

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N
2N-65W-13 Guest East Pad
GUEST 3C-25HZ

Plan A

Plan: Permit Rev-2

Sperry Drilling Services Proposal Report

04 June, 2015

Well Coordinates: 14,577,130.94 N, 1,748,149.96 E (40° 08' 15.93" N, 104° 36' 52.32" W)

Ground Level: 4,872.00 usft

Local Coordinate Origin:

Viewing Datum:

TVDs to System:

North Reference:

Unit System:

Centered on Well GUEST 3C-25HZ

GL 4872 & KB 17 @ 4889.00usft (ASSUMED)

N

True

Dec-Deg - API - US Survey Feet - Custom

Version: 5000.1 Build: 73

HALLIBURTON

Project: WELD-NAD83-UTMFT13N

Site: 2N-65W-13 Guest East Pad

Well: GUEST 3C-25HZ

Wellbore: Plan A

Design: Permit Rev-2

US ROCKIES WATTENBERG PLANNING

HALLIBURTON

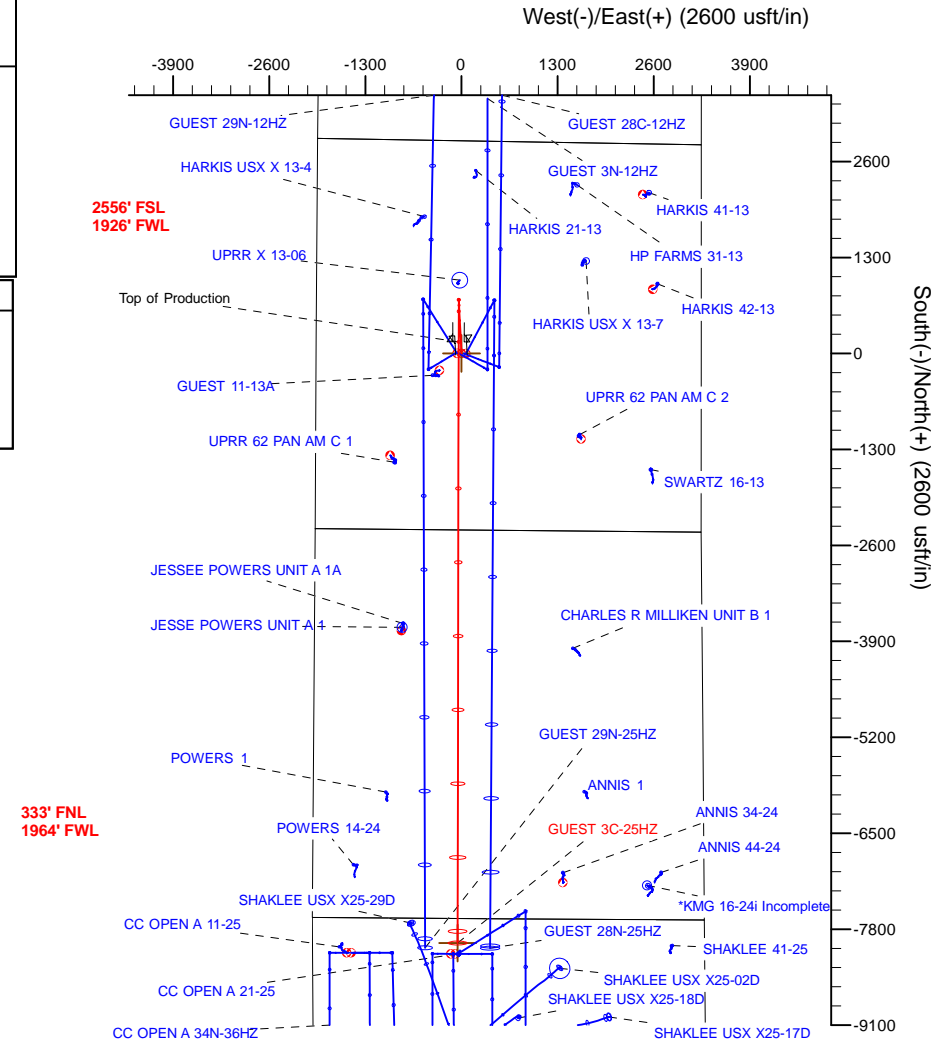
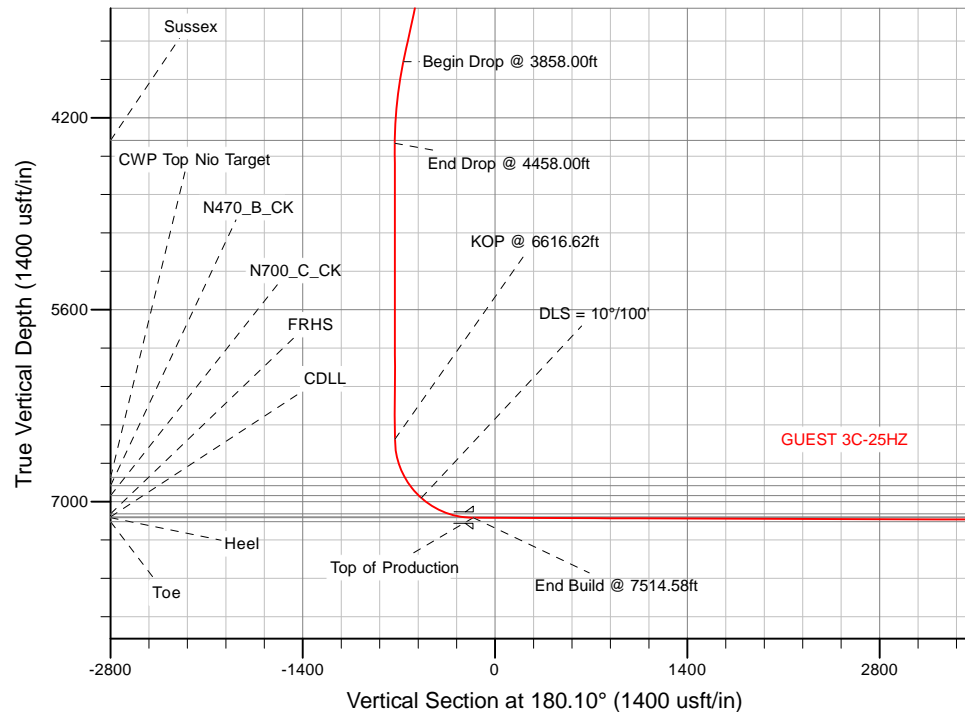
Sperry Drilling

