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BHP PETROLEUM
WELL SEISMIC PROCESSING REPORT
Zero Offset VSP and Geogram

MINERVA-2A

FIELD : WILDCAT

COUNTRY : AUSTRALIA

COORDINATES : 038 43' 04.54" S
 : 142 57' 20.80" E

LOCATION : OTWAY BASIN

DATE OF SURVEY : 14-OCTOBER-1993

REFERENCE NO. : 560960

INTERVAL : 2163 - 110 M



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1. Introduction

A vertical seismic profile was recorded with the Combinable Seismic Imager tool (CSI) at the *Minerva-2A* well. The data was processed using the conventional zero offset processing chain using only the vertical component.

2. Data Acquisition

The data was acquired in a single logging run using the three component Combinable Seismic Imager tool (CSI). An array of three sleeve air guns were used as the source. The gun was positioned 5 meters below mean sea level . Recording was made on the Schlumberger Maxis 500 Unit using DLIS format .

Table 1. Survey Parameters

Elevation of KB	25.3 M
Elevation of DF	25.0 M
Elevation of GL	- 84.0 M
Total Depth	2160 M
Energy Source	3 X 150 cu in. airguns
Source Offset	47 M
Source Depth	5 M below MSL
Reference Sensor	Hydrophone
Hydrophone Offset	47 M
Hydrophone Depth	12 M below MSL
Source & Hyd. Azimuth	50 Degr.

3. Sonic Calibration Processing

3.1 Sonic Calibration

A 'drift' curve is obtained using the sonic log and the vertical check level times. The term 'drift' is defined as the seismic time (from check shots) minus the sonic time (from integration of edited sonic). Commonly the word 'drift' is used to identify the above difference, or to identify the gradient of drift versus increasing depth, or to identify a difference of drift between two levels.

The gradient of drift, that is the slope of the drift curve, can be negative or positive.

$$\frac{\Delta \text{drift}}{\Delta \text{depth}} < 0$$

For a negative drift the sonic time is greater than the seismic time over a certain section of the log.

For a positive drift $\frac{\Delta \text{drift}}{\Delta \text{depth}} > 0$, the sonic time is less than the seismic time over a certain section of the log.

The drift curve, between two levels, is then an indication of the error on the integrated sonic or an indication of the amount of correction required on the sonic to have the TTI of the corrected sonic match the check shot times.

Two methods of correction to the sonic log are used.

1. Uniform or block shift. This method applies a uniform correction to all the sonic values over the interval. This uniform correction is applied in the case of positive drift and is the average correction represented by the drift curve gradient expressed in $\mu\text{sec}/\text{ft}$.

2. ΔT Minimum. In the case of negative drift a second method is used, called ΔT minimum. This applies a differential correction to the sonic log, where it is assumed that the greatest amount of transit time error is caused by the lower velocity sections of the log. Over a given interval the method will correct only Δt values which are higher than a threshold, the Δt_{min} . Values of Δt which are lower than the threshold are not corrected. The correction is a reduction of the excess of Δt over Δt_{min} , $\Delta t - \Delta t_{\text{min}}$.

$\Delta t - \Delta t_{\text{min}}$ is reduced through multiplication by a reduction coefficient which remains constant over the interval. This reduction coefficient, named G, can be defined as:

$$G = 1 + \frac{\text{drift}}{\int (\Delta t - \Delta t_{\text{min}}) dZ}$$

Where drift is the drift over the interval to be corrected and the value $\int (\Delta t - \Delta t_{\text{min}}) dZ$ is the time difference between the integrals of the two curves Δt and Δt_{min} , only over the intervals where $\Delta t > \Delta t_{\text{min}}$.

Hence the corrected sonic: $\Delta t = G(\Delta t - \Delta t_{\text{min}}) + \Delta t_{\text{min}}$.

3.2 Open Hole Logs

The sonic log has been recorded from 2163.0 to 601.0 metres below KB. This sonic log has been edited to alleviate cycle skipping and spiky data. The density log has also been edited to take into account bad hole condition.

The gamma ray and caliper logs are included as correlation curves.

3.3 Correction to Datum and Velocity Modelling

The sonic calibration processing has been referenced to mean sea level which the seismic reference datum . Static corrections are applied to correct for source offset and source depth. This involves using a water velocity of 1480 m/sec.

3.4 Sonic Calibration Results

The top of the sonic log (601.0 metres below KB) is chosen as the origin for the calibration drift curve.

The drift curve is the correction imposed upon the sonic log. The adjusted sonic curve is considered to be the best result using the available data. A list of shifts used on the sonic data is given below.

Table 2: Sonic Drift

Depth Interval (metres below KB)	Block Shift $\mu\text{sec}/\text{mt}$	Δt_{min} $\mu\text{sec}/\text{mt}$	Equiv Block shift $\mu\text{sec}/\text{mt}$
0-601	0	-	0
601-759	23.44	-	23.44
759-1438	-	316.40	-5.60
1438-1542	20.22	-	20.22
1542-1721	2.78	-	2.78
1721-2163	-	240.52	-18.79

4. Synthetic Seismogram Processing

GEOGRAM plots were generated using 25, 35, and 45 Hz zero phase ricker wavelets.

The presentations include both normal and reverse polarity on a time scale of 10 cm/sec.

GEOGRAM processing produces synthetic seismic traces based on reflection coefficients generated from sonic and density measurements in the well-bore. The steps in the processing chain are the following:

- Depth to time conversion
- Reflection coefficient generation
- Attenuation coefficient calculation
- Convolution
- Output

4.1 Depth to Time Conversion

Open hole logs are recorded from the bottom to top with a depth index. This data is converted to a two-way time index and flipped to read from the top to bottom in order to match the seismic section.

4.2 Primary Reflection Coefficients

Sonic and density data are averaged over chosen time intervals (normally 2 or 4 milliseconds). Reflection coefficients are then computed using:

$$R = \frac{\rho_2 \cdot v_2 - \rho_1 \cdot v_1}{\rho_2 \cdot v_2 + \rho_1 \cdot v_1}$$

where:

ρ_1 = density of the layer above the reflection interface

ρ_2 = density of the layer below the reflection interface

v_1 = compressional wave velocity of the layer above the reflection interface

v_2 = compressional wave velocity of the layer below the reflection interface

This computation is done for each time interval to generate a set of primary reflection coefficients without transmission losses.

4.3 Primaries with Transmission Loss

Transmission loss on two-way attenuation coefficients is computed using:

$$A_n = (1 - R_1^2).(1 - R_2^2).(1 - R_3^2)...(1 - R_n^2)$$

A set of primary reflection coefficients with transmission loss is generated using:

$$Primary_n = R_n.A_{n-1}$$

4.4 Primaries plus Multiples

Multiples are computed from these input reflection coefficients using the transform technique from the top of the well to obtain the impulse response of the earth. The transform outputs primaries plus multiples.

4.5 Multiples Only

By subtracting previously calculated primaries from the above result we obtain multiples only.

4.6 Wavelet

A theoretical wavelet is chosen to use for convolution with the reflection coefficients previously generated. Choices available include:

- Klauder wavelet
- Ricker zero phase wavelet
- Ricker minimum phase wavelet
- Butterworth wavelet
- User defined wavelet

Time variant Butterworth filtering can be applied after convolution.

4.7 Polarity Convention

An increase in acoustic impedance gives a positive reflection coefficient, is written to tape as a negative number and is displayed as a white trough under normal polarity. Polarity conventions are displayed in figure 1.

4.8 Convolution

The standard procedure of convolving the wavelet with reflection coefficients; the output is the synthetic seismogram.

5. VSP Processing

The vertical component of the VSP data was processed using the conventional zero offset vertical incident processing chain. The following subsections describe the main aspects of the processing chain.

5.1 Stacking

A median stack was performed on the vertical and horizontal component data. The surface sensor (hydrophone) breaks are used as the zero time for stacking. The break time of each trace is recomputed after stacking.

The data quality is fairly good with the vertical component stacks displaying a consistent signature and a high signal to noise ratio, as seen on Pl01 1.

5.2 Spherical Divergence Correction and Bandpass Filter

A bandpass filter of 5-100 hertz bandwidth was applied and time varying gain function of the exponential form :

$$\text{GAIN}(T) = \left(\frac{T}{T_0}\right)^{\alpha}$$

where T is the recorded time, T_0 is the first break time and $\alpha = 1.0$

Trace equalisation was applied by normalising the RMS amplitude of the first break to correct for transmission losses of the direct wave. A normalisation window of 100 millisecs was used (see plot 2).

5.3 Velocity filter

The downgoing coherent energy is estimated using a seven levels median velocity filter. The filter array is moved down one level after each computation and the process is repeated level by level over the entire dataset. As a result, the deepest and shallowest levels are lost because of edge effects.

The residual wavefield is obtained by subtracting the downgoing coherent energy from the total wavefield. The residual wavefield is dominated by reflected compressional events (plot 3).

The upgoing wavefield is enhanced by making a median stack of the upgoing aligned traces using a 5 levels filter. The data is now displayed in two way time (plot 3).

5.4 Waveshaping Deconvolution

The waveshaping deconvolution operator is a double sided operator and is designed trace by trace opening 20 ms before the first break with a window length of 700 ms. The desired outputs were chosen to be zero phase with a band width of 10-60 Hz. Once the design is made upon the downgoing wavefield, it is applied to the downgoing and subtracted wavefield at the same level. The upgoing compressional wavefield is enhanced in an exactly analogous manner to before.

The result of waveshaping deconvolution on the residual wavefield is shown in Plot 4. The deconvolution is applied before any coherency enhancement in order to collapse the multiple sequence of shear arrivals, diffractions or out of plane reflections.

A corridor stack was computed on the data after zero phase waveshaping deconvolution by defining a timing window 100 msec wide along the time depth curve and stacking the data onto a single trace. This trace under normal circumstances should satisfy the assumption of one dimensionality and provide the best seismic representation of the borehole. This is displayed on Plot 5 .

5.5 VSP Acoustic Impedance Inversion

The zero phase waveshaping should permit a better interpretation of acoustic contrast, hence the data used for the inversion has been taken from the VSP after zero phase waveshaping deconvolution.

The inversion technique is based on entropy minimisation of the reflection coefficient series. In other words, the algorithm chooses the sparsest sequences of reflection coefficients as the preferred solution. The low frequency trend is extracted from the time depth curve such that the inversion technique is achieved without any input from the logged data.

It is important to point out that the acoustic impedance inversion is obtained without any input from the logged data. The quality of the inversion can be assessed by the similarity of the match between the logged impedance and inverted impedance.

Plots 6 and 7 are composite displays of the VSP data, inverted impedance, logged impedance and synthetic seismograms. These displays are a guide to the tie between the geograms and corridor stack.

There is a fairly good tie between the synthetic seismogram and VSP. There are some subtle variations on the Amplitude of the events. The VSP provides a measure of the earth filter effect whilst the synthetic makes some very basic assumptions to approximate the earth filter effect.

A Summary of Geophysical Listings

Five geophysical data listings are appended to this report. Following is a brief description of the format of each listing.

A1 Geophysical Airgun Report

1. Level number: the level number starting from the top level (includes any imposed shots).
2. Measured depth from KB: *dkb*, the depth in metres from kelly bushing.
3. Vertical depth form SRD: *dsrd*, the depth in metres from seismic reference datum.
4. Observed travel time HYD to GEO: *tim0*, the transit time picked from the stacked data by subtracting the surface sensor first break time from the downhole sensor first break time.
5. Vertical travel time SRC to GEO: *timv*, is corrected for source to hydrophone distance and for source offset.
6. Vertical travel time SRD to GEO: *shtm*, is *timv* corrected for the vertical distance between source and datum.
7. Average velocity SRD to GEO: the average seismic velocity from datum to the corresponding checkshot level, $\frac{dsrd}{shtm}$.
8. Delta depth between shots: $\Delta depth$, the vertical distance between each level.
9. Delta time between shots: $\Delta time$, the difference in vertical travel time (*shtm*), between each level.
10. Interval velocity between shots: the average seismic velocity between each level, $\frac{\Delta depth}{\Delta time}$.

A2 Drift Computation Report

1. Level number: the level number starting from the top level (includes any imposed shots).
2. Vertical depth from KB: the depth in metres from kelly bushing
3. Vertical depth from SRD: the depth in metres from seismic reference datum.
4. Vertical travel time SRD to GEO: the calculated vertical travel time from datum to downhole geophone (see column 7, Geophysical Airgun Report).
5. Integrated raw sonic time: the raw sonic log is integrated from top to bottom and listed at each level. An initial value at the top of the sonic log is set equal to the checkshot time at that level. This may be an imposed shot if a shot was not taken at the top of the sonic.
6. Computed drift at level: the checkshot time minus the integrated raw sonic time.
7. Computed blk-shft correction: the drift gradient between any two checkshot levels
$$\left(\frac{\Delta \text{drift}}{\Delta \text{depth}} \right)$$

A3 Sonic Adjustment Parameter Report

1. Knee number: the knee number starting from the highest knee. (The first knees listed will generally be at SRD and the top of sonic. The drift imposed at these knees will normally be zero.)
2. Vertical depth from KB: the depth in metres from kelly bushing
3. Vertical depth from SRD: the depth in metres from seismic reference datum.
4. Drift at knee: the value of drift imposed at each knee.
5. Blockshift used: the change in drift divided by the change in depth between any two levels.
6. Delta-T minimum used: see section 4 of report for an explanation of Δt_{\min} .
7. reduction factor: see section 4 of report.
8. Equivalent blockshift: the gradient of the imposed drift curve.

A4 Velocity Report

1. Level number: the level number starting from the top level (includes any imposed shots).
2. Vertical depth from KB: the depth in metres from kelly bushing.
3. Vertical depth from SRD: the depth in metres from seismic reference datum.
4. Vertical travel time SRD to GEOPH: the vertical travel time from SRD to downhole geophone (see column 7, Geophysical Airgun Report)
5. Integrated adjusted sonic time: the adjusted sonic log is integrated from top to bottom. An initial value at the top of the sonic is set equal the checkshot time at that level. (the adjusted sonic log is the drift corrected sonic log.)
6. Drift=shot time-raw sonic: the check shot time minus the raw integrated sonic time.
7. Residual=shot time-adj sonic: the check shot time minus the adjusted integrated sonic time. This is the difference between calculated drift and the imposed drift.
8. Adjusted interval velocity: the interval velocity calculated from the integrated adjusted sonic time at each level.

A5 Time Converted Velocity Report

the data in this listing has been resampled in time.

1. Two way travel time from SRD: this is the index for the data in this listing. The first value is at SRD (0 millisecs) and the sampling rate is 2 millisecs.
2. Measured depth from KB: the depth from KB at each corresponding value of two way time.
3. Vertical depth from SRD: the vertical depth from SRD at each corresponding value of two way time.
4. Average velocity SRD to GEO: the vertical depth from SRD divided by half the two way time.
5. RMS velocity: the root mean square velocity from datum to the corresponding value of two way time.

$$v_{rms} = \sqrt{\sum_1^n v_i^2 t_i / \sum_1^n t_i}$$

where v_i is the velocity between each 2 millisecs interval.

6. First normal moveout: the correction time in millisecs to be applied to the two way travel time for a specified moveout distance (default = 1000 M).

$$\Delta t = \sqrt{t^2 + \left(\frac{X}{v_{rms}}\right)^2} - t$$

where:

- Δt = normal moveout (secs)
- X = moveout distance (metres)
- t = two way time (secs)
- v_{rms} = rms velocity (metres / sec)

7. Second normal moveout: the correction time in millisecs to be applied to the two way travel time for a specified moveout distance (default = 1500 M).

8. Third normal moveout: the correction time in millisecs to be applied to the two way travel time for a specified moveout distance (default = 2000 M)

9. Interval velocity: the velocity between each sampled depth. Typically, the sampling rate is 2 millisecs two way time, (1 millisec one way time) therefore the interval velocity will be equal to the depth increment divided by 0.002. It is equivalent to column 9 from the Velocity Report.

