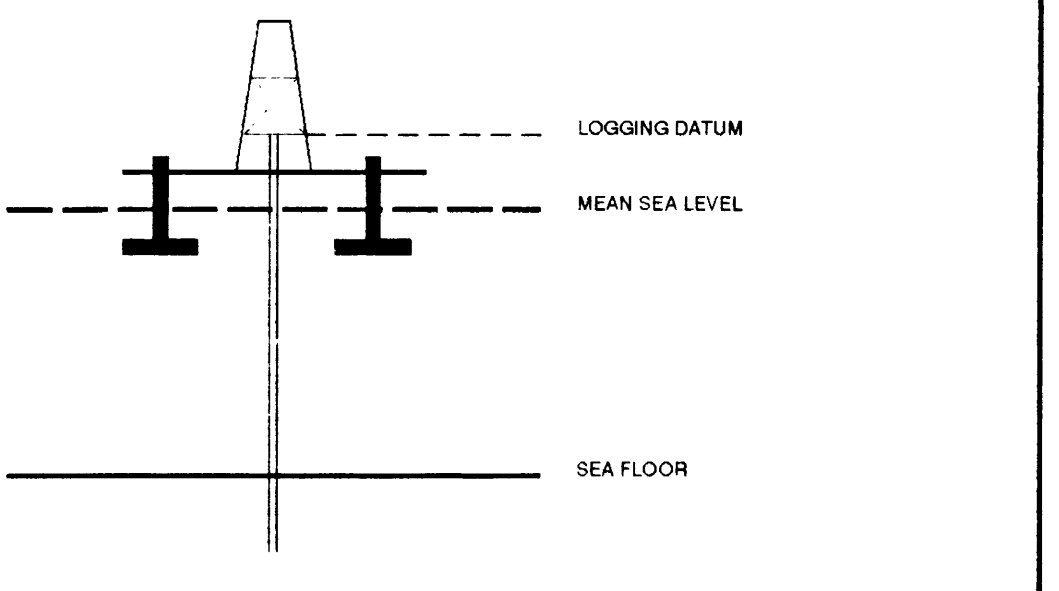


# VERTICAL SEISMIC PROFILE

## ZERO OFFSET VSP PLOT 1 STACKED DATA

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 WISONSU Centre: SYJ Baseline: 5.5

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/ Depth	Top Depth	Bottom Depth
1	14-03-93	AS	1183 M		551 M	
2	21-03-93	AS			1793 M	1195 M
3	25-03-93	AS			2084 M	1793 M
4	05-04-93	AS			2112 M	2084 M

VSP Run	Date	Gun Offset	Hydro Offset	Gun Elevation	Hydro Elevation	Gun Azimuth	Hydro Azimuth
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

