

Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 5-T2N-R67W

Scott 28C-32HZ

Plan B

Plan: Rev B0 Permit

Sperry Drilling Services

Proposal Report

25 October, 2013

Well Coordinates: 1,305,107.79 N, 3,164,308.13 E (40° 10' 09.92" N, 104° 54' 43.35" W)

Ground Level: 4,867.00 usft

Local Coordinate Origin:

Viewing Datum:

TVDs to System:

North Reference:

Unit System:

Geodetic Scale Factor Applied

Version: 5000.1 Build: 70

Centered on Well Scott 28C-32HZ

RKB = 17 @ 4884.00usft (Drilling Rig)

N

Grid

API - US Survey Feet - Custom

HALLIBURTON

Project: Weld County, CO (NAD 83)
Site: Sec. 5-T2N-R67W
Well: Scott 28C-32HZ
Wellbore: Plan B
Design: Rev B0 Permit

Anadarko Petroleum Corp.

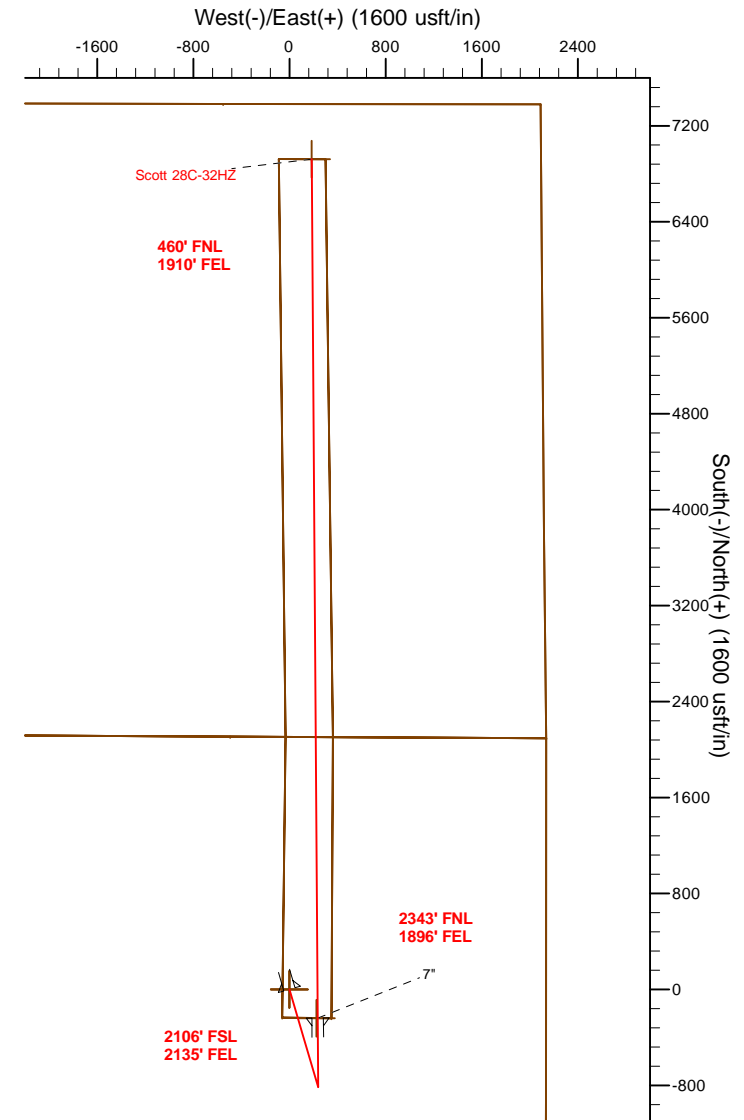
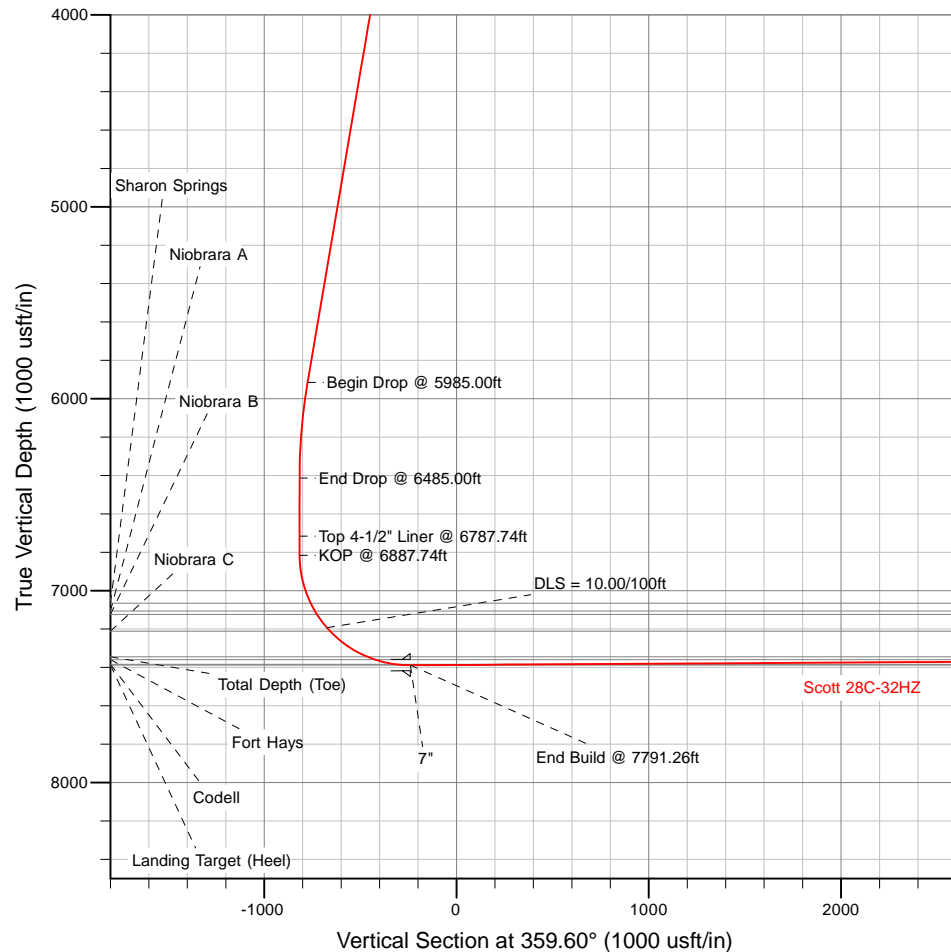
HALLIBURTON
Sperry Drilling

