

# VERTICAL SEISMIC PROFILE

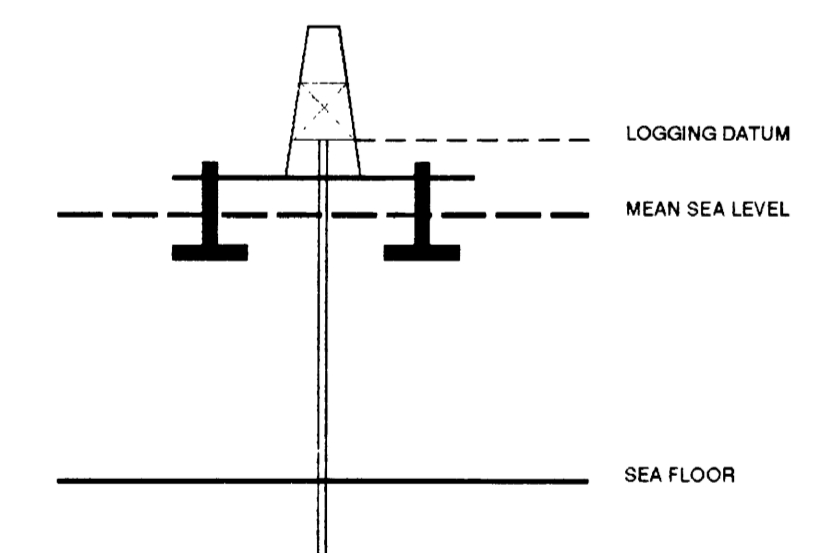
ZERO OFFSET VSP PLOT 5  
WAVESHAPING AND CORRIDOR STACK

Company: BHP PETROLEUM  
Well: MINERVA 1  
Field: EXPLORATION  
Country: AUSTRALIA  
Reference No: 560896 Interval: 2405.00 to 551.00  
Date Logged: 05-04-93 Date Processed: 20-04-94  
Location: 38 42 12 23" S 142 57 12 34" E  
Elevations: KB: 25.30 DF: 25.00 GL: -57.00  
Permanent Datum: MSL Depth Units: METRES  
FIELD RECORDING: Engineer M.HELWIG Location VEA Program Version 32.4  
COMPUTATION: Analyst A.WIBSONO Centre SYJ Baseline 5.5

The well name, location and borehole reference data were furnished by the customer.

All interpretations are opinions based on electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any of the data. In the case of gross or well negligence on our part, we shall be liable to the extent of our legal liability. We shall not be responsible for any loss, costs, damages or expenses incurred or incurred in connection with the use of the data or the use of our equipment or services. Our employees are also subject to Clause 9 of our General Terms and Conditions as set out in our current Price Schedule.

ELEVATION ABOVE MEAN SEA LEVEL  
Logging Datum: 25.00  
Seismic Reference Datum: 0.00



Total Number of Levels: 100  
Depth Reference: SRD  
Time Reference: SRD

Run	Date	Tool Type	Bit Size	Depth	Casing Size	Top Depth	Bottom Depth
1	14-03-93	AS				1183 M	551 M
2	21-03-93	AS				1793 M	1196 M
3	25-03-93	AS				2064 M	1793 M
4	05-04-93	AS				2112 M	2064 M

VSP Run	Date	Gun Offset	Hydro Offset	Gun Elevation	Hydro Elevation	Apimuth	Hydro Apimuth
1	14-03-93	47 M	47 M	7 M BELOW MSL	14 M BELOW MSL	50	50
2	22-03-93	47 M	47 M	7 M BELOW MSL	14 M BELOW MSL	50	50

**\* CORRIDOR STACK + AGC \***  
AGC WINDOW : 300 MS  
POLARITY (S.E.G.) : REVERSE

**\* CORRIDOR STACK \***  
CORRIDOR WINDOW : 100 MS  
POLARITY (S.E.G.) : REVERSE

**\*\* NMO \*\***  
NORMAL MOVEOUT CORRECTION

PROCESSING SEQUENCE:  
MEDIAN STACK APPLIED  
TRUE AMPLITUDE RECOVERY  
STATIC CORRECTION TO MSL: 9.18 MS  
BAND PASS FILTER : 5-75 HZ  
NORMALISATION GATE : 100 MS  
TIME VARYING GAIN : T/TO\*\*1.00  
DOWNGOING WAVEFIELD SUBTRACTION  
WAVESHAPING DECONVOLUTION:  
5-85 HZ ZERO PHASE WAVELET  
5 LEVEL ENHANCED UPGOING WAVEFIELD  
NORMAL MOVEOUT CORRECTION