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	1050.00	12.00	357.00	1044.16	83.36	-4.37	1.50	357.00	-83.35	
4	3858.00	12.00	357.00	3790.80	666.37	-34.92	0.00	0.00	-666.31	
5	4458.00	0.00	0.00	4386.43	728.89	-38.20	2.00	180.00	-728.82	
6	6616.62	0.00	0.00	6545.05	728.89	-38.20	0.00	0.00	-728.82	
7	7514.58	89.80	180.10	7118.00	157.97	-39.21	10.00	180.10	-157.90	
8	15658.50	89.80	180.10	7147.00	-7985.88	-53.69	0.00	0.00	7985.96	GUEST 3C-25HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
GUEST 3C-25HZ_SHL	0.00	0.00	0.00	40.137758	-104.614533	Point
GUEST 3C-25HZ_BHL	7147.00	-7985.88	-53.69	40.115828	-104.614725	Point



ANNOTATIONS

TVD	MD	Annotation
250.00	250.00	Begin Nudge @ 250.00ft
1044.16	1050.00	End Nudge @ 1050.00ft
3790.80	3858.00	Begin Drop @ 3858.00ft
4386.43	4458.00	End Drop @ 4458.00ft
6545.05	6616.62	KOP @ 6616.62ft
6973.09	7100.00	DLS = 10°/100'
7118.00	7514.58	End Build @ 7514.58ft
7147.00	15658.50	TD Well @ 15658.50ft

