

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N
3N-67W-15 Goose Pad
GOOSE 9N-A8HZ

Plan A

Plan: Permit Rev-1

Sperry Drilling Services Proposal Report

12 May, 2015

Well Coordinates: 14,611,160.27 N, 1,672,938.44 E (40° 13' 54.44" N, 104° 53' 00.52" W)
Ground Level: 4,792.00 usft

Local Coordinate Origin:	Centered on Well GOOSE 9N-A8HZ
Viewing Datum:	RKB = 17' @ 4809.00usft (D. Rig)
TVDs to System:	N
North Reference:	True
Unit System:	Dec-Deg - API - US Survey Feet - Custom

Version: 5000.1 Build: 70

HALLIBURTON

Project: WELD-NAD83-UTMFT13N
Site: 3N-67W-15 Goose Pad
Well: GOOSE 9N-A8HZ
Wellbore: Plan A
Design: Permit Rev-1

US ROCKIES WATTENBERG PLANNING

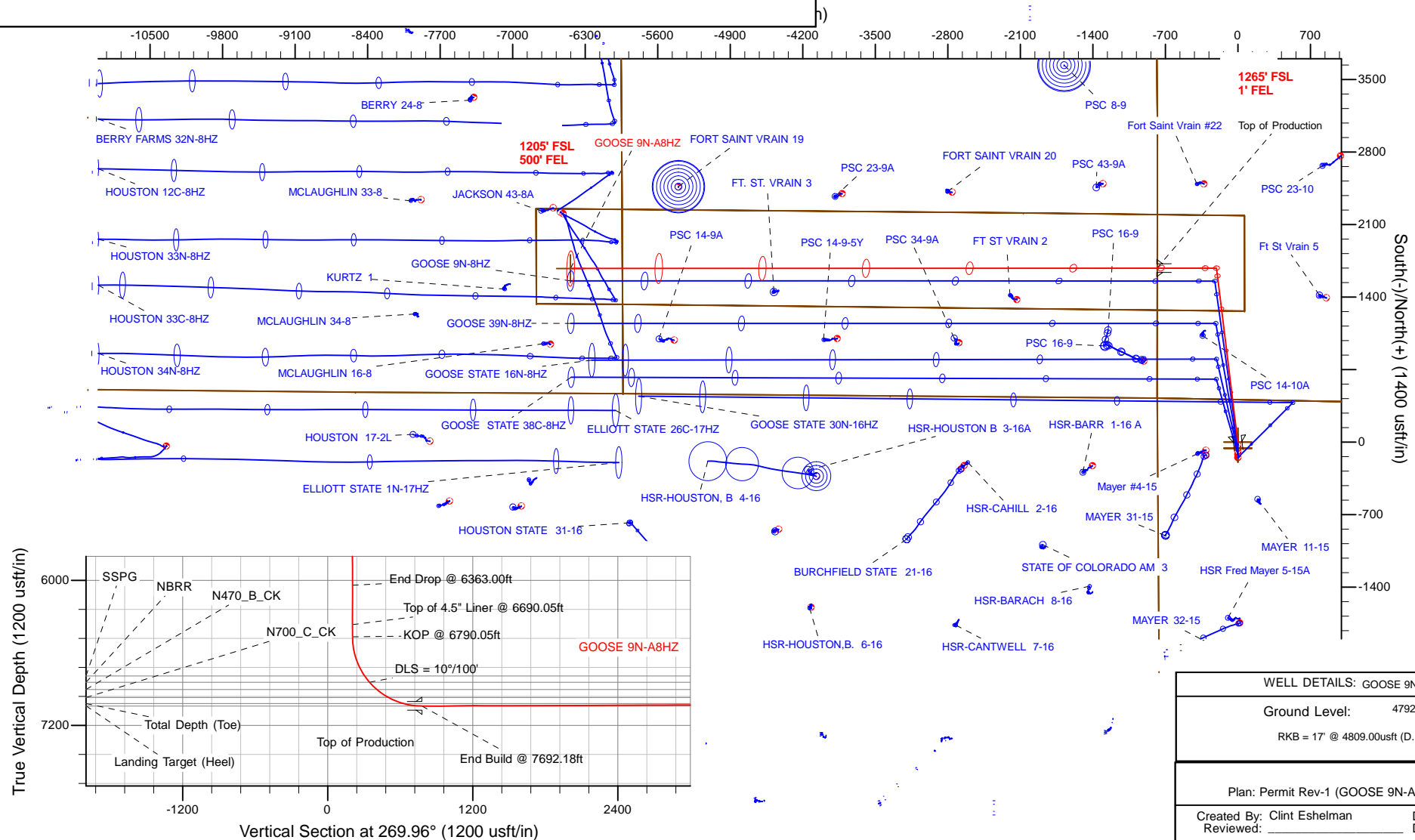
HALLIBURTON
Sperry Drilling

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	1020.00	0.00	0.00	1020.00	0.00	0.00	0.00	0.00	0.00	
3	2220.00	24.00	353.00	2185.21	245.83	-30.18	2.00	353.00	30.01	
4	5163.00	24.00	353.00	4873.78	1433.93	-176.06	0.00	0.00	175.06	
5	6363.00	0.00	0.00	6038.99	1679.76	-206.25	2.00	180.00	205.08	
6	6790.05	0.00	0.00	6466.04	1679.76	-206.25	0.00	0.00	205.08	
7	7692.18	90.21	269.96	7039.00	1679.37	-781.33	10.00	269.96	780.16	
8	13351.29	90.21	269.96	7018.00	1675.59	-6440.40	0.00	0.00	6439.23	GOOSE 9C-8HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
GOOSE 9C-8HZ_SHL	0.00	0.00	0.00	40.231789	-104.883477
GOOSE 9C-8HZ_BHL	7018.00	1675.59	-6440.40	40.236388	-104.906554



