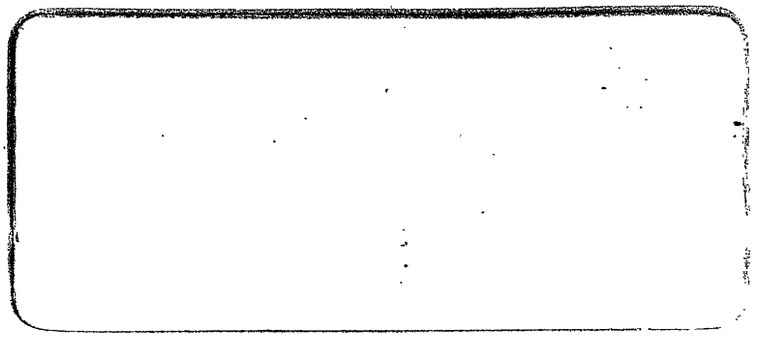

SHELL AUSTRALIA E. & P. OIL AND GAS

JUDITH-1
WELL COMPLETION REPORT
GIPPSLAND BASIN
VIC/P11

VOLUME 1
BASIC DATA

SOUTHERN TEAM/PETROLEUM
ENGINEERING/DRILLING
OPERATIONS

JUNE 1990

Keywords: Exploration, casing, cement, mud log, wireline, RFT, sidewall core, velocity survey, deviation, lithological.

THE SHELL COMPANY OF AUSTRALIA LIMITED
1 SPRING STREET, MELBOURNE, VIC. 3000

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1. INTRODUCTION

Judith-1 was drilled by the semi-submersible drilling unit 'Southern Cross'. Operations commenced on 12 October, 1989 with the rig move from Esso's Trumpeter-1 location. Judith-1 was spudded on 14 October, 1989 and reached a total depth of 2958m on 16 November after a total of 29.4 days drilling. This drilling time includes a total of 8.2 days lost owing to the rig being blown off location during a severe storm.

The well was plugged and abandoned on 21 November, 1989 after a total of 39.9 days of operations.

2. WELL DATA

Note: Unless otherwise stated all depths refer to meters below derrick floor (bdf).

Well :	Judith-1
Well Type :	Exploration
Operator :	The Shell Company of Australia Limited (29 1/6%)
Joint Venture Partner :	Gas & Fuel Exploration N.L. (70 5/6%)
Location :	Latitude 38° 09'18.47" S Longitude 148° 33'20.11" E Easting 636296.6 Northing 5775813.6
Drilling Contractor :	South Seas Drilling Company. (The drilling unit was managed on Shell's behalf by Esso Australia Limited).
Drilling Unit:	'Southern Cross' (Semi-Submersible)
Permanent Datum :	Mean Sea Level msl
Derrick Floor Elevation :	21m above msl
Water Depth :	76.4m below msl
Total Depth :	2958m
Start of Operations :	1615 hours 12 October, 1989
Spudded :	1200 hours 14 October, 1989
Drilling Completed :	2130 hours 16 November, 1989
Rig Released :	1500 hours 21 November, 1989
Total Days :	39.9 (Start to rig release)
Well Status :	Plugged and Abandoned
Total Well Cost :	$ 5.7 million

2. WELL DATA (Cont'd.)

Hole size and depth :	26" to 220m	
	17 1/2" to 815m	
	12 1/4" to 2317m	
	8 1/2" to 2958m	
Casing Summary : (Table 1)	Top 18 3/4" Vetco SG5 Wellhead at 95m	
	20" to 213m	
	13 3/8" to 796m	
	9 5/8" to 2300m	
Wireline Logging :	SUITE-1	Interval Logged
	DLL-GR-CAL	213.0 - 807.0m
	BHC-GR-CAL	213.0 - 800.0m
	(GR to seabed)	
	SUITE-2	
	a) DLL-MSFL-LDL-CNL-GR	798.0 - 2166.5m
	a) SLS-GR-CAL	798.0 - 2158.0m
	b) DLL-MSFL-LDL-CNL-GR	2100.0 - 2315.0m
	b) SLS-GR-CAL	2100.0 - 2306.5m
	(MSFL & CNL to 1400m)	
	SUITE-3	
	SHDT-GR	1900.0 - 2309.0m
	CST	Shot 60, Recovered 58, Lost 1, Empty 1.
	SUITE-4	
	DLL-MSFL-LDL-CNL-GR	2303.0 - 2955.8m
	BHC-GR-CAL	2303.0 - 2948.0m
	SHDT-GR	2303.0 - 2960.0m
	WST	17 levels recorded
	RFT	35 Pressure Tests
	CST	Shot 30, Recovered 17, Lost 10, Empty 3.
Wireline Logging Contractor :	Schlumberger Seaco Inc.	
Production Testing :	None Performed	
Abandonment Plugs : (Figure - 3)	Plug 1A	2763 - 2900m
	Plug 1B	2625 - 2763m
	Plug 1C	2487 - 2625m
	Plug 1D	2362 - 2487m
	Plug 2	2221 - 2362m
	Plug 3	280 - 380m
	Plug 4	130 - 230m
	Bridge Plugs	
	13 3/8"	250m
	9 5/8"	2190m

3. DRILLING OPERATIONS

3.1 Site Survey

A site survey specific to the Judith-1 location was not undertaken. It was considered that the combination of the site survey conducted at Kipper along with the extensive 3D seismic survey data over the Judith location were sufficient to provide the necessary information relating to the bathymetry and likelihood of shallow gas at the location. Seismic data and the Kipper bathymetry surveys indicate a south easterly dipping sea floor with a dip of approximately two degrees.

Shallow gas pockets were not indicated on any of the seismic sections acquired over the location.

3.2 Rig Navigation & Positioning

Rig positioning was carried out by Associated Surveys International Pty. Ltd. Equipment used in positioning the rig included the Trisponder Radio Positioning System (RPS) which is permanently installed on the rig, and a Syledis radio positioning system coupled to a Minitrac navigation system. The final rig position was confirmed with a GPS satellite positioning system.

A summary of the final location results is given below:-

Position from:

Trisponder	E 636292.8 N 5775815.5
Syledis	E 636292.3 N 5775813.9
Mean Accepted Position	E 636292.5 N 5775814.7
Heading	230° True
Latitude	38° 09' 18.47" S
Longitude	148° 33' 20.11" E

A translocated GPS position obtained on the evening of 14th October, 1989 gave a final position of E 636296.6 N 5775813.6 which confirmed the above co-ordinates to be within the accuracies of the systems employed.

3.3 Drilling Operations Summary

Rig Move

The semi-submersible drilling unit 'Southern Cross' was released from Esso's Trumpeter-1 location at 1615 hours on 12 October, 1989. The rig was towed to the Judith-A location using the 'Lady Caroline' supply vessel and arrived on location at 2130 hours on 12 October, 1989. The rig move distance was 35km.

On arrival at the location the weather was too severe for anchor handling and a total of 8.5 hours was spent waiting on weather. Anchor handling then proceeded. The rig was ballasted to its drilling draft and readied for drilling operations by 2300 hours on 13 October, 1989.

26" hole for 20" casing

After running the Temporary Guide Base (TGB), the seabed having been tagged at 76.4m, a 26" bit was made up and the well was spudded at 1200 hours on 14 October, 1989. The 26" hole was drilled to a depth of 220m. A total of 10 joints (including the 18.75" Vetco SG5 wellhead joint) of 20", X56, 94 lbs/ft casing were run and cemented with 750 sacks (94 lbs) of Class G cement mixed with seawater containing 2.2% pre-hydrated gel (to give a slurry specific gravity of 1.58), followed by a tail slurry of 600 sacks of Class G cement mixed with seawater with 1.5% w/w calcium chloride (slurry 1.90 sg.).

Cement returns were monitored at the seabed using the ROV. After running and landing the BOPs the casing was tested to 3,447 kPa.

17 1/2" hole for 13 3/8" casing

A 17 1/2" hole was drilled from 220m to 815m. Overpull of 55,625 daN was recorded on a wiper trip from bottom. On running back in the hole, six meters of fill was found on bottom. This fill was washed out and after pumping an 8 m^3 viscous pill the drill string was recovered from the hole with no overpull.

Schlumberger then logged with a Super Combo tool, including the DLL-MSFL-GR-SP and BHC-GR-CAL.

The 13 3/8" casing string was then run comprising:-

2 joints 54.5 lbs/ft K-55 BTC (float shoe and collar joints)
56 joints 61.0 lbs/ft K-55 BTC
1 joint 68.0 lbs/ft K-55 BTC (wellhead pup joint)

This string was cemented with 1000 sacks of Class G cement mixed with seawater to give a slurry of 1.90 sg. The estimated top of cement was 298m. The casing was pressure tested to 19,500 kPa.

After setting the Vetco SG5 wellhead pack off, the BOPs were tested to 13,800 kPa.

12 1/4" hole for 9 5/8" casing

After making up the 12 1/4" bottom hole assembly and tagging the top of cement at 772m, the cement, shoe track and three meters of new hole were drilled to 818m. A formation intake test was then conducted giving a leak off pressure equivalent to a mud of 1.93 sg.

The 12 1/4" hole was then drilled to a depth of 2315m using three bit runs. At 1909m, the mud specific gravity was increased from 1.14 to 1.24.

Tight hole problems were encountered during a trip for a bit change at 2114m. Overpulls of up to 55,600 daN were recorded from 1904 to 1847m after which the string was pumped out of the hole to a depth of 1415m due to swabbing. On running in the hole after changing the bit, tight hole was experienced from 1703m and reaming was required from this depth to bottom.

Schlumberger ran its Super Combo tool in the hole but was unable to work the tool below a depth of 2195m. The DLL-MSFL-GR, LDL-CNL-GR and SLS-GR-CAL logs were recorded over the interval 2171 to 796m. On recovering the Schlumberger tool a centraliser stand-off was found to be missing from the tool. A wiper trip was then run and the intervals 2163 - 2183m, 2210 - 2230m and 2299 - 2315m were washed and reamed. An additional 2m was drilled to clear the hole of the junk. The string was pulled from the hole with no overpull and Schlumberger then successfully logged the Super Combo tool over the interval 2316.5 - 2100m.

At this stage of the well the weather deteriorated (wind speed 70 knots max, swells of 7.6m and wave heights of up to 2m) and the Lower Marine Riser Package (LMRP) was disconnected after the ball joint angle had increased to five degrees. While waiting on weather Nos. 5 and 3 anchors parted resulting in the rig being blown approximately 575m off location.

After the rig was re-positioned on location, the marine riser was re-connected and tested and the BOP's were function tested.

Waiting on weather, manoeuvering the rig back on location and reconnecting the BOP's and marine riser resulted in 136.5 hours (5.7 days) down time.

A 12 1/4" bit was then run to 2249m where the bit held up on a bridge. The string was washed and reamed to 2317m and pulled from the hole after circulating and conditioning mud. No overpull was experienced.

The remainder of the wireline logging programme, comprising the SHDT-GR and CST, was then completed.

After logging, a check trip was made prior to running the 9 5/8" casing. Washing and reaming was required from 2290 to 2317m.

A total of 183 joints of 9 5/8" 47 lbs/ft, N80, BTC casing were run to 2300m. The string was cemented with 1000 sacks of Class G cement mixed with fresh water containing 1.1% HR6L vol/vol, giving a slurry of 1.90 sg.

After setting the pack-off assembly, the BOP stack was retrieved and repairs to damage resulting from storm were made. The total lost time repairing the damage was 61.25 hours (2.55 days).

8 1/2" hole

The cement and float equipment of the 9 5/8" casing and three meters of new hole were drilled and a leak off test conducted. A maximum pressure of 16,202 kPa (2,350 psi) was reached with no leak off occurring. This was equivalent to a mud of 1.94 sg.

The 8 1/2" hole was drilled from 2317m to a total depth of 2958m using three bit runs.

Final logging was then conducted comprising the DLL-MSFL-GR-SP, BHC-GR-CAL, SHDT-GR-CAL, WST, RFT and CST logs.

When running the WST tool in the hole it was found that the shooting box had failed. The tool was pulled from the hole and the SHDT run while repairs were effected to the WST tool. Following the SHDT and WST runs the RFT tool was run but after two pre-test pressure readings, the probe seal failed at a depth of 2871m and the tool became stuck. The tool was freed, pulled from the hole and a wiper trip made, after which the RFT tool was re-run and 35 RFT pressure tests conducted, (see Appendix 3). One gun of sidewall cores was attempted. Of the 30 cores shot, 17 were recovered, 10 bullets were shattered and three were empty.

3.4 Abandonment

After evaluation of all data the decision was taken to plug and abandon Judith-1. The following abandonment plugs were then set:-

	Interval
Plug 1A	2763 - 2900m
Plug 1B	2625 - 2763m
Plug 1C	2487 - 2625m
Plug 1D	2362 - 2487m
Plug 2	2221 - 2362m
Plug 3	280 - 380m
Plug 4	130 - 230m

After setting plugs 1A to 1D, the top of plug 1D was tagged at 2362m. Plug 2 was then set from 2250 to 2362m and tagged with the top of the plug at 2221m. The plug was tested to 20,684 kPa (3000 psi). A 9 5/8" EZSV bridge plug was then set on wireline at 2190m. The 9 5/8" casing was then cut at 330m using a Pengo cutter. A total of 20 joints plus the stub from the cut joint were recovered from the hole using a 9 5/8" casing spear. After setting plug 3 over the interval 280 to 380m and testing the plug to 10,342 kPa (1500psi), a 13 3/8" bridge plug was run on wireline and set at 250m. The 13 3/8" casing was then cut using a Pengo cutter at 180m. Using a 13 3/8" casing spear a total of 6 joints and the stub of the cut joint were recovered from the hole. Plug 4 was then set from 130 to 230m.

On recovering the BOP stack a mechanical casing cutter was used to cut the 20" casing at 110m. A Vetco 18 3/4" wellhead running tool was then run to recover the 18 3/4" wellhead and 20" casing stub. Despite pulling with 133,500 daN, the wellhead, TGB and PGB could not be pulled free. A circulating head was then rigged up, circulation established and the wellhead, pile joint, PGB and TGB were pulled free.

After racking anchors the rig was released at 1500 hours on 21 November, 1989.

4. CASING RECORD

JUDITH-1 CASING RECORD

SIZE (inches)	WEIGHT (lbs/ft)	GRADE	COUPLING	SHOE (m)	NO. JOINTS	REMARKS (m)
20	94.0	X56	VLS	213	9	Plus 18.75" SG5 wellhead
13.375	68.0	K55	BTC	-	1	Wellhead hanger pup joint
13.375	61.0	K55	BTC	-	56	Main string
13.375	54.5	K55	BTC	796	2	Float collar & shoe jts
9.625	47.0	N80	BTC	2300	185	

5. CEMENTING DATA

JUDITH-1 CEMENTING DETAILS

JOB	SACKS	TONNE	MIXWATER	SLURRY DENSITY (SG)	VOLUME OF SLURRY (cubic m)	TOC (m)	REMARKS
Casing cementations:							
20"	750	31.99	D/W with 2.2% pre-hydr gel	1.6	38.6	Seabed	Lead slurry
	600	25.60	S/W with 1.5% CaCl2	1.9	19.53		Tail slurry
13.375"	1000	42.65	S/W neat	1.9	32.56	298	TOC estimated
9.625"	1000	42.65	D/W with 1.2% HR6L	1.9	32.56	1300	TOC estimated
Abandonment Plugs:							
Plug 1A	150	6.4	D/W with 1.0% HR6L	1.9	4.88	2763	
Plug 1B	150	6.4	D/W with 1.0% HR6L	1.9	4.88	2625	
Plug 1C	150	6.4	D/W with 1.0% HR6L	1.9	4.88	2487	
Plug 1D	150	6.4	D/W with 0.8% HR6L	1.9	4.88	2362	Tagged
Plug 2	150	6.4	D/W with 1.0% HR6L	1.9	4.88	2221	Tagged
Plug 3	100	4.26	D/W neat	1.9	3.25	280	
Plug 4	400	17.06	S/W	1.9	3.02	130	

6. FORMATION EVALUATION

6.1 Mudlogging Services (Appendix 1)

The mudlogging services on board the 'Southern Cross' were supplied by Exploration Logging Australia (EXLOG).

The mudlogging unit was crewed by two mudloggers and two Gemdas computer logging engineers. Services provided included continuous monitoring and chromatographic analysis of the cuttings, gas, recording of depth, rate of penetration, weight on bit, RPM, torque, pump pressure, pump rate, pit volumes and casing pressure. Samples were lagged, caught, washed and air dried at 9m intervals from 254m to 1,449m and thereafter at 3m intervals to TD (2958m). A total of four sets of washed and dried samples were collected and distributed to as follows:-

1 set to BMR
1 set to DITR
1 set to Gas and Fuel Exploration N/L
1 set to Shell

In addition to the above samples, one set of samplex trays and one set of dried, unwashed samples were retained by Shell.

6.2 Sidewall Core Samples (Appendix 2)

A total of 90 sidewall cores were attempted in Judith-1. 75 cores were recovered, 11 bullets were lost and four bullets were empty. The sidewall core descriptions may be found in Appendix 2. Source rock palynological and petrographical analyses have been carried out on selected sidewall cores.

6.3 Wireline Logging

The following wireline logs were run:

DATE	HOLE SIZE	TYPE(inches)	INTERVAL
	SUITE-1		
18/10/89	17.5	DLL-GR-CAL	213.0 - 807.0m
18/10/89	17.5	BHC-GR-CAL	213.0 - 800.0m
18/10/89	18.5	(GR to seabed)	
	SUITE-2		
26/10/89	12.25	a) DLL-MSFL-LDL-CNL-GR	798.0 - 2166.5m
26/10/89	12.25	a) SLS-GR-CAL	798.0 - 2158.0m
27/10/89	12.25	b) DLL-MSFL-LDL-CNL-GR	2100.0 - 2315.0m
27/10/89	12.25	b) SLS-GR-CAL	2100.0 - 2306.5m
		(MSFL & CNL to 1400m).	
	SUITE-3		
02/11/89	12.25	SHDT-GR	1900.0 - 2309.0m
02/11/89	12.25	CST	Shot 60, Recovered 58, Lost 1, Empty 1.
	SUITE-4		
14/11/89	8.5	DLL-MSFL-LDL-CNL-GR	2303.0 - 2955.8m
14/11/89	8.5	BHC-GR-CAL	2303.0 - 2948.0m
15/11/89	8.5	SHDT-GR	2303.0 - 2960.0m
16/11/89	8.5	WST	
16/11/89	8.5	RFT	35 Pressure Tests
16/11/89	8.5	CST	Shot 30, Recovered 17, Lost 10, Empty 3.

6.4 Repeat Formation Testing (Appendix 3)

A total of 35 pretests were attempted in sands over the interval 2300-2900m.

6.5 Velocity Survey (Appendix 4)

A velocity survey was carried out at TD. A total of 20 levels were shot.

7. DEVIATION RECORD

DEPTH (m)	INCLINATION (deg)	AZIMUTH (deg -True)	EASTING (m)	NORTHING (m)	TVD (m)	DLS (deg/100m)
220	0.00	0	0.00	0.00	220.0	0.00
813	0.00	0	0.00	0.00	813.0	0.00
968	0.25	355	-0.03	0.34	968.0	0.02
1151	0.75	324	-0.77	1.71	1151.0	0.03
1333	1.50	345	-2.09	4.97	1333.0	0.05
1516	0.50	10	-2.57	8.07	1515.9	0.06
1727	0.75	135	-1.43	8.00	1726.9	0.05
1909	1.25	15	-0.07	9.08	1908.9	0.10
2090	0.75	20	0.85	12.10	2089.9	0.03
2315	1.25	45	3.09	15.22	2314.8	0.03
2468	1.25	30	5.10	17.85	2467.8	0.02
2698	1.50	334	5.03	22.73	2697.7	0.06
2919	3.00	140	7.48	20.90	2918.7	0.20
2958	4.00	165	8.49	18.80	2957.6	0.46

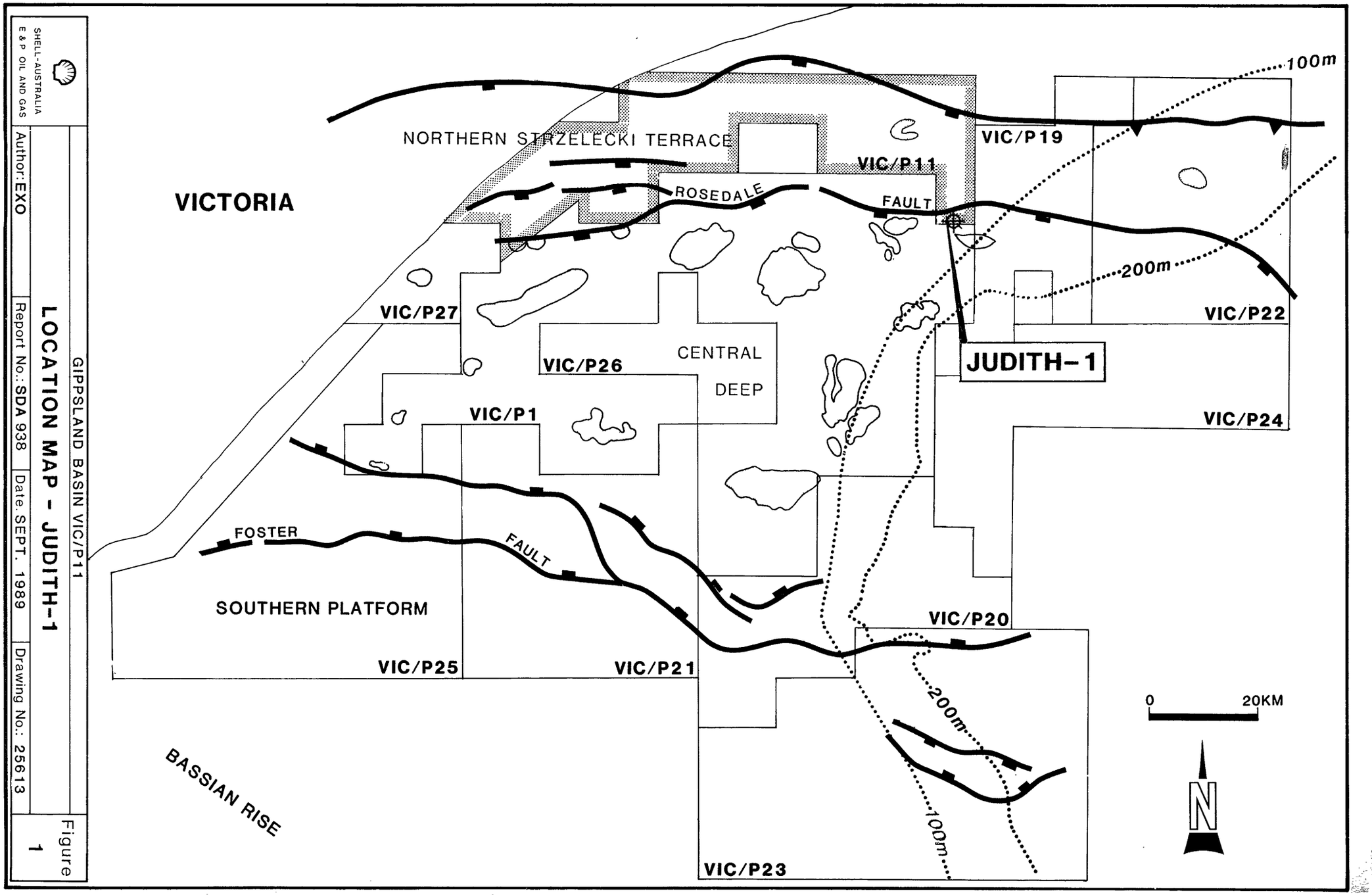
Notes: Surveys were performed using a MSS tool.

8. BOTTOM HOLE TEMPERATURE SUMMARY

JUDITH-1 BOTTOM HOLE TEMPERATURE DETAILS

RUN #	TYPE	DATE	CIRCULATION STOPPED	LOGGER ON BOTTOM	BHT (°C)	DEPTH (m)	EXTRAPOLATED BHT (°C)
1	Super Combo	18/10	21.30	02.00	37.8	811.5	-
2a	Super Combo	26/10	10.00	17.30	80.1	2166.5	-
2b	Super Combo	27/10	07.00	12.45	88.7	2315.0	-
3	HDT	02/11	04.00	09.00	75.0	2309.0	-
4	Super Combo	14/11	12.00	22.30	102	2959.5	127.1
	HDT	15/11	12.00	04.25	109	2960.0	127.1
	RFT	16/11	19.30	09.30	108	2911.0	

Calculated geothermal gradient based on water depth of 76m and sea temperature of 5°C = 4.26°C/100m


VICTORIA
NORTHERN STRZELECKI TERRACE
VIC/P19
VIC/P11
ROSEDALE
FAULT
100m
200m
VIC/P27
VIC/P22
VIC/P26
CENTRAL
DEEP
JUDITH-1
VIC/P1
VIC/P24
FOSTER
FAULT
SOUTHERN PLATFORM
VIC/P20
VIC/P25
VIC/P21
200m
100m
VIC/P23
BASSIAN RISE
0
20KM
N
SHELL-AUSTRALIA
E & P OIL AND GAS
Author: EXO
Report No.: SDA 938
Date: SEPT. 1989
Drawing No.: 25613
GIPPSLAND BASIN VIC/P11
LOCATION MAP - JUDITH-1
Figure
1

PE905120

This is an enclosure indicator page.
The enclosure PE905120 is enclosed within the container PE900022 at this location in this document.

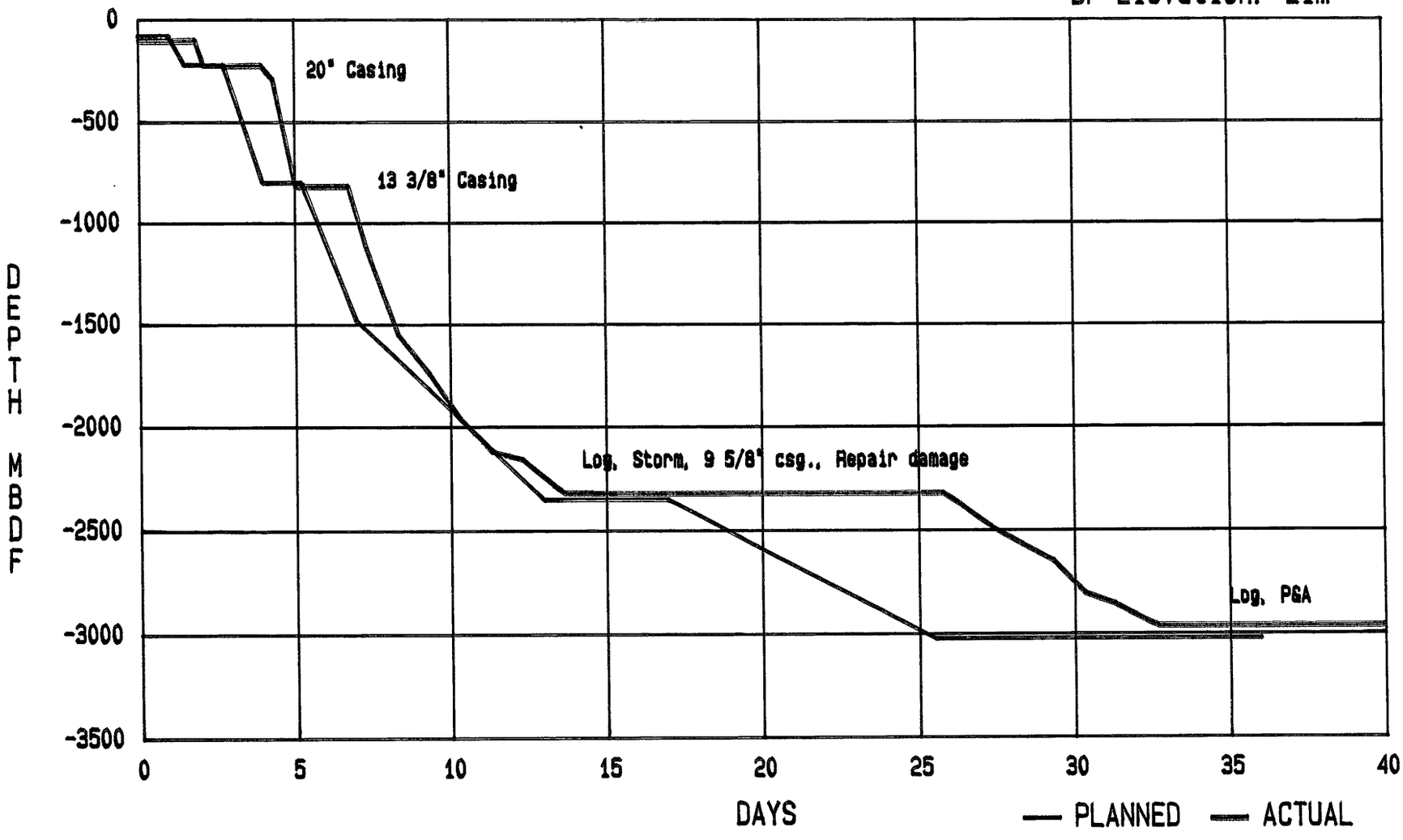
The enclosure PE905120 has the following characteristics:

ITEM_BARCODE	PE905120
CONTAINER_BARCODE	PE900022
NAME	Judith-1 Time vs Depth Graph
BASIN	GIPPSLAND
PERMIT	VIC/P11
TYPE	WELL
SUBTYPE	DIAGRAM
DESCRIPTION	Judith-1 Time verses Depth Graph. Figure 2 of WCR volume 1.
REMARKS	
DATE_CREATED	31/07/1990
DATE_RECEIVED	20/08/1990
W_NO	W1011
WELL_NAME	Judith-1
CONTRACTOR	
CLIENT_OP_CO	Shell Australia E. & P. Oil and Gas

(Inserted by DNRE - Vic Govt Mines Dept)

Figure 2 TIME VS DEPTH CHART - JUDITH-1

Rig: Southern Cross
Waterdepth: 76.4bmsl
DF Elevation: 21m



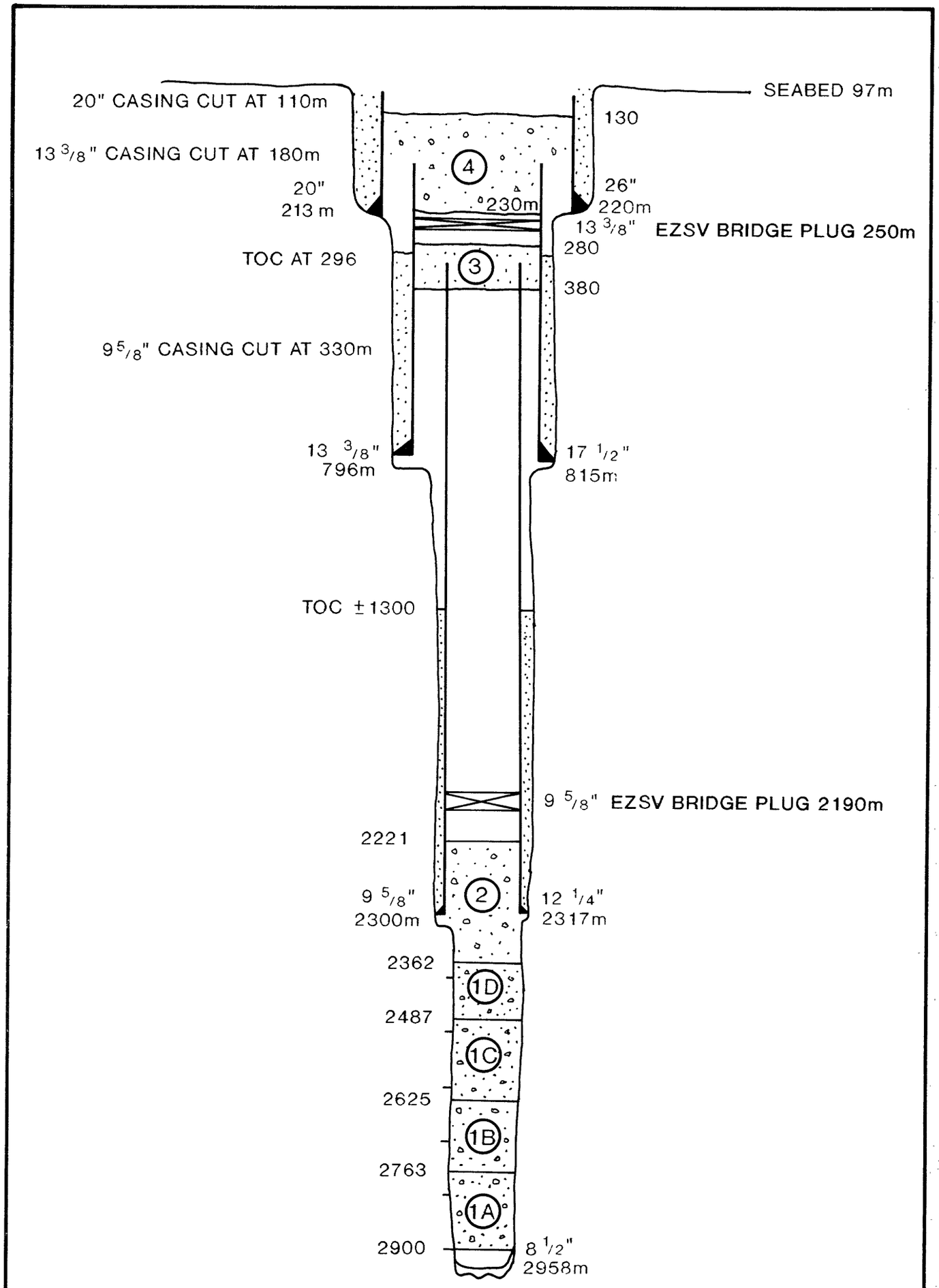
SHELL-AUSTRALIA E.&P. OIL AND GAS

GIPPSLAND BASIN

TIME versus DEPTH GRAPH - JUDITH-1

Author: EXO | Report No.: SDA 938 | Date: JULY 1990 | Drawing No.: 25086

Figure 2



SHELL-AUSTRALIA E & P OIL AND GAS	GIPPSLAND BASIN VIC/P11				Figure 3
	JUDITH–1 ABANDONMENT SCHEMATIC				
	Author: EEO/22	Report No.: SDA 938	Date: DECEMBER 89	Drawing No.: 25821	

PE603200

This is an enclosure indicator page.
The enclosure PE603200 is enclosed within the container PE900022 at this location in this document.

The enclosure PE603200 has the following characteristics:

ITEM_BARCODE	= PE603200
CONTAINER_BARCODE	= PE900022
NAME	= Judith 1 Mud Log
BASIN	= GIPPSLAND
ON_OFF	= OFFSHORE
PERMIT	= VIC/P11
TYPE	= WELL
SUBTYPE	= LOG
DESCRIPTION	= Judith 1 Mud Log. Enclosure 1 of WCR volume 1.
REMARKS	=
DATE_CREATED	= 30/06/90
DATE_RECEIVED	= 20/08/90
W_NO	= W1011
WELL_NAME	= Judith 1
CONTRACTOR	= Exlog
CLIENT_OP_CO	= Shell Australia

(Inserted by DNRE - Vic Govt Mines Dept)

APPENDIX 1

Lithological Descriptions

APPENDIX 1

CUTTINGS DESCRIPTIONS

All depths are quoted below derrick floor (21m above mean sea level). Drill cuttings were collected at 9m intervals throughout the Seaspray Group and 3m intervals in the Latrobe and Golden Beach Groups. No returns were collected above 254m.

Depth	% Lithology	Description
254-263	100	LIMESTONE: lt gy, gy wh, arg-occ aren, fri, abd Foss incl shell frag, bryoz, echin, foram
263-272	100	LIMESTONE: a/a
272-281	100	LIMESTONE: a/a
281-290	100	LIMESTONE: a/a
290-299	100	LIMESTONE: a/a
299-308	100	LIMESTONE: a/a
308-317	100	LIMESTONE: a/a
317-326	100	LIMESTONE: lt gy, arg, disp Cl, sft-uncons, abd Foss incl echin, foram, bryoz, shell frag
326-335	100	LIMESTONE: a/a
335-344	100	LIMESTONE: a/a
344-353	100	LIMESTONE: lt-med gy, arg, sft, abd Foss incl foram, echin, bryoz, shell frag
353-362	100	LIMESTONE: a/a
362-371	100	LIMESTONE: a/a
371-380	100	LIMESTONE: lt-med gy, arg-aren, sft, (Pyr), (Glc), abd Foss a/a
380-389	100	LIMESTONE: a/a
389-398	100	LIMESTONE: lt gy, aren, (arg), sft-fri, (Glc), abd Foss incl foram, bryoz, echin, shell frags
398-407	100	LIMESTONE: lt gy, aren, (arg), sft, (Glc), (Pyr), (carb detr), abd Foss a/a
407-416	100	LIMESTONE: lt gy-crm, aren-arg, sft, (Glc), abd Foss a/a

Depth	% Lithology	Description
416-425	100	LIMESTONE: a/a
425-434	100	LIMESTONE: a/a
434-443	100	LIMESTONE: a/a
443-450	100	LIMESTONE: lt gy, arg, (aren), sft, (Glc), abd Foss a/a
450-459	100	LIMESTONE: lt gy, aren-arg, sft-fri, tr-com Glc, (Pyr), abd Foss a/a
459-468	100	LIMESTONE: a/a
468-477	100	LIMESTONE: a/a
477-486	100	LIMESTONE: lt-med gy, arg, (aren), sft-fri, carb, Glc, (Pyr), abd Foss incl foram, echin, bryoz
486-495	100	LIMESTONE: a/a
495-504	100	LIMESTONE: a/a
504-513	100	LIMESTONE: lt gy, arg, (aren), fri-hd, (Glc), (Pyr), com Foss incl foram, echin, bryoz
513-522	100	LIMESTONE: a/a
522-531	100	LIMESTONE: a/a
531-540	100	LIMESTONE: lt gy, arg + aren, fri-(hd), (Pyr), com Foss a/a
540-549	100	LIMESTONE: crm-lt gy, aren, fri-hd, abd Foss incl foram, echnin, bryoz
549-558	100	LIMESTONE: a/a
558-567	100	LIMESTONE: a/a, (carb detr)
567-576	100	LIMESTONE: a/a
576-585	100	LIMESTONE: a/a
585-594	100	LIMESTONE: a/a
594-603	100	LIMESTONE: lt gy, arg + (aren), fri, (Glc), (carb detr), com Foss a/a
603-612	100	LIMESTONE: a/a
612-621	100	LIMESTONE: a/a
621-630	100	LIMESTONE: a/a

Depth	% Lithology	Description
630-639	100	LIMESTONE: a/a
639-648	100	LIMESTONE: lt gy, aren + (arg), fri-hd, (Glc), (carb detr), abd Foss incl foram, echin, bryoz
648-657	100	LIMESTONE: a/a
657-666	100	LIMESTONE: a/a
666-675	100	LIMESTONE: a/a
675-684	100	LIMESTONE: a/a
684-693	100	LIMESTONE: a/a
693-702	100	LIMESTONE: a/a
702-711	100	LIMESTONE: a/a
711-720	100	LIMESTONE: a/a
720-729	100	LIMESTONE: a/a
729-738	100	LIMESTONE: a/a
738-747	100	LIMESTONE: lt gy, lt gn gy, fri-hd, blky, (slt), tr-com carb detr, (Glc), (Pyr), abd Foss incl foram, echin, bryoz
747-756	100	LIMESTONE: a/a
756-765	100	LIMESTONE: a/a
765-774	100	LIMESTONE: a/a
774-783	100	LIMESTONE: a/a
783-792	100	LIMESTONE: a/a
792-801	100	LIMESTONE: a/a
801-810	100	LIMESTONE: a/a
810-819	100	LIMESTONE: a/a
819-828	100	LIMESTONE: a/a
828-837	100	LIMESTONE: a/a
837-846	100	LIMESTONE: a/a
846-855	100	LIMESTONE: a/a
855-864	100	LIMESTONE: lt-med gy, arg + (aren), fri-hd, blky, (Pyr), (carb detr), com Foss incl foram, bryoz, shell frags

Depth	% Lithology	Description
864-873	100	LIMESTONE: a/a
873-882	100	LIMESTONE: a/a
882-891	100	LIMESTONE: lt-med gy, arg, (aren), sft-(frm), blky, (nod Pyr), (Glc), (carb detr), com Foss incl foram, bryoz, shell frags, echin
891-900	100	LIMESTONE: a/a
900-909	100	LIMESTONE: a/a
909-918	100	LIMESTONE: a/a
918-927	100	LIMESTONE: a/a
927-936	100	LIMESTONE: a/a
936-945	100	LIMESTONE: lt-med gy, arg, fri-hd, blky, (Pyr), (Glc), (carb detr), com-occ foram
945-954	100	LIMESTONE: a/a
954-966	100	LIMESTONE: a/a
966-975	40	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: lt-med gy, (aren) stky, sft, blky-(fis), occ-com foram
975-984	50	LIMESTONE: a/a
	50	CALCAREOUS CLAYSTONE: a/a
984-993	40	LIMESTONE: lt gy, med gn gy, arg, (aren), amr-vf xln, sft-frm, (Pyr), (carb detr), occ foram, bryoz
	60	CALCAREOUS CLAYSTONE: a/a
993-1002	40	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: a/a
1002-1011	40	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: a/a
1011-1020	40	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: lt gy-lt gn gy, mod-v calc, (slt), sft-(frm), blky (Pyr), occ foram + shell frags
1020-1029	40	LIMESTONE: a/a
	60	CALCAREOUS: a/a
1029-1038	30	LIMESTONE: a/a
	70	CALCAREOUS CLAYSTONE: a/a
1038-1047	40	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: a/a

Depth	% Lithology	Description
1047-1056	40	LIMESTONE: lt-med gy, (lt gn gy), arg i/p, (slt-aren), micr-vf xln, blky, (Pyr), (carb detr), occ foram + shell frags
	60	CALCAREOUS CLAYSTONE: a/a
1056-1065	40	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: a/a
1065-1074	30	LIMESTONE: a/a
	70	CALCAREOUS CLAYSTONE: a/a
1074-1083	40	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: a/a
1083-1092	30	LIMESTONE: a/a
	70	CALCAREOUS CLAYSTONE: lt-med gy, (slt, s), dis-(frm), tr-com carb detr, (dissem Pyr), com foram
1092-1101	20	LIMESTONE: a/a
	70	CALCAREOUS CLAYSTONE: a/a
	10	CALCAREOUS SILTSTONE: gdes from Calc Clst.
1101-1110	20	LIMESTONE: v lt gy-lt gr gy, arg i/p, (aren), amr-vf xln, (carb detr), (Pyr), sft-frm, blky-(fis), occ foram + shell frag
	60	CALCAREOUS CLAYSTONE: a/a
	20	CALCAREOUS SILTSTONE: a/a
1110-1119	40	LIMESTONE: a/a
	50	CALCAREOUS CLAYSTONE: a/a
	10	CALCAREOUS SILTSTONE: a/a
1119-1128	30	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: lt gy, calc, disp-(frm), stky, (Pyr)
	10	CALCAREOUS SILTSTONE: a/a
1128-1137	30	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: a/a
	10	CALCAREOUS SILTSTONE: a/a
1137-1146	30	LIMESTONE: a/a
	70	CALCAREOUS CLAYSTONE: a/a
1146-1155	30	LIMESTONE: a/a
	70	CALCAREOUS CLAYSTONE: a/a
1155-1164	30	LIMESTONE: lt gy-v lt gn gy, arg i/p, (aren), amr-vf xln, fri-frm, (dissem Pyr), (carb detr), blky-(fis), occ-com foram, (bryoz), (shell frags)
	70	CALCAREOUS CLAYSTONE: a/a
1164-1173	40	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: a/a

Depth	% Lithology	Description
1173-1182	30	LIMESTONE: a/a
	70	CALCAREOUS CLAYSTONE: a/a
1182-1191	40	LIMESTONE: lt-med gy, arg + aren, fri, (Pyr), com foram
	60	CALCAREOUS CLAYSTONE: a/a
1191-1200	50	LIMESTONE: a/a
	50	CALCAREOUS CLAYSTONE: a/a
1200-1209	50	LIMESTONE: a/a
	50	CALCAREOUS CLAYSTONE: a/a
1209-1218	40	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: v lt-lt gn gy, mod-calc, (slt), sft-(frm), blky, (Pyr), (foss frags)
1218-1227	50	LIMESTONE: a/a
	50	CALCAREOUS CLAYSTONE: a/a
1227-1236	50	LIMESTONE: a/a
	50	CALCAREOUS CLAYSTONE: a/a
1236-1245	50	LIMESTONE: a/a
	50	CALCAREOUS CLAYSTONE: a/a
1245-1254	40	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: a/a
1254-1263	40	LIMESTONE: med gy, arg + (aren), fri-hd, blky-(fis), (Pyr), com foram
	60	CALCAREOUS CLAYSTONE: lt gy calc, (aren), disp-(frm), stky, blky, (foram)
1263-1272	40	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: a/a
1272-1281	40	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: a/a
1281-1290	40	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: a/a
1290-1299	40	LIMESTONE: lt-med gy, arg + (aren), fri-(hd), micr-vf xln, blky-(fis), (Pyr), com foram
	60	CALCAREOUS CLAYSTONE: a/a
1299-1308	30	LIMESTONE: a/a
	70	CALCAREOUS CLAYSTONE: a/a
1308-1317	30	LIMESTONE: a/a
	70	CALCAREOUS CLAYSTONE: lt-med gy, med gn gy, mod-calc, disp-(frm), (carb detr), (Pyr), com foram

Depth	% Lithology	Description
1317-1326	30	LIMESTONE: a/a
	70	CALCAREOUS CLAYSTONE: a/a
1326-1335	30	LIMESTONE: a/a
	70	CALCAREOUS CLAYSTONE: a/a
1335-1344	30	LIMESTONE: med by, arg (aren), amr-vf xln, sft-frm, (Pyr), (Glc), blky, (foss frag)
	70	CALCAREOUS CLAYSTONE: med gn gy, (s), (Glc), sft-frm, (blky)-(fis), (foram)
1344-1353	50	LIMESTONE: calcarenite, buff-buff gy, off wh, (f xln), hd-brit, (foram)
	50	CALCAREOUS CLAYSTONE: a/a
1353-1362	40	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: a/a
1362-1371	40	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: a/a
1371-1380	40	LIMESTONE: a/a
	60	CALCAREOUS CLAYSTONE: a/a
1380-1389	30	LIMESTONE: a/a
	70	CALCAREOUS CLAYSTONE: a/a
1389-1398	20	LIMESTONE: a/a
	80	CALCAREOUS CLAYSTONE: lt-med gy, lt gn gy, slt, (s), com Glc, carb detr, disp-(frm), blky-(fis), com foram, gdes to SLTST
1398-1407	20	LIMESTONE: a/a
	80	CALCAREOUS CLAYSTONE: a/a
1407-1416	10	LIMESTONE: a/a
	90	CALCAREOUS CLAYSTONE: a/a
1416-1425	20	LIMESTONE: lt buff gy, (s), (slt), aren, Glc, fri-hd, (foram)
	80	CALCAREOUS CLAYSTONE: a/a, gdes to SLTST
1425-1434	100	SILTSTONE: lt-med gy, arg, calc, (glc), (s), sft-brit (hd), blky-(fis).
	Tr	LIMESTONE
1434-1443	100	SILTSTONE: a/a
1443-1452	100	SILTSTONE: a/a
1452-1454	60	SANDSTONE: yel brn, (lt gy), vf-v crs, dom vf-f, (srt), slty Mtrx, lmn oxid, glc, (pyr), (Por), mnr dull yel fluor, no cut
	40	SILTSTONE: brn-yel brn, hd, lmn oxid, glc, pyr

Depth	% Lithology	Description
1454-1461	80	SANDSTONE: yel brn-med gn gy, vf-v crs, dom vf-f, (srt), (ang)-(rnd), brit-hd, slty Mtrx, glc, (Por), tr dull yel fluor, v slow strmg cut.
	20	SILTSTONE: a/a, Glc nodules
1461-1470	90	SANDSTONE: a/a, no show
	10	SILTSTONE: a/a
1470-1473	100	SANDSTONE: lt yel brn-med gy, f-v crs, (gran), (srt), (ang)-(rnd), disag-hd, slty Mtrx, glc (Por), no show, gdes to SILTSTONE i/p
1473-1476	100	SANDSTONE: lt yel brn-mauve gy, f-v crs, (gran), ((srt)), (ang)-rnd, disag-hd, slty Mtrx, lmn oxid, (Por), no show, gdes to SILTSTONE i/p.
1476-1479	100	SANDSTONE: a/a, dom f-m
1479-1482	100	SANDSTONE: drty gy-lt yel brn, f-v crs, dom m, ((srt)), (ang)-(rnd), disag-hd, slty Mtrx, glc, (Por), no show.
1482-1485	100	SANDSTONE: lt yel-dk mauve gy, f-v crs, dom m, ((srt)), (ang)-rnd, disag-fri, slty Mtrx, glc, (pyr), fe stn (lmn), (shell frag), (Por), no show, gdes to SILTSTONE, i/p.
1485-1488	30	SANDSTONE: a/a
	70	SILTSONE: yel brn-med gy, lmn oxid, s, glc, sft
1488-1491	40	SANDSTONE: lt yel-dk gy, crs-v crs, (ang)-(rnd), disag, no show
	60	SILTSTONE: drty gy-yel brn, s, glc, (pyr), sft.
1491-1494	80	SANDSTONE: gy gn, f-v crs, (srt), (ang)-(rnd), disag-hd, slty Mtrx, glc, pyr, (Por) tr yel fluor, no cut.
	20	SILTSTONE: a/a
1494-1497	60	SANDSTONE: drty gy, f-(v crs), bec f, (srt), disag-hd, slty Mtrx, glc, (Por), no show
	40	SILTSTONE: lt-med gy, (yel brn), glc, (calc), frm, blky- (fis)
	Tr	MUDSTONE: blk-dk brn, carb.
1497-1500	30	SANDSTONE: a/a
	60	SILTSTONE: a/a
	10	MUDSTONE: blk-dk brn, carb, sft-frm, (fis).
1500-1503	70	SANDSTONE: drty gy, (rd brn), f-v crs, (srt), (ang)-rnd, disag-hd, slty Mtrx, glc, pyr agg, (Por), no show
	30	SILTSTONE: lt gy, a/a, also rd brn-dk brn, carb, frm-hd, blky-(fis).
	Tr	COAL: blk, (vit), brit-hd.

