

Company:	Santos Ltd./Strike Oil
Well:	Casino-1
Field:	VIC/P 44
Rig:	Ocean Bounty
	State: Victoria

Bore hole record				Casing record			
Hole size	from	to	Size	Density	from	to	
914 mm/36 in.	Seabed	130 m	762 mm	461 kg/m	Wellhead	128 m	
445 mm/17.5 in.	130 m	752 m	340 mm	101 kg/m	Wellhead	744 m	
311 mm/12.25 in.	752 m	2118 m					
Type	Mud record from	to	Min	Max	Borehole deviation record from to		
Seawater	Seabed	752 m	0 deg.	0.6 deg.	Seabed	752 m	
KCl/HPA/Glyc	752 m	2118 m	0.26 deg.	4.38 deg.	752 m	1797 m	

## Bit Run Summary

Run number		1	2	3	4						
Bit size	in.	12.25	12.25	12.25	12.25						
Bit start depth	m	752	1056	1400	1797						
Bit end depth	m	1056	1400	1797	1797						
Top interval logged	m	726	1050	1395	1792						
Bottom interval logged	m	1050	1395	1792	1792						
Begin log: time		9:00	15:30	14:30	1:30						
Begin log: date		30 Aug 02	31 Aug 02	02 Sep 02	04 Sep 02						
End log: time		11:00	23:00	9:00	2:00						
End log: date		31 Aug 02	01 Sep 02	03 Sep 02	12 Sep 02						
<b>Mud data</b>											
Depth	m	1056	1400	1797	1797						
Type		KCl/PHPA/Gly	KCl/PHPA/Gly	KCl/PHPA/Gly	KCl/PHPA/Gly						
Mud weight	ppg	8.80	8.80	9.90	10.3						
Solids	%	1.63	2.01	5.67	7.28						
Chlorides	mg/L	29000	28000	29000	30000						
Rm	ohmm@degC	0.132@22	0.135@21	0.165@20	n/a						
Rmf	ohmm@degC	0.125@22	0.127@20	0.145@21	n/a						
Rmc	ohmm@degC	0.182@21	0.190@21	0.207@20	n/a						

Potassium	mg/L	37800	37800	32400	32400						
<b>Environmental data</b>											
<b>GR</b>											
Mud weight	ppg	8.80	8.80	9.90	10.3						
Bit size	in.	12.25	12.25	12.25	12.25						
<b>Resistivity</b>											
<b>Neutron porosity</b>											
Hole Size	in.	12.25	12.25	12.25	12.25						
Mud weight	ppg	8.80	8.80	9.90	10.3						
Borehole Temperature	degC	45	58	59	n/a						
Mud salinity		n/a	n/a	n/a	n/a						
Formation salinity		n/a	n/a	n/a	n/a						
Recording rate 1	SEC	10	10	10	10	GR/Res Sonic Array					
Recording rate 2	SEC	10	10	10	10						
Filtering GR		3	3	3	3						
Filtering density		n/a	n/a	n/a	n/a						
Filtering Neutron		n/a	n/a	n/a	n/a						
Company representative		H.Flink,	S.Hodgetts	R. Subramanian							
Anadrill personnel		W.Bertheux	C.Tue	O.Radicevic							

<p style="text-align: center;"><b>DISCLAIMER</b></p> <p>THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.</p>		
<b>OTHER SERVICES FOR RUN1</b> MWD Surveys Interact	<b>OTHER SERVICES FOR RUN2</b> MWD Surveys Interact	<b>OTHER SERVICES FOR RUN3</b> MWD Surveys Interact
<b>REMARKS: RUN NUMBER 1</b> <p>The data presented is from the tool memory.  There was barrite in the mud.  CDR gamma ray is corrected for mud weight, bit size and tool size, but not environmentally corrected for potassium content in mud.  CDR resitivity is bore hole compensated but not environmentally corrected.</p> <p>ISONIC measurements are borehole compensated, but not environmentally corrected.</p> <p>Interval drilled from 752m to 1056m.  Interval logged from 726m to 1050m.  Depth is Driller's Depth.  Sensor offsets are described in Toolskech.</p> <p>Processed ISONIC data without receiver 4  Receiver 4 signal weak</p> <p>Run objective : drill vertically to TD.  POOH : to change bit due to low ROP.</p>	<b>REMARKS: RUN NUMBER 2</b> <p>The data presented is from the tool memory.  There was barrite in the mud.  CDR gamma ray is corrected for mud weight, bit size and tool size, but not environmentally corrected for potassium content in mud.  CDR resitivity is bore hole compensated but not environmentally corrected.</p> <p>ISONIC measurements are borehole compensated, but not environmentally corrected.</p> <p>Interval drilled from 1056m to 1400m.  Interval logged from 1050m to 1395m.  Depth is Driller's Depth.  Sensor offsets are described in Toolskech.</p> <p>Processed ISONIC data without receiver 4  Receiver 4 signal weak</p> <p>Run objective : drill vertically to TD.  POOH : to change bit due to low ROP.</p>	<b>REMARKS: RUN NUMBER 3</b> <p>The data presented is from the tool memory.  There was barrite in the mud.  CDR gamma ray is corrected for mud weight, bit size and tool size, but not environmentally corrected for potassium content in mud.  CDR resitivity is bore hole compensated but not environmentally corrected.</p> <p>ISONIC measurements are borehole compensated, but not environmentally corrected.</p> <p>Interval drilled from 1400m to 1797m.  Interval logged from 1395m to 1792m.  Depth is Driller's Depth.  Sensor offsets are described in Toolskech.</p> <p>Processed ISONIC data without receiver 4  Receiver 4 signal weak</p> <p>Run objective : drill vertically to TD.  POOH : to change bit due to low ROP.</p>
<p style="text-align: center;"><b>EQUIPMENT DESCRIPTION</b></p>		
<b>RUN1</b>	<b>RUN2</b>	<b>RUN3</b>