Plan Report for GOOSE 9N-A8HZ - Permit Rev-1

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
3N-R67W-Sec. 9_Section Lines - GOOSE 9C-8HZ_LD - GOOSE 9C-8HZ_SHL - 3N-R67W-Sec. 15_Section Lines - 3N-R67W-Sec. 8_Section Lines - 3N										
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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
439.00	0.00	0.00	439.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Fox Hills										
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
756.00	0.00	0.00	756.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Surface Csg Setting Depth										
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,020.00	0.00	0.00	1,020.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 1020.00ft										
1,100.00	1.60	353.00	1,099.99	1.11	-0.14	0.14	2.00	2.00	0.00	353.00
1,200.00	3.60	353.00	1,199.88	5.61	-0.69	0.69	2.00	2.00	0.00	0.00
1,300.00	5.60	353.00	1,299.55	13.57	-1.67	1.66	2.00	2.00	0.00	0.00
1,400.00	7.60	353.00	1,398.89	24.98	-3.07	3.05	2.00	2.00	0.00	0.00
1,500.00	9.60	353.00	1,497.76	39.82	-4.89	4.86	2.00	2.00	0.00	0.00
1,600.00	11.60	353.00	1,596.05	58.08	-7.13	7.09	2.00	2.00	0.00	0.00
1,604.04	11.68	353.00	1,600.00	58.88	-7.23	7.19	2.00	2.00	0.00	0.00
9 5/8"										
1,700.00	13.60	353.00	1,693.63	79.73	-9.79	9.73	2.00	2.00	0.00	0.00
1,800.00	15.60	353.00	1,790.40	104.74	-12.86	12.79	2.00	2.00	0.00	0.00
1,900.00	17.60	353.00	1,886.23	133.10	-16.34	16.25	2.00	2.00	0.00	0.00
2,000.00	19.60	353.00	1,981.00	164.76	-20.23	20.11	2.00	2.00	0.00	0.00
2,100.00	21.60	353.00	2,074.60	199.68	-24.52	24.38	2.00	2.00	0.00	0.00
2,200.00	23.60	353.00	2,166.92	237.82	-29.20	29.03	2.00	2.00	0.00	0.00
2,220.00	24.00	353.00	2,185.21	245.83	-30.18	30.01	2.00	2.00	0.00	0.00
End Nudge @ 2220.00ft										
2,300.00	24.00	353.00	2,258.30	278.12	-34.15	33.96	0.00	0.00	0.00	0.00
2,400.00	24.00	353.00	2,349.65	318.49	-39.11	38.88	0.00	0.00	0.00	0.00
2,500.00	24.00	353.00	2,441.01	358.87	-44.06	43.81	0.00	0.00	0.00	0.00
2,600.00	24.00	353.00	2,532.36	399.24	-49.02	48.74	0.00	0.00	0.00	0.00
2,700.00	24.00	353.00	2,623.72	439.61	-53.98	53.67	0.00	0.00	0.00	0.00
2,800.00	24.00	353.00	2,715.07	479.98	-58.93	58.60	0.00	0.00	0.00	0.00
2,900.00	24.00	353.00	2,806.43	520.35	-63.89	63.53	0.00	0.00	0.00	0.00
3,000.00	24.00	353.00	2,897.78	560.72	-68.85	68.46	0.00	0.00	0.00	0.00
3,100.00	24.00	353.00	2,989.13	601.09	-73.80	73.38	0.00	0.00	0.00	0.00
3,200.00	24.00	353.00	3,080.49	641.46	-78.76	78.31	0.00	0.00	0.00	0.00
3,300.00	24.00	353.00	3,171.84	681.83	-83.72	83.24	0.00	0.00	0.00	0.00
3,400.00	24.00	353.00	3,263.20	722.20	-88.67	88.17	0.00	0.00	0.00	0.00
3,500.00	24.00	353.00	3,354.55	762.57	-93.63	93.10	0.00	0.00	0.00	0.00
3,600.00	24.00	353.00	3,445.91	802.94	-98.59	98.03	0.00	0.00	0.00	0.00
3,700.00	24.00	353.00	3,537.26	843.31	-103.55	102.96	0.00	0.00	0.00	0.00
3,700.81	24.00	353.00	3,538.00	843.64	-103.59	103.00	0.00	0.00	0.00	0.00
Parkman										
3,800.00	24.00	353.00	3,628.62	883.68	-108.50	107.89	0.00	0.00	0.00	0.00
3,900.00	24.00	353.00	3,719.97	924.05	-113.46	112.81	0.00	0.00	0.00	0.00
4,000.00	24.00	353.00	3,811.33	964.42	-118.42	117.74	0.00	0.00	0.00	0.00
4,100.00	24.00	353.00	3,902.68	1,004.79	-123.37	122.67	0.00	0.00	0.00	0.00
4,197.77	24.00	353.00	3,992.00	1,044.26	-128.22	127.49	0.00	0.00	0.00	0.00
Sussex										
4,200.00	24.00	353.00	3,994.03	1,045.16	-128.33	127.60	0.00	0.00	0.00	0.00