GEOGRAM PLOTS

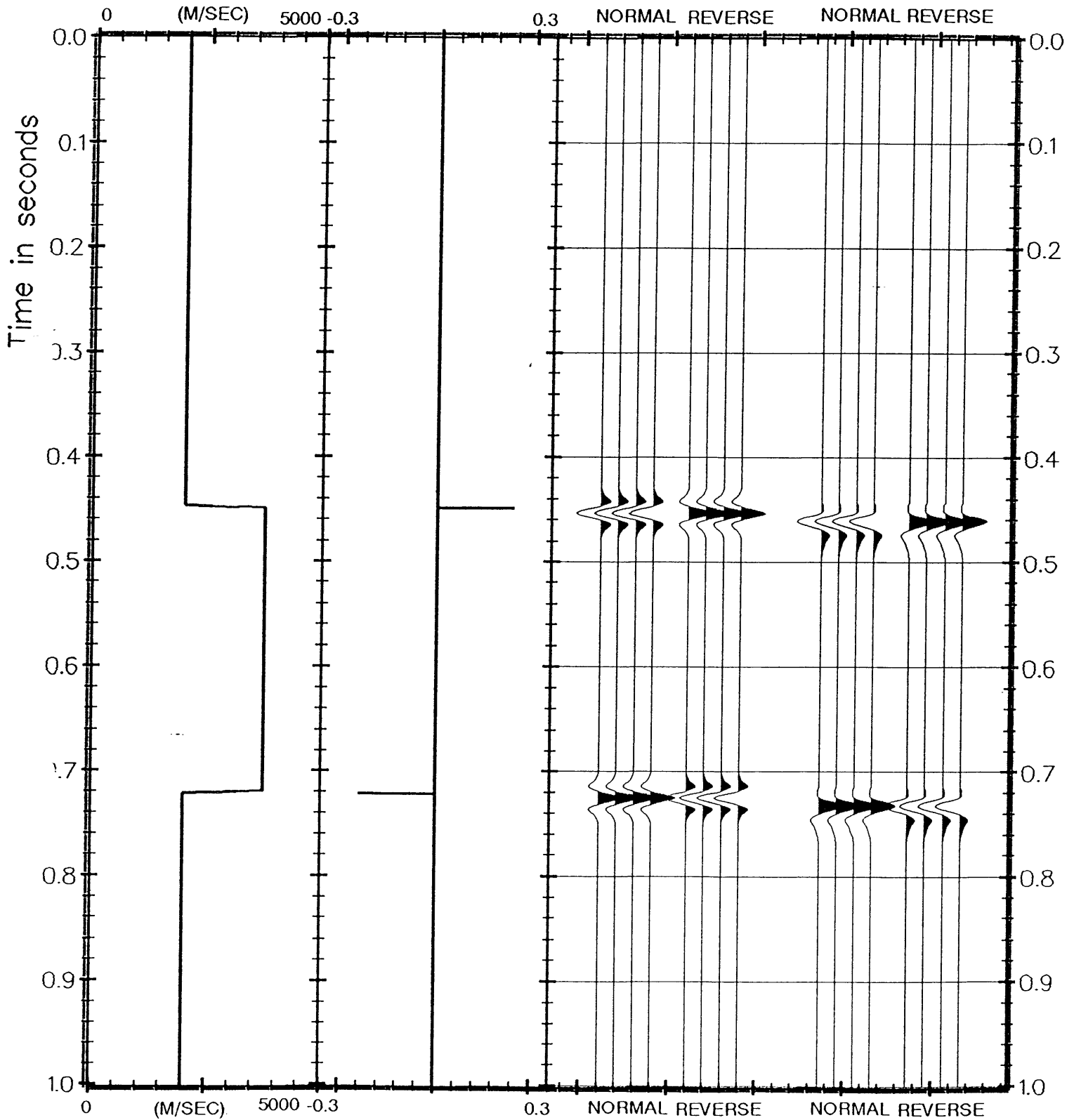
Drift Corrected Sonic
Seismic Calibration Log
25 hz zero phase Geogram 10 cm/sec
35 hz zero phase Geogram 10 cm/sec
45 hz zero phase Geogram 10 cm/sec

VSP PLOTS

Plot 1	Stacked data
Plot 2	Amplitude Recovery
Plot 3	Velocity Filter
Plot 4	Waveshaping Deconvolution Zero Phase
Plot 5	Waveshaping Deconvolution - Corridor Stack...
Plot 6	VSP and Geogram Composite - normal polarity 10 cm/sec
Plot 7	VSP and Geogram Composite - reverse polarity 10 cm/sec

SCHLUMBERGER (SEG-1976) WAVELET POLARITY CONVENTION

INTERVAL VELOCITY REFLECTION COEFF. ZERO PHASE MINIMUM PHASE



Shots

ANALYST: Z...ATELIS

9-JUN-94 10:34:..

PROGRAM: GSHOT 007.E08

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GEOPHYSICAL AIRGUN REPORT

COMPANY : BHP PETROLEUM
WELL : MINERVA -2A
FIELD : WILDCAT
COUNTRY : AUSTRALIA
REFERENCE: SYJ-560960

LONG DEFINITIONS

GLOBAL
 KB - Elevation of the KELLY-BUSHING Above MSL or MWL
 SRD - Elevation of the Seismic Reference Datum Above MSL or MWL
 EKB - Elevation of Kelly Bushing
 GL - Elevation of Users Reference (Generally Ground Level) Above SRD
 VELHYD - VELOCITY OF THE MEDIUM BETWEEN THE SOURCE AND THE HYDROPHONE
 VELSUR - VELOCITY OF THE MEDIUM BETWEEN THE SOURCE AND THE SRD

MATRIX
 GUNELZ - SOURCE ELEVATION ABOVE SRD (ONE FOR THE WHOLE JOB; OR ONE PER SHOT)
 GUNEWZ - SOURCE DISTANCE FROM THE BOREHOLE AXIS IN EW DIRECTION (CF. GUNELZ)
 GUNNSZ - SOURCE DISTANCE FROM THE BOREHOLE AXIS IN NS DIRECTION (CF. GUNELZ)
 HYDELZ - HYDROPHONE ELEVATION ABOVE SRD (CF. GUNELZ)
 HYDEWZ - HYDROPHONE DISTANCE FROM THE BOREH AXIS IN EW DIRECTION (CF GUNELZ)
 HYDNSZ - HYDROPHONE DISTANCE FROM THE BOREH AXIS IN NS DIRECTION (CF GUNELZ)
 TRKTHYD - TRAVEL TIME FROM THE HYDROPHONE TO THE SOURCE
 TRTSRD - TRAVEL TIME FROM THE SOURCE TO THE SRD
 DEWVEL - DEVIATED WELL DATA PER SHOT : MEAS. DEPTH, VERT. DEPTH, EW, NS

SAMPLED

SHOT.GSH - Shot number
 DKB.GSH - Measured Depth from Kelly-Bushing
 DSRD.GSH - Depth from SRD
 DGL.GSH - Vertical Depth Relative to Ground Level (User's Reference)
 TIMO.GSH - Tie In Memorized Output
 TIMV.GSH - Vertical Travel Time from the Source to the Geophone
 SHTM.GSH - Shot time (WST)
 AVGV.GSH - Average Seismic Velocity
 DELZ.GSH - Depth Interval between Successive Shots
 DELT.GSH - Travel Time Interval between Successive Shots
 INTV.GSH - Internal Velocity, Average

(GLOBAL PARAMETERS)

ELEV OF KB AB. MSL (WST)	KB	:	25.0000	M
ELEV OF SRD AB. MSL (WST)	SRD	:	0	M
Elevation of Kelly Bushi	EKB	:	25.0000	M
ELEV OF GL AB. SRD (WST)	GL	:	-85.0000	M
VEL SOURCE-HYDRO (WST)	VELHYD	:	1480.00	M/S
VEL SOURCE-SRD (WST)	VELSUR	:	1480.00	M/S

(MATRIX PARAMETERS)

	SOURCE ELV M	SOURCE EW M	SOURCE NS M	HYDRO ELEV M	HYDRO EW M	HYDRO NS M
1	-5.00	36.00	30.21	-12.00	36.00	30.21

TRT MS	HYD-SC MS	SC-SRD MS
1	4.73	3.38

	MD @ KB M	VD @ KB M	VD @ SRD M	E-W COORD M	N-S COORD M
1	110.00	110.00	85.00	0	0
2	500.00	500.00	475.00	0	0
3	600.00	599.11	574.11	.97	.84
4	640.00	639.05	614.05	2.54	-1.59
5	680.00	678.99	653.99	3.85	-1.60
6	720.00	718.93	693.93	3.36	.77
7	760.00	758.87	733.87	4.70	.34
8	800.00	798.81	773.81	5.72	.06
9	840.00	838.75	813.75	6.34	1.55
10	880.00	878.69	853.69	6.15	1.31
11	920.00	918.63	893.63	3.79	3.35
12	960.00	958.57	933.57	1.77	2.62
13	1000.00	998.51	973.51	1.04	2.42
14	1040.00	1038.45	1013.45	-1.91	2.11
15	1080.00	1078.39	1053.39	-3.56	1.13
16	1120.00	1118.33	1093.33	-5.05	1.12
17	1160.00	1158.27	1133.27	-6.57	.52
18	1200.00	1198.21	1173.21	-8.19	1.08
19	1240.00	1238.15	1213.15	-9.83	1.83
20	1280.00	1278.09	1253.09	-11.91	3.89
21	1320.00	1318.03	1293.03	-13.73	3.46
22	1360.00	1357.97	1332.97	-15.03	3.19
23	1400.00	1397.91	1372.91	-16.72	2.09
24	1440.00	1437.85	1412.85	-16.56	3.23
25	1480.00	1477.79	1452.79	-16.49	4.35
26	1520.00	1517.74	1492.74	-15.83	4.87
27	1544.00	1541.70	1516.70	-14.36	4.32
28	1560.00	1557.68	1532.68	-14.11	4.11
29	1580.00	1577.65	1552.65	-13.29	3.92
30	1600.00	1597.62	1572.62	-12.13	3.74
31	1620.00	1617.59	1592.59	-10.91	3.60
32	1640.00	1637.56	1612.56	-9.63	3.54
33	1660.00	1657.53	1632.53	-8.28	3.53

34	1680.00	1677.50	1652.50	6.82	-3.52
35	1700.00	1697.47	1672.47	-5.30	-3.56
36	1724.00	1721.43	1696.43	-3.38	-3.73
37	1750.00	1747.39	1722.39	-1.33	-4.09
38	1770.00	1767.36	1742.36	1.28	-4.55
39	1790.00	1787.33	1762.33	1.99	-5.12
40	1810.00	1807.30	1782.30	3.72	-5.81
41	1840.00	1827.27	1802.27	5.31	-6.65
42	1860.00	1857.23	1832.23	6.05	-7.11
43	1840.00	1837.26	1812.26	7.46	-8.04
44	1860.00	1857.23	1832.23	8.81	-8.99
45	1902.00	1899.17	1874.17	10.27	-10.08
46	1920.00	1917.14	1892.14	11.50	-10.97
47	1940.00	1937.11	1912.11	12.82	-11.88
48	1960.00	1957.08	1932.08	14.11	-13.01
49	1980.00	1977.05	1952.05	15.38	-14.06
50	2000.00	1997.02	1972.02	16.61	-15.16
51	2020.00	2016.99	1991.99	17.91	-16.18
52	2040.00	2036.96	2011.96	19.30	-17.20
53	2060.00	2056.93	2031.93	20.64	-18.30
54	2080.00	2076.90	2051.90	21.84	-19.43
55	2100.00	2096.87	2071.87	23.17	-20.60
56	2120.00	2116.84	2091.84	24.29	-21.87
57	2140.00	2136.81	2111.81	25.40	-22.87
58	2160.00	2156.78	2131.78	26.44	-24.15

LEVEL NUMBER	MEASUR DEPTH FROM KB M	VERTIC DEPTH FROM SRD M	VERTIC DEPTH FROM GL M	OBSERV TRAVEL TIME HYD/GEO MS	VERTIC TRAVEL TIME SRC/GEO MS	VERTIC TRAVEL TIME SRD/GEO MS	AVERAGE VELOC SRD/GEO M/S	DELTA DEPTH BETWEEN SHOTS M	DELTA TIME BETWEEN SHOTS MS	INTERV VELOC BETWEEN SHOTS M/S
1	110.00	85.00	0	57.96	54.05	57.43	1480	390.00	185.36	2104
2	500.00	475.00	390.00	235.88	239.42	242.79	1956	99.11	44.73	2215
3	600.00	574.11	489.11	280.38	284.15	287.53	1997	39.94	16.58	2409
4	640.00	614.05	529.05	296.86	300.73	304.11	2019	39.94	13.03	3064
5	680.00	653.99	568.99	309.77	313.76	317.14	2062	39.94	16.45	2429
6	720.00	693.93	608.93	326.15	330.21	333.59	2080	39.94	15.33	2605
7	760.00	733.87	648.87	341.42	345.54	348.92	2103	39.94	15.24	2621
8	800.00	773.81	688.81	356.61	360.78	364.16	2125	39.94	15.09	2647
9	840.00	813.75	728.75	371.63	375.87	379.25	2146	39.94	13.67	2921
10	880.00	853.69	768.69	385.25	389.54	392.92	2173	39.94	14.03	2847
11	920.00	893.63	808.63	399.29	403.57	406.95	2196	39.94	14.03	2847
12	960.00	933.57	848.57	413.34	417.60	420.98	2218	39.94	13.91	2871
13	1000.00	973.51	888.51	427.26	431.51	434.89	2239	39.94	13.75	2905
14	1040.00	1013.45	928.45	441.02	445.26	448.64	2259	39.94	13.36	2989
15	1080.00	1053.39	968.39	454.39	458.62	462.00	2280	39.94	13.97	2859
16	1120.00	1093.33	1008.33	468.37	472.59	475.97	2297	39.94	13.20	3027
17	1160.00	1133.27	1048.27	481.58	485.79	489.17	2317	39.94	13.16	3035
18	1200.00	1173.21	1088.21	494.76	498.95	502.33	2336	39.94	12.90	3096
19	1240.00	1213.15	1128.15	507.68	511.85	515.23	2355	39.94	12.94	3087
20	1280.00	1253.09	1168.09	520.64	524.79	528.17	2373	39.94	13.23	3020
21	1320.00	1293.03	1208.03	533.88	538.01	541.39	2388	39.94	12.98	3076
22	1360.00	1332.97	1247.97	546.85	551.00	554.38	2404	39.94	12.54	3186
23	1400.00	1372.91	1287.91	559.38	563.53	566.91	2422	39.94	13.52	2954
24	1440.00	1412.85	1327.85	572.89	577.06	580.43	2434	39.94		

LEVEL NUMBER	MEASUR DEPTH FROM KB M	VERTIC DEPTH FROM SRD M	VERTIC DEPTH FROM GL M	OBSERV TRAVEL TIME HYD/GEO MS	VERTIC TRAVEL TIME SRC/GEO MS	VERTIC TRAVEL TIME SRD/GEO MS	AVERAGE VELOC SRD/GEO M/S	DELTA DEPTH BETWEEN SHOTS M	DELTA TIME BETWEEN SHOTS MS	INTERV VELOC BETWEEN SHOTS M/S
25	1480.00	1452.79	1367.79	587.09	591.26	594.64	2443	39.94	14.21	2811
26	1520.00	1492.74	1407.73	600.72	604.91	608.29	2454	39.94	13.65	2926
27	1544.00	1516.70	1431.70	609.57	613.79	617.16	2458	23.96	8.87	2701
28	1560.00	1532.68	1447.68	615.01	619.25	622.62	2462	15.98	5.46	2926
29	1580.00	1552.65	1467.64	621.71	625.97	629.35	2467	19.97	6.72	2970
30	1600.00	1572.62	1487.62	627.55	631.83	635.21	2476	19.97	5.86	3406
31	1620.00	1592.59	1507.59	634.30	638.61	641.98	2481	19.97	6.77	2949
32	1640.00	1612.56	1527.56	640.57	644.90	648.28	2487	19.97	6.29	3174
33	1660.00	1632.53	1547.53	647.42	651.77	655.15	2492	19.97	6.87	2907
34	1680.00	1652.50	1567.50	654.12	658.49	661.87	2497	19.97	6.72	2971
35	1700.00	1672.47	1587.47	660.54	664.93	668.31	2503	19.97	6.44	3101
36	1724.00	1696.43	1611.43	668.71	673.12	676.50	2508	23.97	8.19	2925
37	1750.00	1722.39	1637.39	675.16	679.59	682.97	2522	25.96	6.47	4011
38	1770.00	1742.36	1657.36	681.35	685.80	689.18	2528	19.97	6.20	3219
39	1790.00	1762.33	1677.33	687.25	691.71	695.09	2535	19.97	5.91	3377
40	1810.00	1782.30	1697.30	692.99	697.46	700.84	2543	19.97	5.75	3472
41	1830.00	1802.27	1717.27	698.98	703.46	706.84	2550	19.97	6.00	3330
42	1840.00	1812.26	1727.26	701.39	705.87	709.25	2555	9.99	2.41	4138
43	1860.00	1832.23	1747.23	706.87	711.36	714.74	2564	19.97	5.48	3641
44	1880.00	1852.20	1767.20	713.79	718.28	721.66	2567	19.97	6.92	2885
45	1902.00	1874.17	1789.17	718.68	723.17	726.55	2580	21.97	4.89	4489
46	1920.00	1892.14	1807.14	723.24	727.74	731.11	2588	17.97	4.56	3940
47	1940.00	1912.11	1827.11	729.29	733.79	737.16	2594	19.97	6.05	3300
48	1960.00	1932.08	1847.08	734.28	738.78	742.15	2603	19.97	4.99	4002

LEVEL NUMBER	MEASUR DEPTH FROM KB M	VERTIC DEPTH FROM SRD M	VERTIC DEPTH FROM GL M	OBSERV TRAVEL TIME HYD/GEO MS	VERTIC TRAVEL TIME SRC/GEO MS	VERTIC TRAVEL TIME SRD/GEO MS	AVERAGE VELOC SRD/GEO M/S	DELTA DEPTH BETWEEN SHOTS M	DELTA TIME BETWEEN SHOTS MS	INTERV VELOC BETWEEN SHOTS M/S
49	1980.00	1952.05	1867.05	739.24	743.74	747.11	2613	19.97	4.96	4027
50	2000.00	1972.02	1887.02	744.70	749.19	752.57	2620	19.97	5.46	3658
51	2020.00	1991.99	1906.99	749.91	754.40	757.78	2629	19.97	5.21	3834
52	2040.00	2011.96	1926.96	755.04	759.53	762.91	2637	19.97	5.13	3894
53	2060.00	2031.93	1946.93	760.19	764.68	768.06	2646	19.97	5.15	3879
54	2080.00	2051.90	1966.90	765.46	769.95	773.32	2653	19.97	5.27	3792
55	2100.00	2071.87	1986.87	770.92	775.40	778.78	2660	19.97	5.46	3660
56	2120.00	2091.84	2006.84	775.06	779.54	782.92	2672	19.97	4.14	4830
57	2140.00	2111.81	2026.81	780.54	785.01	788.39	2679	19.97	5.47	3649
58	2160.00	2131.78	2046.78	785.00	789.46	792.84	2689	19.97	4.45	4484

Drift

DRIFT

ANALYST: Z...ATELIS

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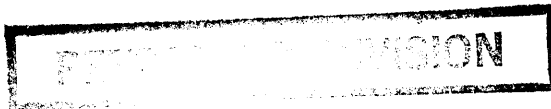
PROGRAM: GDRIPT 007.E09