WELL DETAILS: GUEST 3C-25HZ

Ground Level: 4872.00

GL 4872 & KB 17 @ 4889.00usft (ASSUMED)

Plan: Permit Rev-2 (GUEST 3C-25HZ/Plan A)

Created By: Clint Eshelman Date: 6/4/2015
Reviewed: _____ Date: _____

Plan Report for GUEST 3C-25HZ - Permit Rev-2

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GUEST 3C-25HZ_SHL										
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 250.00ft										
300.00	0.75	357.00	300.00	0.33	-0.02	-0.33	1.50	1.50	0.00	357.00
400.00	2.25	357.00	399.96	2.94	-0.15	-2.94	1.50	1.50	0.00	0.00
500.00	3.75	357.00	499.82	8.17	-0.43	-8.17	1.50	1.50	0.00	0.00
600.00	5.25	357.00	599.51	16.00	-0.84	-16.00	1.50	1.50	0.00	0.00
700.00	6.75	357.00	698.96	26.44	-1.39	-26.44	1.50	1.50	0.00	0.00
800.00	8.25	357.00	798.10	39.47	-2.07	-39.47	1.50	1.50	0.00	0.00
900.00	9.75	357.00	896.87	55.10	-2.89	-55.09	1.50	1.50	0.00	0.00
1,000.00	11.25	357.00	995.19	73.29	-3.84	-73.29	1.50	1.50	0.00	0.00
1,050.00	12.00	357.00	1,044.16	83.36	-4.37	-83.35	1.50	1.50	0.00	0.00
End Nudge @ 1050.00ft										
1,100.00	12.00	357.00	1,093.07	93.74	-4.91	-93.73	0.00	0.00	0.00	0.00
1,200.00	12.00	357.00	1,190.89	114.50	-6.00	-114.49	0.00	0.00	0.00	0.00
1,282.93	12.00	357.00	1,272.00	131.72	-6.90	-131.71	0.00	0.00	0.00	0.00
Fox Hills Marker										
1,300.00	12.00	357.00	1,288.70	135.26	-7.09	-135.25	0.00	0.00	0.00	0.00
1,400.00	12.00	357.00	1,386.52	156.02	-8.18	-156.01	0.00	0.00	0.00	0.00
1,500.00	12.00	357.00	1,484.33	176.79	-9.27	-176.77	0.00	0.00	0.00	0.00
1,600.00	12.00	357.00	1,582.15	197.55	-10.35	-197.53	0.00	0.00	0.00	0.00
1,700.00	12.00	357.00	1,679.96	218.31	-11.44	-218.29	0.00	0.00	0.00	0.00
1,800.00	12.00	357.00	1,777.77	239.08	-12.53	-239.05	0.00	0.00	0.00	0.00
1,822.72	12.00	357.00	1,800.00	243.79	-12.78	-243.77	0.00	0.00	0.00	0.00
9 5/8"										
1,900.00	12.00	357.00	1,875.59	259.84	-13.62	-259.81	0.00	0.00	0.00	0.00
2,000.00	12.00	357.00	1,973.40	280.60	-14.71	-280.57	0.00	0.00	0.00	0.00
2,100.00	12.00	357.00	2,071.22	301.36	-15.79	-301.34	0.00	0.00	0.00	0.00
2,200.00	12.00	357.00	2,169.03	322.13	-16.88	-322.10	0.00	0.00	0.00	0.00
2,300.00	12.00	357.00	2,266.85	342.89	-17.97	-342.86	0.00	0.00	0.00	0.00
2,400.00	12.00	357.00	2,364.66	363.65	-19.06	-363.62	0.00	0.00	0.00	0.00
2,500.00	12.00	357.00	2,462.48	384.41	-20.15	-384.38	0.00	0.00	0.00	0.00
2,600.00	12.00	357.00	2,560.29	405.18	-21.23	-405.14	0.00	0.00	0.00	0.00
2,700.00	12.00	357.00	2,658.11	425.94	-22.32	-425.90	0.00	0.00	0.00	0.00
2,800.00	12.00	357.00	2,755.92	446.70	-23.41	-446.66	0.00	0.00	0.00	0.00
2,900.00	12.00	357.00	2,853.74	467.47	-24.50	-467.42	0.00	0.00	0.00	0.00
3,000.00	12.00	357.00	2,951.55	488.23	-25.59	-488.18	0.00	0.00	0.00	0.00
3,100.00	12.00	357.00	3,049.37	508.99	-26.68	-508.94	0.00	0.00	0.00	0.00
3,200.00	12.00	357.00	3,147.18	529.75	-27.76	-529.70	0.00	0.00	0.00	0.00
3,300.00	12.00	357.00	3,245.00	550.52	-28.85	-550.46	0.00	0.00	0.00	0.00
3,400.00	12.00	357.00	3,342.81	571.28	-29.94	-571.23	0.00	0.00	0.00	0.00
3,500.00	12.00	357.00	3,440.63	592.04	-31.03	-591.99	0.00	0.00	0.00	0.00
3,600.00	12.00	357.00	3,538.44	612.80	-32.12	-612.75	0.00	0.00	0.00	0.00
3,700.00	12.00	357.00	3,636.26	633.57	-33.20	-633.51	0.00	0.00	0.00	0.00
3,800.00	12.00	357.00	3,734.07	654.33	-34.29	-654.27	0.00	0.00	0.00	0.00
3,858.00	12.00	357.00	3,790.80	666.37	-34.92	-666.31	0.00	0.00	0.00	0.00
Begin Drop @ 3858.00ft										
3,900.00	11.16	357.00	3,831.95	674.79	-35.36	-674.73	2.00	-2.00	0.00	180.00
4,000.00	9.16	357.00	3,930.37	692.41	-36.29	-692.34	2.00	-2.00	0.00	180.00
4,100.00	7.16	357.00	4,029.36	706.58	-37.03	-706.51	2.00	-2.00	0.00	180.00
4,200.00	5.16	357.00	4,128.77	717.29	-37.59	-717.23	2.00	-2.00	0.00	180.00
4,300.00	3.16	357.00	4,228.51	724.54	-37.97	-724.47	2.00	-2.00	0.00	180.00
4,400.00	1.16	357.00	4,328.43	728.30	-38.17	-728.23	2.00	-2.00	0.00	180.00
4,436.57	0.43	357.00	4,365.00	728.81	-38.20	-728.74	2.00	-2.00	0.00	-180.00

