

*BB  
RJM  
JMK*

Schlumberger

**B.H.P. PETROLEUM**  
**WELL SEISMIC PROCESSING REPORT**

**~~ABELLA-1~~**

FIELD : WILDCAT  
COUNTRY : AUSTRALIA  
COORDINATES : 039 00' 14.2" S  
: 142 41' 42.9" E

DATE OF SURVEY : 11-FEB-1993

REFERENCE NO. : VSP :560974  
: GEOGRAM:560975

INTERVAL : 2743.0 - 620.0 M

PETROLEUM DIVISION

15 DEC 1993

## **CONTENTS**

<b>1. Introduction</b>	<b>1</b>
<b>2. Data Acquisition</b>	<b>1</b>
<b>3. Sonic Calibration Processing</b>	<b>2</b>
3.1 Sonic Calibration	2
3.2 Open Hole Logs	3
3.3 Correction to Datum and Velocity Modelling	3
3.4 Sonic Calibration Results	3
<b>4. Synthetic Seismogram Processing</b>	<b>4</b>
4.1 Depth to Time Conversion	4
4.2 Primary Reflection Coefficients	4
4.3 Primaries with Transmission Loss	5
4.4 Primaries plus Multiples	5
4.5 Multiples Only	5
4.7 Polarity Convention	5
4.8 Convolution	6
<b>5. VSP Processing</b>	<b>6</b>
5.1 Stacking	6
5.2 Spherical Divergence Correction and Bandpass Filter	6
5.3 Velocity Filter	7
5.4 Waveshaping Deconvolution	7
5.5 VSP Acoustic Impedance Inversion	8

<b>A</b>	<b>Summary of Geophysical Listings</b>	<b>9</b>
A1	Geophysical Airgun Report	9
A2	Drift Computation Report	10
A3	Sonic Adjustment Parameter Report	10
A4	Velocity Report	11
A5	Time Converted Velocity Report	11

## **List of Tables**

1	Survey Parameters	1
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## **List of Figures**

1	Wavelet Polarity Convention
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## **Enclosure**

Field Logs

## 1. Introduction

A vertical seismic profile was recorded over two suites, with overlap between surveys, for the LABELLA-1 well on the 30th of January and the 11th of February 1993. The data was processed using the conventional zero offset vertical incidence processing chain using only the vertical component. Synthetics and a seismic calibration log were also produced utilising corrected vertical times.

## 2. Data Acquisition

The data was acquired using the three component seismic acquisition tool (CSI). A three 150 cu inch airgun Array was used as the source for Suite-1 and a single 200 cu inch bolt gun firing at 120 bar for Suite 2. Gun depth was 10 metres below mean sea level. Seven shots per level were taken with the levels selected by BHPP. Recording was made on the Schlumberger MAXIS Unit, using DLIS format. A copy of the field logs is given in the enclosure at the back of this report.

Table 1. Survey Parameters

Elevation of KB	25.3 metres AMSL
Elevation of DF	25.0 metres AMSL
Elevation of GL	95.0 metres below MSL
Total Depth	2734 metres below DF
Energy Source	3 airgun array (suite-1) Single bolt gun (suite-2)
Source Offset	47 metres
Source Depth	10 metres below MSL
Reference Sensor	Hydrophone
Hydrophone Offset	47 metres
Hydrophone Depth	17 metres below MSL
Azimuth of source	50 degrees

### 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. For a negative drift  $\frac{\Delta \text{drift}}{\Delta \text{depth}} < 0$ , 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.  $\Delta t$  Minimum.** In the case of negative drift a second method is used, called  $\Delta t$  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  $\Delta t$  values which are higher than a threshold, the  $\Delta t_{\min}$ . Values of  $\Delta t$  which are lower than the threshold are not corrected. The correction is a reduction of the excess of  $\Delta t$  over  $\Delta t_{\min}$ ,  $\Delta t - \Delta t_{\min}$ .

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

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

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

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

### **3.2 Open Hole Logs**

The sonic log has been recorded from 2743.0 to 620.0 metres below KB. The 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 conditions.

The gamma ray and calliper 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 is the seismic reference datum . Static corrections are applied to correct for source offset and source depth. This involves using a velocity of 1480 m/sec.

### **3.4 Sonic Calibration Results**

The top of the sonic log (620 metres below DF) 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 in sonic adjustment parameter report provided in the drift listings section of the report.

## **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 millisecs). Reflection coefficients are then computed using:

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

where:

$\rho_1$  = density of the layer above the reflection interface

$\rho_2$  = 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:

$$A_n = (1 - R_1^2) \cdot (1 - R_2^2) \cdot (1 - R_3^2) \cdots (1 - R_n^2)$$

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

$$\text{Primary}_n = R_n \cdot A_{n-1}$$

### **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**

This the standard procedure of convolving the wavelet with reflection coefficients. The output of the convolution is the actual 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. At this stage a shot edit is performed and levels are selected for calibration of the sonic data and Vsp processing.

The data quality is excellent with the vertical component stacks displaying a consistent signature and a high signal to noise ratio.

### **5.2 Spherical Divergence Correction and Bandpass Filter**

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

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

is also used (T is the recorded time, T<sub>0</sub> 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 level 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 level filter. The data is now displayed in two way time (plot 4).

### **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 and minimum 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 on 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 Plots 5 and 6.

## **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 7 and 8 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 an excellent 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 form 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  $\frac{\Delta \text{drift}}{\Delta \text{depth}}$ .

## 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  $\Delta t_{\min}$ .
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.

$$v_{rms} = \sqrt{\frac{\sum_i^n v_i^2 t_i}{\sum_i^n t_i}}$$

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 = 3000 feet).

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

where:

$\Delta t$  = normal moveout (secs)

$X$  = moveout distance (metres)

$t$  = two way time (secs)

$v_{rms}$  = rms velocity (metres / sec)

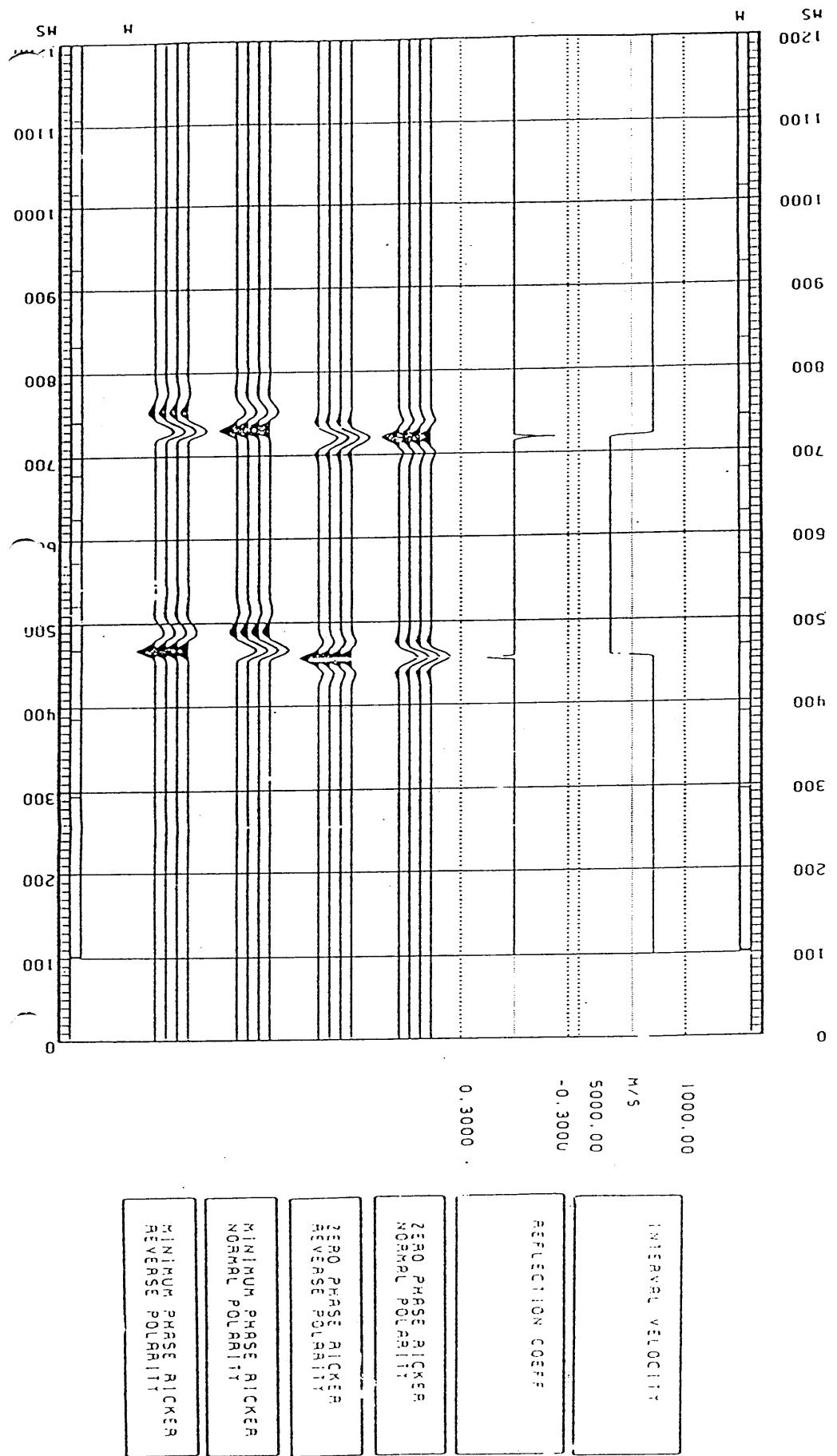
7. Second normal moveout: the correction time in millisecs to be applied to the two way travel time for a specified moveout distance (default = 4500 feet).

8. Third normal moveout: the correction time in millisecs to be applied to the two way travel time for a specified moveout distance (default = 6000 feet)

9. Interval velocity: the velocity between each sampled depth. Typically, the sampling rate is 2 millisecs two way time, (1 millisecond 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.

# SCHLUMBERGER (SEG-1976) WAVELET POLARITY CONVENTION

Figure 1



**SHOTS**

**PETROLEUM DIVISION**

ANALYST: Z.KATELIS

23-JUN-93 15:34:30 PROGRAM: GSHOT 007.E08

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GEOPHYSICAL AIRGUN REPORT

COMPANY : BHP PETROLEUM  
WELL : LA BELLA-1  
FIELD : WILDCAT  
COUNTRY : AUSTRALIA  
REFERENCE: SYJ-560875

## 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 BOREHOLE AXIS IN EW DIRECTION (CF. GUNELZ)  
 HYDNSZ - HYDROPHONE DISTANCE FROM THE BOREHOLE AXIS IN NS DIRECTION (CF. GUNELZ)  
 TRTHYD - TRAVEL TIME FROM THE HYDROPHONE TO THE SOURCE  
 TRTSD - TRAVEL TIME FROM THE SOURCE TO THE SRD  
 DEVWEL - 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 (WST)  
 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	:	-95.0000	M
VEL SOURCE-HYDRO (WST)	VELHYD	:	1480.00	M/S
VEL SOURCE-SRD (WST)	VELSUR	:	1480.00	M/S

## (VALUE)

## (MATRIX PARAMETERS)

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE

2

SOURCE ELV M	SOURCE EW M	SOURCE NS M	HYDRO ELEV M	HYDRO EW M	HYDRO NS M
1 -10.00	36.00	30.21	-17.00	36.00	30.21
TRT HYD-SC MS	TRT SC-SRD MS				
1 4.73		6.76			
MD @ KB M	VD @ KB M	VD @ KB M	VD @ SRD M	E-W COORD M	N-S COORD M
1 120.00	120.00	120.00	95.00	0	0
2 200.00	200.00	200.00	175.00	0	0
3 250.00	250.00	250.00	225.00	0	0
4 300.00	300.00	300.00	275.00	0	0
5 350.00	350.00	350.00	325.00	0	0
6 400.00	400.00	400.00	375.00	0	0
7 450.00	450.00	450.00	425.00	0	0
8 500.00	500.00	500.00	475.00	0	0
9 550.00	550.00	550.00	525.00	0	0
10 600.00	600.00	600.00	575.00	0	0
11 640.00	640.00	640.00	615.00	0	0
12 690.00	690.00	690.00	665.00	0	0
13 740.00	740.00	740.00	715.00	0	0
14 780.00	780.00	780.00	755.00	0	0
15 800.00	800.00	800.00	775.00	0	0
16 820.00	820.00	820.00	795.00	0	0
17 840.00	840.00	840.00	815.00	0	0
18 861.00	861.00	861.00	836.00	0	0
19 880.00	880.00	880.00	855.00	0	0
20 900.00	900.00	900.00	875.00	0	0
21 920.00	920.00	920.00	895.00	0	0
22 940.00	940.00	940.00	915.00	0	0
23 960.00	960.00	960.00	935.00	0	0
24 980.00	980.00	980.00	955.00	0	0
25 1000.00	1000.00	1000.00	975.00	0	0
26 1020.00	1020.00	1020.00	995.00	0	0
27 1040.00	1040.00	1040.00	1015.00	0	0
28 1060.00	1060.00	1060.00	1035.00	0	0
29 1080.00	1080.00	1080.00	1055.00	0	0
30 1100.00	1100.00	1100.00	1075.00	0	0
31 1120.00	1120.00	1120.00	1095.00	0	0
32 1140.00	1140.00	1140.00	1115.00	0	0
33 1160.00	1160.00	1160.00	1135.00	0	0

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WELL : LA BELLA-1

COMPANY : The Peterlowe Co.

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COMPANY : BHP PETROLEUM	WELL	LA BELLA-1
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89	90	0
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93	94	0
94	95	0
95	96	0
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97	98	0
98	99	0
99	100	0
100	101	0
101	102	0
102	103	0
103	104	0
104	105	0
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PAGE

COMPANY : BHP PETROLEUM

PAGE 5

LEVEL NUMBER	MEASUR DEPTH FROM KB M	VERTIC DEPTH FROM SRD M	WELL :			LA BELLA-1			INTERV VELOC BETWEEN SHOTS M/S
			VERTIC DEPTH FROM GL M	OBSERV TRAVEL TIME HYD/GEO MS	VERTIC TRAVEL TIME SRC/GEO MS	AVERAGE VELOC SRD/GEO M/S	DELTA DEPTH BETWEEN SHOTS M	INTERV VELOC BETWEEN SHOTS M/S	
1	120.00	95.00	0	60.90	57.43	64.19	1480	80.00	35.99 2223
2	200.00	175.00	80.00	92.41	93.42	100.18	1747	50.00	24.64 2029
3	250.00	225.00	130.00	116.12	118.06	124.82	1803	50.00	23.54 2124
4	300.00	275.00	180.00	139.08	141.60	148.36	1854	50.00	20.66 2420
5	350.00	325.00	230.00	159.33	162.26	169.02	1923	50.00	20.46 2444
6	400.00	375.00	280.00	179.50	182.72	189.48	1979	50.00	19.00 2632
7	450.00	425.00	330.00	198.28	201.72	208.48	2039	50.00	21.24 2354
8	500.00	475.00	380.00	219.37	222.96	229.72	2068	50.00	18.34 2726
9	550.00	525.00	430.00	237.58	241.31	248.06	2116	50.00	19.52 2561
10	600.00	575.00	480.00	257.00	260.83	267.59	2149	40.00	15.03 2661
11	640.00	615.00	520.00	271.96	275.86	282.62	2176	50.00	18.03 2774
12	690.00	665.00	570.00	289.91	293.88	300.64	2212	50.00	17.64 2834
13	740.00	715.00	620.00	307.49	311.53	318.28	2246	40.00	14.54 2750
14	780.00	755.00	660.00	321.99	326.07	332.83	2268	20.00	6.89 2903
15	800.00	775.00	680.00	328.86	332.96	339.72	2281	20.00	7.66 2612
16	820.00	795.00	700.00	336.50	340.62	347.38	2289	20.00	7.14 2802
17	840.00	815.00	720.00	343.62	347.76	354.51	2299	21.00	7.67 2739
18	861.00	836.00	741.00	351.27	355.42	362.18	2308	19.00	6.71 2834
19	880.00	855.00	760.00	357.96	362.13	368.89	2318	20.00	8.05 2484
20	900.00	875.00	780.00	365.30	369.48	376.24	2326	20.00	7.35 2719
21	920.00	895.00	800.00	372.46	376.66	383.42	2334	20.00	6.99 2860
22	940.00	915.00	820.00	380.50	384.71	391.47	2337	20.00	8.30 2409
23	960.00	935.00	840.00	387.48	391.70	398.46	2347	20.00	
24	980.00	955.00	860.00	395.77	400.01	406.76	2348		