Depth	% Lithology	Description
1503-1506	90	SANDSTONE: trnsl, f-gran, dom m-crs, (srt)-srt, (rnd)-rnd, disag, (pyr), Por inf, no show.
	10	SILTSTONE: rd brn-dk brn, a/a
	Tr	COAL: a/a
1509-1512	100	SANDSTONE: trnsl, qz, crs-v crs, (gran), srt, (rnd)-rnd, disag, Por inf, no show,.
1512-1515	100	SANDSTONE: a/a, (pyr).
1517 (spot sample)	10	SANDSTONE: a/a
	90	COAL: blk, hd-flky, earthy i/p, (pyr), blky, >2% TG
1515-1518	70	SANDSTONE: a/a
	30	COAL: a/a
1518-1527	100	SANDSTONE: a/a
	Tr	COAL: a/a
1527-1533	100	SANDSTONE: trnsl, qz, crs-v crs, (gran), srt, (rnd)-rnd, (pyr), Por inf, no show.
1533-1536	100	SANDSTONE: a/a
	Tr	SILTSTONE: lt-med gy, calc, (pyr), frm, (fis)
1536-1539	90	SANDSTONE: a/a
	10	SILTSTONE: a/a
1539-1542	90	SANDSTONE: a/a
	10	SILTSTONE: a/a, bec aren
	Tr	COAL
1542-1544	60	SANDSTONE: a/a
(POOH Bit Change)	10	SANDSTONE: lt gy, vf-f, (rnd), srt, slty/arg Mtrx, (calc), fri-hd, pyr (glc), (Por), mnr min fluor, no cut
	30	SILTSTONE: lt gy, aren, gdes to vf SST, calc, (glc), frm-hd, (fis).
1544-1545	100	SILTSTONE: lt gy, aren, calc, (glc), (carb flecks), frm-hd, (fis), gdes to vf SST
1545-1548	10	SANDSTONE: lt-med gy, gn gy, vf-f, srt, arg Mtrx, calc/dol Cmt, hd, (glc), (lit), (Por), com dull yel min fluor, no cut.
	90	SILTSTONE: a/a
1548-1551	20	SANDSTONE: a/a, com dull (gn) yel min fluor, no cut.
	30	SILTSTONE: a/a
	20	MUDSTONE: dk rd brn, mic, (carb), sft-frm
	30	COAL: blk-dk brn, dull-occ vit, (conch) frac, slty in pt, hd-flky.

Depth	% Lithology	Description
1551-1554	20	SANDSTONE: lt-med gn gy, vf-(f), srt, arg Mtrx, calc/(dol) Cmt, hd-hd, (lit), gdes to SLTST, (Por), dull gn yel min fluor, no cut.
	30	SILTSTONE: lt-med gy + gy gn, aren, gdes to vf SST, calc, blky-(fis)
	20	MUDSTONE: a/a, carb flecks
	30	COAL: a/a
1554-1557	30	SANDSTONE: a/a, pyr, tr dull yel orng min fluor, no cut
	40	SILTSTONE: a/a
	20	MUDSTONE: a/a, (fis)-fis
	10	COAL: a/a
1557-1560	40	SANDSTONE: lt-med gy, vf-m, a/a, no show
	30	SILTSTONE: a/a, v aren
	20	MUDSTONE: a/a
	10	COAL: a/a
1560-1563	20	SILSTONE: a/a
	60	MUDSTONE: rd brn, mic, carb, sft-frm, blky-(fis)
	20	COAL: a/a
1563-1566	10	SILTSTONE: a/a
	20	MUDSTONE: a/a
	70	COAL: a/a
1566-1569	20	SANDSTONE: lt-med gy, vf-f, (m), srt, arg Mtrx, calc Cmt, hd, gdes to SLTST, (Por), no show.
	20	SILTSTONE: a/a, gdes to vf SST
	40	MUDSTONE; med-dk rd brn/blk, carb, (slty), sft-frm, (fis)-fis.
	20	COAL: a/a
1569-1572	10	SANDSTONE: a/a
	40	SILTSTONE: lt gy gn-gy, aren, (calc), gdes to vf SST
	40	MUDSTONE: rd brn, a/a, mic
	10	COAL: a/a
1572-1575	40	SILTSTONE: lt brn gy, a/a
	40	MUDSTONE: a/a
	20	COAL: a/a
	Tr	SANDSTONE
1575-1578	10	SILTSTONE: a/a
	50	MUDSTONE: a/a
	40	COAL: a/a, gdes to carb MDST/SLTST
1578-1581	40	SANDSTONE: trnsl, qz, f-m, (crs), srt, (ang)-(rnd), disag, Por inf, no show.
	40	MUDSTONE: a/a
	20	COAL: a/a, gdes to carb MDST/SLTST

Depth	% Lithology	Description
1581-1584	10	SILTSTONE: a/a, calc
	70	MUDSTONE: rd brn, a/a, dk brn, non calc, gdes to COAL, mic, frm-hd, blky-fis
	20	COAL: a/a
1584-1587	10	SILTSTONE: lt gn gy, lt rd brn, (aren), (calc), (carb), gdes to vf SST, blky-(fis)
	80	MUDSTONE: a/a
	10	COAL: a/a
1587-1590	10	SANDSTONE: trnsl, qz, f-m, disag, (maybe cvgs)
	20	SILTSTONE: a/a
	50	MUDSTONE: a/a
	20	COAL: a/a
1590-1593	10	SANDSTONE: vf-f, disag.
	10	SILTSTONE: a/a, lt brn gy gdes to vf SST
	50	MUDSTONE: blk-v dk brn, (rd brn), carb, (mic), pyr nod, frm-hd, blky-fis
	30	COAL: blk, dull-occ vit, gdes to carb MDST
1593-1596	10	SILTSTONE: a/a
	50	MUDSTONE: a/a
	40	COAL: a/a
1596-1599	40	SILTSTONE: lt rd brn, lt gy gn, off wh, (mic), aren, gdes to vf SST
	40	MUDSTONE: a/a
	20	COAL: a/a
1599-1602	10	SANDSTONE: lt gy, vf-f, fri-hd, (Por), no show
	20	SILTSTONE: dk brn, carb, gdes to MDST
	50	MUDSTONE: a/a, gdes to SLTST
	10	COAL: a/a
1602-1605	20	SILTSTONE: dk gy brn-blk, carb, pyr nod, hd blky
	50	MUDSTONE: dk gy brn-rd brn, carb, (mic), (sft)-frm, (fis)-fis
	30	COAL: a/a
1605-1608	90	MUDSTONE: lt gy brn-lt rd brn, a/a
	10	COAL: a/a
1608-1611	40	SILTSTONE: a/a, gdes from MDST
	50	MUDSTONE: a/a
	10	COAL: a/a, slty
1611-1614	80	SILTSTONE: lt gy brn, dk brn/blk, arg, sft-hd, (ind)
	10	MUDSTONE: a/a
	10	COAL: a/a

Depth	% Lithology	Description
1614-1617	60	SANDSTONE (1): trnsl, qz, crs-(v crs), srt, (ang)-(rnd), disag, Por inf, no show
	20	SANDSTONE (2): lt gy, vf-f, arg Mtrx, calc Cmt, hd-hd, (Por), mnr dull yel min fluor, no cut
	20	SILTSTONE: blk, dk brn, mauve brn, carb, arg-aren, sft-hd, blky-(fis).
1617-1620	20	SANDSTONE (1): a/a
	80	SILTSTONE: lt rd brn, lt gy, calc, sft-hd, gdes to vf SST.
1620-1623	30	SANDSTONE: trnsl-lt gy, (vf)-crs, dom crs-disag, vf agg-calc Cmt + gdes to SLTST, (Por)-Por, com strong yel min fluor, no cut.
	70	SILTSTONE: mauve brn-blk, lt gy brn, pyr nod.
1623-1626	30	SANDSTONE: a/a, no show
	70	SILTSTONE: lt-med gy brn-blk, arg-aren, (carb), pyr nod, calc, (sft)-hd.
1626-1629	20	SANDSTONE: a/a
	80	SILTSTONE: a/a
1629-1632	15	SANDSTONE (1): trnsl, crs, disag, Por inf, no show
	15	SANDSTONE (2): lt gy, vf-f, arg Mtrx, calc Cmt. gdes to SLTST, (Por), strong dull yel min fluor, no cut
	70	SILTSTONE: lt gy-gy brn, (carb), (calc), arg-aren, (pyr), frm-(hd)
1632-1635	40	SANDSTONE: trnsl, qz, crs-(v crs), srt, (ang)-(rnd), disag, Por inf, no show
	60	SILTSTONE: a/a
1635-1638	60	SANDSTONE: trnsl, qz, m-crs, (f, v crs), srt, (ang)-(rnd), dom disag, (pyr), (lt gy f agg), Por inf, no show.
	40	SILTSTONE: lt brn gy, calc, aren, sft-hd, blky, also blk, carb.
1638-1641	50	SANDSTONE: a/a
	20	SILTSTONE: a/a, arg in pt
	30	COAL: blk, dull, slty, (conch) frac-blky, hd-brit.
1641-1644	70	SANDSTONE: trnsl, crs-(v crs), srt, (ang)-(rnd), dom disag, Por inf, no show
	10	SILTSTONE: lt-med gy, blk, frm-hd
	10	MUDSTONE: mauve brn, sft
	10	COAL: a/a
1644-1650	80	SANDSTONE: a/a
	20	SILTSTONE: a/a

Depth	% Lithology	Description
1650-1653	80	SANDSTONE: trnsl, crs-v crs, (m), srt, (ang)-(rnd), disag, Por inf, mnr strong yel min fluor, no cut
	20	SILTSTONE: lt gy gn-(calc), blk-mauve brn, carb, arg i/p, frm-sft, blky-(fis)
1653-1659	90	SANDSTONE: a/a, (ang)-rnd
	10	COAL: a/a
1659-1662	80	SANDSTONE: a/a
	10	SILTSTONE: blk-mauve brn, carb.
	10	COAL: a/a
1662-1665	80	SANDSTONE: trnsl, aq, crs-v crs, (gran), srt, (rnd)-rnd, disag, pyr nod, Por inf, no show
	10	SILTSTONE: a/a
	10	COAL: a/a
1665-1668	90	SANDSTONE: a/a, dom crs, (m)
	10	SILTSTONE: dk brn-blk, carb, non calc, sft-frm, (fis).
1668-1671	90	SANDSTONE: a/a, mnr yel min Fluor, no cut
	10	SILTSTONE: a/a, gdes to COAL.
1671-1674	100	SANDSTONE: a/a, crs-v crs, (gran)
	Tr	SILTSTONE
	Tr	COAL
1674-1677	100	SANDSTONE: a/a, (qz ovgth), (calc) Cmt
	Tr	SILTSTONE
1677-1680	100	SANDSTONE: a/a
1680-1683	100	SANDSTONE: trnsl, crs-v crs, (gran), srt-srt, (ang)-rnd, disag, qz ovgth, mnr f-m agg w/ calc Cmt, Por inf, no shows.
1683-1686	80	SANDSTONE: a/a, occ f agg, arg Mtrx, sil Cmt, (Por)-Por, no shows
	20	COAL: blk, dull-vit, (conch) frac, hd, slty i/p.
1686-1689	90	SANDSTONE: a/a, (pyr)
	10	COAL: a/a
1689-1692	100	SANDSTONE: trnsl, crs-v crs, (gran), srt, (ang)-rnd, disag, occ f-crs agg, qz ovgth, (calc) Cmt, hd-hd, Por inf, no show.
1692-1695	100	SANDSTONE: a/a
1695-1698	20	SANDSTONE: a/a
	80	COAL: blk, dull-vit, hd-brit, (conch) frac-blky, earthy-slty i/p.

Depth	% Lithology	Description
1698-1701	40	SANDSTONE: a/a
	10	SILTSTONE: blk-dk brn, arg, carb, sft-frm, blky
	50	COAL: a/a
1701-1704	30	SILTSTONE: a/a
	70	COAL: a/a
1704-1707	30	SILTSTONE: a/a
	70	COAL: a/a
1707-1710	90	SANDSTONE: trnsl-lt gy, qz, m-v crs, (gran), (srt)-srt, (ang)-rnd, fri-hd, qz ovgth Cmt, glc, pyr, Por-Por, no show.
	10	SILTSTONE: a/a
1710-1713	100	SANDSTONE: a/a
1713-1716	100	SANDSTONE: a/a
1716-1719	100	SANDSTONE: a/a
1719-1722	100	SANDSTONE: a/a
1722-1725	100	SANDSTONE: a/a
1725-1728	100	SANDSTONE: a/a
1728-1731	100	SANDSTONE: a/a
1731-1734	100	SANDSTONE: a/a
1734-1737	100	SANDSTONE: a/a
1737-1740	100	SANDSTONE: a/a
1740-1743	90	SANDSTONE: a/a
	10	SILTSTONE: med-dk gy, (arg-aren), (calc), pyr, (glc), (carb det), frm.
1743-1746	70	SANDSTONE: qz, trnsl, m-gran, (f), (srt), (ang)-rnd, disag-hd, qz ovgth Cmt, (drty gy slty Mtrx), glc, pyr, (Por)-Por, no show
	20	SILTSTONE: med-dk gy, frm-hd, pyr, (glc)
	10	MUDSTONE: dk brn gy, arg, mic, glc, sft-(frm), (fis).
1746-1749	10	SANDSTONE: drty gy, f-(m), hd, slty Mtrx, glc, pyr, nil-(Por), no show
	70	SILTSTONE: a/a, (carb flecks)
	20	MUDSTONE: a/a
1749-1752	20	SANDSTONE: a/a
	80	SILTSTONE: a/a

Depth	% Lithology	Description
1752-1755	20	SANDSTONE: a/a
	80	SILTSTONE: a/a
1755-1758	70	SANDSTONE: qz, lt gy-trnsl, f-crs, (v crs), (srt)-srt, (ang)-(rnd), disag-(hd), mod sil Cmt, (qz ovgths), (slty Mtrx), (mic), (carb detr), (lit), (Por)-Por, no show
	30	SILTSTONE: lt-med (gy) brn, arg-(aren), carb mat, (mic), (pyr), frm-(hd), blky
1758-1761	80	SANDSTONE: a/a
	20	SILTSTONE: a/a
1761-1764	80	SANDSTONE: a/a
	20	SILTSTONE: a/a
1764-1767	90	SANDSTONE: qz, trnsl, m-v crs, srt, (ang)-(rnd), disag, (qz ovgth), (carb), Por-Por, no show
	10	SILTSTONE: a/a
1767-1770	100	SANDSTONE: a/a
1770-1773	100	SANDSTONE: a/a
1773-1776	80	SANDSTONE: a/a
	20	SILTSTONE: dk gy brn, carb mat, frm-hd.
1776-1779	90	SANDSTONE: qz, trnsl, crs-v crs, srt, (ang)-(rnd), disag, (qz ovgth Cmt), Por-Por, no show
	10	SILTSTONE: a/a
1779-1782	100	SANDSTONE: a/a
1782-1785	100	SANDSTONE: a/a
1785-1788	100	SANDSTONE: a/a
1788-1791	100	SANDSTONE: a/a
1791-1794	100	SANDSTONE: qz, trnsl, m-v crs, srt, (ang)-(rnd), disag, qz ovgths, (lit), Por-Por, no shows.
1794-1797	100	SANDSTONE: a/a
1797-1800	100	SANDSTONE: qz, trnsl, crs-v crs, srt, (ang)-(rnd), disag, (qz ovgths), Por, no shows.
1800-1803	100	SANDSTONE: a/a
1803-1806	90	SANDSTONE: a/a, pyr
	10	COAL: blk, dull- (vit), (wdy text), (slty-earthy), (conch) frac, hd-brit.

Depth	% Lithology	Description
1806-1809	90	SANDSTONE: a/a, (lit)
	10	SILTSTONE: dk brn-blk, (arg), carb, frm-brit, (fis)
1809-1812	100	SANDSTONE: qz, trnsl, crs-v crs, (m), srt, (ang)-(rnd), disag, qz ovgths, (lit), (pyr), Por-Por, no shows.
1812-1815	100	SANDSTONE: a/a
1815-1818	100	SANDSTONE: a/a
1818-1821	100	SANDSTONE: a/a, dom crs
1821-1824	90	SANDSTONE: a/a
	10	SILTSTONE: med-dk(gy) brn, (arg), carb.
1824-1827	100	SANDSTONE: qz, lt gy-trnsl, m-v crs, srt-srt, disag-hd, qz ovgths, (lit), (pyr), Por-Por, no shows.
1827-1830	90	SANDSTONE: a/a, bec f
	10	SILTSTONE: lt-med gy, brn gy, (arg), (carb), sft-frm, (fis).
1830-1833	80	SANDSTONE: qz, trnsl, crs- v crs, (m, gran), (srt)-srt, (ang), disag, strong qz ovgths, pyr, Por, no show
	20	SILTSTONE: med (brn) gy, arg, (mic), pyr, sft-frm, blky-(fis).
1833-1836	100	SANDSTONE: a/a
	Tr	SILTSTONE: a/a, also gn gy, glc (? cvgs)
1836-1839	90	SANDSTONE: a/a, bec f
	10	SILTSTONE: brn gy, arg, sft-frm.
1938-1842	40	SANDSTONE: qz, trnsl-lt gy, f-crs, (srt), (ang), disag, strng qz ovgths, (Por), no shows.
	60	SILTSTONE: med brn gy, arg-aren, (mic), (carb), sft-frm, blky-(fis).
1842-1845	30	SANDSTONE: a/a
	70	SILTSTONE: a/a
1845-1848	40	SANDSTONE: a/a
	60	SILTSTONE: a/a
1848-1851	50	SANDSTONE: qz, trnsl-lt gy, vf-v crs, dom f-crs, (srt), (ang), disag, (lit), pyr, (Por), no shows.
	30	SILTSTONE (1): dk brn gy-blk, arg, carb, frm, blk-(fis), gdes to COAL
	20	SILTSTONE (2): lt-med (gy) brn, aren, carb flecks, sft-hd, blky, gdes to vf SANDSTONE.

Depth	% Lithology	Description
1851-1854	50	SANDSTONE: qz, trnsl-lt gy, f-crs, (srt)-srt, (ang)-rnd, disag-hd, qz ovgth Cmt, (lit), pyr, interlm w/ carb strks, (Por), no shows.
	50	SILTSTONE: med gy brn, aren, (arg), carb flecks, (mic), sft-frm, (hd), blk-(fis), gdes to vf SANDSTONE.
1854-1857	30	SANDSTONE: a/a
	70	SILTSTONE: lt-med brn gy, (dk brn gy), aren, (arg), carb, (mic), sft-frm, (hd), blky.
1857-1860	60	SANDSTONE: a/a
	40	SILTSTONE: a/a
1860-1863	80	SANDSTONE: qz, trnsl, m-crs, (v crs), srt, (ang)-(rnd), disag, qz ovgths, pyr, (Por)-Por, no shows.
	20	SILTSTONE: a/a
1863-1866	90	SANDSTONE: a/a, m-crs, (f).
	10	SILTSTONE: a/a
1866-1869	90	SANDSTONE: qz, trnsl-lt gy, f-crs, dom crs, srt-srt, (ang)-(rnd), disag-(hd), qz ovgth Cmt, (pyr), (Por)-Por, no shows.
	10	SILTSTONE: med-dk gy brn, aren-arg, carb.
1869-1872	100	SANDSTONE: qz-bec lit, trnsl-lt gy, f-gran, dom crs, srt-srt, (ang)-rnd, disag-(hd), qz ovgths, lt-dk gy lit, (pyr), (Por)-Por, no shows.
1872-1875	100	SANDSTONE: a/a, red-pnk, lit may be volc.
	Tr	SILTSTONE.
1875-1878	100	SANDSTONE: qz, (lit), trnsl-lt gy, f-crs, (srt)-srt, (ang)-(rnd), disag-(hd), sil Cmt, (gy-blk lit + amr sil conc), (musc), pyr, (Por), no shows.
	Tr	SILTSTONE: med-dk gy brn, (arg), (carb), sft-(frm), (fis).
1878-1881	100	SANDSTONE: a/c, crs-v crs, srt, (Por)-Por, no shows.
	Tr	SILTSTONE: blk, carb, frm-flky, (fis)-blky.
1881-1884	90	SANDSTONE: qz, (lit), trnsl-lt gy, f-v crs, (srt), disag-(hd), qz ovgth Cmt, (red, gn volc lit + amr sil conc), (Por), no shows.
	10	SILTSTONE: a/a
1884-1887	90	SANDSTONE: qz, (lit), trnsl-lt gy, f-v crs, (srt), (ang), disag-(hd), qz ovgth Cmt, (dk gy sil lit - rnd), (Por), no shows.
	10	SILTSTONE: a/a
	Tr	VOLCANICS: lt-med gn, (red pk), (buff), oxid, altd fld, chlor, sft-(frm).

Depth	% Lithology	Description
1887-1890	60	SANDSTONE: a/a
	10	SILTSTONE: dk gy brn-blk, aren, carb, sft-frm, blky-(fis)
	30	VOLCANICS: pale gn buff, (red pk), oxid, altd fld, chlor, sft-(frm), occ dull yel orng min fluor, no cut.
1890-1893	100	VOLCANICS: pale-lt gn, gy gn, buff (red pnk), altd? fld, clor, sft-frm, (hd), com buff sil concr-amyg masses, v dull yel/orng min fluor, no cut.
1893-1896	100	VOLCANICS: a/a
1896-1899	10	SANDSTONE: ? cvgs, trnsl, m-crs, disag, lit, cht
	90	VOLCANICS: pale-lt gn, off wh, sft-frm, buff sil concr, com dull yel/orng min fluor, no cut.
1899-1902	100	VOLCANICS: pale-lt gn, off wh, lt red brn (orng pnk), oxid, chlor altn, occ med-dk trnsl gn mott, fld laths, (mic), com buff hd sil concr-amyg, dull yel/orng background min fluor, no cut.
1902-1905	100	VOLCANICS: pale-med gn, altd, sft, oxid, also blk-dk gy, hd, chlor, dull yel/orng min fluor, no cut.
1905-1908	100	VOLCANICS: bec more gy blk w/ gn mott, less altn, blky, frm-hd, occ fe concr, occ pale-med gn altn, mnr red orng oxid, comm buff sil amyg concr.
1908-1911	100	VOLCANICS: a/a, occ fld laths - altd.
1911-1914	100	VOLCANICS: blk-gy blk, gn mott, bec less altd, basaltic app, brit-hd, shiny, mnr pale-med gn, red brn lateritic, occ buff amyg concr, 20-30% dull yel/orng min fluor, no cut.
1914-1917	100	VOLCANICS: inc fresh app, dom blk-gy blk, gn mott, hd-hd, occ red brn altn-fe concr-exfoliat app, com buff sil concr, occ frac w/qz vein fill.
1917-1920	100	VOLCANICS: dk gn gy-blk, trnsl app, gn altn mott, occ red brn oxid, hd-hd, sil gndmass, occ wh calc frac/vein fill.
1920-1923	100	VOLCANICS: a/a, calc vein fill more com, 20-30% dull orng/yel min fluor, no cut.
1923-1926	100	VOLCANICS: dk gy gn-blk, off wh-gn altn mott, sft-firm, occ calc vein fill, occ buff sil concr.

Depth	% Lithology	Description
1926-1929	100	VOLCANICS: off wh-pale gn, altd, sft, com red brn laterite, sft-firm, mnr dk gy gn, hd, crypto xln.
1929-1932	100	VOLCANICS: a/a, dom off wh-pale gn-altd.
1932-1935	100	VOLCANICS: a/a, occ lt blu gy cht, 20% dull-mod yel/orng min fluor, no cut.
1935-1938	100	VOLCANICS: off wh-pale gn, (dk gn), altd, sft-brit, occ red brn laterite, sft-firm, occ dk gn gy/blk, hd, fresh, crypto xln, tr gn and red brn mott, mnr calc vein fill.
1938-1942	100	VOLCANICS: a/a, tr lt blu gy cht.
1941-1944	100	VOLCANICS: a/a
1944-1947	100	VOLCANICS: a/a, fld laths, altd, 20-30% dull yel/orng min fluor, tr slow crush cut.
1947-1950	100	VOLCANICS: off wh, lt red brn, sft, com gn altn, plag laths in grndmass, pale-lt gn, occ fresh dk gn blk-hd, occ red brn laterite, tr cht, tr calc vein fill.
1950-1953	100	VOLCANICS: a/a
1953-1956	100	VOLCANICS: a/a
1956-1959	100	VOLCANICS: a/a
1959-1962	100	VOLCANICS: a/a
1962-1965	100	VOLCANICS: a/a
1965-1968	20	SANDSTONE: qz, trnsl-lt gy, crs-vcrs, (gran), srt, (ang)-(rnd), disag, qz ovgth Cmt, (Por)-Por, 20-30% dull yel/orng min fluor, no cut.
	80	VOLCANICS: off wh-v pale (gy) gn, altd, sft, cht.
1968-1971	70	SANDSTONE: qz, trnsl-lt gy, crs-vcrs, (gran), srt, (ang)-(rnd), disag, qz ovgth Cmt, (Por)-Por, 20-30% dull yel/orng min fluor, no cut.
	30	VOLCANICS: off wh-v pale gy gn, sft, altd app.
1971-1974	80	SANDSTONE: a/a, slty Mtrx
	20	VOLCANICS: a/a, 10% dull yel min fluor, no cut.

Depth	% Lithology	Description
1974-1977	90	SANDSTONE: qz, trnsl-lt gy, crs-vcrs, (gran), srt, (ang)-(rnd), disag, qz ovgth Cmt, (Por)-Por, no shows
	10	VOLCANICS: off wh-pale gy gn, sft-(frm).
	Tr	SILTSTONE: blk, hd, blky.
1977-1980	90	SANDSTONE: clr-mlky, crs-v crs, (m), srt, (ang)-(rnd), disag, com frac Grn, Qz ovgth Cmt, (Pyr), Por-Por, no shows.
	10	VOLCANICS: a/a
	Tr	SILTSTONE: a/a
1980-1983	90	SANDSTONE: a/a
	10	VOLCANICS: a/a
1983-1986	90	SANDSTONE: clr-wh, m-v crs, dom crs, srt-srt, (ang)-(rnd), disag-cons, com frac Grn, mod sil Cmt, (Qz ovgth), (Pyr), Por-Por, no shows
	10	MUDSTONE: lt brn gy, (mic), (lit), blky-(fis).
1986-1989	80	SANDSTONE: a/a
	10	SILTSTONE: lt-med brn gy, arg, (disp Cl), aren i/p, carb, sft-frm, blky-(fis)
	10	MUDSTONE: a/a
1989-1992	60	SANDSTONE: a/a
	40	SILTSTONE: a/a
1992-1995	50	SANDSTONE: a/a, crs-v crs, (m, gran), srt
	50	SILTSTONE: a/a
1995-1998	60	SANDSTONE: a/a, Por-Por, no shows
	40	SILTSTONE: a/a
1998-2001	20	SANDSTONE: lt gy, f-crs, (v crs), (srt), (ang)-(rnd), arg Mtrx, (calc Cmt), (Qz ovgth), (lit), (Pyr), (Por), no shows.
	80	SILTSTONE: lt-med brn gy, disp Cl, (carb), sft.
2001-2004	30	SANDSTONE: a/a
	70	SILTSTONE: a/a
2004-2007	20	SANDSTONE: a/a
	80	SILTSTONE: a/a
2007-2010	40	SANDSTONE: lt gy, f-(m), srt, (ang)-(rnd), cons, sil + (calc) Cmt, arg Mtrx, (lit), (Por), no shows
	60	SILTSTONE: a/a
2010-2013	20	SANDSTONE: a/a
	80	SILTSTONE: lt-med brn gy, aren, (carb), (calc), sft-(frm), disp Cl.

Depth	% Lithology	Description
2013-2016	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2016-2019	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2019-2022	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2022-2025	10	SANDSTONE: a/a, 10-20% dull yel min fluor, no cut
	90	SILTSTONE: a/a
2025-2028	100	SILTSTONE: a/a
2028-2031	40	SANDSTONE: lt gy, f-(m), srt-srt, (ang)-(rnd), occ rnd, cons, mod calc Cmt, arg Mtrx, lit, (Por), 30-40% dull yel orng min fluor, no cut.
	60	SILTSTONE: lt-med gy brn, aren, carb, sft-(frm), blky-(fis).
2031-2034	30	SANDSTONE: a/a
	70	SILTSTONE: a/a
2034-2037	60	SANDSTONE: a/a, bec crs, disag, (Por)-Por, no shows
	40	SILTSTONE: a/a
2037-2040	90	SANDSTONE: qz, clr-mlky, crs, srt, (rnd)-rnd, disag, wk sil Cmt, Por, no shows.
	10	SILTSTONE: a/a
2040-2043	90	SANDSTONE: a/a
	10	SILTSTONE: a/a
	Tr	COAL: blk, vit, hd, sbconch Frac.
2043-2046	90	SANDSTONE: a/a
	10	SILTSTONE: a/a
	Tr	COAL: a/a
2046-2049	100	SANDSTONE: a/a
2049-2052	100	SANDSTONE: a/a
2052-2055	100	SANDSTONE: a/a
2055-2058	100	SANDSTONE: a/a
2058-2061	100	SANDSTONE: a/a, tr lit
2061-2064	100	SANDSTONE: a/a, tr lit
2064-2067	100	SANDSTONE: a/a, tr lit, tr Pyr
2067-2070	100	SANDSTONE: a/a

Depth	% Lithology	Description
2070-2073	60	SANDSTONE: a/a
	40	SILTSTONE: lt-med brn gy, aren, (arg), (carb), sft-(frm), blky-(fis).
2073-2076	30	SANDSTONE: clr-trnsl, f-m, (crs), srt-srt, disag, (calc Cmt), (arg Mtrx), (Por)-Por, no shows.
	70	SILTSTONE: med brn gy-blk, aren, (arg), carb, sft-(frm)
	Tr	COAL
2076-2079	90	SILTSTONE: a/a
	10	SANDSTONE: a/a
	Tr	COAL
2079-2082	100	SILTSTONE: a/a
2082-2085	100	SILTSTONE: med-dk brn gy, aren, carb debr, (carb lam), non calc, sft-(frm).
2085-2088	100	SILTSTONE: a/a
2088-2091	10	SANDSTONE: lt gy, clr-trnsl, f-m, disag, no shows
	90	SILTSTONE: a/a
2091-2094	100	SILTSTONE: med-dk brn gy, (blk), aren, (arg), (carb), sft-(hd), blky-(fis).
2094-2097	20	SANDSTONE: lt gy, clr-trnsl, f-m (crs), (srt), ang-(rnd), disag-(cons), mod sil + (calc) Cmt, (arg Mtrx), (Pyr), (Por), no shows.
	80	SILSTONE: a/a, disp Cl.
2097-2100	20	SANDSTONE: a/a
	80	SILTSTONE: a/a
2100-2103	30	SANDSTONE: lt gy, lt buf, f, srt, (rnd), cons, calc Cmt, arg Mtrx, (lit), non-(Por), no shows
	70	SILTSTONE: a/a
2103-2106	100	SILTSTONE: a/a, carb
	TR	COAL
2106-2109	10	SANDSTONE: a/a
	90	SILTSTONE: med-dk brn gy, (blk), (aren), disp Cl, (carb), sft-(hd).
2109-2112	80	SILTSTONE: a/a
	20	MUDSTONE: med brn gy, mic, frm, (fis)-fis,
	Tr	COAL: blk, vit-(earthy), sbconch Frac.
2112-2115	100	SILTSTONE: med gy brn, (dk brn gy), (buff gy), aren-(arg), carb detr, (carb lam), bec hd, less disp Cl, blky, gdes to vf SST.

Depth	% Lithology	Description
2115-2118	80	SILTSTONE: med gy brn, dk brn gy, (blk), carb detr + lam, mm Bds, frm-hd, (sil), blky, gdes to COAL.
	20	SHALE: dk brn gy, carb, (mic), mm Bds, frm-hd, ind, (fis)-fis.
	Tr	COAL.
2118-2121	90	SILTSTONE: a/a
	10	SHALE: a/a
2121-2124	100	SILTSTONE: lt-med brn gy, (carb detr), disp Cl), non calc, sft-frm, (fis)
	Tr	SANDSTONE: off wh-lt gy, vf-f, arg Mtrx, cons, sil + (calc) Cmt, lit, carb, non Por, no shows.
	Tr	CONGLOMERATE: lit, dk brn-blk, f-Pbl, ((srt)), rnd-rnd, blk arg Mtrx, (Qz), non Por.
	Tr	MUDSTONE: lt brn gy, carb lam, sft, (fis).
2124-2127	100	SILTSTONE: lt-med brn gy, carb detr, (vf s), Pyr mod, (lit), sft-(hd), blky-(fis).
2127-2130	100	SILTSTONE: a/a (arg).
2130-2133	100	SILTSTONE: a/a, (aren-gdes to vf SST), (arg-disp Cl).
	Tr	SHALE: dk brn gy, (frm)-hd, fis
2133-2136	100	SILTSTONE: lt brn gy, (arg), (carb detr), sft-frm, (hd), blky-(fis)
	Tr	SANDSTONE: a/a, (Chlor)
	Tr	SHALE: a/a
2136-2139	100	SILTSTONE: a/a, bec more arg-disp Cl.
	Tr	SANDSTONE: lt gy, vf-f, arg Mtrx, (Chlor), non Por, no shows.
2139-2142	10	SANDSTONE: lt gy-off wh, vf-f, srt, cons, (calc Cmt), arg Mtrx, (Chlor), (lit), (Por), no shows
	90	SILTSTONE: lt-med gy, aren-arg, (carb detr), sft-frm, blky-(fis).
2142-2145	30	SANDSTONE: a/a
	70	SILTSTONE: a/a, com disp Cl.
2145-2148	40	SANDSTONE: a/a (f-(m)
	60	SILTSTONE: a/a
2148-2151	50	SANDSTONE: trnsl-off wh, f-m, srt, ang-(rnd), cons, wk-mod sil Cmt, (Pyr), Por, no shows
	50	SILTSTONE: a/a
2151-2154	20	SANDSTONE: a/a
	80	SILTSTONE: lt-med brn gy, aren, (arg-disp Cl), carb detr, (pyr), (calc), (fis)-fis.

Depth	% Lithology	Description
2154-2157	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2157-2160	100	SILTSTONE: a/a
2160-2163	10	SANDSTONE: off wh-lt gy, vf-m (crs), (srt), (ang)-(rnd), cons, mod calc Cmt, arg Mtrx, com lit, (Por), no show.
	90	SILTSTONE: med brn gy, frm-hd, blky-(fis).
	Tr	MUDSTONE: dk gy brn, hd, ind, sbconch Frac.
2163-2166	10	SANDSTONE: a/a
	90	SILTTONE: a/a
	Tr	MUDSTONE: a/a
2166-2169	100	SILTSTONE: a/a
2169-2172	100	SILTSTONE: lt-med brn gy, aren, arg, (disp Cl), carb detr, (pyr), sft-frm, blky-(fis)
	Tr	SHALE
2172-2175	90	SILTSTONE: a/a
	10	SHALE: med brn gy, (aren), frm-(hd), fis.
2175-2178	90	SILTSTONE: a/a
	10	SHALE: a/a
	Tr	SANDSTONE: off wh-lt gy, vf-m, (srt), (ang)-(rnd), calc + sil Cmt, arg Mtrx, (lit), carb lam + detr, (Por), no shows.
2178-2181	100	SILTSTONE: lt-med (dk) brn gy, aren, (arg), (carb), (fis)-fis, gdes to vf SST
	Tr	SANDSTONE: a/a
2181-2184	10	SANDSTONE: off wh, buf, vf-f, (m), (srt), (ang)-(rnd), cons, mod calc + (sil) Cmt, arg Mtrx, (lit), (Por), no shows
	90	SILSTONE: med-dk brn gy, a/a
2184-2187	30	SANDSTONE: a/c bec disag
	70	SILTSTONE: a/a
2187-2190	80	SANDSTONE: trnsl, wh-off wh, frm, (crs), (srt), (rnd), disag, wk calc + sil Cmt, Por-Por inf, no shows
	20	SILTSTONE: a/a
2190-2193	80	SANDSTONE: a/a, arg Mtrx i/p.
	20	SILTSTONE: a/a
2193-2196	80	SANDSTONE: trnsl, wh-off wh, f-crs, (v crs), (srt), (ang)-(rnd), dom disag, wk calc - sil Cmt, (lit), Por-Por inf, no shows
	20	SILTSTONE: a/a

Depth	% Lithology	Description
2196-2199	90	SANDSTONE: a/a
	10	SILTSTONE: a/a
2199-2202	50	SANDSTONE: a/a, dom crs.
	50	SILTSTONE: lt-med brn gy, aren, (carb detr), frm-hd, (sft), blky-(fis), gdes to vf SST.
2202-2205	20	SANDSTONE: clr-trnsl, buf-lt gy, vf-m, (srt), (ang)-(rnd), disag-(cons), arg Mtrx, calc Cmt, (lit), (Por)-Por, no shows.
	80	SILTSTONE: a/a
2205-2208	10	SANDSTONE: a/a, bec vf-f
	90	SILTSTONE: a/a
2208-2211	20	SANDSTONE: off wh, buf, vf-f, (m-crs), (srt), (ang)-(rnd), cons, calc Cmt, (lit), carb frag, (Por), no shows
	80	SILTSTONE: lt-med brn gy, carb i/p, sft-frm, non calc, blky-(fis)
2211-2214	30	SANDSTONE: a/a
	70	SILTSTONE: a/a
2214-2217	100	SILTSTONE: a/a
2217-2220	100	SILTSTONE: lt-med brn gy, carb detr, sft-(frm), blky-(fis)
2220-2223	10	SANDSTONE: off wh-lt gy, buf, vf-m, (crs), (srt), ang-(rnd), cons, mod calc Cmt, arg Mtrx, (Chlor), (lit) (Por), no shows.
	90	SILTSTONE: lt-dk brn gy, aren, (arg), (calc), (carb), mm Bds, sft-(hd), blky-(fis).
2223-2226	100	SILTSTONE: lt brn gy, aren, sil (carb detr), sft-frm, blky-(fis), gdes to vf SST.
2226-2229	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2229-2232	10	SANDSTONE: a/a
	90	SILTSTONE: lt-med brn gy, (aren), carb lam, sft-frm, (hd), blky-(fis), gdes to vf SST.
2232-2235	20	SANDSTONE: a/a
	80	SILTSTONE: a/a
2235-2238	30	SANDSTONE: a/a
	70	SILTSTONE: a/a
	Tr	COAL
2238-2241	10	SANDSTONE: off wh-lt gy, vf-f, arg Mtrx, calc Cmt, non-(Por), no shows
	90	SILTSTONE: med brn gy, aren, (arg), carb, sft-frm.