REMARKS

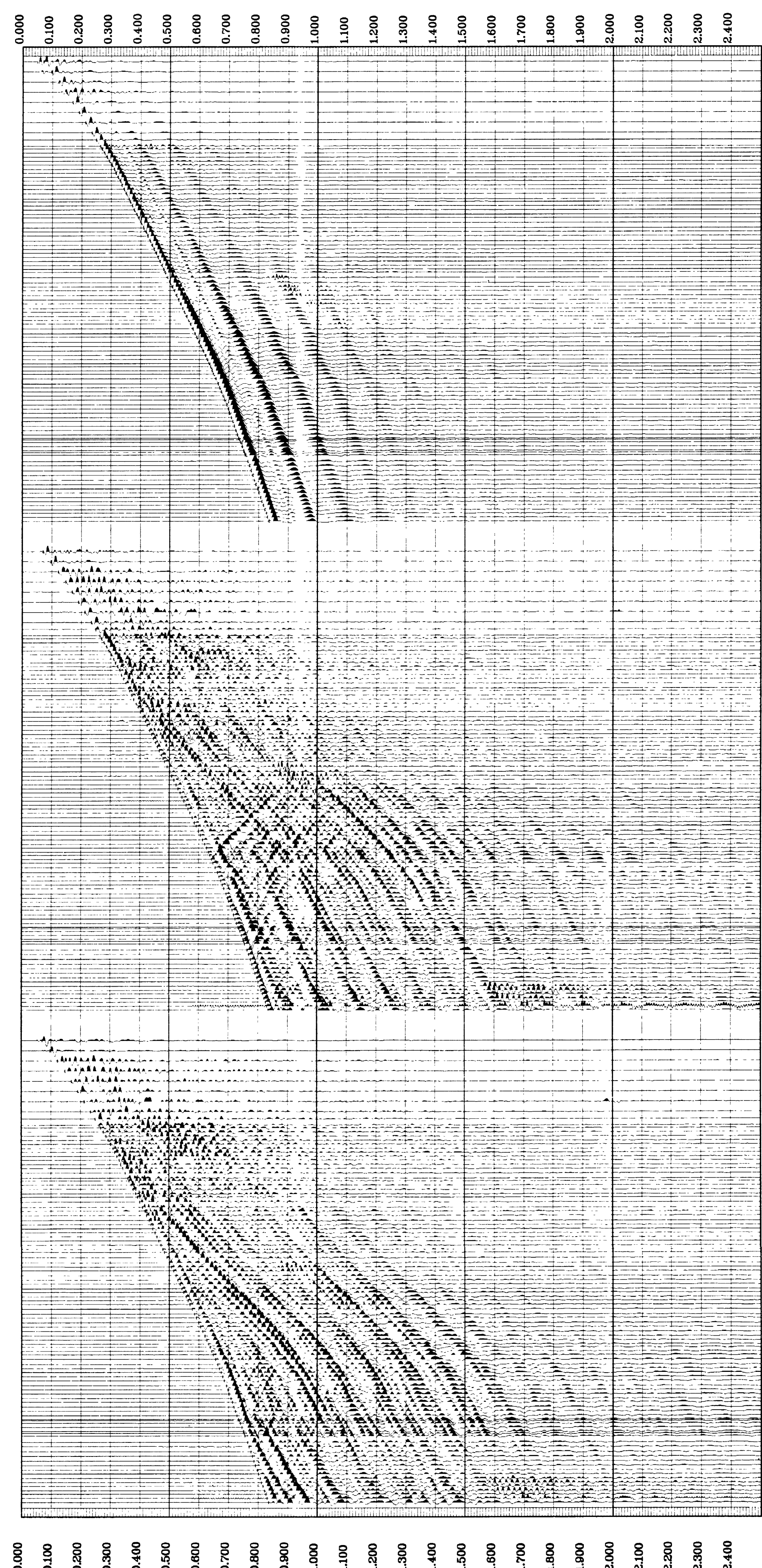
The well name, location and borehole reference data were furnished by the customer. All interpretations are common based on references from electrical or other measurements and do not guarantee the accuracy or completeness of any interpretation and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expense incurred or sustained by anyone resulting from any interpretation made by any of our clients, agents or employees. These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

**\*\* MEDIAN STACK \*\***  
 (DOWNHOLE DATA)  
 MEDIAN COHERENCY STACK OF THE DOWNHOLE VERTICAL COMPONENT.  
 PROCESSING SEQUENCE:  
 MEDIAN STACK APPLIED  
 BANDPASS FILTER : 4 - 120 HZ  
 VERTICAL SCALE : 10 CM/SEC  
 POLARITY (S.E.G.) : REVERSE  
 TIMES REFERENCED TO HYDROPHONE

**\*\* MEDIAN STACK \*\***  
 (DOWNHOLE DATA)  
 MEDIAN COHERENCY STACK OF THE DOWNHOLE 2. HORIZONTAL COMPONENT  
 PROCESSING SEQUENCE:  
 MEDIAN STACK APPLIED  
 BANDPASS FILTER : 4 - 120 HZ  
 VERTICAL SCALE : 10 CM/SEC  
 POLARITY (S.E.G.) : REVERSE  
 TIMES REFERENCED TO HYDROPHONE