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DRIFT COMPUTATION REPORT

COMPANY : BHP PETROLEUM
WELL : MINERVA -2A
FIELD : WILDCAT
COUNTRY : AUSTRALIA
REFERENCE: SYJ-560960



LONG DEFINITIONS

GLOBAL
 KB - Elevation of the KELLY-BUSHING Above MSL or MWL
 SRD - Elevation of the Seismic Reference Datum Above MSL or MWL
 EKB - Elevation of Kelly Bushing
 GL - Elevation of Users Reference (Generally Ground Level) Above SRD
 XSTART - TOP OF ZONE PROCESSED BY WST
 XSTOP - BOTTOM OF ZONE PROCESSED BY WST
 GAD001 - RAW SONIC CHANNEL NAME USED FOR WST SONIC ADJUSTMENT
 UNFDEN - UNIFORM DENSITY VALUE

ZONE
 LOFDEN - LAYER OPTION FLAG FOR DENSITY : -1=NONE; 0=UNIFORM; 1=UNIFORM+LAYER
 LAYDEN - USER SUPPLIED DENSITY DATA

SAMPLED
 SHOT - Shot number
 DKB - Measured Depth from Kelly-Bushing
 DSRD - Depth from SRD
 DGL - Vertical Depth Relative to Ground Level (User's Reference)
 SHTM - Shot time (WST)
 RAW - Raw Sonic (WST)
 SHDR - Drift at Shot or Knee
 BLSH - Block Shift between Shots or Knee

(GLOBAL PARAMETERS) (VALUE)

ELEV OF KB AB. MSL (WST) KB : 25.0000 M
 ELEV OF SRD AB. MSL (WST) SRD : 25.0000 M
 Elevation of Kelly Bushi EKB : -85.0000 M
 ELEV OF GL AB. SRD (WST) GL : 0 M
 TOP OF ZONE PROC (WST) XSTART : 0 M
 BOT OF ZONE PROC (WST) XSTOP : 0 M
 RAW SONIC CH NAME (WST) GAD001 : DT.ATT.003.TVD.FLP.*
 UNIFORM DENSITY VALUE UNFDEN : 2.30000 G/C3

(ZONED PARAMETERS) (VALUE) (LIMITS)

LAYER OPTION FLAG DENS LOFDEN : 1.000000 30479.7 - 0
 USER SUPPLIED DENSITY DA LAYDEN : 0 G/C3 - 0

LEVEL NUMBER	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	VERTICAL TRAVEL TIME SRD/GEO MS	INTEGRATED RAW SONIC TIME MS	COMPUTED DRIFT AT LEVEL MS	COMPUTED BLK-SHIFT CORRECTION US/M
1	110.00	85.00	0	57.43	57.43	0	0
2	500.00	475.00	390.00	242.79	242.79	0	0
3	600.00	574.11	489.11	287.53	287.53	0	0
4	601.05	575.15	490.15	287.96	287.96	0	54.43
5	640.00	614.05	529.05	304.11	301.99	2.12	-41.80
6	680.00	653.99	568.99	317.14	316.69	.45	54.04
7	720.00	693.93	608.93	333.59	330.98	2.61	27.84
8	760.00	733.87	648.87	348.92	345.20	3.72	-12.23
9	800.00	773.81	688.81	364.16	360.93	3.23	-11.87
10	840.00	813.75	728.75	379.25	376.49	2.76	3.87
11	880.00	853.69	768.69	392.92	390.01	2.91	-9.13
12	920.00	893.63	808.63	406.95	404.40	2.55	.84
13	960.00	933.57	848.57	420.98	418.40	2.58	-4.01
14	1000.00	973.51	888.51	434.89	432.47	2.42	-19.71
15	1040.00	1013.45	928.45	448.64	447.01	1.63	.56
16	1080.00	1053.39	968.39	462.00	460.35	1.65	4.14
17	1120.00	1093.33	1008.33	475.97	474.15	1.82	-11.04
18	1160.00	1133.27	1048.27	489.17	487.79	1.38	-7.42
19	1200.00	1173.21	1088.21	502.33	501.25	1.08	-5.58
20	1240.00	1213.15	1128.15	515.23	514.37	.86	-3.32
21	1280.00	1253.09	1168.09	528.17	527.44	.73	-3.91
22	1320.00	1293.03	1208.03	541.39	540.82	.57	-2.84
23	1360.00	1332.97	1247.97	554.38	553.92	.46	-12.26
24	1400.00	1372.91	1287.91	566.91	566.95	-.03	

LEVEL NUMBER	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	VERTICAL TRAVEL TIME SRD/GEO MS	INTEGRATED RAW SONIC TIME MS	COMPUTED DRIFT AT LEVEL MS	COMPUTED US/M
25	1440.00	1412.85	1327.85	580.43	580.54	-.11	-1.81
26	1480.00	1452.79	1367.79	594.64	593.77	.87	24.49
27	1520.00	1492.74	1407.73	608.29	607.04	1.25	9.49
28	1544.00	1516.70	1431.70	617.16	615.12	2.05	33.23
29	1560.00	1532.68	1447.68	622.62	620.48	2.15	6.16
30	1580.00	1552.65	1467.64	629.35	627.24	2.11	-1.77
31	1600.00	1572.62	1487.62	635.21	633.74	1.47	-31.93
32	1620.00	1592.59	1507.59	641.98	640.16	1.83	17.64
33	1640.00	1612.56	1527.56	648.28	646.72	1.56	-13.50
34	1660.00	1632.53	1547.53	655.15	653.21	1.93	18.90
35	1680.00	1652.50	1567.50	661.87	659.89	1.97	2.00
36	1700.00	1672.47	1587.47	668.31	666.48	1.83	-7.42
37	1724.00	1696.43	1611.43	676.50	674.00	2.50	28.05
38	1750.00	1722.39	1637.39	682.97	681.60	1.37	-43.36
39	1770.00	1742.36	1657.36	689.18	687.73	1.45	3.87
40	1790.00	1762.33	1677.33	695.09	693.93	1.15	-14.76
41	1810.00	1782.30	1697.30	700.84	699.86	.98	-8.86
42	1830.00	1802.27	1717.27	706.84	706.04	.80	-8.85
43	1840.00	1812.26	1727.26	709.25	708.86	.40	-40.56
44	1860.00	1832.23	1747.23	714.74	714.52	.22	-8.84
45	1880.00	1852.20	1767.20	721.66	720.77	.89	33.69
46	1902.00	1874.17	1789.17	726.55	727.69	-1.14	-92.58
47	1920.00	1892.14	1807.14	731.11	733.08	-1.97	-46.08
48	1940.00	1912.11	1827.11	737.16	739.01	-1.84	6.46

LEVEL NUMBER	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	VERTICAL TRAVEL TIME SRD/GEO MS	INTEGRATED RAW SONIC TIME MS	COMPUTED DRIFT AT LEVEL MS	COMPUTED US/M
49	1960.00	1932.08	1847.08	742.15	744.63	-2.47	-31.67
50	1980.00	1952.05	1867.05	747.11	750.10	-2.98	-25.41
51	2000.00	1972.02	1887.02	752.57	755.73	-3.16	-8.92
52	2020.00	1991.99	1906.99	757.78	761.44	-3.66	-24.99
53	2040.00	2011.96	1926.96	762.91	767.00	-4.09	-21.60
54	2060.00	2031.93	1946.93	768.06	772.48	-4.42	-16.75
55	2080.00	2051.90	1966.90	773.32	778.07	-4.75	-16.25
56	2100.00	2071.87	1986.87	778.78	783.48	-4.70	2.33
57	2120.00	2091.84	2006.84	782.92	788.57	-5.65	-47.46
58	2140.00	2111.81	2026.81	788.39	793.75	-5.36	14.61
59	2160.00	2131.78	2046.78	792.84	798.66	-5.81	-22.83
60	2163.19	2134.97	2049.97	793.61	799.43	-5.81	0

LONG DEFINITIONS

GLOBAL
 SRCDRF - ORIGIN OF ADJUSTMENT DATA
 CONADJ - CONSTANT ADJUSTMENT TO AUTOMATIC DELTA-T MINIMUM = 7.5 US/F
 UNERTH - UNIFORM EARTH VELOCITY (GTRFRM)
 ZONE
 ZDRIFT - USER DRIFT AT BOTTOM OF THE ZONE
 ADJOPZ - TYPE OF ADJUSTMENT IN THE DRIFT ZONE : 0=DELTA-T MIN, 1=BLOCKSHIFT
 ADJUSZ - DELTA-T MINIMUM USED FOR ADJUSTMENT IN THE DRIFT ZONE
 LOFVEL - LAYER OPTION FLAG FOR VELOCITY: -1=NONE; 0=UNIFORM; 1=UNIFORM+LAYER
 LAYVEL - USER SUPPLIED VELOCITY DATA

SAMPLED
 SHOT - Shot number
 VDKB - Vertical Depth Relative to KB
 DSRD - Depth from SRD
 DGL - Vertical Depth Relative to Ground Level (User's Reference)
 KNEE - Knee
 BLSH - Block Shift between Shots or Knee
 DTMI - Value of Delta-T Minimum used
 COEF - Delta-T MIN Coefficient used in the Drift Zone
 DRGR - Gradient of Drift Curve

(GLOBAL PARAMETERS) (VALUE)

ORIG OF ADJ DATA (WST) SRCDRF : 2.00000
 CONS SONIC ADJST (WST) CONADJ : 24.6063 US/M
 UNIFORM EARTH VELOCITY UNERTH : 1480.00 M/S

(ZONED PARAMETERS)

USER DRIFT ZONE (WST)	ZDRIFT	(VALUE)	(LIMITS)
		-5.800000	MS 2163.19 - 1721.43
		2.500000	1721.43 1541.70
		2.000000	1541.70 1437.85
		-1.000000	1437.85 758.870
		3.700000	758.870 601.050
		0	601.050 0
		-999.2500	30479.7 - 0
ADJUSMT MODE (WST)	ADJOPZ	-999.2500	30479.7 - 0
USER DELTA-T MIN (WST)	ADJUSZ	1.000000	30479.7 - 0
LAYER OPTION FLAG VELOC	LOFVEL	2442.000	601.050 - 600.000
USER VELOC (WST)	LAYVEL	2215.000	500.000 - 500.000
		2104.000	600.000 - 110.000
		1480.000	110.000 0

KNEE NUMBER	VERTICAL DEPTH FROM KB	VERTICAL DEPTH FROM SRD	VERTICAL DEPTH FROM GL	DRIFT AT KNEE		BLOCKSHIFT USED		DELTA-T MINIMUM USED	REDUCTION FACTOR G	EQUIVALENT BLOCKSHIFT
	M	M	M	MS	MS	US/M	US/M	US/M		US/M
2	601.05	576.05	491.05	0	0	23.44	0			23.44
3	758.87	733.87	648.87	3.70	3.70			316.40	.83	-5.60
4	1437.85	1412.85	1327.85	-.10	-.10	20.22	20.22			20.22
5	1541.70	1516.70	1431.70	2.00	2.00	2.78	2.78			2.78
6	1721.43	1696.43	1611.43	2.50	2.50			240.52	.43	-18.79
7	2163.19	2138.19	2053.19	-5.80	-5.80					

LONG DEFINITIONS

GLOBAL
 KB - Elevation of the KELLY-BUSHING Above MSL or MWL
 SRD - Elevation of the Seismic Reference Datum Above MSL or MWL
 EKB - Elevation of Kelly Bushing
 GL - Elevation of Users Reference (Generally Ground Level) Above SRD
 UNERTH - UNIFORM EARTH VELOCITY (GTRFRM)

ZONE
 LOFVEL - LAYER OPTION FLAG FOR VELOCITY: -1=NONE; 0=UNIFORM; 1=UNIFORM+LAYER
 LAYVEL - USER SUPPLIED VELOCITY DATA

SAMPLED
 SHOT - Shot number
 DKB - Measured Depth from Kelly-Bushing
 DSRD - Depth from SRD
 DGL - Vertical Depth Relative to Ground Level (User's Reference)
 SHTM - Shot time (WST)
 ADJS - Adjusted Sonic Travel Time
 SHDR - Drift at Shot or Knee
 REST - Residual travel Time at Knee
 INTV - Internal Velocity, Average

(GLOBAL PARAMETERS) (VALUE)
 ELEV OF KB AB. MSL (WST) KB : 25.0000 M
 ELEV OF SRD AB. MSL (WST) SRD : 0 M
 Elevation of Kelly Bushi EKB : 25.0000 M
 ELEV OF GL AB. SRD (WST) GL : -85.0000 M
 UNIFORM EARTH VELOCITY UNERTH : 1480.00 M/S

(ZONED PARAMETERS) (VALUE) (LIMITS)
 LAYER OPTION FLAG VELOC LOFVEL : 1.000000 30479.7 - 0
 USER VELOC (WST) LAYVEL : 2442.000 M/S 601.050 - 600.000
 : 2215.000 600.000 500.000
 : 2104.000 500.000 110.000
 : 1480.000 110.000 0

LEVEL NUMBER	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	VERTICAL TRAVEL TIME SRD/GEOPH MS	INTEGRATED ADJUSTED SONIC TIME MS	DRIFT = SHOT TIME - RAW SON MS	RESIDUAL = SHOT TIME - ADJ SON MS	ADJUSTED INTERVAL VELOCITY M/S
1	110.00	85.00	0	57.43	57.43	0	0	1480
2	500.00	475.00	390.00	242.79	242.79	0	0	2104
3	600.00	574.11	489.11	287.53	287.53	0	0	2215
4	601.05	575.15	490.15	287.96	287.96	0	0	2416
5	640.00	614.05	529.05	304.11	302.86	2.12	1.24	2610
6	680.00	653.99	568.99	317.14	318.51	.45	-1.37	2552
7	720.00	693.93	608.93	333.59	333.73	2.61	-.15	2624
8	760.00	733.87	648.87	348.92	348.89	3.72	.03	2634
9	800.00	773.81	688.81	364.16	364.10	3.23	.06	2626
10	840.00	813.75	728.75	379.25	379.16	2.76	.09	2651
11	880.00	853.69	768.69	392.92	392.46	2.91	.46	3004
12	920.00	893.63	808.63	406.95	406.51	2.55	.44	2843
13	960.00	933.57	848.57	420.98	420.23	2.58	.75	2911
14	1000.00	973.51	888.51	434.89	434.04	2.42	.86	2893
15	1040.00	1013.45	928.45	448.64	448.24	1.63	.40	2812
16	1080.00	1053.39	968.39	462.00	461.43	1.65	.57	3026
17	1120.00	1093.33	1008.33	475.97	475.04	1.82	.93	2936
18	1160.00	1133.27	1048.27	489.17	488.49	1.38	.68	2969
19	1200.00	1173.21	1088.21	502.33	501.80	1.08	.52	3000
20	1240.00	1213.15	1128.15	515.23	514.81	.86	.41	3070
21	1280.00	1253.09	1168.09	528.17	527.79	.73	.38	3079
22	1320.00	1293.03	1208.03	541.39	541.04	.57	.35	3013
23	1360.00	1332.97	1247.97	554.38	554.05	.46	.32	3070
24	1400.00	1372.91	1287.91	566.91	567.00	-.03	-.09	3085

LEVEL NUMBER	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	VERTICAL TRAVEL TIME SRD/GEOPH MS	INTEGRATED ADJUSTED SONIC TIME MS	DRIFT = SHOT TIME - RAW SON MS	RESIDUAL = SHOT TIME - ADJ SON MS	ADJUSTED INTERVAL VELOCITY M/S
25	1440.00	1412.85	1327.85	580.43	580.43	-.11	.01	2975
26	1480.00	1452.79	1367.79	594.64	594.46	.87	.18	2846
27	1520.00	1492.74	1407.73	608.29	608.54	1.25	-.25	2837
28	1544.00	1516.70	1431.70	617.16	617.10	2.05	.06	2799
29	1560.00	1532.68	1447.68	622.62	622.51	2.15	.12	2956
30	1580.00	1552.65	1467.64	629.35	629.32	2.11	.02	2930
31	1600.00	1572.62	1487.62	635.21	635.88	1.47	-.67	3047
32	1620.00	1592.59	1507.59	641.98	642.36	1.83	-.37	3084
33	1640.00	1612.56	1527.56	648.28	648.97	1.56	-.70	3018
34	1660.00	1632.53	1547.53	655.15	655.52	1.93	-.37	3050
35	1680.00	1652.50	1567.50	661.87	662.26	1.97	-.39	2964
36	1700.00	1672.47	1587.47	668.31	668.90	1.83	-.59	3007
37	1724.00	1696.43	1611.43	676.50	676.49	2.50	.01	3159
38	1750.00	1722.39	1637.39	682.97	683.31	1.37	-.34	3802
39	1770.00	1742.36	1657.36	689.18	688.69	1.45	.49	3715
40	1790.00	1762.33	1677.33	695.09	694.10	1.15	.99	3693
41	1810.00	1782.30	1697.30	700.84	699.39	.98	1.45	3776
42	1830.00	1802.27	1717.27	706.84	704.78	.80	2.06	3703
43	1840.00	1812.26	1727.26	709.25	707.36	.40	1.89	3863
44	1860.00	1832.23	1747.23	714.74	712.53	.22	2.20	3863
45	1880.00	1852.20	1767.20	721.66	717.97	.89	3.69	3677
46	1902.00	1874.17	1789.17	726.55	723.96	-1.14	2.59	3666
47	1920.00	1892.14	1807.14	731.11	728.74	-1.97	2.37	3758
48	1940.00	1912.11	1827.11	737.16	734.03	-1.84	3.14	3779