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	1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00	
3	1600.00	10.00	163.62	1597.47	-41.76	12.27	2.00	163.62	-41.84	
4	5985.00	10.00	163.62	5915.85	-772.30	227.01	0.00	0.00	-773.86	
5	6485.00	0.00	0.00	6413.31	-814.05	239.28	2.00	180.00	-815.70	
6	6887.74	0.00	0.00	6816.05	-814.05	239.28	0.00	0.00	-815.70	
7	7791.26	90.35	359.60	7389.00	-237.59	235.27	10.00	359.60	-239.23	
8	14952.19	90.35	359.60	7345.00	6923.04	185.44	0.00	0.00	6921.57	Scott 28C-32HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N-/S	+E-/W	Latitude	Longitude	Shape
Scott 28C-32HZ_LD	0.00	0.00	0.00	40° 10' 9.916 N	104° 54' 43.351 W	Polygon
Scott 28C-32HZ_Sec	0.00	0.00	0.00	40° 10' 9.916 N	104° 54' 43.351 W	Polygon
Scott 28C-32HZ_SHL	0.00	0.00	0.00	40° 10' 9.916 N	104° 54' 43.351 W	Point
Scott 28C-32HZ_BHL	7345.00	6923.04	185.44	40° 11' 18.316 N	104° 54' 40.370 W	Point
Scott 28C-32HZ_CP	7389.00	-238.58	224.88	40° 10' 7.543 N	104° 54' 40.475 W	Point



WELL DETAILS: Scott 28C-32HZ

Ground Level: 4867.00
RKB = 17 @ 4884.00usft (Drilling Rig)

Plan: Rev B0 Permit (Scott 28C-32HZ/Plan B)