Plan Report for GUEST 3C-25HZ - Permit Rev-2

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
Sussex										
4,458.00	0.00	0.00	4,386.43	728.89	-38.20	-728.82	2.00	-2.00	0.00	180.00
End Drop @ 4458.00ft										
4,500.00	0.00	0.00	4,428.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,528.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,628.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,728.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,828.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	4,928.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,028.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,128.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,228.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,328.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,428.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,528.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,628.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,728.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,828.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	5,928.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,028.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,128.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,228.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,328.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,428.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,528.43	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
6,616.62	0.00	0.00	6,545.05	728.89	-38.20	-728.82	0.00	0.00	0.00	0.00
KOP @ 6616.62ft										
6,700.00	8.34	180.10	6,628.13	722.83	-38.21	-722.76	10.00	10.00	0.00	180.10
6,800.00	18.34	180.10	6,725.31	699.79	-38.25	-699.72	10.00	10.00	0.00	0.00
6,900.00	28.34	180.10	6,817.01	660.23	-38.32	-660.16	10.00	10.00	0.00	0.00
6,907.97	29.13	180.10	6,824.00	656.40	-38.33	-656.33	10.00	10.00	0.00	0.00
CWP Top Nio Target										
6,979.32	36.27	180.10	6,884.00	617.87	-38.40	-617.80	10.00	10.00	0.00	0.00
N470_B_CK										
7,000.00	38.34	180.10	6,900.45	605.34	-38.42	-605.27	10.00	10.00	0.00	0.00
7,074.90	45.83	180.10	6,956.00	555.18	-38.51	-555.11	10.00	10.00	0.00	0.00
N700_C_CK										
7,100.00	48.34	180.10	6,973.09	536.80	-38.54	-536.73	10.00	10.00	0.00	0.00
DLS = 10°/100'										
7,200.00	58.34	180.10	7,032.72	456.68	-38.68	-456.61	10.00	10.00	0.00	0.00
7,300.00	68.34	180.10	7,077.54	367.43	-38.84	-367.36	10.00	10.00	0.00	0.00
7,336.75	72.01	180.10	7,090.00	332.86	-38.90	-332.80	10.00	10.00	0.00	0.00
FRHS										
7,400.00	78.34	180.10	7,106.18	271.75	-39.01	-271.68	10.00	10.00	0.00	0.00
7,433.60	81.70	180.10	7,112.00	238.66	-39.07	-238.59	10.00	10.00	0.00	0.00
CDLL										
7,500.00	88.34	180.10	7,117.76	172.55	-39.19	-172.48	10.00	10.00	0.00	0.00
7,514.58	89.80	180.10	7,118.00	157.97	-39.21	-157.90	10.00	10.00	0.00	0.00
End Build @ 7514.58ft - Heel - Top of Production										
7,600.00	89.80	180.10	7,118.30	72.55	-39.37	-72.48	0.00	0.00	0.00	0.00
7,700.00	89.80	180.10	7,118.66	-27.45	-39.54	27.52	0.00	0.00	0.00	0.00
7,800.00	89.80	180.10	7,119.02	-127.45	-39.72	127.52	0.00	0.00	0.00	0.00
7,900.00	89.80	180.10	7,119.37	-227.45	-39.90	227.51	0.00	0.00	0.00	0.00
8,000.00	89.80	180.10	7,119.73	-327.44	-40.08	327.51	0.00	0.00	0.00	0.00
8,100.00	89.80	180.10	7,120.08	-427.44	-40.25	427.51	0.00	0.00	0.00	0.00
8,200.00	89.80	180.10	7,120.44	-527.44	-40.43	527.51	0.00	0.00	0.00	0.00
8,300.00	89.80	180.10	7,120.80	-627.44	-40.61	627.51	0.00	0.00	0.00	0.00
8,400.00	89.80	180.10	7,121.15	-727.44	-40.79	727.51	0.00	0.00	0.00	0.00
8,500.00	89.80	180.10	7,121.51	-827.44	-40.97	827.51	0.00	0.00	0.00	0.00

