Realtime Log

Natural Formation Evaluation
Gamma Ray

Scale: 1:600 Measured Depth	**Company:** Extraction Oil & Gas
	Well: DT-Martinez 1-5-6
	Field: Weld County
	County: Continental US **State:** Colorado
Status: **Final Print**	Surface Location: Latitude: 40° 26' 07.296" N Longitude: 104° 41' 01.428" W SEC: 05 TWP: 05N RNG: 65W
API Number: 05-123-41029-00	Other Services: Directional VSS

Permanent Datum (P.D.): Mean Sea Level Elevation: 4640.00 ft.
Log Measured From: Rig Floor 4655.00 ft. Above P.D.
Depth Reference: Driller's Depth

Elevations:
KB: N/A
DF: 4655.00 ft.
GL: 4640.00 ft.

Interval Logged		Dates		Magnetic Field Reference			
Top:	6500.0 ft.	Date From:	30/Mar/15	Dip Angle:	66.96 °	Azi Reference North:	True
Bottom:	14727.0 ft.	Date To:	05/Apr/15	Total		Mag to Reference	
		Spud Date:	30/Mar/15	Field Strength:	52699.0 nT	North Correction:	8.44 °

Borehole Record			Casing Record			
Hole Size	From	To	Size	Weight	From	To
13.500 in.	Surface	1075.0 ft.	9.625 in.	36.00 lb/ft	Surface	1063.0 ft.
8.750 in.	1075.0 ft.	7658.0 ft.	7.000 in.	26.00 lb/ft	Surface	7641.0 ft.
6.125 in.	7658.0 ft.	14727.0 ft.				

Mud Record			Deviation Record			
Type	From	To	Hole Size	Interval	Inc / Az (Start)	Inc / Az (End)
Water Based	Surface	14727.0 ft.	13.500 in.	1060.0 ft.	0.0 ° / 0.0 °	2.8 ° / 244.7 °
			8.750 in.	6583.0 ft.	2.8 ° / 244.7 °	81.7 ° / 271.1 °
			6.125 in.	7069.0 ft.	81.7 ° / 271.1 °	90.2 ° / 273.4 °
					/	/
					/	/
					/	/

Acquisition System	Software Version	Other	
Advantage	2.20U4	Rig:	Savanna 802 / Savanna Drilling
PATS	6.4.1.34	Job No:	7163192
		District: / Unit:	RMA / D&E

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Log Run Summary

LWD Run No.	BHA Run No.	Bit Run No.	Bit Size (in.)	Bit Type	Bit Gauge Length (in.)	Assembly Type	Logged Interval Top (ft.)	Logged Interval Bottom (ft.)	Bit Depth Interval From (ft.)	Bit Depth Interval To (ft.)	Date / Time Start		Date / Time End		Circ. Time (hrs.)
1	1	1	13.500	Tri-cone	10.000	Mud Motor	15.0	1014.0	15.0	1075.0	03/30/15	19:00	03/31/15	07:30	7.6
2	2	2	8.750	PDC	3.000	Mud Motor	1014.0	7593.0	1075.0	7658.0	03/31/15	15:45	04/02/15	05:00	20.8
3	3	3	6.125	PDC	6.500	Mud Motor	7593.0	14664.0	7658.0	14727.0	04/02/15	23:00	04/05/215	16:00	54.7

Crew

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
Kristoffer Peterson	30/Mar/2015	05/Apr/2015	James Stover	30/Mar/2015	02/Apr/2015	Juan Chaparro	02/Apr/2015	05/Apr/2015
Nathan Leopold	30/Mar/2015	05/Apr/2015	Enyonam Anyigba	30/Mar/2015	05/Apr/2015			

Mud Properties Record

Date / Time	LWD Run No.	Measured Depth (ft.)	Mud Type	Density (ppg)	Viscosity (cp)	pH	Fluid Loss (cc)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
04/01/15 06:30	2	6287.0	Water Based Mud	9.6	37	9.0	N/A	0 / 91.7	Active Mud Pit	500	N/A
04/02/15 09:00	2	7689.0	Water Based Mud	10.3	47	8.8	N/A	0 / 88.2	Active Mud Pit	500	N/A
04/03/15 09:00	3	8629.0	Water Based Mud	9.2	34	9.8	N/A	0 / 93.7	Active Mud Pit	400	N/A
04/04/15 09:00	3	12784.0	Water Based Mud	9.6	38	8.5	N/A	0 / 89.7	Active Mud Pit	400	N/A

Mnemonics

Curve	Description	Units
GRAX	Gamma Ray - Apparent	API
ROPA	Rate of Penetration 3.0 ft Avg ROP AVG	ft/hr
TVD	True Vertical Depth	ft
WOBA	Surface Weight On Bit 1.0 ft Avg WOB AVG	klbf
TCDX	Downhole Temperature	degF
GRTX	Gamma Ray Time Since Drilled	mins
GRSI	Gamma Ray Sliding Indicator	unitless
GRIX	Gamma Ray Data Point Indicator	unitless

Equipment and Service Data

LWD Run No.	Tool	Serial Number	Measurement	Bit Offset (ft)	Max O.D. (in.)	Min I.D. (in.)
1	DIR	12497605	Directional	70.18	6.750	3.250
1	SRIG	10585205	Gamma	66.80	6.750	3.250
2	DIR	11710699	Directional	65.29	6.750	3.250
2	SRIG	10658452	Gamma	61.83	6.750	3.250
3	DIR	12592552	Directional	63.42	4.750	2.315
3	SRIG	12586749	Gamma	60.04	4.750	2.315

Service and Tool Mnemonics

Mnemonic	Name	Description
DIR	Directional	Wellbore directional survey
SRIG	Inclination and Gamma	Probe based gamma ray and inclination module

Comments

(1) A sliding indicator is shown to the left of track 1 as a heavy green line. The indicator has been depth-shifted to the gamma sensor offset to correspond with data acquired while sliding.

(2) Depth measurements were obtained from a depth tracking system not supplied or operated by Baker Hughes. Due to the lack of control by Baker Hughes LWD logging engineers, depth calibrations and measurements could not be independently verified and the unverified depths as supplied to Baker Hughes are being used to present logging data.

(3) Baker Hughes INTEQ run 1 utilized 6 3/4 inch NaviGamma (Gamma Ray and Directional) behind a 13 1/2 inch bit and steerable assembly from 15 to 1075 feet MD (15 feet to 1074 feet TVD).

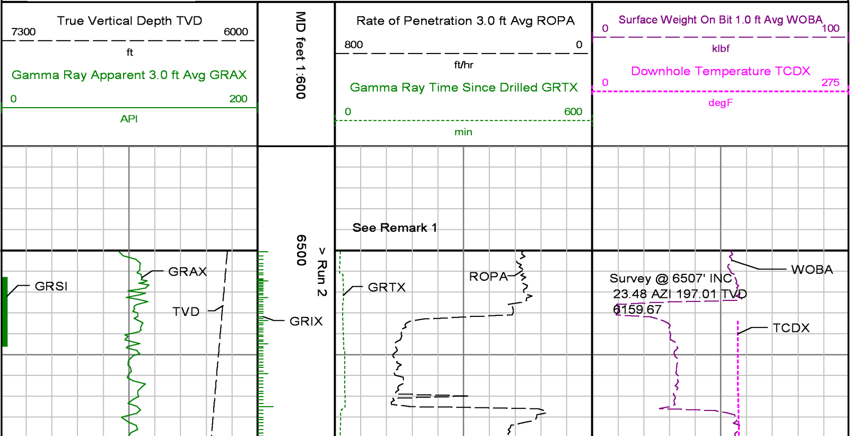
(4) Baker Hughes LWD run 2 utilized 6 3/4 inch NaviGamma Services (VSS, Directional, and Gamma Ray) behind an 8 3/4 inch bit and steerable assembly from 1075 to 7658 feet MD (1074 to 6895 feet TVD).

