

DEPT. NAT. RES & ENV



PE906060

SYDNEY LOG INTERPRETATION CENTRE

Schlumberger

PETROLEUM DIVISION

31 AUG 1987

Schlumberger

ESSO AUSTRALIA LIMITED
SONIC CALIBRATION REPORT

KIPPER - 2

FIELD : KIPPER
STATE : VICTORIA
COUNTRY : AUSTRALIA
LOCATION : GIPPSLAND BASIN
COORDINATES : 038° 11' 31.59" S
148° 36' 45.20" E
DATE OF SURVEY : 17-APRIL-1987
REFERENCE NO. : 570504

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Fig. 1 : Gun Geometry Sketch

Geophysical Airgun Report
Drift Computation Report
Sonic Adjustment Parameter Report
Velocity Report
Time Converted Velocity Report

Raw and Stack Checkshot data
11inch Seismic Calibration
22inch Seismic Calibration

1.0 INTRODUCTION

A velocity check shot survey was conducted in Kipper-2 well on 17 April 1987. Twenty three checkshot levels and additional two Moonpool and two Accelerometer check levels were shot from 266 to 2600 metres below KB using an airgun source. Twenty two checkshot levels have been used in the calibration of the sonic log.

The shot times and calibrated sonic times have been corrected to the seismic reference datum at mean sea level.

2.0 DATA ACQUISITION

Table 1 Field Equipment and Survey Parameters

Elevation SRD	0.0 metres AMSL
Elevation KB	22.3 metres AMSL
Elevation DF	22.0 metres AMSL
Elevation GL	107.3 metres below MSL
No. of Levels	23
Well Deviation	Nil
Total Depth	2600 metres below KB
Energy Source	Airgun
Source Offset	26.64 metres
Source Depth	10 feet below MSL
Reference Sensor	Accelerometer
Sensor Offset	26.64 metres
Sensor Depth	20 feet below MSL
Downhole Geophone	Geospace HS-1 High Temp. (350° F) Coil Resist. 225Ω ±10 % Natural Freq. 8-12 hertz Sensitivity 0.45 V/in/sec Maximum tilt angle 60°

Recording was made on the Schlumberger Cyber Service Unit (CSU) using LIS format. Figure 1 shows the Survey Gun Geometry.

2.1 Survey Details

The survey was shot as a standard offshore velocity survey. A hydrophone was also recorded in the moonpool in order to calculate the source offset.

3.0 Check Shot Data

A total of 23 checkshot levels were shot during the survey. The level at 615 metres below KB was shot when tool going into and coming up the well. The transit time from both sets of data were consistent. The level at 379 metres below KB was shot once and has been rejected due to bad quality. All good shots have been included in the final stack.

Table 2 Checkshot levels

Level Depth (m below KB)	Stacked Shots	Rejected Shots	Quality	Comments
129.6	-	-	Good	Imposed shot - sea floor
266	4	0	Good	Top sonic shots
379	1	1	Bad	
384	5	0	Good	
615	6	0	Good	
830	3	0	Good	
1115	4	1	Good	
1539	3	0	Good	
1672	3	0	Good	
1811	3	0	Good	
1895	3	0	Good	
1922	3	0	Good	
2070	3	0	Good	
2211	3	0	Good	
2242.5	8	3	Good	
2266.5	5	1	Good	
2305	3	1	Good	
2434	3	0	Good	
2466	4	0	Good	
2522	4	1	Good	
2543	5	1	Good	
2570	5	2	Good	
2595	4	1	Good	
2600	3	1	Good	

4.0 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 verses 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 $\frac{\Delta drift}{\Delta depth} < 0$, the sonic time is greater than the seismic time over a certain section of the log.

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

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

Two methods of correction to the sonic log are used.

1. **Uniform or block shift.** This method applies a uniform correction to all the sonic values over the interval. This uniform correction is applied in the case of positive drift and is the average correction represented by the drift curve gradient expressed in $\mu\text{sec}/\text{ft}$.
2. **ΔT Minimum.** In the case of negative drift a second method is used, called Δt minimum. This applies a differential correction to the sonic log, where it is assumed that the greatest amount of transit time error is caused by the lower velocity sections of the log. Over a given interval the method will correct only Δt values which are higher than a threshold, the Δt_{min} . Values of Δt which are lower than the threshold are not corrected. The correction is a reduction of the excess of Δt over Δt_{min} , $\Delta t - \Delta t_{min}$.

$\Delta t - \Delta t_{min}$ 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 Δt and Δt_{min} , only over the intervals where $\Delta t > \Delta t_{min}$.

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

5.0 SONIC CALIBRATION PROCESSING

5.1 Open Hole Logs

Both the sonic and density logs used have been edited prior to input into the Seismic Calibration processing chain.

The sonic log was recorded from 2600 to 266 metres and the density was available from 2600 to 796 metres below KB. A constant density reading of 2.306 gm/cc has been imposed above 796 metres. The overall logs quality is good and only minor zones of cycle skipping have been edited from the sonic log.

5.2 Source Offset

The moonpool hydrophone was positioned right below the wellhead. An average transit time of 18 milliseecs was measured. Using this time and the velocity in water of 1480 metres/sec, an offset of 26.64 metres was calculated for the source offset; the equivalent distance between the gun and the moonpool hydrophone.

5.3 Correction to Datum

Seismic reference datum (SRD) is at MSL, 22.3 metres below KB. The airgun source was positioned 10 feet below MSL. Using the velocity in water of 1480 metres/sec a correction of 2.06 milliseecs has been applied between the gun and datum.

5.4 Imposed Shot at Sea floor

Imposed shot at sea floor, 129.6 metres below KB, was used in addition to the checkshot data to calibrate the sonic log. The transit time at the sea floor has been calculated by assuming a constant velocity of 1480 metres/sec from the source to the sea floor.

5.5 Sonic Calibration Results

The top of sonic log, 266 metres below KB, is chosen as the origin for the calibration drift curve. The drift curve indicates a number of corrections to be made to the sonic log. A list of shifts applied to the sonic data is given below.

Table 3 Sonic Drift

Depth Interval (below KB)	Block Shift $\mu\text{sec}/\text{ft}$	Δt_{min} $\mu\text{sec}/\text{ft}$	Equiv Block Shift $\mu\text{sec}/\text{ft}$
266-615	-	398.24	-5.63
615-1539	8.41	-	8.41
1539-2070	2.97	-	2.97
2070-2600	-	236.28	-5.68

The adjusted sonic curve is considered to be the best result using the available data.

6.0 SUMMARY OF GEOPHYSICAL LISTINGS

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

6.1 Geophysical Airgun Report

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

6.2 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 2 from kelly bushing .
3. Vertical depth from SRD : the depth in 2 from seismic reference datum.
4. Vertical depth from GL : the depth in 2 from ground level.
5. Vertical travel time SRD to GEO : the calculated vertical travel time from datum to downhole geophone (see column 7, Geophysical Airgun Report).
6. 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.
7. Computed drift at level : the checkshot time minus the integrated raw sonic time.
8. Computed blk-shft correction : the drift gradient between any two checkshot levels ($\frac{\Delta drift}{\Delta depth}$).

6.3 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 2 from kelly bushing .
3. Vertical depth from SRD : the depth in 2 from seismic reference datum.
4. Vertical depth from GL : the depth in 2 from ground level.
5. Drift at knee : the value of drift imposed at each knee.
6. Blockshift used : the change in drift divided by the change in depth between any two levels.
7. Delta-T minimum used : see section 4 of report for an explanation of Δt_{min} .
8. Reduction factor : see section 4 of report.
9. Equivalent blockshift : the gradient of the imposed drift curve.

6.4 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 2 from kelly bushing .
3. Vertical depth from SRD : the depth in 2 from seismic reference datum
4. Vertical depth from GL : the depth in 2 from ground level
5. Vertical travel time SRD to GEOPH : the vertical travel time from SRD to downhole geophone (see column 7, Geophysical Airgun Report)
6. Integrated adjusted sonic time : the adjusted sonic log is integrated from top to bottom. An initial value at the the top of the sonic is set equal the checkshot time at that level. (The adjusted sonic log is the drift corrected sonic log.)
7. Drift=shot time-raw son : the check shot time minus the raw integrated sonic time.
8. Residual=shot time-adj son : the check shot time minus the adjusted integrated sonic time. This is the difference between calculated drift and the imposed drift.
9. Adjusted interval velocity : the interval velocity calculated from the integrated adjusted sonic time at each level.

6.5 Time Converted Velocity Report

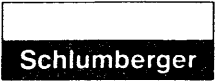
The data in this listing has been resampled in time.

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

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

where v_i is the velocity between each 2 millisecs interval.

6. First normal moveout : the correction time in millisecs to be applied to the two way travel time for a specified moveout distance (default = 3000 feet).
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 millisecc one way time) therefore the interval velocity will be equal to the depth increment divided by 0.001. It is equivalent to column 9 from the the Velocity Report.



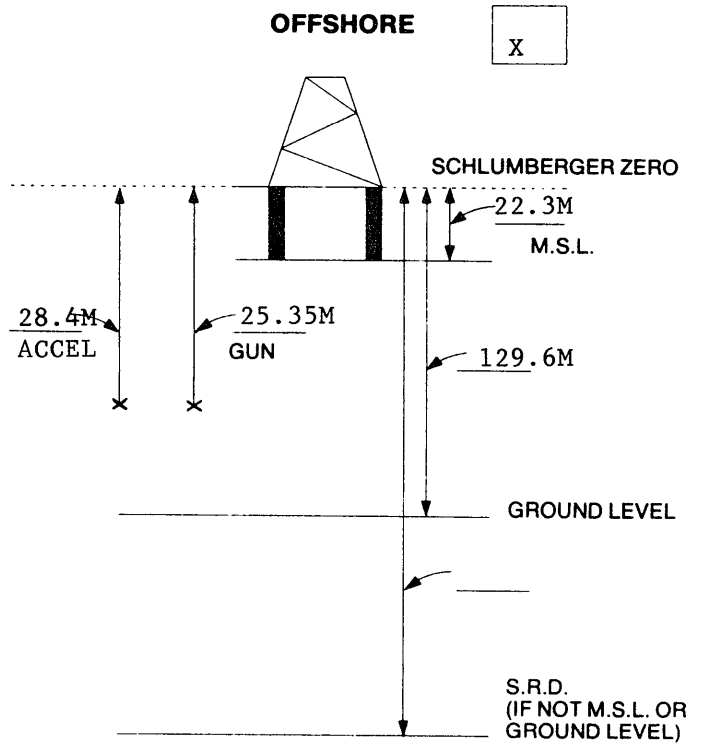
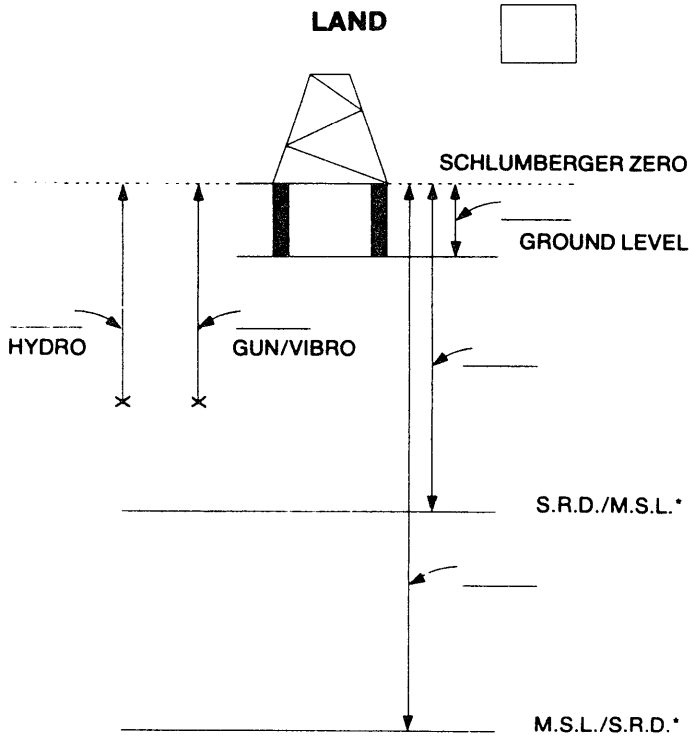
GUN GEOMETRY SKETCH

FIGURE 1

CLIENT: ESSO AUSTRALIA LTD.

WELL: KIPPER - 2

DATE: 17/4/87

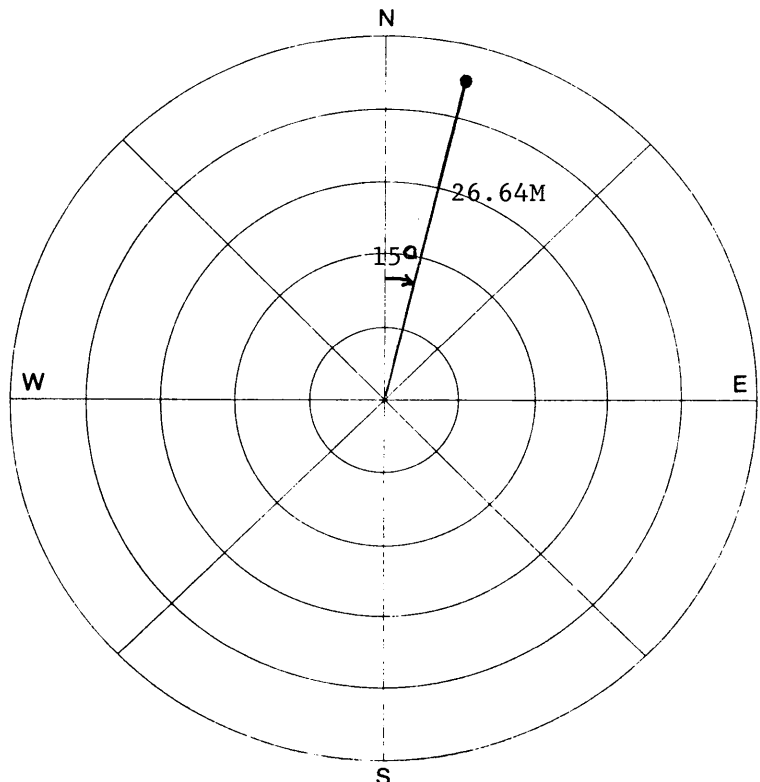


INDICATE ALL DISTANCES RELATIVE TO SCHLUMBERGER ZERO

INDICATE ALL DISTANCES RELATIVE TO SCHLUMBERGER ZERO

* DELETE AS APPLICABLE

SHOT POS'N	GUN OFFSET	ACCEL OFFSET	GUN DEPTH	ACCEL DEPTH
1	26.64M	26.64M	10FT	20FT
2				
3				
4				
5				
6				
7				



INDICATE GUN/VIBRO AND HYDROPHONE OFFSET AND AZIMUTH RELATIVE TO NORTH

Shots

ANALYST: A .CHIN

19-MAY-87 09:37:02

PROGRAM: GSHOT 007.E08

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*                                     *  
*                                     *  
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*          SCHLUMBERGER          *  
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GEOPHYSICAL AIRGUN REPORT

