TRACE-TERRACORP

1999 YILGARN SEISMIC SURVEY

Kalgoorlie/Boulder
Western Australia

FIELD ACQUISITION AND OPERATIONS REPORT

FOR

AUSTRALIAN NATIONAL SEISMIC IMAGING RESOURCE (ANSIR)

BY

TERRACORP PTY. LTD.

August/September 1999

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FINAL REPORT – OPERATIONS

By

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FOR

ANSIR

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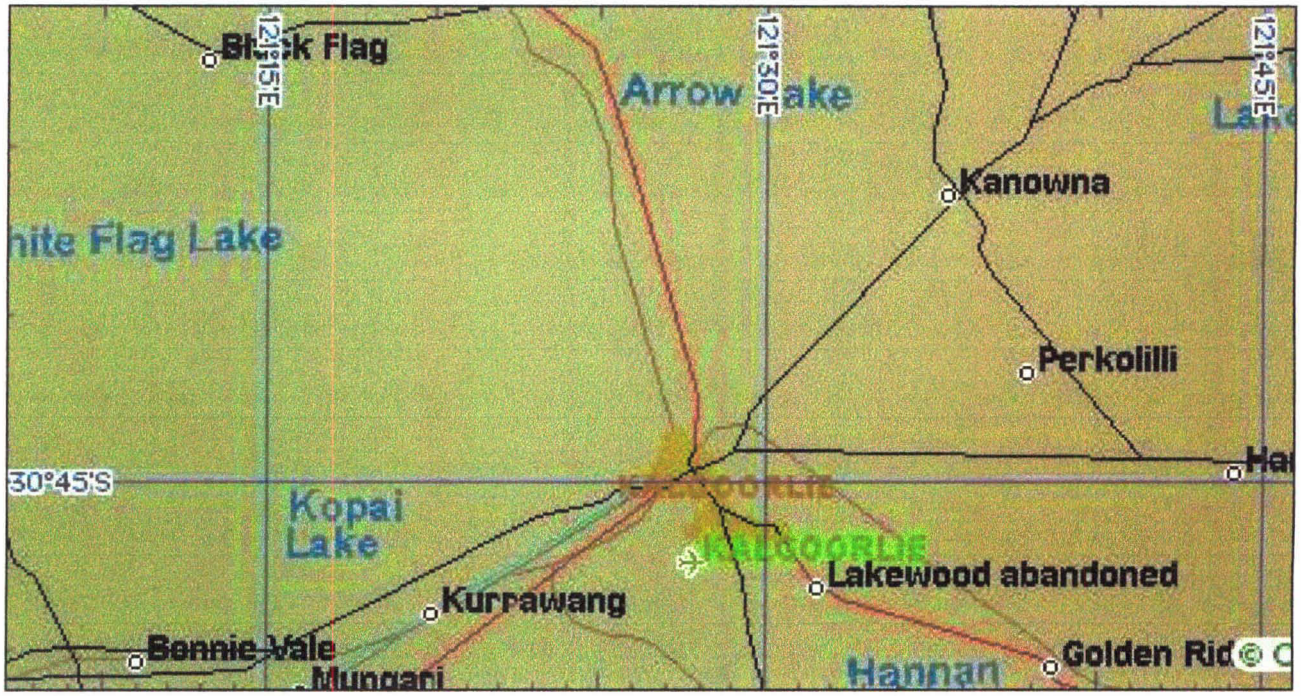
1. INTRODUCTION

Terracorp under its facilities management agreement with ANSIR was contracted to conduct the 1999 Yilgarn Seismic Survey located in the Kalgoorlie Goldfields region of Western Australia. In total 194.64 kms of 60 and 120 fold, 240 channel data was recorded between 19th August and 3rd September 1999.

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

The contract was supervised by Mr Andrew Owen of ANSIR.



1.1 Geographical Area

The area of operation is situated in the goldfields regions of Western Australia, north and south of Kalgoorlie/Boulder. The program extended over numerous mining and pastoral leases from Ora Banda in the Northwest to Bolder in the Southeast. The general topography varied from low-lying salt lakes to rocky outcrops where vehicle and production was slowed due to the difficult terrain. The land use was predominantly pastoral and mining leases, these were serviced by a network of country roads. Large open cut mining operations were scattered throughout the area requiring on-site safety inductions.

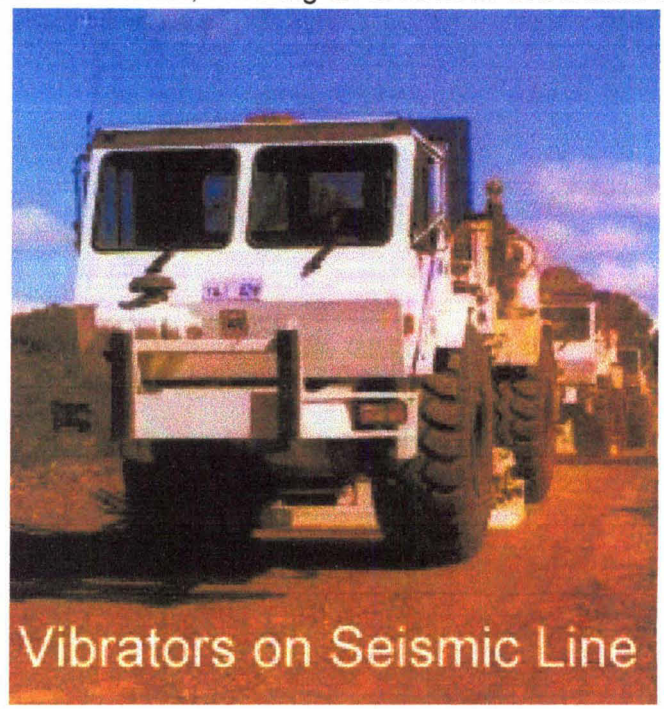
Where possible lines followed station tracks, mining roads and country roads, minimising the amount of line clearing required.

1.2 Weather

The weather varied greatly during the period of operations from rainy days at the start, to fine sunny days and cold windy days near completion. Other than the rain early in the project that prevented vehicular access, the weather was favourable to geophysical operations, with daytime temperature conducive to line operations.

1.3 Logistics

Terracorp's crew mobilised from Perth to Kalgoorlie Western Australia on the morning of 17th August 1999 to commence the 1999 Yilgarn Seismic Survey. The planned program consisted of approximately 210 Kms of 2D seismic, covering an area from Ora Banda in the north to Bolder in the south. The vibes were trucked from Broken Hill to Port Augusta where they were loaded on the rail for transport to Kalgoorlie. Trucking was organised by Radford's Transport of Broken Hill.


Vibrators on Seismic Line

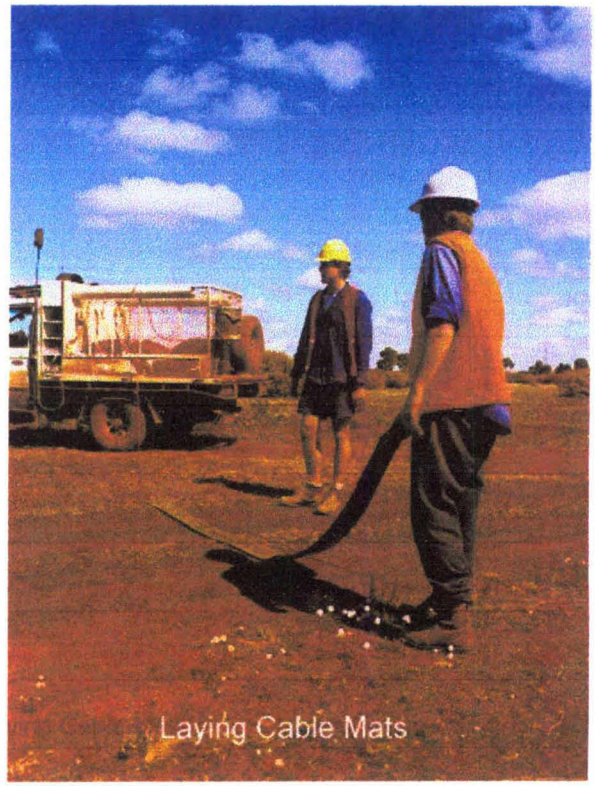
The Albion Shamrock Hotel/Motel in Boulder provided accommodation and meals, this location was central to the area of operations and provides good access to the lines.

The mechanics and electronic workshops were established at Time's Transport's yard located at 8 Clement Way, Boulder. Fuel was delivery by BP Kalgoorlie to Terracorp's bulk tankers situated at the yard.

Rain delayed testing and production for the first 2 days; heavy overnight storms made road conditions very slippery. It was decided to restrict vehicular movement to light vehicles until conditions improved. Truck access was possible on Thursday 19th August when Charles Boyes Transport of Boulder low loaded the vibes from Boulder to the start of line 99AGS-Y1. Boyes Transport was also contracted to move the vibes during line changes, where access along the sealed roads was prohibited.

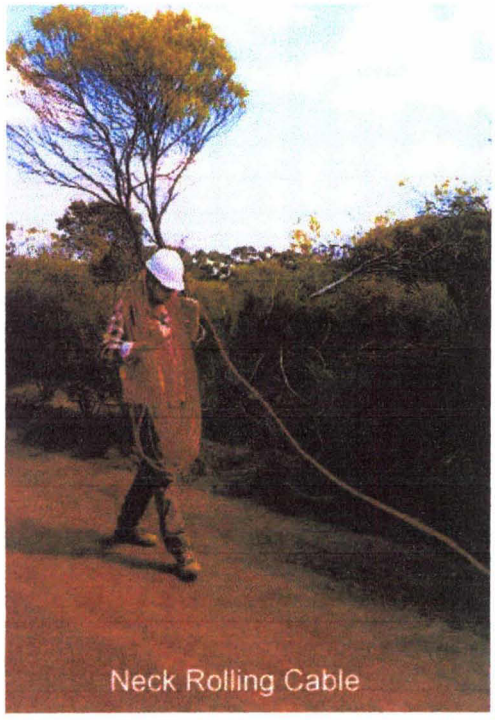
Safety Inductions were conducted by Centaur Mining at both its mine locations, Mt Pleasant and Cawes mines. It was a requirement when working at the mine sites that hard hats, safety glasses and flashing lights were used. Other inductions followed at Delta Gold's, Ballart's Last Chance Mine, Kalgoorlie Consolidated Gold Mines and Kaltailings.

Jim and Barry Donkin of Boulder were contracted to provide flag person services for the numerous rail crossings. Their services were required during the laying and retrieval of the cable, and whenever personnel were working within 3 metres of the rail.


Laying Cable Mats

Main Roads WA issued permits for the movement of the vibes within the area of operations. The vehicles were restricted to tracks and gravel roads. Permission was granted for the vibes to cross over bitumen roads, however vehicular travel along the sealed roads was prohibited.

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 Main Roads WA regulations.


Neck Rolling Cable

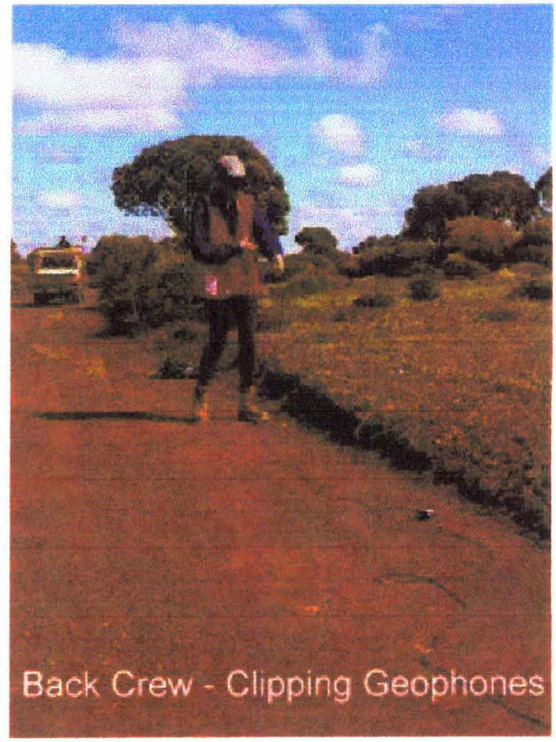
In total 194.64kms of 2D seismic was recorded over 16 days. The average for production days was 12.165 kms per day. The project was completed on the 3rd of September the 4th and 5th were taken up washing all the vehicles, counting, checking and packing up of ANSIR equipment in readiness for shipment to West Wyalong.

Operational delays due to mine site inductions and restricted movement of the vibrators added to the overall operational time. Logistically the area of operation required careful planning to ensure all operational hazards were addressed and the appropriate safety measures applied. Safety issues were discussed on a daily basis with frequent toolbox meetings. Mine site inductions played an important role in pinpointing the potential hazards that the crew faced in these areas. It should be noted that the Safety Officer and Client Representatives role in this type of operation is critical in providing feedback from mine site safety personnel, coordinating inductions and ensuring crew personnel are well informed of the potential hazards. This system proved very effective with praise coming from Delta Gold on the professionalism of the operation. A job well done.

1.4 Recording

As a result of inclement weather experimentals on line 99AGS-Y1 were delayed until late afternoon on 19th August. these were conducted by Andrew Owen from ANSIR and Steve Tobin from Terracorp.

Production recording commenced on the 20th August 1999 on line 99AGS-Y1 with 13.60 kms being recorded. The last production profile was recorded on the 3rd September on line 99AGS-Y3. A total of 194.64 kms of 2D seismic data was recorded.



Back Crew - Clipping Geophones

2. SURVEYING

2.1 Surveying

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

2.2 Line Clearing

Line clearing was contracted to Hampton Transport Services of Kalgoorlie. In most cases a 14G grader was used to tidy up access tracks, however in locations where the lines deviated from the tracks a front end loader was used to selectively clean up vegetation to provide a track for the line crew. A minimalist approach was adopted at all times to line clearing; all large shrubs and trees were left in place. The lines weaved through the vegetation to minimise clearance and prevent line of sight along the seismic line.

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 Goleby and Andrew Owen of ANSIR conducted permitting.

3. Recording

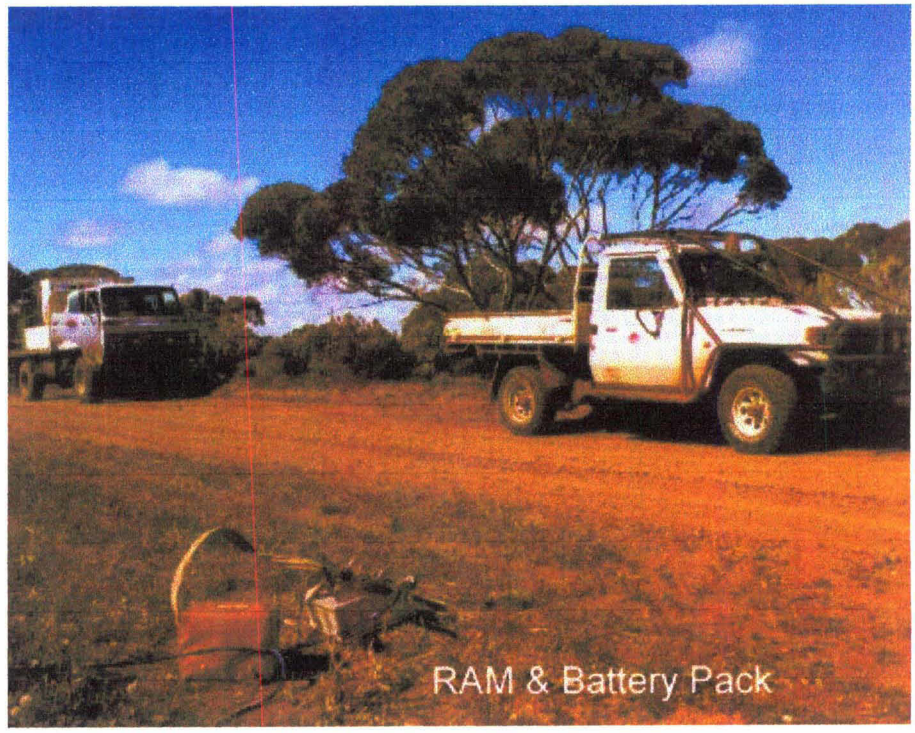
3.1 Introduction

The first production profile was recorded on Line 99AGS-Y1 on the 20th August 1999. The final day's production took place on the 3rd September 1999.

Recording Parameter sheets are detailed in Appendix F 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 Albion Shamrock Motel. The ANSIR Geophysicists were handed tapes and supporting documentation daily for QC.

4.2 Experimental Program

The Experimental Program for the 1999 Yilgarn Seismic Survey was conducted on Thursday 19th August 1999 on a portion of the seismic Line 99AGS-Y1 to the north of Kalgoorlie.

The Experimental Program for the 1999 Yilgarn Seismic Survey was conducted on Thursday 19th August 1999 on the western end of Line 99AGS-Y1.

Aim of the Experimental Program

The fundamental acquisition parameters of Group Interval, Number of Channels, CDP Fold, VP interval and Record Length were decided based on the quality of data previously acquired in the area so that the main objective of this experimental was then to:

Complete the Point Source Test [all 4 vibes then repeat 1st vibe at the end].

Determine Optimum:

- No.of Vibrators (3 vs 4 Online)
- Sweep Type (Varisweep vs Diversity Stack Monosweep)
- Sweep Frequencies (Bandwidth and Shape)

The location selected for testing was Line 99AGS-Y1 Northwest of Kalgoorlie over an area that was representative of regional data quality including key structural elements expected throughout the area.

Startup Protocol Tests

Prior to commencing the parameter testing the following ARAM 24 Startup Protocol Tests were completed:

ARAM 24 CRU System Tests

3490E Cartridge Tape Drive tests.

System tests on all ARAM 24 Mark II Remote Acquisition Modules - RAMs.

System Pulse Tests on all Geospace Geophone strings connected to the line.

Radio similarities via Pelton VIBRA-SIG were completed on each of four IVI Hemi 60 Vibes to be used as a check that all vibrators are operating with the same phase, polarity and amplitude characteristics.

Details of the ARAM 24 system Startup Protocol and Daily, Weekly and Monthly tests are attached.

Line 99AGSY1 – Experimental Line:

Line 99AGSY1 was chained with 40m group interval from SP 1000 on the western end to approximately SP 2426 in the east. The following area was selected to record a brief testing program.

- Receiver Points: 1002 (West) to 1242 (East)
- 40 metre Group Interval

Pegs on North side of line for LHD vibrators

240 Live Channels (9.60 kms live) – Fixed Spread

4800-0-4800 metre maximum offset range

12 x Geospace 10Hz Geophones laid over 40 metres with 3.3m phone spacing. (Centred midway between stations +20m from peg, ie 1000 centred at 1000.5)

Spread frozen – no roll-along for testing

Source Points: VP 1122 through to VP 1136

8 Consecutive VPs for each test.

80 metre VP Interval

8 Fold with 20 metre CDP Interval

Vibe Array centred on VP Peg

Record Length: 16.0 seconds

Crew Supervision

The testing program was designed and coordinated by Stephen Tobin whilst Systems Engineers Mike Bokor and James Butcher undertook all instrument testing and seismic observing. The seismic crew ran under the direction of Crew Managers Mr Bob Stephenson and Mr Steve Barbour with Mr John Philippson as Senior Vibe Technician responsible for all Vibroseis and mechanical systems.

The ANSIR Project was planned, managed and coordinated in the field by Dr Bruce Goleby and Mr Andrew Owen. Mr Owen remained on crew for the duration of the survey as the ANSIR Client Representative.

Vibroseis Similarities

The new Pelton Advance 2 Model 6 ESG – Encoder Sweep Generator and VCE - Vibe Control Electronics were installed and delivery testing conducted by Pelton Engineer Mr Elmo Christianson in November 1998. The VIBRA-SIG Radio Similarity QC system will be used throughout the experimental program and then production to monitor the integrity of every sweep of each vibrator continuously throughout the day.

During the 1999 Yilgarn Seismic Survey the output of the IVI Hemi 60 vibrators was set at approximately 90% of the 62,000 lb Peak Force. Maximum acceptable phase error tolerance between the ESG Pilot and the Vibrator M5 Accelerometer signal is 5 degrees.

Prior to the commencement of the test program Radio Similarities were completed via the Pelton VIBRA-SIG System. These Startup Tests ensured that all Vibrators to be used throughout the survey were operating with the same Polarity and within the same Similarity Phase error tolerances. Acceptable phase difference between machines is +/- 5 degrees.

Recent rain at Kalgoorlie had made it difficult to move all four (4) Hemi 60 vibrators to the line quickly on Thursday 19th August. Thus it was decided to conduct the brief testing program using initially only the two (2) vibrators that were mobilised from Kalgoorlie via low loader on Thursday.

Late that afternoon the third vibe arrived from Kalgoorlie, however the testing was completed on Friday morning 20th August using the two vibes only for consistency of results.

Experimental Program – Thursday 19th August 1999

Parameter Testing

Record into Receiver Line 99AGSY1

Live Spread Stations 1002-1241: 240 Stations @ 40m GI

8 VPs are referenced to 40m VP chaining: VPs 1122-1136

Offsets VP 1122: 4800-0-4800m: Spread Fixed

16.0sec Record Length

FILE NO.	RCVR LINE	V.P.	SWEEP FREQ	NO. SWEEPS	SWEEP LENGTH	SOURCE ARRAY	NO. VIBES
Sweep Frequency Tests							
1-8	99AGSY1	1122-1136	8-90Hz	4	8.0sec	15mP-P/10m Moveups	2
9-16	99AGSY1	1122-1136	6-80Hz	4	8.0sec	15mP-P/10m Moveups	2
17-24	99AGSY1	1122-1136	Varisweep A 6-64 Hz 12-120Hz 12-100Hz 6-80 Hz	4	8.0sec	15mP-P/10m Moveups	2

Production Recording

Line 99FSGY1 was recorded on Friday 20th August using 3 Vibes online from Files 1-40 and 4 Vibes online from File 41 through to the end of the line.

AGSO - AUSTRALIAN GEOLOGICAL SURVEY ORGANISATION

"1999 YILGARN SEISMIC SURVEY" - KALGOORLIE, W.A.

ACQUISITION PARAMETERS

Lines: 99ASGY1, 99ASGY2, 99ASGY3,
99ASGY4 and 99ASGY5

Acquisition Type:	ARAM24 – 24 Bit Telemetry System
Energy Source:	4 x IVI Hemi 60 4x4 Buggy mounted Vibes Online
Vibrator Point Interval:	80.0 metres
Vibrator Array:	15.0m pad-pad
Vibrator Array Location:	Centred on Station Peg (Centred on SP 100.0)
Receivers:	12 x Geospace Type GS-32CT 10Hz Geophones/Group
Receiver Interval:	40.0 metres
Receiver Array:	40.0 metres (12 phones with 3.33m spacing)
Receiver Array Location:	Centred +20.0m in direction of increasing station numbers, ie Centre of Receiver array at SP 100 is actually at 100.5
Sweep Length:	8.0 sec
Number of Composites:	4
Sweep Type:	Varisweep
Sweep Frequencies:	6-64 Hz 12-120 Hz 12-100 Hz 6-80 Hz
Sweep Taper:	200 msec Taper
Source Effort:	400 sec/km
Sweep Control:	Pelton Advance 2 Model 6
Accelerometers:	Pelton M5I High Performance

Similarity System:	Pelton VIB-SIG
Peak Force:	62,031 lbs
Hold Down Weight:	65,000 lbs
Vibrator Drive Level:	Force Control On - 75% Peak Force
Phase Lock:	Ground Force Phase Lock
No. of Channels:	240 Channels
Spread Geometry:	4800m * 4800m *
Channel Geometry:	TR 1 – (VP Location) – Tr 240
	Rear Spread * Front Spread
	1st Ch – Ch 121 – Last Ch 240
	Check Observers Logs For Correct Geometry
Fold:	60 Fold with 20.0m CDP's
Record Length:	16.0 seconds
Correlation Sample Rate:	2 milliseconds
Written to Tape S.R.:	2 milliseconds

5. PERSONNEL

POSITION	NAME
Crew Manager	Bob Stephenson
Operations Manager	Steve Barbour
Snr Observer	James Butcher
Instrument Tech	Mick Bokor
Cable/Geophone Repair	Stuart Robinson
Snr Vibe Mechanic	John Philippson
Asst Vibe Mechanic	Peter McKenzie
Vibe Op	Allan Tanner
Vibe Op	Shane Goossens
Vibe Op	Geoff Geraty
Vibe Op	Mick Jardine
Snr Vehicle Mechanic	Richard Barnes
Safety Officer/Mechanic O.S	Tim Cox
Line Boss	Brendon Horsten
Line Crew/Cable-Ram Ute	Traci Jones
Line Crew/Cable-Ram Ute	Andrew Smylie
Line Crew/Cable-Ram Ute	Noel Grainger
Line Crew/Jug Ute	June Brummel
Line Crew/Jug Ute	Gordon Heiniman
Line Crew/Front Crew	Shane Ebsworth
Line Crew/Front Crew	Andrew Mead
Line Crew/Back Crew	Jeremy Dermer
Line Crew/Back Crew	Anthony Dermer
Line Crew/Back Crew	Liz Goold
DSS Surveyor	Tom Pickett
DSS Surveyor	Lynne Baker
ANSIR Geophysicist	Andrew Owen
ANSIR Geophysicist	Bruce Goleby
ANSIR Geophysicist	Tanya Fomin

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**

No.	Year	Model Type
• 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 worm 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 – Adelaide, South Australia

Survey Personnel

- Two (2) GPS Chainpersons/Surveyor

Survey Equipment

- One (1) 1995 HZJ75 Toyota 4x4 Chaining Unit
- One (1) 1996 HZJ75 Toyota 4x4 Survey Unit (4 days)
- Survey Data output in UKOOA Format

Services

- All messing, accommodation, fuels and lubricants.
- All Line positioning, Chaining, surveying and output of survey data in SEGP1 and UKOOA format on floppy disk.

APPENDIX "B"

Tape Listing

Yilgarn Seismic Survey

Tape Listing

Line	Reel #	FF-FF	VP-VP	Tape Type
99AGS-Y1	L15099003	27-116	1000-1178	3490E
99AGS-Y1	L15099004	117-196	1180-1340	3490E
99AGS-Y1	L15099005	187-299	1342-1508	3490E
99AGS-Y1	L15099006	300-403	1509-1664	3490E
99AGS-Y1	L15099007	404-417	1666-1694	3490E
99AGS-Y1	L15099008	418-524	1696-1912	3490E
99AGS-Y1	L15099009	525-551	1914-1966	3490E
99AGS-Y1	L15099010	395	1648	3490E
99AGS-Y4	L15099011	552-616	2730-2602	3490E
99AGS-Y4	L15099012	617-719	2600-2426	3490E
99AGS-Y4	L15099013	720-807	2423-2335	3490E
99AGS-Y4	L15099014	870-972	2334-2232	3490E
99AGS-Y4	L15099015	973-1075	2231-2124	3490E
99AGS-Y4	L15099016	Point Source		3490E
99AGS-Y4	L15099017	1080-1182	2123-2017	3490E
99AGS-Y4	L15099018	1183-1285	2016-1905	3490E
99AGS-Y4	L15099019	1286-1324	1904-1837	3490E
99AGS-Y4	L15099020	1325-1427	1836-1691	3490E
99AGS-Y4	L15099021	1428-1530	1690-1588	3490E
99AGS-Y4	L15099022	1531-1626	1587-1492	3490E
99AGS-Y4	L15099023	1627-1719	1491-1399	3490E
99AGS-Y4	L15099024	1720-1810	1398-1308	3490E
99AGS-Y4	L15099025	1811-1876	1300-1168	3490E
99AGS-Y5	L15099026	1877-1994	1000-1238	3490E
99AGS-Y5	L15099027	1995-2094	1240-1440	3490E
99AGS-Y5	L15099028	2095-2199	1442-1654	3490E
99AGS-Y5	L15099029	2200-2232	1656-1720	3490E
99AGS-Y2	L15099030	2233-2347	2270-2040	3490E
99AGS-Y2	L15099031	2348-2450	2038-1824	3490E
99AGS-Y2	L15099032	2451-2512	1822-1698	3490E
99AGS-Y2	L15099033	2513-2615	1696-1486	3490E
99AGS-Y2	L15099034	2616-2630	1484-1450	3490E
99AGS-Y3	L15099035	2631-2745	1786-1476	3490E
99AGS-Y3	L15099036	2746-2850	1474-1230	3490E
99AGS-Y1	E15099002	17-196	1000-1340	Exabyte
99AGS-Y1	E15099003	197-417	1342-1694	Exabyte
99AGS-Y1	E15099005	418-551	1696-1966	Exabyte
99AGS-Y4	E15099006	552-616	2730-2602	Exabyte

99AGS-Y4	E15099007	617-807	2600-2335	Exabyte
99AGS-Y4	E15099008	808-1075	2334-2124	Exabyte
99AGS-Y4	E15099009	1076-1324	2123-1837	Exabyte
99AGS-Y4	E15099010	1325-1626	1836-1494	Exabyte
99AGS-Y4	E15099011	1627-1810	1491-1308	Exabyte
99AGS-Y4	E15099012	1811-1876	1300-1168	Exabyte
99AGS-Y5	E15099013	1877-2094	1000-1440	Exabyte
99AGS-Y5	E15099014	2095-2232	1442-1720	Exabyte
99AGS-Y2	E15099015	2233-2512	2270-1698	Exabyte
99AGS-Y2	E15099016	2513-2630	1696-1450	Exabyte
99AGS-Y3	E15099017	2631-2850	1786-1230	Exabyte

Appendix "C"

SAFETY MEETING REPORT

Date:	18/08/99.
Client:	AGSO.
Prospect:	99 Yilgarn Seismic Project.
Area:	Kalgoorlie/Boulder.
State:	WA.
Party Manager:	Bob Stephenson.
Safety Officer:	Tim Cox.
Scribe:	Tim Cox.
Client Rep:	Andrew Owen.

# Of Accidents Since Last Meeting. Vehicles	0
# Of Accidents Since Last Meeting. Employees	0
# Of Incidents Since Last Meeting. Employees	2
# Of Compensation Claims Since Last Meeting.	0
# Of LTI'S Since Last Meeting.	0

DETAILS:

1) Safety Meeting was held on the Wednesday morning before commencement of the survey. Bob Stephenson chaired the meeting and introduced Andrew Owen as the client rep. and Tim Cox as the Safety Officer.
2) Andrew Owen informed the crew as to the nature of the survey and described the geological aims of the survey.
3) Tim Cox discussed the aims of the safety program and requested that all designated drivers check their vehicles for safety equipment and emphasised the importance of regular safety checks of the vehicles.
4) Bob Stephenson discussed the hazards and requirements associated with conducting the survey through mine sites, with particular attention to the correct usage of the safety vests.
5) S. Barbour discussed the immediate plan to mobilise the crew and equipment to the survey site.

6) Incident 1 – On the mobilisation trip from Perth to Boulder Elizabeth Goold was taken ill with nausea and stomach pains. She was given anti-digestion medicine and cool water to sip. Her condition improved and it was decided to continue to Boulder where she was admitted to hospital overnight for tests. She was released the next morning much improved and returned to work the following day. At this point in time she is yet to undergo a stomach biopsy at the request of the attending doctor.
7) Incident 2 – On Wednesday morning Richard Barnes (mechanic) noted smoke issuing from the engine compartment of one of the AGSO vibrators in the storage compound. Fire extinguishers were in place and immediately at hand and the smouldering electrical fire was instantly bought under control. Fire damage was minimal and the electrical fault was repaired the next morning. There was no lost time due to the incident. It was noted that damage was kept to minimum due to the safety equipment

having being strategically placed by Richard as a first priority during the unpacking process of the workshop.

