

444001

TPR
OR-356A.

Drilling Prognosis Tasmanian Devil No. 1

June, 1984

TPR
OR-356A 1/2

Weaver Oil & Gas Corporation, Australia

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INTRODUCTION

The Tasmanian Devil # 1 well, located on Permit T/16P, will test the structural and stratigraphic hydrocarbon potential of the Oligocene, Eocene, and possibly older section, of the southwest most area of the Bass basin. The well will also provide valuable information as to the sand reservoir quality, intra-formational sealing capacity and maturation of the source-rock shale package of this objective sequence.

SEISMIC INTERPRETATION

The Tasmanian Devil prospect was originally recognized on the old seismic lines B69 A-1 and B71 A-65 as a major tilted fault block bounded to the southwest by a down-to-the-coast normal fault accompanied by a major northwest trending depression.

The nearest well is Pelican # 4 located some 31 miles to the northwest. Further to the northwest is the Pelican # 1 well located some 33 miles away to which the prospect is tied by seismic line WB-81-11. A synthetic seismogram has been constructed for the Pelican # 1 well (Fig. 3). Other wells to the northwest do not add significantly to the basic data base.

The prospect is defined by seven Weaver seismic lines acquired in 1982, in addition to five Weaver seismic lines acquired in 1981. Fourteen lines acquired through the late 60's and early 70's by the previous permit holders have also been used in the interpretation.

Weaver's 1981 seismic lines:

WB-81-11 (tie to Pelican # 1 well)
WB-81-12
WB-81-13
WB-81-14
WB-81-15

Weaver's 1982 seismic lines

WB-82-13 Ext.
WB-82-47A
WB-82-48
WB-82-49
WB-82-50
WB-82-51
WB-82-52

SEISMIC TIME STRUCTURE MAPS

The final seismic interpretation of the Tasmanian Devil prospect was carried out by Exploration Associates International, Inc. which are consultant to Weaver Oil and Gas Corporation, Australia on the Bass basin project.

Enclosure # 1 is a time structure map constructed at the Oligocene seismic reflector level. The scale is 1:50,000 and the contour interval is .010 seconds. This domal feature has an area of closure of 8500 acres, or approximately 3500 hectares, and a vertical relief of 125 feet, or approximately 38 meters.

Enclosure # 2 is a time structure map constructed at the Top Eastern View Coal Measures seismic reflector level. The scale is 1:50,000 and the contour interval is 0.010 seconds. This tilted fault block has an area of closure of 11,200 acres, or approximately 4530 hectares, and a vertical relief of 200 feet, or approximately 61 meters.

Enclosure # 3 is a time structure map constructed at the Lower Malvacipolis diversus seismic reflector level. The scale is 1:50,000 and the contour interval is .050 seconds. This tilted fault block has an area of closure of 15,500 acres, or approximately 6275 hectares, and a vertical relief of approximately 475 feet or 145 meters.

REPRESENTATIVE SEISMIC LINE

The Tasmanian Devil # 1 well will be located on seismic line WB-82-51 at shot point # 700 (Enclosure # 4 and Figure 2). This seismic line was recorded by Weaver Oil and Gas Corporation, Australia and processed in May 1982 as part of its second generation of prospect definition seismic data acquisition. This NE-SW seismic line shows the main bounding fault, the prospective tilted fault block, and the convergence of the Eastern View Coal Measures section on the northeast flank of the tilted fault block. The reflector and map levels are identified.

GEOLOGICAL SETTING

In the Bass basin area, the earliest period of sediment accumulation is most likely to date back to the Early Cretaceous period when large thicknesses of coarse clastics, volcanogenic detritus and muds filled major fault bounded troughs and half graben depressions. This first step in the evolution of the basin could be classified as its aborted rift valleys stage characterized by alluvial, fluvial, fluviodeltaic and lacustrine environments of deposition.

Considerably less structural activity took place during the Late Cretaceous period, or second stage of the basin. Slower basin-

wide subsidence prevailed and sediments were derived from the margin areas of the basin as well as from elevated intra-basin areas. These reworked, or second generation sediments, were deposited under alluvial, fluvial and lacustrine conditions. Minor marine incursions may have taken place.

The Bass basin remained a barred basin throughout the Paleocene and Eocene. A time when reworked sand, shale and coal deposition was widespread within what appears to have been a swampy alluvial environment. Regional structural readjustments, in response to an accelerated late Eocene sediment loading, triggered a marine transgression from the northwest. Basal Oligocene coarse clastics were derived from the basin margin areas. These are overlain by widespread mudstones, marl and limestones deposited during the remainder of the Oligocene and Miocene periods. Marine carbonate shelf conditions prevailed thereafter.

Objective reservoir sands interbedded with shales of potential source rock quality have tentatively been identified within the Upper Cretaceous, Paleocene, Eocene and basal Oligocene section.

OBJECTIVE SECTION

The objective section of the Tasmanian Devil # 1 well consists of the sand, shale and coal sequence known as the Eastern View Coal Measures of Eocene, Paleocene and Upper Cretaceous age.