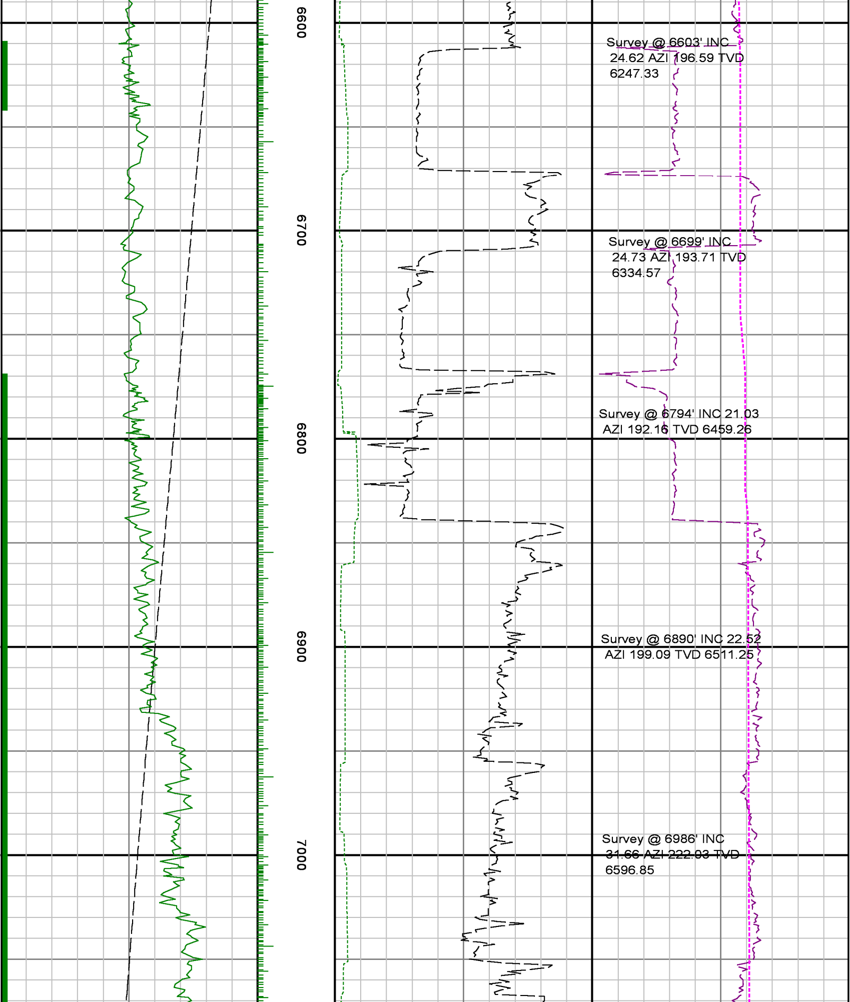
(5) Baker Hughes LWD run 3 and 4 utilized 4 3/4 inch NaviGamma Services (VSS, Directional, and Gamma Ray) behind and 6 1/8 inch bit and steerable assembly from 7658 to 14727 feet MD (6895 to 6892 feet TVD).