Plan Report for GOOSE 9N-A8HZ - Permit Rev-1

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 (°)
4,300.00	24.00	353.00	4,085.39	1,085.53	-133.29	132.53	0.00	0.00	0.00	0.00
4,400.00	24.00	353.00	4,176.74	1,125.90	-138.24	137.46	0.00	0.00	0.00	0.00
4,500.00	24.00	353.00	4,268.10	1,166.28	-143.20	142.39	0.00	0.00	0.00	0.00
4,600.00	24.00	353.00	4,359.45	1,206.65	-148.16	147.32	0.00	0.00	0.00	0.00
4,700.00	24.00	353.00	4,450.81	1,247.02	-153.11	152.24	0.00	0.00	0.00	0.00
4,800.00	24.00	353.00	4,542.16	1,287.39	-158.07	157.17	0.00	0.00	0.00	0.00
4,900.00	24.00	353.00	4,633.52	1,327.76	-163.03	162.10	0.00	0.00	0.00	0.00
5,000.00	24.00	353.00	4,724.87	1,368.13	-167.98	167.03	0.00	0.00	0.00	0.00
5,100.00	24.00	353.00	4,816.23	1,408.50	-172.94	171.96	0.00	0.00	0.00	0.00
5,163.00	24.00	353.00	4,873.78	1,433.93	-176.06	175.06	0.00	0.00	0.00	0.00
Begin Drop @ 5163.00ft										
5,200.00	23.26	353.00	4,907.68	1,448.65	-177.87	176.86	2.00	-2.00	0.00	180.00
5,300.00	21.26	353.00	5,000.22	1,486.25	-182.49	181.45	2.00	-2.00	0.00	180.00
5,400.00	19.26	353.00	5,094.03	1,520.62	-186.71	185.65	2.00	-2.00	0.00	180.00
5,500.00	17.26	353.00	5,188.99	1,551.71	-190.53	189.44	2.00	-2.00	0.00	180.00
5,600.00	15.26	353.00	5,284.98	1,579.50	-193.94	192.84	2.00	-2.00	0.00	180.00
5,700.00	13.26	353.00	5,381.90	1,603.95	-196.94	195.82	2.00	-2.00	0.00	180.00
5,800.00	11.26	353.00	5,479.61	1,625.03	-199.53	198.39	2.00	-2.00	0.00	180.00
5,900.00	9.26	353.00	5,578.01	1,642.70	-201.70	200.55	2.00	-2.00	0.00	180.00
6,000.00	7.26	353.00	5,676.96	1,656.96	-203.45	202.29	2.00	-2.00	0.00	180.00
6,100.00	5.26	353.00	5,776.36	1,667.79	-204.78	203.61	2.00	-2.00	0.00	180.00
6,200.00	3.26	353.00	5,876.08	1,675.16	-205.68	204.51	2.00	-2.00	0.00	180.00
6,300.00	1.26	353.00	5,976.00	1,679.07	-206.16	204.99	2.00	-2.00	0.00	180.00
6,363.00	0.00	0.00	6,038.99	1,679.76	-206.25	205.08	2.00	-2.00	0.00	180.00
End Drop @ 6363.00ft										
