:45	76	3 VIBS 3 SWPS VARISWEEP PACKAGE 6-48Hz 20-100Hz 10-80Hz
08:48:19	77	3 VIBS 3 SWPS VARISWEEP PACKAGE 6-48Hz 20-100Hz 10-80Hz

5. PERSONNEL

POSITION

Crew Manager
Snr Observer
Instrument Tech
Cable/Geophone Repair
Snr Vibe Mechanic
Asst Vibe Mechanic
Vibe Op
Vibe Op
Vibe Op
Vibe Op
Snr Vehicle Mechanic
Safety Officer/Mechanic O.S
Line Boss
Line Crew/Cable-Ram Ute
Line Crew/Cable-Ram Ute
Line Crew/Cable-Ram Ute
Line Crew/Jug Ute
Line Crew/Back Crew
Line Crew/Back Crew
Line Crew/Jug Ute
Line Crew/Front Crew
Line Crew/Front Crew
Line Crew/Back Crew
Line Crew/Back Crew
DSS Surveyor
DSS Surveyor
ANSIR Geophysicist
ANSIR Geophysicist
ANSIR Geophysicist

NAME

Bob Stephenson
James Butcher
Mick Bokor
Stuart Robinson
John Philippson
Peter McKenzie
Allan Tanner
Shane Goossens
Geoff Geraty
Mick Jardine
Richard Barnes
Tim Cox
Brendon Horsten
Traci Jones
Andrew Smylie
Noel Grainger
June Brummel
Mathew Cooper
Jason Baker
Gordon Heiniman
Shane Ebsworth
Andrew Mead
Jeremy Dermer
Liz Goold
Tom Pickett
Lynne Baker
David Johnstone
LEONIE JONES

APPENDIX "A"

Equipment Specifications

RECORDING EQUIPMENT

ARAM 24 Seismic Data Acquisition and Processing System Including

- Real Time Parallel Processor Correlator
- One (1) 10 metre Radio Mast on Recorder with High Gain Antenna
- Forty Five (45) Remote Acquisition Modules [360 Channels]
- Forty Five (45) Telemetry Data Cables [360 channels], 348 metres long, with eight (8) takeouts spaced at 43 metres apart.
- Geospace DX4 10Hz High Specification Superphones
- [Broad Dynamic Range, High S/N, High Specification]
- Three Hundred and Sixty (360) geophone strings [360 Channels with 12 ph/group],
- Sensor SMT-200 Geophone Tester and QC System

SOURCE EQUIPMENT

Four (4) IVI Hemi 60 4x4 Articulated Buggy mounted Vibrators

- Peak force is 62,031 lbs per Vibe and
- Hold-Down weight is 63,000 lbs per Vibe
- One (1) Pelton Advance 2 Model 6 PC Based VIBRASIG
- Real Time Similarity System
- Five (5) Pelton Advance 2 Model 6 VCEs-plus various spare boards.
- One (1) Pelton Advance 2 Model 6 ESG for Recording Truck plus spare boards.
- Three (3) Vibrators operating Online [186,093lbs Force] and One (1) on Standby.
- Vibrators are equipped with Force Control and Ground Force Phase Lock using
- M5 High Performance accelerometers.
- Electronics are capable of correlating various individual sweep frequencies and compositing any range or variation of Upsweeps or Downsweeps within the same VP location. This process is Trade Marked as Varisweep.

OFFICE EQUIPMENT AND COMMUNICATIONS

- One (1) PC based Crew Management and Information System complete with software, Laptop PC and printer
- Four (4) Mobile UHF Radios for Crew and Local Shire Communications.
- One (1) Optus Satellite Telephone in PMs Office or Toyota
- One (1) Motorola Syntrex or equivalent FM radio for Field Communications
- Assorted Daily, weekly and Monthly Operations forms, Safety and Environmental Incident report Forms, crew and System Technical Manuals and Maintenance Handbooks.

VEHICLES

- One (1) Mercedes 911 4WD Recording Truck equipped with an Airconditioned recording cab, Power generator and First Aid Kit

<u>No.</u>	<u>Year</u>	<u>Model</u>	<u>Type</u>
• One (1)	1996	HZJ75 Toyota 4x4 Party Manager	
• Two (2)	1996	HZJ75 Toyota 4x4ATU Line Unit	
• One (1)	1996	HZJ75 Toyota 4x4Line Boss Unit	
• Three (3)	1996	HZJ75 Toyota 4x4Line Units	
• One (1)	1995	HZJ75 Toyota 4x4Chaining Unit	
• One (1)	1995	HZJ75 Toyota 4x4 GPS Survey Unit	
• One (1)	1995	HZJ75 Toyota 4x4Mechanics Unit	
• One (1)	1986	Isuzu 4x4 Vibrator Service Unit.	
• One (1)	1982	Isuzu 4x4 Cable/Geophone Unit.	
• One (1)	1986	Hino 4x4 Supply Truck.	
• One (1)	1980	Kenworth 6x4 Water Truck.	

CAMP EQUIPMENT

- One (1) Terracorp Office and Crew Manager's Accommodation caravan.
- One (1) Workshop/Parts Store Caravan equipped with power and hand tools, electric and oxy/acetylene welding equipment.
- One (1) Airconditioned ATU/Cable Repair Caravan.

OCCUPATIONAL HEALTH AND SAFETY STANDARDS

- Site Specific Safety Management Plan (SSSMP) written, published and implemented for each seismic survey undertaken with all site specific hazards examined along with medivac and emergency procedures summarised.
- Sunscreens and UV blockout creams will be supplied at no cost to all crew members with the wearing of creams being mandatory for all line personnel.
- Hats, shirts and covered safety footwear must be worn by field crew at all times.
- Reflective Orange Safety Vests for all Survey and Recording Crew personnel.
- Severe Disciplinary Procedures ensured Crew Members adhered to all company policies including the wearing of Seat Belts, Speed Limits etc.
- SSB and CB Radios along with Mobile Satellite Telephone and Fax machines are maintained on crew to assist with Safe Operations.
- Crew Manager's vehicle, fitted with Mobile telephone.
- One (1) Full International red Cross standard First Aid Kit was maintained at the Terracorp' crew office with a Basic Emergency Kit maintained in the crew Recording truck online.
- Pre-Survey Induction, Safety and Orientation meetings were conducted with all crew personnel and subcontractors. The appointed Safety Officer conducted a compulsory Weekly Environmental and Safety Meeting and the company Operational Health and Safety Policy was displayed and available for review by all crew members.

CHAINING / GPS SURVEY CREWS

Dynamic Satellite Surveys – Yeppoon, Queensland

Survey Personnel

- Two (2) GPS Chainpersons/Surveyor

Survey Equipment

See DSS Final Report

APPENDIX "B"

Tape Listing LACHLAN SEISMIC SURVEY Tape Listing

Line	Reel #	FF-FF	VP-VP	Tape Type
99AGS-L1	L15199001	28126	1070-1087	3490E
99AGS-L1	L15199002	78-159	1000-1086	3490E
99AGS-L1	L15199003	160-241	1087-1177	3490E
99AGS-L1	L15199004	242-323	1178-1272	3490E
99AGS-L1	L15199005	324-405	1273-1362	3490E
99AGS-L1	L15199006	406-487	1363-1453	3490E
99AGS-L1	L15199007	488-546	1454-1520	3490E
99AGS-L1	L15199008	547-628	1521-1607	3490E
99AGS-L1	L15199009	629-708	1608-1691	3490E
99AGS-L1	L15199010	709-790	1692-1777	3490E
99AGS-L1	L15199011	791-863	1778-1854	3490E
99AGS-L1	L15199012	864-945	1855-1939	3490E
99AGS-L1	L15199013	946-1027	1940-2031	3490E
99AGS-L1	L15199014	1028-1116	2032-2124	3490E
99AGS-L1	L15199015	1117-1167	2125-2181	3490E
99MAR-R1	L15199016	1168-1207	100-105	3490E
99MAR-R1	L15199017	1208-1493	100-388	3490E
99AGS-L2	L15199018	1494-1575	1016-1097	3490E
99AGS-L2	L15199019	1576-1657	1098-1187	3490E
99AGS-L2	L15199020	1658-1739	1188-1269	3490E
99AGS-L2	L15199021	1740-1820	1270-1408	3490E
99AGS-L2	L15199022	1821-1902	1410-1574	3490E
99AGS-L2	L15199023	1903-1984	1576-1746	3490E
99AGS-L2	L15199024	1985-2058	1750-1902	3490E
99AGS-L2	L15199025	2059-2140	1906-2086	3490E
99AGS-L2	L15199026	2141-2222	2088-2256	3490E
99AGS-L2	L15199027	2223-2224	2258-2260	3490E
99AGS-L3	L15199028	2225-2306	1000-1166	3490E
99AGS-L3	L15199029	2307-2388	1168-1330	3490E
99AGS-L3	L15199030	2389-2470	1332-1508	3490E
99AGS-L3	L15199031	2471-2523	1510-1616	3490E
99AGS-L3	L15199032	2524-2611	1618-1792	3490E
99AGS-L3	L15199033	2612-2693	1794-1962	3490E
99AGS-L3	L15199034	2696-2749	1964-2047	3490E
99AGS-L3	L15199035	2750-2831	2082-2185	3490E
99AGS-L3	L15199036	2832-2913	2186-2342	3490E
99AGS-L3	L15199037	2914-2990	2344-2512	3490E
99AGS-L3	L15199038	2991-3072	2516-2688	3490E
99AGS-L3	L15199039	3073-3154	2690-2864	3490E

99AGS-L3	L15199040	3155-3236	2866-3042	3490E
99AGS-L3	L15199041	3237-3318	3044-3214	3490E
99AGS-L3	L15199042	3319-3331	3216-3240	3490E
99WR-HR1	L15199043	3332-3357	2648-2645	3490E
99WR-HR1	L15199044	3358-3560	2772-2576	3490E
99WR-HR1	L15199045	3561-3763	2575-2368	3490E
99WR-HR1	L15199046	3764-3966	2367-2162	3490E
99WR-HR1	L15199047	3967-4169	2161-1947	3490E
99WR-HR1	L15199048	4170-4372	1946-1724	3490E
99WR-HR1	L15199048	4373-4575	1723-1302	3490E
99WR-HR1	L15199050	4576-4684	1300-1076	3490E
99AGS-L1	E15199001	28126	1070-1087	Exabyte
99AGS-L1	E15199002	78-256	1000-1196	Exabyte
99AGS-L1	E15199003	257-546	1197-1520	Exabyte
99AGS-L1	E15199004	547-863	1521-1854	Exabyte
99AGS-L1	E15199005	864-1167	1855-2181	Exabyte
99MAR-R1	E15199006	1168-1493	100-388	Exabyte
99AGS-L2	E15199007	1494-1772	1016-1302	Exabyte
99AGS-L2	E15199008	1773-1999	1304-1902	Exabyte
99AGS-L2	E15199009	2059-2224	1906-2260	Exabyte
99AGS-L3	E15199010	2225-2523	1000-1616	Exabyte
99AGS-L3	E15199011	2524-2749	1618-2047	Exabyte
99AGS-L3	E15199012	2750-2990	2082-2512	Exabyte
99AGS-L3	E15199013	2991-3239	2514-3048	Exabyte
99AGS-L3	E15199014	3240-3331	3050-3240	Exabyte
99WR-HR1	E15199015	3358-4052	2772-2075	Exabyte
99WR-HR1	E15199016	4053-4684	2074-1076	Exabyte

Appendix "C"

SAFETY MEETING REPORT

Date:	13/09/99
Client:	AGSO
Prospect:	1999 LACHLAN Seismic Project
Area:	West Wyalong
State:	NSW
Party Manager:	Bob Stephenson
Safety Officer:	Tim Cox
Scribe:	Tim Cox
Client Rep:	David Johnstone

# Of Accidents Since Last Meeting. Vehicles	0
# Of Accidents Since Last Meeting. Employees	0
# Of Incidents Since Last Meeting. Employees	0
# Of Compensation Claims Since Last Meeting.	0
# Of LTI'S Since Last Meeting.	0

DETAILS:

1. Congratulations were given to the crew on behalf of Delta Gold, AGSO and Stephen Tobin on a job well done on the last job in Kalgoorlie. The crew worked through an active gold mine and the safety awareness of the entire crew was noted by the mine management.
2. Client Rep. Dave Johnstone was introduced to the crew.
3. The crew were informed as to the very low speed limits to be observed when driving through West Wyalong town centre. 30 —40 kms/hr. This limit appears to be set by the locals – anyone doing the 60 km/hr speed limit appears to be driving abnormally fast.
4. The safety issue of Newell highway was discussed with regard to the frequency and speed of large trucks. Bob Stephenson informed the crew to pull over left if needed to allow trucks to pass before turning right off the highway. Also driving into the sun when going to and leaving the field was discussed and the crew was informed to keep the windscreens of the vehicles clean.
5. Awareness of the local traffic on the gravel roads was raised especially with regard to the intersections and school traffic in the mornings and evenings.
6. A number of brown snakes have been seen in the area and the crew were informed to be aware. Extra sheets of snake bite First Aid were made available.
7. Dave Johnstone welcomed the crew and reminded everyone that safety and data quality was the priority for the survey.

8. New hires Mathew Cooper and Jason Baker were introduced to the crew.

TERRACORP PERSONNEL:

R. Stephenson, M. Bokor, T. Cox, J. Butcher, S. Robinson, J. Philipppson, R. Barnes, A. Tanner, S. Goossens, M. Jardine, G. Geraty, T. Jones, N. Grainger, S. Ebsworth, G. Heiniman, A. Mead, J. Brummel, J. Dermer, A. Smylie, P. McKenzie, L. Goold, M. Cooper, J. Baker, B. Horsten.

DSS PERSONNEL:

T. Picket, L. Baker.

AGSO PERSONNEL:

D. Johnstone.

Appendix "C"

Date:	19/09/99
Client:	AGSO
Prospect:	99 LACHLAN Seismic Project
Area:	West Wyalong
State:	NSW
Party Manager:	Bob Stephenson
Safety Officer:	Tim Cox
Scribe:	Tim Cox
Client Rep:	David Johnstone

# Of Accidents Since Last Meeting. Vehicles	0
# Of Accidents Since Last Meeting. Employees	0
# Of Incidents Since Last Meeting. Employees	0
# Of Compensation Claims Since Last Meeting.	0
# Of LTI'S Since Last Meeting.	0

DETAILS:

1. Bob Stephenson reminded the crew that relevant PPE was to be worn at all times, especially with regard to road works and road cable crossings. It was also mentioned that the crew had been diligent with PPE issues and safety in general and to keep up the good work. Laying cable across major roads and railway lines have been undertaken with all due regard to safety and procedures and the crew were congratulated for their efforts.

2. The topic of snakes was discussed and the procedure to be undertaken was reinforced. The method of constrictive bandaging of the bite area was explained and the importance of speed and keeping the patient still was reinforced. Noel Grainger raised the point that identification of the snake was also important but to first ensure your own personnel safety.

3. James Butcher reminded the crew to beware of local traffic as some of the residents of the area may not be aware that we are working in the area.

4. New hire Nathan Falconer was introduced to the crew and June Brumell was assigned as his induction buddy.

5. Tracy Jones commented that the road crossing installation the previous day went without a hitch, and the crew was again complemented on their approach and attitude to safety issues and procedures

TERRACORP PERSONNEL:

R. Stephenson, M. Bokor, T. Cox, J. Butcher, S. Robinson, J. Philippon, R. Barnes, A. Tanner, S. Goossens, M. Jardine, G. Geraty, T. Jones, N. Grainger, S. Ebsworth, G.

Heiniman, A. Mead, J. Brummel, J. Dermer, A. Smylie, P. McKenzie, L. Goold, M. Cooper, J. Baker, B. Horsten, N. Falconer.

DSS PERSONNEL:

T. Picket, Jason Masters.

AGSO PERSONNEL:

D. Johnstone.

Appendix "C"

SAFETY MEETING REPORT

Date:	26/09/99
Client:	AGSO
Prospect:	99 LACHLAN Seismic Project
Area:	West Wyalong
State:	NSW
Party Manager:	Bob Stephenson
Safety Officer:	Tim Cox
Scribe:	Tim Cox
Client Rep:	David Johnstone

# Of Accidents Since Last Meeting. Vehicles	0
# Of Accidents Since Last Meeting. Employees	0
# Of Incidents Since Last Meeting. Employees	0
# Of Compensation Claims Since Last Meeting.	0
# Of LTI'S Since Last Meeting.	0

DETAILS:

1. Bob Stephenson informed the crew of the procedures associated with shooting the additional high resolution line. Escort vehicles to be used front and rear of the vibes where acquisition is along the bitumen surfaced roads. Bob also congratulated the crew on job well done so far.

2. The crew was informed that there had not been any safety incidents to report for the last week. The crew was complemented for their attitude towards road crossings and the project in general.

3. Crew was reminded that they would be driving into Melbourne for the beginning of the next job and drivers to take responsibility with alcohol consumption the night before mobilisation.

4 Dave Johnstone again congratulated the crew on their approach and attitude to the project. He also mentioned that the safety audit conducted by Paul Wong appeared to have gone well and they were waiting on the final report and recommendations.

TERRACORP PERSONNEL:

R. Stephenson, M. Bokor, T. Cox, J. Butcher, S. Robinson, J. Philippson, R. Barnes, A. Tanner, S. Goossens, M. Jardine, G. Geraty, T. Jones, N. Grainger, S. Ebsworth, G. Heiniman, A. Mead, J. Brummel, J. Dermer, A. Smylie, P. McKenzie, L. Goold, M. Cooper, J. Baker, B. Horsten, N. Falconer.

AGSO PERSONNEL:

D. Johnstone.

APPENDIX "D"

Monthly Injury Summary Report

Month:	SEPTEMBER 1999	
Year:	1999	
Client:	ANSIR	
Location:	WEST WYALONG, NSW	
Permit Area		WEST WYALONG
Total Personnel on Crew		26
Total Hours Worked	(a)	242.75
Total Exposure Hours	(b)	6311.50
No. Of Minor Injuries	(c)	0
No. Medical Treatments	(d)	0
No. of LTI's	(e)	0

(a) Total Number of Hours worked in the permit area per person.

(b) Total exposure hours = (a) x total number of personnel.

(c) Number of injuries that required treatment by first aider/medic.

(d) Number of injuries that required treatment by medical practitioner. Not LTI's

(e) Number of LTI's as defined by Australian Standard 1885.

DAY 1		TERRACORP			
DAILY PRODUCTION REPORT					
CREW 205		DATE..... 06-Sep-99			
Client..... ANSIR		Party Manager.. BOB STEPHENSON			
Survey Name. LACHLAN		Client Rep..... DAVID JONSTONE			
Area..... WEST WYALONG		Weather..... FINE			
State..... NSW					

RECORDING	Kms.	SKIPS	PROFILES	TOTALS
Line No.....	Rec	Rec	0	Profiles..... 0
Line No.....	Rec	Rec		Skips..... 0
Line No.....	Rec	Rec		Kms..... 0.000
Line No.....	Rec	Rec		Cum Kms.. 0.000
Line No.....	Rec	Rec		

HOURS	Travel Time..... 12.00	Down Time - Vibes	Extra Charges
	Test Time.....	Recorder.....	Extra Vibe Hrs.....
	Recording Time...	Cables.....	Detours Charge Hrs
Other Time	Line Change....	ATU's.....	Washdowns.....Hrs
	Recorder Move..	Detours/Terr...	Extra Other Charge..
	Detours/Terrain.	W / on Spread.	Total Extra.....Hrs 0.00
	Experimental...	Stock Damage	Total Extra(Job).Hrs 0.00
	Other Charge...	Other.....	Processing Hrs.....
	Wait on Spread.		
	Weather Time...		
	Stock Damage..	Total Down Time..... 0.00	Total Day.....Hrs 12.00
	Safety Meeting..	Cum. Down Time (Job) 0.00	Total Hrs (Job)..... 12.00

COMMENTS: Crew left Kalgoolie enroute to West Wyalong, overnighited at Madura.
DSS mobilized from Kalgoolie 3rd,4th and 5th.

SURVEY				
Line No.....	STN..	STN..	Kms. 0.000	
Line No.....	STN..	STN..	Kms. 0.000	
Line No.....	STN..	STN..	Kms.	
Line No.....	STN..	STN..	Kms.	Total Kms..... 0.000
Line No.....	STN..	STN..	Kms.	Cum. Kms. (Job)..... 0.000

CHAINING				
Line No.....	STN..	STN..	Kms. 0.000	
Line No.....	STN..	STN..	Kms. 0.000	
Line No.....	STN..	STN..	Kms.	
Line No.....	STN..	STN..	Kms.	Total Kms..... 0.000
Line No.....	STN..	STN..	Kms.	Cum. Kms. (Job)..... 0.000

RANGING	COMMENTS :			
Line No.....	Kms			
Line No.....	Kms			
Line No.....	Kms			Total Kms..... 0.000
Line No.....	Kms			Cum. Kms. (Job)..... 0.00

LINE CLEAR	Dozer	Line No.....	Kms. Cut.....	Hrs.	Total Kms.....
	Dozer	Line No.....	Kms. Cut.....	Hrs.	Cum. Kms. (Job).....
	Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hours..... 0.00
	Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hrs (Job)..... 0.00

DRILLING				UPHOLES			
Rig No.	1	# Mtr	#Holes	Hrs	Unit 1	#Mtr	#Holes
Rig No.	2	# Mtr	#Holes	Hrs	Unit 2	#Mtr	#Holes
							# Hrs
Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0		Total # Mtr.....	0.00	Total # Mtr(Job).....
Total Drilled.....	0	Cum Drilled (Job).....	0		Total Logged.....	0	Total Logged (Job)..
Total Hrs.....	0.00	Total Hrs (Job).....	0.00		Total Hrs.....	0.00	Total # Hrs(Job).....

COMMENTS : Survey scouted area, set up office and prospect configuration.

DAY 2

TERRACORP

DAILY PRODUCTION REPORT

CREW 205

DATE..... 7-Sep-99

Client..... ANSIR
 Survey Name. LACHLAN
 Area..... WEST WYALONG
 State..... NSW

Party Manager. BOB STEPHENSON
 Client Rep..... DAVID JONSTONE
 Weather..... FINE

RECORDING	Kms.	SKIPS	PROFILES	TOTALS
Line No..... Rec Rec				Profiles..... 0
Line No..... Rec Rec				Skips..... 0
Line No..... Rec Rec				Kms..... 0.000
Line No..... Rec Rec				Cum Kms.. 0.000

HOURS	Travel Time..... 11.00	Down Time - Vibes	Extra Charges
Test Time..... 0.00	Recorder.....	Extra vibe Hrs..... 0.00	
Recording Time... 0.00	Cables.....	Detours Charge Hrs 0.00	
Other Time Line Change.... 0.00	ATU's.....	Washdowns.....Hrs 0.00	
Recorder Move.. 0.00	Detours/Terr...	Extra Other Charge.. 0.00	
Detours/Terrain. 0.00	W / on Spread.	Total Extra.....Hrs 0.00	
Experimental... 0.00	Stock Damage	Total Extra(Job).Hrs 0.00	
Other Charge... 0.00	Other.....	Processing Hrs.....	
Wait on Spread. 0.00			
Weather Time... 0.00			
Stock Damage.. 0.00	Total Down Time..... 0.00	Total Day.....Hrs 11.00	
Safety Meeting.. 0.00	Cum. Down Time (Job) 0.00	Total Hrs (Job)..... 23.00	

COMMENTS: Crew left Madura enroute to West Wyalong, overnighed at Ceduna.

SURVEY					
Line No.....	99AGSL1	STN.. 1000	STN.. 1126	Kms. 5.040	
Line No.....		STN..	STN..	Kms. 0.000	
Line No.....		STN..	STN..	Kms. 0.000	
Line No.....		STN..	STN..	Kms. 0.000	Total Kms..... 5.040
Line No.....		STN..	STN..	Kms. 0.000	Cum. Kms. (Job).... 5.040

CHAINING					
Line No.....	99AGSL1	STN.. 1000	STN.. 1126	Kms. 5.040	
Line No.....		STN..	STN..	Kms. 0.000	
Line No.....		STN..	STN..	Kms. 0.000	
Line No.....		STN..	STN..	Kms. 0.000	Total Kms..... 5.040
Line No.....		STN..	STN..	Kms. 0.000	Cum. Kms. (Job).... 5.040

RANGING					
Line No.....		Kms			
Line No.....		Kms			
Line No.....		Kms			Total Kms..... 0.000
Line No.....		Kms			Cum. Kms. (Job).... 0.00

LINE CLEAR					
Dozer	Line No.....	Kms. Cut.....	Hrs.		Total Kms..... 0.000
Dozer	Line No.....	Kms. Cut.....	Hrs.		Cum. Kms. (Job).... 0.000
Grader	Line No.....	Kms. Cut.....	Hrs.		Total Hours..... 0.00
Grader	Line No.....	Kms. Cut.....	Hrs.		Total Hrs (Job)..... 0.00

DRILLING					UPHOLES			
Rig No.	1	# Mtr	#Holes	Hrs	Unit 1	#Mtr	#Holes	# Hrs
Rig No.	2	# Mtr	#Holes	Hrs	Unit 2	#Mtr	#Holes	# Hrs
Total # Mts.....	0.0		Cum # Mtr (Job).....	0.0	Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0
Total Drilled.....	0		Cum Drilled (Job).....	0.00	Total Logged.....	0	Total Logged (Job)..	0
Total Hrs.....	0.00		Total Hrs (Job).....	0.00	Total Hrs.....	0.00	Total # Hrs(Job).....	0.00

COMMENTS :

DAY 3		TERRACORP				DAILY PRODUCTION REPORT			
CREW 205						DATE.....8-Sep-99			
Client.....		ANSIR		Party Manager.		BOB STEPHENSON			
Survey Name.		LACHLAN		Client Rep.....		DAVID JONSTONE			
Area.....		WEST WYALONG		Weather.....		FINE			
State.....		NSW							
RECORDING				Kms.	SKIPS	PROFILES	TOTALS		
Line No.....	Rec	Rec					Profiles.....	0	
Line No.....	Rec	Rec					Skips.....	0	
Line No.....	Rec	Rec					Kms.....	0.000	
Line No.....	Rec	Rec					Cum Kms..	0.000	
Line No.....	Rec	Rec							
HOURS				Travel Time.....		10.00	Down Time - Vibe's		Extra Charges
				Test Time.....		0.00	Recorder.....		Extra vibe Hrs.....
				Recording Time...		0.00	Cables.....		Detours Charge Hrs
Other Time				Line Change.....		0.00	ATU's.....		Washdowns.....Hrs
				Recorder Move..		0.00	Detours/Terr...		Extra Other Charge..
				Detours/Terrain.		0.00	W / on Spread.		Total Extra.....Hrs
				Experimental...		0.00	Stock Damage		Total Extra(Job).Hrs
				Other Charge...		0.00	Other.....		Processing Hrs.....
				Wait on Spread.		0.00			
				Weather Time...		0.00			
				Stock Damage..		0.00	Total Down Time.....		0.00
				Safety Meeting..		0.00	Cum. Down Time (Job)		0.00
							Total Day.....Hrs		10.00
							Total Hrs (Job).....		33.00
COMMENTS: Crew left Ceduna enroute to West Wyalong, overnighated at Peterborough.									
SURVEY									
Line No.....	99AGSL1	STN..	1126	STN..	1408	Kms.	11.280		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	11.280
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	16.320
CHAINING									
Line No.....	99AGSL1	STN..	1126	STN..	1408	Kms.	11.280		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	11.280
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	16.320
RANGING									
Line No.....		Kms							
Line No.....		Kms							
Line No.....		Kms							
Line No.....		Kms							
							Total Kms.....	0.000	
							Cum. Kms. (Job).....	0.00	
COMMENTS :									
LINE CLEAR									
Dozer	Line No.....		Kms. Cut.....		Hrs.			Total Kms.....	0.000
Dozer	Line No.....		Kms. Cut.....		Hrs.			Cum. Kms. (Job).....	0.000
Grader	Line No.....		Kms. Cut.....		Hrs.			Total Hours.....	0.00
Grader	Line No.....		Kms. Cut.....		Hrs.			Total Hrs (Job).....	0.00
DRILLING					UPHOLES				
Rig No.	1	# Mtr	#Holes	Hrs	Unit 1	#Mtr	#Holes	# Hrs	
Rig No.	2	# Mtr	#Holes	Hrs	Unit 2	#Mtr	#Holes	# Hrs	
Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0		Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0	
Total Drilled.....	0	Cum Drilled (Job).....	0.00		Total Logged.....	0	Total Logged (Job)..	0	
Total Hrs.....	0.00	Total Hrs (Job).....	0.00		Total Hrs.....	0.00	Total # Hrs(Job).....	0.00	
COMMENTS :									

DAY 4

TERRACORP

DAILY PRODUCTION REPORT

CREW 205

DATE..... 9-Sep-99

Client..... ANSIR
 Survey Name. LACHLAN
 Area..... WEST WYALONG
 State..... NSW

Party Manager. BOB STEPHENSON
 Client Rep..... DAVID JONSTONE
 Weather..... FINE

RECORDING	Kms.	SKIPS	PROFILES	TOTALS
Line No..... Rec Rec	0.000		Profiles..... 0	
Line No..... Rec Rec			Skips..... 0	
Line No..... Rec Rec			Kms..... 0.000	
Line No..... Rec Rec			Cum Kms.. 0.000	

HOURS	Travel Time.....	10.00	Down Time - Vibes	0.00	Extra Charges
	Test Time.....	0.00	Recorder.....	0.00	Extra vibe Hrs..... 0.00
	Recording Time...	0.00	Cables.....	0.00	Detours Charge Hrs 0.00
Other Time	Line Change.....	0.00	ATU's.....	0.00	Washdowns.....Hrs 0.00
	Recorder Move..	0.00	Detours/Terr...	0.00	Extra Other Charge.. 0.00
	Detours/Terrain.	0.00	W / on Spread.	0.00	Total Extra.....Hrs 0.00
	Experimental...	0.00	Stock Damage	0.00	Total Extra(Job).Hrs 0.00
	Other Charge...	0.00	Other.....	0.00	Processing Hrs.....
	Wait on Spread.	0.00			
	Weather Time...	0.00			
	Stock Damage..	0.00	Total Down Time.....	0.00	Total Day.....Hrs 10.00
	Safety Meeting..	0.00	Cum. Down Time (Job)	0.00	Total Hrs (Job)..... 43.00

COMMENTS: Crew left Peterborough enroute to West Wyalong, overnigheted at Wentworth.

SURVEY							
Line No.....	99AGSL1	STN..	1408	STN..	1647	Kms. 9.560	
Line No.....		STN..		STN..		Kms.	
Line No.....		STN..		STN..		Kms. 0.000	
Line No.....		STN..		STN..		Kms. 0.000	Total Kms..... 9.560
Line No.....		STN..		STN..		Kms. 0.000	Cum. Kms. (Job)..... 25.880

CHAINING							
Line No.....	99AGSL1	STN..	1408	STN..	1647	Kms. 9.560	
Line No.....		STN..		STN..		Kms. 0.000	
Line No.....		STN..		STN..		Kms. 0.000	
Line No.....		STN..		STN..		Kms. 0.000	Total Kms..... 9.560
Line No.....		STN..		STN..		Kms. 0.000	Cum. Kms. (Job)..... 25.880

RANGING						COMMENTS :
Line No.....					Kms	
Line No.....					Kms	
Line No.....					Kms	Total Kms..... 0.000
Line No.....					Kms	Cum. Kms. (Job)..... 0.00

LINE CLEAR					
Dozer	Line No.....		Kms. Cut.....	Hrs.	Total Kms..... 0.000
Dozer	Line No.....		Kms. Cut.....	Hrs.	Cum. Kms. (Job)..... 0.000
Grader	Line No.....		Kms. Cut.....	Hrs.	Total Hours..... 0.00
Grader	Line No.....		Kms. Cut.....	Hrs.	Total Hrs (Job)..... 0.00

DRILLING					UPHOLES			
Rig No.	1	# Mtr	#Holes	Hrs	Unit 1	#Mtr	#Holes	# Hrs
Rig No.	2	# Mtr	#Holes	Hrs	Unit 2	#Mtr	#Holes	# Hrs
Total # Mts.....	0.0		Cum # Mtr (Job).....	0.0	Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0
Total Drilled.....	0		Cum Drilled (Job).....	0.00	Total Logged.....	0	Total Logged (Job)..	0
Total Hrs.....	0.00		Total Hrs (Job).....	0.00	Total Hrs.....	0.00	Total # Hrs(Job).....	0.00

COMMENTS :

DAY 5		TERRACORP						
DAILY PRODUCTION REPORT								
CREW 205			DATE..... 10-Sep-99					
Client.....		ANSIR		Party Manager. BOB STEPHENSON				
Survey Name.		LACHLAN		Client Rep..... DAVID JONSTONE				
Area.....		WEST WYALONG		Weather..... FINE				
State.....		NSW						
RECORDING			Kms.	SKIPS	PROFILES	TOTALS		
Line No.....	Rec	Rec	0.000	0	0	Profiles..... 0		
Line No.....	Rec	Rec				Skips..... 0		
Line No.....	Rec	Rec				Kms..... 0.000		
Line No.....	Rec	Rec				Cum Kms.. 0.000		
Line No.....	Rec	Rec						
HOURS		Travel Time..... 11.00		Down Time - Vibes 0.00		Extra Charges		
	Test Time..... 0.00		Recorder..... 0.00		Extra vibe Hrs..... 0.00			
	Recording Time... 0.00		Cables..... 0.00		Detours Charge Hrs 0.00			
Other Time	Line Change..... 0.00		ATU's..... 0.00		Washdowns.....Hrs 0.00			
	Recorder Move.. 0.00		Detours/Terr... 0.00		Extra Other Charge.. 0.00			
	Detours/Terrain.. 0.00		W / on Spread. 0.00		Total Extra.....Hrs 0.00			
	Experimental... 0.00		Stock Damage 0.00		Total Extra(Job).Hrs 0.00			
	Other Charge... 0.00		Other..... 0.00		Processing Hrs.....			
	Wait on Spread. 0.00							
	Weather Time... 0.00							
	Stock Damage.. 0.00		Total Down Time..... 0.00		Total Day.....Hrs 11.00			
	Safety Meeting.. 0.00		Cum. Down Time (Job) 0.00		Total Hrs (Job)..... 54.00			
COMMENTS:		Crew left Wentworth enroute to West Wyalong. Arrived West Wyalong. Parked equipment in yard and settled into motel						
SURVEY								
Line No.....	99AGSL1	STN.. 1647	STN.. 2182	Kms. 21.400				
Line No.....		STN..	STN..	Kms. 0.000				
Line No.....		STN..	STN..	Kms. 0.000				
Line No.....		STN..	STN..	Kms. 0.000	Total Kms.....	21.400		
Line No.....		STN..	STN..	Kms. 0.000	Cum. Kms. (Job).....	47.280		
CHAINING								
Line No.....	99AGSL1	STN.. 1647	STN.. 2182	Kms. 21.400				
Line No.....		STN..	STN..	Kms. 0.000				
Line No.....		STN..	STN..	Kms. 0.000				
Line No.....		STN..	STN..	Kms. 0.000	Total Kms.....	21.400		
Line No.....		STN..	STN..	Kms. 0.000	Cum. Kms. (Job).....	47.280		
RANGING								
COMMENTS :								
Line No.....		Kms						
Line No.....		Kms						
Line No.....		Kms			Total Kms.....	0.000		
Line No.....		Kms			Cum. Kms. (Job).....	0.00		
LINE CLEAR		Dozer	Line No.....	Kms. Cut.....	Hrs.	Total Kms..... 0.000		
		Dozer	Line No.....	Kms. Cut.....	Hrs.	Cum. Kms. (Job)..... 0.000		
		Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hours..... 0.00		
		Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hrs (Job)..... 0.00		
DRILLING				UPHOLES				
Rig No.	1	# Mtr	#Holes	Hrs	Unit 1	#Mtr	#Holes	# Hrs
Rig No.	2	# Mtr	#Holes	Hrs	Unit 2	#Mtr	#Holes	# Hrs
Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0		Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0
Total Drilled.....	0	Cum Drilled (Job).....	0.00		Total Logged.....	0	Total Logged (Job)..	0
Total Hrs.....	0.00	Total Hrs (Job).....	0.00		Total Hrs.....	0.00	Total # Hrs(Job).....	0.00
COMMENTS :								

DAY 6

TERRACORP

DAILY PRODUCTION REPORT

CREW 205

DATE..... 11-Sep-99

Client..... ANSIR
 Survey Name. LACHLAN
 Area..... WEST WYALONG
 State..... NSW

Party Manager. BOB STEPHENSON
 Client Rep..... DAVID JONSTONE
 Weather..... FINE

RECORDING			Kms.	SKIPS	PROFILES	TOTALS
Line No.....	Rec	Rec	0.000	0	0	Profiles..... 0
Line No.....	Rec	Rec	0.000	0	0	Skips..... 0
Line No.....	Rec	Rec				Kms..... 0.000
Line No.....	Rec	Rec				Cum Kms.. 0.000
Line No.....	Rec	Rec				

HOURS		Down Time - Vibes		Extra Charges	
Travel Time.....	2.50	Recorder.....	0.00	Extra vibe Hrs.....	0.00
Test Time.....	0.00	Cables.....	0.00	Detours Charge Hrs	0.00
Recording Time...	1.50	ATU's.....	0.00	Washdowns.....Hrs	0.00
Other Time		Detours/Terr...	0.00	Extra Other Charge..	0.00
Line Change.....	0.00	W / on Spread.	0.00	Total Extra.....Hrs	0.00
Recorder Move..	0.00	Stock Damage	0.00	Total Extra(Job).Hrs	0.00
Detours/Terrain.	0.00	Other.....	0.00	Processing Hrs.....	
Experimental...	0.00				
Other Charge...	7.00				
Wait on Spread.	0.00				
Weather Time...	0.00				
Stock Damage..	0.00	Total Down Time.....	0.00	Total Day.....Hrs	11.00
Safety Meeting..	0.00	Cum. Down Time (Job)	0.00	Total Hrs (Job).....	65.00

COMMENTS: Unpack equipment, check numbers, drive to line 99AGD-L1 lay spread.
 Run instrument test, Ram tests and check line.