COMPANY : ESSO AUSTRALIA LTD.
WELL : KIPPER - 2
FIELD : KIPPER
STATE : VICTORIA
COUNTRY : AUSTRALIA
REFERENCE: 570504

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 USER'S 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
- TRTSRD - TRAVEL TIME FROM THE SOURCE TO THE SRD
- DEWVEL - DEVIATED WELL DATA PER SHOT : MEAS. DEPTH, VERT. DEPTH, EW, NS

SAMPLED

- SHOT.GSH - SHOT NUMBER
- DKE.GSH - MEASURED DEPTH FROM KELLY-BUSHING
- DSRD.GSH - DEPTH FROM SRD
- DGL.GSH - VERTICAL DEPTH RELATIVE TO GROUND LEVEL (USER'S REFERENCE)
- TIM.GSH - MEASURED TRAVEL TIME FROM HYDROPHONE TO GEOPHONE
- TIMV.GSH - VERTICAL TRAVEL TIME FROM THE SOURCE TO THE GEOPHONE
- SHTM.GSH - SHOT TIME (WST)
- AVGV.GSH - AVERAGE SEISMIC VELOCITY
- DELZ.GSH - DEPTH INTERVAL BETWEEN SUCCESSIVE SHOTS
- DELT.GSH - TRAVEL TIME INTERVAL BETWEEN SUCCESSIVE SHOTS
- INTV.GSH - INTERNAL VELOCITY, AVERAGE

(GLOBAL PARAMETERS)

(VALUE)

ELEV OF KB AB. MSL (WST)	KB	:	22.3000	M
ELEV OF SRD AB. MSL (WST)	SRD	:	0	M
ELEVATION OF KELLY BUSHI	EKB	:	22.3000	M
ELEV OF GL AB. SRD (WST)	GL	:	-107.300	M
VEL SOURCE-HYDRO (WST)	VELHYD	:	1480.00	M/S
VEL SOURCE-SRD (WST)	VELSUR	:	1480.00	M/S

(MATRIX PARAMETERS)

	SOURCE ELV M	SOURCE EW M	SOURCE NS M	HYDRO ELEV M	HYDRO EW M	HYDRO NS M
1	-3.05	6.89	25.73	-6.10	6.89	25.73

	TRT HYD-SC MS	TRT SC-SRD MS
1	2.06	2.06

	MD @ KB M	VD @ KB M	VD @ SRD M	E-W COORD M	N-S COORD M
1	129.60	129.60	107.30	0	0
2	266.00	266.00	243.70	0	0
3	384.00	384.00	361.70	0	0
4	615.00	615.00	592.70	0	0
5	830.00	830.00	807.70	0	0
6	1115.00	1115.00	1092.70	0	0
7	1539.00	1539.00	1516.70	0	0
8	1672.00	1672.00	1649.70	0	0
9	1811.00	1811.00	1788.70	0	0
10	1895.00	1895.00	1872.70	0	0
11	1922.00	1922.00	1899.70	0	0
12	2070.00	2070.00	2047.70	0	0
13	2211.00	2211.00	2188.70	0	0
14	2242.50	2242.50	2220.20	0	0
15	2266.50	2266.50	2244.20	0	0
16	2305.00	2305.00	2282.70	0	0
17	2434.00	2434.00	2411.70	0	0
18	2466.00	2466.00	2443.70	0	0
19	2522.00	2522.00	2499.70	0	0
20	2543.00	2543.00	2520.70	0	0
21	2570.00	2570.00	2547.70	0	0
22	2595.00	2595.00	2572.70	0	0
23	2600.00	2600.00	2577.70	0	0

COMPANY : ESSO AUSTRALIA LTD.

WELL : KIPPER - 2

PAGE 3

LEVEL NUMBER	MEASUR DEPTH FROM KE M	VERTIC DEPTH FROM SRD M	VERTIC DEPTH FROM GL M	OBSERV TRAVEL TIME HYD/GEO MS	VERTIC TRAVEL TIME SRC/GEO MS	VERTIC TRAVEL TIME SRD/GEO MS	AVERAGE VELOC SRD/GEO M/S	DELTA DEPTH BETWEEN SHOTS M	DELTA TIME BETWEEN SHOTS MS	INTERV VELOC BETWEEN SHOTS M/S
1	129.60	107.30	0	70.65	70.45	72.51	1480			
2	266.00	243.70	136.40	141.00	142.19	144.25	1689	136.40	71.75	1901
3	384.00	361.70	254.40	196.00	197.52	199.57	1812	118.00	55.32	2133
4	615.00	592.70	485.40	288.00	289.76	291.82	2031	231.00	92.25	2504
5	830.00	807.70	700.40	369.00	370.86	372.92	2166	215.00	81.09	2651
6	1115.00	1092.70	985.40	468.00	469.92	471.98	2315	285.00	99.06	2877
7	1539.00	1516.70	1409.40	625.00	626.96	629.02	2411	424.00	157.04	2700
8	1672.00	1649.70	1542.40	667.00	668.97	671.03	2458	133.00	42.01	3166
9	1811.00	1788.70	1681.40	712.00	713.98	716.04	2498	139.00	45.01	3088
10	1895.00	1872.70	1765.40	737.00	738.98	741.04	2527	84.00	25.00	3359
11	1922.00	1899.70	1792.40	745.00	746.99	749.05	2536	27.00	8.00	3374
12	2070.00	2047.70	1940.40	789.00	790.99	793.05	2582	148.00	44.01	3363
13	2211.00	2188.70	2081.40	827.00	829.00	831.06	2634	141.00	38.01	3710
14	2242.50	2220.20	2112.90	835.00	837.00	839.06	2646	31.50	8.00	3937
15	2266.50	2244.20	2136.90	841.00	843.00	845.06	2656	24.00	6.00	3999
16	2305.00	2282.70	2175.40	853.00	855.00	857.06	2663	38.50	12.00	3208
17	2434.00	2411.70	2304.40	887.00	889.01	891.06	2707	129.00	34.00	3794
18	2466.00	2443.70	2336.40	894.00	896.01	898.07	2721	32.00	7.00	4571
19	2522.00	2499.70	2392.40	907.00	909.01	911.07	2744	56.00	13.00	4307
20	2543.00	2520.70	2413.40	914.00	916.01	918.07	2746	21.00	7.00	3000
21	2570.00	2547.70	2440.40	920.00	922.01	924.07	2757	27.00	6.00	4499
22	2595.00	2572.70	2465.40	926.00	928.01	930.07	2766	25.00	6.00	4166
23	2600.00	2577.70	2470.40	929.00	931.01	933.07	2763	5.00	3.00	1667

Drift

ANALYST: A .CHIN

19-MAY-87 09:53:06

PROGRAM: GDRIFT 007.E09

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*                                     *  
*                                     *  
*****  
*          SCHLUMBERGER              *  
*                                     *  
*****
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DRIFT COMPUTATION REPORT

COMPANY : ESSO AUSTRALIA LTD.
WELL : KIPPER - 2
FIELD : KIPPER
STATE : VICTORIA
COUNTRY : AUSTRALIA
REFERENCE: 57C504

LONG DEFINITIONS

GLOBAL

KB - ELEVATION OF THE KELLY-BUSHING ABOVE MSL OR MWL
 SRD - ELEVATION OF THE SEISMIC REFERENCE DATUM ABOVE MSL OR MWL
 EKE - ELEVATION OF KELLY BUSHING
 GL - ELEVATION OF USER'S REFERENCE (GENERALLY GROUND LEVEL) ABOVE SRD
 XSTART - TOP OF ZONE PROCESSED BY WST
 XSTOP - BOTTOM OF ZONE PROCESSED BY WST
 GAD001 - RAW SONIC CHANNEL NAME USED FOR WST SONIC ADJUSTMENT
 UNFDEN - UNIFORM DENSITY VALUE

ZONE

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

SAMPLED

SHOT - SHOT NUMBER
 DKB - MEASURED DEPTH FROM KELLY-BUSHING
 DSRD - DEPTH FROM SRD
 DGL - VERTICAL DEPTH RELATIVE TO GROUND LEVEL (USER'S REFERENCE)
 SHTM - SHOT TIME (WST)
 RAWS - RAW SONIC (WST)
 SHDR - DRIFT AT SHOT OR KNEE
 BLSH - BLOCK SHIFT BETWEEN SHOTS OR KNEE

(GLOBAL PARAMETERS)

(VALUE)

ELEV OF KB AB. MSL (WST)	KB	:	22.3000	M
ELEV OF SRD AB. MSL(WST)	SRD	:	0	M
ELEVATION OF KELLY BUSHI	EKE	:	22.3000	M
ELEV OF GL AB. SRD(WST)	GL	:	-107.300	M
TOP OF ZONE PROCD (WST)	XSTART	:	0	M
BOT OF ZONE PROCD (WST)	XSTOP	:	0	M
RAW SONIC CH NAME (WST)	GAD001	:	DT.PHC.004.FUN.FLP.*	
UNIFORM DENSITY VALUE	UNFDEN	:	2.30000	G/C3

(ZONED PARAMETERS)

(VALUE)

(LIMITS)

LAYER OPTION FLAG DENS	LOFDEN	:	1.000000	30479.7	-	0
USER SUPPLIED DENSITY DA	LAYDEN	:	-999.2500	G/C3	30479.7	0

LEVEL NUMBER	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	VERTICAL TRAVEL TIME SRD/Geo MS	INTEGRATED RAW SONIC TIME MS	COMPUTED DRIFT AT LEVEL MS	COMPUTED BLK-SHFT CORRECTION US/M
1	129.60	107.30	0	72.51	72.51	0	0
2	266.00	243.70	136.40	144.25	144.25	0	0
3	384.00	361.70	254.40	199.57	200.10	-.53	-4.47
4	615.00	592.70	485.40	291.82	293.79	-1.97	-6.22
5	830.00	807.70	700.40	372.92	372.68	.24	10.24
6	1115.00	1092.70	985.40	471.98	469.20	2.78	8.93
7	1539.00	1516.70	1409.40	629.02	623.22	5.81	7.13
8	1672.00	1649.70	1542.40	671.03	665.06	5.97	1.24
9	1811.00	1788.70	1681.40	716.04	709.92	6.12	1.09
10	1895.00	1872.70	1765.40	741.04	734.83	6.22	1.14
11	1922.00	1899.70	1792.40	749.05	742.69	6.36	5.15
12	2070.00	2047.70	1940.40	793.05	785.67	6.38	6.93
13	2211.00	2188.70	2031.40	831.06	824.37	6.69	-4.93
14	2242.50	2220.20	2112.90	839.06	833.47	5.59	-34.76
15	2266.50	2244.20	2136.90	845.06	839.45	5.60	.51
16	2305.00	2282.70	2175.40	857.06	850.67	6.39	20.36
17	2434.00	2411.70	2304.40	891.06	884.87	6.20	-1.47
18	2466.00	2443.70	2336.40	898.07	893.06	5.00	-37.44
19	2522.00	2499.70	2392.40	911.07	907.18	3.89	-19.83
20	2543.00	2520.70	2413.40	918.07	912.61	5.46	74.72
21	2570.00	2547.70	2440.40	924.07	919.42	4.65	-29.92
22	2595.00	2572.70	2465.40	930.07	925.70	4.37	-11.16
23	2600.00	2577.70	2470.40	933.07	926.95	6.12	349.09

ANALYST: A .CHIN

19-MAY-87 10:47:57

PROGRAM: GADJUST 008.EOS

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*          SCHLUMBERGER              *  
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SONIC ADJUSTMENT PARAMETER REPORT

COMPANY : ESSO AUSTRALIA LTD.
WELL : KIPPER - 2
FIELD : KIPPER
STATE : VICTORIA
COUNTRY : AUSTRALIA
REFERENCE: 570504

LONG DEFINITIONS

GLOBAL

SRCDRF - ORIGIN OF ADJUSTMENT DATA
 CONADJ - CONSTANT ADJUSTMENT TO AUTOMATIC DELTA-T MINIMUM = 7.5 US/F
 UNERTH - UNIFORM EARTH VELOCITY (GTRFRM)

ZONE

ZDRIFT - USER DRIFT AT BOTTOM OF THE ZONE
 ADJOPZ - TYPE OF ADJUSTMENT IN THE DRIFT ZONE : 0=DELTA-T MIN, 1=BLOCKSHIFT
 ADJUSZ - DELTA-T MINIMUM USED FOR ADJUSTMENT IN THE DRIFT ZONE
 LOFVEL - LAYER OPTION FLAG FOR VELOCITY: -1=NONE; 0=UNIFORM; 1=UNIFORM+LAYER
 LAYVEL - USER SUPPLIED VELOCITY DATA

SAMPLED

SHOT - SHOT NUMBER
 VDKB - VERTICAL DEPTH RELATIVE TO KB
 DSRD - DEPTH FROM SRD
 DGL - VERTICAL DEPTH RELATIVE TO GROUND LEVEL (USER'S REFERENCE)
 KNEE - KNEE
 SLSH - BLOCK SHIFT BETWEEN SHOTS OR KNEE
 DTMI - VALUE OF DELTA-T MINIMUM USED
 COEF - DELTA-T MIN COEFFICIENT USED IN THE DRIFT ZONE
 DRGR - GRADIENT OF DRIFT CURVE

(GLOBAL PARAMETERS)

(VALUE)

ORIG OF ADJ DATA (WST)	SRCDRF	:	2.00000	
CONST SONIC ADJUST (WST)	CONADJ	:	24.6063	US/M
UNIFORM EARTH VELOCITY	UNERTH	:	2133.60	M/S

(ZONED PARAMETERS)

(VALUE)

(LIMITS)

USER DRIFT ZONE (WST)	ZDRIFT	:	4.373000	MS	2600.00	-	2070.00
			7.383000		2070.00		1539.00
			5.806000		1539.00		615.000
			-1.965000		615.000		266.000
			0		266.000		25.3480
ADJUSTMENT MODE (WST)	ADJOPZ	:	-999.2500		30479.7	-	0
USER DELTA-T MIN (WST)	ADJUSZ	:	-999.2500	US/M	30479.7	-	0
LAYER OPTION FLAG VELOC	LOFVEL	:	1.000000		30479.7	-	0
USER VELOC (WST)	LAYVEL	:	1480.000	M/S	129.600	-	0

COMPANY : ESSO AUSTRALIA LTD.

