

T/17P Part 4

109001

Van Diemens Land Resources N.L.
153 Dorcas Street,
South Melbourne, 3205

Report 702/6

D of M	A.G.	CG	CC&M	D.S.M.E.
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OBV.81 SEISMIC PROGRAMME
FOR
PETROLEUM EXPLORATION PERMIT
TAS T.17P

Work Order 702

October 1980

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1.00

INTRODUCTION

As mentioned in the Quarterly Report for the period ending September 30th, 1980, (Report 702/5), a preliminary seismic programme has been formulated for Permit Tas T.17P. This is to take the form of a marine seismic survey of 139.7 km. The reasons for and the details of this programme are the basis of this report.

This report is also to inform Geophysical Services Inc., who will be conducting the survey of the details and parameters which have formed the basis of their successful tender for the work.

2.00

CURRENT INTERPRETATION

The final subsidy report of the "Cape Nelson to Cape Otway Seismic Survey", April 1974, by E.G. Urschel and J. Denham is available and incorporates the H03 series of traverses shot by GSI during the period 15th September to 22nd October, 1973 for Hematite Petroleum Pty. etd.

The H04 series of seismic traverses were shot during November 1974, also by GSI. Several H04 lines have been inspected but the full set has not yet been acquired. Although similar equipment was used during data acquisition the H04 series seem to be of better quality than the H03 series.

Normally Van Diemen's Land Resources N.L. would conduct a re-interpretation of all seismic data in T.17P to incorporate both the H03 and H04 series of seismic lines as the Prawn No. A1 well seems to have been drilled off-structure.

However as GSI's seismic vessel will shortly be available in the area with a larger airgun array, a 96 channel streamer cable and a DFS V floating point gain recording system it is proposed to shoot the current programme first. The six lines will tie previous programme into a better network and enable a tie between the Mussel No.1 well and Prawn No.1.

3.00

SPECIFICATION FOR MARINE SEISMIC SURVEY3.10 General

The latest previous shooting inspected was conducted by GSI for Hematite Petroleum Pty. Ltd. during November, 1974.

Broad specifications were:-

Airgun Array	1,200 cu.in.
Cable	3,200 m, 48 groups
Instruments	DFS III binary gain

For this survey equipment will be:-

Airgun Array	2,000 cu.in.
Cable	2,400 m, 96 groups
Instruments	DFS V, floating point gain.

Better data should result.

A total of 139.7 km are required to be shot. This survey is to be known as O.B.V.81 and the lines are shown on the accompanying plan VAN 702/5 (Scale 1:100,000).

Details of the lines are as follows:-

Line numbering convention

Odd SW-NE
Even NW-SE

<u>Line</u>	<u>Length (km)</u>	<u>Remarks</u>
OBV81-1	33.0	Tie H04-91 and OBV81-2
OBV81-3	15.5	Prawn A1 well
OBV81-2	17.0	Tie to programme Vic. P16
OBV81-4	47.0	Tie to programme linking Mussel 1 well.
OBV81-6	13.0	Tie H04-50
OBV81-8	14.2	Tie OBV81-1 & H04-12 of NW corner previous coverage

6 lines 139.7

3.20 A. Acquisition Parameters and Specifications

Tas. T. 17P

OBV.81 Survey

Cable	: 2400 metres, 96 trace, 48 fold, 12 metre (40ft. + 5ft.) depth
Airgun Arrar	: 2,000 cu.in.
Shot	: 1 pop per shotpoint, every 25 metres
Sample Rate	: 2 milliseconds all lines
Record Length	: 5 seconds
Filters	: 2 millisecond sample rate
Low Cut	: (8 Hertz/18dB octave..
High Cut	: 128 Hertz/72dB per octave
Cable Noise	: 3 microbars (to be monitored at boat (riders discretion but on (no account is maximum
Swell Noise	: 4 microbars (allowable to apply to (more than 30% of any line.
Monitor Records Displayed	: Every 50 shotpoints Defloat monitors on request
EPC Shipboard Section	: Trace 92
Runout at End of Lines	: 0.5 km has been allowed for on survey plan map
Navigation Specifications	: Maxiran Shore Stations as per Contractors' specifications
Feathering Angle to be listed	: Every 100 shotpoints when less than 6° Every 50 shotpoints when 6° to 10° not to exceed 10°
Shotpoint Location to be Annotated by Navigation System	: Every 10 shotpoints
Cable Offset	: Measured every start of line, and every 40 shotpoints
Magnetics and Gravity	: Not required

B. Data Processing

By discussion following acquisition.