The top of this objective section is predicted, on the basis of seismic data, to be at a depth of 2250 feet, or approximately 686 meters, below mean low sea level at the proposed well location.

A similar stratigraphic sequence was tested and found to contain several gas and condensate, or light oil bearing intervals in the Pelican # 1 well to which the Tasmanian Devil prospect is tied seismically through line WB-81-11.

The anticipated stratigraphic section is shown on Figure No. 1.

OPENHOLE LOGGING AND FORMATION EVALUATION

The following suite of logs and wireline formation tests program has been specifically designed to evaluate the hydrocarbon potential of the Tasmanian Devil prospect.

The first run of logs will take place before the 13-3/8" surface casing is put in place.

Run # 1 Interval 800' - 2000'
DIL-LSS-CAL-GR

The second run of logs will take place at total depth.

Run # 2 Interval 2000' - TD (3500')
DIL-LSS-CAL-GR

Should hydrocarbons be present the second run of logs will be modified to include the following:

- ^ LDT-CN~~1~~-GR
- + DLL-MSFL-CAL

in addition:

- Velocity Survey
- HDT
- CST (30 cores) or as required
- RFT (10 pressure tests per chamber)
as required

DRILLING DATA

Mud Logging: Continuous from the 20" conductor casing shoe to total depth.

Cuttings:

Five sets of washed and dried cuttings will be caught every 30 feet from the conductor casing shoe down to a depth of 2000 feet. Sampling intervals may be varied as dictated by rapid drilling rates. Minimum sample size will have a weight of 100 grams. Sampling rate will be reduced to 10 feet over the interval 2000' to total depth.

Conventional Cores:

Below the surface casing shoe, conventional cores will be cut only if significant hydrocarbon indications are encountered.

Sidewall Cores:

Below the surface casing shoe, sidewall cores will be acquired only if significant hydrocarbon indications are encountered.

LIST OF FIGURES AND ENCLOSURES:

Figure

1. Anticipate Stratigraphic Section
2. Well Location Map
3. Pelican # 1 Synthetic Seismogram

TASMANIAN DEVIL No.1

ANTICIPATED STRATIGRAPHIC SECTION

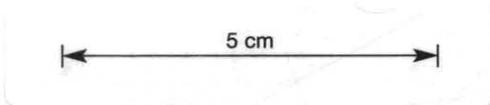
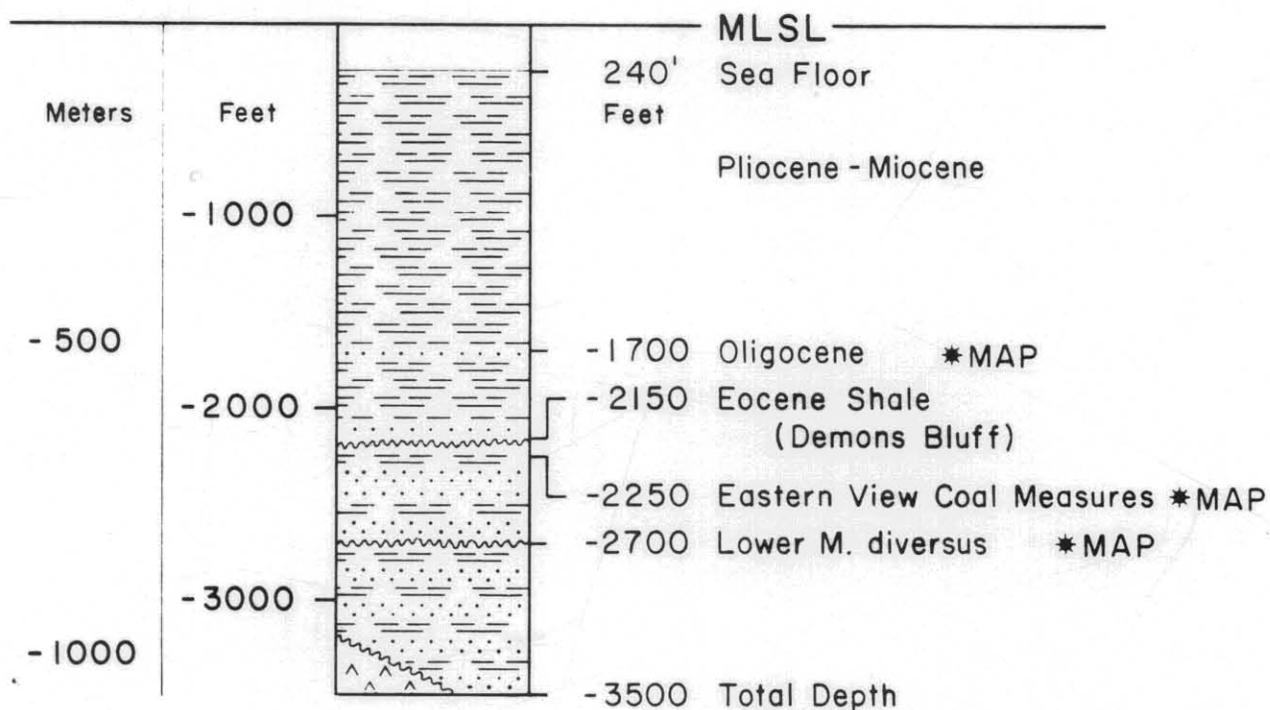


