Schlumberger

Company: **ESSO Australia Pty Ltd**

8.50 in. Section

Well: **SNA A21A**

Field: **Snapper**

Rig: **ISDL 175** State: **Victoria**

Rig: ISDL 175
Field: Snapper
Location: Bass Strait
Well: SNA A21A
Company: ESSO Australia Pty Ltd

VISION Density Neutron
1:200 True Vertical Depth
Recorded Mode Log (Trip Out)

Location

		Elevation		
Total depth:	2931.04 m			Top Drive
Spud date:	05−Feb−08		G.L.	−55.0 m
Run:	5		D.F.	41.7 m

Permanent datum:	Mean Sea Level	Elev.:	0.0 m
Log measured from:	Drill Floor	41.7 m	above Perm. datum
Depth reference:	Driller's Depth		

Service Order no.	X = E 589,791.823 m	Longitude	Latitude
07ASQ0022	Y = N 5,772,180.918 m	E 148° 1' 31.472"	S 38° 11' 37.821"

Depth logged:	2517.00 m To 2920.08 m	Mag decl: 13.015 deg.	Other services:
Date logged:	28−Feb−08 To 02−Mar−08	Mag dip: −68.712 deg.	See Remarks

Bore hole record

Hole size	from	to
8.50 in.	2517.00 m	2931.04 m

Casing record

Size	Density	from	to
9.625 in.	47.00 lb/ft	27.10 m	2517.00 m

Mud record

Type	from	to
Accolade SBM	2517.00 m	2931.04 m

Borehole deviation record

Min	Max	from	to
0.22 deg.	1.02 deg.	2517.00 m	2931.04 m

Surface equipment

Unit	ESSO Office Unit
Depth system	PDA/CLT

Software record

IDEAL Wis	ID13_0c_05
HSPM	13_0c_03
LWD	8.3A02
MWD	8.0C04

Bit Run Summary

Run number		5
Bit size	in	8.50
Bit start depth	m	2517.00
Bit end depth	m	2931.04
Top interval logged	m	2517.00
Bottom interval logged	m	2920.08
Begin log: time		02:10:09
Begin log: date		29−Feb−08
End log: time		01:25:12
End log: date		2−Mar−08
Mud data		
Depth	m	2930.00
Type		SBM
Mud weight	ppg	11.30
Solids	%	15.90
Chlorides	ppm	43,400.00
Rm	ohm.m@°C	n.a
Rmf	ohm.m@°C	n.a
Rmc	ohm.m@°C	n.a

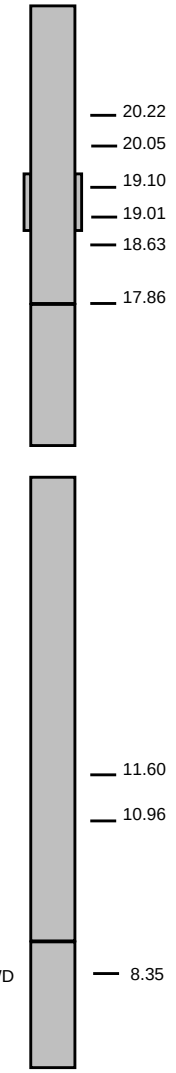
Potassium	%	n.a									
Environmental data											
GR											
Mud weight	ppg	11.30									
Bit size	in	8.50									
Resistivity											
Neutron porosity											
Hole Size	in	8.50									
Mud weight	ppg	11.30									
Temperature	°C	108.00									
Mud salinity	ppk	54.352									
Formation salinity		n.a									
Recording rate 1	SEC	5									
Recording rate 2	SEC	n.a									
Filtering GR		3 pts.									
Filtering density		3 pts.									
Filtering Neutron		3 pts.									
Company representative		D. Daniels	R. Spence	Mark C							
Anadrill personnel		Mewan A	M. Sihite	J. Ikeda	C. Soper	M. How					

OTHER SERVICES FOR RUN5	OTHER SERVICES FOR RUN	OTHER SERVICES FOR RUN
Directional Drilling Directional Surveys Annular Pressure & Temperature Shock & Vibrations		
REMARKS: RUN NUMBER 5	**REMARKS: RUN NUMBER**	**REMARKS: RUN NUMBER**
Depth is referenced to Driller's Depth. Gamma ray is corrected for mud weight, tool size and bit size. Neutron porosity is corrected for the effects of borehole size (bit size), temperature, mud salinity, and mud hydrogen index (a factor of mud weight, mud temperature and pressure). Neutron porosity is calculated using a limestone matrix density of 2.71 g/cm3. POOH due to reaching coring TD of SNA A21A.		

EQUIPMENT DESCRIPTION

RUN 5	RUN	RUN
DOWNHOLE EQUIPMENT		

DOWNHOLE EQUIPMENT



6−3/4" adnVISION* DHS: 8.3A02 Blade OD: 8−1/4" S/N: 40778	22.10
6−3/4" PowerPulse* MDC: FA28 MEC: 1533 MDI: 1820 MGR: 322	15.85
8−3/8" Roller Reamer S/N: GU2317R	7.46
6−3/4" NM Pony S/N: SBD4464	5.47
8−3/8" Roller Reamer S/N: GU2945	2.41
8−1/2" Reed Hycalog PDC Bit S/N: 218088	0.28

Maximum string diameter 8.50 in.

All lengths in Meters

Variable Name	Variable Description	Run Name & Value		
	Run Number			5
	General Information			
BHT_RM	Bottom Hole Temperature (RM)		DEGC	108.000
BSAL_RM	Mud Salinity (RM)		PPK	54.352
BS_RM	Bit Size (RM)		IN	8.500
COEF_M	User Defined FEXP in Clean Sand		----	1.650
C_WS	Overpressure correction to Sw and M		----	1.000
FEXP	Formation Factor Exponent(RM)		----	2.000
FNUM	Formation Factor Enumerator(RM)		----	1.000
FPHI_RM	Formation Factor Porosity Source (RM)		----	XPLOT
MST_RM	Mud Sample temperature (RM)		DEGC	23.889
MW_RM	Mud Weight (RM)		LB/G	11.300
OBMF_RM	Oil Based Mud (RM)		----	YES
RHOF_RM	Mud Filtrate Density (RM)		G/C3	1.000
RHOM_RM	Matrix density (RM)		G/C3	2.710
RMS_RM	Resistivity of Mud Sample (RM)		OHMM	1000.00
RWA_COMP_M	Rwa computation model			
RWA_DEN_AD	Rwa Density Input ADN			
RWA_DEN_CD	Rwa Density Input CDN			
RWA_DEN_IN	Rwa Density Input			
RWA_FORM_M	Rwa computation formation model			
RWA_RES_IN	Rwa computation resistivity input			
RWS_RM	Resistivity of Connate Water (RM)		OHMM	1.000
SHT_RM	Ground Level Temperature (Mud-Line When Offshore) (RM)		DEGC	10.000
TD_RM	Total Measured Depth (RM)		M	2931.0
TWS_RM	Temperature of Connate Water (RM)		DEGC	23.889
VF_ILLI	Fraction of illite in shales		----	0.500
VF_KAOL	Fraction of kaolinite in shales		----	0.500
VF_MONT	Fraction of montmorillonite in shales		----	0.000
XPDM_RM	Cross plot density porosity multiplier		----	0.675
XPNM_RM	Cross plot neutron porosity multiplier		----	0.325
RSD	LWD run start date dd-mmm-yy			28-02-08
RWA_COMP_MOD	Rwa computation model		----	BASIC
RWA_DEN_ADN	Rwa Density Input		----	RHOB
RWA_DEN_CDN	Rwa Density Input		----	RHOB
RWA_DEN_INPUT	Rwa Density Input		----	RHOB
RWA_FORM_MOD	Rwa computation formation model		----	CLASTIC
RWA_RES_INPUT	Rwa computation resistivity input		----	RT
	ADN			
ADN_CHASSIS_STR	**Type String**	**Chassis**		**ADN**
ADN_COLLAR_STR	**Type String**	**Collar**		**ADN**
ADN_DATA_FIX	ADN: Create A Corrected ADN Time Data File		----	NO
ADN_DATA_LTB	ADN: Create An ADN LTB Data File		----	NO
ADN_STAB_STR	ADN Stabilizer Type String		----	IBS
ALPHA_COMPUTE_D	Perform Density Enhanced Vertical Resolution process ?		----	YES
ALPHA_COMPUTE_N	Perform Neutron Enhanced Vertical Resolution process ?		----	YES
AVE_ADN	ADN/Array Channels: perform averaging(RM) :		----	YES
A_DHS	ADN Down Hole Software Version String		----	YES
CHI_RM	Caliper High limit from BS (RM)		IN	3.000
CLO_RM	Caliper Low limit from BS (RM)		IN	0.000
DEVI	Well Section Deviation		DEG	0.690
DTIK_SEL	ADN: Density Tick Channel Name		----	LSAZ
DTMUD	Delta-T for Mud		US/F	211.110
DYN_IMG_COMPUTE	Generate Dynamic Normalized Image?		----	YES
ECC_CORR_ADN	Perform Eccentering Correction for TNPH?		----	YES
ENVCOR	Neutron Processing: Environmental Correction?		----	NO
EVRL	EVR Process averaging number of samples (RM)		----	49
FCD	Future Casing (Outer) Diameter		IN	7.000
GCSE	Generalized Caliper Selection		----	BS
HPS	ADSE-EB (High Pressure Inconel Chassis)?		----	NO
IBS	Intergal Blade Stabilizer Collar?		----	YES
IDQT	Image Derived Quality Threshold		----	2.000
IHVS	Integrated Hole Volume Start Value(RM)		M3	0.000
IMAGE_MAX_SOA	Image SOA (Quadrant) Right Scale		IN	2.500
IMAGE_MAX_SPEF	Image PEF(Segment) Right Scale		----	6.000
IMAGE_MAX_SRHOB	Image RHOB(Segment) Right Scale		G/C3	2.650
IMAGE_MIN_SOA	Image SOA (Quadrant) Left Scale		IN	0.000
IMAGE_MIN_SPEF	Image PEF(Segment) Left Scale		----	2.000
IMAGE_MIN_SRHOB	Image RHOB(Segment) Left Scale		G/C3	2.050
JSD_ADN	ADN Acquisition start date		G/C3	2.050
LITHO_TYPE_ADN	Lithology (RM)		----	LIME
N1FTU_6_RM	ADN: Neutron Bank 1 Far Tubes used :		----	1-2-3
N2FTU_6_RM	ADN: Neutron Bank 2 Far Tubes used :		----	1-2-3
NNTU_RM	ADN Neutron Near Banks Used		----	1-2
NTIK_SEL	ADN: Neutron Tick Channel Name		----	FR11
SOCNL	Standoff Distance of the CNL Tool		----	1.000
SSIZ_ADN	ADN Stabilizer Size		IN	8.346
STOH	ADN Density Top of Hole Sector (Left Boundary):		----	SECTOR_0
TRPM_RM	Average Tool Rotational Speed		RPM	20.000
USMIN_RM	ADN:Minimum Ultrasonic standoff (RM)		IN	0.180
USWF_RM	ADN:Process Ultrasonic Waveform?		----	YES
VERS_ADN	ADN Downhole Software Version		----	8.300
WSDI	Window Size of Dynamic Normalization Image		M	15.240