TERRACORP PERSONNEL:
R. Stephenson, S. Barbour, M. Bokor, T. Cox, J. Butcher, S. Robinson, J. Philippson, R. Barnes, B. Horsten, A. Tanner, S. Goossens, M. Jardine, G. Geraty, T. Jones, N. Grainger, S. Ebsworth, G. Heiniman, A. Mead, A. Dermer, J. Brummel, J. Dermer, A. Smylie, P. McKenzie.

DSS PERSONNEL
T. Picket, L. Baker.

AGSO PERSONNEL:
A. Owen, B. Goleby, T. Fomin.

Appendix "C"

SAFETY MEETING REPORT

Date:	22/08/99
Client:	AGSO
Prospect:	99 Yilgarn Seismic Project
Area:	Kalgoorlie/Boulder
State:	WA
Party Manager:	Bob Stephenson
Safety Officer:	Tim Cox
Scribe:	Tim Cox
Client Rep:	Andrew Owen

# Of Accidents Since Last Meeting. Vehicles	0
# Of Accidents Since Last Meeting. Employees	0
# Of Incidents Since Last Meeting. Employees	1
# Of Compensation Claims Since Last Meeting.	0
# Of LTI'S Since Last Meeting.	0

DETAILS:

1) Steve Barbour introduced Tim Cox as the Safety Officer.
2) Tim Cox discussed the incident concerning the electrical fire and commended Richard Barnes on placing of the fire equipment and quick action.
3) A decision was made to withdraw one of the line vehicles (Dual Cab Toyota) after a safety audit was conducted on the vehicle the previous day. The reasons behind the withdrawal were explained to all present and the importance of regular vehicle checks was reinforced.
4) An emergency response plan was introduced and printed sheets outlining the process was distributed to all line vehicles and recorder, including a field first aid summary sheet.
5) The concept of an emergency response folder to be kept in the office was introduced and the crew was asked to fill in medical and emergency contact details to be kept in the office in a sealed section of the emergency response folder.

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

DSS PERSONNEL:
T. Picket, L. Baker.

AGSO PERSONNEL:
A. Owen, T. Fomin.

Appendix "C"

SAFETY MEETING REPORT

Date:	30/08/99
Client:	AGSO
Prospect:	99 Yilgarn Seismic Project
Area:	Kalgoorlie/Boulder
State:	WA
Party Manager:	Bob Stephenson
Safety Officer:	Tim Cox
Scribe:	Tim Cox
Client Rep:	Andrew Owen

# Of Accidents Since Last Meeting. Vehicles	0
# Of Accidents Since Last Meeting. Employees	0
# Of Incidents Since Last Meeting. Employees	1
# Of Compensation Claims Since Last Meeting.	0
# Of LTI'S Since Last Meeting.	0

DETAILS:

1. The meeting commenced with a summary recap in regard to the procedures to be followed when placing and removing cable across public roads. The incident/procedure had been sufficiently addressed at an extraordinary meeting held the morning following the incident (29/08/99).

2. Mine safety issues were addressed as the crew were due to enter the mine site (Delta Gold BLC) that morning. Points discussed followed those covered in the on-site mine induction. Particular attention was given to the procedure to be followed with regard to crossing the active haul road on the mine site and PPE requirements.

3. Mention was made with regard to the speed of line vehicles on the line and in particular when passing working vibrators.

TERRACORP PERSONNEL:
R. Stephenson, S. Barbour, 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, A. Dermer, J. Brummel, J. Dermer, A. Smylie, P. McKenzie, L. Goold.

DSS PERSONNEL:
T. Picket, L. Baker.

Appendix "C"

TOOLBOX MEETING REPORT

Date:	27/08/99
Client:	AGSO
Prospect:	99 Yilgarn Seismic Project
Area:	Kalgoorlie/Boulder
State:	WA
Party Manager:	Bob Stephenson
Safety Officer:	Tim Cox
Scribe:	Tim Cox
Client Rep:	Andrew Owen

A decision was made by the Safety Officer and the Client that a toolbox meeting should be held to discuss points of relevance with regard to specific issues the crew would confront on the line before the next Safety Meeting.

DETAILS:

1. Mine specific emergency response procedures were discussed as well as the PPE requirements for on site mine work.

2. Safety issues with regard to working around numerous power lines in the area were discussed, along with traffic considerations specific to the area at hand.

3. The crew was informed as to the location and procedures in relation to working in the vicinity of gas pipelines in the immediate areas.

4. It was noted that numerous clay pans would be encountered the following day and the crew was informed to avoid the areas if possible.

5. Quality control with regard to geophone placement was mentioned as a reminder.

TERRACORP PERSONNEL:
R. Stephenson, S. Barbour, 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, A. Dermer, J. Brummel, J. Dermer, A. Smylie, P. McKenzie, L. Goold.

DSS PERSONNEL:
T. Picket, L. Baker.

Appendix "C"

TOOLBOX MEETING REPORT

Date:	29/08/99
Client:	AGSO
Prospect:	99 Yilgarn Seismic Project
Area:	Kalgoorlie/Boulder
State:	WA
Party Manager:	Bob Stephenson
Safety Officer:	Tim Cox
Scribe:	Tim Cox
Client Rep:	Andrew Owen

A Toolbox Meeting was called by the Safety Officer to address procedures not followed with regard to the laying down and retrieving of cable and cable mats across busy public roads. It was noted the previous day (28/08/99) that one worker was not wearing a reflective safety vest while nailing the cable mat across the highway. The worker was immediately informed of the error and instructed as to the correct PPE requirements for the job at hand. The afternoon of the same day it was noted that flagmen were not in place when retrieving the cable and cable mat from the same location. In response the toolbox meeting was called for the following morning.

DETAILS:

1. The importance and priority of crew safety while conducting operations on public roads was addressed. Particular attention was made to adherence to procedures at all times.

2. Mention was made as to the responsibility of each crew member for his/her personal safety. The onus being on the individual to recognise unsafe work procedures and the right to refuse to work under unsafe conditions. In addition, the crew was informed that it is the responsibility of every crew member to inform his or her workmates of unsafe work practice when observed.

3. The crew were informed as to the correct procedures to be followed with regard to installation and retrieval of cable and cable mats on public roads.

4. In addition to following procedures already in place, it was impressed that the relevant trained person should control and organise the process and that only relevant trained personnel would act as flagmen.

TERRACORP PERSONNEL:
R. Stephenson, S. Barbour, 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, A. Dermer, J. Brummel, J. Dermer, A. Smylie, P. McKenzie, L. Goold.
DSS PERSONNEL:
T. Picket, L. Baker.

Appendix "C"

TOOLBOX MEETING REPORT

Date:	3/09/99
Client:	AGSO
Prospect:	99 Yilgarn Seismic Project
Area:	Kalgoorlie/Boulder
State:	WA
Party Manager:	Bob Stephenson
Safety Officer:	Tim Cox
Scribe:	Tim Cox
Client Rep:	Andrew Owen

DETAILS:

1. The crew was informed to beware of hyper-saline salt deposits around the Bindoulie mine area. It was explained to wash salt from the skin regularly if contact occurs, and to avoid eye contact.

2. A significant number of discarded hypodermic needles have been noticed in the vicinity of the cemetery. Crew was informed as to the health hazards associated with used needles and not to touch them under any circumstances. Also when noticed for the crew to inform the rest of the crew via radio as to the location of the needles.

3. The crew was informed of the dangers associated with haulage traffic in the vicinity if the line adjacent to the Bindoulie mine area. A plan was initiated whereby when a truck comes into the vicinity of the line crew; a radio message was to be distributed down the line informing the rest of the crew that a truck was approaching.

(Further to this I visited the Bindoulie mine site office after the meeting and spoke to the resident manager Paul Jent. It was agreed that due to the slippery conditions of the haul road and concerns with crew safety, mine trucks would use an alternative access bypassing the crew until midday. At which time the condition of the road would be re-examined and if ok, the trucks would be using the road during the afternoon. Paul said he would contact all drivers and inform them of the crew's location and to reduce speed in the vicinity and to generally beware. Informed the line boss (Andrew Smylie) to post lookouts after midday as needed, to inform the crew when trucks were approaching.)

TERRACORP PERSONNEL:
R. Stephenson, M. Bokor, T. Cox, J. Butcher, S. Robinson, J. Philippson, A. Tanner, S. Goossens, M. Jardine, G. Geraty, T. Jones, N. Grainger, S. Ebsworth, G. Heiniman, A. Mead, A. Dermer, J. Brummel, J. Dermer, A. Smylie, L. Goold.

APPENDIX "D"

Monthly Injury Summary Report

Month:	**SEPTEMBER 1999**	
Year:	**1999**	
Client:	**ANSIR**	
Location: KALGOORLIE/BOULDER WA		
Permit Area		**KALGOORLIE/BOULDER WA**
Total Personnel on Crew		21 to 28
Total Hours Worked	**(a)**	40.25
Total Exposure Hours	**(b)**	1014.75
No. Of Minor Injuries	**(c)**	0
No. Medical Treatments	**(d)**	0
No. of LTI's	**(e)**	0

(f) Total Number of Hours worked in the permit area per person.
(g) Total exposure hours = (a) x total number of personnel.
(h) Number of injuries that required treatment by first aider/medic.
(i) Number of injuries that required treatment by medical practitioner. Not LTI's
(j) Number of LTI's as defined by Australian Standard 1885.

APPENDIX "D"

Monthly Injury Summary Report

Month:	**SEPTEMBER 1999**	
Year:	**1999**	
Client:	**ANSIR**	
Location: KALGOORLIE/BOULDER WA		
Permit Area		**KALGOORLIE/BOULDER WA**
Total Personnel on Crew		21 to 28
Total Hours Worked	**(a)**	40.25
Total Exposure Hours	**(b)**	1014.75
No. Of Minor Injuries	**(c)**	0
No. Medical Treatments	**(d)**	0
No. of LTI's	**(e)**	0

(f) Total Number of Hours worked in the permit area per person.
(g) Total exposure hours = (a) x total number of personnel.
(h) Number of injuries that required treatment by first aider/medic.
(i) Number of injuries that required treatment by medical practitioner. Not LTI's
(j) Number of LTI's as defined by Australian Standard 1885.

DAY 1

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 17-Aug-99

Client.....	ANSIR	Party Manager..	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	FINE
State.....	WA		

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.....		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...	12.00	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 Mobilised from Perth to Kalgoorlie, Leave Perth 0630, Arrive Kalgoorlie 1600. Unpack
Chargeable Time Mobilisation 1 Day.
DSS Survey Mobilised from Perth 14th. Run Control 15th. Chain 99AGS-Y5 16th.

SURVEY								
Line No.....	99AGSY1	STN..	1000	STN..	1129	Kms.	5.160	
Line No.....	99AGSY5	STN..	1000	STN..	1280	Kms.	7.200	
Line No.....		STN..		STN..		Kms.		
Line No.....		STN..		STN..		Kms.		Total Kms..... 12.360
Line No.....		STN..		STN..		Kms.		Cum. Kms. (Job)..... 12.360

CHAINING								
Line No.....	99AGSY1	STN..	1000	STN..	1129	Kms.	5.160	
Line No.....	99AGSY5	STN..	1000	STN..	1280	Kms.	7.200	
Line No.....		STN..		STN..		Kms.		
Line No.....		STN..		STN..		Kms.		Total Kms..... 12.360
Line No.....		STN..		STN..		Kms.		Cum. Kms. (Job)..... 12.360

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	# 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		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 2

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 18-Aug-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	RAIN
State.....	WA		

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			Down Time - Vibes		Extra Charges	
	Travel Time.....	2.00	Recorder.....		Extra vibe Hrs.....	0.00
	Test Time.....	0.00	Cables.....		Detours Charge Hrs	0.00
	Recording Time...	0.00	ATU's.....		Washdowns.....Hrs	0.00
Other Time	Line Change.....	0.00	Detours/Terr...		Extra Other Charge..	0.00
	Recorder Move..	0.00	W / on Spread.		Total Extra.....Hrs	0.00
	Detours/Terrain.	0.00	Stock Damage		Total Extra(Job).Hrs	0.00
	Experimental...	0.00	Other.....		Processing Hrs.....	
	Other Charge...	7.50				
	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..	2.50	Cum. Down Time (Job)	0.00	Total Hrs (Job).....	24.00

COMMENTS: Overnight Rains, Road Very Slippery, No Access To Lines **Other Charge** Unpacking, Vibe Repairs, Maintenance
Induction Meeting 0730-0900 Mt Pleasant Mine, Centaur Mining.
Unpack Container, Charge Boxes, Check Equipment, Assess Roads
Fire in Vibe Motor. Cat Repair Damage, Repair all Alternator Mounts

SURVEY									
Line No.....	99AGSY1	STN..	1129	STN..	1348	Kms.	8.760		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	8.760
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	21.120

CHAINING									
Line No.....	99AGSY1	STN..	1129	STN..	1348	Kms.	8.760		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	8.760
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	21.120

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 3

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 19-Aug-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	FINE
State.....	WA		

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			Down Time - Vibes		Extra Charges	
	Travel Time.....	2.50	Recorder.....		Extra vibe Hrs.....	0.00
	Test Time.....	0.25	Cables.....		Detours Charge Hrs	0.00
	Recording Time...	0.00	ATU's.....		Washdowns.....Hrs	0.00
Other Time	Line Change.....	0.00	Detours/Terr...		Extra Other Charge..	0.00
	Recorder Move..	0.00	W / on Spread.		Total Extra.....Hrs	0.00
	Detours/Terrain.	0.00	Stock Damage		Total Extra(Job).Hrs	0.00
	Experimental...	1.50	Other.....		Processing Hrs.....	
	Other Charge...	7.75				
	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).....	36.00

COMMENTS: Experimentals Late Afternoon on 99AGS-Y1
Float Vibes to Line all Day. Access Delays 0630-1030 Wet Slippery Conditions
Line Crew Laid Spread

SURVEY									
Line No.....	99AGSY1	STN..	1348	STN..	1664	Kms.	12.640		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	12.640
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	33.760

CHAINING									
Line No.....	99AGSY1	STN..	1348	STN..	1664	Kms.	12.640		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	12.640
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	33.760

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 : 3 Base Stns Established a@ Intersection 1 & 4.

DAY 4

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 20-Aug-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	FINE
State.....	WA		

RECORDING						Kms.	SKIPS	PROFILES		TOTALS
Line No.....	99AGSY1	Rec	1000	Rec	1340	13.600	1	170	Profiles.....	170
Line No.....		Rec		Rec					Skips.....	1
Line No.....		Rec		Rec					Kms.....	13.600
Line No.....		Rec		Rec					Cum Kms..	13.600
Line No.....		Rec		Rec						

HOURS								
	Travel Time.....	2.50	Down Time - Vibes	0.00	Extra Charges	
	Test Time.....	0.25	Recorder.....	0.00	Extra vibe Hrs.....	0.00
	Recording Time...	6.50	Cables.....	0.00	Detours Charge Hrs	0.00
Other Time	Line Change.....	0.00	ATU's.....	0.00	Washdowns.....Hrs	0.00
	Recorder Move..	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...	1.25	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..	0.50	Cum. Down Time (Job)	0.00	Total Hrs (Job).....	48.00

COMMENTS:
Tape: Line 99AGS-Y1,Reel # L15099003, FF27-116, VP1000-1178(3490E) Handed to client
Tape: Line 99AGS-Y1,Reel # L15099004, FF117-196, VP1180-1340(3490E) Handed to client
Tape:Line 99AGS-Y1,Reel # E15099002, FF17-196, VP1000-1340 (Exabyte) Handed to client

SURVEY									
Line No.....	99AGSY1	STN..	1664	STN..	1967	Kms.	12.120		
Line No.....		STN..		STN..		Kms.			
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	12.120
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	45.880

CHAINING									
Line No.....	99AGSY1	STN..	1664	STN..	1967	Kms.	12.120		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	12.120
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	45.880

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 : Chaining/Survey Line 99AGS-Y1 Complete

DAY 5

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 21-Aug-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	FINE
State.....	WA		

RECORDING						Kms.	SKIPS	PROFILES		TOTALS
Line No.....	99AGSY1	Rec	1342	Rec	1694	14.160	2	221	Profiles.....	221
Line No.....		Rec		Rec					Skips.....	2
Line No.....		Rec		Rec					Kms.....	14.160
Line No.....		Rec		Rec					Cum Kms..	27.760
Line No.....		Rec		Rec						

HOURS							
	Travel Time.....	2.00	Down Time - Vibes	0.00	Extra Charges	
	Test Time.....	0.25	Recorder.....	0.00	Extra vibe Hrs.....	0.00
	Recording Time...	8.00	Cables.....	0.25	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.....	
	Wait on Spread.	0.00				
	Weather Time...	0.00				
	Stock Damage..	0.00	Total Down Time.....	0.25	Total Day.....Hrs	12.00
	Safety Meeting..	0.00	Cum. Down Time (Job)	0.25	Total Hrs (Job).....	60.00

COMMENTS:
Tape: Reel # L15099005, Line 99AGS-Y1, FF197-299, VP 1342-1508(3490E) — 120 Fold 1km each side of mine
Tape: Reel # L15099006, Line 99AGS-Y1, FF300-403, VP 1509-1664(3490E) — Flagman appointed rail crossing
Tape: Reel # L15099007, Line 99AGS-Y1, FF404-417, VP 1666-1694(3490E)
Tape: Reel # E015099003, Line 99AGS-Y1, FF197-417, VP1342-1694(Exabyte)

SURVEY									
Line No.....	99AGS-Y1	STN..	2730	STN..	2426	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).....	58.040

CHAINING									
Line No.....	99AGS-Y1	STN..	2730	STN..	2426	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).....	58.040

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..... 22-Aug-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	FINE
State.....	WA		

RECORDING						Kms.	SKIPS	PROFILES		TOTALS
Line No.....	99AGSY1	Rec	1696	Rec	1966	10.880	2	134	Profiles.....	199
Line No.....	99AGSY4	Rec	2730	Rec	2602	5.120	0	65	Skips.....	2
Line No.....		Rec		Rec					Kms.....	16.000
Line No.....		Rec		Rec					Cum Kms..	43.760
Line No.....		Rec		Rec						

HOURS								
	Travel Time.....	2.00		Down Time - Vibes	0.00	Extra Charges		
	Test Time.....	0.25		Recorder.....	0.00	Extra vibe Hrs.....	0.00	
	Recording Time...	6.75		Cables.....	0.00	Detours Charge Hrs	0.00	
Other Time	Line Change.....	1.50		ATU's.....	0.00	Washdowns.....Hrs	0.00	
	Recorder Move..	0.50		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...	0.50	(Vibes Break)	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..	0.50		Cum. Down Time (Job)	0.25	Total Hrs (Job).....	72.00	

COMMENTS:
Tape: Reel # L15099008, Line 99AGS-Y1,FF418-524, VP 1696-1912(3490E)/E15099005.Y1, VP1696-1966,FF418-551
Tape: Reel # L15099009, Line 99AGS-Y1,FF525-551, VP 1914-1966(3490E)
Tape: Reel # L15099010, Line 99AGS-Y1, FF395, VP1648(3490E) / E15099004, Y1. VP1648,FF395
Tape: Reel # L15099011, Line 99AGS-Y4,FF552-616, VP2730-2602(3490E)/E15099006.Y4,VP2730-2602,FF552-616

SURVEY										
Line No.....	99AGS-Y4	STN..	2426	STN..	1974	Kms.	18.080			
Line No.....		STN..		STN..		Kms.				
Line No.....		STN..		STN..		Kms.				
Line No.....		STN..		STN..		Kms.	0.000		Total Kms.....	18.080
Line No.....		STN..		STN..		Kms.	0.000		Cum. Kms. (Job).....	76.120

CHAINING										
Line No.....	99AGS-Y4	STN..	2426	STN..	1974	Kms.	18.080			
Line No.....		STN..		STN..		Kms.	0.000			
Line No.....		STN..		STN..		Kms.	0.000			
Line No.....		STN..		STN..		Kms.	0.000		Total Kms.....	18.080
Line No.....		STN..		STN..		Kms.	0.000		Cum. Kms. (Job).....	76.120

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 :

DAY 7

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 23-Aug-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	FINE
State.....	WA		

RECORDING						Kms.	SKIPS	PROFILES		TOTALS
Line No.....	99AGS-Y4	Rec	2600	Rec	2335	10.680	1	191	Profiles.....	191
Line No.....		Rec		Rec					Skips.....	1
Line No.....		Rec		Rec					Kms.....	10.680
Line No.....		Rec		Rec					Cum Kms..	54.440
Line No.....		Rec		Rec						

HOURS						
	Travel Time.....	2.00	Down Time - Vibes	0.75	Extra Charges	
	Test Time.....	0.25	Recorder.....	0.50	Extra vibe Hrs.....	0.00
	Recording Time...	7.00	Cables.....	0.75	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.....	
	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)	2.25	Total Hrs (Job).....	84.00

COMMENTS: Tape: Reel # L15099012, Line 99AGS-Y4,FF617-719, VP 2600-2426(3490E)
Tape: Reel # L15099013, Line 99AGS-Y4,FF720-807, VP 2423-2335(3490E)
Vibe Blown Accumulator Bladder, 3 Online 120 Fold. Slow Going Difficult Terrain

SURVEY									
Line No.....	99AGSY4	STN..	1974	STN..	1650	Kms.	12.960		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	12.960
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	89.080

CHAINING									
Line No.....	99AGSY4	STN..	1974	STN..	1650	Kms.	12.960		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	12.960
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	89.080

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

Rig No.	1	# Mtr	#Holes	Hrs
Rig No.	2	# Mtr	#Holes	Hrs

Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0
Total Drilled.....	0	Cum Drilled (Job).....	0.00
Total Hrs.....	0.00	Total Hrs (Job).....	0.00

UPHOLES

Unit 1	#Mtr	#Holes	# Hrs	
Unit 2	#Mtr	#Holes	# Hrs	
Total # Mtr.....		0.00	Total # Mtr(Job).....	0.0
Total Logged.....		0	Total Logged (Job)..	0
Total Hrs.....		0.00	Total # Hrs(Job).....	0.00

COMMENTS :

DAY 8

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 24-Aug-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	FINE
State.....	WA		

RECORDING						Kms.	SKIPS	PROFILES		TOTALS
Line No.....	99AGS-Y4	Rec	2334	Rec	2124	8.440	2	206	Profiles.....	206
Line No.....		Rec		Rec					Skips.....	2
Line No.....		Rec		Rec					Kms.....	8.440
Line No.....		Rec		Rec					Cum Kms..	62.880
Line No.....		Rec		Rec						

HOURS						
	Travel Time.....	2.00	Down Time - Vibes	0.00	Extra Charges	
	Test Time.....	0.25	Recorder.....	0.00	Extra vibe Hrs.....	0.00
	Recording Time...	6.50	Cables.....	0.00	Detours Charge Hrs	0.00
Other Time	Line Change.....	0.00	ATU's.....	0.00	Washdowns.....Hrs	0.00
	Recorder Move..	0.00	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.....	3.00	Processing Hrs.....	0.00
	Wait on Spread.	0.00				
	Weather Time...	0.00				
	Stock Damage..	0.00	Total Down Time.....	3.00	Total Day.....Hrs	12.00
	Safety Meeting..	0.25	Cum. Down Time (Job)	5.25	Total Hrs (Job).....	96.00

COMMENTS:
Tape: Reel # L15099014, Line 99AGS-Y4,FF870-972, VP 2334-2232(3490E)
Tape: Reel # L15099015, Line 99AGS-Y4,FF973-1075, VP 2231-2124(3490E)
Reshoot 2334-2273 Incorrect Geometry 3 hours.
Toolbox Meeting 0630-0640 Client/Safety Officer/Line Crew to Discusss LineHazards

SURVEY									
Line No.....	99AGSY4	STN..	1240	STN..	1650	Kms.	16.400		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	16.400
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	105.480

CHAINING									
Line No.....	99AGSY4	STN..	1240	STN..	1650	Kms.	16.400		
Line No.....		STN..		STN..		Kms.			
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	16.400
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	105.480

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

UPHOLES					
Unit 1	#Mtr	#Holes	# Hrs		
Unit 2	#Mtr	#Holes	# Hrs		
Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0		
Total Logged.....	0	Total Logged (Job)..	0		
Total Hrs.....	0.00	Total # Hrs(Job).....	0.00		

COMMENTS :

DAY 9

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 25-Aug-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	SHOWERS
State.....	WA		

RECORDING						Kms.	SKIPS	PROFILES		TOTALS
Line No.....	99AGSY4	Rec	2123	Rec	1837	11.480	44	245	Profiles.....	245
Line No.....		Rec		Rec					Skips.....	44
Line No.....		Rec		Rec					Kms.....	11.480
Line No.....		Rec		Rec					Cum Kms..	74.360
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...	7.75	Cables.....	0.00	Detours Charge Hrs	0.00
Other Time	Line Change.....	0.00	ATU's.....	0.00	Washdowns.....Hrs	0.00
	Recorder Move..	1.50	Detours/Terr...	0.00	Extra Other Charge..	0.00
	Detours/Terrain.	0.75	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)	5.25	Total Hrs (Job).....	108.00

COMMENTS: Tape: Reel L15099018.Line 99AGS-Y4,FF1183-1285,VP 2016-1905(3490E)/E1509908,Y4, VP2334-2124,FF808-1075
Tape: Reel# L15099017.Line 99AGS-Y4,FF1080-1182,VP 2123-2017(3490E)/E1509907,Y4, VP2600-2335,FF617-807
Tape: Reel# L15099019.Line 99AGS-Y4,FF11286-1324,VP 1904-1637(3490E)
Point SourceReel # L15099016.

SURVEY									
Line No.....	99AGSY4	STN..	1020	STN..	1240	Kms.	8.800		
Line No.....		STN..		STN..		Kms.			
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	8.800
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	114.280

CHAINING									
Line No.....	99AGSY4	STN..	1020	STN..	1240	Kms.	8.800		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	8.800
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	114.280

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

DRILLING

Rig No.	1	# Mtr	#Holes	Hrs
Rig No.	2	# Mtr	#Holes	Hrs

Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0
Total Drilled.....	0	Cum Drilled (Job).....	0.00
Total Hrs.....	0.00	Total Hrs (Job).....	0.00

UPHOLES

Unit 1	#Mtr	#Holes	# Hrs	
Unit 2	#Mtr	#Holes	# Hrs	
Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0	
Total Logged.....	0	Total Logged (Job)..	0	
Total Hrs.....	0.00	Total # Hrs(Job).....	0.00	

COMMENTS :

DAY 10

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 26-Aug-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	SHOWERS
State.....	WA		

RECORDING						Kms.	SKIPS	PROFILES		TOTALS
Line No.....	99AGSY4	Rec	1836	Rec	1492	13.800	43	302	Profiles.....	302
Line No.....		Rec		Rec					Skips.....	43
Line No.....		Rec		Rec					Kms.....	13.800
Line No.....		Rec		Rec					Cum Kms..	88.160
Line No.....		Rec		Rec						

HOURS					
	Travel Time.....	1.50	Down Time - Vibes	0.00	Extra Charges
	Test Time.....	0.25	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.	0.50	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)	5.25	Total Hrs (Job)..... 120.00

COMMENTS: Tape: Reel L15099020,Line99AGS-Y4,FF1325-1427,VP1836-1691(3490E)/E1509909,Y4, VP2123-1837,FF1075-1324
Tape: Reel L15099021,Line99AGS-Y4,FF1428-1530,VP1690-1588(3490E)
Tape: Reel L15099022,Line99AGS-Y4,FF1531-1626,VP1587-1492(3490E)
Detours salt lakes

SURVEY								
Line No.....	99AGSY5	STN..	1180	STN..	1720	Kms.	21.600	
Line No.....		STN..		STN..		Kms.		
Line No.....		STN..		STN..		Kms.	0.000	
Line No.....		STN..		STN..		Kms.	0.000	Total Kms..... 21.600
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job)..... 135.880

CHAINING								
Line No.....	99AGSY5	STN..	1180	STN..	1720	Kms.	21.600	
Line No.....		STN..		STN..		Kms.		
Line No.....		STN..		STN..		Kms.	0.000	
Line No.....		STN..		STN..		Kms.	0.000	Total Kms..... 21.600
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job)..... 135.880

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 :

DAY 11

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 27-Aug-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	FINE
State.....	WA		

RECORDING						Kms.	SKIPS	PROFILES		TOTALS
Line No.....	99AGSY4	Rec	1491	Rec	1308	7.360	0	184	Profiles.....	184
Line No.....		Rec		Rec					Skips.....	0
Line No.....		Rec		Rec					Kms.....	7.360
Line No.....		Rec		Rec					Cum Kms..	95.520
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...	6.50	Cables.....	0.00	Detours Charge Hrs	0.00
Other Time	Line Change.....	0.00	ATU's.....	0.00	Washdowns.....Hrs	0.00
	Recorder Move..	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	11.50
	Safety Meeting..	2.00	Cum. Down Time (Job)	5.25	Total Hrs (Job).....	131.50

COMMENTS: Tape: Reel L15099023,Line99AGS-Y4,FF1627-1719,VP1491-1399(3490E)
Tape: Reel L15099024,Line99AGS-Y4,FF1720-1810,VP1398-1308(3490E)
Induction Meeting 0800 Ballart's Last Chance. Delays Due to Highway.
Early Finish. Cable Over Highway Removed at 1730 MRD Requirement..