Depth	% Lithology	Description
2241-2244	30	SANDSTONE: a/a, (lse m-crs)
	70	SILTSTONE: lt-med brn gy, carb detr + lam, aren-(arg), frm-hd, blky-(fis)
	Tr	COAL
2244-2247	30	SANDSTONE: a/a, CGL i/p
	70	SILTSTONE: a/a
2247-2250	10	SANDSTONE: off wh, f, srt, cons, mod calc Cmt, arg Mtrx, non-(Por), no shows
	90	SILTSTONE: a/a, disp Cl i/p
2250-2253	50	SANDSTONE: clr-trnsl, lt gy, f-m, (crs-v crs), (srt)-srt, (ang)-(rnd), disag-(cons), calc Cmt, arg Mtrx, (Pyr), lit, (Por)-Por, no shows
	50	SILTSTONE: a/a
2253-2256	40	SANDSTONE: a/a
	60	SILTSTONE: a/a
2256-2259	30	SANDSTONE: a/a, dom f-m
	70	SILTSTONE: a/a
	Tr	SHALE
2259-2262	20	SANDSTONE: off wh-lt gy, buf, vf-m, (srt), ang-(rnd), cons, mod calc Cmt, arg Mtrx, com lit, (Pyr aggr), (Por), com dull yel orng min Fluor, no cut
	80	SILTSTONE: med brn gy, aren, carg frag, (disp Cl), sft-frm, (hd), blky-(fis), gdes to vf SST.
2262-2265	20	SANDSTONE: a/a
	80	SILTSTONE: a/a
2265-2268	30	SANDSTONE: a/a
	70	SILTSTONE: a/a
2268-2271	20	SANDSTONE: a/a
	80	SILTSTONE: a/a
2271-2274	10	SANDSTONE: a/a
	80	SILTSTONE: lt-med brn gy, aren-arg, (disp Cl), (carb), sft-frm, (hd), blky-(fis)
	10	COAL: blk, vit, hd, blky-sbconch Frac.
2274-2277	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2277-2280	10	SANDSTONE: lt gy-off wh, f-m, arg Mtrx, calc Cmt, (Por), no shows
	90	SILTSTONE: a/a
2280-2283	100	SILTSTONE: a/a
	Tr	COAL

Depth	% Lithology	Description
2283-2286	10	SANDSTONE: a/a
	90	SILTSTONE: lt-dk brn gy, (carb), arg, sft-hd, blky-(fis)
2286-2289	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2289-2292	80	SILTSTONE: a/a
	20	MUDSTONE: med brn gy, (carb), sft-frm, blky-fis
2292-2295	90	SILTSTONE: a/a, carb micro lam
	10	COAL: blk, vit, hd, blky-sbconch Frac.
2295-2298	100	SILTSTONE: lt-med (dk) brn gy, (aren), arg-com disp Cl, (carb detr + lam), (Pyr), (fis)-fis, sft-hd
2298-2301	100	SILTSTONE: a/a
2301-2304	100	SILTSTONE: a/a, dom lt brn gy
2304-2307	100	SILTSTONE: a/a
2307-2310	100	SILTSTONE: lt-med brn gy, arg-aren, (mm Bdg), (carb), sft-frm, blky-(fis)
2310-2313	10	SANDSTONE: lt gy-off wh, vf-m, (srt), ang-(rnd), cons, calc Cmt, arg Mtrx, com lit, (Por), com dull yel orng min Fluor, no cut.
	90	SILTSTONE: a/a
2313-2316	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2316-2319	100	SILTSTONE: lt-dk gy, aren, carb detr + strks, dissem Pyr, non calc, frm-hd, blky-fis.
2319-2322	10	SANDSTONE: lit, off wh-lt gy, buf, f-m, (vf), (srt), ang-(rnd), cons, calc + (Pyr) Cmt, arg Mtrx, carb lam, up to 30% lit-Cl altn, non Por, no shows
	90	SILTSTONE: a/a
2322-2325	40	SANDSTONE: a/a, vf-f, (m), mic, tr Chlor, gdes to SLTST, non-(Por), no shows
	60	SILTSTONE: a/a, v carb i/p.
2325-2328	30	SANDSTONE: a/a, com rock flour
	70	SILTSTONE: a/a
2328-2331	70	SANDSTONE: clr-trnsl, m-crs, (v crs), srt-srt, ang-(rnd), disag, (dol Cmt), Por-Por inf, no shows
	30	SILTSTONE: lt brn gy, (occ med-dk), aren-(arg), dissem Pyr, mic, carb detr + strks, (lam), gdes to vf SST i/p.

Depth	% Lithology	Description
2331-2334	90	SANDSTONE: clr-trnsl, m, (crs-v crs), srt, ang-(rnd), disag, occ dk lit, Por inf, no shows
	10	SILTSTONE: a/a
2334-2337	50	SANDSTONE: off wh, f-m, (crs), (srt)-srt, ang-(ang), cons, mod dol Cmt, arg Mtrx, lit, Pyr aggr, (Por)-Por, no shows
	50	SILTSTONE: lt-med brn gy, (carb detr + lam), aren i/p, (mic), blky-(fis).
2337-2340	30	SANDSTONE: a/a
	70	SILTSTONE: (lt) med-dk brn gy, aren, v carb i/p, mic, gdes to vf SST i/p.
	Tr	COAL
2340-2343	10	SANDSTONE: off wh-lt gy, vf-m, (srt), ang-(ang), cons, mod dol Cmt, arg Mtrx, lit, (Por), no shows
	90	SILTSTONE: med-(dk) gy, aren, abd carb detr, sil, lit, frm-hd, blky, gdes to vf SST.
2343-2346	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2346-2349	100	SILTSTONE: lt-med brn gy, arg-aren, dissem + nod Pyr, mic, carb detr, frm-hd, blky.
2349-2352	10	SANDSTONE: a/a
	90	SILTSTONE: med gy, aren, abd carb detr, (lam), (dol), frm, gdes to vf SST.
2352-2355	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2355-2358	100	SILTSTONE: lt-med brn gy, aren-arg, carb detr, (lam), (tr dol), Pyr nod, lit, frm, blky-(fis)
2358-2361	100	SILTSTONE: a/a dom med brn gy
2361-2364	40	SANDSTONE: off wh-lt gy, f-(m), (srt)-srt, ang-(rnd), cons, dol Cmt, arg Mtrx, lit, (Por), com dull gn yel min Fluor, no cut
	60	SILTSTONE: lt-med brn gy, a/a
2364-2367	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2367-2370	40	SANDSTONE: wh-off wh, m-crs, (occ f, v crs), (srt), ang-(ang), disag-cons, tr arg Mtrx, dol Cmt, lit, (Por)-Por, no shows
	50	SILTSTONE: a/a
	10	COAL: blk, vit-(dull/earthy), hd, blky-sbconch Frac.

Depth	% Lithology	Description
2370-2373	20	SANDSTONE: a/a
	80	SILTSTONE: lt-dk brn gy, occ carb lam + strks, frm-hd, (fis)-fis
2373-2376	100	SILTSTONE: a/a, occ Pyr nod
2376-2379	100	SILTSTONE: med-dk brn gy, aren, carb detr + strks, (mic), (Pyr nod), non calc, (fis), frm-hd.
2379-2382	100	SILTSTONE: a/a
	Tr	COAL
2382-2385	100	SILTSTONE: a/a
2385-2388	30	SANDSTONE: clr-trnsl, m-crs, (v crs), (srt), ang-(ang), disag-cons, (Qz ovgth), (arg Mtrx), (lit), Por inf, no shows
	70	SILTSTONE: a/a
2388-2391	60	SANDSTONE: a/a, Por-Por inf, no shows
	40	SILTSTONE: lt-dk brn gy, carb detr, occ carb strks, frm-hd, blky-(fis)
2391-2394	40	SANDSTONE: a/a
	60	SILTSTONE: a/a
2394-2397	40	SANDSTONE: off wh, vf-f, (m), (srt), ang-(ang), cons, dol Cmt, arg Mtrx, com lit, (Por), no shows
	40	SILTSTONE: med-dk gy, carb detr + strks, non calc, frm-hd, blky-(fis), occ fis, gdes to COAL i/p.
	20	COAL: blk, dk brn/blk, dull, slty, earthy, blky-(fis), gdes from SLTST.
2397-2400	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2400-2403	30	SANDSTONE: a/a, vf-m
	70	SILTSTONE: a/a
3403-2406	100	SILTSTONE: a/a
2406-2409	90	SANDSTONE: off wh, f-m, dom f, srt, ang-(rnd), fri-Cmtd, dol Cmt, arg Mtrx, com lit, (Por), no shows
	10	SILTSTONE: a/a

Depth	% Lithology	Description
2409-2412	70	SANDSTONE: off wh, clr-trnsl, m-crs, (f), (srt), ang-(ang), disag-cons, dol Cmt, (arg Mtrx), (lit), Por inf, com dull yel orng Min Fluor, no cut.
	20	SILTSTONE: med-dk red brn, v carb, calc, frm-hd, ? palaeosol underlying COAL, gdes to COAL i/p.
	10	COAL: blk, dk brn, dom earthy, occ vit, frm-hd, blky-(fis), sbconch Frac i/p.
2412-2415	60	SANDSTONE: off wh-lt gy, f-crs, (srt), ang-(ang), fri-Cmtd, dol Cmt, arg Mtrx, occ lit, (Por), no shows
	30	SILTSTONE: med-dk gy, aren, carb detr, frm-hd, (blky)-(fis)
	10	COAL: a/a
2415-2418	30	SANDSTONE: a/a
	70	SILTSTONE: a/a
2418-2421	20	SANDSTONE: a/a
	70	SILTSTONE: a/a
	10	COAL: blk, dull-vit, occ wdy Tex, (earthy), hd, sbconch Frac.
2421-2424	40	SANDSTONE: a/a, f-(m), (Por), no shows
	50	SILTSTONE: lt-dk brn gy, carb lam + strks, sil, frm-hd, (blky)-fis, gdes to COAL I/P
	10	COAL: a/a
2424-2427	50	SANDSTONE: a/a
	40	SILTSTONE: a/a
	10	COAL: a/a
2427-2430	30	SANDSTONE: a/a
	70	SILTSTONE: med-(dk) brn gy, carb detr, mic, sil, frm, arg, (fis)-fis
2430-2433	20	SANDSTONE: a/a
	80	SILTSTONE: med gy, mot, aren, carb, gdes to vf SST
2433-2436	30	SANDSTONE: a/a
	70	SILTSTONE: a/a
2436-2439	60	SANDSTONE: clr-trnsl, f-m, srt, (ang)-(rnd), disag, occ lit, Por inf, no Fluor, TG up to 5%
	40	SILTSTONE: a/a
2439-2442	100	SANDSTONE: a/a
2442-2445	100	SANDSTONE: a/a
2445-2448	90	SANDSTONE: clr-trnsl, m-crs, (f), srt-srt, ang-(rnd), disag, com lit, Por inf, no shows
	10	SILTSTONE: med-dk brn gy, (aren), (carb), frm (fis)-fis

Depth	% Lithology	Description
2448-2451	90	SANDSTONE: a/a, (arg Mtrx), mnr sil/dol Cmt, (Por)-Por inf, no shows
	10	SILTSTONE: lt brn, med brn gy, carb i/p, (aren), frm, (fis)-fis
2451-2454	90	SANDSTONE: a/a
	10	SILTSTONE: a/a
2454-2457	80	SANDSTONE: off wh, clr-trnsl, m-crs, (f), (srt), ang-(ang), disag-cons, dol Cmt, arg Mtrx, com lit, (Por), no shows
	20	SILTSTONE: a/a
2457-2460	80	SANDSTONE: a/a, f-m
	20	SILTSTONE: lt gy, med brn + brn gy, (aren), (carb detr + lam), (fis)-fis
2460-2463	80	SANDSTONE: a/a
	20	SILTSTONE: a/a
2463-2466	70	SANDSTONE: clr-off wh, f-(m), srt, ang-(rnd), fri-cons, dol Cmt, arg Mtrx, lit, (Por), no shows
	30	SILTSTONE: lt-med brn gy, (aren), v carb i/p, (fis)-fis
2466-2469	60	SANDSTONE: a/a
	40	SILTSTONE: a/a
2469-2472	20	SANDSTONE: a/a
	80	SILTSTONE: med brn gy, aren, abd carb detr, (fis)-fis
2472-2475	20	SANDSTONE: a/a
	80	SILTSTONE: a/a
2475-2478	20	SANDSTONE: off wh, (vf)-f, cons, calc Cmt, arg Mtrx, non-(Por), no shows
	80	SILTSTONE: a/a
2478-2481	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2481-2484	20	SANDSTONE: a/a, f-m
	80	SILTSTONE: a/a
2484-2487	20	SANDSTONE: clr, off wh, f-m, (gran), (srt), ang-(ang), disag-cons, calc Cmt, arg mtrx, lit, (Por), no shows.
	80	SILTSTONE: med-dk brn gy, (carb), (mic), frm-hd, (blky)-fis
2487-2490	30	SANDSTONE: a/a, vf-m, dom f
	70	SILTSTONE: lt-med gy, med brn gy, carb, (mic), dissem Pyr, non calc, blky-(fis)

Depth	% Lithology	Description
2490-2493	60	SANDSTONE: off wh, clr, f-m, srt, ang-(ang), fri-cons, calc Cmt, (arg Mtrx), lit, (Por), no shows.
	40	SILTSTONE: med-dk brn gy, aren, dissem Pyr, carb, (mic), frm-hd, blky-(fis)
2493-2496	70	SANDSTONE: a/a
	30	SILTSTONE: a/a
	Tr	COAL
2496-2499	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2499-2502	30	SANDSTONE: off wh, lt gy, vf-m, (srt), ang-(ang), cons, calc Cmt, arg Mtrx, lit, (Por), no shows.
	70	SILTSTONE: a/a
2502-2505	50	SANDSTONE: a/a
	50	SILTSTONE: med brn gy, aren, carb detr, dissem Pyr, (mic), sil, frm-hd, (blky)-fis
2505-2508	60	SANDSTONE: off wh, drty pale gy, f-(m), srt, ang-(ang), cons, calc Cmt, arg Mtrx, com lit, (Por), no shows
	40	SILTSTONE: a/a, carb lam i/p
2508-2511	90	SANDSTONE: a/a, ang-(rnd)
	10	SILTSTONE: a/a
2511-2514	90	SANDSTONE: a/a
	10	SILTSTONE: a/a
2514-2517	90	SANDSTONE: off wh, clr-trnsl, (f)-m, srt, ang-(rnd), disag-cons, calc Cmt, arg Mtrx, com lit, (Por), no shows
	10	SILTSTONE: med-dk gy, (brn gy), aren, carb detr, non calc, (dissem Pyr), (fis)
2517-2520	80	SANDSTONE: a/a, m-(crs), (Por), no shows
	20	SILTSTONE: dk gy, (lt-med gy brn), dissem Pyr, non-calc, (carb lam), hd, blky-(fis).
	Tr	COAL
2520-2523	90	SANDSTONE: a/a
	10	SILTSTONE: a/a
2523-2526	90	SANDSTONE: off wh, clr-trnsl, f-m (srt), ang-(ang), fri-cons, arg Mtrx, calc Cmt, com lit, (Por), no shows
	10	SILTSTONE: a/a
2526-2529	100	SANDSTONE: clr-trnsl, off wh, m-(crs), srt-srt, ang-(rnd), dom disag, (calc Cmt), (arg Mtrx), (Qz ovgth), occ lit, Por, no shows

Depth	% Lithology	Description
2529-2532	100	SANDSTONE: a/a
2532-2535	100	SANDSTONE: a/a
2535-2538	100	SANDSTONE: a/a, occ crs-v crs
2538-2541	90	SANDSTONE: clr-trnsl, m-v crs, (gran), poss CGL, (srt), ang - (ang), dom disag, (arg Mtrx), (Qz ovgth), occ lit, (Por), no shows
	10	SILTSTONE: med-dk brn gy, frm-hd, carb, blky-(fis), gdes to COAL
	Tr	COAL: blk, dull, slty/earthy i/p, (sbconch Frac), brit-hd
2541-2544	80	SANDSTONE: off wh, clr-trnsl, f-m, (crs), (srt), ang-(ang), (disag)-cons, off wh-wh arg Mtrx, calc Cmt, com lit, non-(Por), no shows
	20	SILTSTONE: a/a
2544-2547	70	SANDSTONE: a/a, (Qz ovgth)
	30	SILTSTONE: lt-med brn gy, med gy, aren, carb i/p, frm-hd, blky-occ fis
2547-2550	60	SANDSTONE: off wh, dirty lt gy, vf-m, (crs), (srt), ang-(ang), slty/arg Mtrx, (calc Cmt), com lit, (carb lam), carb frag, non-(Por), no shows
	40	SILTSTONE: a/a, gdes to vf SST
2550-2553	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2553-2556	100	SANDSTONE: off wh, lt gy, f-m, (crs), (srt), ang-(rnd), cons-cons, buff-off wh arg/slty Mtrx, dol Cmt, lit, carb frag, non Por, no shows
2556-2559	90	SANDSTONE: a/a
	10	SILTSTONE: med-dk red brn, med gy, calc, com fib/acic Text w/ wh Calc infill, aren i/p, carb detr, hd-hd, blky
2559-2562	70	SANDSTONE: off wh, lt gy, f-m, (vf, crs), (srt), ang-(ang), cons, arg Mtrx, calc Cmt, lit, non Por, no shows
	30	SILTSTONE: lt-med brn gy, med-dk gy, aren-arg, carb detr ip, blky-(fis)
2562-2565	40	SANDSTONE: a/a, f-m
	60	SILTSTONE: (lt)-med gy brn, med gy, aren, carb, arg i/p, frm-hd,blky-(fis)
	Tr	COAL

Depth	% Lithology	Description
2565-2568	60	SANDSTONE: lt gy, (off wh), vf-f, (crs), (srt), ang-(ang), off wh-lt gy arg/slty Mtrx, calc Cmt, occ lit, carb frag + strks, non Por, no shows
	30	SILTSTONE: med-(dk) gy, aren, carb i/p, (mic), frm-hd
	10	MUDSTONE: med gy brn, mic, blky-occ fis
2568-2571	20	SANDSTONE: a/a
	80	SILTSTONE: a/a
2571-2574	10	SANDSTONE: a/a
	90	SILTSTONE: med brn gy, (aren), carb i/p, arg, sft-frm, blky-(fis)
2574-2577	10	SANDSTONE: a/a, vf-f
	90	SILTSTONE: a/a, med-dk gy
2577-2580	100	SILTSTONE: a/a
2580-2583	100	SILTSTONE: (lt)-med gy, (med brn gy), aren, carb detr + strks, frm-hd, blky-occ fis
2583-2586	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2586-2589	10	SANDSTONE: lt gy, vf-f, srt, fri-cons, arg Mtrx, calc + sil Cmt, lit, (carb frag), non-Por, no shows
	90	SILTSTONE: (lt)-dk gy, aren, carb detr + lam, (arg), frm-hd, blky-occ fis, gdes to vf SST
2589-2592	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2592-2595	90	SILTSTONE: med gy, speckled app i/p, aren, carb, arg, disp Cl, dissem Pyr, (mic), blky-(fis)
	10	SHALE: med (gy) brn, sil, hd, (fis)-fis
2595-2598	100	SILTSTONE: a/a
2598-2601	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2601-2604	10	SANDSTONE: a/a
	90	SILTSTONE: lt-med gy, aren, arg, arg, disp Cl i/p, frm-hd, (sft), (mic), (sl dol), blky-(fis), gdes to vf SST
2604-2607	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
	Tr	COAL: blk, vit, hd, sbconch Frac.
2607-2610	100	SILTSTONE: med gy, aren, carb, arg i/p, (disp Cl), (sl dol), sft-frm, blky-(fis)

Depth	% Lithology	Description
2610-2613	30	SANDSTONE: med gy, vf-(f), srt, cons, slty, lit, carb frag + lam, non Por, no shows
	70	SILTSTONE: a/a
2613-2616	30	SANDSTONE: a/a, up to 30% lit-com altn
	70	SILTSTONE: a/a, s, gdes to vf SST
2616-2619	20	SANDSTONE: a/a
	80	SILTSTONE: a/a
2619-2622	30	SANDSTONE: med gy, vf-(f), srt, cons, silty, sil + wkly dol Cmt, com disp Cl, up to 20% lit, abd carb mat, non Por, no shows
	70	SILTSTONE: med gy, aren, carb, arg-disp Cl i/p, (mic), lit, sil, wkly dol, frm-hd, (sft), blky-(fis).
2622-2625	10	CONGLOMERATE: off wh-buff, m-pbl, ((srt)), ang-(ang), Mtrx supPorted, strong dol+ sil Cmt, dom lit grns, com fib particles in Mtrx, com Cl altn, non Por, no shows
	90	SILTSTONE: dk gy, (med-dk gy brn), arg, (aren i/p), (carb), dol i/p, disp Cl i/p, frm-hd, (sft), blky-occ fis
2625-2628	60	SANDSTONE: pale trnsl gn, off wh, vf-f, srt, qzt-glassy, strong sil (ovgth) Cmt, dol i/p, no Mtrx, Chlor, (lit) tr wh Calc vein fill, non Por, no show
	40	SILTSTONE: a/a
2628-2631	10	SANDSTONE: a/a
	90	SILTSTONE: med-dk gy, (brn gy), arg, (aren i/p), carb i/p, non-wkly dol, frm-hd, (blky)-fis
2631-2634	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2634-2637	100	SANDSTONE: med-dk brn gy, arg, aren i/p, carb detr + (lam), frm-hd
2637-2640	70	SANDSTONE: off wh-lt buff, f, (vf, m), (srt), ang-(rnd), fri-cons, arg Mtrx, strng dol + (sil) Cmt, abd lit, Cl altn, non-(Por), no shows
	30	SILTSTONE: a/a
2640-2643	90	SANDSTONE: clr-trnsl, off wh, m-crs, (f), srt, (ang)-rnd, dom disag, (arg Mtrx), (dol Cmt), com lit, Por inf, no shows
	10	SILTSTONE: a/a
2643-2646	90	SANDSTONE: off wh, clr-trnsl, f-m, (vf), (srt), ang-(rnd), fri-cons, disag i/p, com arg Mtrx, dol Cmt, up to 30% lit, com Cl (Kao) altn, (Por)-Por inf, no shows
	10	SILTSTONE: a/a

Depth	% Lithology	Description
2646-2649	20	SANDSTONE: off wh-lt buff, vf-m, (srt), ang-(ang), con-cons, wh-off wh arg Mtrx, dol + (sil) Cmt, up to 35% lit, com Cl altn, non Por, no shows
	80	SILTSTONE: v pale buff gy, arg, (aren i/p), sil, sft-hd, (fis)-fis
2649-2652	40	SANDSTONE: a/a
	60	SILTSTONE: lt-med brn gy, (dk gy), (carb), (lam), arg i/p, frm-hd, blky-occ fis
2652-2655	20	SANDSTONE: a/a
	80	SILTSTONE: med-dk brn gy, arg, a/a
2655-2658	80	SANDSTONE: off wh-pale trnsl gn, vf-f, (m), (srt), ang-(rnd), fri-cons, off wh arg Mtrx, dol + sil Cmt, up to 35% lit, com Cl altn; trnsl gn is qzt, glassy, lit, Chlor, non-(Por), no shows
	20	SILTSTONE: a/a
2658-2661	90	SANDSTONE: off wh, lt gy, clr-trnsl, f-m, srt, ang-(rnd), disag-cons, arg Mtrx, dol + (sil) Cmt, up to 30% lit, (carb frag), non-(Por), no shows.
	10	SILTSTONE: a/a
2661-1664	90	SANDSTONE: a/a, com Cl altn.
	10	SILTSTONE: a/a
2664-2667	100	SANDSTONE: off wh, lt buff, m, srt, ang-(rnd), disag-cons, wh-off wh arg Mtrx, dol + (sil) Cmt, abd lit, (Por)-Por inf, no shows.
2667-2670	100	SANDSTONE: a/a
2670-2673	90	SANDSTONE: a/a
	10	SILTSTONE: med-dk brn gy, splnty, hd, bulky-(fis)
2673-2676	80	SANDSTONE: a/a
	10	SILTSTONE: a/a
	10	COAL: blk, dull, earthy, hd, blky-(sbconch)
2676-2679	90	SANDSTONE: off wh, f-m, srt, ang-(rnd), fri-cons, tr-com arg Mtrx, dol Cmt, up to 15% lit, com Cl altn, occ carb frag, (Por)-tr Por, no shows.
2679-2682	100	SANDSTONE: a/a
2682-2685	100	SANDSTONE: a/a, bec m-crs, (f).
2685-2688	100	SANDSTONE: off wh-lt gy, m-crs, (f), srt, ang-(rnd), tr-com arg Mtrx, dol + (sil) Cmt, com lit, com Cl altn, (carb frag), (Por)-tr Por, no shows.

Depth	% Lithology	Description
2688-2691	90	SANDSTONE: a/a, f-crs
	10	SILTSTONE: a/a
2691-2694	50	SANDSTONE: off wh-lt gy, f-(m), srt, ang-(ang), fri-cons, tr-com arg Mtrx, dol Cmt, up to 20% lit, occ Kao altn, non-(Por), no shows.
	50	SILTSTONE: med-dk brn gy, carb detr, occ carb lam, arg, sft-hd, (fis)
2694-2697	90	SANDSTONE: a/a, vf-f, (m)
	10	SILTSTONE: a/a
2697-2700	60	SANDSTONE: a/a
	40	SILTSTONE: med-dk (brn) gy, arg i/p, aren i/p, (carb), brit-hd, (fis)-fis
2700-2703	10	SANDSTONE: a/a
	90	SILTSTONE: a/a
2703-2706	80	SANDSTONE: off wh-lt buff, vf-f, (m), srt), ang-(rnd), (arg Mtrx), dol Cmt, up to 25% lit. Mic, (carb mat), non-(Por), no shows.
	20	SILTSTONE: a/a
2706-2709	90	SANDSTONE: a/a (f)-m
	10	SILTSTONE: a/a
2709-2712	100	SANDSTONE: off wh, clr-trnsl, m-crs, (f), srt, ang-(rnd), (arg Mtrx), dol Cmt, up to 15% lit, (carb mat), (Por)-occ Por, no shows.
2712-2715	100	SANDSTONE: a/a, dom m
2715-2718	80	SANDSTONE: a/a
	20	SILTSTONE: med brn gy, dk gy/blk, arg, (mic), (carb detr), (carb lam), (sft)-hd, (fis)-fis
2718-2721	40	SANDSTONE: off wh, lt buff, (drty lt gy), f-(m), srt, ang-(ang), (arg Mtrx), dol Cmt, up to 30% lit, tr Kao altn, Mic, occ carb mat, non-(Por), no shows
	60	SILTSTONE: a/a
2721-2724	70	SANDSTONE: off wh-lt buff gy, vf-f, (m), (srt), ang-(rnd), arg Mtrx, (dk slty Mtrx), dol Cmt, up to 30% lit, com Cl altn, Kao, (carb), non-(Por), no shows
	30	SILTSTONE: a/a
2724-2727	80	SANDSTONE: a/a
	20	SILTSTONE: a/a
2727-2730	80	SANDSTONE: a/a, up to 35% lit
	20	SILTSTONE: a/a

Depth	% Lithology	Description
2730-2733	80	SANDSTONE: a/a
	20	SILTSTONE: med brn gy, dk gy, carb detr, arg, aren i/p, frm-hd, blky-(fis)
2733-2736	90	SANDSTONE: a/a, vf-m
	10	SILTSTONE: a/a
2736-2739	90	SANDSTONE: a/a
	10	SILTSTONE: a/a
2739-2742	90	SANDSTONE: off wh-v lt gy, f-m, (vf), (srt), ang-(rnd), (arg Mtrx), dol + (sil) Cmt, up to 25% lit, com Kao altn, (carb frag), (Por)-tr Por, no shows
	10	SILTSTONE: med brn gy, dk gy, carb detr, brit-hd, (ind), (blky)-fis
2742-2745	100	SANDSTONE: a/a
2745-2748	90	SANDSTONE: a/a, dom disag
	10	SILTSTONE: a/a, + aren, abd carb mat, (mic)
2748-2751	100	SANDSTONE: a/a
2751-2754	100	SANDSTONE: a/a
2754-2757	100	SANDSTONE: a/a
2757-2760	100	SANDSTONE: off wh, clr-trnsl, f-crs, (srt), ang-(rnd), fri-cons, (arg Mtrx), dol + sil Cmt, (ovgths), up to 25% lit, com Kao altn, (carb), non-(Por), no shows
2760-2763	70	SANDSTONE: a/a
	30	SILTSTONE: a/a
2763-2766	70	SANDSTONE: off wh-lt buff, drty lt gy, vf-f, (m), (srt), ang-(ang), fri-cons, abd arg Mtrx, dol Cmt, (sil ovgths), up to 35% lit, occ Cl (Kao altn),non-(Por), no shows
	30	SILTSTONE: v lt (brn) gy, med-dk gy, arg, disp Cl i/p, (carb detr), sil, sft-hd, (fis)-fis
2766-2769	70	SANDSTONE: a/a, strong dol Cmt, non Por
	30	SILTSTONE: a/a
2769-2772	80	SANDSTONE: a/a
	20	SILTSTONE: a/a
2772-2775	90	SANDSTONE: a/a, abd rock fluor
	10	SILTSTONE: a/a
2775-2778	100	SANDSTONE: off wh-pale buff, clr-trnsl, f-(m), srt, ang-(rnd), disag-cons, wh arg Mtrx, dol Cmt, up to 20% lit, occ Kao altn, (mic), (carb), non-(Por), no shows

Depth	% Lithology	Description
2778-2781	100	SANDSTONE: a/a, (f)-m, Por inf, no shows
2781-2784	100	SANDSTONE: a/a, dom disag, Por-Por inf, no shows
2784-2787	100	SANDSTONE: a/a, f-m, (crs)
2787-2790	100	SANDSTONE: a/a, f-m, (vf)
2790-2793	100	SANDSTONE: off wh-lt buff, clr-trnsl, f-crs, (v crs), dom m, (srt), ang-(rnd), occ rnd, fri-cons, wh-buff arg Mtrx, dol + (sil) Cmt, buff is v wl Cmtd, up to 30% lit, (Kao altn), (carb frag), (Por), no shows
2802-2805	100	SANDSTONE: a/a, up to 35% lit
2805-2808	80	SANDSTONE: a/a
	20	SILTSTONE: med-dk (brn) gy, arg-aren i/p, aren is carb, frm-hd, (fis)-fis, gdes to vf SST i/p
2808-2811	90	SANDSTONE: a/a, f-m, (crs)
	10	SILTSTONE: a/a, + lt-med gy, aren, carb, lit, Cl altn, lam, frm-hd, blky-(fis)
2811-2814	50	SANDSTONE: a/a, f-crs, abd rock fluor
	50	SILTSTONE: a/a
2814-2817	100	SANDSTONE: off wh, clr-trnsl, f-m, (crs), srt-srt, ang-(rnd), occ rnd, fri-cons, wh arg Mtrx, calc + dol Cmt, strng sil Cmt, up to 15% lit, com Kao altn, (Pyr), (Mic), (carb), non-(Por), no show
2817-2820	90	SANDSTONE: a/a, bec f, sil + (dol) Cmt, up to 30% lit, (Chlor), non-(Por), no shows
	10	SILTSTONE: med-dk (brn) gy, (aren), carb, hd, blky-(fis)
2820-2823	100	SANDSTONE: off wh, clr-trnsl, (f)-m, srt, ang-(rnd), disag-cons, (arg Mtrx), dol + sil Cmt, up to 15%, com Kao altn, (Pyr), (Por)-Por inf, no shows
2823-2826	100	SANDSTONE: a/a, dom disag
2826-2829	100	SANDSTONE: a/a
2829-2832	100	SANDSTONE: a/a
2832-2835	100	SANDSTONE: a/a, m, (crs), Por-Por inf, no shows

Depth	% Lithology	Description
2835-2838	80	SANDSTONE: clr-trnsl, off wh, m, (f, crs), (srt)-srt. ang-(rnd) occ rnd, disag-cons, (wh, buff arg Mtrx), dol + sil Cmt, up to 20% lit, com Kao altn, (Por)-Por inf, no shows
	20	SILTSTONE: med-dk gy, arg-aren, carb i/p, hd-hd, blky-(fis)
2838-2841	90	SANDSTONE: a/a
	10	SILTSTONE: a/a
2841-2844	90	SANDSTONE: a/a, f-m
	10	SILTSTONE: a/a
2844-2847	80	SANDSTONE: off wh-lt gy, vf-f, (m), srt), (arg Mtrx), fri-cons, dol + sil Cmt, up to 20% lit, com Kao altn, carb frag, non Por, no shows
	20	SILTSTONE: a/a
2847-2850	50	SANDSTONE: a/a, abd arg Mtrx
	50	SILTSTONE: a/a
2850-2853	40	SANDSTONE: a/a, vf-f
	60	SILTSTONE: a/a
2853-2856	20	SANDSTONE: a/a
	80	SILTSTONE: med gy, aren, s, abd carb mat, (lam), lit, Cl altn, (dl), frm-hd, blky-(fis)
2856-2859	30	SANDSTONE: off wh-v lt buff gy, vf-f, (m), (srt), ang-(rnd), fri-cons, com arg Mtrx, dol + sil Cmt, com lit, non Por, no shows
	70	SILTSTONE: a/a
2859-2862	30	SANDSTONE: a/a
	70	SILTSTONE: a/a
2862-2865	30	SANDSTONE: a/a
	70	SILTSTONE: a/a, + dk gy/blk, arg, brit-hd, (fis)-fis
2865-2868	80	SANDSTONE: off wh-v lt buff gy, f-(m), srt, ang-(ang), cons-cons, arg Mtrx, sil + (dol) Cmt, up to 30% lit, non Por, no shows
	20	SILTSTONE: a/a
2868-2871	100	SANDSTONE: a/a
2871-2874	100	SANDSTONE: off wh, clr-trnsl, m, (f-crs), srt-srt, ang-(ang), disag-cons, (arg Mtrx), sil + (dol) Cmt, com lit, Cl altn, (Por)-Por inf, no shows
2874-2877	100	SANDSTONE: a/a, ang-(rnd), occ rnd, Qz ovgth, non-(Por), no shows

Depth	% Lithology	Description
2877-2880	100	SANDSTONE: a/a, f-m
2880-2883	100	SANDSTONE: a/a, f-m, (crs), Kao altn
2883-2886	100	SANDSTONE: a/a, (Por),-occ Por inf, no shows
2886-2889	100	SANDSTONE: off wh-lt buff gy, f-m, (crs), (srt), ang-(ang), cons-cons, (arg Mtrx), dol + sil Cmt, up to 30% lit, occ Kao altn, non Por, no shows
2889-2892	80	SANDSTONE: a/a, vf-f, (m), non Por, no shows
	20	SILTSTONE: med gy, lt-med brn gy, arg, aren i/p, tr-com carb mat, (dol), brit-hd
2892-2895	70	SANDSTONE: a/a, f-(m), non Por, no shows
	30	SILTSTONE: a/a
2895-2898	70	SANDSTONE: a/a
	30	SILTSTONE: a/a
2898-2901	70	SANDSTONE: a/a
	30	SILTSTONE: a/a
2901-2904	70	SANDSTONE: a/a
	30	SILTSTONE: a/a
2904-2907	70	SANDSTONE: off wh-v lt gy, vf-m, dom m, (srt), ang-(ang), cons-cons, (arg Mtrx), dol + sil Cmt, (ovgths), up to 30% lit, Kao altn, non Por, no shows
	30	SILTSTONE: lt-med gy, arg, aren i/p, tr-com carb mat, lit (dol), (mic), brit-hd, (fis)-fis
2907-2910	100	SANDSTONE: a/a, f-m, com disag, (Por)-Por inf, no shows
2910-2913	100	SANDSTONE: a/a, (Por) inf, no shows
2913-2916	90	SANDSTONE: a/a, vf-f, (m), cons, non Por, no shows
	10	SILTSTONE: lt-dk gy, arg, aren i/p, tr-com carb mat + lam, (dol), brit-hd
2916-2919	80	SANDSTONE: off wh-v lt gy, vf-f, (m, crs), (srt), ang-(ang), tr-com arg Mtrx, dol + sil Cmt, lit, com Kao altn, (carb), non Por, no shows
	20	SILTSTONE: a/a
2919-2922	60	SANDSTONE: a/a
	40	SILTSTONE: a/a
2922-2925	60	SANDSTONE: a/a
	40	SILTSTONE: a/a

Depth	% Lithology	Description
2925-2928	50	SANDSTONE: a/a, (Pyr Cmt)
	50	SILTSTONE: a/a
2928-2931	30	SANDSTONE: off wh, buff, v lt gy, vf-f, (m), (srt), ang-(rnd), cons-cons, (arg Mtrx), up to 30% lit, (Kao altn), sil + (dol) Cmt, non Por, no shows
	70	SILTSTONE: lt-med gy, (dk gy/blk), (med blue gy), aren, arg i/p, occ-com carb detr, (mic), dol), hd-hd, blky-(fis)
2931-2934	40	SANDSTONE: a/a
	60	SILTSTONE: a/a
	Tr	COAL: blk, dull-(vit), slty i/p, hd, brit, blky-(conch)
2934-2937	30	SANDSTONE: a/a
	70	SILTSTONE: a/a, bec less aren
2937-2940	40	SANDSTONE: a/a
	60	SILTSTONE: lt-med gy, (dk gy), (med blue gy), (arg), (aren), tr-com carb detr, (mic), (dol), hd (fis)-fis
2940-2943	70	SANDSTONE: a/a, (vf)-f, non Por, no shows
	30	SILTSTONE: a/a, tr Calc vein fill
2943-2946	90	SANDSTONE: v lt gy, (clr-trnsl), f-crs, dom m, (srt), ang-(rnd), cons (arg Mtrx), dol Cmt, up to 15% lit, (Kao altn), occ carb, non-(Por), no shows
	10	
2946-2949	40	SANDSTONE: a/a, vf-f, (m)
	60	SILTSTONE: a/a
2949-2952	20	SANDSTONE: off wh, lt buff, v lt gy, vf-crs, dom vf, (srt), ang-(rnd), cons, off wh-buff arg Mtrx, abd dol + sil Cmt, lit com Kao altn, non Por, no shows
	80	SILTSTONE: lt-med gy, (brn gy), (blue gy), bec more arg, aren i/p, tr-mod carb, sft-hd, blky-(fis)
2952-2955	20	SANDSTONE: a/a, vf-f, (m), non Por, no shows
	80	SILTSTONE: a/a bec aren
2955-2958	10	SANDSTONE: a/a
	90	SILTSTONE: a/a

APPENDIX 2

Sidewall Sample Descriptions

APPENDIX 2

SIDEWALL SAMPLE DESCRIPTIONS

NE/DRILL/019001NE.CWT

SIDEWALL SAMPLE DESCRIPTION

WELL: JUDITH -1

DEPTH OF HOLE: 2317m RUN NO: 1 FIRED: 60 REC: 59 DESCRIPTION BY: M. KING DATE: 2-11-89 PAGE 1 OF 5

SHOT NO.	DEPTH (mRT)	RECOVERY (mm)	LITHOLOGICAL DESCRIPTION																			HYDROCARBON INDICATIONS								
			MAIN ROCK TYPE	COLOUR	QUALIFIER		QUALIFIER		GRAINSIZE		SORTING	ROUNDNESS	HARDNESS	ACCESSORIES	MATRIX		CEMENT		POROSITY		SED. STRUCTURE	REMARKS	NATURAL FLUOR			CUT FLUOR			SOLVENT CUT	REMARKS (Residue, oil staining, acetone)
					TYPE	%	TYPE	%	RANGE	DOM.					TYPE	%	TYPE	%	TYPE	%			DISTRIB.	INTENS.	COLOUR	RATE TYPE	INTENS.	COLOUR		
1	2308	40	SS/ST	LT (BF) GE	CL	20	ST	10	V-M	V-F	S2-3	R4-5	C5	LC, CO (MC)	CL/ST	30	SI	tr		P1		GDES TO ST, COM CO LAM, DISP CL	Z	O	Z	O	O	Z	-	-
				MD-DK GE	SA	30	CO	15						CO, MC																
2	2282	25	ST	MD GE	CL	30							C2-4	MC, (CO)	CL							NIL BDG, DISP CL, BQ	Z	O	Z	O	O	Z	-	-
3	2268	25	ST	MD GE	CL	25							C2-4	CO DET (MC)								NIL BDG, DISP CL, BQ	Z	O	Z	O	O	Z	-	-
4	2248	32	SS	LT GE-BW GE	ST	20	CL	10	V-F	V	S3-4		C3-5	CO DET, (LC)	CL/ST	30	SI	tr		P1	B5-7, B8	ALT DK-LT SS, V DISP CL	Z	O	Z	O	O	Z	-	-
5	2224	15	ST	LT-MD GE	CL	40							C2-(3)	(CO), (LC)								DISP CL, BQ	Z	O	Z	O	O	Z	-	-
6	2210.5	16	ST	DK GE	CL	25							C2-4	CO DET, MC, LC								DISP CL, BQ	Z	O	Z	O	O	Z	-	-
7	2202	6	ST	LT GE	SA	40	CL	15	ST-V				C2-(3)									DISP CL, BQ	Z	O	Z	O	O	Z	-	-
8	2176	15	ST	LT-MD GE	SA	40	CL	15	ST-V(F)				C2-3	CO DET								DISP CL, BQ-SBFI	Z	O	Z	O	O	Z	-	-
9	2163	23	ST	DK GE	CL	25							C2-(5)	MC, (CO)								FI-SBFI, (IND), DISP CL	Z	O	Z	O	O	Z	-	-
10	2143	22	SS	LT GE, MD GE	ST	35	CL	20	V-F	V	S4		C2-3	LC, CO DET, MC	ST/CL		SI	tr		P1	B3-5, B8	ALT LT-DK SS, DISP CL	Z	O	Z	O	O	Z	-	-
11	2113	27	ST	MD GE	CL	35							C2	FNLY CO								BQ-SBFIS, DISP CL	Z	O	Z	O	O	Z	-	-
12	2092	25	SS	LT GE, MD DK GE	CL	30	ST	5	V-F	F	S4-5	R2-4	C2	LC, MC, CO	CL		SI	tr				CO LAM, DISP CL	Z	O	Z	O	O	Z	-	-
13	2081	30	ST	DK GE	CL	30							C2-3	CO, MC	CL							SBFI, DISP CL	Z	O	Z	O	O	Z	-	-