6,400.00	0.00	0.00	6,075.99	1,679.76	-206.25	205.08	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,175.99	1,679.76	-206.25	205.08	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,275.99	1,679.76	-206.25	205.08	0.00	0.00	0.00	0.00
6,690.05	0.00	0.00	6,366.04	1,679.76	-206.25	205.08	0.00	0.00	0.00	0.00
Top of 4.5" Liner @ 6690.05ft										
6,700.00	0.00	0.00	6,375.99	1,679.76	-206.25	205.08	0.00	0.00	0.00	0.00
6,790.05	0.00	0.00	6,466.04	1,679.76	-206.25	205.08	0.00	0.00	0.00	0.00
KOP @ 6790.05ft										
6,800.00	0.99	269.96	6,475.99	1,679.76	-206.33	205.16	10.00	10.00	-904.91	-90.04
6,900.00	10.99	269.96	6,575.32	1,679.75	-216.77	215.59	10.00	10.00	0.00	0.00
7,000.00	20.99	269.96	6,671.33	1,679.73	-244.29	243.11	10.00	10.00	0.00	0.00
7,100.00	30.99	269.96	6,761.10	1,679.70	-288.06	286.89	10.00	10.00	0.00	0.00
7,134.36	34.43	269.96	6,790.00	1,679.69	-306.63	305.45	10.00	10.00	0.00	0.00
SSPG										
7,200.00	40.99	269.96	6,841.90	1,679.67	-346.76	345.58	10.00	10.00	0.00	0.00
DLS = 10°/100'										
7,200.13	40.99	269.96	6,842.00	1,679.67	-346.84	345.67	0.00	0.00	0.00	-5.48
NBRR										
7,285.47	49.54	269.96	6,902.00	1,679.62	-407.42	406.25	10.02	10.02	0.00	0.00
N470_B_CK										
7,300.00	50.99	269.96	6,911.28	1,679.62	-418.59	417.42	10.00	10.00	0.00	0.00
7,400.00	60.99	269.96	6,967.14	1,679.56	-501.39	500.21	10.00	10.00	0.00	0.00
7,401.78	61.17	269.96	6,968.00	1,679.56	-502.94	501.77	10.00	10.00	0.00	0.00
N700_C_CK										
7,500.00	70.99	269.96	7,007.77	1,679.50	-592.62	591.45	10.00	10.00	0.00	0.00
7,600.00	80.99	269.96	7,031.94	1,679.44	-689.53	688.35	10.00	10.00	0.00	0.00
7,692.18	90.21	269.96	7,039.00	1,679.37	-781.34	780.16	10.00	10.00	0.00	0.00
End Build @ 7692.18ft - Landing Target (Heel) - Top of Production										
7,700.00	90.21	269.96	7,038.97	1,679.37	-789.16	787.98	0.00	0.00	0.00	0.00
7,800.00	90.21	269.96	7,038.60	1,679.30	-889.16	887.98	0.00	0.00	0.00	0.00
7,900.00	90.21	269.96	7,038.23	1,679.24	-989.15	987.98	0.00	0.00	0.00	0.00
8,000.00	90.21	269.96	7,037.86	1,679.17	-1,089.15	1,087.98	0.00	0.00	0.00	0.00
8,100.00	90.21	269.96	7,037.48	1,679.10	-1,189.15	1,187.98	0.00	0.00	0.00	0.00