Figure 1

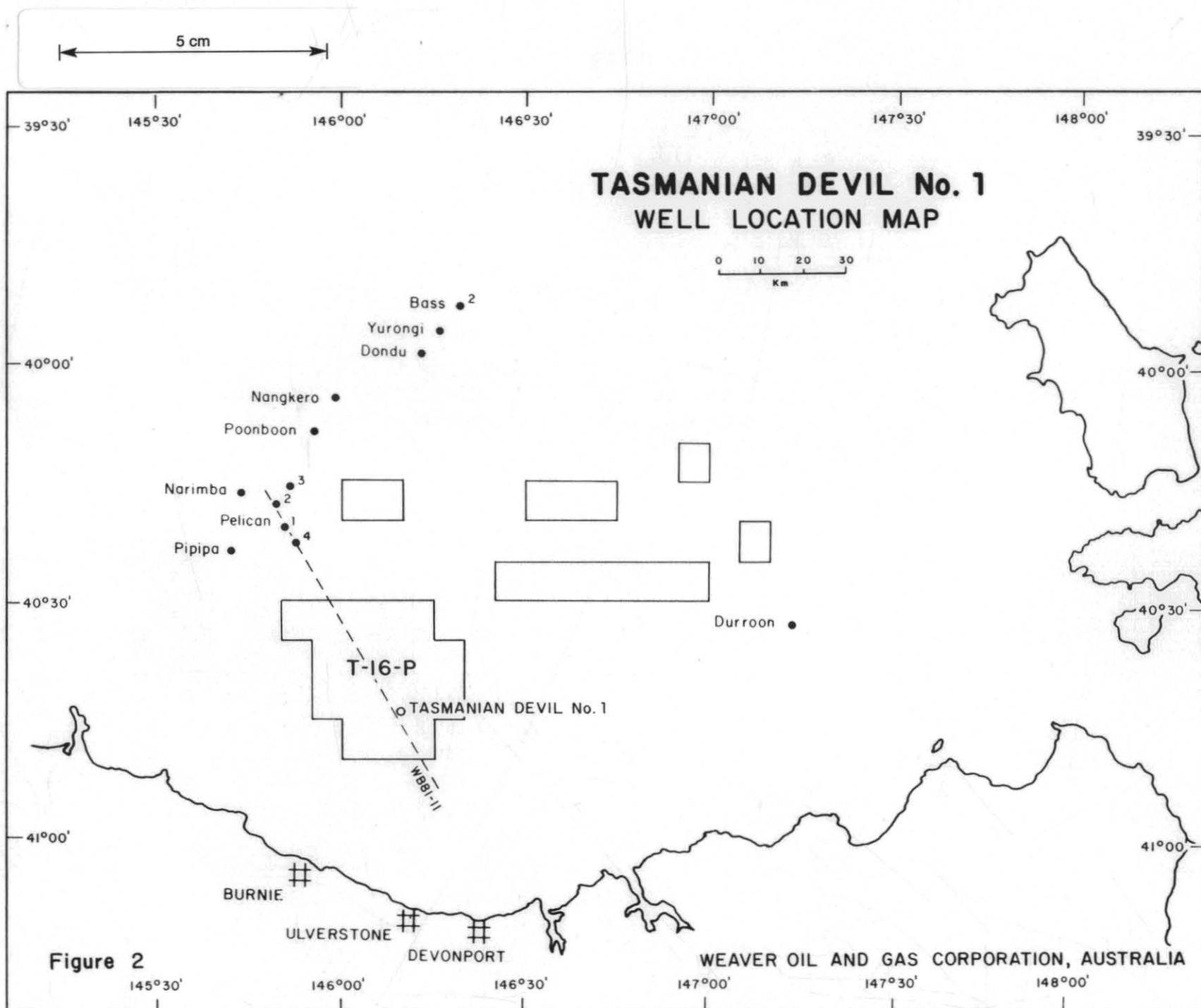


Figure 2

444010

SYNTHETIC SEISMOGRAM

GTS CORP.