SIDEWALL SAMPLE DESCRIPTION

WELL: JUDITH-1

DEPTH OF HOLE: 2317m RUN NO: 1 FIRED: 60 REC: 59 DESCRIPTION BY: M. KING DATE: 2-11-90 PAGE 2 OF 5

SHOT NO.	DEPTH (mRT)	RECOVERY (mm)	LITHOLOGICAL DESCRIPTION																			HYDROCARBON INDICATIONS								
			MAIN ROCK TYPE	COLOUR	QUALIFIER		QUALIFIER		GRAINSIZE		SORTING	ROUNDNESS	HARDNESS	ACCESSORIES	MATRIX		CEMENT		POROSITY		SED. STRUCTURE	REMARKS	NATURAL FLUOR			CUT FLUOR			SOLVENT CUT	REMARKS (Residue, oil staining, acetone)
					TYPE	%	TYPE	%	RANGE	DOM.					TYPE	%	TYPE	%	TYPE	%			DISTRIB.	INTENS.	COLOUR	RATE TYPE	INTENS.	COLOUR		
14	2041.5	45	SS	PL GE	CL	10			F-M	M	ST	R2-3	C1-3	LC					IG	P5-7			Z	O	Z	O	O	Z	-	-
15	2023	32	ST	DK GE	SA	30	CL	20	ST-V				C2-4	CO DET, LC								DISP CL, BQ-SBFI	Z	O	Z	O	O	Z	-	-
16	2017	30	ST	MD GE	CL	15							C2-4	MC, CO DET								DISP CL, BQ-SBFI	Z	O	Z	O	O	Z	-	-
17	1993.5	30	ST	MD GE	SA	40	CL	15	ST-V				C2-3	CO DET, LC								(DISP CL)	Z	O	Z	O	O	Z	-	-
18	1984	28	MS	PL BW GE									C3-5	(MC)			SI						Z	O	Z	O	O	Z	-	-
19	1977	25	ST	LT BW GE	CL	20	SA	15					C2-4	(MC), (LC)								(DISP CL), BQ-SBFI	Z	O	Z	O	O	Z	-	-
20	1921.5	NIL																												
21	1897	60	ALT VO	PL GE GN	CL	70							C2-4	FD LATHS SI CONC								HIGHLY ALT^D GNDMASS, COM BF SI CONCRETIONS, (DM).	B	2	C/D	O	O	Z	-	MIN FLUOR.
22	1875.5	35	ST	MD (GE) BW	CL	30	SA	fr-5					C2-4	CO DET, (MC)								SBFI-FI, FNLY CO	Z	O	Z	O	O	Z	-	-
23	1869.5	27	SS	LT BW GE	ST	20	CL	15	V-F	V	S3-4		C2-3	CO STRKS ALT LC	ST/CL	35				P2		DISP CL	Z	O	Z	O	O	Z	-	-
24	1858	25	ST	LT-MD (BW) GE	CL	5	SA	5					C2-4	(CO DET)								BQ	Z	O	Z	O	O	Z	-	-
25	1835.5	27	ST	LT GE-DK BW GE	CL	5							C2-4	PY, MC, CO DET							BQ, BB, BC	ALT LT-DK LAYERS (CO CONTENT), SOFI-FI	Z	O	Z	O	O	Z	-	-
26	1821.5	25	ST	DK (GE) BW	CL	5-10							C3-4	MC, PY CO DET								BQ-SBFI, AREN	Z	O	Z	O	O	Z	-	-
27	1803	35	ST	LT (BW) GE	SA	40	CL	5					C2-3	(CO DET)								BQ-SBFI	Z	O	Z	O	O	Z	-	-

SIDEWALL SAMPLE DESCRIPTION

WELL: JUDITH-1

DEPTH OF HOLE: 2317m RUN NO: 1 FIRED: 60 REC: 59 DESCRIPTION BY: M. KING DATE: 2-11-89 PAGE 3 OF 5

SHOT NO.	DEPTH (mRT)	RECOVERY (mm)	LITHOLOGICAL DESCRIPTION																		HYDROCARBON INDICATIONS							
			MAIN ROCK TYPE	COLOUR	QUALIFIER		QUALIFIER		GRAINSIZE		SORTING	ROUNDNESS	HARDNESS	ACCESSORIES	MATRIX		CEMENT		POROSITY		SED. STRUCTURE	REMARKS	NATURAL FLUOR			CUT FLUOR			SOLVENT CUT	REMARKS
					TYPE	%	TYPE	%	RANGE	DOM.					TYPE	%	TYPE	%	TYPE	%			DISTRIB.	INTENS.	COLOUR	RATE TYPE	INTENS.	COLOUR		(Residue, oil staining, acetone)
28	1777.5	40	MS/CO	DK (GE) BN									C3-(5)	CO FRAG								SBFI - FI	Z	O	Z	O	O	Z	–	–
			→	BR - (BN BR)									C3									DULL - VIT, (ST + EARTHY), BRIT, BQ - SBCUNCH								
29	1764	32	ST	MD/DK BN GE	CL	10							C2-4	CO DET, MC								CO LAM, BQ - SBFI	Z	O	Z	O	O	Z	–	–
30	1747	NIL																												
31	1710.5	40	ST	DK GE BN	CL	10							C3-5	MC, CO DET							BS, BB	ALT LT/DK LAYERS BQ - SBFI	Z	O	Z	O	O	Z	–	–
32	1701.5	30	ST	LT (BN) GE	CL	5-10							C2-4	MC, CO DET, PY								FAINT mm BDG, BQ - SBFI	Z	O	Z	O	O	Z	–	–
33	1691	50	ST	LT GE	SA	5							C2-4	MC, (CO DET)								OCC CO LAM + STRKS	Z	O	Z	O	O	Z	–	–
34	1667.5	30	ST	LT BN GE	CL	10-15							C2-4	CO DET, MC								SBFI, FAINT BDG	Z	O	Z	O	O	Z	–	–
35	1654	25	ST	LT GE, MD GE BN	CL	10							C2-4	MC, CO STRKS								LT GE BDG, BQ - SBFI	Z	O	Z	O	O	Z	–	–
36	1622	35	ST	LT BN GE	CL	10							C2-4	MC, CO DET								BQ - SBFI	Z	O	Z	O	O	Z	–	–
37	1610	55	ST	DK BN	CL	30							C2-(5)	CO, MC								FAINT BDG, SBFI - FI	Z	O	Z	O	O	Z	–	–
38	1600	55	ST	LT-MD BN GE	CL	25	CO	15					C3-5	MC								CO LAM, ARG, RD BN CO/EARTHY STRKS	Z	O	Z	O	O	Z	–	–
39	1571.5	50	ST	DK BN	CL	15							C2-4	MC, PY, CO								SBFI	Z	O	Z	O	O	Z	–	–
40	1555	55	ST	DK BN	CL	10							C2-(5)	MC, CO DET								LT GE STRKS, SBFI	Z	O	Z	O	O	Z	–	–

SIDEWALL SAMPLE DESCRIPTION

WELL: JUDITH-1

DEPTH OF HOLE: 2317 m. RUN NO: 1 FIRED: 60 REC: 59 DESCRIPTION BY: M. KING DATE: 2-11-89 PAGE 4 OF 5

SHOT NO.	DEPTH (mRT)	RECOVERY (mm)	LITHOLOGICAL DESCRIPTION																			HYDROCARBON INDICATIONS								
			MAIN ROCK TYPE	COLOUR	QUALIFIER		QUALIFIER		GRAINSIZE		SORTING	ROUNDNESS	HARDNESS	ACCESSORIES	MATRIX		CEMENT		POROSITY		SED. STRUCTURE	REMARKS	NATURAL FLUOR			CUT FLUOR			SOLVENT CUT	REMARKS (Residue, oil staining, acetone)
					TYPE	%	TYPE	%	RANGE	DOM.					TYPE	%	TYPE	%	TYPE	%			DISTRIB.	INTENS.	COLOUR	RATE TYPE	INTENS.	COLOUR		
41	1546	45	ST	LT GE	CL	5							C2-4	MC, (CO DET)								FAINT BDG, CO LAM, AREN, BQ-SBFI	Z	O	Z	O	O	Z	-	-
42	1509.5	33	ST	MD-DK BN GE	CL	25	SA	5					C2-4(5)	MC, PY AGG								ALT LT/DK LAYERS, BQ-SBFI, DISP CL, AREN	Z	O	Z	O	O	Z	-	-
43	1503.5	55	SS	DK GN GY	GC	55	SA	15	F-PB	F-M	SI-3	R2-5	C3-4	PY, MC	CL/ST	30	LS/DM	5		P2-3		COM CL ALTN, DISP CL	Z	O	Z	O	O	Z	-	-
44	1502	45	ST	LT-MD GN GE	GC	35	CL	15					C3-4	(MC)			LS/DM	5				ALT'D GC	Z	O	Z	O	O	Z	-	-
45	1488	48	SS	DK GN BN	GC	25	ST	20	V-PB	V-F	S3-4	R2-5	C3-4	FG ALTN, (MC)	CL/ST	30				P2-3		GC V ALTD, FG ALTN	Z	O	Z	O	O	Z	-	-
46	1471	52	ST	DK GN GE	GC	25	SA	35	V-M				C3-4	MG, FG								INC FG ALTN	Z	O	Z	O	O	Z	-	-
47	1454	50	ST	DK OLIVE GN	GC	80	SA	Tr-5					C5	FG, MC			DM	Tr				FG NOD + MOTT, GC COM ALTD TO CL - DISP	Z	O	Z	O	O	Z	-	-
48	1451	30	ST	LT-MD GN BN	GC	20	SA	10					C2-4				LS	15				GC DOM FRESH, V CALC, MOTT APP	Z	O	Z	O	O	Z	-	-
49	1449	35	ST	PL-LT GE	LS	20	GC	5					C2-4	PY, SA	CL	15	LS	20				GC FRESH, SANDY	Z	O	Z	O	O	Z	-	-
50	1436	48	ST	LT/MD GN GE	LS	15	CL	30					C2-4	PY, SA	CL	30	LS	15				SBFI - BQ, STKY, DISP CL	Z	O	Z	O	O	Z	-	-
51	1391	30	MS	PL GE (DK GE)	LS	20	ST	10					C2-6	(GC), (PY), (SA)			LS	20				OCC V HD, BQ, STKY	Z	O	Z	O	O	Z	-	-
52	1320	45	MS	LT-MD GE	LS	15	ST	10					C2-4	(PY), (FF)			LS	15				BQ, STKY	Z	O	Z	O	O	Z	-	-
53	1244	45	MS	LT-MD GN GE	LS	15	SA	Tr					C2-4	(MC), PY			LS	15				BQ, STKY	Z	O	Z	O	O	Z	-	-
54	1172	50	MS	LT-MD GN GE	LS	15	ST	Tr					C2-4	(MC), (PY), (CO)			LS	15				BQ - SBFI, STKY, ARG	Z	O	Z	O	O	Z	-	-

SIDEWALL SAMPLE DESCRIPTION

WELL: JUDITH-1

DEPTH OF HOLE: 2317m RUN NO: 1 FIRED: 60 REC: 59 DESCRIPTION BY: M. KING DATE: 2-11-89 PAGE 5 OF 5

SHOT NO.	DEPTH (mRT)	RECOVERY (mm)	LITHOLOGICAL DESCRIPTION																			HYDROCARBON INDICATIONS							
			MAIN ROCK TYPE	COLOUR	QUALIFIER		QUALIFIER		GRAINSIZE		SORTING	ROUNDNESS	HARDNESS	ACCESSORIES	MATRIX		CEMENT		POROSITY		SED. STRUCTURE	REMARKS	NATURAL FLUOR			CUT FLUOR			SOLVENT CUT	REMARKS (Residue, oil staining, acetone)
					TYPE	%	TYPE	%	RANGE	DOM.					TYPE	%	TYPE	%	TYPE	%			DISTRIB.	INTENS.	COLOUR	RATE TYPE	INTENS.	COLOUR		
55	1097	55	MS	LT-MD GN GE	LS	15	ST	Tr					C2-4	(mc), (Py)			LS	15				SBFI, DISP CL, STKY, ARG	Z	O	Z	O	O	Z	-	-
56	1033	60	MS	LT-MD GN GE	LS	20							C2-4	(Py)(FF)			LS	20				SBFI, DISP CL, STKY	Z	O	Z	O	O	Z	-	-
57	964	60	MR	LT-MD GN GE	LS	30							C4-6	(mc), (Py)			LS	30				HD, BQ, DISP CL	Z	O	Z	O	O	Z	-	-
58	922	60	MR	LT-MD GN GE	LS	35							C4-6	(mc), FF, SF			LS	35				BEC MORE FOSS, BQ, HD, DISP CL	Z	O	Z	O	O	Z	-	-
59	890	50	LS	MD GN GE (DK)	CL	30							C4-6	FF-SF, (GC)	CL	30	LS					DOM LS, HD, BQ, DISP CL, (LS XLS)	Z	O	Z	O	O	Z	-	-
60	839	60	LS	MD-(DK) GN GE	CL	15							C4-6	a/a, CA VEIN								DOM LS, BQ, HD, (XLS) CALCSILTITE	Z	O	Z	O	O	Z	-	-

SIDEWALL SAMPLE DESCRIPTION

WELL: JUDITH-1

DEPTH OF HOLE: 2958 mRT RUN NO: 2 FIRED: 30 REC: 17 DESCRIPTION BY: M. KING DATE: 17-11-88 PAGE 1 OF 3

SHOT NO.	DEPTH (mRT)	RECOVERY (mm)	LITHOLOGICAL DESCRIPTION																			HYDROCARBON INDICATIONS							
			MAIN ROCK TYPE	COLOUR	QUALIFIER		QUALIFIER		GRAINSIZE		SORTING	ROUNDNESS	HARDNESS	ACCESSORIES	MATRIX		CEMENT		POROSITY		SED. STRUCTURE	REMARKS	NATURAL FLUOR			CUT FLUOR			SOLVENT CUT	REMARKS (Residue, oil staining, acetone)
					TYPE	%	TYPE	%	RANGE	DOM.					TYPE	%	TYPE	%	TYPE	%			DISTRIB.	INTENS.	COLOUR	RATE TYPE	INTENS.	COLOUR		
1	2956	NIL																												
2	2944	NIL																												
3	2923	15	SS	WH - V LT GE	CL	35	CO	20	V-F	V	SS	R2-3	C2-(4)	ALT LC	CL	35	DM	Tr		P1	BI	ABD CO LAM, DISP CL	Z	O	Z	O	O	Z	-	-
4	2908	23	ST	MD-DK GE	CL	30							C2-6	(MC), (CL)			DM	Tr				BQ - SBFI, DISP CL, ARG - AREN	Z	O	Z	O	O	Z	-	-
5	2895	20	ST	MD-DK GE	CL	5							C4-6	CO DET, ALT LC, MC, (SA)			DM	Tr				BQ - SBFI, AREN	Z	O	Z	O	O	Z	-	-
6	2867.5	NIL																												
7	2852	NIL																												
8	2785	NIL																												
9	2765	NIL																												
10	2721	20	MS	MD-DK GE									C4-6	(MC), CO DET			DM	Tr			BB	SBFI-FI, LAM	Z	O	Z	O	O	Z	-	-
11	2705	22	MS	MD-DK GE	ST	20							C3-5	(MC), (CO)							BB	DISP CL, SBFI-FI, LAM	Z	O	Z	O	O	Z	-	-
12	2688	32	SS	LT GE	LC	30	CL	.	V-C	F-M	SL-3	R1-3	C2-3	KL	CL	35	DM/SI	5		P1-3		DISP CL MTX, LC ALTD TO CL	Z	O	Z	O	O	Z	-	YE ON MIN FLU
13	2653	20	SS	LT-MD GE	ST	35	CL	10	V	V			C4-5	MC, CO, LC			DM	Tr		P1	BB	INTERLAM W/ ST, CO STRKS	Z	O	Z	O	O	Z	-	-
14	2630.5	33	ST	DK GE	CL	35							C2-5	(CO DET)			DM	5				DISP CL, STKY, BQ-SBFI, ARG	Z	O	Z	C	O	Z	-	-

SIDEWALL SAMPLE DESCRIPTION

WELL: JUDITH-1

DEPTH OF HOLE: 2958m. RUN NO: 2 FIRED: 30 REC: 17 DESCRIPTION BY: M. KING DATE: 17.11.89 PAGE 2 OF 3

SHOT NO.	DEPTH (mRT)	RECOVERY (mm)	LITHOLOGICAL DESCRIPTION																			HYDROCARBON INDICATIONS								
			MAIN ROCK TYPE	COLOUR	QUALIFIER		QUALIFIER		GRAINSIZE		SORTING	ROUNDNESS	HARDNESS	ACCESSORIES	MATRIX		CEMENT		POROSITY		SED. STRUCTURE	REMARKS	NATURAL FLUOR			CUT FLUOR			SOLVENT CUT	REMARKS (Residue, oil staining, acetone)
					TYPE	%	TYPE	%	RANGE	DOM.					TYPE	%	TYPE	%	TYPE	%			DISTRIB.	INTENS.	COLOUR	RATE TYPE	INTENS.	COLOUR		
15	2604	NIL																												
16	2579	NIL																												
17	2552	NIL																												
18	2532	42	SS	WH-LT GE	LC	25	CL		V-C	F-M	S2-3	R2-3(4)	C2-3	(MC), KL	CL	35	DM	5		Pi-(3)		DISP CL MTX, COM KL + CL ALTN	Z	O	Z	O	O	Z	-	TR MIN FLUO
19	2497.5	NIL																												
20	2488	NIL																												
21	2474	29	ST	MD-DK GE	SA	10	CL	5-10					C4-5	CO DET, ALTD LC			DM	TR				COM CO STRKS, BQ-SBFI, AREN	Z	O	Z	O	O	Z	-	-
22	2435	21	SS/ST	OFF WH-LT GE	LC	35	CL		V-F	F	S5	R2-3	C3-4	(MC)	CL	30	DM	TR		A1		LC COM ALTD TO CL + KL	Z	O	Z	O	O	Z	-	-
			→	DK GE	SA	20	CL	10									DM	TR				CO STRKS + LAM, BQ-SBFI, AREN	Z	O	Z	O	O	Z	-	-
23	2428.5	38	SS	OFF WH-LT GE	LC	25	CL		V-C	F-M	S2-3	R2-4	C3-4	(MC)	CL	25	DM	5		Pi-(3)		LC ALTD TO CL + KL, DISP CL MTX	Z	O	Z	O	O	Z	-	-
24	2420	NIL																												
25	2392.5	20	SS	WH-LT GE	QZ	DOM	CL	TR	VR	M-C	S3	R2-3(4)	C4-5	MNR GN ALTN			SI	5		P2		DK-BK ST/CO STRKS + LAM, COM QZ O/GTH	Z	O	Z	O	O	Z	-	-
26	2387	NIL																												
27	2364	30	ST	MD GE	SA	10	CL	5-10					C2-5	MC, CO DET								DISP CL, OCC CO STRKS, BQ-SBFI, AREN	Z	O	Z	O	O	Z	-	-

SIDEWALL SAMPLE DESCRIPTION

WELL: JUDITH-1

DEPTH OF HOLE: 2958 m RUN NO: 2 FIRED: 30 REC: 17 DESCRIPTION BY: M KING DATE: 17-11-89 PAGE 3 OF 3

SHOT NO.	DEPTH (mRT)	RECOVERY (mm)	LITHOLOGICAL DESCRIPTION																			HYDROCARBON INDICATIONS								
			MAIN ROCK TYPE	COLOUR	QUALIFIER		QUALIFIER		GRAINSIZE		SORTING	ROUNDNESS	HARDNESS	ACCESSORIES	MATRIX		CEMENT		POROSITY		SED. STRUCTURE	REMARKS	NATURAL FLUOR			CUT FLUOR			SOLVENT CUT	REMARKS (Residue, oil staining, acetone)
					TYPE	%	TYPE	%	RANGE	DOM.					TYPE	%	TYPE	%	TYPE	%			DISTRIB.	INTENS.	COLOUR	RATE TYPE	INTENS.	COLOUR		
28	2344	23	ST	MD-DK GE	CL	10							C2-4	CO DET, (MC), (LC)			DM	TR				ARGN, BQ-SBFI (FI), DISP CL	Z	O	Z	O	O	Z	–	–
29	2332	30	SS	WH-LT GE	QZ	DOM			V-M	F-M	S3-4	R2-4	C2-3	(LC), CO	CL	TR-5	SI	TR-MNR		P3-5		COM CO STNS, CL ALTN IN PTS	Z	O	Z	O	O	Z	–	–
30	2325	25	ST	MD-DK GE									C2-4	CO DET, MC	CL	TR-5	DM	TR				ARGN, (DISP CL)	Z	O	Z	O	O	Z	–	–

APPENDIX 3

R.F.T

RFT

APPENDIX 3

RFT RESULTS

NE/DRILL/019001NE.CWT

JUDITH-1 RFT PRESSURE SURVEY RESULTS

	DEPTH (mbdf)	INITIAL HYDRO (psia)	MIN. FLOW PRESSURE (psia)	FORMATION PRESSURE (psia)	EQUIV MW (sg)	TEMP (Deg C)	REMARKS
1	2331.5	4192.1	3391.0	3397.2	1.03	86.9	
2	2341.6	4207.4	3410.0	3411.2	1.03	87.6	
3	2392.3	4296.1	15.6	3538.1	1.04	88.3	
4	2396.1	4301.6	10.2	3534.5	1.04	89.6	
5	2398.2	4305.3	10.1	3693.8	1.08	90.6	
6	2413.2	4333.1	5.2	8.7	Tight	90.8	
7	2413.0	4334.2	5.4	8.3	Tight	90.8	
8	2439.3	4380.2	3.8	9.1	Tight	91.0	
9	2442.0	4387.0	11.5	3677.3	1.06	91.3	
10	2455.0	4413.3	15.1	3705.0	1.06	91.9	
11	2495.5	4486.8	32.9	3783.9	1.07	92.7	
12	2522.4	4535.4	4	6.4	Tight	93.6	
13	2531.5	4552.6	574.0	3797.9	1.06	94.1	
14	2535.5	4561.1	3712.6	3798.2	1.05	94.6	
15	2555.8	4597.3	0	61.3	Tight	95.0	
16	2559.0	4506.0	26.2	31.8	Tight	95.3	
17	2563.4	4614.0	15.5	19.5	Tight	95.4	
18	2641.6	4751.7				96.8	Seal Failure Test
19	2665.0	4793.8	1274.3	4279.4	1.13	97.4	
20	2670.8	4806.1	629.6	4187.2	1.1	98.2	
21	2677.7	4818.7	8.2	11.0	Tight	-	
22	2678.5	4820.4	918.9	4486.5	1.18	99.4	Supercharged
23	2691.5	4841.8	4175.0	4183.8	1.09	100.2	
24	2684.5	4831.4	2527.8	4182.2	1.10	100.5	
25	2719.4	4892.4	1877.6	4216.8	1.09	101.2	
26	2762.0	4965.8	12.9	4317.3	1.10	101.9	
27	2785.0	5007.0	13.4	4394.2	1.11	102.7	
28	2811.6	5056.7	862.0	4613.7	1.15	103.6	
29	2813.0	5059.4	1634.4	4526.4	1.13	103.7	
30	2871.4	5157.2	8.4	16.0	Tight	105.0	
31	2884.5	5181.6	1120.0	4578.4	1.12	107.2	
32	2911.0	5227.8	8.6	12.0	Tight	107.9	
33	2665.5	4807.2	1249.4	4330.4	1.14	104.5	
34	2560.5	4625.2	1072.4	3858.9	1.06	101.0	
35	2398.7	4340.2	9.6	3695.9	1.08	97.2	

NE/DRILL/019001NE.CWT

APPENDIX 4

Velocity Survey

Schlumberger

SHELL COMPANY OF AUSTRALIA

SONIC CALIBRATION
AND GEOGRAM
PROCESSING REPORT

JUDITH #1

FIELD : WILDCAT

STATE : VICTORIA

COUNTRY : AUSTRALIA

COORDINATES : 38° 09' 18.5" S
148° 33' 20.1" E

LOCATION : GIPPSLAND BASIN VIC/P11
SEISMIC LINE GL88-26

DATE OF SURVEY : 16 NOV 89

REFERENCE NO. : SYJ-56521

INTERVAL : 2958.0 - 800.0 M

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1 Survey Parameters 1

1. Introduction

A velocity checkshot survey of the JUDITH #1 well has been used to calibrate the sonic log and generate synthetic seismograms using 25, 35 and 45 hertz zero phase Ricker wavelets. The shot times and calibrated sonic times have been corrected to the seismic reference datum (SRD) at mean sea level.

2. Data Acquisition

The data was acquired with the SAT (Seismic acquisition tool) tool. Recording was made on the Schlumberger Cyber Service Unit (CSU) using LIS format at a tape density of 1600 BPI. The Air gun was suspended from the rig with a deck crane.

Table 1: Survey Parameters

Datum	MSL
Elevation KB	21.0 metres AMSL
Elevation DF	20.7 metres AMSL
Elevation GL	-76.4 below MSL
Total Depth	2958.0 metres below KB
Energy Source	Air gun
Source Offset	40
Source Depth	5 metres below MSL
Hydrophone Offset	40
Hydrophone Depth	10 metres below MSL
Source Azimuth	40 deg
Hydrophone Azimuth	40 deg

3. Sonic Calibration Processing

3.1 Sonic Calibration

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

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

For a negative drift $\frac{\Delta drift}{\Delta depth} < 0$, 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 μsec/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}, Δt - Δt_{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 be defined as:

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

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

3.2 Correction to Datum

The corrected sonic log is indexed to true vertical depth and referenced to SRD (SRD at msl).

3.3 Open Hole Logs

The sonic log has been recorded from 2958.0 to 800.0 metres below KB. The overall log quality is good with small zones of cycle skipping having been patched out.The density log was also recorded in the same interval.

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

3.4 Sonic Calibration Results

The top of the sonic log (800.0 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. The adjusted sonic curve is considered to be the best result using the available data. A list of shifts used on the sonic data is given in the geophysical listings section.

4. Synthetic Seismogram Processing

GEOGRAM plots were generated using 25, 35 and 45 hertz zero phase Ricker wavelets
.

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

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

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

4.1 Depth to Time Conversion

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

4.2 Primary Reflection Coefficients

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

$$R = \frac{\rho_2.\nu_2 - \rho_1.\nu_1}{\rho_2.\nu_2 + \rho_1.\nu_1}$$

where:

ρ_1 = density of the layer above the reflection interface
ρ_2 = density of the layer below the reflection interface
ν_1 = compressional wave velocity of the layer above the reflection interface
ν_2 = compressional wave velocity of the layer below the reflection interface

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

4.3 Primaries with Transmission Loss

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

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

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

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

4.4 Primaries plus Multiples

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

4.5 Multiples Only

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

4.6 Wavelet

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

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

Time variant Butterworth filtering can be applied after convolution.

4.7 Polarity Convention

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

4.8 Convolution

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

A Summary of Geophysical Listings

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

A1 Geophysical Airgun Report

1. Level number : the level number starting from the top level (includes any imposed shots).

2. Measured depth from KB : *dkb*, the depth in meters from kelly bushing .

3. Vertical depth from SRD : *dsrd*, the depth in meters from seismic reference datum.

4. Observed travel time HYD to GEO : *tim*0, the transit time picked from the stacked data by subtracting the surface sensor first break time from the downhole sensor first break time.

5. Vertical travel time SRC to GEO : *timv*, is corrected for source to hydrophone distance and for source offset.

6. Vertical travel time SRD to GEO : *shtm*, is *timv* corrected for the vertical distance between source and datum.

7. Average velocity SRD to GEO : the average seismic velocity from datum to the corresponding checkshot level, $\frac{dsrd}{shtm}$.

8. Delta depth between shots : $\Delta depth$, the vertical distance between each level.

9. Delta time between shots : $\Delta time$, the difference in vertical travel time (*shtm*) between each level.

10. Interval velocity between shots : the average seismic velocity between each level, $\frac{\Delta depth}{\Delta time}$.

A2 Drift Computation Report

1. Level number : the level number starting from the top level (includes any imposed shots).

2. Vertical depth from KB : the depth in meters from kelly bushing .

3. Vertical depth from SRD : the depth in meters from seismic reference datum.

4. Vertical travel time SRD to GEO : the calculated vertical travel time from datum to downhole geophone (see column 7, Geophysical Airgun Report).

5. Integrated raw sonic time : the raw sonic log is integrated from top to bottom and listed at each level. An initial value at the top of the sonic log is set equal to the checkshot time at that level. This may be an imposed shot if a shot was not taken at the top of the sonic.

6. Computed drift at level : the checkshot time minus the integrated raw sonic time.

7. Computed blk-shft correction : the drift gradient between any two checkshot levels $(\frac{\Delta drift}{\Delta depth})$.

A3 Sonic Adjustment Parameter Report

1. Knee number : the knee number starting from the highest knee. (The first knees listed will generally be at SRD and the top of sonic. The drift imposed at these knees will normally be zero.)

2. Vertical depth from KB : the depth in meters from kelly bushing .

3. Vertical depth from SRD : the depth in meters from seismic reference datum.

4. Drift at knee : the value of drift imposed at each knee.

5. Blockshift used : the change in drift divided by the change in depth between any two levels.

6. Delta-T minimum used : see section 4 of report for an explanation of Δt_{min}.

7. Reduction factor : see section 4 of report.

8. Equivalent blockshift : the gradient of the imposed drift curve.

A4 Velocity Report

1. Level number : the level number starting from the top level (includes any imposed shots).

2. Vertical depth from KB : the depth in meters from kelly bushing .

3. Vertical depth from SRD : the depth in meters from seismic reference datum

4. Vertical travel time SRD to GEOPH : the vertical travel time from SRD to downhole geophone (see column 7, Geophysical Airgun Report)

5. Integrated adjusted sonic time : the adjusted sonic log is integrated from top to bottom. An initial value at the the top of the sonic is set equal the checkshot time at that level. (The adjusted sonic log is the drift corrected sonic log.)

6. Drift=shot time-raw sonic : the check shot time minus the raw integrated sonic time.

7. Residual=shot time-adj sonic : the check shot time minus the adjusted integrated sonic time. This is the difference between calculated drift and the imposed drift.

8. Adjusted interval velocity : the interval velocity calculated from the integrated adjusted sonic time at each level.

A5 Time Converted Velocity Report

The data in this listing has been resampled in time.

1. Two way travel time from SRD : This is the index for the data in this listing. The first value is at SRD (0 millisecs) and the sampling rate is 2 millisecs.

2. Measured depth from KB : the depth from KB at each corresponding value of two way time.

3. Vertical depth from SRD : the vertical depth from SRD at each corresponding value of two way time.

4. Average velocity SRD to GEO : the vertical depth from SRD divided by half the two way time.

5. RMS velocity : the root mean square velocity from datum to the corresponding value of two way time.

$$v_{rms} = \sqrt{\Sigma_1^n v_i^2 t_i / \Sigma_1^n t_i}$$

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).

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

where:

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

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

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

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

A6 Synthetic Seismogram Table

1. Two way travel time from SRD : This is the index for the data in this listing. The first value is at the top of the sonic. The default sampling rate is 2 millisecs.

2. Vertical depth from SRD : the vertical depth from SRD at each corresponding value of two way time.

3. Interval velocity : the velocity between each sampled depth. Typically, the sampling rate is 2 millisecs two way time, (1 millisec one way time) therefore the interval velocity will be equal to the depth increment divided by 0.001. It is equivalent to column 9 from the the Velocity Report.

4. Interval density : the average density between two successive values of two way time.

5. Reflect. coeff. : the difference in acoustic impedance divided by the sum of the acoustic impedance between any two levels. The acoustic impedance is the product of the interval density and the interval velocity.

6. Two way atten. coeff. : is computed from the series

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

7. Synthetic seismogram primary : the product of the reflection coefficient at each depth and the two way attenuation coefficient up to that depth.

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

8. Primary + multiple : a transform technique is used to calculate multiples from the input reflection coefficients.

9. Multiples only : (Primary + multiple) - (Synthetic seismo. primary)

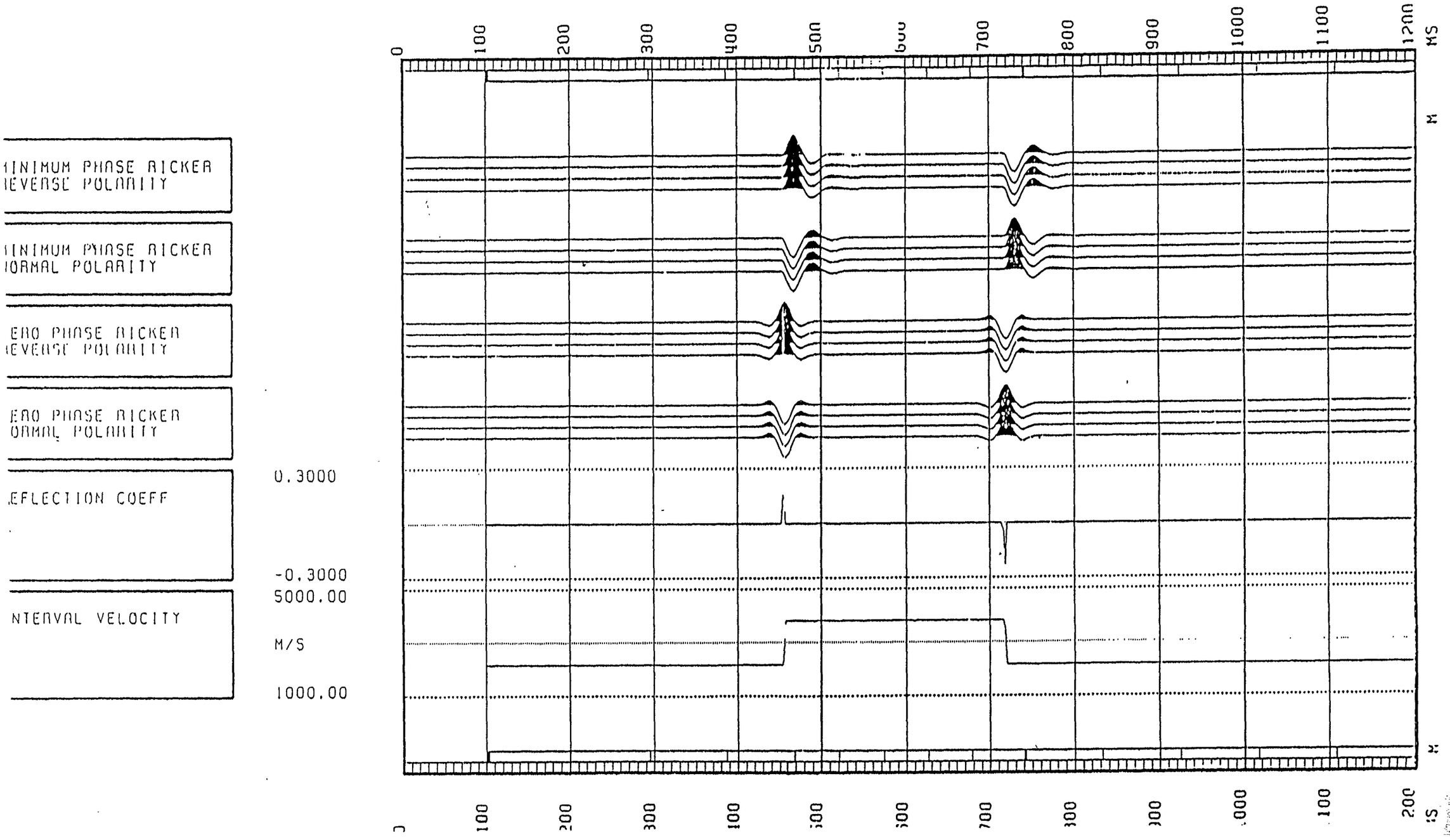
LIST OF ENCLOSURES

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

Figure 1. Wavelet Polarity Convention.
Figure 2. Stacked Data.

SCHLUMBERGER (SEG-1976) WAVELET POLARITY CONVENTION

Figure 1



PE603201

This is an enclosure indicator page.
The enclosure PE603201 is enclosed within the container PE900022 at this location in this document.

The enclosure PE603201 has the following characteristics:

ITEM_BARCODE	= PE603201
CONTAINER_BARCODE	= PE900022
NAME	= Drift Corrected Sonic
BASIN	= GIPPSLAND
ON_OFF	= OFFSHORE
PERMIT	= VIC/P11
TYPE	= WELL
SUBTYPE	= LOG
DESCRIPTION	= Judith 1 Drift Corrected Sonic. From appendix 4 of WCR volume 1.
REMARKS	=
DATE_CREATED	= 5/12/89
DATE_RECEIVED	= 20/08/90
W_NO	= W1011
WELL_NAME	= Judith 1
CONTRACTOR	= Schlumberger
CLIENT_OP_CO	= Shell Australia

(Inserted by DNRE - Vic Govt Mines Dept)

PE603202

This is an enclosure indicator page.
The enclosure PE603202 is enclosed within the container PE900022 at this location in this document.

The enclosure PE603202 has the following characteristics:

ITEM_BARCODE	PE603202
CONTAINER_BARCODE	PE900022
NAME	Seismic Calibration Log
BASIN	GIPPSLAND
ON_OFF	OFFSHORE
PERMIT	VIC/P11
TYPE	WELL
SUBTYPE	LOG
DESCRIPTION	Judith 1 Seismic Calibration Log (Adjusted Continuous Velocity Log). From appendix 4 of WCR volume 1.
REMARKS	
DATE_CREATED	5/12/89
DATE_RECEIVED	20/08/90
W_NO	W1011
WELL_NAME	Judith 1
CONTRACTOR	Schlumberger
CLIENT_OP_CO	Shell Australia

(Inserted by DNRE - Vic Govt Mines Dept)

PE900048

This is an enclosure indicator page.
The enclosure PE900048 is enclosed within the container PE900022 at this location in this document.

The enclosure PE900048 has the following characteristics:

ITEM_BARCODE	= PE900048
CONTAINER_BARCODE	= PE900022
NAME	= Stacked Data
BASIN	= GIPPSLAND
ON_OFF	= OFFSHORE
PERMIT	= VIC/P11
TYPE	= WELL
SUBTYPE	= VELOCITY
DESCRIPTION	= Judith 1 Stacked Data, Median Stack. From appendix 4 of WCR volume 1.
REMARKS	=
DATE_CREATED	=
DATE_RECEIVED	= 20/08/90
W_NO	= W1011
WELL_NAME	= Judith 1
CONTRACTOR	= Schlumberger
CLIENT_OP_CO	= Shell Australia

(Inserted by DNRE - Vic Govt Mines Dept)

PE603203

This is an enclosure indicator page.
The enclosure PE603203 is enclosed within the container PE900022 at this location in this document.

The enclosure PE603203 has the following characteristics:

ITEM_BARCODE	= PE603203
CONTAINER_BARCODE	= PE900022
NAME	= Geogram
BASIN	= GIPPSLAND
ON_OFF	= OFFSHORE
PERMIT	= VIC/P11
TYPE	= WELL
SUBTYPE	= SYNTH_SEISMOGRAM
DESCRIPTION	= Judith 1 25 Hertz zero phase Geogram (Synthetic Seismogram). From appendix 4 of WCR volume 1.
REMARKS	=
DATE_CREATED	= 5/12/89
DATE_RECEIVED	= 20/08/90
W_NO	= W1011
WELL_NAME	= Judith 1
CONTRACTOR	= Schlumberger
CLIENT_OP_CO	= Shell Australia

(Inserted by DNRE - Vic Govt Mines Dept)

PE603204

This is an enclosure indicator page.
The enclosure PE603204 is enclosed within the container PE900022 at this location in this document.

The enclosure PE603204 has the following characteristics:

ITEM_BARCODE	= PE603204
CONTAINER_BARCODE	= PE900022
NAME	= Geogram
BASIN	= GIPPSLAND
ON_OFF	= OFFSHORE
PERMIT	= VIC/P11
TYPE	= WELL
SUBTYPE	= SYNTH_SEISMOGRAM
DESCRIPTION	= Judith 1 35 Hertz zero phase Geogram (Synthetic Seismogram). From appendix 4 of WCR volume 1.
REMARKS	=
DATE_CREATED	= 5/12/89
DATE_RECEIVED	= 20/08/90
W_NO	= W1011
WELL_NAME	= Judith 1
CONTRACTOR	= Schlumberger
CLIENT_OP_CO	= Shell Australia

(Inserted by DNRE - Vic Govt Mines Dept)

PE603205

This is an enclosure indicator page.
The enclosure PE603205 is enclosed within the container PE900022 at this location in this document.