SURVEY						
Line No.....	99MAR-R1	STN..	100	STN..	388	Kms. 2.880
Line No.....		STN..		STN..		Kms.
Line No.....		STN..		STN..		Kms.
Line No.....		STN..		STN..		Kms. 0.000
Line No.....		STN..		STN..		Kms. 0.000
						Total Kms..... 2.880
						Cum. Kms. (Job)..... 50.160

CHAINING						
Line No.....	99MAR-R1	STN..	100	STN..	388	Kms. 2.880
Line No.....		STN..		STN..		Kms. 0.000
Line No.....		STN..		STN..		Kms. 0.000
Line No.....		STN..		STN..		Kms. 0.000
Line No.....		STN..		STN..		Kms. 0.000
						Total Kms..... 2.880
						Cum. Kms. (Job)..... 50.160

RANGING					
Line No.....		Kms	0.000		
Line No.....		Kms			
Line No.....		Kms			
Line No.....		Kms			
				Total Kms.....	0.000
				Cum. Kms. (Job).....	0.00

LINE CLEAR					
Dozer	Line No.....	Kms. Cut.....	Hrs.	Total Kms..... 0.000	
Dozer	Line No.....	Kms. Cut.....	Hrs.	Cum. Kms. (Job)..... 0.000	
Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hours..... 0.00	
Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hrs (Job)..... 0.00	

DRILLING					UPHOLES			
Rig No.	1	# Mtr	#Holes	Hrs	Unit 1	#Mtr	#Holes	# Hrs
Rig No.	2	# Mtr	#Holes	Hrs	Unit 2	#Mtr	#Holes	# Hrs
Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0		Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0
Total Drilled.....	0	Cum Drilled (Job).....	0.00		Total Logged.....	0	Total Logged (Job)..	0
Total Hrs.....	0.00	Total Hrs (Job).....	0.00		Total Hrs.....	0.00	Total # Hrs(Job).....	0.00

COMMENTS: Survey and chain high resolution line.

DAY 7

TERRACORP

DAILY PRODUCTION REPORT

CREW 205

DATE..... 12-Sep-99

Client..... ANSIR
 Survey Name. LACHLAN
 Area..... WEST WYALONG
 State..... NSW

Party Manager. BOB STEPHENSON
 Client Rep..... DAVID JOHNSTONE
 Weather..... FINE

RECORDING				Kms.	SKIPS	PROFILES	TOTALS		
Line No.....	99AGS-L1	Rec	1000	Rec	1196	7.880	18	178	Profiles..... 178
Line No.....		Rec		Rec					Skips..... 18
Line No.....		Rec		Rec					Kms..... 7.880
Line No.....		Rec		Rec					Cum Kms.. 7.880
Line No.....		Rec		Rec					

HOURS		Travel Time.....	2.50	Down Time - Vibes	0.00	Extra Charges
	Test Time.....	0.50	Recorder.....	0.00	Extra vibe Hrs.....	0.00
	Recording Time...	5.00	Cables.....	0.00	Detours Charge Hrs	0.00
Other Time	Line Change.....	0.00	ATU's.....	0.00	Washdowns.....Hrs	0.00
	Recorder Move..	0.00	Detours/Terr...	0.00	Extra Other Charge..	0.00
	Detours/Terrain.	0.00	W / on Spread.	0.00	Total Extra.....Hrs	0.00
	Experimental...	4.00	Stock Damage	0.00	Total Extra(Job).Hrs	0.00
	Other Charge...	0.00	Other.....	0.00	Processing Hrs.....	
	Wait on Spread.	0.00				
	Weather Time...	0.00				
	Stock Damage..	0.00	Total Down Time.....	0.00	Total Day.....Hrs	12.00
	Safety Meeting..	0.00	Cum. Down Time (Job)	0.00	Total Hrs (Job).....	77.00

COMMENTS: Tape: Reel L 15199001 Line 99AGS-L1experimental (3490E)
 Tape: Reel L 15199002 Line 99AGS-L1,FF 78-159,VP1000-1086(3490E)
 Tape: Reel L 15199003 Line 99AGS-L1,FF160-241,VP1087-1177(3490E)

SURVEY						
Line No.....	99AGSL2	STN..	1000	STN..	1372	Kms. 14.880
Line No.....		STN..		STN..		Kms. 0.000
Line No.....		STN..		STN..		Kms. 0.000
Line No.....		STN..		STN..		Kms. 0.000
Line No.....		STN..		STN..		Kms. 0.000
						Total Kms..... 14.880
						Cum. Kms. (Job)..... 65.040

CHAINING						
Line No.....	99AGSL2	STN..	1000	STN..	1372	Kms. 14.880
Line No.....		STN..		STN..		Kms. 0.000
Line No.....		STN..		STN..		Kms. 0.000
Line No.....		STN..		STN..		Kms. 0.000
Line No.....		STN..		STN..		Kms. 0.000
						Total Kms..... 14.880
						Cum. Kms. (Job)..... 65.040

RANGING						COMMENTS :
Line No.....		Kms	0.000			
Line No.....		Kms				
Line No.....		Kms				
Line No.....		Kms				
						Total Kms..... 0.000
						Cum. Kms. (Job)..... 0.00

LINE CLEAR					
Dozer	Line No.....	Kms. Cut.....	Hrs.		Total Kms..... 0.000
Dozer	Line No.....	Kms. Cut.....	Hrs.		Cum. Kms. (Job)..... 0.000
Grader	Line No.....	Kms. Cut.....	Hrs.		Total Hours..... 0.00
Grader	Line No.....	Kms. Cut.....	Hrs.		Total Hrs (Job)..... 0.00

DRILLING					UPHOLES			
Rig No.	1	# Mtr	#Holes	Hrs	Unit 1	#Mtr	#Holes	# Hrs
Rig No.	2	# Mtr	#Holes	Hrs	Unit 2	#Mtr	#Holes	# Hrs
Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0		Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0
Total Drilled.....	0	Cum Drilled (Job).....	0.00		Total Logged.....	0	Total Logged (Job).....	0
Total Hrs.....	0.00	Total Hrs (Job).....	0.00		Total Hrs.....	0.00	Total # Hrs(Job).....	0.00

COMMENTS :

DAILY PRODUCTION REPORT

CREW 205

DATE..... 13-Sep-99

Client..... ANSIR
 Survey Name. LACHLAN
 Area..... WEST WYALONG
 State..... NSW

Party Manager. BOB STEPHENSON
 Client Rep..... DAVID JOHNSTONE
 Weather..... FINE

RECORDING				Kms.	SKIPS	PROFILES	TOTALS		
Line No.....	99AGS-L1	Rec	1197	Rec	1520	12.960	34	290	Profiles..... 290
Line No.....		Rec		Rec					Skips..... 34
Line No.....		Rec		Rec					Kms..... 12.960
Line No.....		Rec		Rec					Cum Kms.. 20.840
Line No.....		Rec		Rec					

HOURS		Travel Time.....	2.00	Down Time - Vibes	0.00	Extra Charges
	Test Time.....	0.50	Recorder.....	0.00	Extra vibe Hrs.....	0.00
	Recording Time...	8.50	Cables.....	0.00	Detours Charge Hrs	0.00
Other Time	Line Change.....	0.00	ATU's.....	0.00	Washdowns.....Hrs	0.00
	Recorder Move..	0.75	Detours/Terr...	0.00	Extra Other Charge..	0.00
	Detours/Terrain.	0.00	W / on Spread.	0.00	Total Extra.....Hrs	0.00
	Experimental...	0.00	Stock Damage	0.00	Total Extra(Job).Hrs	0.00
	Other Charge...	0.00	Other.....	0.00	Processing Hrs.....	0.00
	Wait on Spread.	0.00				
	Weather Time...	0.00				
	Stock Damage..	0.00	Total Down Time.....	0.00	Total Day.....Hrs	12.00
	Safety Meeting..	0.25	Cum. Down Time (Job)	0.00	Total Hrs (Job).....	89.00

COMMENTS: Tape: Reel L15199004, Line99AGS-L1, FF242-323, VP1178-1272(3490E)
 Tape: Reel L15199005, Line99AGS-L1, FF324-405, VP1273-1362(3490E)
 Tape: Reel L15199006, Line99AGS-L1, FF406-487, VP1363-1453(3490E)
 Tape: Reel L15199007, Line99AGS-L1, FF488-546, VP1454-1520(3490E)

SURVEY				Kms.		
Line No.....	99AGS-L2	STN..	1372	STN..	1850	Kms. 19.120
Line No.....		STN..		STN..		Kms. 0.000
Line No.....		STN..		STN..		Kms. 0.000
Line No.....		STN..		STN..		Kms. 0.000
Line No.....		STN..		STN..		Kms. 0.000
						Total Kms..... 19.120
						Cum. Kms. (Job)..... 84.160

CHAINING				Kms.		
Line No.....	99AGS-L2	STN..	1372	STN..	1850	Kms. 19.120
Line No.....		STN..		STN..		Kms.
Line No.....		STN..		STN..		Kms. 0.000
Line No.....		STN..		STN..		Kms. 0.000
Line No.....		STN..		STN..		Kms. 0.000
						Total Kms..... 19.120
						Cum. Kms. (Job)..... 84.160

LACING				COMMENTS :	
Line No.....		Kms	0.000		
Line No.....		Kms			
Line No.....		Kms			
Line No.....		Kms			
				Total Kms.....	0.000
				Cum. Kms. (Job)....	0.00

LINE CLEAR				Kms. Cut.....	Hrs.	Total Kms.....
Dozer	Line No.....					0.000
Dozer	Line No.....					Cum. Kms. (Job).... 0.000
Grader	Line No.....					Total Hours..... 0.00
Grader	Line No.....					Total Hrs (Job)..... 0.00

DRILLING				UPHOLES				
Rig No.	1	# Mtr	#Holes	Hrs	Unit 1	#Mtr	#Holes	# Hrs
Rig No.	2	# Mtr	#Holes	Hrs	Unit 2	#Mtr	#Holes	# Hrs
Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0		Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0
Total Drilled.....	0	Cum Drilled (Job).....	0.00		Total Logged.....	0	Total Logged (Job)..	0
Total Hrs.....	0.00	Total Hrs (Job).....	0.00		Total Hrs.....	0.00	Total # Hrs(Job).....	0.00

COMMENTS :

DAILY PRODUCTION REPORT

CREW 205

DATE..... 14-Sep-99

Client..... ANSIR
 Survey Name. LACHLAN
 Area..... WEST WYALONG
 State..... NSW

Party Manager. BOB STEPHENSON
 Client Rep..... DAVID JOHNSTONE
 Weather..... FINE

RECORDING	Kms.	SKIPS	PROFILES	TOTALS
Line No..... 99AGS-L1 Rec 1521 Rec 1854 13.360	17	317	Profiles..... 317	
Line No..... Rec Rec			Skips..... 17	
Line No..... Rec Rec			Kms..... 13.360	
Line No..... Rec Rec			Cum Kms.. 34.200	
Line No..... Rec Rec				

HOURS	Travel Time.....	1.75	Down Time - Vibes	0.00	Extra Charges
	Test Time.....	0.50	Recorder.....	0.00	Extra vibe Hrs..... 0.00
	Recording Time...	8.75	Cables.....	0.00	Detours Charge Hrs 0.00
Other Time	Line Change.....	0.00	ATU's.....	0.00	Washdowns.....Hrs 0.00
	Recorder Move..	1.00	Detours/Terr...	0.00	Extra Other Charge.. 0.00
	Detours/Terrain.	0.00	W / on Spread.	0.00	Total Extra.....Hrs 0.00
	Experimental...	0.00	Stock Damage	0.00	Total Extra(Job).Hrs 0.00
	Other Charge...	0.00	Other.....	0.00	Processing Hrs..... 0.00
	Wait on Spread.	0.00			
	Weather Time...	0.00			
	Stock Damage..	0.00	Total Down Time.....	0.00	Total Day.....Hrs 12.00
	Safety Meeting..	0.00	Cum. Down Time (Job)	0.00	Total Hrs (Job)..... 101.00

COMMENTS: Tape:Reel L 15199008 Line 99AGS-L1,FF547-628,VP1521-1607(3490E)
 Tape:Reel L 15199009 Line 99AGS-L1,FF629-708,VP1608-1691(3490E)
 Tape:Reel L 15199010 Line 99AGS-L1,FF709-790,VP1692-1777(3490E)
 Tape:Reel L 15199011 Line 99AGS-L1,FF791-863,VP1778-1854(3490E)

SURVEY	Line No.....	99AGSL2	STN..	1850	STN..	2262	Kms.	16.480	
	Line No.....		STN..		STN..		Kms.		
	Line No.....		STN..		STN..		Kms.	0.000	
	Line No.....		STN..		STN..		Kms.	0.000	Total Kms..... 16.480
	Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job)..... 100.640

CHAINING	Line No.....	99AGSL2	STN..	1850	STN..	2262	Kms.	16.480	
	Line No.....		STN..		STN..		Kms.	0.000	
	Line No.....		STN..		STN..		Kms.	0.000	
	Line No.....		STN..		STN..		Kms.	0.000	Total Kms..... 16.480
	Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job)..... 100.640

ANGING	Line No.....	Kms	0.000	COMMENTS :
	Line No.....	Kms		
	Line No.....	Kms		
	Line No.....	Kms		Total Kms..... 0.000
	Line No.....	Kms		Cum. Kms. (Job)..... 0.00

LINE CLEAR	Dozer	Line No.....	Kms. Cut.....	Hrs.	Total Kms.....	0.000
	Dozer	Line No.....	Kms. Cut.....	Hrs.	Cum. Kms. (Job).....	0.000
	Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hours.....	0.00
	Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hrs (Job).....	0.00

RILLING	Log No.	1	# Mtr	#Holes	Hrs	UPHOLES	Unit 1	#Mtr	#Holes	# Hrs
	Rig No.	2	# Mtr	#Holes	Hrs		Unit 2	#Mtr	#Holes	# Hrs
	Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0		Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0	
	Total Drilled.....	0	Cum Drilled (Job).....	0.00		Total Logged.....	0	Total Logged (Job)..	0	
	Total Hrs.....	0.00	Total Hrs (Job).....	0.00		Total Hrs.....	0.00	Total # Hrs(Job).....	0.00	

COMMENTS :

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 15-Sep-99

Client..... ANSIR	Party Manager. BOB STEPHENSON
Survey Name. LACHLAN	Client Rep..... DAVID JOHNSTONE
Area..... WEST WYALONG	Weather..... FINE
State..... NSW	

RECORDING	Kms.	SKIPS	PROFILES	TOTALS
Line No..... 99AGS-L1 Rec 1855 Rec 2182 13.120 25 303				Profiles..... 303
Line No..... Rec Rec				Skips..... 25
Line No..... Rec Rec				Kms..... 13.120
Line No..... Rec Rec				Cum Kms.. 47.320
Line No..... Rec Rec				

HOUS	Travel Time..... 1.50	Down Time - Vibes 0.00	Extra Charges
	Test Time..... 0.50	Recorder..... 0.00	Extra vibe Hrs..... 0.00
	Recording Time... 8.50	Cables..... 0.00	Detours Charge Hrs 0.00
Other Time	Line Change..... 0.00	ATU's..... 0.00	Washdowns.....Hrs 0.00
	Recorder Move.. 0.75	Detours/Terr... 0.00	Extra Other Charge.. 0.00
	Detours/Terrain. 0.00	W / on Spread. 0.00	Total Extra.....Hrs 0.00
	Experimental... 0.00	Stock Damage 0.00	Total Extra(Job).Hrs 0.00
	Other Charge... 0.75	Other..... 0.00	Processing Hrs..... 0.00
	Wait on Spread. 0.00		
	Weather Time... 0.00		
	Stock Damage.. 0.00	Total Down Time..... 0.00	Total Day.....Hrs 12.00
	Safety Meeting.. 0.00	Cum. Down Time (Job) 0.00	Total Hrs (Job)..... 113.00

COMMENTS: Tape:Reel L15199012 Line 99AGS-L1,FF864-945,VP1856-1939(3490E)
Tape:Reel L15199013 Line 99AGS-L1,FF946-1027,VP1940-2031(3490E)
Tape:Reel L15199014 Line 99AGS-L1,FF1028-1116,VP2032-2124(3490E)
Tape:Reel L15199015 Line 99AGS-L1,FF1117-1167,VP2125-2181(3490E)

SURVEY	Kms.	TOTALS
Line No..... 99AGS-L3 STN.. 1000 STN.. 1270 Kms. 10.800		
Line No..... STN.. STN.. Kms.		
Line No..... STN.. STN.. Kms. 0.000		
Line No..... STN.. STN.. Kms. 0.000		Total Kms..... 10.800
Line No..... STN.. STN.. Kms. 0.000		Cum. Kms. (Job)..... 111.440

CHAINING	Kms.	TOTALS
Line No..... 99AGS-L1 STN.. 1000 STN.. 1270 Kms. 10.800		
Line No..... 3 STN.. STN.. Kms.		
Line No..... STN.. STN.. Kms. 0.000		
Line No..... STN.. STN.. Kms. 0.000		Total Kms..... 10.800
Line No..... STN.. STN.. Kms. 0.000		Cum. Kms. (Job)..... 111.440

CHAINING	Kms	TOTALS
Line No..... Kms 0.000		
Line No..... Kms		
Line No..... Kms		Total Kms..... 0.000
Line No..... Kms		Cum. Kms. (Job)..... 0.00

LINE CLEAR	Kms. Cut.....	Hrs.	TOTALS
Dozer Line No.....			Total Kms..... 0.000
Dozer Line No.....			Cum. Kms. (Job)..... 0.000
Grader Line No.....			Total Hours..... 0.00
Grader Line No.....			Total Hrs (Job)..... 0.00

BILLING	UPHOLES
Log No. 1 # Mtr #Holes Hrs	Unit 1 #Mtr #Holes # Hrs
Log No. 2 # Mtr #Holes Hrs	Unit 2 #Mtr #Holes # Hrs
Total # Mts..... 0.0 Cum # Mtr (Job)..... 0.0	Total # Mtr..... 0.00 Total # Mtr(Job)..... 0.0
Total Drilled..... 0 Cum Drilled (Job)..... 0.00	Total Logged..... 0 Total Logged (Job).. 0
Total Hrs..... 0.00 Total Hrs (Job)..... 0.00	Total Hrs..... 0.00 Total # Hrs(Job)..... 0.00

COMMENTS: Line 99AGS-L1 completed Vibes walked back to Newell Hwy.

DAILY PRODUCTION REPORT

CREW 205

DATE..... 16-Sep-99

Client..... ANSIR
 Survey Name. MARSDEN
 Area..... WEST WYALONG
 State..... NSW

Party Manager. BOB STEPHENSON
 Client Rep..... DAVID JOHNSTONE
 Weather..... SHOWERS

RECORDING				Kms.	SKIPS	PROFILES	TOTALS
Line No.....	99MAR-R1	Rec 100	Rec 388	2.880	1	287	Profiles..... 287
Line No.....		Rec	Rec				Skips..... 1
Line No.....		Rec	Rec				Kms..... 2.880
Line No.....		Rec	Rec				Cum Kms.. 50.200
Line No.....		Rec	Rec				

HOURS		Travel Time.....	1.50	Down Time - Vibes	0.00	Extra Charges
	Test Time.....	0.50		Recorder.....	0.00	Extra vibe Hrs..... 0.00
	Recording Time...	3.75		Cables.....	0.00	Detours Charge Hrs 0.00
Other Time	Line Change.....	0.00		ATUs.....	0.00	Washdowns.....Hrs 0.00
	Recorder Move..	0.00		Detours/Terr...	0.00	Extra Other Charge.. 0.00
	Detours/Terrain.	0.00		W / on Spread.	0.00	Total Extra.....Hrs 0.00
	Experimental...	2.00		Stock Damage	0.00	Total Extra(Job).Hrs 0.00
	Other Charge...	2.00		Other.....	0.00	Processing Hrs..... 0.00
	Wait on Spread.	0.75				
	Weather Time...	0.00				
	Stock Damage..	0.00		Total Down Time.....	0.00	Total Day.....Hrs 10.50
	Safety Meeting..	0.00		Cum. Down Time (Job)	0.00	Total Hrs (Job)..... 123.50

COMMENTS: Tape: Reel L15199016 Line 99MAR-R1,FF1168-1207,VP100-105(3490E)
 Tape: Reel L15199017 Line 99MAR-R1,FF1208-1493,VP100-388(3490E)
 Other charge 2hrs picking up spread.
 Wet and windy all day, light showers of rain, wet and slippery conditions.

SURVEY					
Line No.....	99ASG-L3	STN.. 1270	STN.. 1630	Kms. 14.400	
Line No.....		STN..	STN..	Kms. 0.000	
Line No.....		STN..	STN..	Kms. 0.000	
Line No.....		STN..	STN..	Kms. 0.000	Total Kms..... 14.400
Line No.....		STN..	STN..	Kms. 0.000	Cum. Kms. (Job)..... 125.840

TRAINING					
Line No.....	99ASG-L3	STN.. 1270	STN.. 1630	Kms. 14.400	
Line No.....		STN..	STN..	Kms. 0.000	
Line No.....		STN..	STN..	Kms. 0.000	
Line No.....		STN..	STN..	Kms. 0.000	Total Kms..... 14.400
Line No.....		STN..	STN..	Kms. 0.000	Cum. Kms. (Job)..... 125.840

DRAINING		COMMENTS :			
Line No.....	Kms 0.000				
Line No.....	Kms				
Line No.....	Kms				Total Kms..... 0.000
Line No.....	Kms				Cum. Kms. (Job)..... 0.00

LINE CLEAR					
Dozer	Line No.....	Kms. Cut.....	Hrs.	Total Kms.....	0.000
Dozer	Line No.....	Kms. Cut.....	Hrs.	Cum. Kms. (Job).....	0.000
Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hours.....	0.00
Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hrs (Job).....	0.00

DRILLING				UPHOLES				
Rig No.	1	# Mtr	#Holes	Hrs	Unit 1	#Mtr	#Holes	# Hrs
Rig No.	2	# Mtr	#Holes	Hrs	Unit 2	#Mtr	#Holes	# Hrs
Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0		Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0
Total Drilled.....	0	Cum Drilled (Job).....	0.00		Total Logged.....	0	Total Logged (Job)..	0
Total Hrs.....	0.00	Total Hrs (Job).....	0.00		Total Hrs.....	0.00	Total # Hrs(Job).....	0.00

COMMENTS :

DAILY PRODUCTION REPORT

CREW 205

DATE..... 17-Sep-99

Client..... ANSIR
Survey Name. LACHLAN
Area..... WEST WYALONG
State..... NSW

Party Manager. BOB STEPHENSON
Client Rep..... DAVID JOHNSTONE
Weather..... SHOWERS

RECORDING			Kms.	SKIPS	PROFILES	TOTALS
Line No.....	Rec	Rec	0.000	0	0	Profiles..... 0
Line No.....	Rec	Rec	0.000	0	0	Skips..... 0
Line No.....	Rec	Rec				Kms..... 0.000
Line No.....	Rec	Rec				Cum Kms.. 50.200
Line No.....	Rec	Rec				

HOUS	Travel Time.....	0.00	Down Time - Vibes	0.00	Extra Charges	
	Test Time.....	0.00	Recorder.....	0.00	Extra vibe Hrs.....	0.00
	Recording Time...	0.00	Cables.....	0.00	Detours Charge Hrs	0.00
Other Time	Line Change.....	0.00	ATU's.....	0.00	Washdowns.....Hrs	0.00
	Recorder Move..	0.00	Detours/Terr...	0.00	Extra Other Charge..	0.00
	Detours/Terrain.	0.00	W / on Spread.	0.00	Total Extra.....Hrs	0.00
	Experimental...	0.00	Stock Damage	0.00	Total Extra(Job).Hrs	0.00
	Other Charge...	0.00	Other.....	0.00	Processing Hrs.....	0.00
	Wait on Spread.	0.00				
	Weather Time...	10.00				
	Stock Damage..	0.00	Total Down Time.....	0.00	Total Day.....Hrs	10.00
	Safety Meeting..	0.00	Cum. Down Time (Job)	0.00	Total Hrs (Job).....	133.50

COMMENTS: Stand by due to wet and slippery conditions caused by rain.

SURVEY	Line No.....	99AGSL3	STN..	1630	STN..	2008	Kms.	15.120	
	Line No.....		STN..		STN..		Kms.	0.000	
	Line No.....		STN..		STN..		Kms.	0.000	
	Line No.....		STN..		STN..		Kms.	0.000	Total Kms..... 15.120
	Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job)..... 140.960

CHAINING	Line No.....	99AGSL3	STN..	1630	STN..	2008	Kms.	15.120	
	Line No.....		STN..		STN..		Kms.	0.000	
	Line No.....		STN..		STN..		Kms.	0.000	
	Line No.....		STN..		STN..		Kms.	0.000	Total Kms..... 15.120
	Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job)..... 140.960

RANGING	Line No.....	Kms	0.000			
	Line No.....	Kms				
	Line No.....	Kms				Total Kms..... 0.000
	Line No.....	Kms				Cum. Kms. (Job)..... 0.00

LINE CLEAR	Dozer	Line No.....	Kms. Cut.....	Hrs.	Total Kms.....	0.000
	Dozer	Line No.....	Kms. Cut.....	Hrs.	Cum. Kms. (Job).....	0.000
	Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hours.....	0.00
	Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hrs (Job).....	0.00

DRILLING	Rig No.	1	# Mtr	#Holes	Hrs	UPHOLES	Unit 1	#Mtr	#Holes	# Hrs
	Rig No.	2	# Mtr	#Holes	Hrs		Unit 2	#Mtr	#Holes	# Hrs
	Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0			Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0
	Total Drilled.....	0	Cum Drilled (Job).....	0.00			Total Logged.....	0	Total Logged (Job)..	0
	Total Hrs.....	0.00	Total Hrs (Job).....	0.00			Total Hrs.....	0.00	Total # Hrs(Job).....	0.00

COMMENTS :

DAILY PRODUCTION REPORT

CREW 205

DATE..... 18-Sep-99

Client..... ANSIR
Survey Name. LACHLAN
Area..... WEST WYALONG
State..... NSW

Party Manager. BOB STEPHENSON
Client Rep..... DAVID JOHNSTONE
Weather..... FINE

RECORDING					Kms.	SKIPS	PROFILES	TOTALS
Line No.....	99AGSL2	Rec	1016	Rec	1302	11.440	8	278
Line No.....		Rec		Rec				Profiles..... 278
Line No.....		Rec		Rec				Skips..... 8
Line No.....		Rec		Rec				Kms..... 11.440
Line No.....		Rec		Rec				Cum Kms.. 61.640

HOURS	Travel Time.....	1.50	Down Time - Vibes	0.00	Extra Charges
	Test Time.....	0.50	Recorder.....	0.00	Extra vibe Hrs..... 0.00
	Recording Time...	7.50	Cables.....	0.00	Detours Charge Hrs 0.00
Other Time	Line Change.....	1.50	ATU's.....	0.00	Washdowns.....Hrs 0.00
	Recorder Move..	0.00	Detours/Terr...	0.00	Extra Other Charge.. 0.00
	Detours/Terrain.	0.00	W / on Spread.	0.00	Total Extra.....Hrs 0.00
	Experimental...	0.00	Stock Damage	0.00	Total Extra(Job).Hrs 0.00
	Other Charge...	0.00	Other.....	0.00	Processing Hrs..... 0.00
	Wait on Spread.	1.00			
	Weather Time...	0.00			
	Stock Damage..	0.00	Total Down Time.....	0.00	Total Day.....Hrs 12.00
	Safety Meeting..	0.00	Cum. Down Time (Job)	0.00	Total Hrs (Job)..... 145.50

COMMENTS: Tape:Reel L15199018,Line99AGS-L2,FF1494-1575,VP1016-1097(3490E)
Tape:Reel L15199019,Line99AGS-L2,FF1576-1657,VP1098-1187(3490E)
Tape:Reel L15199020,Line 99AGS-L2,FF1658-1739,VP1188-1269(3490E)
Shift vibes from line99MAR-R1 to line 99AGS-L2,lav rest of spread not layed due to rain on the 16th and 17th.

SURVEY	Line No.....	99AGSL3	STN..	2008	STN..	2312	Kms.	12.160	
	Line No.....		STN..		STN..		Kms.	0.000	
	Line No.....		STN..		STN..		Kms.	0.000	
	Line No.....		STN..		STN..		Kms.	0.000	Total Kms..... 12.160
	Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job)..... 153.120

CHAINING	Line No.....	99AGSL3	STN..	2008	STN..	2312	Kms.	12.160	
	Line No.....		STN..		STN..		Kms.	0.000	
	Line No.....		STN..		STN..		Kms.	0.000	
	Line No.....		STN..		STN..		Kms.	0.000	Total Kms..... 12.160
	Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job)..... 153.120

RANGING	Line No.....	Kms	0.000	COMMENTS :	
	Line No.....	Kms			
	Line No.....	Kms			Total Kms..... 0.000
	Line No.....	Kms			Cum. Kms. (Job)..... 0.00

LINE CLEAR	Dozer	Line No.....	Kms. Cut.....	Hrs.	Total Kms..... 0.000
	Dozer	Line No.....	Kms. Cut.....	Hrs.	Cum. Kms. (Job)..... 0.000
	Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hours..... 0.00
	Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hrs (Job)..... 0.00

DRILLING	Rig No.	1	# Mtr	#Holes	Hrs	UPHOLES	Unit 1	#Mtr	#Holes	# Hrs
	Rig No.	2	# Mtr	#Holes	Hrs		Unit 2	#Mtr	#Holes	# Hrs
	Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0			Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0
	Total Drilled.....	0	Cum Drilled (Job).....	0.00			Total Logged.....	0	Total Logged (Job)..	0
	Total Hrs.....	0.00	Total Hrs (Job).....	0.00			Total Hrs.....	0.00	Total # Hrs(Job).....	0.00

COMMENTS :

DAILY PRODUCTION REPORT

CREW 205

DATE..... 19-Sep-99

Client..... ANSIR
 Survey Name. LACHLAN
 Area..... WEST WYALONG
 State..... NSW

Party Manager. BOB STEPHENSON
 Client Rep..... DAVID JOHNSTONE
 Weather..... FINE

RECORDING						Kms.	SKIPS	PROFILES	TOTALS
Line No.....	99AGSL2	Rec	1304	Rec	1902	24.000	14	286	Profiles..... 286
Line No.....		Rec		Rec		0.000	0	0	Skips..... 14
Line No.....		Rec		Rec					Kms..... 24.000
Line No.....		Rec		Rec					Cum Kms.. 85.640
Line No.....		Rec		Rec					

HOURS	Travel Time.....	1.50	Down Time - Vibes	0.00	Extra Charges
	Test Time.....	0.50	Recorder.....	0.00	Extra vibe Hrs..... 0.00
Other Time	Recording Time...	8.50	Cables.....	0.00	Detours Charge Hrs 0.00
	Line Change.....	0.00	ATU's.....	0.00	Washdowns.....Hrs 0.00
	Recorder Move..	1.50	Detours/Terr...	0.00	Extra Other Charge.. 0.00
	Detours/Terrain.	0.00	W / on Spread.	0.00	Total Extra.....Hrs 0.00
	Experimental...	0.00	Stock Damage	0.00	Total Extra(Job).Hrs 0.00
	Other Charge...	0.00	Other.....	0.00	Processing Hrs..... 0.00
	Wait on Spread.	0.00			
	Weather Time...	0.00			
	Stock Damage..	0.00	Total Down Time.....	0.00	Total Day.....Hrs 12.00
	Safety Meeting..	0.00	Cum. Down Time (Job)	0.00	Total Hrs (Job)..... 157.50

COMMENTS: Tape:Reel L15199021, Line 99AGS-L2,FF1740-1820,VP1270-1408(3490E)
 Tape:Reel L15199022, Line 99AGS-L2,FF1821-1902,VP1410-1574(3490E)
 Tape:Reel L15199023, Line 99AGS-L2,FF1903-1984,VP1576-1746(3490E)
 Tape:Reel L15199024, Line 99AGS-L2,FF1985-2058,VP1750-1902(3490E)

SURVEY									
Line No.....	99AGSL3	STN..	2312	STN..	2703	Kms.	15.640		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	15.640
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	168.760

CHAINING							
Line No.....	99AGSL3	STN..	2312	STN..	2703	Kmfs.	15.640
Line No.....		STN..		STN..		Kms.	0.000
Line No.....		STN..		STN..		Kms.	0.000
Line No.....		STN..		STN..		Kms.	0.000
Line No.....		STN..		STN..		Kms.	0.000
Line No.....		STN..		STN..		Kms.	0.000
							Total Kms..... 15.640
							Cum. Kms. (Job)..... 168.760

RANGING				COMMENTS :			
Line No.....		Kms	0.000				
Line No.....		Kms					
Line No.....		Kms					Total Kms..... 0.000
Line No.....		Kms					Cum. Kms. (Job)..... 0.00

LINE CLEAR	Dozer	Line No.....	Kms. Cut.....	Hrs.	Total Kms.....	0.000
	Dozer	Line No.....	Kms. Cut.....	Hrs.	Cum. Kms. (Job).....	0.000
	Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hours.....	0.00
	Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hrs (Job).....	0.00

DRILLING					UPHOLES			
Rig No.	1	# Mtr	#Holes	Hrs	Unit 1	#Mtr	#Holes	# Hrs
Rig No.	2	# Mtr	#Holes	Hrs	Unit 2	#Mtr	#Holes	# Hrs
Total # Mts.....	0.0	Cum # Mtr (Job).....		0.0	Total # Mtr.....	0.00	Total # Mtr(Job)..... 0.0	
Total Drilled.....	0	Cum Drilled (Job).....		0.00	Total Logged.....	0	Total Logged (Job).. 0	
Total Hrs.....	0.00	Total Hrs (Job).....		0.00	Total Hrs.....	0.00	Total # Hrs(Job)..... 0.00	

COMMENTS : Line 99AGS-L2 recorded at 60 fold as of the start of day 19/09/99

TERRACORP
DAILY PRODUCTION REPORT

CREW 205

DATE..... 20-Sep-99

Client..... ANSIR
Survey Name. LACHLAN
Area..... WEST WYALONG
State..... NSW

Party Manager. BOB STEPHENSON
Client Rep..... DAVID JOHNSTONE
Weather..... FINE

RECORDING	Kms.	SKIPS	PROFILES	TOTALS
Line No..... 99AGSL2 Rec 1906 Rec 2260 14.400 15 165				Profiles..... 165
Line No..... Rec Rec				Skips..... 15
Line No..... Rec Rec				Kms..... 14.400
Line No..... Rec Rec				Cum Kms.. 100.040
Line No..... Rec Rec				

HOURS	Travel Time..... 1.50	Down Time - Vibes 0.00	Extra Charges
	Test Time..... 0.50	Recorder..... 0.00	Extra vibe Hrs..... 0.00
	Recording Time... 5.00	Cables..... 0.00	Detours Charge Hrs 0.00
Other Time	Line Change..... 3.25	ATU's..... 0.00	Washdowns.....Hrs 0.00
	Recorder Move.. 0.75	Detours/Terr... 0.00	Extra Other Charge.. 0.00
	Detours/Terrain. 0.00	W / on Spread. 0.00	Total Extra.....Hrs 0.00
	Experimental... 0.00	Stock Damage 0.00	Total Extra(Job).Hrs 0.00
	Other Charge... 1.00	Other..... 0.00	Processing Hrs..... 0.00
	Wait on Spread. 0.00		
	Weather Time... 0.00		
	Stock Damage.. 0.00	Total Down Time..... 0.00	Total Day.....Hrs 12.00
	Safety Meeting.. 0.00	Cum. Down Time (Job) 0.00	Total Hrs (Job)..... 169.50

COMMENTS: Tape:Reel L15199025,Line 99AGS-L2,FF2059-2140,VP1906-2086(3490E)
Tape:Reel L15199026,Line 99AGS-L2,FF2141-2222,VP2088-2256(3490E)
Tape:Reel L15199027,Line 99AGS-L2,FF2223-2224,VP2258-2260(3490E)
Line 99AGS-L2 completed, moved spread to line 99AGS-L3,not enough spread layed to commence recording.