COMPANY : BHP PETROLEUM

PAGE 6

WELL : LA BELLA-1

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	INTERV VELOC BETWEEN SHOTS M/S
25	1000.00	975.00	880.00	404.19	408.44	415.19	2348	20.00	8.43
26	1020.00	995.00	900.00	411.59	415.85	422.60	2354	20.00	7.41
27	1040.00	1015.00	920.00	419.58	423.85	430.60	2357	20.00	8.00
28	1060.00	1035.00	940.00	426.78	431.06	437.81	2364	20.00	7.21
29	1080.00	1055.00	960.00	433.99	438.28	445.03	2371	20.00	7.22
30	1100.00	1075.00	980.00	440.53	444.83	451.58	2381	20.00	7.22
31	1120.00	1095.00	1000.00	447.43	451.74	458.49	2388	20.00	7.22
32	1140.00	1115.00	1020.00	454.38	458.70	465.45	2396	20.00	6.55
33	1160.00	1135.00	1040.00	460.79	465.11	471.87	2405	20.00	6.91
34	1180.00	1155.00	1060.00	467.39	471.72	478.48	2414	20.00	6.96
35	1203.00	1178.00	1083.00	475.26	479.60	486.36	2422	20.00	6.42
36	1220.00	1195.00	1100.00	480.99	485.34	492.09	2428	17.00	5.74
37	1240.00	1215.00	1120.00	487.80	492.16	498.91	2435	23.00	7.88
38	1260.00	1235.00	1140.00	494.38	498.74	505.50	2443	20.00	6.59
39	1280.00	1255.00	1160.00	501.77	506.14	512.90	2447	20.00	6.15
40	1300.00	1275.00	1180.00	506.95	511.33	518.08	2461	22.00	3579
41	1322.00	1297.00	1202.00	513.09	517.47	524.23	2474	20.00	4.81
42	1340.00	1315.00	1220.00	517.81	522.20	528.96	2486	18.00	4.73
43	1360.00	1335.00	1240.00	523.19	527.59	534.34	2498	20.00	5.39
44	1380.00	1355.00	1260.00	527.99	532.39	539.15	2513	25.00	7.36
45	1405.00	1380.00	1285.00	535.34	539.75	546.51	2525	15.00	4.88
46	1420.00	1395.00	1300.00	540.22	544.64	551.39	2530	20.00	3071
47	1440.00	1415.00	1320.00	545.52	549.94	556.70	2542	20.00	5.31
48	1460.00	1435.00	1340.00	552.73	557.16	563.91	2545	20.00	7.21

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 7

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	AVERAGE VELOC SRD/GEO MS	DELTA DEPTH BETWEEN SHOTS M	INTERV VELOC BETWEEN SHOTS M/S
49	1480.00	1455.00	1360.00	558.43	562.86	569.62	2554	20.00
50	1502.00	1477.00	1382.00	564.23	568.67	575.42	2567	22.00
51	1520.00	1495.00	1400.00	571.68	576.12	582.88	2565	18.00
52	1540.00	1515.00	1420.00	576.85	581.30	588.05	2576	20.00
53	1564.00	1539.00	1444.00	584.53	588.98	595.74	2583	24.00
54	1580.00	1555.00	1460.00	589.74	594.19	600.95	2588	16.00
55	1600.00	1575.00	1480.00	596.33	600.79	607.55	2592	20.00
56	1620.00	1595.00	1500.00	602.57	607.03	613.79	2599	20.00
57	1640.00	1615.00	1520.00	609.09	613.56	620.31	2604	6.52
58	1660.00	1635.00	1540.00	616.60	621.07	627.83	2604	6.59
59	1680.00	1655.00	1560.00	622.65	627.12	633.88	2611	6.59
60	1701.00	1676.00	1581.00	629.86	634.34	641.09	2614	3033
61	1723.00	1698.00	1603.00	637.09	641.57	648.33	2619	20.00
62	1745.00	1720.00	1625.00	645.69	650.17	656.93	2618	20.00
63	1770.00	1745.00	1650.00	653.29	657.78	664.54	2626	20.00
64	1801.00	1776.00	1681.00	663.00	667.49	674.25	2634	20.00
65	1817.00	1792.00	1697.00	667.91	672.41	679.16	2639	16.00
66	1835.00	1810.00	1715.00	673.33	677.83	684.59	2644	18.00
67	1855.00	1830.00	1735.00	679.57	684.07	690.83	2649	5.42
68	1875.00	1850.00	1755.00	685.49	689.99	696.75	2655	3319
69	1902.00	1877.00	1782.00	693.22	697.73	704.49	2664	27.00
70	1915.00	1890.00	1795.00	696.81	701.32	708.08	2669	7.73
71	1937.00	1912.00	1817.00	703.21	707.72	714.48	2676	3436
72	1959.00	1934.00	1839.00	709.25	713.77	720.52	2684	3641

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 8

LEVEL NUMBER	MEASUR DEPTH FROM KB M	VERTIC DEPTH FROM SRD M	VERTIC DEPTH FROM GL M	OBSERV TRAVEL TIME SRC/GEO MS	VERTIC TRAVEL TIME SRC/GEO MS	VERTIC TRAVEL TIME SRC/GEO MS	AVERAGE VELOC SRD/GEO M/S	DELTA DEPTH BETWEEN SHOTS M.	INTERV VELOC BETWEEN SHOTS M/S.
73	1975.00	1950.00	1855.00	713.86	718.38	725.14	2689	16.00	4.61
74	1995.00	1970.00	1875.00	719.26	723.78	730.54	2697	20.00	5.40
75	2017.00	1992.00	1897.00	725.17	729.69	736.45	2705	22.00	5.91
76	2035.00	2010.00	1915.00	729.79	734.32	741.07	2712	18.00	4.62
77	2055.00	2030.00	1935.00	735.02	739.55	746.31	2720	20.00	5.23
78	2075.00	2050.00	1955.00	740.86	745.39	752.15	2726	20.00	5.84
79	2096.00	2071.00	1976.00	745.66	750.19	756.95	2736	21.00	4.80
80	2115.00	2090.00	1995.00	751.38	755.92	762.67	2740	20.00	5.62
81	2135.00	2110.00	2015.00	757.00	761.54	768.30	2746	21.00	5.62
82	2156.00	2131.00	2036.00	762.62	767.16	773.92	2754	19.00	5.72
83	2174.00	2149.00	2054.00	767.99	772.53	779.29	2758	20.00	5.37
84	2195.00	2170.00	2075.00	773.07	777.62	784.37	2767	21.00	5.08
85	2215.00	2190.00	2095.00	778.34	782.89	789.64	2773	20.00	5.27
86	2230.00	2205.00	2110.00	782.24	786.79	793.55	2779	15.00	3.90
87	2257.00	2232.00	2137.00	789.42	793.97	800.73	2787	27.00	7.18
88	2283.00	2258.00	2163.00	796.23	800.78	807.54	2796	26.00	3.945
89	2290.00	2265.00	2170.00	798.27	802.83	809.58	2798	7.00	2.04
90	2310.00	2285.00	2190.00	803.46	808.02	814.77	2804	20.00	5.19
91	2335.00	2310.00	2215.00	809.87	814.43	821.19	2813	20.00	3.852
92	2355.00	2330.00	2235.00	815.03	819.59	826.35	2820	20.00	5.17
93	2375.00	2350.00	2255.00	820.20	824.76	831.52	2826	25.00	6.41
94	2392.00	2367.00	2272.00	824.14	828.71	835.46	2833	17.00	3.94
95	2413.00	2388.00	2293.00	831.12	835.69	842.44	2835	21.00	6.98
96	2435.00	2410.00	2315.00	836.20	840.77	847.53	2844	22.00	5.08

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 9

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
97	2455.00	2430.00	2335.00	842.39	846.96	853.72	2846	20.00	6.19	3230
98	2477.00	2452.00	2357.00	846.78	851.35	858.11	2857	22.00	4.39	5009
99	2501.00	2476.00	2381.00	852.75	857.32	864.08	2865	24.00	5.97	4019
100	2515.00	2490.00	2395.00	855.98	860.56	867.31	2871	14.00	3.23	4333
101	2533.00	2508.00	2413.00	860.51	865.09	871.84	2877	18.00	4.53	3972
102	2555.00	2530.00	2435.00	866.33	870.91	877.67	2883	22.00	5.82	3779
103	2580.00	2555.00	2460.00	872.46	877.04	883.80	2891	25.00	6.13	4077
104	2595.00	2570.00	2475.00	876.40	880.98	887.74	2895	15.00	3.94	3806
105	2614.00	2589.00	2494.00	881.05	885.63	892.39	2901	19.00	4.65	4085
106	2634.00	2609.00	2514.00	886.64	891.22	897.98	2905	20.00	5.59	3577
107	2655.00	2630.00	2535.00	891.91	896.50	903.25	2912	21.00	5.27	3984
108	2675.00	2650.00	2555.00	896.94	901.53	908.28	2918	20.00	5.03	3975
109	2690.00	2665.00	2570.00	900.85	905.44	912.19	2922	15.00	3.91	3835
110	2715.00	2690.00	2595.00	906.13	910.72	917.48	2932	25.00	5.28	4733
111	2734.00	2709.00	2614.00	911.03	915.62	922.38	2937	19.00	4.90	3877

**DRIFT**

**PETROLEUM DIVISION**

ANALYST: Z.KATELIS

23-JUN-93 15:43:08      PROGRAM: GADJST 008.E08

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\* SCHLUMBERGER  
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SONIC ADJUSTMENT PARAMETER REPORT

COMPANY : BHP PETROLEUM  
WELL : LA BELLA-1  
FIELD : WILDCAT  
COUNTRY : AUSTRALIA  
REFERENCE: SYJ-560875

## 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

ZDRAFT - 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

ADJUSZ - LAYER OPTION FLAG FOR VELOCITY: -1=NONE; 0=UNIFORM; 1=UNIFORM+LAYER

LOFVEL - USER SUPPLIED VELOCITY DATA

## SAMPLED

SHOT

VDKB - 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)		(LIMITS)	
USER DRIFT ZONE (WST)	ZDRAFT	: 23.20000	MS	: 2734.00	- 2055.00
ORIG OF ADJ DATA (WST)	SRCDRF	: 24.6063	US/M	: 2055.00	- 1807.30
CONS SONIC ADJST (WST)	CONADJ	: 14.80.00	M/S	: 1807.30	- 1557.00
UNIFORM EARTH VELOCITY	UNERTH			: 1557.00	- 1140.00

## (ZONED PARAMETERS)

ADJOPZ	ADJUSZ	LOFVEL	LAYVEL	ADJOPZ	ADJUSZ	LOFVEL	LAYVEL
: -999.2500	: -999.2500	: 1.000000	: 2664.0000	: 30479.7	: 30479.7	: 30479.7	: 600.0000
				: 2561.0000	: 2726.0000	: 2354.0000	: 600.0000
				: 2726.0000	: 2354.0000	: 2632.0000	: 550.0000
				: 2354.0000	: 2632.0000	: 2444.0000	: 500.0000
				: 2632.0000	: 2444.0000	: 2420.0000	: 450.0000
				: 2444.0000	: 2420.0000	: 2124.0000	: 400.0000
				: 2124.0000	: 2124.0000	: 2029.0000	: 350.0000
				: 2029.0000	: 2029.0000	: 250.0000	: 300.0000
				: 250.0000	: 250.0000	: 250.0000	: 250.0000

) COMPANY : BHP PETROLEUM

) WELL : LA BELLA-1

2223.000	200.000	120.000
1480.000	120.000	0

) PAGE 2

COMPANY	BHP PETROLEUM	WELL	LA BELLA-1					
KNEE NUMBER	VERTICAL DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	DRIFT AT KNEE	BLOCKSHIFT	DELTA-T MINIMUM USED	REDUCTION FACTOR G	EQUIVALENT BLOCKSHIFT US/M
2	620.00	595.00	500.00	0	0			0
3	900.00	875.00	780.00	8.20	29.29			29.29
4	1140.00	1115.00	1020.00	12.20	16.67			16.67
5	1557.00	1532.00	1437.00	13.80	3.84			3.84
6	1807.30	1782.30	1687.30	19.10	21.17			21.17
7	2055.00	2030.00	1935.00	21.17	8.36			8.36
8	2734.00	2709.00	2614.00	23.20	2.99			2.99

PAGE 3

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ANALYST: Z.KATELIS

)  
23-JUN-93 15:43:21      PROGRAM: GADJST 008.E08

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\* SCHLUMBERGER  
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VELOCITY REPORT

COMPANY : BHP PETROLEUM  
WELL : LA BELLA-1  
FIELD : WILDCAT  
COUNTRY : AUSTRALIA  
REFERENCE: SYJ-560875

## 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)

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	: -95.0000	M
UNIFORM EARTH VELOCITY		UNERTH	: 1480.00	M/S

## (VALUE)

## (ZONED PARAMETERS)

LAYER OPTION FLAG VELOC	LOFVEL	: 1.000000		30479.7	-	0
USER VELOC (WST)	LAYVEL	: 2664.000	M/S	620.000	-	600.000
		: 2561.000		600.000		550.000
		: 2726.000		550.000		500.000
		: 2354.000		500.000		450.000
		: 2632.000		450.000		400.000
		: 2444.000		400.000		350.000
		: 2420.000		350.000		300.000
		: 2124.000		300.000		250.000
		: 2029.000		250.000		200.000
		: 2223.000		200.000		120.000
		: 1480.000		120.000		0

## (VALUE)

(LIMITS)						
				30479.7	-	0
				620.000	-	600.000
				600.000		550.000
				550.000		500.000
				500.000		450.000
				450.000		400.000
				400.000		350.000
				350.000		300.000
				300.000		250.000
				250.000		200.000
				200.000		120.000
				120.000		0

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 5

LEVEL NUMBER	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	SRD/GEOPH MS	VERTICAL TRAVEL TIME MS	ADJUSTED SONIC TIME MS	DRAFT = SHOT TIME - RAW SON MS	RESIDUAL = SHOT TIME - ADJ SON MS	ADJUSTED INTERVAL VELOCITY M/S
1	120.00	95.00	0		64.19	64.19	0	0	1480
2	200.00	175.00	80.00		100.18	100.18	0	0	2223
3	250.00	225.00	130.00		124.82	124.82	0	0	2029
4	300.00	275.00	180.00		148.36	148.35	0	0	2125
5	350.00	325.00	230.00		169.02	169.02	0	0	2420
6	400.00	375.00	280.00		189.48	189.47	0	.01	2444
7	450.00	425.00	330.00		208.48	208.48	0	0	2631
8	500.00	475.00	380.00		229.72	229.71	0	.01	2354
9	550.00	525.00	430.00		248.06	248.06	0	.01	2725
10	600.00	575.00	480.00		267.59	267.58	0	.01	2562
11	620.12	595.12	500.12		275.14	275.14	0	0	2659
12	640.00	615.00	520.00		282.62	282.38	.80	.23	2746
13	690.00	665.00	570.00		300.64	300.48	2.20	.16	2763
14	740.00	715.00	620.00		318.28	318.29	3.49	-.01	2807
15	780.00	755.00	660.00		332.83	333.00	4.49	-.17	2719
16	800.00	775.00	680.00		339.72	340.12	4.84	-.40	2811
17	820.00	795.00	700.00		347.38	347.72	5.50	-.35	2629
18	840.00	815.00	720.00		354.51	354.86	6.08	-.34	2804
19	861.00	836.00	741.00		362.18	362.36	6.87	-.17	2741
20	880.00	855.00	760.00		368.89	369.29	7.20	-.40	2861
21	900.00	875.00	780.00		376.24	376.28	8.16	-.04	2637
22	920.00	895.00	800.00		383.42	383.86	8.08	-.45	2667
23	940.00	915.00	820.00		391.47	391.36	8.97	.11	2590
24	960.00	935.00	840.00		398.46	399.08	8.57	-.62	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 6

LEVEL NUMBER	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	SRD/GEOPH MS	VERTICAL TRAVEL TIME MS	ADJUSTED SONIC TIME MS	DRAFT = SHOT TIME - RAW SON MS	RESIDUAL = SHOT TIME - ADJ SON MS	ADJUSTED INTERVAL VELOCITY M/S
25	980.00	955.00	860.00	406.76	407.04	9.25	-.28	2514	
26	1000.00	975.00	880.00	415.19	414.99	10.07	.21	2516	
27	1020.00	995.00	900.00	422.60	422.83	9.96	-.23	2549	
28	1040.00	1015.00	920.00	430.60	430.75	10.38	-.15	2527	
29	1060.00	1035.00	940.00	437.81	438.20	10.46	-.39	2683	
30	1080.00	1055.00	960.00	445.03	445.16	11.06	-.13	2874	
31	1100.00	1075.00	980.00	451.58	451.87	11.24	-.28	2983	
32	1120.00	1095.00	1000.00	458.49	458.54	11.81	-.05	2997	
33	1140.00	1115.00	1020.00	465.45	465.45	12.18	0	2892	
34	1160.00	1135.00	1040.00	471.87	471.76	12.37	.12	3174	
35	1180.00	1155.00	1060.00	478.48	478.23	12.59	.25	3091	
36	1203.00	1178.00	1083.00	486.36	485.30	13.48	1.06	3250	
37	1220.00	1195.00	1100.00	492.09	491.20	13.39	.90	2884	
38	1240.00	1215.00	1120.00	498.91	498.32	13.17	.60	2810	
39	1260.00	1235.00	1140.00	505.50	505.21	12.94	.29	2903	
40	1280.00	1255.00	1160.00	512.90	511.78	13.83	1.11	3042	
41	1300.00	1275.00	1180.00	518.08	517.85	13.02	.23	3294	
42	1322.00	1297.00	1202.00	524.23	524.41	12.71	-.17	3358	
43	1340.00	1315.00	1220.00	528.96	529.35	12.56	-.39	3642	
44	1360.00	1335.00	1240.00	534.34	535.17	12.19	-.83	3911	
45	1380.00	1355.00	1260.00	539.15	540.29	11.96	-1.13	3810	
46	1405.00	1380.00	1285.00	546.51	546.85	12.86	-.34	3434	
47	1420.00	1395.00	1300.00	551.39	551.52	13.13	-.13	3208	
48	1440.00	1415.00	1320.00	556.70	557.36	12.66	-.66	3425	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 7

