



Schlumberger



Company: NN Energy  
Field:  
Well: Boggess 1H  
Rig Name: Patterson 334  
Country: US  
Report Date: Thursday, 25 April 2019  
(UTC-06:00) Central Time (US & Canada)  
Prepared by: Francis Kalukal / Luis Castaneda



# Well Placement Daily Report

Product Code:



## Disclaimer

ANY INTERPRETATION, RESEARCH, ANALYSIS, DATA, RESULTS, ESTIMATES, OR RECOMMENDATION FURNISHED WITH THE SERVICES OR OTHERWISE COMMUNICATED BY SCHLUMBERGER TO CUSTOMER AT ANY TIME IN CONNECTION WITH THE SERVICES ARE OPINIONS BASED ON INFERENCES FROM MEASUREMENTS, EMPIRICAL RELATIONSHIPS AND/OR ASSUMPTIONS, WHICH INFERENCES, EMPIRICAL RELATIONSHIPS AND/OR ASSUMPTIONS ARE NOT INFALLIBLE, AND WITH RESPECT TO WHICH PROFESSIONALS IN THE INDUSTRY MAY DIFFER. ACCORDINGLY, SCHLUMBERGER CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION, RESEARCH, ANALYSIS, DATA, RESULTS, ESTIMATES OR RECOMMENDATION. CUSTOMER ACKNOWLEDGES THAT IT IS ACCEPTING THE SERVICES "AS IS", THAT SCHLUMBERGER MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, OF ANY KIND OR DESCRIPTION IN RESPECT THERETO. SPECIFICALLY, CUSTOMER ACKNOWLEDGES THAT SCHLUMBERGER DOES NOT WARRANT THAT ANY INTERPRETATION, RESEARCH, ANALYSIS, DATA, RESULTS, ESTIMATES, OR RECOMMENDATION IS FIT FOR A PARTICULAR PURPOSE, INCLUDING BUT NOT LIMITED TO COMPLIANCE WITH ANY GOVERNMENT REQUEST OR REGULATORY REQUIREMENT. CUSTOMER FURTHER ACKNOWLEDGES THAT SUCH SERVICES ARE DELIVERED WITH THE EXPLICIT UNDERSTANDING AND AGREEMENT THAT ANY ACTION TAKEN BASED ON THE SERVICES RECEIVED SHALL BE AT ITS OWN RISK AND RESPONSIBILITY AND NO CLAIM SHALL BE MADE AGAINST SCHLUMBERGER AS A CONSEQUENCE THEREOF.

## Summary of Operations

Total lateral drilled (since entry into target): 20,898 - 9,570 = 11,328 ft MD

In Zone: 10,832 ft  
Out of Zone: 496 ft

TD was called on April 25, 2019 at 2:48 PM at 20,898' MD.

- Average Dip over length of lateral was 89.8° (0.2° down), with dip varying between 88.6° (1.4° down) and 91.3° (1.3° up)
- TVD change from Target Top at entry and Target Top at TD was 48.5 ft down-dip
- Bit at TD is projected to be below Target Top (4.5' above the Target Base) and inclined at 90.39°
- Current formation dip is estimated to be 90.1° +/- 0.5deg.
- Total drilling time bit-on-bottom is ~100 hours over 2 runs.
- Last survey: MD:20,898'; INC:90.39; AZI:327.81; TVD:8,022.52'; VS:12,642.79; DLS:0.00 deg/100ft
- Projection to bit: MD:20,898'; INC:90.39; AZI:327.81; TVD:8,022.52'; VS:12,642.79; DLS: 0.00 deg/100ft

Marker Tops Crossed:

- Entered to Target Top at 9,570' MD (7,974' TVD)
- Exited to Target Base at ~ 10,997' MD (8,015' TVD)
- Entered to Target Base at 11,322' MD (8,022' TVD)
- Exited to Target Base at ~ 14,777' MD (8,046' TVD)
- Entered to Target Base at 14,902' MD (8,044' TVD)
- Exited to Target Base at ~ 15,180' MD (8,038' TVD)
- Entered to Target Base at 15,226' MD (8,035' TVD)