The enclosure PE603205 has the following characteristics:

ITEM_BARCODE	PE603205
CONTAINER_BARCODE	PE900022
NAME	Geogram
BASIN	GIPPSLAND
ON_OFF	OFFSHORE
PERMIT	VIC/P11
TYPE	WELL
SUBTYPE	SYNTH_SEISMOGRAM
DESCRIPTION	Judith 1 45 Hertz zero phase Geogram (Synthetic Seismogram). From appendix 4 of WCR volume 1.
REMARKS	
DATE_CREATED	5/12/89
DATE_RECEIVED	20/08/90
W_NO	W1011
WELL_NAME	Judith 1
CONTRACTOR	Schlumberger
CLIENT_OP_CO	Shell Australia

(Inserted by DNRE - Vic Govt Mines Dept)

SCHLUMBERGER

GEOPHYSICAL AIRGUN REPORT

COMPANY : SHELL COMPANY OF AUSTRALIA
WELL : JUDITH #1
FIELD : WILDCAT
COUNTRY : AUSTRALIA
REFERENCE: SYJ-56521

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 BOREH AXIS IN EW DIRECTION (CF GUNELZ)
HYDNSZ - HYDROPHONE DISTANCE FROM THE BOREH AXIS IN NS DIRECTION (CF GUNELZ)
TRTHYD - TRAVEL TIME FROM THE HYDROPHONE TO THE SOURCE
TRTSRD - TRAVEL TIME FROM THE SOURCE TO THE SRD
DEVWEL - DEVIATED WELL DATA PER SHOT : MEAS. DEPTH, VERT. DEPTH, EW, NS

SAMPLED

SHOT.GSH - SHOT NUMBER
DKB.GSH - MEASURED DEPTH FROM KELLY-BUSHING
DSRD.GSH - DEPTH FROM SRD
DGL.GSH - VERTICAL DEPTH RELATIVE TO GROUND LEVEL (USER'S REFERENCE)
TIMO.GSH - 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	: 21.0000	M
ELEV OF SRD AB. MSL(WST)	SRD	: 0	M
ELEVATION OF KELLY BUSHI	EKB	: 21.0000	M
ELEV OF GL AB. SRD(WST)	GL	: -76.4000	M
VEL SOURCE-HYDRO(WST)	VELHYD	: 1480.00	M/S
VEL SOURCE-SRD (WST)	VELSUR	: 1480.00	M/S

(MATRIX PARAMETERS)

	SOURCE ELV M	SOURCE EW M	SOURCE NS M	HYDRO ELEV M	HYDRO EW M	HYDRO NS M
1	-5.00	25.71	30.64	-10.00	25.71	30.64

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

	MD @ KB M	VD @ KB M	VD @ SRD M	E-W COORD M	N-S COORD M
1	97.40	97.40	76.40	0	0
2	500.10	500.10	479.10	0	0
3	650.00	650.00	629.00	0	0
4	800.00	800.00	779.00	0	0
5	960.00	960.00	939.00	0	0
6	1100.00	1100.00	1079.00	0	0
7	1250.00	1250.00	1229.00	0	0
8	1451.00	1451.00	1430.00	0	0
9	1700.00	1700.00	1679.00	0	0
10	1888.00	1888.00	1867.00	0	0
11	2100.00	2100.00	2079.00	0	0
12	2250.00	2250.00	2229.00	0	0
13	2394.00	2394.00	2373.00	0	0
14	2495.00	2495.00	2474.00	0	0
15	2655.00	2655.00	2634.00	0	0
16	2770.00	2770.00	2749.00	0	0
17	2865.00	2865.00	2844.00	0	0
18	2958.00	2958.00	2937.00	0	0

COMPANY : SHELL COMPANY OF AUSTRALIA WELL : JUDITH #1

LEVEL NUMBER	MEASUR DEPTH FROM KB M	VERTIC DEPTH FROM SRD M	VERTIC DEPTH FROM GL M	OBSERV TRAVEL TIME HYD/GEO MS	VERTIC TRAVEL TIME SRC/GEO MS	VERTIC TRAVEL TIME SRD/GEO MS	AVERAGE VELOC SRD/GEO M/S	DELTA DEPTH BETWEEN SHOTS M	DELTA TIME BETWEEN SHOTS MS	INTERV VELOC BETWEEN SHOTS M/S
1	97.40	76.40	0	51.92	48.24	51.62	1480			
2	500.10	479.10	402.70	223.96	231.52	234.89	2040	402.70	183.27	2197
3	650.00	629.00	552.60	273.21	286.00	289.38	2174	149.90	54.49	2751
4	800.00	779.00	702.60	345.23	348.14	351.52	2216	150.00	62.14	2414
5	960.00	939.00	862.60	405.40	408.40	411.78	2280	160.00	60.26	2655
6	1100.00	1079.00	1002.60	459.62	462.68	466.06	2315	140.00	54.27	2580
7	1250.00	1229.00	1152.60	516.99	520.09	523.47	2348	150.00	57.41	2613
8	1451.00	1430.00	1353.60	586.67	589.82	593.19	2411	201.00	69.73	2883
9	1700.00	1679.00	1602.60	667.99	671.18	674.56	2489	249.00	81.36	3061
10	1888.00	1867.00	1790.60	724.52	727.73	731.11	2554	188.00	56.55	3324
11	2100.00	2079.00	2002.60	784.23	787.46	790.84	2629	212.00	59.73	3549
12	2250.00	2229.00	2152.60	823.32	827.06	830.44	2684	150.00	39.60	3788
13	2394.00	2373.00	2296.60	861.89	865.15	868.52	2732	144.00	38.08	3781
14	2495.00	2474.00	2397.60	889.82	893.08	896.46	2760	101.00	27.94	3615
15	2655.00	2634.00	2557.60	930.23	933.50	936.88	2811	160.00	40.42	3959
16	2770.00	2749.00	2672.60	959.84	963.12	966.49	2844	115.00	29.62	3883
17	2865.00	2844.00	2767.60	984.45	987.73	991.11	2870	95.00	24.61	3860
18	2958.00	2937.00	2860.60	1006.40	1009.68	1013.06	2899	93.00	21.95	4236

ANALYST: Z.KATELIS 8-DEC-89 18:02:46 PROGRAM: GDRIFT 007.E09

DRIFT COMPUTATION REPORT

COMPANY : SHELL COMPANY OF AUSTRALIA
WELL : JUDITH #1
FIELD : WILDCAT
COUNTRY : AUSTRALIA
REFERENCE: SYJ-56521

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
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	21.0000	M
ELEV OF SRD AB. MSL(WST)	SRD	0	M
ELEVATION OF KELLY BUSHI	EKB	21.0000	M
ELEV OF GL AB. SRD(WST)	GL	-76.4000	M
TOP OF ZONE PROCD (WST)	XSTART	0	M
BOT OF ZONE PROCD (WST)	XSTOP	0	M
RAW SONIC CH NAME (WST)	GAD001	DT.ATT.002.FLD.*	
UNIFORM DENSITY VALUE	UNFDEN	2.30000	G/C3

(ZONED PARAMETERS)		(VALUE)		(LIMITS)	
LAYER OPTION FLAG DENS	LOFDEN	1.000000		30479.7 -	0
USER SUPPLIED DENSITY DA	LAYDEN	0	G/C3	0 -	0

COMPANY : SHELL COMPANY OF AUSTRALIA WELL : JUDITH #1

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/F
1	97.40	76.40	0	51.62	51.62	0	0
2	500.10	479.10	402.70	234.89	234.89	0	0
3	650.00	629.00	552.60	289.38	289.38	0	0
4	800.00	779.00	702.60	351.52	351.52	0	0
5	960.00	939.00	862.60	411.78	408.14	3.65	6.95
6	1100.00	1079.00	1002.60	466.06	461.49	4.56	2.00
7	1250.00	1229.00	1152.60	523.47	517.47	6.00	2.92
8	1451.00	1430.00	1353.60	593.19	586.32	6.83	1.33
9	1700.00	1679.00	1602.60	674.56	664.32	10.04	3.37
10	1888.00	1867.00	1790.60	731.11	719.83	11.23	1.93
11	2100.00	2079.00	2002.60	790.84	780.26	10.58	-.94
12	2250.00	2229.00	2152.60	830.44	818.97	11.47	1.81
13	2394.00	2373.00	2296.60	868.52	856.27	12.25	1.65
14	2495.00	2474.00	2397.60	896.45	883.07	13.39	3.44
15	2655.00	2634.00	2557.60	936.86	923.45	13.43	.06
16	2770.00	2749.00	2672.60	966.49	953.01	13.49	.17
17	2865.00	2844.00	2767.60	991.11	976.91	14.19	2.27
18	2958.00	2937.00	2860.60	1013.06	999.20	13.86	-1.09

SONIC ADJUSTMENT PARAMETER REPORT

COMPANY : SHELL COMPANY OF AUSTRALIA
WELL : JUDITH #1
FIELD : WILDCAT
COUNTRY : AUSTRALIA
REFERENCE: SYJ-56521

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

SAMPLED

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

(GLOBAL PARAMETERS)		(VALUE)	
ORIG OF ADJ DATA (WST)	SRCDRF	: 2.00000	
CONS SONIC ADJST (WST)	CONADJ	: 7.50000	US/F
UNIFORM EARTH VELOCITY	UNERTH	: 1480.00	M/S

(ZONED PARAMETERS)		(VALUE)		(LIMITS)
USER DRIFT ZONE (WST)	ZDRIFT	: 14.00000	MS	2958.00 - 1888.00
		11.20000		1888.00 - 1250.00
		6.000000		1250.00 - 300.000
		0		300.000
ADJUSMNT MODE (WST)	ADJOPZ	:-999.2500		30479.7 -
USER DELTA-T MIN (WST)	ADJUSZ	:-999.2500	US/F	30479.7 -
LAYER OPTION FLAG VELOC	LOFVEL	: 1.000000		30479.7 -
USER VELOC (WST)	LAYVEL	: 2197.000	M/S	500.100 - 97.4000
		1480.000		97.4000

KNEE NUMBER	VERTICAL DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	VERTICAL DEPTH FROM GL M	DRIFT AT KNEE MS	BLOCKSHIFT USED US/F	DELTA-T MINIMUM USED US/F	REDUCTION FACTOR G	EQUIVALENT BLOCKSHIFT US/F
2	800.00	779.00	702.60	0	0			0
3	1250.00	1229.00	1152.60	6.00	4.06			4.06
4	1888.00	1867.00	1790.60	11.20	2.48			2.48
5	2958.00	2937.00	2860.60	14.00	.80			.80

ANALYST: Z.KATELIS 8-DEC-89 18:33:55 PROGRAM: GADJST 008.E08

SCHLUMBERGER

VELOCITY REPORT

COMPANY : SHELL COMPANY OF AUSTRALIA
WELL : JUDITH #1
FIELD : WILDCAT
COUNTRY : AUSTRALIA
REFERENCE: SYJ-56521

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

(GLOBAL PARAMETERS)		(VALUE)	
ELEV OF KB AB. MSL (WST)	KB	21.0000	M
ELEV OF SRD AB. MSL(WST)	SRD	0	M
ELEVATION OF KELLY BUSHI	EKB	21.0000	M
ELEV OF GL AB. SRD(WST)	GL	-76.4000	M
UNIFORM EARTH VELOCITY	UNERTH	1480.00	M/S

(ZONED PARAMETERS)		(VALUE)		(LIMITS)	
LAYER OPTION FLAG VELOC	LOFVEL	1.000000		30479.7	- 0
USER VELOC (WST)	LAYVEL	2197.000	M/S	500.100	- 97.4000
		1480.000		97.4000	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
								1480
1	97.40	76.40	0	51.62	51.62	0	0	
								2197
2	500.10	479.10	402.70	234.89	234.88	0	.01	
								2751
3	650.00	629.00	552.60	289.38	289.37	0	.01	
								2414
4	800.00	779.00	702.60	351.52	351.51	0	.01	
								2724
5	960.00	939.00	862.60	411.78	410.26	3.65	1.52	
								2535
6	1100.00	1079.00	1002.60	466.06	465.48	4.56	.57	
								2537
7	1250.00	1229.00	1152.60	523.47	523.46	6.00	.01	
								2852
8	1451.00	1430.00	1353.60	593.19	593.94	6.88	-.75	
								3104
9	1700.00	1679.00	1602.60	674.56	674.17	10.04	.38	
								3304
10	1888.00	1867.00	1790.60	731.11	731.07	11.23	.04	
								3478
11	2100.00	2079.00	2002.60	790.84	792.00	10.58	-1.16	
								3836
12	2250.00	2229.00	2152.60	830.44	831.10	11.47	-.66	
								3822
13	2394.00	2373.00	2296.60	868.52	868.78	12.25	-.26	
								3732
14	2495.00	2474.00	2397.60	896.46	895.84	13.39	.62	
								3921
15	2655.00	2634.00	2557.60	936.88	936.64	13.43	.23	
								3852
16	2770.00	2749.00	2672.60	966.49	966.50	13.49	0	
								3933
17	2865.00	2844.00	2767.60	991.11	990.66	14.19	.45	
								4129
18	2958.00	2937.00	2860.60	1013.06	1013.18	13.96	-.11	

SCHLUMBERGER

TIME CONVERTED VELOCITY REPORT

COMPANY : SHELL COMPANY OF AUSTRALIA
WELL : JUDITH #1
FIELD : WILDCAT
COUNTRY : AUSTRALIA
REFERENCE: SYJ-56521

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
DKB - MEASURED DEPTH FROM KELLY-BUSHING
DSRD - DEPTH FROM SRD
AVGV - AVERAGE SEISMIC VELOCITY
RMSV - ROOT MEAN SQUARE VELOCITY (SEISMIC)
MVOT - NORMAL MOVE-OUT
MVOT - NORMAL MOVE-OUT
MVOT - NORMAL MOVE-OUT
INTV - INTERNAL VELOCITY, AVERAGE

(GLOBAL PARAMETERS)		(VALUE)	
ELEV OF KB AB. MSL (WST)	KB	: 21.0000	M
ELEV OF SRD AB. MSL(WST)	SRD	: 0	M
ELEV OF GL AB. SRD(WST)	GL	: -76.4000	M
UNIFORM EARTH VELOCITY	UNERTH	: 1480.00	M/S
UNIFORM DENSITY VALUE	UNFDEN	: 2.30000	G/C3

(MATRIX PARAMETERS)

	MVOUT DIST M
1	1000.0
2	1500.0
3	2000.0

(ZONED PARAMETERS)		(VALUE)		(LIMITS)	
LAYER OPTION FLAG VELOC	LOFVEL	: 1.000000		30479.7	- 0
USER VELOC (WST)	LAYVEL	: 2197.000	M/S	500.100	- 97.4000
		1480.000		97.4000	0
LAYER OPTION FLAG DENS	LOFDEN	:-1.000000		30479.7	- 0
USER SUPPLIED DENSITY DA	LAYDEN	: 0	G/C3	0	- 0

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	21.00	0						1480
2.00	22.48	1.48	1480	1480	673.68	1011.52	1349.35	1480
4.00	23.96	2.96	1480	1480	671.69	1009.52	1347.36	1480
6.00	25.44	4.44	1480	1480	669.70	1007.53	1345.36	1480
8.00	26.92	5.92	1480	1480	667.72	1005.55	1343.38	1480
10.00	28.40	7.40	1480	1480	665.75	1003.56	1341.39	1480
12.00	29.88	8.88	1480	1480	663.78	1001.53	1339.40	1480
14.00	31.36	10.36	1480	1480	661.82	999.61	1337.42	1480
16.00	32.84	11.84	1480	1480	659.87	997.64	1335.45	1480
18.00	34.32	13.32	1480	1480	657.92	995.67	1333.47	1480
20.00	35.80	14.80	1480	1480	655.97	993.71	1331.50	1480
22.00	37.28	16.28	1480	1480	654.03	991.75	1329.53	1480
24.00	38.76	17.76	1480	1480	652.10	989.80	1327.56	1480
26.00	40.24	19.24	1480	1480	650.18	987.85	1325.60	1480
28.00	41.72	20.72	1480	1480	648.26	985.90	1323.64	1480
30.00	43.20	22.20	1480	1480	646.34	983.96	1321.68	1480
32.00	44.68	23.68	1480	1480	644.43	982.02	1319.73	1480
34.00	46.16	25.16	1480	1480	642.53	980.08	1317.78	1480
36.00	47.64	26.64	1480	1480	640.63	978.15	1315.83	1480
38.00	49.12	28.12	1480	1480	638.74	976.23	1313.89	1480
40.00	50.60	29.60	1480	1480	636.86	974.30	1311.94	1480
42.00	52.08	31.08	1480	1480	634.98	972.38	1310.00	1480
44.00	53.56	32.56	1480	1480	633.11	970.47	1308.07	1480
46.00	55.04	34.04	1480	1480	631.24	968.56	1306.13	

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	56.52	35.52	1480	1480	629.38	966.65	1304.20	1480
50.00	58.00	37.00	1480	1480	627.52	964.75	1302.33	1480
52.00	59.48	38.48	1480	1480	625.67	962.85	1300.35	1480
54.00	60.96	39.96	1480	1480	623.83	960.95	1298.43	1480
56.00	62.44	41.44	1480	1480	621.99	959.06	1296.51	1480
58.00	63.92	42.92	1480	1480	620.16	957.17	1294.60	1480
60.00	65.40	44.40	1480	1480	618.33	955.29	1292.68	1480
62.00	66.88	45.88	1480	1480	616.51	953.41	1290.77	1480
64.00	68.36	47.36	1480	1480	614.70	951.53	1288.87	1480
66.00	69.84	48.84	1480	1480	612.89	949.66	1286.96	1480
68.00	71.32	50.32	1480	1480	611.09	947.79	1285.06	1480
70.00	72.80	51.80	1480	1480	609.29	945.93	1283.16	1480
72.00	74.28	53.28	1480	1480	607.50	944.07	1281.27	1480
74.00	75.76	54.76	1480	1480	605.72	942.21	1279.37	1480
76.00	77.24	56.24	1480	1480	603.94	940.36	1277.49	1480
78.00	78.72	57.72	1480	1480	602.16	938.51	1275.60	1480
80.00	80.20	59.20	1480	1480	600.40	936.67	1273.72	1480
82.00	81.68	60.68	1480	1480	598.63	934.83	1271.84	1480
84.00	83.16	62.16	1480	1480	596.88	932.99	1269.96	1480
86.00	84.64	63.64	1480	1480	595.13	931.16	1268.08	1480
88.00	86.12	65.12	1480	1480	593.38	929.33	1266.21	1480
90.00	87.60	66.60	1480	1480	591.64	927.50	1264.34	1480
92.00	89.08	68.08	1480	1480	589.91	925.68	1262.48	1480
94.00	90.56	69.56	1480	1480	588.18	923.86	1260.62	

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	92.04	71.04	1480	1480	586.46	922.05	1258.76	1480
98.00	93.52	72.52	1480	1480	584.75	920.24	1256.90	1480
100.00	95.00	74.00	1480	1480	583.04	918.43	1255.05	1480
102.00	96.48	75.48	1480	1480	581.33	916.63	1253.20	1774
104.00	98.25	77.25	1486	1486	576.84	910.62	1245.71	2197
106.00	100.45	79.45	1499	1503	567.84	897.78	1229.11	2197
108.00	102.65	81.65	1512	1518	559.34	885.70	1213.51	2197
110.00	104.85	83.85	1524	1534	551.31	874.31	1198.82	2197
112.00	107.04	86.04	1536	1548	543.68	863.52	1184.94	2197
114.00	109.24	88.24	1548	1562	536.44	853.30	1171.80	2197
116.00	111.44	90.44	1559	1575	529.54	843.58	1159.34	2197
118.00	113.64	92.64	1570	1587	522.95	834.33	1147.50	2197
120.00	115.83	94.83	1581	1599	516.65	825.50	1136.22	2197
122.00	118.03	97.03	1591	1611	510.61	817.07	1125.46	2197
124.00	120.23	99.23	1600	1622	504.82	808.99	1115.17	2197
126.00	122.42	101.42	1610	1633	499.26	801.25	1105.33	2197
128.00	124.62	103.62	1619	1643	493.90	793.81	1095.89	2197
130.00	126.82	105.82	1628	1653	488.74	786.66	1086.83	2197
132.00	129.02	108.02	1637	1663	483.76	779.78	1078.12	2197
134.00	131.21	110.21	1645	1672	478.95	773.14	1069.73	2197
136.00	133.41	112.41	1653	1681	474.30	766.73	1061.65	2197
138.00	135.61	114.61	1661	1689	469.79	760.54	1053.86	2197
140.00	137.81	116.81	1669	1698	465.43	754.55	1046.32	2197
142.00	140.00	119.00	1676	1706	461.19	748.75	1039.04	

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
								2197
144.00	142.20	121.20	1683	1714	457.08	743.12	1031.99	2197
146.00	144.40	123.40	1690	1721	453.08	737.66	1025.16	2197
148.00	146.59	125.59	1697	1728	449.19	732.36	1018.54	2197
150.00	148.79	127.79	1704	1736	445.40	727.21	1012.11	2197
152.00	150.99	129.99	1710	1742	441.71	722.20	1005.87	2197
154.00	153.19	132.19	1717	1749	438.11	717.32	999.79	2197
156.00	155.38	134.38	1723	1756	434.60	712.57	993.89	2197
158.00	157.58	136.58	1729	1762	431.18	707.93	988.14	2197
160.00	159.78	138.78	1735	1768	427.83	703.41	982.53	2197
162.00	161.98	140.98	1740	1774	424.56	698.99	977.07	2197
164.00	164.17	143.17	1746	1780	421.36	694.68	971.74	2197
166.00	166.37	145.37	1751	1785	418.23	690.46	966.55	2197
168.00	168.57	147.57	1757	1791	415.16	686.34	961.45	2197
170.00	170.76	149.76	1762	1796	412.16	682.31	956.47	2197
172.00	172.96	151.96	1767	1801	409.22	678.36	951.61	2197
174.00	175.16	154.16	1772	1806	406.33	674.48	946.86	2197
176.00	177.36	156.36	1777	1811	403.50	670.69	942.20	2197
178.00	179.55	158.55	1782	1816	400.73	666.97	937.64	2197
180.00	181.75	160.75	1786	1821	398.00	663.32	933.17	2197
182.00	183.95	162.95	1791	1825	395.32	659.74	928.79	2197
184.00	186.15	165.15	1795	1830	392.69	656.23	924.49	2197
186.00	188.34	167.34	1799	1834	390.11	652.77	920.27	2197
188.00	190.54	169.54	1804	1838	387.57	649.38	916.12	2197
190.00	192.74	171.74	1808	1842	385.07	646.04	912.06	

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	194.93	173.93	1812	1846	382.61	642.76	908.06	2197
194.00	197.13	176.13	1816	1850	380.19	639.53	904.13	2197
196.00	199.33	178.33	1820	1854	377.81	636.36	900.27	2197
198.00	201.53	180.53	1823	1858	375.47	633.23	896.47	2197
200.00	203.72	182.72	1827	1862	373.16	630.15	892.73	2197
202.00	205.92	184.92	1831	1865	370.89	627.12	889.05	2197
204.00	208.12	187.12	1834	1869	368.65	624.14	885.43	2197
206.00	210.32	189.32	1838	1872	366.44	621.19	881.86	2197
208.00	212.51	191.51	1841	1876	364.26	618.29	878.34	2197
210.00	214.71	193.71	1845	1879	362.11	615.43	874.88	2197
212.00	216.91	195.91	1848	1882	360.00	612.61	871.46	2197
214.00	219.10	198.10	1851	1886	357.91	609.82	868.09	2197
216.00	221.30	200.30	1855	1889	355.85	607.07	864.77	2197
218.00	223.50	202.50	1858	1892	353.81	604.36	861.50	2197
220.00	225.70	204.70	1861	1895	351.81	601.69	858.26	2197
222.00	227.89	206.89	1864	1898	349.83	599.04	855.07	2197
224.00	230.09	209.09	1867	1901	347.87	596.43	851.92	2197
226.00	232.29	211.29	1870	1903	345.94	593.85	848.81	2197
228.00	234.49	213.49	1873	1906	344.03	591.30	845.74	2197
230.00	236.68	215.68	1876	1909	342.14	588.78	842.70	2197
232.00	238.88	217.88	1878	1912	340.28	586.29	839.70	2197
234.00	241.08	220.08	1881	1914	338.44	583.83	836.74	2197
236.00	243.27	222.27	1884	1917	336.62	581.40	833.81	2197
238.00	245.47	224.47	1886	1919	334.82	578.99	830.91	

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	247.67	226.67	1889	1922	333.04	576.61	828.05	2197
242.00	249.87	228.87	1891	1924	331.29	574.26	825.21	2197
244.00	252.06	231.06	1894	1927	329.55	571.93	822.41	2197
246.00	254.26	233.26	1896	1929	327.83	569.62	819.64	2197
248.00	256.46	235.46	1899	1931	326.13	567.34	816.89	2197
250.00	258.66	237.66	1901	1934	324.45	565.08	814.17	2197
252.00	260.85	239.85	1904	1936	322.79	562.84	811.49	2197
254.00	263.05	242.05	1906	1938	321.14	560.63	808.82	2197
256.00	265.25	244.25	1908	1940	319.51	558.44	806.19	2197
258.00	267.44	246.44	1910	1942	317.90	556.27	803.58	2197
260.00	269.64	248.64	1913	1944	316.30	554.12	800.99	2197
262.00	271.84	250.84	1915	1946	314.73	551.99	798.43	2197
264.00	274.04	253.04	1917	1948	313.16	549.87	795.90	2197
266.00	276.23	255.23	1919	1950	311.62	547.78	793.38	2197
268.00	278.43	257.43	1921	1952	310.08	545.71	790.89	2197
270.00	280.63	259.63	1923	1954	308.57	543.66	788.42	2197
272.00	282.83	261.83	1925	1956	307.06	541.62	785.97	2197
274.00	285.02	264.02	1927	1958	305.58	539.60	783.55	2197
276.00	287.22	266.22	1929	1960	304.10	537.60	781.14	2197
278.00	289.42	268.42	1931	1962	302.64	535.62	778.76	2197
280.00	291.61	270.61	1933	1963	301.20	533.65	776.39	2197
282.00	293.81	272.81	1935	1965	299.77	531.70	774.05	2197
284.00	296.01	275.01	1937	1967	298.35	529.77	771.72	2197
286.00	298.21	277.21	1939	1969	296.94	527.85	769.41	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
								2197
288.00	300.40	279.40	1940	1970	295.55	525.95	767.13	2197
290.00	302.60	281.60	1942	1972	294.17	524.06	764.85	2197
292.00	304.80	283.80	1944	1974	292.80	522.19	762.60	2197
294.00	307.00	286.00	1946	1975	291.45	520.33	760.36	2197
296.00	309.19	288.19	1947	1977	290.10	518.49	758.14	2197
298.00	311.39	290.39	1949	1978	288.77	516.66	755.94	2197
300.00	313.59	292.59	1951	1980	287.45	514.85	753.76	2197
302.00	315.78	294.78	1952	1981	286.14	513.05	751.59	2197
304.00	317.98	296.98	1954	1983	284.85	511.26	749.43	2197
306.00	320.18	299.18	1955	1984	283.56	509.49	747.29	2197
308.00	322.38	301.38	1957	1986	282.29	507.72	745.17	2197
310.00	324.57	303.57	1959	1987	281.02	505.98	743.06	2197
312.00	326.77	305.77	1960	1989	279.77	504.24	740.96	2197
314.00	328.97	307.97	1962	1990	278.53	502.52	738.88	2197
316.00	331.17	310.17	1963	1991	277.30	500.81	736.82	2197
318.00	333.36	312.36	1965	1993	276.07	499.11	734.77	2197
320.00	335.56	314.56	1966	1994	274.86	497.43	732.73	2197
322.00	337.76	316.76	1967	1996	273.66	495.75	730.71	2197
324.00	339.95	318.95	1969	1997	272.47	494.09	728.69	2197
326.00	342.15	321.15	1970	1998	271.28	492.44	726.70	2197
328.00	344.35	323.35	1972	1999	270.11	490.80	724.71	2197
330.00	346.55	325.55	1973	2001	268.95	489.17	722.74	2197
332.00	348.74	327.74	1974	2002	267.79	487.55	720.79	2197
334.00	350.94	329.94	1976	2003	266.65	485.94	718.85	

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	353.14	332.14	1977	2004	265.51	484.35	716.89	2197
338.00	355.34	334.34	1978	2006	264.39	482.76	714.97	2197
340.00	357.53	336.53	1980	2007	263.27	481.19	713.06	2197
342.00	359.73	338.73	1981	2008	262.16	479.62	711.16	2197
344.00	361.93	340.93	1982	2009	261.06	478.07	709.27	2197
346.00	364.12	343.12	1983	2010	259.97	476.52	707.39	2197
348.00	366.32	345.32	1985	2011	258.88	474.99	705.52	2197
350.00	368.52	347.52	1986	2012	257.81	473.46	703.67	2197
352.00	370.72	349.72	1987	2013	256.74	471.95	701.82	2197
354.00	372.91	351.91	1988	2015	255.68	470.44	699.99	2197
356.00	375.11	354.11	1989	2016	254.63	468.94	698.17	2197
358.00	377.31	356.31	1991	2017	253.59	467.46	696.35	2197
360.00	379.51	358.51	1992	2018	252.55	465.98	694.55	2197
362.00	381.70	360.70	1993	2019	251.52	464.51	692.76	2197
364.00	383.90	362.90	1994	2020	250.50	463.05	690.97	2197
366.00	386.10	365.10	1995	2021	249.49	461.60	689.20	2197
368.00	388.29	367.29	1996	2022	248.49	460.16	687.44	2197
370.00	390.49	369.49	1997	2023	247.49	458.72	685.69	2197
372.00	392.69	371.69	1998	2024	246.50	457.30	683.94	2197
374.00	394.89	373.89	1999	2025	245.51	455.88	682.20	2197
376.00	397.08	376.08	2000	2026	244.54	454.47	680.48	2197
378.00	399.28	378.28	2001	2027	243.57	453.07	678.76	2197
380.00	401.48	380.48	2003	2028	242.61	451.68	677.05	2197
382.00	403.68	382.68	2004	2029	241.65	450.29	675.35	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
384.00	405.87	384.87	2005	2029	240.70	448.92	673.66	2197
386.00	408.07	387.07	2006	2030	239.76	447.55	671.98	2197
388.00	410.27	389.27	2007	2031	238.83	446.19	670.31	2197
390.00	412.46	391.46	2008	2032	237.90	444.84	668.64	2197
392.00	414.66	393.66	2008	2033	236.98	443.49	666.99	2197
394.00	416.86	395.86	2009	2034	236.06	442.15	665.34	2197
396.00	419.06	398.06	2010	2035	235.15	440.82	663.70	2197
398.00	421.25	400.25	2011	2036	234.25	439.50	662.07	2197
400.00	423.45	402.45	2012	2036	233.35	438.19	660.45	2197
402.00	425.65	404.65	2013	2037	232.46	436.88	658.83	2197
404.00	427.85	406.85	2014	2038	231.58	435.58	657.22	2197
406.00	430.04	409.04	2015	2039	230.70	434.29	655.63	2197
408.00	432.24	411.24	2016	2040	229.83	433.00	654.03	2197
410.00	434.44	413.44	2017	2040	228.96	431.72	652.45	2197
412.00	436.63	415.63	2018	2041	228.10	430.45	650.87	2197
414.00	438.83	417.83	2019	2042	227.25	429.18	649.30	2197
416.00	441.03	420.03	2019	2043	226.40	427.92	647.74	2197
418.00	443.23	422.23	2020	2044	225.56	426.67	646.19	2197
420.00	445.42	424.42	2021	2044	224.72	425.43	644.64	2197
422.00	447.62	426.62	2022	2045	223.89	424.19	643.10	2197
424.00	449.82	428.82	2023	2046	223.06	422.96	641.57	2197
426.00	452.02	431.02	2024	2047	222.24	421.73	640.05	2197
428.00	454.21	433.21	2024	2047	221.43	420.51	638.53	2197
430.00	456.41	435.41	2025	2048	220.62	419.30	637.02	

COMPANY : SHELL COMPANY OF AUSTRALIA WELL : JUDITH #1

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
432.00	458.61	437.61	2026	2049	219.82	418.10	635.31	2197
434.00	460.80	439.80	2027	2049	219.02	416.90	634.01	2197
436.00	463.00	442.00	2028	2050	218.22	415.70	632.52	2197
438.00	465.20	444.20	2028	2051	217.43	414.51	631.04	2197
440.00	467.40	446.40	2029	2052	216.65	413.33	629.56	2197
442.00	469.59	448.59	2030	2052	215.87	412.16	628.09	2197
444.00	471.79	450.79	2031	2053	215.10	410.99	626.63	2197
446.00	473.99	452.99	2031	2054	214.33	409.83	625.17	2197
448.00	476.19	455.19	2032	2054	213.57	408.67	623.72	2197
450.00	478.38	457.38	2033	2055	212.81	407.52	622.27	2197
452.00	480.58	459.58	2034	2056	212.06	406.37	620.83	2197
454.00	482.78	461.78	2034	2056	211.31	405.23	619.40	2197
456.00	484.97	463.97	2035	2057	210.56	404.10	617.97	2197
458.00	487.17	466.17	2036	2057	209.82	402.97	616.55	2197
460.00	489.37	468.37	2036	2058	209.09	401.85	615.14	2197
462.00	491.57	470.57	2037	2059	208.36	400.73	613.73	2197
464.00	493.76	472.76	2038	2059	207.63	399.62	612.33	2197
466.00	495.96	474.96	2038	2060	206.91	398.51	610.93	2197
468.00	498.16	477.16	2039	2061	206.20	397.41	609.54	2197
470.00	500.45	479.45	2040	2062	205.41	396.19	607.98	2289
472.00	503.20	482.20	2043	2065	204.23	394.27	605.41	2751
474.00	505.95	484.95	2046	2068	203.07	392.37	602.87	2751
476.00	508.70	487.70	2049	2072	201.91	390.49	600.35	2751
478.00	511.45	490.45	2052	2075	200.77	388.63	597.86	2751

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	514.20	493.20	2055	2078	199.64	386.78	595.39	2751
482.00	516.95	495.95	2058	2082	198.53	384.96	592.95	2751
484.00	519.71	498.71	2061	2085	197.43	383.15	590.52	2751
486.00	522.46	501.46	2064	2083	196.34	381.36	588.12	2751
488.00	525.21	504.21	2066	2091	195.26	379.59	585.75	2751
490.00	527.96	506.96	2069	2094	194.19	377.83	583.39	2751
492.00	530.71	509.71	2072	2097	193.13	376.10	581.05	2751
494.00	533.46	512.46	2075	2100	192.09	374.37	578.74	2751
496.00	536.21	515.21	2077	2103	191.06	372.67	576.45	2751
498.00	538.96	517.96	2080	2106	190.03	370.98	574.17	2751
500.00	541.71	520.71	2083	2109	189.02	369.31	571.92	2751
502.00	544.47	523.47	2086	2112	188.02	367.65	569.69	2751
504.00	547.22	526.22	2088	2115	187.03	366.01	567.47	2751
506.00	549.97	528.97	2091	2118	186.05	364.38	565.28	2751
508.00	552.72	531.72	2093	2121	185.08	362.77	563.10	2751
510.00	555.47	534.47	2096	2124	184.12	361.17	560.94	2751
512.00	558.22	537.22	2099	2127	183.17	359.59	558.80	2751
514.00	560.97	539.97	2101	2129	182.23	358.02	556.68	2751
516.00	563.72	542.72	2104	2132	181.30	356.46	554.58	2751
518.00	566.48	545.48	2106	2135	180.38	354.92	552.49	2751
520.00	569.23	548.23	2109	2138	179.47	353.39	550.42	2751
522.00	571.98	550.98	2111	2140	178.56	351.88	548.37	2751
524.00	574.73	553.73	2113	2143	177.67	350.38	546.33	2751
526.00	577.48	556.48	2116	2146	176.78	348.89	544.32	

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	580.23	559.23	2118	2148	175.90	347.41	542.31	2751
530.00	582.98	561.98	2121	2151	175.03	345.95	540.32	2751
532.00	585.73	564.73	2123	2153	174.17	344.50	538.35	2751
534.00	588.48	567.48	2125	2156	173.32	343.06	536.40	2751
536.00	591.24	570.24	2128	2158	172.48	341.64	534.46	2751
538.00	593.99	572.99	2130	2161	171.64	340.22	532.53	2751
540.00	596.74	575.74	2132	2163	170.81	338.82	530.62	2751
542.00	599.49	578.49	2135	2166	169.99	337.43	528.72	2751
544.00	602.24	581.24	2137	2168	169.18	336.05	526.84	2751
546.00	604.99	583.99	2139	2171	168.38	334.68	524.97	2751
548.00	607.74	586.74	2141	2173	167.58	333.33	523.12	2751
550.00	610.49	589.49	2144	2176	166.79	331.98	521.28	2751
552.00	613.25	592.25	2146	2178	166.01	330.65	519.45	2751
554.00	616.00	595.00	2148	2180	165.23	329.32	517.64	2751
556.00	618.75	597.75	2150	2183	164.46	328.01	515.84	2751
558.00	621.50	600.50	2152	2185	163.70	326.71	514.06	2751
560.00	624.25	603.25	2154	2187	162.94	325.41	512.28	2751
562.00	627.00	606.00	2157	2189	162.20	324.13	510.52	2751
564.00	629.75	608.75	2159	2192	161.45	322.86	508.78	2751
566.00	632.50	611.50	2161	2194	160.72	321.60	507.04	2751
568.00	635.26	614.26	2163	2196	159.99	320.35	505.32	2751
570.00	638.01	617.01	2165	2198	159.27	319.10	503.61	2751
572.00	640.76	619.76	2167	2200	158.55	317.87	501.91	2751
574.00	643.51	622.51	2169	2203	157.85	316.65	500.23	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
576.00	646.26	625.26	2171	2205	157.14	315.43	498.55	2751
578.00	649.01	628.01	2173	2207	156.44	314.23	496.89	2751
580.00	651.54	630.54	2174	2208	155.87	313.24	495.55	2530
582.00	653.95	632.95	2175	2209	155.35	312.37	494.38	2414
584.00	656.37	635.37	2176	2210	154.84	311.50	493.21	2414
586.00	658.78	637.78	2177	2210	154.33	310.64	492.04	2414
588.00	661.20	640.20	2178	2211	153.83	309.78	490.88	2414
590.00	663.61	642.61	2178	2212	153.32	308.92	489.73	2414
592.00	666.02	645.02	2179	2212	152.82	308.07	488.58	2414
594.00	668.44	647.44	2180	2213	152.32	307.23	487.43	2414
596.00	670.85	649.85	2181	2214	151.83	306.38	486.29	2414
598.00	673.26	652.26	2181	2215	151.34	305.54	485.16	2414
600.00	675.68	654.68	2182	2215	150.85	304.71	484.03	2414
602.00	678.09	657.09	2183	2216	150.37	303.88	482.90	2414
604.00	680.51	659.51	2184	2217	149.88	303.06	481.78	2414
606.00	682.92	661.92	2185	2217	149.41	302.23	480.67	2414
608.00	685.33	664.33	2185	2218	148.93	301.42	479.55	2414
610.00	687.75	666.75	2186	2219	148.46	300.60	478.45	2414
612.00	690.16	669.16	2187	2219	147.98	299.79	477.35	2414
614.00	692.58	671.58	2188	2220	147.52	298.99	476.25	2414
616.00	694.99	673.99	2188	2221	147.05	298.19	475.16	2414
618.00	697.40	676.40	2189	2221	146.59	297.39	474.07	2414
620.00	699.82	678.82	2190	2222	146.13	296.60	472.99	2414
622.00	702.23	681.23	2190	2223	145.67	295.81	471.91	2414

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	704.64	683.64	2191	2223	145.22	295.02	470.83	2414
626.00	707.06	686.06	2192	2224	144.77	294.24	469.76	2414
628.00	709.47	688.47	2193	2224	144.32	293.46	468.70	2414
630.00	711.89	690.89	2193	2225	143.87	292.69	467.64	2414
632.00	714.30	693.30	2194	2226	143.43	291.91	466.58	2414
634.00	716.71	695.71	2195	2226	142.99	291.15	465.53	2414
636.00	719.13	698.13	2195	2227	142.55	290.38	464.48	2414
638.00	721.54	700.54	2196	2228	142.11	289.62	463.44	2414
640.00	723.95	702.95	2197	2228	141.68	288.87	462.40	2414
642.00	726.37	705.37	2197	2229	141.25	288.12	461.36	2414
644.00	728.78	707.78	2198	2229	140.82	287.37	460.33	2414
646.00	731.20	710.20	2199	2230	140.39	286.62	459.31	2414
648.00	733.61	712.61	2199	2231	139.97	285.88	458.28	2414
650.00	736.02	715.02	2200	2231	139.55	285.14	457.27	2414
652.00	738.44	717.44	2201	2232	139.13	284.41	456.25	2414
654.00	740.85	719.85	2201	2232	138.71	283.68	455.24	2414
656.00	743.27	722.27	2202	2233	138.30	282.95	454.23	2414
658.00	745.68	724.68	2203	2233	137.88	282.22	453.23	2414
660.00	748.09	727.09	2203	2234	137.48	281.50	452.24	2414
662.00	750.51	729.51	2204	2235	137.07	280.78	451.24	2414
664.00	752.92	731.92	2205	2235	136.66	280.07	450.25	2414
666.00	755.33	734.33	2205	2236	136.26	279.36	449.26	2414
668.00	757.75	736.75	2206	2236	135.86	278.65	448.28	2414
670.00	760.16	739.16	2206	2237	135.46	277.95	447.30	

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
672.00	762.58	741.58	2207	2237	135.06	277.24	446.33	2414
674.00	764.99	743.99	2208	2238	134.67	276.55	445.36	2414
676.00	767.40	746.40	2208	2238	134.28	275.85	444.39	2414
678.00	769.82	748.82	2209	2239	133.89	275.16	443.43	2414
680.00	772.23	751.23	2210	2240	133.50	274.47	442.47	2414
682.00	774.64	753.64	2210	2240	133.12	273.79	441.51	2414
684.00	777.06	756.06	2211	2241	132.73	273.10	440.56	2414
686.00	779.47	758.47	2211	2241	132.35	272.42	439.61	2414
688.00	781.89	760.89	2212	2242	131.97	271.75	438.67	2414
690.00	784.30	763.30	2212	2242	131.60	271.08	437.73	2414
692.00	786.71	765.71	2213	2243	131.22	270.41	436.79	2414
694.00	789.13	768.13	2214	2243	130.85	269.74	435.86	2414
696.00	791.54	770.54	2214	2244	130.48	269.08	434.93	2414
698.00	793.96	772.96	2215	2244	130.11	268.41	434.00	2414
700.00	796.37	775.37	2215	2245	129.74	267.76	433.08	2414
702.00	798.78	777.78	2216	2245	129.37	267.10	432.16	2512
704.00	801.29	780.29	2217	2246	128.98	266.39	431.15	2723
706.00	804.02	783.02	2218	2247	128.51	265.53	429.93	2756
708.00	806.77	785.77	2220	2249	128.04	264.66	428.68	2880
710.00	809.66	788.66	2222	2251	127.52	263.70	427.29	3077
712.00	812.74	791.74	2224	2254	126.93	262.61	425.70	2986
714.00	815.72	794.72	2226	2256	126.38	261.59	424.22	2840
716.00	818.56	797.56	2228	2258	125.89	260.69	422.91	2930
718.00	821.49	800.49	2230	2260	125.37	259.73	421.52	

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	824.58	803.58	2232	2263	124.79	258.65	419.95	3089
722.00	827.32	806.32	2234	2264	124.35	257.84	418.78	2732
724.00	830.09	809.09	2235	2266	123.90	257.01	417.58	2770
726.00	832.85	811.85	2237	2267	123.45	256.19	416.39	2764
728.00	835.66	814.66	2238	2269	123.00	255.34	415.17	2811
730.00	838.49	817.49	2240	2271	122.53	254.48	413.92	2833
732.00	841.35	820.35	2241	2273	122.07	253.61	412.66	2858
734.00	844.17	823.17	2243	2274	121.62	252.78	411.45	2815
736.00	847.18	826.18	2245	2277	121.10	251.82	410.04	3012
738.00	850.13	829.13	2247	2279	120.61	250.91	408.71	2948
740.00	852.99	831.99	2249	2281	120.16	250.06	407.48	2859
742.00	855.60	834.60	2250	2281	119.79	249.38	406.49	2610
744.00	858.28	837.28	2251	2283	119.40	248.65	405.44	2679
746.00	861.08	840.08	2252	2284	118.97	247.85	404.28	2806
748.00	863.96	842.96	2254	2286	118.52	247.02	403.06	2876
750.00	866.57	845.57	2255	2287	118.16	246.34	402.09	2615
752.00	869.35	848.35	2256	2288	117.75	245.58	400.97	2781
754.00	872.20	851.20	2258	2290	117.32	244.78	399.80	2842
756.00	874.96	853.96	2259	2291	116.92	244.03	398.71	2763
758.00	877.61	856.61	2260	2292	116.56	243.35	397.72	2653
760.00	880.18	859.18	2261	2293	116.22	242.72	396.81	2573
762.00	883.01	862.01	2262	2295	115.80	241.95	395.68	2823
764.00	885.89	864.89	2264	2297	115.38	241.15	394.51	2883
766.00	888.97	867.97	2266	2299	114.89	240.22	393.14	3084

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
								2849
768.00	891.82	870.82	2268	2301	114.48	239.45	392.01	
								2491
770.00	894.31	873.31	2268	2301	114.17	238.88	391.19	
								2583
772.00	896.90	875.90	2269	2302	113.84	238.27	390.30	
								2740
774.00	899.64	878.64	2270	2303	113.47	237.57	389.28	
								2797
776.00	902.43	881.43	2272	2304	113.09	236.85	388.21	
								2562
778.00	905.00	884.00	2272	2305	112.77	236.25	387.35	
								2924
780.00	907.92	886.92	2274	2307	112.35	235.46	386.18	
								2496
782.00	910.42	889.42	2275	2307	112.06	234.91	385.38	
								2772
784.00	913.19	892.19	2276	2309	111.69	234.21	384.36	
								2538
786.00	915.73	894.73	2277	2309	111.38	233.65	383.53	
								2657
788.00	918.38	897.38	2278	2310	111.05	233.02	382.61	
								2427
790.00	920.81	899.81	2278	2311	110.78	232.51	381.88	
								2508
792.00	923.32	902.32	2279	2311	110.49	231.96	381.08	
								2560
794.00	925.88	904.88	2279	2312	110.18	231.39	380.25	
								2503
796.00	928.38	907.38	2280	2312	109.89	230.85	379.47	
								2634
798.00	931.02	910.02	2281	2313	109.57	230.25	378.59	
								2453
800.00	933.47	912.47	2281	2314	109.30	229.74	377.85	
								2582
802.00	936.05	915.05	2282	2314	109.00	229.17	377.01	
								2574
804.00	938.62	917.62	2283	2315	108.70	228.61	376.19	
								2833
806.00	941.46	920.46	2284	2316	108.34	227.92	375.16	
								2804
808.00	944.26	923.26	2285	2318	107.98	227.24	374.16	
								2578
810.00	946.84	925.84	2286	2318	107.69	226.69	373.35	
								2500
812.00	949.34	928.34	2287	2319	107.41	226.17	372.59	
								2515
814.00	951.85	930.85	2287	2319	107.14	225.65	371.83	