IDEAL Version: ID13_0C_06

IDF

MWD_10	id13_0c_02	ADN	id13_0c_02

Format: VISION Density Neutron Log Vertical Scale: 1:200 Graphics File Created: 05−Mar−2008 21:37

Rate of Penetration, Averaged over Last 5ft (ROP5_RM)
200 (M/HR) 0

GR(TM) (GRM1)
0 (GAPI) 200

Vertical Hole Diameter (VERD)
6 (IN) 16

Horizontal Hole Diameter (HORD)
6 (IN) 16

Photoelectric Factor (PEF)
0 (−−−− 10

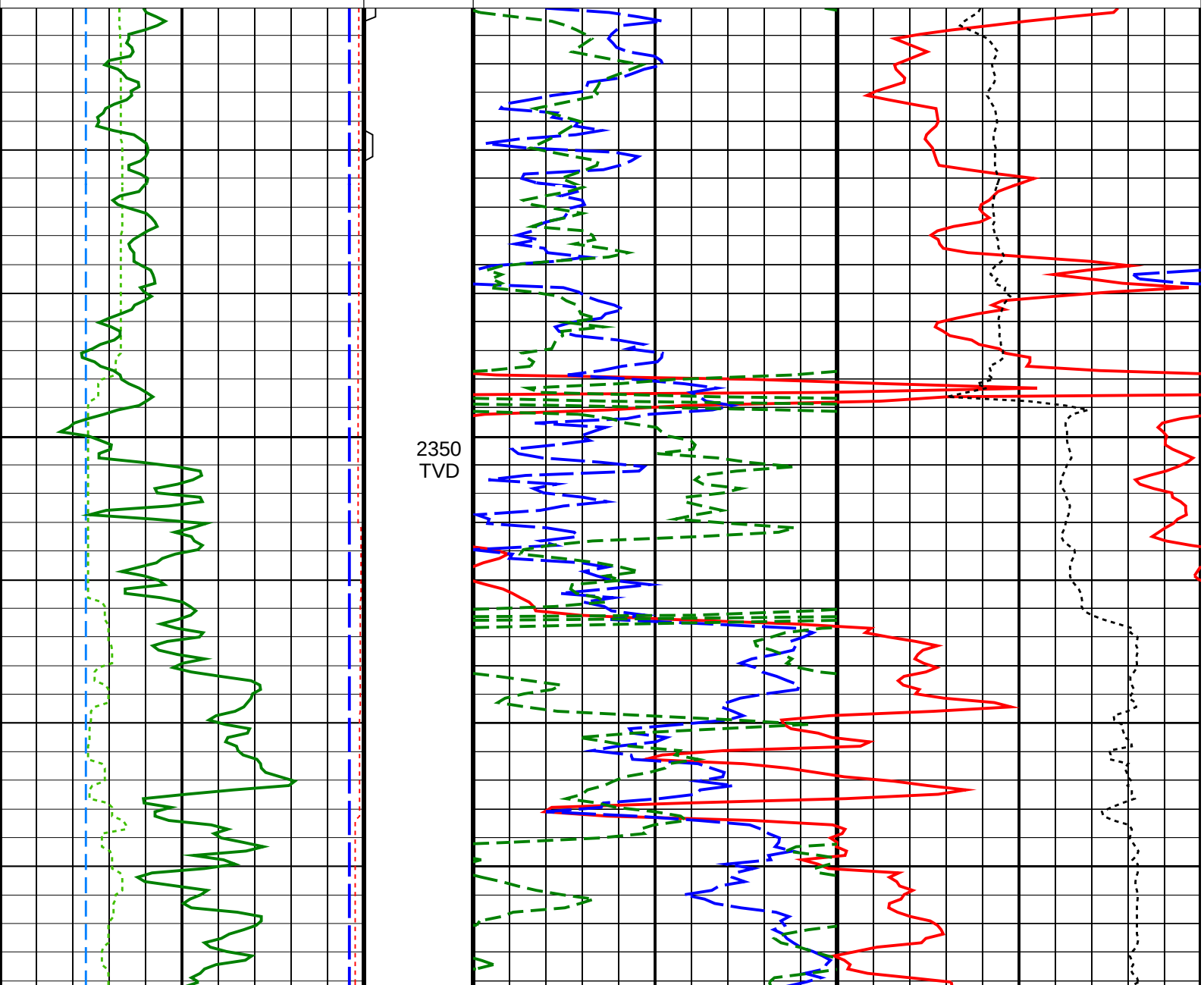
Bulk Density Correction (DRHO)
−0.75 (G/C3) 0.25