No.	Time	MD	Inclination	Azimuth	Recommendation	Decision
52	04/25/2019 11:56:37	20661.00	90.45	328.78	90	90
51	04/25/2019 10:11:21	20513.00	90.25	329.74	90.3	90.3
50	04/25/2019 07:13:01	20215.00	89.90	329.66	89.6	89.6
49	04/24/2019 13:43:16	19974.43	88.90	331.38	89	89
48	04/24/2019 11:04:59	19643.15	89.09	328.72	90.1	90.1
47	04/24/2019 06:21:12	19370.97	90.10	332.46	90.4	90.4
46	04/24/2019 16:30:43	18979.00	90.30	330.18	90.2	90.2
45	04/24/2019 09:49:52	18229.00	89.95	330.10	89	89
44	04/24/2019 09:26:35	18161.00	89.97	330.10	89.5	89.5
43	04/23/2019 15:52:26	17641.41	90.05	328.81	90.8	90.8
42	04/23/2019 14:40:24	17540.92	90.40	331.83	90	90
41	04/23/2019 13:58:18	17444.26	89.95	329.30	90.5	90.5
40	04/23/2019 12:51:31	17349.97	89.40	328.87	90.3	90.3
39	04/23/2019 10:06:46	17162.81	90.25	329.62	89	89
38	04/23/2019 09:44:23	17109.66	90.22	329.62	89.5	89.5
37	04/23/2019 17:38:43	16366.00	90.31	328.98	90	90
36	04/23/2019 15:38:40	16273.00	91.12	328.71	90.6	90.6
35	04/23/2019 13:39:16	16087.00	89.83	329.13	91	91
34	04/23/2019 12:49:44	16068.00	90.05	329.79	90.6	90.6
33	04/23/2019 11:07:10	15889.00	90.60	329.55	89.8	89.8
32	04/23/2019 10:43:50	15806.00	90.01	327.75	90	90