SURVEY									
Line No.....	99AGSY2	STN..	1860	STN..	2270	Kms.	16.400		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	16.400
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	152.280

CHAINING									
Line No.....	99AGS	STN..	1860	STN..	2270	Kms.	16.400		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	16.400
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	152.280

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

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 12

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 28-Aug-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	FINE
State.....	WA		

RECORDING						Kms.	SKIPS	PROFILES		TOTALS
Line No.....	99AGSY4	Rec	1300	Rec	1048	10.400	125	66	Profiles.....	102
Line No.....	99AGSY5	Rec	1000	Rec	1070	2.800	0	36	Skips.....	125
Line No.....		Rec		Rec					Kms.....	13.200
Line No.....		Rec		Rec					Cum Kms..	108.720
Line No.....		Rec		Rec						

HOURS					
	Travel Time.....	1.00	Down Time - Vibes	0.00	Extra Charges
	Test Time.....	0.50	Recorder.....	0.00	Extra vibe Hrs..... 0.00
	Recording Time...	4.75	Cables.....	0.00	Detours Charge Hrs 0.00
Other Time	Line Change.....	5.00	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...	0.00			
	Stock Damage..	0.00	Total Down Time.....	0.00	Total Day.....Hrs 11.50
	Safety Meeting..	0.25	Cum. Down Time (Job)	5.25	Total Hrs (Job)..... 143.00

COMMENTS: Tape: Reel L15099025,Line99AGS-Y4,FF1811-1876,VP1300-1168(3490E)/E1509910.Y4, VP1836-1494,FF1325-1626
Long Line Change Time, Low Load Vibes. Delays Due to Mining Operations, Blasting, Haul Rd.
Toolbox Meeting 0630-0640 Discuss Safety Issues On Minesite. Early Finish All Off Minesite By 1730
Note: Kms CalculatedTo Last Receiver On Line Y4

SURVEY									
Line No.....	99AGSY2	STN..	1600	STN..	1860	Kms.	10.800		
Line No.....		STN..		STN..		Kms.	0.000		
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).....	163.080

CHAINING									
Line No.....	99AGSY2	STN..	1600	STN..	1860	Kms.	10.800		
Line No.....		STN..		STN..		Kms.	0.000		
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).....	163.080

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

Rig No.	1	# Mtr	#Holes	Hrs
Rig No.	2	# Mtr	#Holes	Hrs

Total # Mts.....	0.0	Cum # Mtr (Job).....	0.0
Total Drilled.....	0	Cum Drilled (Job).....	0.00
Total Hrs.....	0.00	Total Hrs (Job).....	0.00

UPHOLES

Unit 1	#Mtr	#Holes	# Hrs
Unit 2	#Mtr	#Holes	# Hrs

Total # Mtr.....	0.00	Total # Mtr(Job).....	0.0
Total Logged.....	0	Total Logged (Job)..	0
Total Hrs.....	0.00	Total # Hrs(Job).....	0.00

COMMENTS :

DAY 13

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 29-Aug-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	FINE
State.....	WA		

RECORDING						Kms.	SKIPS	PROFILES		TOTALS
Line No.....	99AGSY5	Rec	1072	Rec	1440	14.800	3	182	Profiles.....	182
Line No.....		Rec		Rec					Skips.....	3
Line No.....		Rec		Rec					Kms.....	14.800
Line No.....		Rec		Rec					Cum Kms..	123.520
Line No.....		Rec		Rec						

HOURS						
	Travel Time.....	1.00	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..	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	11.50
	Safety Meeting..	0.50	Cum. Down Time (Job)	5.25	Total Hrs (Job).....	154.50

COMMENTS: Tape: Reel L15099026,Line99AGS-Y5,FF1877-1994,VP1000-1238(3490E)/E1509911,Y4, VP1491-1308,FF1627-1810
Tape: Reel L15099027,Line99AGS-Y4,FF1995-2094,VP1240-1440(3490E)/E1509912,Y4, VP1300-1168,FF1811-1876
E1509913,Y5, VP1000-1440,FF1877-2094
Safety Meeting 0630. Vibe Blown Pressure Valve

SURVEY									
Line No.....	99AGSY2	STN..	1162	STN..	1600	Kms.	17.520		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	17.520
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	180.600

CHAINING									
Line No.....	99AGSY2	STN..	1162	STN..	1600	Kms.	17.520		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	17.520
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	180.600

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 :

DAY 14

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 30-Aug-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	FINE
State.....	WA		

RECORDING						Kms.	SKIPS	PROFILES		TOTALS
Line No.....	99AGCY5	Rec	1442	Rec	1720	11.200	2	138	Profiles.....	190
Line No.....	99AGSY2	Rec	2270	Rec	2168	4.080	0	52	Skips.....	2
Line No.....		Rec		Rec					Kms.....	15.280
Line No.....		Rec		Rec					Cum Kms..	138.800
Line No.....		Rec		Rec						

HOURS						
	Travel Time.....	1.00	Down Time - Vibes	0.50	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.....	2.50	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.	0.00				
	Weather Time...	0.00				
	Stock Damage..	0.00	Total Down Time.....	0.50	Total Day.....Hrs	12.00
	Safety Meeting..	0.00	Cum. Down Time (Job)	5.75	Total Hrs (Job).....	166.50

COMMENTS: Tape: Reel L15099028,Line99AGS-Y5,FF2095-2199,VP1442-1654(3490E)
Tape: Reel L15099029,Line99AGS-Y5,FF2200-2232,VP1656-1720(3490E)
Vibe Blown Hose

SURVEY									
Line No.....	99AGSY2	STN..	1162	STN..	1050	Kms.	4.480		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	4.480
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	185.080

CHAINING									
Line No.....	99AGSY2	STN..	1162	STN..	1050	Kms.	4.480		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	4.480
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	185.080

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 :

DAY 15

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 31-Aug-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	FINE
State.....	WA		

RECORDING						Kms.	SKIPS	PROFILES		TOTALS
Line No.....	99AGSY2	Rec	2166	Rec	1698	18.800	5	228	Profiles.....	228
Line No.....		Rec		Rec					Skips.....	5
Line No.....		Rec		Rec					Kms.....	18.800
Line No.....		Rec		Rec					Cum Kms..	157.600
Line No.....		Rec		Rec						

HOURS					
	Travel Time.....	1.00	Down Time - Vibes	0.50	Extra Charges
	Test Time.....	0.50	Recorder.....		Extra vibe Hrs..... 0.00
	Recording Time...	10.00	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...		Other.....		Processing Hrs..... 0.00
	Wait on Spread.				
	Weather Time...				
	Stock Damage..		Total Down Time.....	0.50	Total Day.....Hrs 12.00
	Safety Meeting..		Cum. Down Time (Job)	6.25	Total Hrs (Job)..... 178.50

COMMENTS:
Tape : Reel L 15099030,Line 99AGS-Y2,FF2233-2347(3490E)
Tape : Reel L 15099031,Line 99AGS-Y2,FF2348-2450(3490E)
Tape : Reel L 15099032,Line 99AGS-Y2,FF2451-2512(3490E)
Vibe blown hose

SURVEY									
Line No.....	99AGSY3	STN..	1880	STN..	1510	Kms.	14.800		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	14.800
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	199.880

CHAINING									
Line No.....	99AGSY3	STN..	1880	STN..	1510	Kms.	14.800		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	14.800
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	199.880

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 :

DAY 16

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 1-Sep-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	FINE
State.....	WA		

RECORDING						Kms.	SKIPS	PROFILES		TOTALS
Line No.....	99AGSY2	Rec	1696	Rec	1330	14.720	124	118	Profiles.....	118
Line No.....		Rec		Rec					Skips.....	124
Line No.....		Rec		Rec					Kms.....	14.720
Line No.....		Rec		Rec					Cum Kms..	172.320
Line No.....		Rec		Rec						

HOURS					
	Travel Time.....	1.00	Down Time - Vibes		Extra Charges
	Test Time.....	0.50	Recorder.....		Extra vibe Hrs..... 0.00
	Recording Time...	6.00	Cables.....		Detours Charge Hrs 0.00
Other Time	Line Change.....	3.00	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...		Other.....		Processing Hrs..... 0.00
	Wait on Spread.	1.50			
	Weather Time...				
	Stock Damage..		Total Down Time.....	0.00	Total Day.....Hrs 12.00
	Safety Meeting..		Cum. Down Time (Job)	6.25	Total Hrs (Job)..... 190.50

COMMENTS: Tape:Reel L15099033,Line99AGS-Y2,FF2513-2615,VP1696-1486(3490E)
Tape:Reel L15099034,Line99AGS-Y2,FF2616-2630,VP1484-1450(3490E)
Line 99AGS-Y2 stopped at Stn 1450,Spread layed to Stn 1330.Pick up spread and move to Line99AGS-Y3

SURVEY									
Line No.....	99AGSY3	STN..	1230	STN..	1510	Kms.	11.200		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	11.200
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	211.080

CHAINING									
Line No.....	99AGSY3	STN..	1230	STN..	1510	Kms.	11.200		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000		
Line No.....		STN..		STN..		Kms.	0.000	Total Kms.....	11.200
Line No.....		STN..		STN..		Kms.	0.000	Cum. Kms. (Job).....	211.080

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 :

DAY 17

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 2-Sep-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	FINE
State.....	WA		

RECORDING						Kms.	SKIPS	PROFILES		TOTALS
Line No.....	99AGSY3	Rec	1788	Rec	1678	4.400	17	38	Profiles.....	38
Line No.....		Rec		Rec					Skips.....	17
Line No.....		Rec		Rec					Kms.....	4.400
Line No.....		Rec		Rec					Cum Kms..	176.720
Line No.....		Rec		Rec						

HOURS			Down Time - Vibes		Extra Charges	
	Travel Time.....	1.00			Extra vibe Hrs.....	0.00
	Test Time.....	0.50			Detours Charge Hrs	0.00
	Recording Time...	1.50	Recorder.....		Washdowns.....Hrs	0.00
Other Time	Line Change.....	2.00	Cables.....		Extra Other Charge..	0.00
	Recorder Move..		ATU's.....		Total Extra.....Hrs	0.00
	Detours/Terrain.		Detours/Terr...		Total Extra(Job).Hrs	0.00
	Experimental...		W / on Spread.		Processing Hrs.....	0.00
	Other Charge...	1.25	Stock Damage		Total Day.....Hrs	6.25
	Wait on Spread.		Other.....		Total Hrs (Job).....	196.75
	Weather Time...					
	Stock Damage..		Total Down Time.....	0.00		
	Safety Meeting..		Cum. Down Time (Job)	6.25		

COMMENTS: Other Charge Vibe bogged at station 1706. Winched out by other vibe. 2hrs laying line.
Vibe down with servo valve problem. Crew closed down at 3pm.
Final Survey Data 1999 Yilgarn Seismic Survey.

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)..... 211.080

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)..... 211.080

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 : Survey and Chaining completed, running finals.

DAY 18

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 3-Sep-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	WET
State.....	WA		

RECORDING						Kms.	SKIPS	PROFILES		TOTALS
Line No.....	99AGSY3	Rec	1676	Rec	1282	15.840	80	139	Profiles.....	175
Line No.....	99AGSY3	Rec	1281	Rec	1230	2.080	15	36	Skips.....	95
Line No.....		Rec		Rec					Kms.....	17.920
Line No.....		Rec		Rec					Cum Kms..	194.640
Line No.....		Rec		Rec						

HOURS			Down Time - Vibes		Extra Charges	
	Travel Time.....	1.00			Extra vibe Hrs.....	0.00
	Test Time.....	0.50	Recorder.....		Detours Charge Hrs	0.00
	Recording Time...	7.50	Cables.....		Washdowns.....Hrs	0.00
Other Time	Line Change.....		ATU's.....		Extra Other Charge..	0.00
	Recorder Move..		Detours/Terr...		Total Extra.....Hrs	0.00
	Detours/Terrain.		W / on Spread.		Total Extra(Job).Hrs	0.00
	Experimental...		Stock Damage		Processing Hrs.....	0.00
	Other Charge...	2.00	Other.....			
	Wait on Spread.	1.00				
	Weather Time...					
	Stock Damage..		Total Down Time.....	0.00	Total Day.....Hrs	12.00
	Safety Meeting..		Cum. Down Time (Job)	6.25	Total Hrs (Job).....	208.75

COMMENTS: Tape:Reel L15099035,Line99AGS-Y3,FF2631-2745,VP1786-1476(3490E)
Tape:Reel L15099036,Line99AGS-Y3,FF2746-2850,VP1474-1230(3490E)
Stn 1786-1282 recorded 60 Fold, Stn 1281-1230 recorded 120 Fold.
Other charge 2 hrs picking up spread

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).....	211.080

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).....	211.080

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 :

DAY 19

TERRACORP
DAILY PRODUCTION REPORT

CREW 205 DATE..... 4-Sep-99

Client.....	ANSIR	Party Manager.	BOB STEPHENSON
Survey Name.	YILGARN	Client Rep.....	ANDREW OWEN
Area.....	KALGOORLIE REGION	Weather.....	FINE
State.....	WA		

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..	194.640
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...	10.00	Other.....		Processing Hrs.....	0.00
	Wait on Spread.					
	Weather Time...					
	Stock Damage..		Total Down Time.....	0.00	Total Day.....Hrs	10.00
	Safety Meeting..		Cum. Down Time (Job)	6.25	Total Hrs (Job).....	218.75

COMMENTS: Wash down Vibes, Vehicles. Check and pack up equipment in container. Pick up pin flags on lines 99AGS-Y2 & Y3.

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)..... 211.080

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)..... 211.080

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 :

TERRACORP
23 Felspar Street
Welshpool, Western Australia

RECORDING PARAMETER SHEET

Client:	ANSIR	Line:	99AGS-Y1
Crew:	1	Prospect Area:	Kallgoolie / Boulder
Survey:	1999 Yilgaran Seismic Survey	Date Recorded:	19 To 22 August 1999
Instrument:	Aram 24	Direction of Rec:	West To East

Recording parameters

Traces per File	242
Record Length	16,000
Sample Rate:	2 msec
Tape Format	Seg Y
Shot Points	1000 To 1966
Rec To Rec	1000 To 1966
Files	27 To 551

Sweep Frequency

Swp 1	6 To 64 Hz
Swp 2	12 To 120 HZ
Swp 3	12 To 100 Hz
Swp 4	6 To 80 Hz
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	1

Source Parameters

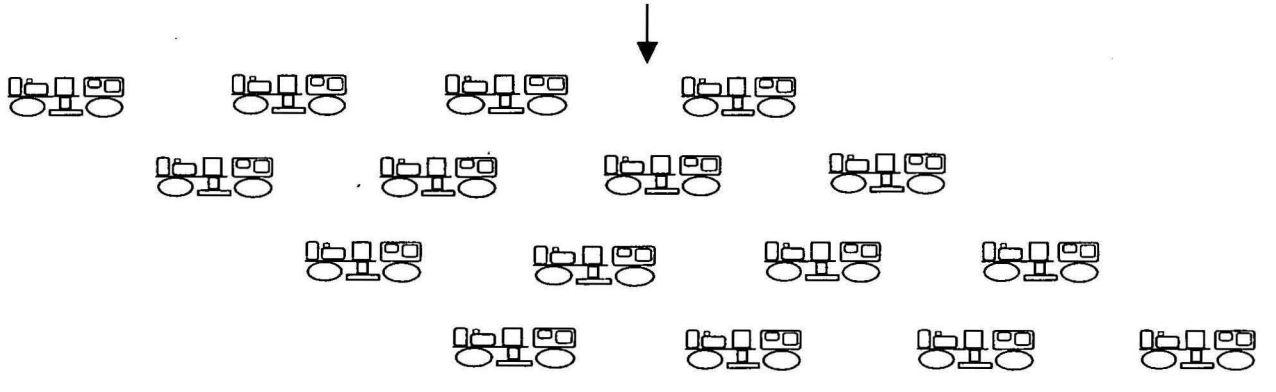
No. of Sources On-Line	4
No. of Sweeps per VP	4
Sweep Length:	8 Sec
Sweep Type	Linear
Sweep Type Mono / Vari	Vari
VP Interval	40 And 80 M
Source Array Length	75 M
Vibe Spacing Pad to Pad	15 M
Vibe Move Up	10 M
VP Source Centre	On Station
Vibe Electronics	Pelton Adv II Model 6
Vibrator QC	Vibra Sig
Force Control	Peak and Trough
Phase Lock	Ground Force
High Force Output	80%
Pelton Rev. Level	6E

Tape Listing

Tape No	
Tape No	
Tape No	
Tape No	

Reciever Array 12 Phones over 40m 3.33m between Phones Centered between pegs

Source Array 4 vibes 0ver 75m 15m pad to pad centered on VP 10m moveups



TERRACORP
23 Felspar Street
Welshpool, Western Australia

RECORDING PARAMETER SHEET

Client:	ANSIR	Line:	99AGS-Y4
Crew:	1	Prospect Area:	Kallgoolie / Boulder
Survey:	1999 Yilgaran Seismic Survey	Date Recorded:	22 To 28 August 1999
Instrument:	Aram 24	Direction of Rec:	North To South

Recording parameters

Traces per File	242
Record Length	16,000
Sample Rate:	2 msec
Tape Format	Seg Y
Shot Points	2730 To 1168
Rec To Rec	2730 To 1048
Files	552 To 1876

Sweep Frequency

Swp 1	6 To 64 Hz
Swp 2	12 To 120 HZ
Swp 3	12 To 100 Hz
Swp 4	6 To 80 Hz
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	1

Source Parameters

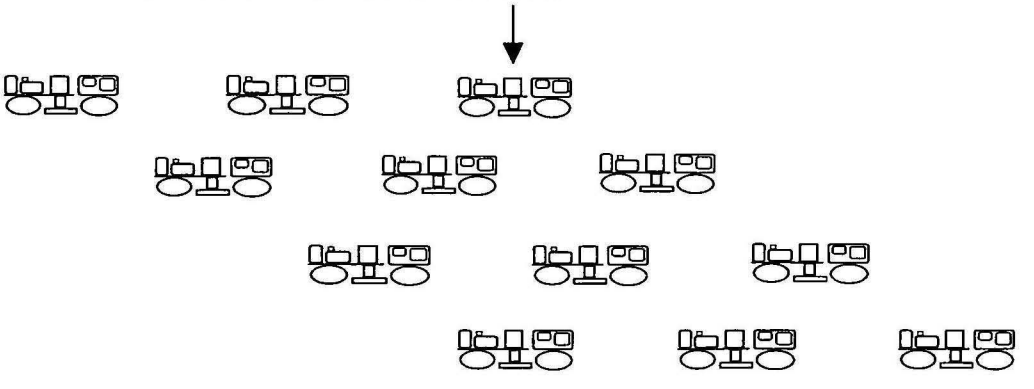
No. of Sources On-Line	3 and 4
No. of Sweeps per VP	4
Sweep Length:	8 Sec
Sweep Type	Linear
Sweep Type Mono / Vari	Vari
VP Interval	80 M
Source Array Length	60 M
Vibe Spacing Pad to Pad	15 M
Vibe Move Up	10 M
VP Source Centre	On Station
Vibe Electronics	Pelton Adv II Model 6
Vibrator QC	Vibra Sig
Force Control	Peak and Trough
Phase Lock	Ground Force
High Force Output	80%
Pelton Rev. Level	6E

Tape Listing

Tape No	
Tape No	
Tape No	
Tape No	

Reciever Array 12 Phones over 40m 3.33m between Phones Centered between pegs

Source Array 3 vibes 0ver 60m 15m pad to pad centered on VP 10m moveups



TERRACORP
23 Felspar Street
Welshpool, Western Australia

RECORDING PARAMETER SHEET

Client:	ANSIR	Line:	99AGS-Y5
Crew:	1	Prospect Area:	Kallgoolie / Boulder
Survey:	1999 Yilgaran Seismic Survey	Date Recorded:	28 To 30 August 1999
Instrument:	Aram 24	Direction of Rec:	South East To North West

Recording parameters

Traces per File	242
Record Length	16,000
Sample Rate:	2 msec
Tape Format	Seg Y
Shot Points	1000 To 1720
Rec To Rec	1000 To 1720
Files	1877 To 2232

Sweep Frequency

Swp 1	6 To 64 Hz
Swp 2	12 To 120 HZ
Swp 3	12 To 100 Hz
Swp 4	6 To 80 Hz
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	1

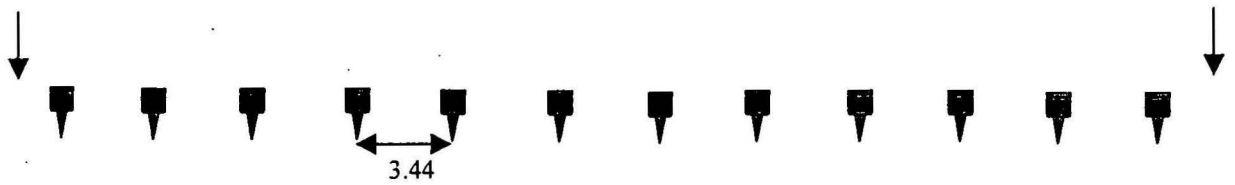
Source Parameters

No. of Sources On-Line	3
No. of Sweeps per VP	4
Sweep Length:	8 Sec
Sweep Type	Linear
Sweep Type Mono / Vari	Vari
VP Interval	80 M
Source Array Length	60 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	80%
Pelton Rev. Level	6E

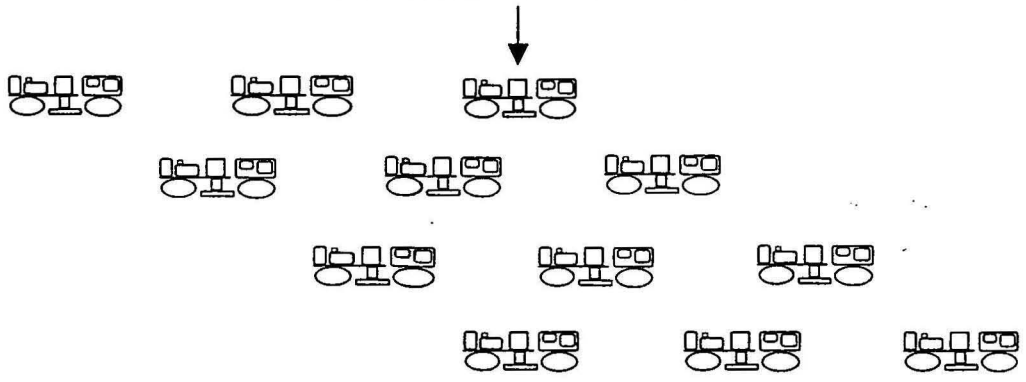
Tape Listing

Tape No	
Tape No	
Tape No	
Tape No	

Reciever Array 12 Phones over 40m 3.33m between Phones Centered between pegs



Source Array 3 vibes 0ver 60m 15m pad to pad centered on VP 10m moveups



TERRACORP

Welshpool, Western Australia

RECORDING PARAMETER SHEET

Client:	ANSIR	Line:	99AGS-Y2
Crew:	1	Prospect Area:	Kallgoolie / Boulder
Survey:	1999 Yilgaran Seismic Survey	Date Recorded:	30 Aug To 1 Sep 1999
Instrument:	Aram 24	Direction of Rec:	East To West

Recording parameters

Traces per File	242
Record Length	16,000
Sample Rate:	2 msec
Tape Format	Seg Y
Shot Points	2270 To 1330
Rec To Rec	2270 To 1330
Files	2233 To 2630

Sweep Frequency

Swp 1	6 To 64 Hz
Swp 2	12 To 120 HZ
Swp 3	12 To 100 Hz
Swp 4	6 To 80 Hz
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	1

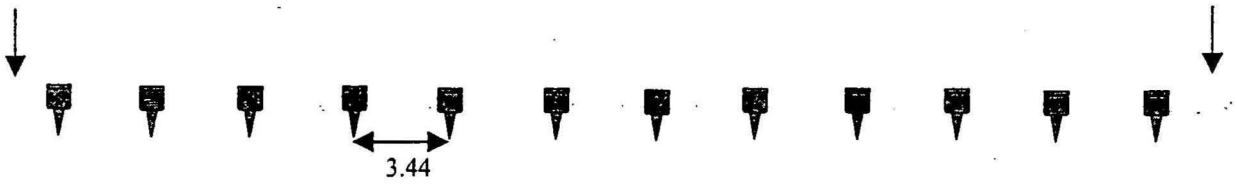
Source Parameters

No. of Sources On-Line	3
No. of Sweeps per VP	4
Sweep Length:	8 Sec
Sweep Type	Linear
Sweep Type Mono / Vari	Vari
VP Interval	80 M
Source Array Length	60 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	80%
Pelton Rev. Level	6E

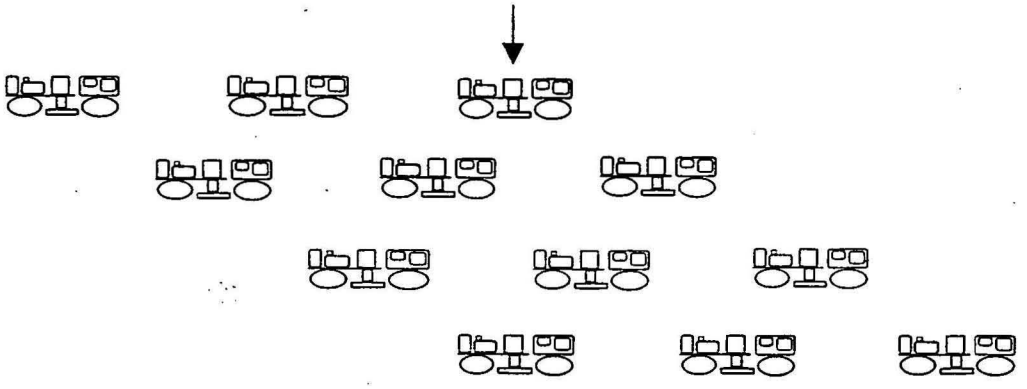
Tape Listing

Tape No	
Tape No	
Tape No	
Tape No	

Reciever Array 12 Phones over 40m 3.33m between Phones Centered between pegs



Source Array 3 vibes 0ver 60m 15m pad to pad centered on VP 10m moveups



TERRACORP
23 Felspar Street
Welshpool, Western Australia

RECORDING PARAMETER SHEET

Client:	ANSIR	Line:	99AGS-Y3
Crew:	1	Prospect Area:	Kallgoolie / Boulder
Survey:	1999 Yilgaran Seismic Survey	Date Recorded:	2 To 3 September 1999
Instrument:	Aram 24	Direction of Rec:	East To West

Recording parameters

Traces per File	242
Record Length	16,000
Sample Rate:	2 msec
Tape Format	Seg Y
Shot Points	1788 To 1230
Rec To Rec	1788 To 1230
Files	2631 To 2846

Sweep Frequency

Swp 1	6 To 64 Hz
Swp 2	12 To 120 HZ
Swp 3	12 To 100 Hz
Swp 4	6 To 80 Hz
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	1

Source Parameters

No. of Sources On-Line	3
No. of Sweeps per VP	4
Sweep Length:	8 Sec
Sweep Type	Linear
Sweep Type Mono / Vari	Vari
VP Interval	80 M
Source Array Length	60 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	80%
Pelton Rev. Level	6E

Tape Listing

Tape No	
Tape No	
Tape No	
Tape No	

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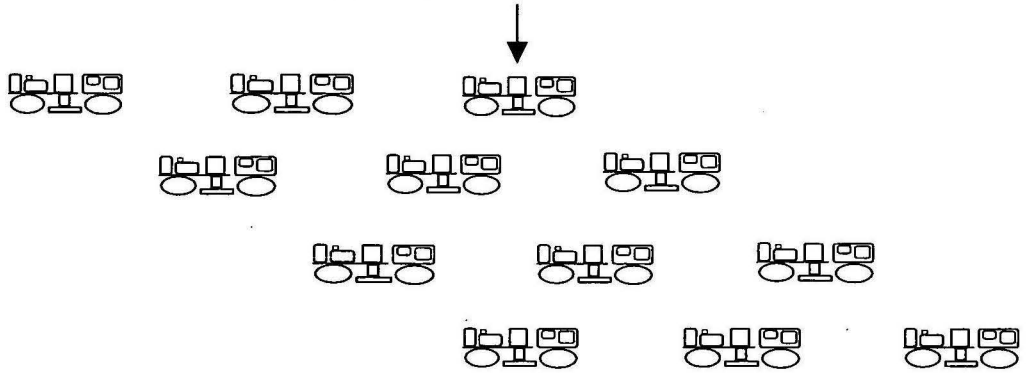
Source Array 3 vibes 0ver 60m 15m pad to pad centered on VP 10m moveups



Dynamic

Satellite

Surveys

99-63

Final Operations Report
on the

AGSO
1999 YILGARN 2D SEISMIC SURVEY

for

TERRACORP PTY LTD

September 1999

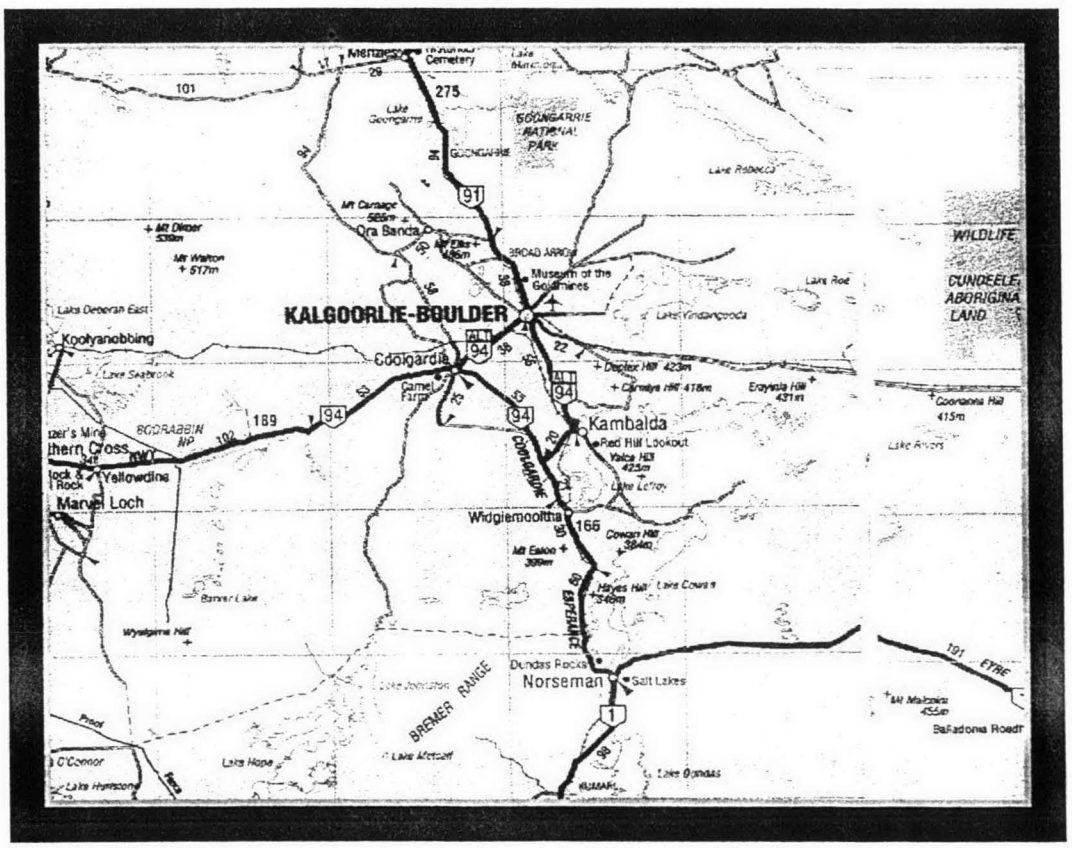


Table of Contents

1

INTRODUCTION

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

The 1999 survey operation consisted of 210.680 kilometres of seismic line around the townsite of Kalgoorlie, WA.

Work commenced on the 15th August and was completed on 1st September, 1999. There were 5 seismic lines in all at 40m station interval, which are listed below.

Line	From	To	Km's
99AGS-Y1	1000	1967	38.680
99AGS-Y2	1050	2270	48.800
99AGS-Y3	1230	1880	26.000
99AGS-Y4	1020	2730	68.400
99AGS-Y5	1000	1720	28.800

Total Distance = 210.680 Kilometres

2

INSTRUMENTATION AND PERSONNEL

2.1 Personnel

DSS personnel involved in the survey were as follows:

Senior Field Surveyors:

Tom Pickett - Bachelor of Surveying - Curtin University of Technology
(Surveying, Processing, Report Writing)

Lynne Baker - Bachelor of Geodetic Engineering
(Surveying, associated paperwork)

2.2 Equipment

Equipment provided by DSS and used on this project:

	Description	Quantity
Vehicles	Toyota Landcruiser Trayback - DSS	1
	Toyota Landcruiser Trayback - from Terracorp - 5 day s	1
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.

The DSS survey vehicle was mobilised from Perth, on the 14th August.