LEVEL NUMBER	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	VERTICAL TRAVEL TIME SRD/GEOPH MS	INTEGRATED ADJUSTED SONIC TIME MS	DRIFT = SHOT TIME - RAW SON MS	RESIDUAL = SHOT TIME - ADJ SON MS	ADJUSTED INTERVAL VELOCITY M/S
49	1960.00	1932.08	1847.08	742.15	739.18	-2.47	2.97	3874
50	1980.00	1952.05	1867.05	747.11	744.27	-2.98	2.84	3923
51	2000.00	1972.02	1887.02	752.57	749.43	-3.16	3.14	3868
52	2020.00	1991.99	1906.99	757.78	754.63	-3.66	3.15	3846
53	2040.00	2011.96	1926.96	762.91	759.76	-4.09	3.15	3893
54	2060.00	2031.93	1946.93	768.06	764.85	-4.42	3.20	3918
55	2080.00	2051.90	1966.90	773.32	770.00	-4.75	3.33	3884
56	2100.00	2071.87	1986.87	778.78	775.06	-4.70	3.72	3942
57	2120.00	2091.84	2006.84	782.92	779.94	-5.65	2.98	4093
58	2140.00	2111.81	2026.81	788.39	784.91	-5.36	3.48	4022
59	2160.00	2131.78	2046.78	792.84	789.71	-5.81	3.13	4153
60	2163.19	2134.97	2049.97	793.61	790.54	-5.81	3.07	3855

Time / Depth

TIME/DEPTH

LONG DEFINITIONS

GLOBAL
 KB - Elevation of the KELLY-BUSHING Above MSL or MWL
 SRD - Elevation of the Seismic Reference Datum Above MSL or MWL
 GL - Elevation of Users Reference (Generally Ground Level) Above SRD
 UNERTH - UNIFORM EARTH VELOCITY (GTRFRM)
 UNFDEN - UNIFORM DENSITY VALUE

MATRIX
 MVODIS - MOVE-OUT DISTANCE FROM BOREHOLE
 ZONE
 LOFVEL - LAYER OPTION FLAG FOR VELOCITY: -1=NONE; 0=UNIFORM; 1=UNIFORM+LAYER
 LAVVEL - USER SUPPLIED VELOCITY DATA
 LOFDEN - LAYER OPTION FLAG FOR DENSITY : -1=NONE; 0=UNIFORM; 1=UNIFORM+LAYER
 LAYDEN - USER SUPPLIED DENSITY DATA

SAMPLED
 TWOT - Two Way Travel Time (Relative to the Seismic Reference)
 DKB - Measured Depth from Kelly-Bushing
 DSRD - Depth from SRD
 AVGV - Average Seismic Velocity
 RMSV - Root Mean Square Velocity (Seismic)
 MVOT - Normal Move-Out
 MVOT - Normal Move-Out
 INTV - Internal Velocity, Average

(GLOBAL PARAMETERS) (VALUE)
 ELEV OF KB AB. MSL (WST) KB : 25.0000 M
 ELEV OF SRD AB. MSL (WST) SRD : 0 M
 ELEV OF GL AB. SRD (WST) GL : -85.0000 M
 UNIFORM EARTH VELOCITY UNERTH : 1480.00 M/S
 UNIFORM DENSITY VALUE UNFDEN : 2.30000 G/C3

(MATRIX PARAMETERS)

MVOUT DIST
 M
 1 1000.0
 2 1500.0
 3 2000.0

(ZONED PARAMETERS)

LAYER OPTION FLAG VELOC LOFVEL
 USER VELOC (WST) LAYVEL

LAYER OPTION FLAG DENS LOFDEN
 USER SUPPLIED DENSITY DA LAYDEN

(VALUE)	(LIMITS)
: 1.000000	30479.7 -
: 2442.000	601.050 -
: 2215.000	600.000
: 2104.000	500.000
: 1480.000	110.000
: 1.000000	0
: 0	30479.7 -
: 0	0

M/S

G/C3

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
0	25.00	0	1480	1480	673.68	1011.52	1349.35	1480
2.00	26.48	1.48	1480	1480	671.69	1009.52	1347.36	1480
4.00	27.96	2.96	1480	1480	669.70	1007.53	1345.36	1480
6.00	29.44	4.44	1480	1480	667.72	1005.55	1343.38	1480
8.00	30.92	5.92	1480	1480	665.75	1003.56	1341.39	1480
10.00	32.40	7.40	1480	1480	663.78	1001.58	1339.40	1480
12.00	33.88	8.88	1480	1480	661.82	999.61	1337.42	1480
14.00	35.36	10.36	1480	1480	659.87	997.64	1335.45	1480
16.00	36.84	11.84	1480	1480	657.92	995.67	1333.47	1480
18.00	38.32	13.32	1480	1480	655.97	993.71	1331.50	1480
20.00	39.80	14.80	1480	1480	654.03	991.75	1329.53	1480
22.00	41.28	16.28	1480	1480	652.10	989.80	1327.56	1480
24.00	42.76	17.76	1480	1480	650.18	987.85	1325.60	1480
26.00	44.24	19.24	1480	1480	648.26	985.90	1323.64	1480
28.00	45.72	20.72	1480	1480	646.34	983.96	1321.68	1480
30.00	47.20	22.20	1480	1480	644.43	982.02	1319.73	1480
32.00	48.68	23.68	1480	1480	642.53	980.08	1317.78	1480
34.00	50.16	25.16	1480	1480	640.63	978.15	1315.83	1480
36.00	51.64	26.64	1480	1480	638.74	976.23	1313.89	1480
38.00	53.12	28.12	1480	1480	636.86	974.30	1311.94	1480
40.00	54.60	29.60	1480	1480	634.98	972.38	1310.00	1480
42.00	56.08	31.08	1480	1480	633.11	970.47	1308.07	1480
44.00	57.56	32.56	1480	1480	631.24	968.56	1306.13	1480
46.00	59.04	34.04	1480	1480				

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL NORMAL VELOCITY M/S
48.00	60.52	35.52	1480	1480	629.38	966.65	1304.20	1480
50.00	62.00	37.00	1480	1480	627.52	964.75	1302.28	1480
52.00	63.48	38.48	1480	1480	625.67	962.85	1300.35	1480
54.00	64.96	39.96	1480	1480	623.83	960.95	1298.43	1480
56.00	66.44	41.44	1480	1480	621.99	959.06	1296.51	1480
58.00	67.92	42.92	1480	1480	620.16	957.17	1294.60	1480
60.00	69.40	44.40	1480	1480	618.33	955.29	1292.68	1480
62.00	70.88	45.88	1480	1480	616.51	953.41	1290.77	1480
64.00	72.36	47.36	1480	1480	614.70	951.53	1288.87	1480
66.00	73.84	48.84	1480	1480	612.89	949.66	1286.96	1480
68.00	75.32	50.32	1480	1480	611.09	947.79	1285.06	1480
70.00	76.80	51.80	1480	1480	609.29	945.93	1283.16	1480
72.00	78.28	53.28	1480	1480	607.50	944.07	1281.27	1480
74.00	79.76	54.76	1480	1480	605.72	942.21	1279.38	1480
76.00	81.24	56.24	1480	1480	603.94	940.36	1277.49	1480
78.00	82.72	57.72	1480	1480	602.16	938.51	1275.60	1480
80.00	84.20	59.20	1480	1480	600.40	936.67	1273.72	1480
82.00	85.68	60.68	1480	1480	598.63	934.83	1271.84	1480
84.00	87.16	62.16	1480	1480	596.88	932.99	1269.96	1480
86.00	88.64	63.64	1480	1480	595.13	931.16	1268.08	1480
88.00	90.12	65.12	1480	1480	593.38	929.33	1266.21	1480
90.00	91.60	66.60	1480	1480	591.64	927.50	1264.34	1480
92.00	93.08	68.08	1480	1480	589.91	925.68	1262.48	1480
94.00	94.56	69.56	1480	1480	588.18	923.86	1260.62	1480

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
96.00	96.04	71.04	1480	1480	586.46	922.05	1258.76	1480
98.00	97.52	72.52	1480	1480	584.75	920.24	1256.90	1480
100.00	99.00	74.00	1480	1480	583.04	918.43	1255.05	1480
102.00	100.48	75.48	1480	1480	581.33	916.63	1253.20	1480
104.00	101.96	76.96	1480	1480	579.63	914.84	1251.35	1480
106.00	103.44	78.44	1480	1480	577.94	913.04	1249.50	1480
108.00	104.92	79.92	1480	1480	576.25	911.25	1247.66	1480
110.00	106.40	81.40	1480	1480	574.57	909.47	1245.82	1480
112.00	107.88	82.88	1480	1480	572.90	907.68	1243.98	1480
114.00	109.36	84.36	1480	1480	571.23	905.90	1242.15	1882
116.00	111.24	86.24	1487	1488	566.05	898.82	1233.22	2104
118.00	113.35	88.35	1497	1500	558.85	888.67	1220.19	2104
120.00	115.45	90.45	1507	1512	551.99	879.01	1207.80	2104
122.00	117.55	92.55	1517	1524	545.42	869.79	1196.01	2104
124.00	119.66	94.66	1527	1535	539.13	860.98	1184.75	2104
126.00	121.76	96.76	1536	1546	533.09	852.55	1174.00	2104
128.00	123.87	98.87	1545	1556	527.29	844.47	1163.70	2104
130.00	125.97	100.97	1553	1566	521.71	836.70	1153.83	2104
132.00	128.07	103.07	1562	1575	516.33	829.24	1144.35	2104
134.00	130.18	105.18	1570	1585	511.14	822.05	1135.24	2104
136.00	132.28	107.28	1578	1593	506.13	815.12	1126.47	2104
138.00	134.39	109.39	1585	1602	501.28	808.43	1118.02	2104
140.00	136.49	111.49	1593	1610	496.59	801.97	1109.87	2104
142.00	138.59	113.59	1600	1618	492.04	795.71	1102.00	2104

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL NORMAL VELOCITY M/S
144.00	140.70	115.70	1607	1626	487.63	789.66	1094.39	2104
146.00	142.80	117.80	1614	1634	483.34	783.79	1087.02	2104
148.00	144.91	119.91	1620	1641	479.18	778.10	1079.88	2104
150.00	147.01	122.01	1627	1648	475.13	772.57	1072.96	2104
152.00	149.11	124.11	1633	1655	471.18	767.20	1066.24	2104
154.00	151.22	126.22	1639	1661	467.34	761.97	1059.72	2104
156.00	153.32	128.32	1645	1668	463.60	756.89	1053.38	2104
158.00	155.43	130.43	1651	1674	459.95	751.93	1047.21	2104
160.00	157.53	132.53	1657	1680	456.38	747.10	1041.21	2104
162.00	159.63	134.63	1662	1686	452.90	742.39	1035.36	2104
164.00	161.74	136.74	1668	1692	449.49	737.79	1029.66	2104
166.00	163.84	138.84	1673	1697	446.17	733.30	1024.09	2104
168.00	165.94	140.94	1678	1703	442.91	728.91	1018.66	2104
170.00	168.05	143.05	1683	1708	439.72	724.61	1013.36	2104
172.00	170.15	145.15	1688	1713	436.60	720.41	1008.18	2104
174.00	172.26	147.26	1693	1718	433.54	716.30	1003.11	2104
176.00	174.36	149.36	1697	1723	430.54	712.27	998.15	2104
178.00	176.46	151.46	1702	1728	427.60	708.33	993.30	2104
180.00	178.57	153.57	1706	1732	424.71	704.46	988.55	2104
182.00	180.67	155.67	1711	1737	421.88	700.66	983.89	2104
184.00	182.78	157.78	1715	1741	419.09	696.94	979.32	2104
186.00	184.88	159.88	1719	1745	416.36	693.28	974.85	2104
188.00	186.98	161.98	1723	1750	413.67	689.69	970.45	2104
190.00	189.09	164.09	1727	1754	411.03	686.17	966.14	2104

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
192.00	191.19	166.19	1731	1758	408.44	682.70	961.91	2104
194.00	193.30	168.30	1735	1762	405.88	679.29	957.75	2104
196.00	195.40	170.40	1739	1765	403.37	675.94	953.66	2104
198.00	197.50	172.50	1742	1769	400.89	672.64	949.64	2104
200.00	199.61	174.61	1746	1773	398.46	669.39	945.69	2104
202.00	201.71	176.71	1750	1776	396.06	666.20	941.81	2104
204.00	203.82	178.82	1753	1780	393.70	663.05	937.98	2104
206.00	205.92	180.92	1757	1783	391.37	659.95	934.21	2104
208.00	208.02	183.02	1760	1787	389.07	656.89	930.51	2104
210.00	210.13	185.13	1763	1790	386.81	653.88	926.85	2104
212.00	212.23	187.23	1766	1793	384.58	650.91	923.25	2104
214.00	214.34	189.34	1769	1796	382.38	647.98	919.71	2104
216.00	216.44	191.44	1773	1800	380.21	645.09	916.21	2104
218.00	218.54	193.54	1776	1803	378.07	642.24	912.76	2104
220.00	220.65	195.65	1779	1805	375.96	639.43	909.36	2104
222.00	222.75	197.75	1782	1808	373.87	636.65	906.01	2104
224.00	224.86	199.86	1784	1811	371.81	633.91	902.69	2104
226.00	226.96	201.96	1787	1814	369.78	631.20	899.43	2104
228.00	229.06	204.06	1790	1817	367.77	628.53	896.20	2104
230.00	231.17	206.17	1793	1819	365.79	625.89	893.01	2104
232.00	233.27	208.27	1795	1822	363.83	623.28	889.86	2104
234.00	235.38	210.38	1798	1825	361.89	620.70	886.75	2104
236.00	237.48	212.48	1801	1827	359.98	618.14	883.68	2104
238.00	239.58	214.58	1803	1830	358.09	615.62	880.64	2104

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
240.00	241.69	216.69	1806	1832	356.22	613.13	877.64	2104
242.00	243.79	218.79	1808	1835	354.37	610.66	874.67	2104
244.00	245.90	220.90	1811	1837	352.55	608.22	871.73	2104
246.00	248.00	223.00	1813	1839	350.74	605.81	868.83	2104
248.00	250.10	225.10	1815	1842	348.95	603.42	865.96	2104
250.00	252.21	227.21	1818	1844	347.19	601.05	863.11	2104
252.00	254.31	229.31	1820	1846	345.44	598.71	860.30	2104
254.00	256.42	231.42	1822	1848	343.71	596.40	857.52	2104
256.00	258.52	233.52	1824	1850	342.00	594.10	854.76	2104
258.00	260.62	235.62	1827	1852	340.30	591.83	852.03	2104
260.00	262.73	237.73	1829	1855	338.63	589.59	849.33	2104
262.00	264.83	239.83	1831	1857	336.97	587.36	846.65	2104
264.00	266.94	241.94	1833	1859	335.32	585.15	844.00	2104
266.00	269.04	244.04	1835	1861	333.70	582.97	841.38	2104
268.00	271.14	246.14	1837	1862	332.09	580.80	838.78	2104
270.00	273.25	248.25	1839	1864	330.50	578.65	836.20	2104
272.00	275.35	250.35	1841	1866	328.92	576.53	833.65	2104
274.00	277.46	252.46	1843	1868	327.35	574.42	831.11	2104
276.00	279.56	254.56	1845	1870	325.81	572.33	828.60	2104
278.00	281.66	256.66	1846	1872	324.27	570.26	826.12	2104
280.00	283.77	258.77	1848	1873	322.75	568.20	823.65	2104
282.00	285.87	260.87	1850	1875	321.25	566.17	821.20	2104
284.00	287.98	262.98	1852	1877	319.76	564.15	818.78	2104
286.00	290.08	265.08	1854	1879	318.28	562.15	816.37	2104

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY FROM SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
288.00	292.18	267.18	1855	1880	316.82	560.16	813.99	2104
290.00	294.29	269.29	1857	1882	315.37	558.19	811.62	2104
292.00	296.39	271.39	1859	1883	313.93	556.24	809.27	2104
294.00	298.49	273.49	1861	1885	312.50	554.30	806.94	2104
296.00	300.60	275.60	1862	1887	311.09	552.38	804.63	2104
298.00	302.70	277.70	1864	1888	309.69	550.47	802.34	2104
300.00	304.81	279.81	1865	1890	308.30	548.57	800.06	2104
302.00	306.91	281.91	1867	1891	306.93	546.70	797.80	2104
304.00	309.01	284.01	1869	1893	305.57	544.83	795.56	2104
306.00	311.12	286.12	1870	1894	304.21	542.98	793.33	2104
308.00	313.22	288.22	1872	1896	302.87	541.14	791.12	2104
310.00	315.33	290.33	1873	1897	301.54	539.32	788.93	2104
312.00	317.43	292.43	1875	1898	300.23	537.51	786.75	2104
314.00	319.53	294.53	1876	1900	298.92	535.71	784.59	2104
316.00	321.64	296.64	1877	1901	297.62	533.93	782.44	2104
318.00	323.74	298.74	1879	1902	296.34	532.16	780.30	2104
320.00	325.85	300.85	1880	1904	295.06	530.40	778.19	2104
322.00	327.95	302.95	1882	1905	293.80	528.65	776.08	2104
324.00	330.05	305.05	1883	1906	292.54	526.92	773.99	2104
326.00	332.16	307.16	1884	1908	291.30	525.20	771.91	2104
328.00	334.26	309.26	1886	1909	290.07	523.49	769.85	2104
330.00	336.37	311.37	1887	1910	288.84	521.79	767.80	2104
332.00	338.47	313.47	1888	1911	287.63	520.10	765.76	2104
334.00	340.57	315.57	1890	1913	286.42	518.43	763.73	2104