HOUSTON OFFICE 3724 JACOBA 77018

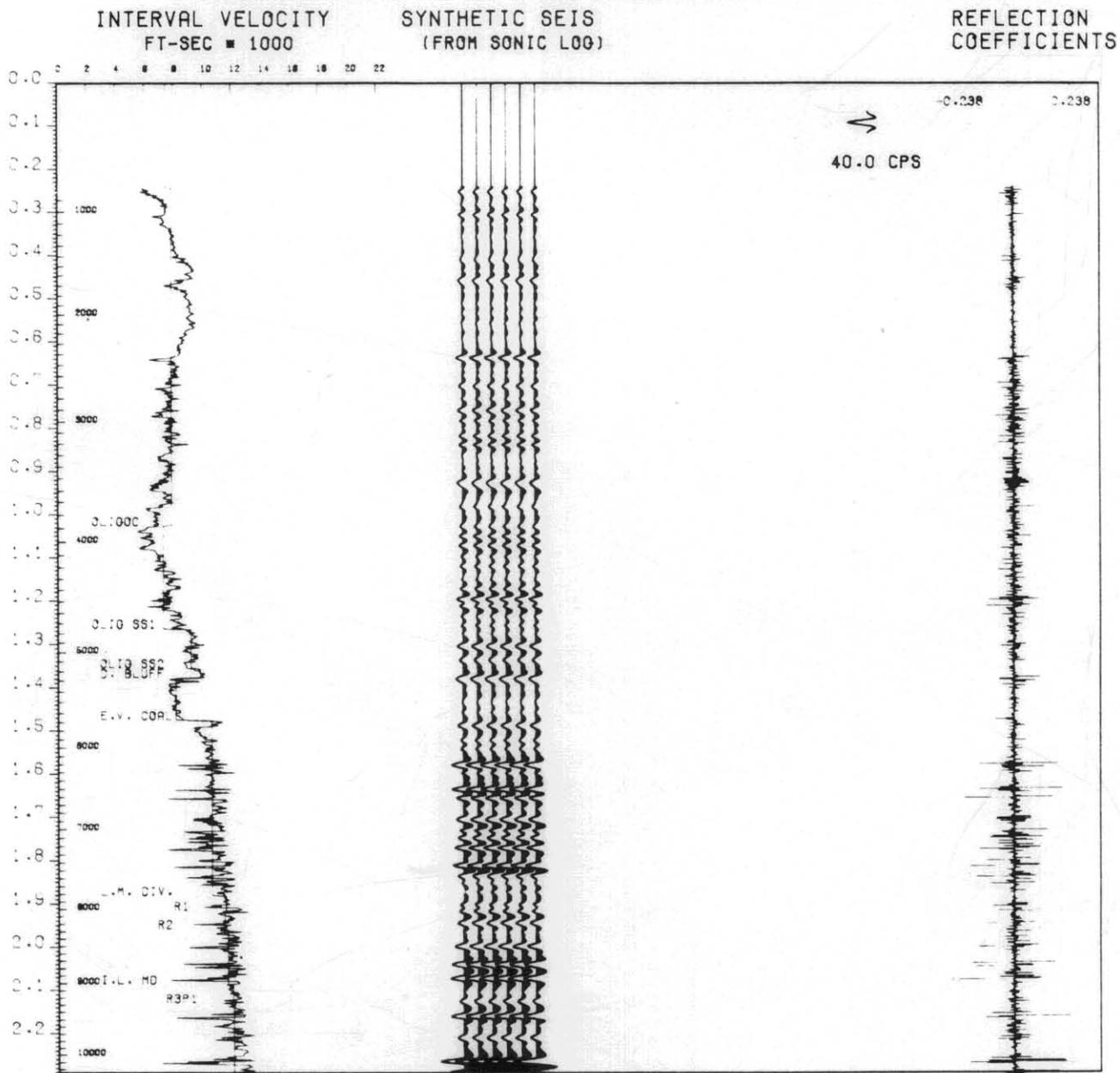
ESSO EXPL & PROD AUSTRALIA INC PELICAN #1 WILDCAT AUSTRALIA TASMANIA

W

LOG DATUM = 100

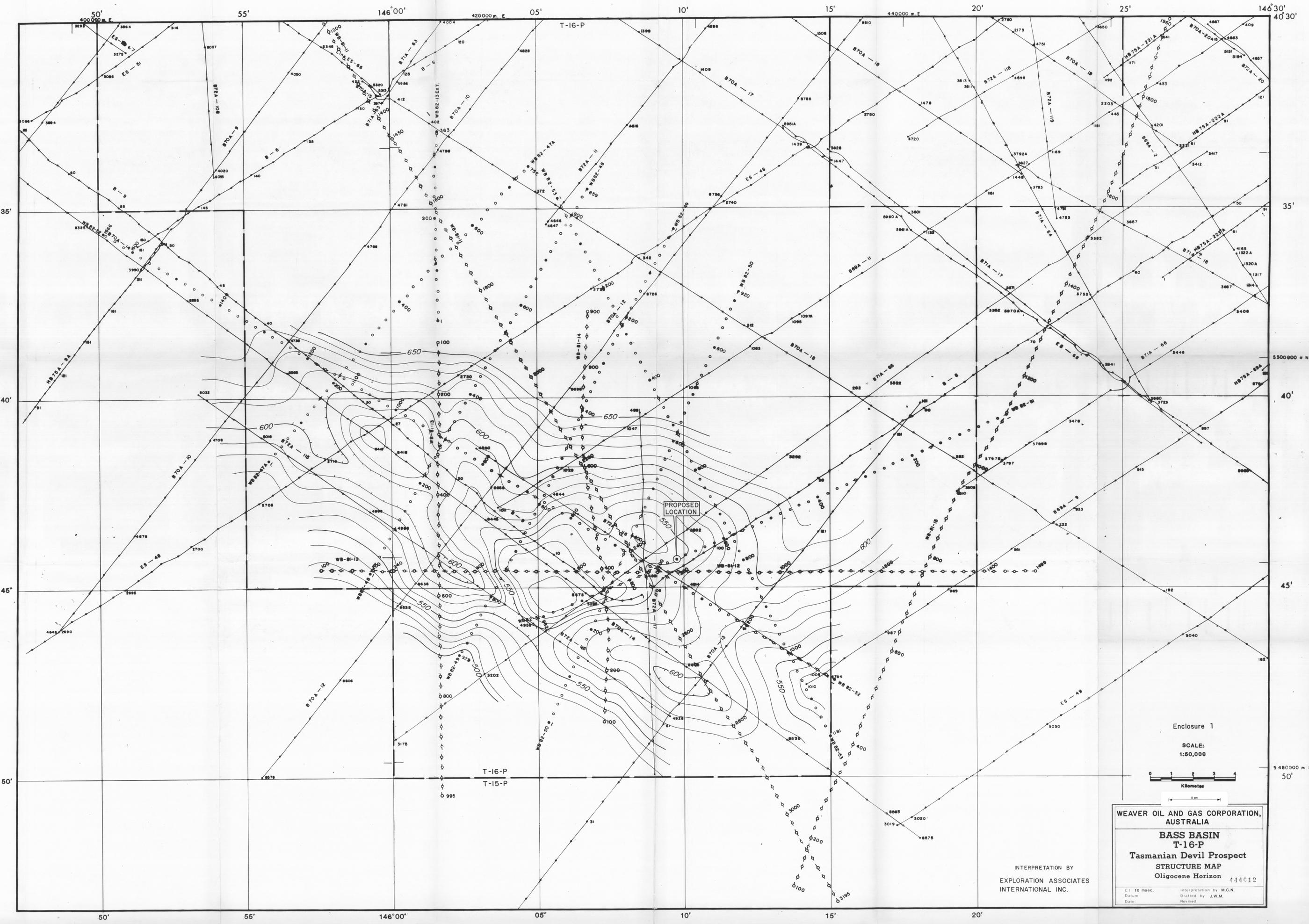
SEISMIC DATUM = 0

COMMENTS _____