SURVEY	Line No..... 99AGSL3 STN.. 2703 STN.. 3004 Kms. 12.040	
	Line No..... STN.. STN.. Kms. 0.000	
	Line No..... STN.. STN.. Kms. 0.000	
	Line No..... STN.. STN.. Kms. 0.000	Total Kms..... 12.040
	Line No..... STN.. STN.. Kms. 0.000	Cum. Kms. (Job)..... 180.800

CHAINING	Line No..... 99AGSL3 STN.. 2703 STN.. 3004 Kms. 12.040	
	Line No..... STN.. STN.. Kms. 0.000	
	Line No..... STN.. STN.. Kms. 0.000	
	Line No..... STN.. STN.. Kms. 0.000	Total Kms..... 12.040
	Line No..... STN.. STN.. Kms. 0.000	Cum. Kms. (Job)..... 180.800

ANGING	Line No..... Kms 0.000	COMMENTS :
	Line No..... Kms	
	Line No..... Kms	Total Kms..... 0.000
	Line No..... Kms	Cum. Kms. (Job)..... 0.00

LINE CLEAR	Dozer Line No..... Kms. Cut..... Hrs.	Total Kms..... 0.000
	Dozer Line No..... Kms. Cut..... Hrs.	Cum. Kms. (Job)..... 0.000
	Grader Line No..... Kms. Cut..... Hrs.	Total Hours..... 0.00
	Grader Line No..... Kms. Cut..... Hrs.	Total Hrs (Job)..... 0.00

DRILLING	Unit No. 1 # Mtr #Holes Hrs	UPHOLES	Unit 1 #Mtr #Holes # Hrs
	Unit No. 2 # Mtr #Holes Hrs		Unit 2 #Mtr #Holes # Hrs
Total # Mts..... 0.0	Cum # Mtr (Job)..... 0.0	Total # Mtr..... 0.00	Total # Mtr(Job)..... 0.0
Total Drilled..... 0	Cum Drilled (Job)..... 0.00	Total Logged..... 0	Total Logged (Job).. 0
Total Hrs..... 0.00	Total Hrs (Job)..... 0.00	Total Hrs..... 0.00	Total # Hrs(Job)..... 0.00

COMMENTS :

DAILY PRODUCTION REPORT

CREW 205

DATE.....21-Sep-99

Client..... ANSIR
 Survey Name. LACHLAN
 Area..... WEST WYALONG
 State..... NSW

Party Manager. BOB STEPHENSON
 Client Rep..... DAVID JOHNSTONE
 Weather..... FINE

RECORDING			Kms.	SKIPS	PROFILES	TOTALS
Line No.....	99AGSL3	Rec 1000	Rec 1616	24.640	10	298
Line No.....		Rec	Rec			Profiles..... 298
Line No.....		Rec	Rec			Skips..... 10
Line No.....		Rec	Rec			Kms..... 24.640
Line No.....		Rec	Rec			Cum Kms.. 124.680

HOURS	Travel Time.....	1.50	Down Time - Vibes	0.00	Extra Charges
	Test Time.....	0.50	Recorder.....	0.00	Extra vibe Hrs..... 0.00
	Recording Time...	9.00	Cables.....	0.00	Detours Charge Hrs 0.00
Other Time	Line Change.....	0.00	ATU's.....	0.00	Washdowns.....Hrs 0.00
	Recorder Move..	0.75	Detours/Terr... 0.00		Extra Other Charge.. 0.00
	Detours/Terrain..	0.00	W / on Spread. 0.00		Total Extra.....Hrs 0.00
	Experimental...	0.00	Stock Damage 0.00		Total Extra(Job).Hrs 0.00
	Other Charge...	0.00	Other.....	0.00	Processing Hrs..... 0.00
	Wait on Spread.	0.00			
	Weather Time...	0.00			
	Stock Damage..	0.00	Total Down Time.....	0.00	Total Day.....Hrs 11.75
	Safety Meeting..	0.00	Cum. Down Time (Job)	0.00	Total Hrs (Job)..... 181.25

COMMENTS: Tape:Reel L15199028,Line99AGS-L3,FF2225-2306,VP1000-1166 (3490E)
 Tape:Reel L15199029,Line99AGS-L3,FF2307-2388,VP1168-1330 (3490E)
 Tape:Reel L15199030,Line99AGS-L3,FF2389-2470,VP1332-1508 (3490E)
 Tape:Reel L15199031,Line99AGS-L3,FF2471-2523,VP1510-1616 (3490E)

SURVEY	Line No.....	99AGSL3	STN.. 3004	STN.. 3241	Kms. 9.480	
	Line No.....		STN..	STN..	Kms. 0.000	
	Line No.....		STN..	STN..	Kms. 0.000	
	Line No.....		STN..	STN..	Kms. 0.000	Total Kms..... 9.480
	Line No.....		STN..	STN..	Kms. 0.000	Cum. Kms. (Job)..... 190.280

CHAINING	Line No.....	99AGSL3	STN.. 3004	STN.. 3241	Kms. 9.480	
	Line No.....		STN..	STN..	Kms. 0.000	
	Line No.....		STN..	STN..	Kms. 0.000	
	Line No.....		STN..	STN..	Kms. 0.000	Total Kms..... 9.480
	Line No.....		STN..	STN..	Kms. 0.000	Cum. Kms. (Job)..... 190.280

ANGING	COMMENTS :				
Line No.....		Kms 0.000			
Line No.....		Kms			
Line No.....		Kms			Total Kms..... 0.000
Line No.....		Kms			Cum. Kms. (Job)..... 0.00

LINE CLEAR	Dozer	Line No.....	Kms. Cut.....	Hrs.	Total Kms..... 0.000
	Dozer	Line No.....	Kms. Cut.....	Hrs.	Cum. Kms. (Job)..... 0.000
	Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hours..... 0.00
	Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hrs (Job)..... 0.00

DRILLING					UPHOLES				
Log No.	1	# Mtr	#Holes	Hrs	Unit 1	#Mtr	#Holes	# Hrs	
Log No.	2	# Mtr	#Holes	Hrs	Unit 2	#Mtr	#Holes	# Hrs	
Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0		Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0	
Total Drilled.....	0	Cum Drilled (Job).....	0.00		Total Logged.....	0	Total Logged (Job)..	0	
Total Hrs.....	0.00	Total Hrs (Job).....	0.00		Total Hrs.....	0.00	Total # Hrs(Job).....	0.00	

COMMENTS : Commenced recording on line 99AGS-L3. Survey and chaining completed.

TERRACORP

DAILY PRODUCTION REPORT

CREW 205

DATE..... 22-Sep-99

Client..... ANSIR
 Survey Name. LACHLAN
 Area..... WEST WYALONG
 State..... NSW

Party Manager. BOB STEPHENSON
 Client Rep..... DAVID JOHNSTONE
 Weather..... FINE

RECORDING						Kms.	SKIPS	PROFILES	TOTALS
Line No.....	99AGSL3	Rec	1618	Rec	1996	15.200	4	186	Profiles..... 226
Line No.....	99AGSL3	Rec	1996	Rec	2047	2.040	11	40	Skips..... 15
Line No.....		Rec		Rec					Kms..... 17.240
Line No.....		Rec		Rec					Cum Kms.. 141.920
Line No.....		Rec		Rec					

HOURS	Travel Time.....	1.00	Down Time - Vibes	0.00	Extra Charges	
	Test Time.....	0.50	Recorder.....	1.50	Extra vibe Hrs.....	0.00
	Recording Time...	7.00	Cables.....	0.50	Detours Charge Hrs	0.00
Other Time	Line Change.....	0.00	ATU's.....	0.00	Washdowns.....Hrs	0.00
	Recorder Move..	1.50	Detours/Terr...	0.00	Extra Other Charge..	0.00
	Detours/Terrain.	0.00	W / on Spread.	0.00	Total Extra.....Hrs	0.00
	Experimental...	0.00	Stock Damage	0.00	Total Extra(Job).Hrs	0.00
	Other Charge...	0.00	Other.....	0.00	Processing Hrs.....	0.00
	Wait on Spread.	0.00				
	Weather Time...	0.00				
	Stock Damage..	0.00	Total Down Time.....	2.00	Total Day.....Hrs	12.00
	Safety Meeting..	0.00	Cum. Down Time (Job)	2.00	Total Hrs (Job).....	193.25

COMMENTS: Tape:Reel L15199032, Line 99AGS-L3,FF2524-2611,VP1618-1792(3490E)
 Tape:Reel L15199033, Line 99AGS-L3,FF2612-2693,VP1794-1962(3490E)
 Tape:Reel L15199034, Line 99AGS-L3,FF2696-2749,VP1964-2047(3490E)
 Stn 1618 to Stn 1996 recorded at 60 fold, Stn 1996 to Stn 2047 recorded at 120 fold.

SURVEY						
Line No.....	STN..	STN..	Kms.	0.000		
Line No.....	STN..	STN..	Kms.	0.000		
Line No.....	STN..	STN..	Kms.	0.000		
Line No.....	STN..	STN..	Kms.	0.000	Total Kms.....	0.000
Line No.....	STN..	STN..	Kms.	0.000	Cum. Kms. (Job).....	190.280

CHAINING						
Line No.....	STN..	STN..	Kms.	0.000		
Line No.....	STN..	STN..	Kms.	0.000		
Line No.....	STN..	STN..	Kms.	0.000		
Line No.....	STN..	STN..	Kms.	0.000	Total Kms.....	0.000
Line No.....	STN..	STN..	Kms.	0.000	Cum. Kms. (Job).....	190.280

CHANGING						
Line No.....	Kms	0.000				
Line No.....	Kms					
Line No.....	Kms				Total Kms.....	0.000
Line No.....	Kms				Cum. Kms. (Job).....	0.00

LINE CLEAR	Dozer	Line No.....	Kms. Cut.....	Hrs.	Total Kms.....	0.000
	Dozer	Line No.....	Kms. Cut.....	Hrs.	Cum. Kms. (Job).....	0.000
	Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hours.....	0.00
	Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hrs (Job).....	0.00

DRILLING					UPHOLES				
Rig No.	1	# Mtr	#Holes	Hrs	Unit 1	#Mtr	#Holes	# Hrs	
Rig No.	2	# Mtr	#Holes	Hrs	Unit 2	#Mtr	#Holes	# Hrs	
Total # Mts.....	0.0	Cum # Mtr (Job).....		0.0	Total # Mtr.....	0.00	Total # Mtr(Job).....		0.0
Total Drilled.....	0	Cum Drilled (Job).....		0.00	Total Logged.....	0	Total Logged (Job)..		0
Total Hrs.....	0.00	Total Hrs (Job).....		0.00	Total Hrs.....	0.00	Total # Hrs(Job).....		0.00

COMMENTS: Surveyors running final reports. Completed project

DAILY PRODUCTION REPORT

CREW 205

DATE:.....23-Sep-99

Client..... ANSIR
 Survey Name. LACHLAN
 Area..... WEST WYALONG
 State..... NSW

Party Manager. BOB STEPHENSON
 Client Rep..... DAVID JOHNSTONE
 Weather..... FINE

RECORDING					Kms.	SKIPS	PROFILES	TOTALS
Line No.....	99AGSL3	Rec 2048	Rec 2219	6.880	64	108	Profiles.....	241
Line No.....	99AGSL3	Rec 2220	Rec 2512	11.680	13	133	Skips.....	77
Line No.....		Rec	Rec				Kms.....	18.560
Line No.....		Rec	Rec				Cum Kms..	160.480
Line No.....		Rec	Rec					

HOURS	Travel Time.....	1.50	Down Time - Vibes	0.00	Extra Charges	
	Test Time.....	0.50	Recorder.....	0.50	Extra vibe Hrs.....	0.00
	Recording Time...	7.25	Cables.....	0.00	Detours Charge Hrs	0.00
Other Time	Line Change.....	0.00	ATU's.....	0.00	Washdowns.....Hrs	0.00
	Recorder Move..	1.75	Detours/Terr...	0.00	Extra Other Charge..	0.00
	Detours/Terrain.	0.00	W / on Spread.	0.00	Total Extra.....Hrs	0.00
	Experimental...	0.00	Stock Damage	0.00	Total Extra(Job).Hrs	0.00
	Other Charge...	0.00	Other.....	0.00	Processing Hrs.....	0.00
	Wait on Spread.	0.00				
	Weather Time...	0.00				
	Stock Damage..	0.00	Total Down Time.....	0.50	Total Day.....Hrs	11.50
	Safety Meeting..	0.00	Cum. Down Time (Job)	2.50	Total Hrs (Job).....	204.75

COMMENTS: Tape:Reel L15199035,Line 99AGS-L3,FF2750-2831,VP2082-2185(3490E)
 Tape:Reel L15199036,Line 99AGS-L3,FF2832-2913,VP2186-2342(3490E)
 Tape:Reel L15199037,Line 99AGS-L3,FF2914-2990,VP2344-2512(3490E)
 STn 2048-2219 recorded at 120 fold, Stn 2220-2512 recorded at 60 fold.

SURVEY						
Line No.....	STN..	STN..	Kms.	0.000		
Line No.....	STN..	STN..	Kms.	0.000		
Line No.....	STN..	STN..	Kms.	0.000		
Line No.....	STN..	STN..	Kms.	0.000	Total Kms.....	0.000
Line No.....	STN..	STN..	Kms.	0.000	Cum. Kms. (Job).....	190.280

CHAINING						
Line No.....	STN..	STN..	Kms.	0.000		
Line No.....	STN..	STN..	Kms.	0.000		
Line No.....	STN..	STN..	Kms.	0.000		
Line No.....	STN..	STN..	Kms.	0.000	Total Kms.....	0.000
Line No.....	STN..	STN..	Kms.	0.000	Cum. Kms. (Job).....	190.280

ANGING						
Line No.....	Kms	0.000				
Line No.....	Kms					
Line No.....	Kms				Total Kms.....	0.000
Line No.....	Kms				Cum. Kms. (Job).....	0.00

LINE CLEAR	Dozer	Line No.....	Kms. Cut.....	Hrs.	Total Kms.....	0.000
	Dozer	Line No.....	Kms. Cut.....	Hrs.	Cum. Kms. (Job).....	0.000
	Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hours.....	0.00
	Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hrs (Job).....	0.00

DRILLING					UPHOLES					
Log No.	1	# Mtr	#Holes	Hrs	Unit 1	#Mtr	#Holes	# Hrs		
Log No.	2	# Mtr	#Holes	Hrs	Unit 2	#Mtr	#Holes	# Hrs		
Total # Mts.....		0.0	Cum # Mtr (Job).....		0.0	Total # Mtr.....		0.00	Total # Mtr(Job).....	0.0
Total Drilled.....		0	Cum Drilled (Job).....		0.00	Total Logged.....		0	Total Logged (Job)..	0
Total Hrs.....		0.00	Total Hrs (Job).....		0.00	Total Hrs.....		0.00	Total # Hrs(Job).....	0.00

COMMENTS :

DAY 19

TERRACORP

DAILY PRODUCTION REPORT

CREW 205

DATE..... 24-Sep-99

Client..... ANSIR
 Survey Name. LACHLAN
 Area..... WEST WYALONG
 State..... NSW

Party Manager. BOB STEPHENSON
 Client Rep..... DAVID JOHNSTONE
 Weather..... FINE

RECORDING				Kms.	SKIPS	PROFILES	TOTALS
Line No.....	99AGS-L3	Rec 2514	Rec 3048	21.360	19	248	Profiles..... 248
Line No.....		Rec	Rec				Skips..... 19
Line No.....		Rec	Rec				Kms..... 21.360
Line No.....		Rec	Rec				Cum Kms.. 181.840
Line No.....		Rec	Rec				

HOURS		Down Time - Vibes		Extra Charges
Travel Time.....	1.50	Recorder.....	0.00	Extra vibe Hrs..... 0.00
Test Time.....	0.50	Cables.....	0.00	Detours Charge Hrs 0.00
Recording Time...	7.75	ATU's.....	0.00	Washdowns.....Hrs 0.00
Other Time		Detours/Terr...	0.00	Extra Other Charge.. 0.00
Line Change.....	0.00	W / on Spread. 0.00		Total Extra.....Hrs 0.00
Recorder Move..	1.00	Stock Damage 0.00		Total Extra(Job).Hrs 0.00
Detours/Terrain. 0.00		Other.....	0.00	Processing Hrs..... 0.00
Experimental... 0.00				
Other Charge... 0.00				
Wait on Spread. 0.75				
Weather Time... 0.00				
Stock Damage.. 0.00		Total Down Time.....	0.00	Total Day.....Hrs 11.50
Safety Meeting.. 0.00		Cum. Down Time (Job)	2.50	Total Hrs (Job)..... 216.25

COMMENTS: Tape:Reel L15199038,Line99AGS-L3,FF2991-3072,VP2518-2688(3490E)
 Tape:Reel L15199039,Line99AGS-L3,FF3073-3154,VP2690-2864(3490E)
 Tape:Reel L15199040,Line99AGS-L3,FF3155-3236,VP2866-3042(3490E)

SURVEY			
Line No.....	STN..	STN..	Kms. 0.000
Line No.....	STN..	STN..	Kms. 0.000
Line No.....	STN..	STN..	Kms. 0.000
Line No.....	STN..	STN..	Kms. 0.000
Line No.....	STN..	STN..	Kms. 0.000
			Total Kms..... 0.000
			Cum. Kms. (Job)..... 190.280

CHAINING			
Line No.....	STN..	STN..	Kms. 0.000
Line No.....	STN..	STN..	Kms. 0.000
Line No.....	STN..	STN..	Kms. 0.000
Line No.....	STN..	STN..	Kms. 0.000
Line No.....	STN..	STN..	Kms. 0.000
			Total Kms..... 0.000
			Cum. Kms. (Job)..... 190.280

LACING			
Line No.....	Kms	0.000	
Line No.....	Kms		
Line No.....	Kms		
Line No.....	Kms		
			Total Kms..... 0.000
			Cum. Kms. (Job)..... 0.00

LINE CLEAR			
Dozer	Line No.....	Kms. Cut.....	Hrs.
Dozer	Line No.....	Kms. Cut.....	Hrs.
Grader	Line No.....	Kms. Cut.....	Hrs.
Grader	Line No.....	Kms. Cut.....	Hrs.
			Total Kms..... 0.000
			Cum. Kms. (Job)..... 0.000
			Total Hours..... 0.00
			Total Hrs (Job)..... 0.00

DRILLING				UPHOLES			
Rig No.	1	# Mtr	#Holes	Unit 1	#Mtr	#Holes	# Hrs
Rig No.	2	# Mtr	#Holes	Unit 2	#Mtr	#Holes	# Hrs
Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0	Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0
Total Drilled.....	0	Cum Drilled (Job).....	0.00	Total Logged.....	0	Total Logged (Job)..	0
Total Hrs.....	0.00	Total Hrs (Job).....	0.00	Total Hrs.....	0.00	Total # Hrs(Job).....	0.00

COMMENTS :

DAILY PRODUCTION REPORT

CREW 205

DATE.....25-Sep-99

Client..... ANSIR
 Survey Name. LACHLAN
 Area..... WEST WYALONG
 State..... NSW

Party Manager. BOB STEPHENSON
 Client Rep..... DAVID JOHNSTONE
 Weather..... FINE

RECORDING				Kms.	SKIPS	PROFILES	TOTALS
Line No.....	99AGSL3	Rec 3050	Rec 3240	7.680	3	92	Profiles..... 92
Line No.....	99WRHR1	Rec 2648	Rec 2645				Skips..... 3
Line No.....		Rec	Rec				Kms..... 7.680
Line No.....		Rec	Rec				Cum Kms.. 189.520
Line No.....		Rec	Rec				

HOURS		Travel Time.....	2.00	Down Time - Vibes	Extra Charges
	Test Time.....	0.50	Recorder.....	Extra vibe Hrs.....	0.00
	Recording Time...	3.75	Cables.....	Detours Charge Hrs	0.00
Other Time	Line Change.....	4.75	ATU's.....	Washdowns.....Hrs	0.00
	Recorder Move..		Detours/Terr...	Extra Other Charge..	0.00
	Detours/Terrain.		W / on Spread.	Total Extra.....Hrs	0.00
	Experimental... 1.00		Stock Damage	Total Extra(Job).Hrs	0.00
	Other Charge...		Other.....	Processing Hrs.....	0.00
	Wait on Spread.				
	Weather Time...				
	Stock Damage..		Total Down Time.....	Total Day.....Hrs	12.00
	Safety Meeting..		Cum. Down Time (Job)	Total Hrs (Job).....	228.25

COMMENTS: Tape:Reel L15199041,Line 99AGS-L3,FF3237-3318,VP3044-3214(3490E)
 Tape:Reel L15199042,Line 99AGS-L3,FF3319-3331,VP3216-3240(3490E)
 Tape:Reel L15188043,Line 99WR-HR1,FF3332-3357,VP2648-2645(3490E)
 Line 99AGS-L3 Completed,picked upspread,moved to line 99WR-HR1,layed line and recorded experimental

SURVEY				
Line No.....	STN..	STN..	Kms.	
Line No.....	STN..	STN..	Kms. 0.000	
Line No.....	STN..	STN..	Kms. 0.000	
Line No.....	STN..	STN..	Kms. 0.000	Total Kms..... 0.000
Line No.....	STN..	STN..	Kms. 0.000	Cum. Kms. (Job)..... 190.280

CHAINING				
Line No.....	STN..	STN..	Kms.	
Line No.....	STN..	STN..	Kms. 0.000	
Line No.....	STN..	STN..	Kms. 0.000	
Line No.....	STN..	STN..	Kms. 0.000	Total Kms..... 0.000
Line No.....	STN..	STN..	Kms. 0.000	Cum. Kms. (Job)..... 190.280

RANGING				COMMENTS :
Line No.....	Kms	0.000		
Line No.....	Kms			
Line No.....	Kms			Total Kms..... 0.000
Line No.....	Kms			Cum. Kms. (Job)..... 0.00

LINE CLEAR				
Dozer	Line No.....	Kms. Cut.....	Hrs.	Total Kms..... 0.000
Dozer	Line No.....	Kms. Cut.....	Hrs.	Cum. Kms. (Job)..... 0.000
Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hours..... 0.00
Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hrs (Job)..... 0.00

BILLING				UPHOLES				
No.	1	# Mtr	#Holes	Hrs	Unit 1	#Mtr	#Holes	# Hrs
Rig No.	2	# Mtr	#Holes	Hrs	Unit 2	#Mtr	#Holes	# Hrs
Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0		Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0
Total Drilled.....	0	Cum Drilled (Job).....	0.00		Total Logged.....	0	Total Logged (Job)..	0
Total Hrs.....	0.00	Total Hrs (Job).....	0.00		Total Hrs.....	0.00	Total # Hrs(Job).....	0.00

COMMENTS :

DAY 21

TERRACORP

DAILY PRODUCTION REPORT

CREW 205

DATE.....26-Sep-99

Client..... ANSIR
 Survey Name. LACHLAN
 Area..... WEST WYALONG
 State..... NSW

Party Manager. BOB STEPHENSON
 Client Rep..... DAVID JOHNSTONE
 Weather..... FINE

RECORDING				Kms.	SKIPS	PROFILES	TOTALS
Line No.....	99WRHR1	Rec 2772	Rec 2075	6.970	16	681	Profiles..... 681
Line No.....		Rec	Rec				Skips..... 16
Line No.....		Rec	Rec				Kms..... 6.970
Line No.....		Rec	Rec				Cum Kms.. 196.490
Line No.....		Rec	Rec				

HOURS		Travel Time.....	2.00	Down Time - Vibes	Extra Charges
		Test Time.....	0.50	Recorder.....	Extra vibe Hrs..... 0.00
		Recording Time...	7.50	Cables.....	Detours Charge Hrs 0.00
Other Time		Line Change.....		ATU's.....	Washdowns.....Hrs 0.00
		Recorder Move..	0.50	Detours/Terr...	Extra Other Charge.. 0.00
		Detours/Terrain.		W / on Spread.	Total Extra.....Hrs 0.00
		Experimental...	0.50	Stock Damage	Total Extra(Job).Hrs 0.00
		Other Charge...		Other.....	Processing Hrs..... 0.00
		Wait on Spread.	1.00		
		Weather Time...			
		Stock Damage..		Total Down Time.....	Total Day.....Hrs 12.00
		Safety Meeting..		Cum. Down Time (Job)	Total Hrs (Job)..... 240.25

COMMENTS: Tape:Reel L15199044,Line 99WR-HR1,FF3358-3560,VP2772-2576(3490E)
 Tape:Reel L15199045,Line 99WR-HR1,FF3561-3763,VP2575-2368(3490E)
 Tape:Reel L15199046,Line 99WR-HR1,FF3764-3966,VP2367-2162(3490E)

SURVEY				Kms.	
Line No.....	STN..	STN..		Kms.	0.000
Line No.....	STN..	STN..		Kms.	0.000
Line No.....	STN..	STN..		Kms.	0.000
Line No.....	STN..	STN..		Kms.	0.000
Line No.....	STN..	STN..		Kms.	0.000
				Total Kms.....	0.000
				Cum. Kms. (Job).....	190.280

CHAINING				Kms.	
Line No.....	STN..	STN..		Kms.	0.000
Line No.....	STN..	STN..		Kms.	0.000
Line No.....	STN..	STN..		Kms.	0.000
Line No.....	STN..	STN..		Kms.	0.000
Line No.....	STN..	STN..		Kms.	0.000
				Total Kms.....	0.000
				Cum. Kms. (Job).....	190.280

RANGING				COMMENTS :		
Line No.....		Kms	0.000			
Line No.....		Kms				
Line No.....		Kms				
Line No.....		Kms				
				Total Kms.....	0.000	
				Cum. Kms. (Job).....	0.00	

LINE CLEAR				Kms. Cut.....	Hrs.	
Dozer	Line No.....			Kms. Cut.....	Hrs.	Total Kms..... 0.000
Dozer	Line No.....			Kms. Cut.....	Hrs.	Cum. Kms. (Job)..... 0.000
Grader	Line No.....			Kms. Cut.....	Hrs.	Total Hours..... 0.00
Grader	Line No.....			Kms. Cut.....	Hrs.	Total Hrs (Job)..... 0.00

DRILLING					UPHOLES			
Rig No.	1	# Mtr	#Holes	Hrs	Unit 1	#Mtr	#Holes	# Hrs
Rig No.	2	# Mtr	#Holes	Hrs	Unit 2	#Mtr	#Holes	# Hrs
Total # Mts.....	0.0		Cum # Mtr (Job).....	0.0	Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0
Total Drilled.....	0		Cum Drilled (Job).....	0.00	Total Logged.....	0	Total Logged (Job)..	0
Total Hrs.....	0.00		Total Hrs (Job).....	0.00	Total Hrs.....	0.00	Total # Hrs(Job).....	0.00

COMMENTS :

DAILY PRODUCTION REPORT

CREW 205

DATE.....27-Sep-99

Client..... ANSIR
 Survey Name. LACHLAN
 Area..... WEST WYALONG
 State..... NSW

Party Manager. BOB STEPHENSON
 Client Rep..... DAVID JOHNSTONE
 Weather..... SHOWERS

RECORDING				Kms.	SKIPS	PROFILES	TOTALS
Line No.....	99WRHR	Rec 2074	Rec 1716	3.580	30	328	Profiles..... 632
Line No.....	99WRHR	Rec 1716	Rec 1076	6.400	18	304	Skips..... 48
Line No.....		Rec	Rec				Kms..... 9.980
Line No.....		Rec	Rec				Cum Kms.. 206.470
Line No.....		Rec	Rec				

HOURS	Travel Time.....	2.50	Down Time - Vibes	Extra Charges
	Test Time.....	0.50	Recorder.....	Extra vibe Hrs..... 0.00
	Recording Time...	7.25	Cables.....	Detours Charge Hrs 0.00
Other Time	Line Change.....		ATU's.....	Washdowns.....Hrs 0.00
	Recorder Move..	1.25	Detours/Terr...	Extra Other Charge.. 0.00
	Detours/Terrain.		W / on Spread.	Total Extra.....Hrs 0.00
	Experimental...		Stock Damage	Total Extra(Job).Hrs 0.00
	Other Charge...		Other.....	Processing Hrs..... 0.00
	Wait on Spread.	1.00		
	Weather Time...			
	Stock Damage..		Total Down Time.....	Total Day.....Hrs 12.50
	Safety Meeting..		Cum. Down Time (Job)	Total Hrs (Job)..... 252.75

COMMENTS: Tape:Reel L15199047,Line99WR-HR1,FF3967-4169,VP2161-1947(3490E)
 Tape:Reel L15199048,Line99WR-HR1,FF4170-4372,VP1946-1724(3490E)
 Tape:Reel L15199049,Line99WR-HR1,FF4373-4575,VP1723-1302(3490E)
 Tape:Reel L15199050,Line 99WR-HR1,FF4576-4684,VP1300-1076(3490E)

SURVEY			
Line No.....	STN..	STN..	Kms.
Line No.....	STN..	STN..	Kms. 0.000
Line No.....	STN..	STN..	Kms. 0.000
Line No.....	STN..	STN..	Kms. 0.000
Line No.....	STN..	STN..	Kms. 0.000
			Total Kms..... 0.000
			Cum. Kms. (Job)..... 190.280

CHAINING			
Line No.....	STN..	STN..	Kms.
Line No.....	STN..	STN..	Kms. 0.000
Line No.....	STN..	STN..	Kms. 0.000
Line No.....	STN..	STN..	Kms. 0.000
Line No.....	STN..	STN..	Kms. 0.000
			Total Kms..... 0.000
			Cum. Kms. (Job)..... 190.280

RANGING				COMMENTS :
Line No.....	Kms	0.000		
Line No.....	Kms			
Line No.....	Kms			
Line No.....	Kms			
			Total Kms.....	0.000
			Cum. Kms. (Job).....	0.00

LINE CLEAR				COMMENTS :	
Dozer	Line No.....	Kms. Cut.....	Hrs.	Total Kms.....	0.000
Dozer	Line No.....	Kms. Cut.....	Hrs.	Cum. Kms. (Job).....	0.000
Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hours.....	0.00
Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hrs (Job).....	0.00

DRILLING					UPHOLES			
Rig No.	1	# Mtr	#Holes	Hrs	Unit 1	#Mtr	#Holes	# Hrs
Rig No.	2	# Mtr	#Holes	Hrs	Unit 2	#Mtr	#Holes	# Hrs
Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0		Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0
Total Drilled.....	0	Cum Drilled (Job).....	0.00		Total Logged.....	0	Total Logged (Job)..	0
Total Hrs.....	0.00	Total Hrs (Job).....	0.00		Total Hrs.....	0.00	Total # Hrs(Job).....	0.00

COMMENTS: Recorded 120 fold down to station 1716,from 1716 to 1076 recorded at 60 fold.
 Lachlan survey completed except for picking up spread and packing up container.

DAY 23

TERRACORP

DAILY PRODUCTION REPORT

CREW 205

DATE.....28-Sep-99

Client..... ANSIR
 Survey Name. LACHLAN
 Area..... WEST WYALONG
 State..... NSW

Party Manager. BOB STEPHENSON
 Client Rep..... DAVID JOHNSTONE
 Weather..... SHOWERS

RECORDING	Kms.	SKIPS	PROFILES	TOTALS
Line No..... Rec Rec			Profiles..... 0	
Line No..... Rec Rec			Skips..... 0	
Line No..... Rec Rec			Kms..... 0.000	
Line No..... Rec Rec			Cum Kms.. 206.470	
Line No..... Rec Rec				

HOURS	Travel Time.....	Down Time - Vibes	Extra Charges
	Test Time.....	Recorder.....	Extra vibe Hrs..... 0.00
	Recording Time...	Cables.....	Detours Charge Hrs 0.00
Other Time	Line Change.....	ATU's.....	Washdowns.....Hrs 0.00
	Recorder Move..	Detours/Terr...	Extra Other Charge.. 0.00
	Detours/Terrain.	W / on Spread.	Total Extra.....Hrs 0.00
	Experimental...	Stock Damage	Total Extra(Job).Hrs 0.00
	Other Charge... 12.00	Other.....	Processing Hrs..... 0.00
	Wait on Spread.		
	Weather Time...		
	Stock Damage..	Total Down Time..... 0.00	Total Day.....Hrs 12.00
	Safety Meeting..	Cum. Down Time (Job) 2.50	Total Hrs (Job)..... 264.75

COMMENTS: PICK UP SPREAD, PACK UP CONTAINER

SURVEY	STN..	STN..	Kms.	
Line No.....	STN..	STN..	Kms. 0.000	
Line No.....	STN..	STN..	Kms. 0.000	
Line No.....	STN..	STN..	Kms. 0.000	
Line No.....	STN..	STN..	Kms. 0.000	Total Kms..... 0.000
Line No.....	STN..	STN..	Kms. 0.000	Cum. Kms. (Job)..... 190.280

CHAINING	STN..	STN..	Kms.	
Line No.....	STN..	STN..	Kms. 0.000	
Line No.....	STN..	STN..	Kms. 0.000	
Line No.....	STN..	STN..	Kms. 0.000	
Line No.....	STN..	STN..	Kms. 0.000	Total Kms..... 0.000
Line No.....	STN..	STN..	Kms. 0.000	Cum. Kms. (Job)..... 190.280

LACING	Kms	COMMENTS :	
Line No.....	Kms 0.000		
Line No.....	Kms		
Line No.....	Kms		Total Kms..... 0.000
Line No.....	Kms		Cum. Kms. (Job)..... 0.00

LINE CLEAR	Dozer	Line No.....	Kms. Cut.....	Hrs.	
	Dozer	Line No.....	Kms. Cut.....	Hrs.	Total Kms..... 0.000
	Grader	Line No.....	Kms. Cut.....	Hrs.	Cum. Kms. (Job)..... 0.000
	Grader	Line No.....	Kms. Cut.....	Hrs.	Total Hours..... 0.00
					Total Hrs (Job)..... 0.00

DRILLING	g No.	# Mtr	#Holes	Hrs	UPHOLES	Unit 1	#Mtr	#Holes	# Hrs
	Rig No.	2	# Mtr	#Holes	Hrs	Unit 2	#Mtr	#Holes	# Hrs
Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0	Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0		
Total Drilled.....	0	Cum Drilled (Job).....	0.00	Total Logged.....	0	Total Logged (Job)..	0		
Total Hrs.....	0.00	Total Hrs (Job).....	0.00	Total Hrs.....	0.00	Total # Hrs(Job).....	0.00		

COMMENTS :