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL NORMAL VELOCITY M/S
336.00	342.68	317.68	1891	1914	285.23	516.76	761.72	2104
338.00	344.78	319.78	1892	1915	284.04	515.11	759.72	2104
340.00	346.89	321.89	1893	1916	282.86	513.47	757.74	2104
342.00	348.99	323.99	1895	1917	281.69	511.83	755.76	2104
344.00	351.09	326.09	1896	1918	280.53	510.21	753.80	2104
346.00	353.20	328.20	1897	1920	279.38	508.60	751.85	2104
348.00	355.30	330.30	1898	1921	278.24	507.00	749.91	2104
350.00	357.41	332.41	1899	1922	277.11	505.41	747.98	2104
352.00	359.51	334.51	1901	1923	275.98	503.83	746.06	2104
354.00	361.61	336.61	1902	1924	274.87	502.26	744.16	2104
356.00	363.72	338.72	1903	1925	273.76	500.70	742.27	2104
358.00	365.82	340.82	1904	1926	272.66	499.14	740.38	2104
360.00	367.93	342.93	1905	1927	271.57	497.60	738.51	2104
362.00	370.03	345.03	1906	1928	270.49	496.07	736.65	2104
364.00	372.13	347.13	1907	1929	269.41	494.55	734.79	2104
366.00	374.24	349.24	1908	1930	268.34	493.03	732.95	2104
368.00	376.34	351.34	1909	1931	267.28	491.53	731.12	2104
370.00	378.45	353.45	1911	1932	266.23	490.03	729.30	2104
372.00	380.55	355.55	1912	1933	265.19	488.54	727.49	2104
374.00	382.65	357.65	1913	1934	264.15	487.06	725.69	2104
376.00	384.76	359.76	1914	1935	263.12	485.60	723.89	2104
378.00	386.86	361.86	1915	1936	262.10	484.13	722.11	2104
380.00	388.97	363.97	1916	1937	261.08	482.68	720.34	2104
382.00	391.07	366.07	1917	1938	260.07	481.24	718.57	2104

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
384.00	393.17	368.17	1918	1939	259.07	479.80	716.82	2104
386.00	395.28	370.28	1919	1939	258.08	478.37	715.07	2104
388.00	397.38	372.38	1919	1940	257.09	476.95	713.34	2104
390.00	399.49	374.49	1920	1941	256.11	475.54	711.61	2104
392.00	401.59	376.59	1921	1942	255.14	474.14	709.89	2104
394.00	403.69	378.69	1922	1943	254.17	472.74	708.18	2104
396.00	405.80	380.80	1923	1944	253.21	471.35	706.48	2104
398.00	407.90	382.90	1924	1945	252.26	469.97	704.78	2104
400.00	410.01	385.01	1925	1945	251.31	468.60	703.10	2104
402.00	412.11	387.11	1926	1946	250.37	467.23	701.42	2104
404.00	414.21	389.21	1927	1947	249.44	465.88	699.75	2104
406.00	416.32	391.32	1928	1948	248.51	464.53	698.09	2104
408.00	418.42	393.42	1929	1949	247.59	463.18	696.44	2104
410.00	420.52	395.52	1929	1950	246.67	461.85	694.80	2104
412.00	422.63	397.63	1930	1950	245.76	460.52	693.16	2104
414.00	424.73	399.73	1931	1951	244.86	459.20	691.53	2104
416.00	426.84	401.84	1932	1952	243.96	457.88	689.91	2104
418.00	428.94	403.94	1933	1953	243.07	456.57	688.30	2104
420.00	431.04	406.04	1934	1953	242.19	455.27	686.69	2104
422.00	433.15	408.15	1934	1954	241.31	453.98	685.09	2104
424.00	435.25	410.25	1935	1955	240.43	452.69	683.50	2104
426.00	437.36	412.36	1936	1956	239.57	451.41	681.92	2104
428.00	439.46	414.46	1937	1956	238.70	450.14	680.34	2104
430.00	441.56	416.56	1938	1957	237.85	448.87	678.77	2104

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL NORMAL VELOCITY M/S
432.00	443.67	418.67	1938	1958	236.99	447.61	677.21	2104
434.00	445.77	420.77	1939	1958	236.15	446.36	675.65	2104
436.00	447.88	422.88	1940	1959	235.31	445.11	674.11	2104
438.00	449.98	424.98	1941	1960	234.47	443.87	672.56	2104
440.00	452.08	427.08	1941	1960	233.64	442.63	671.03	2104
442.00	454.19	429.19	1942	1961	232.82	441.40	669.50	2104
444.00	456.29	431.29	1943	1962	232.00	440.18	667.98	2104
446.00	458.40	433.40	1943	1962	231.19	438.97	666.47	2104
448.00	460.50	435.50	1944	1963	230.38	437.76	664.96	2104
450.00	462.60	437.60	1945	1964	229.57	436.55	663.46	2104
452.00	464.71	439.71	1946	1964	228.78	435.35	661.96	2104
454.00	466.81	441.81	1946	1965	227.98	434.16	660.47	2104
456.00	468.92	443.92	1947	1966	227.19	432.97	658.99	2104
458.00	471.02	446.02	1948	1966	226.41	431.79	657.52	2104
460.00	473.12	448.12	1948	1967	225.63	430.62	656.05	2104
462.00	475.23	450.23	1949	1967	224.86	429.45	654.58	2104
464.00	477.33	452.33	1950	1968	224.09	428.29	653.13	2104
466.00	479.44	454.44	1950	1969	223.32	427.13	651.68	2104
468.00	481.54	456.54	1951	1969	222.56	425.98	650.23	2104
470.00	483.64	458.64	1952	1970	221.81	424.83	648.79	2104
472.00	485.75	460.75	1952	1970	221.06	423.69	647.36	2104
474.00	487.85	462.85	1953	1971	220.31	422.56	645.93	2104
476.00	489.96	464.96	1954	1972	219.57	421.43	644.51	2104
478.00	492.06	467.06	1954	1972	218.83	420.30	643.10	2104

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
480.00	494.16	469.16	1955	1973	218.10	419.18	641.69	2104
482.00	496.27	471.27	1955	1973	217.37	418.07	640.28	2104
484.00	498.37	473.37	1956	1974	216.65	416.96	638.89	2104
486.00	500.53	475.51	1957	1975	215.90	415.81	637.43	2136
488.00	502.83	477.72	1958	1976	215.10	414.55	635.81	2215
490.00	505.14	479.94	1959	1977	214.30	413.30	634.20	2215
492.00	507.44	482.15	1960	1978	213.50	412.06	632.60	2215
494.00	509.75	484.37	1961	1979	212.71	410.82	631.01	2215
496.00	512.05	486.58	1962	1980	211.93	409.59	629.43	2215
498.00	514.36	488.80	1963	1981	211.15	408.36	627.85	2215
500.00	516.66	491.02	1964	1982	210.37	407.15	626.28	2215
502.00	518.97	493.23	1965	1983	209.60	405.94	624.72	2215
504.00	521.22	495.45	1966	1984	208.84	404.73	623.17	2215
506.00	523.44	497.66	1967	1985	208.08	403.54	621.63	2215
508.00	525.66	499.88	1968	1986	207.33	402.35	620.09	2215
510.00	527.88	502.09	1969	1987	206.58	401.17	618.56	2215
512.00	530.10	504.31	1970	1988	205.84	399.99	617.04	2215
514.00	532.32	506.52	1971	1988	205.10	398.82	615.53	2215
516.00	534.54	508.74	1972	1989	204.37	397.66	614.02	2215
518.00	536.75	510.95	1973	1990	203.64	396.50	612.52	2215
520.00	538.97	513.17	1974	1991	202.92	395.35	611.03	2215
522.00	541.19	515.39	1975	1992	202.20	394.21	609.54	2215
524.00	543.41	517.60	1976	1993	201.48	393.07	608.07	2215
526.00	545.63	519.82	1976	1994	200.77	391.94	606.60	2215

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL NORMAL VELOCITY M/S
528.00	547.85	522.03	1977	1995	200.07	390.81	605.13	2215
530.00	550.07	524.25	1978	1996	199.37	389.69	603.67	2215
532.00	552.29	526.46	1979	1997	198.67	388.58	602.22	2215
534.00	554.50	528.68	1980	1997	197.98	387.47	600.78	2215
536.00	556.72	530.89	1981	1998	197.30	386.37	599.35	2215
538.00	558.94	533.11	1982	1999	196.62	385.27	597.92	2215
540.00	561.16	535.32	1983	2000	195.94	384.18	596.49	2215
542.00	563.38	537.54	1984	2001	195.26	383.10	595.08	2215
544.00	565.60	539.75	1984	2002	194.60	382.02	593.67	2215
546.00	567.82	541.97	1985	2002	193.93	380.94	592.26	2215
548.00	570.04	544.19	1986	2003	193.27	379.88	590.87	2215
550.00	572.25	546.40	1987	2004	192.61	378.81	589.48	2215
552.00	574.47	548.62	1988	2005	191.96	377.76	588.09	2215
554.00	576.69	550.83	1989	2006	191.31	376.71	586.71	2215
556.00	578.91	553.05	1989	2007	190.67	375.66	585.34	2215
558.00	581.13	555.26	1990	2007	190.03	374.62	583.98	2215
560.00	583.35	557.48	1991	2008	189.40	373.59	582.62	2215
562.00	585.57	559.69	1992	2009	188.76	372.56	581.26	2215
564.00	587.79	561.91	1993	2010	188.14	371.53	579.92	2215
566.00	590.00	564.12	1993	2010	187.51	370.51	578.57	2215
568.00	592.22	566.34	1994	2011	186.89	369.50	577.24	2215
570.00	594.44	568.56	1995	2012	186.27	368.49	575.91	2215
572.00	596.66	570.77	1996	2013	185.66	367.49	574.58	2215
574.00	598.88	572.99	1996	2013	185.05	366.49	573.27	2215

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL NORMAL VELOCITY M/S
576.00	601.20	575.31	1998	2015	184.38	365.38	571.78	2319
578.00	603.64	577.74	1999	2016	183.64	364.13	570.10	2435
580.00	605.87	579.97	2000	2017	183.04	363.14	568.78	2230
582.00	608.27	582.37	2001	2018	182.33	361.96	567.19	2395
584.00	610.69	584.78	2003	2020	181.62	360.76	565.58	2414
586.00	613.19	587.27	2004	2022	180.86	359.48	563.83	2493
588.00	615.80	589.89	2006	2024	180.03	358.05	561.88	2614
590.00	618.44	592.51	2009	2026	179.19	356.63	559.92	2628
592.00	621.11	595.19	2011	2029	178.33	355.16	557.90	2671
594.00	623.76	597.83	2013	2031	177.50	353.73	555.94	2642
596.00	626.42	600.48	2015	2034	176.67	352.30	553.98	2656
598.00	628.96	603.02	2017	2035	175.93	351.03	552.23	2538
600.00	631.85	605.91	2020	2039	174.95	349.33	549.86	2886
602.00	634.74	608.80	2023	2042	173.98	347.65	547.51	2888
604.00	637.55	611.60	2025	2045	173.08	346.09	545.34	2806
606.00	640.45	614.50	2028	2049	172.13	344.42	543.02	2898
608.00	643.09	617.13	2030	2051	171.36	343.10	541.19	2630
610.00	645.72	619.76	2032	2053	170.61	341.79	539.38	2626
612.00	648.12	622.15	2033	2054	169.99	340.74	537.96	2394
614.00	650.48	624.52	2034	2055	169.40	339.73	536.59	2366
616.00	652.89	626.92	2035	2057	168.79	338.69	535.17	2401
618.00	655.31	629.34	2037	2058	168.17	337.64	533.74	2420
620.00	657.76	631.78	2038	2059	167.54	336.56	532.26	2449
622.00	660.39	634.41	2040	2061	166.82	335.31	530.52	2621

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
624.00	663.13	637.14	2042	2064	166.04	333.93	528.61	2736
626.00	665.87	639.88	2044	2066	165.26	332.57	526.70	2740
628.00	668.58	642.58	2046	2069	164.51	331.26	524.88	2702
630.00	671.15	645.15	2048	2070	163.84	330.10	523.27	2571
632.00	673.68	647.68	2050	2072	163.20	328.99	521.74	2522
634.00	676.24	650.23	2051	2074	162.56	327.86	520.18	2554
636.00	678.78	652.77	2053	2075	161.92	326.76	518.66	2535
638.00	681.27	655.25	2054	2077	161.32	325.71	517.21	2490
640.00	683.87	657.85	2056	2079	160.66	324.56	515.61	2594
642.00	686.48	660.46	2057	2080	160.00	323.41	514.00	2608
644.00	689.09	663.06	2059	2082	159.35	322.27	512.42	2603
646.00	691.63	665.60	2061	2084	158.74	321.20	510.93	2541
648.00	694.14	668.11	2062	2085	158.15	320.16	509.50	2508
650.00	696.61	670.57	2063	2087	157.58	319.18	508.13	2465
652.00	699.14	673.09	2065	2088	157.00	318.15	506.70	2520
654.00	701.65	675.61	2066	2089	156.41	317.13	505.28	2512
656.00	704.25	678.20	2068	2091	155.79	316.04	503.76	2598
658.00	707.07	681.01	2070	2094	155.07	314.74	501.93	2810
660.00	709.73	683.67	2072	2096	154.43	313.61	500.33	2659
662.00	712.53	686.47	2074	2098	153.72	312.35	498.55	2796
664.00	715.27	689.20	2076	2100	153.05	311.16	496.87	2736
666.00	718.04	691.97	2078	2103	152.37	309.94	495.16	2766
668.00	720.78	694.71	2080	2105	151.72	308.77	493.50	2734
670.00	723.60	697.52	2082	2107	151.03	307.53	491.74	2815

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
672.00	726.39	700.31	2084	2110	150.35	306.32	490.03	2790
674.00	729.14	703.05	2086	2112	149.71	305.17	488.40	2742
676.00	731.89	705.80	2088	2114	149.07	304.02	486.76	2751
678.00	734.65	708.56	2090	2116	148.43	302.88	485.14	2753
680.00	737.30	711.20	2092	2118	147.85	301.84	483.68	2643
682.00	739.95	713.85	2093	2120	147.27	300.80	482.21	2651
684.00	742.56	716.45	2095	2121	146.72	299.81	480.82	2603
686.00	745.18	719.07	2096	2123	146.16	298.81	479.41	2621
688.00	747.71	721.59	2098	2124	145.65	297.91	478.14	2519
690.00	750.18	724.06	2099	2125	145.17	297.05	476.93	2470
692.00	752.74	726.62	2100	2127	144.65	296.12	475.63	2555
694.00	755.23	729.10	2101	2128	144.17	295.26	474.42	2485
696.00	757.69	731.56	2102	2129	143.70	294.42	473.24	2460
698.00	760.33	734.20	2104	2130	143.16	293.45	471.85	2638
700.00	762.91	736.78	2105	2132	142.64	292.53	470.55	2576
702.00	765.48	739.34	2106	2133	142.14	291.62	469.27	2560
704.00	768.12	741.98	2108	2135	141.61	290.66	467.91	2640
706.00	770.75	744.60	2109	2136	141.09	289.72	466.57	2626
708.00	773.37	747.22	2111	2138	140.57	288.79	465.24	2619
710.00	775.97	749.81	2112	2139	140.07	287.88	463.96	2592
712.00	778.58	752.42	2114	2141	139.57	286.97	462.66	2609
714.00	781.18	755.02	2115	2142	139.07	286.07	461.38	2598
716.00	783.79	757.62	2116	2144	138.58	285.18	460.11	2601
718.00	786.37	760.20	2118	2145	138.10	284.31	458.87	2576

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL NORMAL VELOCITY M/S
720.00	788.99	762.82	2119	2146	137.60	283.41	457.59	2620
722.00	791.82	765.64	2121	2148	137.02	282.35	456.07	2824
724.00	794.49	768.31	2122	2150	136.52	281.43	454.75	2663
726.00	797.16	770.97	2124	2152	136.02	280.52	453.44	2662
728.00	799.79	773.60	2125	2153	135.53	279.63	452.17	2633
730.00	802.40	776.21	2127	2154	135.06	278.77	450.94	2608
732.00	805.00	778.80	2128	2156	134.60	277.93	449.73	2594
734.00	807.71	781.51	2129	2158	134.09	277.00	448.40	2706
736.00	810.33	784.12	2131	2159	133.63	276.15	447.18	2617
738.00	812.98	786.77	2132	2160	133.15	275.28	445.93	2647
740.00	815.74	789.52	2134	2162	132.64	274.34	444.57	2751
742.00	818.36	792.14	2135	2164	132.18	273.50	443.37	2621
744.00	821.08	794.86	2137	2165	131.70	272.60	442.07	2712
746.00	823.97	797.75	2139	2167	131.14	271.57	440.57	2891
748.00	826.63	800.40	2140	2169	130.68	270.73	439.36	2650
750.00	829.20	802.96	2141	2170	130.26	269.95	438.24	2567
752.00	831.71	805.47	2142	2171	129.85	269.21	437.18	2508
754.00	834.27	808.03	2143	2172	129.44	268.45	436.08	2554
756.00	836.85	810.61	2144	2173	129.02	267.67	434.97	2580
758.00	839.60	813.35	2146	2175	128.54	266.78	433.68	2746
760.00	842.41	816.15	2148	2177	128.04	265.86	432.34	2799
762.00	845.52	819.26	2150	2180	127.43	264.71	430.65	3115
764.00	848.38	822.11	2152	2182	126.93	263.77	429.28	2847
766.00	851.17	824.90	2154	2184	126.45	262.88	427.98	2788