Survey operations were based from the Albion Shamrock Hotel, Boulder. 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 3rd 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:

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

Coordinate sets were transformed directly to the Australian Map Grid (AMG) based on the Australian Geodetic Datum 1984 (AGD 84):

Datum:	AGD 84 (Australian Geodetic Datum 1984)
Spheroid:	ANS (Australian National Spheroid)
Semi-Major Axis Length:	6 378 160.0
Inverse Flattening:	298.25
The Unit of Measure:	International Metre

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

Translations:	ΔX:	116.00 m	ΔY:	50.47 m	ΔZ:	-141.69 m
Rotations:	RΩ:	0.230"	Rϕ:	0.390"	Δκ:	0.344"
Scale:	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:

Projection:	AMG Zone 51
Latitude of Origin:	0°
Central Meridian (CM):	123° E
Scale Factor at CM:	0.9996
False Easting:	500 000
False Northing:	10 000 000
The Unit of Measure:	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

AHD = WGS84 - 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 the highest Standard Survey Mark within the Prospect which was KB 222. This mark as an accuracy of 15 parts per million in both horizontal and vertical position, and is situated near Mount Vetters Homestead in Bardic.

The coordinates of this base station KB 222 are as follows;

Station Name	Easting	Northing	Height (AHD)	Comments
KB 222	336098.099	6642042.592	424.110	3rd Order Hz 2nd Order Ht

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)	Comments
99AGS-Y1 1060	308432.6	6629679.9	414.7	Coolgardie Rd
99AGS-Y1 1347+16	318038.1	6635761.8	436.0	Grants Hatch Rd
99AGS-Y1 1674+39	329440.9	6640612.6	402.4	x 99AGS-Y4
99AGS-Y4 2276+20	331416.9	6625486.0	386.0	Haulage Rd
99AGS-Y4 1730+17	340428.6	6606627.5	342.1	x 99AGS-Y2
SSM KB 56	346973.6	6591003.2	371.7	Gt East. Hwy
Bench Mark BMUO25	365993.4	6612813.2	374.5	Kanowna T.S.
99AGS-Y5 1465+21	360615.9	6622668.6	335.5	X 99AGS-Y2
99AGS-Y2 1505+12	350027.4	6614506.0	342.6	Menzies Hwy

The position of KB 222 was tied off into various standard survey marks, to verify its coordinates, and check the integrity of the survey.

For the results of the survey network ties to these stations see **Appendix A - Control Survey, Miscloses and Ties.**

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, lines intersections 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-Y*.PMS.

6

METHOD OF SURVEY

6.1 Line Ranging

The line pointing was completed by AGSO.

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 whats actually on the ground, DSS utilized 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.

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 which 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 rechained 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 and 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.

Surveyed elevations at all new line intersections were checked and the results are listed in **Appendix D - New Line Intersection Diagram and Listing**. The list was also included in the digital data supplied to Terracorp as **INTERSEC.CRD**.

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-Y?.UKA	Coordinates and elevations of all stations in UKOOA format.
99AGS-Y?.SEG	Coordinates and elevations of all stations in P1/90 format.
99AGS-Y?.CHK	A chaining check file for each surveyed station.
99AGS-Y?.PMS	A list of all new permanent markers.
99AGS-Y?.CRD	Coordinates and elevations of all surveyed stations.
99AGS-Y?.INT	Coordinates and elevations of all interpolated stations.
INTERSEC.CRD	A listing of all new line intersections.
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 governing mining and exploration leases. DSS safety guidelines were followed at all times.

DSS personnel attended all safety inductions in the various mine sites where the seismic operations encroached.

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

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

9

CHRONOLOGICAL SUMMARY OF SURVEY

DATE	SURVEY OPERATIONS
Aug 14	Tom Pickett mobilized from Perth. Set up office.
Aug 15	Control Established on 99AGS-Y5. Created N-value model and prospect configuration. Meeting with Bruce Golebly, Andrew Owen.
Aug 16	Survey and Chain 99AGS-Y5 stns 1000-1280 (7.2km) Had difficulties due to major line bends, as surveying points in opposite direction to recording.
Aug 17	Moved area to line 99AGS-Y1 at short notice. Point position for first base. Survey and Chain 99AGS-Y1 stns 1000-1129 (5.16km) Spent ~2hrs trying to get access in Ora Banda Mine to tie into KG-11 trig. Lynne Baker arrives in afternoon.
Aug 18	Safety Induction at Centaur Mine (MT Pleasant) 1.5 hrs Survey and Chain 99AGS-Y1 stns 1129-1348 (8.76km) Difficulty d/t trees, losing lock. GPS base#2 established.
Aug 19	Survey and Chain 99AGS-Y1 stns 1348-1664 (12.64km) GPS base#3 established. Intersection of Y1 & Y4

Aug 20 Survey and Chain 99AGS-Y1 stns 1664-1967 (12.12km)
Line 99AGS-Y1 completed. Tied into KB222. Datum point.

Aug 21 Survey and Chain 99AGS-Y4 stns 2426-2730 (12.16km)
GPS static tie on first GPS point. Closed travers loop.
Static next base.

Aug 22 Safety meeting with Terracorp.
Survey and Chain 99AGS-Y4 stns 1974-2426 (18.08km)
Open plain, some trees. Next base established.

Aug 23 Survey and Chain 99AGS-Y4 stns 1650-1974 (12.96km)
Difficulty d/t overhead powerlines interfering with radio corrections.
Control ties to KB56 & KB57

Aug 24 Survey and Chain 99AGS-Y4 stns 1240-1650 (16.40km)

Aug 25 Survey and Chain 99AGS-Y4 stns 1020-1240 (8.80km)
Survey tie into G25-1, next base established at Int Y5 & Y2

Aug 26 Survey and Chain 99AGS-Y5 stns 1180-1720 (21.60km)

Aug 27 Survey and Chain 99AGS-Y2 stns 1860-2270 (16.40km)
New base established at highway.

Aug28 Terracorp safety meeting.
Survey and Chain 99AGS-Y2 stns 1600-1860 (10.80km)
Re-established base at highway.

Aug 29 Survey and Chain 99AGS-Y2 stns 1162-1600 (17.52km)
Closed traverse loop into Int of Y2 & Y4

Aug 30 Survey and Chain 99AGS-Y2 stns 1050-1162 (4.48km)
Safety Induction with Normandy Mine, and KCGM
Control on 99AGS-Y2. Problems getting access through mine site.

Aug 31	Survey and Chain 99AGS-Y3 stns 1510-1880 (14.80km) Slow through KCGM
Sep 01	Survey and Chain 99AGS-Y3 stns 1230-1510 (11.20km) Yilgarn 2D completed.
Sep 02	Final survey processing completed, and handed in. Final survey report started, ½ completed. Maintenance on vehicle and equipment, pinflags ...etc
Sep 03	Demobilisation from Kalgoorlie

10

OPERATIONAL ASPECTS

The survey of the five lines on this project was relatively fast. A total of 210.680 kilometres was surveyed in 16 days giving an average daily production rate of just over 13 kilometres per day.

The prospect consisted of thick tree coverage, open mud flats and salt lakes, mine sites, and along existing gravel tracks and haulage roads. This enabled quite quick acquisition in the survey data where very few obstacles were of hindrance.

Two people were required in the survey, as the seismic lines were quite long and very bent. This was to enable the pinflags to be placed on the left had side of the seismic line, and to keep a running chainage through radial pegging.

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

The prospect area was well suited to RT20 GPS system due to its openness.

Two surveyors were required in the survey operations, so as to keep a lead over the recording crew. This was mainly due to the fact that the seismic lines were relatively long and bendy. If the seismic lines were substantially shorter, one surveyor would have been sufficient.

The survey control network tied in 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 51 Central Meridian 123°

Heights are AHD, using OSU89A N-value model

CONTROL POINTS FOR SURVEY

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

Station		Easting	Northing	Elevation	Comments
99AGS-Y1	1060	308432.6	6629679.9	414.7	Coolgardie Rd
99AGS-Y1	1347+16	318038.1	6635761.8	436.0	Grants Hatch Rd
SSM	KB 222	336098.1	6642042.6	424.1	Datum Point
99AGS-Y1	1674+39	329440.9	6640612.6	402.4	x99AGS-Y4
99AGS-Y4	2276+20	331416.9	6625486.0	386.0	Haulage Rd
99AGS-Y4	1730+17	340428.6	6606627.5	342.1	x99AGS-Y2
SSM	KB 56	346973.6	6591003.2	371.7	Gt East. Hwy
Bench Mark	BM UO25	365993.4	6612813.2	374.5	Kanowna T.S.
99AGS-Y5	1465+21	360615.9	6622668.6	335.5	X 99AGS-Y2
99AGS-Y2	1505+12	350027.4	6614506.0	342.6	Menzies Hwy

SURVEY TIES AND MISCLOSES

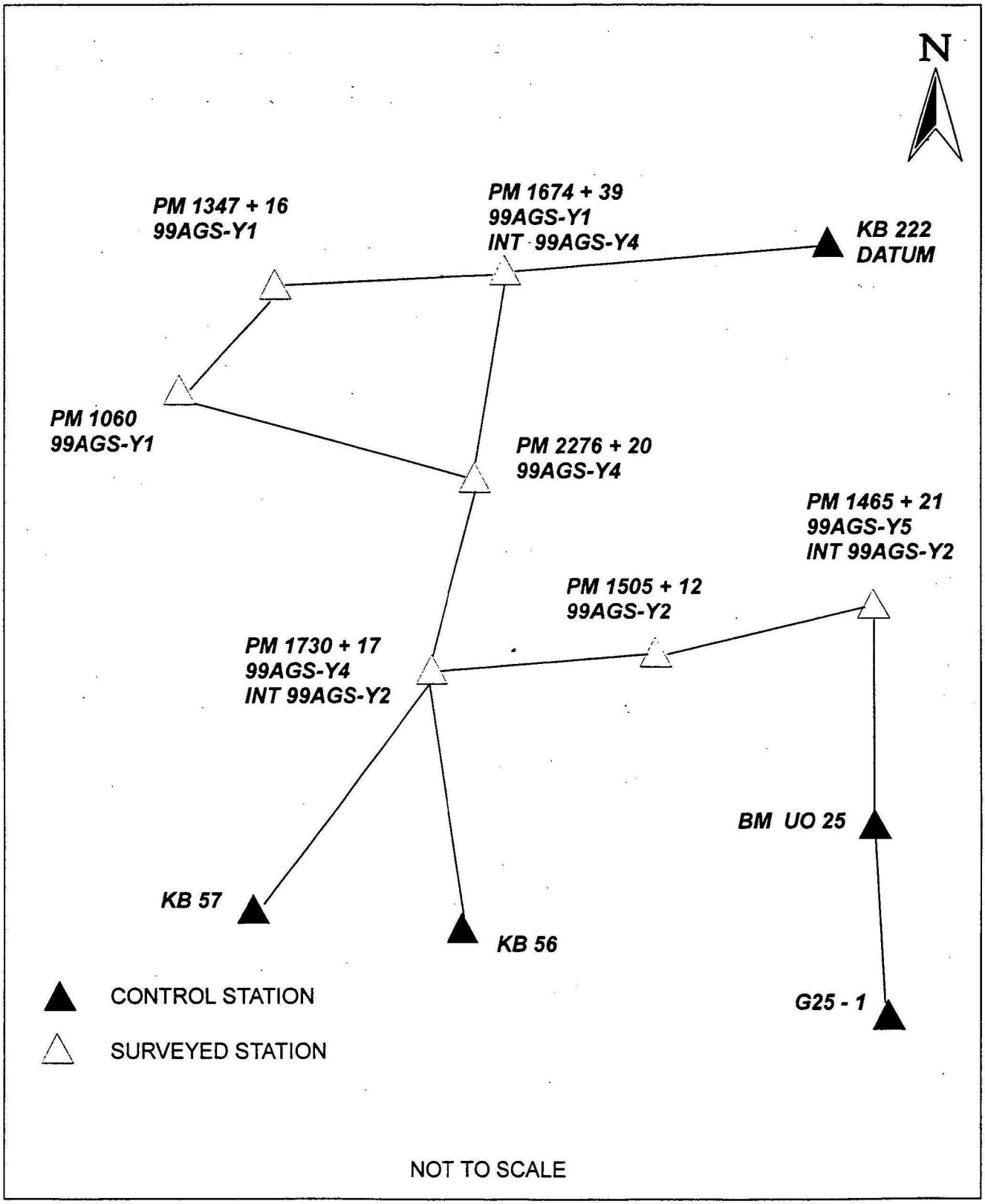
Station		Easting	Northing	Elevation	Comments
DSS	CNS002	322457.6	6637971.2	413.9	RT20
"CAWSE MINE"	CNS002	322457.9	6637971.2	413.7	CENTAUR
		-0.3	0.0	+0.2	Misclose
DSS	KB57	344663.07	6589084.80	401.12	DAY235
SSM	KB57	344663.16	6589084.39	401.15	3rd ORDER
		-0.09	+0.41	-0.03	Misclose
DSS	KB56	346973.60	6591003.18	371.68	DAY235
SSM	KB56	346973.62	6591002.82	371.73	3rd ORDER
		-0.02	+0.37	-0.05	Misclose

DSS	G25-1	378135.37	6602694.43	448.02	3rd ORDER
SSM	G25-1	378135.60	6602694.02	447.92	3rd ORDER
		-0.23	+0.41	+0.10	Misclose
DSS	BM UO25	365993.44	6612813.22	374.52	Bench Mark
	BM UO25			374.52	Bench Mark
				0.00	Misclose
WHELANS	peg4141	352273	6587609	356.4	97AGS-4
DSS	peg4141	352273.3	6587610.0	356.5	97AGS-4
		+0.3	+1.0	+0.1	Misclose
Geopcko?	10032	357147.8	6626069.9	340.4	Gravity Point
BMR EGF1 1991	PM 7235+39	355605.2	6627663.5	344.8	
99AGS-Y5	1644+14	355610.4	6627670.4	344.6	X OLDLINE

Control Network Diagram

Dynamic Satellite Surveys

CONTROL NETWORK



New Permanent Markers Listing

Coordinates are AMG84 Zone 51 Central Meridian 123°

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

Revision 1, September 1999

Permanent Markers

Line	Stn.	Easting	Northing	Elev.	Comments
99AGS-Y1	1060	308432.6	6629679.9	414.7	Coolgardie Rd
99AGS-Y1	1347+16	318038.1	6635761.8	436.0	Grants Hatch Rd
99AGS-Y1	1674+39	329440.9	6640612.6	402.4	x99AGS-Y4
99AGS-Y1	1967	340583.6	6642826.7	388.8	EOL
99AGS-Y2	1050	336699.1	6604892.3	342.0	EOL
99AGS-Y2	1156+27	340428.6	6606627.5	342.1	X 99AGS-Y4
99AGS-Y2	1505+12	350027.4	6614506.0	342.6	Highway
99AGS-Y2	1863+29	360615.9	6622668.6	335.5	X 99AGS-Y5
99AGS-Y2	2270	376278.0	6621508.0	352.9	EOL
99AGS-Y3	1800	361927.2	6594808.6	349.1	97AGS-K3 3246
99AGS-Y3	1428+28	351239.9	6588380.9	347.3	X 99AGS-Y4
99AGS-Y3	1230	345198.0	6585315.2	364.2	EOL
99AGS-Y4	1020	354441.0	6584188.2	348.8	EOL
99AGS-Y4	1730+17	340428.6	6606627.5	342.1	x99AGS-Y2
99AGS-Y4	2276+20	331416.9	6625486.0	386.0	Haulage Rd
99AGS-Y4	2682+30	329440.9	6640612.6	402.4	x99AGS-Y1
99AGS-Y4	2730	328641.7	6642325.0	399.9	EOL
99AGS-Y5	1000	371264.7	6608890.1	359.5	EOL
99AGS-Y5	1465+21	360615.9	6622668.6	335.5	X 99AGS-Y2
99AGS-Y5	1720	355389.0	6630682.0	342.2	EOL

New Line Intersections and Diagrams

Coordinates are AMG84 Zone 51 Central Meridian 123°

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

Revision 1, September 1999

Calculated Line Intersections

Line/Stn	Line/Stn	Easting	Northing	Elev
99AGS-Y1/1675+05	99AGS-Y4/2682+30	329446.55	6640615.40	402.40
99AGS-Y2/1863+28	99AGS-Y5/1465+24	360616.52	6622671.44	335.57
99AGS-Y2/1156+34	99AGS-Y4/1730+16	340434.14	6606631.28	341.95
99AGS-Y3/1428+36	99AGS-Y4/1157+36	351241.88	6588388.79	347.33