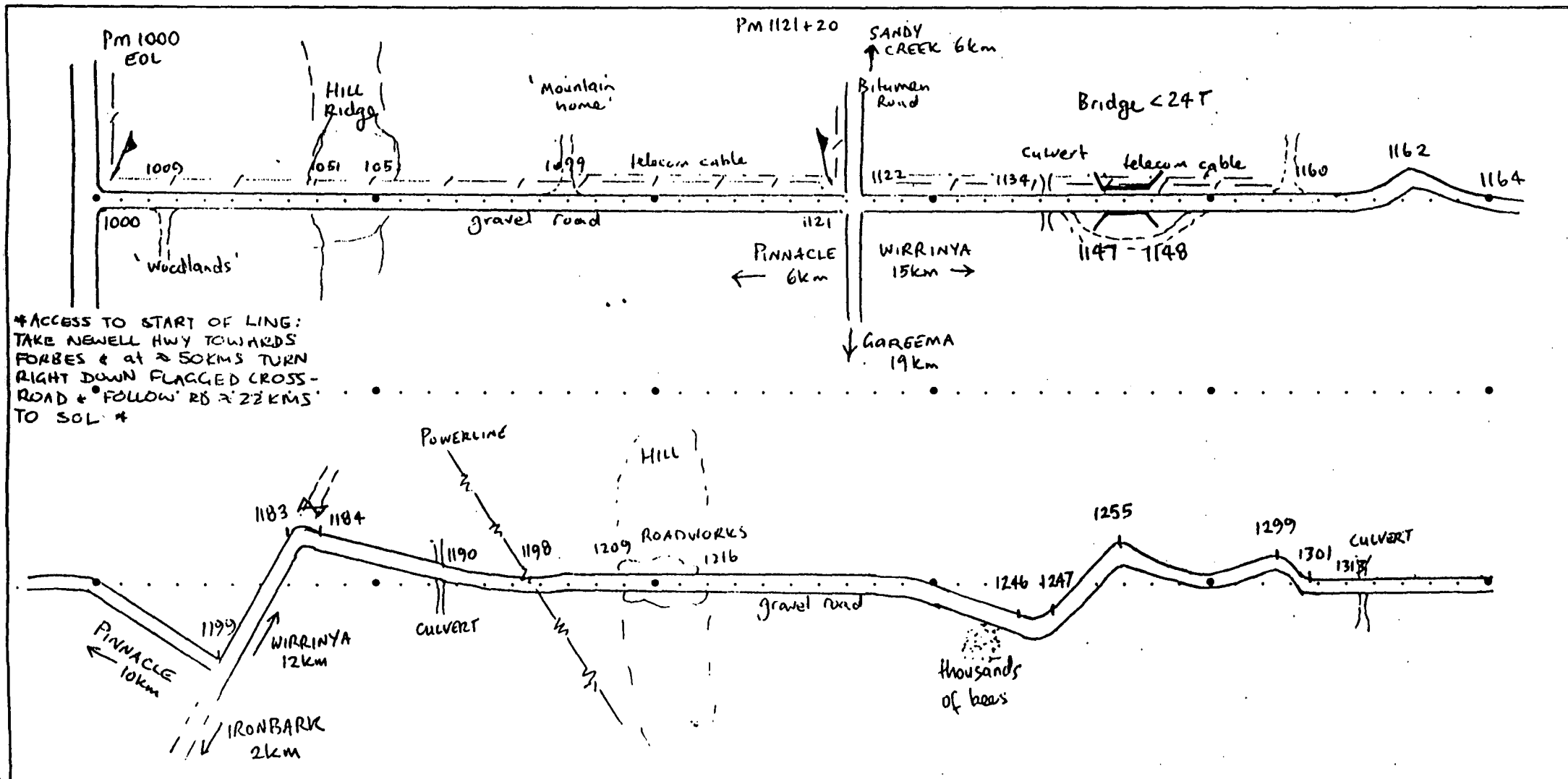
TERRACORP

CHAINING MAP

LINE 99AGS-L1

PROSPECT LACHLAN CLIENT AGSO PARTY COMPLETED BY DSS DATE 7/9/99 PAGE 1

DIRECTION E-W STATION SPACING 40m VP SPACING



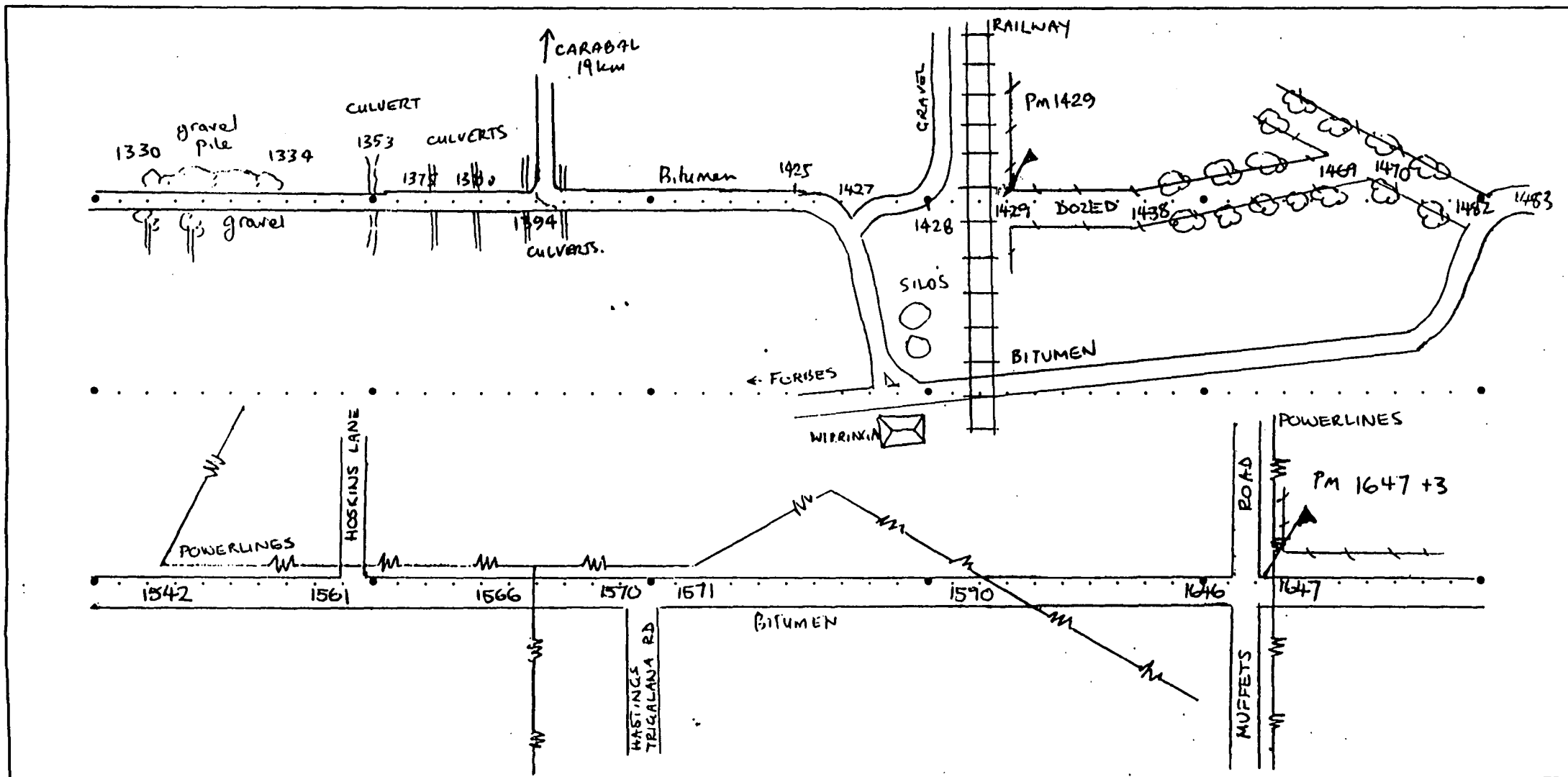


TERRACORP

CHAINING MAP

LINE 99AGS - L1

PROSPECT LACHLAN CLIENT AGSO PARTY COMPLETED BY DSS DATE 8/9/99 PAGE 2
DIRECTION E-W STATION SPACING 40m VP SPACING





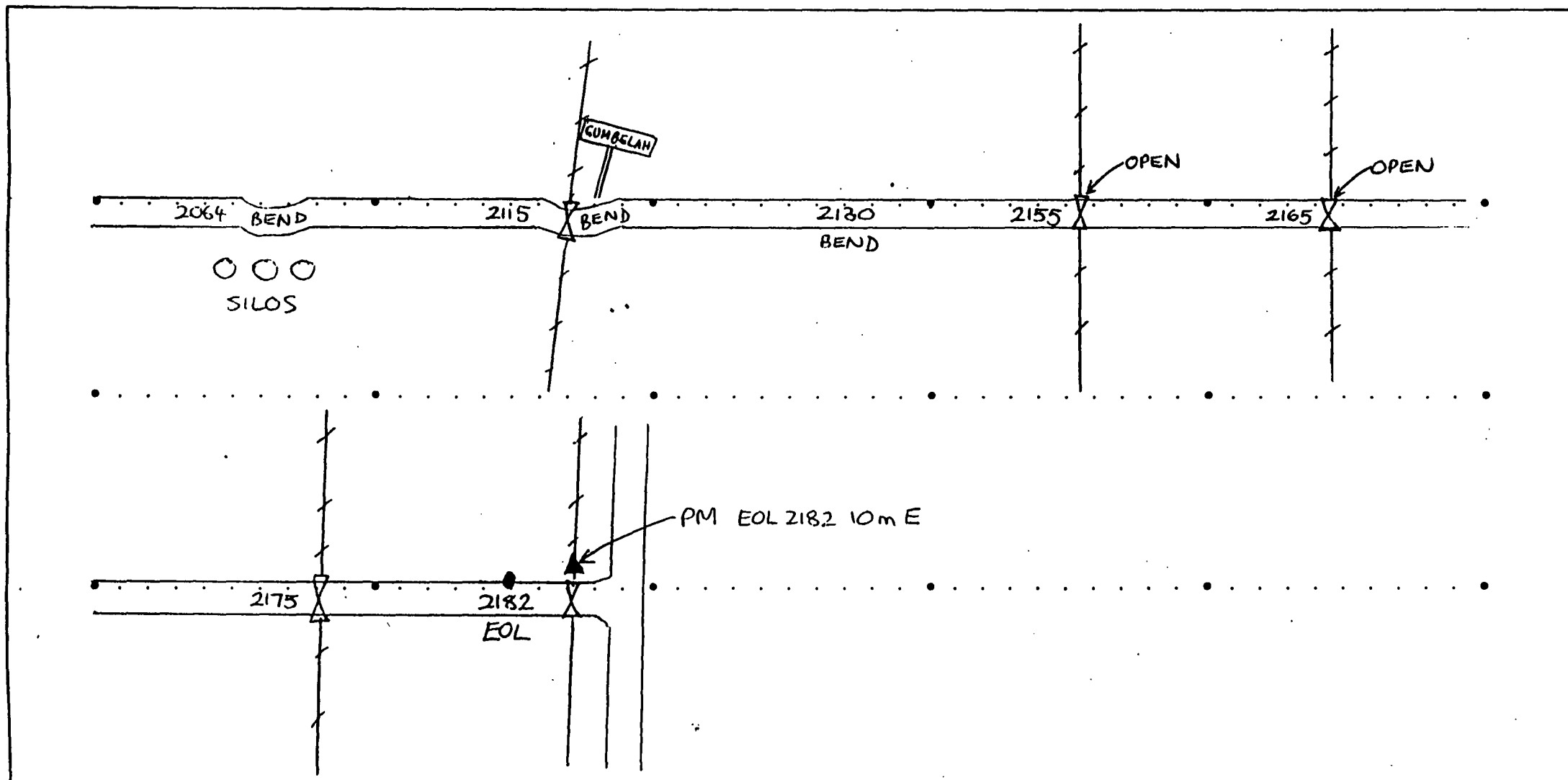
TERRACORP

CHAINING MAP

LINE 99AGS-L1

PROSPECT LACHLAN CLIENT AGSO PARTY COMPLETED BY DSS DATE PAGE 4

DIRECTION E-W STATION SPACING 40m VP SPACING





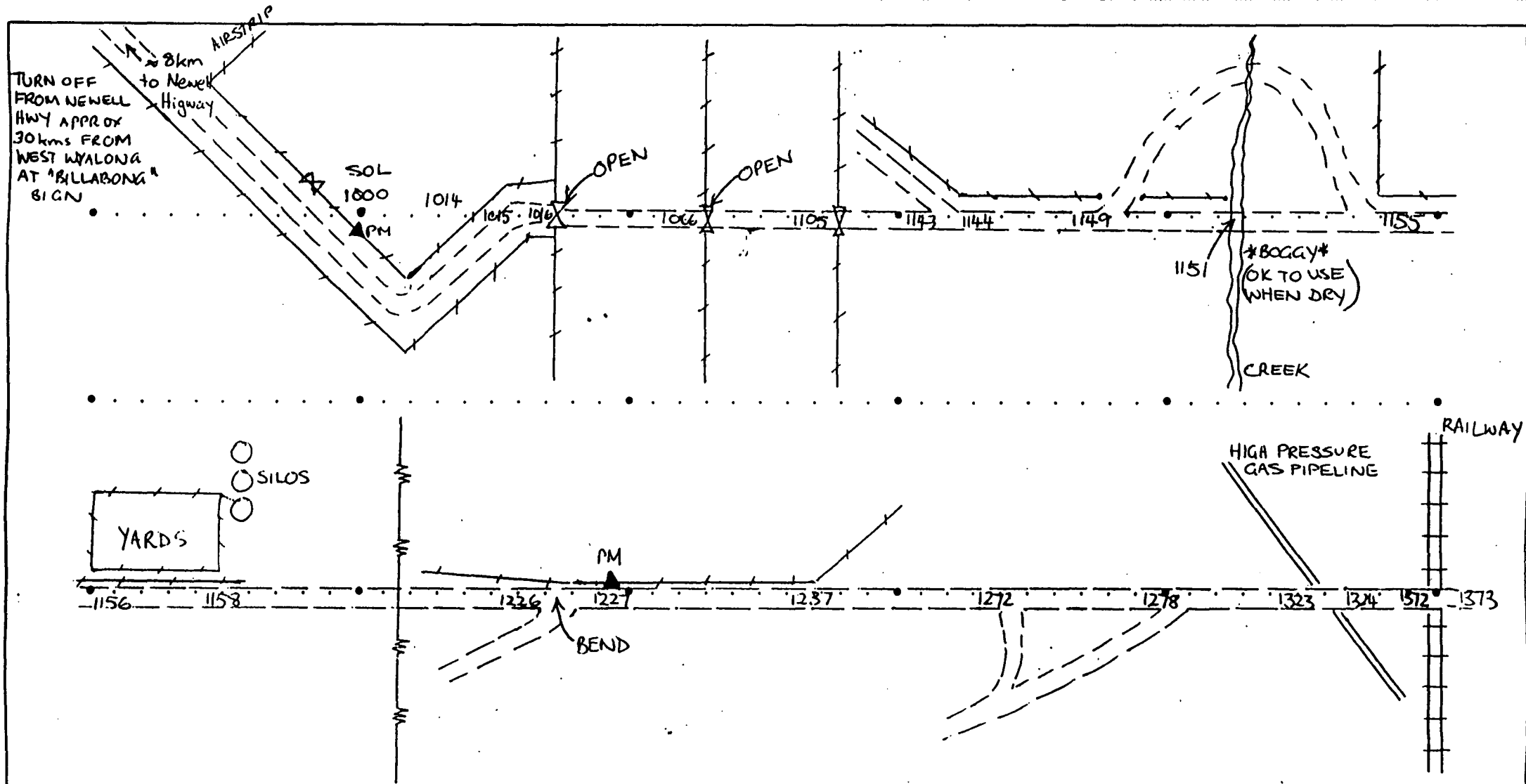
TERRACORP

CHAINING MAP

LINE 99AGS-L2

PROSPECT LACHLAN CLIENT ACSO PARTY COMPLETED BY DSS DATE 12/9/99 PAGE 1

DIRECTION E-W STATION SPACING 40m VP SPACING





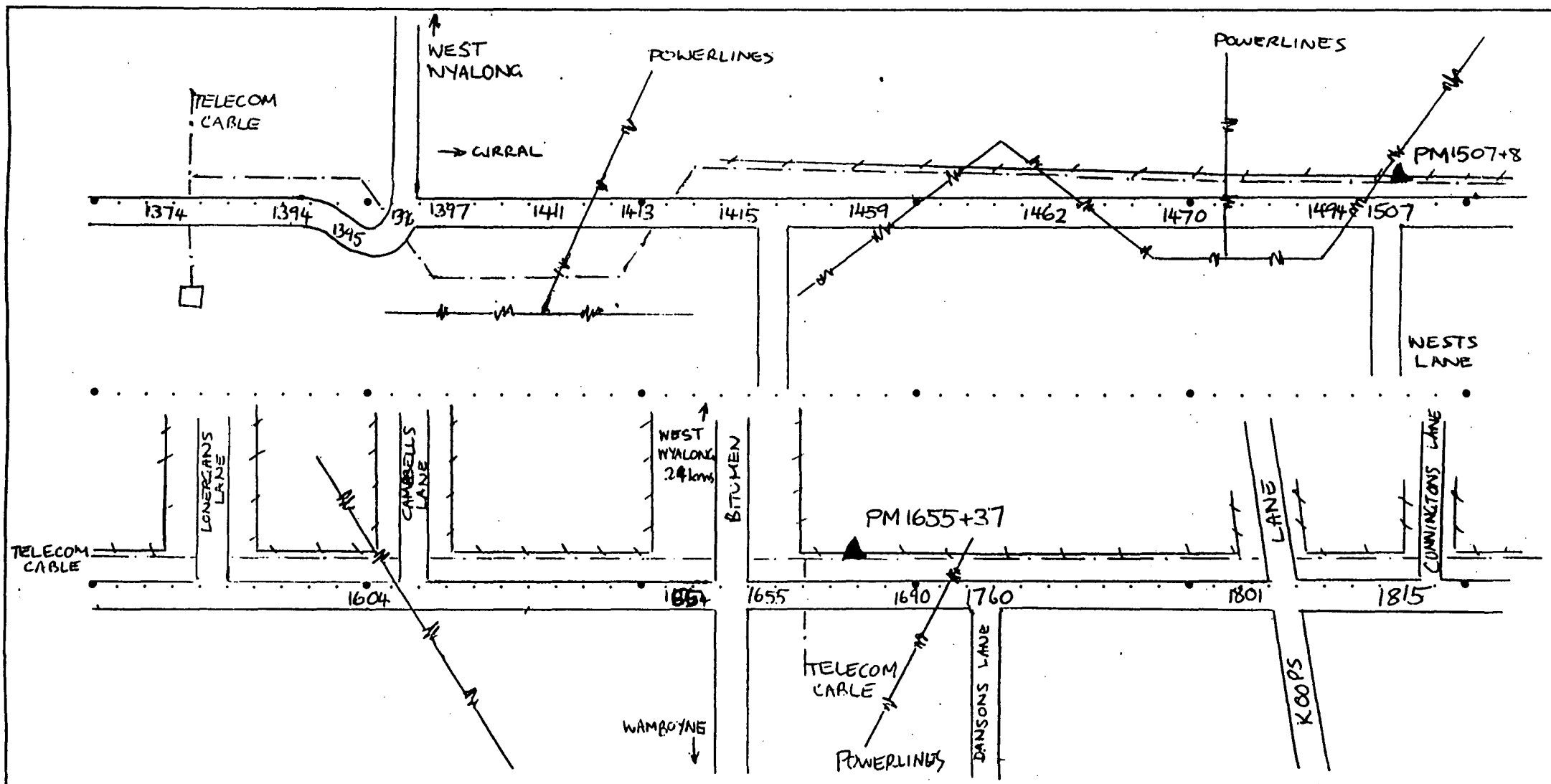
TERRACORP

CHAINING MAP

LINE 99AGS-L2

PROSPECT LACHLAN CLIENT AGSO PARTY COMPLETED BY DSS DATE 13/9/99 PAGE 2

DIRECTION E-W STATION SPACING 40m VP SPACING





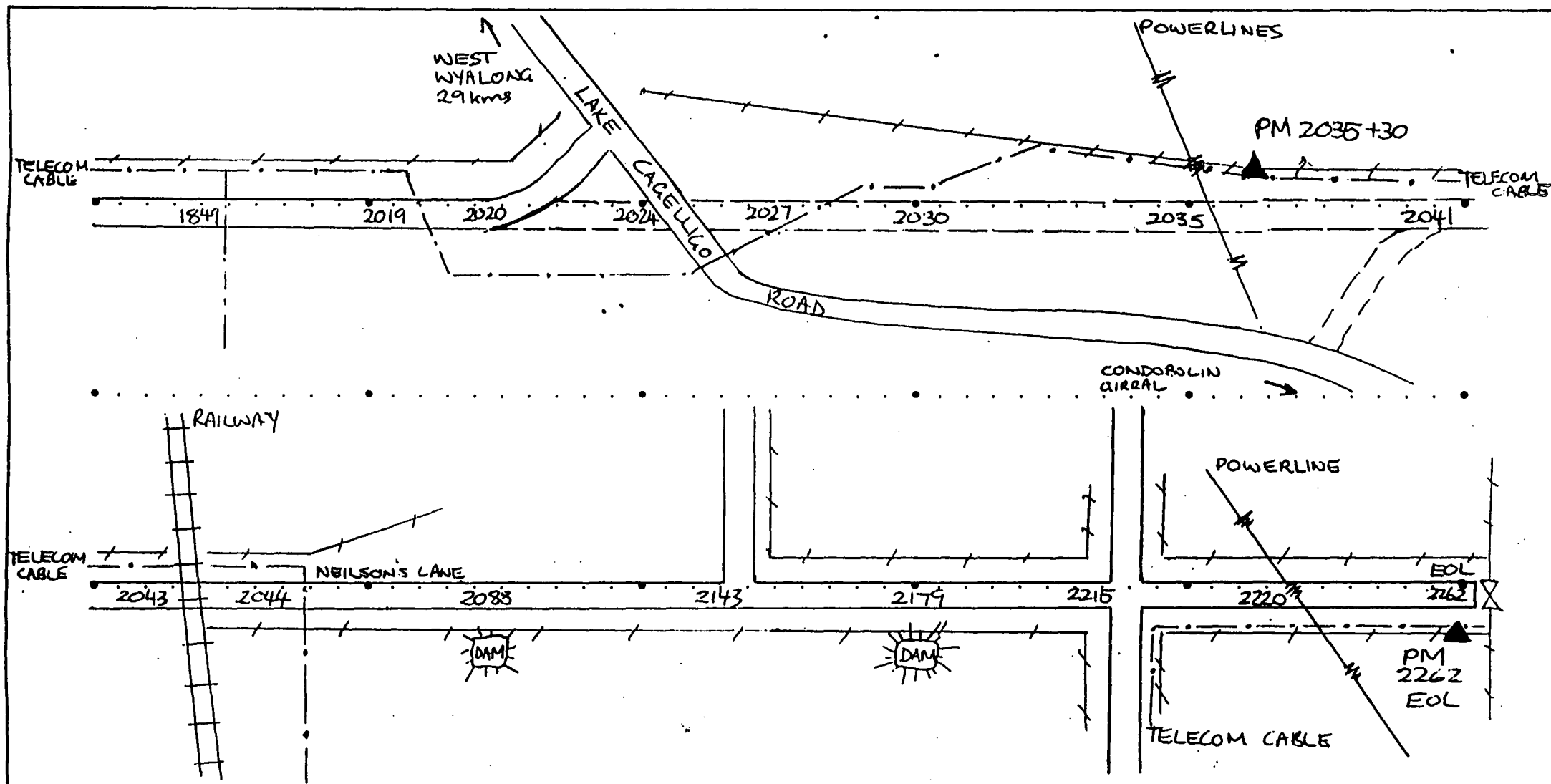
TERRACORP

CHAINING MAP

LINE 99-AGS-L2

PROSPECT LACILAN CLIENT AGSO PARTY COMPLETED BY DSS DATE 14/8/99 PAGE 3

DIRECTION E-W STATION SPACING 40m VP SPACING



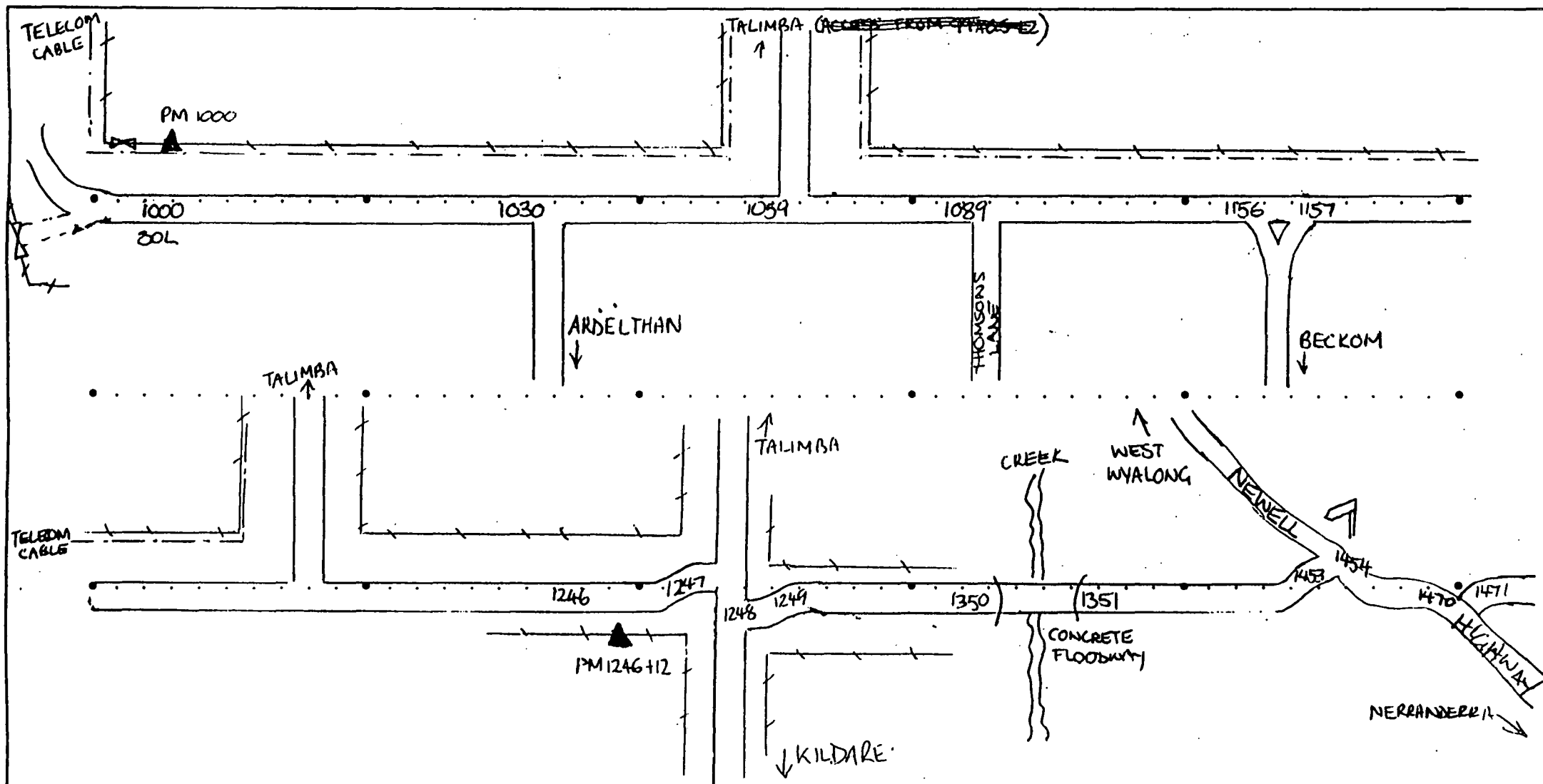


TERRACORP

CHAINING MAP

LINE 99ACS-L3

PROSPECT LACHLAN CLIENT ACSO PARTY _____ COMPLETED BY DSS DATE 15/9/99 PAGE 1
DIRECTION E-W W-E STATION SPACING 40m VP SPACING _____



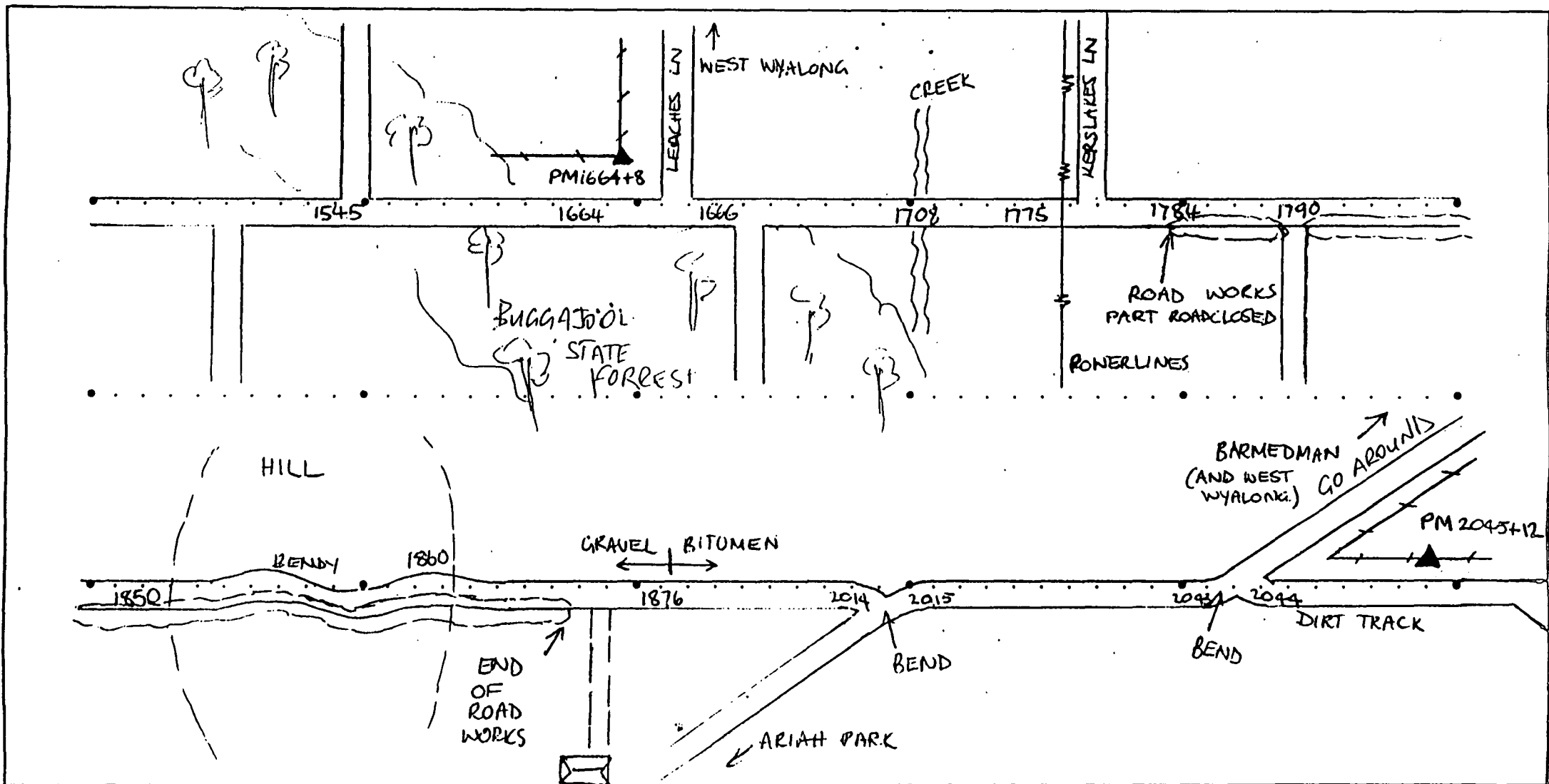


TERRACORP

CHAINING MAP

LINE 99AGS-L3

PROSPECT LACHLAN CLIENT ACISO PARTY COMPLETED BY DSS DATE 16/9/99 PAGE 2
DIRECTION W-E STATION SPACING 40m VP SPACING



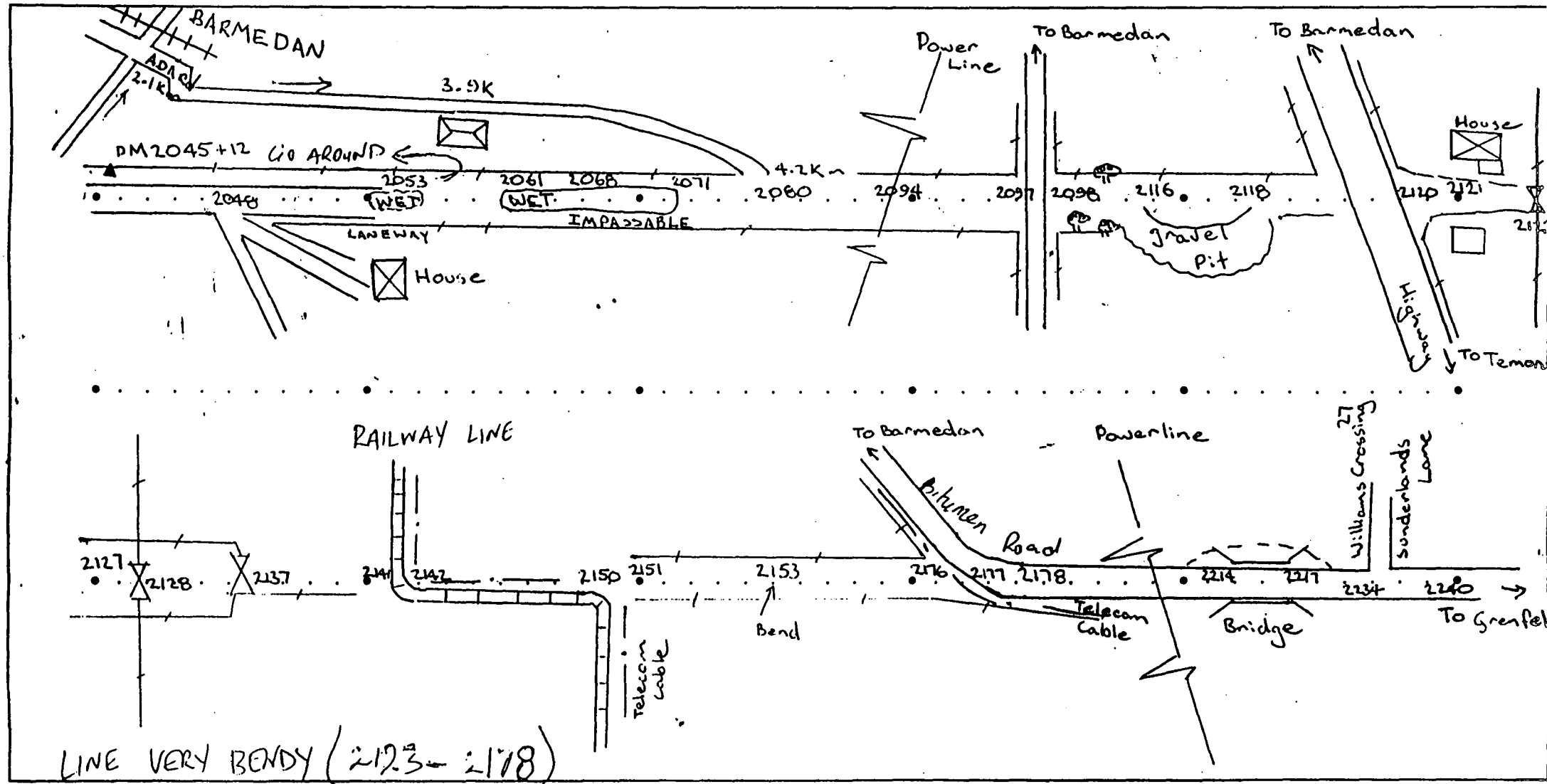


TERRACORP

CHAINING MAP

LINE 99AGS - L3

PROSPECT LACHLAN CLIENT AGSO PARTY COMPLETED BY DSS DATE 18/9/99 PAGE 3
DIRECTION ~~E-W~~ W-E STATION SPACING 40m VP SPACING



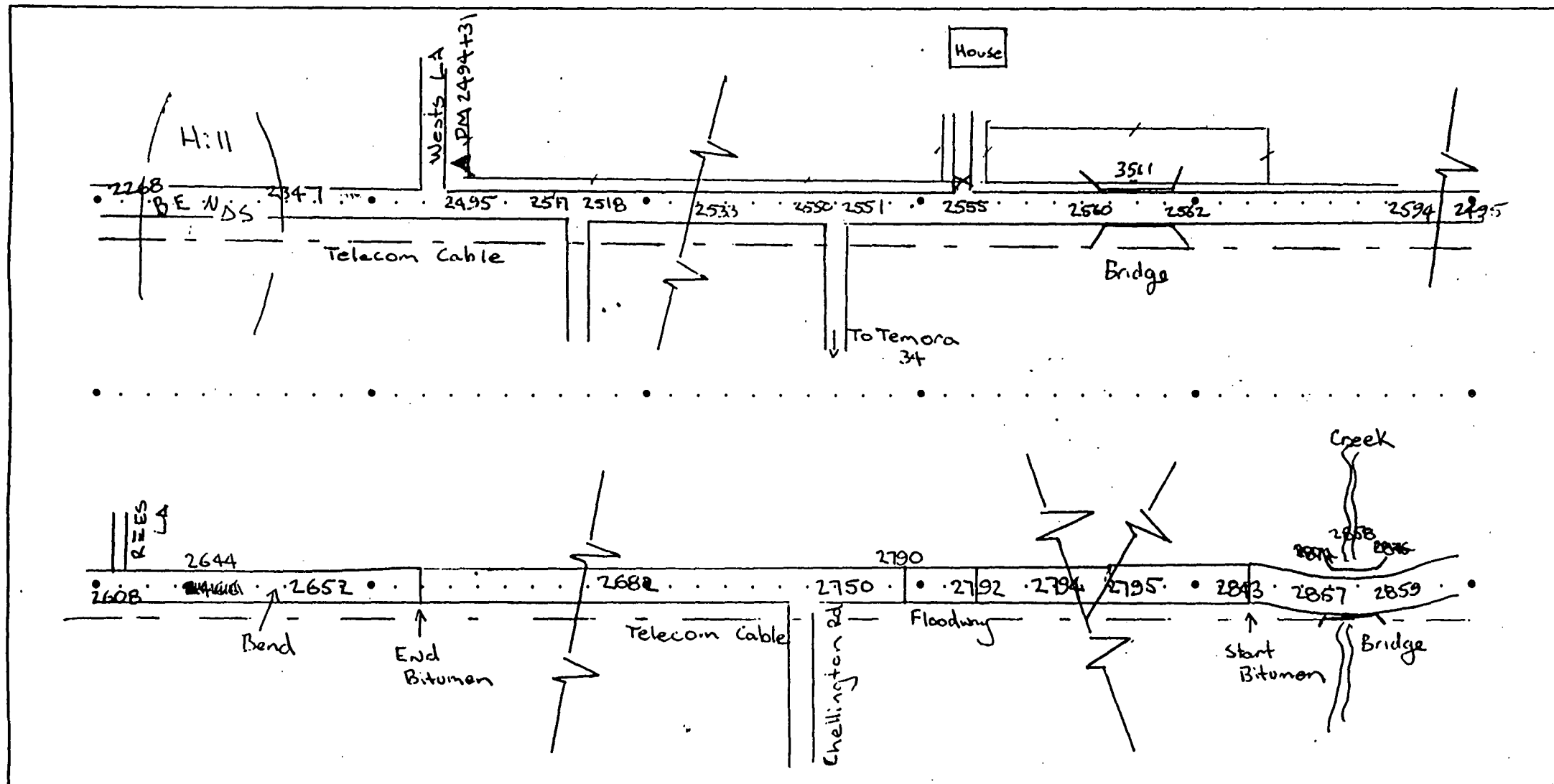


TERRACORP

CHAINING MAP

LINE 99AGS - 23

PROSPECT LACHLAN CLIENT AGSO PARTY COMPLETED BY DSS DATE 19/9/99 PAGE 4
DIRECTION ~~W-E~~ W-E STATION SPACING 40m VP SPACING