WELL : KIPPER - 2

PAGE 2

KNEE NUMBER	VERTICAL DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	DRIFT AT KNEE MS	BLOCKSHIFT USED US/M	DELTA-T MINIMUM USED US/M	REDUCTION FACTOR G	EQUIVALENT BLOCKSHIFT US/M
1	25.35	3.05	-104.25	0				
2	266.00	243.70	136.40	0	0			0
3	615.00	592.70	485.40	-1.97		398.24	.87	-5.63
4	1539.00	1516.70	1409.40	5.81	8.41			8.41
5	2070.00	2047.70	1940.40	7.38	2.97			2.97
6	2600.00	2577.70	2470.40	4.37		236.28	.86	-5.68

ANALYST: A .CHIN

19-MAY-87 10:49:18

PROGRAM: GADJST 008.E08

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*          SCHLUMBERGER              *  
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VELOCITY REPORT

COMPANY : ESSO AUSTRALIA LTD.
WELL : KIPPER - 2
FIELD : KIPPER
STATE : VICTORIA
COUNTRY : AUSTRALIA
REFERENCE: 570504

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 USER'S 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
 DKE - MEASURED DEPTH FROM KELLY-BUSHING
 DSRD - DEPTH FROM SRD
 DGL - VERTICAL DEPTH RELATIVE TO GROUND LEVEL (USER'S REFERENCE)
 SHTM - SHOT TIME (WST)
 ADJS - ADJUSTED SONIC TRAVEL TIME
 SHDR - DRIFT AT SHOT OR KNEE
 REST - RESIDUAL TRAVEL TIME AT KNEE
 INTV - INTERNAL VELOCITY, AVERAGE

(GLOBAL PARAMETERS)

(VALUE)

ELEV OF KB AB. MSL (WST)	KB	:	22.3000	M
ELEV OF SRD AB. MSL (WST)	SRD	:	0	M
ELEVATION OF KELLY BUSHI	EKB	:	22.3000	M
ELEV OF GL AB. SRD (WST)	GL	:	-107.300	M
UNIFORM EARTH VELOCITY	UNERTH	:	2133.60	M/S

(ZONED PARAMETERS)

(VALUE)

(LIMITS)

LAYER OPTION FLAG VELOC	LOFVEL	:	1.000000	30479.7	-	0	
USER VELOC (WST)	LAYVEL	:	1480.000	M/S	129.600	-	0

LEVEL NUMBER	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	VERTICAL TRAVEL TIME SRD/GEOPH MS	INTEGRATED ADJUSTED SONIC TIME MS	DRIFT = SHOT TIME - RAW SON MS	RESIDUAL = SHOT TIME - ADJ SON MS	ADJUSTED INTERVAL VELOCITY M/S
1	129.60	107.30	0	72.51	72.51	0	0	1480
2	266.00	243.70	136.40	144.25	144.25	0	0	1901
3	384.00	361.70	254.40	199.57	198.90	-.53	.67	2159
4	615.00	592.70	485.40	291.82	291.81	-1.97	.01	2436
5	830.00	807.70	700.40	372.92	372.51	.24	.41	2664
6	1115.00	1092.70	985.40	471.98	471.41	2.73	.57	2832
7	1539.00	1516.70	1409.40	629.02	629.00	5.81	.02	2691
8	1672.00	1649.70	1542.40	671.03	671.24	5.97	-.21	3149
9	1811.00	1788.70	1681.40	716.04	716.51	6.12	-.47	3071
10	1895.00	1872.70	1765.40	741.04	741.67	6.22	-.63	3339
11	1922.00	1899.70	1792.40	749.05	749.61	6.36	-.56	3400
12	2070.00	2047.70	1940.40	793.05	793.03	7.38	.02	3408
13	2211.00	2188.70	2081.40	831.06	830.84	6.69	.22	3730
14	2242.50	2220.20	2112.90	839.06	839.70	5.59	-.64	3554
15	2266.50	2244.20	2136.90	845.06	845.62	5.60	-.56	4054
16	2305.00	2282.70	2175.40	857.06	856.55	6.39	.51	3523
17	2434.00	2411.70	2304.40	891.06	890.23	6.20	.84	3830
18	2466.00	2443.70	2336.40	898.07	898.33	5.00	-.27	3949
19	2522.00	2499.70	2392.40	911.07	912.33	3.39	-1.26	4002
20	2543.00	2520.70	2413.40	918.07	917.69	5.46	.38	3913
21	2570.00	2547.70	2440.40	924.07	924.44	4.65	-.37	4002
22	2595.00	2572.70	2465.40	930.07	930.67	4.37	-.60	4014
23	2600.00	2577.70	2470.40	933.07	931.97	6.12	1.09	3821

Time / Depth

ANALYST: A .CHIN

19-MAY-87 11:04:35

PROGRAM: GTRFRM 001.E12

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*          SCHLUMBERGER              *  
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TIME CONVERTED VELOCITY REPORT

COMPANY : ESSO AUSTRALIA LTD.
WELL : KIPPER - 2
FIELD : WILDCAT
STATE : VICTORIA
COUNTRY : AUSTRALIA
REFERENCE: 57C504

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 USER'S REFERENCE (GENERALLY GROUND LEVEL) ABOVE SRD
 UNERTH - UNIFORM EARTH VELOCITY (GTRFRM)
 UNFDEN - UNIFORM DENSITY VALUE

MATRIX
 MVODIS - MOVE-OUT DISTANCE FROM BOREHOLE

ZONE
 LOFVEL - LAYER OPTION FLAG FOR VELOCITY: -1=NONE; 0=UNIFORM; 1=UNIFORM+LAYER
 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)
 DKE - 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)

(VALUE)

ELEV OF KB AB. MSL (WST)	KB	:	22.3000	M
ELEV OF SRD AB. MSL(WST)	SRD	:	0	M
ELEV OF GL AB. SRD(WST)	GL	:	-107.300	M
UNIFORM EARTH VELOCITY	UNERTH	:	2133.60	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 : ESSO AUSTRALIA LTD.

WELL : KIPPER - 2

PAGE 2

(ZONED PARAMETERS)		(VALUE)	(LIMITS)
LAYER OPTION FLAG VELOC	LOFVEL	: 1.000000	30479.7 - 0
USER VELOC (WST)	LAYVEL	: 1480.000 M/S	129.600 - 0
LAYER OPTION FLAG DENS	LOFDEN	: -1.000000	30479.7 - 0
USER SUPPLIED DENSITY DA	LAYDEN	: -999.2500 G/C3	30479.7 - 0

COMPANY : ESSO AUSTRALIA LTD.

WELL : KIPPER - 2

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 MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
0	22.30	0						
<u>2.00</u>	23.78	<u>1.48</u>	1480	1480	673.68	1011.52	1349.35	1480
4.00	25.26	2.96	1480	1480	671.69	1009.52	1347.36	1480
6.00	26.74	4.44	1480	1480	669.70	1007.53	1345.36	1480
8.00	28.22	5.92	1480	1480	667.72	1005.55	1343.38	1480
<u>10.00</u>	29.70	<u>7.40</u>	1480	1480	665.75	1003.56	1341.39	1480
12.00	31.18	8.88	1480	1480	663.78	1001.58	1339.40	1480
14.00	32.66	10.36	1480	1480	661.82	999.61	1337.42	1480
16.00	34.14	11.84	1480	1480	659.87	997.64	1335.45	1480
18.00	35.62	13.32	1480	1480	657.92	995.67	1333.47	1480
<u>20.00</u>	37.10	<u>14.80</u>	1480	1480	655.97	993.71	1331.50	1480
22.00	38.58	16.28	1480	1480	654.03	991.75	1329.53	1480
24.00	40.06	17.76	1480	1480	652.10	989.80	1327.56	1480
26.00	41.54	19.24	1480	1480	650.18	987.85	1325.60	1480
28.00	43.02	20.72	1480	1480	648.26	985.90	1323.64	1480
<u>30.00</u>	44.50	<u>22.20</u>	1480	1480	646.34	983.96	1321.68	1480
32.00	45.98	23.68	1480	1480	644.43	982.02	1319.73	1480
34.00	47.46	25.16	1480	1480	642.53	980.08	1317.78	1480
36.00	48.94	26.64	1480	1480	640.63	978.15	1315.83	1480
38.00	50.42	28.12	1480	1480	638.74	976.23	1313.89	1480
<u>40.00</u>	51.90	<u>29.60</u>	1480	1480	636.86	974.30	1311.94	1480
42.00	53.38	31.08	1480	1480	634.98	972.38	1310.00	1480
44.00	54.86	32.56	1480	1480	633.11	970.47	1308.07	1480
46.00	56.34	34.04	1480	1480	631.24	968.56	1306.13	1480

COMPANY : ESSO AUSTRALIA LTD.

WELL : KIPPER - 2

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 MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
48.00	57.82	35.52	1480	1480	629.38	966.65	1304.20	1480
<u>50.00</u>	59.30	<u>37.00</u>	1480	1480	627.52	964.75	1302.28	1480
52.00	60.78	38.48	1480	1480	625.67	962.85	1300.35	1480
54.00	62.26	39.96	1480	1480	623.83	960.95	1298.43	1480
56.00	63.74	41.44	1480	1480	621.99	959.06	1296.51	1480
58.00	65.22	42.92	1480	1480	620.16	957.17	1294.60	1480
<u>60.00</u>	66.70	<u>44.40</u>	1480	1480	618.33	955.29	1292.68	1480
62.00	68.18	45.88	1480	1480	616.51	953.41	1290.77	1480
64.00	69.66	47.36	1480	1480	614.70	951.53	1288.87	1480
66.00	71.14	48.84	1480	1480	612.89	949.66	1286.96	1480
68.00	72.62	50.32	1480	1480	611.09	947.79	1285.06	1480
<u>70.00</u>	74.10	<u>51.80</u>	1480	1480	609.29	945.93	1283.16	1480
72.00	75.58	53.28	1480	1480	607.50	944.07	1281.27	1480
74.00	77.06	54.76	1480	1480	605.72	942.21	1279.33	1480
76.00	78.54	56.24	1480	1480	603.94	940.36	1277.49	1480
78.00	80.02	57.72	1480	1480	602.16	938.51	1275.60	1480
<u>80.00</u>	81.50	<u>59.20</u>	1480	1480	600.40	936.67	1273.72	1480
82.00	82.98	60.68	1480	1480	598.63	934.83	1271.84	1480
84.00	84.46	62.16	1480	1480	596.88	932.99	1269.96	1480
86.00	85.94	63.64	1480	1480	595.13	931.16	1268.08	1480
88.00	87.42	65.12	1480	1480	593.38	929.33	1266.21	1480
<u>90.00</u>	88.90	<u>66.60</u>	1480	1480	591.64	927.50	1264.34	1480
92.00	90.38	68.08	1480	1480	589.91	925.68	1262.48	1480
94.00	91.86	69.56	1480	1480	588.18	923.86	1260.62	1480

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
96.00	93.34	71.04	1480	1480	586.46	922.05	1258.76	1480
98.00	94.82	72.52	1480	1480	584.75	920.24	1256.90	1480
100.00	96.30	74.00	1480	1480	583.04	918.43	1255.05	1480
102.00	97.78	75.48	1480	1480	581.33	916.63	1253.20	1480
104.00	99.26	76.96	1480	1480	579.63	914.84	1251.35	1480
106.00	100.74	78.44	1480	1480	577.94	913.04	1249.50	1480
108.00	102.22	79.92	1480	1480	576.25	911.25	1247.66	1480
110.00	103.70	81.40	1480	1480	574.57	909.47	1245.82	1480
112.00	105.18	82.88	1480	1480	572.90	907.68	1243.98	1480
114.00	106.66	84.36	1480	1480	571.23	905.90	1242.15	1480
116.00	108.14	85.84	1480	1480	569.56	904.13	1240.32	1480
118.00	109.62	87.32	1480	1480	567.90	902.36	1238.49	1480
120.00	111.10	88.80	1480	1480	566.25	900.59	1236.67	1480
122.00	112.58	90.28	1480	1480	564.60	898.83	1234.85	1480
124.00	114.06	91.76	1480	1480	562.96	897.07	1233.03	1480
126.00	115.54	93.24	1480	1480	561.32	895.32	1231.21	1480
128.00	117.02	94.72	1480	1480	559.69	893.56	1229.40	1480
130.00	118.50	96.20	1480	1480	558.07	891.82	1227.59	1480
132.00	119.98	97.68	1480	1480	556.45	890.07	1225.78	1480
134.00	121.46	99.16	1480	1480	554.83	888.33	1223.98	1480
136.00	122.94	100.64	1480	1480	553.23	886.60	1222.18	1480
138.00	124.42	102.12	1480	1480	551.62	884.87	1220.38	1480
140.00	125.90	103.60	1480	1480	550.03	883.14	1218.58	1480
142.00	127.38	105.08	1480	1480	548.44	881.41	1216.79	1480

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
144.00	128.86	106.56	1480	1480	546.85	879.69	1215.00	1480
146.00	130.55	108.25	1483	1483	543.87	875.86	1210.38	1694
148.00	132.45	110.15	1489	1490	539.46	869.82	1202.81	1901
<u>150.00</u>	134.36	<u>112.06</u>	1494	1496	535.16	863.97	1195.47	1901
152.00	136.26	113.96	1499	1502	530.98	858.27	1188.34	1901
154.00	138.16	115.86	1505	1508	526.90	852.74	1181.43	1901
156.00	140.06	117.76	1510	1513	522.93	847.35	1174.70	1901
158.00	141.96	119.66	1515	1519	519.05	842.10	1168.17	1901
160.00	143.86	<u>121.56</u>	1520	1524	515.27	836.98	1161.80	1901
162.00	145.76	123.46	1524	1530	511.57	831.99	1155.60	1901
164.00	147.66	125.36	1529	1535	507.96	827.12	1149.56	1901
166.00	149.57	127.27	1533	1540	504.43	822.37	1143.66	1901
168.00	151.47	129.17	1538	1544	500.97	817.72	1137.91	1901
<u>170.00</u>	153.37	<u>131.07</u>	1542	1549	497.58	813.17	1132.29	1901
172.00	155.27	132.97	1546	1554	494.27	808.72	1126.81	1901
174.00	157.17	134.87	1550	1558	491.02	804.37	1121.44	1901
176.00	159.07	136.77	1554	1562	487.83	800.11	1116.19	1901
178.00	160.97	138.67	1558	1567	484.70	795.93	1111.05	1901
180.00	162.87	<u>140.57</u>	1562	1571	481.64	791.84	1106.02	1901
182.00	164.77	142.47	1566	1575	478.63	787.82	1101.09	1901
184.00	166.68	144.38	1569	1579	475.67	783.88	1096.26	1901
186.00	168.58	146.28	1573	1582	472.76	780.01	1091.53	1901
188.00	170.48	148.18	1576	1586	469.91	776.21	1086.88	1901
<u>190.00</u>	172.38	<u>150.08</u>	1580	1590	467.10	772.48	1082.32	1901