Dynamic Satellite Surveys

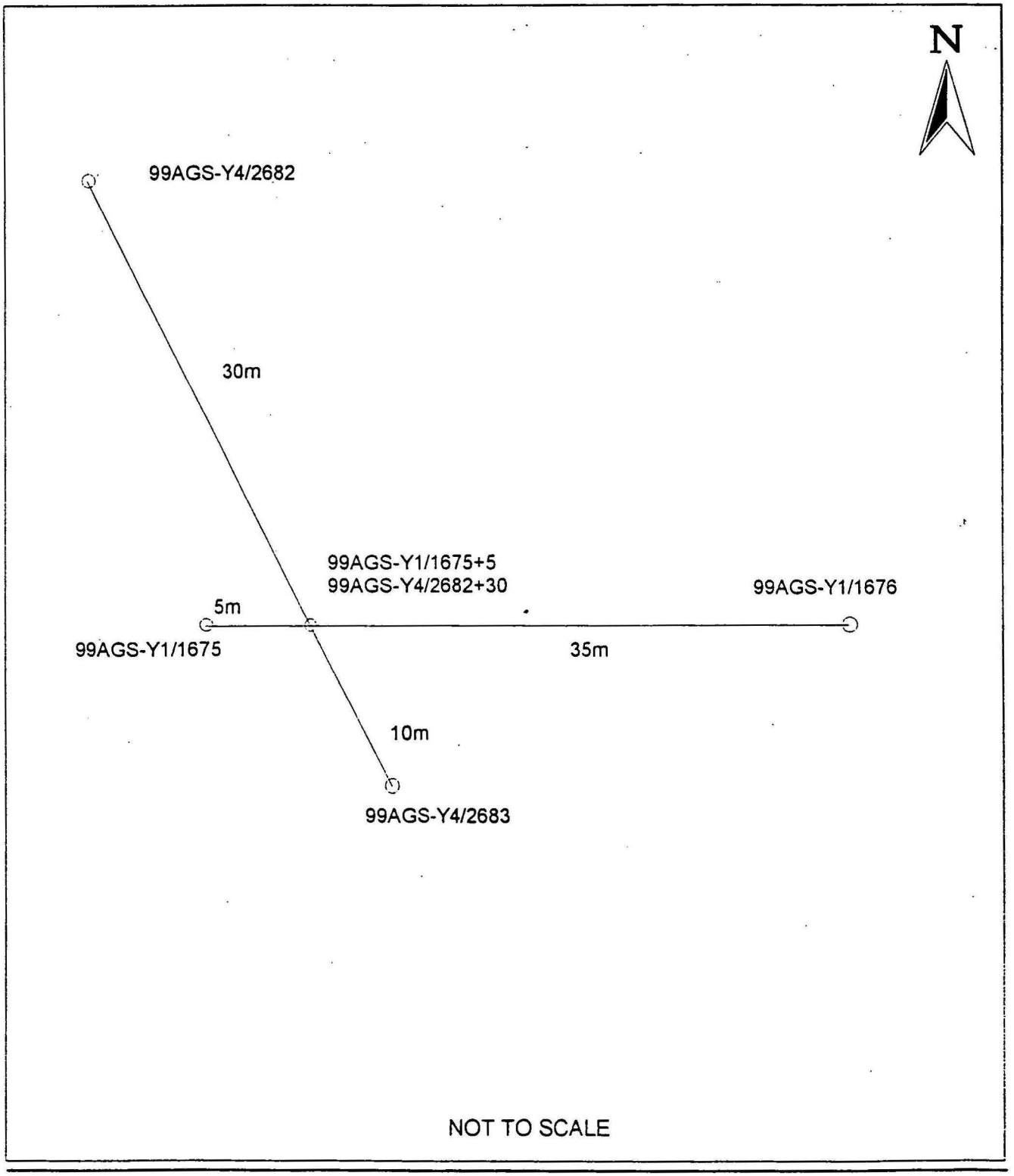
INTERSECTION DIAGRAM

DSS-FF-14
REV 5.0
Mar 1999

PROJECT / JOB # 99-63 CLIENT AGSO DAY / DATE 08/99

SURVEY NAME: AGSO/TERRACORP AREA: YILGARN

STATION INTERVAL: 40



NOT TO SCALE

Dynamic Satellite Surveys

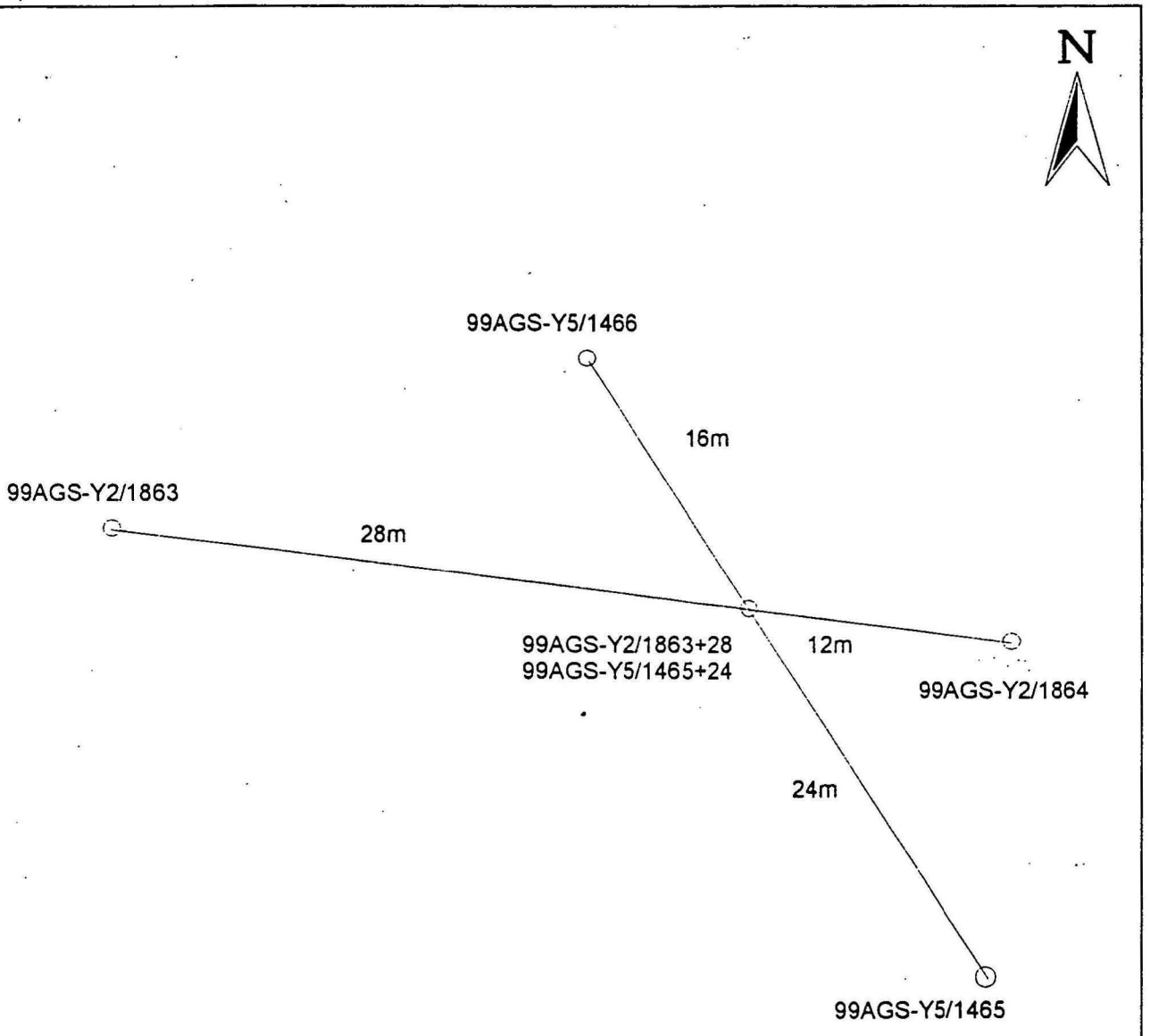
INTERSECTION DIAGRAM

DSS-FF-14
REV 5.0
Mar 1999

PROJECT / JOB # 99-63 CLIENT AGSO DAY / DATE 08/99

SURVEY NAME: AGSO/TERRACORP AREA: YILGARN

STATION INTERVAL: 40



NOT TO SCALE

Dynamic Satellite Surveys

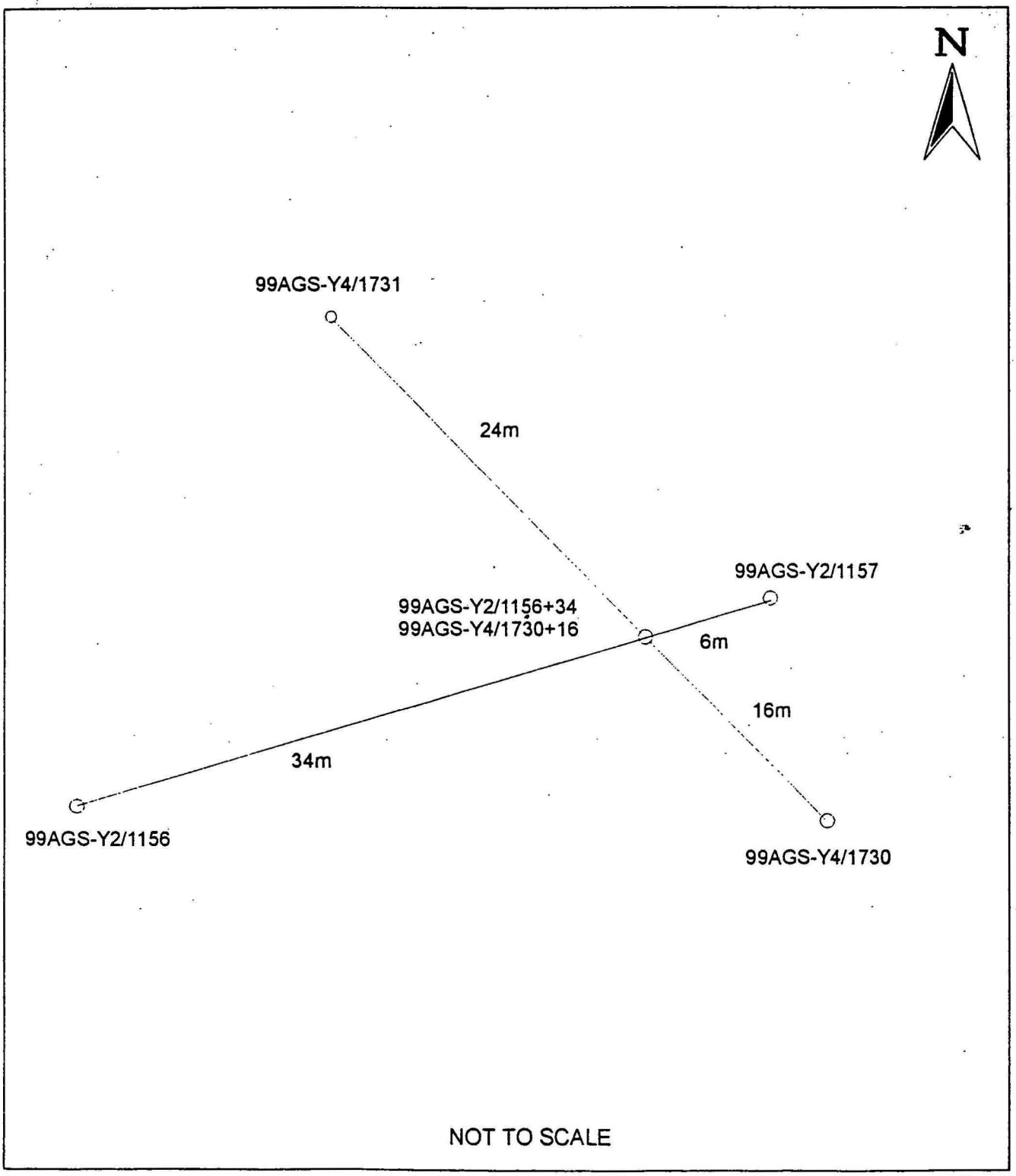
INTERSECTION DIAGRAM

DSS-FF-14
REV 5.0
Mar 1999

PROJECT / JOB # 99-63 CLIENT AGSO DAY / DATE 08/99

SURVEY NAME: AGSO/TERRACORP AREA: YILARN

STATION INTERVAL: 40



NOT TO SCALE

Dynamic Satellite Surveys

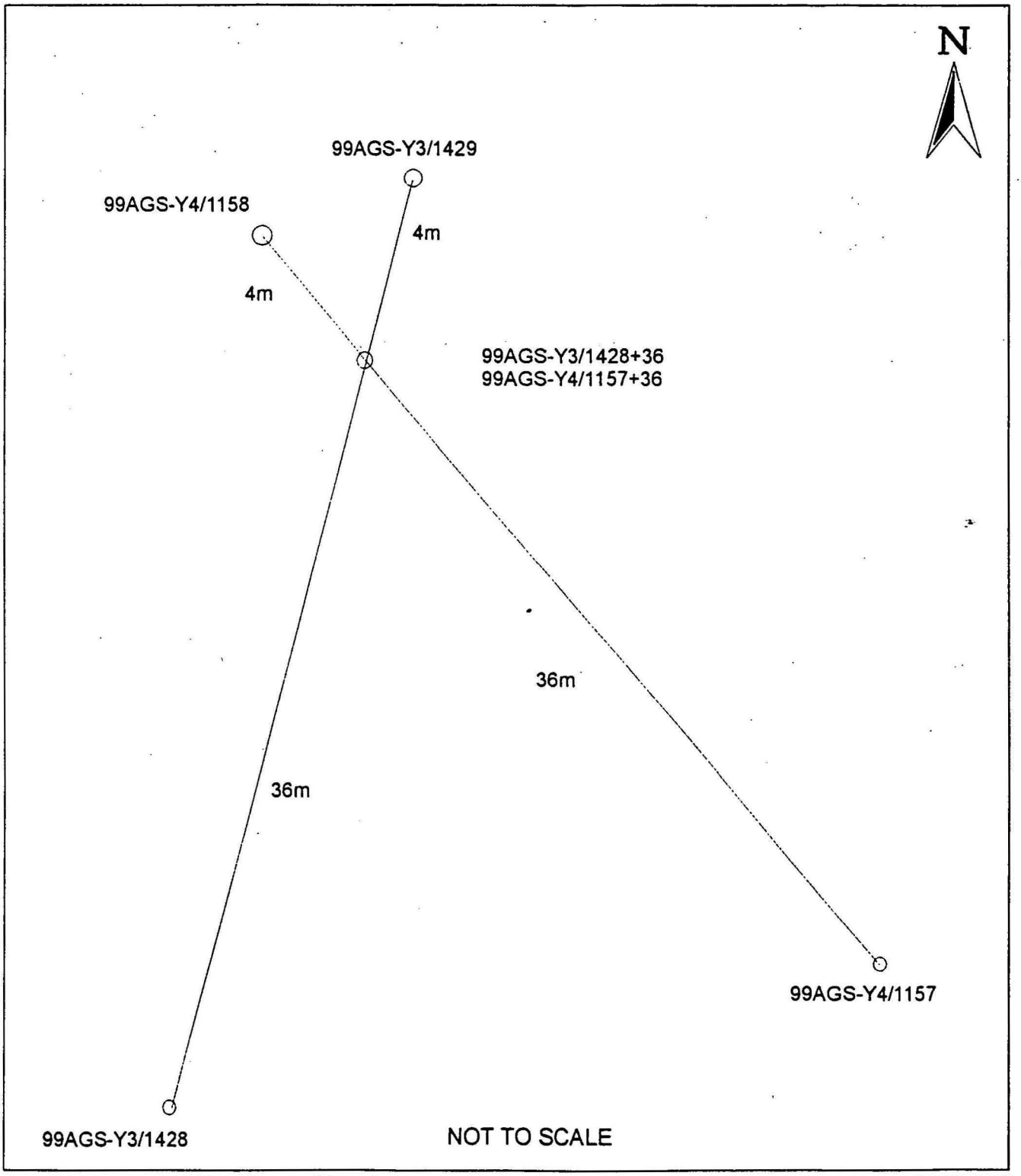
INTERSECTION DIAGRAM

DSS-FF-14
REV 5.0
Mar 1999

PROJECT / JOB # 99-63 **CLIENT** AGSO **DAY / DATE** 08/99

SURVEY NAME: AGSO/TERRACORP **AREA:** YILGARN

STATION INTERVAL: 40



Survey Base Locations

Dynamic Satellite Surveys

DSS-FF-15
REV 6.0
Mar 1999

STATION LOCATION DIAGRAM

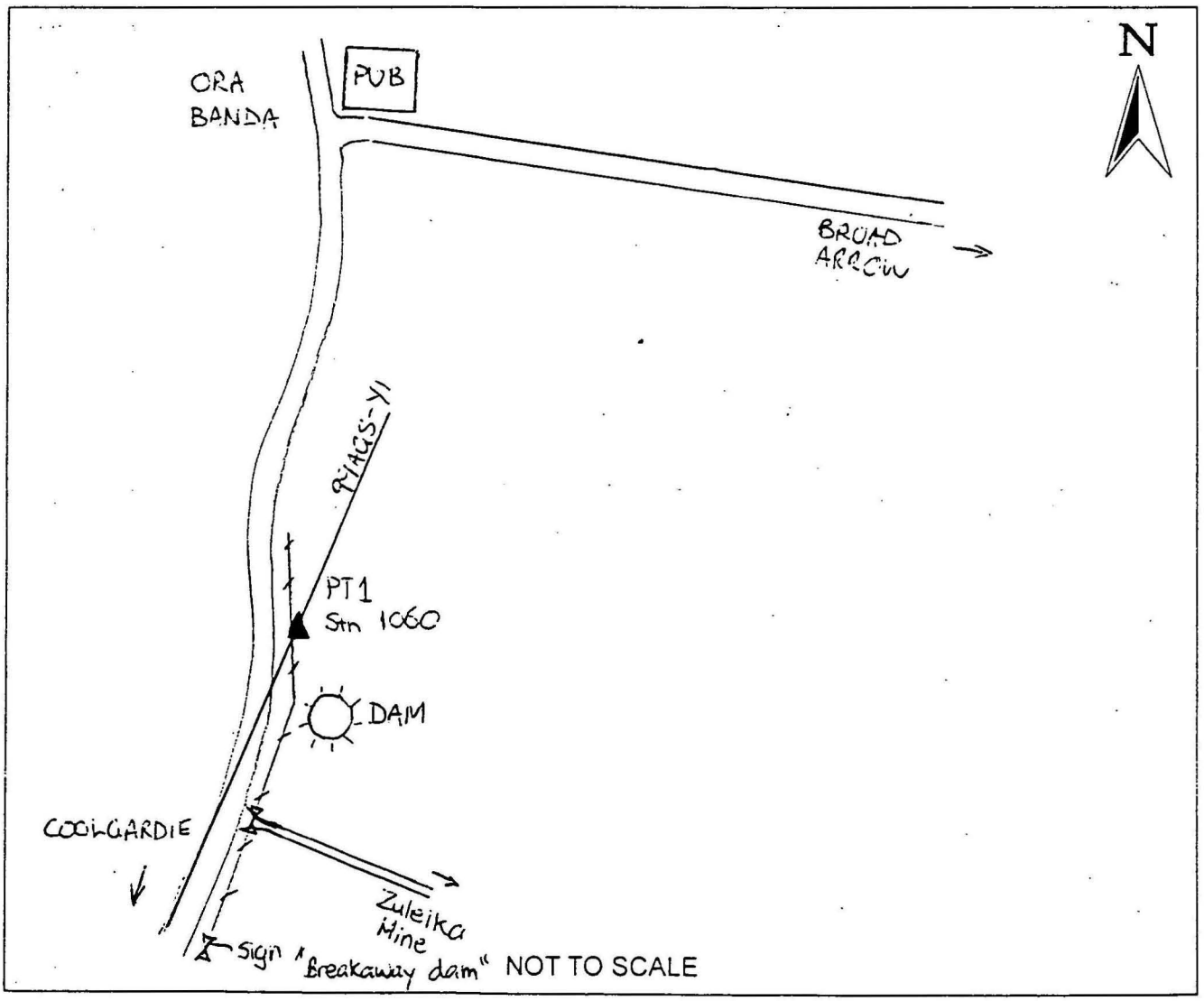
PROJECT / JOB # 99-63 CLIENT AGSO/TERRACORP DAY / DATE 8/99

STATION NAME: (PT1) 99AGS-Y1 Stn 1060

AREA: YILGARN MAP REFERENCE :

Horizontal Control Information		Vertical Control Information	
Easting:	308432.569	RL:	414.705
Northing:	6629679.858	Datum:	AHD
Datum:	AMG Zone: 51	Origin:	KB222
Origin:	KB222		

Mark Description: Star picket tagged "99AGS-Y1 1060"



Dynamic Satellite Surveys

DSS-FF-15
REV 6.0
Mar 1999

STATION LOCATION DIAGRAM

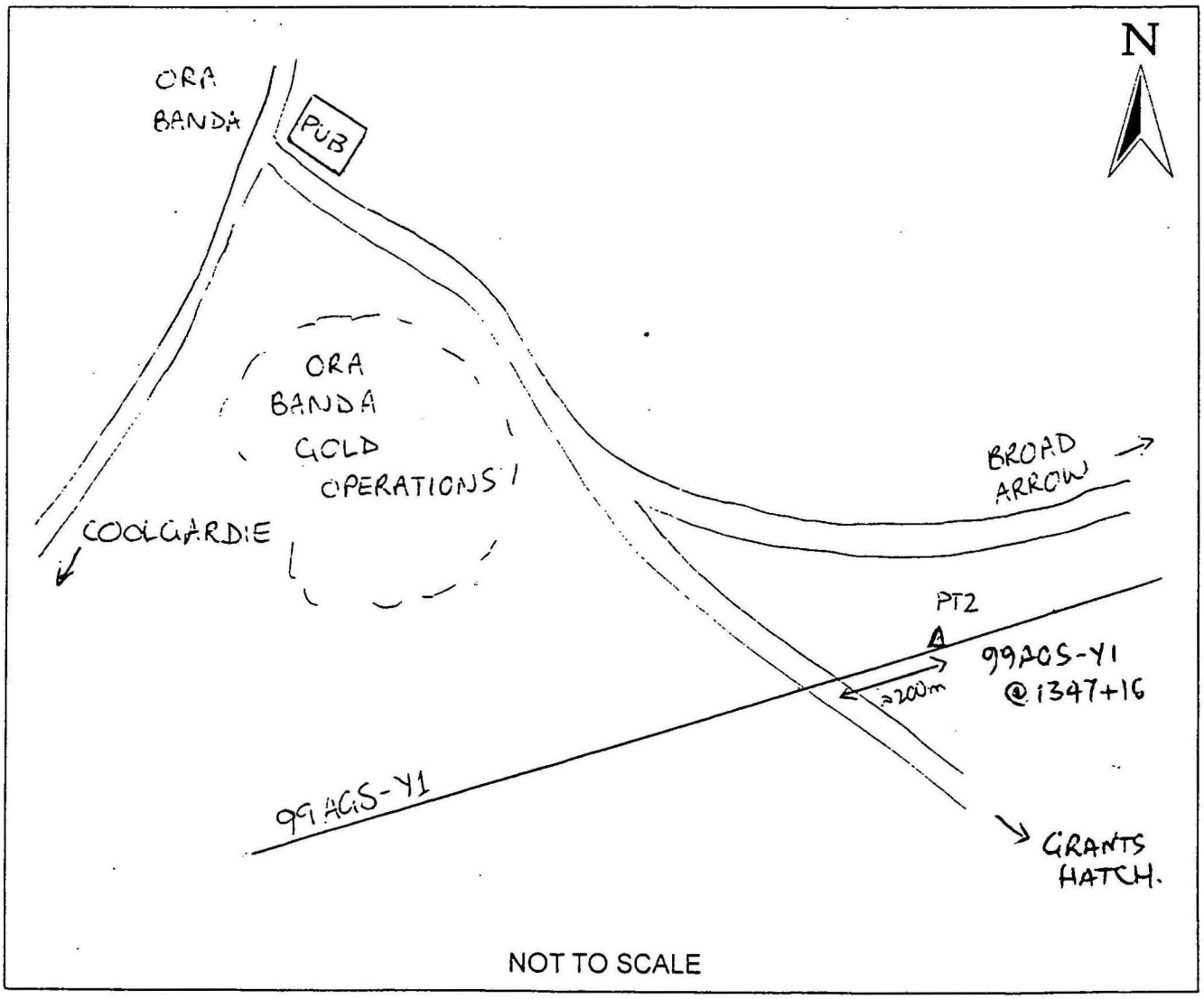
PROJECT / JOB # 99-63 CLIENT ACSO/TERRACORP DAY / DATE 8/99

STATION NAME: (PT2) 99AGS-Y1 Stn 1347+16

AREA: YILGARN MAP REFERENCE :

Horizontal Control Information		Vertical Control Information	
Easting:	318038.087	RL:	436.033
Northing:	6635761.769	Datum:	AHD
Datum:	AMG Zone: 51	Origin:	KB222
Origin:	KB222		

Mark Description: Star picket tagged "99AGS-Y1 1347+16"



NOT TO SCALE

Dynamic Satellite Surveys

DSS-FF-15
REV 6.0
Mar 1999

STATION LOCATION DIAGRAM

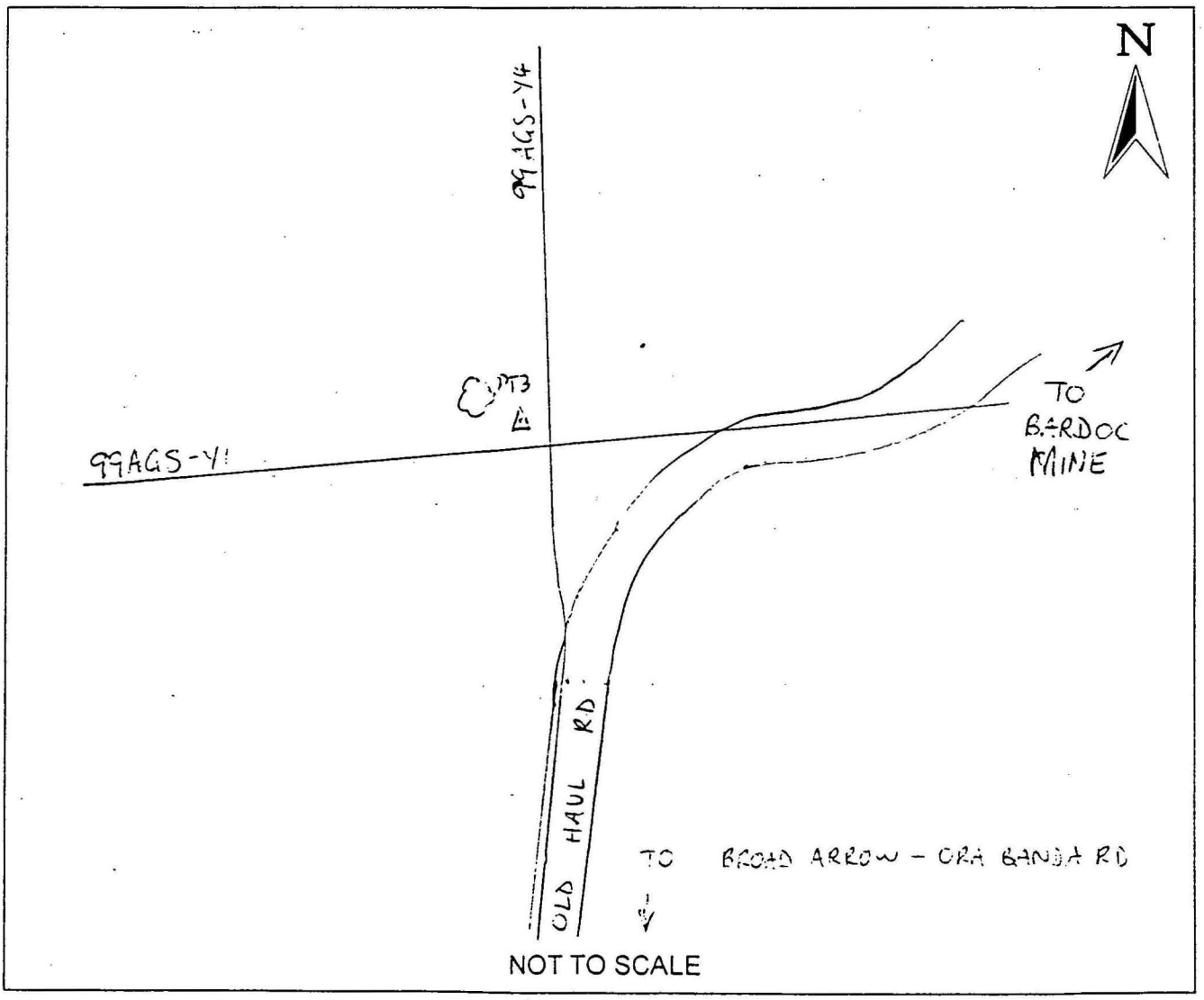
PROJECT / JOB # 99-63 CLIENT AGSO/TERRACORP DAY / DATE 8/99

STATION NAME: (PT 3) 99AGS-Y1 Stn 1674+39

AREA: YILGARN MAP REFERENCE :

Horizontal Control Information		Vertical Control Information	
Easting:	329440.943	RL:	402.393
Northing:	6640612.596	Datum:	AHD
Datum:	AMG Zone: 51	Origin:	KB222
Origin:	KB222		

Mark Description: Star picket tagged "99AGS-Y1 1674+39 x 99AGS-Y4 2882+30"



NOT TO SCALE

Dynamic Satellite Surveys

DSS-FF-15
REV 6.0
Mar 1999

STATION LOCATION DIAGRAM

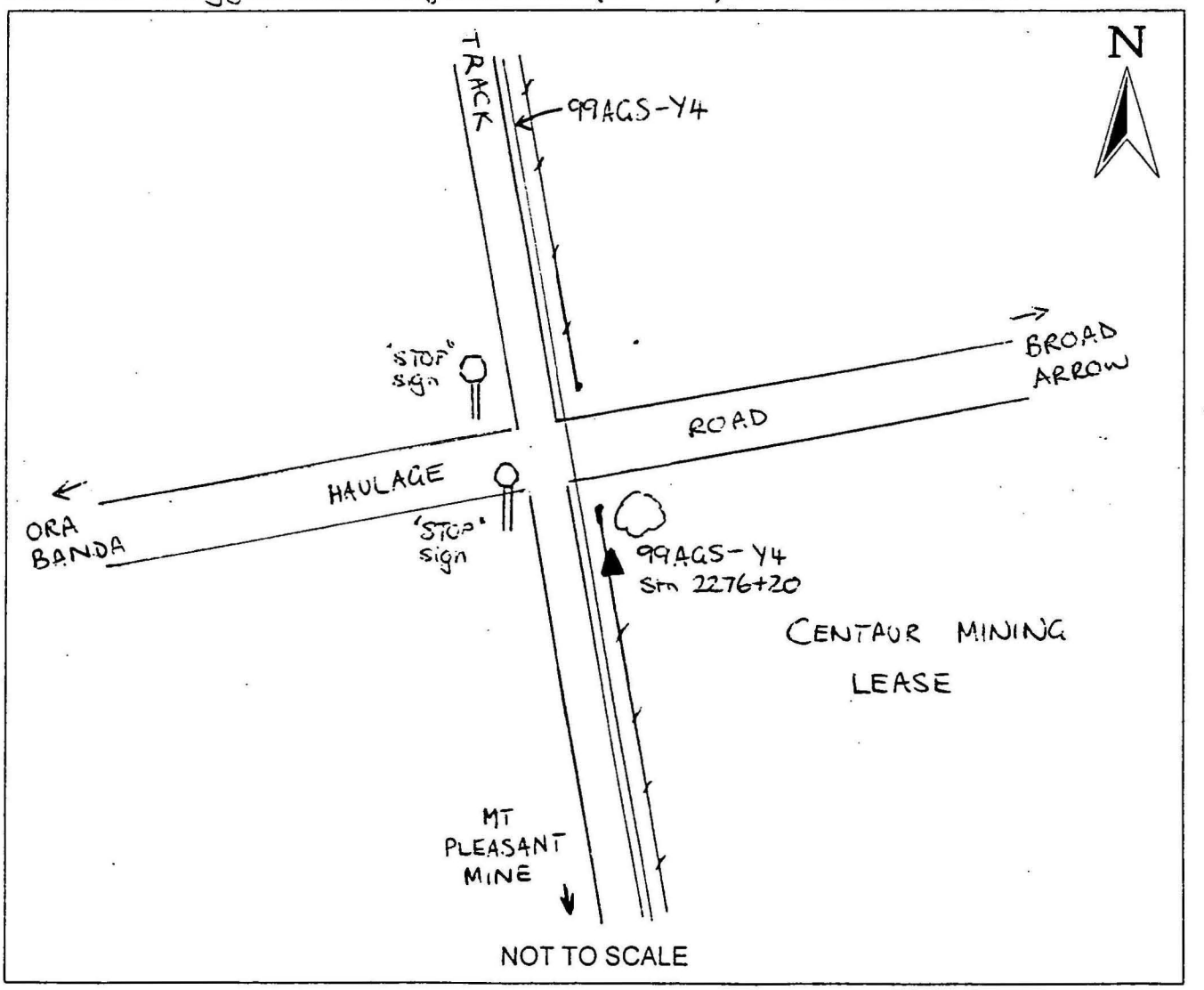
PROJECT / JOB # 99-63 CLIENT AGSO/TERRACORP DAY / DATE 3/99

STATION NAME: 99AGS-Y4 2276+20 (PT4)

AREA: YILGARN MAP REFERENCE :

Horizontal Control Information		Vertical Control Information	
Easting:	331416.904	RL:	386.009
Northing:	6625486.011	Datum:	AHD
Datum: AMG	Zone: 51	Origin:	KB222
Origin:	KB222		

Mark Description: Star Picket tagged "99AGS-Y4 2276+20"
also tagged with grid values (old PM).



Dynamic Satellite Surveys

DSS-FF-15
REV 6.0
Mar 1999

STATION LOCATION DIAGRAM

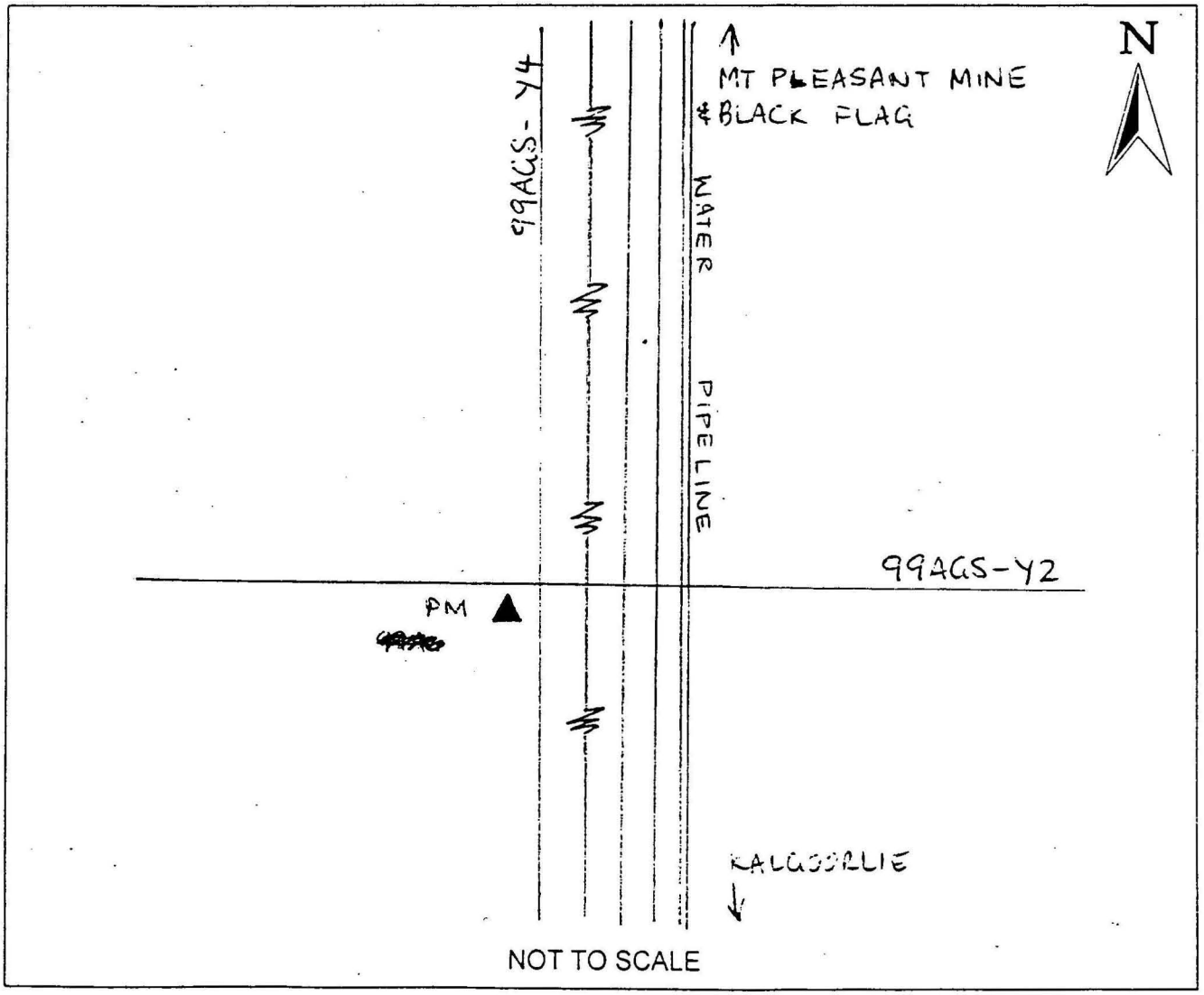
PROJECT / JOB # 99-63 CLIENT AGSO/TERRACORP DAY / DATE 8/99

STATION NAME: 99AGS-Y4

AREA: YILGARN MAP REFERENCE :

Horizontal Control Information		Vertical Control Information	
Easting:	340428.559	RL:	342.058
Northing:	6606627.479	Datum:	AHD
Datum:	AMG Zone: 51	Origin:	KB222
Origin:	KB222		

Mark Description: Star picket *tagged "99AGS-Y4 @ 1730+17 x 99AGS-Y2"



Dynamic Satellite Surveys

DSS-FF-15
REV 6.0
Mar 1999

STATION LOCATION DIAGRAM

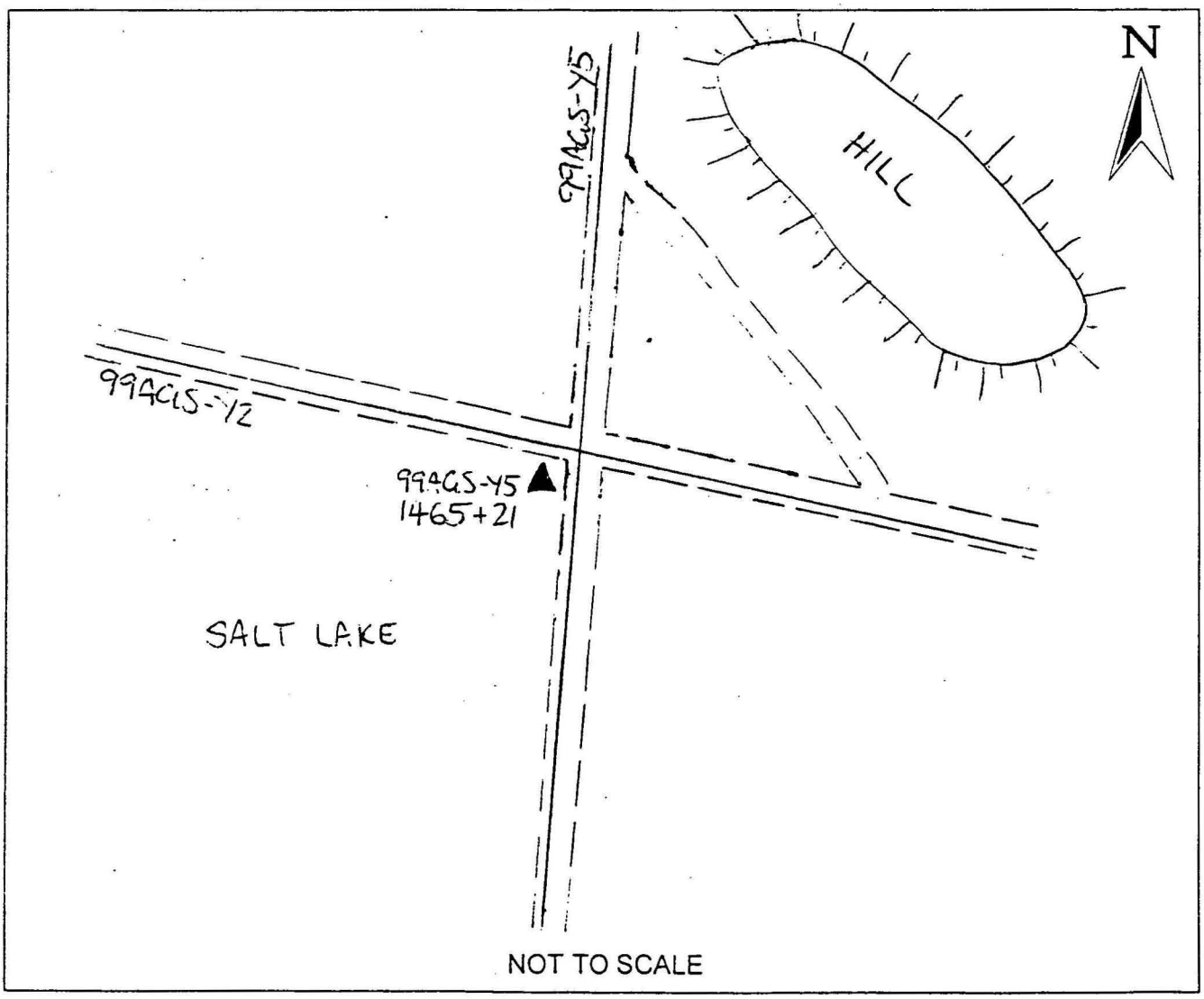
PROJECT / JOB # 99-63 CLIENT AGSO/TERRACORP DAY / DATE 8/99

STATION NAME: 99AGS-Y5 1465+21

AREA: YILGARN MAP REFERENCE :

Horizontal Control Information		Vertical Control Information	
Easting:	360615.963	RL:	335.505
Northing:	6622668.650	Datum:	AHD
Datum:	AMG Zone: 51	Origin:	KB222
Origin:	KB222		

Mark Description: Star picket tagged "99AGS-Y5 1465+21 X 99AGS-Y2"



NOT TO SCALE

Dynamic Satellite Surveys

DSS-FF-15
REV 6.0
Mar 1999

STATION LOCATION DIAGRAM

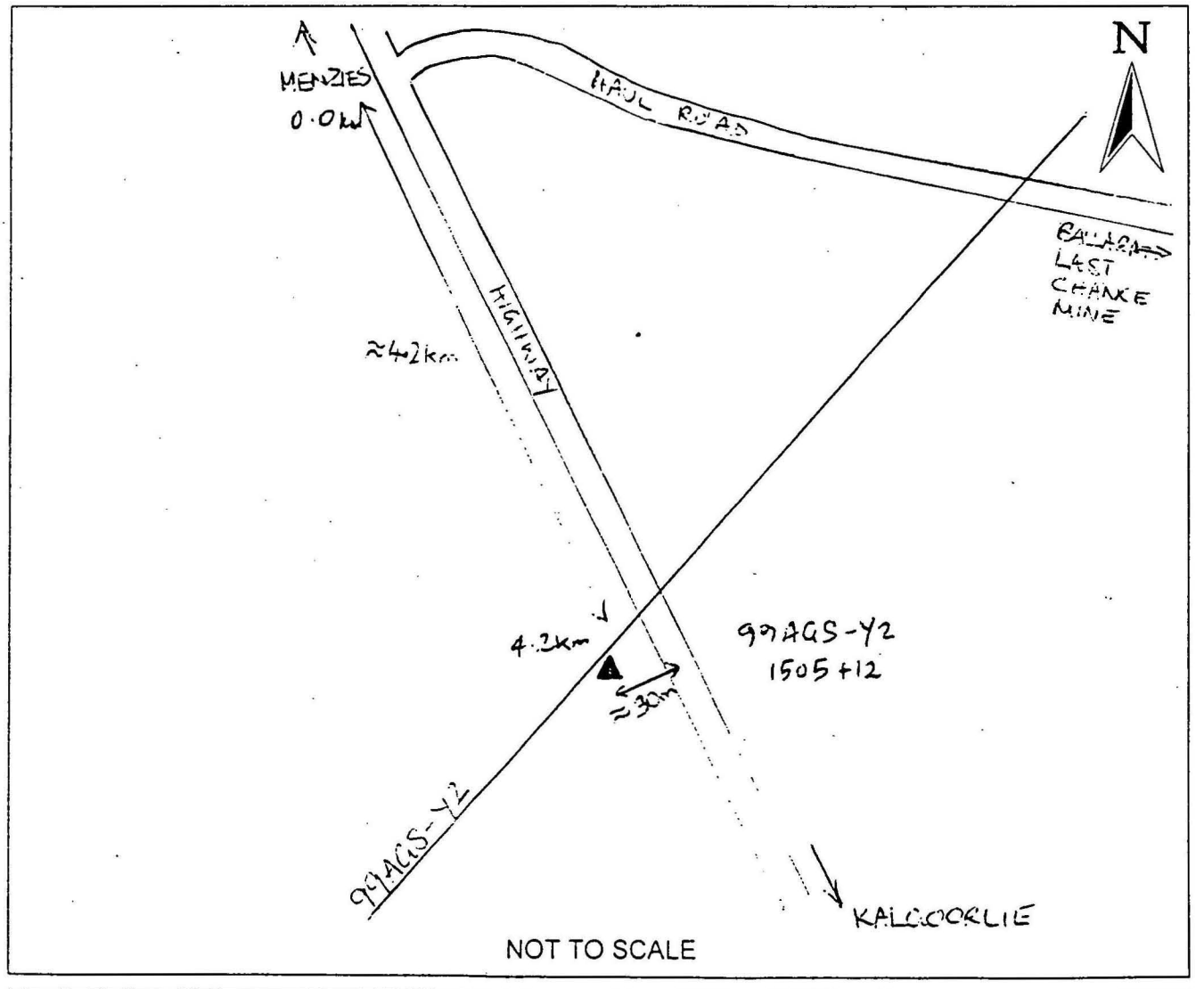
PROJECT / JOB # 99-63 CLIENT AGSO/TERRACORP DAY / DATE 8/99