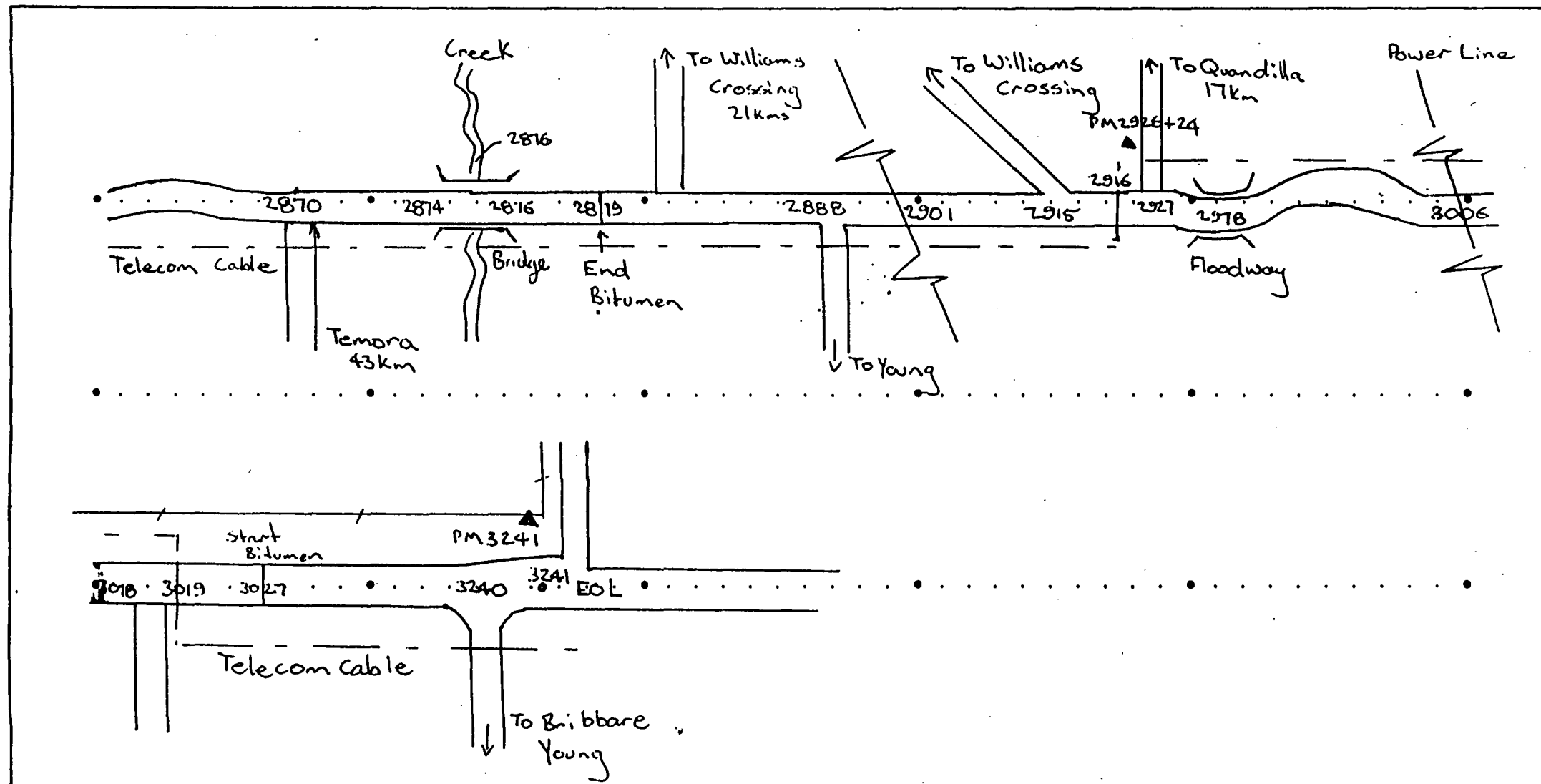


TERRACORP

CHAINING MAP

LINE 99AGS - L3

PROSPECT LACHLAN CLIENT AGSO PARTY _____ COMPLETED BY DSS DATE 20/9/99 PAGE 5
DIRECTION W - E STATION SPACING 40m VP SPACING _____





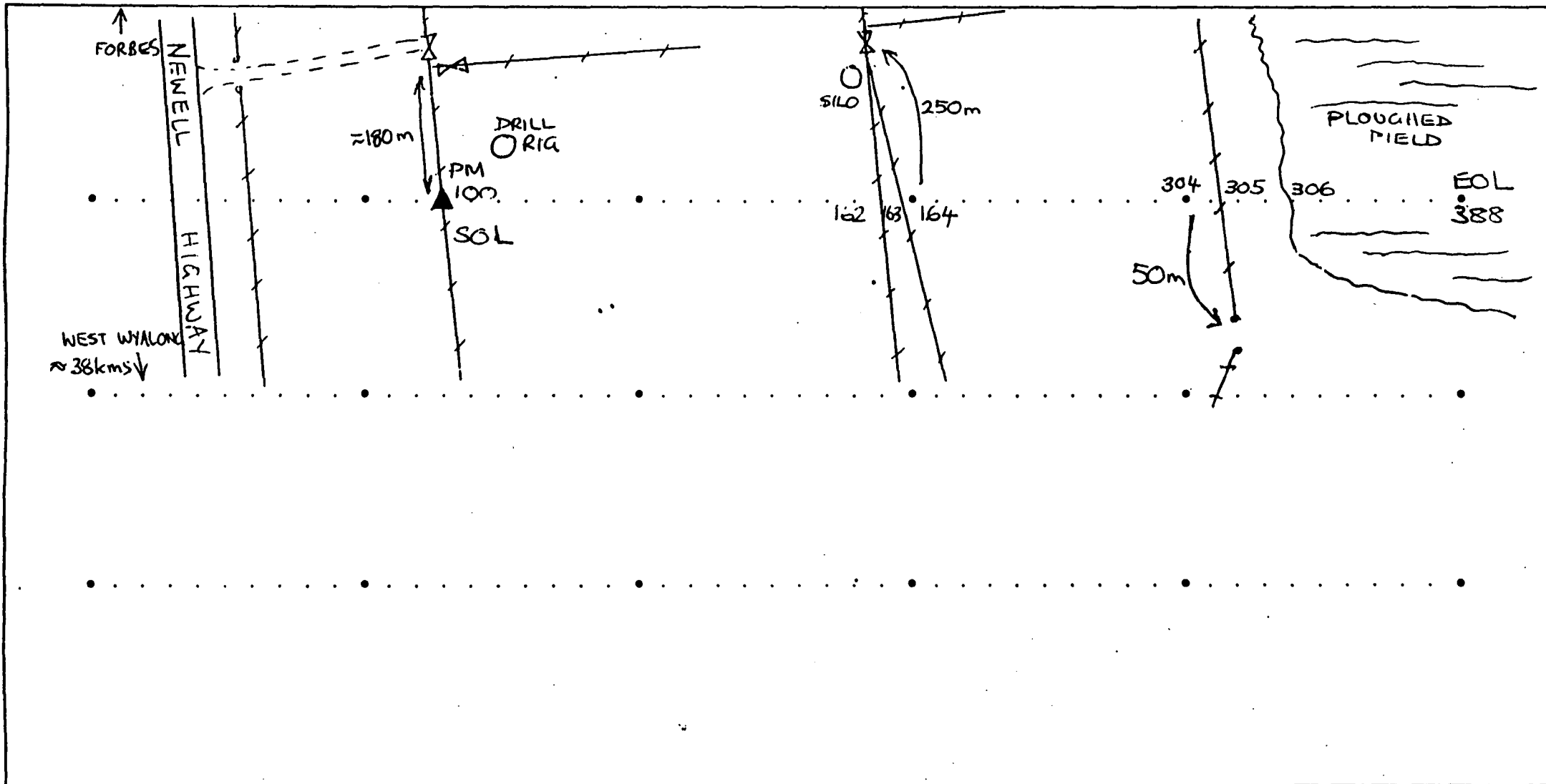
TERRACORP

CHAINING MAP

LINE 99MAR-R1

PROSPECT LACHLAN CLIENT AGSO PARTY COMPLETED BY DSS DATE 11/9/99 PAGE 1

DIRECTION W - E STATION SPACING 10m VP SPACING





TERRACORP

23 Felspar Street

Welshpool, Western Australia

RECORDING PARAMETER SHEET

Client:	ANSIR	Line:	99WR-HR1
Crew:	1	Prospect Area:	West Wyalong
Survey:	1999 Lachlan Seismic Survey	Date Recorded:	26 To 27 September 1999
Instrument:	Aram 24	Direction of Rec:	East To West

Recording parameters

Traces per File	242
Record Length	4,000 Mil
Sample Rate:	1 msec
Tape Format	Seg Y
Shot Points	2772 To 1076
Rec To Rec	2772 To 1076
Files	3358 To 4684

Receiver Parameters

Station Interval	10 M
Geophone Array Length	Grouped
Geophone Array Centre	On Station
Geophone Type	OYO GS32CT
Geophones Per String	12
Strings Per Station	1
Connection	Series/Parallel
Spread Geometry	Symmetrical
# of Station Gap at SP	0

Auxiliary Traces

Time Break	241
True Reference	242

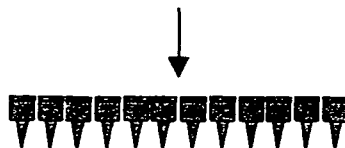
Sweep Frequency

Swp 1	12 To 140 HZ
Swp 2	
Swp 3	
Swp 4	
Swp 5	
Swp 6	
Swp 7	
Swp 8	

Source Parameters

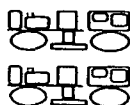
No. of Sources On-Line	1 And 2
No. of Sweeps per VP	2 And 3
Sweep Length:	5 Sec
Sweep Type	Linear
Sweep Type Mono / Vari	Mono
VP Interval	10 M
Source Array Length	0 M
Vibe Spacing Pad to Pad	0 M
Vibe Move Up	0 M
VP Source Centre	Mid Station .5
Vibe Electronics	Pelton Adv II Model 6
Vibrator QC	Vibra Sig
Force Control	Peak and Trough
Phase Lock	Ground Force
High Force Output	90%
Pelton Rev. Level	6E

Receiver Array 12 Phones Centred on Peg



Geophones Grouped on Station

Source Array 2 and 1 Vibe Operation Centred Mid VP 0.5



2 Vibe Operation 2 Sweeps



1 Vibe Operation 3 Sweeps



23 Felspar Street

Welshpool, Western Australia

RECORDING PARAMETER SHEET

Client:	ANSIR	Line:	99AGS-L1
Crew:	1	Prospect Area:	West Wyalong
Survey:	1999 Lachlan Seismic Survey	Date Recorded:	12 To 15 September 1999
Instrument:	Aram 24	Direction of Rec:	East To West

Recording parameters

Traces per File	242
Record Length	20,000
Sample Rate:	2 msec
Tape Format	Seg Y
Shot Points	1000 To 2181
Rec To Rec	1000 To 2182
Files	78 To 1167

Receiver Parameters

Station Interval	40 M
Geophone Array Length	40 M
Geophone Array Centre	Mid Station .5
Geophone Type	OYO GS32CT
Geophones Per String	12
Strings Per Station	1
Connection	Series/Parallel
Spread Geometry	Symmetrical
# of Station Gap at SP	3

Auxiliary Traces

Time Break	241
True Reference	242

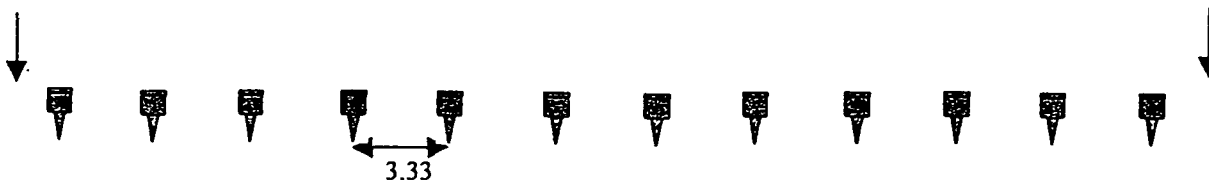
Sweep Frequency

Swp 1	6 To 90 HZ
Swp 2	
Swp 3	
Swp 4	
Swp 5	
Swp 6	
Swp 7	
Swp 8	

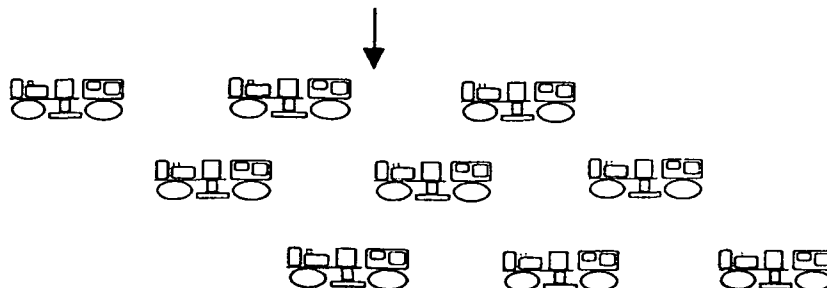
Source Parameters

No. of Sources On-Line	3
No. of Sweeps per VP	3
Sweep Length:	10 Sec
Sweep Type	Linear
Sweep Type Mono / Vari	Mono
VP Interval	40 M
Source Array Length	50 M
Vibe Spacing Pad to Pad	15 M
Vibe Move Up	10 M
VP Source Centre	On Station
Vibe Electronics	Pelton Adv II Model 6
Vibrator QC	Vibra Sig
Force Control	Peak and Trough
Phase Lock	Ground Force
High Force Output	90%
Pelton Rev. Level	6E

Receiver Array 12 Phones over 40m 3.33m between Phones Centred between pegs



Source Array 3 vibes Over 50m 15m pad to pad centred on VP 10m moveups





23 Felspar Street

Welshpool, Western Australia

RECORDING PARAMETER SHEET

Client: **ANSIR** Line: **99AGS-L1** *99MARS.R1*
Crew: **1** Prospect Area: **West Wyalong**
Survey: **1999 Marsden Seismic Survey** Date Recorded: **16-Sep-99**
Instrument: **Aram 24** Direction of Rec: **West To East**

Recording parameters

Traces per File	162
Record Length	3,000
Sample Rate:	1 msec
Tape Format	Seg Y
Shot Points	100 To 388
Rec To Rec	100 To 388
Files	1168 To 1493

Receiver Parameters

Station Interval	10 M
Geophone Array Length	10 M
Geophone Array Centre	On Station
Geophone Type	OYO GS32CT
Geophones Per String	12
Strings Per Station	1
Connection	Series/Parallel
Spread Geometry	Symmetrical
# of Station Gap at SP	2

Auxiliary Traces

Time Break	161
True Reference	162

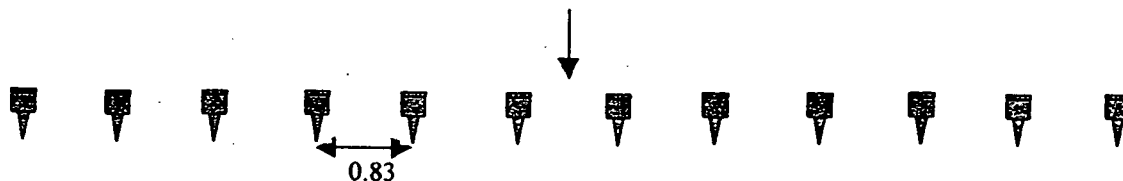
Sweep Frequency

Swp 1	24 To 180 HZ
Swp 2	
Swp 3	
Swp 4	
Swp 5	
Swp 6	
Swp 7	
Swp 8	

Source Parameters

No. of Sources On-Line	1
No. of Sweeps per VP	2
Sweep Length:	5 Sec
Sweep Type	Linear
Sweep Type Mono / Vari	Mono
VP Interval	10 M
Source Array Length	0 M
Vibe Spacing Pad to Pad	0 M
Vibe Move Up	0 M
VP Source Centre	Mid Station .5
Vibe Electronics	Pelton Adv II Model 6
Vibrator QC	Vibra Sig
Force Control	Peak and Trough
Phase Lock	Ground Force
High Force Output	90%
Pelton Rev. Level	6E

Receiver Array 12 Phones over 10m 0.83 m between Phones Centred on pegs



Source Array 1 Vibe Centred Mid Station





23 Felspar Street
Welshpool, Western Australia

RECORDING PARAMETER SHEET

Client:	ANSIR	Line:	99AGS-L2
Crew:	1	Prospect Area:	West Wyalong
Survey:	1999 Lachlan Seismic Survey	Date Recorded:	18 To 20 September 1999
Instrument:	Aram 24	Direction of Rec:	East To West

Recording parameters

Traces per File	242
Record Length	20,000
Sample Rate:	2 msec
Tape Format	Seg Y
Shot Points	1016 To 2260
Rec To Rec	1000 To 2262
Files	1494 To 2224

Receiver Parameters

Station Interval	40 M
Geophone Array Length	40 M
Geophone Array Centre	Mid Station .5
Geophone Type	OYO GS32CT
Geophones Per String	12
Strings Per Station	1
Connection	Series/Parallel
Spread Geometry	Symmetrical
# of Station Gap at SP	3

Auxiliary Traces

Time Break	241
True Reference	242

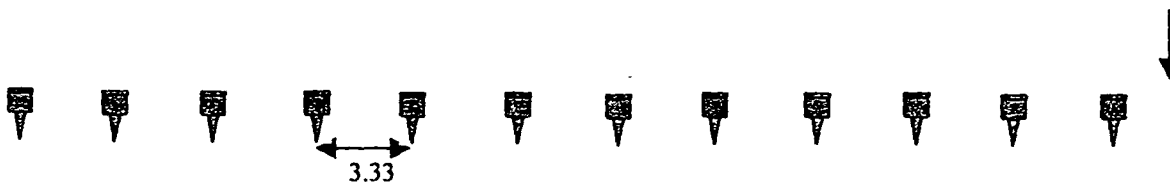
Sweep Frequency

Swp 1	6 To 90 HZ
Swp 2	
Swp 3	
Swp 4	
Swp 5	
Swp 6	
Swp 7	
Swp 8	

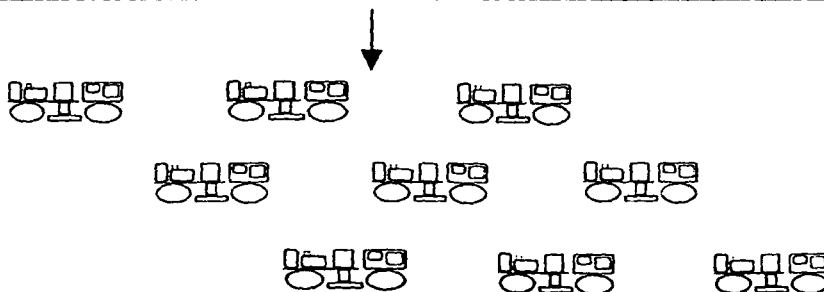
Source Parameters

No. of Sources On-Line	3
No. of Sweeps per VP	3
Sweep Length:	10 Sec
Sweep Type	Linear
Sweep Type Mono / Vari	Mono
VP Interval	40 M
Source Array Length	50 M
Vibe Spacing Pad to Pad	15 M
Vibe Move Up	10 M
VP Source Centre	On Station
Vibe Electronics	Pelton Adv II Model 6
Vibrator QC	Vibra Sig
Force Control	Peak and Trough
Phase Lock	Ground Force
High Force Output	90%
Pelton Rev. Level	6E

Receiver Array 12 Phones over 40m 3.33m between Phones Centred between pegs



Source Array 3 vibes Over 50m 15m pad to pad centred on VP 10m moveups





23 Felspar Street

Welshpool, Western Australia

RECORDING PARAMETER SHEET

Client: **ANSIR** Line: **99AGS-L3**
Crew: **1** Prospect Area: **West Wyalong**
Survey: **1999 Yilgarn Seismic Survey** Date Recorded: **21 To 25 September 1999**
Instrument: **Aram 24** Direction of Rec: **West To East**

*
LACHLAN**Recording parameters**

Traces per File	242
Record Length	20,000
Sample Rate:	2 msec
Tape Format	Seg Y
Shot Points	1000 To 3240
Rec To Rec	1000 To 3240
Files	2225 To 3331

Sweep Frequency

Swp 1	6 To 90 HZ
Swp 2	
Swp 3	
Swp 4	
Swp 5	
Swp 6	
Swp 7	
Swp 8	

Receiver Parameters

Station Interval	40 M
Geophone Array Length	40 M
Geophone Array Centre	Mid Station .5
Geophone Type	OYO GS32CT
Geophones Per String	12
Strings Per Station	1
Connection	Series/Parallel
Spread Geometry	Symmetrical
# of Station Gap at SP	3

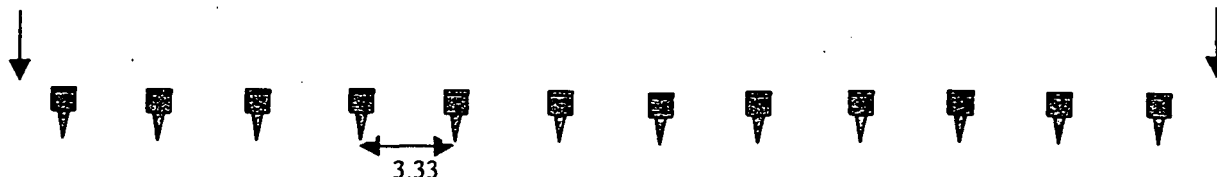
Source Parameters

No. of Sources On-Line	3
No. of Sweeps per VP	3
Sweep Length:	10 Sec
Sweep Type	Linear
Sweep Type Mono / Vari	Mono
VP Interval	80 And 40 M
Source Array Length	50 M
Vibe Spacing Pad to Pad	15 M
Vibe Move Up	10 M
VP Source Centre	On Station
Vibe Electronics	Pelton Adv II Model 6
Vibrator QC	Vibra Sig
Force Control	Peak and Trough
Phase Lock	Ground Force
High Force Output	90%
Pelton Rev. Level	6E

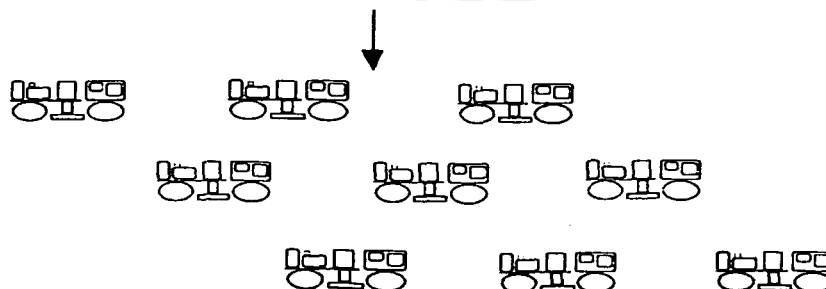
Auxiliary Traces

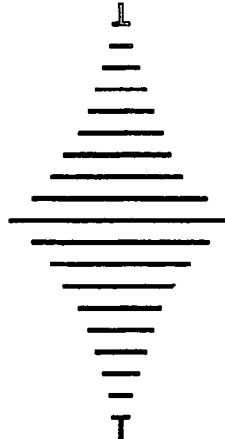
Time Break	241
True Reference	242

Receiver Array 12 Phones over 40m 3.33m between Phones Centred between pegs



Source Array 3 vibcs Over 50m 15m pad to pad centred on VP 10m moveups





Dynamic

Satellite

Surveys

99-70

Final Operations Report

on the

AGSO

1999 LACHLAN 2D SEISMIC SURVEY

for

TERRACORP PTY LTD

Sept 1999

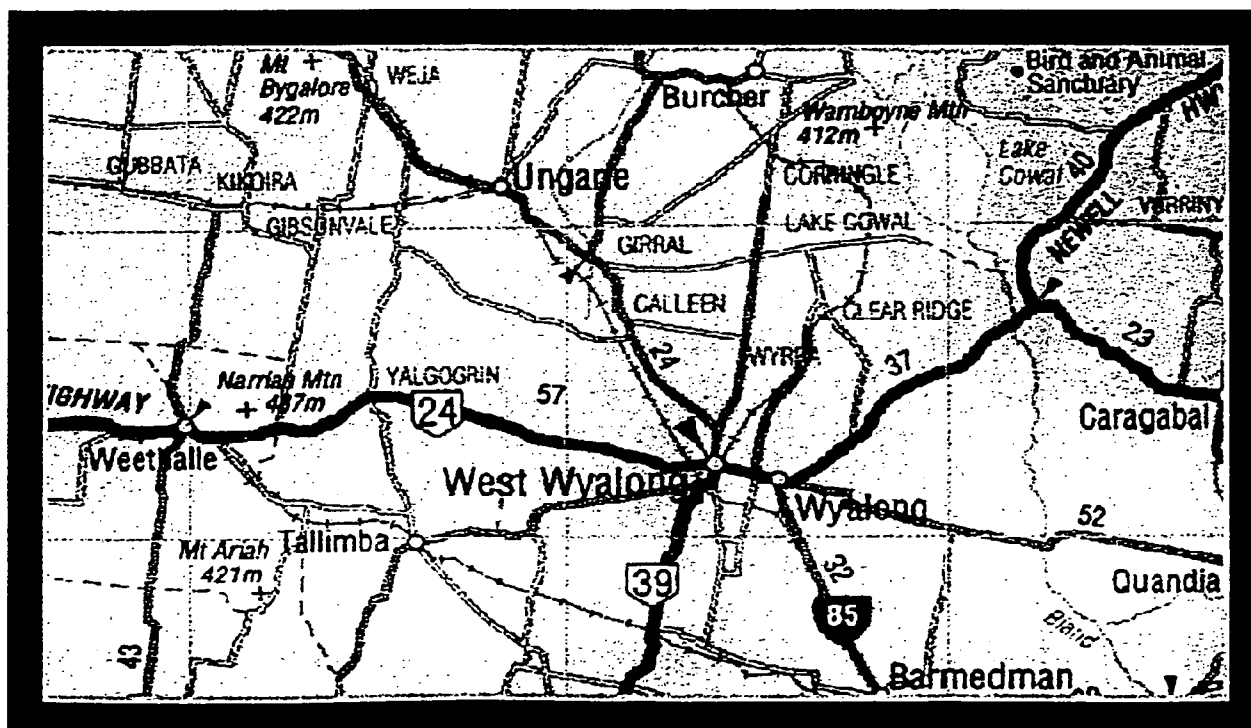


Table of Contents

INTRODUCTION	1
INSTRUMENTATION AND PERSONNEL	2
2.1 Personnel	2
2.2 Equipment	2
2.3 Logistics	3
SURVEY REFERENCE SYSTEMS	4
3.1 Survey Datum	4
3.1.1 Geodetic Datum	4
3.1.2 Map Projection	5
3.1.3 Height Datum	5
SURVEY CONTROL	7
4.1 Datum	7
MONUMENTATION	9
METHOD OF SURVEY	10
6.1 Line Ranging	10
6.2 RT20 Surveying	10
6.3 GPS Processing and Quality Control	11
DATA PRESENTATION	13
SAFETY	14
CHRONOLOGICAL SUMMARY OF SURVEY	15
OPERATIONAL ASPECTS	18
CONCLUSIONS AND RECOMMENDATIONS	19
APPENDICES	20
Control Survey, Miscloses and Ties	A - 1
Control Network Diagram	B - 1
New Permanent Markers Listing	C - 1
Survey Base Locations	D - 1
Chaining Maps	E - 1

1

**INTRODUCTION**

The following report covers the 1999 Lachlan 2D Seismic Survey operations, performed by Dynamic Satellite Surveys Pty Ltd (DSS) whilst contracted to TERRACORP Pty Ltd for Australian Geological Survey Organisation (AGSO).

The 1999 survey operation consisted of 190.28 kilometres of seismic line around the townsite of West Wyalong, NSW.

Work commenced on the 6th September and was completed on 21st September, 1999. There were 3 seismic lines at a 40m station interval, and 1 high resolution line at a 10m interval. These are listed below.

Line	From	To	Km's	
99AGS-L1	1000	2182	47.280	
99AGS-L2	1000	2262	50.480	
99AGS-L3	1000	3241	89.640	
99MAR-R1	100	388	2.880	(10m SI)
TOTAL:			190.280	

2



INSTRUMENTATION AND PERSONNEL

2.1 Personnel

DSS personnel involved in the survey were as follows:

Field Surveyors:

- Tom Pickett - Bachelor of Surveying - Curtin University of Technology
(Surveying, Processing, Report Writing)
- Lynne Baker - Bachelor of Geodetic Engineering - University of New South
Wales
(Surveying, associated paperwork)
- Jason Masters - Bachelor of Surveying - Queensland University of Technology
(Surveying, associated paperwork)

2.2 Equipment

Equipment provided by DSS and used on this project:

	Description	Quantity
Vehicles	Toyota Landcruiser Trayback - DSS	2
GPS receivers	NovAtel 2151R/RT20 c/w VHF telemetry	3
Computers	Acer 486 Portable PC	1

	Description	Quantity
	Grid 386 Field PC	3
Software	Waypoint GPS post-processing	1
	DSS MIB for Windows QC	1
Printer	Hewlett Packard DeskJet 340	1
Survey Instruments	Suunto Compass	1
Miscellaneous	Sundry office and support equipment	
	Field and Office Consumables	

2.3 Logistics

Personnel and equipment logistics were supported by the DSS Yeppoon office.

One DSS survey vehicle was mobilised from Kalgoorlie, WA on the 3rd September. The Second DSS vehicle mobilised from Sydney, on the 8th September.

Survey operations were based from the Charles Sturt Motor Inn, West Wyalong. This proved both feasible and practical, since both AGSO and TERRACORP were also staying there, hence available at all times.

The crew was demobilised on 22nd September 1999.

3



SURVEY REFERENCE SYSTEMS

3.1 Survey Datum

3.1.1 Geodetic Datum

Raw GPS data is acquired on the WGS 84 datum, described by the following parameters:

<i>Datum:</i>	WGS 84 (World Geodetic System 1984)
<i>Spheroid:</i>	WGS 84
<i>Semi-Major Axis Length:</i>	6 378 137.0
<i>Inverse Flattening:</i>	298.257223563
<i>The Unit of Measure:</i>	International Metre

Coordinate sets were transformed directly to the Australian Map Grid (AMG) based on the Australian Geodetic Datum 1966 (AGD 66):

<i>Datum:</i>	AGD 66 (Australian Geodetic Datum 1966)
<i>Spheroid:</i>	ANS (Australian National Spheroid)
<i>Semi-Major Axis Length:</i>	6 378 160.0
<i>Inverse Flattening:</i>	298.25
<i>The Unit of Measure:</i>	International Metre

Coordinate conversions from WGS 84 to AGD 84 were performed using the following seven transformation parameters:

<i>Translations:</i>	ΔX :	116.00 m	ΔY :	50.47 m	ΔZ :	-141.69 m
<i>Rotations:</i>	$R\Omega$:	0.230"	$R\phi$:	0.390"	$\Delta\kappa$:	0.344"
<i>Scale:</i>	bs :	-0.0983 ppm				

3.1.2 Map Projection

Rectangular coordinates provided were based on the Australian Map Grid (AMG).

Parameters for this projection are:

<i>Projection:</i>	AMG Zone 55
<i>Latitude of Origin:</i>	0°
<i>Central Meridian (CM):</i>	147° E
<i>Scale Factor at CM:</i>	0.9996
<i>False Easting:</i>	500 000
<i>False Northing:</i>	10 000 000
<i>The Unit of Measure:</i>	International Metre

Final data was presented as AMG84 and AHD coordinates as requested by the client.

3.1.3 Height Datum

Observations were made on the WGS84 datum. The height associated with this datum is an ellipsoidal height (h). The Australian Height Datum (AHD) uses a height datum associated with the Australian Map Grid (AMG), as an orthometric height, which is measured as the height above mean sea level or the geoid (H).

The function that defines the relationship between the ellipsoid and orthometric heights is:

$$H = h - N$$

Or

$$\text{AHD} = \text{WGS84} - \text{Geoid-Ellipsoid Separation}$$

A digital model (OSU89A) was used for automatic determination of N at each point, so that orthometric heights within the survey area can be readily derived. For all line areas, a separate model was calculated and the models' residuals indicated a good fit, reflecting the gradual change in geoid slope within the extents of the models.

4



SURVEY CONTROL

4.1 Datum

The datum for the prospect was based upon two survey marks within the prospect. These were trig station porter, which is 1st order accuracy in horizontal, and PM2488 bench mark, which is 3rd order accuracy in vertical.

The coordinates of these stations are as follows:

Station Name	Easting	Northing	Height (AHD)	Comment
PORTER	560790.511	6267528.377		1st Order Hz
PM2488			207.394	3rd Order Vt

Throughout the survey various GPS static points were established, and were used as bases for the layout and survey of the seismic lines. These are listed below:

Station	Name	Easting	Northing	Height (AHD)	Comment
99AGS-L1	1121+20	585030.1	6270154.8	261.3	Sandy Creek Rd
99AGS-L1	1974+34	552933.0	6275482.3	207.5	Newell Hwy
99MAR-R1	100	548371.1	6267151.3	207.5	EOL
99AGS-L2	1227	538545.8	6272269.9	215.2	
99AGS-L2	1655+37	522290.7	6269506.2	251.1	Blow Clear
99AGS-L2	2035+30	507335.6	6269649.9	246.7	Girral
99AGS-L3	1246+12	502922.9	6223784.4	302.2	Kildare
99AGS-L3	1664+8	518618.4	6220741.9	281.1	Buggajool
99AGS-L3	2045+17	533356.9	6220008.8	234.4	Barmedmam
99AGS-L3	2494+31	549299.0	6219363.1	248.7	West's Rd
99AGS-L3	2926+24	565892.4	6221739.8	233.5	Morangorell

Two points were also established within the prospect to close off the survey traverse. These points have the following coordinates;

Station Name	Easting	Northing	Height (AHD)	Comments
Lachlan 1	571282.5	6236721.2	243.0	Quandilla
Lachlan 2	568736.3	6254991.6	226.0	Carabal

See Appendix D - Survey Base Locations for graphical descriptions.

5



MONUMENTATION

Permanent markers were placed along the seismic lines at appropriate positions for easy future access. They consisted of a steel star picket with an aluminium tag attached. The tags were punched with all relevant information such as line name, station number, or end of line numbers. They were also stamped with the AGSO telephone number in Canberra.

A coordinate listing of all new permanent markers placed is contained in **Appendix C-Permanent Markers Listing**. The list of new permanent markers is included in the digital data supplied to the client as files named 99AGS-L*.PMS.

6



METHOD OF SURVEY

6.1 Line Ranging

The line pointing was completed by AGSO, which was minimal due to fact that all seismic lines were shot along shire roads.

6.2 RT20 Surveying

The lines were surveyed using DSS's RT20 real time kinematic surveying technique. RT20 enables both position and elevation coordinates to be acquired in real time and on the appropriate datum.

The survey method utilised phase data received from US Navy NAVSTAR Satellites to provide three dimensional positioning. One receiver was set up as a base station at a known location (as per the survey network shown in **Appendix B - Control network Diagram**), while other receivers were used as remote rovers.

NovAtel real time kinematic can achieve accuracies of better than +/- 0.3m in position and elevation depending on base line length. The expected precision for locating pegged positions is better than 0.3 metres in both elevation and height relative to the base station used and is generally better than 0.2 metres.

Initialisation of the RT20 rover GPS usually takes as little as 2-3 minutes, although this is greatly dependant on satellite geometry, availability, and baseline length.

To allow for the possible variation of the designed coordinates, to what's actually on the ground, DSS utilised an option of radial pegging. This option allows a running chain from each recorded point to the next at any desired increment. This also has an added advantage to accommodate any line bends due to obstacles.

As the seismic lines followed shire roads, DSS personnel picked up the bend points of the seismic lines before pegging commenced. This enabled the associated waypoint coordinates to be generated, and loaded/updated in the DSS in-the-field software.

Checks and ties were examined in both real time operation and through the control network, to assess coordinate integrity.

The field data was edited into line files and examined for quality control.

6.3 GPS Processing and Quality Control

When using RT20, all data is recorded internally in GRID palmtop data loggers and then downloaded to the office computer each evening. Quality of the satellite data was monitored by careful examination of the various on-screen quality control statistics produced by DSS's software. These checks on data integrity are in the form of standard deviation (or sigma) values for latitude, longitude, and height and are generally better than 0.2 metres.

The coordinates were then checked using a chaining check routine developed by DSS that calculates line bearing and compares calculated peg distance with actual peg distance. Points outside specified distance and azimuth tolerances are flagged for further investigation and re-surveyed as necessary.

Profile plots were examined to identify any height anomalies.

Coordinates were then finalised by interpolating intermediate stations using software developed by DSS and providing these coordinates in SEGP1 an UKOOA format.

Each line consisted of a *.CRD file which is the Surveyor's recordings along a line, an *.INT file which is a complete listing of Easting, Northing and Elevation for every station along a line and a *.CHK file which is a chaining check along the line. Each line has a list of the surveyed coordinates of all new permanent markers placed on the line and are recorded in a *.PMS file.

7



DATA PRESENTATION

On completion of the survey a full digital set of data along with relevant hard copies was presented to TERRACORP in duplicate. Files supplied were:

File	Description
99AGS-L?.UKA	Coordinates and elevations of all stations in UKOOA format.
99AGS-L?.SEG	Coordinates and elevations of all stations in P1/90 format.
99AGS-L?.CHK	A chaining check file for each surveyed station.
99AGS-L?.PMS	A list of all new permanent markers.
99AGS-L?.CRD	Coordinates and elevations of all surveyed stations.
99AGS-L?.INT	Coordinates and elevations of all interpolated stations.
TIES.CRD	A listing of all survey ties and miscloses.
PMS.CRD	Listing of all permanent markers.

These files are all backed up on digital disks in the Yeppoon office for future reference.

8



SAFETY

DSS personnel are aware of safety conditions concerning all exploration seismic surveys. DSS safety guidelines were followed at all times.

DSS personnel attended all safety meetings conducted by TERRACORP.

Each DSS vehicle was fitted with, UHF and HF radio, fire extinguisher, first-aid kit, vehicle recovery equipment, and weekly vehicle maintenance check lists.

As the survey was conducted along shire roads, each DSS vehicle was equipped with flashing lights, personnel with orange vests.

No LTIs (Lost Time Injuries), no near misses and no accidents were reported for the survey.

9



CHRONOLOGICAL SUMMARY OF SURVEY

DATE	SURVEY OPERATIONS
Sept 03	Tom Pickett mobilised from Kalgoorlie, WA.
Sept 04	Still mobilising.
Sept 05	Still driving. Arrived in West Wyalong in the evening.
Sept 06	Awaiting on Plans for the Prospect. Meeting with David Johnstone, Scouted 99AGS-L1. Set up office, and job file.
Sept 07	Survey and Chain 99AGS-L1 stns 1000-1126 (5.04km) Difficult d/t thick trees - loss of GPS signal. Picked up bend points.
Sept 08	99AGS-L1 stns 1126-1408 (11.28km) Thick Trees, Picked up bend points. Lynne Baker arrives in the evening.
Sept 09	99AGS-L1 stns 1408-1647 (9.56km) Equipment problems, fixed ok. Static observations TS Porter, PM2488
Sept 10	99AGS-L1 stns 1647-2182 (21.40km) Open, No trees !