LEVEL NUMBER	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	SRD/GEOPH MS	VERTICAL TRAVEL TIME MS	ADJUSTED SONIC TIME MS	INTEGRATED TIME MS	DRIFT =	RESIDUAL =	ADJUSTED INTERVAL VELOCITY M/S
49	1460.00	1435.00	1340.00		563.91	563.41	13.91	.50	.50	3304
50	1480.00	1455.00	1360.00		569.62	569.50	13.60	.12	.12	3289
51	1502.00	1477.00	1382.00		575.42	576.07	12.93	-.64	-.64	3347
52	1520.00	1495.00	1400.00		582.88	581.70	14.82	1.18	1.18	3196
53	1540.00	1515.00	1420.00		588.05	587.93	13.84	.12	.12	3210
54	1564.00	1539.00	1444.00		595.74	595.76	13.91	-.02	-.02	3066
55	1580.00	1555.00	1460.00		600.95	601.23	13.99	-.28	-.28	2925
56	1600.00	1575.00	1480.00		607.55	607.70	14.53	-.16	-.16	3088
57	1620.00	1595.00	1500.00		613.79	614.12	14.78	-.33	-.33	3117
58	1640.00	1615.00	1520.00		620.31	620.96	14.89	-.65	-.65	2924
59	1660.00	1635.00	1540.00		627.83	628.02	15.78	-.19	-.19	2834
60	1680.00	1655.00	1560.00		633.88	634.83	15.44	-.95	-.95	2936
61	1701.00	1676.00	1581.00		641.09	642.05	15.87	-.96	-.96	2907
62	1723.00	1698.00	1603.00		648.33	649.17	16.46	-.84	-.84	3152
63	1745.00	1720.00	1625.00		656.93	656.15	18.54	.78	.78	3104
64	1770.00	1745.00	1650.00		664.54	664.21	18.62	.33	.33	3111
65	1801.00	1776.00	1681.00		674.25	674.17	19.03	.08	.08	3215
66	1817.00	1792.00	1697.00		679.16	679.15	19.18	.01	.01	3334
67	1835.00	1810.00	1715.00		684.59	684.55	19.35	.04	.04	3503
68	1855.00	1830.00	1735.00		690.83	690.71	19.59	.11	.11	3496
69	1875.00	1850.00	1755.00		696.75	696.53	19.86	-.22	-.22	3436
70	1902.00	1877.00	1782.00		704.49	704.24	20.11	.24	.24	3243
71	1915.00	1890.00	1795.00		708.08	707.96	20.10	.12	.12	3515
72	1937.00	1912.00	1817.00		714.48	714.22	20.42	.26	.26	

LEVEL NUMBER	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	SRD/GEOFH MS	VERTICAL TRAVEL TIME MS	INTEGRATED SONIC TIME MS	DRIFT = SHOT TIME - RAW SON MS	RESIDUAL = SHOT TIME - ADJ SON MS	ADJUSTED INTERVAL VELOCITY M/S
73	1959.00	1934.00	1839.00	720.52	720.39	20.48	.13	3565	
74	1975.00	1950.00	1855.00	725.14	724.84	20.77	.30	3596	
75	1995.00	1970.00	1875.00	730.54	730.34	20.84	.20	3636	
76	2017.00	1992.00	1897.00	736.45	736.29	20.99	.16	3700	
77	2035.00	2010.00	1915.00	741.07	741.06	20.99	.01	3771	
78	2055.00	2030.00	1935.00	746.31	746.28	21.17	.03	3832	
79	2075.00	2050.00	1955.00	752.15	751.64	21.71	.51	3730	
80	2096.00	2071.00	1976.00	756.95	757.02	21.21	-.06	3907	
81	2115.00	2090.00	1995.00	762.67	762.40	21.60	.27	3527	
82	2135.00	2110.00	2015.00	768.30	768.08	21.61	.21	3522	
83	2156.00	2131.00	2036.00	773.92	773.69	21.68	.23	3746	
84	2174.00	2149.00	2054.00	779.29	778.83	21.96	.46	3498	
85	2195.00	2170.00	2075.00	784.37	784.44	21.49	-.07	3744	
86	2215.00	2190.00	2095.00	789.64	789.68	21.59	-.03	3821	
87	2230.00	2205.00	2110.00	793.55	793.45	21.76	.09	3973	
88	2257.00	2232.00	2137.00	800.73	800.59	21.88	.13	3781	
89	2283.00	2258.00	2163.00	807.54	807.14	22.23	.40	3974	
90	2290.00	2265.00	2170.00	809.58	808.97	22.46	.62	3826	
91	2310.00	2285.00	2190.00	814.77	814.37	22.31	.41	3702	
92	2335.00	2310.00	2215.00	821.19	820.96	22.21	.23	3795	
93	2355.00	2330.00	2235.00	826.35	826.38	22.02	-.03	3691	
94	2375.00	2350.00	2255.00	831.52	831.77	21.85	-.25	3706	
95	2392.00	2367.00	2272.00	835.46	836.28	21.33	-.82	3769	
96	2413.00	2388.00	2293.00	842.44	841.73	22.93	.72	3856	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 9

LEVEL NUMBER	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	SRD/GEOPH MS	VERTICAL TRAVEL TIME ADJUSTED SONIC TIME MS	INTEGRATED TIME ADJUSTED SONIC TIME MS	DRIFT = SHOT TIME - RAW SON MS	RESIDUAL = SHOT TIME - ADJ SON MS	ADJUSTED INTERVAL VELOCITY M/S
97	2435.00	2410.00	2315.00	847.53	847.67	22.14	-.14	3703	
98	2455.00	2430.00	2335.00	853.72	852.85	23.21	.87	3861	
99	2477.00	2452.00	2357.00	858.11	858.56	21.96	-.45	3853	
100	2501.00	2476.00	2381.00	864.08	864.68	21.88	-.60	3918	
101	2515.00	2490.00	2395.00	867.31	868.06	21.77	-.75	4150	
102	2533.00	2508.00	2413.00	871.84	872.52	21.90	-.67	4038	
103	2555.00	2530.00	2435.00	877.67	877.99	22.31	-.33	4017	
104	2580.00	2555.00	2460.00	883.80	884.32	22.19	-.52	3949	
105	2595.00	2570.00	2475.00	887.74	888.20	22.29	-.47	3864	
106	2614.00	2589.00	2494.00	892.39	892.96	22.24	-.57	3993	
107	2634.00	2609.00	2514.00	897.98	897.90	22.96	.08	4053	
108	2655.00	2630.00	2535.00	903.25	903.11	23.08	.14	4025	
109	2675.00	2650.00	2555.00	908.28	908.18	23.10	.10	3946	
110	2690.00	2665.00	2570.00	912.19	911.90	23.34	.30	4035	
111	2715.00	2690.00	2595.00	917.48	917.86	22.73	-.39	4193	
112	2734.00	2709.00	2614.00	922.38	922.35	23.20	.02	4231	

**TIME/DEPTH**

**PETROLEUM DIVISION**

ANALYST: Z.KATELIS

23-JUN-93 15:46:48 PROGRAM: GTRFRM 001.E13

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TIME CONVERTED VELOCITY REPORT

COMPANY : BHP PETROLEUM  
WELL : LA BELLA-1  
FIELD : WILDCAT  
COUNTRY : AUSTRALIA  
REFERENCE: SYJ-560875

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 1

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 (GTR FRM)  
UNFDEN - UNIFORM DENSITY VALUE

MVODIS - MOVE-OUT DISTANCE FROM BOREHOLE

ZONE  
LOFVEL - LAYER OPTION FLAG FOR VELOCITY: -1=NONE; 0=UNIFORM; 1=UNIFORM+LAYER  
LAYVEL - 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  
MVOT - Normal Move-Out  
INTV - Internal Velocity, Average

(GLOBAL PARAMETERS)

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	:	-95.0000	M/S
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

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 2

(ZONED PARAMETERS)

(LIMITS)

LAYER	OPTION	FLAG	VELOC	LOFVEL	USER	VELOC	(WST)	LAYVEL	(VALUE)	(LIMITS)
									30479.7	- 0
									620.000	- 600.000
									600.000	550.000
									550.000	500.000
									500.000	450.000
									450.000	400.000
									400.000	350.000
									350.000	300.000
									300.000	250.000
									250.000	200.000
									200.000	150.000
									150.000	120.000
									120.000	0
									0	0
									30479.7	-
									0	0
									G/C3	-

LAYER OPTION FLAG DENS LOFDEN  
USER SUPPLIED DENSITY DA LAYDEN

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 3

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 M/S	SECOND NORMAL MOVEOUT M/S	THIRD NORMAL MOVEOUT M/S	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	
46.00	59.04	34.04	1480	1480				

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 4

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 M/S	SECOND NORMAL MOVEOUT M/S	THIRD NORMAL MOVEOUT M/S	INTERVAL 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	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 5

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 M/S	SECOND NORMAL MOVEOUT M/S	THIRD NORMAL MOVEOUT M/S	INTERVAL VELOCITY M/S
96.00	96.04	71.04	1480	586.46	922.05	1258.76	1480	
98.00	97.52	72.52	1480	584.75	920.24	1256.90	1480	
100.00	99.00	74.00	1480	583.04	918.43	1255.05	1480	
102.00	100.48	75.48	1480	581.33	916.63	1253.20	1480	
104.00	101.96	76.96	1480	579.63	914.84	1251.35	1480	
106.00	103.44	78.44	1480	577.94	913.04	1249.50	1480	
108.00	104.92	79.92	1480	576.25	911.25	1247.66	1480	
110.00	106.40	81.40	1480	574.57	909.47	1245.82	1480	
112.00	107.88	82.88	1480	572.90	907.68	1243.98	1480	
114.00	109.36	84.36	1480	571.23	905.90	1242.15	1480	
116.00	110.84	85.84	1480	569.56	904.13	1240.32	1480	
118.00	112.32	87.32	1480	567.90	902.36	1238.49	1480	
120.00	113.80	88.80	1480	566.25	900.59	1236.67	1480	
122.00	115.28	90.28	1480	564.60	898.83	1234.85	1480	
124.00	116.76	91.76	1480	562.96	897.07	1233.03	1480	
126.00	118.24	93.24	1480	561.32	895.32	1231.21	1480	
128.00	119.72	94.72	1480	559.69	893.56	1229.40	2110	
130.00	121.83	96.83	1490	552.86	883.93	1217.03	2223	
132.00	124.05	99.05	1501	545.25	873.09	1203.06	2223	
134.00	126.28	101.28	1512	537.98	862.77	1189.77	2223	
136.00	128.50	103.50	1522	531.03	852.93	1177.10	2223	
138.00	130.72	105.72	1532	524.38	843.52	1165.02	2223	
140.00	132.94	107.94	1542	518.00	834.51	1153.46	2223	
142.00	135.17	110.17	1552	511.87	825.87	1142.40		

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 6

TWO-WAY TRAVEL TIME FROM SRD	MEASURED DEPTH KB	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
144.00	137.39	112.39	1561	1578	505.97	817.57	1131.79	2223
146.00	139.61	114.61	1570	1588	500.29	809.60	1121.61	2223
148.00	141.84	116.84	1579	1599	494.82	801.92	1111.82	2223
150.00	144.06	119.06	1587	1609	489.53	794.52	1102.40	2223
152.00	146.28	121.28	1596	1618	484.42	787.38	1093.32	2223
154.00	148.50	123.50	1604	1627	479.48	780.49	1084.56	2223
156.00	150.73	125.73	1612	1636	474.69	773.82	1076.10	2223
158.00	152.95	127.95	1620	1645	470.05	767.36	1067.92	2223
160.00	155.17	130.17	1627	1654	465.54	761.11	1060.01	2223
162.00	157.40	132.40	1635	1662	461.17	755.04	1052.34	2223
164.00	159.62	134.62	1642	1670	456.92	749.15	1044.92	2223
166.00	161.84	136.84	1649	1678	452.79	743.43	1037.71	2223
168.00	164.06	139.06	1656	1685	448.76	737.87	1030.71	2223
170.00	166.29	141.29	1662	1692	444.84	732.47	1023.91	2223
172.00	168.51	143.51	1669	1700	441.02	727.20	1017.30	2223
174.00	170.73	145.73	1675	1706	437.30	722.07	1010.86	2223
176.00	172.96	147.96	1681	1713	433.66	717.07	1004.60	2223
178.00	175.18	150.18	1687	1720	430.11	712.19	998.49	2223
180.00	177.40	152.40	1693	1726	426.64	707.43	992.54	2223
182.00	179.63	154.62	1699	1732	423.25	702.77	986.73	2223
184.00	181.85	156.85	1705	1738	419.93	698.23	981.06	2223
186.00	184.07	159.07	1710	1744	416.68	693.78	975.52	2223
188.00	186.29	161.29	1716	1750	413.51	689.43	970.10	2223
190.00	188.52	163.52	1721	1756	410.39	685.18	964.81	2223

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 7

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 M/S	SECOND NORMAL MOVEOUT M/S	THIRD NORMAL MOVEOUT M/S	INTERVAL VELOCITY M/S
192.00	190.74	165.74	1726	1761	407.34	681.01	959.63	2223
194.00	192.96	167.96	1732	1767	404.35	676.93	954.56	2223
196.00	195.19	170.19	1737	1772	401.42	672.92	949.60	2223
198.00	197.41	172.41	1741	1777	398.54	669.00	944.73	2223
200.00	199.63	174.63	1746	1782	395.72	665.15	939.97	2058
202.00	201.69	176.69	1749	1785	393.52	662.27	936.50	2029
204.00	203.72	178.72	1752	1788	391.45	659.57	933.28	2029
206.00	205.75	180.75	1755	1790	389.41	656.90	930.10	2029
208.00	207.78	182.78	1757	1793	387.39	654.27	926.96	2029
210.00	209.81	184.81	1760	1795	385.39	651.67	923.86	2029
212.00	211.84	186.84	1763	1797	383.41	649.10	920.80	2029
214.00	213.86	188.86	1765	1800	381.46	646.55	917.78	2029
216.00	215.89	190.89	1768	1802	379.54	644.04	914.79	2029
218.00	217.92	192.92	1770	1804	377.63	641.55	911.83	2029
220.00	219.95	194.95	1772	1806	375.74	639.10	908.91	2029
222.00	221.98	196.98	1775	1808	373.88	636.66	906.02	2029
224.00	224.01	199.01	1777	1810	372.03	634.26	903.16	2029
226.00	226.04	201.04	1779	1813	370.21	631.88	900.34	2029
228.00	228.07	203.07	1781	1815	368.40	629.52	897.54	2029
230.00	230.10	205.10	1783	1817	366.62	627.19	894.77	2029
232.00	232.13	207.13	1786	1818	364.85	624.88	892.03	2029
234.00	234.16	209.16	1788	1820	363.10	622.59	889.32	2029
236.00	236.19	211.19	1790	1822	361.37	620.33	886.64	2029
238.00	238.22	213.22	1792	1824	359.65	618.08	883.98	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 8

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 M/S	SECOND NORMAL MOVEOUT M/S	THIRD NORMAL MOVEOUT M/S	INTERVAL VELOCITY M/S
240.00	240.25	215.25	1794	1826	357.96	615.86	881.34	2029
242.00	242.28	217.28	1796	1828	356.28	613.66	878.74	2029
244.00	244.31	219.31	1798	1829	354.61	611.47	876.15	2029
246.00	246.33	221.33	1799	1831	352.96	609.31	873.59	2029
248.00	248.36	223.36	1801	1833	351.33	607.17	871.05	2050
250.00	250.41	225.41	1803	1835	349.66	604.96	868.43	2124
252.00	252.54	227.54	1806	1837	347.83	602.50	865.44	2124
254.00	254.66	229.66	1808	1840	346.02	600.06	862.49	2124
256.00	256.79	231.79	1811	1842	344.23	597.64	859.57	2124
258.00	258.91	233.91	1813	1844	342.46	595.25	856.69	2124
260.00	261.04	236.04	1816	1847	340.71	592.89	853.83	2124
262.00	263.16	238.16	1818	1849	338.98	590.55	851.00	2124
264.00	265.28	240.28	1820	1851	337.27	588.23	848.20	2124
266.00	267.41	242.41	1823	1853	335.57	585.94	845.43	2124
268.00	269.53	244.53	1825	1856	333.89	583.67	842.69	2124
270.00	271.66	246.66	1827	1858	332.23	581.42	839.97	2124
272.00	273.78	248.78	1829	1860	330.59	579.19	837.28	2124
274.00	275.91	250.91	1831	1862	328.96	576.99	834.62	2124
276.00	278.03	253.03	1834	1864	327.35	574.80	831.98	2124
278.00	280.15	255.15	1836	1866	325.76	572.63	829.36	2124
280.00	282.28	257.28	1838	1868	324.18	570.49	826.77	2124
282.00	284.40	259.40	1840	1870	322.62	568.36	824.20	2124
284.00	286.53	261.53	1842	1872	321.07	566.25	821.66	2124
286.00	288.65	263.65	1844	1874	319.54	564.17	819.14	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 9