5 cm

Figure 3



Enclosure 1

SCALE:
1:50,000

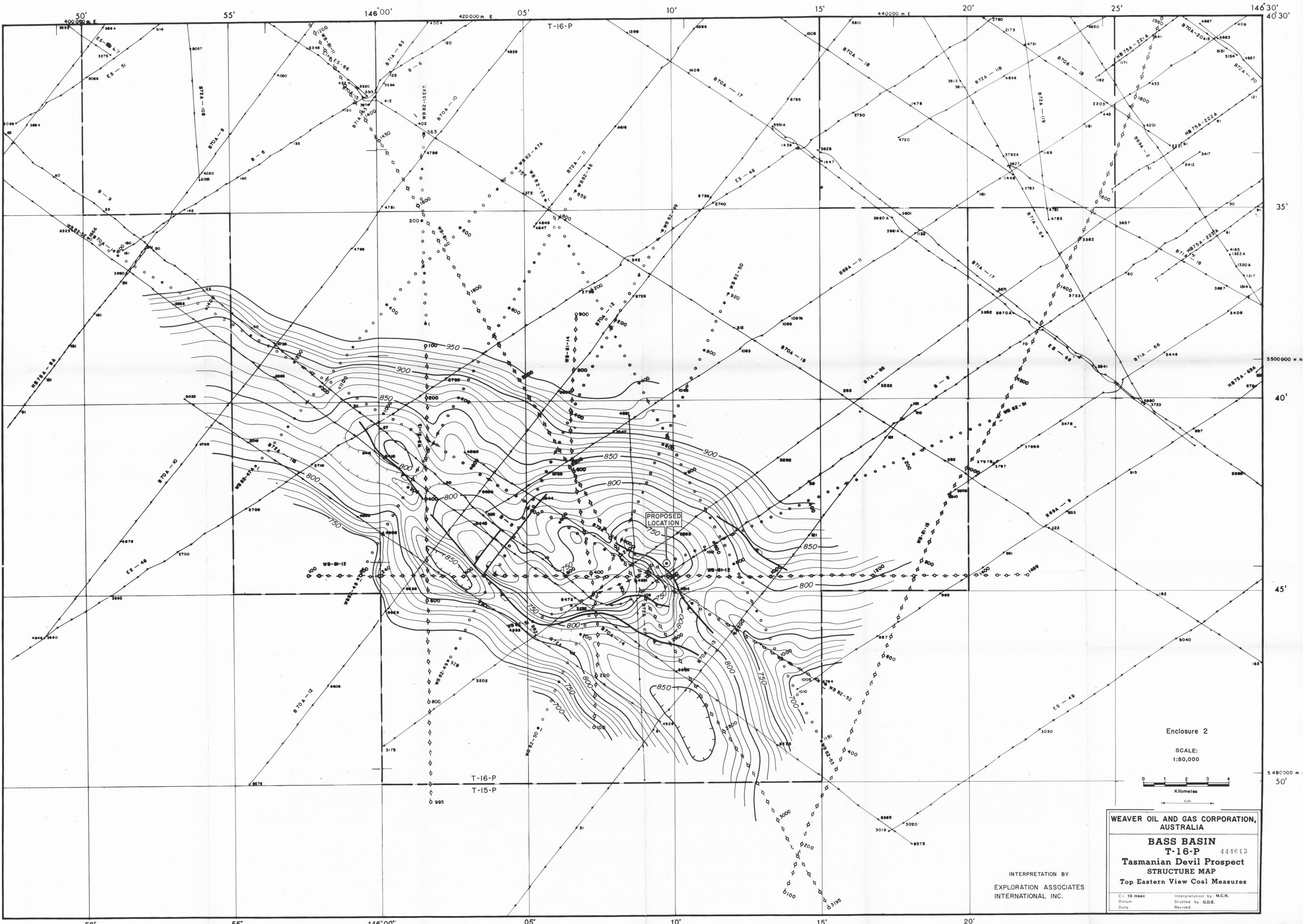


WEAVER OIL AND GAS CORPORATION,
AUSTRALIA

BASS BASIN
T-16-P
Tasmanian Devil Prospect
STRUCTURE MAP
Oligocene Horizon 444012

INTERPRETATION BY