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	954.57	933.57	2288	2320	106.81	225.03	370.91	2718
818.00	957.02	936.02	2289	2321	106.55	224.54	370.20	2447
820.00	959.39	938.39	2289	2321	106.31	224.09	369.55	2375
822.00	961.81	940.81	2289	2321	106.06	223.62	368.86	2413
824.00	964.29	943.29	2290	2321	105.80	223.13	368.14	2478
826.00	966.85	945.85	2290	2322	105.52	222.60	367.36	2563
828.00	969.38	948.38	2291	2323	105.25	222.08	366.60	2530
830.00	971.93	950.93	2291	2323	104.98	221.56	365.84	2551
832.00	974.36	953.36	2292	2323	104.73	221.10	365.16	2428
834.00	976.86	955.86	2292	2324	104.47	220.60	364.43	2503
836.00	979.38	958.38	2293	2324	104.20	220.10	363.69	2523
838.00	982.07	961.07	2294	2325	103.90	219.52	362.83	2689
840.00	984.54	963.54	2294	2326	103.66	219.05	362.14	2464
842.00	987.08	966.08	2295	2326	103.39	218.55	361.40	2543
844.00	989.70	968.70	2296	2327	103.11	218.01	360.60	2625
846.00	992.23	971.23	2296	2327	102.85	217.52	359.87	2529
848.00	994.83	973.83	2297	2328	102.58	217.00	359.10	2597
850.00	997.38	976.38	2297	2329	102.32	216.50	358.36	2551
852.00	999.91	978.91	2298	2329	102.06	216.01	357.64	2532
854.00	1002.49	981.49	2299	2330	101.80	215.51	356.89	2573
856.00	1005.02	984.02	2299	2330	101.54	215.02	356.17	2536
858.00	1007.56	986.56	2300	2331	101.29	214.54	355.45	2534
860.00	1009.98	988.98	2300	2331	101.06	214.10	354.81	2427
862.00	1012.47	991.47	2300	2331	100.82	213.64	354.13	2483

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	1015.05	994.05	2301	2332	100.56	213.14	353.39	2586
866.00	1017.55	996.55	2301	2332	100.32	212.68	352.71	2493
868.00	1020.20	999.20	2302	2333	100.05	212.16	351.92	2658
870.00	1022.77	1001.77	2303	2334	99.80	211.67	351.20	2565
872.00	1025.38	1004.38	2304	2334	99.54	211.18	350.46	2607
874.00	1028.01	1007.01	2304	2335	99.28	210.67	349.70	2635
876.00	1030.52	1009.52	2305	2336	99.04	210.21	349.02	2510
878.00	1032.96	1011.96	2305	2336	98.82	209.79	348.39	2435
880.00	1035.55	1014.55	2306	2336	98.57	209.30	347.66	2597
882.00	1038.07	1017.07	2306	2337	98.33	208.85	346.99	2515
884.00	1040.57	1019.57	2307	2337	98.10	208.40	346.33	2500
886.00	1043.23	1022.23	2308	2338	97.84	207.90	345.57	2658
888.00	1045.77	1024.77	2308	2338	97.60	207.44	344.89	2546
890.00	1048.29	1027.29	2309	2339	97.37	207.00	344.22	2512
892.00	1050.95	1029.95	2309	2340	97.11	206.50	343.47	2661
894.00	1053.44	1032.44	2310	2340	96.89	206.07	342.83	2491
896.00	1056.08	1035.08	2310	2341	96.64	205.58	342.09	2642
898.00	1058.53	1037.53	2311	2341	96.42	205.17	341.48	2450
900.00	1061.12	1040.12	2311	2342	96.19	204.70	340.79	2584
902.00	1063.65	1042.65	2312	2342	95.96	204.26	340.12	2538
904.00	1066.08	1045.08	2312	2342	95.75	203.86	339.53	2432
906.00	1068.60	1047.60	2313	2343	95.53	203.43	338.88	2518
908.00	1071.18	1050.18	2313	2343	95.30	202.98	338.20	2580
910.00	1073.62	1052.62	2313	2343	95.09	202.58	337.61	2434

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	1076.07	1055.07	2314	2344	94.88	202.18	337.00	2454
914.00	1078.53	1057.53	2314	2344	94.67	201.78	336.40	2461
916.00	1081.05	1060.05	2315	2344	94.46	201.35	335.76	2521
918.00	1083.69	1062.69	2315	2345	94.22	200.88	335.06	2641
920.00	1086.18	1065.18	2316	2345	94.01	200.48	334.44	2487
922.00	1088.73	1067.73	2316	2346	93.79	200.05	333.80	2544
924.00	1091.13	1070.13	2316	2346	93.59	199.67	333.24	2406
926.00	1093.61	1072.61	2317	2346	93.39	199.27	332.63	2480
928.00	1096.16	1075.16	2317	2347	93.17	198.85	332.00	2545
930.00	1098.81	1077.81	2318	2347	92.93	198.39	331.30	2657
932.00	1101.32	1080.32	2318	2348	92.73	197.98	330.69	2503
934.00	1103.77	1082.77	2319	2348	92.53	197.60	330.11	2452
936.00	1106.44	1085.44	2319	2349	92.29	197.14	329.41	2667
938.00	1108.89	1087.89	2320	2349	92.10	196.75	328.83	2458
940.00	1111.42	1090.42	2320	2349	91.89	196.35	328.22	2525
942.00	1114.07	1093.07	2321	2350	91.66	195.90	327.53	2653
944.00	1116.60	1095.60	2321	2350	91.45	195.50	326.93	2524
946.00	1119.01	1098.01	2321	2350	91.27	195.13	326.38	2416
948.00	1121.80	1100.80	2322	2351	91.02	194.64	325.62	2791
950.00	1124.27	1103.27	2323	2352	90.82	194.26	325.05	2467
952.00	1126.77	1105.77	2323	2352	90.63	193.87	324.47	2495
954.00	1129.31	1108.31	2324	2352	90.42	193.47	323.86	2547
956.00	1131.83	1110.83	2324	2353	90.22	193.08	323.26	2516
958.00	1134.34	1113.34	2324	2353	90.02	192.69	322.68	2514

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	1136.76	1115.76	2324	2353	89.84	192.34	322.14	2413
962.00	1139.20	1118.20	2325	2353	89.66	191.98	321.59	2449
964.00	1141.63	1120.63	2325	2354	89.48	191.62	321.06	2422
966.00	1144.07	1123.07	2325	2354	89.29	191.26	320.51	2447
968.00	1146.52	1125.52	2325	2354	89.11	190.90	319.97	2445
970.00	1149.00	1128.00	2326	2354	88.92	190.53	319.41	2484
972.00	1151.48	1130.48	2326	2355	88.74	190.17	318.85	2474
974.00	1153.89	1132.89	2326	2355	88.56	189.82	318.33	2415
976.00	1156.30	1135.30	2326	2355	88.39	189.48	317.81	2407
978.00	1158.90	1137.90	2327	2355	88.18	189.08	317.20	2602
980.00	1161.36	1140.36	2327	2356	88.00	188.72	316.65	2464
982.00	1163.88	1142.88	2328	2356	87.81	188.35	316.08	2521
984.00	1166.41	1145.41	2328	2356	87.62	187.97	315.51	2526
986.00	1168.94	1147.94	2328	2357	87.43	187.60	314.94	2534
988.00	1171.44	1150.44	2329	2357	87.25	187.24	314.39	2500
990.00	1174.03	1153.03	2329	2357	87.05	186.85	313.79	2588
992.00	1176.58	1155.58	2330	2358	86.86	186.47	313.22	2543
994.00	1179.16	1158.16	2330	2358	86.67	186.09	312.63	2581
996.00	1181.84	1160.84	2331	2359	86.46	185.67	311.99	2681
998.00	1184.57	1163.57	2332	2360	86.24	185.24	311.32	2731
1000.00	1187.17	1166.17	2332	2360	86.05	184.86	310.73	2601
1002.00	1189.78	1168.78	2333	2361	85.85	184.47	310.14	2613
1004.00	1192.30	1171.30	2333	2361	85.68	184.11	309.59	2514
1006.00	1194.87	1173.87	2334	2362	85.49	183.74	309.02	2570

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
1008.00	1197.40	1176.40	2334	2362	85.31	183.38	308.47	2528
1010.00	1199.99	1178.99	2335	2362	85.12	183.01	307.89	2598
1012.00	1202.62	1181.62	2335	2363	84.92	182.62	307.30	2625
1014.00	1205.34	1184.34	2336	2364	84.72	182.21	306.66	2723
1016.00	1208.07	1187.07	2337	2364	84.51	181.79	306.01	2733
1018.00	1210.80	1189.80	2338	2365	84.30	181.38	305.38	2725
1020.00	1213.46	1192.46	2338	2366	84.11	180.99	304.77	2667
1022.00	1216.08	1195.08	2339	2366	83.92	180.62	304.20	2612
1024.00	1218.64	1197.64	2339	2367	83.74	180.26	303.65	2565
1026.00	1221.39	1200.39	2340	2368	83.54	179.85	303.01	2744
1028.00	1224.18	1203.18	2341	2368	83.33	179.42	302.35	2799
1030.00	1227.06	1206.06	2342	2370	83.10	178.97	301.65	2876
1032.00	1229.93	1208.93	2343	2371	82.88	178.53	300.96	2868
1034.00	1232.70	1211.70	2344	2371	82.68	178.12	300.31	2776
1036.00	1235.42	1214.42	2344	2372	82.48	177.72	299.70	2715
1038.00	1238.16	1217.16	2345	2373	82.28	177.33	299.08	2743
1040.00	1240.83	1219.83	2346	2374	82.09	176.95	298.50	2669
1042.00	1243.50	1222.50	2346	2374	81.91	176.58	297.92	2672
1044.00	1246.13	1225.13	2347	2375	81.73	176.22	297.36	2631
1046.00	1248.78	1227.78	2348	2375	81.55	175.85	296.80	2643
1048.00	1251.49	1230.49	2348	2376	81.36	175.47	296.20	2709
1050.00	1254.21	1233.21	2349	2377	81.17	175.09	295.61	2717
1052.00	1257.02	1236.02	2350	2378	80.96	174.68	294.97	2812
1054.00	1260.17	1239.17	2351	2379	80.71	174.16	294.16	3152

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	1263.03	1242.03	2352	2380	80.50	173.74	293.50	2855
1058.00	1265.81	1244.81	2353	2381	80.31	173.35	292.89	2777
1060.00	1268.56	1247.56	2354	2382	80.12	172.97	292.29	2757
1062.00	1271.38	1250.38	2355	2383	79.92	172.57	291.66	2817
1064.00	1274.10	1253.10	2355	2383	79.74	172.20	291.08	2721
1066.00	1276.85	1255.85	2356	2384	79.55	171.82	290.49	2750
1068.00	1279.59	1258.59	2357	2385	79.36	171.45	289.91	2742
1070.00	1282.36	1261.36	2358	2386	79.18	171.07	289.31	2766
1072.00	1285.24	1264.24	2359	2387	78.97	170.65	288.67	2885
1074.00	1287.95	1266.95	2359	2387	78.80	170.30	288.11	2703
1076.00	1290.63	1269.63	2360	2388	78.62	169.94	287.56	2688
1078.00	1293.49	1272.49	2361	2389	78.43	169.55	286.93	2853
1080.00	1296.24	1275.24	2362	2390	78.25	169.18	286.36	2749
1082.00	1298.92	1277.92	2362	2390	78.07	168.83	285.82	2681
1084.00	1301.77	1280.77	2363	2391	77.88	168.44	285.20	2857
1086.00	1304.42	1283.42	2364	2392	77.72	168.11	284.68	2643
1088.00	1307.19	1286.19	2364	2392	77.54	167.74	284.10	2773
1090.00	1309.95	1288.95	2365	2393	77.36	167.38	283.54	2755
1092.00	1312.75	1291.75	2366	2394	77.17	167.01	282.95	2806
1094.00	1315.59	1294.59	2367	2395	76.99	166.63	282.35	2839
1096.00	1318.40	1297.40	2368	2396	76.81	166.26	281.77	2809
1098.00	1321.14	1300.14	2368	2396	76.63	165.91	281.22	2740
1100.00	1323.97	1302.97	2369	2397	76.45	165.53	280.63	2834
1102.00	1326.69	1305.69	2370	2398	76.28	165.19	280.09	2714

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	1329.40	1308.40	2370	2398	76.11	164.85	279.56	2712
1106.00	1332.16	1311.16	2371	2399	75.94	164.50	279.01	2757
1108.00	1334.97	1313.97	2372	2400	75.77	164.14	278.44	2810
1110.00	1337.70	1316.70	2372	2400	75.60	163.80	277.90	2735
1112.00	1340.42	1319.42	2373	2401	75.43	163.47	277.38	2720
1114.00	1343.15	1322.15	2374	2402	75.27	163.13	276.85	2730
1116.00	1345.95	1324.95	2374	2402	75.10	162.78	276.29	2793
1118.00	1348.98	1327.98	2376	2404	74.89	162.36	275.63	3037
1120.00	1352.24	1331.24	2377	2406	74.66	161.88	274.86	3263
1122.00	1355.23	1334.23	2378	2407	74.47	161.49	274.23	2982
1124.00	1358.05	1337.05	2379	2408	74.29	161.13	273.67	2821
1126.00	1360.88	1339.88	2380	2408	74.12	160.78	273.12	2834
1128.00	1363.78	1342.78	2381	2409	73.94	160.41	272.53	2897
1130.00	1366.48	1345.48	2381	2410	73.78	160.09	272.03	2702
1132.00	1369.26	1348.26	2382	2411	73.62	159.76	271.50	2779
1134.00	1372.47	1351.47	2384	2412	73.40	159.31	270.79	3215
1136.00	1375.37	1354.37	2384	2413	73.22	158.94	270.20	2900
1138.00	1378.31	1357.31	2385	2414	73.04	158.57	269.61	2931
1140.00	1381.17	1360.17	2386	2415	72.87	158.22	269.06	2862
1142.00	1384.38	1363.38	2388	2417	72.66	157.78	268.35	3217
1144.00	1387.32	1366.32	2389	2418	72.48	157.41	267.76	2938
1146.00	1390.59	1369.59	2390	2419	72.26	156.96	267.04	3268
1148.00	1393.63	1372.63	2391	2421	72.07	156.57	266.41	3042
1150.00	1396.65	1375.65	2392	2422	71.88	156.19	265.81	3016

COMPANY : SHELL COMPANY OF AUSTRALIA WELL : JUDITH #1

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
1152.00	1399.55	1378.55	2393	2423	71.71	155.84	265.25	2902
1154.00	1402.35	1381.35	2394	2423	71.56	155.52	264.74	2801
1156.00	1405.28	1384.28	2395	2424	71.38	155.16	264.17	2934
1158.00	1408.30	1387.30	2396	2426	71.20	154.79	263.57	3010
1160.00	1411.07	1390.07	2397	2426	71.05	154.47	263.08	2777
1162.00	1413.94	1392.94	2397	2427	70.89	154.14	262.55	2865
1164.00	1416.99	1395.99	2399	2428	70.71	153.76	261.94	3054
1166.00	1419.89	1398.89	2399	2429	70.54	153.42	261.40	2899
1168.00	1422.64	1401.64	2400	2430	70.39	153.12	260.92	2751
1170.00	1425.48	1404.48	2401	2430	70.24	152.80	260.41	2838
1172.00	1428.58	1407.58	2402	2432	70.05	152.42	259.79	3102
1174.00	1431.26	1410.26	2402	2432	69.91	152.13	259.34	2676
1176.00	1433.96	1412.96	2403	2433	69.78	151.85	258.89	2703
1178.00	1436.60	1415.60	2403	2433	69.64	151.58	258.46	2638
1180.00	1439.43	1418.43	2404	2434	69.49	151.26	257.96	2830
1182.00	1442.21	1421.21	2405	2434	69.35	150.96	257.48	2778
1184.00	1445.09	1424.09	2406	2435	69.19	150.64	256.96	2882
1186.00	1448.02	1427.02	2406	2436	69.03	150.31	256.43	2930
1188.00	1451.23	1430.23	2408	2438	68.84	149.91	255.79	3207
1190.00	1454.04	1433.04	2408	2438	68.69	149.61	255.30	2810
1192.00	1456.95	1435.95	2409	2439	68.53	149.28	254.78	2913
1194.00	1459.97	1438.97	2410	2440	68.36	148.94	254.22	3024
1196.00	1463.37	1442.37	2412	2442	68.15	148.49	253.51	3402
1198.00	1466.80	1445.80	2414	2444	67.94	148.05	252.78	3429

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	1470.27	1449.27	2415	2446	67.72	147.59	252.05	3467
1202.00	1473.62	1452.62	2417	2448	67.52	147.17	251.37	3347
1204.00	1476.95	1455.95	2419	2450	67.32	146.76	250.70	3329
1206.00	1480.14	1459.14	2420	2451	67.14	146.38	250.09	3195
1208.00	1483.38	1462.38	2421	2453	66.95	145.99	249.46	3239
1210.00	1486.61	1465.61	2422	2454	66.77	145.61	248.85	3229
1212.00	1489.85	1468.85	2424	2456	66.58	145.23	248.23	3239
1214.00	1492.90	1471.90	2425	2457	66.42	144.89	247.69	3052
1216.00	1495.98	1474.98	2426	2458	66.26	144.55	247.13	3082
1218.00	1499.09	1478.09	2427	2459	66.09	144.20	246.57	3113
1220.00	1502.27	1481.27	2428	2460	65.92	143.84	245.99	3175
1222.00	1505.41	1484.41	2429	2462	65.75	143.49	245.42	3141
1224.00	1508.42	1487.42	2430	2463	65.59	143.17	244.91	3015
1226.00	1511.23	1490.23	2431	2463	65.46	142.89	244.46	2807
1228.00	1514.29	1493.29	2432	2464	65.30	142.56	243.93	3062
1230.00	1517.48	1496.48	2433	2466	65.13	142.21	243.36	3185
1232.00	1520.51	1499.51	2434	2467	64.98	141.89	242.84	3029
1234.00	1523.54	1502.54	2435	2468	64.83	141.57	242.33	3037
1236.00	1525.94	1504.94	2435	2468	64.73	141.38	242.02	2393
1238.00	1529.32	1508.32	2437	2469	64.54	140.98	241.38	3387
1240.00	1532.75	1511.75	2438	2471	64.35	140.58	240.72	3425
1242.00	1535.97	1514.97	2440	2473	64.18	140.23	240.15	3223
1244.00	1539.01	1518.01	2441	2474	64.03	139.92	239.65	3033
1246.00	1542.05	1521.05	2441	2475	63.88	139.61	239.14	3048

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	1545.34	1524.34	2443	2476	63.71	139.24	238.55	3285
1250.00	1548.95	1527.95	2445	2478	63.50	138.80	237.84	3611
1252.00	1551.85	1530.85	2445	2479	63.37	138.53	237.39	2902
1254.00	1554.62	1533.62	2446	2480	63.25	138.28	236.98	2771
1256.00	1557.74	1536.74	2447	2481	63.10	137.96	236.47	3116
1258.00	1560.92	1539.92	2448	2482	62.94	137.62	235.93	3180
1260.00	1563.47	1542.47	2448	2482	62.84	137.42	235.59	2547
1262.00	1566.23	1545.23	2449	2483	62.72	137.17	235.20	2763
1264.00	1569.39	1548.39	2450	2484	62.57	136.85	234.67	3158
1266.00	1572.39	1551.39	2451	2485	62.43	136.56	234.20	3000
1268.00	1575.49	1554.49	2452	2486	62.28	136.25	233.70	3102
1270.00	1578.31	1557.31	2452	2486	62.16	136.00	233.29	2813
1272.00	1581.04	1560.04	2453	2487	62.05	135.76	232.91	2736
1274.00	1584.00	1563.00	2454	2488	61.91	135.49	232.46	2956
1276.00	1587.08	1566.08	2455	2489	61.77	135.19	231.98	3080
1278.00	1589.96	1568.96	2455	2489	61.65	134.93	231.56	2879
1280.00	1592.96	1571.96	2456	2490	61.51	134.65	231.10	3006
1282.00	1595.92	1574.92	2457	2491	61.38	134.37	230.65	2960
1284.00	1598.70	1577.70	2457	2492	61.27	134.13	230.27	2783
1286.00	1601.45	1580.45	2458	2492	61.16	133.90	229.89	2750
1288.00	1604.24	1583.24	2458	2492	61.04	133.66	229.51	2788
1290.00	1607.08	1586.08	2459	2493	60.92	133.42	229.11	2841
1292.00	1610.08	1589.08	2460	2494	60.79	133.14	228.66	2998
1294.00	1613.12	1592.12	2461	2495	60.66	132.86	228.20	3038

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
								3853
1296.00	1616.97	1595.97	2463	2497	60.44	132.40	227.45	3036
1298.00	1620.01	1599.01	2464	2498	60.31	132.13	227.00	3266
1300.00	1623.27	1602.27	2465	2500	60.16	131.80	226.47	3197
1302.00	1626.47	1605.47	2466	2501	60.01	131.50	225.97	3170
1304.00	1629.64	1608.64	2467	2502	59.87	131.20	225.48	3194
1306.00	1632.84	1611.84	2468	2503	59.73	130.90	224.99	3030
1308.00	1635.86	1614.86	2469	2504	59.60	130.63	224.54	3071
1310.00	1638.94	1617.94	2470	2505	59.47	130.35	224.09	3104
1312.00	1642.04	1621.04	2471	2506	59.33	130.07	223.63	2735
1314.00	1644.77	1623.77	2471	2507	59.23	129.85	223.28	3036
1316.00	1647.81	1626.81	2472	2507	59.10	129.58	222.84	3446
1318.00	1651.26	1630.26	2474	2509	58.94	129.24	222.28	3279
1320.00	1654.54	1633.54	2475	2511	58.79	128.93	221.77	3172
1322.00	1657.71	1636.71	2476	2512	58.65	128.64	221.29	3216
1324.00	1660.92	1639.92	2477	2513	58.51	128.34	220.81	2990
1326.00	1663.91	1642.91	2478	2514	58.39	128.09	220.40	2756
1328.00	1666.67	1645.67	2478	2514	58.29	127.88	220.05	3192
1330.00	1669.86	1648.86	2479	2515	58.15	127.59	219.58	3319
1332.00	1673.18	1652.18	2481	2517	58.01	127.28	219.07	3247
1334.00	1676.43	1655.43	2482	2518	57.87	126.98	218.58	3547
1336.00	1679.97	1658.98	2483	2520	57.70	126.63	218.00	3268
1338.00	1683.24	1662.24	2485	2521	57.56	126.33	217.52	3197
1340.00	1686.44	1665.44	2486	2522	57.43	126.05	217.05	3189
1342.00	1689.63	1668.63	2487	2523	57.30	125.77	216.60	

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	1692.75	1671.75	2488	2524	57.17	125.51	216.16	3118
1346.00	1696.02	1675.02	2489	2526	57.03	125.22	215.68	3277
1348.00	1699.48	1678.48	2490	2527	56.88	124.89	215.14	3453
1350.00	1702.66	1681.66	2491	2528	56.75	124.62	214.70	3183
1352.00	1705.81	1684.82	2492	2529	56.62	124.35	214.26	3154
1354.00	1708.65	1687.65	2493	2530	56.52	124.14	213.91	2836
1356.00	1711.64	1690.64	2494	2531	56.41	123.90	213.52	2990
1358.00	1714.66	1693.66	2494	2531	56.29	123.66	213.12	3021
1360.00	1717.92	1696.92	2495	2533	56.16	123.38	212.66	3254
1362.00	1721.29	1700.29	2497	2534	56.02	123.08	212.17	3374
1364.00	1724.79	1703.79	2498	2536	55.87	122.76	211.63	3504
1366.00	1728.13	1707.13	2499	2537	55.73	122.46	211.15	3336
1368.00	1731.40	1710.40	2501	2538	55.60	122.19	210.70	3273
1370.00	1734.68	1713.68	2502	2539	55.47	121.91	210.24	3275
1372.00	1737.98	1716.98	2503	2541	55.34	121.63	209.78	3300
1374.00	1741.27	1720.27	2504	2542	55.21	121.35	209.32	3293
1376.00	1744.61	1723.61	2505	2543	55.07	121.07	208.85	3336
1378.00	1748.06	1727.06	2507	2545	54.93	120.76	208.35	3449
1380.00	1751.58	1730.58	2508	2547	54.78	120.45	207.83	3527
1382.00	1754.68	1733.68	2509	2547	54.67	120.21	207.43	3097
1384.00	1758.17	1737.17	2510	2549	54.52	119.90	206.93	3491
1386.00	1761.39	1740.39	2511	2550	54.40	119.64	206.50	3220
1388.00	1764.64	1743.64	2512	2551	54.28	119.38	206.07	3248
1390.00	1768.20	1747.20	2514	2553	54.13	119.07	205.55	3556

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	1771.40	1750.40	2515	2554	54.01	118.82	205.13	3201
1394.00	1774.63	1753.63	2516	2555	53.89	118.56	204.71	3237
1396.00	1777.85	1756.85	2517	2556	53.77	118.31	204.29	3220
1398.00	1781.17	1760.17	2518	2558	53.65	118.04	203.85	3313
1400.00	1784.43	1763.43	2519	2559	53.53	117.79	203.43	3259
1402.00	1787.73	1766.73	2520	2560	53.41	117.53	202.99	3298
1404.00	1790.97	1769.97	2521	2561	53.29	117.27	202.58	3245
1406.00	1794.25	1773.25	2522	2562	53.17	117.02	202.16	3273
1408.00	1797.52	1776.52	2523	2563	53.05	116.76	201.74	3268
1410.00	1800.79	1779.79	2525	2564	52.93	116.51	201.32	3274
1412.00	1804.19	1783.19	2526	2566	52.80	116.24	200.86	3401
1414.00	1807.31	1786.31	2527	2567	52.69	116.01	200.49	3119
1416.00	1810.56	1789.56	2528	2568	52.58	115.76	200.08	3251
1418.00	1814.03	1793.03	2529	2569	52.45	115.48	199.61	3470
1420.00	1817.34	1796.34	2530	2570	52.33	115.23	199.19	3314
1422.00	1820.68	1799.68	2531	2572	52.21	114.97	198.77	3340
1424.00	1824.15	1803.15	2533	2573	52.08	114.70	198.31	3468
1426.00	1827.44	1806.44	2534	2574	51.96	114.45	197.90	3287
1428.00	1830.69	1809.69	2535	2575	51.85	114.21	197.50	3246
1430.00	1834.04	1813.04	2536	2577	51.73	113.96	197.08	3350
1432.00	1837.44	1816.44	2537	2578	51.61	113.69	196.64	3403
1434.00	1840.89	1819.89	2538	2579	51.48	113.43	196.20	3445
1436.00	1844.11	1823.11	2539	2580	51.37	113.20	195.82	3223
1438.00	1847.47	1826.47	2540	2582	51.26	112.95	195.40	3353

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	1850.93	1829.93	2542	2583	51.13	112.68	194.96	3470
1442.00	1854.30	1833.30	2543	2584	51.01	112.43	194.54	3368
1444.00	1857.62	1836.62	2544	2586	50.90	112.19	194.14	3315
1446.00	1861.25	1840.25	2545	2587	50.77	111.90	193.66	3627
1448.00	1864.58	1843.58	2546	2588	50.65	111.66	193.26	3333
1450.00	1867.82	1846.82	2547	2589	50.55	111.43	192.88	3238
1452.00	1871.26	1850.26	2549	2591	50.43	111.17	192.46	3445
1454.00	1874.49	1853.49	2550	2592	50.32	110.95	192.08	3227
1456.00	1877.99	1856.99	2551	2593	50.20	110.69	191.65	3500
1458.00	1881.36	1860.36	2552	2594	50.09	110.45	191.24	3372
1460.00	1884.77	1863.77	2553	2596	49.97	110.20	190.83	3408
1462.00	1887.84	1866.84	2554	2596	49.88	110.00	190.50	3070
1464.00	1890.61	1869.61	2554	2597	49.80	109.84	190.24	2774
1466.00	1893.94	1872.94	2555	2598	49.69	109.61	189.85	3326
1468.00	1896.63	1875.63	2555	2598	49.62	109.46	189.61	2688
1470.00	1899.39	1878.39	2556	2598	49.55	109.30	189.35	2760
1472.00	1902.76	1881.76	2557	2599	49.44	109.07	188.95	3371
1474.00	1907.05	1886.05	2559	2602	49.26	108.68	188.31	4290
1476.00	1910.15	1889.15	2560	2603	49.17	108.49	187.98	3102
1478.00	1912.91	1891.91	2560	2603	49.10	108.33	187.73	2763
1480.00	1917.51	1896.51	2563	2607	48.89	107.90	187.00	4602
1482.00	1922.72	1901.72	2566	2612	48.64	107.34	186.06	5205
1484.00	1925.90	1904.90	2567	2613	48.54	107.14	185.73	3179
1486.00	1928.68	1907.68	2568	2613	48.47	106.99	185.47	2783

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	1931.10	1910.10	2567	2613	48.42	106.87	185.29	2415
1490.00	1933.93	1912.93	2568	2614	48.34	106.72	185.02	2833
1492.00	1937.13	1916.13	2569	2614	48.25	106.51	184.69	3199
1494.00	1940.11	1919.11	2569	2615	48.17	106.34	184.40	2974
1496.00	1943.68	1922.68	2570	2616	48.05	106.09	183.98	3570
1498.00	1947.06	1926.06	2572	2618	47.95	105.87	183.60	3379
1500.00	1950.36	1929.36	2572	2619	47.85	105.65	183.25	3306
1502.00	1953.67	1932.67	2573	2620	47.75	105.44	182.89	3311
1504.00	1956.94	1935.94	2574	2621	47.65	105.23	182.53	3269
1506.00	1960.38	1939.38	2576	2622	47.55	105.01	182.17	3439
1508.00	1963.94	1942.94	2577	2623	47.43	104.76	181.76	3561
1510.00	1967.64	1946.64	2578	2625	47.31	104.50	181.32	3697
1512.00	1971.49	1950.49	2580	2627	47.18	104.22	180.84	3850
1514.00	1975.44	1954.44	2582	2629	47.04	103.92	180.35	3950
1516.00	1978.98	1957.98	2583	2631	46.93	103.68	179.95	3543
1518.00	1982.23	1961.23	2584	2632	46.84	103.49	179.62	3251
1520.00	1985.72	1964.72	2585	2633	46.73	103.26	179.24	3492
1522.00	1989.29	1968.29	2586	2634	46.62	103.02	178.84	3567
1524.00	1992.90	1971.90	2588	2636	46.51	102.78	178.44	3610
1526.00	1996.58	1975.58	2589	2638	46.40	102.53	178.02	3676
1528.00	2000.22	1979.22	2591	2639	46.28	102.29	177.61	3646
1530.00	2003.95	1982.95	2592	2641	46.16	102.03	177.18	3725
1532.00	2007.64	1986.64	2594	2642	46.05	101.79	176.77	3694
1534.00	2011.46	1990.46	2595	2644	45.93	101.52	176.32	3822

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	2015.14	1994.14	2597	2646	45.81	101.28	175.91	3675
1538.00	2018.79	1997.79	2598	2647	45.70	101.04	175.51	3656
1540.00	2022.39	2001.39	2599	2649	45.60	100.81	175.13	3594
1542.00	2025.94	2004.94	2600	2650	45.49	100.59	174.75	3553
1544.00	2029.51	2008.51	2602	2652	45.39	100.36	174.37	3567
1546.00	2033.29	2012.29	2603	2653	45.27	100.11	173.95	3783
1548.00	2036.99	2015.99	2605	2655	45.16	99.87	173.55	3697
1550.00	2040.35	2019.35	2606	2656	45.07	99.67	173.22	3358
1552.00	2043.68	2022.68	2607	2657	44.98	99.48	172.90	3332
1554.00	2047.16	2026.16	2608	2658	44.88	99.27	172.54	3485
1556.00	2050.57	2029.57	2609	2659	44.79	99.07	172.21	3407
1558.00	2053.97	2032.97	2610	2661	44.70	98.88	171.88	3400
1560.00	2057.40	2036.40	2611	2662	44.60	98.67	171.54	3433
1562.00	2060.94	2039.94	2612	2663	44.51	98.46	171.18	3534
1564.00	2064.43	2043.43	2613	2664	44.41	98.26	170.83	3495
1566.00	2067.92	2046.92	2614	2665	44.32	98.05	170.49	3493
1568.00	2071.40	2050.40	2615	2667	44.22	97.85	170.15	3478
1570.00	2074.79	2053.79	2616	2668	44.13	97.66	169.83	3387
1572.00	2078.41	2057.41	2618	2669	44.03	97.44	169.46	3625
1574.00	2081.84	2060.84	2619	2670	43.94	97.24	169.13	3422
1576.00	2085.39	2064.39	2620	2671	43.84	97.03	168.78	3557
1578.00	2088.97	2067.97	2621	2673	43.75	96.82	168.42	3581
1580.00	2092.57	2071.57	2622	2674	43.65	96.61	168.07	3597
1582.00	2096.21	2075.21	2624	2676	43.55	96.40	167.70	3640

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	2100.04	2079.04	2625	2677	43.44	96.16	167.30	3826
1586.00	2103.74	2082.74	2626	2679	43.34	95.94	166.93	3703
1588.00	2107.53	2086.53	2628	2681	43.23	95.71	166.54	3795
1590.00	2111.29	2090.29	2629	2682	43.12	95.48	166.15	3761
1592.00	2114.92	2093.92	2631	2684	43.03	95.27	165.80	3629
1594.00	2118.71	2097.71	2632	2685	42.92	95.04	165.42	3788
1596.00	2122.38	2101.38	2633	2687	42.82	94.83	165.06	3672
1598.00	2126.04	2105.04	2635	2688	42.73	94.62	164.70	3660
1600.00	2129.72	2108.72	2636	2690	42.63	94.41	164.34	3679
1602.00	2133.45	2112.45	2637	2691	42.53	94.19	163.98	3727
1604.00	2137.39	2116.39	2639	2693	42.42	93.95	163.57	3941
1606.00	2141.18	2120.18	2640	2695	42.31	93.73	163.20	3790
1608.00	2144.94	2123.94	2642	2696	42.21	93.51	162.83	3759
1610.00	2148.47	2127.47	2643	2698	42.13	93.32	162.51	3536
1612.00	2152.42	2131.42	2644	2700	42.02	93.08	162.10	3950
1614.00	2156.45	2135.45	2646	2702	41.90	92.83	161.69	4028
1616.00	2160.36	2139.36	2648	2703	41.80	92.60	161.30	3912
1618.00	2164.16	2143.16	2649	2705	41.70	92.39	160.93	3799
1620.00	2167.87	2146.87	2650	2706	41.60	92.18	160.58	3711
1622.00	2171.74	2150.74	2652	2708	41.50	91.96	160.21	3864
1624.00	2175.85	2154.85	2654	2710	41.38	91.71	159.78	4108
1626.00	2179.99	2158.99	2656	2713	41.27	91.46	159.35	4140
1628.00	2184.07	2163.07	2657	2715	41.15	91.21	158.94	4082
1630.00	2188.00	2167.00	2659	2717	41.05	90.99	158.56	3928

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
1632.00	2191.60	2170.60	2660	2718	40.96	90.80	158.24	3602
1634.00	2195.27	2174.27	2661	2719	40.87	90.60	157.91	3671
1636.00	2198.82	2177.82	2662	2720	40.79	90.42	157.60	3550
1638.00	2202.73	2181.73	2664	2722	40.69	90.20	157.23	3915
1640.00	2206.66	2185.66	2665	2724	40.59	89.98	156.86	3925
1642.00	2210.62	2189.62	2667	2726	40.49	89.76	156.48	3957
1644.00	2214.50	2193.50	2668	2727	40.39	89.55	156.12	3883
1646.00	2218.44	2197.44	2670	2729	40.29	89.33	155.75	3942
1648.00	2222.42	2201.42	2672	2731	40.18	89.11	155.38	3984
1650.00	2226.37	2205.37	2673	2733	40.09	88.89	155.01	3942
1652.00	2230.36	2209.36	2675	2735	39.98	88.67	154.63	3997
1654.00	2234.16	2213.16	2676	2736	39.89	88.47	154.30	3792
1656.00	2238.05	2217.05	2678	2738	39.80	88.27	153.94	3893
1658.00	2241.97	2220.97	2679	2740	39.70	88.06	153.59	3918
1660.00	2245.77	2224.77	2680	2741	39.61	87.86	153.26	3800
1662.00	2249.65	2228.65	2682	2743	39.52	87.66	152.91	3883
1664.00	2253.42	2232.42	2683	2744	39.43	87.47	152.58	3773
1666.00	2257.27	2236.27	2685	2746	39.34	87.27	152.25	3847
1668.00	2260.97	2239.97	2686	2747	39.25	87.08	151.94	3705
1670.00	2264.79	2243.79	2687	2749	39.16	86.89	151.61	3814
1672.00	2268.50	2247.50	2688	2750	39.08	86.71	151.30	3706
1674.00	2272.14	2251.14	2690	2751	39.00	86.53	151.00	3645
1676.00	2275.98	2254.98	2691	2753	38.91	86.34	150.68	3837
1678.00	2279.88	2258.88	2692	2755	38.82	86.14	150.34	3904

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
1680.00	2283.65	2262.65	2694	2756	38.73	85.96	150.02	3769
1682.00	2287.48	2266.48	2695	2758	38.65	85.77	149.70	3834
1684.00	2291.44	2270.44	2696	2759	38.55	85.57	149.36	3954
1686.00	2295.20	2274.20	2698	2761	38.47	85.38	149.05	3765
1688.00	2298.94	2277.94	2699	2762	38.39	85.21	148.75	3738
1690.00	2302.80	2281.80	2700	2764	38.30	85.02	148.42	3863
1692.00	2306.57	2285.57	2702	2765	38.22	84.84	148.12	3762
1694.00	2310.35	2289.35	2703	2767	38.14	84.66	147.81	3788
1696.00	2314.20	2293.20	2704	2768	38.05	84.47	147.49	3847
1698.00	2317.97	2296.97	2706	2769	37.97	84.29	147.19	3771
1700.00	2321.77	2300.77	2707	2771	37.89	84.11	146.89	3800
1702.00	2325.60	2304.60	2708	2772	37.80	83.93	146.58	3832
1704.00	2329.51	2308.51	2710	2774	37.72	83.74	146.26	3900
1706.00	2333.13	2312.13	2711	2775	37.64	83.58	145.98	3624
1708.00	2336.75	2315.75	2712	2776	37.57	83.42	145.71	3624
1710.00	2340.42	2319.42	2713	2777	37.49	83.26	145.43	3671
1712.00	2344.13	2323.13	2714	2779	37.42	83.09	145.15	3706
1714.00	2347.98	2326.98	2715	2780	37.33	82.91	144.84	3852
1716.00	2351.84	2330.84	2717	2782	37.25	82.73	144.53	3861
1718.00	2355.81	2334.81	2718	2783	37.16	82.54	144.21	3967
1720.00	2359.76	2338.76	2719	2785	37.08	82.35	143.89	3947
1722.00	2363.72	2342.72	2721	2787	36.99	82.17	143.58	3959
1724.00	2367.60	2346.60	2722	2788	36.91	81.99	143.27	3888
1726.00	2371.59	2350.59	2724	2790	36.83	81.80	142.95	3986

COMPANY : SHELL COMPANY OF AUSTRALIA WELL : JUDITH #1

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
1728.00	2375.58	2354.58	2725	2792	36.74	81.62	142.63	3986
1730.00	2379.63	2358.63	2727	2793	36.65	81.42	142.31	4055
1732.00	2383.39	2362.39	2728	2795	36.58	81.26	142.03	3759
1734.00	2387.29	2366.29	2729	2796	36.50	81.08	141.73	3902
1736.00	2391.27	2370.27	2731	2798	36.41	80.90	141.41	3974
1738.00	2394.86	2373.86	2732	2799	36.34	80.75	141.16	3599
1740.00	2398.41	2377.41	2733	2800	36.28	80.61	140.92	3541
1742.00	2402.06	2381.06	2734	2801	36.21	80.46	140.66	3654
1744.00	2405.87	2384.87	2735	2802	36.13	80.29	140.38	3809
1746.00	2409.65	2388.65	2736	2804	36.06	80.13	140.10	3777
1748.00	2413.40	2392.40	2737	2805	35.99	79.97	139.83	3753
1750.00	2417.10	2396.10	2738	2806	35.92	79.82	139.57	3703
1752.00	2420.95	2399.95	2740	2808	35.84	79.65	139.29	3846
1754.00	2424.64	2403.64	2741	2809	35.77	79.50	139.03	3695
1756.00	2428.11	2407.11	2742	2810	35.71	79.37	138.80	3470
1758.00	2431.81	2410.81	2743	2811	35.64	79.22	138.55	3697
1760.00	2435.74	2414.74	2744	2812	35.56	79.05	138.25	3933
1762.00	2439.45	2418.45	2745	2813	35.49	78.90	138.00	3711
1764.00	2443.02	2422.02	2746	2814	35.43	78.76	137.76	3569
1766.00	2446.54	2425.54	2747	2815	35.37	78.62	137.53	3521
1768.00	2450.08	2429.08	2748	2816	35.31	78.49	137.30	3536
1770.00	2453.50	2432.50	2749	2817	35.25	78.36	137.08	3423
1772.00	2456.95	2435.95	2749	2818	35.19	78.23	136.87	3445
1774.00	2460.64	2439.64	2750	2819	35.12	78.09	136.62	3692

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	2464.38	2443.38	2752	2820	35.05	77.94	136.36	3742
1778.00	2468.31	2447.31	2753	2822	34.98	77.77	136.08	3924
1780.00	2472.26	2451.26	2754	2823	34.90	77.61	135.80	3951
1782.00	2476.30	2455.30	2756	2825	34.82	77.43	135.50	4046
1784.00	2480.34	2459.34	2757	2826	34.74	77.26	135.21	4031
1786.00	2484.24	2463.24	2758	2828	34.67	77.10	134.93	3904
1788.00	2488.26	2467.26	2760	2829	34.59	76.93	134.65	4023
1790.00	2491.90	2470.90	2761	2831	34.53	76.80	134.41	3639
1792.00	2495.63	2474.63	2762	2832	34.47	76.65	134.17	3726
1794.00	2499.15	2478.15	2763	2833	34.41	76.53	133.95	3522
1796.00	2503.04	2482.04	2764	2834	34.34	76.37	133.68	3895
1798.00	2507.04	2486.04	2765	2836	34.26	76.21	133.40	3996
1800.00	2510.64	2489.64	2766	2836	34.20	76.07	133.18	3603
1802.00	2514.21	2493.21	2767	2837	34.14	75.95	132.95	3567
1804.00	2517.69	2496.69	2768	2838	34.09	75.82	132.75	3483
1806.00	2521.14	2500.14	2769	2839	34.03	75.70	132.54	3445
1808.00	2524.60	2503.60	2769	2840	33.98	75.58	132.34	3464
1810.00	2528.15	2507.15	2770	2841	33.92	75.46	132.12	3553
1812.00	2531.66	2510.66	2771	2841	33.86	75.33	131.91	3504
1814.00	2535.24	2514.24	2772	2842	33.80	75.21	131.69	3583
1816.00	2538.80	2517.80	2773	2843	33.75	75.08	131.48	3558
1818.00	2542.37	2521.37	2774	2844	33.69	74.95	131.26	3571
1820.00	2546.25	2525.25	2775	2845	33.62	74.81	131.01	3877
1822.00	2550.24	2529.24	2776	2847	33.55	74.65	130.74	3989

TWO-WAY TRAVEL TIME FROM SRD MS	MEASURED DEPTH FROM KB M	VERTICAL DEPTH FROM SRD M	AVERAGE VELOCITY SRD/GEO M/S	RMS VELOCITY M/S	FIRST NORMAL MOVEOUT MS	SECOND NORMAL MOVEOUT MS	THIRD NORMAL MOVEOUT MS	INTERVAL VELOCITY M/S
1824.00	2554.26	2533.26	2778	2849	33.48	74.49	130.47	4021
1826.00	2558.28	2537.28	2779	2850	33.40	74.33	130.20	4024
1828.00	2562.07	2541.07	2780	2851	33.34	74.19	129.96	3789
1830.00	2565.82	2544.82	2781	2852	33.28	74.06	129.73	3752
1832.00	2569.79	2548.79	2783	2854	33.21	73.91	129.47	3964
1834.00	2573.89	2552.89	2784	2856	33.14	73.75	129.19	4103
1836.00	2577.80	2556.80	2785	2857	33.07	73.60	128.94	3907
1838.00	2581.80	2560.80	2787	2858	33.00	73.45	128.68	3998
1840.00	2585.77	2564.77	2788	2860	32.93	73.30	128.42	3974
1842.00	2589.95	2568.95	2789	2862	32.86	73.13	128.14	4183
1844.00	2594.15	2573.15	2791	2863	32.78	72.97	127.85	4199
1846.00	2598.46	2577.46	2792	2865	32.70	72.79	127.56	4306
1848.00	2602.74	2581.74	2794	2867	32.62	72.62	127.26	4286
1850.00	2606.99	2585.99	2796	2869	32.55	72.45	126.97	4251
1852.00	2611.36	2590.36	2797	2871	32.47	72.28	126.67	4369
1854.00	2615.69	2594.69	2799	2873	32.39	72.11	126.37	4331
1856.00	2619.94	2598.94	2801	2875	32.31	71.94	126.09	4246
1858.00	2624.26	2603.26	2802	2877	32.23	71.77	125.80	4316
1860.00	2628.27	2607.27	2804	2878	32.17	71.63	125.55	4017
1862.00	2632.30	2611.30	2805	2880	32.10	71.48	125.30	4026
1864.00	2636.13	2615.13	2806	2881	32.04	71.35	125.07	3831
1866.00	2640.25	2619.25	2807	2883	31.97	71.20	124.81	4116
1868.00	2644.16	2623.16	2809	2884	31.91	71.06	124.58	3912
1870.00	2648.06	2627.06	2810	2885	31.85	70.92	124.34	3903