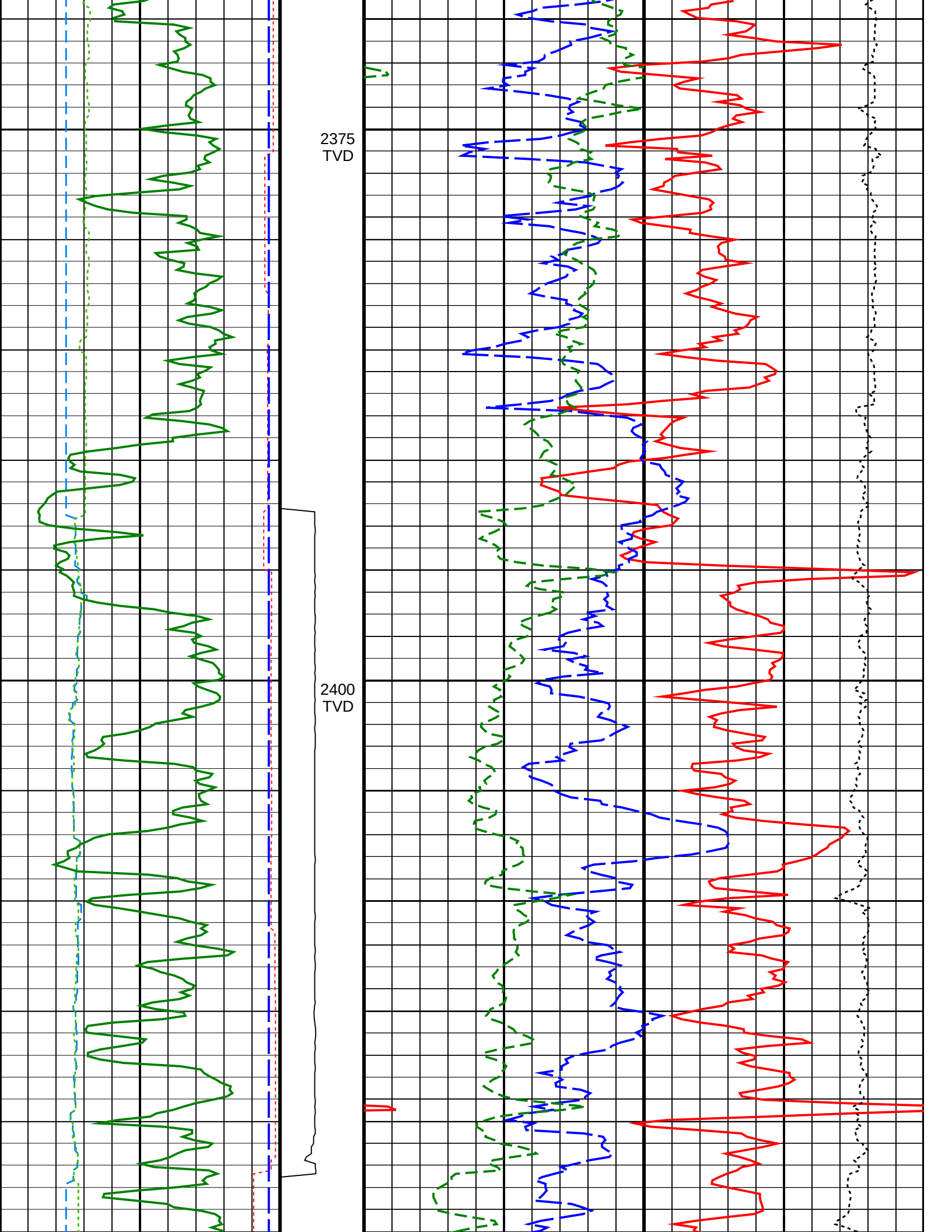
Thermal Neutron Porosity (TNPH)
45 (PU) −15