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
192.00	174.28	151.98	1583	1593	464.33	768.81	1077.85	1901
194.00	176.18	153.88	1586	1597	461.62	765.21	1073.45	1901
196.00	178.08	155.78	1590	1600	458.94	761.66	1069.13	1901
198.00	179.98	157.68	1593	1604	456.31	758.17	1064.88	1901
<u>200.00</u>	181.89	<u>159.59</u>	1596	1607	453.72	754.74	1060.71	1901
202.00	183.79	161.49	1599	1610	451.16	751.36	1056.60	1901
204.00	185.69	163.39	1602	1613	448.65	748.03	1052.56	1901
206.00	187.59	165.29	1605	1616	446.17	744.75	1048.58	1901
208.00	189.49	167.19	1608	1619	443.72	741.52	1044.66	1901
<u>210.00</u>	191.39	<u>169.09</u>	1610	1622	441.31	738.33	1040.81	1901
212.00	193.29	170.99	1613	1625	438.93	735.19	1037.01	1901
214.00	195.19	172.89	1616	1628	436.59	732.09	1033.26	1901
216.00	197.09	174.79	1618	1630	434.27	729.04	1029.57	1901
218.00	199.00	176.70	1621	1633	431.99	726.02	1025.93	1901
<u>220.00</u>	200.90	<u>178.60</u>	1624	1636	429.73	723.05	1022.34	1901
222.00	202.80	180.50	1626	1638	427.51	720.11	1018.80	1901
224.00	204.70	182.40	1629	1641	425.31	717.21	1015.30	1901
226.00	206.60	184.30	1631	1643	423.14	714.35	1011.86	1901
228.00	208.50	186.20	1633	1646	420.99	711.52	1008.45	1901
<u>230.00</u>	210.40	<u>188.10</u>	1636	1648	418.87	708.73	1005.09	1901
232.00	212.30	190.00	1638	1650	416.78	705.96	1001.77	1901
234.00	214.21	191.91	1640	1653	414.71	703.23	998.49	1901
236.00	216.11	193.81	1642	1655	412.66	700.53	995.25	1901
238.00	218.01	195.71	1645	1657	410.64	697.87	992.04	1901

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
240.00	219.91	197.61	1647	1659	408.64	695.23	988.87	1901
242.00	221.81	199.51	1649	1662	406.66	692.62	985.74	1901
244.00	223.71	201.41	1651	1664	404.71	690.03	982.65	1901
246.00	225.61	203.31	1653	1666	402.77	687.48	979.59	1901
248.00	227.51	205.21	1655	1668	400.86	684.95	976.56	1901
250.00	229.41	207.11	1657	1670	398.96	682.45	973.56	1901
252.00	231.32	209.02	1659	1672	397.09	679.97	970.59	1901
254.00	233.22	210.92	1661	1674	395.23	677.52	967.66	1901
256.00	235.12	212.82	1663	1676	393.39	675.09	964.75	1901
258.00	237.02	214.72	1664	1677	391.58	672.69	961.88	1901
260.00	238.92	216.62	1666	1679	389.78	670.31	959.03	1901
262.00	240.82	218.52	1668	1681	387.99	667.95	956.21	1901
264.00	242.72	220.42	1670	1683	386.23	665.61	953.42	1901
266.00	244.62	222.32	1672	1685	384.48	663.29	950.65	1901
268.00	246.53	224.23	1673	1686	382.75	661.00	947.91	1901
270.00	248.43	226.13	1675	1688	381.03	658.72	945.19	1901
272.00	250.33	228.03	1677	1690	379.34	656.47	942.50	1901
274.00	252.23	229.93	1678	1691	377.65	654.24	939.83	1901
276.00	254.13	231.83	1680	1693	375.99	652.02	937.13	1901
278.00	256.03	233.73	1682	1695	374.33	649.82	934.56	1901
280.00	257.93	235.63	1683	1696	372.70	647.65	931.96	1901
282.00	259.83	237.53	1685	1698	371.07	645.49	929.38	1901
284.00	261.73	239.43	1686	1699	369.47	643.35	926.83	1901
286.00	263.64	241.34	1688	1701	367.87	641.22	924.29	1901

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	265.54	243.24	1689	1702	366.29	639.11	921.78	1901
290.00	267.46	245.16	1691	1704	364.68	636.95	919.18	1921
292.00	269.52	247.22	1693	1706	362.74	634.26	915.86	2060
294.00	271.68	249.38	1696	1710	360.56	631.18	912.02	2161
296.00	273.75	251.45	1699	1713	358.63	628.50	908.70	2075
298.00	275.89	253.59	1702	1716	356.57	625.60	905.09	2136
300.00	278.15	255.85	1706	1720	354.23	622.24	900.85	2257
302.00	280.33	258.03	1709	1724	352.10	619.22	897.07	2185
304.00	282.44	260.14	1711	1726	350.18	616.53	893.73	2111
306.00	284.56	262.26	1714	1729	348.28	613.86	890.42	2114
308.00	286.74	264.44	1717	1732	346.25	610.97	886.81	2178
310.00	288.99	266.69	1721	1736	344.05	607.82	882.83	2256
312.00	291.21	268.91	1724	1740	341.99	604.87	879.13	2213
314.00	293.46	271.16	1727	1744	339.86	601.81	875.27	2254
316.00	295.66	273.36	1730	1747	337.88	598.98	871.72	2203
318.00	297.87	275.57	1733	1750	335.92	596.18	868.21	2202
320.00	299.99	277.69	1736	1753	334.16	593.68	865.11	2128
322.00	302.09	279.79	1738	1755	332.48	591.33	862.19	2094
324.00	304.17	281.87	1740	1757	330.83	589.01	859.34	2087
326.00	306.29	283.99	1742	1760	329.15	586.64	856.40	2113
328.00	308.41	286.11	1745	1762	327.46	584.24	853.43	2125
330.00	310.52	288.22	1747	1764	325.83	581.94	850.58	2104
332.00	312.64	290.34	1749	1767	324.19	579.61	847.68	2122
334.00	314.76	292.46	1751	1769	322.56	577.30	844.82	2119

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	316.89	294.59	1754	1772	320.92	574.97	841.92	2135
338.00	319.06	296.76	1756	1774	319.23	572.54	838.89	2171
<u>340.00</u>	321.23	<u>298.93</u>	1758	1777	317.56	570.14	835.89	2171
342.00	323.41	301.11	1761	1779	315.89	567.74	832.89	2178
344.00	325.53	303.23	1763	1781	314.35	565.56	830.19	2116
346.00	327.69	305.39	1765	1784	312.74	563.24	827.30	2166
348.00	329.83	307.53	1767	1786	311.20	561.04	824.56	2136
<u>350.00</u>	332.01	<u>309.71</u>	1770	1789	309.60	558.73	821.66	2180
352.00	334.20	311.90	1772	1791	308.00	556.41	818.76	2189
354.00	336.30	314.00	1774	1793	306.57	554.37	816.24	2099
356.00	338.38	316.08	1776	1795	305.18	552.40	813.80	2084
358.00	340.45	318.15	1777	1796	303.83	550.48	811.43	2069
<u>360.00</u>	342.59	<u>320.29</u>	1779	1799	302.37	548.38	808.82	2138
362.00	344.75	322.45	1782	1801	300.89	546.23	806.13	2165
364.00	346.84	324.54	1783	1802	299.55	544.32	803.78	2083
366.00	349.03	326.73	1785	1805	298.04	542.13	801.02	2194
368.00	351.15	328.85	1787	1807	296.67	540.14	798.55	2123
<u>370.00</u>	353.38	<u>331.08</u>	1790	1809	295.13	537.90	795.72	2226
372.00	355.52	333.22	1791	1811	293.76	535.91	793.24	2138
374.00	357.61	335.31	1793	1813	292.48	534.06	790.96	2089
376.00	359.70	337.40	1795	1814	291.20	532.22	788.68	2093
378.00	361.84	339.54	1797	1816	289.85	530.26	786.23	2145
<u>380.00</u>	364.11	<u>341.81</u>	1799	1819	288.32	528.00	783.36	2267
382.00	366.34	344.04	1801	1821	286.87	525.86	780.66	2227

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	368.54	346.24	1803	1824	285.47	523.81	778.07	2203
386.00	370.74	348.44	1805	1826	284.10	521.79	775.53	2194
388.00	372.94	350.64	1807	1828	282.73	519.78	772.99	2202
390.00	375.10	352.80	1809	1830	281.43	517.87	770.60	2165
392.00	377.33	355.03	1811	1832	280.05	515.83	768.02	2225
394.00	379.55	357.25	1813	1834	278.69	513.81	765.46	2224
396.00	381.94	359.64	1816	1837	277.10	511.40	762.36	2384
398.00	384.26	361.96	1819	1840	275.62	509.17	759.51	2324
400.00	386.64	364.34	1822	1843	274.06	506.82	756.48	2382
402.00	389.06	366.76	1825	1846	272.46	504.38	753.33	2424
404.00	391.63	369.33	1828	1851	270.67	501.61	749.71	2562
406.00	394.16	371.86	1832	1855	268.94	498.95	746.24	2534
408.00	396.49	374.19	1834	1857	267.54	496.83	743.53	2328
410.00	398.86	376.56	1837	1860	266.09	494.63	740.69	2373
412.00	401.23	378.93	1839	1863	264.66	492.46	737.90	2368
414.00	403.49	381.19	1842	1865	263.40	490.55	735.47	2264
416.00	405.86	383.56	1844	1868	262.00	488.42	732.73	2366
418.00	408.40	386.10	1847	1872	260.38	485.90	729.44	2538
420.00	410.94	388.64	1851	1875	258.77	483.41	726.18	2540
422.00	413.45	391.15	1854	1879	257.23	481.02	723.06	2512
424.00	415.82	393.52	1856	1882	255.90	478.97	720.42	2370
426.00	418.26	395.96	1859	1885	254.48	476.79	717.58	2442
428.00	420.57	398.27	1861	1887	253.25	474.92	715.19	2307
430.00	422.92	400.62	1863	1889	251.98	472.96	712.67	2354

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	425.44	403.14	1866	1893	250.51	470.68	709.68	2514
434.00	427.88	405.58	1869	1895	249.15	468.57	706.94	2444
436.00	430.36	408.06	1872	1899	247.77	466.41	704.12	2478
438.00	432.94	410.64	1875	1902	246.26	464.03	700.99	2586
440.00	435.47	413.17	1878	1906	244.84	461.81	698.03	2528
442.00	437.95	415.65	1881	1909	243.50	459.71	695.34	2479
444.00	440.24	417.94	1883	1910	242.39	458.01	693.16	2293
446.00	442.71	420.41	1885	1913	241.09	455.98	690.50	2466
448.00	445.06	422.76	1887	1915	239.94	454.19	688.18	2356
450.00	447.38	425.08	1889	1917	238.84	452.49	685.99	2315
452.00	449.71	427.41	1891	1919	237.73	450.77	683.77	2334
454.00	452.10	429.80	1893	1922	236.57	448.97	681.43	2383
456.00	454.65	432.35	1896	1925	235.23	446.85	678.64	2552
458.00	457.26	434.96	1899	1929	233.84	444.62	675.69	2616
460.00	460.02	437.72	1903	1933	232.29	442.13	672.36	2757
462.00	462.63	440.33	1906	1936	230.93	439.97	669.50	2608
464.00	465.28	442.98	1909	1940	229.54	437.74	666.54	2654
466.00	467.98	445.68	1913	1944	228.12	435.45	663.49	2696
468.00	470.45	448.15	1915	1946	226.97	433.62	661.09	2469
470.00	473.04	450.74	1918	1950	225.69	431.57	658.38	2597
472.00	475.76	453.46	1921	1954	224.29	429.32	655.36	2715
474.00	478.24	455.94	1924	1956	223.17	427.53	653.01	2479
476.00	480.68	458.38	1926	1958	222.09	425.82	650.77	2440
478.00	483.22	460.92	1929	1961	220.92	423.94	648.28	2546

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
480.00	485.94	463.64	1932	1965	219.58	421.76	645.37	2718
482.00	488.43	466.13	1934	1967	218.49	420.03	643.07	2487
484.00	490.89	468.59	1936	1970	217.45	418.35	640.87	2458
486.00	493.61	471.31	1940	1973	216.15	416.23	638.03	2719
488.00	495.91	473.61	1941	1975	215.26	414.84	636.22	2303
490.00	498.20	475.90	1942	1976	214.39	413.47	634.45	2291
492.00	500.78	478.48	1945	1979	213.27	411.65	632.02	2580
494.00	503.49	481.19	1948	1982	212.03	409.63	629.31	2705
496.00	505.62	483.32	1949	1983	211.31	408.51	627.89	2139
498.00	507.79	485.49	1950	1984	210.58	407.37	626.43	2164
500.00	510.26	487.96	1952	1986	209.59	405.77	624.31	2475
502.00	512.63	490.33	1953	1988	208.70	404.35	622.45	2366
504.00	514.91	492.61	1955	1989	207.89	403.06	620.78	2282
506.00	517.41	495.11	1957	1991	206.91	401.46	618.65	2499
508.00	519.73	497.43	1958	1993	206.08	400.15	616.93	2316
510.00	521.86	499.56	1959	1993	205.41	399.09	615.58	2131
512.00	524.08	501.78	1960	1994	204.67	397.91	614.06	2225
514.00	526.32	504.02	1961	1995	203.92	396.73	612.53	2234
516.00	528.65	506.35	1963	1997	203.10	395.42	610.80	2338
518.00	530.94	508.64	1964	1998	202.33	394.17	609.18	2289
520.00	533.43	511.13	1966	2000	201.40	392.66	607.16	2486
522.00	536.04	513.74	1968	2003	200.38	390.98	604.90	2608
524.00	538.67	516.37	1971	2005	199.35	389.27	602.60	2634
526.00	541.04	518.74	1972	2007	198.55	387.96	600.87	2368

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	543.46	521.16	1974	2009	197.70	386.59	599.05	2421
530.00	546.17	<u>523.87</u>	1977	2012	196.63	384.80	596.62	2712
532.00	548.87	526.57	1980	2015	195.58	383.05	594.25	2698
534.00	551.41	529.11	1982	2017	194.67	381.55	592.23	2545
536.00	553.75	531.45	1983	2018	193.92	380.33	590.62	2339
538.00	556.13	533.83	1984	2020	193.15	379.07	588.94	2377
540.00	558.52	<u>536.22</u>	1986	2021	192.38	377.79	587.26	2391
542.00	561.00	538.70	1988	2023	191.55	376.42	585.41	2476
544.00	563.44	541.14	1989	2025	190.74	375.09	583.64	2448
546.00	566.06	543.76	1992	2027	189.82	373.55	581.55	2614
548.00	568.89	546.59	1995	2031	188.74	371.72	579.04	2828
550.00	571.21	<u>548.91</u>	1996	2032	188.04	370.58	577.54	2319
552.00	573.62	551.32	1998	2033	187.29	369.34	575.87	2414
554.00	576.01	553.71	1999	2035	186.56	368.13	574.26	2393
556.00	578.84	556.54	2002	2038	185.52	366.35	571.82	2825
558.00	581.54	559.24	2004	2041	184.58	364.76	569.65	2705
560.00	584.25	<u>561.95</u>	2007	2044	183.64	363.18	567.48	2709
562.00	587.03	564.73	2010	2047	182.67	361.52	565.20	2780
564.00	589.83	567.53	2013	2050	181.69	359.85	562.90	2795
566.00	592.64	570.34	2015	2053	180.71	358.17	560.60	2811
568.00	595.46	573.16	2018	2056	179.73	356.49	558.28	2827
570.00	598.31	<u>576.01</u>	2021	2060	178.74	354.80	555.95	2843
572.00	601.15	578.85	2024	2063	177.77	353.13	553.64	2844
574.00	603.88	581.58	2026	2066	176.89	351.63	551.58	2724