## DOWNHOLE EQ

## DOWNHOLE E

## DOWNHOLE EQ

ISONIC #  
Software verRX arr  
R-O p

27.7

25.7  
25.3

Xmitte

— 22.2

12 1/4 in  
#31327

20.5

PowerPuls  
Software ver

D&amp;I

— 14.5

CDR #9  
Software ver

Gamma

R-O P

Receiv



10.4

— 8.65

— 6.34

5.17

12 1/4 in. NB



2.8

12 1/4 in. P  
Hycalog DSX

— 0.00

MAXIMUM STRING DIA

ALL LENGTHS I

ISONIC #  
Software verRX arr  
R-O p

27.5

25.6  
25.2

Xmitte

— 22.1

12 1/4 in  
#31327

20.3

PowerPuls  
Software ver

D&amp;I

— 14.4

CDR #9  
Software ver

Gamma

R-O P

Receiv



10.3

— 8.52

— 6.21

5.04

12 1/4 in. NB



2.7

12 1/4 in. In  
Smith MJ

— 0.00

MAXIMUM STRING DIA

ALL LENGTHS I

ISONIC #  
Software verRX arr  
R-O p

27.6

25.6  
25.2

Xmitte

— 22.1

12 1/4 in  
#31327

20.4

PowerPuls  
Software ver

D&amp;I

— 14.4

CDR #9  
Software ver

Gamma

R-O P

Receiv



10.3

— 8.57

— 6.26

5.09

12 1/4 in. NB



2.8

12 1/4 in. P  
Smith MA7

— 0.00

MAXIMUM STRING DIA


ALL LENGTHS I

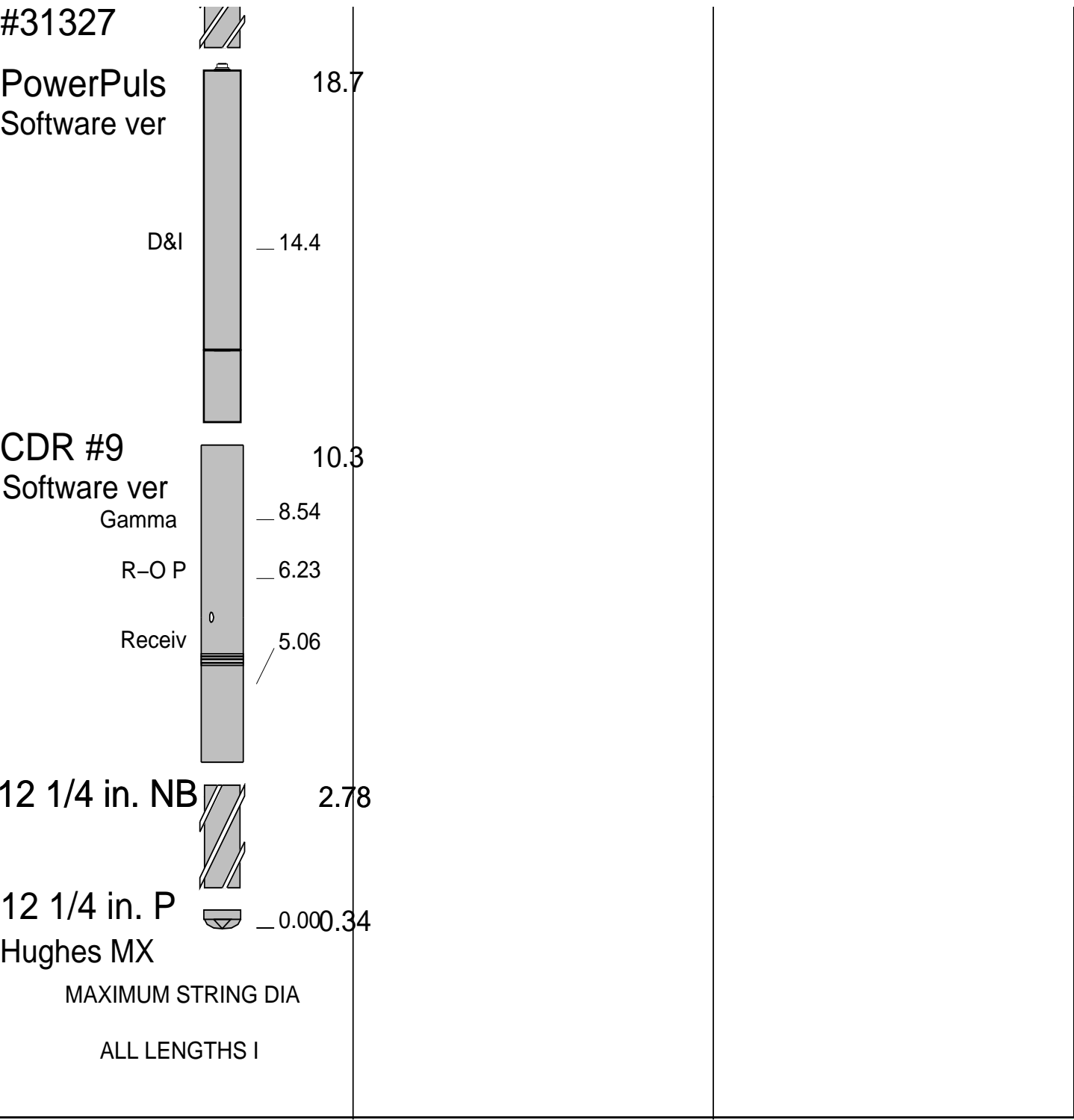
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OTHER SERVICES FOR RUN4 MWD Surveys Interact	OTHER SERVICES FOR RUN	OTHER SERVICES FOR RUN
REMARKS: RUN NUMBER 4 Gale force wind and high swell forced the rig to stop RIH, hang off the BHA in BOP and disconnect the riser. After 7 days the weather improved and the BHA was pulled out of hole. Next BHA was run to assess hole condition without MWD/LWD tools. Hole was in good condition and decision was made to drill ahead. TD was reached at 2118 m.	REMARKS: RUN NUMBER	REMARKS: RUN NUMBER

EQUIPMENT DESCRIPTION

RUN4	RUN	RUN
<div>DOWNHOLE EQ</div> <div>ISONIC #</div> <div>Software ver</div> <div>RX arr</div> <div>R-O p</div> <div>Xmitte</div> <div>12 1/4 in</div> <div></div>	<div>27.6</div> <div>25.5</div> <div>25.1</div> <div>22.0</div> <div>20.4</div>	