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL NORMAL VELOCITY M/S
768.00	853.99	827.72	2156	2186	125.96	261.97	426.65	2822
770.00	856.84	830.56	2157	2188	125.47	261.06	425.31	2837
772.00	859.72	833.44	2159	2190	124.97	260.12	423.94	2879
774.00	862.59	836.30	2161	2192	124.48	259.20	422.59	2863
776.00	866.08	839.78	2164	2196	123.75	257.81	420.53	3483
778.00	869.17	842.88	2167	2199	123.19	256.75	418.95	3093
780.00	872.15	845.85	2169	2201	122.67	255.78	417.52	2970
782.00	874.98	848.67	2171	2203	122.21	254.92	416.26	2823
784.00	878.64	852.33	2174	2208	121.43	253.42	414.03	3663
786.00	881.55	855.24	2176	2210	120.96	252.53	412.70	2901
788.00	884.66	858.34	2179	2213	120.41	251.49	411.17	3108
790.00	887.49	861.17	2180	2214	119.97	250.66	409.94	2825
792.00	890.19	863.86	2181	2216	119.57	249.91	408.85	2693
794.00	892.90	866.57	2183	2217	119.17	249.16	407.75	2711
796.00	895.84	869.51	2185	2219	118.70	248.27	406.43	2936
798.00	899.47	873.13	2188	2224	117.98	246.89	404.36	3618
800.00	902.17	875.82	2190	2225	117.59	246.16	403.29	2697
802.00	904.96	878.61	2191	2227	117.18	245.38	402.15	2783
804.00	907.63	881.28	2192	2228	116.81	244.68	401.12	2672
806.00	910.30	883.94	2193	2229	116.44	243.98	400.10	2664
808.00	912.82	886.46	2194	2230	116.11	243.38	399.21	2513
810.00	915.90	889.54	2196	2232	115.62	242.43	397.80	3083
812.00	918.68	892.31	2198	2234	115.23	241.68	396.70	2773
814.00	921.45	895.08	2199	2235	114.84	240.95	395.61	2765

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
816.00	924.25	897.88	2201	2237	114.44	240.19	394.50	2801
818.00	927.03	900.65	2202	2238	114.05	239.46	393.41	2773
820.00	929.84	903.45	2204	2240	113.66	238.72	392.31	2801
822.00	932.68	906.29	2205	2242	113.26	237.95	391.18	2840
824.00	935.59	909.19	2207	2243	112.85	237.16	390.00	2902
826.00	938.42	912.02	2208	2245	112.46	236.42	388.90	2825
828.00	941.33	914.93	2210	2247	112.04	235.63	387.72	2907
830.00	944.18	917.77	2211	2248	111.65	234.88	386.61	2845
832.00	946.93	920.52	2213	2250	111.29	234.20	385.60	2746
834.00	950.45	924.03	2216	2254	110.70	233.04	383.85	3515
836.00	953.24	926.82	2217	2255	110.33	232.34	382.81	2791
838.00	955.99	929.57	2219	2256	109.98	231.67	381.81	2748
840.00	959.43	933.00	2221	2260	109.43	230.59	380.18	3429
842.00	962.45	936.02	2223	2262	109.00	229.78	378.96	3019
844.00	965.34	938.90	2225	2264	108.62	229.05	377.87	2880
846.00	968.26	941.82	2227	2265	108.24	228.31	376.75	2920
848.00	971.20	944.75	2228	2267	107.85	227.56	375.63	2931
850.00	973.96	947.51	2229	2269	107.51	226.90	374.66	2763
852.00	976.88	950.42	2231	2270	107.13	226.18	373.57	2911
854.00	979.96	953.50	2233	2272	106.71	225.36	372.34	3079
856.00	982.89	956.43	2235	2274	106.33	224.63	371.25	2927
858.00	985.67	959.20	2236	2275	106.00	223.99	370.28	2776
860.00	988.44	961.97	2237	2277	105.67	223.36	369.33	2763
862.00	991.04	964.57	2238	2278	105.38	222.80	368.51	2602

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
864.00	994.19	967.71	2240	2280	104.95	221.98	367.26	3143
866.00	997.10	970.61	2242	2282	104.60	221.28	366.22	2904
868.00	999.96	973.47	2243	2283	104.25	220.62	365.22	2858
870.00	1002.52	976.02	2244	2284	103.98	220.10	364.45	2552
872.00	1005.24	978.74	2245	2285	103.67	219.51	363.56	2718
874.00	1007.94	981.44	2246	2286	103.37	218.93	362.70	2695
876.00	1010.79	984.28	2247	2287	103.04	218.28	361.72	2845
878.00	1013.63	987.12	2249	2289	102.71	217.64	360.76	2840
880.00	1016.45	989.94	2250	2290	102.39	217.02	359.82	2815
882.00	1019.38	992.87	2251	2292	102.04	216.34	358.80	2929
884.00	1021.90	995.38	2252	2292	101.79	215.86	358.08	2515
886.00	1024.65	998.12	2253	2293	101.49	215.28	357.21	2739
888.00	1027.64	1001.11	2255	2295	101.13	214.58	356.15	2990
890.00	1030.52	1003.98	2256	2297	100.81	213.95	355.19	2874
892.00	1033.44	1006.90	2258	2298	100.47	213.29	354.20	2919
894.00	1036.42	1009.87	2259	2300	100.13	212.62	353.18	2970
896.00	1039.35	1012.81	2261	2301	99.79	211.97	352.19	2933
898.00	1042.37	1015.82	2262	2303	99.45	211.28	351.15	3010
900.00	1045.48	1018.92	2264	2305	99.07	210.56	350.04	3108
902.00	1048.63	1022.07	2266	2308	98.70	209.82	348.91	3142
904.00	1051.61	1025.04	2268	2309	98.36	209.16	347.91	2973
906.00	1054.61	1028.03	2269	2311	98.03	208.50	346.91	2995
908.00	1057.54	1030.96	2271	2313	97.71	207.88	345.96	2926
910.00	1060.50	1033.92	2272	2314	97.39	207.24	344.99	2962

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY FROM SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL NORMAL VELOCITY M/S
912.00	1063.43	1036.85	2274	2316	97.07	206.63	344.05	2925
914.00	1066.54	1039.95	2276	2318	96.72	205.93	342.99	3100
916.00	1069.69	1043.09	2277	2320	96.36	205.22	341.90	3147
918.00	1072.64	1046.04	2279	2321	96.05	204.61	340.97	2946
920.00	1075.56	1048.96	2280	2323	95.74	204.01	340.05	2921
922.00	1078.80	1052.19	2282	2325	95.37	203.28	338.92	3227
924.00	1081.73	1055.12	2284	2327	95.07	202.68	338.01	2935
926.00	1084.69	1058.08	2285	2328	94.76	202.08	337.09	2955
928.00	1087.68	1061.06	2287	2330	94.45	201.47	336.16	2980
930.00	1090.61	1063.98	2288	2331	94.16	200.88	335.26	2924
932.00	1093.53	1066.90	2289	2333	93.87	200.31	334.38	2917
934.00	1096.45	1069.81	2291	2334	93.58	199.73	333.51	2914
936.00	1099.38	1072.74	2292	2336	93.28	199.16	332.63	2932
938.00	1102.30	1075.65	2294	2337	93.00	198.60	331.76	2909
940.00	1105.16	1078.51	2295	2338	92.72	198.06	330.94	2859
942.00	1108.13	1081.48	2296	2340	92.43	197.47	330.04	2971
944.00	1111.06	1084.41	2297	2341	92.15	196.91	329.18	2925
946.00	1114.05	1087.39	2299	2343	91.85	196.33	328.29	2982
948.00	1116.97	1090.31	2300	2344	91.58	195.78	327.44	2915
950.00	1119.94	1093.27	2302	2345	91.29	195.21	326.57	2964
952.00	1122.91	1096.24	2303	2347	91.00	194.65	325.70	2968
954.00	1125.91	1099.23	2304	2348	90.72	194.08	324.82	2994
956.00	1128.96	1102.28	2306	2350	90.42	193.48	323.91	3050
958.00	1131.73	1105.04	2307	2351	90.18	193.01	323.18	2761

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
960.00	1134.62	1107.93	2308	2352	89.91	192.49	322.37	2887
962.00	1137.71	1111.01	2310	2354	89.62	191.89	321.45	3082
964.00	1140.65	1113.95	2311	2355	89.35	191.35	320.63	2941
966.00	1143.57	1116.87	2312	2357	89.08	190.83	319.82	2913
968.00	1146.56	1119.85	2314	2358	88.81	190.29	318.98	2980
970.00	1149.51	1122.80	2315	2360	88.54	189.75	318.16	2951
972.00	1152.51	1125.79	2316	2361	88.27	189.21	317.32	2995
974.00	1155.60	1128.88	2318	2363	87.98	188.63	316.42	3084
976.00	1158.57	1131.84	2319	2364	87.72	188.10	315.60	2968
978.00	1161.75	1135.02	2321	2366	87.41	187.50	314.66	3173
980.00	1164.73	1138.00	2322	2368	87.15	186.97	313.85	2981
982.00	1167.68	1140.94	2324	2369	86.90	186.46	313.06	2938
984.00	1170.64	1143.89	2325	2370	86.64	185.95	312.27	2955
986.00	1173.65	1146.90	2326	2372	86.37	185.42	311.45	3008
988.00	1176.63	1149.88	2328	2373	86.12	184.91	310.65	2977
990.00	1179.56	1152.80	2329	2374	85.87	184.41	309.88	2923
992.00	1182.58	1155.82	2330	2376	85.61	183.89	309.07	3023
994.00	1185.58	1158.82	2332	2377	85.35	183.38	308.27	2994
996.00	1188.60	1161.82	2333	2379	85.10	182.86	307.47	3008
998.00	1191.60	1164.82	2334	2380	84.84	182.35	306.68	2996
1000.00	1194.56	1167.78	2336	2381	84.60	181.86	305.92	2961
1002.00	1197.65	1170.86	2337	2383	84.33	181.33	305.09	3080
1004.00	1200.67	1173.89	2338	2384	84.08	180.82	304.29	3025
1006.00	1203.64	1176.84	2340	2386	83.84	180.34	303.54	2957

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
1008.00	1206.80	1180.00	2341	2387	83.57	179.79	302.68	3155
1010.00	1209.85	1183.04	2343	2389	83.31	179.28	301.89	3045
1012.00	1212.92	1186.11	2344	2390	83.06	178.76	301.08	3072
1014.00	1216.08	1189.27	2346	2392	82.79	178.22	300.24	3153
1016.00	1219.17	1192.36	2347	2394	82.54	177.71	299.43	3089
1018.00	1222.29	1195.47	2349	2395	82.28	177.19	298.62	3111
1020.00	1225.32	1198.49	2350	2397	82.04	176.70	297.86	3023
1022.00	1228.26	1201.43	2351	2398	81.81	176.25	297.15	2937
1024.00	1231.30	1204.47	2352	2399	81.57	175.76	296.39	3037
1026.00	1234.34	1207.50	2354	2401	81.33	175.28	295.63	3033
1028.00	1237.29	1210.44	2355	2402	81.11	174.83	294.93	2945
1030.00	1240.62	1213.77	2357	2404	80.83	174.25	294.02	3323
1032.00	1243.72	1216.87	2358	2406	80.58	173.76	293.24	3102
1034.00	1246.80	1219.94	2360	2407	80.34	173.27	292.48	3075
1036.00	1249.85	1222.99	2361	2408	80.11	172.80	291.74	3048
1038.00	1252.96	1226.09	2362	2410	79.87	172.31	290.97	3100
1040.00	1256.05	1229.18	2364	2411	79.63	171.83	290.21	3088
1042.00	1259.20	1232.32	2365	2413	79.38	171.33	289.43	3145
1044.00	1262.22	1235.34	2367	2414	79.16	170.88	288.72	3012
1046.00	1265.24	1238.36	2368	2416	78.94	170.43	288.01	3022
1048.00	1268.24	1241.35	2369	2417	78.72	169.99	287.32	2990
1050.00	1271.58	1244.69	2371	2419	78.45	169.43	286.45	3341
1052.00	1274.74	1247.84	2372	2421	78.21	168.95	285.68	3149
1054.00	1277.73	1250.82	2373	2422	78.00	168.52	285.00	2985

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
1056.00	1280.70	1253.79	2375	2423	77.79	168.09	284.34	2970
1058.00	1283.72	1256.80	2376	2424	77.57	167.66	283.65	3011
1060.00	1286.76	1259.84	2377	2425	77.36	167.22	282.96	3035
1062.00	1289.78	1262.85	2378	2427	77.15	166.79	282.28	3017
1064.00	1292.75	1265.82	2379	2428	76.94	166.37	281.62	2969
1066.00	1295.75	1268.82	2381	2429	76.73	165.95	280.96	2997
1068.00	1298.94	1272.00	2382	2431	76.50	165.47	280.20	3183
1070.00	1301.90	1274.96	2383	2432	76.30	165.07	279.56	2955
1072.00	1304.79	1277.84	2384	2433	76.11	164.68	278.96	2886
1074.00	1307.80	1280.85	2385	2434	75.91	164.27	278.30	3003
1076.00	1310.74	1283.79	2386	2435	75.71	163.87	277.68	2939
1078.00	1313.82	1286.86	2388	2436	75.50	163.44	277.00	3076
1080.00	1316.86	1289.89	2389	2437	75.30	163.02	276.33	3032
1082.00	1319.93	1292.97	2390	2439	75.09	162.59	275.66	3072
1084.00	1322.97	1296.00	2391	2440	74.89	162.18	275.00	3034
1086.00	1326.07	1299.10	2392	2441	74.67	161.75	274.32	3095
1088.00	1329.14	1302.16	2394	2443	74.47	161.33	273.66	3064
1090.00	1332.23	1305.25	2395	2444	74.26	160.91	272.99	3088
1092.00	1335.43	1308.44	2396	2446	74.04	160.46	272.27	3193
1094.00	1338.50	1311.51	2398	2447	73.84	160.04	271.62	3065
1096.00	1341.55	1314.56	2399	2448	73.64	159.64	270.97	3047
1098.00	1344.57	1317.57	2400	2449	73.45	159.25	270.35	3011
1100.00	1347.64	1320.63	2401	2451	73.25	158.84	269.71	3064
1102.00	1350.73	1323.72	2402	2452	73.05	158.43	269.05	3088

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL NORMAL VELOCITY M/S
1104.00	1353.86	1326.84	2404	2453	72.85	158.01	268.39	3122
1106.00	1356.90	1329.88	2405	2454	72.66	157.62	267.77	3035
1108.00	1359.90	1332.87	2406	2455	72.47	157.24	267.16	2994
1110.00	1363.02	1335.99	2407	2457	72.27	156.83	266.51	3120
1112.00	1366.02	1338.98	2408	2458	72.09	156.46	265.92	2991
1114.00	1368.93	1341.89	2409	2459	71.92	156.10	265.36	2905
1116.00	1371.87	1344.83	2410	2460	71.74	155.75	264.79	2943
1118.00	1375.03	1347.98	2411	2461	71.54	155.33	264.13	3150
1120.00	1378.29	1351.24	2413	2463	71.33	154.90	263.43	3257
1122.00	1381.39	1354.33	2414	2464	71.14	154.50	262.81	3094
1124.00	1384.55	1357.48	2415	2465	70.94	154.10	262.16	3152
1126.00	1387.60	1360.54	2417	2467	70.76	153.72	261.56	3053
1128.00	1390.68	1363.61	2418	2468	70.58	153.34	260.95	3071
1130.00	1393.80	1366.72	2419	2469	70.39	152.95	260.32	3116
1132.00	1397.02	1369.94	2420	2471	70.19	152.54	259.66	3213
1134.00	1400.06	1372.98	2421	2472	70.01	152.17	259.08	3039
1136.00	1402.87	1375.78	2422	2472	69.86	151.86	258.59	2806
1138.00	1405.73	1378.63	2423	2473	69.70	151.54	258.08	2851
1140.00	1408.82	1381.72	2424	2474	69.52	151.17	257.48	3085
1142.00	1411.87	1384.76	2425	2475	69.35	150.81	256.91	3044
1144.00	1414.89	1387.78	2426	2476	69.17	150.45	256.34	3022
1146.00	1417.88	1390.77	2427	2477	69.01	150.11	255.79	2983
1148.00	1420.82	1393.71	2428	2478	68.85	149.78	255.26	2942
1150.00	1423.77	1396.65	2429	2479	68.69	149.45	254.73	2941

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL NORMAL VELOCITY M/S
1152.00	1426.79	1399.66	2430	2480	68.52	149.10	254.18	3013
1154.00	1429.81	1402.68	2431	2481	68.35	148.75	253.63	3019
1156.00	1432.80	1405.66	2432	2482	68.19	148.42	253.09	2983
1158.00	1435.87	1408.73	2433	2483	68.02	148.06	252.52	3068
1160.00	1438.79	1411.64	2434	2484	67.86	147.75	252.01	2910
1162.00	1441.67	1414.52	2435	2485	67.71	147.44	251.52	2878
1164.00	1444.45	1417.30	2435	2485	67.57	147.15	251.07	2781
1166.00	1447.23	1420.07	2436	2486	67.44	146.87	250.62	2771
1168.00	1450.22	1423.06	2437	2487	67.28	146.55	250.09	2984
1170.00	1453.07	1425.91	2437	2488	67.14	146.25	249.62	2852
1172.00	1456.07	1428.90	2438	2489	66.98	145.92	249.09	2995
1174.00	1458.92	1431.75	2439	2489	66.84	145.63	248.62	2845
1176.00	1461.71	1434.53	2440	2490	66.70	145.35	248.18	2786
1178.00	1464.61	1437.42	2440	2490	66.55	145.05	247.70	2889
1180.00	1467.46	1440.28	2441	2491	66.41	144.76	247.23	2855
1182.00	1470.29	1443.10	2442	2492	66.28	144.47	246.77	2824
1184.00	1473.10	1445.91	2442	2492	66.14	144.19	246.33	2804
1186.00	1475.97	1448.77	2443	2493	66.00	143.90	245.86	2866
1188.00	1478.76	1451.55	2444	2493	65.87	143.63	245.43	2782
1190.00	1481.60	1454.39	2444	2494	65.73	143.35	244.97	2836
1192.00	1484.49	1457.28	2445	2495	65.59	143.05	244.50	2890
1194.00	1487.29	1460.07	2446	2495	65.46	142.78	244.07	2791
1196.00	1490.12	1462.90	2446	2496	65.33	142.51	243.63	2826
1198.00	1492.90	1465.68	2447	2496	65.20	142.24	243.20	2779