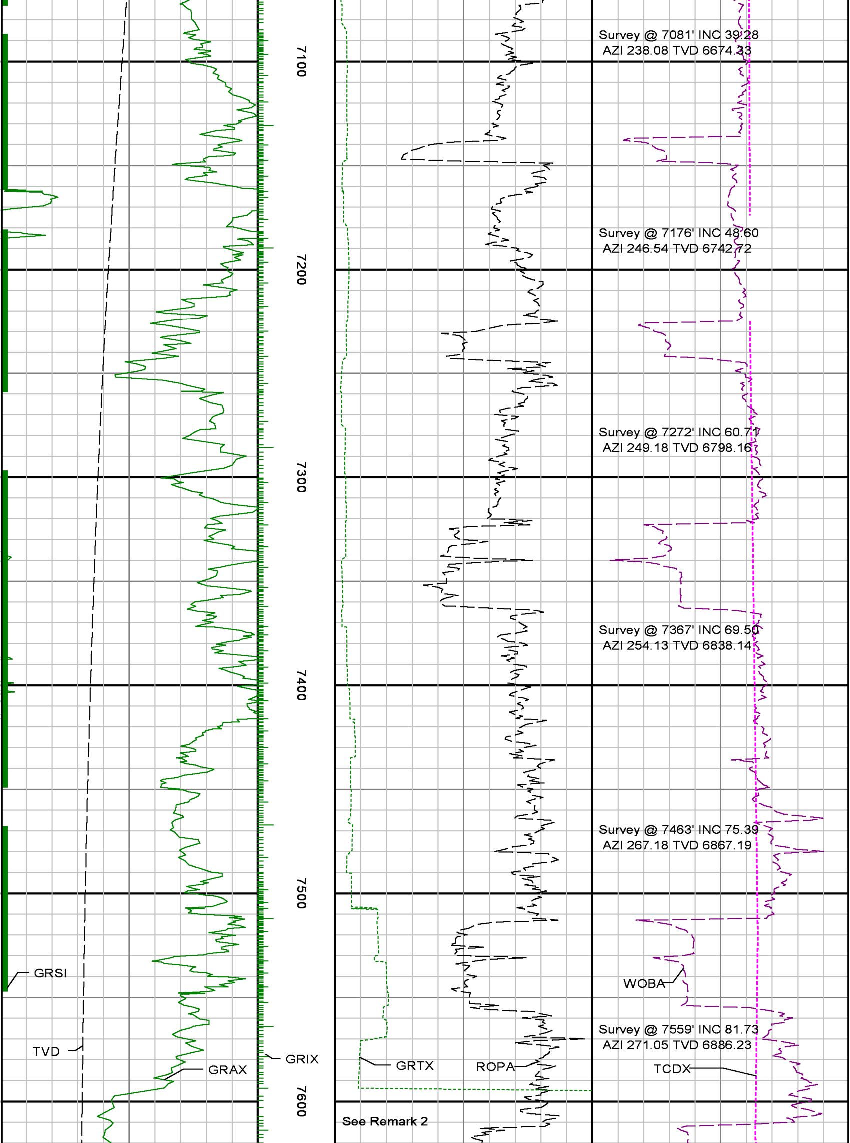
Remarks

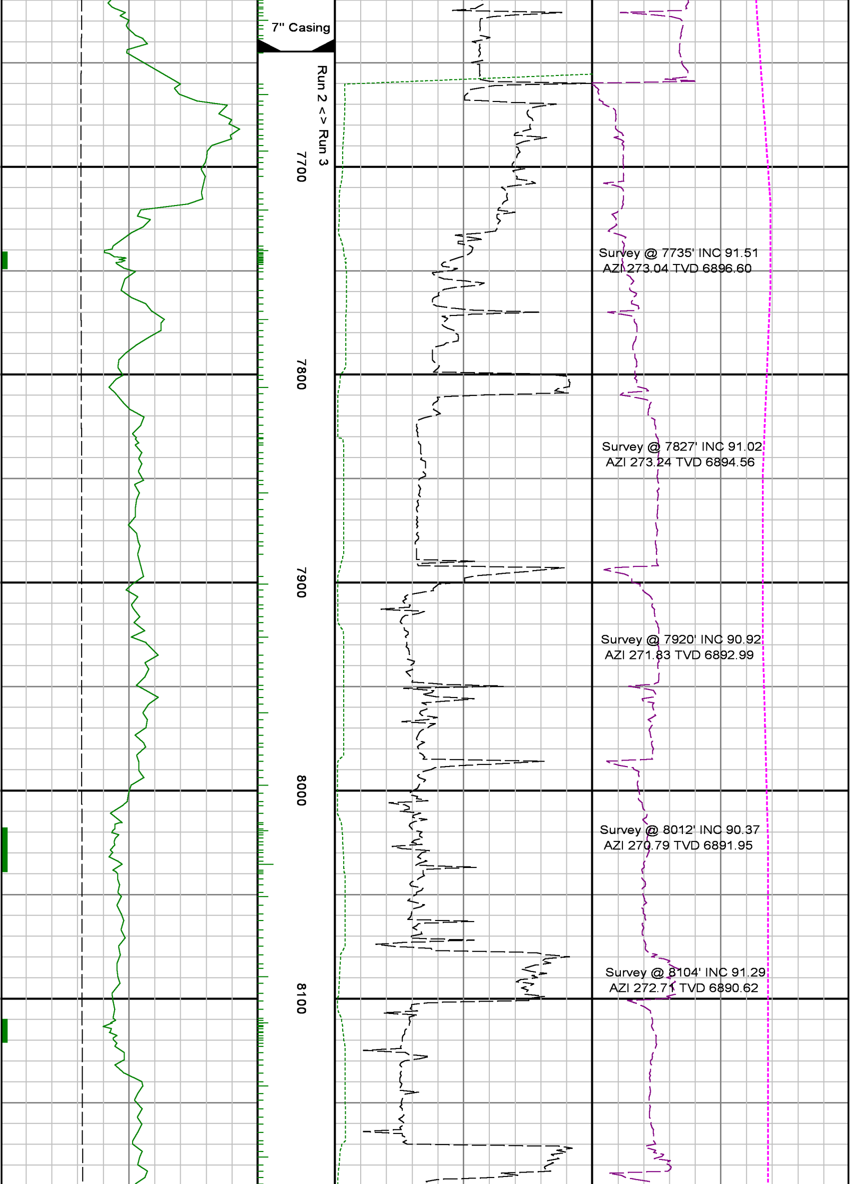
Number	Measured Depth (ft)	Hole Section (in.)	LWD Run No.	Remark
1	6500	8.750	2	The interval from surface to 6500 feet MD (6153 feet TVD) was not logged since logging services began at kick off point.
2	7611	8.750	2	The interval between 7593 to 7658 feet MD (6890 to 6895 feet TVD) was not logged for up to 30.35 hours due to casing and cementing operations
3	14677	6.125	3	The interval from 14667 to 14727 feet MD (6892 to 6892 feet TVD) was not logged due to bit to sensor offset at TD

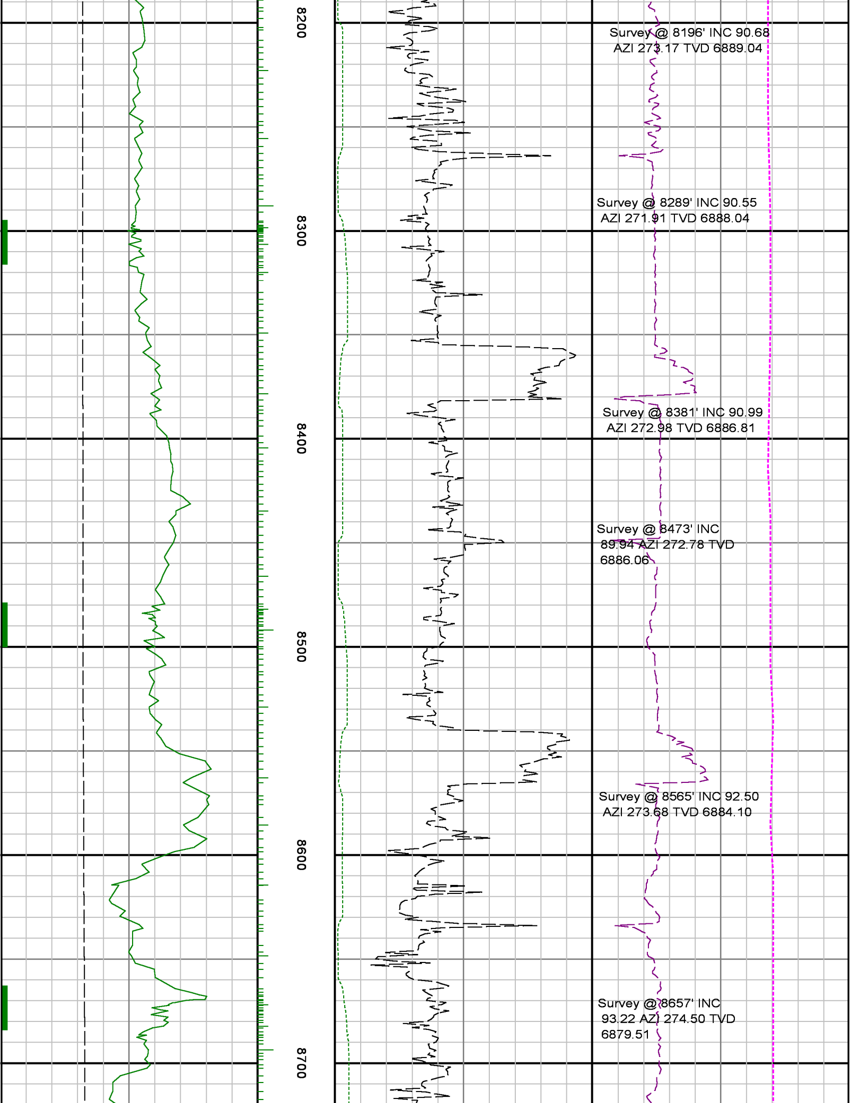
Company : Extraction Oil & Gas
Well : DT-MARTINEZ 1-5-6
Interval : 6450.00 - 14800.00 feet
Created : 05/Apr/2015 4:38:36 AM