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
1872.00	2652.30	2631.30	2811	2887	31.78	70.77	124.07	4233
1874.00	2656.53	2635.53	2813	2889	31.70	70.61	123.80	4238
1876.00	2660.60	2639.60	2814	2890	31.64	70.46	123.55	4065
1878.00	2664.26	2643.26	2815	2891	31.58	70.35	123.35	3662
1880.00	2667.91	2646.91	2816	2892	31.53	70.23	123.15	3650
1882.00	2671.61	2650.61	2817	2893	31.48	70.11	122.95	3697
1884.00	2675.29	2654.29	2818	2894	31.42	69.99	122.75	3685
1886.00	2679.06	2658.06	2819	2895	31.37	69.87	122.54	3771
1888.00	2682.77	2661.77	2820	2896	31.32	69.75	122.34	3702
1890.00	2686.39	2665.39	2821	2897	31.26	69.64	122.14	3622
1892.00	2689.99	2668.99	2821	2898	31.21	69.53	121.95	3607
1894.00	2693.75	2672.75	2822	2899	31.16	69.41	121.75	3751
1896.00	2697.64	2676.64	2823	2900	31.10	69.28	121.53	3898
1898.00	2701.44	2680.44	2824	2901	31.05	69.16	121.32	3797
1900.00	2705.41	2684.41	2826	2902	30.98	69.03	121.09	3967
1902.00	2709.25	2688.25	2827	2904	30.93	68.91	120.88	3843
1904.00	2712.98	2691.98	2828	2905	30.88	68.79	120.68	3730
1906.00	2716.78	2695.78	2829	2906	30.82	68.67	120.47	3800
1908.00	2720.57	2699.57	2830	2907	30.77	68.55	120.27	3784
1910.00	2724.54	2703.54	2831	2908	30.71	68.42	120.04	3970
1912.00	2728.66	2707.66	2832	2910	30.64	68.28	119.80	4122
1914.00	2732.51	2711.51	2833	2911	30.59	68.16	119.59	3853
1916.00	2736.40	2715.40	2834	2912	30.53	68.04	119.38	3893
1918.00	2740.36	2719.36	2836	2913	30.47	67.91	119.16	3960

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
1920.00	2744.24	2723.24	2837	2914	30.42	67.79	118.95	3880
1922.00	2748.20	2727.20	2838	2916	30.36	67.66	118.73	3951
1924.00	2752.08	2731.08	2839	2917	30.31	67.54	118.53	3889
1926.00	2755.93	2734.93	2840	2918	30.25	67.42	118.32	3845
1928.00	2759.81	2738.81	2841	2919	30.20	67.30	118.11	3877
1930.00	2763.76	2742.76	2842	2920	30.14	67.18	117.90	3953
1932.00	2767.98	2746.98	2844	2922	30.08	67.03	117.66	4219
1934.00	2772.22	2751.22	2845	2924	30.01	66.89	117.41	4246
1936.00	2776.48	2755.48	2847	2925	29.95	66.75	117.17	4254
1938.00	2780.47	2759.47	2848	2927	29.89	66.62	116.95	3994
1940.00	2784.14	2763.14	2849	2928	29.84	66.52	116.77	3673
1942.00	2787.86	2766.86	2849	2929	29.79	66.41	116.58	3717
1944.00	2791.59	2770.59	2850	2929	29.74	66.30	116.40	3731
1946.00	2795.32	2774.32	2851	2930	29.69	66.20	116.21	3730
1948.00	2798.97	2777.97	2852	2931	29.65	66.09	116.04	3653
1950.00	2802.69	2781.69	2853	2932	29.60	65.99	115.85	3715
1952.00	2806.30	2785.30	2854	2933	29.55	65.89	115.68	3614
1954.00	2810.20	2789.20	2855	2934	29.50	65.77	115.43	3893
1956.00	2813.93	2792.93	2856	2935	29.45	65.67	115.30	3731
1958.00	2817.87	2796.87	2857	2936	29.40	65.55	115.10	3942
1960.00	2821.92	2800.92	2858	2938	29.34	65.42	114.88	4051
1962.00	2825.82	2804.82	2859	2939	29.29	65.31	114.69	3894
1964.00	2829.74	2808.74	2860	2940	29.24	65.19	114.49	3921
1966.00	2833.57	2812.57	2861	2941	29.19	65.09	114.30	3829

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
1968.00	2837.44	2816.44	2862	2942	29.14	64.97	114.11	3878
1970.00	2841.45	2820.45	2863	2943	29.08	64.85	113.90	4006
1972.00	2845.53	2824.53	2865	2945	29.03	64.73	113.69	4084
1974.00	2849.63	2828.63	2866	2946	28.97	64.61	113.47	4096
1976.00	2853.85	2832.85	2867	2948	28.91	64.48	113.25	4225
1978.00	2858.05	2837.05	2869	2949	28.85	64.35	113.03	4197
1980.00	2862.31	2841.31	2870	2951	28.79	64.21	112.80	4263
1982.00	2866.37	2845.37	2871	2952	28.74	64.09	112.59	4057
1984.00	2870.63	2849.63	2873	2954	28.68	63.96	112.36	4260
1986.00	2874.52	2853.52	2874	2955	28.63	63.85	112.18	3888
1988.00	2878.34	2857.34	2875	2956	28.58	63.75	112.00	3820
1990.00	2882.13	2861.13	2876	2957	28.54	63.65	111.82	3794
1992.00	2885.86	2864.86	2876	2958	28.49	63.55	111.65	3730
1994.00	2889.76	2868.76	2877	2959	28.44	63.44	111.46	3899
1996.00	2893.82	2872.82	2879	2960	28.39	63.32	111.26	4061
1998.00	2898.14	2877.14	2880	2962	28.33	63.19	111.03	4318
2000.00	2902.44	2881.44	2881	2963	28.27	63.06	110.81	4301
2002.00	2906.66	2885.66	2883	2965	28.21	62.94	110.59	4221
2004.00	2910.57	2889.57	2884	2966	28.16	62.83	110.41	3904
2006.00	2914.56	2893.56	2885	2967	28.11	62.72	110.22	3989
2008.00	2918.75	2897.75	2886	2969	28.06	62.60	110.01	4196
2010.00	2923.07	2902.07	2888	2970	28.00	62.47	109.78	4313
2012.00	2927.35	2906.35	2889	2972	27.94	62.34	109.57	4281
2014.00	2931.68	2910.68	2890	2974	27.88	62.21	109.34	4335

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
2016.00	2936.04	2915.04	2892	2975	27.83	62.09	109.12	4359
2018.00	2940.13	2919.13	2893	2977	27.77	61.97	108.92	4085
2020.00	2944.31	2923.31	2894	2978	27.72	61.85	108.72	4189
2022.00	2948.33	2927.33	2895	2979	27.67	61.74	108.53	4015
2024.00	2952.73	2931.73	2897	2981	27.61	61.61	108.31	4405
2026.00	2957.16	2936.16	2898	2983	27.55	61.48	108.08	4431

SCHLUMBERGER

SYNTHETIC SEISMOGRAM TABLE

COMPANY : SHELL COMPANY OF AUSTRALIA
WELL : JUDITH #1
FIELD : WILDCAT
COUNTRY : AUSTRALIA
REFERENCE: 56521
LOGGED : 16 NOV 89

E HEADINGS AND FLAGS SHOWN IN THE DATA LIST ARE DEFINED
FOLLOWS:

ECFL- FLAG INDICATING MODE OF PROCESSING
IGEOFL = 0 WST DATA AVAILABLE AND PROCESSED
IGEOFL = 1 WST DATA NOT AVAILABLE

G INPUT DATA :
FCO1- CHANNEL NAME FOR INPUT DENSITY LOG DATA
ROC1- CHANNEL NAME FOR INPUT SONIC LOG DATA
URVE- CORRELATION LOG NAMES

ER DEFINED MODELING

FVEL- LAYER OPTION FLAG FOR VELOCITY
FDEN- LAYER OPTION FLAG FOR DENSITY
YVEL- LAYERED VELOCITY VALUES FOR USER SUPPLIED ZONE LIMIT
WITH RESPECT TO SONIC LOG DATA
YDEN- LAYERED DENSITY VALUES FOR USER SUPPLIED ZONE LIMITS
WITH RESPECT TO SONIC LOG DATA
ERTH- UNIFORM EARTH VELOCITY
FDEN- UNIFORM EARTH DENSITY
ATE SAMPLING RATE IN MS
IDEP START DEPTH FOR COMPUTING SYNTHETIC SEISMOGRAM
WITH RESPECT TO SONIC LOG DATA
ESTP STOP DEPTH FOR COMPUTING SYNTHETIC SEISMOGRAM
WITH RESPECT TO SONIC LOG DATA
ITAU TWO WAY TRAVEL TIME FROM TOP SONIC TO SRD
B ELEVATION OF KELLY BUSHING WITH RESPECT TO
MEAN SEA LEVEL
DGEO SEISMIC REFERENCE DEPTH WITH RESPECT TO
MEAN SEA LEVEL
OP FLAG FOR COMPUTING RESIDUAL MULTIPLES
PTIM TWO WAY TIME INTERVAL FOR COMPUTATION OF
RESIDUAL MULTIPLES
RTIM SURFACE REFLECTOR TWO WAY TIME ABOVE INITAU
REFL SURFACE REFLECTION COEFFICIENT
MAX REFLECTION COEFFICIENTS THAT ARE EQUAL TO OR
GREATER THAN THIS VALUE SHALL BE FLAGGED

OTE* IN CASE OF MODELING A SYNTHETIC SEISMOGRAM WITHOUT
SONIC LOG DATA ,THE DEPTH REFERENCES SHALL BE USER
DEFINED

TPUT DATA

SVWE ROOT MEAN SQUARE VELOCITY FOUND FOR THE WELL
DTIM TWO WAY TRANSIT TIME BETWEEN INIDEP AND SRDGEO

ANNNEL NAMES

TWOT- TWO WAY TRAVEL TIME
DSRD- DEPTH OF COMPUTED DATA WITH RESPECT TO SRD
INTV- INTERVAL VELOCITY ON A TIME SCALE
RHOT- INTERVAL DENSITY ON A TIME SCALE
REFL- REFLECTION COEFFICIENT AT GIVEN TWO WAY TRAVEL TIMES
ATTE- ATTENUATION COEFFICIENT AT GIVEN TWO WAY TRAVEL TIMES
PRIM- SYNTHETIC SEISMOGRAM - PRIMARIES
MULT- SYNTHETIC SEISMOGRAM - PRIMARIES + MULTIPLES
MUON- MULTIPLES ONLY

CHANNEL NAMES

CHAN 1 - TWOT.GMU.002.*
CHAN 2 - DSRD.GRF.006.*
CHAN 3 - INTV.GRF.007.*
CHAN 4 - RHOT.GRF.001.*
CHAN 5 - REFL.GRF.001.*
CHAN 6 - ATTE.GRF.001.*
CHAN 7 - PRIM.GRF.001.*
CHAN 8 - MULT.GMU.001.*
CHAN 9 - MUON.GMU.001.*

(GLOBAL PARAMETERS)		(VALUE)	
MODE OF PROC (GEOGRAM)	IGEOFL	0	
INITIALIZE CDP LOGIC	ICDP	0	
CDP TIME	CDPTIM	.200000	S
TIME SAMPLING (WST)	SRATE	2.00000	MS
TOP DEPTH OF PROCESSING	INIDEP	779.000	M
INITIAL TWO WAY TRAVEL T	INITAU	.703040	S
SRD FOR GEOGRAM	SRDGEO	-30479.7	M
ELEVATION OF KELLY BUSHI	EKB	0	M
SRD TIME	SRDTIM	0	MS
SURFACE COEFFICIENT OF R	SCRTIM	0	MS
SURFACE COEFFICIENT OF R	SCREFL	-1.00000	
REFLECTION COEFF MAXIMUM	RCMAX	.300000	
RMS VELOCITY IN WELL	RMSVWE	3312.36	M/S
UNIFORM EARTH VELOCITY	UNERTH	1480.00	M/S
UNIFORM DENSITY VALUE	UNFDEN	2.30000	G/C3

(MATRIX PARAMETERS)

1 GR*
2 CALI*

(ZONED PARAMETERS)		(VALUE)		(LIMITS)	
LAYER OPTION FLAG DENS	LOFDEN	:-1.000000		30479.7 -	
LAYER OPTION FLAG VELOC	LOFVEL	: 1.000000		30479.7 -	
USER SUPPLIED DENSITY DA	LAYDEN	: 0	G/C3	0 -	
USER VELOC (WST)	LAYVEL	: 2197.000	M/S	500.1000 -	97.4000
		1480.000		97.4000	

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		2647	2.299					
705.0	781.65			.020	.99962	.01434	.01954	0
		2725	2.323					
707.0	784.37			.015	.99940	.01463	.01445	-.00038
		2812	2.319					
709.0	787.18			.037	.99803	.03701	.03644	-.00057
		3029	2.318					
711.0	790.21			0	.99803	-.00039	-.00209	-.00169
		3039	2.308					
713.0	793.25			-.015	.99780	-.01531	-.01606	-.00106
		2927	2.326					
715.0	796.18			-.065	.99359	-.06479	-.06547	-.00068
		2801	2.134					
717.0	798.98			.086	.98630	.08512	.08840	.00329
		3041	2.334					
719.0	802.02			-.013	.98613	-.01315	-.01331	-.00016
		2931	2.357					
721.0	804.95			-.037	.98480	-.03618	-.03369	.00249
		2757	2.329					
723.0	807.71			.003	.98479	.00312	-.00191	-.00503
		2764	2.339					
725.0	810.47			.001	.98479	.00108	.00094	-.00015
		2777	2.332					
727.0	813.25			.006	.98475	.00577	.00631	.00054
		2812	2.330					
729.0	816.06			.010	.98466	.00967	.02024	.01058
		2855	2.341					
731.0	818.92			-.012	.98452	-.01169	-.02271	-.01102
		2796	2.334					
733.0	821.71			.035	.98334	.03413	.03165	-.00249
		2972	2.354					
735.0	824.68			-.003	.98333	-.00279	.00154	.00434
		2953	2.356					
737.0	827.64			.002	.98333	.00227	.00204	-.00024
		2965	2.357					
739.0	830.60			-.051	.98073	-.05050	-.05304	-.00254
		2705	2.331					
741.0	833.31			-.026	.98008	-.02532	-.02348	.00183
		2610	2.294					
743.0	835.92			.033	.97898	.03281	.03107	-.00174
		2724	2.350					
745.0	838.64			.032	.97800	.03094	.04229	.01135
		2897	2.354					
747.0	841.54			-.035	.97683	-.03394	-.03831	-.00437
		2734	2.328					
749.0	844.27			-.005	.97681	-.00502	-.00856	-.00354
		2694	2.339					
751.0	846.97			.027	.97611	.02613	.01831	-.00782
		2823	2.354					

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
753.0	849.79			-.008	.97604	-.00782	.00030	.00811
		2801	2.335					
755.0	852.59			-.023	.97553	-.02234	-.01351	.00883
		2704	2.311					
757.0	855.29			-.021	.97511	-.02024	-.02708	-.00684
		2605	2.301					
759.0	857.90			.013	.97494	.01304	.00080	-.01224
		2655	2.318					
761.0	860.56			.059	.97158	.05721	.06853	.01132
		2932	2.361					
763.0	863.49			.002	.97158	.00149	.00661	.00512
		2969	2.339					
765.0	866.46			.012	.97145	.01130	.00487	-.00643
		2997	2.372					
767.0	869.45			-.081	.96503	-.07898	-.08732	-.00834
		2632	2.294					
769.0	872.09			-.035	.96384	-.03386	-.03017	.00369
		2497	2.255					
771.0	874.58			.050	.96143	.04819	.05731	.00911
		2678	2.324					
773.0	877.26			.034	.96034	.03233	.04308	.01075
		2834	2.349					
775.0	880.09			-.032	.95938	-.03069	-.04699	-.01630
		2695	2.316					
777.0	882.79			-.042	.95764	-.04065	-.04461	-.00397
		2590	2.214					
779.0	885.38			.032	.95665	.03081	.02472	-.00609
		2761	2.216					
781.0	888.14			-.006	.95662	-.00552	.01183	.01735
		2633	2.296					
783.0	890.77			-.012	.95648	-.01131	.00203	.01334
		2705	2.183					
785.0	893.48			.016	.95624	.01517	-.00246	-.01763
		2737	2.227					
787.0	896.21			-.111	.94455	-.10573	-.11754	-.01181
		2383	2.048					
789.0	898.60			.033	.94353	.03151	.04476	.01325
		2462	2.120					
791.0	901.06			.035	.94234	.03304	.03585	.00281
		2543	2.201					
793.0	903.60			.006	.94231	.00525	.00215	-.00310
		2570	2.202					
795.0	906.17			-.045	.94036	-.04286	-.04524	-.00237
		2462	2.099					
797.0	908.64			.056	.93740	.05293	.06439	.01146
		2671	2.165					
799.0	911.31			-.060	.93397	-.05660	-.07103	-.01443
		2417	2.120					
801.0	913.72			.045	.93211	.04171	.06457	.02286

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		2608	2.149					
803.0	916.33			.021	.93171	.01947	-.00177	-.02124
		2679	2.181					
805.0	919.01			.067	.92754	.06229	.05132	-.01097
		2871	2.326					
807.0	921.88			-.043	.92581	-.04005	-.03129	.00876
		2688	2.279					
809.0	924.57			-.065	.92193	-.05992	-.03799	.02193
		2543	2.116					
811.0	927.11			-.009	.92186	-.00812	-.03590	-.02778
		2465	2.145					
813.0	929.58			.062	.91829	.05734	.06473	.00739
		2634	2.274					
815.0	932.21			-.017	.91802	-.01575	-.01028	.00547
		2610	2.217					
817.0	934.82			-.052	.91556	-.04754	-.02953	.01801
		2390	2.183					
819.0	937.21			.017	.91531	.01529	-.00655	-.02184
		2409	2.239					
821.0	939.62			.007	.91527	.00613	-.00681	-.01293
		2424	2.255					
823.0	942.04			.030	.91445	.02740	.02936	.00196
		2522	2.301					
825.0	944.57			.013	.91430	.01174	.03581	.02407
		2582	2.306					
827.0	947.15			-.032	.91335	-.02933	-.03462	-.00529
		2462	2.268					
829.0	949.61			.020	.91300	.01795	.02207	.00412
		2524	2.301					
831.0	952.13			-.014	.91281	-.01310	-.04007	-.02697
		2461	2.294					
833.0	954.60			.028	.91212	.02522	.02513	-.00008
		2571	2.320					
835.0	957.17			0	.91212	-.00012	.01932	.01945
		2580	2.312					
837.0	959.75			.001	.91212	.00100	.00797	.00697
		2590	2.308					
839.0	962.34			-.036	.91091	-.03323	-.04780	-.01457
		2447	2.271					
841.0	964.78			.046	.90895	.04216	.04849	.00633
		2618	2.329					
843.0	967.40			-.011	.90885	-.00987	-.01831	-.00844
		2579	2.313					
845.0	969.98			-.008	.90879	-.00702	.00868	.01570
		2544	2.308					
847.0	972.52			.014	.90862	.01257	.00560	-.00697
		2606	2.317					
849.0	975.13			-.028	.90788	-.02585	-.02430	.00156
		2504	2.278					

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
851.0	977.63			.027	.90724	.02417	.01161	-.01256
		2595	2.319					
853.0	980.23			-.025	.90668	-.02252	-.02670	-.00418
		2505	2.285					
855.0	982.73			.020	.90630	.01847	.02049	.00202
		2588	2.304					
857.0	985.32			-.032	.90535	-.02945	-.00092	.02853
		2466	2.266					
859.0	987.79			-.013	.90518	-.01217	-.03009	-.01792
		2417	2.250					
861.0	990.20			.041	.90363	.03687	.02328	-.01359
		2564	2.301					
863.0	992.77			-.011	.90358	-.00959	-.00853	.00105
		2530	2.283					
865.0	995.30			.014	.90341	.01240	.01331	.00091
		2576	2.305					
867.0	997.88			.015	.90322	.01323	.02702	.01379
		2651	2.307					
869.0	1000.53			-.021	.90282	-.01882	-.00527	.01355
		2537	2.312					
871.0	1003.06			.021	.90242	.01906	-.00660	-.02566
		2632	2.324					
873.0	1005.70			-.010	.90233	-.00933	-.01573	-.00639
		2592	2.312					
875.0	1008.29			-.034	.90125	-.03110	-.03221	-.00111
		2452	2.281					
877.0	1010.74			.014	.90109	.01229	.03452	.02223
		2492	2.306					
879.0	1013.23			.025	.90052	.02258	.03442	.01183
		2614	2.312					
881.0	1015.85			-.044	.89880	-.03937	-.05859	-.01922
		2439	2.270					
883.0	1018.29			.043	.89715	.03846	.01382	-.02465
		2601	2.319					
885.0	1020.89			.010	.89706	.00921	.03011	.02090
		2661	2.314					
887.0	1023.55			-.055	.89433	-.04948	-.03551	.01397
		2439	2.261					
889.0	1025.99			.032	.89343	.02834	.05100	.02266
		2558	2.297					
891.0	1028.55			.021	.89305	.01837	-.02203	-.04040
		2649	2.311					
893.0	1031.19			-.004	.89304	-.00364	-.01559	-.01196
		2617	2.320					
895.0	1033.81			-.037	.89184	-.03280	-.02914	.00366
		2484	2.271					
897.0	1036.30			.017	.89158	.01510	.04990	.03480
		2526	2.310					
899.0	1038.82			.016	.89135	.01441	-.00915	-.02356

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		2589	2.328					
901.0	1041.41			-.032	.89042	-.02881	-.01847	.01034
		2465	2.292					
903.0	1043.88			0	.89042	-.00002	-.02062	-.02060
		2457	2.299					
905.0	1046.33			.028	.88971	.02505	.03374	.00870
		2573	2.323					
907.0	1048.91			-.025	.88916	-.02203	-.01104	.01104
		2482	2.292					
909.0	1051.39			-.007	.88912	-.00613	.00578	.01191
		2471	2.271					
911.0	1053.86			-.005	.88910	-.00452	-.02149	-.01697
		2450	2.267					
913.0	1056.31			.017	.88885	.01482	.00418	-.01063
		2501	2.296					
915.0	1058.81			.008	.88879	.00710	.02014	.01303
		2536	2.300					
917.0	1061.34			.021	.88842	.01823	.02630	.00806
		2624	2.316					
919.0	1063.97			-.033	.88747	-.02903	-.03472	-.00569
		2478	2.297					
921.0	1066.45			.005	.88745	.00459	.01758	.01298
		2499	2.302					
923.0	1068.95			-.024	.88694	-.02131	-.06042	-.03911
		2424	2.262					
925.0	1071.37			.021	.88656	.01837	.03831	.01994
		2498	2.288					
927.0	1073.87			.024	.88604	.02148	.02127	-.00021
		2583	2.322					
929.0	1076.45			.014	.88537	.01216	.02708	.01492
		2629	2.345					
931.0	1079.08			-.038	.88457	-.03391	-.05065	-.01675
		2485	2.298					
933.0	1081.56			.010	.88448	.00884	.02125	.01241
		2518	2.314					
935.0	1084.08			.026	.88388	.02316	.00643	-.01673
		2614	2.349					
937.0	1086.70			-.045	.88209	-.03977	-.02835	.01142
		2445	2.294					
939.0	1089.14			.027	.88144	.02393	.01769	-.00625
		2539	2.333					
941.0	1091.68			.034	.88043	.02982	.03126	.00143
		2696	2.351					
943.0	1094.38			-.063	.87697	-.05517	-.04886	.00630
		2427	2.303					
945.0	1096.80			.035	.87591	.03045	.02656	-.00389
		2566	2.335					
947.0	1099.37			.027	.87529	.02336	.01033	-.01303
		2680	2.359					

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
949.0	1102.05			-.053	.87285	-.04622	-.03540	.01082
		2475	2.298					
951.0	1104.53			.006	.87282	.00555	.02629	.02075
		2489	2.314					
953.0	1107.01			.021	.87242	.01851	.00847	-.01004
		2570	2.338					
955.0	1109.58			-.020	.87207	-.01752	-.03270	-.01518
		2499	2.310					
957.0	1112.08			-.006	.87204	-.00557	.00819	.01377
		2474	2.304					
959.0	1114.56			-.010	.87194	-.00914	-.03249	-.02335
		2445	2.283					
961.0	1117.00			-.008	.87188	-.00736	.00024	.00760
		2418	2.270					
963.0	1119.42			.001	.87188	.00095	.03210	.03116
		2421	2.272					
965.0	1121.84			.012	.87175	.01053	-.01528	-.02581
		2458	2.292					
967.0	1124.30			.002	.87175	.00131	-.01589	-.01720
		2475	2.284					
969.0	1126.77			.006	.87171	.00548	.03398	.02850
		2486	2.302					
971.0	1129.26			-.014	.87153	-.01263	-.02363	-.01100
		2440	2.278					
973.0	1131.70			-.007	.87149	-.00587	-.00195	.00391
		2398	2.287					
975.0	1134.10			.043	.86990	.03726	.03805	.00079
		2561	2.333					
977.0	1136.66			-.027	.86924	-.02385	-.03654	-.01270
		2485	2.276					
979.0	1139.14			-.005	.86922	-.00422	.00556	.00977
		2474	2.264					
981.0	1141.62			.012	.86909	.01085	.02511	.01426
		2528	2.272					
983.0	1144.15			.004	.86907	.00332	-.00852	-.01184
		2523	2.294					
985.0	1146.67			.004	.86906	.00319	.00188	-.00131
		2543	2.293					
987.0	1149.21			-.007	.86902	-.00637	-.02702	-.02065
		2495	2.303					
989.0	1151.71			.034	.86802	.02950	.04399	.01450
		2620	2.347					
991.0	1154.33			-.014	.86784	-.01249	.00585	.01834
		2552	2.341					
993.0	1156.88			.008	.86778	.00672	.00387	-.00285
		2608	2.326					
995.0	1159.49			.018	.86749	.01582	-.00527	-.02109
		2700	2.331					
997.0	1162.19			-.003	.86749	-.00233	.00738	.00971

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		2677	2.338					
999.0	1164.86			-.006	.86746	-.00498	-.00811	-.00313
		2619	2.363					
1001.0	1167.48			-.017	.86721	-.01463	.00849	.02312
		2562	2.335					
1003.0	1170.05			-.006	.86718	-.00496	-.03051	-.02555
		2535	2.333					
1005.0	1172.58			.006	.86715	.00552	.01408	.00856
		2562	2.338					
1007.0	1175.14			-.011	.86705	-.00925	-.01189	-.00264
		2523	2.325					
1009.0	1177.67			.029	.86630	.02554	.01550	-.01004
		2642	2.354					
1011.0	1180.31			.009	.86623	.00779	.02640	.01861
		2686	2.358					
1013.0	1182.99			.008	.86617	.00689	.02890	.02202
		2722	2.364					
1015.0	1185.71			.008	.86612	.00670	-.04374	-.05045
		2752	2.374					
1017.0	1188.47			-.016	.86590	-.01398	.00622	.02020
		2715	2.331					
1019.0	1191.18			-.023	.86543	-.02001	-.00902	.01099
		2585	2.337					
1021.0	1193.77			.009	.86537	.00738	.00320	-.00418
		2610	2.354					
1023.0	1196.38			.004	.86535	.00377	-.01126	-.01503
		2620	2.366					
1025.0	1199.00			.039	.86403	.03382	.06252	.02871
		2813	2.383					
1027.0	1201.81			-.011	.86393	-.00932	-.04387	-.03455
		2781	2.359					
1029.0	1204.59			.037	.86276	.03179	.05332	.02154
		2957	2.388					
1031.0	1207.55			-.033	.86182	-.02859	-.02957	-.00097
		2756	2.398					
1033.0	1210.30			-.004	.86180	-.00383	-.00154	.00229
		2746	2.385					
1035.0	1213.05			.011	.86169	.00953	.00588	-.00365
		2820	2.375					
1037.0	1215.87			-.038	.86043	-.03300	-.03729	-.00429
		2626	2.362					
1039.0	1218.50			.009	.86035	.00810	.00006	-.00804
		2661	2.375					
1041.0	1221.16			.002	.86035	.00157	.01477	.01320
		2676	2.371					
1043.0	1223.33			-.013	.86020	-.01152	-.02222	-.01070
		2633	2.346					
1045.0	1226.46			.019	.85988	.01646	.02135	.00489
		2688	2.387					

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
1047.0	1229.15			-.007	.85934	-.00582	-.00031	.00551
		2686	2.357					
1049.0	1231.84			.023	.85937	.02014	.02423	.00409
		2793	2.376					
1051.0	1234.63			.020	.85904	.01680	.00041	-.01639
		2961	2.329					
1053.0	1237.59			-.003	.85903	-.00286	.01362	.01648
		2939	2.331					
1055.0	1240.53			-.005	.85901	-.00431	-.01830	-.01399
		2904	2.336					
1057.0	1243.44			-.021	.85862	-.01333	-.01266	.00567
		2770	2.347					
1059.0	1246.21			.001	.85862	.00105	.00219	.00114
		2754	2.366					
1061.0	1248.96			-.002	.85861	-.00211	.00782	.00992
		2757	2.352					
1063.0	1251.72			.005	.85859	.00463	.00621	.00158
		2766	2.370					
1065.0	1254.48			-.004	.85857	-.00354	-.00806	-.00452
		2744	2.370					
1067.0	1257.23			.015	.85838	.01294	.00615	-.00678
		2786	2.405					
1069.0	1260.01			-.012	.85825	-.01045	-.00713	.00332
		2759	2.370					
1071.0	1262.77			.010	.85816	.00871	.00980	.00109
		2814	2.371					
1073.0	1265.59			-.028	.85751	-.02374	-.03502	-.01128
		2695	2.342					
1075.0	1268.28			.019	.85720	.01614	.03536	.01923
		2776	2.361					
1077.0	1271.06			.015	.85700	.01324	.01156	-.00168
		2848	2.374					
1079.0	1273.90			-.058	.85413	-.04953	-.05883	-.00931
		2590	2.325					
1081.0	1276.49			.072	.84969	.06139	.07324	.01185
		2885	2.412					
1083.0	1279.38			-.044	.84808	-.03699	-.05048	-.01348
		2707	2.356					
1085.0	1282.09			.003	.84808	.00260	.00499	.00239
		2719	2.360					
1087.0	1284.81			.014	.84792	.01163	.01683	.00520
		2783	2.370					
1089.0	1287.59			-.004	.84790	-.00314	.00830	.01144
		2762	2.371					
1091.0	1290.35			.010	.84782	.00340	-.01860	-.02200
		2795	2.389					
1093.0	1293.15			.006	.84779	.00505	.02711	.02206
		2831	2.387					
1095.0	1295.98			-.008	.84773	-.00699	-.01711	-.01012

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		2784	2.388					
1097.0	1298.76			.001	.84773	.00120	.01508	.01388
		2796	2.385					
1099.0	1301.56			-.008	.84767	-.00717	-.00558	.00158
		2756	2.378					
1101.0	1304.31			-.011	.84757	-.00913	-.02562	-.01649
		2708	2.369					
1103.0	1307.02			.008	.84752	.00642	.00771	.00130
		2739	2.378					
1105.0	1309.76			.006	.84749	.00529	.02402	.01873
		2748	2.400					
1107.0	1312.51			.010	.84741	.00846	-.00668	-.01514
		2820	2.386					
1109.0	1315.33			-.020	.84708	-.01660	-.01428	.00232
		2733	2.367					
1111.0	1318.06			-.008	.84703	-.00663	-.02101	-.01438
		2692	2.366					
1113.0	1320.75			.013	.84690	.01064	.03204	.02140
		2763	2.364					
1115.0	1323.52			.029	.84617	.02485	.00533	-.01952
		2896	2.392					
1117.0	1326.41			.042	.84471	.03512	.06007	.02495
		3124	2.409					
1119.0	1329.54			.028	.84403	.02388	.02452	.00065
		3284	2.425					
1121.0	1332.82			-.082	.83834	-.06932	-.08933	-.02001
		2843	2.376					
1123.0	1335.66			.008	.83828	.00707	-.00590	-.01297
		2870	2.393					
1125.0	1338.53			-.012	.83816	-.00989	.03177	.04166
		2820	2.379					
1127.0	1341.35			-.009	.83810	-.00713	-.04165	-.03452
		2812	2.346					
1129.0	1344.16			-.030	.83735	-.02515	-.01632	.00883
		2702	2.299					
1131.0	1346.87			.059	.83441	.04964	.05559	.00594
		2966	2.358					
1133.0	1349.83			.032	.83356	.02653	.01688	-.00965
		3114	2.394					
1135.0	1352.95			-.052	.83127	-.04369	-.01699	.02670
		2869	2.339					
1137.0	1355.82			.010	.83120	.00800	.00015	-.00785
		2913	2.349					
1139.0	1358.73			.023	.83077	.01888	-.00887	-.02775
		3033	2.360					
1141.0	1361.76			.006	.83073	.00536	.03934	.03397
		3067	2.365					
1143.0	1364.83			.018	.83047	.01488	.00400	-.01087
		3136	2.397					

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
1145.0	1367.97			.014	.83031	.01122	.01019	-.00103
1147.0	1371.16	3199	2.414	-.046	.82857	-.03801	-.04789	-.00987
1149.0	1374.13	2967	2.375	.002	.82857	.00137	-.00131	-.00268
1151.0	1377.12	2985	2.369	-.029	.82787	-.02406	-.02916	-.00511
1153.0	1379.94	2823	2.363	.014	.82771	.01167	.03544	.02377
1155.0	1382.82	2881	2.382	.001	.82771	.00055	-.00063	-.00118
1157.0	1385.75	2931	2.344	.017	.82747	.01401	-.00228	-.01629
1159.0	1388.75	3000	2.369	-.054	.82505	-.04476	-.04043	.00433
1161.0	1391.52	2770	2.303	.036	.82401	.02931	.03755	.00824
1163.0	1394.45	2931	2.336	.026	.82345	.02145	.00192	-.01954
1165.0	1397.46	3004	2.402	-.037	.82232	-.03055	-.01752	.01303
1167.0	1400.22	2764	2.424	.032	.82148	.02628	.03232	.00604
1169.0	1403.17	2946	2.424	-.014	.82132	-.01143	-.01081	.00062
1171.0	1406.03	2864	2.425	.014	.82116	.01155	.01186	.00031
1173.0	1408.98	2945	2.425	-.057	.81847	-.04697	-.04750	-.00052
1175.0	1411.60	2626	2.426	.007	.81843	.00590	-.02720	-.03309
1177.0	1414.27	2664	2.426	.018	.81815	.01500	.02932	.01432
1179.0	1417.03	2763	2.427	.005	.81813	.00394	.02612	.02219
1181.0	1419.82	2789	2.427	.022	.81774	.01788	.03205	.01417
1183.0	1422.73	2913	2.428	-.013	.81761	-.01040	-.02193	-.01153
1185.0	1425.57	2839	2.428	.031	.81681	.02555	.01322	-.01233
1187.0	1428.59	3022	2.429	.009	.81674	.00745	-.00857	-.01602
1189.0	1431.67	3077	2.429	-.040	.81546	-.03240	.00051	.03291
1191.0	1434.51	2841	2.430	-.006	.81543	-.00507	-.01535	-.01028
1193.0	1437.37	2860	2.383	.087	.80932	.07057	.04730	-.02327

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		3298	2.459					
1195.0	1440.67			.015	.80914	.01211	.02719	.01508
		3368	2.481					
1197.0	1444.04			.012	.80903	.00939	.03873	.02934
		3493	2.448					
1199.0	1447.53			-.014	.80888	-.01107	-.01561	-.00454
		3403	2.445					
1201.0	1450.93			-.033	.80798	-.02698	-.04151	-.01453
		3336	2.333					
1203.0	1454.27			-.002	.80797	-.00189	.01029	.01218
		3289	2.355					
1205.0	1457.56			-.015	.80779	-.01228	-.01896	-.00668
		3216	2.337					
1207.0	1460.77			.010	.80771	.00785	-.00134	-.00919
		3238	2.366					
1209.0	1464.01			.012	.80759	.01000	.03021	.02020
		3183	2.468					
1211.0	1467.19			-.027	.80698	-.02215	-.05167	-.02952
		3165	2.350					
1213.0	1470.36			-.024	.80653	-.01908	-.02766	-.00858
		3069	2.311					
1215.0	1473.43			.018	.80628	.01416	.03815	.02399
		3092	2.376					
1217.0	1476.52			.011	.80619	.00857	.01867	.01011
		3130	2.397					
1219.0	1479.65			.035	.80518	.02853	-.00227	-.03080
		3168	2.542					
1221.0	1482.82			-.034	.80422	-.02777	.00305	.03082
		3105	2.421					
1223.0	1485.92			-.064	.80096	-.05122	-.05826	-.00704
		2942	2.249					
1225.0	1488.87			-.030	.80024	-.02405	-.04546	-.02141
		2858	2.180					
1227.0	1491.72			.079	.79520	.06351	.07370	.01020
		3245	2.251					
1229.0	1494.97			-.033	.79431	-.02659	-.02173	.00487
		3083	2.217					
1231.0	1498.05			-.024	.79336	-.01883	.00103	.01986
		2959	2.202					
1233.0	1501.01			-.145	.77709	-.11539	-.12884	-.01346
		2591	1.877					
1235.0	1503.60			.123	.76536	.09545	.05926	-.03619
		3024	2.058					
1237.0	1506.63			.103	.75726	.07877	.08836	.00959
		3367	2.273					
1239.0	1509.99			.016	.75706	.01215	.02891	.01676
		3407	2.319					
1241.0	1513.40			-.078	.75250	-.05877	-.04707	.01170
		3086	2.192					

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
1243.0	1516.49			-.014	.75235	-.01065	-.03885	-.02820
		3000	2.191					
1245.0	1519.49			.052	.75032	.03910	.05765	.01855
		3114	2.343					
1247.0	1522.60			.091	.74405	.06859	.08632	.01774
		3557	2.464					
1249.0	1526.16			-.020	.74374	-.01514	-.01751	-.00237
		3375	2.493					
1251.0	1529.53			-.171	.72197	-.12723	-.13589	-.00865
		2786	2.137					
1253.0	1532.32			.004	.72197	.00255	.01776	.01521
		2847	2.107					
1255.0	1535.16			.096	.71531	.06933	.02981	-.03952
		3243	2.242					
1257.0	1538.41			-.054	.71325	-.03835	-.05818	-.01984
		2932	2.228					
1259.0	1541.34			-.236	.67349	-.16840	-.10410	.06430
		2275	1.775					
1261.0	1543.61			.245	.63294	.16526	.12580	-.03946
		3293	2.023					
1263.0	1546.91			-.034	.63222	-.02142	-.03400	-.01258
		2980	2.090					
1265.0	1549.89			.058	.63010	.03654	.07863	.04208
		3130	2.233					
1267.0	1553.02			-.098	.62403	-.06187	-.06806	-.00618
		2795	2.054					
1269.0	1555.81			-.001	.62403	-.00063	-.02103	-.02040
		2824	2.029					
1271.0	1558.64			.074	.62063	.04605	.03575	-.01030
		2953	2.249					
1273.0	1561.59			-.013	.62052	-.00829	.03134	.03963
		2915	2.218					
1275.0	1564.50			-.025	.62014	-.01531	-.02097	-.00566
		2956	2.082					
1277.0	1567.46			.017	.61995	.01073	.00607	-.00466
		3075	2.072					
1279.0	1570.53			.009	.61991	.00534	-.03737	-.04271
		2929	2.213					
1281.0	1573.46			-.036	.61910	-.02240	.03103	.05342
		2771	2.176					
1283.0	1576.24			.038	.61822	.02338	.03746	.01408
		3015	2.157					
1285.0	1579.25			-.147	.60489	-.09076	-.08745	.00331
		2498	1.937					
1287.0	1581.75			.160	.58939	.09682	.01773	-.07910
		3034	2.202					
1289.0	1584.78			-.095	.58407	-.05602	-.03748	.01854
		2806	1.968					
1291.0	1587.59			.123	.57524	.07182	.09518	.02336

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		3026	2.337					
1293.0	1590.61			-.086	.57096	-.04962	.01677	.06639
		2954	2.014					
1295.1	1593.57			.253	.53453	.14421	.05691	-.08730
		3930	2.537					
1297.1	1597.50			-.165	.52000	-.08812	-.09328	-.00516
		3168	2.256					
1299.1	1600.67			.033	.51944	.01715	.04296	.02581
		3201	2.385					
1301.1	1603.87			-.001	.51944	-.00061	.08701	.08762
		3212	2.371					
1303.1	1607.08			-.007	.51942	-.00345	-.04195	-.03849
		3210	2.342					
1305.1	1610.29			-.054	.51790	-.02802	-.09774	-.06972
		3035	2.223					
1307.1	1613.32			-.001	.51790	-.00074	-.01990	-.01916
		3062	2.197					
1309.1	1616.39			-.007	.51788	-.00366	.03333	.03700
		3038	2.183					
1311.1	1619.42			.019	.51769	.00973	.09641	.08668
		2986	2.307					
1313.1	1622.41			-.102	.51229	-.05291	-.12409	-.07118
		2701	2.077					
1315.1	1625.11			.167	.49792	.08579	.07270	-.01309
		3466	2.269					
1317.1	1628.58			-.035	.49731	-.01747	-.06613	-.04865
		3260	2.250					
1319.1	1631.84			-.050	.49607	-.02480	.04977	.07457
		3112	2.132					
1321.1	1634.95			.002	.49607	.00114	.00831	.00717
		3252	2.050					
1323.1	1638.20			.037	.49539	.01834	-.01088	-.02922
		3330	2.156					
1325.1	1641.53			-.173	.48049	-.08592	-.16679	-.08087
		2606	1.940					
1327.1	1644.14			.164	.46755	.07886	.17236	.09350
		3229	2.181					
1329.1	1647.37			.030	.46711	.01423	-.01576	-.02999
		3181	2.353					
1331.1	1650.55			-.016	.46700	-.00735	.02203	.02937
		3225	2.249					
1333.1	1653.77			.051	.46580	.02360	.06081	.03721
		3568	2.249					
1335.1	1657.34			-.030	.46538	-.01406	-.02987	-.01581
		3332	2.267					
1337.1	1660.67			-.046	.46441	-.02126	-.05615	-.03490
		3135	2.199					
1339.1	1663.81			.001	.46441	.00031	.05135	.05104
		3162	2.183					