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
288.00	290.77	265.77	1846	1875	318.02	562.10	816.64	2124
290.00	292.90	267.90	1848	1877	316.52	560.04	814.16	2124
292.00	295.02	270.02	1849	1879	315.03	558.01	811.70	2124
294.00	297.15	272.15	1851	1881	313.55	555.99	809.26	2124
296.00	299.27	274.27	1853	1883	312.09	553.99	806.84	2328
298.00	301.60	276.60	1856	1886	310.25	551.36	803.57	2420
300.00	304.02	279.02	1860	1890	308.24	548.47	799.92	2420
302.00	306.44	281.44	1864	1894	306.26	545.61	796.32	2420
304.00	308.86	283.86	1867	1898	304.31	542.80	792.77	2420
306.00	311.28	286.28	1871	1902	302.38	540.02	789.26	2420
308.00	313.70	288.70	1875	1906	300.48	537.27	785.80	2420
310.00	316.12	291.12	1878	1909	298.61	534.56	782.38	2420
312.00	318.54	293.54	1882	1913	296.76	531.88	779.01	2420
314.00	320.96	295.96	1885	1917	294.93	529.23	775.68	2420
316.00	323.38	298.38	1888	1920	293.13	526.62	772.38	2420
318.00	325.80	300.80	1892	1924	291.35	524.04	769.13	2420
320.00	328.22	303.22	1895	1927	289.59	521.49	765.91	2420
322.00	330.64	305.64	1898	1931	287.86	518.97	762.74	2420
324.00	333.06	308.06	1902	1934	286.15	516.48	759.60	2420
326.00	335.48	310.48	1905	1938	284.45	514.02	756.49	2420
328.00	337.90	312.90	1908	1941	282.78	511.58	753.42	2420
330.00	340.31	315.31	1911	1944	281.13	509.17	750.39	2420
332.00	342.73	317.73	1914	1947	279.50	506.79	747.38	2420
334.00	345.15	320.15	1917	1950	277.89	504.44	744.41	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 10

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
336.00	347.57	322.57	1920	1954	276.30	502.11	741.47	2420
338.00	349.99	324.99	1923	1957	274.72	499.80	738.56	2421
340.00	352.44	327.44	1926	1960	273.13	497.46	735.60	2444
342.00	354.88	329.88	1929	1963	271.56	495.14	732.67	2444
344.00	357.33	332.33	1932	1966	270.00	492.85	729.77	2444
346.00	359.77	334.77	1935	1969	268.46	490.58	726.89	2444
348.00	362.21	337.21	1938	1972	266.94	488.34	724.05	2444
350.00	364.66	339.66	1941	1975	265.44	486.12	721.24	2444
352.00	367.10	342.10	1944	1978	263.95	483.92	718.46	2444
354.00	369.55	344.55	1947	1981	262.48	481.75	715.70	2444
356.00	371.99	346.99	1949	1984	261.03	479.59	712.97	2444
358.00	374.44	349.44	1952	1987	259.60	477.46	710.27	2444
360.00	376.88	351.88	1955	1990	258.18	475.35	707.60	2444
362.00	379.32	354.32	1958	1993	256.77	473.27	704.95	2444
364.00	381.77	356.77	1960	1995	255.38	471.20	702.32	2444
366.00	384.21	359.21	1963	1998	254.01	469.15	699.72	2444
368.00	386.66	361.66	1966	2001	252.65	467.12	697.15	2444
370.00	389.10	364.10	1968	2004	251.30	465.11	694.60	2444
372.00	391.54	366.54	1971	2006	249.97	463.12	692.07	2444
374.00	393.99	368.99	1973	2009	248.65	461.15	689.56	2444
376.00	396.43	371.43	1976	2011	247.35	459.20	687.08	2444
378.00	398.88	373.88	1978	2014	246.06	457.26	684.62	2553
380.00	401.43	376.43	1981	2017	244.65	455.11	681.86	2632
382.00	404.06	379.06	1985	2021	243.15	452.81	678.88	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 11

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	406.69	381.69	1988	2024	241.66	450.54	675.93	2632
386.00	409.32	384.32	1991	2028	240.20	448.29	673.02	2632
388.00	411.96	386.96	1995	2032	238.75	446.07	670.14	2632
390.00	414.59	389.59	1998	2035	237.33	443.87	667.28	2632
392.00	417.22	392.22	2001	2039	235.91	441.69	664.46	2632
394.00	419.85	394.85	2004	2042	234.52	439.54	661.67	2632
396.00	422.48	397.48	2007	2045	233.14	437.41	658.91	2632
398.00	425.11	400.11	2011	2049	231.78	435.30	656.17	2632
400.00	427.75	402.75	2014	2052	230.43	433.22	653.47	2632
402.00	430.38	405.38	2017	2055	229.10	431.16	650.79	2632
404.00	433.01	408.01	2020	2059	227.79	429.12	648.13	2632
406.00	435.64	410.64	2023	2062	226.49	427.10	645.51	2632
408.00	438.27	413.27	2026	2065	225.20	425.10	642.90	2632
410.00	440.90	415.90	2029	2068	223.93	423.12	640.33	2632
412.00	443.54	418.54	2032	2071	222.68	421.16	637.78	2632
414.00	446.17	421.17	2035	2074	221.44	419.22	635.25	2632
416.00	448.80	423.80	2037	2077	220.21	417.30	632.75	2469
418.00	451.27	426.27	2040	2080	219.16	415.68	630.67	2354
420.00	453.62	428.62	2041	2081	218.23	414.27	628.88	2354
422.00	455.98	430.98	2043	2082	217.31	412.87	627.10	2354
424.00	458.33	433.33	2044	2084	216.40	411.48	625.33	2354
426.00	460.68	435.68	2045	2085	215.49	410.09	623.57	2354
428.00	463.04	438.04	2047	2086	214.59	408.72	621.83	2354
430.00	465.39	440.39	2048	2088	213.70	407.35	620.09	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 12

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
432.00	467.74	442.74	2050	2089	212.81	405.99	618.36	2354
434.00	470.10	445.10	2051	2090	211.93	404.65	616.65	2354
436.00	472.45	447.45	2053	2092	211.06	403.31	614.94	2354
438.00	474.81	449.81	2054	2093	210.20	401.97	613.24	2354
440.00	477.16	452.16	2055	2094	209.34	400.65	611.56	2354
442.00	479.51	454.51	2057	2095	208.49	399.34	609.88	2354
444.00	481.87	456.87	2058	2097	207.64	398.03	608.21	2354
446.00	484.22	459.22	2059	2098	206.80	396.73	606.55	2354
448.00	486.57	461.57	2061	2099	205.97	395.44	604.90	2354
450.00	488.93	463.93	2062	2100	205.15	394.16	603.26	2354
452.00	491.28	466.28	2063	2101	204.33	392.89	601.63	2354
454.00	493.63	468.63	2064	2103	203.51	391.62	600.01	2354
456.00	495.99	470.99	2066	2104	202.70	390.37	598.40	2354
458.00	498.34	473.34	2067	2105	201.90	389.12	596.79	2483
460.00	500.82	475.82	2069	2107	201.00	387.69	594.94	2726
462.00	503.55	478.55	2072	2110	199.90	385.91	592.57	2726
464.00	506.28	481.28	2074	2113	198.81	384.14	590.22	2726
466.00	509.00	484.00	2077	2116	197.73	382.39	587.89	2726
468.00	511.73	486.73	2080	2119	196.67	380.66	585.59	2726
470.00	514.45	489.45	2083	2122	195.61	378.95	583.30	2726
472.00	517.18	492.18	2086	2125	194.57	377.25	581.04	2726
474.00	519.91	494.91	2088	2128	193.53	375.56	578.79	2726
476.00	522.63	497.63	2091	2130	192.51	373.89	576.57	2726
478.00	525.36	500.36	2094	2133	191.50	372.24	574.36	

COMPANY : BHP PETROLEUM

PAGE 13

WELL : LA BELLA-1

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 M/S	SECOND NORMAL MOVEOUT M/S	THIRD NORMAL MOVEOUT M/S	INTERVAL VELOCITY
480.00	528.08	503.08	2096	2136	190.50	370.60	572.17	2726
482.00	530.81	505.81	2099	2139	189.51	368.98	570.00	2726
484.00	533.53	508.53	2101	2142	188.53	367.37	567.85	2726
486.00	536.26	511.26	2104	2144	187.55	365.78	565.72	2726
488.00	538.99	513.99	2106	2147	186.59	364.20	563.61	2726
490.00	541.71	516.71	2109	2150	185.64	362.63	561.51	2726
492.00	544.44	519.44	2112	2152	184.70	361.08	559.43	2726
494.00	547.16	522.16	2114	2155	183.77	359.54	557.36	2724
496.00	549.89	524.89	2116	2158	182.84	358.02	555.32	2561
498.00	552.45	527.45	2118	2159	182.05	356.72	553.59	2726
500.00	555.01	530.01	2120	2161	181.26	355.43	551.88	2561
502.00	557.57	532.57	2122	2163	180.48	354.14	550.18	2561
504.00	560.13	535.13	2124	2165	179.70	352.87	548.49	2561
506.00	562.69	537.69	2125	2166	178.93	351.61	546.81	2561
508.00	565.26	540.26	2127	2168	178.16	350.35	545.14	2561
510.00	567.82	542.82	2129	2170	177.41	349.11	543.48	2561
512.00	570.38	545.38	2130	2171	176.66	347.87	541.83	2561
514.00	572.94	547.94	2132	2173	175.91	346.64	540.19	2561
516.00	575.50	550.50	2134	2175	175.17	345.42	538.56	2561
518.00	578.06	553.06	2135	2176	174.44	344.21	536.94	2561
520.00	580.62	555.62	2137	2178	173.71	343.00	535.33	2561
522.00	583.18	558.18	2139	2179	172.99	341.81	533.74	2561
524.00	585.74	560.74	2140	2181	172.27	340.62	532.15	2561
526.00	588.31	563.31	2142	2183	171.56	339.44	530.57	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 14

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
528.00	590.87	565.87	2143	2184	170.86	338.27	529.00	2561
530.00	593.43	568.43	2145	2186	170.16	337.10	527.44	2561
532.00	595.99	570.99	2147	2187	169.46	335.95	525.89	2561
534.00	598.55	573.55	2148	2189	168.77	334.80	524.35	2611
536.00	601.16	576.16	2150	2190	168.06	333.61	522.74	2661
538.00	603.82	578.82	2152	2192	167.33	332.36	521.06	2661
540.00	606.48	581.48	2154	2194	166.59	331.13	519.39	2661
542.00	609.15	584.15	2156	2196	165.87	329.91	517.73	2661
544.00	611.81	586.81	2157	2198	165.15	328.69	516.08	2661
546.00	614.47	589.47	2159	2200	164.44	327.49	514.44	2661
548.00	617.13	592.13	2161	2202	163.73	326.29	512.82	2661
550.00	619.79	594.79	2163	2204	163.03	325.10	511.20	2561
552.00	622.35	597.35	2164	2205	162.39	324.02	509.75	2978
554.00	625.33	600.33	2167	2208	161.51	322.50	507.64	2772
556.00	628.10	603.10	2169	2211	160.77	321.23	505.89	2771
558.00	630.87	605.87	2172	2213	160.03	319.96	504.15	2644
560.00	633.52	608.52	2173	2215	159.37	318.83	502.62	2589
562.00	636.11	611.11	2175	2216	158.74	317.77	501.17	2790
564.00	638.90	613.90	2177	2218	158.01	316.51	499.44	2820
566.00	641.72	616.72	2179	2221	157.27	315.23	497.67	2836
568.00	644.55	619.55	2182	2223	156.52	313.94	495.89	2833
570.00	647.38	622.38	2184	2226	155.79	312.67	494.13	2528
572.00	649.91	624.91	2185	2227	155.22	311.70	492.82	2774
574.00	652.69	627.69	2187	2229	154.53	310.51	491.17	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 15

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 M/S	SECOND NORMAL MOVEOUT M/S	THIRD NORMAL MOVEOUT M/S	INTERVAL VELOCITY M/S
576.00	655.48	630.48	2189	2231	153.83	309.30	489.50	2794
578.00	658.35	633.35	2192	2234	153.10	308.02	487.73	2873
580.00	661.28	636.28	2194	2236	152.34	306.70	485.89	2927
582.00	664.09	639.09	2196	2239	151.66	305.51	484.24	2808
584.00	667.00	642.00	2199	2241	150.93	304.23	482.45	2908
586.00	669.79	644.79	2201	2243	150.26	303.07	480.84	2794
588.00	672.61	647.61	2203	2246	149.59	301.89	479.21	2822
590.00	675.39	650.39	2205	2248	148.94	300.77	477.64	2780
592.00	678.03	653.03	2206	2249	148.37	299.78	476.28	2636
594.00	680.85	655.85	2208	2251	147.72	298.63	474.68	2818
596.00	683.39	658.39	2209	2252	147.20	297.73	473.45	2542
598.00	686.05	661.05	2211	2254	146.63	296.74	472.08	2664
600.00	688.75	663.75	2213	2255	146.04	295.72	470.67	2569
602.00	691.32	666.32	2214	2257	145.52	294.81	469.43	2609
604.00	693.93	668.93	2215	2258	144.99	293.88	468.14	2638
606.00	696.57	671.57	2216	2259	144.45	292.93	466.83	2915
608.00	699.48	674.48	2219	2262	143.78	291.75	465.16	2893
610.00	702.37	677.37	2221	2264	143.13	290.59	463.54	2864
612.00	705.24	680.24	2223	2266	142.49	289.47	461.97	2696
614.00	707.93	682.93	2225	2268	141.94	288.50	460.62	3108
616.00	711.04	686.04	2227	2271	141.20	287.18	458.74	3255
618.00	714.30	689.30	2231	2275	140.40	285.72	456.66	3088
620.00	717.39	692.39	2234	2278	139.68	284.44	454.83	2683
622.00	720.07	695.07	2235	2279	139.16	283.51	453.54	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 16

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	722.82	697.82	2237	2281	138.61	282.54	452.17	2754
626.00	725.42	700.42	2238	2282	138.13	281.69	451.00	2597
628.00	728.01	703.01	2239	2283	137.65	280.85	449.84	2589
630.00	730.67	705.67	2240	2284	137.15	279.97	448.60	2661
632.00	733.57	708.57	2242	2287	136.55	278.89	447.08	2904
634.00	736.36	711.36	2244	2288	136.00	277.92	445.70	2790
636.00	739.15	714.15	2246	2290	135.46	276.95	444.34	2791
638.00	741.96	716.96	2248	2292	134.92	275.98	442.97	2691
640.00	744.65	719.65	2249	2293	134.43	275.10	441.73	2803
642.00	747.45	722.45	2251	2295	133.89	274.14	440.38	2654
644.00	750.11	725.11	2252	2296	133.42	273.30	439.20	2540
646.00	752.65	727.65	2253	2297	132.99	272.54	438.15	2665
648.00	755.31	730.31	2254	2298	132.52	271.70	436.97	2707
650.00	758.02	733.02	2255	2300	132.04	270.84	435.75	2614
652.00	760.63	735.63	2257	2301	131.60	270.05	434.63	2667
654.00	763.30	738.30	2258	2302	131.13	269.22	433.47	2572
656.00	765.87	740.87	2259	2303	130.71	268.46	432.41	2820
658.00	768.69	743.69	2260	2305	130.20	267.54	431.09	2992
660.00	771.68	746.68	2263	2307	129.62	266.49	429.59	2583
662.00	774.27	749.27	2264	2308	129.20	265.74	428.54	2771
664.00	777.04	752.04	2265	2309	128.72	264.86	427.29	3002
666.00	780.04	755.04	2267	2312	128.15	263.83	425.80	2753
668.00	782.79	757.79	2269	2313	127.68	262.98	424.60	2713
670.00	785.51	760.51	2270	2314	127.23	262.16	423.44	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 17