EXPLORATION ASSOCIATES
INTERNATIONAL INC.

CI 10 msec. Interpretation by M.C.N.
Datum Drafted by J.W.M.
Date Revised



Enclosure 2

SCALE:
1:50,000

0 1 2 3 4
Kilometres

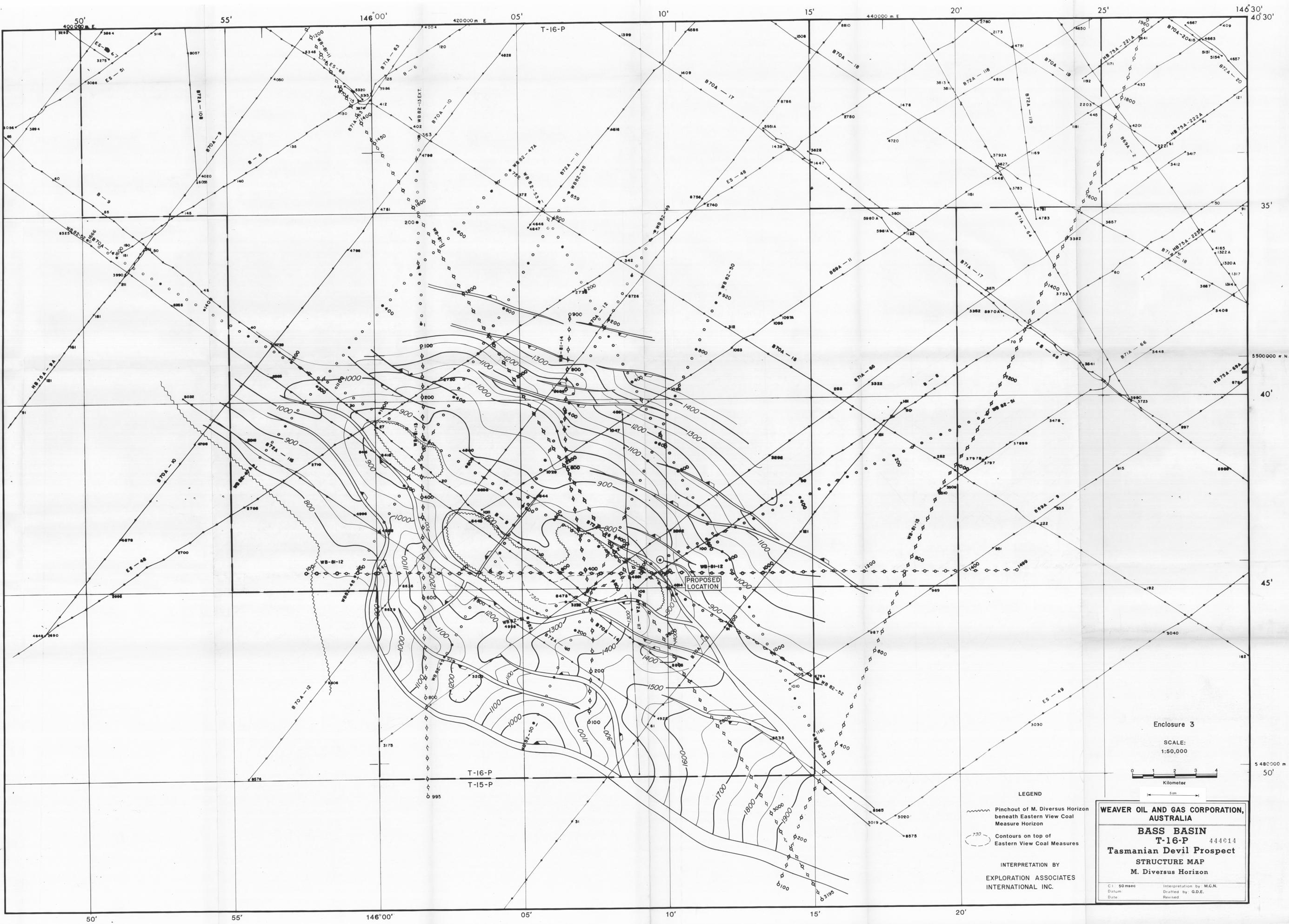
WEAVER OIL AND GAS CORPORATION,
AUSTRALIA