Plan Report for GOOSE 9N-A8HZ - Permit Rev-1

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 (°)
8,200.00	90.21	269.96	7,037.11	1,679.03	-1,289.15	1,287.98	0.00	0.00	0.00	0.00
8,300.00	90.21	269.96	7,036.74	1,678.97	-1,389.15	1,387.98	0.00	0.00	0.00	0.00
8,400.00	90.21	269.96	7,036.37	1,678.90	-1,489.15	1,487.98	0.00	0.00	0.00	0.00
8,500.00	90.21	269.96	7,036.00	1,678.83	-1,589.15	1,587.98	0.00	0.00	0.00	0.00
8,600.00	90.21	269.96	7,035.63	1,678.77	-1,689.15	1,687.98	0.00	0.00	0.00	0.00
8,700.00	90.21	269.96	7,035.26	1,678.70	-1,789.15	1,787.98	0.00	0.00	0.00	0.00
8,800.00	90.21	269.96	7,034.89	1,678.63	-1,889.15	1,887.98	0.00	0.00	0.00	0.00
8,900.00	90.21	269.96	7,034.52	1,678.57	-1,989.15	1,987.98	0.00	0.00	0.00	0.00
9,000.00	90.21	269.96	7,034.14	1,678.50	-2,089.15	2,087.97	0.00	0.00	0.00	0.00
9,100.00	90.21	269.96	7,033.77	1,678.43	-2,189.15	2,187.97	0.00	0.00	0.00	0.00
9,200.00	90.21	269.96	7,033.40	1,678.37	-2,289.15	2,287.97	0.00	0.00	0.00	0.00
9,300.00	90.21	269.96	7,033.03	1,678.30	-2,389.14	2,387.97	0.00	0.00	0.00	0.00
9,400.00	90.21	269.96	7,032.66	1,678.23	-2,489.14	2,487.97	0.00	0.00	0.00	0.00
9,500.00	90.21	269.96	7,032.29	1,678.17	-2,589.14	2,587.97	0.00	0.00	0.00	0.00
9,600.00	90.21	269.96	7,031.92	1,678.10	-2,689.14	2,687.97	0.00	0.00	0.00	0.00
9,700.00	90.21	269.96	7,031.55	1,678.03	-2,789.14	2,787.97	0.00	0.00	0.00	0.00
9,800.00	90.21	269.96	7,031.18	1,677.96	-2,889.14	2,887.97	0.00	0.00	0.00	0.00
9,900.00	90.21	269.96	7,030.81	1,677.90	-2,989.14	2,987.97	0.00	0.00	0.00	0.00
10,000.00	90.21	269.96	7,030.43	1,677.83	-3,089.14	3,087.97	0.00	0.00	0.00	0.00
10,100.00	90.21	269.96	7,030.06	1,677.76	-3,189.14	3,187.97	0.00	0.00	0.00	0.00
10,200.00	90.21	269.96	7,029.69	1,677.70	-3,289.14	3,287.97	0.00	0.00	0.00	0.00
10,300.00	90.21	269.96	7,029.32	1,677.63	-3,389.14	3,387.97	0.00	0.00	0.00	0.00
10,400.00	90.21	269.96	7,028.95	1,677.56	-3,489.14	3,487.96	0.00	0.00	0.00	0.00
10,500.00	90.21	269.96	7,028.58	1,677.50	-3,589.14	3,587.96	0.00	0.00	0.00	0.00
10,600.00	90.21	269.96	7,028.21	1,677.43	-3,689.14	3,687.96	0.00	0.00	0.00	0.00
10,700.00	90.21	269.96	7,027.84	1,677.36	-3,789.13	3,787.96	0.00	0.00	0.00	0.00
10,800.00	90.21	269.96	7,027.47	1,677.30	-3,889.13	3,887.96	0.00	0.00	0.00	0.00