VERTICAL SCALE : 10 CM/SEC  
POLARITY (S.E.G.) : REVERSE

**\* CORRIDOR STACK + AGC \***  
AGC WINDOW : 300 MS  
POLARITY (S.E.G.) : NORMAL

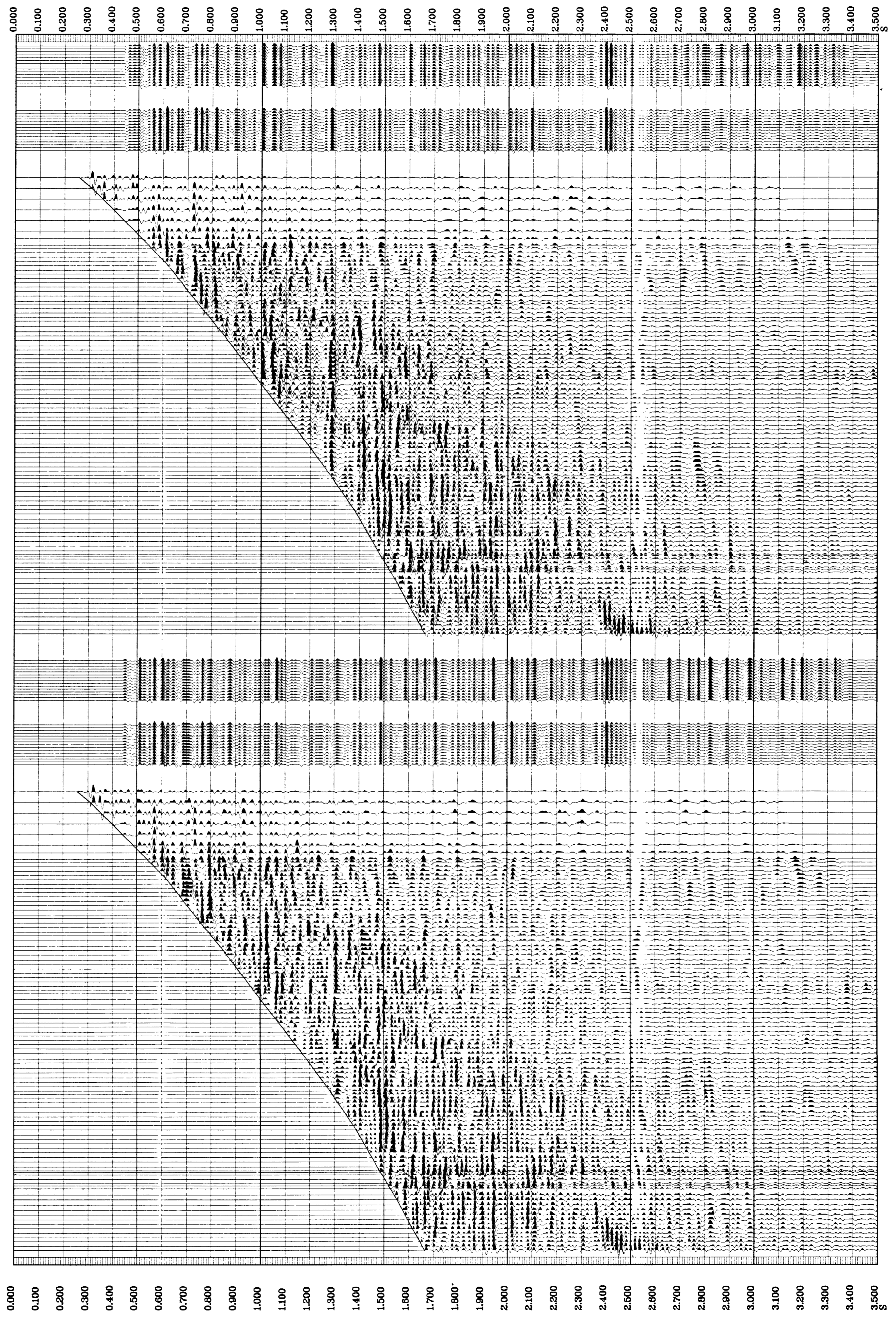
**\* CORRIDOR STACK \***  
CORRIDOR WINDOW : 100 MS  
POLARITY (S.E.G.) : NORMAL