Density Time After Bit (TAB_DEN)
0 (HR) 10

ADN Rotational Speed (RPM_ADN) (RPM)
0 200

Bulk Density (RHOB)
1.85 (G/C3) 2.85

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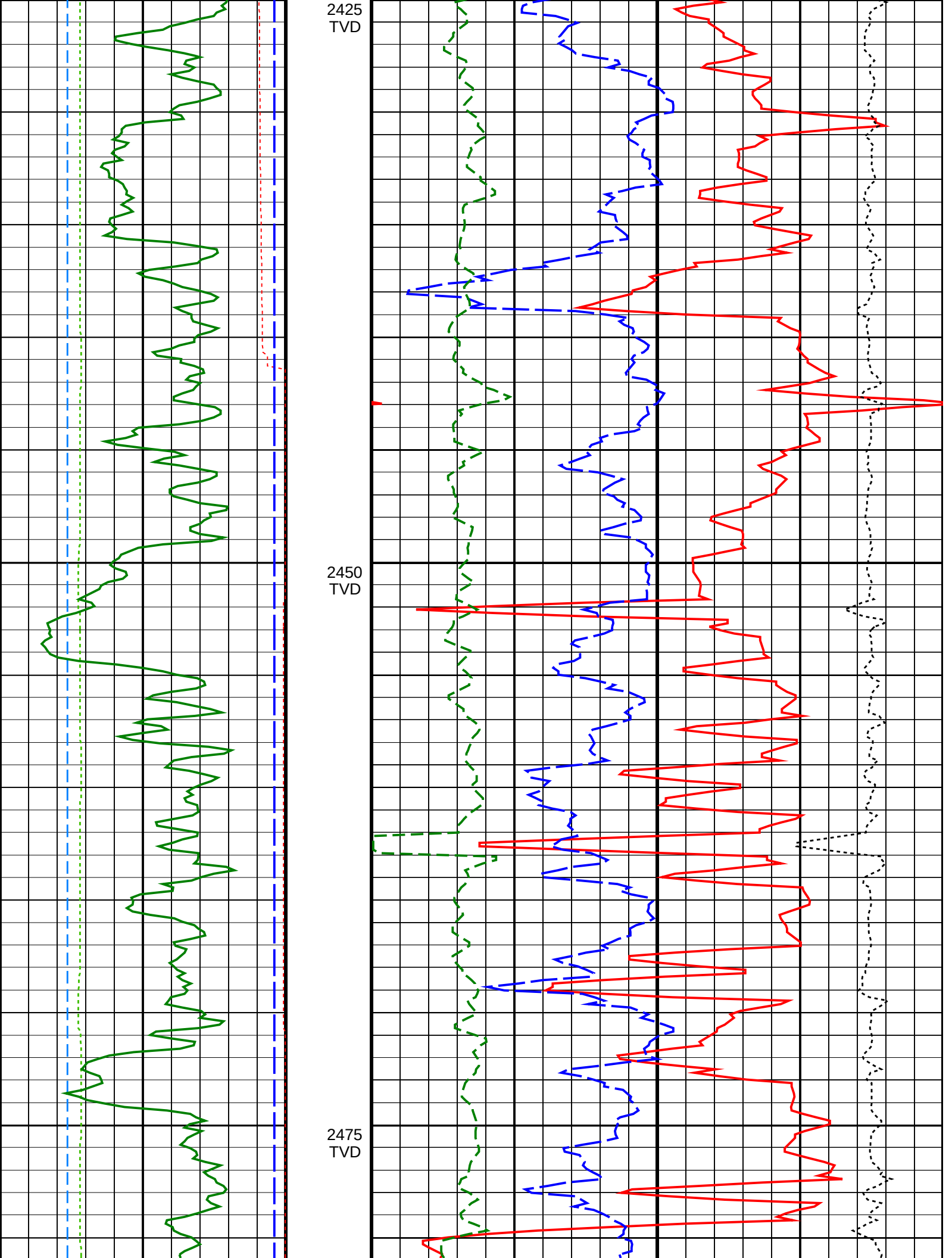
TVD
2400
TVD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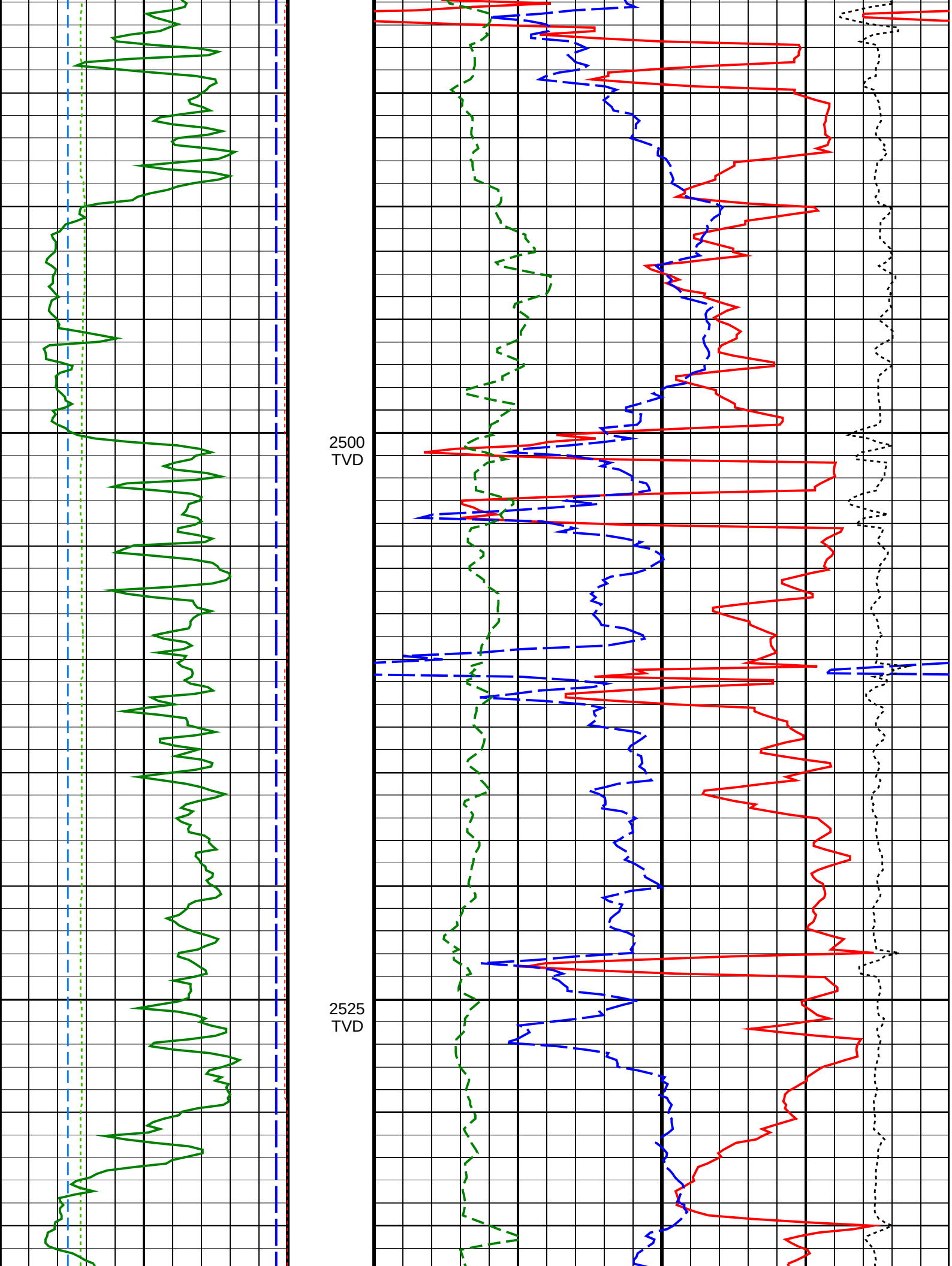
TVD
2450
TVD
2475
TVD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TVD