STATION NAME: 99AGS-Y2

AREA: YILGARN MAP REFERENCE :

Horizontal Control Information		Vertical Control Information	
Easting:	350027.453	RL:	342.633
Northing:	6614506.021	Datum:	AHD
Datum:	AMG Zone: 51	Origin:	KB222
Origin:	KB222		

Mark Description: Star picket tagged " 99AGS-Y2 @ 1505+12"



Chaining Maps

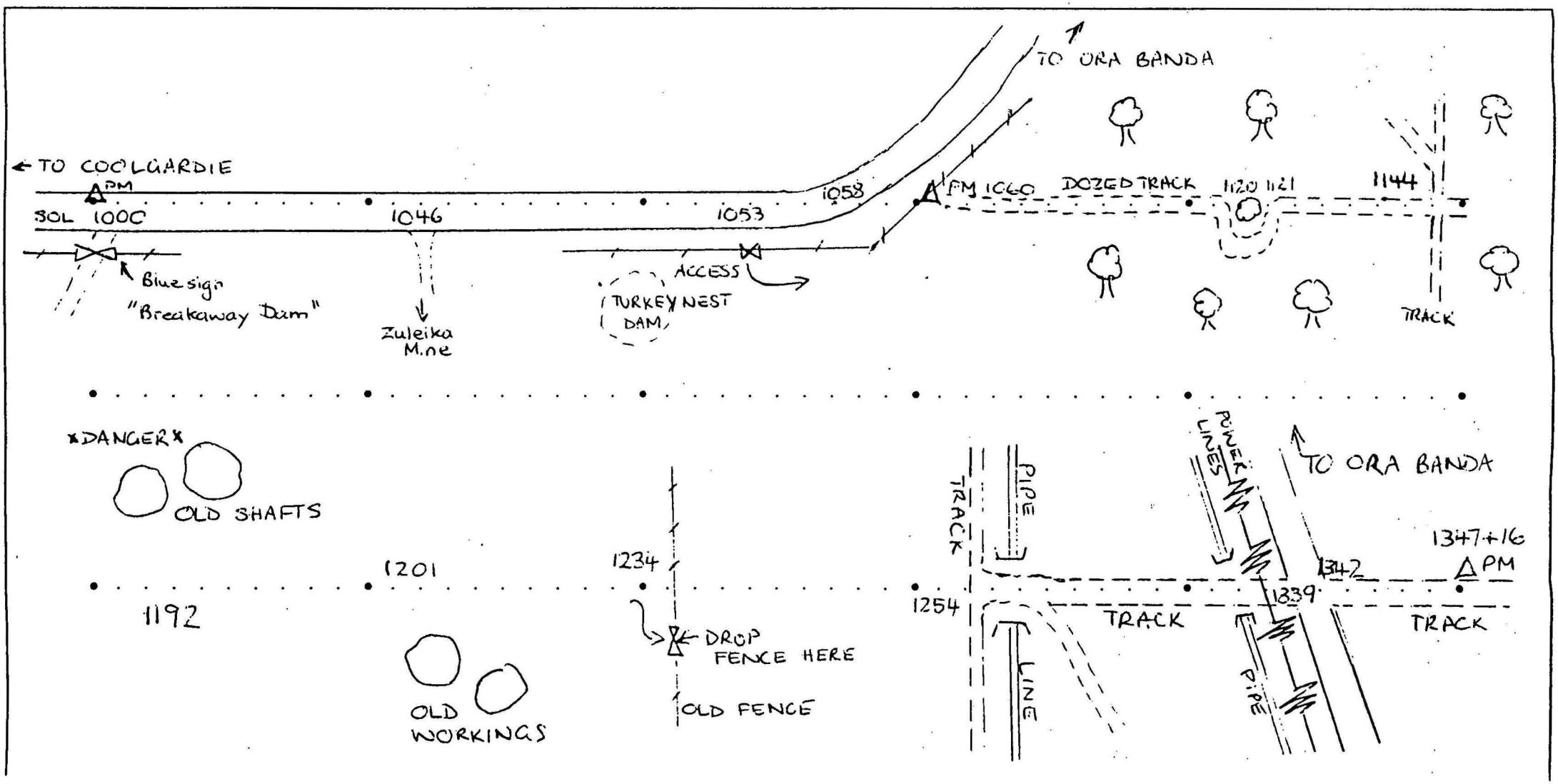
TERRACORP

CHAINING MAP

LINE 99AGS – Y1

PROSPECT YILGARN CLIENT AGSC PARTY COMPLETED BY Lynne Baker DATE 18/3/99 PAGE 1

DIRECTION SE – NW STATION SPACING 40m VP SPACING



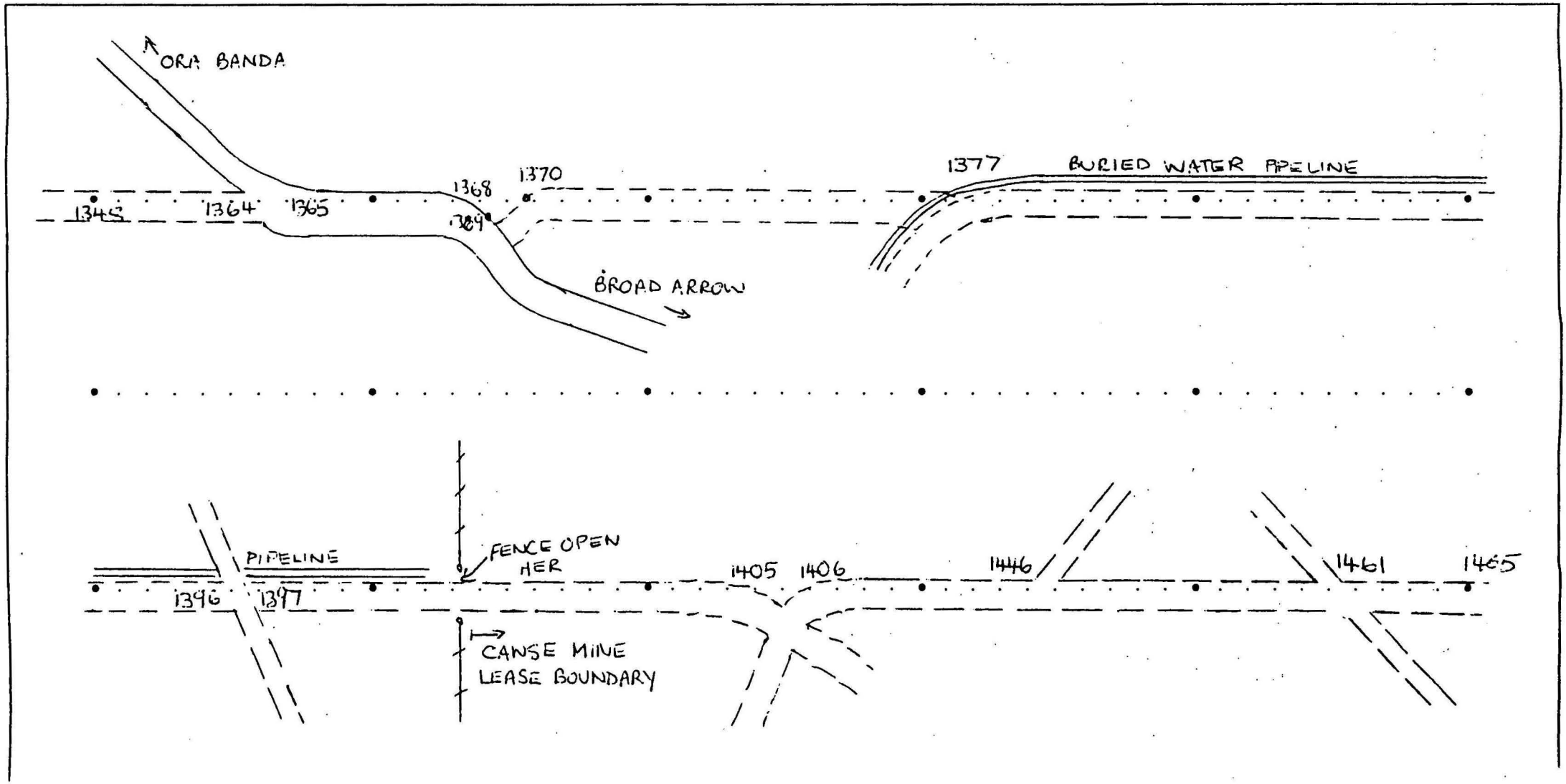
TERRACORP

CHAINING MAP

LINE 99AGS-Y1

PROSPECT YILGARN CLIENT AGSC PARTY COMPLETED BY Lynne Baker DATE 19/8/99 PAGE 2

DIRECTION SE-NW STATION SPACING 40m VP SPACING



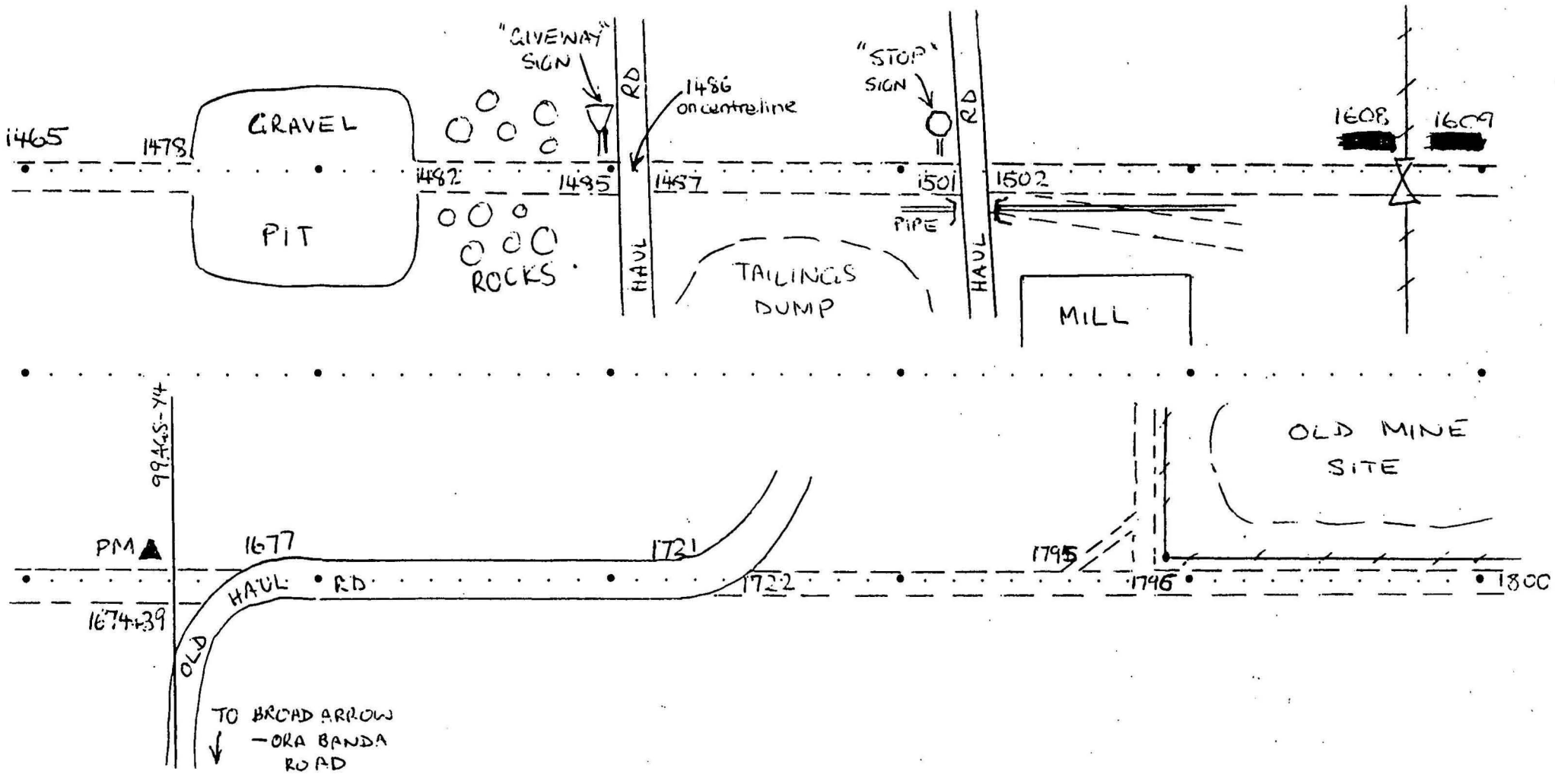
TERRACORP

CHAINING MAP

LINE 99AGS-Y1

PROSPECT YILGARN CLIENT AGSO PARTY COMPLETED BY Lynne Baker DATE 19/8/99 PAGE 3

DIRECTION SE - NW STATION SPACING 40m VP SPACING



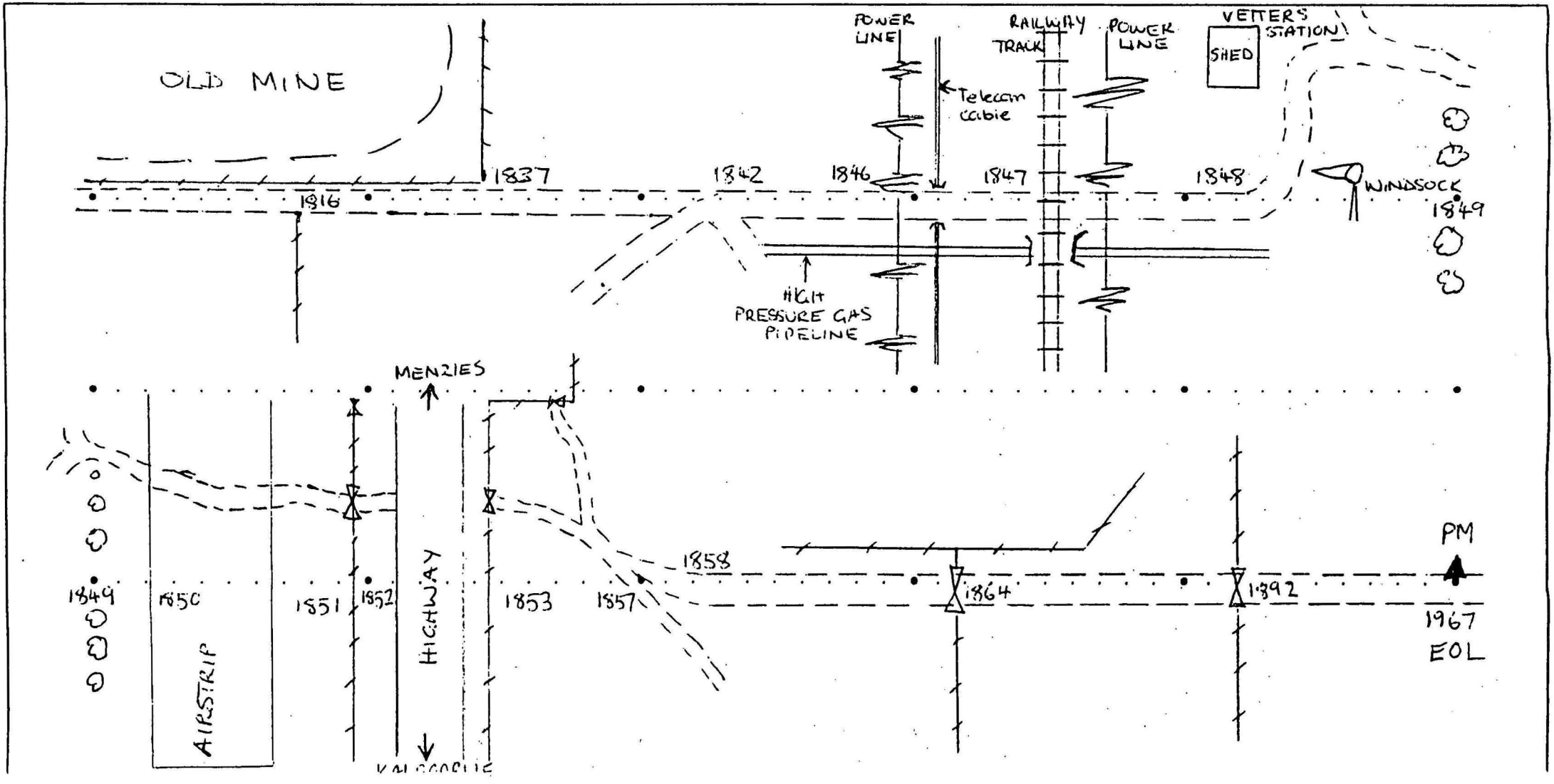
TERRACORP

CHAINING MAP

LINE 99ACS-Y1

PROSPECT YILGARN CLIENT ACSO PARTY COMPLETED BY Lynne Barker DATE 20/8/99 PAGE 4

DIRECTION SE-NW STATION SPACING 40m VP SPACING



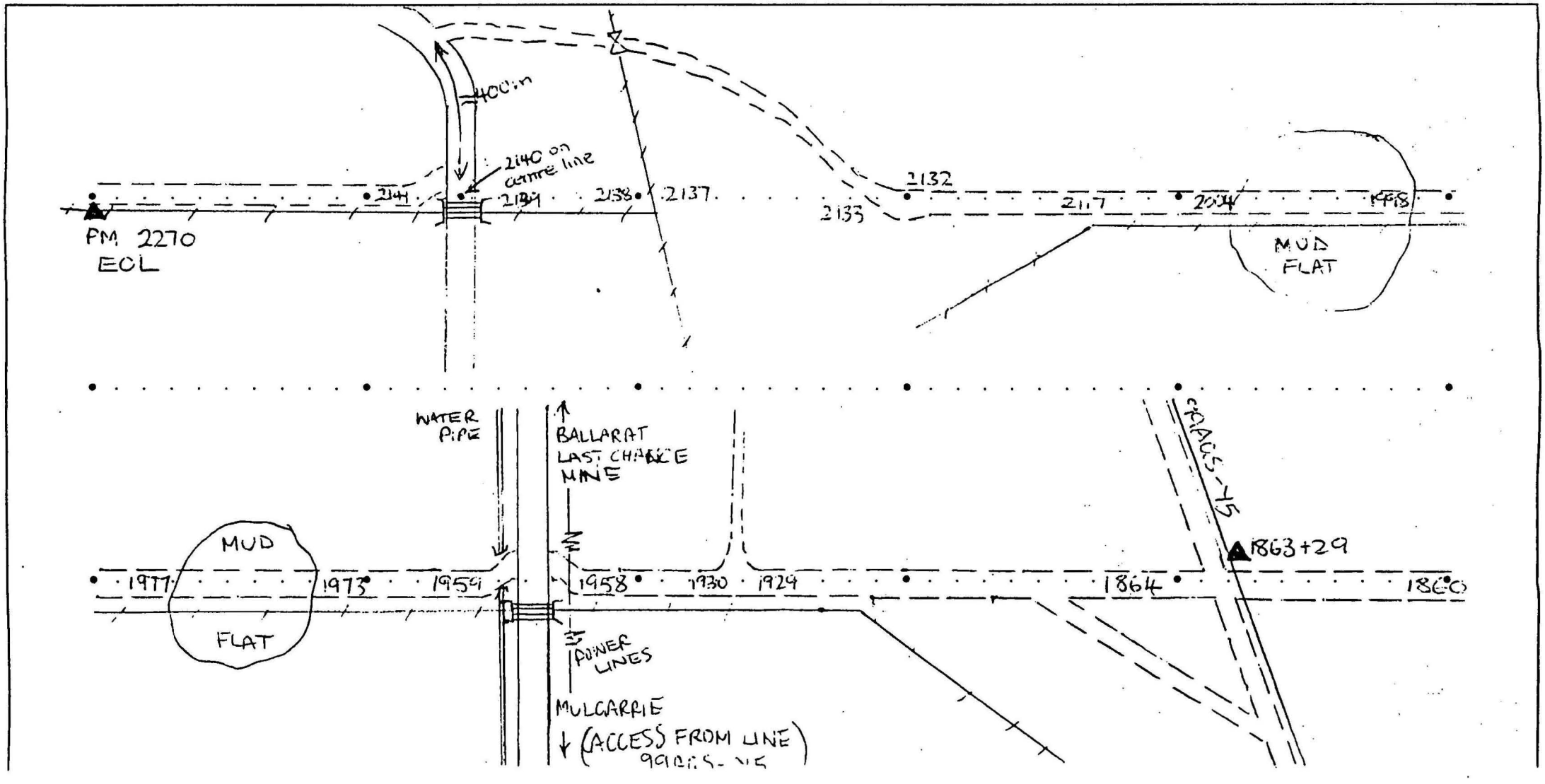
TERRACORP

CHAINING MAP

LINE 99-AGS-Y2

PROSPECT YILGARN CLIENT AGSC PARTY COMPLETED BY Lynne & Team DATE 27/8/99 PAGE 1

DIRECTION E-W STATION SPACING 40m VP SPACING



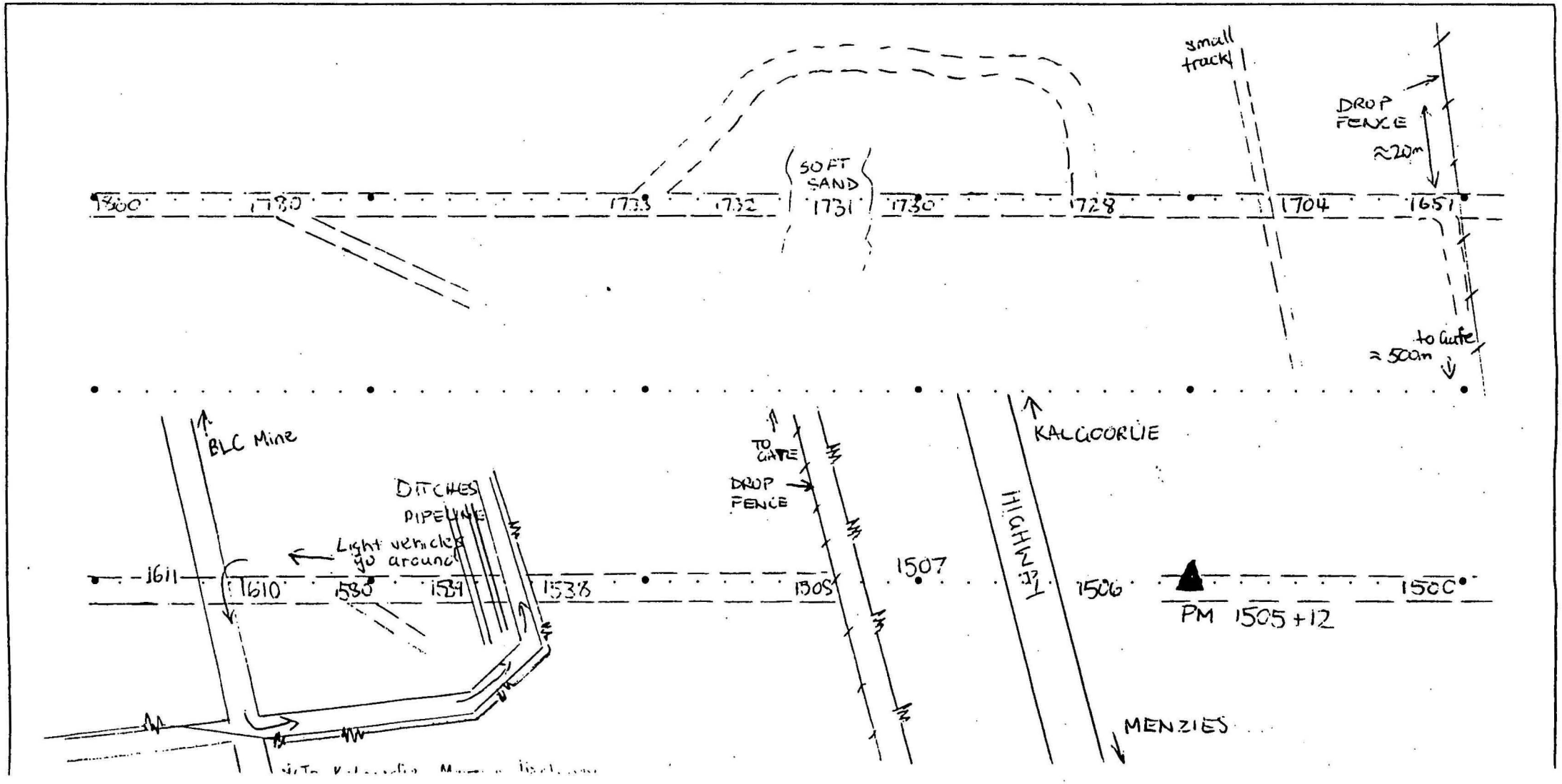
TERRACORP

CHAINING MAP

LINE 99AGS-Y2

PROSPECT YILGARN CLIENT AGSO PARTY COMPLETED BY Lynne & Tom DATE 28/6/99 PAGE 2

DIRECTION E-W STATION SPACING 40m VP SPACING



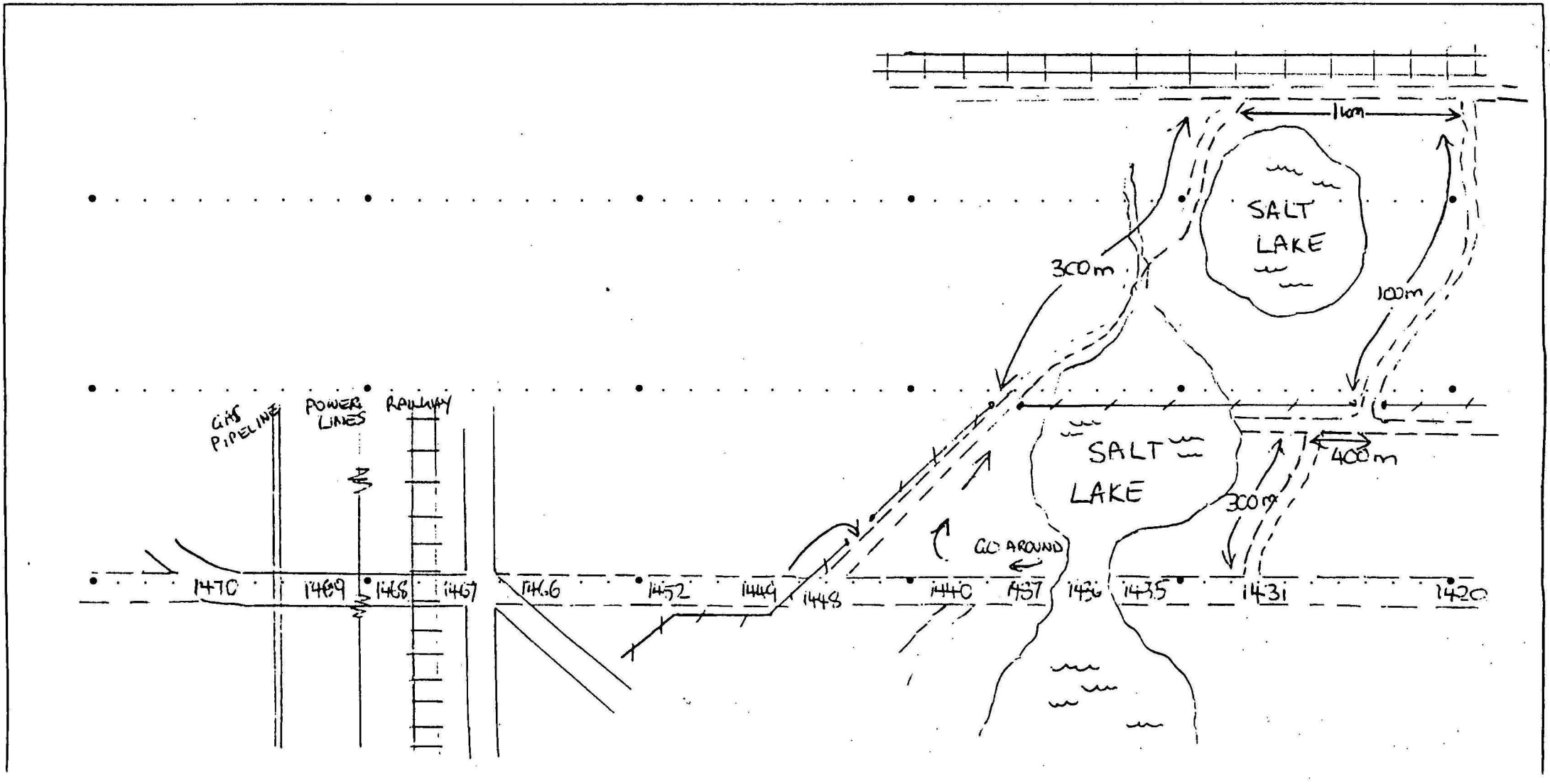
TERRACORP

CHAINING MAP

LINE 99ACS-Y2

PROSPECT YILGARN CLIENT ACSO PARTY COMPLETED BY Lynne & Tom DATE 29/3/99 PAGE 3