IDEAL Version: ID7\_OC\_02

IDF

CDR SON825

IDEAL Version: ID7\_OC\_02

IDEAL Version: ID7\_OC\_02

MWD\_10

IDEAL Version: ID7\_OC\_02

Format: ISONIC\_BHC\_Log

Vertical Scale: 1:500

Graphics File Created: 18-Sep-2002 15:10

PIP SUMMARY

ISONIC Integrated Transit Time Every 1 MS

ISONIC Integrated Transit Time Every 10 MS

ISONIC Samples

Delta-T Compressional Borehole Compensated (Depth Derived) (DTBC)

140 (US/F) 40

Coherence at Compressional Peak for the Transmitter Array (CHTA)

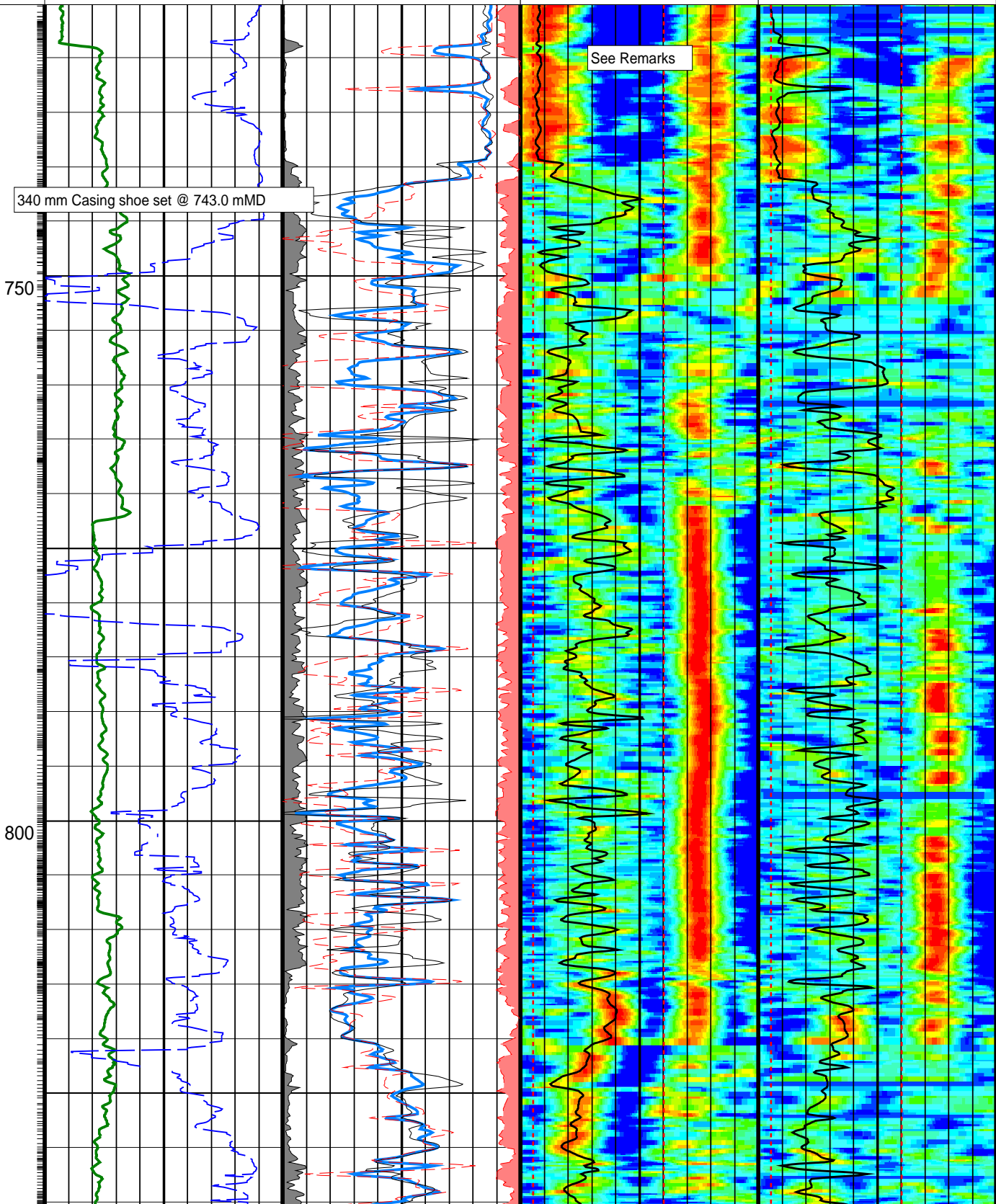
Min Amplitude Max

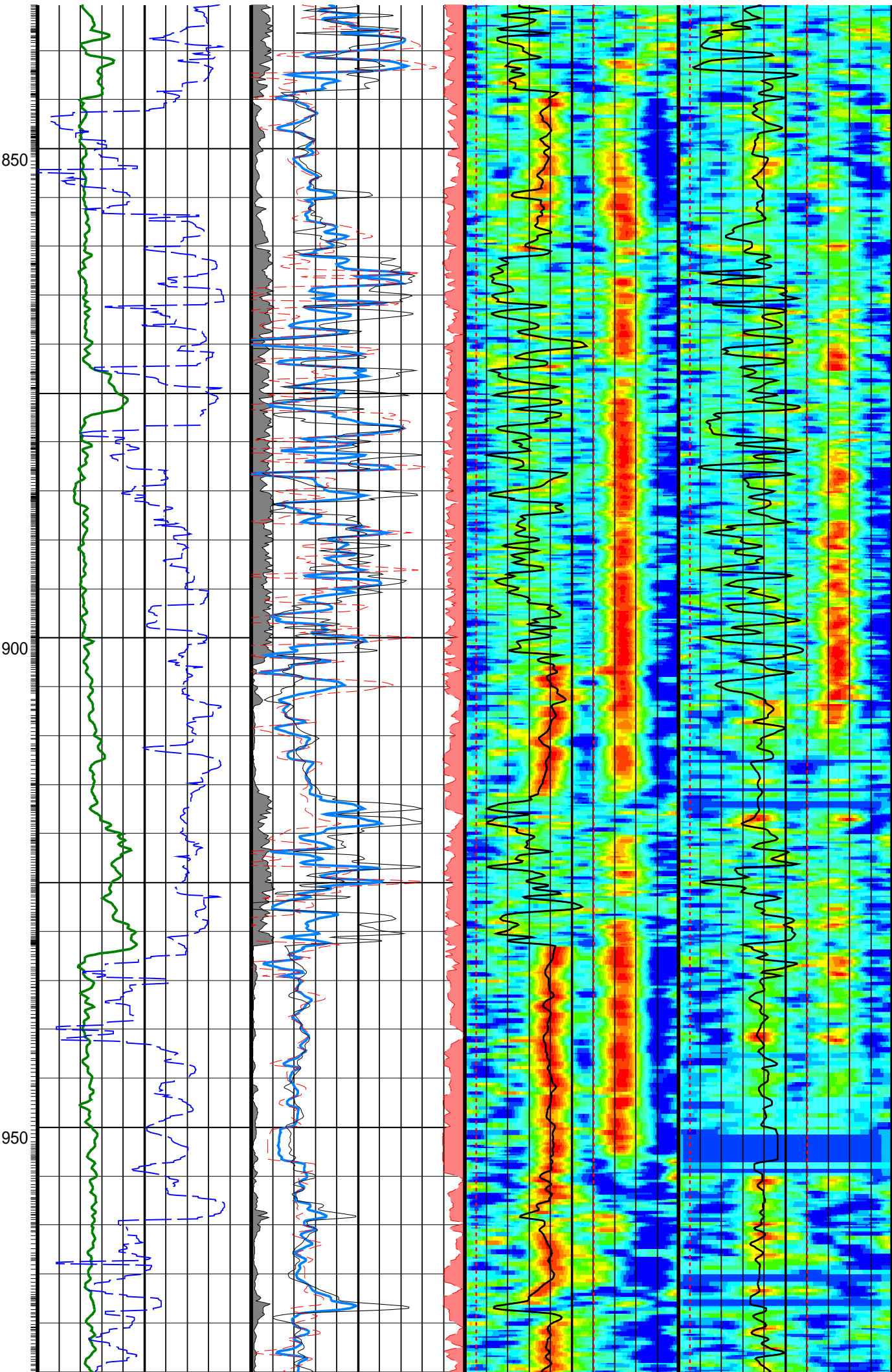
0 RCVR Projection 1

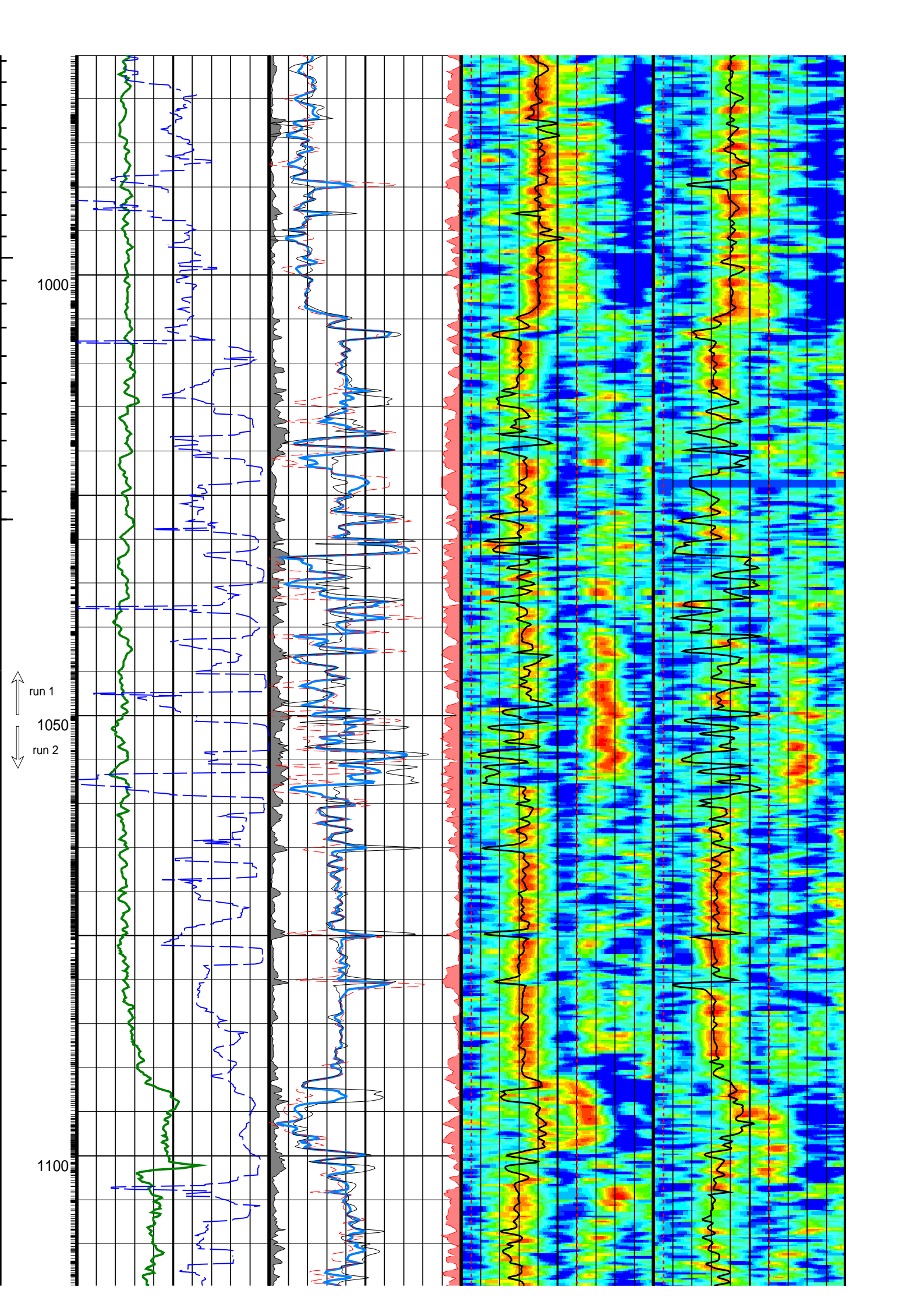
Min Amplitude Max

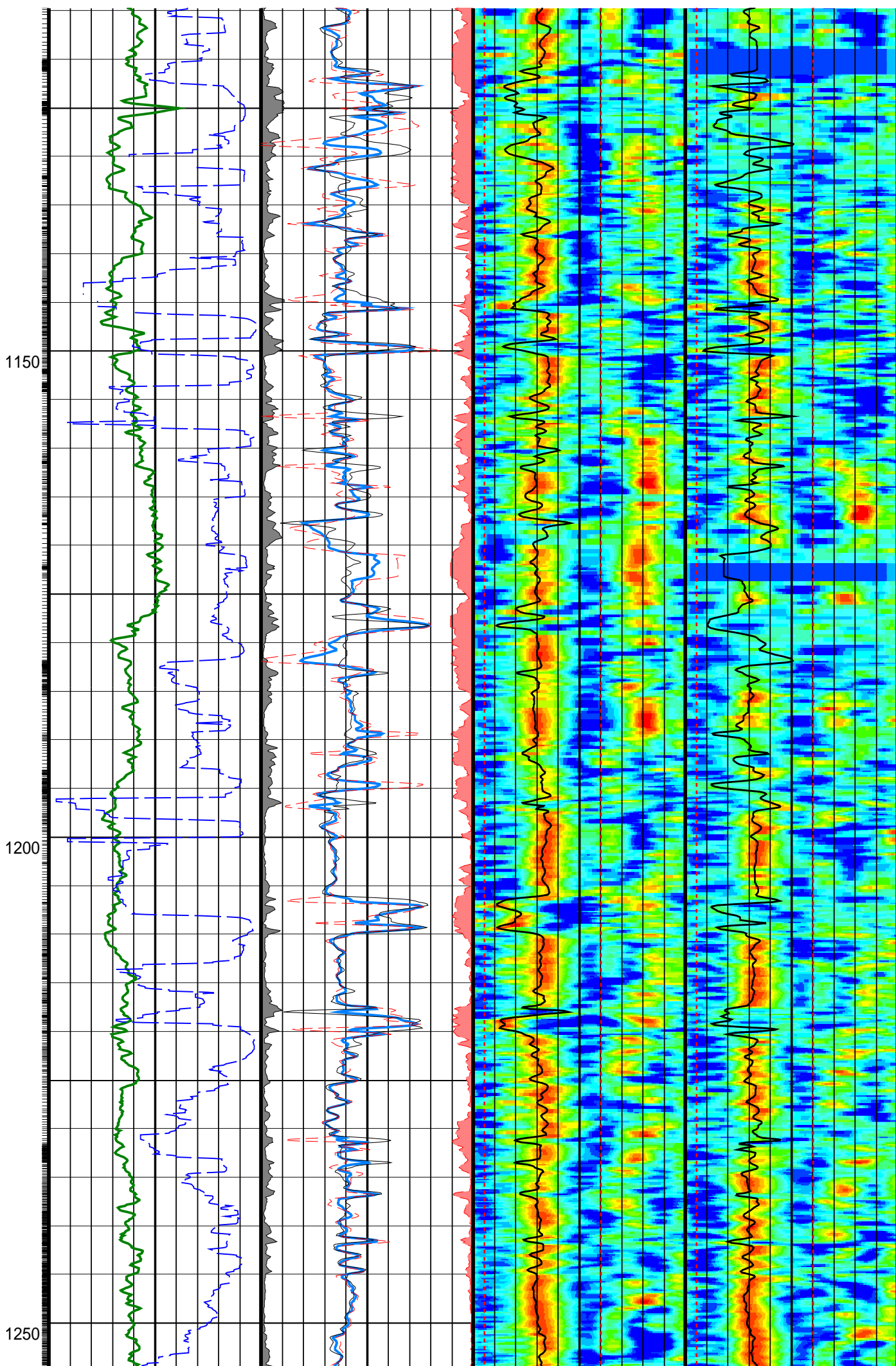
0 TRSM Projection 1

	-4 (----) 1	40 (STRA) (US/F) 240	40 (STTA) (US/F) 240
	Delta-T Compressional from Transmitter Array (DTTA)	Maximum Labeling Slowness, Compressional (MXSL)	Maximum Labeling Slowness, Compressional (MXSL)
	140 (US/F) 40	40 (US/F) 240	40 (US/F) 240
Rate of Penetration, Averaged over Last 5ft (ROP5_RM)	Coherence at Compressional Peak for the Receiver Array (CHRA)	Minimum Labeling Slowness, Compressional (MNSL)	Minimum Labeling Slowness, Compressional (MNSL)
200 (M/HR) 0	1 (----) -4	40 (US/F) 240	40 (US/F) 240
CDR Gamma Ray (GR_CDR)	Delta-T Compressional from Receiver Array (DTRA)	Delta-T Compressional from Receiver Array (DTRA)	Delta-T Compressional from Transmitter Array (DTTA)
0 (GAPI) 200	140 (US/F) 40	40 (US/F) 240	40 (US/F) 240