2525
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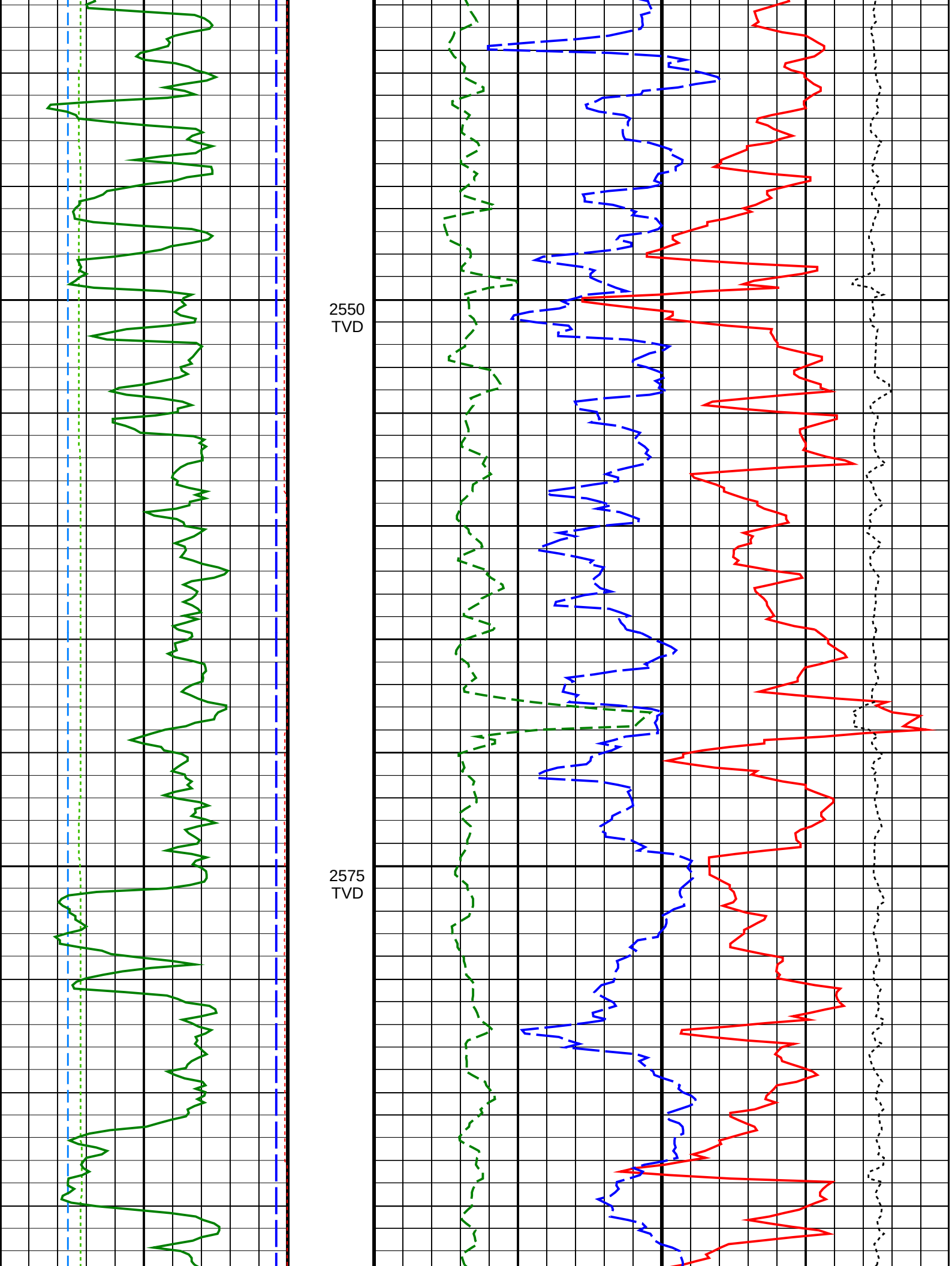
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TVD
2575
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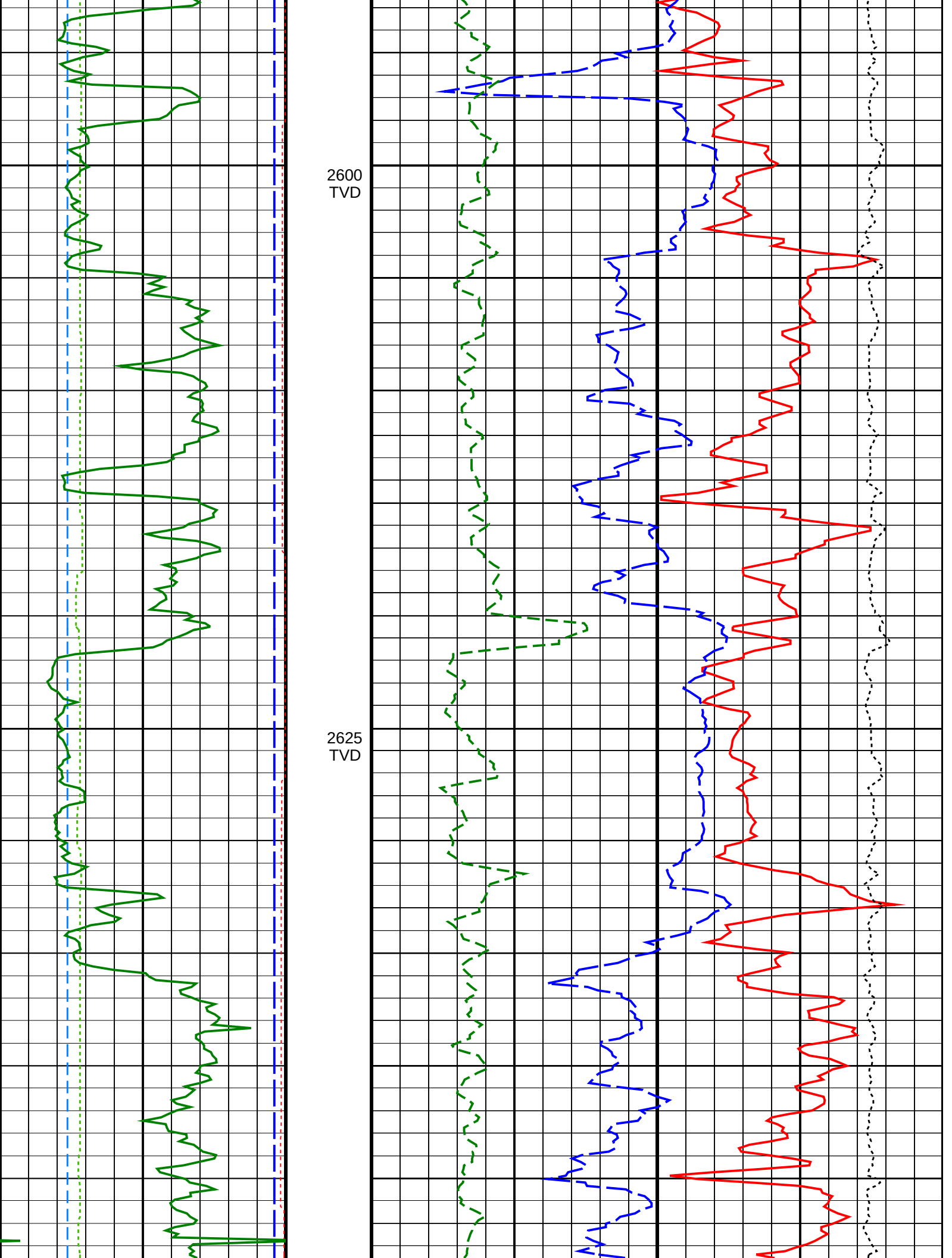
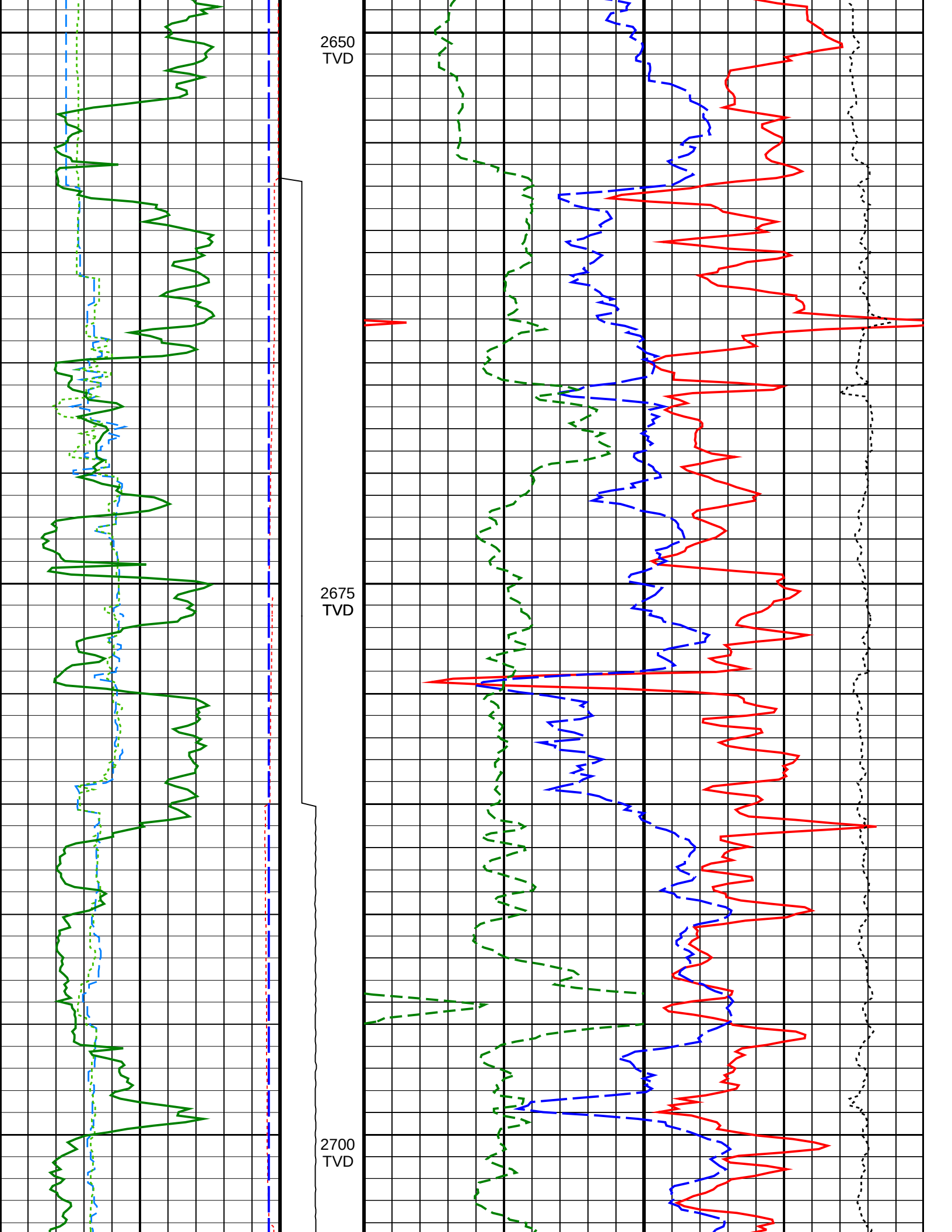
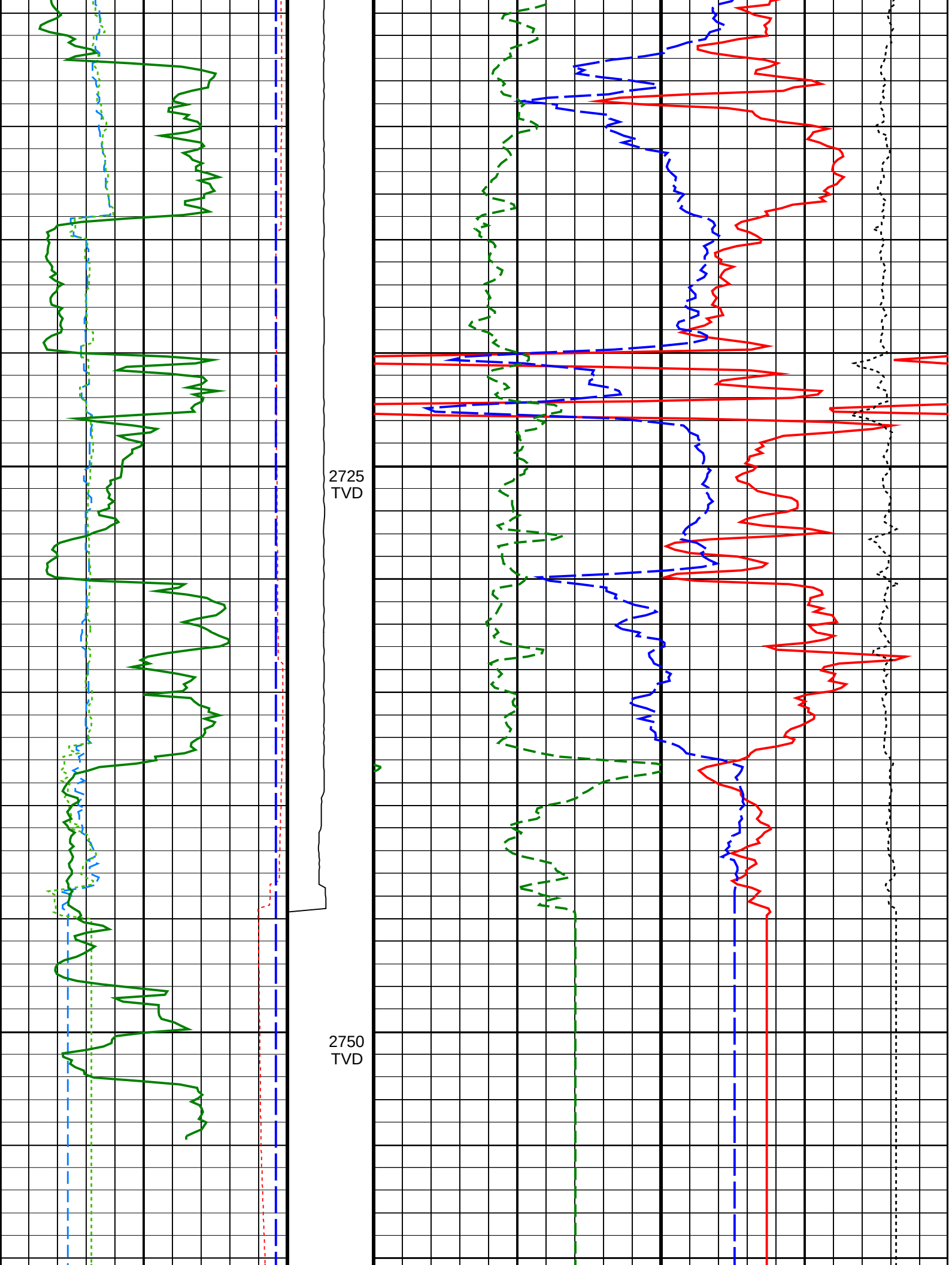
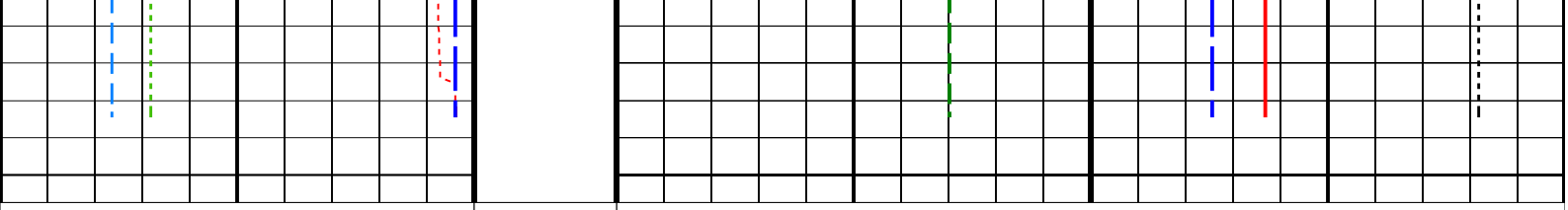