Created By: Clint Eshelman Date: 10/25/2013
Reviewed: _____ Date: _____

TVD MD

6716.05 6787.74 Top 4-1/2" Liner @ 6787.74ft

6816.05 6887.74 KOP @ 6887.74ft

Plan Report for Scott 28C-32HZ - Rev B0 Permit

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
Scott 28C-32HZ_SHL - Scott 28C-32HZ_Sec - Scott 28C-32HZ_LD										
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
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
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
943.00	0.00	0.00	943.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"										
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 1100.00ft										
1,200.00	2.00	163.62	1,199.98	-1.67	0.49	-1.68	2.00	2.00	0.00	163.62
1,300.00	4.00	163.62	1,299.84	-6.70	1.97	-6.71	2.00	2.00	0.00	0.00
1,400.00	6.00	163.62	1,399.45	-15.06	4.43	-15.09	2.00	2.00	0.00	0.00
1,500.00	8.00	163.62	1,498.70	-26.75	7.86	-26.80	2.00	2.00	0.00	0.00
1,600.00	10.00	163.62	1,597.47	-41.76	12.27	-41.84	2.00	2.00	0.00	0.00
End Nudge @ 1600.00ft										
1,700.00	10.00	163.62	1,695.95	-58.42	17.17	-58.53	0.00	0.00	0.00	0.00
1,800.00	10.00	163.62	1,794.43	-75.08	22.07	-75.23	0.00	0.00	0.00	0.00
1,900.00	10.00	163.62	1,892.91	-91.74	26.96	-91.92	0.00	0.00	0.00	0.00
2,000.00	10.00	163.62	1,991.39	-108.40	31.86	-108.62	0.00	0.00	0.00	0.00
2,100.00	10.00	163.62	2,089.87	-125.06	36.76	-125.31	0.00	0.00	0.00	0.00
2,200.00	10.00	163.62	2,188.35	-141.72	41.66	-142.00	0.00	0.00	0.00	0.00
2,300.00	10.00	163.62	2,286.83	-158.38	46.55	-158.70	0.00	0.00	0.00	0.00
2,400.00	10.00	163.62	2,385.31	-175.04	51.45	-175.39	0.00	0.00	0.00	0.00
2,500.00	10.00	163.62	2,483.79	-191.70	56.35	-192.09	0.00	0.00	0.00	0.00
2,600.00	10.00	163.62	2,582.27	-208.36	61.24	-208.78	0.00	0.00	0.00	0.00
2,700.00	10.00	163.62	2,680.75	-225.02	66.14	-225.47	0.00	0.00	0.00	0.00
2,800.00	10.00	163.62	2,779.23	-241.68	71.04	-242.17	0.00	0.00	0.00	0.00
2,900.00	10.00	163.62	2,877.72	-258.34	75.93	-258.86	0.00	0.00	0.00	0.00
3,000.00	10.00	163.62	2,976.20	-275.00	80.83	-275.55	0.00	0.00	0.00	0.00
3,100.00	10.00	163.62	3,074.68	-291.66	85.73	-292.25	0.00	0.00	0.00	0.00
3,200.00	10.00	163.62	3,173.16	-308.32	90.62	-308.94	0.00	0.00	0.00	0.00
3,300.00	10.00	163.62	3,271.64	-324.98	95.52	-325.64	0.00	0.00	0.00	0.00
3,400.00	10.00	163.62	3,370.12	-341.64	100.42	-342.33	0.00	0.00	0.00	0.00
3,500.00	10.00	163.62	3,468.60	-358.30	105.32	-359.02	0.00	0.00	0.00	0.00
3,600.00	10.00	163.62	3,567.08	-374.96	110.21	-375.72	0.00	0.00	0.00	0.00
3,700.00	10.00	163.62	3,665.56	-391.62	115.11	-392.41	0.00	0.00	0.00	0.00
3,800.00	10.00	163.62	3,764.04	-408.28	120.01	-409.10	0.00	0.00	0.00	0.00
3,822.30	10.00	163.62	3,786.00	-411.99	121.10	-412.83	0.00	0.00	0.00	0.00
Parkman										
3,900.00	10.00	163.62	3,862.52	-424.94	124.90	-425.80	0.00	0.00	0.00	0.00
4,000.00	10.00	163.62	3,961.00	-441.60	129.80	-442.49	0.00	0.00	0.00	0.00
4,100.00	10.00	163.62	4,059.48	-458.26	134.70	-459.19	0.00	0.00	0.00	0.00
4,200.00	10.00	163.62	4,157.97	-474.92	139.59	-475.88	0.00	0.00	0.00	0.00
4,268.07	10.00	163.62	4,225.00	-486.26	142.93	-487.24	0.00	0.00	0.00	0.00
Sussex										
4,300.00	10.00	163.62	4,256.45	-491.58	144.49	-492.57	0.00	0.00	0.00	0.00
4,400.00	10.00	163.62	4,354.93	-508.24	149.39	-509.27	0.00	0.00	0.00	0.00
4,500.00	10.00	163.62	4,453.41	-524.90	154.29	-525.96	0.00	0.00	0.00	0.00
4,600.00	10.00	163.62	4,551.89	-541.56	159.18	-542.65	0.00	0.00	0.00	0.00
4,700.00	10.00	163.62	4,650.37	-558.22	164.08	-559.35	0.00	0.00	0.00	0.00
4,800.00	10.00	163.62	4,748.85	-574.88	168.98	-576.04	0.00	0.00	0.00	0.00