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
1200.00	1495.72	1468.49	2447	2497	65.06	141.97	242.76	2815
1202.00	1498.61	1471.38	2448	2498	64.93	141.68	242.30	2887
1204.00	1501.50	1474.26	2449	2498	64.79	141.40	241.84	2881
1206.00	1504.32	1477.08	2450	2499	64.66	141.13	241.41	2816
1208.00	1507.21	1479.96	2450	2500	64.52	140.84	240.96	2884
1210.00	1510.05	1482.80	2451	2500	64.39	140.57	240.52	2841
1212.00	1512.87	1485.62	2452	2501	64.26	140.30	240.09	2819
1214.00	1515.70	1488.44	2452	2501	64.13	140.04	239.66	2821
1216.00	1518.52	1491.26	2453	2502	64.01	139.77	239.23	2820
1218.00	1521.35	1494.08	2453	2502	63.88	139.51	238.80	2821
1220.00	1524.17	1496.90	2454	2503	63.75	139.24	238.38	2821
1222.00	1527.00	1499.72	2455	2504	63.63	138.98	237.96	2819
1224.00	1529.83	1502.55	2455	2504	63.50	138.72	237.53	2834
1226.00	1532.67	1505.38	2456	2505	63.37	138.45	237.11	2827
1228.00	1535.53	1508.24	2456	2505	63.24	138.19	236.68	2859
1230.00	1538.20	1510.91	2457	2506	63.13	137.96	236.31	2669
1232.00	1540.97	1513.67	2457	2506	63.01	137.71	235.91	2763
1234.00	1543.77	1516.47	2458	2507	62.89	137.45	235.50	2801
1236.00	1546.78	1519.47	2459	2507	62.75	137.16	235.03	3000
1238.00	1549.71	1522.40	2459	2508	62.62	136.89	234.58	2924
1240.00	1552.64	1525.33	2460	2509	62.49	136.61	234.14	2931
1242.00	1555.62	1528.30	2461	2510	62.35	136.33	233.68	2971
1244.00	1558.54	1531.22	2462	2510	62.22	136.06	233.25	2919
1246.00	1561.52	1534.20	2463	2511	62.09	135.78	232.79	2979

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY FROM SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL NORMAL VELOCITY M/S
1248.00	1564.50	1537.17	2463	2512	61.95	135.50	232.34	2973
1250.00	1567.46	1540.13	2464	2513	61.82	135.22	231.89	2958
1252.00	1570.36	1543.02	2465	2513	61.70	134.96	231.47	2895
1254.00	1573.23	1545.89	2466	2514	61.57	134.71	231.05	2865
1256.00	1576.12	1548.77	2466	2515	61.45	134.45	230.64	2880
1258.00	1579.09	1551.73	2467	2515	61.32	134.18	230.20	2964
1260.00	1582.07	1554.71	2468	2516	61.19	133.90	229.75	2978
1262.00	1585.16	1557.80	2469	2517	61.05	133.61	229.27	3091
1264.00	1588.22	1560.85	2470	2518	60.91	133.32	228.81	3047
1266.00	1591.25	1563.88	2471	2519	60.78	133.04	228.36	3028
1268.00	1594.29	1566.92	2471	2520	60.64	132.76	227.90	3042
1270.00	1597.34	1569.96	2472	2521	60.51	132.48	227.44	3037
1272.00	1600.43	1573.05	2473	2522	60.37	132.20	226.97	3090
1274.00	1603.50	1576.11	2474	2523	60.24	131.91	226.52	3062
1276.00	1606.60	1579.21	2475	2524	60.10	131.63	226.05	3100
1278.00	1609.72	1582.32	2476	2525	59.96	131.34	225.58	3115
1280.00	1612.82	1585.41	2477	2526	59.83	131.05	225.11	3092
1282.00	1615.90	1588.50	2478	2527	59.70	130.77	224.66	3084
1284.00	1618.98	1591.57	2479	2528	59.56	130.49	224.20	3070
1286.00	1622.05	1594.64	2480	2529	59.43	130.22	223.76	3069
1288.00	1625.05	1597.63	2481	2529	59.31	129.96	223.33	2996
1290.00	1628.11	1600.68	2482	2530	59.18	129.69	222.89	3050
1292.00	1631.08	1603.64	2482	2531	59.06	129.43	222.48	2963
1294.00	1634.05	1606.62	2483	2532	58.94	129.18	222.06	2971

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL NORMAL VELOCITY M/S
1296.00	1637.16	1609.72	2484	2533	58.81	128.90	221.61	3105
1298.00	1640.15	1612.70	2485	2534	58.68	128.65	221.20	2984
1300.00	1643.17	1615.72	2486	2534	58.56	128.39	220.77	3014
1302.00	1646.19	1618.74	2487	2535	58.44	128.13	220.35	3023
1304.00	1649.26	1621.80	2487	2536	58.31	127.87	219.92	3057
1306.00	1652.32	1624.86	2488	2537	58.19	127.60	219.49	3060
1308.00	1655.48	1628.01	2489	2538	58.06	127.33	219.03	3151
1310.00	1658.48	1631.01	2490	2539	57.94	127.07	218.62	3001
1312.00	1661.51	1634.03	2491	2540	57.82	126.82	218.21	3019
1314.00	1664.57	1637.09	2492	2540	57.69	126.56	217.79	3058
1316.00	1667.53	1640.04	2492	2541	57.58	126.32	217.39	2955
1318.00	1670.47	1642.98	2493	2542	57.47	126.09	217.01	2940
1320.00	1673.44	1645.94	2494	2542	57.35	125.85	216.62	2960
1322.00	1676.40	1648.90	2495	2543	57.24	125.61	216.23	2959
1324.00	1679.30	1651.80	2495	2544	57.13	125.38	215.86	2898
1326.00	1682.28	1654.77	2496	2544	57.02	125.14	215.47	2971
1328.00	1685.21	1657.70	2497	2545	56.91	124.91	215.09	2931
1330.00	1688.10	1660.58	2497	2546	56.80	124.69	214.73	2880
1332.00	1691.01	1663.49	2498	2546	56.69	124.46	214.36	2912
1334.00	1694.02	1666.50	2498	2547	56.58	124.22	213.96	3007
1336.00	1697.21	1669.68	2500	2548	56.45	123.95	213.52	3182
1338.00	1700.38	1672.85	2501	2549	56.33	123.69	213.08	3165
1340.00	1703.53	1675.99	2501	2550	56.20	123.42	212.65	3146
1342.00	1706.51	1678.97	2502	2551	56.09	123.19	212.27	2977

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
1344.00	1709.63	1682.08	2503	2552	55.97	122.94	211.86	3111
1346.00	1712.74	1685.19	2504	2553	55.85	122.69	211.44	3112
1348.00	1715.77	1688.21	2505	2553	55.74	122.45	211.05	3021
1350.00	1718.93	1691.37	2506	2554	55.62	122.19	210.63	3157
1352.00	1722.35	1694.79	2507	2556	55.48	121.89	210.13	3417
1354.00	1725.94	1698.37	2509	2558	55.32	121.56	209.58	3579
1356.00	1729.67	1702.09	2510	2560	55.15	121.20	208.99	3726
1358.00	1733.46	1705.88	2512	2562	54.98	120.83	208.39	3788
1360.00	1737.39	1709.80	2514	2565	54.80	120.44	207.74	3917
1362.00	1741.25	1713.65	2516	2567	54.62	120.07	207.12	3855
1364.00	1745.09	1717.49	2518	2569	54.45	119.70	206.50	3836
1366.00	1748.88	1721.27	2520	2571	54.28	119.34	205.91	3784
1368.00	1752.70	1725.09	2522	2574	54.11	118.98	205.31	3814
1370.00	1756.48	1728.86	2524	2576	53.94	118.63	204.73	3775
1372.00	1760.23	1732.60	2526	2578	53.78	118.29	204.16	3741
1374.00	1763.91	1736.28	2527	2580	53.63	117.96	203.62	3678
1376.00	1767.51	1739.88	2529	2582	53.48	117.64	203.10	3596
1378.00	1771.21	1743.57	2531	2584	53.33	117.32	202.55	3697
1380.00	1774.86	1747.22	2532	2585	53.18	117.00	202.03	3643
1382.00	1778.52	1750.87	2534	2587	53.03	116.68	201.50	3650
1384.00	1782.25	1754.59	2536	2589	52.88	116.35	200.95	3724
1386.00	1785.97	1758.31	2537	2591	52.72	116.03	200.41	3717
1388.00	1789.71	1762.04	2539	2593	52.57	115.70	199.87	3735
1390.00	1793.46	1765.78	2541	2595	52.42	115.37	199.33	3740

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
1392.00	1797.25	1769.57	2542	2597	52.26	115.04	198.78	3784
1394.00	1801.06	1773.38	2544	2600	52.10	114.71	198.22	3812
1396.00	1804.88	1777.19	2546	2602	51.95	114.37	197.67	3806
1398.00	1808.61	1780.92	2548	2604	51.80	114.06	197.14	3732
1400.00	1812.40	1784.70	2550	2606	51.65	113.73	196.60	3785
1402.00	1816.07	1788.36	2551	2608	51.51	113.43	196.10	3659
1404.00	1819.75	1792.04	2553	2609	51.36	113.13	195.59	3679
1406.00	1823.49	1795.77	2554	2611	51.22	112.82	195.08	3733
1408.00	1827.16	1799.44	2556	2613	51.08	112.52	194.58	3664
1410.00	1830.95	1803.22	2558	2615	50.93	112.20	194.05	3784
1412.00	1834.86	1807.12	2560	2617	50.78	111.87	193.50	3899
1414.00	1838.74	1811.00	2562	2620	50.62	111.54	192.95	3880
1416.00	1842.39	1814.64	2563	2621	50.49	111.25	192.47	3639
1418.00	1846.23	1818.48	2565	2623	50.34	110.93	191.94	3841
1420.00	1850.05	1822.29	2567	2625	50.19	110.62	191.42	3812
1422.00	1853.92	1826.16	2568	2628	50.04	110.30	190.89	3869
1424.00	1857.94	1830.17	2570	2630	49.89	109.96	190.32	4005
1426.00	1861.89	1834.12	2572	2632	49.73	109.63	189.77	3950
1428.00	1865.58	1837.80	2574	2634	49.60	109.35	189.29	3686
1430.00	1869.23	1841.44	2575	2636	49.47	109.07	188.83	3641
1432.00	1872.74	1844.95	2577	2637	49.35	108.82	188.41	3508
1434.00	1876.49	1848.70	2578	2639	49.22	108.53	187.93	3745
1436.00	1880.20	1852.40	2580	2641	49.08	108.25	187.46	3703
1438.00	1883.92	1856.11	2582	2643	48.95	107.97	186.99	3714

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL NORMAL VELOCITY M/S
1440.00	1887.63	1859.81	2583	2644	48.82	107.69	186.52	3701
1442.00	1891.13	1863.31	2584	2646	48.71	107.44	186.11	3500
1444.00	1894.83	1867.01	2586	2648	48.58	107.17	185.65	3697
1446.00	1898.56	1870.73	2587	2649	48.45	106.89	185.19	3718
1448.00	1902.22	1874.39	2589	2651	48.33	106.62	184.74	3659
1450.00	1905.83	1877.99	2590	2653	48.21	106.36	184.31	3607
1452.00	1909.61	1881.77	2592	2654	48.07	106.08	183.84	3772
1454.00	1913.44	1885.59	2594	2656	47.94	105.80	183.36	3826
1456.00	1917.26	1889.40	2595	2658	47.81	105.51	182.89	3809
1458.00	1921.04	1893.17	2597	2660	47.68	105.24	182.43	3773
1460.00	1924.71	1896.84	2598	2662	47.56	104.98	181.99	3671
1462.00	1928.47	1900.59	2600	2664	47.43	104.71	181.54	3750
1464.00	1932.39	1904.51	2602	2666	47.30	104.41	181.05	3911
1466.00	1936.19	1908.30	2603	2668	47.17	104.14	180.59	3796
1468.00	1939.98	1912.09	2605	2669	47.04	103.87	180.13	3789
1470.00	1943.78	1915.88	2607	2671	46.92	103.60	179.68	3794
1472.00	1947.60	1919.70	2608	2673	46.79	103.32	179.22	3817
1474.00	1951.49	1923.58	2610	2675	46.66	103.04	178.75	3878
1476.00	1955.38	1927.47	2612	2677	46.53	102.76	178.28	3887
1478.00	1959.36	1931.44	2614	2679	46.39	102.47	177.79	3975
1480.00	1963.30	1935.38	2615	2681	46.26	102.19	177.32	3934
1482.00	1967.23	1939.30	2617	2684	46.13	101.91	176.84	3926
1484.00	1971.17	1943.23	2619	2686	46.00	101.63	176.37	3929
1486.00	1975.09	1947.15	2621	2688	45.87	101.35	175.91	3919

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
1488.00	1979.02	1951.07	2622	2690	45.74	101.07	175.44	3925
1490.00	1982.88	1954.92	2624	2692	45.62	100.81	175.00	3846
1492.00	1986.74	1958.77	2626	2693	45.50	100.54	174.56	3853
1494.00	1990.57	1962.60	2627	2695	45.38	100.29	174.12	3828
1496.00	1994.48	1966.51	2629	2697	45.25	100.02	173.67	3909
1498.00	1998.36	1970.39	2631	2699	45.13	99.75	173.23	3875
1500.00	2002.29	1974.31	2632	2701	45.01	99.49	172.78	3920
1502.00	2006.17	1978.18	2634	2703	44.89	99.23	172.35	3873
1504.00	2010.01	1982.01	2636	2705	44.77	98.98	171.92	3833
1506.00	2013.80	1985.80	2637	2707	44.66	98.73	171.51	3792
1508.00	2017.64	1989.64	2639	2708	44.54	98.48	171.09	3832
1510.00	2021.54	1993.53	2640	2710	44.42	98.22	170.65	3897
1512.00	2025.40	1997.39	2642	2712	44.30	97.97	170.23	3854
1514.00	2029.32	2001.30	2644	2714	44.19	97.71	169.80	3913
1516.00	2033.26	2005.23	2645	2716	44.07	97.46	169.36	3934
1518.00	2037.14	2009.11	2647	2718	43.95	97.21	168.95	3872
1520.00	2041.03	2012.99	2649	2720	43.83	96.96	168.53	3886
1522.00	2044.90	2016.86	2650	2722	43.72	96.71	168.11	3865
1524.00	2048.77	2020.72	2652	2723	43.61	96.47	167.70	3860
1526.00	2052.78	2024.72	2654	2726	43.49	96.21	167.26	4004
1528.00	2056.75	2028.69	2655	2728	43.37	95.95	166.83	3966
1530.00	2060.64	2032.56	2657	2729	43.26	95.71	166.42	3878
1532.00	2064.52	2036.44	2659	2731	43.15	95.47	166.02	3874
1534.00	2068.41	2040.32	2660	2733	43.03	95.23	165.61	3884

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
1536.00	2072.27	2044.18	2662	2735	42.93	94.99	165.22	3860
1538.00	2076.14	2048.04	2663	2737	42.82	94.76	164.82	3858
1540.00	2080.10	2052.00	2665	2738	42.70	94.51	164.40	3962
1542.00	2084.05	2055.94	2667	2740	42.59	94.27	163.99	3942
1544.00	2087.97	2059.86	2668	2742	42.48	94.03	163.59	3913
1546.00	2091.96	2063.84	2670	2744	42.37	93.79	163.18	3982
1548.00	2095.89	2067.77	2672	2746	42.26	93.55	162.78	3926
1550.00	2099.84	2071.71	2673	2748	42.15	93.31	162.38	3944
1552.00	2103.85	2075.72	2675	2750	42.03	93.07	161.96	4006
1554.00	2107.92	2079.78	2677	2752	41.92	92.82	161.54	4059
1556.00	2112.06	2083.91	2679	2754	41.80	92.56	161.10	4137
1558.00	2116.31	2088.16	2681	2757	41.67	92.29	160.64	4248
1560.00	2120.32	2092.16	2682	2759	41.56	92.05	160.24	3998
1562.00	2124.32	2096.15	2684	2761	41.45	91.81	159.84	3994
1564.00	2128.36	2100.19	2686	2763	41.34	91.57	159.43	4038
1566.00	2132.38	2104.21	2687	2765	41.23	91.34	159.03	4016
1568.00	2136.41	2108.23	2689	2766	41.13	91.10	158.63	4022
1570.00	2140.47	2112.28	2691	2768	41.02	90.86	158.23	4051
1572.00	2144.65	2116.46	2693	2771	40.90	90.61	157.80	4180
1574.00	2148.87	2120.67	2695	2773	40.78	90.35	157.37	4212
1576.00	2152.88	2124.68	2696	2775	40.68	90.12	156.98	4005
1578.00	2157.11	2128.90	2698	2777	40.56	89.87	156.55	4224
1580.00	2161.27	2133.05	2700	2779	40.45	89.63	156.14	4149
1582.00	2163.90	2135.68	2700	2779	40.40	89.53	155.98	2627

COMPANY

BHP PETROLEUM

WELL

: MINERVA -2A

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TWO-WAY
TRAVEL
TIME
FROM SRD
MS

1584.00

MEASURED
DEPTH
FROM
KB
M

2165.38

VERTICAL
DEPTH
FROM
SRD
M

2137.16

AVERAGE
VELOCITY
SRD/GEO
M/S

2698

RMS
VELOCITY
M/S

2778

FIRST
NORMAL
MOVEOUT
MS

40.39

SECOND
NORMAL
MOVEOUT
MS

89.50

THIRD
NORMAL
MOVEOUT
MS

155.93

INTERVAL
VELOCITY
M/S

1480

PE900107

This is an enclosure indicator page.
The enclosure PE900107 is enclosed within the
container PE900104 at this location in this
document.