- Sept 11 99MAR-R1 stns 100-388 (2.88km) - High Resolution Line.
Static Obs PM1120+20, PM1974+34, PM100.
Picked up bend points on line L2.
- Sept 12 99AGS-L2 stns 1000-1372 (14.88km)
Static obs PM1277, Blow, Girr.
Picked up bends.
- Sept 13 99AGS-L2 stns 1372-1850 (19.12km)
Static tie into PM26345.
Picked up bend points.
- Sept 14 99AGS-L2 stns 1850-2262 (16.48km)
- Sept 15 99AGS-L3 stns 1000-1270 (10.80km)
Static Obs Kildare, Bugg.
Thick Trees.
- Sept 16 99AGS-L3 stns 1270-1630 (14.40km)
Thick trees.
Static obs Bar.
- Sept 17 99AGS-L3 stns 1630-2008 (15.12km)
Thick Trees.
Lynne Baker - out in the evening.
Jason Masters - In, in the evening.
- Sept 18 99AGS-L3 stns 2008-2312 (12.16km)
Thick trees, very bendy.
Static obs to grav.
- Sept 19 99AGS-L3 stns 2312-2703 (15.64km)
Static obs Quan.
- Sept 20 99AGS-L3 stns 2703-3004 (12.04km)
Static obs Lach1, Lach2.

Sept 21 99AGS-L3 stns 3004-3241 (9.48km)

Lachlan 2D completed.

Closed off survey traverse from Lach2 to Pm1121+20@99AGS-L1

Tied into AGSO gravity point.

Sept 22 Final survey data completed.

Final report completed.

Vehicle, equipment maintenance.

Sept 23 DSS demobilise.

10



OPERATIONAL ASPECTS

The survey of the four lines on this project was relatively fast. A total of 190.280 kilometres was surveyed in 15 days giving an average daily production rate of just under 13 kilometres per day.

The prospect consisted of thick tree coverage along the shire roads. This caused major difficulty in obtaining survey data due to loss of GPS signal. At times it was very slow, but this was displaced by open areas of road where production was greatly increased. One good side in working along roads was quick mobility where very few obstacles were of hindrance

As the seismic lines were along relatively straight roads, DSS utilised its radial pegging software to obtain bend points on the road. These points were then used to create waypoints for the line, so as to allow two vehicles to operate in the recording of the survey data.

There was no down time due to equipment problems, nor were there any problems with GPS due to poor satellite geometry and availability.

11



CONCLUSIONS AND RECOMMENDATIONS

Although the prospect was quite thick with tree coverage, it was quite suitable to RT20 GPS pegging. This was mainly because it was relatively flat and of a constant grade. Survey points could be recorded even in the most thick areas, although it took longer to reach the required tolerances in the standard deviations of the GPS reading. These readings mainly concerned the height tolerances.

Two surveyors were required in the survey operations, so as to keep a lead over the recording crew.

The seismic lines were along roads which were relatively long and bendy. Points were surveyed at the bend points to create waypoints along the line, so as to allow both vehicles to operate at any desired station along the line.

The survey control network tied in relatively well with the surrounding survey marks and all new points of survey met the required survey tolerances.

Submitted by,

Tom Pickett

12



APPENDICES

Control Survey, Miscloses and Ties

Coordinates are AMG84 Zone 55 Central Meridian 147°

Heights are AHD, using OSU89A N-value model

CONTROL POINTS FOR SURVEY

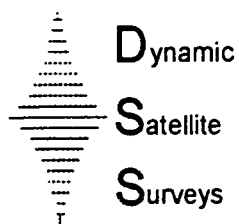
The following points had a GPS static Observation and were used as a RT20 base.

Line	Station	Easting	Northing	Elevation	Comments
99AGS-L1	1121+20	585030.1	6270154.8	261.3	Sandy Creek Rd
99AGS-L1	1974+34	552933.0	6275482.3	207.5	Newell Hwy
99MAR-R1	100	548371.1	6267151.3	207.5	EOL
99AGS-L2	1227	538545.8	6272269.9	215.2	
99AGS-L2	1655+37	522290.7	6269506.2	251.1	Blow Clear
99AGS-L2	2035+30	507335.6	6269649.9	246.7	Girral
99AGS-L3	1246+12	502922.9	6223784.4	302.2	Kildare
99AGS-L3	1664+8	518618.4	6220741.9	281.1	Buggajool
99AGS-L3	2045+17	533356.9	6220008.8	234.4	Barnedmam
99AGS-L3	2494+31	549299.0	6219363.1	248.7	West's Rd
99AGS-L3	2926+24	565892.4	6221739.8	233.5	Morangorell

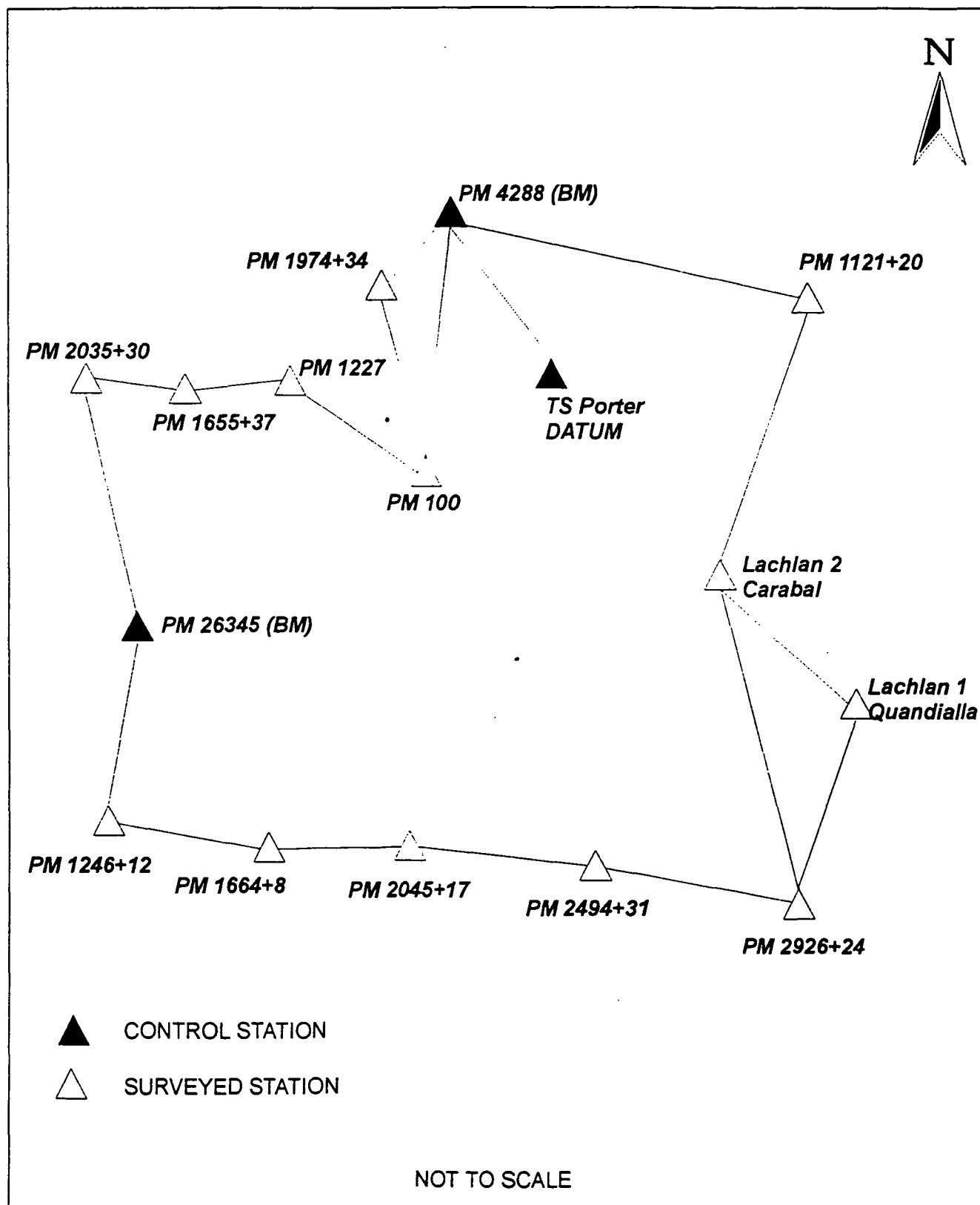
SURVEY TIES AND MISCLOSES

Station	Easting	Northing	Elevation	Comments
PM4288	554310	6278010	207.39	8th Hz, 3rd Vt
PM4288	554279.47	6277972.04	207.25	Day 252
			-0.14	Misclose
PM26345	502728.40	6250664.62	287.22	2th Hz, 3rd Vt
PM26345	502727.79	6250666.64	287.67	DAY256
	-0.61	+2.02	+0.45	Misclose
PM112	585030.10	6270154.82	261.29	DAY254
PM1121	585029.94	6270154.88	261.39	DAY264
	-0.16	+0.06	+0.10	Misclose
95012	549298.97	6219363.10	248.70	Solo Geophysical
SSM265?	552744.9	6275554.6	207.0	SSM

Control Network Diagram



CONTROL NETWORK



New Permanent Markers Listing

Coordinates are AMG84 Zone 55 Central Meridian 147°

Heights are AHD, using OSU-89A N-value model

Revision 1, September 1999

Permanent Markers

Line	Stn.	Easting	Northing	Elev.	Comments
99AGS-L1	1000	589764.6	6269117.2	265.7	EOL
99AGS-L1	1121+20	585030.1	6270154.8	261.3	Sandy Creek Rd
99AGS-L1	1429	573591.5	6271911.1	265.8	Railway
99AGS-L1	1647+3	565743.8	6273008.3	225.9	Muffet Road
99AGS-L1	1974+34	552933.0	6275482.3	207.5	Newell Hwy
99AGS-L1	2182	545588.4	6276014.7	206.8	EOL 10mE
99AGS-L2	1000	546433.4	6269194.8	208.5	EOL
99AGS-L2	1227	538545.8	6272269.9	215.2	
99AGS-L2	1507+8	527830.5	6270982.0	254.0	West's Rd
99AGS-L2	1655+37	522290.7	6269506.2	251.1	Blow Clear
99AGS-L2	2035+30	507335.6	6269649.9	246.7	Girral
99AGS-L2	2262	498429.6	6271016.4	258.6	EOL
99AGS-L3	1000	493189.2	6225262.1	292.1	EOL
99AGS-L3	1246+12	502922.9	6223784.4	302.2	Kildare
99AGS-L3	1664+8	518618.4	6220741.9	281.1	Buggajool
99AGS-L3	2045+17	533356.9	6220008.8	234.4	Barnedman
99AGS-L3	2494+31	549299.0	6219363.1	248.7	West's Rd
99AGS-L3	2926+24	565892.4	6221739.8	233.5	Morangorell
99AGS-L3	3241	577633.3	6224852.5	252.5	EOL
99MAR-R1	100	548371.1	6267151.3	207.5	EOL

Survey Base Locations



D_{ynamic}

S_{atellite}

S_{urveys}

STATION LOCATION DIAGRAM

DSS-FF-15

REV 6.0

Mar 1999

PROJECT / JOB # 99-70 CLIENT AGSO/TERRACORP DAY / DATE 9/99

STATION NAME: PM 1121+20 99AGS-L1

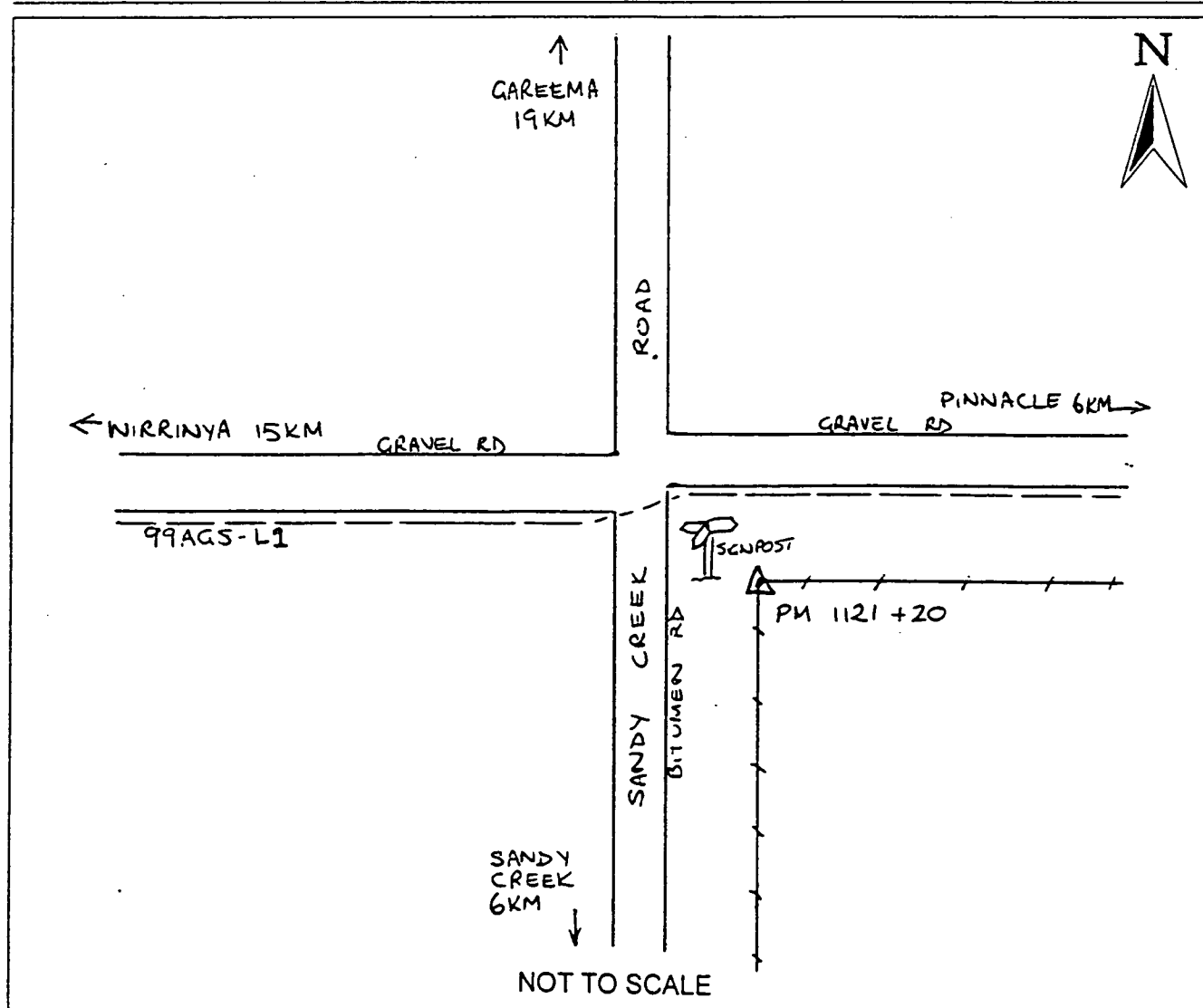
AREA: LACHLAN MAP REFERENCE: _____

Horizontal Control Information

Vertical Control Information

Easting: <u>585030.1</u>	RL: <u>261.3</u>
Northing: <u>6270154.8</u>	Datum: <u>AHD</u>
Datum: <u>AMG</u> Zone: <u>55</u>	Origin: <u>PM4288</u>
Origin: <u>T.S. PORTER</u>	

Mark Description: Star picket tagged with station name.





Dynamic

Satellite

Surveys

STATION LOCATION DIAGRAM

PROJECT / JOB # 99-70 CLIENT AGSO/TERRACORD DAY / DATE 9/99

STATION NAME: PM 1974 + 34 99AGS-L1

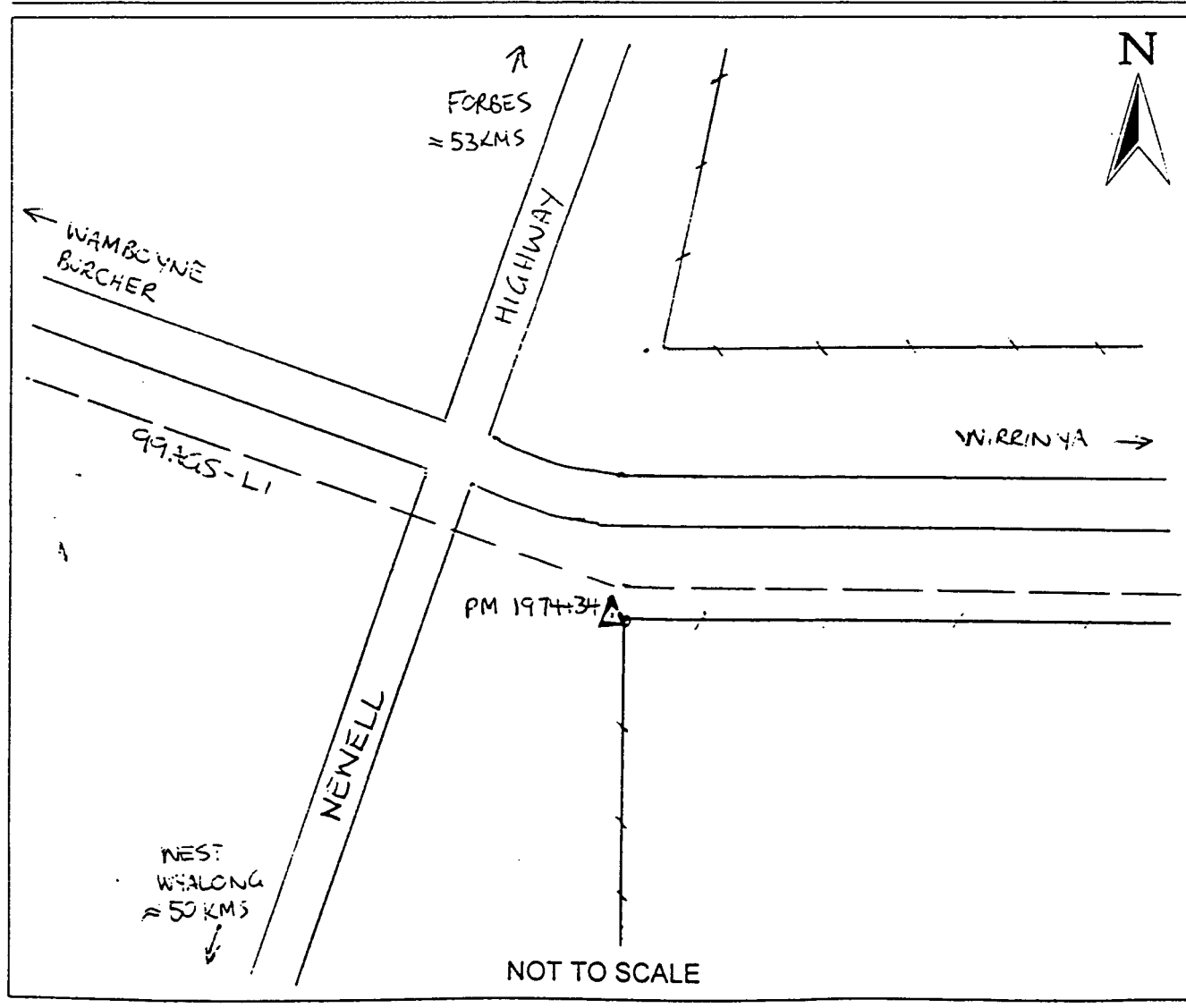
AREA: LACHLAN MAP REFERENCE: _____

Horizontal Control Information

Vertical Control Information

Easting: 552933.0	RL: 207.5
Northing: 6275482.3	Datum: AHD
Datum: AMG Zone: 55	Origin: PM 4288
Origin: TS. PORTER	

Mark Description: Star picket tagged with station name.





Dynamic

Satellite

Surveys

STATION LOCATION DIAGRAM

DSS-FF-15

REV 6.0

Mar 1999

PROJECT / JOB # 99-70 CLIENT AGSC / TERRACORP DAY / DATE 9/99

STATION NAME: PM 100 99MAR-R1

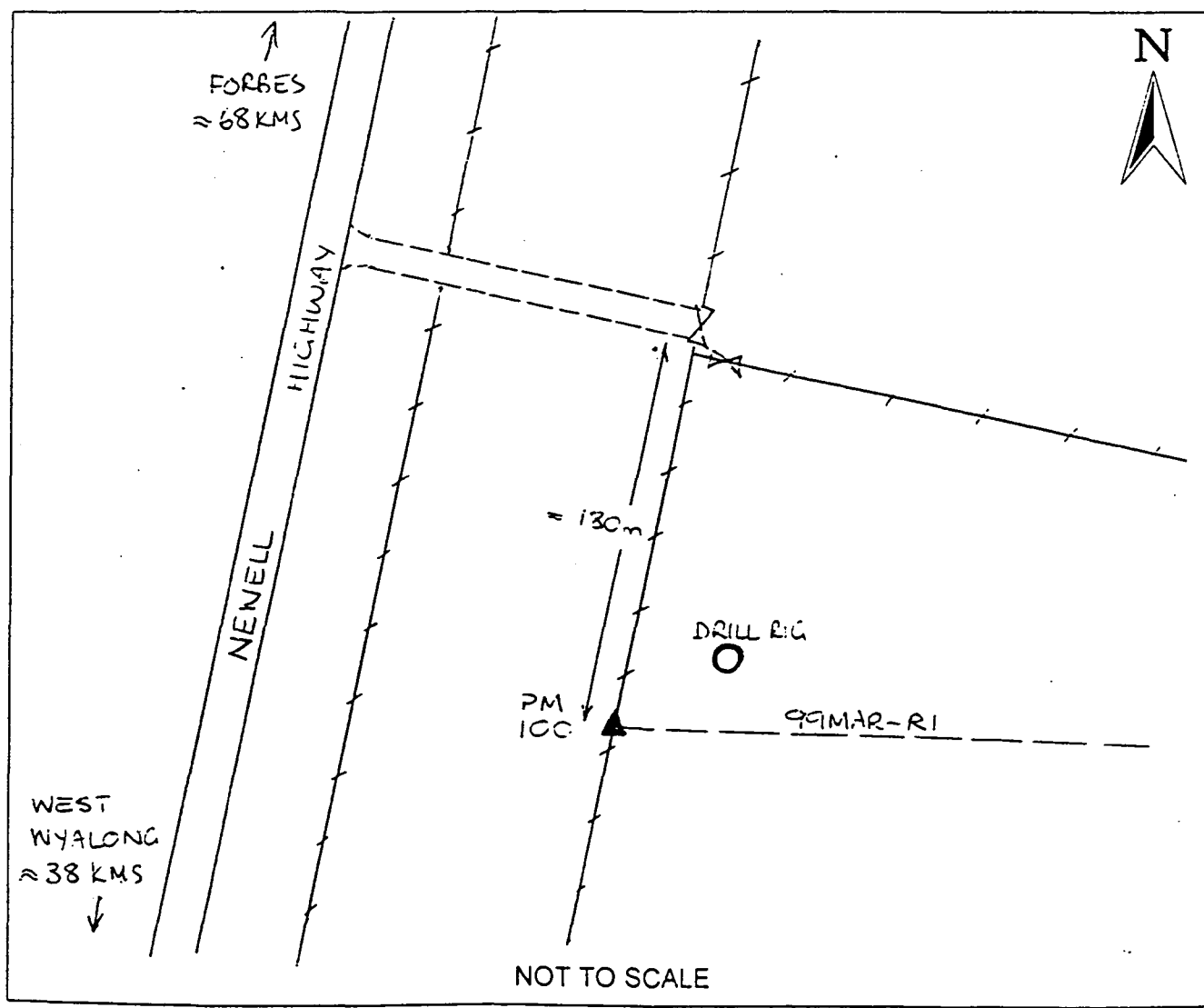
AREA: MARSDEN MAP REFERENCE: _____

Horizontal Control Information

Vertical Control Information

Easting: <u>548371.1</u>	RL: <u>207.5</u>
Northing: <u>6267151.3</u>	Datum: <u>AHD</u>
Datum: <u>AMG</u> Zone: <u>55</u>	Origin: <u>PM 4288</u>
Origin: <u>T.S. PORTER</u>	

Mark Description: Star picket tagged with station name





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Surveys

STATION LOCATION DIAGRAM

DSS-FF-15

REV 6.0

Mar 1999

PROJECT / JOB # 99-70 CLIENT AGSO / TERRACORP DAY / DATE 9 / 99

STATION NAME: Pm 1227 @ 99AGS-L3

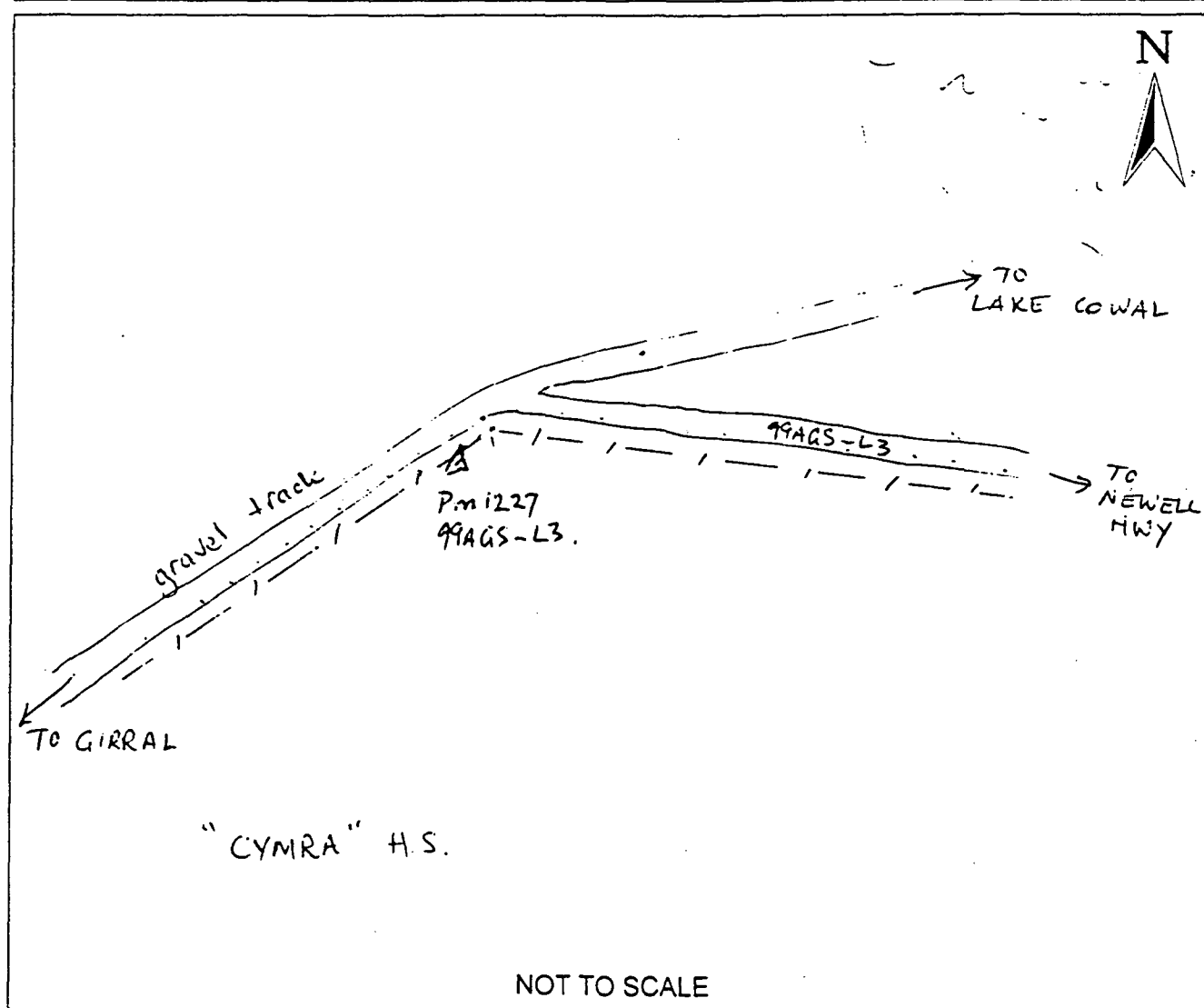
AREA: LACHLAN MAP REFERENCE: _____

Horizontal Control Information

Vertical Control Information

Easting: <u>538545.8</u>	RL: <u>215.2</u>
Northing: <u>6272269.9</u>	Datum: <u>AHD</u>
Datum: <u>AMG</u> Zone: <u>55</u>	Origin: <u>PM 4288</u>
Origin: <u>TS PORTER</u>	

Mark Description: STAR PICKET TAGGED WITH STATION NAME





Dynamic
Satellite
Surveys

STATION LOCATION DIAGRAM

DSS-FF-15
REV 6.0
Mar 1999

PROJECT / JOB # 99-70 CLIENT AGSC/TERRACORP DAY / DATE 9/99

STATION NAME: PM 1655+37 99AGS-L2

AREA: LACHLAN MAP REFERENCE: _____

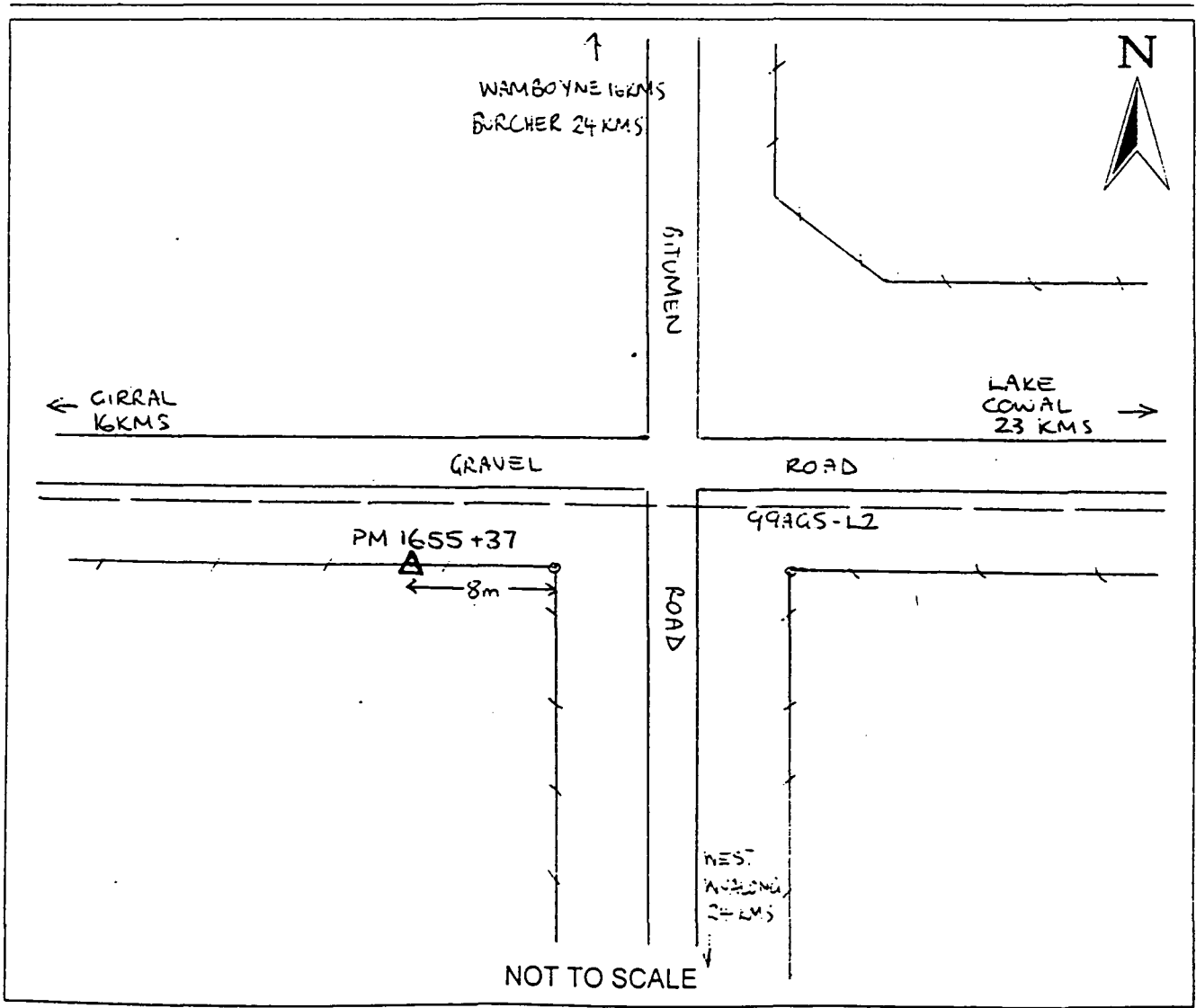
Horizontal Control Information

Easting: 522290.7
Northing: 6269506.2
Datum: AMG Zone: 55
Origin: T.S. PORTER

Vertical Control Information

RL: 251.1
Datum: AHD
Origin: PM 4288

Mark Description: Star picket tagged with station name





D_{ynamic}

S_{atellite}

S_{urveys}

STATION LOCATION DIAGRAM

DSS-FF-15

REV 6.0

Mar 1999

PROJECT / JOB # 99-70 CLIENT AGSC / TERRACORP DAY / DATE 9/99

STATION NAME: PM 2035+30 99AGS-L2

AREA: LACHLAN MAP REFERENCE: _____

Horizontal Control Information

Vertical Control Information

Easting: 507335.6

RL: 246.7

Northing: 6269649.9

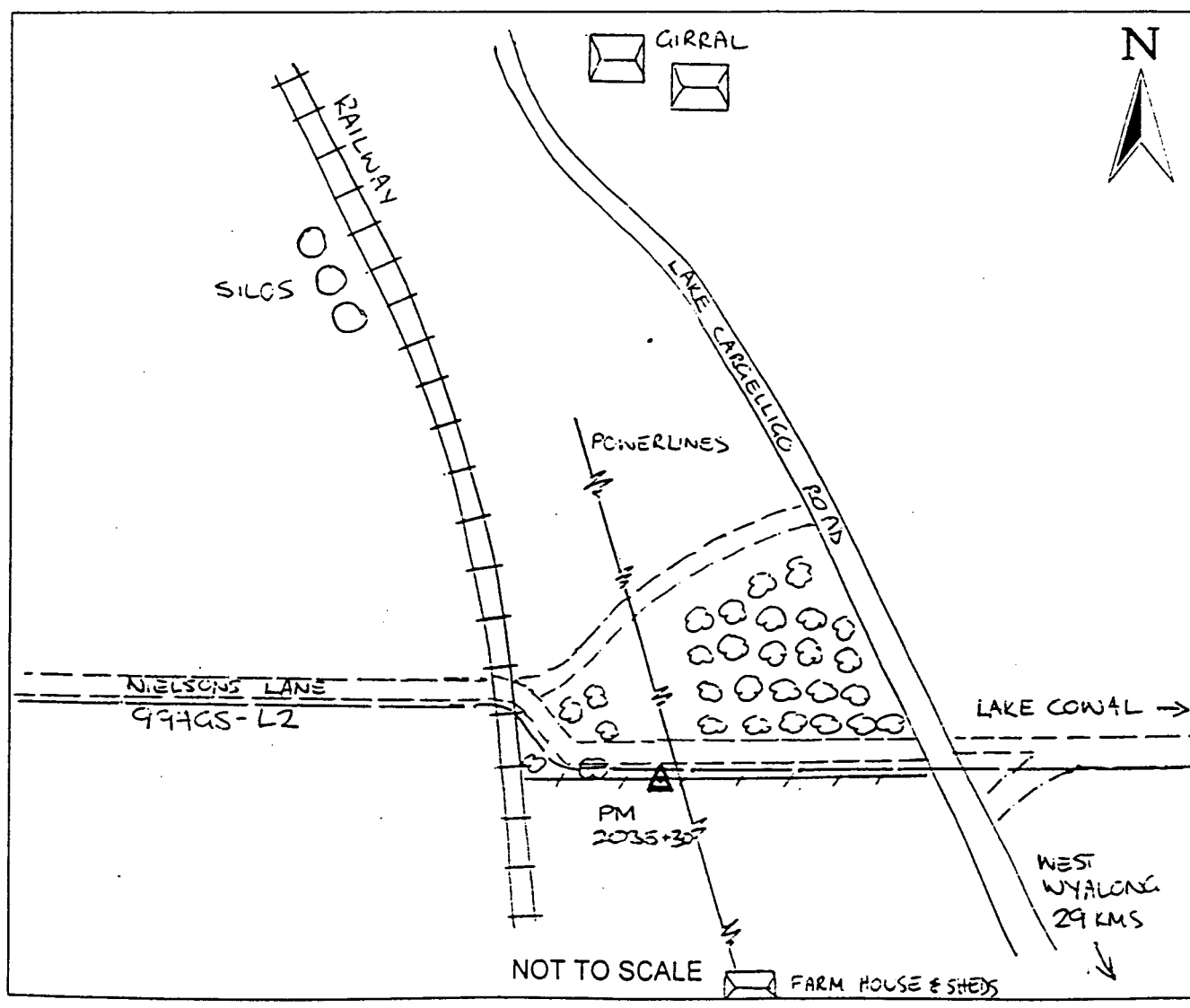
Datum: AHD

Datum: AMG Zone: 55

Origin: PM 4288

Origin: T.S. PORTER

Mark Description: Star picket tagged with station name.