10,900.00	90.21	269.96	7,027.10	1,677.23	-3,989.13	3,987.96	0.00	0.00	0.00	0.00
11,000.00	90.21	269.96	7,026.72	1,677.16	-4,089.13	4,087.96	0.00	0.00	0.00	0.00
11,100.00	90.21	269.96	7,026.35	1,677.10	-4,189.13	4,187.96	0.00	0.00	0.00	0.00
11,200.00	90.21	269.96	7,025.98	1,677.03	-4,289.13	4,287.96	0.00	0.00	0.00	0.00
11,300.00	90.21	269.96	7,025.61	1,676.96	-4,389.13	4,387.96	0.00	0.00	0.00	0.00
11,400.00	90.21	269.96	7,025.24	1,676.89	-4,489.13	4,487.96	0.00	0.00	0.00	0.00
11,500.00	90.21	269.96	7,024.87	1,676.83	-4,589.13	4,587.96	0.00	0.00	0.00	0.00
11,600.00	90.21	269.96	7,024.50	1,676.76	-4,689.13	4,687.96	0.00	0.00	0.00	0.00
11,700.00	90.21	269.96	7,024.13	1,676.69	-4,789.13	4,787.96	0.00	0.00	0.00	0.00
11,800.00	90.21	269.96	7,023.76	1,676.63	-4,889.13	4,887.96	0.00	0.00	0.00	0.00
11,900.00	90.21	269.96	7,023.38	1,676.56	-4,989.13	4,987.95	0.00	0.00	0.00	0.00
12,000.00	90.21	269.96	7,023.01	1,676.49	-5,089.13	5,087.95	0.00	0.00	0.00	0.00
12,100.00	90.21	269.96	7,022.64	1,676.43	-5,189.12	5,187.95	0.00	0.00	0.00	0.00
12,200.00	90.21	269.96	7,022.27	1,676.36	-5,289.12	5,287.95	0.00	0.00	0.00	0.00
12,300.00	90.21	269.96	7,021.90	1,676.29	-5,389.12	5,387.95	0.00	0.00	0.00	0.00
12,400.00	90.21	269.96	7,021.53	1,676.23	-5,489.12	5,487.95	0.00	0.00	0.00	0.00
12,500.00	90.21	269.96	7,021.16	1,676.16	-5,589.12	5,587.95	0.00	0.00	0.00	0.00
12,600.00	90.21	269.96	7,020.79	1,676.09	-5,689.12	5,687.95	0.00	0.00	0.00	0.00
12,700.00	90.21	269.96	7,020.42	1,676.02	-5,789.12	5,787.95	0.00	0.00	0.00	0.00
12,800.00	90.21	269.96	7,020.05	1,675.96	-5,889.12	5,887.95	0.00	0.00	0.00	0.00
12,900.00	90.21	269.96	7,019.67	1,675.89	-5,989.12	5,987.95	0.00	0.00	0.00	0.00
13,000.00	90.21	269.96	7,019.30	1,675.82	-6,089.12	6,087.95	0.00	0.00	0.00	0.00
13,100.00	90.21	269.96	7,018.93	1,675.76	-6,189.12	6,187.95	0.00	0.00	0.00	0.00
13,200.00	90.21	269.96	7,018.56	1,675.69	-6,289.12	6,287.95	0.00	0.00	0.00	0.00
13,300.00	90.21	269.96	7,018.19	1,675.62	-6,389.12	6,387.94	0.00	0.00	0.00	0.00
13,351.28	90.21	269.96	7,018.00	1,675.59	-6,440.40	6,439.22	0.00	0.00	0.00	0.00
Total Depth (Toe)										
13,351.29	90.21	269.96	7,018.00	1,675.59	-6,440.40	6,439.23	0.00	0.00	0.00	0.00
TD Well @ 13351.29ft - GOOSE 9C-8HZ_BHL										