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
576.00	606.23	583.93	2028	2067	176.26	350.58	550.17	2355
578.00	608.27	585.97	2028	2067	175.81	349.85	549.23	2036
580.00	610.46	<u>588.16</u>	2028	2067	175.28	348.97	548.08	2193
582.00	612.99	590.69	2030	2069	174.55	347.74	546.40	2530
584.00	615.49	593.19	2031	2070	173.85	346.55	544.79	2499
586.00	618.30	596.00	2034	2073	172.94	344.99	542.63	2815
588.00	621.02	598.72	2036	2076	172.12	343.58	540.67	2713
590.00	623.84	<u>601.54</u>	2039	2079	171.23	342.04	538.54	2821
592.00	626.71	604.41	2042	2082	170.32	340.45	536.33	2871
594.00	629.63	607.33	2045	2086	169.38	338.81	534.05	2926
596.00	632.52	610.22	2048	2089	168.48	337.24	531.85	2889
598.00	635.28	612.98	2050	2091	167.67	335.84	529.91	2754
600.00	637.84	<u>615.54</u>	2052	2093	166.98	334.66	528.30	2560
602.00	640.39	618.09	2053	2095	166.31	333.50	526.71	2551
604.00	643.28	620.98	2056	2098	165.44	331.97	524.57	2892
606.00	646.00	623.70	2058	2100	164.67	330.65	522.73	2725
608.00	648.71	626.41	2061	2103	163.93	329.35	520.93	2711
610.00	651.19	<u>628.89</u>	2062	2104	163.32	328.31	519.51	2472
612.00	653.50	631.20	2063	2105	162.80	327.42	518.31	2318
614.00	655.58	633.28	2063	2105	162.39	326.75	517.43	2072
616.00	658.13	635.83	2064	2106	161.75	325.64	515.91	2556
618.00	660.75	638.45	2066	2108	161.08	324.48	514.29	2622
620.00	663.42	<u>641.12</u>	2068	2110	160.39	323.27	512.62	2665
622.00	665.93	643.63	2070	2111	159.79	322.23	511.18	2510

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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	668.56	646.26	2071	2113	159.13	321.08	509.58	2630
626.00	671.33	649.03	2074	2116	158.40	319.80	507.79	2765
628.00	673.92	651.62	2075	2117	157.77	318.70	506.27	2592
630.00	676.43	<u>654.13</u>	2077	2119	157.18	317.69	504.87	2508
632.00	678.98	656.68	2078	2120	156.58	316.64	503.43	2553
634.00	681.60	659.30	2080	2122	155.96	315.54	501.89	2618
636.00	684.48	662.18	2082	2125	155.19	314.18	499.97	2884
638.00	687.04	664.74	2084	2126	154.60	313.14	498.54	2564
640.00	689.49	<u>667.19</u>	2085	2127	154.07	312.22	497.27	2447
642.00	692.26	669.96	2087	2130	153.38	311.00	495.55	2770
644.00	694.97	672.67	2089	2132	152.73	309.86	493.95	2705
646.00	697.60	675.30	2091	2134	152.13	308.79	492.45	2632
648.00	700.08	677.78	2092	2135	151.60	307.86	491.17	2485
650.00	702.80	<u>680.50</u>	2094	2137	150.96	306.72	489.57	2719
652.00	705.19	682.89	2095	2138	150.48	305.89	488.42	2387
654.00	707.67	685.37	2096	2139	149.96	304.98	487.16	2476
656.00	710.35	688.05	2098	2141	149.35	303.90	485.64	2684
658.00	712.76	690.46	2099	2141	148.87	303.06	484.48	2408
660.00	715.15	<u>692.85</u>	2100	2142	148.40	302.24	483.35	2389
662.00	717.92	695.62	2102	2144	147.76	301.09	481.73	2776
664.00	720.63	698.33	2103	2146	147.16	300.02	480.21	2707
666.00	723.30	701.00	2105	2148	146.58	298.98	478.76	2665
668.00	726.02	703.72	2107	2150	145.98	297.91	477.23	2722
670.00	728.67	<u>706.37</u>	2109	2152	145.42	296.90	475.82	2647

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	731.13	708.83	2110	2153	144.94	296.06	474.64	2464
674.00	733.59	711.29	2111	2154	144.46	295.22	473.47	2462
676.00	736.03	713.73	2112	2155	144.00	294.40	472.33	2443
678.00	738.84	716.54	2114	2157	143.38	293.28	470.74	2809
680.00	741.59	719.29	2116	2159	142.79	292.23	469.24	2743
682.00	744.36	722.06	2117	2161	142.20	291.16	467.72	2771
684.00	747.09	724.79	2119	2163	141.63	290.13	466.26	2731
686.00	749.77	727.47	2121	2164	141.09	289.15	464.87	2681
688.00	752.32	730.02	2122	2166	140.60	288.28	463.64	2547
690.00	754.86	732.56	2123	2167	140.12	287.42	462.44	2539
692.00	757.51	735.21	2125	2168	139.60	286.49	461.11	2652
694.00	760.36	738.06	2127	2171	139.00	285.39	459.53	2854
696.00	763.08	740.78	2129	2172	138.46	284.41	458.14	2719
698.00	765.62	743.32	2130	2174	137.99	283.57	456.96	2540
700.00	768.21	745.91	2131	2175	137.51	282.70	455.72	2593
702.00	770.78	748.48	2132	2176	137.04	281.86	454.53	2566
704.00	773.42	751.12	2134	2177	136.55	280.97	453.26	2637
706.00	776.32	754.02	2136	2180	135.95	279.87	451.68	2904
708.00	779.12	756.82	2138	2182	135.40	278.86	450.23	2803
710.00	781.71	759.41	2139	2183	134.94	278.02	449.04	2589
712.00	784.36	762.06	2141	2185	134.45	277.14	447.79	2646
714.00	787.05	764.75	2142	2186	133.96	276.24	446.49	2693
716.00	789.90	767.60	2144	2188	133.40	275.22	445.02	2851
718.00	792.86	770.56	2146	2191	132.81	274.12	443.42	2960

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	795.59	773.29	2148	2193	132.31	273.21	442.11	2730
722.00	798.16	775.86	2149	2194	131.87	272.42	440.99	2565
724.00	800.76	778.46	2150	2195	131.43	271.60	439.82	2608
726.00	803.39	781.09	2152	2196	130.97	270.78	438.64	2629
728.00	806.06	783.76	2153	2198	130.51	269.93	437.43	2666
730.00	808.89	786.59	2155	2200	129.99	268.97	436.03	2833
732.00	811.73	789.43	2157	2202	129.47	268.01	434.65	2838
734.00	814.48	792.18	2159	2203	128.99	267.12	433.36	2751
736.00	817.25	794.95	2160	2205	128.50	266.22	432.06	2774
738.00	820.15	797.85	2162	2207	127.97	265.24	430.63	2894
740.00	823.03	800.73	2164	2209	127.45	264.27	429.23	2883
742.00	825.86	803.56	2166	2211	126.96	263.35	427.89	2831
744.00	828.63	806.33	2168	2213	126.49	262.48	426.63	2769
746.00	831.37	809.07	2169	2214	126.03	261.64	425.41	2737
748.00	834.07	811.77	2171	2216	125.59	260.82	424.23	2704
750.00	836.71	814.41	2172	2217	125.17	260.06	423.12	2635
752.00	839.29	816.99	2173	2218	124.78	259.33	422.07	2584
754.00	841.87	819.57	2174	2219	124.39	258.61	421.03	2573
756.00	844.46	822.16	2175	2220	123.99	257.88	419.99	2592
758.00	846.99	824.69	2176	2221	123.62	257.19	419.00	2532
760.00	849.64	827.34	2177	2222	123.21	256.44	417.90	2655
762.00	852.40	830.10	2179	2224	122.77	255.62	416.71	2758
764.00	855.26	832.96	2181	2226	122.30	254.73	415.42	2858
766.00	858.09	835.79	2182	2228	121.84	253.88	414.17	2825

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
768.00	860.87	838.57	2184	2229	121.40	253.06	412.97	2788
770.00	863.96	<u>841.66</u>	2186	2232	120.86	252.04	411.46	3086
772.00	866.81	844.51	2188	2234	120.41	251.19	410.21	2846
774.00	869.47	847.17	2189	2235	120.02	250.46	409.15	2664
776.00	872.30	850.00	2191	2237	119.58	249.63	407.94	2827
778.00	875.23	852.93	2193	2239	119.11	248.74	406.63	2934
780.00	877.96	<u>855.66</u>	2194	2240	118.70	247.98	405.52	2730
782.00	880.75	<u>858.45</u>	2196	2242	118.28	247.19	404.37	2790
784.00	883.67	861.37	2197	2244	117.83	246.33	403.09	2918
786.00	886.58	864.28	2199	2246	117.37	245.48	401.83	2914
788.00	889.59	867.29	2201	2248	116.89	244.56	400.48	3010
790.00	892.47	<u>870.17</u>	2203	2250	116.46	243.75	399.28	2875
792.00	895.31	873.01	2205	2251	116.04	242.95	398.10	2845
794.00	898.36	876.06	2207	2254	115.56	242.03	396.74	2848
796.00	901.29	878.99	2209	2256	115.12	241.20	395.51	2930
798.00	904.00	881.70	2210	2257	114.74	240.50	394.48	2711
800.00	906.61	<u>884.31</u>	2211	2258	114.40	239.85	393.53	2614
802.00	909.33	<u>887.03</u>	2212	2259	114.03	239.16	392.51	2716
804.00	912.12	889.82	2213	2261	113.64	238.42	391.42	2795
806.00	915.15	892.85	2215	2263	113.19	237.55	390.13	3021
808.00	918.08	895.78	2217	2265	112.77	236.75	388.94	2930
810.00	920.83	<u>898.53</u>	2219	2266	112.40	236.05	387.90	2752
812.00	923.68	901.38	2220	2268	112.00	235.30	386.79	2848
814.00	926.60	904.30	2222	2270	111.59	234.51	385.62	2925

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
816.00	929.58	907.28	2224	2272	111.17	233.70	384.41	2977
818.00	932.34	910.04	2225	2273	110.81	233.01	383.39	2761
820.00	934.96	<u>912.66</u>	2226	2274	110.48	232.40	382.50	2622
822.00	937.75	915.45	2227	2275	110.12	231.71	381.46	2793
824.00	940.57	918.27	2229	2277	109.75	231.00	380.42	2815
826.00	943.67	921.37	2231	2279	109.30	230.14	379.13	3096
828.00	946.64	924.34	2233	2281	108.89	229.36	377.96	2979
830.00	949.65	<u>927.35</u>	2235	2283	108.48	228.56	376.77	3006
832.00	952.67	930.37	2236	2285	108.07	227.77	375.58	3016
834.00	955.64	933.34	2238	2287	107.67	227.00	374.43	2976
836.00	958.64	936.34	2240	2289	107.27	226.23	373.27	2994
838.00	961.66	939.36	2242	2291	106.86	225.44	372.09	3027
840.00	964.72	<u>942.42</u>	2244	2293	106.45	224.65	370.89	3057
842.00	967.83	945.53	2246	2295	106.03	223.83	369.66	3108
844.00	970.70	948.40	2247	2297	105.67	223.14	368.63	2870
846.00	973.47	951.17	2249	2298	105.34	222.51	367.69	2771
848.00	976.43	954.13	2250	2300	104.96	221.78	366.60	2962
850.00	979.50	<u>957.20</u>	2252	2302	104.56	221.01	365.43	3068
852.00	982.38	960.08	2254	2304	104.21	220.33	364.41	2880
854.00	985.25	962.95	2255	2305	103.87	219.66	363.41	2873
856.00	988.20	965.90	2257	2307	103.51	218.96	362.36	2949
858.00	991.20	968.90	2259	2309	103.13	218.24	361.27	3002
<u>860.00</u>	994.09	<u>971.79</u>	2260	2310	102.79	217.58	360.28	2881
862.00	997.00	974.70	2261	2312	102.45	216.91	359.26	2919

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	1000.03	977.73	2263	2314	102.07	216.18	358.17	3029
866.00	1002.93	980.63	2265	2315	101.73	215.53	357.18	2901
868.00	1005.78	983.48	2266	2317	101.41	214.90	356.24	2844
<u>870.00</u>	1008.71	<u>986.41</u>	2268	2318	101.07	214.24	355.24	2932
872.00	1011.72	989.42	2269	2320	100.71	213.54	354.19	3009
874.00	1014.67	992.37	2271	2322	100.37	212.88	353.18	2955
876.00	1017.55	995.25	2272	2323	100.05	212.25	352.23	2881
878.00	1020.60	998.30	2274	2325	99.69	211.55	351.17	3042
<u>880.00</u>	1023.64	<u>1001.34</u>	2276	2327	99.33	210.85	350.11	3042
882.00	1026.70	1004.40	2278	2329	98.98	210.15	349.05	3061
884.00	1029.58	1007.28	2279	2330	98.66	209.54	348.12	2885
886.00	1032.36	1010.06	2280	2331	98.37	208.98	347.27	2775
888.00	1035.12	1012.82	2281	2332	98.09	208.43	346.45	2756
890.00	1037.97	<u>1015.67</u>	2282	2334	97.79	207.84	345.55	2858
<u>892.00</u>	1041.04	<u>1018.74</u>	2284	2336	97.44	207.15	344.51	3069
894.00	1044.08	1021.78	2286	2337	97.10	206.49	343.49	3042
896.00	1047.19	1024.89	2288	2339	96.74	205.79	342.43	3105
898.00	1050.08	1027.78	2289	2341	96.44	205.20	341.53	2893
<u>900.00</u>	1052.84	<u>1030.54</u>	2290	2342	96.17	204.67	340.73	2758
902.00	1055.77	1033.47	2292	2343	95.86	204.06	339.81	2932
904.00	1059.08	1036.78	2294	2346	95.47	203.29	338.62	3306
906.00	1062.09	1039.79	2295	2347	95.15	202.66	337.66	3007
908.00	1065.15	1042.85	2297	2349	94.82	202.02	336.67	3061
<u>910.00</u>	1068.20	<u>1045.90</u>	2299	2351	94.50	201.37	335.69	3055