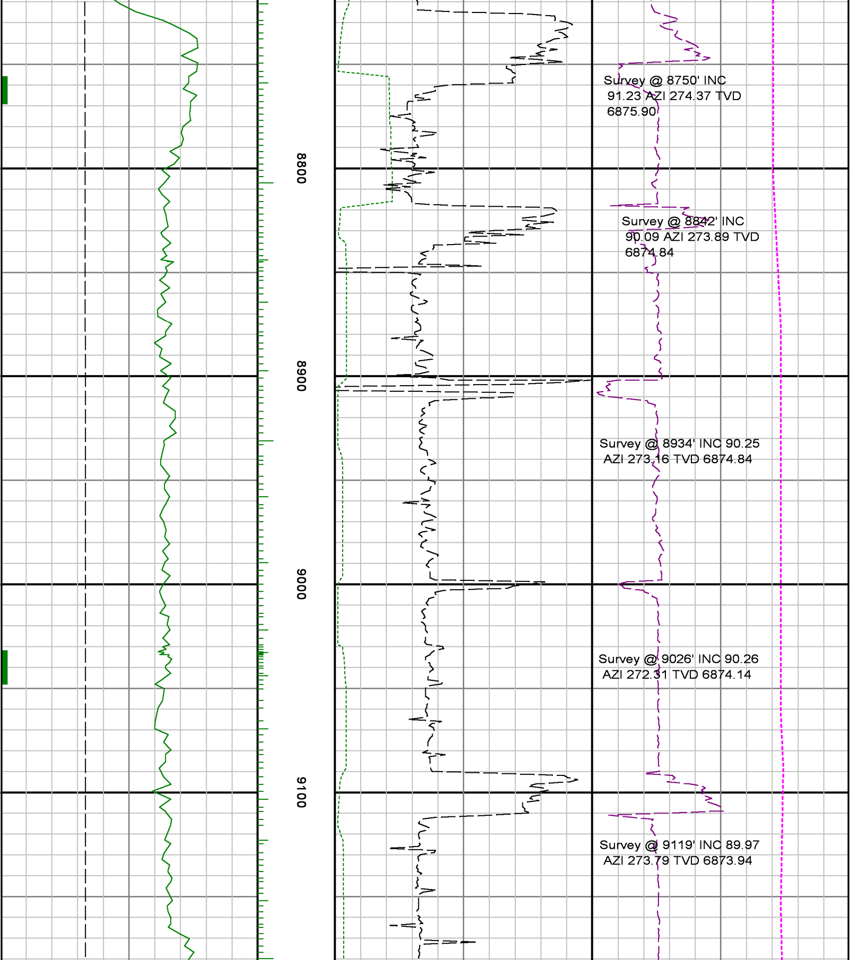












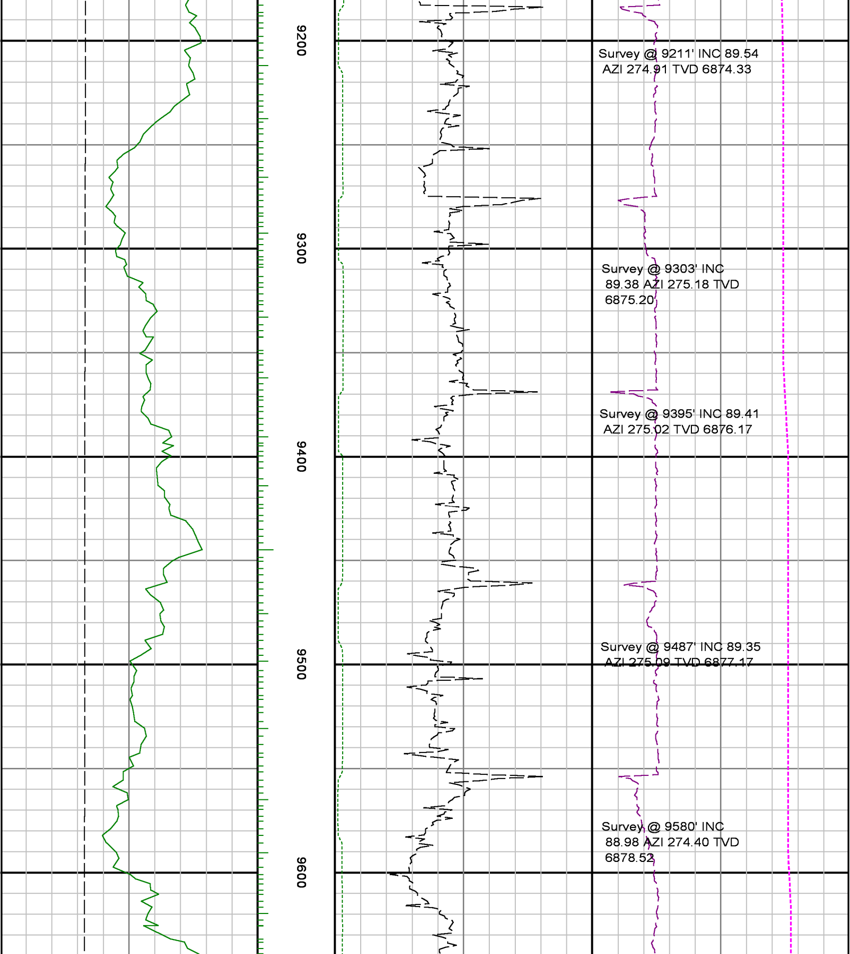
Survey @ 8750' INC 91.23 AZI 274.37 TVD 6875.90

Survey @ 8842' INC 90.09 AZI 273.89 TVD 6874.84

Survey @ 8934' INC 90.25 AZI 273.16 TVD 6874.84

Survey @ 9026' INC 90.26 AZI 272.31 TVD 6874.14

Survey @ 9119' INC 89.97 AZI 273.79 TVD 6873.94



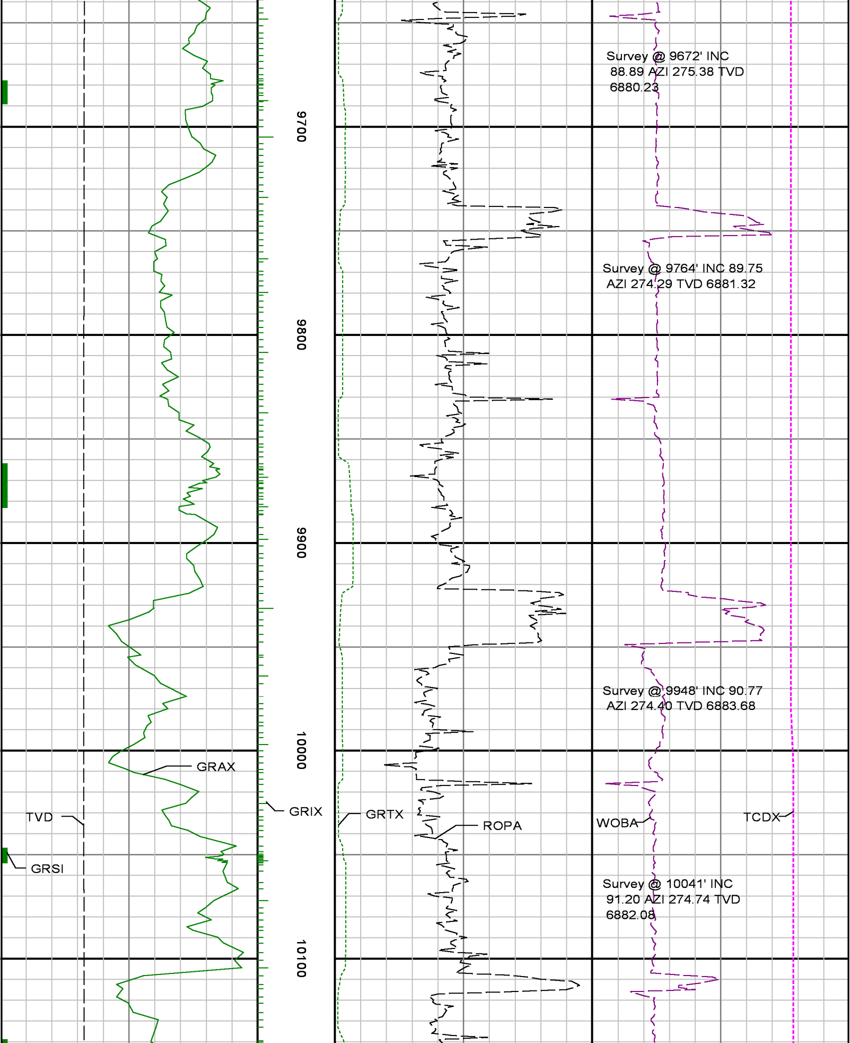
Survey @ 9211' INC 89.54 AZI 274.91 TVD 6874.33