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	788.12	763.12	2271	2315	126.82	261.41	422.38	2614
674.00	791.16	766.16	2273	2318	126.25	260.37	420.88	3039
676.00	793.99	768.99	2275	2320	125.77	259.49	419.63	2829
678.00	796.76	771.76	2277	2321	125.31	258.66	418.43	2777
680.00	799.61	774.61	2278	2323	124.83	257.78	417.17	2844
682.00	802.62	777.62	2280	2325	124.29	256.79	415.74	3009
684.00	805.51	780.51	2282	2327	123.80	255.89	414.45	2892
686.00	808.33	783.33	2284	2329	123.34	255.04	413.23	2468
688.00	810.80	785.80	2284	2329	122.99	254.42	412.36	2363
690.00	813.16	788.16	2285	2329	122.68	253.86	411.58	2316
692.00	815.48	790.48	2285	2329	122.38	253.33	410.85	2612
694.00	818.09	793.09	2286	2330	122.00	252.64	409.85	2647
696.00	820.74	795.74	2287	2331	121.60	251.92	408.83	2741
698.00	823.48	798.48	2288	2332	121.18	251.15	407.73	2618
700.00	826.10	801.10	2289	2333	120.81	250.46	406.75	3044
702.00	829.14	804.14	2291	2335	120.29	249.50	405.35	2873
704.00	832.02	807.02	2293	2337	119.84	248.66	404.14	2534
706.00	834.55	809.55	2293	2338	119.49	248.03	403.24	3036
708.00	837.59	812.59	2295	2340	118.99	247.10	401.88	2955
710.00	840.54	815.54	2297	2342	118.52	246.22	400.61	2855
712.00	843.40	818.40	2299	2343	118.08	245.41	399.44	2846
714.00	846.24	821.24	2300	2345	117.65	244.62	398.29	2689
716.00	848.93	823.93	2301	2346	117.27	243.92	397.29	2516
718.00	851.45	826.45	2302	2347	116.95	243.33	396.44	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 18

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
720.00	854.39	829.39	2304	2348	116.49	242.48	395.21	2946
722.00	857.31	832.31	2306	2350	116.05	241.66	394.01	2913
724.00	860.03	835.03	2307	2351	115.68	240.96	393.00	2720
726.00	862.88	837.88	2308	2353	115.26	240.20	391.88	2849
728.00	865.44	840.44	2309	2353	114.94	239.59	391.02	2561
730.00	867.97	842.97	2310	2354	114.62	239.01	390.18	2537
732.00	870.75	845.75	2311	2355	114.23	238.29	389.14	2773
734.00	873.64	848.64	2312	2357	113.82	237.51	388.01	2708
736.00	876.34	851.34	2313	2358	113.46	236.84	387.04	2924
738.00	879.27	854.27	2315	2360	113.04	236.06	385.89	2835
740.00	882.10	857.10	2316	2361	112.64	235.32	384.82	2979
742.00	885.08	860.08	2318	2363	112.21	234.51	383.63	3193
744.00	888.27	863.27	2321	2365	111.72	233.58	382.24	2819
746.00	891.09	866.09	2322	2367	111.34	232.87	381.21	2699
748.00	893.79	868.79	2323	2368	111.00	232.23	380.28	2743
750.00	896.54	871.54	2324	2369	110.65	231.57	379.32	2832
752.00	899.37	874.37	2325	2370	110.27	230.87	378.29	2793
754.00	902.16	877.16	2327	2371	109.91	230.19	377.29	2646
756.00	904.81	879.81	2328	2372	109.59	229.59	376.42	2670
758.00	907.48	882.48	2328	2373	109.27	228.98	375.54	2476
760.00	909.95	884.95	2329	2373	108.99	228.47	374.80	2639
762.00	912.59	887.59	2330	2374	108.68	227.89	373.95	2508
764.00	915.10	890.10	2330	2374	108.40	227.36	373.20	2598
766.00	917.70	892.70	2331	2375	108.10	226.80	372.38	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 19

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 M/S	SECOND NORMAL MOVEOUT M/S	THIRD NORMAL MOVEOUT M/S	INTERVAL VELOCITY M/S
768.00	920.44	895.44	2332	2376	107.76	226.18	371.46	2738
770.00	923.20	898.20	2333	2377	107.43	225.54	370.53	2762
772.00	925.74	900.74	2334	2378	107.14	225.01	369.76	2544
774.00	928.49	903.49	2335	2379	106.81	224.39	368.85	2747
776.00	931.29	906.29	2336	2380	106.47	223.74	367.90	2803
778.00	933.88	908.88	2336	2380	106.18	223.20	367.11	2587
780.00	936.51	911.51	2337	2381	105.89	222.64	366.29	2633
782.00	939.14	914.14	2338	2382	105.59	222.09	365.48	2629
784.00	941.62	916.62	2338	2382	105.34	221.61	364.78	2474
786.00	944.29	919.29	2339	2383	105.03	221.04	363.95	2676
788.00	946.77	921.77	2340	2383	104.78	220.56	363.25	2482
790.00	949.33	924.33	2340	2383	104.51	220.04	362.50	2556
792.00	951.98	926.98	2341	2384	104.21	219.49	361.69	2647
794.00	954.75	929.75	2342	2385	103.90	218.89	360.80	2772
796.00	957.33	932.33	2343	2386	103.62	218.37	360.04	2581
798.00	959.83	934.83	2343	2386	103.37	217.90	359.35	2498
800.00	962.36	937.36	2343	2386	103.11	217.41	358.63	2531
802.00	964.76	939.76	2344	2386	102.88	216.97	358.00	2403
804.00	967.22	942.22	2344	2387	102.64	216.52	357.34	2460
806.00	969.79	944.79	2344	2387	102.37	216.02	356.60	2573
808.00	972.40	947.40	2345	2388	102.10	215.50	355.85	2608
810.00	974.89	949.89	2345	2388	101.86	215.04	355.17	2490
812.00	977.37	952.37	2346	2388	101.62	214.59	354.51	2475
814.00	979.94	954.94	2346	2389	101.36	214.09	353.78	2571

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 20

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 MOVEOUT M/S	SECOND MOVEOUT M/S	THIRD MOVEOUT M/S	INTERVAL VELOCITY M/S
816.00	982.47	957.47	2347	2389	101.11	213.62	353.09	2532
818.00	984.93	959.93	2347	2389	100.87	213.18	352.44	2459
820.00	987.36	962.36	2347	2389	100.64	212.75	351.81	2434
822.00	989.95	964.95	2348	2390	100.39	212.26	351.09	2589
824.00	992.70	967.70	2349	2391	100.09	211.70	350.25	2748
826.00	995.16	970.16	2349	2391	99.87	211.26	349.62	2456
828.00	997.64	972.64	2349	2391	99.63	210.82	348.97	2482
830.00	1000.07	975.07	2350	2391	99.41	210.40	348.35	2427
832.00	1002.60	977.60	2350	2391	99.17	209.94	347.68	2535
834.00	1005.19	980.19	2351	2392	98.92	209.46	346.96	2594
836.00	1007.88	982.88	2351	2393	98.65	208.94	346.19	2681
838.00	1010.40	985.40	2352	2393	98.41	208.49	345.53	2527
840.00	1012.88	987.88	2352	2393	98.19	208.06	344.90	2476
842.00	1015.44	990.44	2353	2394	97.94	207.60	344.21	2567
844.00	1017.97	992.97	2353	2394	97.71	207.16	343.55	2477
846.00	1020.44	995.44	2353	2394	97.49	206.73	342.93	2522
848.00	1022.92	997.92	2354	2394	97.27	206.31	342.30	2476
850.00	1025.44	1000.44	2354	2395	97.04	205.87	341.65	2519
852.00	1027.91	1002.91	2354	2395	96.82	205.46	341.04	2469
854.00	1030.37	1005.37	2355	2395	96.61	205.04	340.43	2441
856.00	1032.81	1007.81	2355	2395	96.39	204.64	339.83	2465
858.00	1035.44	1010.44	2355	2396	96.15	204.17	339.13	2624
860.00	1038.08	1013.08	2356	2396	95.90	203.69	338.42	2638
862.00	1040.69	1015.69	2357	2397	95.66	203.23	337.73	2613

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 21

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	1043.28	1018.28	2357	2397	95.43	202.78	337.05	2594
866.00	1045.92	1020.92	2358	2398	95.19	202.31	336.35	2637
868.00	1048.58	1023.58	2358	2398	94.94	201.83	335.64	2664
870.00	1051.20	1026.20	2359	2399	94.70	201.37	334.95	2617
872.00	1053.90	1028.90	2360	2400	94.45	200.89	334.22	2698
874.00	1056.63	1031.63	2361	2401	94.20	200.39	333.47	2731
876.00	1059.43	1034.43	2362	2402	93.93	199.87	332.68	2803
878.00	1062.37	1037.37	2363	2403	93.64	199.29	331.81	2936
880.00	1065.39	1040.39	2365	2404	93.33	198.69	330.89	3020
882.00	1068.04	1043.04	2365	2405	93.09	198.23	330.20	2650
884.00	1070.74	1045.74	2366	2406	92.85	197.76	329.49	2700
886.00	1073.68	1048.68	2367	2407	92.56	197.19	328.63	2946
888.00	1076.59	1051.59	2368	2408	92.28	196.65	327.80	2904
890.00	1079.58	1054.58	2370	2410	91.98	196.06	326.91	2817
892.00	1082.40	1057.40	2371	2411	91.73	195.56	326.14	2977
894.00	1085.38	1060.38	2372	2412	91.44	194.99	325.28	3226
896.00	1088.60	1063.60	2374	2414	91.10	194.32	324.25	3109
898.00	1091.71	1066.71	2376	2416	90.79	193.71	323.31	3184
900.00	1094.90	1069.90	2378	2418	90.46	193.06	322.32	2619
902.00	1097.52	1072.52	2378	2419	90.25	192.64	321.69	2945
904.00	1100.46	1075.46	2379	2420	89.97	192.11	320.87	3222
906.00	1103.68	1078.68	2381	2422	89.65	191.46	319.87	3318
908.00	1107.00	1082.00	2383	2424	89.30	190.77	318.81	2805
910.00	1109.81	1084.81	2384	2425	89.06	190.30	318.09	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 22

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT M/S	SECOND NORMAL MOVEOUT M/S	THIRD NORMAL MOVEOUT M/S	INTERVAL VELOCITY M/S
912.00	1112.85	1087.85	2386	2427	88.78	189.73	317.22	3042
914.00	1115.60	1090.60	2386	2427	88.55	189.28	316.53	2750
916.00	1118.53	1093.53	2388	2429	88.29	188.77	315.75	2931
918.00	1121.40	1096.40	2389	2430	88.04	188.28	315.00	2869
920.00	1124.37	1099.37	2390	2431	87.77	187.75	314.19	2976
922.00	1127.42	1102.42	2391	2433	87.49	187.20	313.34	3051
924.00	1130.31	1105.31	2392	2434	87.25	186.71	312.59	2887
926.00	1133.07	1108.07	2393	2434	87.02	186.27	311.92	2857
928.00	1135.93	1110.93	2394	2435	86.78	185.80	311.19	2726
930.00	1138.65	1113.65	2395	2436	86.57	185.37	310.54	3072
932.00	1141.73	1116.73	2396	2438	86.29	184.82	309.70	3190
934.00	1144.92	1119.92	2398	2439	86.00	184.24	308.79	3317
936.00	1148.23	1123.23	2400	2442	85.68	183.60	307.80	3200
938.00	1151.43	1126.43	2402	2444	85.39	183.02	306.90	2981
940.00	1154.42	1129.42	2403	2445	85.14	182.52	306.13	3186
942.00	1157.60	1132.60	2405	2447	84.85	181.94	305.24	3260
944.00	1160.86	1135.86	2406	2449	84.55	181.35	304.31	2841
946.00	1163.70	1138.70	2407	2450	84.33	180.90	303.63	2983
948.00	1166.69	1141.69	2409	2451	84.08	180.41	302.87	2889
950.00	1169.57	1144.57	2410	2452	83.86	179.96	302.17	3335
952.00	1172.91	1147.91	2412	2454	83.55	179.35	301.22	3310
954.00	1176.22	1151.22	2413	2456	83.25	178.75	300.28	3038
956.00	1179.26	1154.26	2415	2457	83.00	178.25	299.51	3325
958.00	1182.58	1157.58	2417	2460	82.71	177.65	298.58	

COMPANY : BHP PETROLEUM

PAGE 23

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	WELL : LA BELLA-1	
960.00	1185.80	1160.80	2418	2461	82.43	177.10	297.72	3217		
962.00	1189.21	1164.21	2420	2464	82.12	176.48	296.74	3409		
964.00	1192.56	1167.56	2422	2466	81.83	175.88	295.81	3352		
966.00	1195.77	1170.77	2424	2468	81.56	175.34	294.97	3209		
968.00	1199.06	1174.06	2426	2470	81.28	174.77	294.08	3292		
970.00	1202.14	1177.14	2427	2471	81.03	174.28	293.32	3079		
972.00	1205.17	1180.17	2428	2472	80.80	173.81	292.59	3025		
974.00	1208.12	1183.12	2429	2473	80.58	173.37	291.90	2917		
976.00	1211.03	1186.03	2430	2474	80.36	172.94	291.24	2795		
978.00	1213.83	1188.83	2431	2475	80.17	172.55	290.63	2833		
980.00	1216.66	1191.66	2432	2476	79.97	172.15	290.01	2816		
982.00	1219.48	1194.48	2433	2477	79.77	171.76	289.40	2792		
984.00	1222.27	1197.27	2433	2477	79.58	171.37	288.81	2838		
986.00	1225.10	1200.10	2434	2478	79.38	170.98	288.19	2765		
988.00	1227.87	1202.87	2435	2479	79.20	170.60	287.62	2761		
990.00	1230.63	1205.63	2436	2479	79.01	170.23	287.04	2876		
992.00	1233.51	1208.51	2437	2480	78.81	169.83	286.42	2771		
994.00	1236.28	1211.28	2437	2481	78.63	169.46	285.84	2861		
996.00	1239.14	1214.14	2438	2482	78.43	169.06	285.23	2859		
998.00	1242.00	1217.00	2439	2482	78.23	168.67	284.62	2854		
1000.00	1244.85	1219.85	2440	2483	78.04	168.28	284.01	2815		
1002.00	1247.67	1222.67	2440	2484	77.85	167.91	283.43	2845		
1004.00	1250.51	1225.51	2441	2485	77.66	167.52	282.83	2839		
1006.00	1253.35	1228.35	2442	2485	77.47	167.14	282.24			

COMPANY : BHP PETROLEUM

PAGE 24

WELL : LA BELLA-1

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	1256.37	1231.37	2443	2487	77.26	166.71	281.56	3019
1010.00	1259.42	1234.42	2444	2488	77.04	166.27	280.87	3055
1012.00	1262.35	1237.35	2445	2489	76.85	165.87	280.25	2925
1014.00	1265.29	1240.29	2446	2490	76.65	165.47	279.62	2939
1016.00	1268.29	1243.29	2447	2491	76.44	165.06	278.97	3036
1018.00	1271.33	1246.33	2449	2492	76.23	164.63	278.30	3071
1020.00	1274.40	1249.40	2450	2493	76.02	164.20	277.62	3129
1022.00	1277.53	1252.53	2451	2495	75.80	163.75	276.92	3210
1024.00	1280.74	1255.74	2453	2496	75.57	163.28	276.17	3193
1026.00	1283.93	1258.93	2454	2498	75.34	162.82	275.44	3294
1028.00	1287.23	1262.23	2456	2500	75.10	162.33	274.67	3259
1030.00	1290.48	1265.48	2457	2501	74.86	161.85	273.91	3286
1032.00	1293.77	1268.77	2459	2503	74.63	161.37	273.15	3360
1034.00	1297.13	1272.13	2461	2505	74.38	160.86	272.35	3414
1036.00	1300.54	1275.54	2462	2507	74.13	160.35	271.54	3376
1038.00	1303.92	1278.92	2464	2509	73.88	159.85	270.74	3421
1040.00	1307.34	1282.34	2466	2511	73.63	159.33	269.93	3330
1042.00	1310.67	1285.67	2468	2513	73.40	158.85	269.16	3477
1044.00	1314.15	1289.15	2470	2515	73.14	158.33	268.33	3250
1046.00	1317.40	1292.40	2471	2517	72.92	157.88	267.62	3272
1048.00	1320.67	1295.67	2473	2518	72.70	157.42	266.89	3442
1050.00	1324.11	1299.11	2474	2521	72.45	156.92	266.09	3680
1052.00	1327.79	1302.79	2477	2523	72.17	156.34	265.18	3760
1054.00	1331.55	1306.55	2479	2526	71.88	155.75	264.22	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 25