The enclosure PE900107 has the following characteristics:

ITEM_BARCODE = PE900107
CONTAINER_BARCODE = PE900104
NAME = Vertical Seismic Profile for Minerva-2a
BASIN = OTWAY
ONSHORE? = N
DATA_TYPE = SEISMIC
DATA_SUB_TYPE = VELOCITY
DESCRIPTION = Vertical Seismic Profile for
Minerva-2a, Zero Offset VSP, Velocity
Filtering, Plot 3, By Schlumberger
(Melbourne Log Interpretation Centre)
for BHP Petroleum, 14 October 1993.
REMARKS =
DATE_WRITTEN = 14-OCT-1993
DATE_PROCESSED = 23-OCT-1993
DATE_RECEIVED =
RECEIVED_FROM = BHP Petroleum Pty Ltd
WELL_NAME = Minerva-2a
CONTRACTOR = Schlumberger
AUTHOR =
ORIGINATOR = BHP Petroleum Pty Ltd
TOP_DEPTH = 600
BOTTOM_DEPTH = 2160
ROW_CREATED_BY = FH11_SW

(Inserted by DNRE - Vic Govt Mines Dept)

PE900105

This is an enclosure indicator page.
The enclosure PE900105 is enclosed within the
container PE900104 at this location in this
document.

The enclosure PE900105 has the following characteristics:

ITEM_BARCODE = PE900105
CONTAINER_BARCODE = PE900104
NAME = Vertical Seismic Profile for Minerva-2a
BASIN = OTWAY
ONSHORE? = N
DATA_TYPE = SEISMIC
DATA_SUB_TYPE = VELOCITY
DESCRIPTION = Vertical Seismic Profile for
Minerva-2a, Zero Offset VSP, Stacked
Data, Plot 1, By Schlumberger
(Melbourne Log Interpretation Centre)
for BHP Petroleum, 14 October 1993.
REMARKS =
DATE_WRITTEN = 14-OCT-1993
DATE_PROCESSED = 23-OCT-1993
DATE_RECEIVED =
RECEIVED_FROM = BHP Petroleum Pty Ltd
WELL_NAME = Minerva-2a
CONTRACTOR = Schlumberger
AUTHOR =
ORIGINATOR = BHP Petroleum Pty Ltd
TOP_DEPTH = 600
BOTTOM_DEPTH = 2160
ROW_CREATED_BY = FH11_SW

(Inserted by DNRE - Vic Govt Mines Dept)

PE900106

This is an enclosure indicator page.
The enclosure PE900106 is enclosed within the
container PE900104 at this location in this
document.

The enclosure PE900106 has the following characteristics:

ITEM_BARCODE = PE900106
CONTAINER_BARCODE = PE900104
 NAME = Vertical Seismic Profile for Minerva-2a
 BASIN = OTWAY
 ONSHORE? = N
 DATA_TYPE = SEISMIC
 DATA_SUB_TYPE = VELOCITY
 DESCRIPTION = Vertical Seismic Profile for
 Minerva-2a, Zero Offset VSP, Amplitude
 Recovery, Plot 2, By Schlumberger
 (Melbourne Log Interpretation Centre)
 for BHP Petroleum, 14 October 1993.
 REMARKS =
 DATE_WRITTEN = 14-OCT-1993
 DATE_PROCESSED = 23-OCT-1993
 DATE_RECEIVED =
 RECEIVED_FROM = BHP Petroleum Pty Ltd
 WELL_NAME = Minerva-2a
 CONTRACTOR = Schlumberger
 AUTHOR =
 ORIGINATOR = BHP Petroleum Pty Ltd
 TOP_DEPTH = 600
 BOTTOM_DEPTH = 2160
 ROW_CREATED_BY = FH11_SW

(Inserted by DNRE - Vic Govt Mines Dept)

PE900126

This is an enclosure indicator page.
The enclosure PE900126 is enclosed within the
container PE900104 at this location in this
document.

The enclosure PE900126 has the following characteristics:

- ITEM_BARCODE = PE900126
- CONTAINER_BARCODE = PE900104
 - NAME = Drift Corrected Sonic for Minerva-2a
 - BASIN = OTWAY
 - ONSHORE? = N
 - DATA_TYPE = SEISMIC
 - DATA_SUB_TYPE = PROC_RPT
 - DESCRIPTION = Drift Corrected Sonic for Minerva-2a,
Zero Offset VSP and Geogram, By
Schlumberger (Melbourne Log
Interpretation Centre) for BHP
Petroleum, 14 October 1993.
- REMARKS =
- DATE_WRITTEN = 14-OCT-1993
- DATE_PROCESSED = 23-OCT-1993
- DATE_RECEIVED =
- RECEIVED_FROM = BHP Petroleum Pty Ltd
 - WELL_NAME = Minerva-2a
 - CONTRACTOR = Schlumberger
 - AUTHOR =
 - ORIGINATOR = BHP Petroleum Pty Ltd
 - TOP_DEPTH = 600
 - BOTTOM_DEPTH = 2160
 - ROW_CREATED_BY = FH11_SW

(Inserted by DNRE - Vic Govt Mines Dept)

PE900111

This is an enclosure indicator page.
The enclosure PE900111 is enclosed within the
container PE900104 at this location in this
document.

The enclosure PE900111 has the following characteristics:

ITEM_BARCODE = PE900111
CONTAINER_BARCODE = PE900104
NAME = Vertical Seismic Profile for Minerva-2a
BASIN =

OTWAY

ONSHORE? = N
DATA_TYPE = SEISMIC
DATA_SUB_TYPE = VELOCITY
DESCRIPTION = Vertical Seismic Profile for
Minerva-2a, Zero Offset VSP,
Waveshaping and Corridor Stack, Plot 5,
By Schlumberger (Melbourne Log
Interpretation Centre) for BHP
Petroleum, 14 October 1993.
REMARKS =
DATE_WRITTEN = 14-OCT-1993
DATE_PROCESSED = 23-OCT-1993
DATE_RECEIVED =
RECEIVED_FROM = BHP Petroleum Pty Ltd
WELL_NAME = Minerva-2a
CONTRACTOR = Schlumberger
AUTHOR =
ORIGINATOR = BHP Petroleum Pty Ltd
TOP_DEPTH = 600
BOTTOM_DEPTH = 2160
ROW_CREATED_BY = FH11_SW

(Inserted by DNRE - Vic Govt Mines Dept)

PE900110

This is an enclosure indicator page.
The enclosure PE900110 is enclosed within the
container PE900104 at this location in this
document.

The enclosure PE900110 has the following characteristics:
ITEM_BARCODE = PE900110
CONTAINER_BARCODE = PE900104
NAME = Vertical Seismic Profile for Minerva-2a
BASIN =

OTWAY

ONSHORE? = N
DATA_TYPE = SEISMIC
DATA_SUB_TYPE = VELOCITY
DESCRIPTION = Vertical Seismic Profile for
Minerva-2a, Zero Offset VSP, Reverse
Polarity, VSP and Geogram Composite,
Plot 7, By Schlumberger (Melbourne Log
Interpretation Centre) for BHP
Petroleum, 14 October 1993.
REMARKS =
DATE_WRITTEN = 14-OCT-1993
DATE_PROCESSED = 23-OCT-1993
DATE_RECEIVED =
RECEIVED_FROM = BHP Petroleum Pty Ltd
WELL_NAME = Minerva-2a
CONTRACTOR = Schlumberger
AUTHOR =
ORIGINATOR = BHP Petroleum Pty Ltd
TOP_DEPTH = 600
BOTTOM_DEPTH = 2160
ROW_CREATED_BY = FH11_SW

(Inserted by DNRE - Vic Govt Mines Dept)

PE900109

This is an enclosure indicator page.
The enclosure PE900109 is enclosed within the
container PE900104 at this location in this
document.

The enclosure PE900109 has the following characteristics:

ITEM_BARCODE = PE900109
CONTAINER_BARCODE = PE900104
NAME = Vertical Seismic Profile for Minerva-2a
BASIN = OTWAY
ONSHORE? = N
DATA_TYPE = SEISMIC
DATA_SUB_TYPE = VELOCITY
DESCRIPTION = Vertical Seismic Profile for
Minerva-2a, Zero Offset VSP, Normal
Polarity, VSP and Geogram Composite,
Plot 6, By Schlumberger (Melbourne Log
Interpretation Centre) for BHP
Petroleum, 14 October 1993.
REMARKS =
DATE_WRITTEN = 14-OCT-1993
DATE_PROCESSED = 23-OCT-1993
DATE_RECEIVED =
RECEIVED_FROM = BHP Petroleum Pty Ltd
WELL_NAME = Minerva-2a
CONTRACTOR = Schlumberger
AUTHOR =
ORIGINATOR = BHP Petroleum Pty Ltd
TOP_DEPTH = 600
BOTTOM_DEPTH = 2160
ROW_CREATED_BY = FH11_SW

(Inserted by DNRE - Vic Govt Mines Dept)

PE900108

This is an enclosure indicator page.
The enclosure PE900108 is enclosed within the
container PE900104 at this location in this
document.

The enclosure PE900108 has the following characteristics:

ITEM_BARCODE = PE900108
CONTAINER_BARCODE = PE900104
NAME = Vertical Seismic Profile for Minerva-2a
BASIN = OTWAY
ONSHORE? = N
DATA_TYPE = SEISMIC
DATA_SUB_TYPE = VELOCITY
DESCRIPTION = Vertical Seismic Profile for
Minerva-2a, Zero Offset VSP,
Waveshaping Deconvolution, Plot 4, By
Schlumberger (Melbourne Log
Interpretation Centre) for BHP
Petroleum, 14 October 1993.
REMARKS =
DATE_WRITTEN = 14-OCT-1993
DATE_PROCESSED = 23-OCT-1993
DATE_RECEIVED =
RECEIVED_FROM = BHP Petroleum Pty Ltd
WELL_NAME = Minerva-2a
CONTRACTOR = Schlumberger
AUTHOR =
ORIGINATOR = BHP Petroleum Pty Ltd
TOP_DEPTH = 600
BOTTOM_DEPTH = 2160
ROW_CREATED_BY = FH11_SW

(Inserted by DNRE - Vic Govt Mines Dept)

PE900115

This is an enclosure indicator page.
The enclosure PE900115 is enclosed within the
container PE900104 at this location in this
document.

The enclosure PE900115 has the following characteristics:

ITEM_BARCODE = PE900115
CONTAINER_BARCODE = PE900104
 NAME = Geogram/Synth. Seismogram for
 Minerva-2a
 BASIN = OTWAY
 ONSHORE? = N
 DATA_TYPE = WELL
 DATA_SUB_TYPE = SYNTH_SEISMOGRAM
 DESCRIPTION = Geogram (Synthetic Seismogram) for
 Minerva-2a, 45 Hertz Zero Phase, By
 Schlumberger (Melbourne Log
 Interpretation Centre) for BHP
 Petroleum, 14 October 1993.
 REMARKS =
 DATE_WRITTEN = 14-OCT-1993
 DATE_PROCESSED = 23-OCT-1993
 DATE_RECEIVED =
 RECEIVED_FROM = BHP Petroleum Pty Ltd
 WELL_NAME = Minerva-2a
 CONTRACTOR = Schlumberger
 AUTHOR =
 ORIGINATOR = BHP Petroleum Pty Ltd
 TOP_DEPTH = 600
 BOTTOM_DEPTH = 2160
 ROW_CREATED_BY = FH11_SW

(Inserted by DNRE - Vic Govt Mines Dept)

PE900114

This is an enclosure indicator page.
The enclosure PE900114 is enclosed within the
container PE900104 at this location in this
document.

The enclosure PE900114 has the following characteristics:

ITEM_BARCODE = PE900114
CONTAINER_BARCODE = PE900104
NAME = Geogram/Synth. Seismogram for
Minerva-2a
BASIN = OTWAY
ONSHORE? = N
DATA_TYPE = WELL
DATA_SUB_TYPE = SYNTH_SEISMOGRAM
DESCRIPTION = Geogram (Synthetic Seismogram) for
Minerva-2a, 25 Hertz Zero Phase, By
Schlumberger (Melbourne Log
Interpretation Centre) for BHP
Petroleum, 14 October 1993.
REMARKS =
DATE_WRITTEN = 14-OCT-1993
DATE_PROCESSED = 23-OCT-1993
DATE_RECEIVED =
RECEIVED_FROM = BHP Petroleum Pty Ltd
WELL_NAME = Minerva-2a
CONTRACTOR = Schlumberger
AUTHOR =
ORIGINATOR = BHP Petroleum Pty Ltd
TOP_DEPTH = 600
BOTTOM_DEPTH = 2160
ROW_CREATED_BY = FH11_SW

(Inserted by DNRE - Vic Govt Mines Dept)

PE900113

This is an enclosure indicator page.
The enclosure PE900113 is enclosed within the
container PE900104 at this location in this
document.

The enclosure PE900113 has the following characteristics:

ITEM_BARCODE = PE900113
CONTAINER_BARCODE = PE900104
 NAME = Geogram/Synth. Seismogram for
 Minerva-2a
 BASIN = OTWAY
 ONSHORE? = N
 DATA_TYPE = WELL
 DATA_SUB_TYPE = SYNTH_SEISMOGRAM
 DESCRIPTION = Geogram (Synthetic Seismogram) for
 Minerva-2a, 35 Hertz Zero Phase, By
 Schlumberger (Melbourne Log
 Interpretation Centre) for BHP
 Petroleum, 14 October 1993.
 REMARKS =
 DATE_WRITTEN = 14-OCT-1993
 DATE_PROCESSED = 23-OCT-1993
 DATE_RECEIVED =
 RECEIVED_FROM = BHP Petroleum Pty Ltd
 WELL_NAME = Minerva-2a
 CONTRACTOR = Schlumberger
 AUTHOR =
 ORIGINATOR = BHP Petroleum Pty Ltd
 TOP_DEPTH = 600
 BOTTOM_DEPTH = 2160
 ROW_CREATED_BY = FH11_SW

(Inserted by DNRE - Vic Govt Mines Dept)

PE900112

This is an enclosure indicator page.
The enclosure PE900112 is enclosed within the
container PE900104 at this location in this
document.

The enclosure PE900112 has the following characteristics:

- ITEM_BARCODE = PE900112
- CONTAINER_BARCODE = PE900104
 - NAME = Seismic Calibration Log for Minerva-2a
 - BASIN = OTWAY
 - ONSHORE? = N
 - DATA_TYPE = SEISMIC
 - DATA_SUB_TYPE = VELOCITY
 - DESCRIPTION = Seismic Calibration Log (Adjusted
Continuous Velocity Log) for
Minerva-2a, By Schlumberger (Melbourne
Log Interpretation Centre) for BHP
Petroleum, 14 October 1993.
- REMARKS =
- DATE_WRITTEN = 14-OCT-1993
- DATE_PROCESSED = 23-OCT-1993
- DATE_RECEIVED =
- RECEIVED_FROM = BHP Petroleum Pty Ltd
 - WELL_NAME = Minerva-2a
 - CONTRACTOR = Schlumberger
 - AUTHOR =
 - ORIGINATOR = BHP Petroleum Pty Ltd
 - TOP_DEPTH = 600
 - BOTTOM_DEPTH = 2160
 - ROW_CREATED_BY = FH11_SW

(Inserted by DNRE - Vic Govt Mines Dept)

PE900116

This is an enclosure indicator page.
The enclosure PE900116 is enclosed within the
container PE900104 at this location in this
document.

The enclosure PE900116 has the following characteristics:

ITEM_BARCODE = PE900116
CONTAINER_BARCODE = PE900104
NAME = CSI (VSP) for Minerva-2a
BASIN = OTWAY
ONSHORE? = N
DATA_TYPE = SEISMIC
DATA_SUB_TYPE = VELOCITY
DESCRIPTION = CSI (VSP) for Minerva-2a, Suite-2
Run-1, 2160-680m, Wildcat Field,
VIC/P31, By Schlumberger (Melbourne Log
Interpretation Centre) for BHP
Petroleum, 14 October 1993.
REMARKS =
DATE_WRITTEN = 14-OCT-1993
DATE_PROCESSED = 23-OCT-1993
DATE_RECEIVED =
RECEIVED_FROM = BHP Petroleum Pty Ltd
WELL_NAME = Minerva-2a
CONTRACTOR = Schlumberger
AUTHOR =
ORIGINATOR = BHP Petroleum Pty Ltd
TOP_DEPTH = 600
BOTTOM_DEPTH = 2160
ROW_CREATED_BY = FH11_SW

(Inserted by DNRE - Vic Govt Mines Dept)

GEOGRAM PLOTS

Drift Corrected Sonic
Seismic Calibration Log
25 hz zero phase Geogram 10 cm/sec
35 hz zero phase Geogram 10 cm/sec
45 hz zero phase Geogram 10 cm/sec

VSP PLOTS

Plot 1	Stacked data
Plot 2	Amplitude Recovery
Plot 3	Velocity Filter
Plot 4	Waveshaping Deconvolution Zero Phase
Plot 5	Waveshaping Deconvolution - Corridor Stack
Plot 6	VSP and Geogram Composite - normal polarity 10 cm/sec
Plot 7	VSP and Geogram Composite - reverse polarity 10 cm/sec