Survey @ 9303' INC 89.38 AZI 275.18 TVD 6875.20

Survey @ 9395' INC 89.41 AZI 275.02 TVD 6876.17

Survey @ 9487' INC 89.35 AZI 275.09 TVD 6877.17

Survey @ 9580' INC 88.98 AZI 274.40 TVD 6878.52

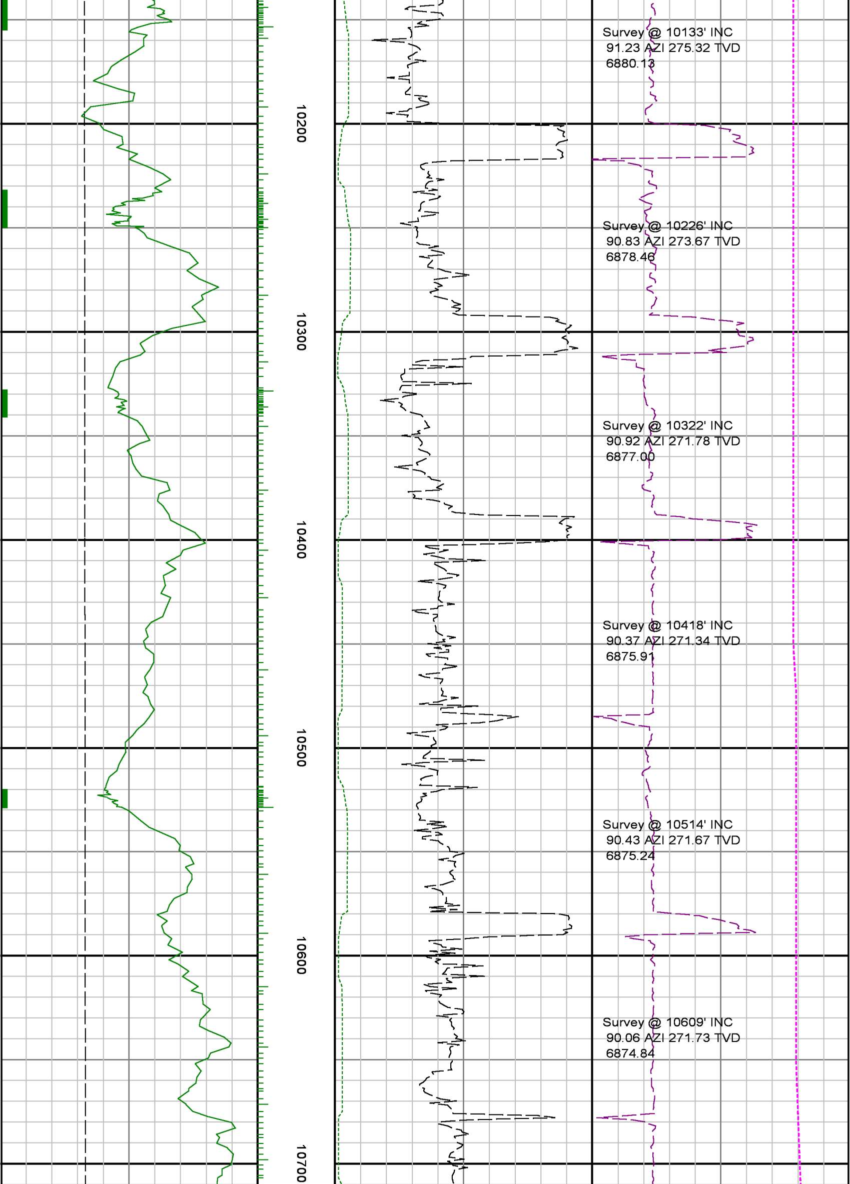


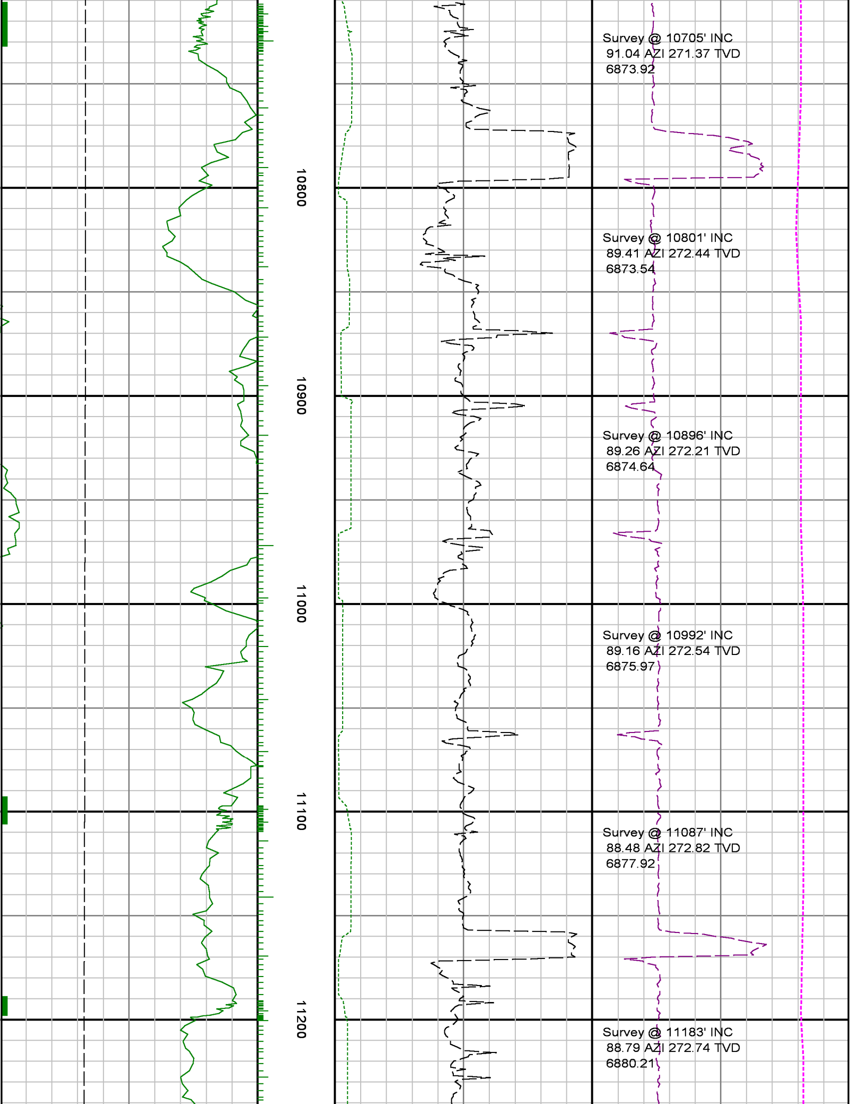
Survey @ 9672' INC 88.89 AZI 275.38 TVD 6880.23