BASS BASIN
T-16-P 444613
Tasmanian Devil Prospect
STRUCTURE MAP
Top Eastern View Coal Measures

INTERPRETATION BY
EXPLORATION ASSOCIATES
INTERNATIONAL INC.

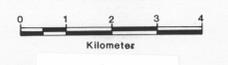
C.I. 10 msec
Datum
Date

Interpretation by M.C.N.
Drafted by G.D.E.
Revised



Enclosure 3

SCALE:
1:50,000



LEGEND

Pinchout of M. Diversus Horizon beneath Eastern View Coal Measure Horizon

Contours on top of Eastern View Coal Measures

INTERPRETATION BY
EXPLORATION ASSOCIATES
INTERNATIONAL INC.

**WEAVER OIL AND GAS CORPORATION,
AUSTRALIA**

**BASS BASIN
T-16-P** 444614

**Tasmanian Devil Prospect
STRUCTURE MAP**

M. Diversus Horizon

C.I. 50 msec
Datum
Date

Interpretation by M.G.N.
Drafted by G.D.E.
Revised

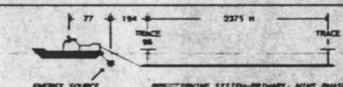
WEAVER OIL & GAS
BASS BASIN
PERMIT T-16-P



DATE PROCESSED MAY 1982
REEL NUMBER 6408
CONTRACT NUMBER 4805

FIELD RECORDING

RECORDED BY WESTERN GEOPHYSICAL
DATE FEBRUARY 1982 SYSTEM DFSV
FORMAT SEG B GAIN 36 DB
ENERGY SOURCE
TYPE AIR GUNS 750 CU. INS. 4500 PSI.
ARRAY 10 GUNS DEPTH 6 METERS
STREAMER
LENGTH 2375 METERS NO. TRACES 96
DEPTH 40 FT GROUP INTERVAL 25 METERS
ARRAY 20 GEOPH/TR OVER 25 METERS
PARAMETERS
RECORDING FOLD 4800 S.P. SPACING 25 METERS
SAMPLE INTERVAL 2 MS RECORD LENGTH 5 SECONDS
RECORDING FILTER OUT - 128HZ @ 7000/OCTAVE



DIGITAL PROCESSING

SEQ	PROCESS	PARAMETERS
1	DEMULTIPLY	PRIMARY GAIN RECOVERY OUTPUT 4 MS
2	GAIN	AMPLITUDE RECOVERY
3	CDP TRACE GATHER	4800/ADJACENT TRACE SUM
4	PRE-FILTER	SEE BELOW
5	DECONVOLUTION	SEE BELOW
6	VELOCITY ANALYSIS	CONSTANT VELOCITY STACK OVER 6 CDP'S
7	NO. DATE	HORIZONTAL MOVEOUT NOTE APPLICATION
8	CDP STACK	4800
9	FILTER	SEE BELOW
10	EQUALIZATION	DATA DEPENDENT

DECON	OPERATOR LENGTH	PREDICTIVE GAP	DERIVATION WINDOWS	APPLICATION WINDOWS
5	140	30	0 TO 3500	RECORD LENGTH

FILTER	CUT OFF POINT	ON POINT	OFF POINT	APPLICATION TIMES FOR SHOTPOINTS SPECIFIED
9	12	15	56	0-1000
4	4	8	32	3500-4000
4	4	8	56	RECORD LENGTH

ALL TIMES IN HOURS UNLESS ALL PROVISIONS IN HERTZ
FILTERS INTERPOLATED LINEARLY BETWEEN APPLICATION TIMES
APPLICATION TIMES INTERPOLATED LINEARLY BETWEEN SHOTPOINTS
*OPERATOR LENGTH GIVEN IS ACTIVE LENGTH ADD GAP FOR TOTAL LENGTH
SAMPLE RATE: 4MS; DATA CORRECTION: 13 MS
SCALES: HORIZONTAL 24 TR/IN VERTICAL 2.5 IN/SEC
RECORDING POLARITY: NEG. VALUE EQUALS PRESSURE INCREASE
PROCESSING POLARITY: POSITIVE NO. GIVES BLACK PEAK