**\*\* NMO \*\***  
NORMAL MOVEOUT CORRECTION

PROCESSING SEQUENCE:  
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TRUE AMPLITUDE RECOVERY  
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NORMAL MOVEOUT CORRECTION

VERTICAL SCALE : 10 CM/SEC  
POLARITY (S.E.G.) : NORMAL

RAW DEPTH	TRUE VERTICAL DEPTH MSL	GEOPHONE OFFSET	TRANSIT TIME S	TRANSIT TIME NMO S	LEVEL NO
0.0	0.0	0.0	0.000	0.000	0
0.0	0.0	0.0	0.000	0.000	0
0.0	0.0	0.0	0.000	0.000	0
0.0	0.0	0.0	0.000	0.000	0
0.0	0.0	0.0	0.000	0.000	0
0.0	0.0	0.0	0.000	0.000	0
1497.0	1381.3	21.1	0.588	1.131	51
0.0	0.0	0.0	0.000	0.000	0
0.0	0.0	0.0	0.000	0.000	0
0.0	0.0	0.0	0.000	0.000	0
0.0	0.0	0.0	0.000	0.000	0
0.0	0.0	0.0	0.000	0.000	0
0.0	0.0	0.0	0.000	0.000	0
259.0	235.0	1.0	0.137	0.258	99
300.0	273.0	1.2	0.157	0.310	98
350.0	325.0	1.4	0.180	0.355	97
400.0	375.0	1.6	0.201	0.399	96
450.0	425.0	1.8	0.223	0.443	95
500.0	475.0	2.0	0.245	0.487	94
550.0	525.0	2.1	0.259	0.528	93
600.0	575.0	2.3	0.279	0.555	91
650.0	625.0	2.5	0.296	0.580	89
700.0	675.0	2.6	0.312	0.603	87
750.0	725.0	2.8	0.325	0.650	85
800.0	775.0	2.9	0.341	0.676	83
850.0	825.0	3.1	0.357	0.702	81
900.0	875.0	3.2	0.374	0.748	79
950.0	925.0	3.3	0.388	0.775	78
1000.0	975.0	3.5	0.400	0.808	75
1050.0	1025.0	3.7	0.417	0.830	73
1100.0	1075.0	3.9	0.430	0.859	71
1150.0	1125.0	4.1	0.443	0.885	69
1200.0	1175.0	4.1	0.442	0.883	68
1250.0	1225.0	4.2	0.456	0.909	67
1300.0	1275.0	4.4	0.469	0.937	65
1350.0	1325.0	4.6	0.485	0.963	63
1400.0	1375.0	4.7	0.493	0.965	61
1450.0	1425.0	4.7	0.495	1.002	59
1500.0	1475.0	4.9	0.510	1.019	57
1550.0	1525.0	4.9	0.524	1.046	56
1600.0	1575.0	5.1	0.532	1.062	54
1650.0	1625.0	5.1	0.546	1.080	52
1700.0	1675.0	5.1	0.558	1.111	50
1750.0	1725.0	5.1	0.568	1.141	48
1800.0	1775.0	5.1	0.577	1.172	46
1850.0	1825.0	5.1	0.581	1.200	44
1900.0	1875.0	5.1	0.585	1.228	42
1950.0	1925.0	5.1	0.588	1.244	40
2000.0	1975.0	5.1	0.591	1.271	38
2050.0	2025.0	5.1	0.594	1.293	36
2100.0	2075.0	5.1	0.597	1.314	34
2150.0	2125.0	5.1	0.599	1.343	32
2200.0	2175.0	5.1	0.601	1.368	30
2250.0	2225.0	5.1	0.603	1.388	28
2300.0	2275.0	5.1	0.604	1.401	26
2350.0	2325.0	5.1	0.605	1.421	24
2400.0	2375.0	5.1	0.605	1.440	22
2450.0	2425.0	5.1	0.606	1.453	20
2500.0	2475.0	5.1	0.606	1.463	18
2550.0	2525.0	5.1	0.607	1.475	16
2600.0	2575.0	5.1	0.607	1.486	14
2650.0	2625.0	5.1	0.607	1.496	12
2700.0	2675.0	5.1	0.607	1.507	10
2750.0	2725.0	5.1	0.608	1.518	8
2800.0	2775.0	5.1	0.608	1.531	6
2850.0	2825.0	5.1	0.608	1.546	5
2900.0	2875.0	5.1	0.608	1.565	3



COMPANY BHP PETROLEUM  
FIELD EXPLORATION  
WELL MINERVA 1  
COUNTRY AUSTRALIA