Plan Report for GOOSE 9N-A8HZ - Permit Rev-1

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,020.00	1,020.00	0.00	0.00	Begin Nudge @ 1020.00ft
2,220.00	2,185.21	245.83	-30.18	End Nudge @ 2220.00ft
5,163.00	4,873.78	1,433.93	-176.06	Begin Drop @ 5163.00ft
6,363.00	6,038.99	1,679.76	-206.25	End Drop @ 6363.00ft
6,690.05	6,366.04	1,679.76	-206.25	Top of 4.5" Liner @ 6690.05ft
6,790.05	6,466.04	1,679.76	-206.25	KOP @ 6790.05ft
7,200.00	6,841.90	1,679.67	-346.76	DLS = 10°/100'
7,692.18	7,039.00	1,679.37	-781.34	End Build @ 7692.18ft
13,351.29	7,018.00	1,675.59	-6,440.40	TD Well @ 13351.29ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (usft)
				+N/-S (usft)	+E/-W (usft)	
User	No Target (Freehand)	269.96	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	7,692.18	Permit Rev-1	APC_ISCWSA REV 2 MWD+IFR1
7,692.18	13,351.29	Permit Rev-1	APC_ISCWSA REV 2 MWD+IFR1

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,604.04	1,600.00	9 5/8"	9-5/8	13-1/2
7,692.18	7,039.00	Top of Production	5-1/2	7-7/8

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
439.00	439.00	Base Fox Hills		0.00	
756.00	756.00	Surface Csg Setting Depth		0.00	
3,700.81	3,538.00	Parkman		0.00	
4,197.77	3,992.00	Sussex		0.00	
7,134.36	6,790.00	SSPG		0.00	
7,200.13	6,842.00	NBRR		0.00	
7,285.47	6,902.00	N470_B_CK		0.00	
7,401.78	6,968.00	N700_C_CK		0.00	
7,692.18	7,039.00	Landing Target (Heel)		0.00	
13,351.28	7,018.00	Total Depth (Toe)		0.00	

Plan Report for GOOSE 9N-A8HZ - Permit Rev-1

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
3N-R67W-Sec. 9_Section Lines	-1.00	-59.72	0.28	Polygon
GOOSE 9C-8HZ_LD	0.00	0.00	0.00	Polygon
GOOSE 9C-8HZ_SHL	0.00	0.00	0.00	Point
GOOSE 9C-8HZ_BHL	7,018.00	1,675.59	-6,440.40	Point
3N-R67W-Sec. 15_Section Lines	-1.00	-59.72	0.28	Polygon
3N-R67W-Sec. 8_Section Lines	-1.00	-59.72	0.28	Polygon
3N-R67W-Sec. 10_Section Lines	-1.00	-59.72	0.28	Polygon

North Reference Sheet for 3N-67W-15 Goose Pad - GOOSE 9N-A8HZ - 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 RKB = 17' @ 4809.00usft (D. Rig). Northing and Easting are relative to GOOSE 9N-A8HZ

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

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: 0.99960121

Grid Coordinates of Well: 14,611,160.27 usft N, 1,672,938.44 usft E

Geographical Coordinates of Well: 40° 13' 54.44" N, 104° 53' 00.52" W

Grid Convergence at Surface is: 0.08°

Based upon Minimum Curvature type calculations, at a Measured Depth of 13,351.29usft
the Bottom Hole Displacement is 6,654.80usft in the Direction of 284.58° (True).

Magnetic Convergence at surface is: -8.38° (20 November 2014, , IGRF2010)