SP 889

TIME	VRMS
0	1490
120	1490
350	1670
760	2020
1260	2660
1930	3060
2670	3860
4000	4980

SP 809

TIME	VRMS
0	1490
130	1490
420	1780
760	2100
1120	2420
1460	2740
1860	3380
2450	4180
4000	4980

SP 729

TIME	VRMS
0	1490
120	1490
330	1640
780	2020
1150	2500
1560	2820
2200	3700
4000	4820

SP 649

TIME	VRMS
0	1490
120	1490
300	1640
780	2020
1100	2500
1520	2900
2030	3700
2820	4500
4000	4980

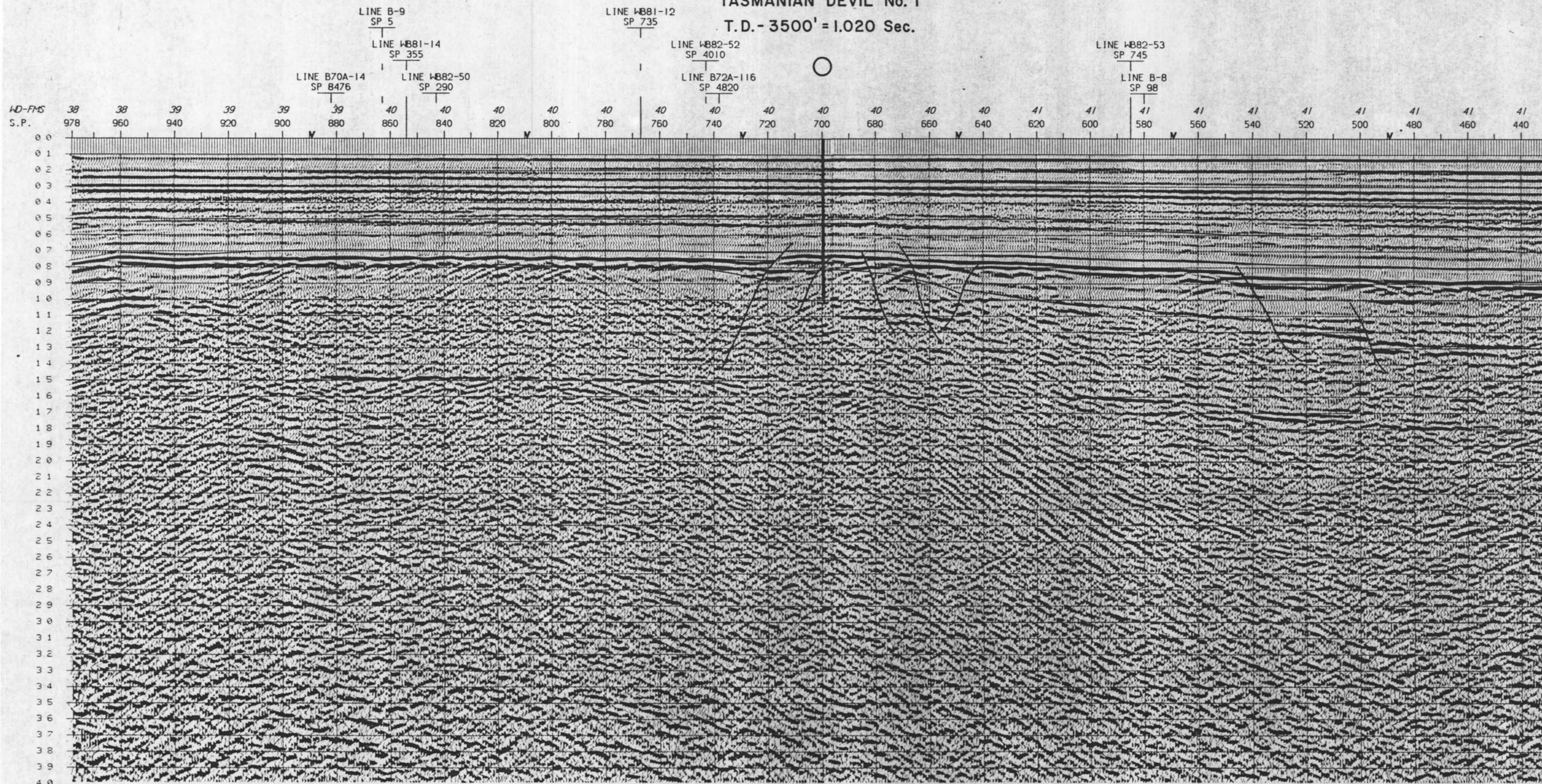
SP 569

TIME	VRMS
0	1490
120	1490
350	1670
760	2020
1110	2340
1650	3060
2260	3860
3080	4660
4000	4980

SP 489

TIME	VRMS
0	1490
120	1490
400	1670
920	2020
1300	2500
1750	2900
2350	3860
4000	4980

TASMANIAN DEVIL No. 1
T.D. - 3500' = 1.020 Sec.



TOP OLIGOCENE
NEAR BASE OLIGOCENE
EVCM
L.M. DIVERSUS