Plan Report for GUEST 3C-25HZ - Permit Rev-2

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
8,600.00	89.80	180.10	7,121.87	-927.44	-41.14	927.51	0.00	0.00	0.00	0.00
8,700.00	89.80	180.10	7,122.22	-1,027.44	-41.32	1,027.51	0.00	0.00	0.00	0.00
8,800.00	89.80	180.10	7,122.58	-1,127.44	-41.50	1,127.51	0.00	0.00	0.00	0.00
8,900.00	89.80	180.10	7,122.93	-1,227.44	-41.68	1,227.51	0.00	0.00	0.00	0.00
9,000.00	89.80	180.10	7,123.29	-1,327.44	-41.85	1,327.51	0.00	0.00	0.00	0.00
9,100.00	89.80	180.10	7,123.65	-1,427.44	-42.03	1,427.51	0.00	0.00	0.00	0.00
9,200.00	89.80	180.10	7,124.00	-1,527.44	-42.21	1,527.51	0.00	0.00	0.00	0.00
9,300.00	89.80	180.10	7,124.36	-1,627.43	-42.39	1,627.51	0.00	0.00	0.00	0.00
9,400.00	89.80	180.10	7,124.71	-1,727.43	-42.57	1,727.51	0.00	0.00	0.00	0.00
9,500.00	89.80	180.10	7,125.07	-1,827.43	-42.74	1,827.50	0.00	0.00	0.00	0.00
9,600.00	89.80	180.10	7,125.43	-1,927.43	-42.92	1,927.50	0.00	0.00	0.00	0.00
9,700.00	89.80	180.10	7,125.78	-2,027.43	-43.10	2,027.50	0.00	0.00	0.00	0.00
9,800.00	89.80	180.10	7,126.14	-2,127.43	-43.28	2,127.50	0.00	0.00	0.00	0.00
9,900.00	89.80	180.10	7,126.49	-2,227.43	-43.45	2,227.50	0.00	0.00	0.00	0.00
10,000.00	89.80	180.10	7,126.85	-2,327.43	-43.63	2,327.50	0.00	0.00	0.00	0.00
10,100.00	89.80	180.10	7,127.21	-2,427.43	-43.81	2,427.50	0.00	0.00	0.00	0.00
10,200.00	89.80	180.10	7,127.56	-2,527.43	-43.99	2,527.50	0.00	0.00	0.00	0.00
10,300.00	89.80	180.10	7,127.92	-2,627.43	-44.17	2,627.50	0.00	0.00	0.00	0.00
10,400.00	89.80	180.10	7,128.27	-2,727.43	-44.34	2,727.50	0.00	0.00	0.00	0.00
10,500.00	89.80	180.10	7,128.63	-2,827.42	-44.52	2,827.50	0.00	0.00	0.00	0.00
10,600.00	89.80	180.10	7,128.99	-2,927.42	-44.70	2,927.50	0.00	0.00	0.00	0.00
10,700.00	89.80	180.10	7,129.34	-3,027.42	-44.88	3,027.50	0.00	0.00	0.00	0.00
10,800.00	89.80	180.10	7,129.70	-3,127.42	-45.05	3,127.50	0.00	0.00	0.00	0.00
10,900.00	89.80	180.10	7,130.06	-3,227.42	-45.23	3,227.50	0.00	0.00	0.00	0.00
11,000.00	89.80	180.10	7,130.41	-3,327.42	-45.41	3,327.50	0.00	0.00	0.00	0.00
11,100.00	89.80	180.10	7,130.77	-3,427.42	-45.59	3,427.49	0.00	0.00	0.00	0.00
11,200.00	89.80	180.10	7,131.12	-3,527.42	-45.77	3,527.49	0.00	0.00	0.00	0.00
11,300.00	89.80	180.10	7,131.48	-3,627.42	-45.94	3,627.49	0.00	0.00	0.00	0.00
11,400.00	89.80	180.10	7,131.84	-3,727.42	-46.12	3,727.49	0.00	0.00	0.00	0.00