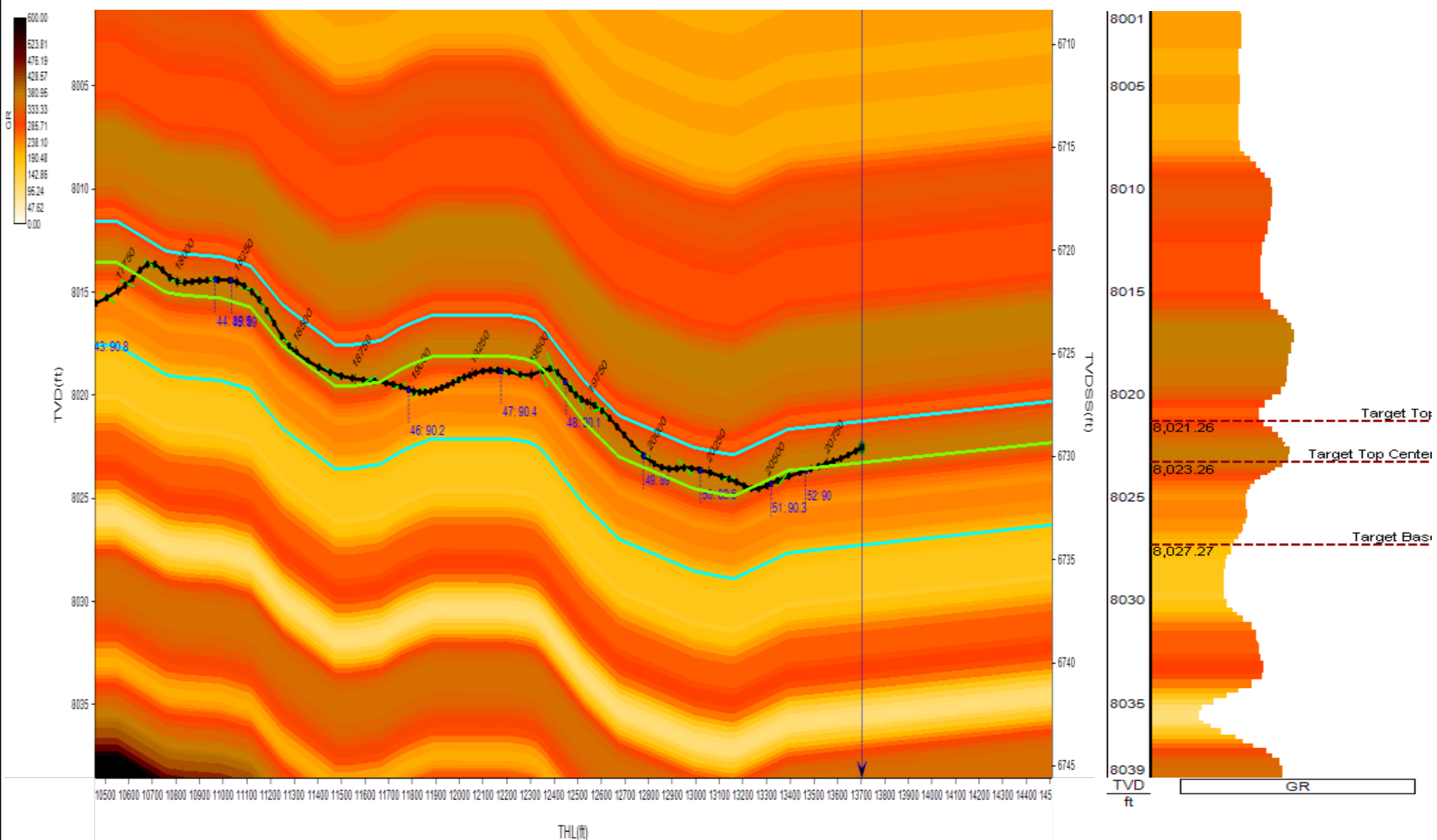
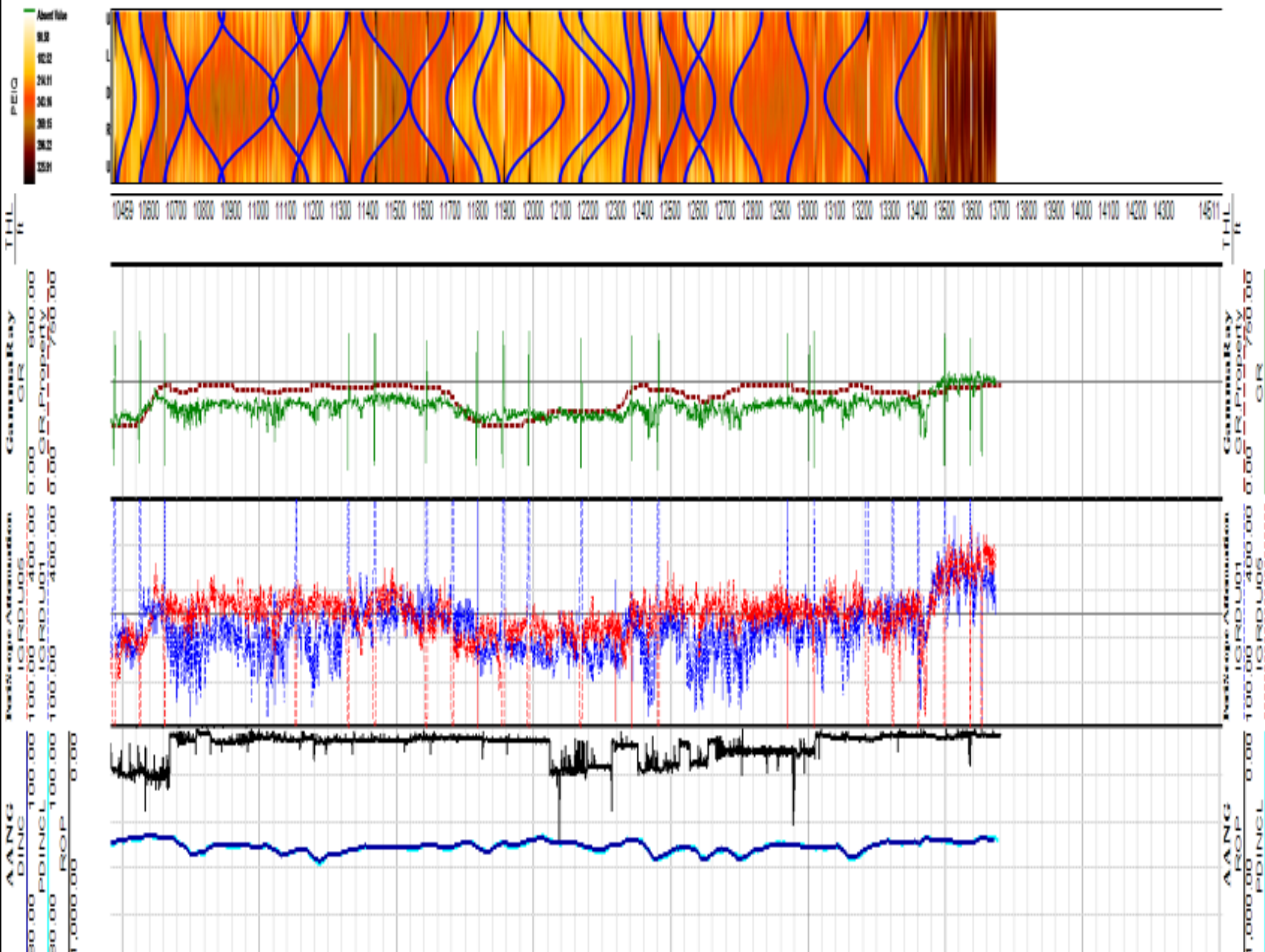
Company	NN Energy	CO REP		Bit MD(ft)	20897.01	Hole Size	8.5
Rig Name	Patterson 334	GEOLOGIST	Ben Welsh / Jeff Dereume	LSS MD(ft)	20898.00	RKB(ft)	1293.00
Start Date	20-Apr-19	WP ENG	Francis Kalukal / Luis Castaneda	LSS TVD(ft)	8022.53	Mud Type	OBM
Job #	19NEB1005	MWD/LWD ENG	Mahmoud Khalil / Nicolas Avena	LSS Inc (deg)	90.39	BHA	Bit+ RSS+MWD
Run #	2	DD	David Jones / Ida Stanfill	LSS Azi (deg)	327.81	Bit Type	PDC