Plan Report for Scott 28C-32HZ - Rev B0 Permit

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 (°)
4,900.00	10.00	163.62	4,847.33	-591.54	173.87	-592.74	0.00	0.00	0.00	0.00
5,000.00	10.00	163.62	4,945.81	-608.20	178.77	-609.43	0.00	0.00	0.00	0.00
5,100.00	10.00	163.62	5,044.29	-624.86	183.67	-626.12	0.00	0.00	0.00	0.00
5,200.00	10.00	163.62	5,142.77	-641.52	188.56	-642.82	0.00	0.00	0.00	0.00
5,300.00	10.00	163.62	5,241.25	-658.18	193.46	-659.51	0.00	0.00	0.00	0.00
5,400.00	10.00	163.62	5,339.73	-674.84	198.36	-676.21	0.00	0.00	0.00	0.00
5,500.00	10.00	163.62	5,438.22	-691.50	203.26	-692.90	0.00	0.00	0.00	0.00
5,600.00	10.00	163.62	5,536.70	-708.16	208.15	-709.59	0.00	0.00	0.00	0.00
5,700.00	10.00	163.62	5,635.18	-724.82	213.05	-726.29	0.00	0.00	0.00	0.00
5,800.00	10.00	163.62	5,733.66	-741.48	217.95	-742.98	0.00	0.00	0.00	0.00
5,900.00	10.00	163.62	5,832.14	-758.14	222.84	-759.67	0.00	0.00	0.00	0.00
5,985.00	10.00	163.62	5,915.85	-772.30	227.01	-773.86	0.00	0.00	0.00	0.00
Begin Drop @ 5985.00ft										
6,000.00	9.70	163.62	5,930.63	-774.76	227.73	-776.33	2.00	-2.00	0.00	180.00
6,100.00	7.70	163.62	6,029.47	-789.27	231.99	-790.87	2.00	-2.00	0.00	180.00
6,200.00	5.70	163.62	6,128.78	-800.46	235.28	-802.09	2.00	-2.00	0.00	180.00
6,300.00	3.70	163.62	6,228.44	-808.33	237.60	-809.96	2.00	-2.00	0.00	180.00
6,400.00	1.70	163.62	6,328.33	-812.84	238.92	-814.49	2.00	-2.00	0.00	180.00
6,485.00	0.00	0.00	6,413.31	-814.05	239.28	-815.70	2.00	-2.00	0.00	-180.00
End Drop @ 6485.00ft										
6,500.00	0.00	0.00	6,428.31	-814.05	239.28	-815.70	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,528.31	-814.05	239.28	-815.70	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,628.31	-814.05	239.28	-815.70	0.00	0.00	0.00	0.00
6,787.74	0.00	0.00	6,716.05	-814.05	239.28	-815.70	0.00	0.00	0.00	0.00
Top 4-1/2" Liner @ 6787.74ft										
6,800.00	0.00	0.00	6,728.31	-814.05	239.28	-815.70	0.00	0.00	0.00	0.00
6,887.74	0.00	0.00	6,816.05	-814.05	239.28	-815.70	0.00	0.00	0.00	0.00
KOP @ 6887.74ft										
6,900.00	1.23	359.60	6,828.31	-813.92	239.28	-815.57	10.00	10.00	0.00	359.60
7,000.00	11.23	359.60	6,927.60	-803.09	239.20	-804.74	10.00	10.00	0.00	0.00
7,100.00	21.23	359.60	7,023.49	-775.18	239.01	-776.83	10.00	10.00	0.00	0.00
7,145.27	25.75	359.60	7,065.00	-757.15	238.88	-758.79	10.00	10.00	0.00	0.00
Sharon Springs										
7,191.75	30.40	359.60	7,106.00	-735.27	238.73	-736.92	10.00	10.00	0.00	0.00
Niobrara A										
7,200.00	31.23	359.60	7,113.08	-731.05	238.70	-732.70	10.00	10.00	0.00	0.00
7,212.86	32.51	359.60	7,124.00	-724.26	238.65	-725.91	10.00	10.00	0.00	0.00
Niobrara B										
7,300.00	41.23	359.60	7,193.65	-672.03	238.29	-673.68	10.00	10.00	0.00	0.00
DLS = 10.00/100ft										
7,323.50	43.58	359.60	7,211.00	-656.19	238.18	-657.83	10.00	10.00	0.00	0.00
Niobrara C										
7,400.00	51.23	359.60	7,262.74	-599.91	237.79	-601.56	10.00	10.00	0.00	0.00
7,500.00	61.23	359.60	7,318.26	-516.90	237.21	-518.54	10.00	10.00	0.00	0.00
7,600.00	71.23	359.60	7,358.52	-425.50	236.58	-427.14	10.00	10.00	0.00	0.00
7,604.64	71.69	359.60	7,360.00	-421.10	236.54	-422.74	10.00	10.00	0.00	0.00
Fort Hays										
7,700.00	81.23	359.60	7,382.30	-328.50	235.90	-330.14	10.00	10.00	0.00	0.00
7,711.93	82.42	359.60	7,384.00	-316.70	235.82	-318.33	10.00	10.00	0.00	0.00
Codell										
7,790.34	90.26	359.60	7,389.00	-238.51	235.27	-240.14	10.00	10.00	0.00	0.00
Scott 28C-32HZ_CP										
7,791.26	90.35	359.60	7,389.00	-237.59	235.27	-239.22	10.00	10.00	0.00	0.00
End Build @ 7791.26ft - Landing Target (Heel) - 7"										
7,800.00	90.35	359.60	7,388.94	-228.85	235.21	-230.48	0.00	0.00	0.00	0.00
7,900.00	90.35	359.60	7,388.33	-128.85	234.51	-130.49	0.00	0.00	0.00	0.00
8,000.00	90.35	359.60	7,387.71	-28.86	233.81	-30.49	0.00	0.00	0.00	0.00
8,100.00	90.35	359.60	7,387.10	71.14	233.12	69.51	0.00	0.00	0.00	0.00