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	1335.18	1310.18	2481	2529	71.62	155.20	263.35	3626
1058.00	1338.80	1313.80	2484	2531	71.35	154.65	262.48	3624
1060.00	1342.29	1317.29	2485	2533	71.11	154.15	261.68	3492
1062.00	1345.80	1320.80	2487	2536	70.87	153.65	260.88	3507
1064.00	1349.21	1324.21	2489	2538	70.64	153.18	260.13	3409
1066.00	1352.65	1327.65	2491	2539	70.41	152.71	259.37	3434
1068.00	1356.06	1331.06	2493	2541	70.18	152.24	258.63	3415
1070.00	1359.44	1334.44	2494	2543	69.96	151.79	257.90	3382
1072.00	1362.92	1337.92	2496	2545	69.73	151.31	257.14	3480
1074.00	1366.49	1341.49	2498	2548	69.48	150.81	256.33	3567
1076.00	1370.79	1345.79	2501	2552	69.13	150.07	255.15	4304
1078.00	1375.11	1350.11	2505	2556	68.78	149.35	253.98	4312
1080.00	1378.99	1353.99	2507	2559	68.50	148.76	253.04	3888
1082.00	1382.84	1357.84	2510	2562	68.23	148.20	252.13	3850
1084.00	1386.51	1361.51	2512	2565	67.98	147.69	251.31	3664
1086.00	1390.41	1365.41	2515	2568	67.70	147.11	250.39	3905
1088.00	1394.49	1369.49	2517	2572	67.40	146.49	249.38	4079
1090.00	1398.39	1373.39	2520	2575	67.13	145.93	248.47	3899
1092.00	1402.23	1377.23	2522	2578	66.87	145.39	247.60	3835
1094.00	1405.56	1380.56	2524	2579	66.67	144.98	246.95	3339
1096.00	1408.84	1383.84	2525	2581	66.49	144.60	246.33	3279
1098.00	1411.97	1386.97	2526	2582	66.32	144.25	245.78	3126
1100.00	1415.29	1390.29	2528	2583	66.13	143.85	245.15	3318
1102.00	1418.41	1393.41	2529	2584	65.96	143.51	244.60	3125

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 26

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 M/S	SECOND NORMAL MOVEOUT M/S	THIRD NORMAL MOVEOUT M/S	INTERVAL VELOCITY M/S
1104.00	1421.58	1396.58	2530	2586	65.79	143.16	244.03	3172
1106.00	1424.92	1399.92	2532	2587	65.60	142.76	243.40	3341
1108.00	1428.74	1403.74	2534	2590	65.35	142.25	242.57	3821
1110.00	1432.14	1407.14	2535	2592	65.16	141.85	241.92	3400
1112.00	1435.47	1410.47	2537	2593	64.98	141.47	241.31	3322
1114.00	1438.80	1413.80	2538	2595	64.79	141.08	240.70	3337
1116.00	1442.30	1417.30	2540	2596	64.59	140.67	240.02	3494
1118.00	1445.54	1420.54	2541	2598	64.42	140.31	239.45	3240
1120.00	1448.82	1423.82	2543	2599	64.24	139.95	238.87	3285
1122.00	1452.05	1427.05	2544	2600	64.07	139.60	238.31	3223
1124.00	1455.30	1430.30	2545	2602	63.90	139.25	237.74	3251
1126.00	1458.77	1433.77	2547	2603	63.71	138.84	237.09	3472
1128.00	1461.86	1436.86	2548	2604	63.56	138.53	236.59	3088
1130.00	1465.05	1440.05	2549	2606	63.40	138.20	236.05	3172
1132.00	1468.22	1443.22	2550	2607	63.24	137.87	235.52	3264
1134.00	1471.49	1446.49	2551	2608	63.07	137.52	234.96	3194
1136.00	1474.90	1449.90	2553	2610	62.89	137.14	234.35	3409
1138.00	1478.32	1453.32	2554	2611	62.71	136.76	233.74	3732
1140.00	1482.05	1457.05	2556	2614	62.49	136.31	233.01	3616
1142.00	1485.67	1460.67	2558	2616	62.29	135.89	232.33	3389
1144.00	1489.06	1464.06	2560	2617	62.12	135.53	231.74	3131
1146.00	1492.19	1467.19	2561	2618	61.97	135.22	231.24	3053
1148.00	1495.24	1470.24	2561	2619	61.83	134.93	230.77	3409
1150.00	1498.65	1473.65	2563	2621	61.65	134.57	230.19	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 27

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
1152.00	1501.82	1476.82	2564	2622	61.50	134.25	229.68	3169
1154.00	1505.05	1480.05	2565	2623	61.35	133.93	229.16	3234
1156.00	1508.30	1483.30	2566	2624	61.19	133.61	228.64	3249
1158.00	1511.46	1486.46	2567	2625	61.05	133.30	228.15	3153
1160.00	1514.68	1489.68	2568	2626	60.89	132.99	227.64	3219
1162.00	1517.83	1492.83	2569	2627	60.75	132.69	227.15	3152
1164.00	1521.02	1496.02	2570	2628	60.60	132.38	226.65	3191
1166.00	1524.25	1499.25	2572	2629	60.45	132.06	226.15	3230
1168.00	1527.41	1502.41	2573	2631	60.31	131.77	225.66	3163
1170.00	1530.70	1505.70	2574	2632	60.15	131.44	225.14	3291
1172.00	1533.93	1508.93	2575	2633	60.01	131.13	224.64	3229
1174.00	1537.10	1512.10	2576	2634	59.86	130.84	224.16	3162
1176.00	1540.26	1515.26	2577	2635	59.72	130.55	223.69	3164
1178.00	1543.29	1518.29	2578	2636	59.60	130.28	223.26	3027
1180.00	1546.34	1521.34	2579	2636	59.47	130.01	222.82	3053
1182.00	1549.37	1524.37	2579	2637	59.34	129.74	222.39	3125
1184.00	1552.50	1527.50	2580	2638	59.20	129.46	221.94	2976
1186.00	1555.47	1530.47	2581	2639	59.08	129.21	221.53	3391
1188.00	1558.86	1533.86	2582	2640	58.92	128.88	220.99	3052
1190.00	1561.91	1536.91	2583	2641	58.80	128.61	220.56	2804
1192.00	1564.72	1539.72	2583	2641	58.69	128.39	220.20	2820
1194.00	1567.54	1542.54	2584	2641	58.58	128.17	219.85	2750
1196.00	1570.29	1545.29	2584	2642	58.48	127.96	219.51	2788
1198.00	1573.08	1548.08	2584	2642	58.38	127.74	219.16	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 28

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 M/S	SECOND NORMAL MOVEOUT M/S	THIRD NORMAL MOVEOUT M/S	INTERVAL VELOCITY M/S
1200.00	1576.21	1551.21	25.85	2643	58.25	127.47	218.71	3135
1202.00	1579.34	1554.34	25.86	2644	58.12	127.19	218.27	3134
1204.00	1582.48	1557.48	25.87	2645	57.99	126.92	217.82	3140
1206.00	1585.59	1560.59	25.88	2645	57.86	126.65	217.39	3101
1208.00	1588.73	1563.73	25.89	2646	57.73	126.38	216.95	3144
1210.00	1591.80	1566.80	25.90	2647	57.61	126.12	216.53	3068
1212.00	1594.90	1569.90	25.91	2648	57.48	125.86	216.11	3105
1214.00	1597.97	1572.97	25.91	2649	57.36	125.61	215.69	2972
1216.00	1600.94	1575.94	25.92	2649	57.24	125.37	215.31	3047
1218.00	1603.99	1578.99	25.93	2650	57.12	125.12	214.90	2999
1220.00	1606.98	1581.98	25.93	2650	57.01	124.88	214.51	3024
1222.00	1610.01	1585.01	25.94	2651	56.89	124.63	214.11	3003
1224.00	1613.01	1588.01	25.95	2652	56.78	124.39	213.72	3470
1226.00	1616.48	1591.48	25.96	2653	56.63	124.07	213.20	3191
1228.00	1619.67	1594.67	25.97	2654	56.50	123.80	212.76	2998
1230.00	1622.67	1597.67	25.98	2655	56.38	123.57	212.37	2937
1232.00	1625.61	1600.61	25.98	2655	56.28	123.34	212.01	2915
1234.00	1628.52	1603.52	25.99	2656	56.17	123.12	211.65	2880
1236.00	1631.40	1606.40	25.99	2656	56.07	122.91	211.30	2825
1238.00	1634.23	1609.23	26.00	2656	55.97	122.70	210.97	3040
1240.00	1637.27	1612.27	2600	2657	55.86	122.46	210.58	2883
1242.00	1640.15	1615.15	2601	2657	55.76	122.25	210.24	2738
1244.00	1642.89	1617.89	2601	2658	55.66	122.06	209.93	2815
1246.00	1645.70	1620.70	2601	2658	55.57	121.86	209.60	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 29

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 M/S	SECOND NORMAL MOVEOUT M/S	THIRD NORMAL MOVEOUT M/S	INTERVAL VELOCITY M/S
1248.00	1648.53	1623.53	2602	2658	55.47	121.66	209.27	2828
1250.00	1651.38	1626.38	2602	2658	55.37	121.45	208.94	2848
1252.00	1654.28	1629.28	2603	2659	55.27	121.24	208.59	2902
1254.00	1657.13	1632.13	2603	2659	55.18	121.03	208.26	2852
1256.00	1659.99	1634.99	2603	2659	55.08	120.83	207.93	2855
1258.00	1662.90	1637.90	2604	2660	54.98	120.62	207.59	2907
1260.00	1665.72	1640.72	2604	2660	54.88	120.42	207.26	2824
1262.00	1668.73	1643.73	2605	2661	54.78	120.20	206.90	2853
1264.00	1671.58	1646.58	2605	2661	54.68	119.99	206.57	3041
1266.00	1674.63	1649.63	2606	2662	54.57	119.77	206.20	3060
1268.00	1677.69	1652.69	2607	2662	54.46	119.54	205.82	2846
1270.00	1680.53	1655.53	2607	2663	54.37	119.34	205.50	2931
1272.00	1683.46	1658.46	2608	2663	54.27	119.13	205.16	2860
1274.00	1686.32	1661.32	2608	2663	54.17	118.93	204.83	2910
1276.00	1689.23	1664.23	2609	2664	54.08	118.72	204.50	2845
1278.00	1692.08	1667.08	2609	2664	53.98	118.53	204.18	2868
1280.00	1694.95	1669.95	2609	2664	53.89	118.33	203.86	2911
1282.00	1697.86	1672.86	2610	2665	53.79	118.13	203.53	3024
1284.00	1700.88	1675.88	2610	2665	53.69	117.91	203.17	2961
1286.00	1703.84	1678.84	2611	2666	53.59	117.70	202.83	3106
1288.00	1706.95	1681.95	2612	2667	53.48	117.47	202.45	3056
1290.00	1710.00	1685.00	2612	2667	53.37	117.25	202.09	3073
1292.00	1713.08	1688.08	2613	2668	53.27	117.03	201.72	3112
1294.00	1716.19	1691.19	2614	2669	53.16	116.80	201.35	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 30

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
1296.00	1719.36	1694.36	2615	2670	53.05	116.56	200.96	3176
1298.00	1722.53	1697.53	2616	2670	52.94	116.33	200.57	3165
1300.00	1725.55	1700.55	2616	2671	52.84	116.11	200.22	3022
1302.00	1728.80	1703.80	2617	2672	52.72	115.87	199.82	3253
1304.00	1731.96	1706.96	2618	2673	52.61	115.64	199.44	3156
1306.00	1735.06	1710.06	2619	2674	52.51	115.42	199.08	3102
1308.00	1738.16	1713.16	2620	2674	52.40	115.20	198.72	3094
1310.00	1741.39	1716.39	2620	2675	52.29	114.96	198.32	3171
1312.00	1744.56	1719.56	2621	2676	52.18	114.73	197.95	3184
1314.00	1747.74	1722.74	2622	2677	52.07	114.50	197.57	3076
1316.00	1750.82	1725.82	2623	2677	51.97	114.28	197.22	3063
1318.00	1753.88	1728.88	2623	2678	51.87	114.07	196.87	3065
1320.00	1756.94	1731.94	2624	2679	51.77	113.86	196.52	3080
1322.00	1760.02	1735.02	2625	2679	51.67	113.65	196.18	3264
1324.00	1763.29	1738.29	2626	2680	51.56	113.41	195.78	3075
1326.00	1766.36	1741.36	2626	2681	51.46	113.20	195.44	3051
1328.00	1769.41	1744.41	2627	2682	51.36	113.00	195.10	3063
1330.00	1772.48	1747.48	2628	2682	51.27	112.79	194.76	3068
1332.00	1775.55	1750.55	2628	2683	51.17	112.59	194.42	3068
1334.00	1778.61	1753.61	2629	2683	51.07	112.38	194.08	3068
1336.00	1781.68	1756.68	2630	2684	50.98	112.18	193.75	3068
1338.00	1784.75	1759.75	2630	2685	50.88	111.97	193.41	3068
1340.00	1787.82	1762.82	2631	2685	50.78	111.77	193.08	3114
1342.00	1790.93	1765.93	2632	2686	50.69	111.56	192.73	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 31

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	1794.26	1769.26	2633	2687	50.57	111.32	192.34	3330
1346.00	1797.34	1772.34	2633	2688	50.48	111.12	192.00	3079
1348.00	1800.50	1775.50	2634	2688	50.38	110.91	191.65	3162
1350.00	1803.67	1778.67	2635	2689	50.28	110.69	191.30	3170
1352.00	1806.78	1781.78	2636	2690	50.18	110.49	190.96	3113
1354.00	1810.03	1785.03	2637	2691	50.08	110.26	190.59	3246
1356.00	1813.27	1788.27	2638	2692	49.97	110.04	190.23	3241
1358.00	1816.57	1791.57	2639	2693	49.86	109.82	189.85	3304
1360.00	1819.78	1794.78	2639	2694	49.76	109.60	189.50	3203
1362.00	1823.04	1798.04	2640	2694	49.66	109.38	189.13	3262
1364.00	1826.70	1801.70	2642	2696	49.53	109.10	188.67	3191
1366.00	1829.89	1804.89	2643	2697	49.43	108.89	188.32	3658
1368.00	1833.22	1808.22	2644	2698	49.32	108.67	187.94	3278
1370.00	1836.49	1811.49	2645	2699	49.22	108.45	187.58	3231
1372.00	1839.72	1814.72	2645	2700	49.12	108.23	187.23	3260
1374.00	1842.98	1817.98	2646	2701	49.02	108.02	186.87	3241
1376.00	1846.23	1821.23	2647	2701	48.92	107.81	186.52	3213
1378.00	1849.44	1824.44	2648	2702	48.82	107.60	186.18	3295
1380.00	1852.73	1827.73	2649	2703	48.72	107.38	185.82	3276
1382.00	1856.01	1831.01	2650	2704	48.62	107.17	185.46	3366
1384.00	1859.38	1834.38	2651	2705	48.52	106.94	185.09	3494
1386.00	1862.87	1837.87	2652	2707	48.40	106.70	184.68	3463
1388.00	1866.33	1841.33	2653	2708	48.29	106.46	184.29	3411
1390.00	1869.74	1844.74	2654	2709	48.18	106.23	183.91	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 32

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH 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	1873.23	1848.23	2656	2710	48.07	105.99	183.51	3488
1394.00	1876.74	1851.74	2657	2712	47.96	105.75	183.11	3507
1396.00	1880.17	1855.17	2658	2713	47.85	105.53	182.73	3431
1398.00	1883.73	1858.73	2659	2714	47.74	105.28	182.32	3565
1400.00	1887.18	1862.18	2660	2715	47.63	105.05	181.94	3444
1402.00	1890.71	1865.71	2661	2717	47.52	104.81	181.54	3528
1404.00	1894.31	1869.31	2663	2718	47.40	104.56	181.13	3606
1406.00	1897.73	1872.73	2664	2719	47.30	104.34	180.76	3482
1408.00	1901.21	1876.21	2665	2720	47.19	104.11	180.38	3471
1410.00	1904.68	1879.68	2666	2722	47.09	103.89	180.00	3416
1412.00	1908.33	1883.33	2668	2723	46.97	103.64	179.58	3649
1414.00	1911.77	1886.77	2669	2724	46.87	103.42	179.22	3440
1416.00	1915.18	1890.18	2670	2725	46.77	103.20	178.85	3413
1418.00	1918.69	1893.69	2671	2727	46.66	102.97	178.47	3509
1420.00	1922.22	1897.22	2672	2728	46.55	102.74	178.09	3530
1422.00	1925.67	1900.67	2673	2729	46.45	102.52	177.73	3451
1424.00	1929.14	1904.14	2674	2730	46.35	102.30	177.36	3465
1426.00	1932.69	1907.69	2676	2732	46.24	102.07	176.98	3603
1428.00	1936.29	1911.29	2677	2733	46.13	101.84	176.58	3565
1430.00	1939.86	1914.86	2678	2734	46.02	101.61	176.20	3550
1432.00	1943.51	1918.51	2679	2736	45.91	101.37	175.80	3653
1434.00	1947.01	1922.01	2681	2737	45.81	101.15	175.43	3502
1436.00	1950.54	1925.54	2682	2738	45.71	100.93	175.06	3530
1438.00	1954.07	1929.07	2683	2740	45.60	100.71	174.69	3530