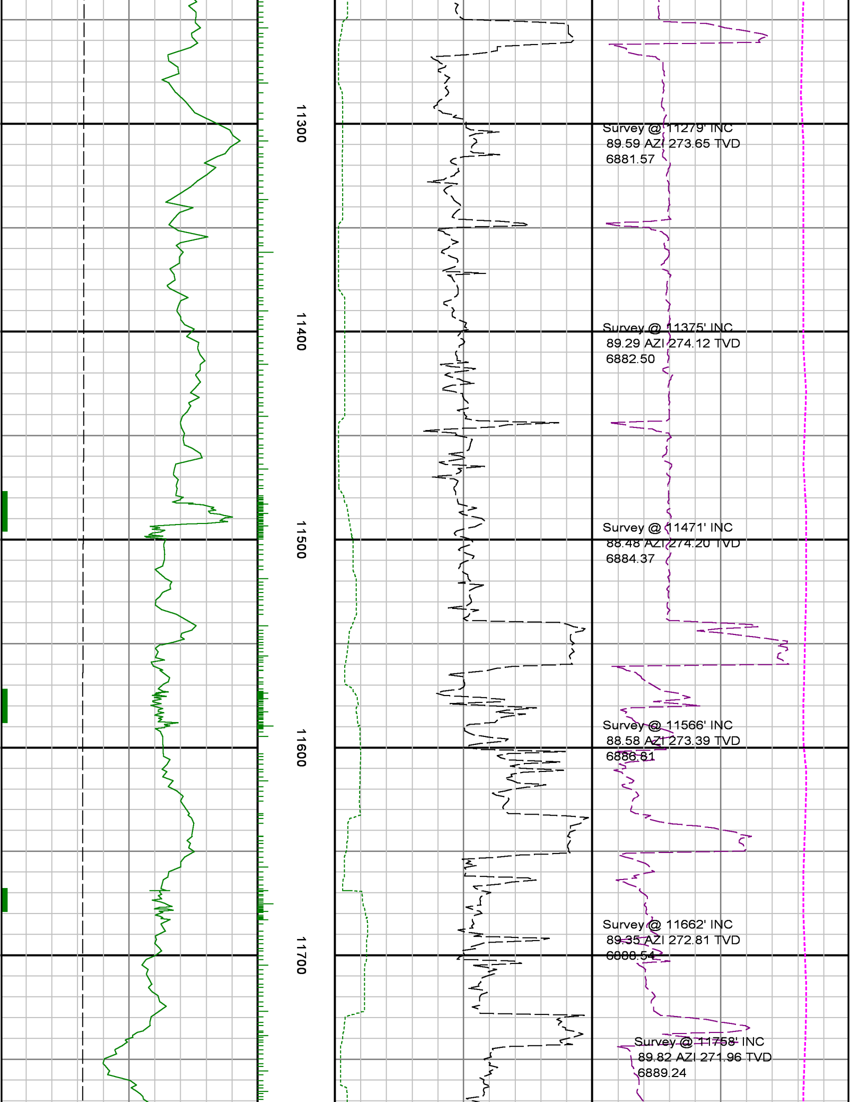
Survey @ 9764' INC 89.75 AZI 274.29 TVD 6881.32

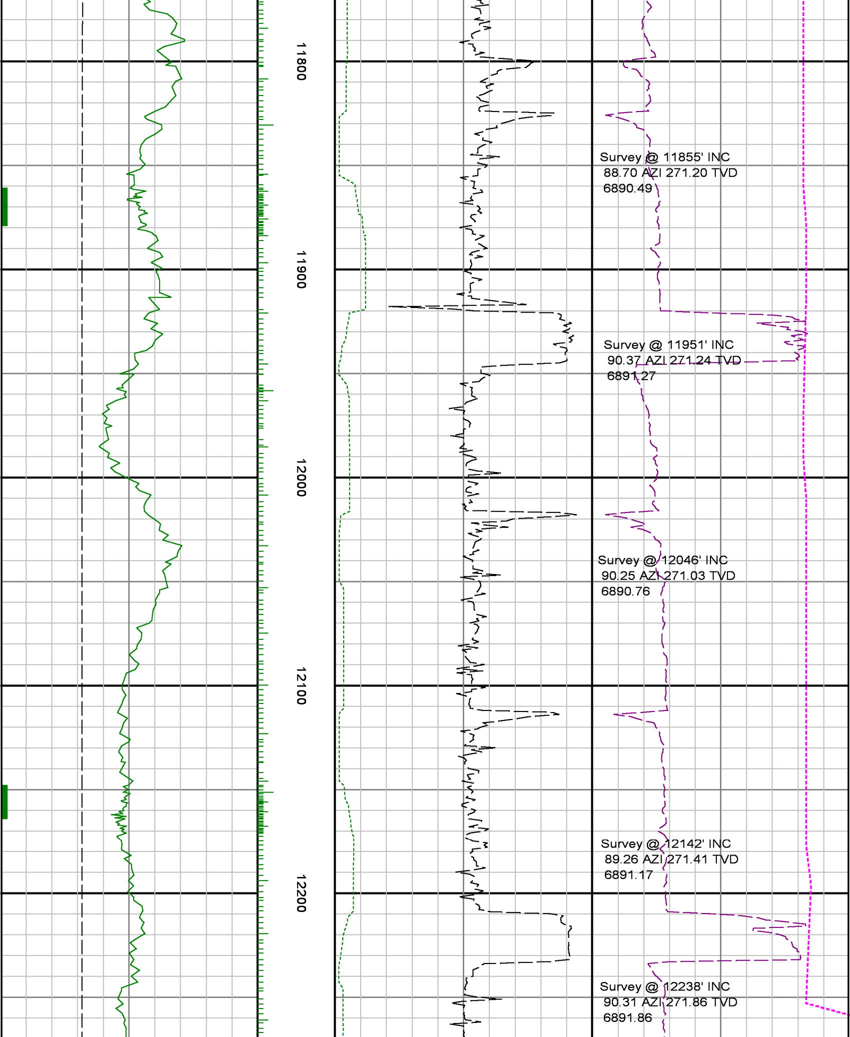
Survey @ 9948' INC 90.77 AZI 274.40 TVD 6883.68

Survey @ 10041' INC 91.20 AZI 274.74 TVD 6882.08









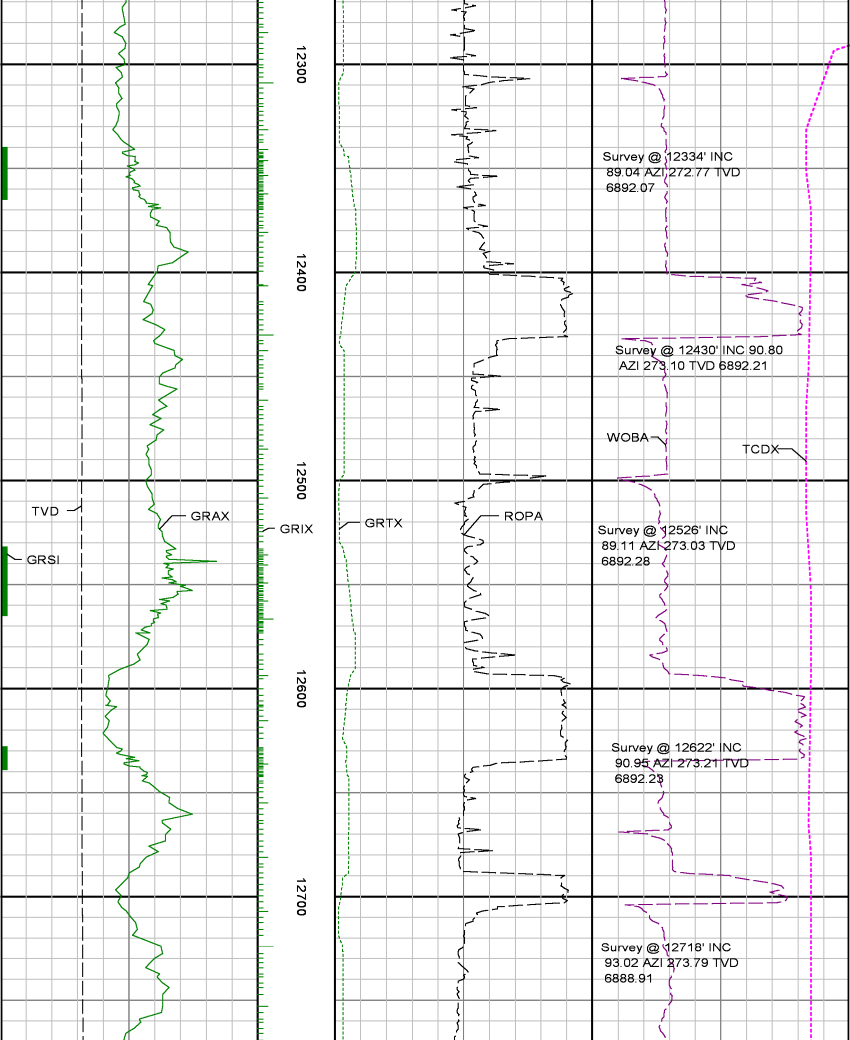
Survey @ 11855' INC 88.70 AZI 271.20 TVD 6890.49