11,500.00	89.80	180.10	7,132.19	-3,827.42	-46.30	3,827.49	0.00	0.00	0.00	0.00
11,600.00	89.80	180.10	7,132.55	-3,927.42	-46.48	3,927.49	0.00	0.00	0.00	0.00
11,700.00	89.80	180.10	7,132.90	-4,027.42	-46.65	4,027.49	0.00	0.00	0.00	0.00
11,800.00	89.80	180.10	7,133.26	-4,127.41	-46.83	4,127.49	0.00	0.00	0.00	0.00
11,900.00	89.80	180.10	7,133.62	-4,227.41	-47.01	4,227.49	0.00	0.00	0.00	0.00
12,000.00	89.80	180.10	7,133.97	-4,327.41	-47.19	4,327.49	0.00	0.00	0.00	0.00
12,100.00	89.80	180.10	7,134.33	-4,427.41	-47.36	4,427.49	0.00	0.00	0.00	0.00
12,200.00	89.80	180.10	7,134.68	-4,527.41	-47.54	4,527.49	0.00	0.00	0.00	0.00
12,300.00	89.80	180.10	7,135.04	-4,627.41	-47.72	4,627.49	0.00	0.00	0.00	0.00
12,400.00	89.80	180.10	7,135.40	-4,727.41	-47.90	4,727.49	0.00	0.00	0.00	0.00
12,500.00	89.80	180.10	7,135.75	-4,827.41	-48.08	4,827.49	0.00	0.00	0.00	0.00
12,600.00	89.80	180.10	7,136.11	-4,927.41	-48.25	4,927.49	0.00	0.00	0.00	0.00
12,700.00	89.80	180.10	7,136.46	-5,027.41	-48.43	5,027.48	0.00	0.00	0.00	0.00
12,800.00	89.80	180.10	7,136.82	-5,127.41	-48.61	5,127.48	0.00	0.00	0.00	0.00
12,900.00	89.80	180.10	7,137.18	-5,227.41	-48.79	5,227.48	0.00	0.00	0.00	0.00
13,000.00	89.80	180.10	7,137.53	-5,327.41	-48.96	5,327.48	0.00	0.00	0.00	0.00
13,100.00	89.80	180.10	7,137.89	-5,427.40	-49.14	5,427.48	0.00	0.00	0.00	0.00
13,200.00	89.80	180.10	7,138.25	-5,527.40	-49.32	5,527.48	0.00	0.00	0.00	0.00
13,300.00	89.80	180.10	7,138.60	-5,627.40	-49.50	5,627.48	0.00	0.00	0.00	0.00
13,400.00	89.80	180.10	7,138.96	-5,727.40	-49.68	5,727.48	0.00	0.00	0.00	0.00
13,500.00	89.80	180.10	7,139.31	-5,827.40	-49.85	5,827.48	0.00	0.00	0.00	0.00
13,600.00	89.80	180.10	7,139.67	-5,927.40	-50.03	5,927.48	0.00	0.00	0.00	0.00
13,700.00	89.80	180.10	7,140.03	-6,027.40	-50.21	6,027.48	0.00	0.00	0.00	0.00
13,800.00	89.80	180.10	7,140.38	-6,127.40	-50.39	6,127.48	0.00	0.00	0.00	0.00
13,900.00	89.80	180.10	7,140.74	-6,227.40	-50.56	6,227.48	0.00	0.00	0.00	0.00
14,000.00	89.80	180.10	7,141.09	-6,327.40	-50.74	6,327.48	0.00	0.00	0.00	0.00
14,100.00	89.80	180.10	7,141.45	-6,427.40	-50.92	6,427.48	0.00	0.00	0.00	0.00
14,200.00	89.80	180.10	7,141.81	-6,527.40	-51.10	6,527.47	0.00	0.00	0.00	0.00
14,300.00	89.80	180.10	7,142.16	-6,627.39	-51.28	6,627.47	0.00	0.00	0.00	0.00
14,400.00	89.80	180.10	7,142.52	-6,727.39	-51.45	6,727.47	0.00	0.00	0.00	0.00
14,500.00	89.80	180.10	7,142.87	-6,827.39	-51.63	6,827.47	0.00	0.00	0.00	0.00