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
912.00	1071.06	1048.76	2300	2352	94.21	200.82	334.85	2854
914.00	1073.86	1051.56	2301	2353	93.95	200.29	334.05	2805
916.00	1076.87	1054.57	2303	2355	93.64	199.68	333.12	3003
918.00	1079.77	1057.47	2304	2356	93.35	199.12	332.26	2902
920.00	1082.67	1060.37	2305	2358	93.07	198.56	331.41	2896
922.00	1085.52	1063.22	2306	2359	92.79	198.03	330.59	2857
924.00	1088.31	1066.01	2307	2360	92.54	197.52	329.81	2790
926.00	1091.05	1068.75	2308	2361	92.29	197.03	329.07	2736
928.00	1093.98	1071.68	2310	2362	92.01	196.47	328.22	2927
930.00	1097.01	1074.71	2311	2364	91.70	195.88	327.31	3023
932.00	1099.85	1077.55	2312	2365	91.44	195.36	326.51	2842
934.00	1102.57	1080.27	2313	2366	91.20	194.89	325.80	2726
936.00	1105.40	1083.10	2314	2367	90.95	194.38	325.02	2823
938.00	1108.06	1085.76	2315	2367	90.72	193.94	324.35	2664
940.00	1110.89	1088.59	2316	2369	90.46	193.43	323.57	2834
942.00	1113.69	1091.39	2317	2370	90.22	192.95	322.83	2798
944.00	1116.67	1094.37	2319	2371	89.94	192.39	321.97	2977
946.00	1119.42	1097.12	2320	2372	89.70	191.92	321.26	2756
948.00	1121.97	1099.67	2320	2372	89.50	191.53	320.66	2547
950.00	1124.64	1102.34	2321	2373	89.28	191.10	320.00	2666
952.00	1127.29	1104.99	2321	2374	89.06	190.67	319.35	2653
954.00	1130.00	1107.70	2322	2374	88.84	190.23	318.67	2711
956.00	1132.70	1110.40	2323	2375	88.62	189.79	318.00	2699
958.00	1135.19	1112.89	2323	2375	88.43	189.42	317.45	2488

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
960.00	1137.80	1115.50	2324	2376	88.22	189.02	316.83	2611
962.00	1140.47	1118.17	2325	2376	88.01	188.59	316.18	2671
964.00	1143.05	1120.75	2325	2377	87.81	188.20	315.58	2577
966.00	1145.48	1123.18	2325	2377	87.64	187.86	315.06	2435
968.00	1148.18	1125.88	2326	2378	87.42	187.43	314.41	2694
970.00	1150.82	1128.52	2327	2378	87.21	187.02	313.79	2643
972.00	1153.65	1131.35	2328	2379	86.98	186.55	313.06	2832
974.00	1156.27	1133.97	2328	2380	86.78	186.16	312.46	2617
976.00	1158.86	1136.56	2329	2380	86.58	185.77	311.87	2593
978.00	1161.50	1139.20	2330	2381	86.38	185.37	311.26	2638
980.00	1163.96	1141.66	2330	2381	86.21	185.03	310.73	2464
982.00	1166.59	1144.29	2331	2381	86.01	184.64	310.13	2623
984.00	1169.20	1146.90	2331	2382	85.81	184.25	309.54	2617
986.00	1171.73	1149.43	2331	2382	85.63	183.90	308.99	2522
988.00	1174.25	1151.95	2332	2383	85.45	183.54	308.45	2529
990.00	1176.82	1154.52	2332	2383	85.27	183.17	307.89	2567
992.00	1179.45	1157.15	2333	2383	85.07	182.79	307.29	2625
994.00	1182.02	1159.72	2333	2384	84.89	182.42	306.73	2570
996.00	1184.59	1162.29	2334	2384	84.71	182.05	306.17	2575
998.00	1187.23	1164.93	2335	2385	84.51	181.67	305.58	2633
1000.00	1189.88	1167.58	2335	2385	84.32	181.29	304.99	2651
1002.00	1192.39	1170.09	2336	2386	84.15	180.94	304.46	2516
1004.00	1194.98	1172.68	2336	2386	83.96	180.58	303.90	2588
1006.00	1197.67	1175.37	2337	2387	83.77	180.18	303.29	2692

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM K9 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	1200.26	1177.96	2337	2387	83.58	179.82	302.74	2586
<u>1010.00</u>	1202.97	<u>1180.67</u>	2338	2388	83.38	179.42	302.12	2714
1012.00	1205.57	1183.27	2338	2388	83.20	179.06	301.56	2598
1014.00	1208.25	1185.95	2339	2389	83.01	178.68	300.97	2681
1016.00	1210.75	1188.45	2339	2389	82.84	178.35	300.46	2503
1018.00	1213.42	1191.12	2340	2390	82.66	177.97	299.87	2669
<u>1020.00</u>	1216.11	<u>1193.81</u>	2341	2390	82.46	177.59	299.28	2684
1022.00	1218.91	1196.61	2342	2391	82.26	177.17	298.64	2801
1024.00	1221.65	1199.35	2342	2392	82.06	176.77	298.02	2742
1026.00	1224.26	1201.96	2343	2392	81.88	176.42	297.47	2611
1028.00	1226.95	1204.65	2344	2393	81.69	176.04	296.89	2693
<u>1030.00</u>	1229.58	<u>1207.28</u>	2344	2393	81.52	175.69	296.34	2623
1032.00	1232.25	<u>1209.95</u>	2345	2394	81.33	175.32	295.76	2677
1034.00	1235.08	1212.78	2346	2395	81.13	174.90	295.12	2824
1036.00	1237.72	1215.42	2346	2395	80.95	174.54	294.56	2648
1038.00	1240.32	1218.02	2347	2396	80.78	174.20	294.03	2600
1040.00	1242.87	<u>1220.57</u>	2347	2396	80.61	173.88	293.53	2542
1042.00	1245.55	1223.25	2348	2397	80.43	173.51	292.96	2680
1044.00	1248.20	1225.90	2348	2397	80.26	173.16	292.41	2654
1046.00	1250.78	1228.48	2349	2398	80.09	172.82	291.90	2582
1048.00	1253.59	1231.29	2350	2398	79.89	172.43	291.28	2808
<u>1050.00</u>	1256.30	<u>1234.00</u>	2350	2399	79.71	172.06	290.71	2707
1052.00	1259.07	1236.77	2351	2400	79.52	171.68	290.11	2774
1054.00	1261.90	1239.60	2352	2401	79.32	171.28	289.48	2829

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	1264.69	1242.39	2353	2402	79.13	170.89	238.88	2791
1058.00	1267.47	1245.17	2354	2402	78.95	170.52	238.29	2777
1060.00	1270.06	1247.76	2354	2403	78.78	170.19	237.73	2591
1062.00	1272.69	1250.39	2355	2403	78.62	169.85	237.26	2629
1064.00	1275.37	1253.07	2355	2404	78.45	169.51	236.72	2683
1066.00	1277.96	1255.66	2356	2404	78.29	169.18	236.22	2588
1068.00	1280.54	1258.24	2356	2404	78.13	168.86	235.72	2585
1070.00	1283.24	1260.95	2357	2405	77.95	168.52	235.17	2700
1072.00	1285.96	1263.66	2358	2406	77.78	168.16	234.62	2716
1074.00	1288.53	1266.23	2358	2406	77.63	167.85	234.14	2568
1076.00	1291.13	1268.83	2358	2406	77.47	167.53	233.64	2599
1078.00	1293.79	1271.49	2359	2407	77.30	167.20	233.12	2663
1080.00	1296.39	1274.09	2359	2407	77.15	166.88	232.62	2602
1082.00	1299.04	1276.74	2360	2408	76.98	166.55	232.11	2652
1084.00	1301.71	1279.41	2361	2408	76.82	166.22	231.59	2664
1086.00	1304.38	1282.08	2361	2409	76.66	165.89	231.07	2673
1088.00	1307.05	1284.75	2362	2409	76.49	165.56	230.55	2671
1090.00	1309.74	1287.44	2362	2410	76.33	165.23	230.03	2684
1092.00	1312.37	1290.07	2363	2410	76.17	164.91	229.53	2637
1094.00	1315.04	1292.74	2363	2411	76.01	164.59	229.03	2664
1096.00	1317.72	1295.42	2364	2411	75.85	164.26	228.51	2681
1098.00	1320.46	1298.16	2365	2412	75.68	163.92	227.97	2747
1100.00	1323.15	1300.85	2365	2412	75.52	163.59	227.46	2689
1102.00	1325.85	1303.55	2366	2413	75.36	163.26	226.94	2700

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
1104.00	1328.62	1306.32	2367	2414	75.19	162.92	276.40	2767
1106.00	1331.40	1309.10	2367	2414	75.02	162.57	275.85	2782
1108.00	1334.13	1311.83	2368	2415	74.86	162.24	275.33	2725
1110.00	1336.81	1314.51	2368	2415	74.70	161.92	274.83	2679
1112.00	1339.51	1317.21	2369	2416	74.54	161.60	274.32	2702
1114.00	1342.29	1319.99	2370	2417	74.37	161.25	273.78	2785
1116.00	1345.13	1322.83	2371	2417	74.20	160.90	273.22	2839
1118.00	1347.97	1325.67	2371	2418	74.03	160.55	272.66	2834
1120.00	1350.77	1328.47	2372	2419	73.86	160.20	272.12	2810
1122.00	1353.56	1331.26	2373	2420	73.69	159.87	271.58	2785
1124.00	1356.37	1334.07	2374	2420	73.53	159.52	271.04	2806
1126.00	1359.07	1336.77	2374	2421	73.37	159.21	270.55	2707
1128.00	1361.75	1339.45	2375	2421	73.22	158.90	270.06	2679
1130.00	1364.60	1342.30	2376	2422	73.05	158.55	269.51	2852
1132.00	1367.41	1345.11	2377	2423	72.89	158.22	268.98	2803
1134.00	1370.54	1348.24	2378	2424	72.68	157.80	268.31	3125
1136.00	1373.44	1351.14	2379	2425	72.51	157.44	267.74	2903
1138.00	1376.26	1353.96	2380	2426	72.35	157.11	267.21	2817
1140.00	1379.12	1356.82	2380	2427	72.18	156.77	266.67	2865
1142.00	1381.83	1359.53	2381	2427	72.03	156.46	266.19	2706
1144.00	1384.49	1362.19	2381	2428	71.89	156.17	265.72	2667
1146.00	1387.18	1364.88	2382	2428	71.74	155.87	265.25	2680
1148.00	1389.88	1367.58	2383	2429	71.59	155.57	264.77	2709
1150.00	1392.61	1370.31	2383	2429	71.45	155.27	264.29	2726

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	1395.44	1373.14	2384	2430	71.29	154.94	263.77	2827
1154.00	1398.11	1375.81	2384	2431	71.15	154.65	263.31	2674
1156.00	1400.86	1378.56	2385	2431	71.00	154.34	262.82	2754
1158.00	1403.49	1381.19	2385	2432	70.86	154.06	262.38	2630
<u>1160.00</u>	<u>1406.15</u>	<u>1383.85</u>	2386	2432	70.72	153.78	261.94	2660
1162.00	1408.83	1386.53	2386	2432	70.58	153.49	261.48	2679
1164.00	1411.59	1389.29	2387	2433	70.43	153.19	261.00	2757
1166.00	1414.29	1391.99	2388	2434	70.29	152.90	260.54	2696
1168.00	1417.02	1394.72	2388	2434	70.15	152.60	260.07	2737
<u>1170.00</u>	1419.65	<u>1397.35</u>	2389	2434	70.02	152.33	259.63	2631
1172.00	1422.36	1400.06	2389	2435	69.88	152.05	259.18	2704
1174.00	1424.83	1402.58	2389	2435	69.76	151.80	258.79	2521
1176.00	1427.52	1405.22	2390	2435	69.62	151.53	258.35	2645
1178.00	1430.13	1407.83	2390	2436	69.49	151.26	257.94	2605
<u>1180.00</u>	1432.84	<u>1410.54</u>	2391	2436	69.36	150.98	257.48	2712
1182.00	1435.62	1413.32	2391	2437	69.21	150.68	257.01	2780
1184.00	1438.36	1416.06	2392	2437	69.07	150.39	256.55	2735
1186.00	1441.14	1418.84	2393	2438	68.93	150.09	256.07	2786
1188.00	1443.82	1421.52	2393	2438	68.79	149.82	255.63	2683
<u>1190.00</u>	1446.57	<u>1424.27</u>	2394	2439	68.65	149.53	255.18	2745
1192.00	1449.46	1427.16	2395	2440	68.50	149.21	254.67	2890
1194.00	1452.44	1430.14	2396	2441	68.34	148.87	254.12	2985
1196.00	1455.17	1432.87	2396	2441	68.20	148.59	253.68	2724
1198.00	1457.81	1435.51	2397	2442	68.07	148.33	253.26	2639

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/Geo M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
1200.00	1460.56	1438.26	2397	2442	67.94	148.05	252.81	2750
1202.00	1463.20	1440.90	2398	2443	67.81	147.79	252.40	2644
1204.00	1465.85	1443.55	2398	2443	67.68	147.53	251.98	2655
1206.00	1468.50	1446.20	2398	2443	67.56	147.27	251.57	2642
1208.00	1471.39	1449.09	2399	2444	67.41	146.96	251.07	2894
1210.00	1474.33	1452.03	2400	2445	67.26	146.64	250.56	2941
1212.00	1477.34	1455.04	2401	2446	67.09	146.31	250.02	3014
1214.00	1480.25	1457.95	2402	2447	66.95	146.00	249.52	2906
1216.00	1483.12	1460.82	2403	2448	66.80	145.70	249.04	2866
1218.00	1485.88	1463.58	2403	2448	66.67	145.43	248.60	2761
1220.00	1488.70	1466.40	2404	2449	66.53	145.14	248.14	2826
1222.00	1491.40	1469.10	2404	2449	66.40	144.88	247.72	2697
1224.00	1494.03	1471.73	2405	2450	66.28	144.63	247.33	2627
1226.00	1496.77	1474.47	2405	2450	66.16	144.37	246.90	2739
1228.00	1499.33	1477.03	2406	2450	66.04	144.14	246.53	2564
1230.00	1501.97	1479.67	2406	2451	65.93	143.89	246.14	2641
1232.00	1504.61	1482.31	2406	2451	65.81	143.65	245.75	2637
1234.00	1507.11	1484.81	2407	2451	65.70	143.43	245.40	2505
1236.00	1509.54	1487.24	2407	2451	65.60	143.22	245.08	2422
1238.00	1512.14	1489.84	2407	2451	65.49	142.99	244.70	2600
1240.00	1514.70	1492.40	2407	2451	65.38	142.76	244.34	2564
1242.00	1517.45	1495.15	2408	2452	65.25	142.50	243.92	2749
1244.00	1520.16	1497.86	2408	2452	65.13	142.25	243.51	2709
1246.00	1522.84	1500.54	2409	2453	65.01	142.00	243.11	2685