DIRECTION E-W STATION SPACING 40m VP SPACING



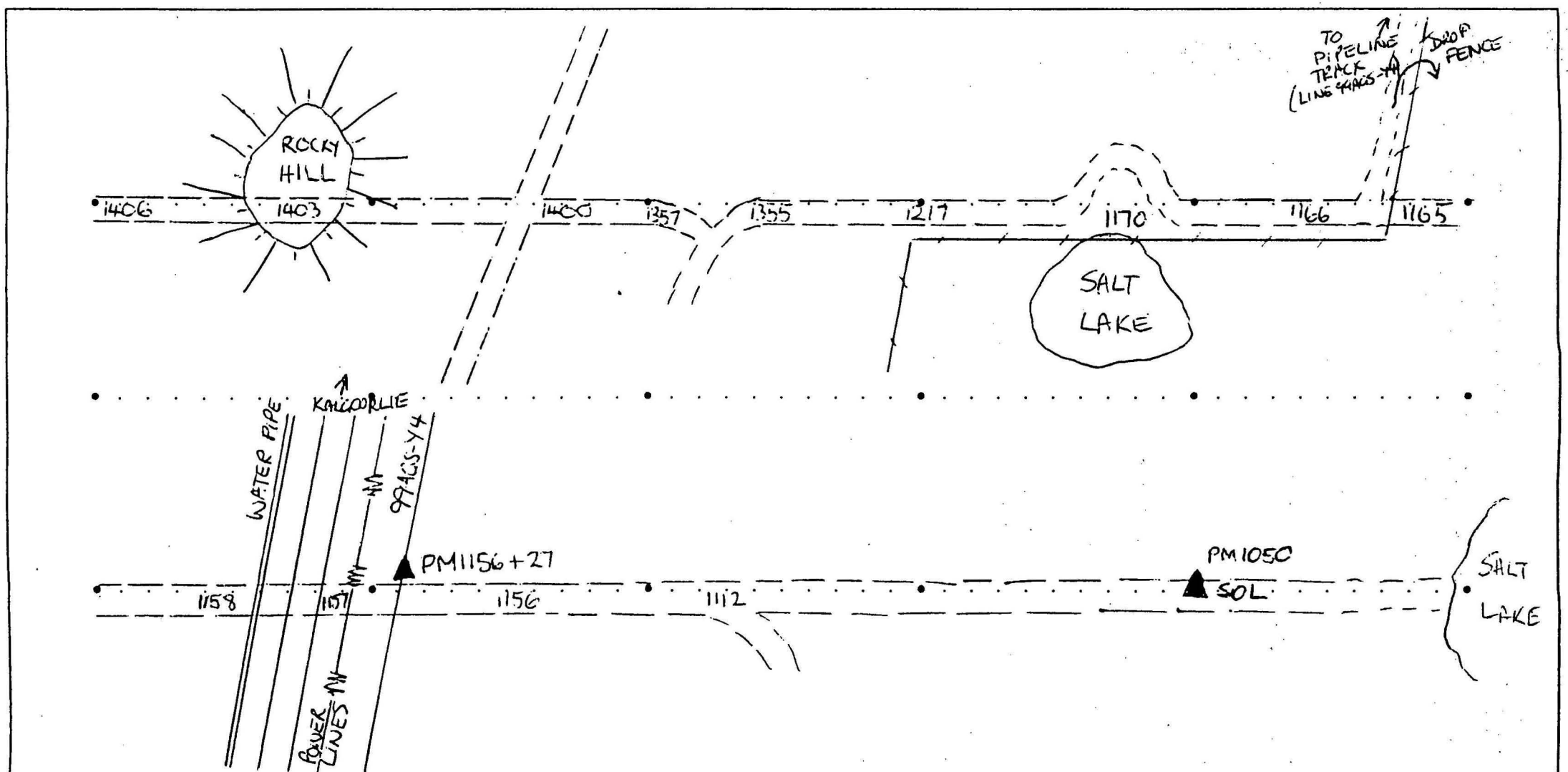
TERRACORP

CHAINING MAP

LINE 99ACS-Y2

PROSPECT YILGARN CLIENT ACSO PARTY COMPLETED BY Lynne & Tom DATE 29/8/99 PAGE 4

DIRECTION E-W STATION SPACING 40m VP SPACING



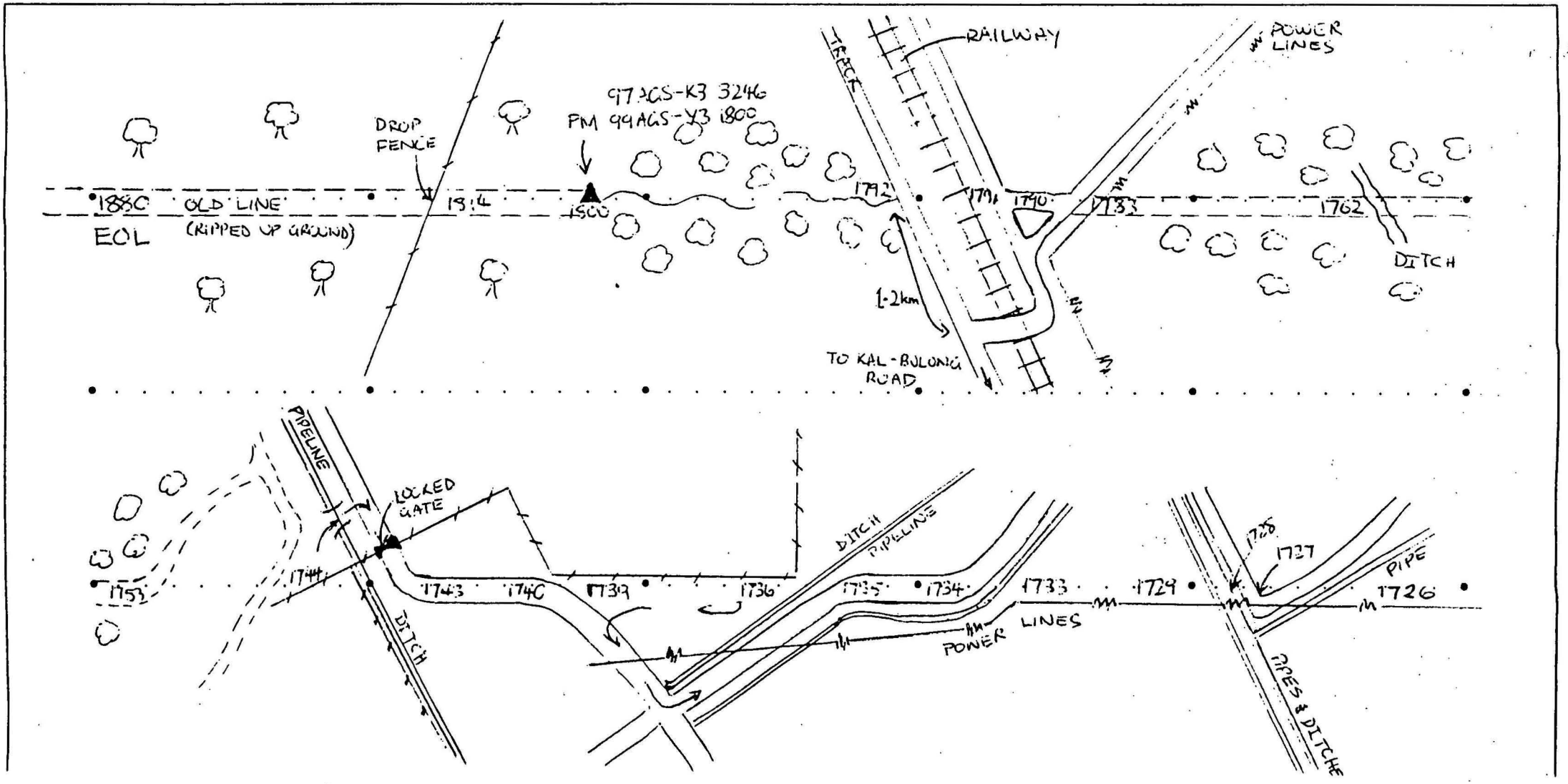
TERRACORP

CHAINING MAP

LINE 99ACS-Y3

PROSPECT YILGARN CLIENT ACSC PARTY COMPLETED BY Layne & Team DATE 31/8/99 PAGE 1

DIRECTION E-W STATION SPACING 40m VP SPACING



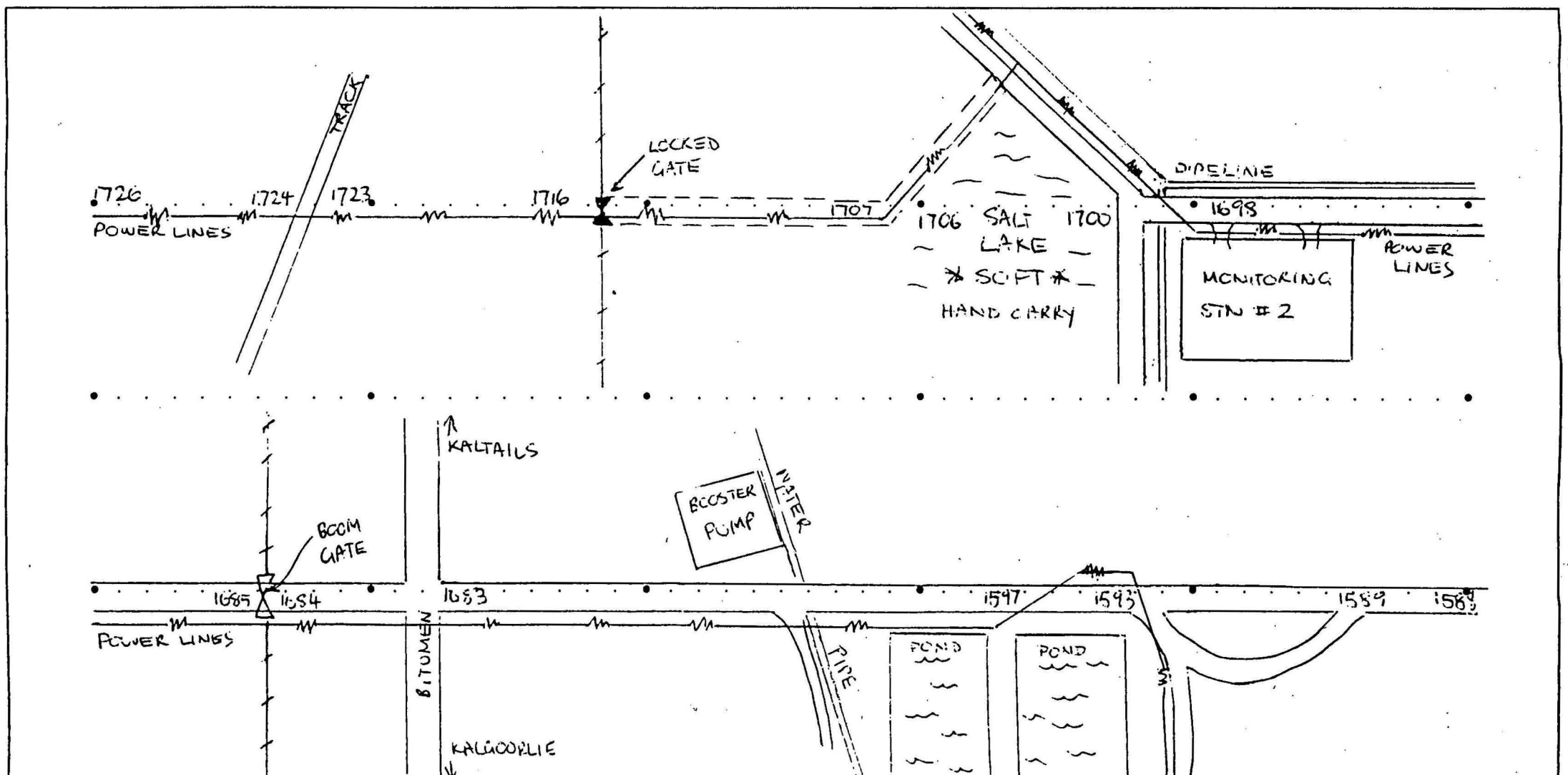
TERRACORP

CHAINING MAP

LINE 99ACS-Y3

PROSPECT YILGARN CLIENT ACSO PARTY COMPLETED BY Lynne & Tom DATE 31/8/99 PAGE 2

DIRECTION E-W STATION SPACING 40m VP SPACING



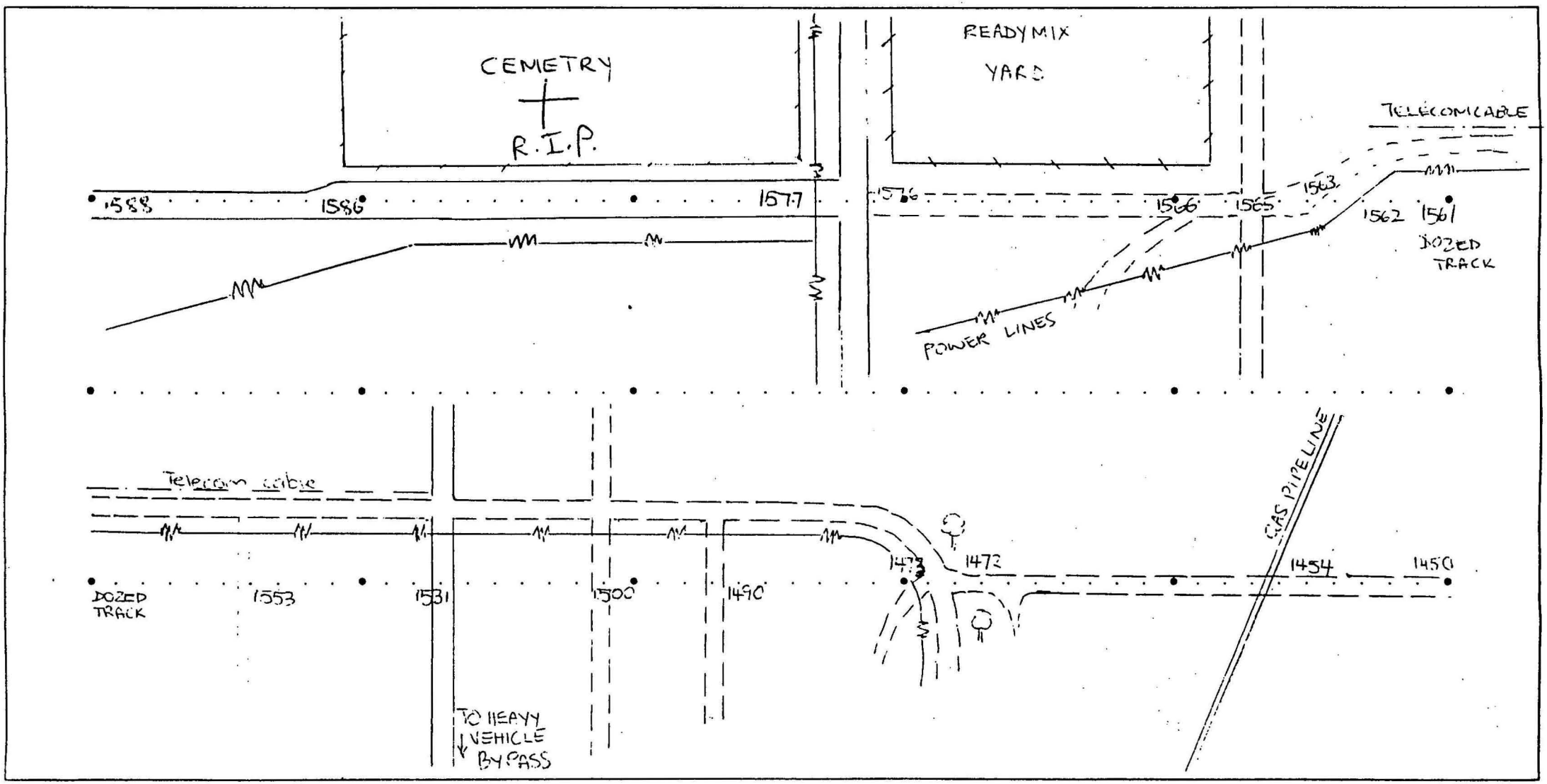
TERRACORP

CHAINING MAP

LINE 99AGS - Y3

PROSPECT YILGARN CLIENT AGSO PARTY COMPLETED BY Lynne & Tom DATE 31/8/99 PAGE 3

DIRECTION E - W STATION SPACING 40m VP SPACING



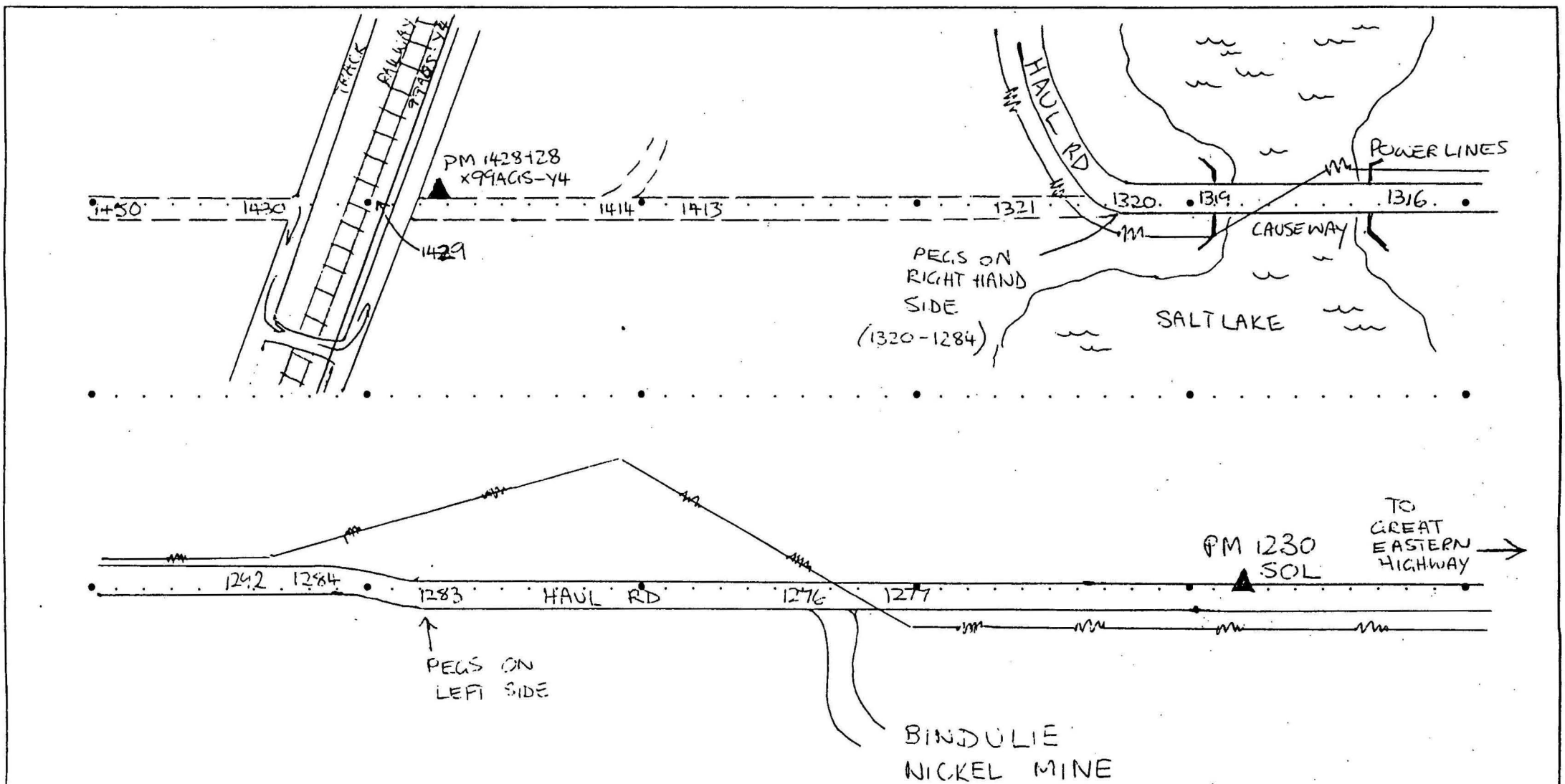
TERRACORP

CHAINING MAP

LINE 99AGS-Y3

PROSPECT YILGARN CLIENT AGSO PARTY COMPLETED BY Lynne & Tom DATE 1/9/99 PAGE 4

DIRECTION E-W STATION SPACING 40m VP SPACING



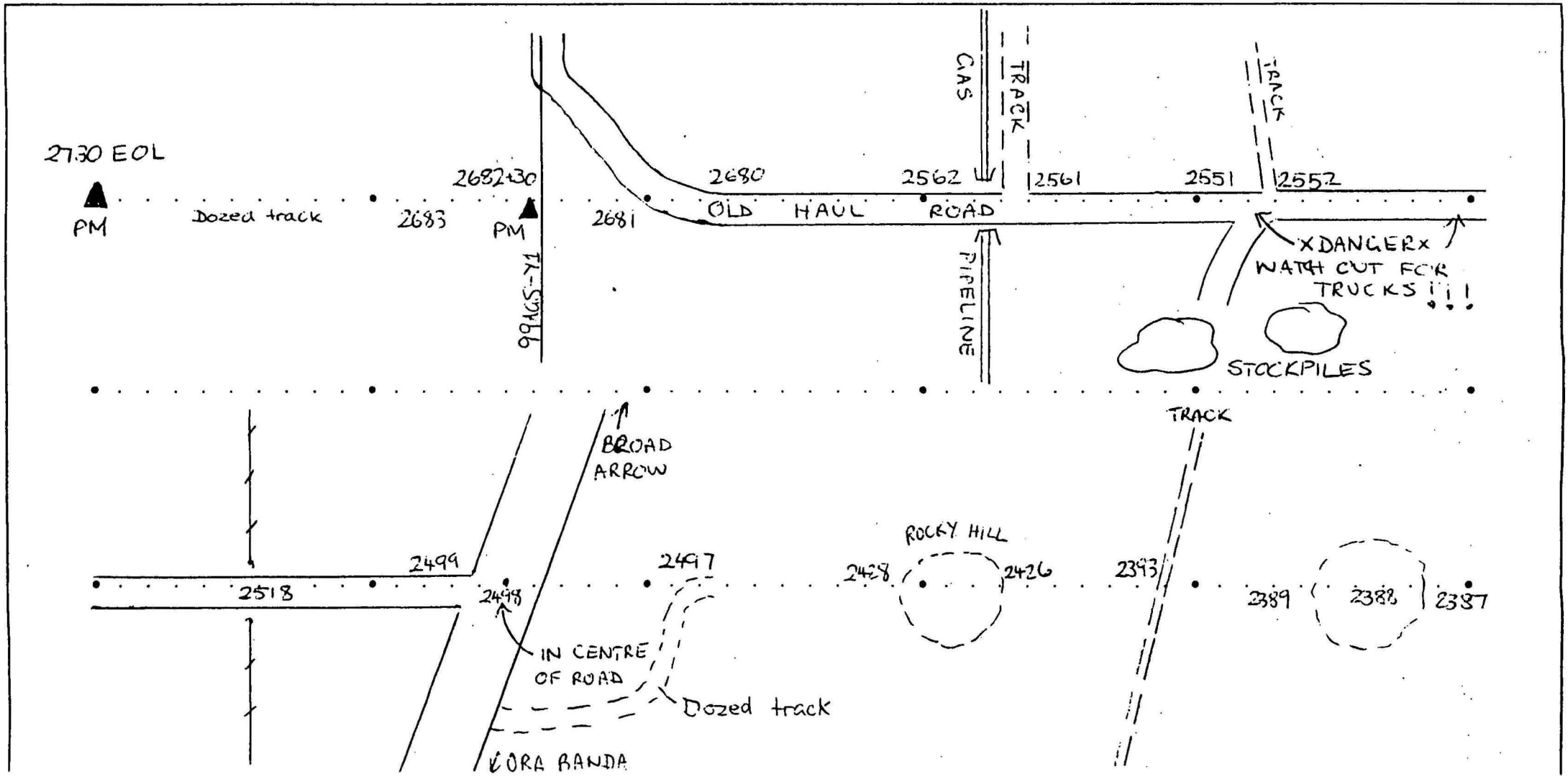
TERRACORP

CHAINING MAP

LINE 99AGS-Y4

PROSPECT YILGARN CLIENT AGSO PARTY COMPLETED BY Lynne Baker DATE 21/8/99 PAGE 1

DIRECTION N – S STATION SPACING 40m VP SPACING



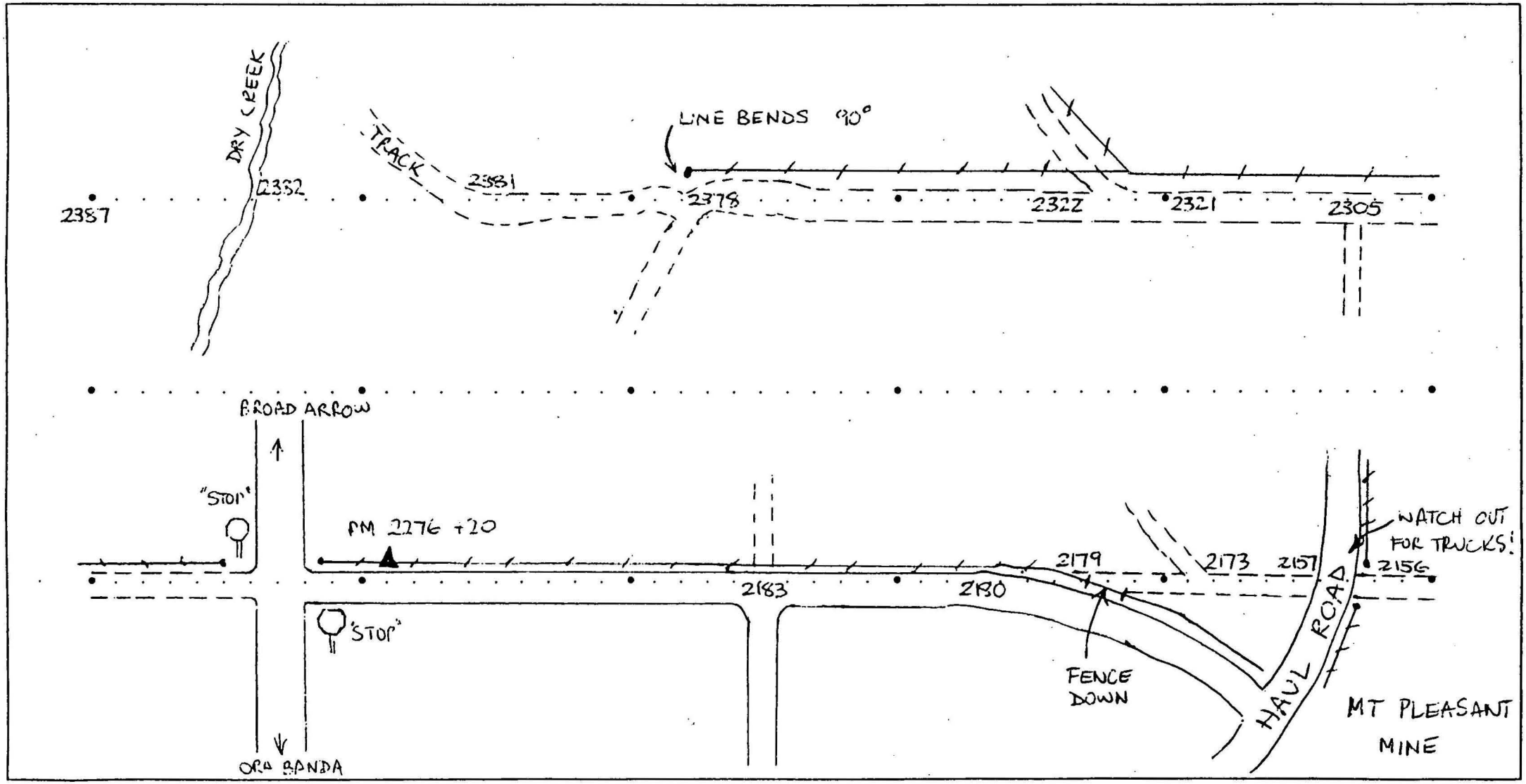
TERRACORP

CHAINING MAP

LINE 99ACS-44

PROSPECT VILGARN CLIENT ACSO PARTY COMPLETED BY Lynne & Tom DATE 22/8/99 PAGE 2

DIRECTION N-S STATION SPACING 40m VP SPACING



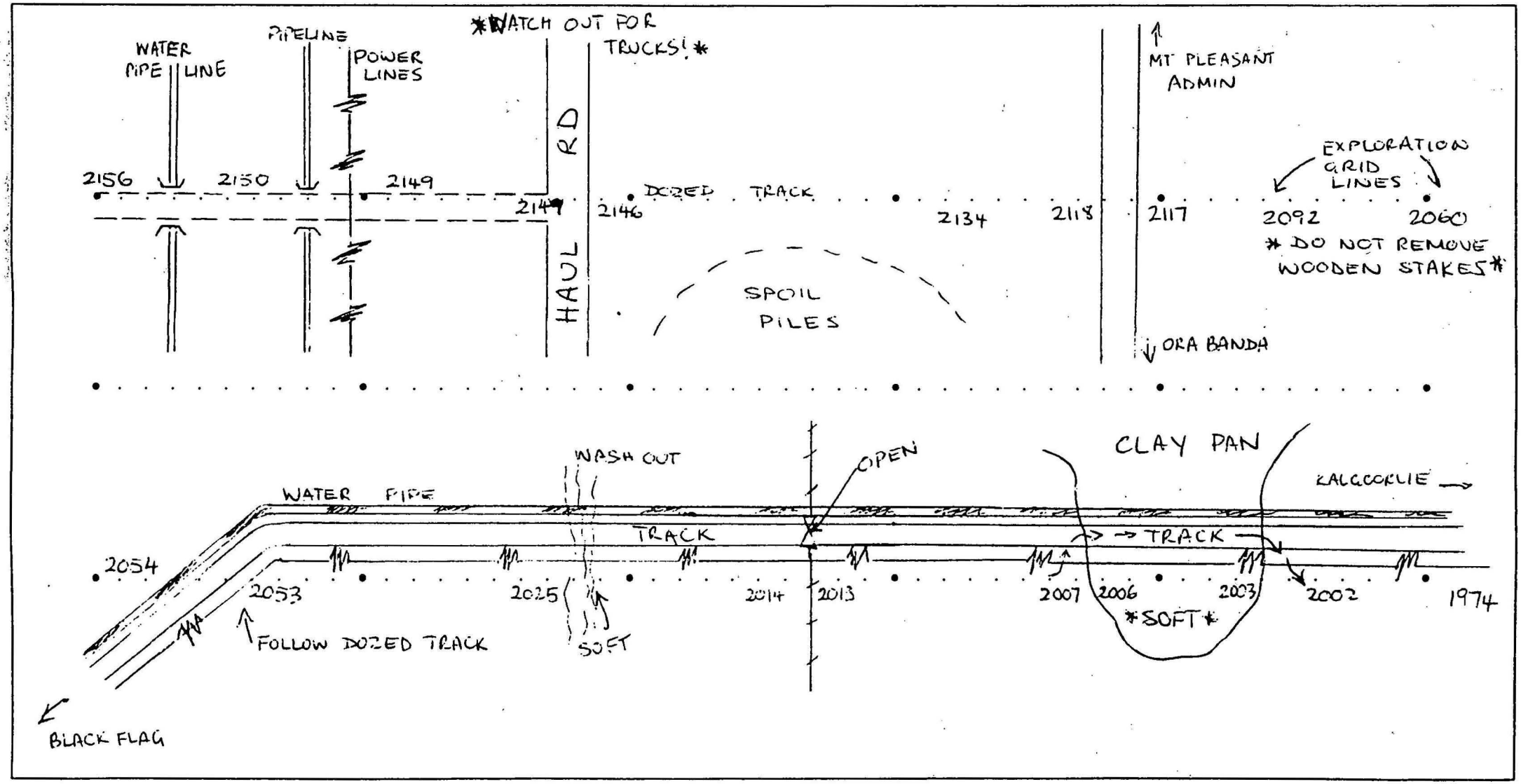
TERRACORP

CHAINING MAP

LINE 99AGS-Y4

PROSPECT YILGARN CLIENT AGSO PARTY COMPLETED BY Lynne & Tom DATE 22/8/99 PAGE 3

DIRECTION N-S STATION SPACING 40m VP SPACING



FORM CP163

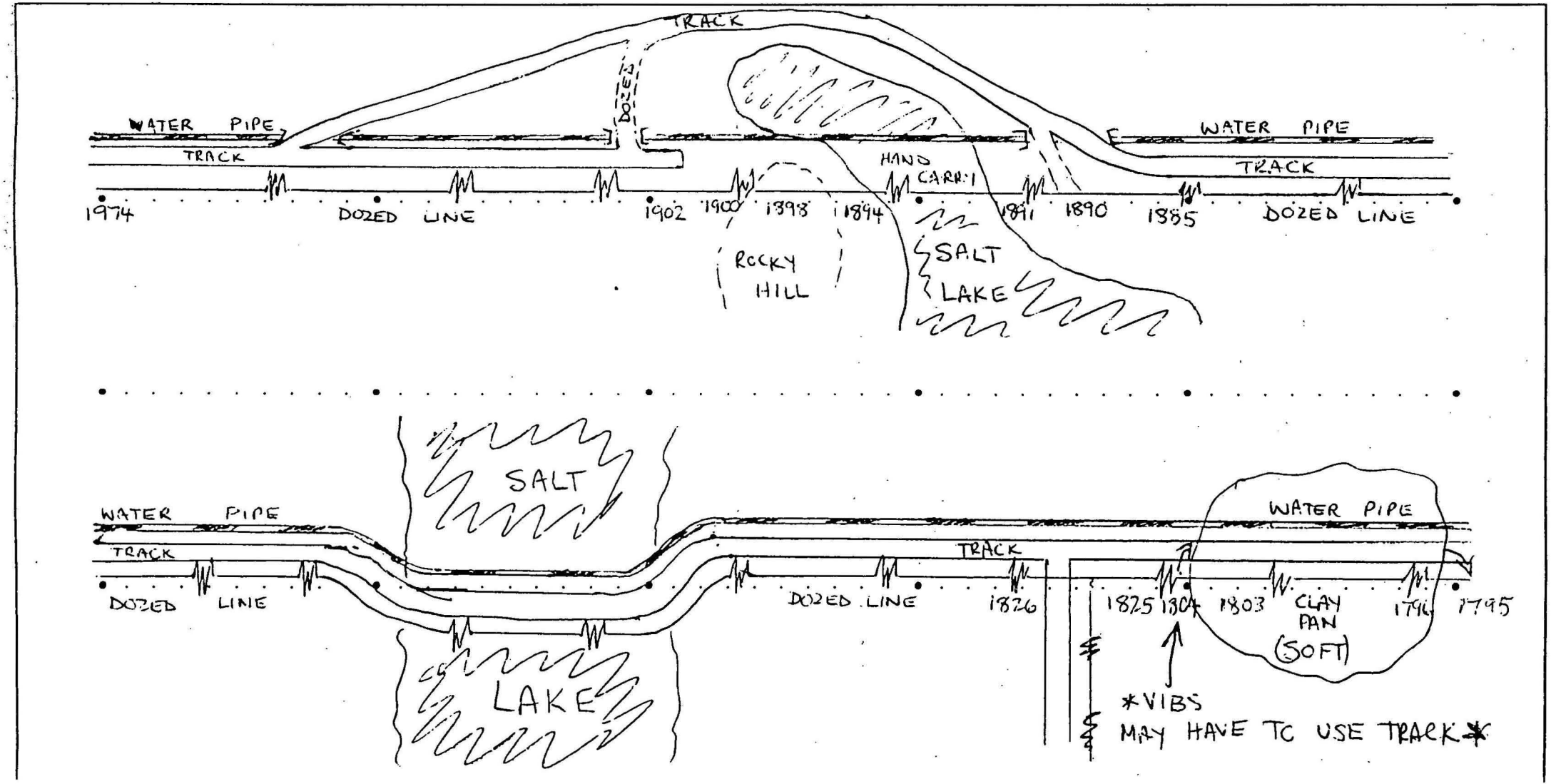