Plan Report for GUEST 3C-25HZ - Permit Rev-2

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
14,600.00	89.80	180.10	7,143.23	-6,927.39	-51.81	6,927.47	0.00	0.00	0.00	0.00
14,700.00	89.80	180.10	7,143.59	-7,027.39	-51.99	7,027.47	0.00	0.00	0.00	0.00
14,800.00	89.80	180.10	7,143.94	-7,127.39	-52.16	7,127.47	0.00	0.00	0.00	0.00
14,900.00	89.80	180.10	7,144.30	-7,227.39	-52.34	7,227.47	0.00	0.00	0.00	0.00
15,000.00	89.80	180.10	7,144.66	-7,327.39	-52.52	7,327.47	0.00	0.00	0.00	0.00
15,100.00	89.80	180.10	7,145.01	-7,427.39	-52.70	7,427.47	0.00	0.00	0.00	0.00
15,200.00	89.80	180.10	7,145.37	-7,527.39	-52.88	7,527.47	0.00	0.00	0.00	0.00
15,300.00	89.80	180.10	7,145.72	-7,627.39	-53.05	7,627.47	0.00	0.00	0.00	0.00
15,400.00	89.80	180.10	7,146.08	-7,727.39	-53.23	7,727.47	0.00	0.00	0.00	0.00
15,500.00	89.80	180.10	7,146.44	-7,827.39	-53.41	7,827.47	0.00	0.00	0.00	0.00
15,600.00	89.80	180.10	7,146.79	-7,927.38	-53.59	7,927.47	0.00	0.00	0.00	0.00
15,658.49	89.80	180.10	7,147.00	-7,985.87	-53.69	7,985.96	0.00	0.00	0.00	0.00
Toe										
15,658.50	89.80	180.10	7,147.00	-7,985.88	-53.69	7,985.96	0.01	0.00	0.00	0.00
TD Well @ 15658.50ft - GUEST 3C-25HZ_BHL										