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Satellite

Surveys

STATION LOCATION DIAGRAM

DSS-FF-15

REV 5.0

Mar 1999

PROJECT / JOB # 99-70 CLIENT AGS / TERRACORP DAY / DATE 9/99

STATION NAME: PM 1246+12 99ACS-L3

AREA: LACHLAN MAP REFERENCE: _____

Horizontal Control Information

Easting: 502922.9

Northing: 6223784.4

Datum: AMG Zone: 55

Origin: T.S. PORTER

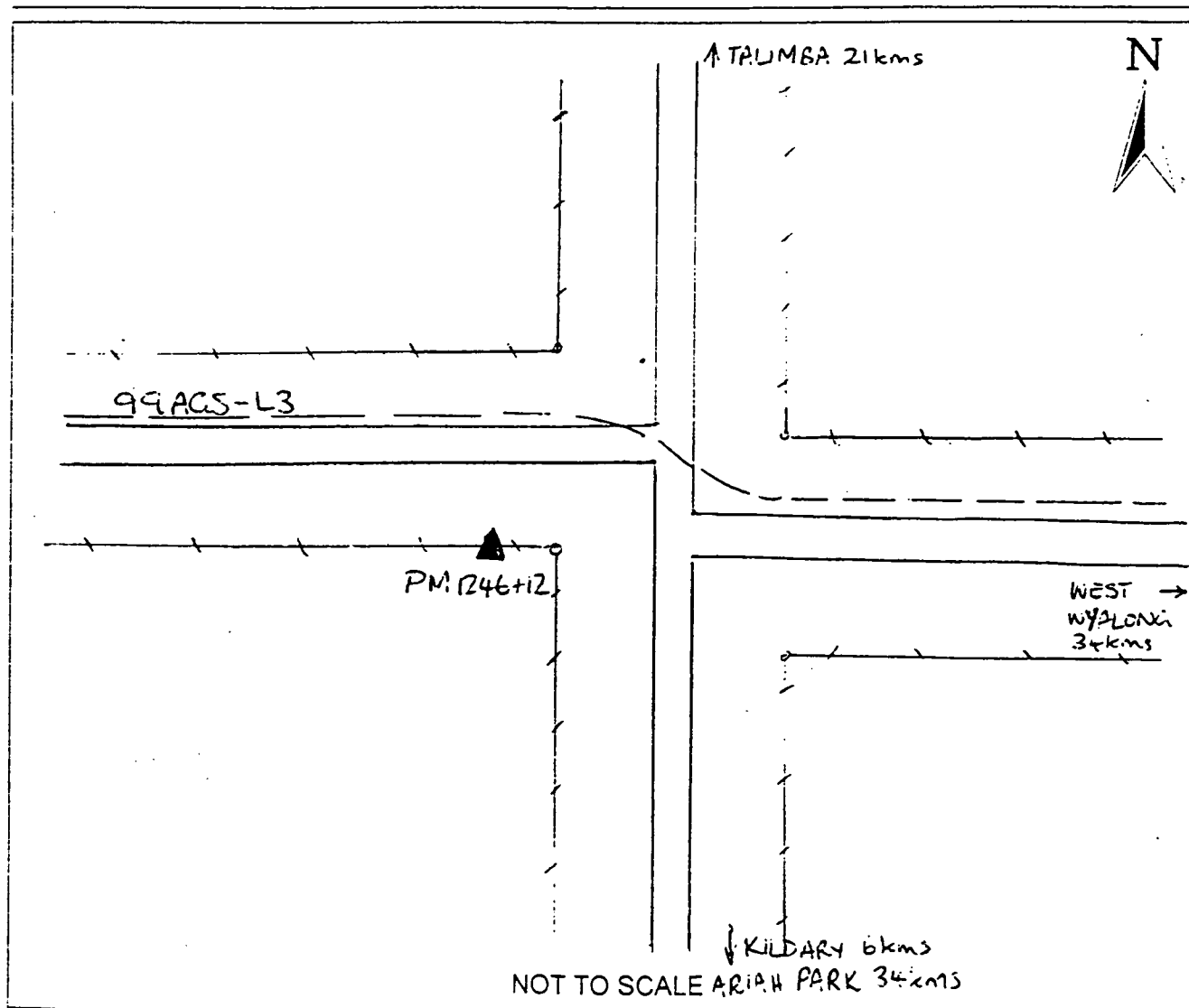
Vertical Control Information

RL: 302.2

Datum: AHD

Origin: Pm 4288

Mark Description: Star picket tagged with station name.





Dynamic
Satellite
Surveys

STATION LOCATION DIAGRAM

DSS-FF-15
REV 6.0
Mar 1999

PROJECT / JOB # 99-70 CLIENT AGSCO/TERRACORP DAY / DATE 9/99

STATION NAME: PM 1664 + E 99.ACS-L3

AREA: LACHLAN MAP REFERENCE: _____

Horizontal Control Information

Easting: 518618.4

Northing: 6220741.9

Datum: AMC Zone: 55

Origin: T.S. PORTER

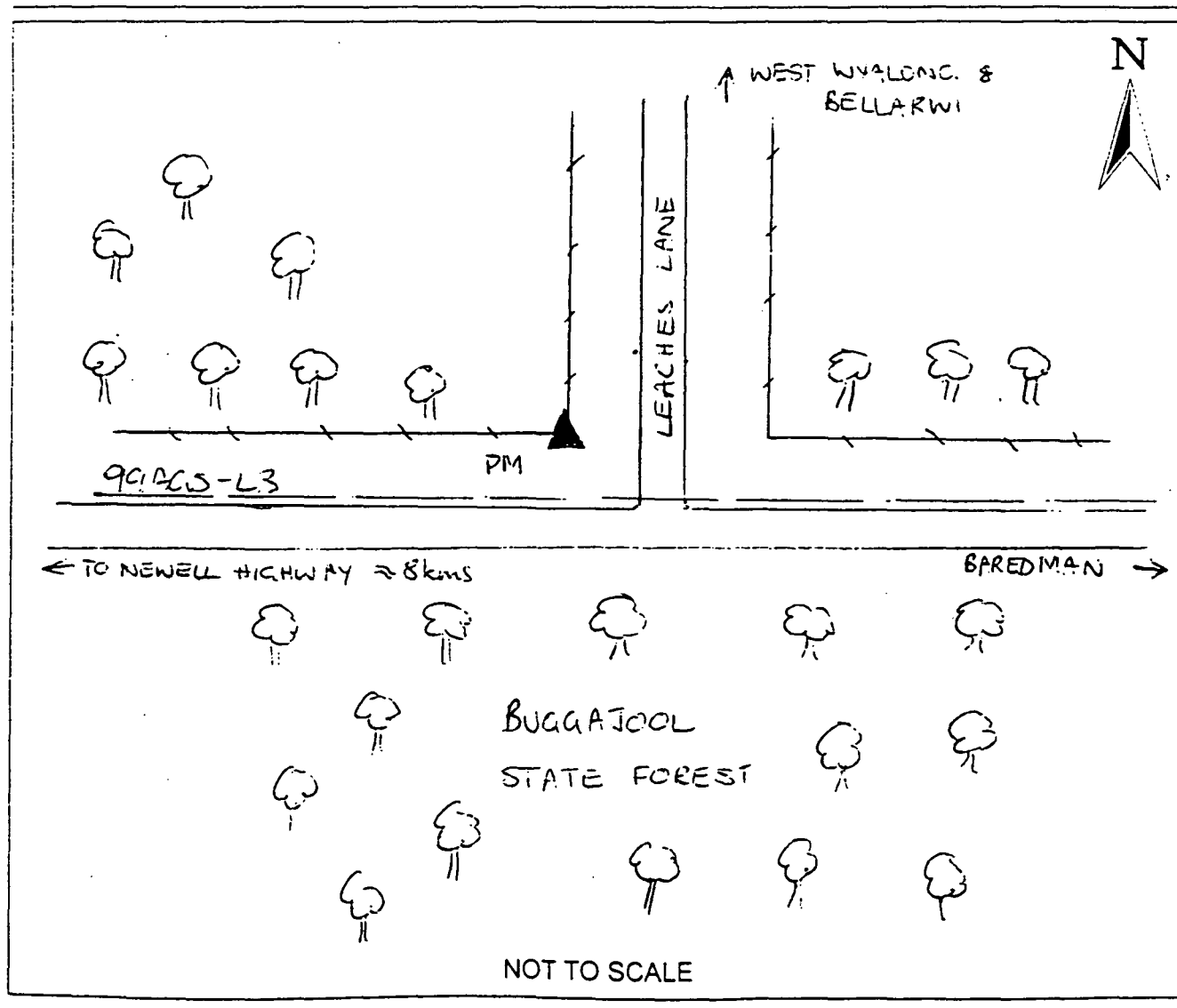
Vertical Control Information

RL: 281.1

Datum: AHD

Origin: PM 4288

Mark Description: Star picket tagged with station name.





Dynamic

Satellite

Surveys

STATION LOCATION DIAGRAM

DSS-FF-15

REV 6.0

Mar 1999

PROJECT / JOB # 99-70 CLIENT AGSO/TERRACORP DAY / DATE 9/99

STATION NAME: PM 2045+17 99AGS-L3

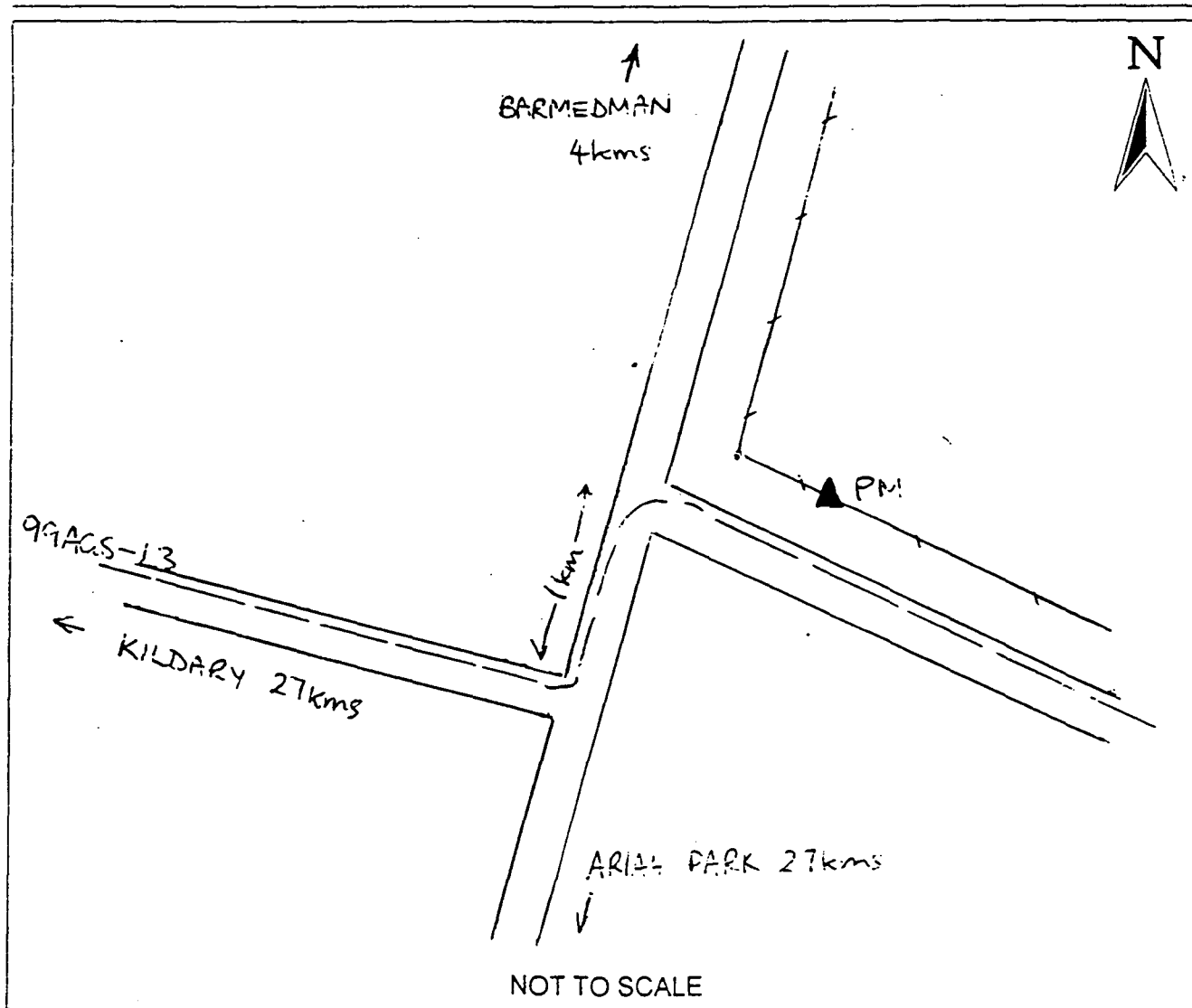
AREA: LACHLAN MAP REFERENCE: _____

Horizontal Control Information

Vertical Control Information

Easting: 533356.9	RL: 234.4
Northing: 6220008.8	Datum: AHD
Datum: AMG Zone: 55	Origin: PM 4288
Origin: T.S. PORTER	

Mark Description: Star picket tagged with station name.





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Satellite

Surveys

STATION LOCATION DIAGRAM

DSS-FF-15

REV 6.0

Mar 1999

PROJECT / JOB # 99-70 CLIENT AGSO / TERRACOS DAY / DATE 3/9

STATION NAME: PM 2494+33 99AGS-L3

AREA: LACHLAN MAP REFERENCE: _____

Horizontal Control Information

Vertical Control Information

Easting: 549299.0

RL: 248.7

Northing: 6219363.1

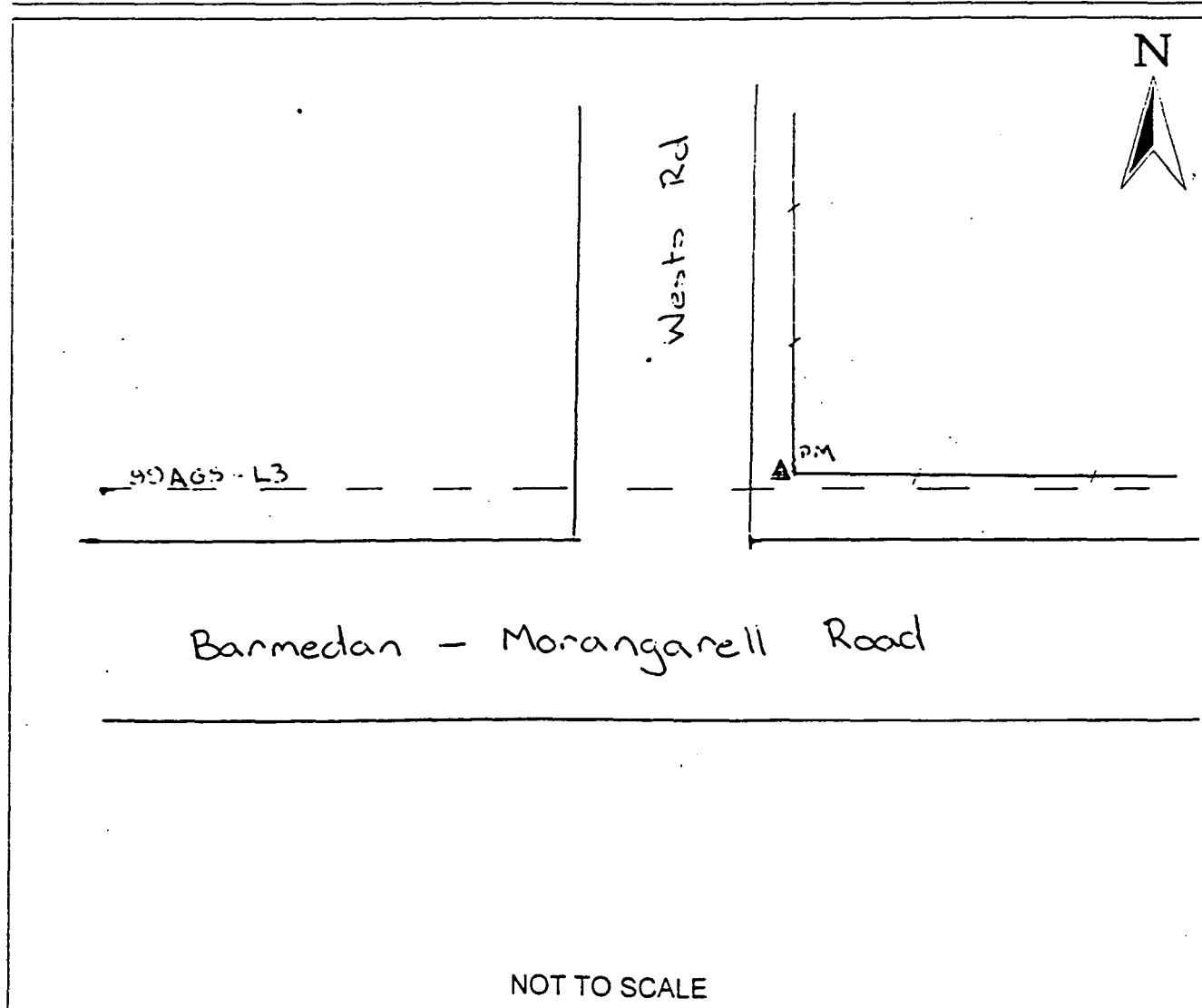
Datum: AHD

Datum: AMG Zone: 55

Origin: PM 4288

Origin: TS PORTER

Mark Description: Star Picket tagged with station name





Dynamic

Satellite

Surveys

STATION LOCATION DIAGRAM

DSS-FF-15

REV 6.0

Mar 1999

PROJECT / JOB # 99-70 CLIENT AGSCO / TERRACORP DAY / DATE 2/99

STATION NAME: PM 2326 + 24 99AGS-L3

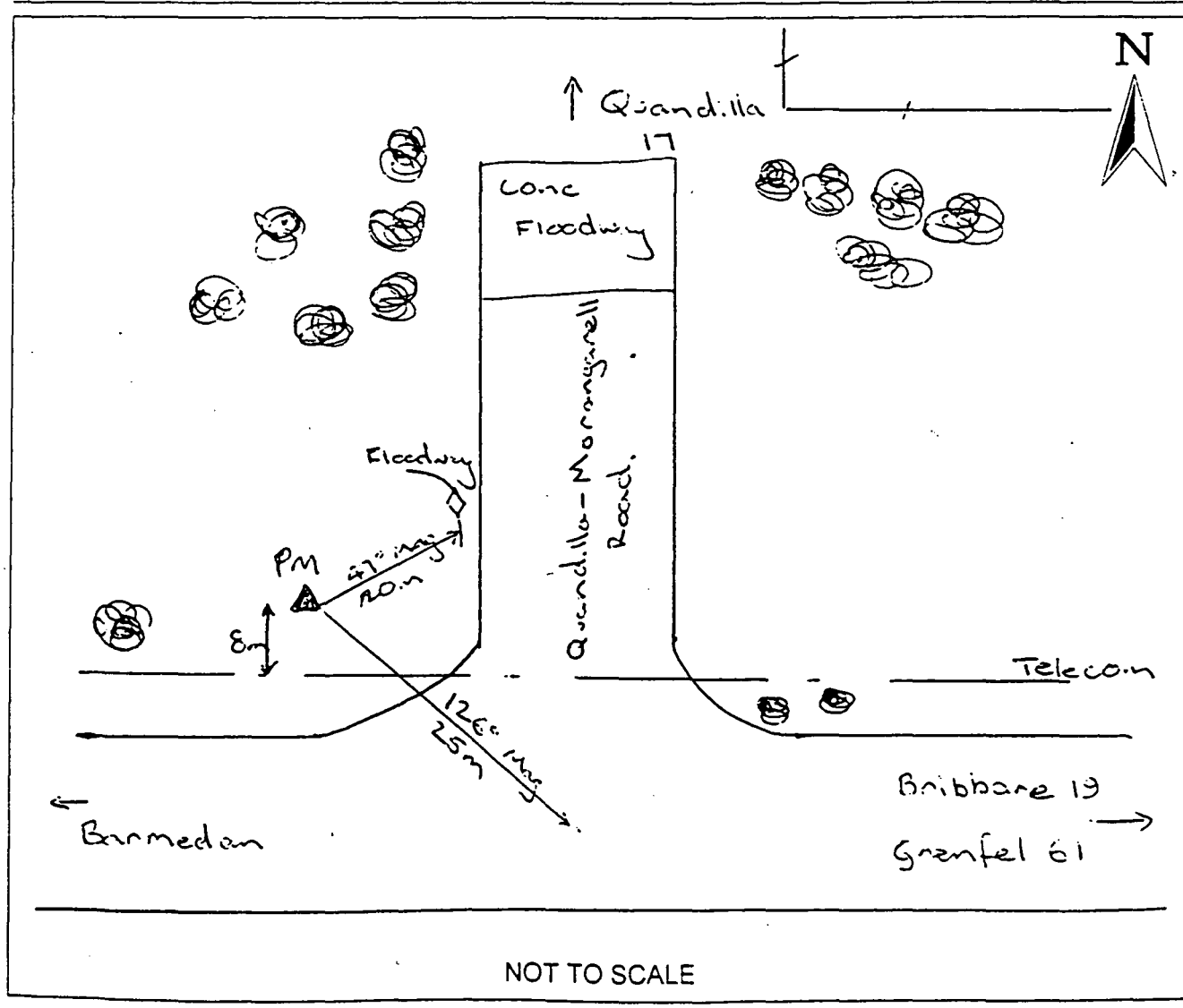
AREA: LACHLAN MAP REFERENCE: _____

Horizontal Control Information

Vertical Control Information

Easting: <u>565892.4</u>	RL: <u>233.5</u>
Northing: <u>6221739.8</u>	Datum: <u>AHD</u>
Datum: <u>AMG</u> Zone: <u>55</u>	Origin: <u>PM 4288</u>
Origin: <u>TS PORTER</u>	

Mark Description: Star Picket tagged with station name



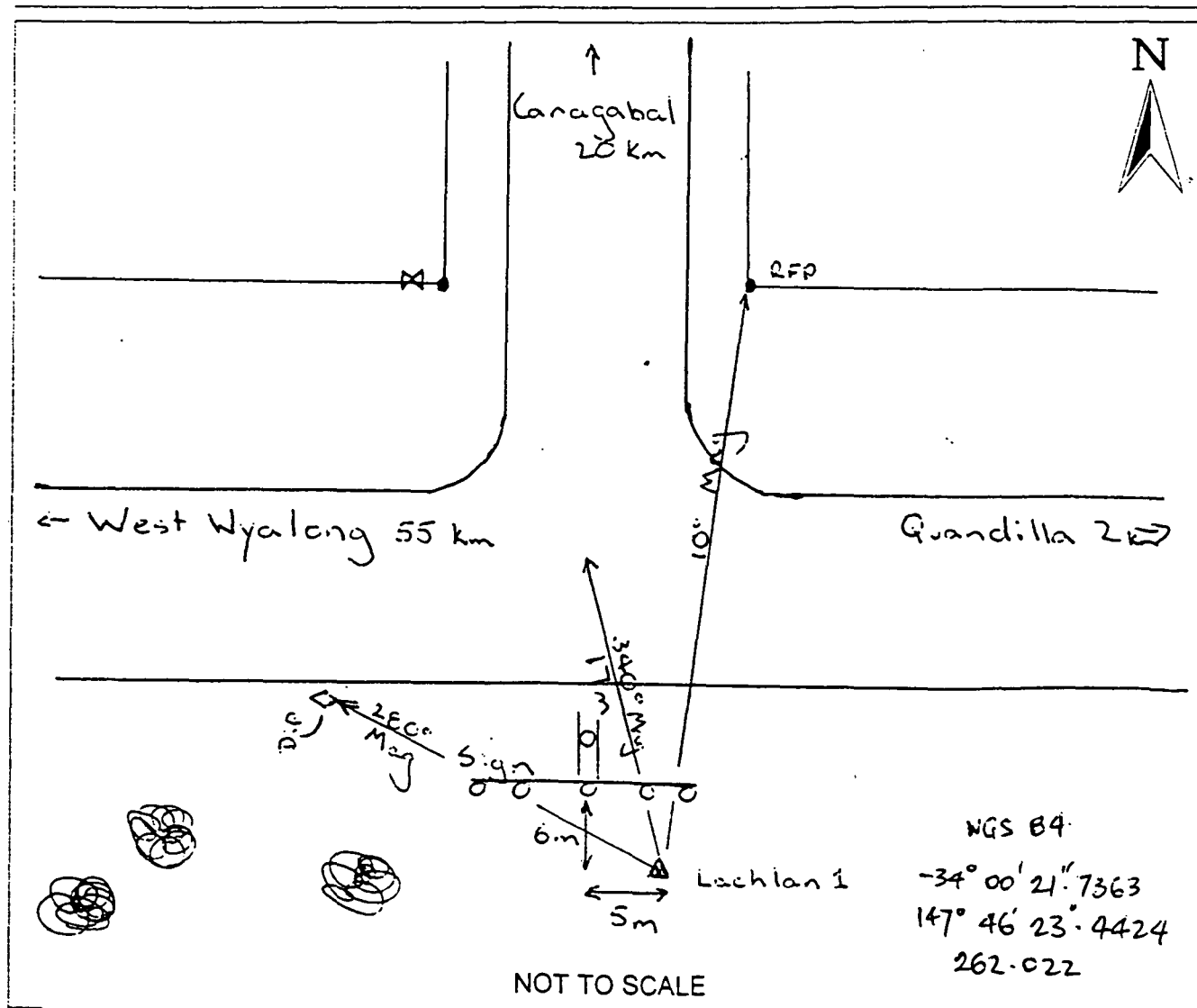


Dynamic

Satellite

Surveys

STATION LOCATION DIAGRAM

PROJECT / JOB # 99-70 CLIENT AGSO / TERRACORP DAY / DATE 9/99STATION NAME: PM LACHLAN 1 ~~99 AGS L3~~AREA: LACHLAN MAP REFERENCE: _____Horizontal Control InformationVertical Control InformationEasting: 571282.516RL: 243.012Northing: 6236721.171Datum: AHDDatum: AMG Zone: 55Origin: Pm 4288Origin: TS PORTERMark Description: Star Picket tagged with station name



Dynamic

Satellite

Surveys

STATION LOCATION DIAGRAM

DSS-FF-15

REV 6.0

Mar 1999

PROJECT / JOB # 99-70 CLIENT AGSO / TERRACORP DAY / DATE 9/99

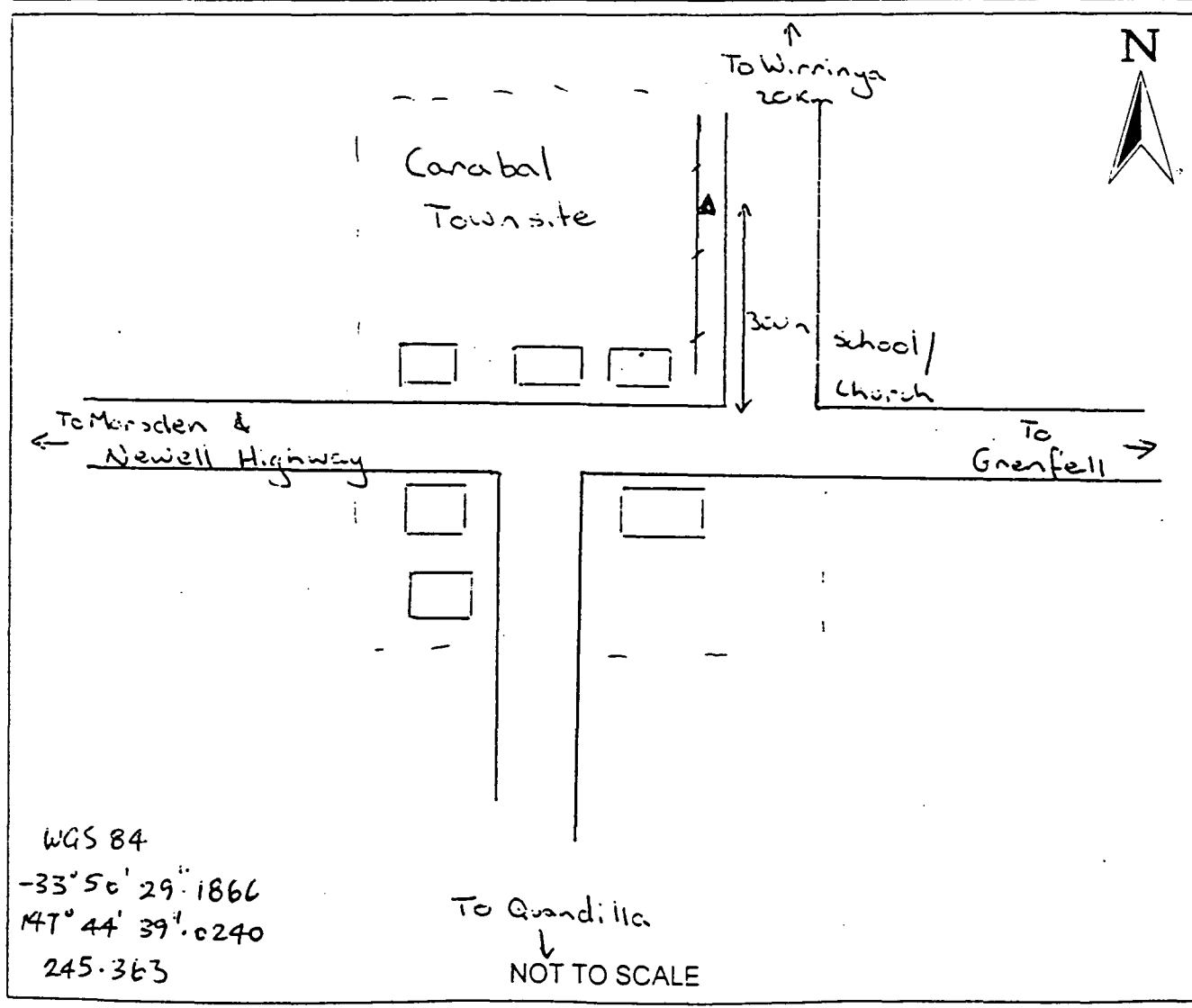
STATION NAME: PM Carabal LACHLAN 2

AREA: LACHLAN 2 MAP REFERENCE: _____

Horizontal Control Information

Vertical Control Information

Easting: 568736.345	RL: 225.959
Northing: 6254991.574	Datum: AHD
Datum: AMG Zone: 55	Origin: Pm 4288
Origin: TS PORTER	
Mark Description: Star Picket	