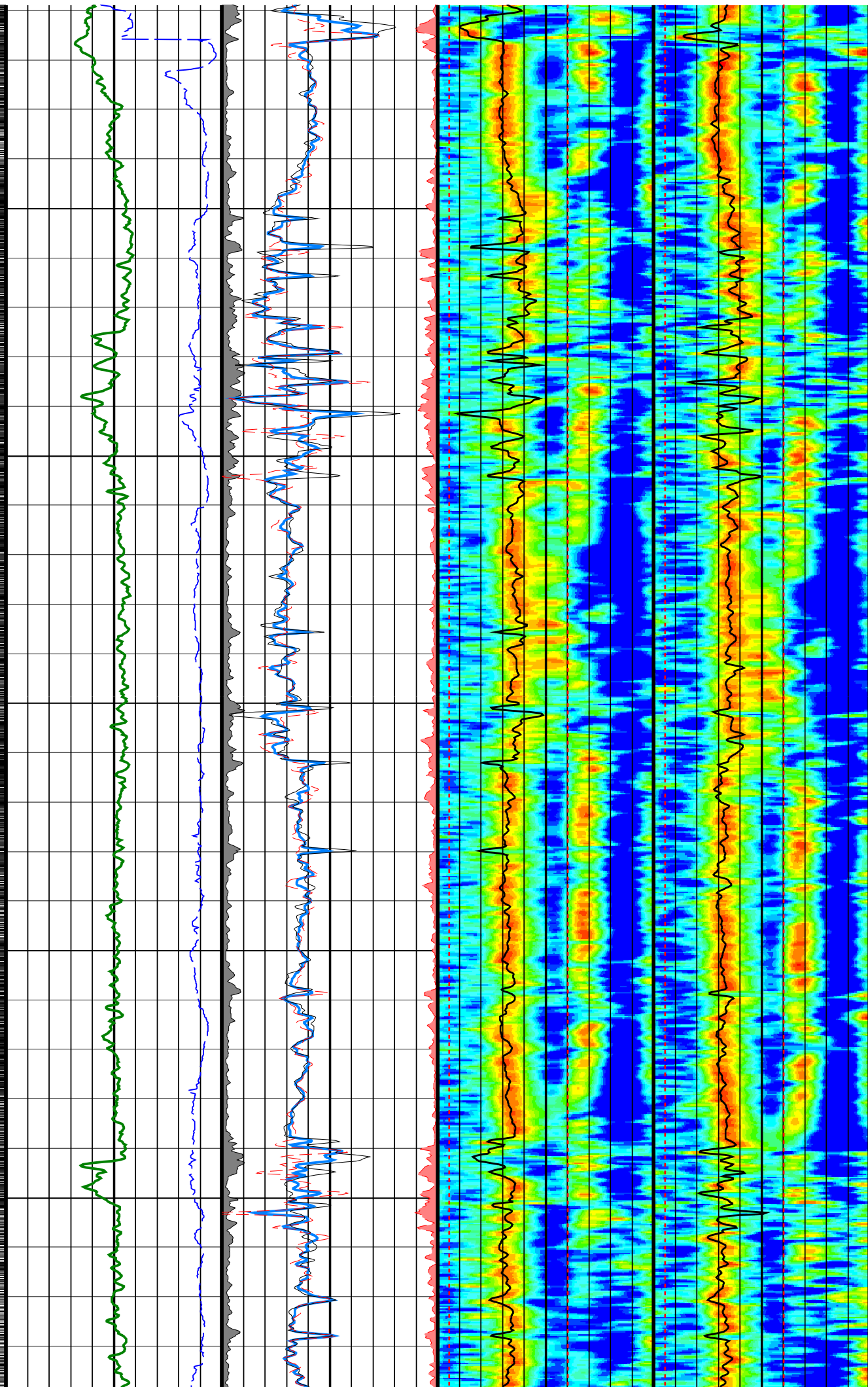




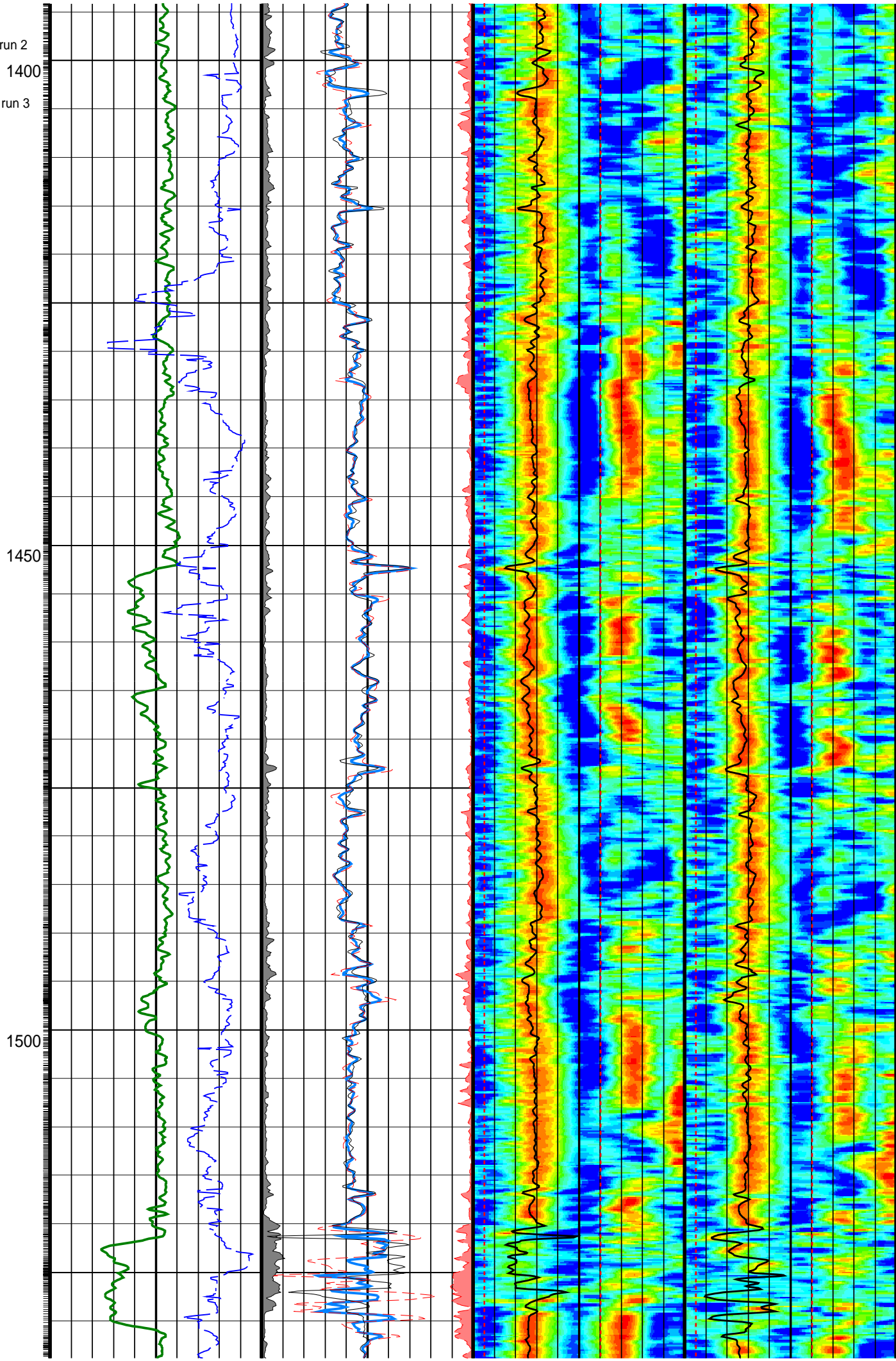


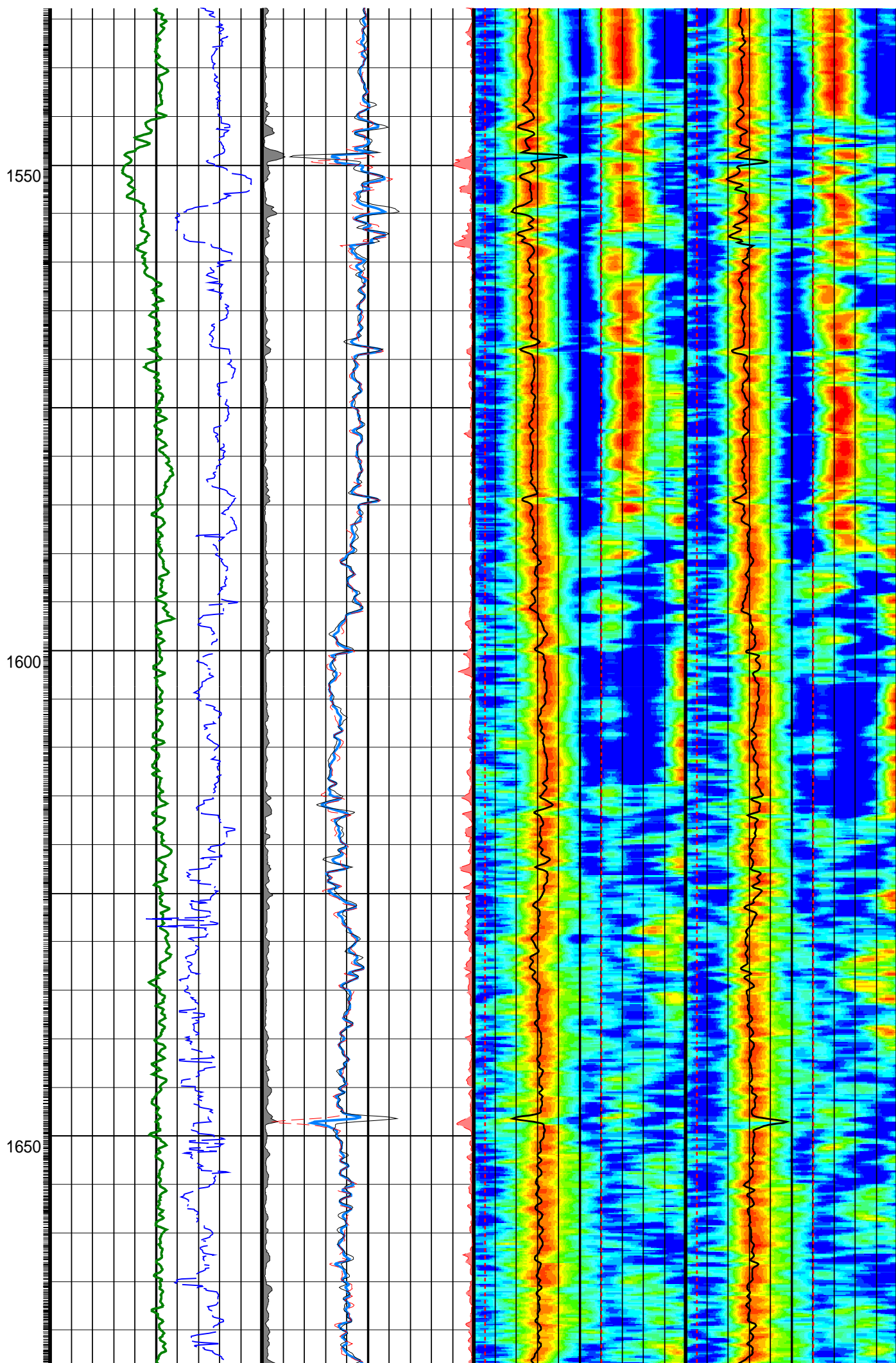
1300

1350



run 2  
run 3





1700

1750

See Remarks

Casino-1 TD @ 2118.0 mMD

CDR Gamma Ray (GR\_CDR)  
0 (GAPI) 200

Rate of Penetration, Averaged  
over Last 5ft (ROP5\_RM)  
200 (M/HR) 0

Delta-T Compressional from  
Receiver Array (DTRA)  
140 (US/F) 40

Coherence at Compressional  
Peak for the Receiver Array  
(CHRA)  
1 (----) -4

Delta-T Compressional from  
Receiver Array (DTRA)  
40 (US/F) 240

Minimum Labeling Slowness,  
Compressional (MNSL)  
40 (US/F) 240

Delta-T Compressional from  
Transmitter Array (DTTA)  
40 (US/F) 240

Minimum Labeling Slowness,  
Compressional (MNSL)  
40 (US/F) 240

	<b>Delta-T Compressional from Transmitter Array (DTTA)</b>	<b>Maximum Labeling Slowness, Compressional (MXSL)</b>	<b>Maximum Labeling Slowness, Compressional (MXSL)</b>
140	(US/F) 40	40 (US/F) 240	40 (US/F) 240
	<b>Coherence at Compressional Peak for the Transmitter Array (CHTA)</b>	Min Amplitude Max	Min Amplitude Max
-4	(----) 1	0 RCVR Projection (STRA) (US/F) 40 240 1	0 TRSM Projection (STTA) (US/F) 40 240 1
	<b>Delta-T Compressional Borehole Compensated (Depth Derived) (DTBC)</b>		
140	(US/F) 40		

PIP SUMMARY

- ISONIC Integrated Transit Time Every 1 MS
- ISONIC Integrated Transit Time Every 10 MS
- ISONIC Samples

<div>IDEAL Version: ID7_0C_02</div> <div>IDF</div>			
CDR SON825	IDEAL Version: ID7_0C_02 IDEAL Version: ID7_0C_02	MWD_10	IDEAL Version: ID7_0C_02

9.50-in. Compensated Dual Resistivity / Equipment Identification			
Primary Equipment:			
Tool Name and Serial Number	RGS9 – AA	9556	
Gamma Ray Type	Plat – GR		
Calibration Status	Valid		