Survey @ 11951' INC 90.37 AZI 271.24 TVD 6891.27

Survey @ 12046' INC 90.25 AZI 271.03 TVD 6890.76

Survey @ 12142' INC 89.26 AZI 271.41 TVD 6891.17

Survey @ 12238' INC 90.31 AZI 271.86 TVD 6891.86



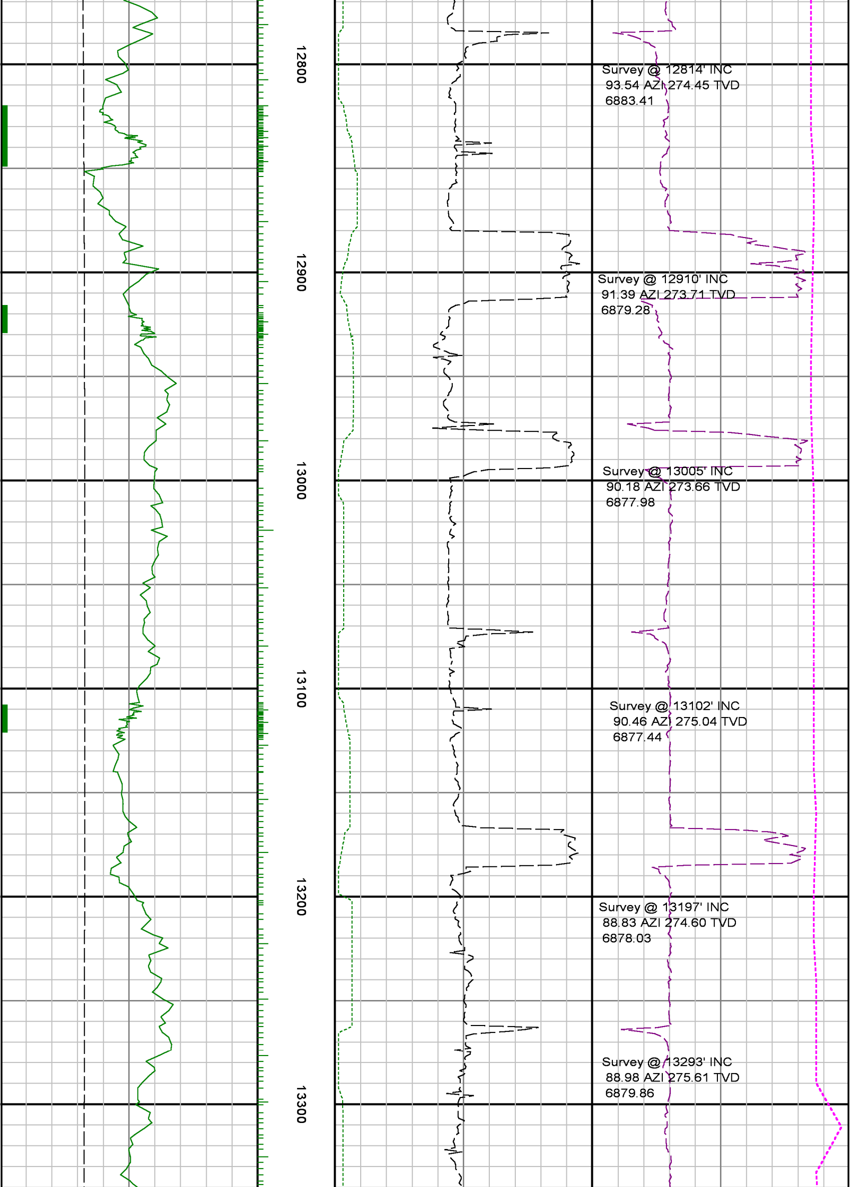
Survey @ 12334' INC 89.04 AZI 272.77 TVD 6892.07

Survey @ 12430' INC 90.80 AZI 273.10 TVD 6892.21

Survey @ 12526' INC 89.11 AZI 273.03 TVD 6892.28

Survey @ 12622' INC 90.95 AZI 273.21 TVD 6892.23

Survey @ 12718' INC 93.02 AZI 273.79 TVD 6888.91



Survey @ 12814' INC 93.54 AZI 274.45 TVD 6883.41

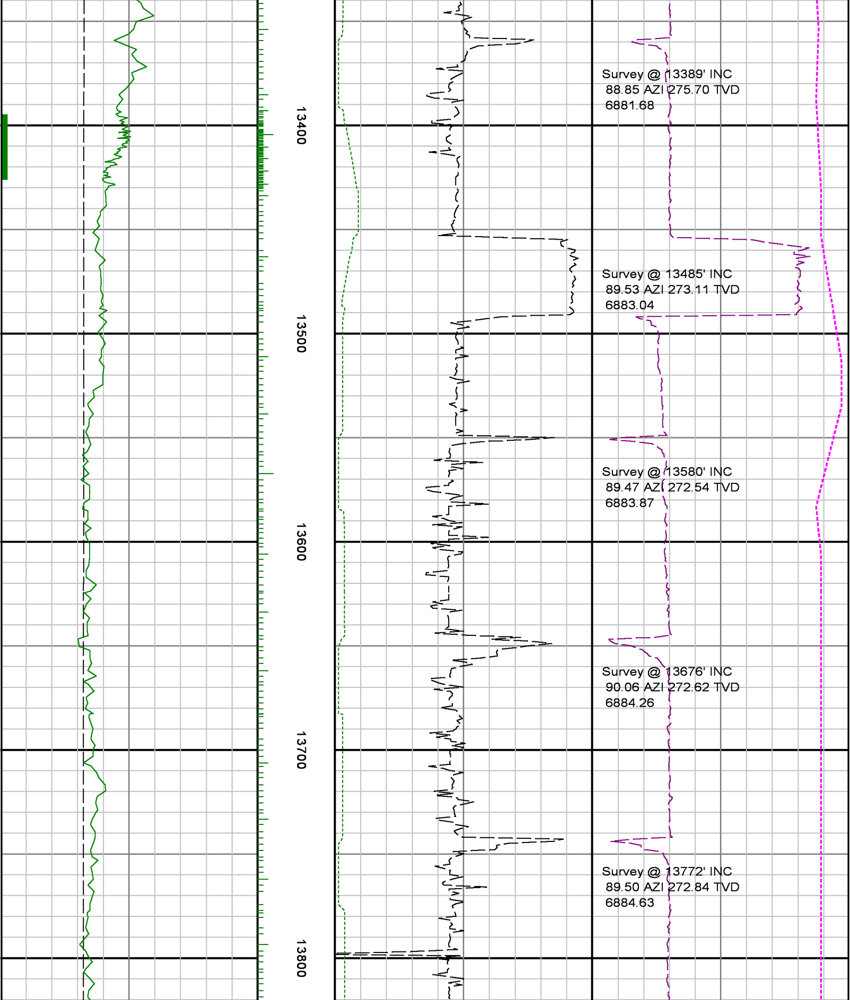
Survey @ 12910' INC 91.39 AZI 273.71 TVD 6879.28