Plan Report for Scott 28C-32HZ - Rev B0 Permit

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	90.35	359.60	7,386.49	171.13	232.42	169.51	0.00	0.00	0.00	0.00
8,300.00	90.35	359.60	7,385.87	271.13	231.73	269.51	0.00	0.00	0.00	0.00
8,400.00	90.35	359.60	7,385.26	371.13	231.03	369.50	0.00	0.00	0.00	0.00
8,500.00	90.35	359.60	7,384.64	471.12	230.34	469.50	0.00	0.00	0.00	0.00
8,600.00	90.35	359.60	7,384.03	571.12	229.64	569.50	0.00	0.00	0.00	0.00
8,700.00	90.35	359.60	7,383.41	671.11	228.94	669.50	0.00	0.00	0.00	0.00
8,800.00	90.35	359.60	7,382.80	771.11	228.25	769.50	0.00	0.00	0.00	0.00
8,900.00	90.35	359.60	7,382.18	871.10	227.55	869.49	0.00	0.00	0.00	0.00
9,000.00	90.35	359.60	7,381.57	971.10	226.86	969.49	0.00	0.00	0.00	0.00
9,100.00	90.35	359.60	7,380.96	1,071.10	226.16	1,069.49	0.00	0.00	0.00	0.00
9,200.00	90.35	359.60	7,380.34	1,171.09	225.46	1,169.49	0.00	0.00	0.00	0.00
9,300.00	90.35	359.60	7,379.73	1,271.09	224.77	1,269.49	0.00	0.00	0.00	0.00
9,400.00	90.35	359.60	7,379.11	1,371.08	224.07	1,369.49	0.00	0.00	0.00	0.00
9,500.00	90.35	359.60	7,378.50	1,471.08	223.38	1,469.48	0.00	0.00	0.00	0.00
9,600.00	90.35	359.60	7,377.88	1,571.07	222.68	1,569.48	0.00	0.00	0.00	0.00
9,700.00	90.35	359.60	7,377.27	1,671.07	221.99	1,669.48	0.00	0.00	0.00	0.00
9,800.00	90.35	359.60	7,376.66	1,771.07	221.29	1,769.48	0.00	0.00	0.00	0.00
9,900.00	90.35	359.60	7,376.04	1,871.06	220.59	1,869.48	0.00	0.00	0.00	0.00
10,000.00	90.35	359.60	7,375.43	1,971.06	219.90	1,969.47	0.00	0.00	0.00	0.00
10,100.00	90.35	359.60	7,374.81	2,071.05	219.20	2,069.47	0.00	0.00	0.00	0.00
10,200.00	90.35	359.60	7,374.20	2,171.05	218.51	2,169.47	0.00	0.00	0.00	0.00
10,300.00	90.35	359.60	7,373.58	2,271.04	217.81	2,269.47	0.00	0.00	0.00	0.00
10,400.00	90.35	359.60	7,372.97	2,371.04	217.11	2,369.47	0.00	0.00	0.00	0.00
10,500.00	90.35	359.60	7,372.35	2,471.04	216.42	2,469.46	0.00	0.00	0.00	0.00
10,600.00	90.35	359.60	7,371.74	2,571.03	215.72	2,569.46	0.00	0.00	0.00	0.00
10,700.00	90.35	359.60	7,371.13	2,671.03	215.03	2,669.46	0.00	0.00	0.00	0.00
10,800.00	90.35	359.60	7,370.51	2,771.02	214.33	2,769.46	0.00	0.00	0.00	0.00
10,900.00	90.35	359.60	7,369.90	2,871.02	213.63	2,869.46	0.00	0.00	0.00	0.00
11,000.00	90.35	359.60	7,369.28	2,971.01	212.94	2,969.46	0.00	0.00	0.00	0.00
11,100.00	90.35	359.60	7,368.67	3,071.01	212.24	3,069.45	0.00	0.00	0.00	0.00