2600
TVD
2625
TVD


2650
TVD
2675
TVD
2700
TVD


2725
TVD
2750
TVD



Density Time After Bit (TAB_DEN)	ADN Rotational Speed (RPM_ADN) (RPM)	Bulk Density (RHOB)
0 (HR) 10	0 200	1.85 (G/C3) 2.85

Horizontal Hole Diameter (HORD)	Thermal Neutron Porosity (TNPH)	
6 (IN) 16	45 (PU) −15	
Vertical Hole Diameter (VERD)	**Photoelectric Factor (PEF)**	**Bulk Density Correction (DRHO)**
6 (IN) 16	0 (−−−− 10	−0.75 (G/C3) 0.25
GR(TM) (GRM1)		
0 (GAPI) 200		
Rate of Penetration, Averaged over Last 5ft (ROP5_RM)		
200 (M/HR) 0		

IDEAL Version: ID13_0C_06

IDF

MWD_10	**id13_0c_02**	**ADN**	**id13_0c_02**

6.75−in. Azimuthal Density Neutron / Equipment Identification

Primary Equipment:		
Tool Name and Serial Number	ADN6 − CA	373
Collar Type and Serial Number	ADDC − AA	40778
Chassis Type and Serial Number	ADSE − EA	
Stabilizer Type and Serial Number	IBS	
Neutron Logging Source	NSR − M	202
Density Logging Source	GSR − J/Z	1994
Stabilizer Size	8.35 − in.	
Calibration Status	Valid	

Master: 15−Jan−2008 23:42

6.75−in. Azimuthal Density Neutron Calibration

Density: Magnesium Block

Phase	LS window 3 − Mg CPS	Value	Phase	SS window 1 − Mg CPS	Value	Phase	SS window 3 − Mg CPS	Value
Master		1039	Master		2672	Master		6394
	250.0 (Minimum) 4125 (Nominal) 8000 (Maximum)			700.0 (Minimum) 9350 (Nominal) 18000 (Maximum)			2500 (Minimum) 23750 (Nominal) 45000 (Maximum)	

Master: 15−Jan−2008 23:42

6.75−in. Azimuthal Density Neutron Calibration

Density: Aluminum Block

Phase	LS window 3 − Al CPS	Value	Phase	SS window 1 − Al CPS	Value	Phase	SS window 3 − Al CPS	Value
Master		156.2	Master		1355	Master		4015
	50.00 (Minimum) 725.0 (Nominal) 1400 (Maximum)			500.0 (Minimum) 4250 (Nominal) 8000 (Maximum)			1500 (Minimum) 15750 (Nominal) 30000 (Maximum)	

Master: 15−Jan−2008 23:42

6.75−in. Azimuthal Density Neutron Calibration

Density: Background

Phase	LS window 3 − Background CPS	Value	Phase	SS window 1 − Background CPS	Value	Phase	SS window 3 − Background CPS	Value
Master		49.65	Master		117.5	Master		513.5
	15.00 (Minimum) 82.50 (Nominal) 150.0 (Maximum)			40.00 (Minimum) 220.0 (Nominal) 400.0 (Maximum)			150.0 (Minimum) 825.0 (Nominal) 1500 (Maximum)	

Master: 15−Jan−2008 23:42

6.75−in. Azimuthal Density Neutron Calibration

Density: Water Block Check

Phase	Long spacing water density G/C3	Value	Phase	Short spacing water density G/C3	Value
Master		1.034	Master		1.143
1.024 (Minimum)	1.039 (Nominal)	1.054 (Maximum)	1.096 (Minimum)	1.126 (Nominal)	1.156 (Maximum)

Master: 15−Jan−2008 23:42

6.75−in. Azimuthal Density Neutron Calibration

Neutron: 3−Point Calibration

Phase	Far 1 tube 1 Air Point Measure CPS	Value	Phase	Far 1 tube 1 Rod Point Measure CPS	Value	Phase	Far 1 tube 1 H2O Point Measure CPS	Value
Master		17.03	Master		4.292	Master		2.103
13.30 (Minimum)	19.05 (Nominal)	24.70 (Maximum)	3.400 (Minimum)	4.857 (Nominal)	6.200 (Maximum)	1.600 (Minimum)	2.363 (Nominal)	3.100 (Maximum)

Phase	Far 1 tube 2 Air Point Measure CPS	Value	Phase	Far 1 tube 2 Rod Point Measure CPS	Value	Phase	Far 1 tube 2 H2O Point Measure CPS	Value
Master		17.96	Master		4.380	Master		2.166
13.30 (Minimum)	19.05 (Nominal)	24.70 (Maximum)	3.400 (Minimum)	4.857 (Nominal)	6.200 (Maximum)	1.600 (Minimum)	2.363 (Nominal)	3.100 (Maximum)

Phase	Far 1 tube 3 Air Point Measure CPS	Value	Phase	Far 1 tube 3 Rod Point Measure CPS	Value	Phase	Far 1 tube 3 H2O Point Measure CPS	Value
Master		16.34	Master		4.008	Master		1.956
13.30 (Minimum)	19.05 (Nominal)	24.70 (Maximum)	3.400 (Minimum)	4.857 (Nominal)	6.200 (Maximum)	1.600 (Minimum)	2.363 (Nominal)	3.100 (Maximum)

Phase	Far 2 tube 1 Air Point Measure CPS	Value	Phase	Far 2 tube 1 Rod Point Measure CPS	Value	Phase	Far 2 tube 1 H2O Point Measure CPS	Value
Master		16.32	Master		4.328	Master		2.075
13.30 (Minimum)	19.05 (Nominal)	24.70 (Maximum)	3.400 (Minimum)	4.857 (Nominal)	6.200 (Maximum)	1.600 (Minimum)	2.363 (Nominal)	3.100 (Maximum)

Phase	Far 2 tube 2 Air Point Measure CPS	Value	Phase	Far 2 tube 2 Rod Point Measure CPS	Value	Phase	Far 2 tube 2 H2O Point Measure CPS	Value
Master		17.92	Master		4.511	Master		2.168
13.30 (Minimum)	19.05 (Nominal)	24.70 (Maximum)	3.400 (Minimum)	4.857 (Nominal)	6.200 (Maximum)	1.600 (Minimum)	2.363 (Nominal)	3.100 (Maximum)