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
250.00	250.00	0.00	0.00	Begin Nudge @ 250.00ft
1,050.00	1,044.16	83.36	-4.37	End Nudge @ 1050.00ft
3,858.00	3,790.80	666.37	-34.92	Begin Drop @ 3858.00ft
4,458.00	4,386.43	728.89	-38.20	End Drop @ 4458.00ft
6,616.62	6,545.05	728.89	-38.20	KOP @ 6616.62ft
7,100.00	6,973.09	536.80	-38.54	DLS = 10°/100'
7,514.58	7,118.00	157.97	-39.21	End Build @ 7514.58ft
15,658.50	7,147.00	-7,985.88	-53.69	TD Well @ 15658.50ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (usft)
				+N/_S (usft)	+E/-W (usft)	
User	No Target (Freehand)	180.10	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	7,514.58	Permit Rev-2	APC_ISCWSA REV 2 MWD+IFR1
7,514.58	15,658.50	Permit Rev-2	APC_ISCWSA REV 2 MWD+IFR1

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,822.72	1,800.00	9 5/8"	9-5/8	13-1/2
7,514.58	7,118.00	Top of Production	5-1/2	7-7/8

Plan Report for GUEST 3C-25HZ - Permit Rev-2

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,282.93	1,272.00	Fox Hills Marker		0.00	
4,436.57	4,365.00	Sussex		0.00	
6,907.97	6,824.00	CWVP Top Nio Target		0.00	
6,979.32	6,884.00	N470_B_CK		0.00	
7,074.90	6,956.00	N700_C_CK		0.00	
7,336.75	7,090.00	FRHS		0.00	
7,433.60	7,112.00	CDLL		0.00	
7,514.58	7,118.00	Heel		0.00	
15,658.49	7,147.00	Toe		0.00	

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
GUEST 3C-25HZ_SHL	0.00	0.00	0.00	Point
GUEST 3C-25HZ_BHL	7,147.00	-7,985.88	-53.69	Point

Directional Difficulty Index

Average Dogleg over Survey:	0.72 °/100usft	Maximum Dogleg over Survey:	10.00 °/100usft at 7,514.60 usft
Net Tortousity applicable to Plans:	0.72 °/100usft	Directional Difficulty Index:	6.462

Audit Info

North Reference Sheet for 2N-65W-13 Guest East Pad - GUEST 3C-25HZ - Plan A

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.

Vertical Depths are relative to GL 4872 & KB 17 @ 4889.00usft (ASSUMED). Northing and Easting are relative to GUEST 3C-25HZ

Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 13N (108 W to 102 W) using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is -105.00°, Longitude Origin:0.000000°, Latitude Origin:0.000000°

False Easting: 1,640,416.67usft, False Northing: 0.00usft, Scale Reduction: 0.99961327

Grid Coordinates of Well: 14,577,130.94 usft N, 1,748,149.96 usft E

Geographical Coordinates of Well: 40° 08' 15.93" N, 104° 36' 52.32" W

Grid Convergence at Surface is: 0.25°

Based upon Minimum Curvature type calculations, at a Measured Depth of 15,658.50usft the Bottom Hole Displacement is 7,986.06usft in the Direction of 180.39° (True).

Magnetic Convergence at surface is: -8.05° (12 November 2014, , IGRF2010)