For your survey we shall provide the following:

1. Vessel (Appendix A)

We will make available our vessel the "Eugene McDermott 11". Subject to prior commitments and also to delays outside GSI's control in the vessel's current program schedule, we anticipate that the vessel should be able to commence your survey in December 1980.

2. Energy Source (Appendix B)

GSI's 2000 cubic inch tuned airgun array will be provided as the seismic energy source.

3. Recording Cables (Appendix C)

GSI's Acceleration Cancelling Hydrophone Marine Streamer cable which can be made up of 96 twenty-five metre or thirty three metre groups or 48 fifty metre groups would be used.

4. Seismic Data Recording Instrument System

For the recording of the seismic data, DFS V instruments. Recording would be on $\frac{1}{2}$ inch magnetic tape, packing density 1600 BPI, in SEG-B format.

5. Shooting Geometry

Data would be recorded at a 25 metre pop interval, hence, with 96 groups (2400m cable), a 48 fold, 96 group recording would result.

6. Monitors

EPC 4600 Graphic Recorder for onboard single coverage sections.
A 63 trace oscillograph camera display for onboard monitoring and

playback quality control.

The vessel will be equipped with radar, a continuous recording fathometer capable of recording depths of up to 1,000 fathoms and radio communications equipment for regular liaison with shore based personnel.

7. Personnel

A crew complement of seismic vessel operating personnel experienced in marine seismic operations.

8. Supplies

All operating supplies necessary to operate and maintain the field unit including fuels, lubricants, food and provisions, magnetic tapes and ancillary recording supplies.

9. Quality Control

We will furnish a shipboard Vessel Controller whose responsibility is to ensure that Quality Control standards are within specifications.

10. Water Depths

Water depths to be not less than 12 metres at the vessel and at all points along the cable.

11. Horizontal Survey Positioning System

GSI will provide a Maxiran shore based positioning system for primary horizontal survey control. The system will be comprised of one shipboard mobile unit and a minimum of 3 base stations and sufficient personnel to operate all stations on a 24 hour

basis. Not included in prices quoted are costs for any extraordinary survey logistics such as helicopters, boats, etc.

12. Compensation for Data Acquisition

Basic System

- 2000 cubic inch tuned airgun array
- All necessary personnel and supplies, including field tapes
- Texas Instruments DFS V Recording Systems. Recordings to be made on ½ inch magnetic tape in SEG-B format
- 96 trace recording
- 5 second record length
- Maxiran shore based positioning system

13. a. Mobilisation

Australian Dollars 30,000.00

b. Turnkey Rate (assumes 400 kms, average line 50 kms)

<u>Cable Length</u>	<u>No. of Traces</u>	<u>Shot Interval</u>	<u>Fold Coverage</u>	<u>Sample Rate</u>	<u>A\$/km</u>
2400	96	25m	48	2	466.00

Kilometres of coverage will be computed based on the number of "pops" or shots per line multiplied by the "pop" or shot interval.

c. Daily Rate

A daily rate or standby charge of A\$19,680.00 per day or prorated on a twenty-four hour basis for lesser periods.

Daily rate shall be payable for: time during which the survey vessel is unable to conduct operations due to any cause beyond GSI's reasonable control (except damage to the vessel), including but not limited to, time spent waiting on instructions or services to be provided by Cue Minerals and standby due to weather and feathering.

14. Items to be Furnished by Cue Minerals

Cue Minerals shall furnish all other personnel, equipment, supplies and services required for the performance of this survey over and above those furnished in connection with the field unit as described above, such as but not limited to the following:

- a. All permits necessary to conduct the operations including those required for: entry into the operations area, entry of the personnel and material of the field unit and supply operations.
- b. Import duties (or taxes in lieu thereof) and agents' fees that may be levied on or incurred by the field unit or survey control stations, or their supplies and provisions.
- c. Program charts, base maps and preplots which will be delivered to GSI at least ten days prior to anticipated commencement of operations. The program charts shall give the end points on each line segment in co-ordinates in the same co-ordinate system as that used for control stations.
- d. All extra personnel required by local laws and regulations, such as, but not limited to services of local marine pilots, standby vessel crews, and the like.

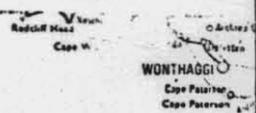
- e. Fisheries Inspector or other Governmental agents, if required as condition of permits, including vessel and other expenses for them.
- f. A support vessel for such uses as logistical support and relocation of Maxiran base stations, at-sea data drops and other operational requirements if necessary.