Phase	Far 2 tube 3 Air Point Measure CPS	Value	Phase	Far 2 tube 3 Rod Point Measure CPS	Value	Phase	Far 2 tube 3 H2O Point Measure CPS	Value
Master		17.33	Master		4.319	Master		2.045
13.30 (Minimum)	19.05 (Nominal)	24.70 (Maximum)	3.400 (Minimum)	4.857 (Nominal)	6.200 (Maximum)	1.600 (Minimum)	2.363 (Nominal)	3.100 (Maximum)

Phase	Near 1 tube 1 Air Point Measure CPS	Value	Phase	Near 1 tube 1 Rod Point Measure CPS	Value	Phase	Near 1 tube 1 H2O Point Measure CPS	Value
Master		454.5	Master		735.4	Master		325.4
345.0 (Minimum)	487.5 (Nominal)	595.0 (Maximum)	535.0 (Minimum)	768.8 (Nominal)	925.0 (Maximum)	230.0 (Minimum)	343.7 (Nominal)	430.0 (Maximum)

Phase	Near 2 tube 1 Air Point Measure CPS	Value	Phase	Near 2 tube 1 Rod Point Measure CPS	Value	Phase	Near 2 tube 1 H2O Point Measure CPS	Value
Master		462.0	Master		725.7	Master		326.1
345.0 (Minimum)	487.5 (Nominal)	595.0 (Maximum)	535.0 (Minimum)	768.8 (Nominal)	925.0 (Maximum)	230.0 (Minimum)	343.7 (Nominal)	430.0 (Maximum)

Master: 15−Jan−2008 23:42

6.75−in. Azimuthal Density Neutron Calibration

Neutron: Water Block Check

Phase	Far Neutron water porosity PU	Value
Master		98.07
90.00 (Minimum)	100.0 (Nominal)	125.0 (Maximum)

SCHLUMBERGER

Survey report 18−Mar−2008 05:20:22

Client.....: ESSO Australia Pty Ltd
Field.....: Snapper

Well.....: SNA A21A
Service Order no.....: 07ASQ0022
Engineer.....: MS

COUNTY:.....: ISLD 175
STATE:.....: Victoria

Spud date.....: 05−Feb−08
Last survey date.....: 18−Mar−08
Total accepted surveys...: 91
MD of first survey.....: 625.00 m
MD of last survey.....: 3346.89 m

----- Survey calculation methods----------
Method for positions.....: Minimum curvature

----- Geomagnetic data ----------
Magnetic model.....: BGGM version 2007

Method for DLS.....: Mason & Taylor

----- Depth reference -----
Permanent datum.....: Mean Sea Level
Depth reference.....: Driller's Depth
GL above permanent.....: -55.00 m
KB above permanent.....: Top Drive
DF above permanent.....: 41.70 m

----- Vertical section origin-----
Latitude (+N/S-).....: -3.69 m
Departure (+E/W-).....: 4.78 m

----- Platform reference point-----
Latitude (+N/S-).....:
Departure (+E/W-).....:

Azimuth from Vsect Origin to target: 312.96 degrees

Magnetic date.....: 25-Feb-2008
Magnetic field strength..: 1197.81 HCNT
Magnetic dec (+E/W-).....: 13.01 degrees
Magnetic dip.....: -68.71 degrees

----- MWD survey Reference Criteria -----
Reference G.....: 1000.02 mGal
Reference H.....: 1197.81 HCNT
Reference Dip.....: -68.71 degrees
Tolerance of G.....: (+/-) 2.50 mGal
Tolerance of H.....: (+/-) 6.00 HCNT
Tolerance of Dip.....: (+/-) 0.45 degrees

----- Corrections -----
Magnetic dec (+E/W-).....: 13.01 degrees
Grid convergence (+E/W-).: -0.63 degrees
Total az corr (+E/W-)....: 13.64 degrees
(Total az corr = magnetic dec - grid conv)
Survey Correction Type ...:
I=Sag Corrected Inclination
M=Schlumberger Magnetic Correction
S=Shell Magnetic Correction
F=Failed Axis Correction
R=Magnetic Resonance Tool Correction
D=Dmag Magnetic Correction

Seq # -	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/ 100f)	Srvy tool type	Tool Corr (deg)
1	625.00	1.38	351.20	0.00	623.39	27.34	32.16	0.80	32.17	1.42	0.00	TIP	None
2	652.41	5.45	320.65	27.41	650.75	28.89	33.49	-0.08	33.49	359.87	4.80	MWD	None
3	705.85	12.48	317.04	53.44	703.50	37.18	39.69	-5.63	40.09	351.93	4.02	MWD	None
4	725.21	13.02	315.52	19.36	722.38	41.44	42.78	-8.58	43.63	348.66	1.00	MWD	None
5	754.52	14.44	311.84	29.31	750.86	48.40	47.57	-13.62	49.48	344.03	1.73	MWD	None
6	784.09	16.51	312.18	29.57	779.35	56.28	52.85	-19.48	56.33	339.77	2.14	MWD	None
7	813.12	18.78	313.53	29.03	807.02	65.08	58.84	-25.92	64.30	336.22	2.42	MWD	None
8	842.44	21.59	313.20	29.32	834.53	75.20	65.78	-33.28	73.72	333.17	2.92	MWD	None
9	871.68	24.22	311.73	29.24	861.46	86.58	73.46	-41.68	84.46	330.43	2.81	MWD	None
10	900.94	26.82	310.10	29.26	887.87	99.17	81.71	-51.21	96.43	327.92	2.81	MWD	None
11	930.15	29.84	307.85	29.21	913.58	113.00	90.42	-61.99	109.63	325.56	3.34	MWD	None
12	959.50	32.87	307.23	29.35	938.64	128.20	99.72	-74.10	124.23	323.38	3.16	MWD	None
13	989.11	33.88	307.39	29.61	963.36	144.41	109.59	-87.06	139.96	321.54	1.04	MWD	None
14	1018.15	34.17	307.26	29.04	987.43	160.58	119.44	-99.98	155.76	320.07	0.31	MWD	None
15	1047.09	34.15	308.61	28.94	1011.38	176.76	129.43	-112.79	171.68	318.93	0.80	MWD	None
16	1078.04	34.14	309.60	30.95	1037.00	194.10	140.39	-126.27	188.82	318.03	0.55	MWD	None
17	1107.99	33.85	312.28	29.95	1061.83	210.83	151.36	-138.92	205.45	317.45	1.55	MWD	None
18	1137.64	34.20	312.71	29.65	1086.40	227.42	162.57	-151.15	221.98	317.08	0.44	MWD	None
19	1165.35	34.55	312.45	27.71	1109.27	243.06	173.15	-162.67	237.58	316.79	0.42	MWD	None
20	1195.05	34.67	311.75	29.70	1133.72	259.93	184.46	-175.19	254.40	316.48	0.43	MWD	None
21	1223.98	34.59	311.04	28.93	1157.52	276.36	195.33	-187.52	270.78	316.17	0.43	MWD	None
22	1253.83	34.61	311.01	29.85	1182.09	293.30	206.46	-200.31	287.66	315.87	0.03	MWD	None
23	1283.30	35.06	310.70	29.47	1206.28	310.13	217.47	-213.04	304.43	315.59	0.50	MWD	None
24	1311.04	35.22	310.15	27.74	1228.97	326.08	227.82	-225.20	320.34	315.33	0.39	MWD	None
25	1339.83	34.49	309.08	28.79	1252.59	342.50	238.31	-237.87	336.71	315.05	1.01	MWD	None
26	1368.38	34.54	308.77	28.55	1276.11	358.64	248.48	-250.46	352.80	314.77	0.19	MWD	None
27	1398.22	34.75	309.47	29.84	1300.66	375.56	259.18	-263.62	369.69	314.51	0.46	MWD	None
28	1427.62	33.94	311.69	29.40	1324.94	392.13	269.97	-276.21	386.23	314.34	1.55	MWD	None
29	1457.22	33.59	312.30	29.60	1349.55	408.58	280.97	-288.44	402.67	314.25	0.50	MWD	None
30	1486.18	33.57	312.37	28.96	1373.67	424.60	291.76	-300.28	418.68	314.18	0.05	MWD	None
31	1515.35	34.00	311.71	29.17	1397.92	440.82	302.62	-312.33	434.89	314.10	0.59	MWD	None
32	1545.07	34.17	310.50	29.72	1422.53	457.46	313.57	-324.88	451.52	313.99	0.72	MWD	None
33	1573.99	33.63	309.97	28.92	1446.54	473.58	323.99	-337.19	467.62	313.86	0.65	MWD	None
34	1602.74	32.45	310.56	28.75	1470.64	489.23	334.12	-349.15	483.27	313.74	1.30	MWD	None
35	1632.66	31.89	310.51	29.92	1495.96	505.15	344.47	-361.26	499.17	313.64	0.57	MWD	None
36	1661.99	30.57	310.54	29.33	1521.04	520.34	354.36	-372.82	514.36	313.55	1.37	MWD	None
37	1691.42	28.92	310.18	29.43	1546.59	534.93	363.81	-383.95	528.94	313.46	1.72	MWD	None
38	1720.46	27.60	309.76	29.04	1572.17	548.66	372.64	-394.48	542.66	313.37	1.40	MWD	None
39	1750.04	26.32	309.58	29.58	1598.54	562.05	381.21	-404.80	556.04	313.28	1.32	MWD	None
40	1779.99	24.23	309.89	29.95	1625.62	574.81	389.38	-414.64	568.81	313.20	2.13	MWD	None
41	1808.98	22.83	310.45	28.99	1652.20	586.37	396.84	-423.48	580.36	313.14	1.49	MWD	None
42	1837.32	20.99	310.77	28.34	1678.49	596.94	403.72	-431.51	590.93	313.09	1.98	MWD	None
43	1867.39	18.74	310.60	30.07	1706.77	607.15	410.39	-439.26	601.14	313.05	2.28	MWD	None
44	1897.11	16.67	309.64	29.72	1735.08	616.17	416.21	-446.17	610.16	313.01	2.14	MWD	None
45	1926.28	15.62	309.74	29.17	1763.10	624.27	421.39	-452.41	618.26	312.97	1.10	MWD	None
46	1955.02	13.10	310.42	28.74	1790.94	631.39	425.98	-457.86	625.38	312.93	2.68	MWD	None
47	1984.70	10.07	310.16	29.68	1820.01	637.34	429.83	-462.41	631.33	312.91	3.11	MWD	None
48	2013.75	7.32	312.94	29.05	1848.72	641.73	432.73	-465.70	635.72	312.90	2.92	MWD	None
49	2044.10	4.92	317.60	30.35	1878.90	644.96	435.01	-468.00	638.95	312.91	2.46	PUP	None
50	2073.22	3.32	318.41	29.12	1907.94	647.05	436.56	-469.40	641.03	312.92	1.68	PUP	None