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
1248.00	1525.49	1503.19	2409	2453	64.89	141.76	242.72	2648
1250.00	1528.17	1505.87	2409	2453	64.78	141.51	242.33	2684
1252.00	1530.82	1508.52	2410	2454	64.66	141.28	241.95	2641
1254.00	1533.54	1511.24	2410	2454	64.54	141.02	241.54	2728
1256.00	1536.22	1513.92	2411	2455	64.42	140.78	241.15	2680
1258.00	1539.02	1516.72	2411	2455	64.30	140.52	240.73	2791
1260.00	1542.14	1519.84	2412	2456	64.14	140.19	240.19	3120
1262.00	1545.53	1523.23	2414	2458	63.95	139.79	239.55	3390
1264.00	1548.80	1526.50	2415	2460	63.78	139.43	238.96	3279
1266.00	1552.24	1529.94	2417	2461	63.59	139.04	238.32	3434
1268.00	1555.70	1533.40	2419	2463	63.40	138.64	237.66	3458
1270.00	1559.00	1536.70	2420	2465	63.23	138.27	237.07	3305
1272.00	1562.48	1540.18	2422	2467	63.04	137.87	236.42	3475
1274.00	1565.73	1543.43	2423	2468	62.87	137.53	235.86	3254
1276.00	1568.71	1546.41	2424	2469	62.73	137.24	235.39	2984
1278.00	1571.56	1549.26	2425	2470	62.61	136.98	234.96	2849
1280.00	1574.58	1552.28	2425	2471	62.47	136.68	234.49	3017
1282.00	1577.65	1555.36	2426	2472	62.32	136.38	233.99	3074
1284.00	1580.97	1558.67	2428	2473	62.15	136.03	233.42	3316
1286.00	1583.98	1561.68	2429	2474	62.02	135.74	232.95	3012
1288.00	1587.10	1564.80	2430	2475	61.87	135.43	232.45	3116
1290.00	1590.37	1568.07	2431	2477	61.71	135.09	231.89	3273
1292.00	1594.13	1571.83	2433	2479	61.50	134.64	231.16	3757
1294.00	1597.36	1575.06	2434	2481	61.34	134.32	230.62	3229

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	1600.13	1577.83	2435	2481	61.23	134.08	230.24	2768
1298.00	1603.26	1580.96	2436	2482	61.08	133.77	229.74	3140
1300.00	1606.30	<u>1584.00</u>	2437	2483	60.95	133.49	229.28	3035
1302.00	1609.28	1586.98	2438	2484	60.82	133.22	228.84	2980
1304.00	1612.30	1590.00	2439	2485	60.68	132.94	228.38	3021
1306.00	1615.52	1593.22	2440	2486	60.53	132.62	227.87	3219
1308.00	1618.56	1596.26	2441	2487	60.40	132.34	227.41	3042
1310.00	1621.63	<u>1599.33</u>	2442	2488	60.27	132.06	226.95	3067
1312.00	1624.73	<u>1602.43</u>	2443	2489	60.13	131.77	226.48	3101
1314.00	1627.74	1605.44	2444	2490	60.00	131.50	226.04	3007
1316.00	1630.62	1608.32	2444	2491	59.88	131.25	225.64	2881
1318.00	1633.74	1611.44	2445	2492	59.74	130.96	225.16	3126
1320.00	1636.87	<u>1614.57</u>	2446	2493	59.61	130.68	224.69	3127
1322.00	1640.09	<u>1617.79</u>	2447	2494	59.46	130.37	224.19	3220
1324.00	1643.29	1620.99	2449	2495	59.32	130.07	223.69	3201
1326.00	1646.12	1623.82	2449	2496	59.21	129.84	223.32	2828
1328.00	1649.15	1626.85	2450	2497	59.08	129.57	222.88	3034
1330.00	1652.38	<u>1630.08</u>	2451	2498	58.94	129.27	222.39	3227
1332.00	1655.75	<u>1633.45</u>	2453	2500	58.78	128.94	221.84	3374
1334.00	1658.92	1636.62	2454	2501	58.65	128.65	221.37	3166
1336.00	1662.13	1639.83	2455	2502	58.51	128.36	220.89	3206
1338.00	1665.11	1642.81	2456	2503	58.39	128.10	220.48	2987
1340.00	1668.21	<u>1645.91</u>	2457	2504	58.26	127.83	220.03	3096
1342.00	1671.23	1648.93	2457	2505	58.14	127.58	219.61	3021

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	1674.06	1651.76	2458	2505	58.03	127.35	219.25	2833
1346.00	1677.13	1654.83	2459	2506	57.90	127.09	218.81	3072
1348.00	1680.26	1657.96	2460	2507	57.78	126.81	218.37	3129
1350.00	<u>1683.53</u>	<u>1661.23</u>	2461	2508	57.63	126.52	217.88	3263
1352.00	1686.65	<u>1664.35</u>	2462	2509	57.51	126.25	217.44	3119
1354.00	1689.59	1667.29	2463	2510	57.39	126.01	217.05	2949
1356.00	1692.72	1670.42	2464	2511	57.27	125.74	216.61	3121
1358.00	1696.05	1673.75	2465	2512	57.12	125.44	216.11	3337
1360.00	<u>1699.20</u>	1676.90	2466	2514	57.00	125.17	215.66	3146
1362.00	1702.48	<u>1680.18</u>	2467	2515	56.86	124.88	215.19	3277
1364.00	1705.69	1683.39	2468	2516	56.73	124.60	214.73	3218
1366.00	1708.91	1686.61	2469	2517	56.60	124.32	214.27	3216
1368.00	1712.06	1689.76	2470	2518	56.47	124.06	213.83	3148
1370.00	<u>1715.06</u>	<u>1692.76</u>	2471	2519	56.36	123.82	213.44	3004
1372.00	1718.27	<u>1695.97</u>	2472	2520	56.23	123.54	212.99	3213
1374.00	1721.34	1699.04	2473	2521	56.11	123.30	212.58	3061
1376.00	1724.56	1702.26	2474	2522	55.98	123.02	212.13	3227
1378.00	1727.62	1705.32	2475	2523	55.87	122.78	211.73	3055
1380.00	<u>1730.71</u>	<u>1708.41</u>	2476	2524	55.75	122.53	211.32	3090
1382.00	1733.58	1711.28	2477	2525	55.65	122.32	210.97	2877
1384.00	1736.78	1714.48	2478	2526	55.52	122.05	210.54	3198
1386.00	1739.66	1717.36	2478	2526	55.42	121.84	210.19	2874
1388.00	1742.47	1720.17	2479	2527	55.33	121.64	209.86	2817
1390.00	<u>1745.73</u>	<u>1723.43</u>	2480	2528	55.20	121.37	209.41	3259

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/Geo M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
1392.00	1748.71	1726.41	2480	2529	55.09	121.14	209.04	2983
1394.00	1751.76	1729.46	2481	2529	54.98	120.91	208.65	3046
1396.00	1754.91	1732.61	2482	2530	54.86	120.65	208.24	3148
1398.00	1758.07	1735.77	2483	2531	54.75	120.40	207.82	3139
1400.00	1761.21	1738.91	2484	2532	54.63	120.16	207.41	3167
1402.00	1764.37	1742.07	2485	2533	54.51	119.91	207.00	3212
1404.00	1767.58	1745.28	2486	2534	54.39	119.65	206.58	3166
1406.00	1770.75	1748.45	2487	2535	54.27	119.40	206.17	2363
1408.00	1773.11	1750.81	2487	2535	54.21	119.27	205.95	2578
1410.00	1775.69	1753.39	2487	2535	54.13	119.10	205.68	2773
1412.00	1778.46	1756.16	2487	2536	54.04	118.92	205.37	3261
1414.00	1781.73	1759.43	2489	2537	53.92	118.66	204.94	3277
1416.00	1785.00	1762.70	2490	2538	53.80	118.39	204.51	3211
1418.00	1788.21	1765.91	2491	2539	53.68	118.14	204.09	3148
1420.00	1791.36	1769.06	2492	2540	53.57	117.90	203.70	3090
1422.00	1794.45	1772.15	2492	2541	53.46	117.67	203.32	3098
1424.00	1797.55	1775.25	2493	2542	53.35	117.44	202.94	3197
1426.00	1800.75	1778.45	2494	2543	53.24	117.20	202.54	2886
1428.00	1803.63	1781.33	2495	2543	53.14	117.00	202.21	2743
1430.00	1806.38	1784.08	2495	2544	53.06	116.83	201.92	3167
1432.00	1809.54	1787.24	2496	2545	52.95	116.59	201.53	3097
1434.00	1812.64	1790.34	2497	2545	52.84	116.36	201.15	3087
1436.00	1815.73	1793.43	2498	2546	52.74	116.14	200.78	3180
1438.00	1818.91	1796.61	2499	2547	52.63	115.90	200.39	

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
1440.00	1822.13	1799.83	2500	2548	52.51	115.66	199.99	3222
1442.00	1825.51	1803.21	2501	2550	52.39	115.40	199.55	3378
1444.00	1828.88	1806.58	2502	2551	52.26	115.13	199.11	3374
1446.00	1832.20	1809.90	2503	2552	52.15	114.88	198.69	3317
1448.00	1835.57	1813.27	2505	2553	52.02	114.62	198.26	3377
1450.00	1838.94	1816.64	2506	2555	51.90	114.36	197.83	3362
1452.00	1842.28	1819.98	2507	2556	51.78	114.11	197.41	3341
1454.00	1845.63	1823.33	2508	2557	51.66	113.85	196.99	3352
1456.00	1848.96	1826.66	2509	2559	51.55	113.60	196.57	3332
1458.00	1852.32	1830.02	2510	2560	51.43	113.35	196.15	3361
1460.00	1855.70	1833.40	2512	2561	51.31	113.10	195.73	3373
1462.00	1859.02	1836.72	2513	2562	51.20	112.85	195.32	3322
1464.00	1862.35	1840.05	2514	2563	51.08	112.61	194.91	3328
1466.00	1865.66	1843.36	2515	2565	50.97	112.36	194.51	3319
1468.00	1868.97	1846.67	2516	2566	50.85	112.12	194.11	3306
1470.00	1872.40	1850.10	2517	2567	50.73	111.87	193.68	3426
1472.00	1875.75	1853.45	2518	2568	50.62	111.62	193.27	3353
1474.00	1879.09	1856.79	2519	2570	50.51	111.38	192.87	3343
1476.00	1882.45	1860.15	2521	2571	50.39	111.14	192.47	3354
1478.00	1885.86	1863.56	2522	2572	50.28	110.89	192.05	3419
1480.00	1889.46	1867.16	2523	2574	50.15	110.61	191.59	3596
1482.00	1892.84	1870.54	2524	2575	50.03	110.37	191.18	3383
1484.00	1896.10	1873.80	2525	2576	49.93	110.14	190.81	3256
1486.00	1899.71	1877.41	2527	2578	49.80	109.87	190.35	3615

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	1903.17	1880.87	2528	2579	49.68	109.61	189.93	3453
1490.00	<u>1906.56</u>	<u>1884.26</u>	2529	2580	49.57	109.37	189.53	3389
1492.00	1909.95	1887.65	2530	2582	49.46	109.13	189.13	3399
1494.00	1913.33	1891.03	2531	2583	49.35	108.90	188.73	3371
1496.00	1916.66	1894.36	2533	2584	49.24	108.67	188.35	3334
1498.00	1919.91	1897.61	2534	2585	49.14	108.45	187.99	3249
1500.00	<u>1923.33</u>	<u>1901.03</u>	2535	2586	49.03	108.21	187.59	3420
1502.00	1926.65	1904.35	2536	2588	48.92	107.99	187.21	3319
1504.00	1930.31	1908.01	2537	2589	48.80	107.72	186.76	3664
1506.00	1933.77	1911.47	2538	2591	48.68	107.47	186.35	3458
1508.00	1937.26	1914.96	2540	2592	48.57	107.23	185.94	3489
1510.00	<u>1940.65</u>	<u>1918.35</u>	2541	2593	48.46	107.00	185.56	3390
1512.00	<u>1944.10</u>	1921.80	2542	2595	48.35	106.76	185.16	3448
1514.00	1946.77	1924.47	2542	2595	48.29	106.62	184.93	2673
1516.00	1950.20	1927.90	2543	2596	48.18	106.39	184.54	3427
1518.00	1953.53	1931.23	2544	2597	48.08	106.17	184.18	3337
1520.00	<u>1956.87</u>	<u>1934.57</u>	2545	2598	47.97	105.95	183.81	3341
1522.00	1960.23	1937.93	2547	2599	47.87	105.73	183.44	3358
1524.00	1963.77	1941.47	2548	2601	47.76	105.49	183.03	3535
1526.00	1967.24	1944.94	2549	2602	47.65	105.25	182.64	3473
1528.00	1970.60	1948.30	2550	2603	47.55	105.04	182.28	3354
1530.00	<u>1974.03</u>	<u>1951.73</u>	2551	2604	47.44	104.81	181.90	3437
1532.00	1977.55	1955.25	2553	2606	47.33	104.57	181.50	3522
1534.00	1980.88	1958.58	2554	2607	47.23	104.36	181.15	3330

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
1536.00	1984.36	1962.06	2555	2608	47.13	104.13	180.76	3480
1538.00	1987.68	1965.38	2556	2609	47.03	103.92	180.41	3316
1540.00	<u>1990.94</u>	<u>1968.64</u>	2557	2610	46.94	103.72	180.08	3255
1542.00	1994.24	1971.94	2558	2611	46.84	103.52	179.74	3304
1544.00	1997.85	1975.55	2559	2613	46.73	103.28	179.33	3609
1546.00	2001.17	1978.87	2560	2614	46.63	103.07	178.99	3323
1548.00	2004.62	1982.32	2561	2615	46.53	102.85	178.62	3451
1550.00	<u>2008.21</u>	<u>1985.91</u>	2562	2617	46.42	102.61	178.22	3582
1552.00	2011.65	1989.35	2564	2618	46.32	102.40	177.85	3440
1554.00	2015.06	1992.76	2565	2619	46.22	102.18	177.50	3416
1556.00	2018.41	1996.11	2566	2620	46.13	101.98	177.15	3353
1558.00	2021.73	1999.43	2567	2621	46.03	101.78	176.82	3319
1560.00	<u>2025.29</u>	<u>2002.99</u>	2568	2623	45.93	101.55	176.43	3557
1562.00	2028.54	2006.24	2569	2623	45.84	101.36	176.12	3253
1564.00	2031.96	2009.66	2570	2625	45.74	101.15	175.77	3416
1566.00	2035.33	2013.03	2571	2626	45.65	100.95	175.43	3372
1568.00	2038.74	2016.44	2572	2627	45.55	100.74	175.08	3413
1570.00	<u>2042.29</u>	<u>2019.99</u>	2573	2628	45.45	100.52	174.70	3543
1572.00	2045.78	2023.48	2574	2629	45.35	100.31	174.34	3495
1574.00	2049.21	2026.91	2575	2631	45.25	100.10	173.99	3432
1576.00	2052.73	2030.43	2577	2632	45.15	99.88	173.63	3516
1578.00	2056.19	2033.89	2578	2633	45.06	99.67	173.28	3460
1580.00	<u>2059.66</u>	<u>2037.36</u>	2579	2634	44.96	99.47	172.93	3470
1582.00	2063.03	2040.73	2580	2635	44.87	99.27	172.60	3375