11,200.00	90.35	359.60	7,368.05	3,171.01	211.55	3,169.45	0.00	0.00	0.00	0.00
11,300.00	90.35	359.60	7,367.44	3,271.00	210.85	3,269.45	0.00	0.00	0.00	0.00
11,400.00	90.35	359.60	7,366.82	3,371.00	210.16	3,369.45	0.00	0.00	0.00	0.00
11,500.00	90.35	359.60	7,366.21	3,470.99	209.46	3,469.45	0.00	0.00	0.00	0.00
11,600.00	90.35	359.60	7,365.60	3,570.99	208.76	3,569.44	0.00	0.00	0.00	0.00
11,700.00	90.35	359.60	7,364.98	3,670.98	208.07	3,669.44	0.00	0.00	0.00	0.00
11,800.00	90.35	359.60	7,364.37	3,770.98	207.37	3,769.44	0.00	0.00	0.00	0.00
11,900.00	90.35	359.60	7,363.75	3,870.97	206.68	3,869.44	0.00	0.00	0.00	0.00
12,000.00	90.35	359.60	7,363.14	3,970.97	205.98	3,969.44	0.00	0.00	0.00	0.00
12,100.00	90.35	359.60	7,362.52	4,070.97	205.28	4,069.43	0.00	0.00	0.00	0.00
12,200.00	90.35	359.60	7,361.91	4,170.96	204.59	4,169.43	0.00	0.00	0.00	0.00
12,300.00	90.35	359.60	7,361.30	4,270.96	203.89	4,269.43	0.00	0.00	0.00	0.00
12,400.00	90.35	359.60	7,360.68	4,370.95	203.20	4,369.43	0.00	0.00	0.00	0.00
12,500.00	90.35	359.60	7,360.07	4,470.95	202.50	4,469.43	0.00	0.00	0.00	0.00
12,600.00	90.35	359.60	7,359.45	4,570.94	201.81	4,569.42	0.00	0.00	0.00	0.00
12,700.00	90.35	359.60	7,358.84	4,670.94	201.11	4,669.42	0.00	0.00	0.00	0.00
12,800.00	90.35	359.60	7,358.22	4,770.94	200.41	4,769.42	0.00	0.00	0.00	0.00
12,900.00	90.35	359.60	7,357.61	4,870.93	199.72	4,869.42	0.00	0.00	0.00	0.00
13,000.00	90.35	359.60	7,356.99	4,970.93	199.02	4,969.42	0.00	0.00	0.00	0.00
13,100.00	90.35	359.60	7,356.38	5,070.92	198.33	5,069.42	0.00	0.00	0.00	0.00
13,200.00	90.35	359.60	7,355.77	5,170.92	197.63	5,169.41	0.00	0.00	0.00	0.00
13,300.00	90.35	359.60	7,355.15	5,270.91	196.93	5,269.41	0.00	0.00	0.00	0.00
13,400.00	90.35	359.60	7,354.54	5,370.91	196.24	5,369.41	0.00	0.00	0.00	0.00
13,500.00	90.35	359.60	7,353.92	5,470.91	195.54	5,469.41	0.00	0.00	0.00	0.00
13,600.00	90.35	359.60	7,353.31	5,570.90	194.85	5,569.41	0.00	0.00	0.00	0.00
13,700.00	90.35	359.60	7,352.69	5,670.90	194.15	5,669.40	0.00	0.00	0.00	0.00
13,800.00	90.35	359.60	7,352.08	5,770.89	193.45	5,769.40	0.00	0.00	0.00	0.00
13,900.00	90.35	359.60	7,351.46	5,870.89	192.76	5,869.40	0.00	0.00	0.00	0.00
14,000.00	90.35	359.60	7,350.85	5,970.88	192.06	5,969.40	0.00	0.00	0.00	0.00
14,100.00	90.35	359.60	7,350.24	6,070.88	191.37	6,069.40	0.00	0.00	0.00	0.00