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 33

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 M/S	SECOND NORMAL MOVEOUT M/S	THIRD NORMAL MOVEOUT M/S	INTERVAL VELOCITY M/S
1440.00	1957.66	1932.66	2684	2741	45.50	100.48	174.31	3594
1442.00	1961.19	1936.19	2685	2742	45.40	100.26	173.95	3524
1444.00	1964.77	1939.77	2687	2744	45.29	100.04	173.57	3578
1446.00	1968.36	1943.36	2688	2745	45.19	99.81	173.20	3592
1448.00	1972.02	1947.02	2689	2746	45.08	99.58	172.81	3661
1450.00	1975.63	1950.63	2691	2748	44.97	99.35	172.43	3614
1452.00	1979.17	1954.17	2692	2749	44.87	99.14	172.07	3537
1454.00	1982.75	1957.75	2693	2750	44.77	98.92	171.70	3683
1456.00	1986.43	1961.43	2694	2752	44.66	98.69	171.31	3642
1458.00	1990.07	1965.07	2696	2753	44.56	98.46	170.94	3693
1460.00	1993.76	1968.76	2697	2755	44.45	98.23	170.55	3708
1462.00	1997.47	1972.47	2698	2756	44.34	98.00	170.16	3694
1464.00	2001.16	1976.16	2700	2758	44.24	97.77	169.78	3680
1466.00	2004.85	1979.85	2701	2759	44.13	97.55	169.40	3635
1468.00	2008.48	1983.48	2702	2761	44.03	97.33	169.03	3731
1470.00	2012.21	1987.21	2704	2762	43.92	97.10	168.65	3775
1472.00	2015.99	1990.99	2705	2764	43.82	96.86	168.25	3726
1474.00	2019.71	1994.71	2707	2765	43.71	96.64	167.87	3669
1476.00	2023.38	1998.38	2708	2767	43.61	96.42	167.50	3860
1478.00	2027.24	2002.24	2709	2769	43.50	96.18	167.10	3851
1480.00	2031.09	2006.09	2711	2770	43.38	95.94	166.69	3741
1482.00	2034.83	2009.83	2712	2772	43.28	95.71	166.32	3731
1484.00	2038.56	2013.56	2714	2773	43.18	95.49	165.94	3831
1486.00	2042.39	2017.39	2715	2775	43.07	95.26	165.55	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 34

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	2046.25	2021.25	2717	2777	42.96	95.02	165.15	3859
1490.00	2050.13	2025.13	2718	2779	42.85	94.78	164.75	3873
1492.00	2054.01	2029.01	2720	2780	42.74	94.55	164.36	3880
1494.00	2057.88	2032.88	2721	2782	42.63	94.31	163.96	3877
1496.00	2061.61	2036.61	2723	2784	42.53	94.10	163.60	3732
1498.00	2065.41	2040.41	2724	2785	42.43	93.87	163.22	3793
1500.00	2069.10	2044.10	2725	2787	42.33	93.66	162.87	3692
1502.00	2072.64	2047.64	2727	2788	42.24	93.47	162.55	3535
1504.00	2076.47	2051.47	2728	2789	42.14	93.25	162.17	3835
1506.00	2080.38	2055.38	2730	2791	42.03	93.02	161.78	3908
1508.00	2084.30	2059.30	2731	2793	41.92	92.78	161.39	3917
1510.00	2088.14	2063.14	2733	2795	41.82	92.56	161.01	3847
1512.00	2092.07	2067.07	2734	2796	41.71	92.33	160.62	3924
1514.00	2096.00	2071.00	2736	2798	41.61	92.10	160.24	3866
1516.00	2099.86	2074.86	2737	2800	41.50	91.88	159.86	3445
1518.00	2103.31	2078.31	2738	2801	41.42	91.70	159.57	3667
1520.00	2106.97	2081.97	2739	2802	41.33	91.51	159.24	3409
1522.00	2110.38	2085.38	2740	2803	41.25	91.34	158.95	3347
1524.00	2113.73	2088.73	2741	2804	41.18	91.18	158.68	3359
1526.00	2117.09	2092.09	2742	2805	41.10	91.01	158.40	3397
1528.00	2120.49	2095.49	2743	2805	41.03	90.85	158.12	3351
1530.00	2123.84	2098.84	2744	2806	40.95	90.68	157.85	3650
1532.00	2127.49	2102.49	2745	2807	40.86	90.49	157.53	4009
1534.00	2131.50	2106.50	2746	2809	40.76	90.26	157.14	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 35

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 M/S	SECOND NORMAL MOVEOUT M/S	THIRD NORMAL MOVEOUT M/S	INTERVAL VELOCITY M/S
1536.00	2134.79	2109.79	2747	2810	40.68	90.11	156.88	3291
1538.00	2138.27	2113.27	2748	2811	40.61	89.94	156.59	3485
1540.00	2142.20	2117.20	2750	2813	40.50	89.72	156.22	3924
1542.00	2146.24	2121.24	2751	2815	40.40	89.49	155.83	4046
1544.00	2150.00	2125.00	2753	2816	40.31	89.29	155.50	3759
1546.00	2153.62	2128.62	2754	2817	40.22	89.11	155.19	3620
1548.00	2157.08	2132.08	2755	2818	40.15	88.94	154.91	3456
1550.00	2160.67	2135.67	2756	2819	40.06	88.77	154.61	3593
1552.00	2164.25	2139.25	2757	2821	39.98	88.59	154.32	3579
1554.00	2167.87	2142.87	2758	2822	39.90	88.41	154.01	3622
1556.00	2171.24	2146.24	2759	2822	39.83	88.26	153.75	3349
1558.00	2174.59	2149.59	2759	2823	39.76	88.10	153.50	3366
1560.00	2177.88	2152.88	2760	2824	39.69	87.96	153.25	3253
1562.00	2181.13	2156.13	2761	2824	39.62	87.81	153.01	3826
1564.00	2184.96	2159.96	2762	2826	39.53	87.62	152.68	4067
1566.00	2189.02	2164.02	2764	2828	39.43	87.39	152.30	4203
1568.00	2193.23	2168.23	2766	2830	39.32	87.16	151.90	4124
1570.00	2197.35	2172.35	2767	2832	39.22	86.93	151.51	3843
1572.00	2201.19	2176.19	2769	2834	39.13	86.74	151.18	3678
1574.00	2204.87	2179.87	2770	2835	39.04	86.56	150.88	3597
1576.00	2208.47	2183.47	2771	2836	38.97	86.39	150.60	3830
1578.00	2212.30	2187.30	2772	2837	38.88	86.20	150.27	4088
1580.00	2216.39	2191.39	2774	2839	38.78	85.98	149.90	3891
1582.00	2220.28	2195.28	2775	2841	38.69	85.79	149.57	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 36

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
1584.00	2224.24	2199.24	2777	2843	38.59	85.58	149.23	3960
1586.00	2228.24	2203.24	2778	2844	38.50	85.38	148.88	3997
1588.00	2232.26	2207.26	2780	2846	38.40	85.17	148.53	4020
1590.00	2236.16	2211.16	2781	2848	38.32	84.98	148.20	3902
1592.00	2239.86	2214.86	2782	2849	38.24	84.81	147.91	3705
1594.00	2243.41	2218.41	2783	2850	38.16	84.65	147.64	3546
1596.00	2247.07	2222.07	2785	2851	38.09	84.48	147.36	3665
1598.00	2250.90	2225.90	2786	2853	38.00	84.30	147.05	3830
1600.00	2254.73	2229.73	2787	2854	37.92	84.11	146.74	3926
1602.00	2258.66	2233.66	2789	2856	37.83	83.92	146.41	4051
1604.00	2262.71	2237.71	2790	2857	37.74	83.72	146.07	3942
1606.00	2266.65	2241.65	2792	2859	37.65	83.53	145.74	4017
1608.00	2270.67	2245.67	2793	2861	37.56	83.33	145.41	4042
1610.00	2274.71	2249.71	2795	2862	37.47	83.13	145.07	3964
1612.00	2278.68	2253.68	2796	2864	37.38	82.94	144.75	3818
1614.00	2282.49	2257.49	2797	2865	37.30	82.77	144.45	3908
1616.00	2286.40	2261.40	2799	2867	37.21	82.58	144.14	3778
1618.00	2290.18	2265.18	2800	2868	37.14	82.41	143.85	3814
1620.00	2294.00	2269.00	2801	2870	37.06	82.24	143.56	3655
1622.00	2297.65	2272.65	2802	2871	36.98	82.08	143.29	3621
1624.00	2301.27	2276.27	2803	2872	36.91	81.93	143.03	3671
1626.00	2304.94	2279.94	2804	2873	36.84	81.77	142.76	3736
1628.00	2308.68	2283.68	2806	2874	36.76	81.61	142.48	3803
1630.00	2312.48	2287.48	2807	2875	36.69	81.44	142.19	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 37

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
1632.00	2316.36	2291.36	2808	2877	36.61	81.26	141.90	3874
1634.00	2320.13	2295.13	2809	2878	36.53	81.10	141.62	3777
1636.00	2323.94	2298.94	2810	2880	36.45	80.93	141.33	3806
1638.00	2327.69	2302.69	2812	2881	36.38	80.77	141.06	3754
1640.00	2331.48	2306.48	2813	2882	36.30	80.61	140.78	3789
1642.00	2335.21	2310.21	2814	2883	36.23	80.45	140.51	3730
1644.00	2338.87	2313.87	2815	2884	36.16	80.30	140.25	3661
1646.00	2342.69	2317.69	2816	2886	36.09	80.13	139.97	3822
1648.00	2346.34	2321.34	2817	2887	36.02	79.98	139.72	3645
1650.00	2350.00	2325.00	2818	2888	35.95	79.83	139.46	3663
1652.00	2353.65	2328.65	2819	2889	35.88	79.68	139.21	3649
1654.00	2357.35	2332.35	2820	2890	35.81	79.53	138.95	3697
1656.00	2361.06	2336.06	2821	2891	35.74	79.38	138.69	3709
1658.00	2364.74	2339.74	2822	2892	35.67	79.23	138.44	3682
1660.00	2368.38	2343.38	2823	2893	35.60	79.08	138.19	3641
1662.00	2372.11	2347.11	2824	2894	35.53	78.93	137.93	3730
1664.00	2375.94	2350.94	2826	2896	35.46	78.77	137.66	3829
1666.00	2379.77	2354.77	2827	2897	35.39	78.61	137.39	3833
1668.00	2383.59	2358.59	2828	2898	35.32	78.46	137.12	3820
1670.00	2387.36	2362.36	2829	2899	35.24	78.30	136.86	3771
1672.00	2390.96	2365.96	2830	2900	35.18	78.16	136.62	3596
1674.00	2394.74	2369.74	2831	2901	35.11	78.01	136.36	3782
1676.00	2398.52	2373.52	2832	2903	35.04	77.86	136.10	3779
1678.00	2402.47	2377.47	2834	2904	34.96	77.69	135.82	3954

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 38

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH 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
1680.00	2406.42	2381.42	2835	2906	34.89	77.53	135.54	3944
1682.00	2410.32	2385.32	2836	2907	34.82	77.37	135.26	3907
1684.00	2414.05	2389.05	2837	2908	34.75	77.22	135.02	3722
1686.00	2417.66	2392.66	2838	2909	34.69	77.08	134.78	3615
1688.00	2421.28	2396.28	2839	2910	34.62	76.95	134.55	3615
1690.00	2424.92	2399.92	2840	2911	34.56	76.81	134.32	3642
1692.00	2428.64	2403.64	2841	2912	34.50	76.67	134.07	3724
1694.00	2432.49	2407.49	2842	2913	34.43	76.52	133.81	3813
1696.00	2436.30	2411.30	2844	2915	34.36	76.37	133.56	3849
1698.00	2440.15	2415.15	2845	2916	34.29	76.22	133.30	3845
1700.00	2444.08	2419.08	2846	2917	34.22	76.06	133.03	3879
1702.00	2447.96	2422.96	2847	2919	34.15	75.91	132.77	3838
1704.00	2451.80	2426.80	2848	2920	34.08	75.76	132.52	3864
1706.00	2455.66	2430.66	2850	2921	34.01	75.61	132.26	3847
1708.00	2459.51	2434.51	2851	2922	33.94	75.46	132.01	3863
1710.00	2463.37	2438.37	2852	2924	33.87	75.31	131.75	3802
1712.00	2467.17	2442.17	2853	2925	33.81	75.17	131.51	3799
1714.00	2470.97	2445.97	2854	2926	33.74	75.02	131.27	3899
1716.00	2474.87	2449.87	2855	2927	33.67	74.87	131.01	3902
1718.00	2478.77	2453.77	2857	2929	33.60	74.72	130.75	3866
1720.00	2482.64	2457.64	2858	2930	33.54	74.58	130.50	3984
1722.00	2486.62	2461.62	2859	2931	33.47	74.42	130.24	3872
1724.00	2490.49	2465.49	2860	2933	33.40	74.28	129.99	3949
1726.00	2494.44	2469.44	2861	2934	33.33	74.13	129.73	

COMPANY : BHP PETROLEUM

PAGE 39

WELL : LA BELLA-1

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
1728.00	2498.19	2473.19	2862	2935	33.27	73.99	129.50	4097
1730.00	2502.29	2477.29	2864	2937	33.19	73.83	129.23	4074
1732.00	2506.36	2481.36	2865	2938	33.12	73.67	128.95	4207
1734.00	2510.57	2485.57	2867	2940	33.04	73.50	128.66	4249
1736.00	2514.82	2489.81	2868	2942	32.97	73.33	128.37	4222
1738.00	2519.04	2494.04	2870	2944	32.89	73.16	128.08	3895
1740.00	2522.93	2497.93	2871	2945	32.82	73.02	127.84	4001
1742.00	2526.93	2501.93	2872	2946	32.76	72.87	127.58	4037
1744.00	2530.97	2505.97	2874	2948	32.69	72.72	127.32	4034
1746.00	2535.01	2510.01	2875	2949	32.62	72.57	127.06	3930
1748.00	2538.94	2513.94	2876	2951	32.55	72.42	126.82	4035
1750.00	2542.97	2517.97	2878	2952	32.48	72.27	126.56	3981
1752.00	2546.95	2521.95	2879	2953	32.42	72.13	126.31	4066
1754.00	2551.02	2526.02	2880	2955	32.35	71.98	126.06	4074
1756.00	2555.09	2530.09	2882	2956	32.28	71.83	125.80	4042
1758.00	2559.13	2534.13	2883	2958	32.21	71.68	125.54	3975
1760.00	2563.11	2538.11	2884	2959	32.15	71.54	125.30	3986
1762.00	2567.09	2542.09	2885	2961	32.08	71.39	125.05	3844
1764.00	2570.94	2545.94	2887	2962	32.02	71.26	124.83	3845
1766.00	2574.78	2549.78	2888	2963	31.96	71.13	124.60	4016
1768.00	2578.80	2553.80	2889	2964	31.89	70.99	124.36	3909
1770.00	2582.71	2557.71	2890	2966	31.83	70.85	124.13	3848
1772.00	2586.56	2561.56	2891	2967	31.77	70.72	123.90	3878
1774.00	2590.43	2565.43	2892	2968	31.71	70.59	123.68	

COMPANY : BHP PETROLEUM

PAGE 40

WELL : LA BELLA-1

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT M/S	SECOND NORMAL MOVEOUT M/S	THIRD NORMAL MOVEOUT M/S	INTERVAL VELOCITY M/S
1776.00	2594.31	2569.31	2893	2969	31.65	70.46	123.45	3800
1778.00	2598.11	2573.11	2894	2970	31.60	70.33	123.24	3924
1780.00	2602.03	2577.03	2896	2971	31.53	70.20	123.01	4070
1782.00	2606.10	2581.10	2897	2973	31.47	70.05	122.76	4049
1784.00	2610.15	2585.15	2898	2974	31.40	69.91	122.52	4080
1786.00	2614.23	2589.23	2899	2976	31.34	69.77	122.27	4043
1788.00	2618.27	2593.27	2901	2977	31.28	69.63	122.03	3969
1790.00	2622.24	2597.24	2902	2978	31.21	69.50	121.80	4128
1792.00	2626.37	2601.37	2903	2980	31.15	69.35	121.55	4070
1794.00	2630.44	2605.44	2905	2981	31.08	69.21	121.31	4064
1796.00	2634.50	2609.50	2906	2983	31.02	69.07	121.08	3937
1798.00	2638.44	2613.44	2907	2984	30.96	68.94	120.85	4064
1800.00	2642.50	2617.50	2908	2986	30.90	68.80	120.62	4054
1802.00	2646.56	2621.56	2910	2987	30.84	68.67	120.38	4039
1804.00	2650.60	2625.60	2911	2988	30.78	68.53	120.15	4022
1806.00	2654.62	2629.62	2912	2990	30.71	68.40	119.92	3800
1808.00	2658.42	2633.42	2913	2991	30.66	68.28	119.72	4048
1810.00	2662.47	2637.47	2914	2992	30.60	68.15	119.49	3894
1812.00	2666.36	2641.36	2915	2993	30.54	68.02	119.27	4091
1814.00	2670.45	2645.45	2917	2995	30.48	67.89	119.04	3885
1816.00	2674.34	2649.34	2918	2996	30.42	67.76	118.83	4063
1818.00	2678.40	2653.40	2919	2997	30.36	67.63	118.60	4033
1820.00	2682.43	2657.43	2920	2998	30.30	67.50	118.38	3975
1822.00	2686.41	2661.41	2921	3000	30.25	67.37	118.16	

COMPANY : BHP PETROLEUM

WELL : LA BELLA-1

PAGE 41

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
1824.00	2690.48	2665.48	2923	3001	30.19	67.24	117.93	4070
1826.00	2694.61	2669.61	2924	3003	30.12	67.11	117.70	4135
1828.00	2698.73	2673.73	2925	3004	30.06	66.97	117.47	4119
1830.00	2702.95	2677.95	2927	3006	30.00	66.83	117.23	4223
1832.00	2707.26	2682.26	2928	3007	29.93	66.69	116.98	4309
1834.00	2711.42	2686.42	2930	3009	29.87	66.55	116.74	4153
1836.00	2715.64	2690.64	2931	3010	29.81	66.41	116.50	4220
1838.00	2719.76	2694.76	2932	3012	29.75	66.28	116.28	4118
1840.00	2724.06	2699.06	2934	3014	29.68	66.14	116.03	4303
1842.00	2728.20	2703.20	2935	3015	29.62	66.01	115.81	4143
1844.00	2732.49	2707.49	2937	3017	29.56	65.86	115.56	4290

PE600289

This is an enclosure indicator page.  
The enclosure PE600289 is enclosed within the  
container PE900383 at this location in this  
document.