\* LSS: last static survey

### Report Well Path

### Note

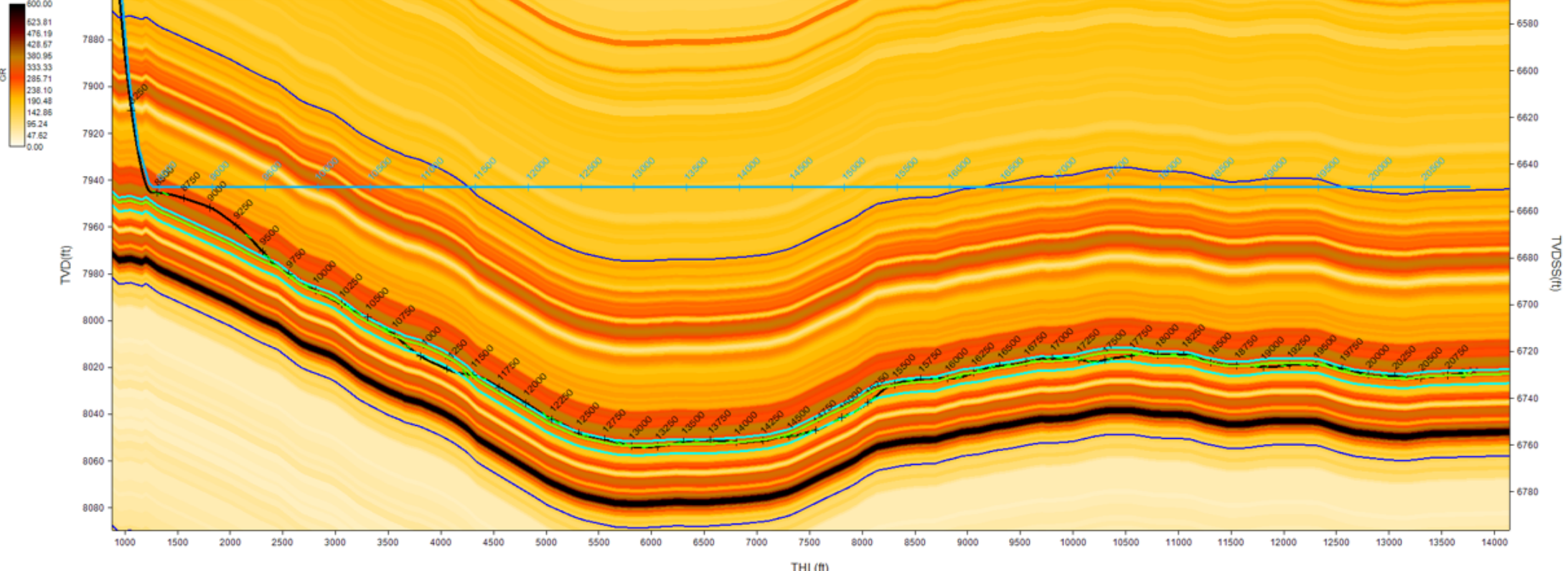
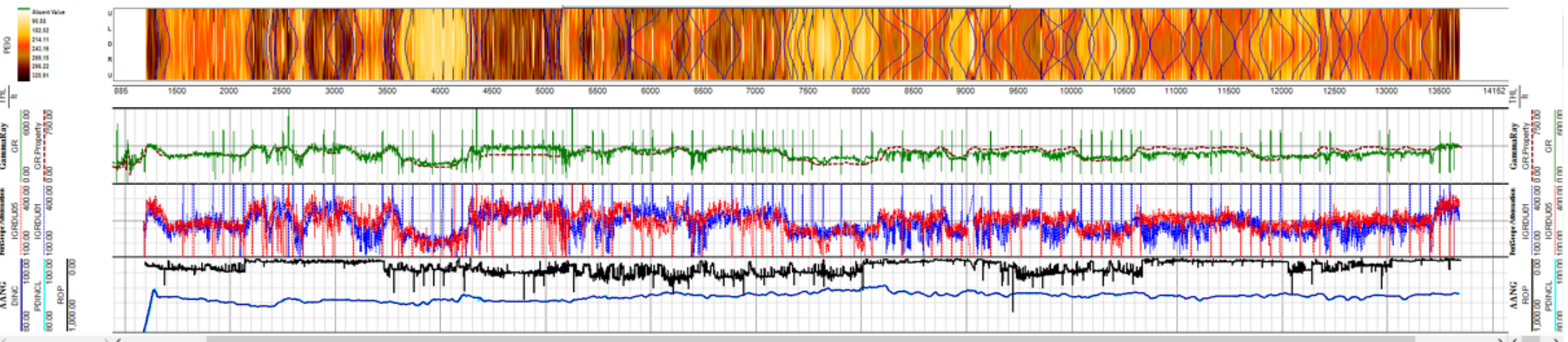
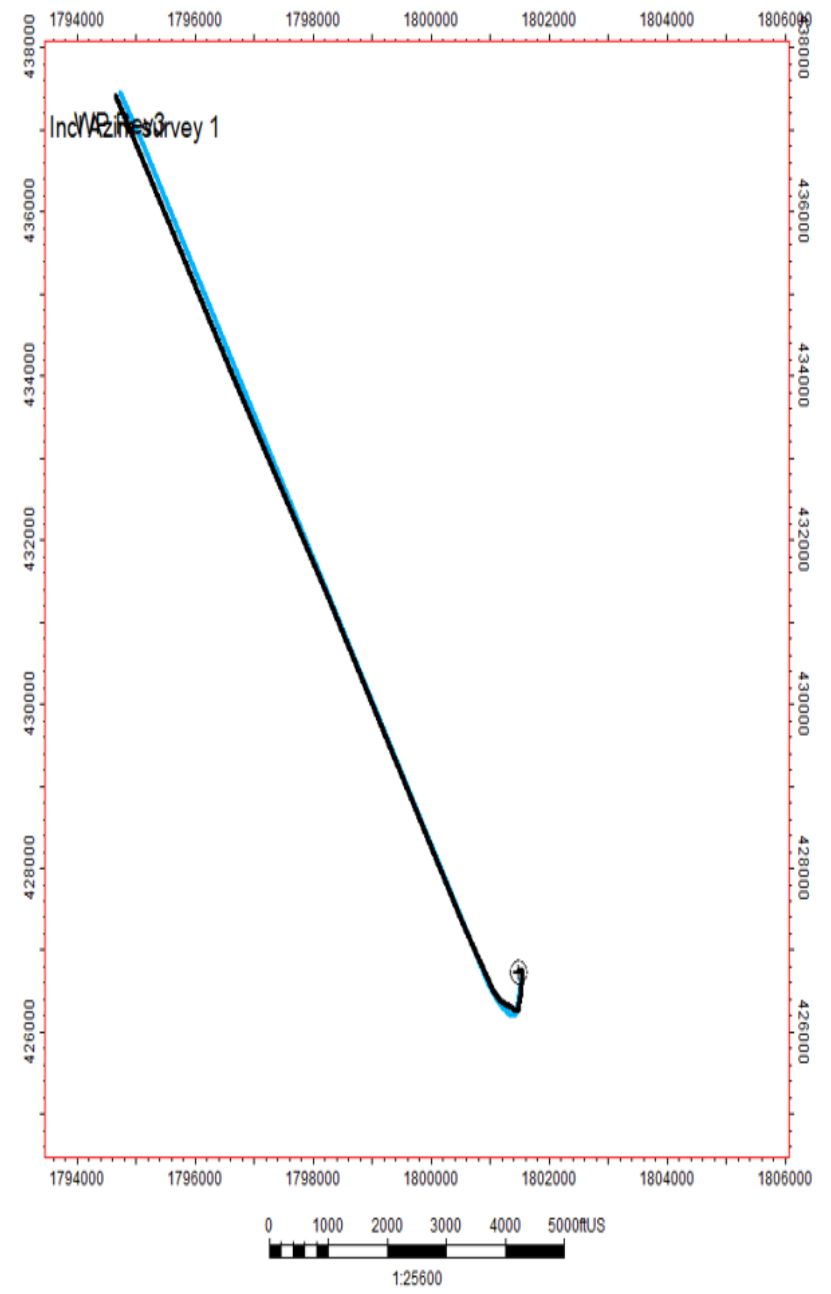
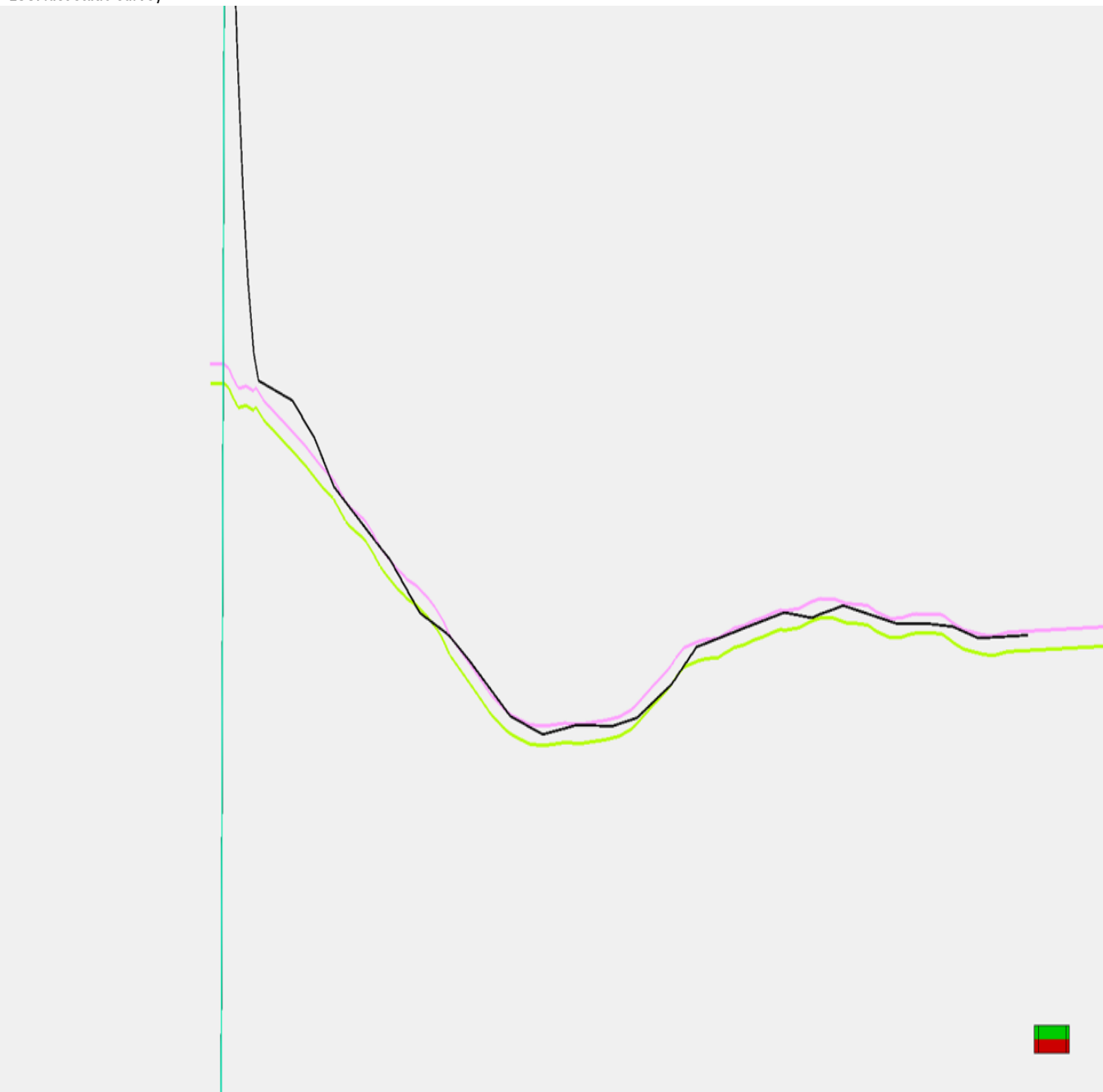
Well Placement Engineers:  
 Francis Advent Kalukal (Day, 7am-7pm)  
 Email: FAdvent@slb.com, Cell: +61 436 291 268  
 Luis Castaneda (Night, 7pm-7am)  
 Email: Lzigala@slb.com, Cell: 832 494 8748