Survey @ 13005' INC 90.18 AZI 273.66 TVD 6877.98

Survey @ 13102' INC 90.46 AZI 275.04 TVD 6877.44

Survey @ 13197' INC 88.83 AZI 274.60 TVD 6878.03

Survey @ 13293' INC 88.98 AZI 275.61 TVD 6879.86



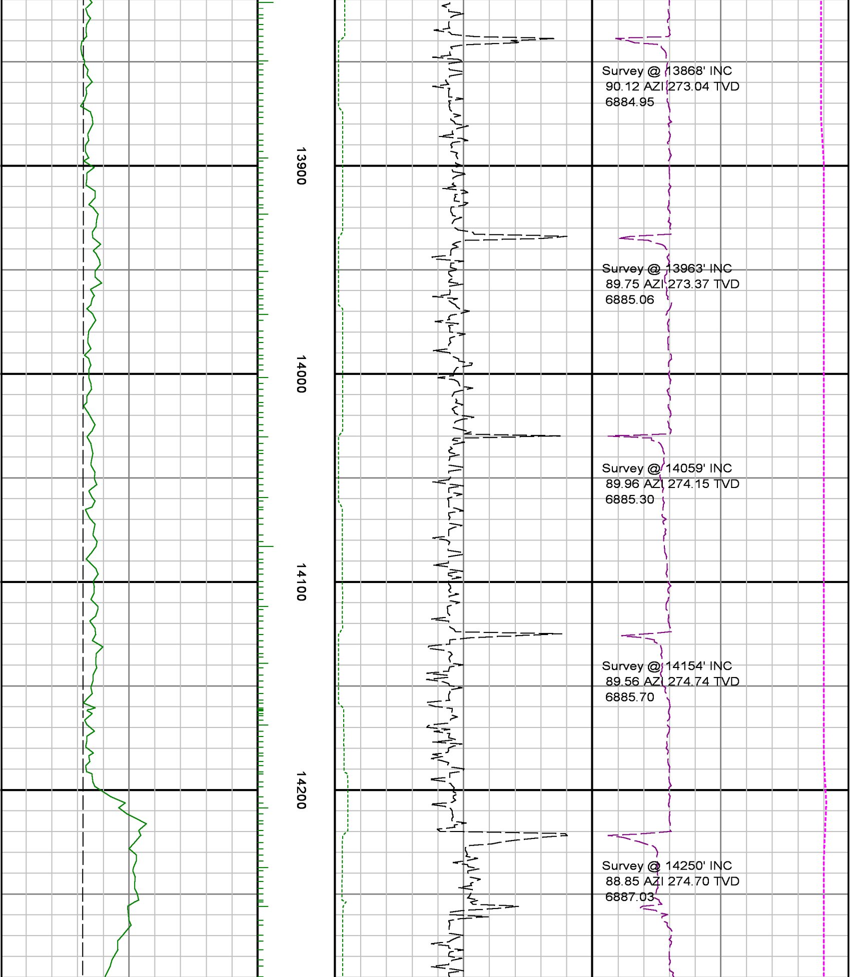
Survey @ 13389' INC 88.85 AZI 275.70 TVD 6881.68

Survey @ 13485' INC 89.53 AZI 273.11 TVD 6883.04

Survey @ 13580' INC 89.47 AZI 272.54 TVD 6883.87

Survey @ 13676' INC 90.06 AZI 272.62 TVD 6884.26

Survey @ 13772' INC 89.50 AZI 272.84 TVD 6884.63



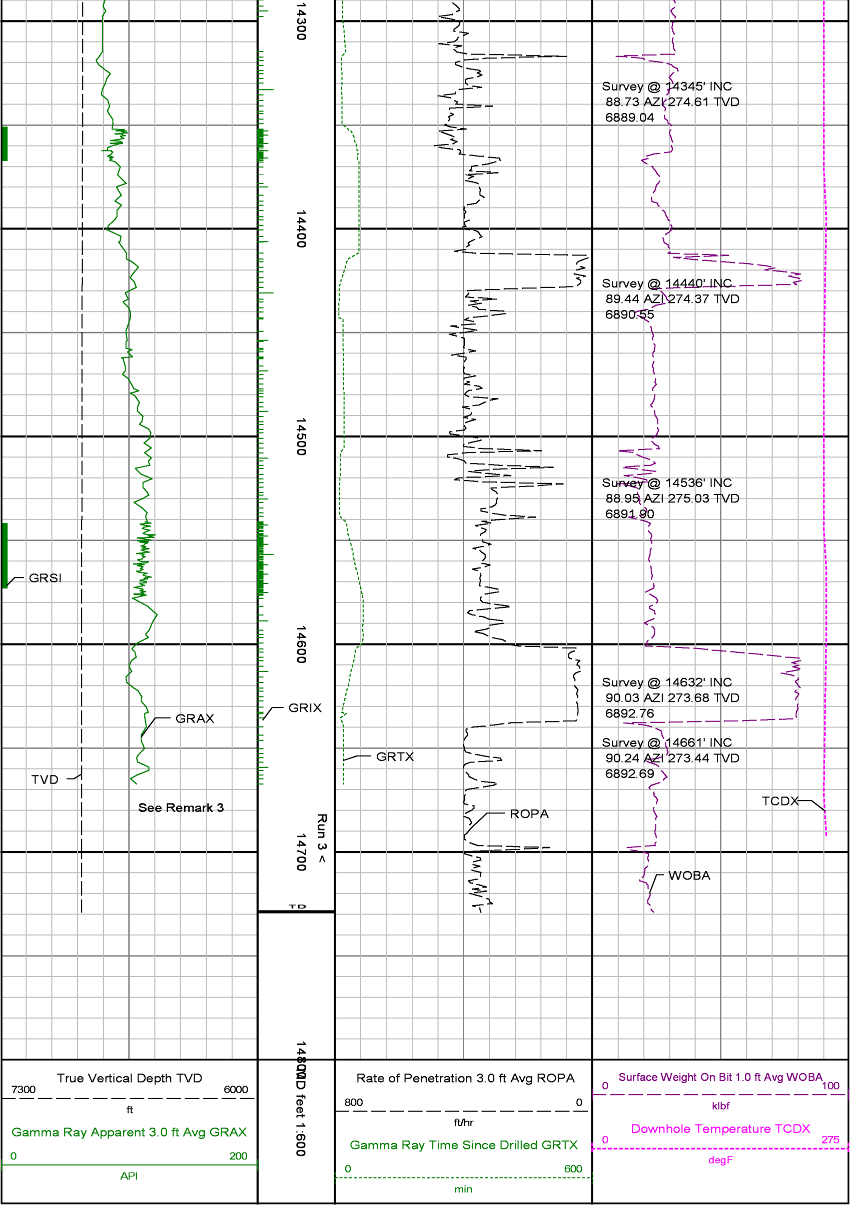
Survey @ 13868' INC 90.12 AZI 273.04 TVD 6884.95

Survey @ 13963' INC 89.75 AZI 273.37 TVD 6885.06

Survey @ 14059' INC 89.96 AZI 274.15 TVD 6885.30

Survey @ 14154' INC 89.56 AZI 274.74 TVD 6885.70

Survey @ 14250' INC 88.85 AZI 274.70 TVD 6887.03


14300
14400
14500
14600
14700
14800
MD feet 1:600
Run 3 <
TD
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Survey @ 14440' INC 89.44 AZI 274.37 TVD 6890.55
Survey @ 14536' INC 88.95 AZI 275.03 TVD 6891.90
Survey @ 14632' INC 90.03 AZI 273.68 TVD 6892.76
Survey @ 14661' INC 90.24 AZI 273.44 TVD 6892.69
GRSI
GRAX
TVD
See Remark 3
GRIX
GRTX
ROPA
TCDX
WOBA
True Vertical Depth TVD
7300
6000
ft
Gamma Ray Apparent 3.0 ft Avg GRAX
0
200
API
Rate of Penetration 3.0 ft Avg ROPA
800
0
ft/hr
Gamma Ray Time Since Drilled GRTX
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600
min
Surface Weight On Bit 1.0 ft Avg WOBA
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