For those above items furnished by GSI upon Cue Minerals' request, GSI is to be reimbursed at cost plus a 12 percent handling fee.

- 15. This proposal assumes that Cue Minerals will make available sufficient light diesel to GSI for the performance of this survey. Our prices are based on the current price of A\$00.26/litre. If the actual price during the survey exceeds this price, then Cue Minerals is to reimburse GSI for the actual price in excess of A\$00.26/litre.

4.00

ILLUSTRATIONS ACCOMPANYING REPORT

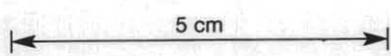


VICTORIA
TASMANIA

T17P



LOCATION OF SEISMIC SURVEY O.B.V.81
VAN DIEMANS LAND RESOURCES N.L.

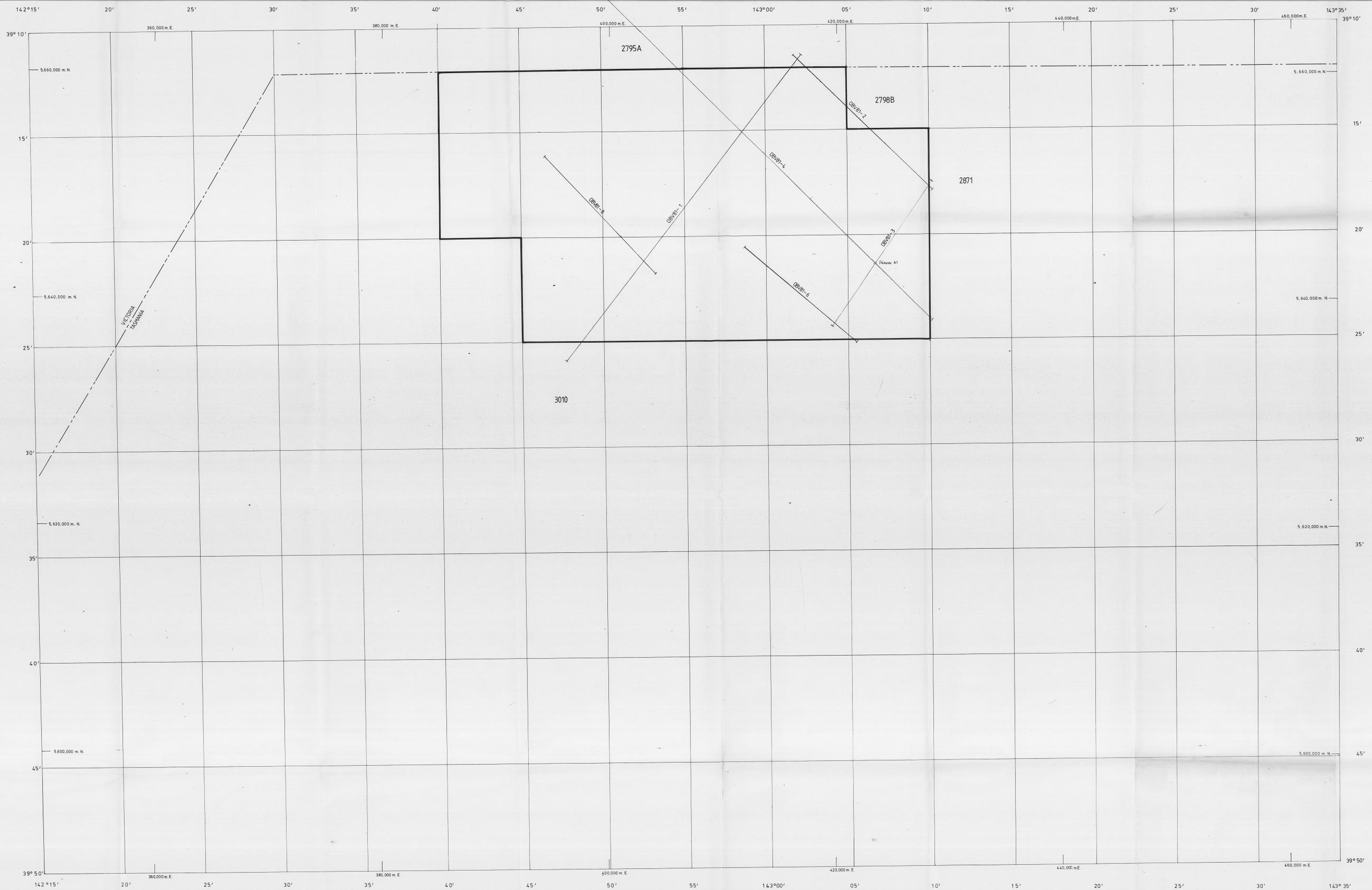


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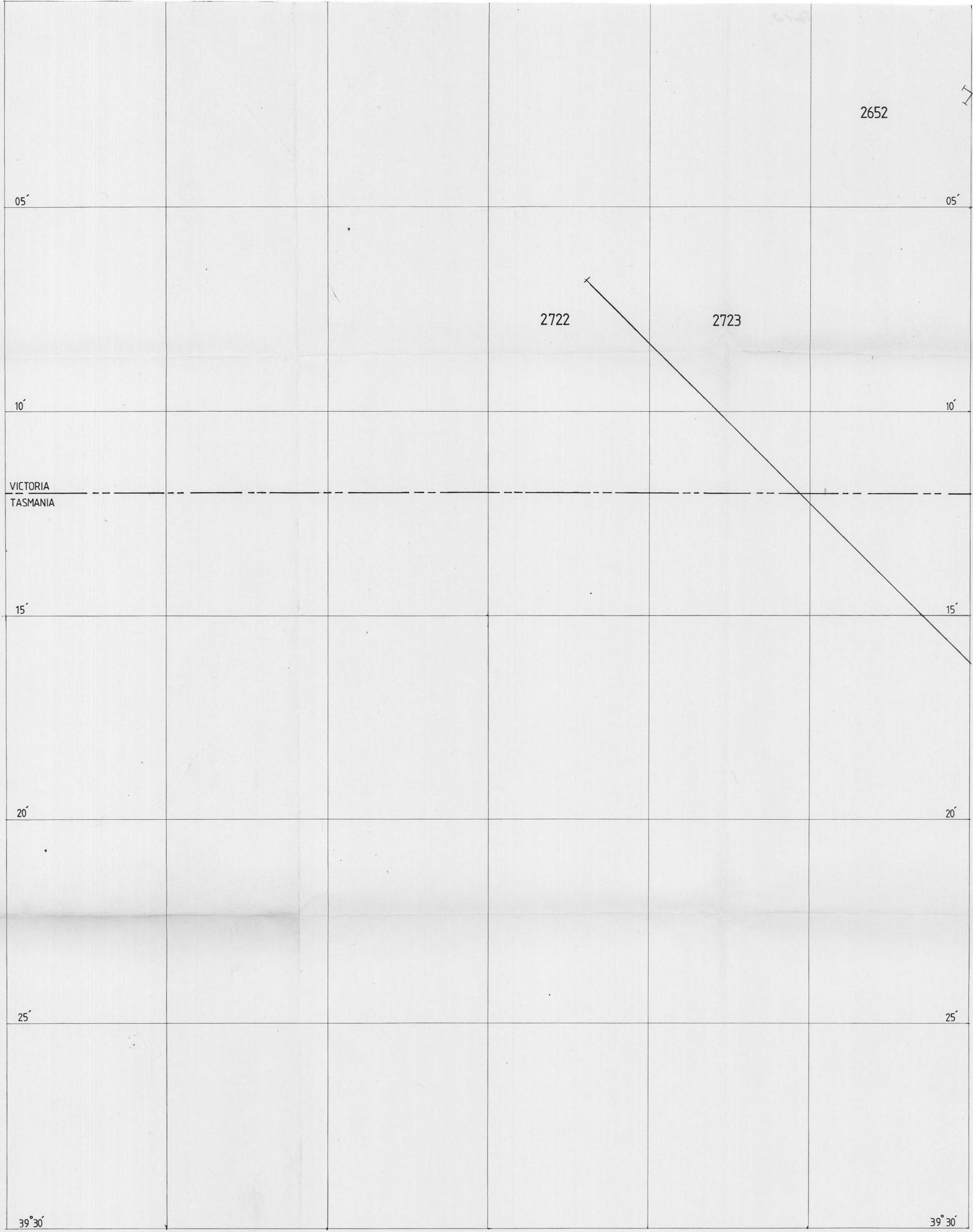
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PART OF HAMILTON
SJ.54 VAN.702/4

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109014
 SEISMIC PROGRAMME MAP
 T.17P



142° 30'

35'

40'

45'

50'

55'

143° 00'

109015

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Sheet No. 702/15 Part 3