Company	NN Energy	CO REP		Bit MD(ft)	20897.01	Hole Size	8.5
Rig Name	Patterson 334	GEOLOGIST	Ben Welsh / Jeff Dereume	LSS MD(ft)	20898.00	RKB(ft)	1293.00
Start Date	20-Apr-19	WP ENG	Francis Kalukal / Luis Castaneda	LSS TVD(ft)	8022.53	Mud Type	OBM
Job #	19NEB1005	MWD/LWD ENG	Mahmoud Khalil / Nicolas Avena	LSS Inc (deg)	90.39	BHA	Bit+ RSS+MWD
Run #	2	DD	David Jones / Ida Stanfill	LSS Azi (deg)	327.81	Bit Type	PDC

\* LSS: last static survey



Company	NN Energy	CO REP		Bit MD(ft)	20897.01	Hole Size	8.5
Rig Name	Patterson 334	GEOLOGIST	Ben Welsh / Jeff Dereume	LSS MD(ft)	20898.00	RKB(ft)	1293.00
Start Date	20-Apr-19	WP ENG	Francis Kalukal / Luis Castaneda	LSS TVD(ft)	8022.53	Mud Type	OBM
Job #	19NEB1005	MWD/LWD ENG	Mahmoud Khalil / Nicolas Avena	LSS Inc (deg)	90.39	BHA	Bit+ RSS+MWD
Run #	2	DD	David Jones / Ida Stanfill	LSS Azi (deg)	327.81	Bit Type	PDC

\* LSS: last static survey