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	2066.56	2044.26	2581	2637	44.77	99.05	172.24	3530
1586.00	2069.91	2047.61	2582	2638	44.68	98.86	171.92	3350
1588.00	2072.74	2050.44	2582	2638	44.62	98.73	171.69	2827
1590.00	<u>2075.78</u>	<u>2053.48</u>	2583	2639	44.54	98.57	171.43	3035
1592.00	<u>2078.39</u>	2056.09	2583	2639	44.49	98.46	171.24	2617
1594.00	2081.51	2059.21	2584	2639	44.41	98.29	170.96	3116
1596.00	2084.49	2062.19	2584	2640	44.35	98.15	170.71	2981
1598.00	2088.51	2066.21	2586	2642	44.22	97.87	170.25	4023
1600.00	<u>2093.31</u>	<u>2071.01</u>	2589	2646	44.04	97.48	169.60	4799
1602.00	2096.52	2074.22	2590	2646	43.96	97.31	169.31	3211
1604.00	2099.32	2077.02	2590	2647	43.90	97.19	169.10	2796
1606.00	2102.25	2079.95	2590	2647	43.84	97.05	168.86	2929
1608.00	2106.34	2084.04	2592	2649	43.71	96.77	168.39	4093
1610.00	<u>2111.41</u>	<u>2089.11</u>	2595	2654	43.51	96.35	167.68	5067
1612.00	2115.50	2093.20	2597	2656	43.39	96.07	167.22	4090
1614.00	2119.35	2097.05	2599	2658	43.28	95.83	166.81	3851
1616.00	2122.62	2100.32	2599	2659	43.20	95.66	166.52	3273
1618.00	2126.29	2103.99	2601	2660	43.10	95.45	166.16	3664
1620.00	<u>2130.24</u>	<u>2107.94</u>	2602	2662	42.98	95.20	165.74	3951
1622.00	2134.08	2111.78	2604	2664	42.88	94.97	165.34	3839
1624.00	2138.00	2115.70	2606	2666	42.76	94.72	164.93	3923
1626.00	2140.99	2118.69	2606	2666	42.70	94.58	164.70	2995
1628.00	2144.54	2122.24	2607	2667	42.61	94.39	164.36	3551
1630.00	<u>2149.36</u>	<u>2127.06</u>	2610	2671	42.44	94.02	163.75	4815

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY FROM SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
1632.00	2153.62	2131.32	2612	2674	42.31	93.74	163.27	4257
1634.00	2157.49	2135.19	2613	2675	42.20	93.51	162.88	3876
1636.00	2160.42	2138.12	2614	2676	42.14	93.38	162.66	2932
1638.00	2164.01	2141.71	2615	2677	42.05	93.18	162.33	3588
1640.00	<u>2167.46</u>	<u>2145.16</u>	2616	2678	41.97	93.00	162.02	3444
1642.00	2170.69	2148.39	2617	2679	41.90	92.85	161.76	3236
1644.00	2173.86	2151.56	2617	2680	41.83	92.70	161.50	3166
1646.00	2178.08	2155.78	2619	2682	41.70	92.43	161.05	4226
1648.00	2183.00	2160.70	2622	2686	41.54	92.06	160.43	4919
1650.00	<u>2187.25</u>	<u>2164.95</u>	2624	2688	41.41	91.79	159.97	4251
1652.00	2191.64	2169.34	2626	2691	41.28	91.51	159.49	4383
1654.00	2195.70	2173.40	2628	2693	41.17	91.27	159.08	4060
1656.00	2199.69	2177.39	2630	2695	41.06	91.04	158.69	3993
1658.00	2203.58	2181.28	2631	2697	40.96	90.82	158.31	3888
1660.00	<u>2207.84</u>	<u>2185.54</u>	2633	2699	40.84	90.55	157.87	4264
1662.00	2211.64	2189.34	2635	2701	40.75	90.35	157.51	3801
1664.00	2215.07	2192.77	2636	2702	40.67	90.18	157.23	3425
1666.00	2218.39	2196.09	2636	2703	40.60	90.02	156.97	3327
1668.00	2221.68	2199.38	2637	2703	40.53	89.87	156.71	3282
1670.00	2225.62	2203.32	2639	2705	40.42	89.65	156.34	3944
1672.00	<u>2229.30</u>	<u>2207.00</u>	2640	2707	40.34	89.46	156.01	3679
1674.00	2232.83	2210.53	2641	2708	40.26	89.28	155.72	3530
1676.00	2236.35	2214.05	2642	2709	40.18	89.11	155.42	3519
1678.00	2239.89	2217.59	2643	2710	40.10	88.94	155.13	3542

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
1630.00	<u>2243.56</u>	<u>2221.26</u>	2644	2711	40.01	88.75	154.81	3670
1682.00	2247.18	2224.88	2646	2713	39.93	88.57	154.51	3624
1684.00	2252.08	2229.78	2648	2716	39.77	88.24	153.94	4899
1686.00	2256.17	2233.87	2650	2718	39.67	88.01	153.55	4082
1688.00	2260.12	2237.82	2651	2720	39.57	87.80	153.19	3953
1690.00	2264.20	2241.90	2653	2722	39.47	87.57	152.81	4082
1692.00	<u>2267.97</u>	<u>2245.67</u>	2654	2724	39.38	87.38	152.49	3773
1694.00	2271.41	2249.11	2655	2724	39.31	87.22	152.22	3441
1696.00	2275.09	2252.79	2657	2726	39.23	87.04	151.91	3673
1698.00	2278.56	2256.26	2658	2727	39.15	86.88	151.64	3472
1700.00	<u>2281.92</u>	<u>2259.62</u>	2658	2728	39.08	86.74	151.39	3361
1702.00	2285.56	2263.26	2660	2729	39.00	86.56	151.09	3643
1704.00	2289.15	2266.85	2661	2730	38.93	86.39	150.81	3582
1706.00	2292.62	2270.32	2662	2731	38.85	86.24	150.54	3472
1708.00	2296.43	2274.13	2663	2733	38.77	86.05	150.22	3810
1710.00	<u>2299.74</u>	<u>2277.44</u>	2664	2733	38.70	85.90	149.98	3317
1712.00	2303.19	2280.89	2665	2734	38.63	85.75	149.72	3448
1714.00	2306.70	2284.40	2666	2735	38.56	85.59	149.45	3508
1716.00	2310.41	2288.11	2667	2737	38.48	85.42	149.15	3711
1718.00	2314.34	2292.04	2668	2738	38.39	85.22	148.81	3929
1720.00	<u>2318.30</u>	<u>2296.00</u>	2670	2740	38.29	85.02	148.47	3961
1722.00	2322.01	2299.71	2671	2741	38.21	84.84	148.18	3704
1724.00	2325.79	2303.49	2672	2743	38.13	84.66	147.87	3787
1726.00	2329.89	2307.59	2674	2745	38.03	84.45	147.51	4099

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	2333.67	2311.37	2675	2746	37.95	84.27	147.20	3780
1730.00	2337.49	2315.19	2677	2748	37.87	84.09	146.89	3814
1732.00	2341.23	2318.94	2678	2749	37.79	83.92	146.60	3749
1734.00	2344.82	2322.52	2679	2750	37.72	83.76	146.33	3589
1736.00	2348.94	2326.64	2680	2752	37.62	83.55	145.97	4111
1738.00	2352.72	2330.42	2682	2753	37.54	83.38	145.67	3786
1740.00	2356.40	2334.10	2683	2755	37.46	83.21	145.39	3680
1742.00	2360.17	2337.87	2684	2756	37.38	83.04	145.10	3767
1744.00	2363.90	2341.60	2685	2757	37.31	82.87	144.81	3733
1746.00	2367.92	2345.62	2687	2759	37.22	82.67	144.48	4023
1748.00	2372.03	2349.73	2688	2761	37.12	82.47	144.13	4104
1750.00	2376.08	2353.78	2690	2763	37.04	82.28	143.80	4047
1752.00	2380.00	2357.70	2691	2765	36.95	82.09	143.49	3929
1754.00	2383.78	2361.48	2693	2766	36.87	81.93	143.20	3776
1756.00	2387.89	2365.59	2694	2768	36.78	81.73	142.86	4108
1758.00	2391.96	2369.66	2696	2770	36.69	81.53	142.53	4076
1760.00	2396.08	2373.78	2697	2772	36.60	81.33	142.19	4115
1762.00	2399.67	2377.37	2698	2773	36.53	81.18	141.94	3589
1764.00	2403.29	2380.99	2700	2774	36.47	81.03	141.68	3622
1766.00	2406.99	2384.69	2701	2775	36.39	80.88	141.41	3703
1768.00	2410.61	2388.31	2702	2776	36.32	80.73	141.15	3615
1770.00	2414.48	2392.18	2703	2778	36.25	80.55	140.86	3873
1772.00	2418.22	2395.92	2704	2779	36.17	80.40	140.59	3737
1774.00	2421.87	2399.57	2705	2780	36.10	80.24	140.33	3654

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
1776.00	2425.79	2403.49	2707	2781	36.02	80.07	140.04	3919
1778.00	2429.54	2407.24	2708	2783	35.95	79.91	139.77	3749
1780.00	2433.21	2410.91	2709	2784	35.88	79.76	139.51	3672
1782.00	2437.20	2414.90	2710	2786	35.80	79.58	139.20	3990
1784.00	2441.21	2418.91	2712	2787	35.72	79.41	138.90	4003
1786.00	2445.22	2422.92	2713	2789	35.64	79.23	138.59	4013
1788.00	2449.35	2427.05	2715	2791	35.55	79.04	138.27	4133
1790.00	2453.48	2431.18	2716	2793	35.47	78.85	137.95	4123
1792.00	2457.22	2434.92	2718	2794	35.40	78.70	137.69	3746
1794.00	2460.94	2438.64	2719	2795	35.33	78.55	137.44	3715
1796.00	2464.70	2442.40	2720	2796	35.26	78.40	137.17	3765
1798.00	2468.82	2446.52	2721	2798	35.17	78.21	136.86	4117
1800.00	2472.92	2450.62	2723	2800	35.09	78.03	136.55	4102
1802.00	2477.01	2454.71	2724	2802	35.01	77.85	136.25	4086
1804.00	2481.00	2458.70	2726	2803	34.93	77.68	135.95	3991
1806.00	2485.05	2462.75	2727	2805	34.85	77.51	135.66	4056
1808.00	2489.01	2466.71	2729	2807	34.78	77.34	135.37	3955
1810.00	2492.95	2470.65	2730	2808	34.70	77.18	135.09	3945
1812.00	2496.89	2474.59	2731	2810	34.63	77.02	134.82	3933
1814.00	2500.90	2478.60	2733	2811	34.55	76.85	134.53	4013
1816.00	2504.89	2482.59	2734	2813	34.48	76.69	134.25	3990
1818.00	2508.78	2486.48	2735	2814	34.40	76.53	133.98	3895
1820.00	2512.80	2490.50	2737	2816	34.33	76.36	133.69	4017
1822.00	2516.90	2494.60	2738	2817	34.25	76.19	133.40	4102

COMPANY : ESSO AUSTRALIA LTD.

WELL : KIPPER - 2

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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
								3860
1824.00	2520.76	2498.46	2740	2819	34.18	76.04	133.14	3945
1826.00	2524.71	2502.41	2741	2820	34.11	75.88	132.87	4023
1828.00	2528.73	2506.43	2742	2822	34.03	75.72	132.59	3901
1830.00	<u>2532.63</u>	<u>2510.33</u>	2744	2823	33.96	75.56	132.33	3860
1832.00	2536.49	2514.19	2745	2825	33.89	75.41	132.07	3848
1834.00	2540.34	2518.04	2746	2826	33.83	75.27	131.82	3907
1836.00	2544.25	2521.95	2747	2827	33.76	75.12	131.56	3980
1838.00	2548.23	2525.93	2749	2829	33.69	74.96	131.29	3995
1840.00	<u>2552.22</u>	<u>2529.92</u>	2750	2830	33.61	74.80	131.02	4083
1842.00	2556.30	2534.00	2751	2832	33.54	74.64	130.74	3992
1844.00	2560.30	2538.00	2753	2834	33.47	74.48	130.47	3953
1846.00	2564.25	2541.95	2754	2835	33.40	74.33	130.21	4000
1848.00	2568.25	2545.95	2755	2837	33.33	74.17	129.94	4044
1850.00	<u>2572.29</u>	<u>2549.99</u>	2757	2838	33.25	74.01	129.67	4168
1852.00	2576.46	<u>2554.16</u>	2758	2840	33.18	73.85	129.38	3983
1854.00	2580.44	2558.14	2760	2841	33.11	73.70	129.12	3978
1856.00	2584.42	2562.12	2761	2843	33.04	73.54	128.86	3978
1858.00	2588.40	2566.10	2762	2844	32.97	73.39	128.60	3978
1860.00	<u>2592.38</u>	<u>2570.08</u>	2764	2846	32.90	73.24	128.35	3978
1862.00	2596.36	2574.06	2765	2847	32.83	73.10	128.09	

PE603410

This is an enclosure indicator page.
The enclosure PE603410 is enclosed within the
container PE906060 at this location in this
document.

The enclosure PE603410 has the following characteristics:

ITEM_BARCODE = PE603410
CONTAINER_BARCODE = PE906060
 NAME = Raw and Stacked Checkshot Data
 BASIN = GIPPSLAND
 PERMIT = VIC/P19
 TYPE = WELL
 SUBTYPE = VELOCITY_CHART
DESCRIPTION = Raw and stacked checkshot data
 (enclosure from appendix 5 of WCR
 vol.1--attachment to WCR) for Kipper-2
REMARKS =
DATE_CREATED = 14/05/1987
DATE_RECEIVED = 31/08/1987
 W_NO = W953
 WELL_NAME = KIPPER-2
 CONTRACTOR = SCHLUMBERGER
 CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603411

This is an enclosure indicator page.
The enclosure PE603411 is enclosed within the
container PE906060 at this location in this
document.

The enclosure PE603411 has the following characteristics:

- ITEM_BARCODE = PE603411
- CONTAINER_BARCODE = PE906060
 - NAME = Seismic Calibration Log
 - BASIN = GIPPSLAND
 - PERMIT = VIC/P19
 - TYPE = WELL
 - SUBTYPE = WELL_LOG
- DESCRIPTION = Seismic Calibration Log (enclosure from
appendix 5 of WCR vol.1--attachment to
WCR) for Kipper-2
- REMARKS =
- DATE_CREATED = 14/05/1987
- DATE_RECEIVED = 31/08/1987
- W_NO = W953
- WELL_NAME = KIPPER-2
- CONTRACTOR = SCHLUMBERGER
- CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)

PE603412

This is an enclosure indicator page.
The enclosure PE603412 is enclosed within the
container PE906060 at this location in this
document.

The enclosure PE603412 has the following characteristics:

ITEM_BARCODE = PE603412
CONTAINER_BARCODE = PE906060
NAME = Seismic Calibration Log
BASIN = GIPPSLAND
PERMIT = VIC/P19
TYPE = WELL
SUBTYPE = WELL_LOG
DESCRIPTION = Seismic Calibration Log (Adjusted
continuous velocity log or time-depth
curve), form appendix 5 of WCR
vol.1--attacment to WCR, for Kipper-2
REMARKS =
DATE_CREATED = 14/05/1987
DATE_RECEIVED = 31/08/1987
W_NO = W953
WELL_NAME = KIPPER-2
CONTRACTOR = SCHLUMBERGER
CLIENT_OP_CO = ESSO AUSTRALIA LIMITED

(Inserted by DNRE - Vic Govt Mines Dept)