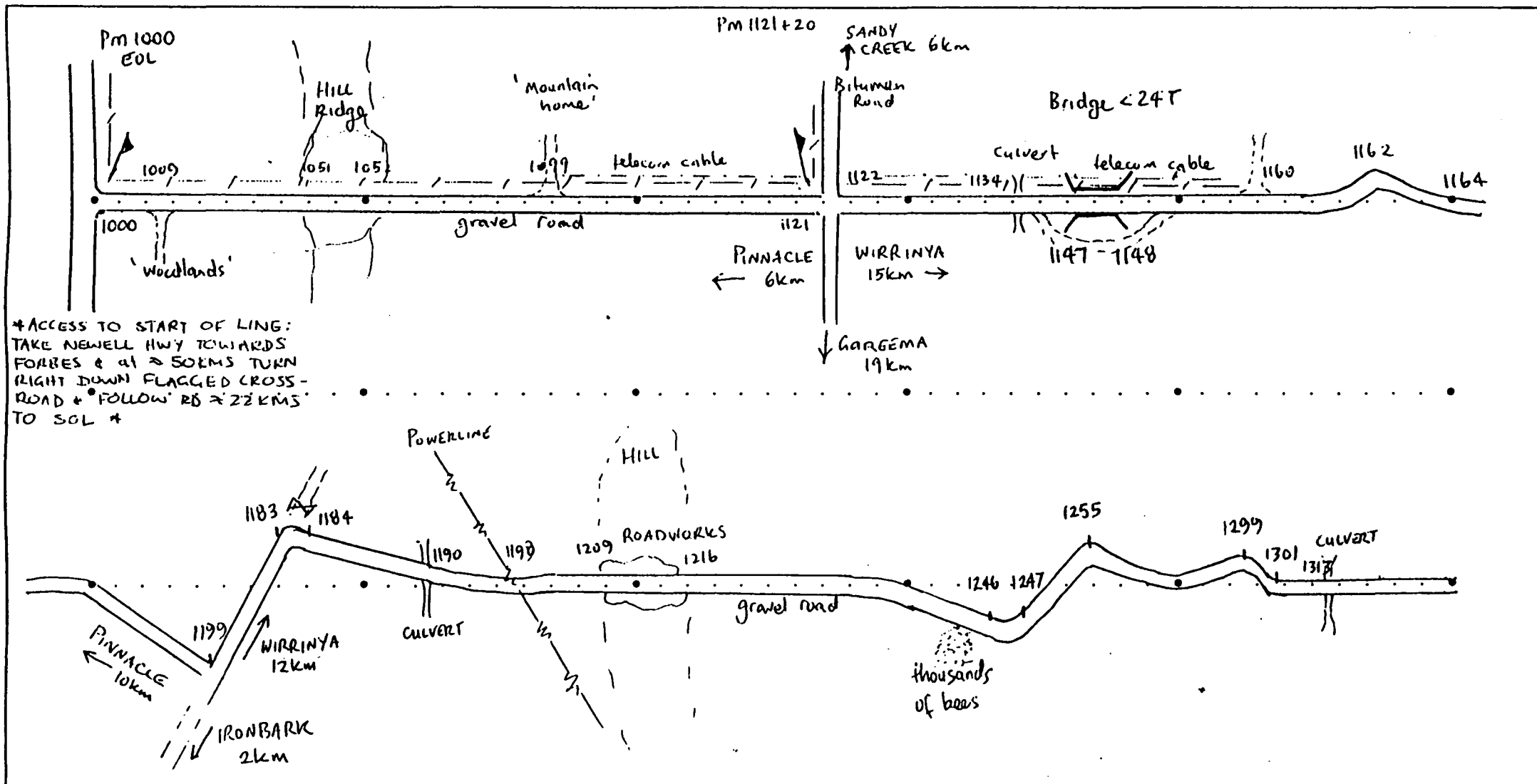
Chaining Maps



CHAINING MAP

LINE 99AGS-L1

PROSPECT LACHLAN CLIENT AGSO PARTY COMPLETED BY DSS DATE 7/9/99 PAGE 1
DIRECTION E - W STATION SPACING 40 m VP SPACING

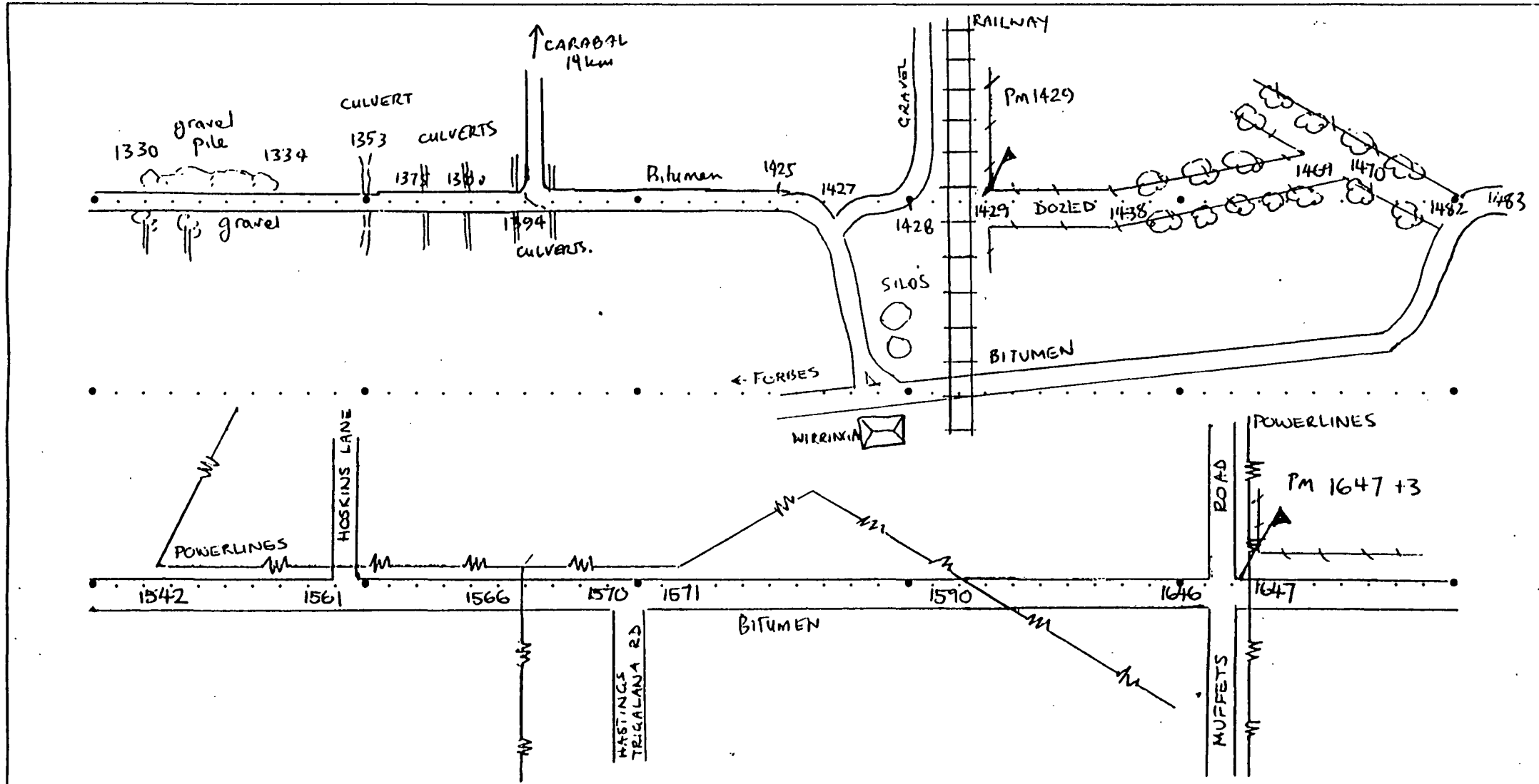




CHAINING MAP

LINE 99AGS - L1

PROSPECT LACHLAN CLIENT AGSO PARTY COMPLETED BY DSS DATE 8/9/99 PAGE 2
DIRECTION E-W STATION SPACING 40 m VP SPACING





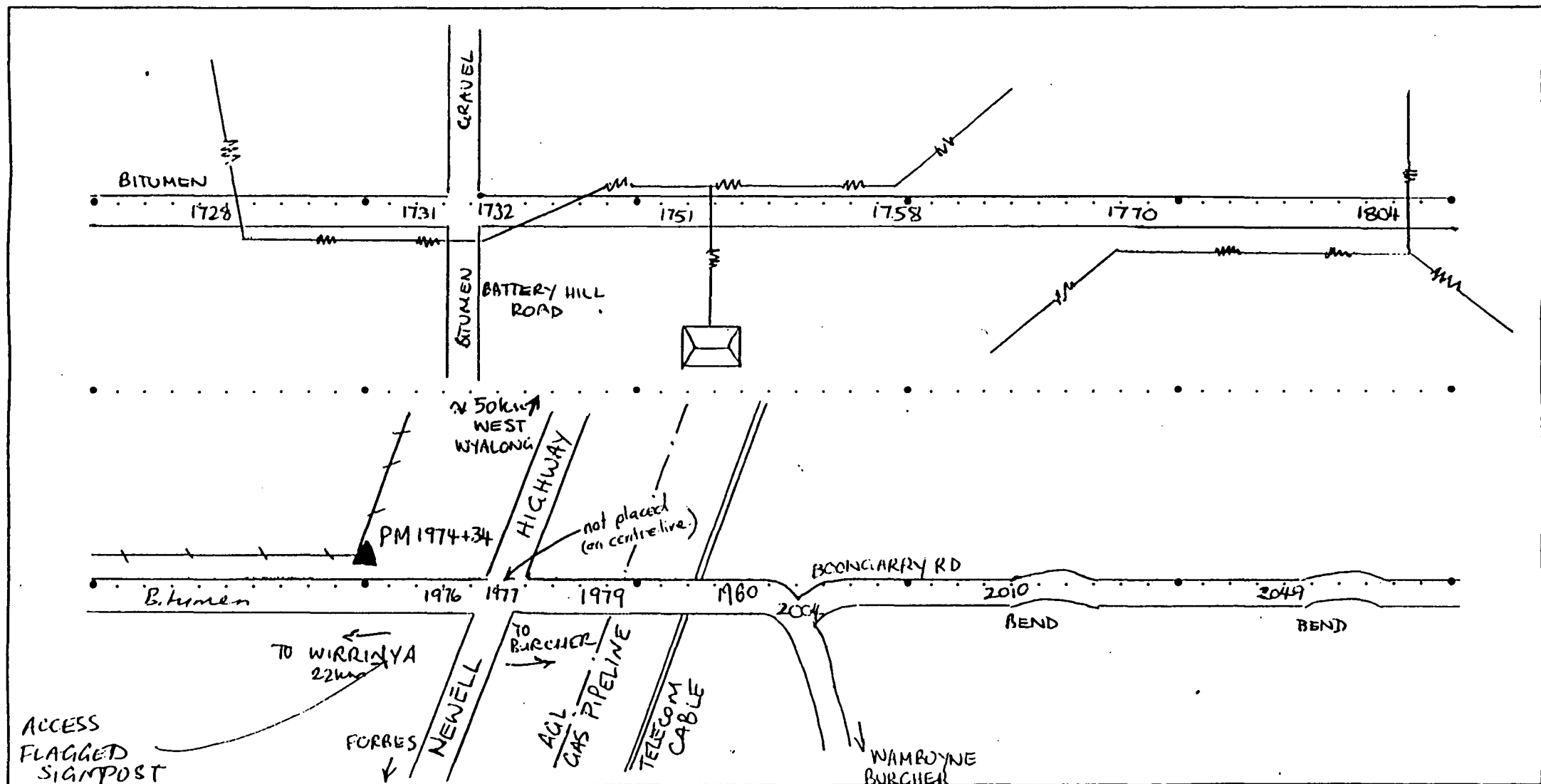
TERRACORP

CHAINING MAP

LINE 99AGS-L1

PROSPECT LACHLAN CLIENT ACESO PARTY COMPLETED BY DES DATE 10/9/99 PAGE 3

DIRECTION E - W STATION SPACING 40m VP SPACING





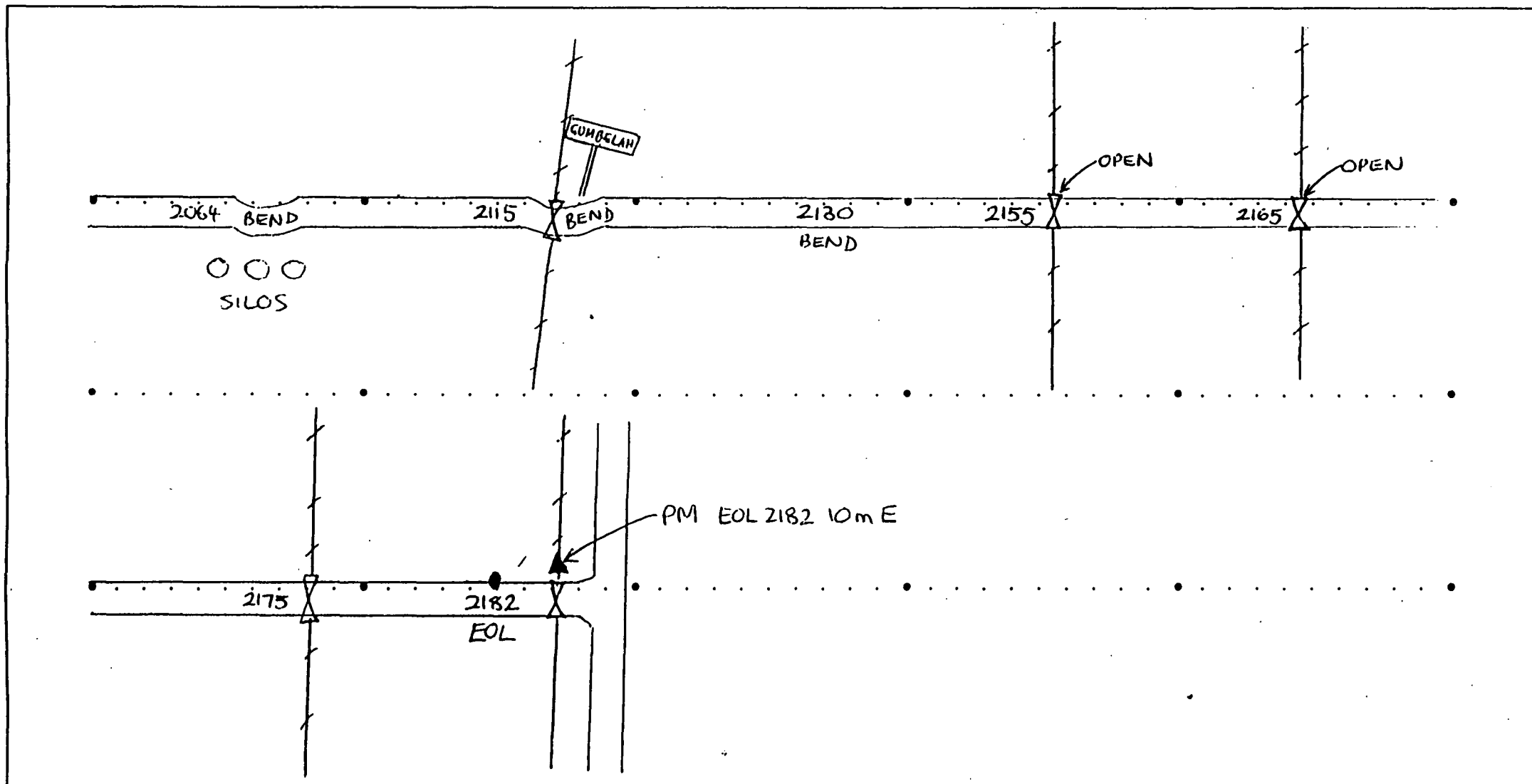
TERRACORP

CHAINING MAP

LINE 99AGS- L1

PROSPECT LACHLAN CLIENT AGSO PARTY COMPLETED BY DSS DATE PAGE 4

DIRECTION E-W STATION SPACING 40m VP SPACING





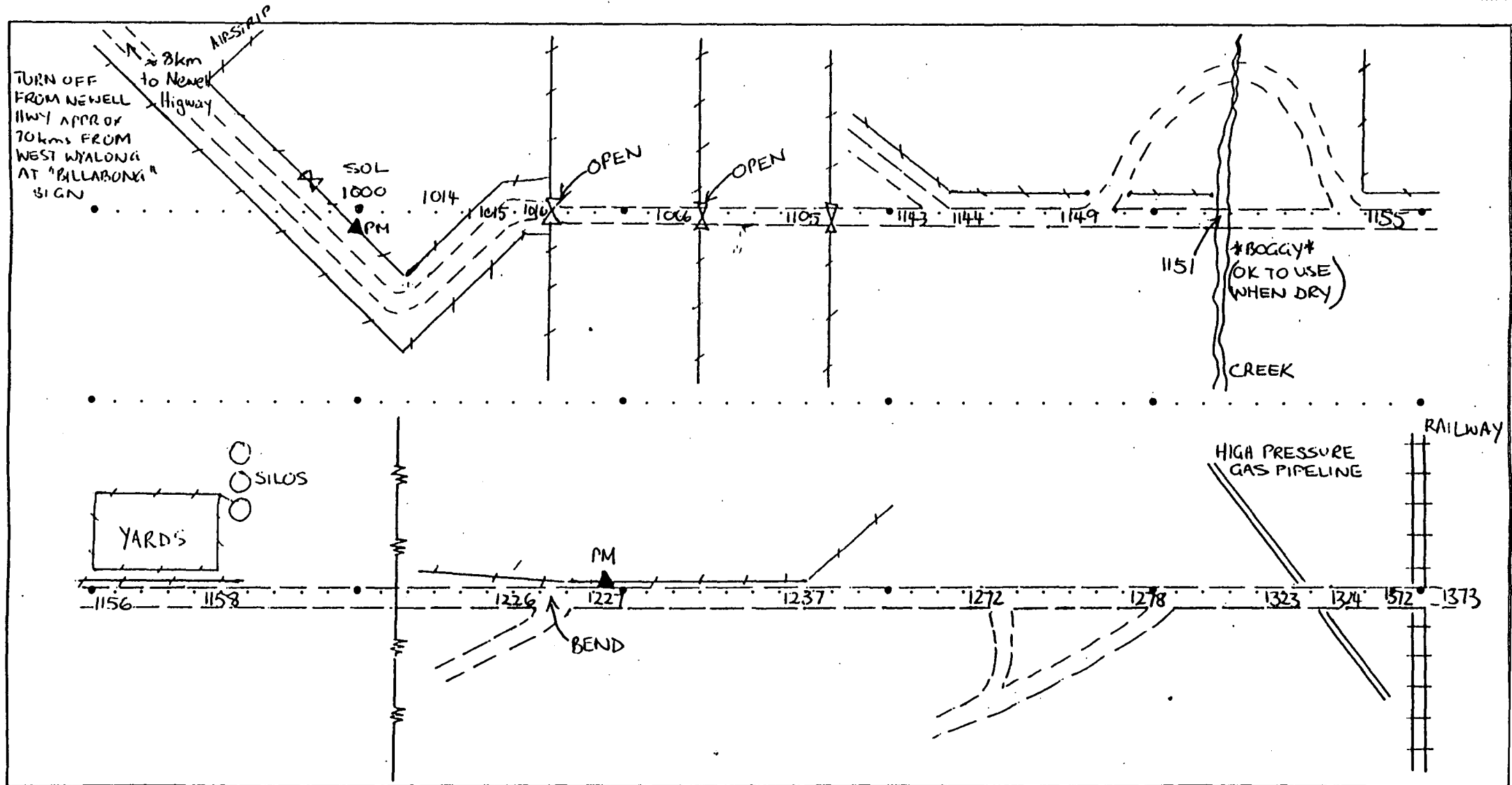
TERRACORP

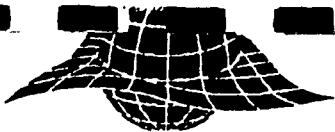
CHAINING MAP

LINE 99AGS-L2

PROSPECT LACHLAN CLIENT AGSO PARTY COMPLETED BY DSS DATE 12/9/99 PAGE 1

DIRECTION E-W STATION SPACING 40m VP SPACING





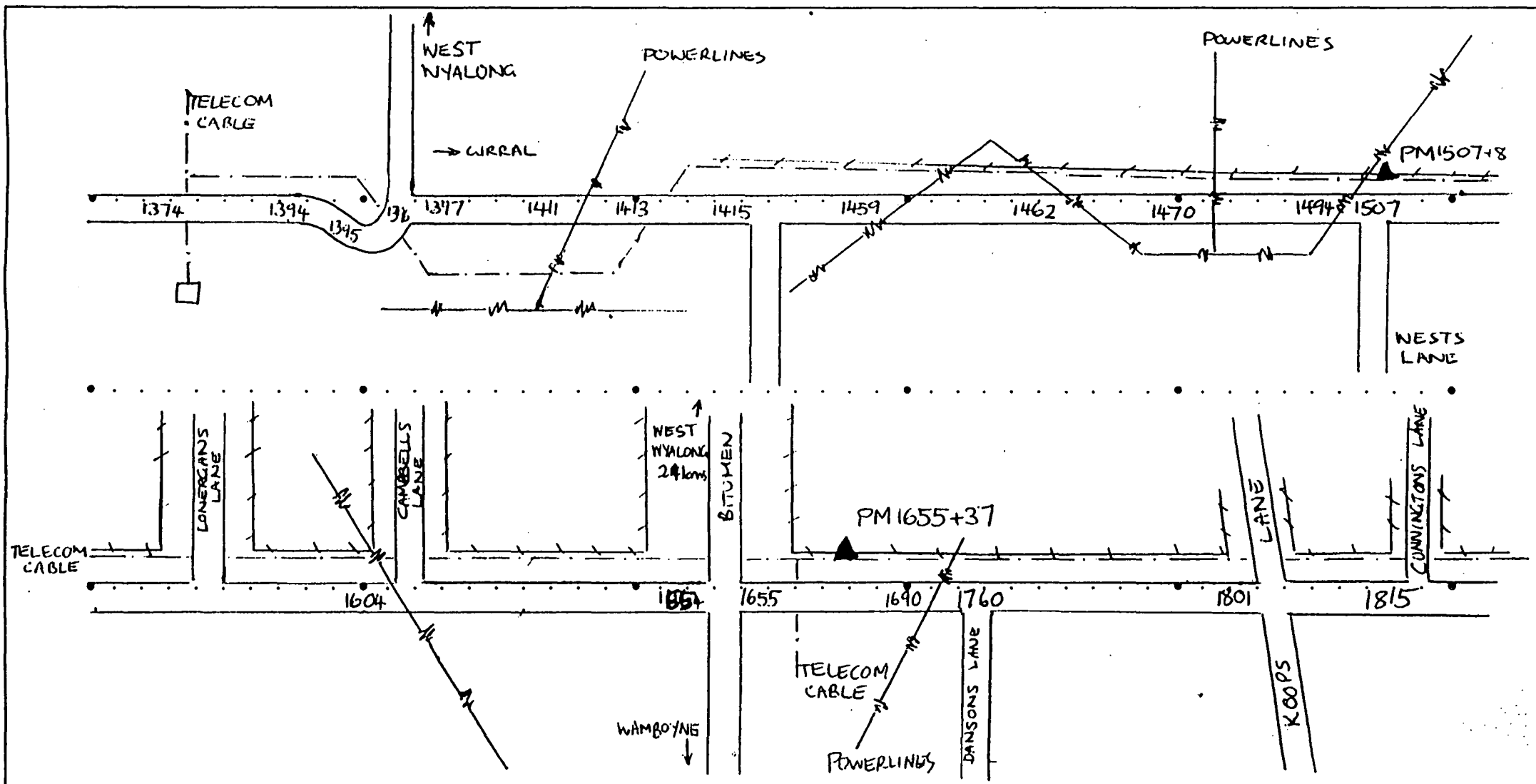
TERRACORP

CHAINING MAP

LINE 99AGS-L2

PROSPECT LACHLAN CLIENT AGSO PARTY COMPLETED BY DSS DATE 13/9/99 PAGE 2

DIRECTION E-W STATION SPACING 40m VP SPACING





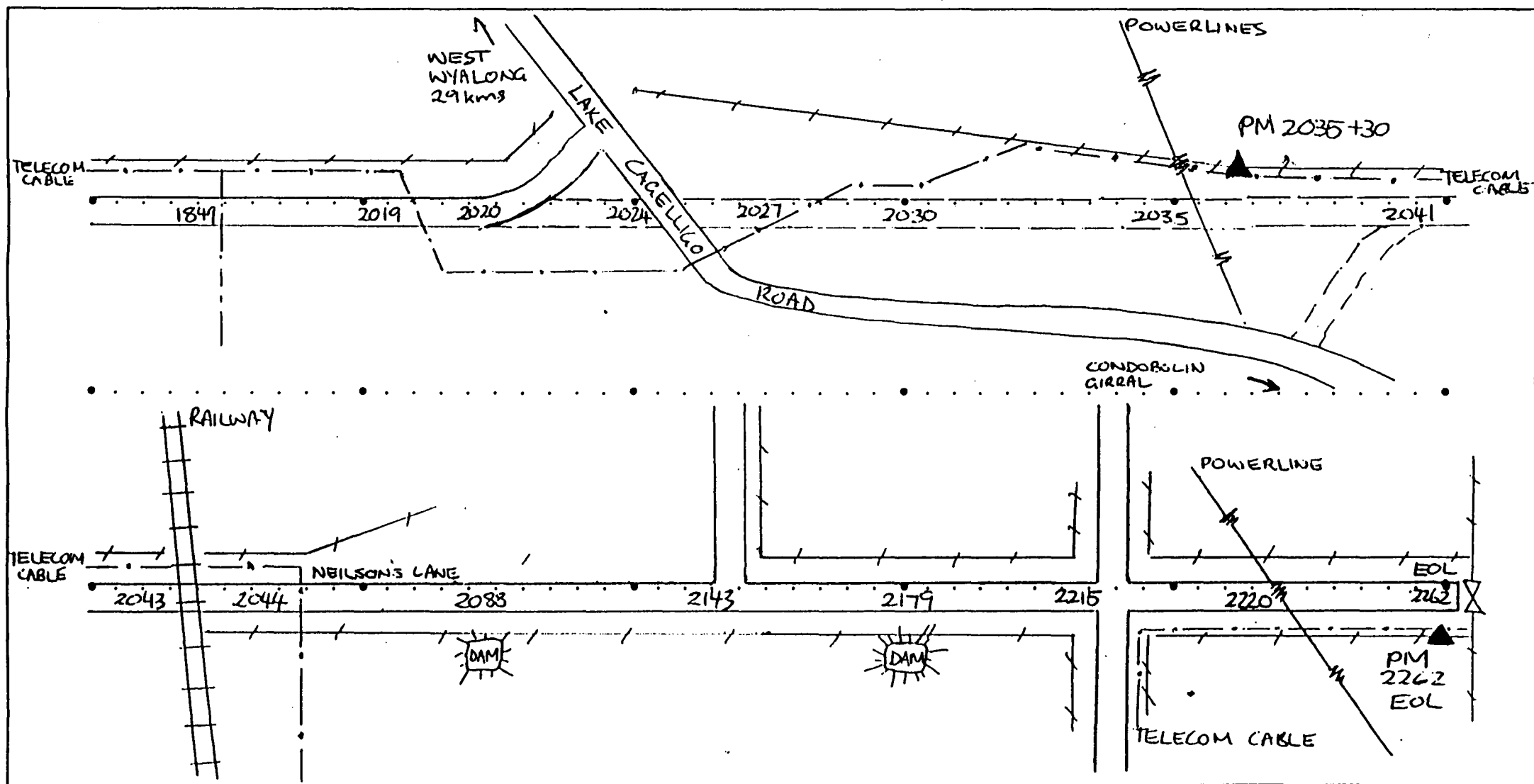
TERRACORP

CHAINING MAP

LINE 99-ACS-L2

PROSPECT LACILLAN CLIENT AGSO PARTY COMPLETED BY DSS DATE 14/8/99 PAGE 3

DIRECTION E-W STATION SPACING 40m VP SPACING





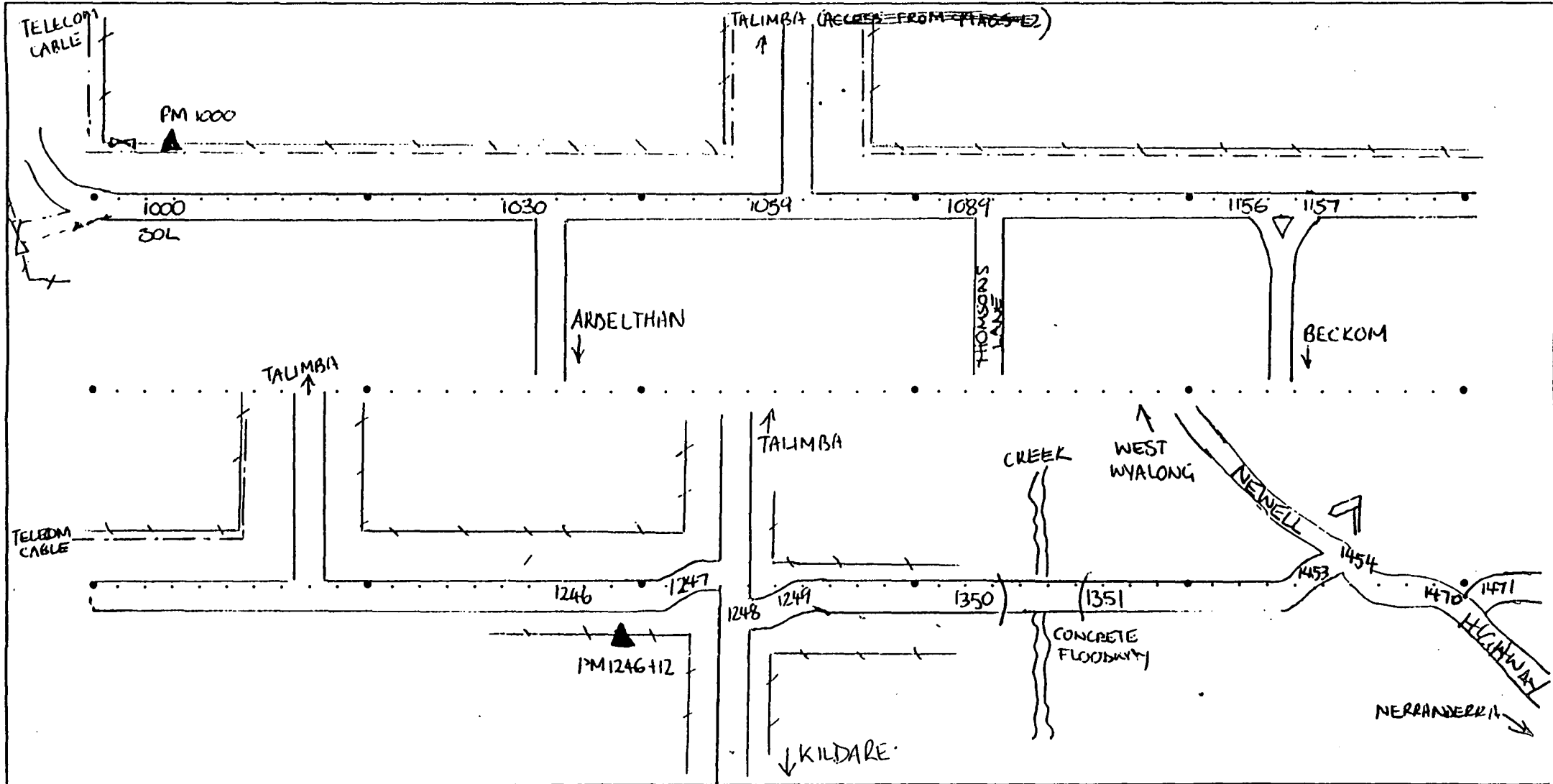
TERRACORP

CHAINING MAP

LINE 99ACS-L3

PROSPECT LACHLAN CLIENT AGISO PARTY COMPLETED BY DSS DATE 15/9/99 PAGE 1

DIRECTION W-E STATION SPACING 40m VP SPACING



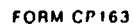


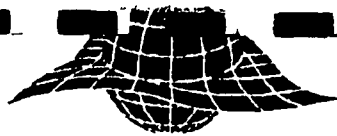
LINE 99AGS-L3

DIRECTION..... ~~E-W~~ W-E

STATION SPACING 40m

VP SPACING





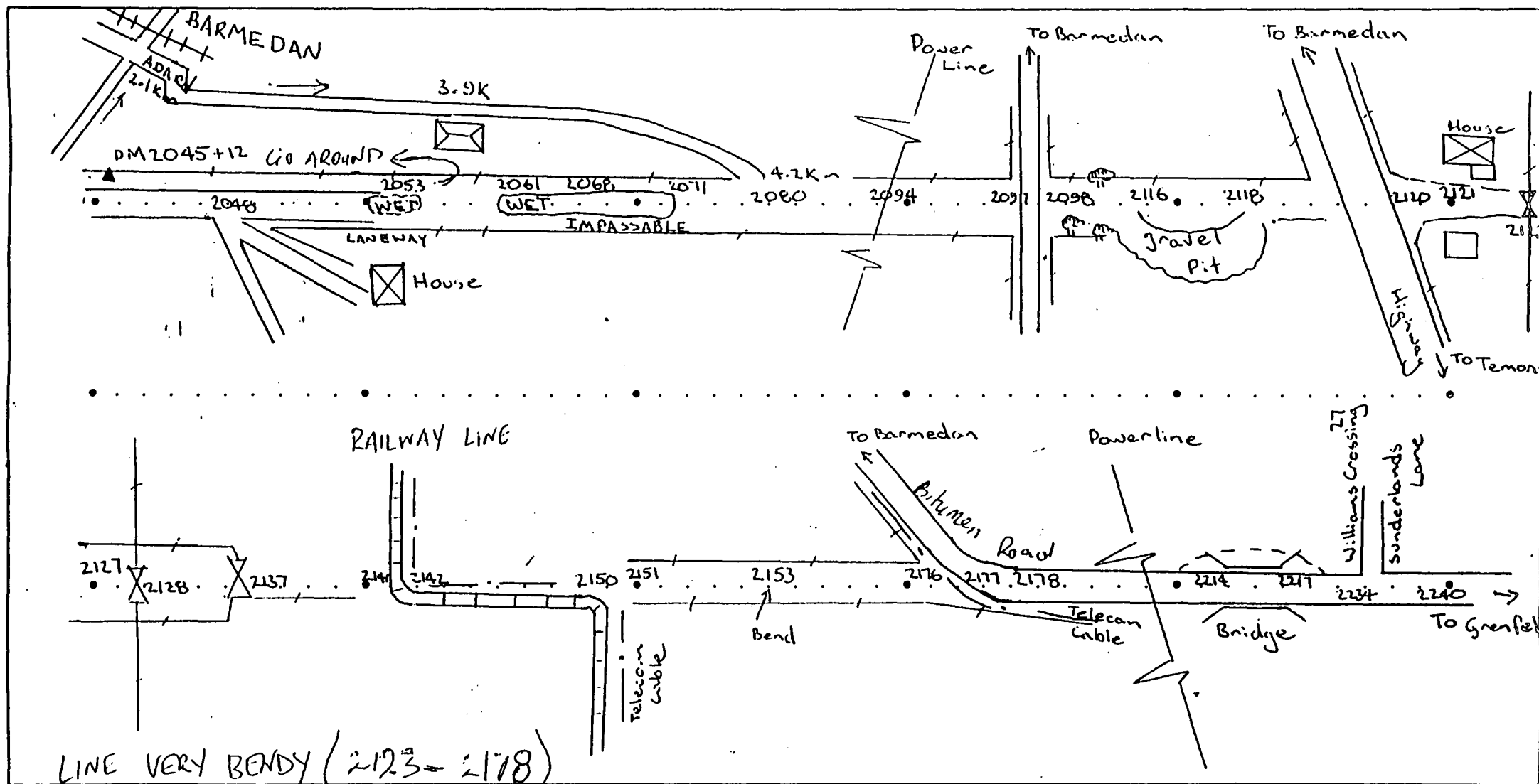
TERRACORP

CHAINING MAP

LINE 99AGS - L3

PROSPECT LACHLAN CLIENT AGSO PARTY COMPLETED BY DSS DATE 18/9/99 PAGE 3

DIRECTION ~~E-W~~ W-E STATION SPACING 40m VP SPACING





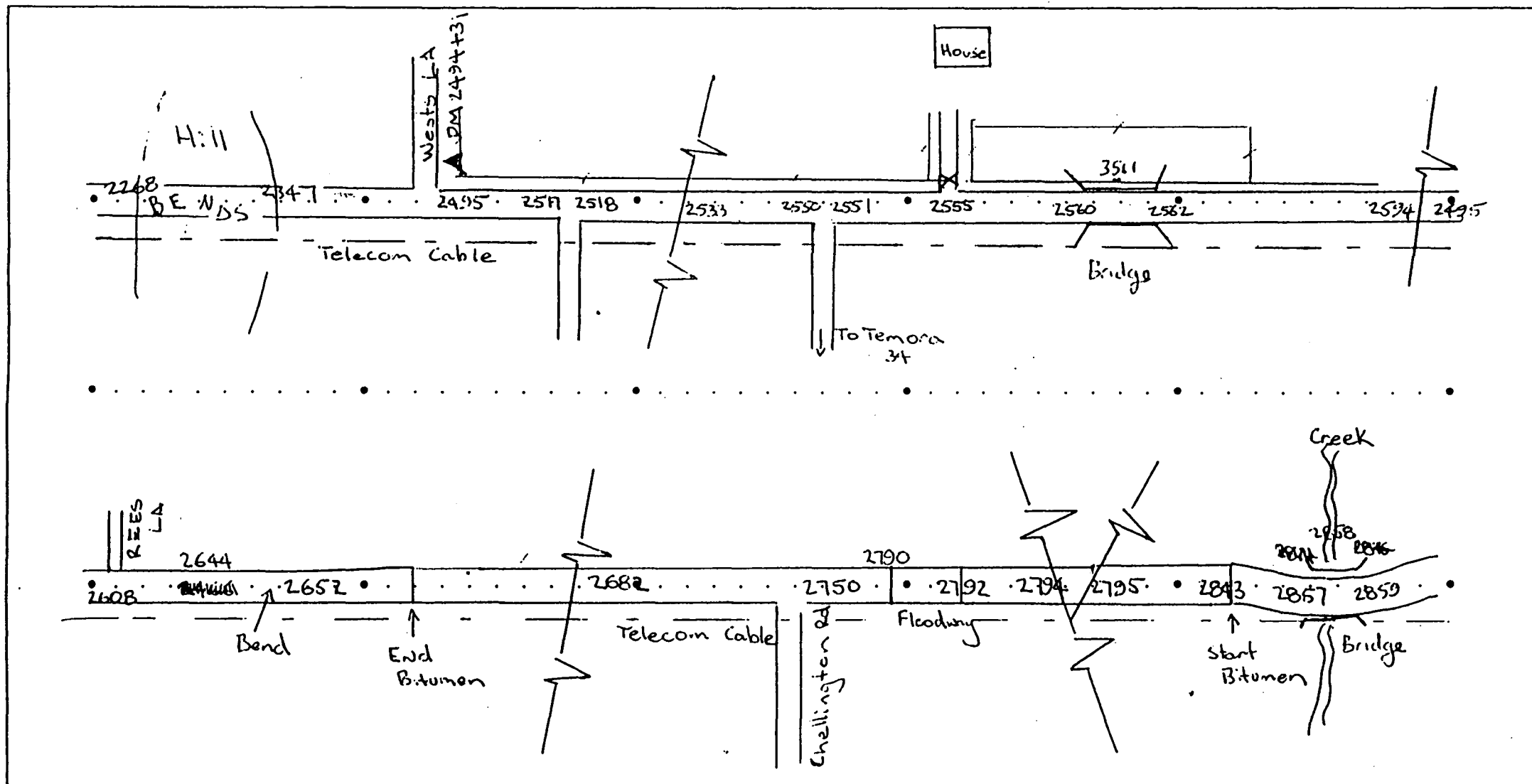
TERRACORP

CHAINING MAP

LINE 99 AGS - 43

PROSPECT LACHLAN CLIENT AGSO PARTY COMPLETED BY DSS DATE 19/9/99 PAGE 4

DIRECTION ~~E-W~~ W-E STATION SPACING 40m VP SPACING



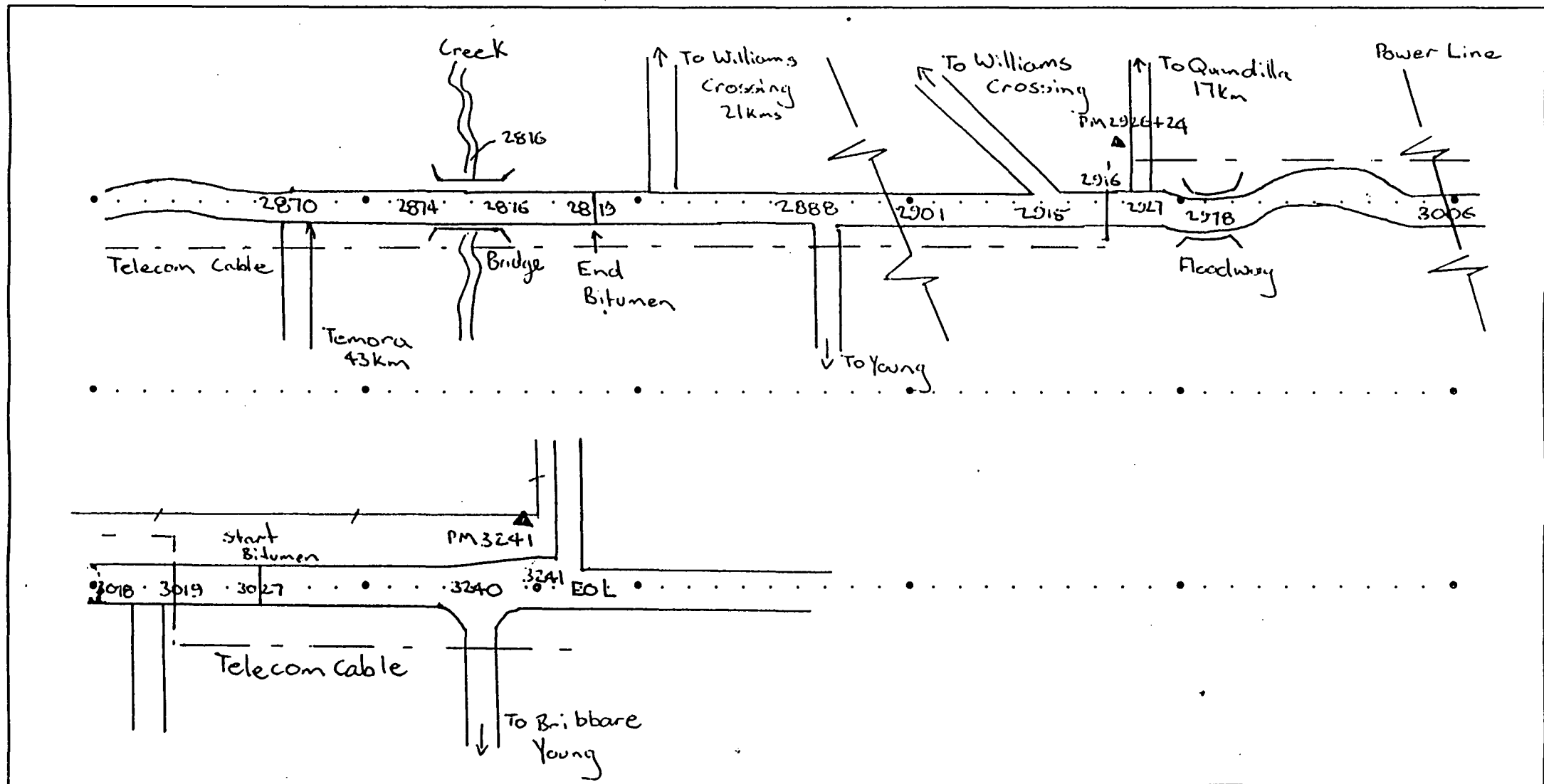


TERRACORP

CHAINING MAP

LINE 99AGS - L3

PROSPECT LACHLAN CLIENT AGSO PARTY COMPLETED BY DSS DATE 20/9/99 PAGE 5
DIRECTION W - E STATION SPACING 40m VP SPACING





TERRACORP

CHAINING MAP

LINE 99MAR-R1

PROSPECT LACHLAN CLIENT AGSO PARTY _____ COMPLETED BY DSS DATE 11/9/99 PAGE 1

DIRECTION W - E STATION SPACING 10m VP SPACING _____