**\*\* MEDIAN STACK \*\***  
 (DOWNHOLE DATA)  
 MEDIAN COHERENCY STACK OF THE DOWNHOLE 1. HORIZONTAL COMPONENT  
 PROCESSING SEQUENCE:  
 MEDIAN STACK APPLIED  
 BANDPASS FILTER : 4 - 120 HZ  
 VERTICAL SCALE : 10 CM/SEC  
 POLARITY (S.E.G.) : REVERSE  
 TIMES REFERENCED TO HYDROPHONE

RAW DEPTH M	TRUE VERTICAL DEPTH MSL M	TRANSIT TIME S	LEVEL NO	MAX AMPLITUDE	MIN AMPLITUDE
150.0	150.0	0.072	101	41219.748	-38678.131
200.0	170.0	0.098	100	16185.191	-14546.484
250.0	220.0	0.123	99	16259.853	-16526.486
300.0	270.0	0.148	98	16988.083	-14606.990
350.0	320.0	0.171	97	9526.965	-5288.521
400.0	370.0	0.192	96	3714.106	-4268.803
450.0	420.0	0.214	95	7859.833	-1073.577
500.0	470.0	0.235	94	7272.193	-5649.094
550.0	520.0	0.254	93	5392.724	-4370.885
600.0	570.0	0.273	92	6776.196	-5096.375
650.0	620.0	0.290	91	4124.790	-2813.454
700.0	670.0	0.305	90	4656.710	-1570.086
750.0	720.0	0.319	89	2301.822	-2099.077
800.0	770.0	0.332	88	2970.321	-1861.189
850.0	820.0	0.344	87	2618.477	-1897.274
900.0	870.0	0.352	86	2983.098	-1391.507
950.0	920.0	0.364	85	2668.428	-1397.264
1000.0	970.0	0.372	84	1848.913	-1379.588
1050.0	1020.0	0.383	83	2077.991	-1176.203
1100.0	1070.0	0.411	82	1736.681	-1216.692
1150.0	1120.0	0.424	81	1748.281	-1049.533
1200.0	1170.0	0.438	80	1208.922	-645.987
1250.0	1220.0	0.453	79	1036.333	870.453
1300.0	1270.0	0.466	78	163.201	-784.584
1350.0	1320.0	0.479	77	789.013	-689.090
1400.0	1370.0	0.490	76	491.884	-714.754
1450.0	1420.0	0.500	75	621.659	-527.296
1500.0	1470.0	0.513	74	569.783	524.856
1550.0	1520.0	0.521	73	161.842	-485.233
1600.0	1570.0	0.529	72	106.731	-172.617
1650.0	1620.0	0.535	71	180.508	387.198
1700.0	1670.0	0.539	70	460.478	-146.954
1750.0	1720.0	0.542	69	302.273	-320.440
1800.0	1770.0	0.546	68	204.478	-226.119
1850.0	1820.0	0.549	67	382.690	-279.446
1900.0	1870.0	0.554	66	270.851	-268.688
1950.0	1920.0	0.557	65	241.854	-213.570
2000.0	1970.0	0.559	64	262.355	-244.979
2050.0	2020.0	0.562	63	231.697	-216.739
2100.0	2070.0	0.564	62	226.620	-189.662
2150.0	2120.0	0.566	61	193.259	-161.756
2200.0	2170.0	0.567	60	227.111	-160.408
2250.0	2220.0	0.568	59	226.977	-161.661
2300.0	2270.0	0.569	58	260.186	-181.427
2350.0	2320.0	0.570	57	229.779	-179.540
2400.0	2370.0	0.570	56	225.563	-139.514
2450.0	2420.0	0.570	55	225.088	-152.924
2500.0	2470.0	0.571	54	219.909	-159.809
2550.0	2520.0	0.571	53	184.908	-125.265
2600.0	2570.0	0.571	52	183.448	-139.927
2650.0	2620.0	0.572	51	206.487	-131.990
2700.0	2670.0	0.572	50	206.405	-121.308
2750.0	2720.0	0.572	49	211.486	-123.605
2800.0	2770.0	0.572	48	202.777	-122.097
2850.0	2820.0	0.572	47	188.506	-117.239



COMPANY BHP PETROLEUM  
 FIELD EXPLORATION  
 WELL MINERVA 1  
 COUNTRY AUSTRALIA