51	2102.90	1.71	322.36	29.68	1937.59	648.34	437.56	-470.24	642.33	312.94	1.66	PUP	None
52	2131.95	0.17	329.67	29.05	1966.64	648.81	437.94	-470.53	642.80	312.95	1.62	PUP	None
53	2161.88	0.06	37.16	29.93	1996.57	648.85	437.99	-470.54	642.84	312.95	0.16	PUP	None
54	2191.09	0.14	285.89	29.21	2025.78	648.89	438.01	-470.57	642.87	312.95	0.18	PUP	None
55	2220.65	0.11	151.26	29.56	2055.34	648.89	438.00	-470.59	642.88	312.95	0.24	PUP	None
56	2249.63	0.14	116.42	28.98	2084.32	648.83	437.96	-470.54	642.82	312.95	0.08	PUP	None
57	2279.10	0.14	131.90	29.47	2113.79	648.76	437.92	-470.48	642.75	312.95	0.04	PUP	None
58	2308.26	0.14	57.11	29.16	2142.95	648.72	437.91	-470.43	642.70	312.95	0.18	PUP	None
59	2337.63	0.17	15.68	29.37	2172.32	648.73	437.97	-470.38	642.71	312.96	0.12	PUP	None
63	2454.71	0.29	12.45	28.97	2289.40	648.74	438.05	-470.32	642.72	312.97	0.28	PUP	None
64	2483.64	0.18	307.41	28.93	2318.33	648.82	438.15	-470.34	642.81	312.97	0.28	PUP	None
65	2511.29	0.17	271.05	27.65	2345.98	648.89	438.18	-470.42	642.88	312.97	0.12	PUP	None
66	2595.54	0.46	294.45	84.25	2430.22	649.31	438.32	-470.85	643.29	312.95	0.11	MWD	None
67	2624.99	0.32	281.01	29.45	2459.67	649.49	438.39	-471.04	643.47	312.94	0.17	MWD	None
68	2653.28	0.32	280.34	28.29	2487.96	649.62	438.42	-471.19	643.61	312.94	0.00	MWD	None
69	2682.92	0.51	290.53	29.64	2517.60	649.81	438.48	-471.40	643.80	312.93	0.21	MWD	None
70	2711.80	0.60	279.20	28.88	2546.48	650.06	438.55	-471.67	644.04	312.92	0.15	MWD	None
71	2741.85	0.45	284.11	30.05	2576.53	650.29	438.60	-471.94	644.28	312.90	0.16	MWD	None
72	2771.28	0.56	279.80	29.43	2605.96	650.51	438.65	-472.19	644.50	312.89	0.12	MWD	None
73	2800.47	0.63	303.10	29.19	2635.15	650.79	438.77	-472.47	644.78	312.88	0.26	MWD	None
74	2829.52	0.22	290.40	29.05	2664.20	651.00	438.87	-472.65	644.99	312.88	0.44	MWD	None
75	2858.73	0.44	352.48	29.21	2693.41	651.14	439.00	-472.72	645.13	312.88	0.41	MWD	None
76	2887.94	0.59	335.99	29.21	2722.61	651.36	439.25	-472.79	645.35	312.89	0.22	MWD	None
77	2917.29	1.02	331.24	29.35	2751.96	651.75	439.62	-472.98	645.74	312.91	0.45	MWD	None
78	2952.39	1.45	332.66	35.10	2787.05	652.46	440.29	-473.34	646.45	312.93	0.37	MWD	None
79	2982.31	1.40	335.32	29.92	2816.96	653.16	440.96	-473.66	647.15	312.95	0.08	MWD	None
80	3011.52	1.55	343.71	29.21	2846.16	653.83	441.66	-473.92	647.82	312.98	0.27	MWD	None
81	3040.02	1.76	339.70	28.50	2874.65	654.55	442.44	-474.18	648.54	313.02	0.26	MWD	None
82	3069.79	2.05	348.59	29.77	2904.41	655.39	443.39	-474.45	649.38	313.06	0.42	MWD	None
83	3098.66	1.92	350.74	28.87	2933.26	656.19	444.37	-474.63	650.18	313.11	0.16	MWD	None
84	3128.14	1.98	351.62	29.48	2962.72	656.98	445.36	-474.78	650.97	313.17	0.07	MWD	None
85	3157.90	2.02	354.35	29.76	2992.46	657.78	446.40	-474.91	651.77	313.23	0.11	MWD	None
86	3178.27	2.11	357.54	20.37	3012.82	658.31	447.13	-474.96	652.31	313.27	0.22	MWD	None
87	3206.34	2.29	357.80	28.07	3040.87	659.08	448.20	-475.00	653.08	313.34	0.20	MWD	None
88	3266.24	3.14	352.54	59.90	3100.70	661.19	451.03	-475.26	655.21	313.50	0.45	MWD	None
89	3294.19	3.99	356.45	27.95	3128.60	662.49	452.76	-475.42	656.52	313.60	0.96	MWD	None
90	3323.56	4.58	359.67	29.37	3157.89	664.03	454.95	-475.49	658.08	313.74	0.66	MWD	None
91	**3346.89**	**4.58**	**359.67**	**23.33**	**3181.14**	**665.31**	**456.81**	**-475.50**	**659.38**	**313.85**	**0.00**	**Proj. to TD**	

Company: **ESSO Australia Pty Ltd**

Schlumberger

Well: **SNA A21A**

Field: **Snapper**

Rig: **ISDL 175**

8.50 in. Section

State: **Victoria**

VISION Density Neutron
1:200 True Vertical Depth
Recorded Mode Log (Trip Out)