The enclosure PE600289 has the following characteristics:

ITEM\_BARCODE = PE600289  
CONTAINER\_BARCODE = PE900383  
NAME = Log CSI (VSP) STE: 1/Run 1  
BASIN =  
OFFSHORE? = N  
DATA\_TYPE = WELL  
DATA\_SUB\_TYPE = WELL\_LOG  
DESCRIPTION = Log CSI (VSP) STE: 1/Run 1 (1770 -  
200m)  
REMARKS =  
DATE\_WRITTEN = 15-DEC-1993  
DATE\_PROCESSED =  
DATE\_RECEIVED =  
RECEIVED\_FROM = BHP Petroleum Pty Ltd  
WELL\_NAME = La Bella-1  
CONTRACTOR = Schlumberger  
AUTHOR =  
ORIGINATOR = BHP Petroleum Pty Ltd  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY = xls\_tb11

(Inserted by DNRE - Vic Govt Mines Dept)

PE600290

This is an enclosure indicator page.  
The enclosure PE600290 is enclosed within the  
container PE900383 at this location in this  
document.

The enclosure PE600290 has the following characteristics:

ITEM\_BARCODE = PE600290  
CONTAINER\_BARCODE = PE900383  
NAME = Log CSI (VSP) STE: 2/Run 2  
BASIN =  
OFFSHORE? = N  
DATA\_TYPE = WELL  
DATA\_SUB\_TYPE = WELL\_LOG  
DESCRIPTION = Log CSI (VSP) STE: 2/Run 2 (2734 -  
1520m)  
REMARKS =  
DATE\_WRITTEN = 15-DEC-1993  
DATE\_PROCESSED =  
DATE\_RECEIVED =  
RECEIVED\_FROM = BHP Petroleum Pty Ltd  
WELL\_NAME = La Bella-1  
CONTRACTOR = Schlumberger  
AUTHOR =  
ORIGINATOR = BHP Petroleum Pty Ltd  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY = xls\_tb11

(Inserted by DNRE - Vic Govt Mines Dept)

PE600291

This is an enclosure indicator page.  
The enclosure PE600291 is enclosed within the  
container PE900383 at this location in this  
document.

The enclosure PE600291 has the following characteristics:

ITEM\_BARCODE = PE600291  
CONTAINER\_BARCODE = PE900383  
NAME = Log Drift Corrected Sonic  
BASIN =  
OFFSHORE? = N  
DATA\_TYPE = WELL  
DATA\_SUB\_TYPE = WELL\_LOG  
DESCRIPTION = Log Drift Corrected Sonic (2743-620m)  
REMARKS =  
DATE\_WRITTEN = 15-DEC-1993  
DATE\_PROCESSED =  
DATE\_RECEIVED =  
RECEIVED\_FROM = BHP Petroleum Pty Ltd  
WELL\_NAME = La Bella-1  
CONTRACTOR = Schlumberger  
AUTHOR =  
ORIGINATOR = BHP Petroleum Pty Ltd  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY = xls\_tb11

(Inserted by DNRE - Vic Govt Mines Dept)

PE600288

This is an enclosure indicator page.  
The enclosure PE600288 is enclosed within the  
container PE900383 at this location in this  
document.

The enclosure PE600288 has the following characteristics:

ITEM\_BARCODE = PE600288  
CONTAINER\_BARCODE = PE900383  
NAME = Seismic Calibration log  
BASIN =  
OFFSHORE? = N  
DATA\_TYPE = WELL  
DATA\_SUB\_TYPE = WELL\_LOG  
DESCRIPTION = Seismic Calibration log  
REMARKS =  
DATE\_WRITTEN = 15-DEC-1993  
DATE\_PROCESSED =  
DATE RECEIVED =  
RECEIVED\_FROM = BHP Petroleum Pty Ltd  
WELL\_NAME = La Bella-1  
CONTRACTOR = Schlumberger  
AUTHOR =  
ORIGINATOR = BHP Petroleum Pty Ltd  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY = xls\_tb11

(Inserted by DNRE - Vic Govt Mines Dept)

PE900409

This is an enclosure indicator page.  
The enclosure PE900409 is enclosed within the  
container PE900383 at this location in this  
document.

The enclosure PE900409 has the following characteristics:

ITEM\_BARCODE = PE900409  
CONTAINER\_BARCODE = PE900383  
NAME = Geograu  
BASIN =  
OFFSHORE? = N  
DATA\_TYPE = WELL  
DATA\_SUB\_TYPE = SYNTH\_SEISMOGRAM  
DESCRIPTION = Geogram  
REMARKS =  
DATE\_WRITTEN = 15-DEC-1993  
DATE\_PROCESSED =  
DATE RECEIVED =  
RECEIVED\_FROM = BHP Petroleum Pty Ltd  
WELL\_NAME = La Bella-1  
CONTRACTOR = Schlumberger  
AUTHOR =  
ORIGINATOR = BHP Petroleum Pty Ltd  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY = xls\_tb11

(Inserted by DNRE - Vic Govt Mines Dept)

PE900411

This is an enclosure indicator page.  
The enclosure PE900411 is enclosed within the  
container PE900383 at this location in this  
document.

The enclosure PE900411 has the following characteristics:

ITEM\_BARCODE = PE900411  
CONTAINER\_BARCODE = PE900383  
NAME = Geograu  
BASIN =  
OFFSHORE? = N  
DATA\_TYPE = WELL  
DATA\_SUB\_TYPE = SYNTH\_SEISMOGRAM  
DESCRIPTION = Geogram  
REMARKS =  
DATE\_WRITTEN = 15-DEC-1993  
DATE\_PROCESSED =  
DATE\_RECEIVED =  
RECEIVED\_FROM = BHP Petroleum Pty Ltd  
WELL\_NAME = La Bella-1  
CONTRACTOR = Schlumberger  
AUTHOR =  
ORIGINATOR = BHP Petroleum Pty Ltd  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY = xls\_tb11

(Inserted by DNRE - Vic Govt Mines Dept)

PE900410

This is an enclosure indicator page.  
The enclosure PE900410 is enclosed within the  
container PE900383 at this location in this  
document.

The enclosure PE900410 has the following characteristics:

ITEM\_BARCODE = PE900410  
CONTAINER\_BARCODE = PE900383  
NAME = Geograu  
BASIN =  
OFFSHORE? = N  
DATA\_TYPE = WELL  
DATA\_SUB\_TYPE = SYNTH\_SEISMOGRAM  
DESCRIPTION = Geogram  
REMARKS =  
DATE\_WRITTEN = 15-DEC-1993  
DATE\_PROCESSED =  
DATE\_RECEIVED =  
RECEIVED\_FROM = BHP Petroleum Pty Ltd  
WELL\_NAME = La Bella-1  
CONTRACTOR = Schlumberger  
AUTHOR =  
ORIGINATOR = BHP Petroleum Pty Ltd  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY = xls\_tb11

(Inserted by DNRE - Vic Govt Mines Dept)

PE900391

This is an enclosure indicator page.  
The enclosure PE900391 is enclosed within the  
container PE900383 at this location in this  
document.

The enclosure PE900391 has the following characteristics:

ITEM\_BARCODE = PE900391  
CONTAINER\_BARCODE = PE900383  
NAME = VSP Plot 1  
BASIN =  
OFFSHORE? = N  
DATA\_TYPE = WELL  
DATA\_SUB\_TYPE = VELOCITY\_CHART  
DESCRIPTION = Vertical Seismic Profile Plot 1  
REMARKS =  
DATE\_WRITTEN = 15-DEC-1993  
DATE\_PROCESSED =  
DATE\_RECEIVED =  
RECEIVED\_FROM = BHP Petroleum Pty Ltd  
WELL\_NAME = La Bella-1  
CONTRACTOR = Schlumberger  
AUTHOR =  
ORIGINATOR = BHP Petroleum Pty Ltd  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY = xls\_tb11

(Inserted by DNRE - Vic Govt Mines Dept)

PE900384

This is an enclosure indicator page.  
The enclosure PE900384 is enclosed within the  
container PE900383 at this location in this  
document.

The enclosure PE900384 has the following characteristics:

ITEM\_BARCODE = PE900384  
CONTAINER\_BARCODE = PE900383  
NAME = Vertical Sesmic Profile Plot 2  
BASIN =  
OFFSHORE? = N  
DATA\_TYPE = WELL  
DATA\_SUB\_TYPE = VELOCITY\_CHART  
DESCRIPTION = Vertical Sesmic Profile Plot 2  
REMARKS =  
DATE\_WRITTEN = 15-DEC-1993  
DATE\_PROCESSED =  
DATE\_RECEIVED =  
RECEIVED\_FROM = BHP Petroleum Pty Ltd  
WELL\_NAME = La Bella-1  
CONTRACTOR = Schlumberger  
AUTHOR =  
ORIGINATOR = BHP Petroleum Pty Ltd  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY = xls\_tb11

(Inserted by DNRE - Vic Govt Mines Dept)

PE900385

This is an enclosure indicator page.  
The enclosure PE900385 is enclosed within the  
container PE900383 at this location in this  
document.

The enclosure PE900385 has the following characteristics:

ITEM\_BARCODE = PE900385  
CONTAINER\_BARCODE = PE900383  
NAME = Vertical Sesmic Profile Plot 3  
BASIN =  
OFFSHORE? = N  
DATA\_TYPE = WELL  
DATA\_SUB\_TYPE = VELOCITY\_CHART  
DESCRIPTION = Vertical Sesmic Profile Plot 3  
REMARKS =  
DATE\_WRITTEN = 15-DEC-1993  
DATE\_PROCESSED =  
DATE\_RECEIVED =  
RECEIVED\_FROM = BHP Petroleum Pty Ltd  
WELL\_NAME = La Bella-1  
CONTRACTOR = Schlumberger  
AUTHOR =  
ORIGINATOR = BHP Petroleum Pty Ltd  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY = xls\_tb11

(Inserted by DNRE - Vic Govt Mines Dept)

PE900386

This is an enclosure indicator page.  
The enclosure PE900386 is enclosed within the  
container PE900383 at this location in this  
document.

The enclosure PE900386 has the following characteristics:

ITEM\_BARCODE = PE900386  
CONTAINER\_BARCODE = PE900383  
NAME = Vertical Sesmic Profile Plot 4  
BASIN =  
OFFSHORE? = N  
DATA\_TYPE = WELL  
DATA\_SUB\_TYPE = VELOCITY\_CHART  
DESCRIPTION = Vertical Sesmic Profile Plot 4  
REMARKS =  
DATE\_WRITTEN = 15-DEC-1993  
DATE\_PROCESSED =  
DATE\_RECEIVED =  
RECEIVED\_FROM = BHP Petroleum Pty Ltd  
WELL\_NAME = La Bella-1  
CONTRACTOR = Schlumberger  
AUTHOR =  
ORIGINATOR = BHP Petroleum Pty Ltd  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY = xls\_tb11

(Inserted by DNRE - Vic Govt Mines Dept)

PE900387

This is an enclosure indicator page.  
The enclosure PE900387 is enclosed within the  
container PE900383 at this location in this  
document.

The enclosure PE900387 has the following characteristics:

ITEM\_BARCODE = PE900387  
CONTAINER\_BARCODE = PE900383  
NAME = Vertical Sesmic Profile Plot 5  
BASIN =  
OFFSHORE? = N  
DATA\_TYPE = WELL  
DATA\_SUB\_TYPE = VELOCITY\_CHART  
DESCRIPTION = Vertical Sesmic Profile Plot 5  
REMARKS =  
DATE\_WRITTEN = 15-DEC-1993  
DATE\_PROCESSED =  
DATE\_RECEIVED =  
RECEIVED\_FROM = BHP Petroleum Pty Ltd  
WELL\_NAME = La Bella-1  
CONTRACTOR = Schlumberger  
AUTHOR =  
ORIGINATOR = BHP Petroleum Pty Ltd  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY = xls\_tb11

(Inserted by DNRE - Vic Govt Mines Dept)

PE900388

This is an enclosure indicator page.  
The enclosure PE900388 is enclosed within the  
container PE900383 at this location in this  
document.

The enclosure PE900388 has the following characteristics:

ITEM\_BARCODE = PE900388  
CONTAINER\_BARCODE = PE900383  
NAME = Vertical Sesmic Profile Plot 6  
BASIN =  
OFFSHORE? = N  
DATA\_TYPE = WELL  
DATA\_SUB\_TYPE = VELOCITY\_CHART  
DESCRIPTION = Vertical Sesmic Profile Plot 6  
REMARKS =  
DATE\_WRITTEN = 15-DEC-1993  
DATE\_PROCESSED =  
DATE\_RECEIVED =  
RECEIVED\_FROM = BHP Petroleum Pty Ltd  
WELL\_NAME = La Bella-1  
CONTRACTOR = Schlumberger  
AUTHOR =  
ORIGINATOR = BHP Petroleum Pty Ltd  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY = xls\_tb11

(Inserted by DNRE - Vic Govt Mines Dept)

PE900389

This is an enclosure indicator page.  
The enclosure PE900389 is enclosed within the  
container PE900383 at this location in this  
document.

The enclosure PE900389 has the following characteristics:

ITEM\_BARCODE = PE900389  
CONTAINER\_BARCODE = PE900383  
NAME = Vertical Sesmic Profile Plot 7  
BASIN =  
OFFSHORE? = N  
DATA\_TYPE = WELL  
DATA\_SUB\_TYPE = VELOCITY\_CHART  
DESCRIPTION = Vertical Sesmic Profile Plot 7  
REMARKS =  
DATE\_WRITTEN = 15-DEC-1993  
DATE\_PROCESSED =  
DATE\_RECEIVED =  
RECEIVED\_FROM = BHP Petroleum Pty Ltd  
WELL\_NAME = La Bella-1  
CONTRACTOR = Schlumberger  
AUTHOR =  
ORIGINATOR = BHP Petroleum Pty Ltd  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY = xls\_tb11

(Inserted by DNRE - Vic Govt Mines Dept)

PE900390

This is an enclosure indicator page.  
The enclosure PE900390 is enclosed within the  
container PE900383 at this location in this  
document.

The enclosure PE900390 has the following characteristics:

ITEM\_BARCODE = PE900390  
CONTAINER\_BARCODE = PE900383  
NAME = Vertical Sesmic Profile Plot 8  
BASIN =  
OFFSHORE? = N  
DATA\_TYPE = WELL  
DATA\_SUB\_TYPE = VELOCITY\_CHART  
DESCRIPTION = Vertical Sesmic Profile Plot 8  
REMARKS =  
DATE\_WRITTEN = 15-DEC-1993  
DATE\_PROCESSED =  
DATE RECEIVED =  
RECEIVED\_FROM = BHP Petroleum Pty Ltd  
WELL\_NAME = La Bella-1  
CONTRACTOR = Schlumberger  
AUTHOR =  
ORIGINATOR = BHP Petroleum Pty Ltd  
TOP\_DEPTH =  
BOTTOM\_DEPTH =  
ROW\_CREATED\_BY = xls\_tb11

(Inserted by DNRE - Vic Govt Mines Dept)

## GEOGRAM

Drift Corrected Sonic  
Seismic Calibration Log  
25 hz zero phase Geogram  
35 hz zero phase Geogram  
45 hz zero phase Geogram

## 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 | Waveshaping Deconvolution - Corridor Stack AGC                  |
| Plot 7 | VSP and Geogram Composite - normal polarity 10 cm/sec 10-60 hz  |
| Plot 8 | VSP and Geogram Composite - reverse polarity 10 cm/sec 10-60 hz |