TERRACORP

CHAINING MAP

LINE 79AGS-Y4

PROSPECT YILGARN CLIENT AGSO PARTY COMPLETED BY Lynne & Tom DATE 23/8/99 PAGE 84

DIRECTION N-S STATION SPACING 40m VP SPACING



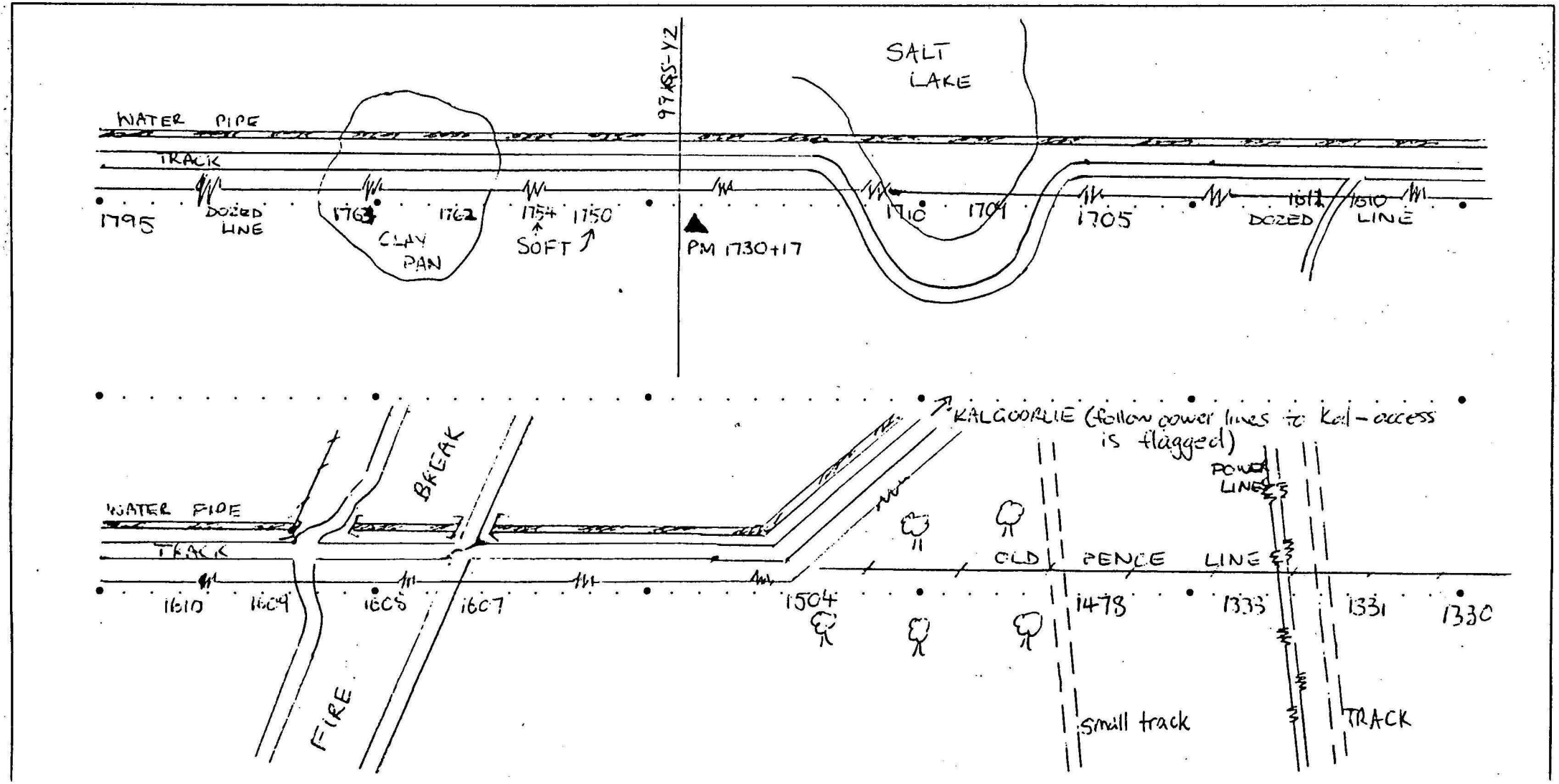
TERRACORP

CHAINING MAP

LINE 99AGS-Y4

PROSPECT YILGARN CLIENT AGSO PARTY COMPLETED BY Lynne & Tom DATE 23/8/99 PAGE 5

DIRECTION N-S STATION SPACING 40m VP SPACING



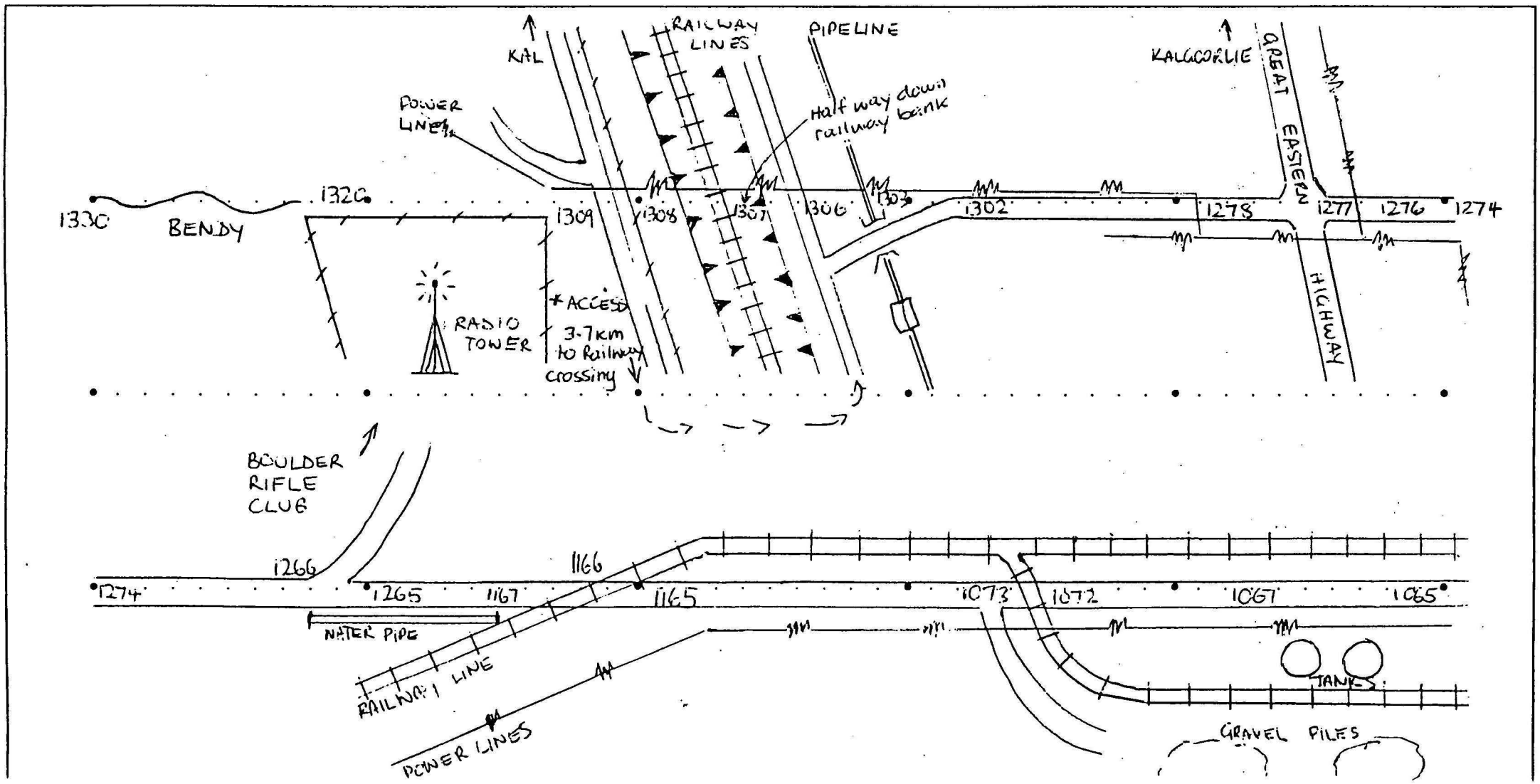
TERRACORP

CHAINING MAP

LINE 99AGS-Y4

PROSPECT VILGARN CLIENT AGSO PARTY COMPLETED BY Lynne & Tom DATE 24/8/99 PAGE 6

DIRECTION N-S STATION SPACING 40m VP SPACING



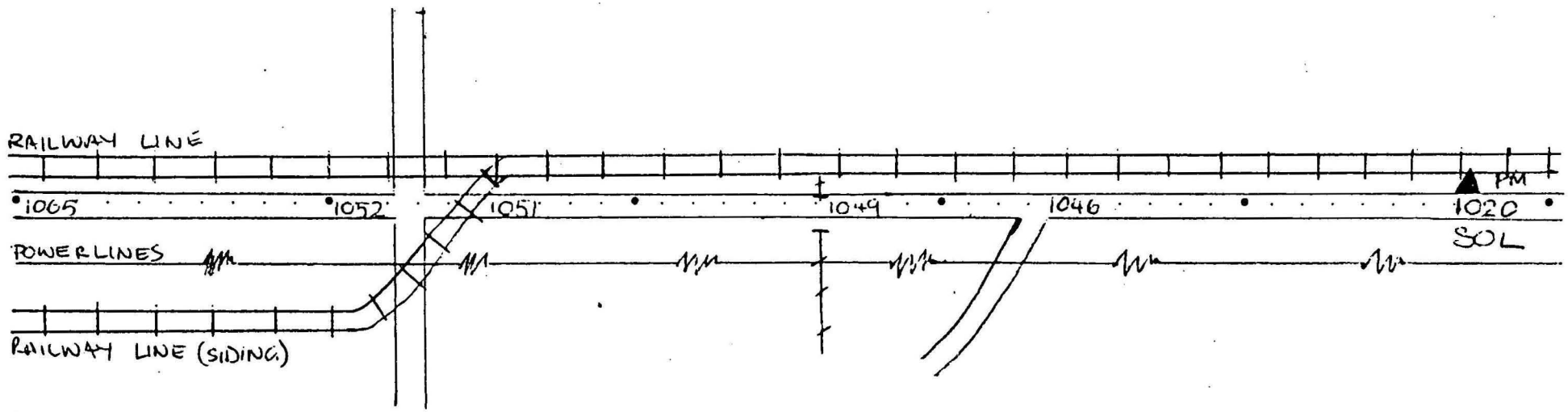
TERRACORP

CHAINING MAP

LINE 99AGS-Y4

PROSPECT YILGARN CLIENT AGSO PARTY COMPLETED BY Lynne & Tom DATE 25/8/99 PAGE 7

DIRECTION N-S STATION SPACING 40m VP SPACING



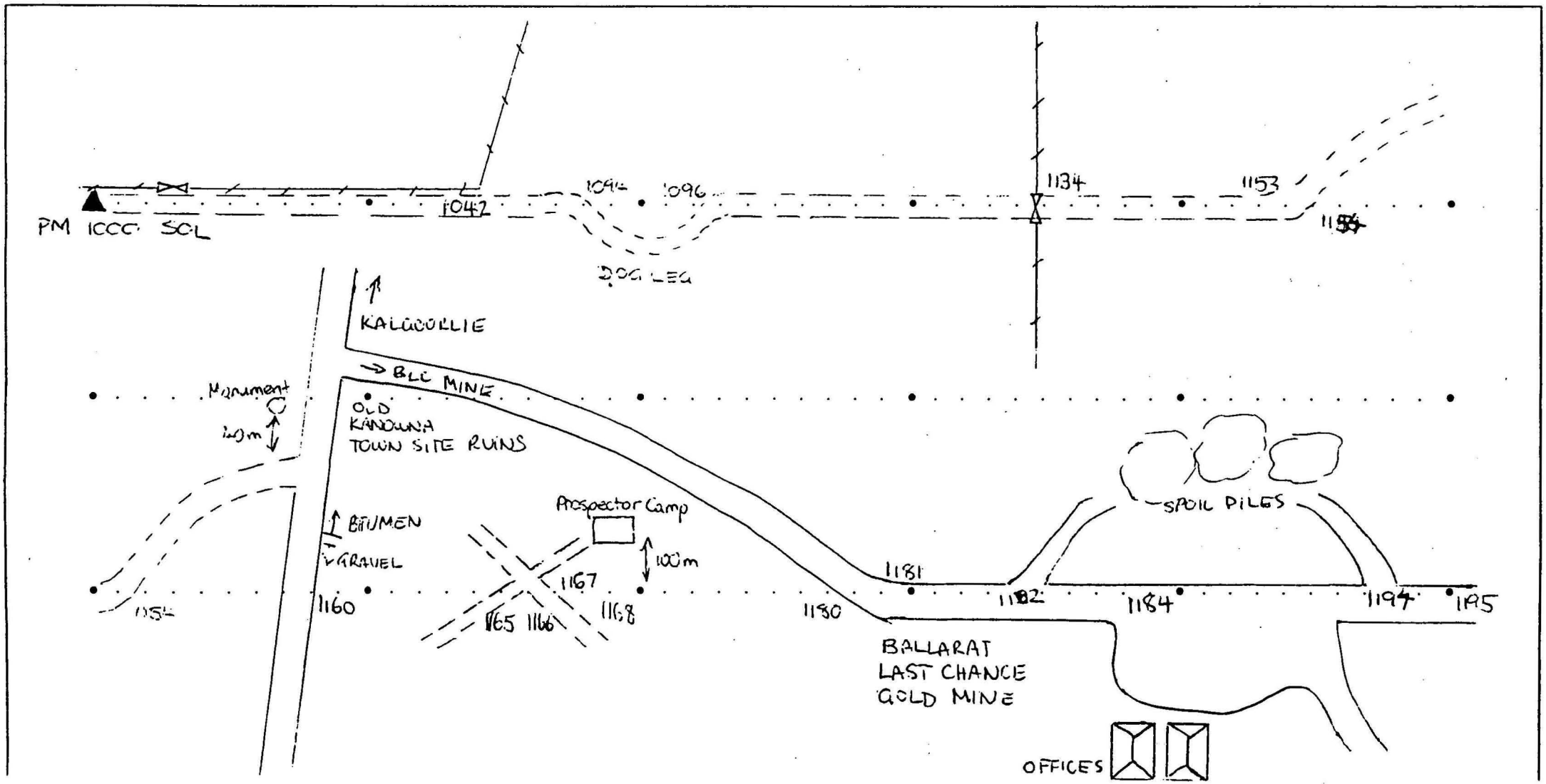
TERRACORP

CHAINING MAP

LINE 99ACS-Y5

PROSPECT VILGARN CLIENT ACSC PARTY COMPLETED BY Lynne & Tom DATE 26/8/99 PAGE 1

DIRECTION S-N STATION SPACING 40m VP SPACING



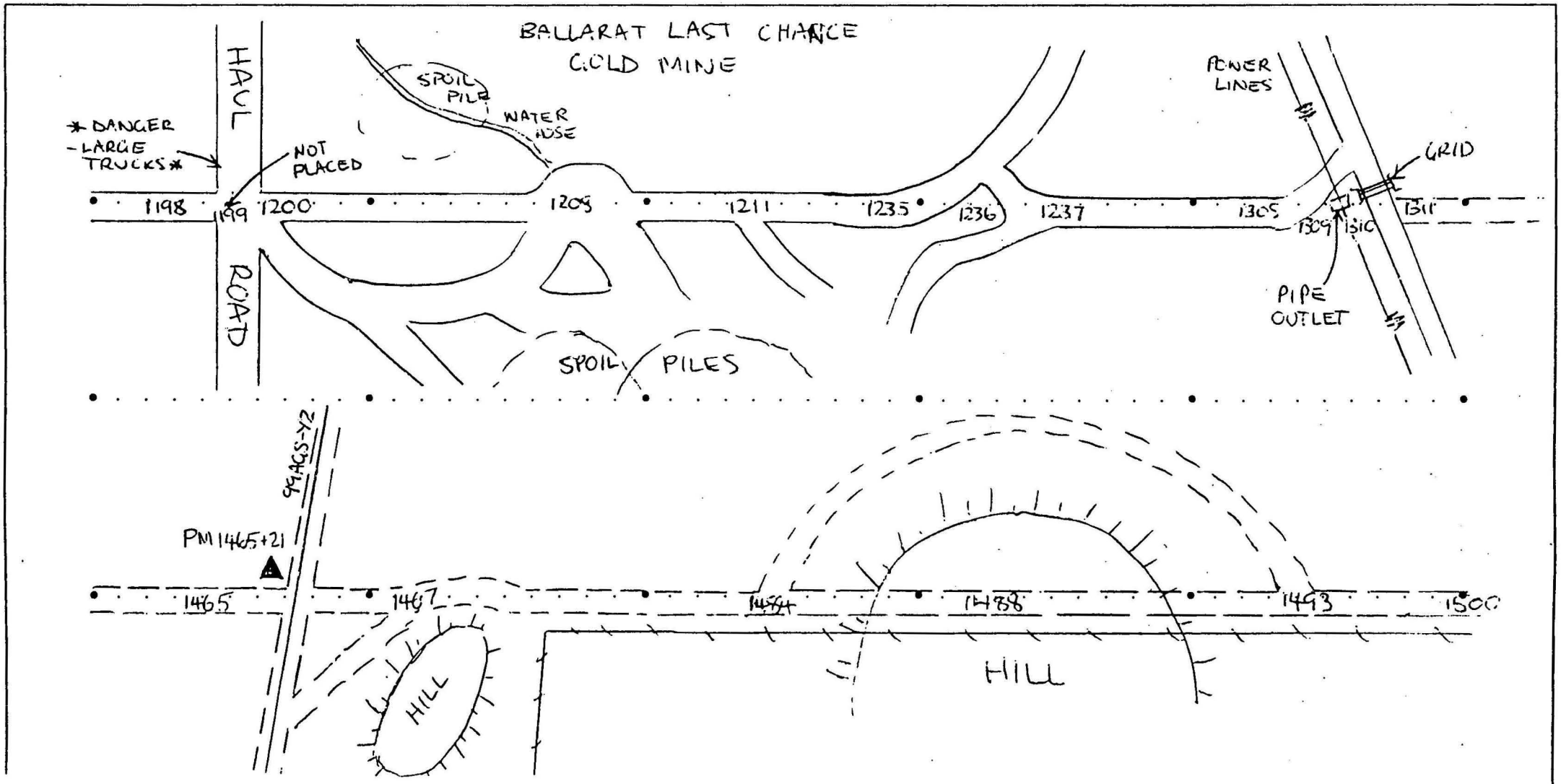
TERRACORP

CHAINING MAP

LINE 99ACS-Y5

PROSPECT YILGARN CLIENT ACSO PARTY COMPLETED BY Lynne & Tom DATE 26/8/99 PAGE 2

DIRECTION S-N STATION SPACING 40m VP SPACING



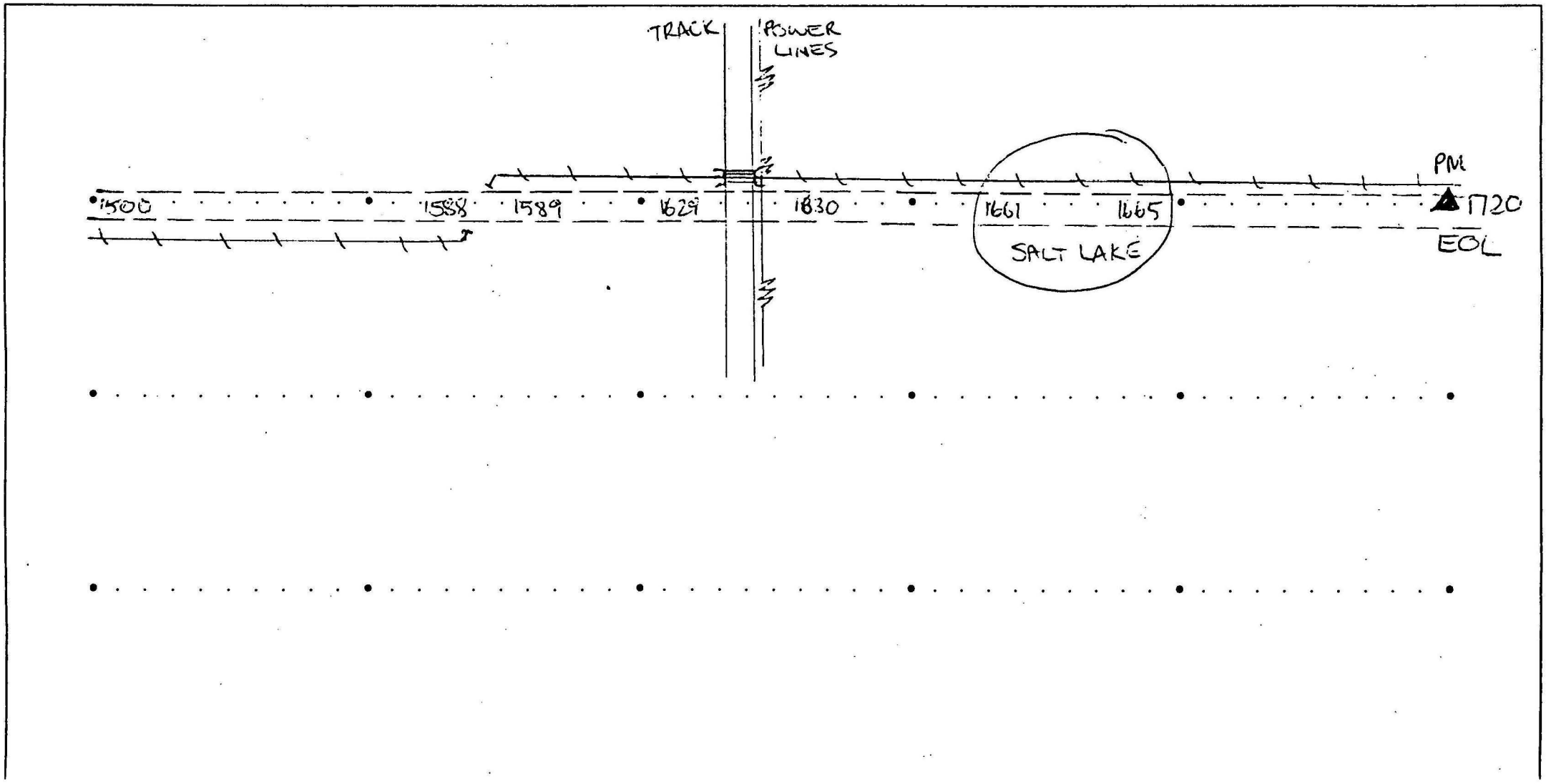
TERRACORP

CHAINING MAP

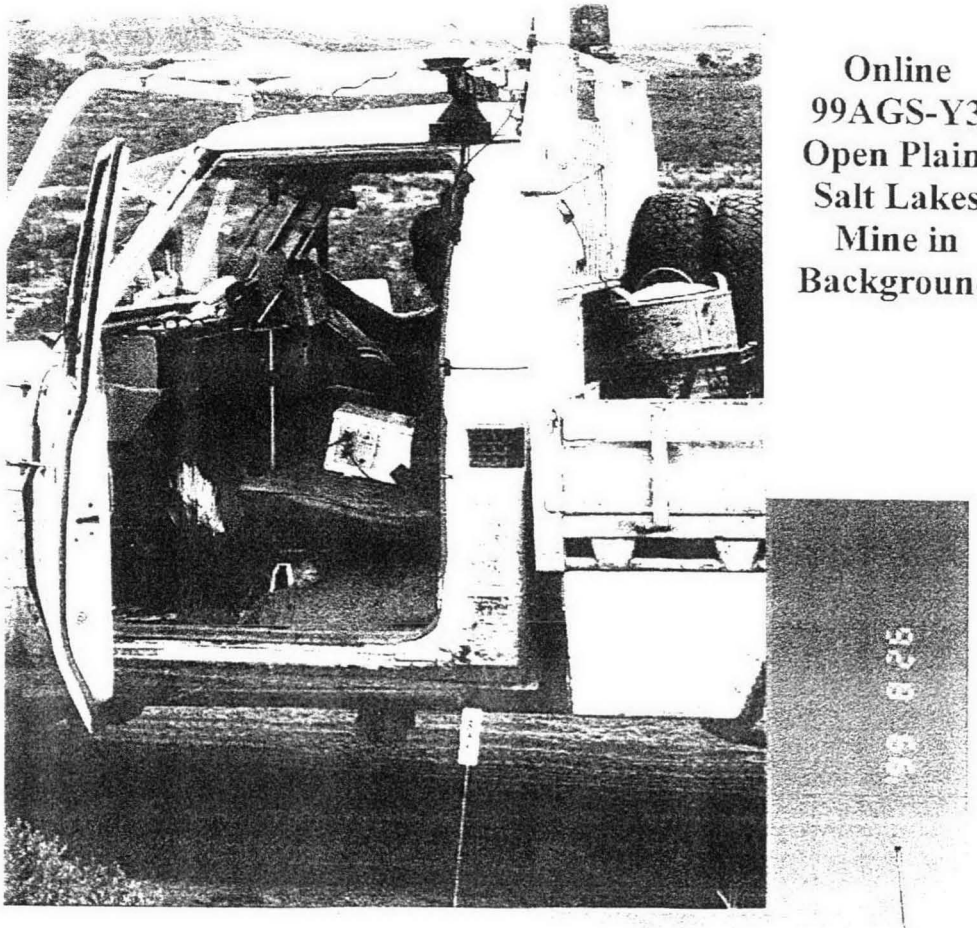
LINE 99AGS-Y5

PROSPECT YILGARN CLIENT AGSO PARTY COMPLETED BY Lynne & Tom DATE 26/8/99 PAGE 3

DIRECTION S-N STATION SPACING 40m VP SPACING



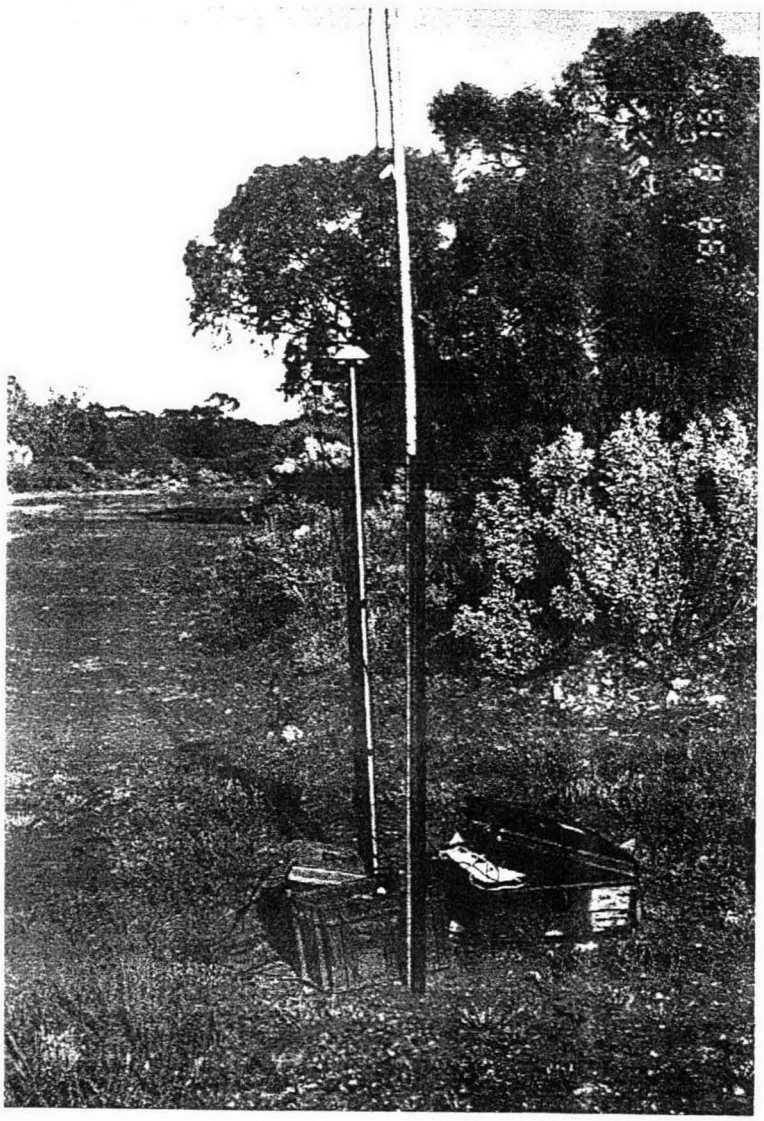
Photographs



Online
99AGS-Y3
Open Plain/
Salt Lakes
Mine in
Background

Intersection of
99AGS-Y5,
99AGS-Y2

Base Station
at KB56
Great Eastern
Highway



Base Station at
PM 1347+16.
99AGS-Y1

APPENDIX H - ANSIR YILGARN STATS