Master: 17-Aug-2002 0:16											
9.50-in. Compensated Dual Resistivity Calibration											
Resistivity: Air											
Phase	Attenuation down	DB	Value	Phase	Attenuation up	DB	Value	Phase	BHC attenuation	DB	Value
Master			3.920	Master			3.912	Master			3.916
	3.290 (Minimum)	3.890 (Nominal)	4.490 (Maximum)		3.290 (Minimum)	3.890 (Nominal)	4.490 (Maximum)		3.790 (Minimum)	3.890 (Nominal)	3.990 (Maximum)

Master: 17-Aug-2002 0:16											
9.50-in. Compensated Dual Resistivity Calibration											
Resistivity: Air											
Phase	Phase shift down	DEG	Value	Phase	Phase shift up	DEG	Value	Phase	BHC phase shift	DEG	Value
Master			-0.4190	Master			0.5240	Master			0.05250
	-2.400 (Minimum)	0.1000 (Nominal)	2.600 (Maximum)		-2.400 (Minimum)	0.1000 (Nominal)	2.600 (Maximum)		-0.9000 (Minimum)	0.1000 (Nominal)	1.100 (Maximum)

Master: 18-Aug-2002 0:27											
9.50-in. Compensated Dual Resistivity Calibration											
Gamma Ray: Blanket											
Phase	Gain								Value		
Master									0.8800		
	0.8000 (Minimum) 1.000 (Nominal) 1.200 (Maximum)										

ANADRILL			
SCHLUMBERGER			
Survey report	13-Sep-2002 12:11:21	Page	1 of 2
Client.....: Santos			
Field.....: Exploration			
Well.....: Casino-1	Spud date.....: 25-Aug-02		

API number.....:  
Engineer.....: W. Bertheux, C. Tue, C. Borbas  
COUNTY.....: Ocean Bounty  
STATE.....: Victoria

Last survey date.....: 09-Sep-02  
Total accepted surveys...: 16  
MD of first survey.....: 0.00 m  
MD of last survey.....: 1797.00 m

----- Survey calculation methods-----  
Method for positions.....: Minimum curvature  
Method for DLS.....: Mason & Taylor

----- Depth reference -----  
Permanent datum.....: LAT  
Depth reference.....: Driller's Depth  
GL above permanent.....: -70.50 m  
KB above permanent.....: 0.00 m  
DF above permanent.....: 25.00 m

----- Vertical section origin-----  
Latitude (+N/S-).....: 0.00 m  
Departure (+E/W-).....: 0.00 m

----- Platform reference point-----  
Latitude (+N/S-).....: 0.00 m  
Departure (+E/W-).....: 0.00 m

Azimuth from rotary table to target: 0.00 degrees

----- Geomagnetic data -----  
Magnetic model.....: BGGM version 2002  
Magnetic date.....: 29-Aug-2002  
Magnetic field strength...: 1220.75 HCNT  
Magnetic dec (+E/W-).....: 10.87 degrees  
Magnetic dip.....: -70.06 degrees

----- MWD survey Reference Criteria -----  
Reference G.....: 1000.08 mGal  
Reference H.....: 1220.75 HCNT  
Reference Dip.....: -70.06 degrees  
Tolerance of G.....: (+/-) 2.50 mGal  
Tolerance of H.....: (+/-) 6.00 HCNT  
Tolerance of Dip.....: (+/-) 0.45 degrees

----- Corrections -----  
Magnetic dec (+E/W-).....: 10.87 degrees  
Grid convergence (+E/W-)..: -1.07 degrees  
Total az corr (+E/W-).....: 11.94 degrees  
(Total az corr = magnetic dec - grid conv)  
Sag applied (Y/N).....: No degree: 0.00

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ANADRILL SCHLUMBERGER Survey Report

13-Sep-2002 12:11:21

Page 2 of 2

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/ 10m)	Srvy tool type	Tool qual type
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIP	-
2	766.75	0.60	342.17	766.75	766.74	3.82	3.82	-1.23	4.01	342.17	0.01	MWD	6-axis
3	855.00	0.26	216.64	88.25	854.98	4.10	4.10	-1.49	4.36	340.03	0.09	MWD	6-axis
4	912.40	0.54	155.43	57.40	912.38	3.75	3.75	-1.46	4.02	338.79	0.08	MWD	6-axis
5	969.94	0.83	135.97	57.54	969.92	3.20	3.20	-1.05	3.37	341.81	0.06	MWD	6-axis
6	1041.08	1.20	191.94	71.14	1041.05	2.11	2.11	-0.85	2.27	338.03	0.14	MWD	6-axis
7	1084.57	1.29	209.06	43.49	1084.53	1.23	1.23	-1.18	1.71	316.20	0.09	MWD	6-axis
8	1170.44	0.93	192.51	85.87	1170.38	-0.29	-0.29	-1.80	1.83	260.74	0.06	MWD	6-axis
9	1256.72	1.44	181.17	86.28	1256.64	-2.06	-2.06	-1.98	2.85	223.78	0.06	MWD	6-axis
10	1382.12	1.87	182.17	125.40	1381.99	-5.68	-5.68	-2.08	6.05	200.15	0.03	MWD	6-axis
11	1458.48	2.13	183.87	76.36	1458.31	-8.34	-8.34	-2.23	8.63	194.95	0.03	MWD	6-axis
12	1546.07	2.74	185.63	87.59	1545.82	-12.05	-12.05	-2.54	12.31	191.92	0.07	MWD	6-axis
13	1605.53	3.09	184.83	59.46	1605.20	-15.06	-15.06	-2.82	15.32	190.60	0.06	MWD	6-axis
14	1690.72	3.44	188.91	85.19	1690.25	-19.87	-19.87	-3.41	20.16	189.73	0.05	MWD	6-axis
15	1775.86	4.38	192.34	85.14	1775.19	-25.57	-25.57	-4.50	25.97	189.97	0.11	MWD	6-axis

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Company: Santos Ltd./Strike Oil

Schlumberger

Well: Casino-1

Field: VIC/P 44

Rig: Ocean Bounty

State: Victoria

ISONIC

Measured Depth 1:500

Recorded Mode