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
1341.1	1666.97			.027	.46406	.01273	-.10969	-.12243
1343.1	1670.30	3334	2.187	-.032	.46358	-.01495	.02765	.04260
1345.1	1673.43	3131	2.184	.029	.46318	.01360	.10911	.09550
1347.1	1676.65	3213	2.257	.077	.46043	.03566	-.02033	-.05598
1349.1	1680.13	3485	2.428	-.123	.45347	-.05663	-.08030	-.02367
1351.1	1683.26	3132	2.110	-.070	.45128	-.03154	-.01736	.01417
1353.1	1686.11	2846	2.020	.062	.44955	.02789	.04150	.01360
1355.1	1689.15	3043	2.138	-.062	.44784	-.02776	-.04768	-.01992
1357.1	1692.15	2996	1.919	.059	.44626	.02656	-.00500	-.03156
1359.1	1695.30	3152	2.054	.066	.44434	.02928	.04236	.01308
1361.1	1698.52	3214	2.297	.059	.44281	.02612	.05115	.03503
1363.1	1702.07	3550	2.340	-.038	.44216	-.01690	-.00987	.00703
1365.1	1705.45	3389	2.271	-.021	.44197	-.00913	.02773	.03686
1367.1	1708.76	3301	2.237	-.003	.44197	-.00144	-.01886	-.01741
1369.1	1712.03	3277	2.238	.001	.44197	.00024	-.05013	-.05038
1371.1	1715.31	3280	2.239	.013	.44189	.00567	.04078	.03511
1373.1	1718.61	3297	2.285	.002	.44189	.00102	-.01770	-.01872
1375.1	1721.93	3319	2.280	.026	.44159	.01147	.05389	.04242
1377.1	1725.30	3368	2.367	.067	.43961	.02957	.00379	-.02578
1379.1	1728.90	3606	2.529	-.102	.43507	-.04470	-.00424	.04046
1381.1	1732.07	3168	2.347	.017	.43495	.00718	-.01579	-.02297
1383.1	1735.35	3283	2.340	.045	.43406	.01973	.05915	.03941
1385.1	1738.84	3489	2.412	-.100	.42974	-.04329	-.06162	-.01833
1387.1	1741.98	3138	2.195	.089	.42632	.03834	.01845	-.01989
1389.1	1745.44	3458	2.382	-.038	.42571	-.01607	-.04204	-.02598

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		3312	2.306					
1391.1	1748.75			-.022	.42551	-.00930	-.01333	-.00402
		3253	2.248					
1393.1	1752.01			.004	.42550	.00178	.03092	.02914
		3263	2.260					
1395.1	1755.27			.008	.42548	.00323	-.02765	-.03088
		3284	2.280					
1397.1	1758.55			-.015	.42538	-.00635	.02688	.03323
		3220	2.257					
1399.1	1761.77			.016	.42527	.00687	.01272	.00585
		3313	2.266					
1401.1	1765.08			-.013	.42519	-.00571	-.00844	-.00273
		3246	2.251					
1403.1	1768.33			.008	.42517	.00347	-.07143	-.07490
		3290	2.257					
1405.1	1771.62			-.001	.42517	-.00040	.05026	.05066
		3265	2.270					
1407.1	1774.89			0	.42517	.00014	.03081	.03067
		3249	2.283					
1409.1	1778.14			-.044	.42435	-.01862	-.07183	-.05321
		3194	2.128					
1411.1	1781.33			.082	.42147	.03493	.08570	.05077
		3421	2.343					
1413.1	1784.75			-.092	.41789	-.03884	-.06778	-.02894
		3061	2.177					
1415.1	1787.81			.099	.41376	.04158	.03911	-.00247
		3509	2.318					
1417.1	1791.32			-.029	.41340	-.01211	.01788	.02999
		3330	2.304					
1419.1	1794.65			.018	.41326	.00763	.02828	.02066
		3390	2.348					
1421.1	1798.04			.009	.41323	.00391	-.07314	-.07705
		3399	2.387					
1423.1	1801.44			-.031	.41282	-.01287	.03448	.04735
		3295	2.313					
1425.1	1804.73			-.008	.41280	-.00321	-.00330	-.00009
		3293	2.279					
1427.1	1808.03			.012	.41274	.00511	.02400	.01889
		3286	2.341					
1429.1	1811.31			.032	.41231	.01327	-.04129	-.05456
		3414	2.403					
1431.1	1814.73			.006	.41230	.00249	.02508	.02259
		3414	2.432					
1433.1	1818.14			-.023	.41209	-.00931	-.04307	-.03376
		3361	2.362					
1435.1	1821.50			-.018	.41195	-.00733	.06031	.06763
		3257	2.352					
1437.1	1824.76			.031	.41155	.01293	.02171	.00877
		3422	2.383					

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
1439.1	1828.18			.005	.41154	.00193	-.04093	-.04286
1441.1	1831.62	3440	2.393	-.028	.41123	-.01133	-.02377	-.01244
1443.1	1834.95	3330	2.340	.030	.41086	.01234	.07449	.06215
1445.1	1838.42	3467	2.387	.013	.41079	.00536	-.01644	-.02180
1447.1	1841.97	3556	2.388	-.072	.40867	-.02951	.01385	.04336
1449.1	1845.22	3251	2.262	.018	.40854	.00717	-.04750	-.05467
1451.1	1848.53	3301	2.308	.001	.40854	.00026	.00231	.00206
1453.1	1851.82	3297	2.313	.009	.40851	.00376	.00334	-.00042
1455.1	1855.16	3337	2.328	.037	.40795	.01509	.05834	.04325
1457.1	1858.69	3531	2.369	-.044	.40717	-.01783	-.05365	-.03582
1459.1	1862.07	3384	2.265	-.012	.40712	-.00475	-.02558	-.02083
1461.1	1865.37	3291	2.275	-.098	.40322	-.03981	-.02503	.01478
1463.1	1868.21	2848	2.161	.076	.40089	.03068	-.04123	-.07190
1465.1	1871.33	3115	2.301	-.017	.40078	-.00662	.02469	.03132
1467.1	1874.28	2954	2.347	-.075	.39851	-.03019	-.01536	.01483
1469.1	1877.02	2739	2.177	.066	.39675	.02643	-.00430	-.03073
1471.1	1879.97	2952	2.307	.125	.39054	.04966	.06618	.01652
1473.1	1883.69	3720	2.354	.071	.38855	.02784	.07132	.04348
1475.1	1887.71	4016	2.516	-.246	.36502	-.09563	-.07247	.02316
1477.1	1890.49	2777	2.201	.156	.35619	.05677	-.00134	-.05811
1479.1	1893.97	3484	2.400	.229	.33746	.08168	.09048	.00880
1481.1	1899.05	5082	2.625	-.076	.33552	-.02559	.05645	.08204
1483.1	1903.45	4395	2.607	-.241	.31601	-.08090	-.03318	.04772
1485.1	1906.45	3005	2.332	-.125	.31109	-.03943	-.10995	-.07051
1487.1	1908.90	2451	2.224	.060	.30997	.01869	-.10949	-.12818

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		2629	2.339					
1489.1	1911.53			.074	.30827	.02293	.04713	.02420
		3160	2.257					
1491.1	1914.69			-.036	.30736	-.01122	-.01822	-.00700
		2902	2.285					
1493.1	1917.60			.071	.30631	.02184	.09581	.07397
		3226	2.370					
1495.1	1920.82			.061	.30518	.01962	.05324	.03462
		3553	2.430					
1497.1	1924.37			-.045	.30455	-.01388	-.10807	-.09419
		3317	2.376					
1499.1	1927.69			.003	.30455	.00097	.03241	.03144
		3379	2.348					
1501.1	1931.07			-.039	.30407	-.01203	.04251	.05454
		3168	2.314					
1503.1	1934.24			.044	.30349	.01331	-.03432	-.04762
		3391	2.359					
1505.1	1937.63			.011	.30345	.00335	-.00258	-.00593
		3495	2.340					
1507.1	1941.12			0	.30345	.00015	.01256	.01242
		3623	2.260					
1509.1	1944.75			.037	.30304	.01118	-.01661	-.02779
		3767	2.340					
1511.1	1948.51			.035	.30267	.01061	.10694	.09633
		3930	2.405					
1513.1	1952.44			.007	.30265	.00214	-.07369	-.07583
		3863	2.482					
1515.1	1956.31			-.125	.29792	-.03786	.03879	.07665
		3243	2.299					
1517.1	1959.55			.030	.29765	.00899	.02511	.01612
		3396	2.332					
1519.1	1962.94			.043	.29710	.01280	-.00939	-.02219
		3614	2.388					
1521.1	1966.56			-.035	.29674	-.01027	-.07806	-.06779
		3456	2.331					
1523.1	1970.01			.062	.29558	.01854	.04425	.02570
		3720	2.454					
1525.1	1973.73			-.002	.29558	-.00056	-.03025	-.02969
		3653	2.489					
1527.1	1977.39			.005	.29557	.00156	.03105	.02949
		3651	2.517					
1529.1	1981.04			-.008	.29556	-.00231	.05198	.05429
		3701	2.444					
1531.1	1984.74			.050	.29480	.01489	.00758	-.00732
		3929	2.547					
1533.1	1988.67			-.060	.29375	-.01766	-.06644	-.04878
		3603	2.464					
1535.1	1992.27			.023	.29360	.00663	.04178	.03515
		3665	2.534					

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
1537.1	1995.94			-.008	.29358	-.00231	.03482	.03714
		3640	2.512					
1539.1	1999.58			-.005	.29357	-.00143	-.01930	-.01786
		3582	2.528					
1541.1	2003.16			-.018	.29348	-.00517	-.08349	-.07832
		3530	2.475					
1543.1	2006.69			.025	.29330	.00722	.06529	.05808
		3735	2.458					
1545.1	2010.42			-.001	.29330	-.00036	.01219	.01255
		3666	2.498					
1547.1	2014.09			-.025	.29313	-.00723	.01215	.01938
		3561	2.448					
1549.1	2017.65			-.067	.29180	-.01972	-.05869	-.03897
		3341	2.280					
1551.1	2020.99			-.006	.29179	-.00182	-.00785	-.00603
		3328	2.261					
1553.1	2024.32			.054	.29094	.01577	-.03087	-.04664
		3535	2.372					
1555.1	2027.85			-.038	.29051	-.01109	.04015	.05124
		3393	2.289					
1557.1	2031.25			-.002	.29051	-.00069	-.03562	-.03493
		3413	2.265					
1559.1	2034.66			0	.29051	.00011	.00293	.00282
		3413	2.266					
1561.1	2038.07			.046	.28990	.01330	.03853	.02524
		3609	2.349					
1563.1	2041.68			-.041	.28941	-.01192	-.04347	-.03155
		3459	2.258					
1565.1	2045.14			.013	.28936	.00379	.03019	.02639
		3519	2.278					
1567.1	2048.66			-.022	.28922	-.00633	.01308	.01940
		3400	2.256					
1569.1	2052.06			.050	.28850	.01451	-.02502	-.03953
		3516	2.413					
1571.1	2055.58			.020	.28838	.00576	-.01599	-.02174
		3577	2.468					
1573.1	2059.15			-.027	.28816	-.00790	.01709	.02499
		3426	2.440					
1575.1	2062.58			.035	.28781	.01008	.01212	.00204
		3596	2.493					
1577.1	2066.17			-.011	.28778	-.00310	.01040	.01349
		3566	2.460					
1579.1	2069.74			.009	.28775	.00263	.04773	.04509
		3611	2.474					
1581.1	2073.35			.024	.28758	.00699	-.03507	-.04206
		3781	2.481					
1583.1	2077.13			.005	.28758	.00150	.00359	.00209
		3770	2.514					
1585.1	2080.90			-.017	.28750	-.00479	.05738	.06217

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		3714	2.468					
1587.1	2084.62			-.001	.28750	-.00023	-.04459	-.04435
		3778	2.422					
1589.1	2088.39			.006	.28749	.00187	.06399	.06212
		3672	2.525					
1591.1	2092.07			.017	.28740	.00493	-.01702	-.02195
		3741	2.565					
1593.1	2095.81			-.003	.28740	-.00086	-.06106	-.06020
		3722	2.562					
1595.1	2099.53			-.008	.28738	-.00233	.03297	.03530
		3653	2.569					
1597.1	2103.18			0	.28738	.00011	.01691	.01681
		3658	2.568					
1599.1	2106.84			.004	.28737	.00118	-.00651	-.00770
		3713	2.550					
1601.1	2110.55			.030	.28712	.00849	.02406	.01557
		3926	2.559					
1603.1	2114.48			-.033	.28682	-.00934	-.03549	-.02615
		3759	2.504					
1605.1	2118.24			.006	.28681	.00168	-.03908	-.04076
		3804	2.504					
1607.1	2122.04			-.040	.28635	-.01144	.07747	.08890
		3602	2.441					
1609.1	2125.64			-.023	.28621	-.00645	-.07013	-.06368
		3558	2.363					
1611.1	2129.20			.111	.28269	.03172	.05393	.02221
		4249	2.472					
1613.1	2133.45			-.020	.28258	-.00562	-.05134	-.04572
		3948	2.556					
1615.1	2137.40			-.005	.28257	-.00139	.07282	.07421
		3854	2.593					
1617.1	2141.25			-.007	.28256	-.00206	-.03027	-.02821
		3771	2.612					
1619.1	2145.02			-.013	.28251	-.00361	.03246	.03606
		3737	2.569					
1621.1	2148.76			.023	.28236	.00653	-.03404	-.04057
		3937	2.554					
1623.1	2152.70			.043	.28183	.01228	.04522	.03294
		4193	2.616					
1625.1	2156.89			-.015	.28177	-.00417	-.02733	-.02316
		4098	2.598					
1627.1	2160.99			-.015	.28170	-.00416	.05899	.06315
		4054	2.550					
1629.1	2165.04			-.060	.28069	-.01691	-.06322	-.04631
		3735	2.455					
1631.1	2168.78			-.033	.28039	-.00920	-.02514	-.01594
		3612	2.377					
1633.1	2172.39			-.017	.28031	-.00464	-.04010	-.03546
		3586	2.316					

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
1635.1	2175.98			.055	.27946	.01542	.04930	.03388
		3769	2.461					
1637.1	2179.75			.044	.27891	.01240	-.02144	-.03383
		3923	2.584					
1639.1	2183.67			-.008	.27889	-.00227	.04340	.04567
		3938	2.532					
1641.1	2187.61			-.005	.27889	-.00128	-.02009	-.01881
		3872	2.551					
1643.1	2191.48			-.001	.27889	-.00028	-.00470	-.00442
		3923	2.514					
1645.1	2195.40			.019	.27878	.00543	.02450	.01907
		3991	2.569					
1647.1	2199.39			-.003	.27878	-.00071	.00845	.00916
		3973	2.568					
1649.1	2203.37			-.002	.27878	-.00052	-.02429	-.02377
		3989	2.547					
1651.1	2207.36			-.018	.27869	-.00493	.06115	.06608
		3901	2.515					
1653.1	2211.26			-.012	.27865	-.00334	-.02799	-.02465
		3821	2.506					
1655.1	2215.08			.015	.27859	.00425	-.04484	-.04909
		3890	2.538					
1657.1	2218.97			-.006	.27858	-.00174	-.01412	-.01239
		3861	2.526					
1659.1	2222.83			-.002	.27858	-.00070	-.01653	-.01583
		3852	2.519					
1661.1	2226.68			-.006	.27857	-.00168	.05003	.05171
		3810	2.516					
1663.1	2230.49			-.020	.27845	-.00558	.04406	.04964
		3791	2.430					
1665.1	2234.28			0	.27845	-.00001	-.02706	-.02706
		3818	2.412					
1667.1	2238.10			.018	.27836	.00504	-.02203	-.02707
		3780	2.526					
1669.1	2241.88			.001	.27836	.00036	-.05383	-.05419
		3789	2.527					
1671.1	2245.67			-.012	.27832	-.00337	.11296	.11633
		3597	2.598					
1673.1	2249.27			.012	.27828	.00337	-.01525	-.01862
		3758	2.548					
1675.1	2253.02			.010	.27825	.00285	-.03338	-.03673
		3878	2.520					
1677.1	2256.90			-.007	.27824	-.00197	-.06205	-.06018
		3822	2.522					
1679.1	2260.72			-.001	.27824	-.00040	.01258	.01297
		3802	2.529					
1681.1	2264.52			.019	.27814	.00522	.03254	.02732
		3913	2.551					
1683.1	2268.44			-.003	.27814	-.00073	.01150	.01223

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		3900	2.546					
1685.1	2272.34			-.035	.27781	-.00961	-.02530	-.01568
		3695	2.507					
1687.1	2276.03			.031	.27754	.00854	.03097	.02243
		3815	2.583					
1689.1	2279.85			.001	.27754	.00042	-.00353	-.00395
		3841	2.573					
1691.1	2283.69			-.004	.27754	-.00106	.01338	.01444
		3821	2.566					
1693.1	2287.51			-.007	.27752	-.00197	-.00485	-.00288
		3767	2.567					
1695.1	2291.28			-.001	.27752	-.00037	-.01047	-.01010
		3757	2.567					
1697.1	2295.03			.009	.27750	.00255	-.02043	-.02298
		3833	2.562					
1699.1	2298.87			-.006	.27749	-.00177	.05584	.05762
		3801	2.552					
1701.1	2302.67			.007	.27748	.00188	.02730	.02543
		3842	2.558					
1703.1	2306.51			-.010	.27745	-.00271	-.04027	-.03755
		3848	2.505					
1705.1	2310.36			-.084	.27549	-.02334	-.09348	-.07014
		3537	2.302					
1707.1	2313.89			.025	.27531	.00691	.01398	.00707
		3655	2.343					
1709.1	2317.55			.005	.27531	.00139	-.00105	-.00244
		3672	2.356					
1711.1	2321.22			.052	.27456	.01429	.02111	.00682
		3802	2.524					
1713.1	2325.02			.014	.27451	.00373	-.00788	-.01160
		3880	2.542					
1715.1	2328.90			0	.27451	-.00013	.07010	.07023
		3880	2.539					
1717.1	2332.78			.019	.27442	.00512	-.00890	-.01402
		3960	2.582					
1719.1	2336.74			.006	.27441	.00159	.02563	.02404
		3992	2.591					
1721.1	2340.73			-.008	.27439	-.00219	-.06637	-.06419
		3915	2.600					
1723.1	2344.65			-.009	.27437	-.00259	.03961	.04221
		3889	2.569					
1725.1	2348.54			.016	.27429	.00446	-.00381	-.00826
		4029	2.562					
1727.1	2352.57			.001	.27429	.00036	.04813	.04777
		4035	2.564					
1729.1	2356.60			-.016	.27422	-.00441	-.07854	-.07413
		3877	2.584					
1731.1	2360.48			-.013	.27418	-.00358	-.00715	-.00358
		3790	2.575					

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
1733.1	2364.27			.034	.27387	.00922	.02873	.01951
		3961	2.636					
1735.1	2368.23			-.052	.27313	-.01418	.08694	.10111
		3780	2.490					
1737.1	2372.01			-.031	.27288	-.00837	-.09030	-.08193
		3632	2.438					
1739.1	2375.64			-.016	.27281	-.00426	-.01243	-.00816
		3542	2.423					
1741.1	2379.18			.033	.27251	.00910	-.03774	-.04683
		3712	2.471					
1743.1	2382.90			.023	.27236	.00633	-.00118	-.00751
		3839	2.503					
1745.1	2386.73			-.016	.27229	-.00446	.02220	.02666
		3770	2.467					
1747.1	2390.51			-.021	.27217	-.00564	.01020	.01584
		3719	2.399					
1749.1	2394.22			.033	.27186	.00912	-.00564	-.01475
		3779	2.525					
1751.1	2398.00			.006	.27185	.00174	.03199	.03025
		3812	2.535					
1753.1	2401.81			-.048	.27122	-.01310	-.02062	-.00752
		3589	2.445					
1755.1	2405.40			-.037	.27088	-.00993	-.00713	.00280
		3425	2.381					
1757.1	2408.83			.097	.26830	.02634	.03077	.00443
		3886	2.550					
1759.1	2412.71			-.002	.26830	-.00060	-.05934	-.05874
		3882	2.542					
1761.1	2416.60			-.049	.26764	-.01327	-.05429	-.04103
		3665	2.438					
1763.1	2420.26			-.037	.26727	-.00995	.09102	.10097
		3478	2.385					
1765.1	2423.74			.033	.26697	.00892	-.02606	-.03497
		3635	2.440					
1767.1	2427.38			-.054	.26618	-.01451	.03023	.04474
		3356	2.370					
1769.1	2430.73			.016	.26612	.00417	-.04069	-.04485
		3466	2.368					
1771.1	2434.20			.026	.26594	.00695	.01037	.00342
		3564	2.427					
1773.1	2437.76			.026	.26576	.00692	-.05079	-.05771
		3696	2.465					
1775.1	2441.46			.029	.26554	.00765	.04090	.03326
		3828	2.521					
1777.1	2445.29			.016	.26547	.00424	.05799	.05374
		3941	2.528					
1779.1	2449.23			.016	.26540	.00436	.00365	-.00071
		4017	2.564					
1781.1	2453.24			.009	.26538	.00241	-.05316	-.05557

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		4053	2.587					
1783.1	2457.30			-.007	.26536	-.00196	.02363	.02559
		4003	2.581					
1785.1	2461.30			-.012	.26532	-.00322	.02839	.03161
		3908	2.580					
1787.1	2465.21			-.018	.26524	-.00468	-.01457	-.00989
		3822	2.547					
1789.1	2469.03			-.011	.26521	-.00285	-.03792	-.03507
		3781	2.520					
1791.1	2472.81			-.057	.26434	-.01520	-.00670	.00850
		3560	2.386					
1793.1	2476.37			.037	.26398	.00973	.01026	.00053
		3601	2.539					
1795.1	2479.97			.072	.26260	.01909	.05318	.03409
		4028	2.624					
1797.1	2484.00			-.045	.26207	-.01174	-.03743	-.02570
		3844	2.514					
1799.1	2487.84			-.060	.26113	-.01571	.02672	.04242
		3577	2.396					
1801.1	2491.42			-.015	.26108	-.00383	-.01310	-.00927
		3489	2.386					
1803.1	2494.91			.004	.26107	.00114	-.03289	-.03403
		3509	2.393					
1805.1	2498.42			-.025	.26091	-.00655	-.07498	-.06843
		3375	2.366					
1807.1	2501.80			.023	.26077	.00596	.05441	.04844
		3518	2.377					
1809.1	2505.31			.023	.26063	.00601	-.01753	-.02354
		3608	2.427					
1811.1	2508.92			-.021	.26052	-.00548	.00634	.01182
		3550	2.365					
1813.1	2512.47			-.009	.26050	-.00226	-.01031	-.00856
		3510	2.350					
1815.1	2515.98			.020	.26039	.00528	-.00308	-.00836
		3597	2.389					
1817.1	2519.58			.025	.26023	.00652	.04959	.04307
		3686	2.451					
1819.1	2523.26			.043	.25976	.01107	.00745	-.00362
		3921	2.509					
1821.1	2527.18			.019	.25966	.00487	-.01173	-.01660
		4015	2.544					
1823.1	2531.20			-.012	.25963	-.00322	.03614	.03936
		3985	2.500					
1825.1	2535.18			-.018	.25955	-.00456	-.05998	-.05542
		3928	2.449					
1827.1	2539.11			-.025	.25939	-.00640	-.02520	-.01880
		3771	2.428					
1829.1	2542.88			.033	.25910	.00864	.06255	.05392
		3838	2.550					

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
1831.1	2546.72			.042	.25865	.01083	.09561	.08478
		4130	2.576					
1833.1	2550.85			-.029	.25843	-.00757	-.08457	-.07700
		3962	2.533					
1835.1	2554.81			.011	.25839	.00295	-.00678	-.00973
		3934	2.610					
1837.1	2558.75			.012	.25836	.00305	-.02951	-.03256
		4035	2.605					
1839.1	2562.78			0	.25836	.00010	.03138	.03128
		4041	2.603					
1841.1	2566.82			.016	.25829	.00424	.09322	.08898
		4169	2.607					
1843.1	2570.99			.013	.25824	.00328	-.00364	-.00693
		4269	2.612					
1845.1	2575.26			0	.25824	.00012	-.07340	-.07352
		4287	2.603					
1847.1	2579.55			-.003	.25824	-.00070	.07234	.07304
		4264	2.603					
1849.1	2583.81			.002	.25824	.00064	.04194	.04129
		4328	2.578					
1851.1	2588.14			.011	.25821	.00282	-.04397	-.04679
		4350	2.622					
1853.1	2592.49			-.012	.25817	-.00317	-.06845	-.06528
		4271	2.605					
1855.1	2596.76			.003	.25817	.00086	.02291	.02205
		4288	2.612					
1857.1	2601.05			-.041	.25774	-.01054	.00342	.01397
		4078	2.531					
1859.1	2605.13			-.064	.25667	-.01661	.03669	.05331
		4122	2.200					
1861.1	2609.25			.077	.25513	.01987	-.06118	-.08105
		4019	2.636					
1863.1	2613.27			-.030	.25490	-.00760	.01927	.02687
		3908	2.554					
1865.1	2617.18			-.019	.25481	-.00485	-.05837	-.05402
		3982	2.413					
1867.1	2621.16			-.010	.25478	-.00262	.04813	.05075
		3982	2.364					
1869.1	2625.14			.007	.25477	.00182	-.02909	-.03091
		3961	2.411					
1871.1	2629.10			.080	.25315	.02033	.04490	.02457
		4294	2.609					
1873.1	2633.39			-.023	.25302	-.00581	-.04737	-.04156
		4156	2.575					
1875.1	2637.55			-.061	.25207	-.01543	.06742	.08285
		3835	2.470					
1877.1	2641.38			-.040	.25167	-.01006	-.07057	-.06051
		3682	2.374					
1879.1	2645.07			.003	.25167	.00081	-.04799	-.04880

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		3661	2.404					
1881.1	2648.73			.005	.25166	.00136	.01619	.01483
		3698	2.406					
1883.1	2652.43			.027	.25148	.00680	.05624	.04944
		3795	2.474					
1885.1	2656.22			-.034	.25118	-.00863	-.04759	-.03896
		3624	2.419					
1887.1	2659.84			.016	.25112	.00411	.02376	.01965
		3715	2.438					
1889.1	2663.56			-.029	.25091	-.00719	-.07620	-.06901
		3594	2.380					
1891.1	2667.15			.007	.25090	.00171	.06751	.06580
		3647	2.377					
1893.1	2670.80			.034	.25061	.00845	.01385	.00540
		3829	2.422					
1895.1	2674.63			.001	.25061	.00015	-.03829	-.03844
		3841	2.418					
1897.1	2678.47			.029	.25040	.00732	-.01627	-.02359
		3941	2.498					
1899.1	2682.41			.008	.25038	.00205	.09397	.09192
		3912	2.558					
1901.1	2686.32			-.048	.24982	-.01190	-.02285	-.01095
		3763	2.418					
1903.1	2690.09			0	.24982	.00003	-.00987	-.00990
		3761	2.420					
1905.1	2693.85			.018	.24973	.00456	-.00207	-.00663
		3860	2.446					
1907.1	2697.71			.011	.24970	.00274	-.07448	-.07722
		3800	2.540					
1909.1	2701.51			.034	.24942	.00847	.05574	.04727
		4061	2.543					
1911.1	2705.57			-.019	.24932	-.00482	-.01325	-.00842
		3986	2.493					
1913.1	2709.55			-.026	.24916	-.00644	.07488	.08132
		3844	2.454					
1915.1	2713.40			.029	.24895	.00720	-.00632	-.01352
		3985	2.509					
1917.1	2717.38			-.012	.24891	-.00309	-.02863	-.02554
		3911	2.493					
1919.1	2721.29			0	.24891	.00008	-.05196	-.05204
		3915	2.492					
1921.1	2725.21			.009	.24889	.00222	.06638	.06415
		3954	2.512					
1923.1	2729.16			-.029	.24868	-.00720	-.01839	-.01118
		3836	2.444					
1925.1	2733.00			-.002	.24868	-.00057	-.00204	-.00146
		3823	2.441					
1927.1	2736.82			.008	.24867	.00192	.00471	.00279
		3880	2.443					

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
1929.1	2740.70			.053	.24797	.01319	-.03134	-.04453
		4148	2.541					
1931.1	2744.85			.027	.24778	.00675	.03868	.03193
		4162	2.674					
1933.1	2749.01			.006	.24778	.00138	.00459	.00321
		4276	2.631					
1935.1	2753.29			-.021	.24766	-.00528	.04949	.05477
		4224	2.553					
1937.1	2757.51			-.081	.24603	-.02009	-.02532	-.00524
		3794	2.416					
1939.1	2761.31			-.033	.24577	-.00804	-.03750	-.02946
		3595	2.388					
1941.1	2764.90			.041	.24535	.01018	-.00011	-.01029
		3804	2.452					
1943.1	2768.71			-.010	.24532	-.00256	-.02585	-.02329
		3747	2.438					
1945.1	2772.45			-.027	.24514	-.00674	-.03446	-.02772
		3629	2.383					
1947.1	2776.08			.042	.24470	.01037	.05487	.04451
		3813	2.468					
1949.1	2779.89			-.044	.24422	-.01079	-.00261	.00817
		3567	2.415					
1951.1	2783.46			.030	.24400	.00733	-.05057	-.05790
		3713	2.464					
1953.1	2787.18			.032	.24376	.00779	.06707	.05928
		3895	2.504					
1955.1	2791.07			-.012	.24372	-.00303	.02886	.03189
		3828	2.486					
1957.1	2794.90			.012	.24368	.00289	-.06362	-.06651
		3914	2.489					
1959.1	2798.81			.026	.24352	.00637	-.06551	-.07188
		4070	2.522					
1961.1	2802.88			-.036	.24320	-.00885	.05420	.06304
		3882	2.459					
1963.1	2806.76			-.002	.24319	-.00057	-.00611	-.00557
		3871	2.455					
1965.1	2810.63			-.009	.24317	-.00226	.03503	.03729
		3821	2.441					
1967.1	2814.46			.017	.24311	.00408	.00535	.00126
		3898	2.475					
1969.1	2818.35			.043	.24265	.01057	-.05495	-.06552
		4065	2.589					
1971.1	2822.42			.009	.24263	.00213	.03819	.03606
		4105	2.609					
1973.1	2826.52			.008	.24261	.00206	.00791	.00585
		4141	2.631					
1975.1	2830.67			.009	.24259	.00214	.01951	.01737
		4227	2.623					
1977.1	2834.89			.004	.24259	.00088	.01548	.01460

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
		4251	2.627					
1979.1	2839.14			0	.24259	-.00001	.03806	.03807
		4236	2.636					
1981.1	2843.38			-.016	.24252	-.00399	.03537	.03935
		4044	2.673					
1983.1	2847.42			-.014	.24247	-.00339	-.00485	-.00145
		4124	2.548					
1985.1	2851.55			-.055	.24174	-.01336	-.06318	-.04982
		3855	2.441					
1987.1	2855.40			-.003	.24174	-.00078	-.02592	-.02514
		3826	2.444					
1989.1	2859.23			-.006	.24173	-.00145	-.07129	-.06984
		3773	2.448					
1991.1	2863.00			-.002	.24173	-.00051	.05316	.05367
		3757	2.449					
1993.1	2866.76			.040	.24134	.00961	.01311	.00349
		3956	2.518					
1995.1	2870.71			.052	.24068	.01262	-.00746	-.02008
		4241	2.608					
1997.1	2874.96			-.002	.24068	-.00048	.03100	.03148
		4262	2.585					
1999.1	2879.22			0	.24068	0	.04574	.04574
		4246	2.595					
2001.1	2883.46			-.005	.24068	-.00117	.01796	.01913
		4116	2.650					
2003.1	2887.58			-.056	.23993	-.01341	-.04335	-.02994
		3900	2.502					
2005.1	2891.48			.026	.23976	.00631	-.06094	-.06725
		4073	2.525					
2007.1	2895.55			.047	.23923	.01135	.01946	.00811
		4340	2.605					
2009.1	2899.89			-.003	.23922	-.00083	.00548	.00631
		4281	2.623					
2011.1	2904.17			-.004	.23922	-.00105	.03238	.03344
		4282	2.600					
2013.1	2908.46			.015	.23916	.00362	-.04067	-.04429
		4358	2.633					
2015.1	2912.81			-.013	.23912	-.00322	.01390	.01712
		4227	2.642					
2017.1	2917.04			-.009	.23910	-.00216	-.01800	-.01584
		4195	2.615					
2019.1	2921.24			-.040	.23872	-.00953	.05064	.06017
		4007	2.528					
2021.1	2925.24			.025	.23857	.00596	.00716	.00120
		4229	2.518					
2023.1	2929.47			.022	.23846	.00515	-.06775	-.07290
		4431	2.509					
2025.1	2933.90			-.026	.23830	-.00619	.02212	.02832
		4206	2.509					

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
2027.1	2938.11			0	0	0	.05864	.05864
2029.1							-.00686	-.00686
2031.1							-.02207	-.02207
2033.1							.01053	.01053
2035.1							-.05013	-.05013
2037.1							.03145	.03145
2039.1							-.01997	-.01997
2041.1							-.01746	-.01746
2043.1							-.03026	-.03026
2045.1							.13176	.13176
2047.1							-.03415	-.03415
2049.1							.01419	.01419
2051.1							-.06780	-.06780
2053.1							.01330	.01330
2055.1							.00915	.00915
2057.1							.05114	.05114
2059.1							.02415	.02415
2061.1							-.08886	-.08886
2063.1							.01474	.01474
2065.1							.04093	.04093
2067.1							-.02591	-.02591
2069.1							-.05311	-.05311
2071.1							-.00202	-.00202
2073.1							-.05243	-.05243
2075.1							.10010	.10010

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
2077.1							.01304	.01304
2079.1							-.07137	-.07137
2081.1							.02244	.02244
2083.1							.08007	.08007
2085.1							-.04672	-.04672
2087.1							.00866	.00866
2089.1							-.00690	-.00690
2091.1							.02072	.02072
2093.1							.02894	.02894
2095.1							-.00728	-.00728
2097.1							-.06732	-.06732
2099.1							.05045	.05045
2101.1							-.04129	-.04129
2103.1							.00063	.00063
2105.1							-.03063	-.03063
2107.1							.00268	.00268
2109.1							-.00556	-.00556
2111.1							.06003	.06003
2113.1							-.05223	-.05223
2115.1							.02592	.02592
2117.1							.01921	.01921
2119.1							.01437	.01437
2121.1							-.00433	-.00433
2123.1							-.03858	-.03858

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
2125.1							.02758	.02758
2127.1							.00100	.00100
2129.1							-.01352	-.01352
2131.1							.01895	.01895
2133.1							.02970	.02970
2135.1							-.10589	-.10589
2137.1							.04047	.04047
2139.1							-.01250	-.01250
2141.1							.04578	.04578
2143.1							-.03061	-.03061
2145.1							.05166	.05166
2147.1							.00539	.00539
2149.1							-.01419	-.01419
2151.1							-.03873	-.03873
2153.1							-.01236	-.01236
2155.1							.01895	.01895
2157.1							-.00808	-.00808
2159.1							-.02051	-.02051
2161.1							.03365	.03365
2163.1							-.00870	-.00870
2165.1							.01880	.01880
2167.1							.02293	.02293
2169.1							-.03534	-.03534
2171.1							.05942	.05942
2173.1							-.06953	-.06953

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
2175.1							.03620	.03620
2177.1							-.03250	-.03250
2179.1							.00123	.00123
2181.1							.00150	.00150
2183.1							.04101	.04101
2185.1							-.08328	-.08328
2187.1							-.00411	-.00411
2189.1							.03404	.03404
2191.1							.02810	.02810
2193.1							-.00602	-.00602
2195.1							-.00158	-.00158
2197.1							-.03906	-.03906
2199.1							.06223	.06223
2201.1							.04008	.04008
2203.1							-.04952	-.04952
2205.1							-.01112	-.01112
2207.1							-.02115	-.02115
2209.1							-.02751	-.02751
2211.1							.06518	.06518
2213.1							-.06740	-.06740
2215.1							-.00651	-.00651
2217.1							.05637	.05637
2219.1							-.02236	-.02236
2221.1							.04882	.04882

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
2223.1							-.03637	-.03637
2225.1							-.02082	-.02082
2227.1							.02981	.02981
2229.1							.04624	.04624
2231.1							-.04489	-.04489
2233.1							-.00345	-.00345
2235.1							-.02966	-.02966
2237.1							.08297	.08297
2239.1							-.02930	-.02930
2241.1							.00502	.00502
2243.1							-.04476	-.04476
2245.1							-.01763	-.01763
2247.1							.00914	.00914
2249.1							.03423	.03423
2251.1							-.07086	-.07086
2253.1							.05981	.05981
2255.1							.02146	.02146
2257.1							-.03523	-.03523
2259.1							-.05680	-.05680
2261.1							.02772	.02772
2263.1							-.00407	-.00407
2265.1							.10315	.10315
2267.1							.00614	.00614
2269.1							-.12881	-.12881
2271.1							.00669	.00669

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
2273.1							.06336	.06336
2275.1							.04274	.04274
2277.1							-.06384	-.06384
2279.1							-.02555	-.02555
2281.1							.01312	.01312
2283.1							.04001	.04001
2285.1							-.01535	-.01535
2287.1							-.04378	-.04378
2289.1							.02893	.02893
2291.1							-.00446	-.00446
2293.1							.03431	.03431
2295.1							.01732	.01732
2297.1							.00332	.00332
2299.1							-.04819	-.04819
2301.1							.01802	.01802
2303.1							.01866	.01866
2305.1							-.00872	-.00872
2307.1							-.05414	-.05414
2309.1							.02137	.02137
2311.1							.03597	.03597
2313.1							-.05716	-.05716
2315.1							-.00923	-.00923
2317.1							.05687	.05687
2319.1							-.01408	-.01408

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
2321.1							-.04255	-.04255
2323.1							-.02020	-.02020
2325.1							.00210	.00210
2327.1							.01639	.01639
2329.1							.03543	.03543
2331.1							-.02159	-.02159
2333.1							.04668	.04668
2335.1							-.07224	-.07224
2337.1							.04681	.04681
2339.1							.01179	.01179
2341.1							-.01076	-.01076
2343.1							-.04213	-.04213
2345.1							.05735	.05735
2347.1							-.01245	-.01245
2349.1							.05448	.05448
2351.1							-.08073	-.08073
2353.1							.03480	.03430
2355.1							-.03002	-.03002
2357.1							.01636	.01636
2359.1							-.04152	-.04152
2361.1							.07337	.07337
2363.1							-.03017	-.03017
2365.1							-.02112	-.02112
2367.1							.01259	.01259
2369.1							.02157	.02157

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
2371.1							.06853	.06853
2373.1							-.02958	-.02958
2375.1							-.12181	-.12181
2377.1							.05882	.05882
2379.1							.07637	.07637
2381.1							-.02561	-.02561
2383.1							-.01183	-.01183
2385.1							-.03236	-.03236
2387.1							-.00247	-.00247
2389.1							.01629	.01629
2391.1							-.06885	-.06885
2393.1							-.01710	-.01710
2395.1							.06701	.06701
2397.1							.04910	.04910
2399.1							-.00671	-.00671
2401.1							.01557	.01557
2403.1							-.03510	-.03510
2405.1							-.00840	-.00840
2407.1							-.01764	-.01764
2409.1							-.00477	-.00477
2411.1							.00555	.00555
2413.1							-.02456	-.02456
2415.1							-.02826	-.02826
2417.1							.04409	.04409

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
2419.1							.01236	.01236
2421.1							.02996	.02996
2423.1							.00898	.00898
2425.1							-.03277	-.03277
2427.1							-.03828	-.03828
2429.1							.03498	.03498
2431.1							.00078	.00078
2433.1							.02542	.02542
2435.1							-.01438	-.01438
2437.1							-.03387	-.03387
2439.1							-.01371	-.01371
2441.1							.01374	.01374
2443.1							.00499	.00499
2445.1							.09336	.09336
2447.1							-.08623	-.08623
2449.1							-.01561	-.01561
2451.1							.01074	.01074
2453.1							.04227	.04227
2455.1							-.02660	-.02660
2457.1							-.00074	-.00074
2459.1							-.06039	-.06039
2461.1							.04099	.04099
2463.1							.02321	.02321
2465.1							-.00087	-.00087
2467.1							-.06031	-.06031

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
2469.1							.08920	.08920
2471.1							-.06296	-.06296
2473.1							.01454	.01454
2475.1							.00425	.00425
2477.1							.04937	.04937
2479.1							-.06988	-.06988
2481.1							.11237	.11237
2483.1							-.03624	-.03624
2485.1							.01121	.01121
2487.1							-.05029	-.05029
2489.1							-.02958	-.02958
2491.1							-.03843	-.03843
2493.1							.03328	.03328
2495.1							.04719	.04719
2497.1							-.03844	-.03844
2499.1							-.00916	-.00916
2501.1							.02238	.02238
2503.1							-.00791	-.00791
2505.1							-.01800	-.01800
2507.1							.02806	.02806
2509.1							.02007	.02007
2511.1							-.04694	-.04694
2513.1							-.00460	-.00460
2515.1							-.01161	-.01161

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
2517.1							.05086	.05086
2519.1							-.00431	-.00431
2521.1							.02183	.02183
2523.1							-.05897	-.05897
2525.1							-.00778	-.00778
2527.1							.00778	.00778
2529.1							.03476	.03476
2531.1							.01703	.01703
2533.1							-.01414	-.01414
2535.1							.02866	.02866
2537.1							.06040	.06040
2539.1							-.09477	-.09477
2541.1							-.00461	-.00461
2543.1							-.02583	-.02583
2545.1							.02976	.02976
2547.1							.02789	.02789
2549.1							.00649	.00649
2551.1							-.02487	-.02487
2553.1							-.01024	-.01024
2555.1							-.00311	-.00311
2557.1							.03364	.03364
2559.1							-.03900	-.03900
2561.1							-.00045	-.00045
2563.1							-.01395	-.01395
2565.1							.02790	.02790

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
2567.1							.02029	.02029
2569.1							-.03188	-.03188
2571.1							-.02122	-.02122
2573.1							.03307	.03307
2575.1							.00672	.00672
2577.1							-.00459	-.00459
2579.1							.00867	.00867
2581.1							.03278	.03278
2583.1							-.02760	-.02760
2585.1							-.00937	-.00937
2587.1							.00971	.00971
2589.1							-.04832	-.04832
2591.1							-.02613	-.02613
2593.1							.05459	.05459
2595.1							.00524	.00524
2597.1							-.00432	-.00432
2599.1							-.01729	-.01729
2601.1							.10020	.10020
2603.1							-.04760	-.04760
2605.1							-.01040	-.01040
2607.1							-.07371	-.07371
2609.1							.00973	.00973
2611.1							-.01225	-.01225
2613.1							.10152	.10152

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
2615.1							-.02893	-.02893
2617.1							.02089	.02089
2619.1							-.03814	-.03814
2621.1							-.00763	-.00763
2623.1							.01234	.01234
2625.1							-.00414	-.00414
2627.1							-.01146	-.01146
2629.1							.04658	.04658
2631.1							.00668	.00668
2633.1							-.04233	-.04233
2635.1							-.01899	-.01899
2637.1							-.00377	-.00377
2639.1							.01417	.01417
2641.1							.04211	.04211
2643.1							-.08658	-.08658
2645.1							.03317	.03317
2647.1							.06242	.06242
2649.1							-.03442	-.03442
2651.1							-.04670	-.04670
2653.1							.02246	.02246
2655.1							-.00476	-.00476
2657.1							-.02263	-.02263
2659.1							.05379	.05379
2661.1							-.04274	-.04274
2663.1							.02628	.02628

TWO WAY TRAVEL TIME MS	DEPTH FROM SRD (OR TOP) M	INTERVAL VELOCITY M/S	INTERVAL DENSITY G/C3	REFLECT. COEFF.	TWO WAY ATTEN. COEFF.	SYNTHETIC SEISMO. PRIMARY	PRIMARY + MULTIPLES	MULTIPLES ONLY
2665.1							.00384	.00384
2667.1							.03585	.03585
2669.1							-.06531	-.06531
2671.1							.02580	.02580
2673.1							-.00222	-.00222
2675.1							-.03619	-.03619
2677.1							.06899	.06899
2679.1							-.01174	-.01174
2681.1							-.00888	-.00888
2683.1							-.05083	-.05083
2685.1							.07219	.07219
2687.1							-.02081	-.02081
2689.1							-.02658	-.02658