Plan Report for Scott 28C-32HZ - Rev B0 Permit

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 (°)
14,200.00	90.35	359.60	7,349.62	6,170.88	190.67	6,169.39	0.00	0.00	0.00	0.00
14,300.00	90.35	359.60	7,349.01	6,270.87	189.98	6,269.39	0.00	0.00	0.00	0.00
14,400.00	90.35	359.60	7,348.39	6,370.87	189.28	6,369.39	0.00	0.00	0.00	0.00
14,500.00	90.35	359.60	7,347.78	6,470.86	188.58	6,469.39	0.00	0.00	0.00	0.00
14,600.00	90.35	359.60	7,347.16	6,570.86	187.89	6,569.39	0.00	0.00	0.00	0.00
14,700.00	90.35	359.60	7,346.55	6,670.85	187.19	6,669.39	0.00	0.00	0.00	0.00
14,800.00	90.35	359.60	7,345.94	6,770.85	186.50	6,769.38	0.00	0.00	0.00	0.00
14,900.00	90.35	359.60	7,345.32	6,870.85	185.80	6,869.38	0.00	0.00	0.00	0.00
14,952.19	90.35	359.60	7,345.00	6,923.03	185.44	6,921.57	0.00	0.00	0.00	0.00

TD @ 14952.19ft - Total Depth (Toe) - Scott 28C-32HZ_BHL

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,100.00	1,100.00	0.00	0.00	Begin Nudge @ 1100.00ft
1,600.00	1,597.47	-41.76	12.27	End Nudge @ 1600.00ft
5,985.00	5,915.85	-772.30	227.01	Begin Drop @ 5985.00ft
6,485.00	6,413.31	-814.05	239.28	End Drop @ 6485.00ft
6,787.74	6,716.05	-814.05	239.28	Top 4-1/2" Liner @ 6787.74ft
6,887.74	6,816.05	-814.05	239.28	KOP @ 6887.74ft
7,300.00	7,193.65	-672.03	238.29	DLS = 10.00/100ft
7,791.26	7,389.00	-237.59	235.27	End Build @ 7791.26ft
14,952.19	7,345.00	6,923.03	185.44	TD @ 14952.19ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (usft)
				+N/_S (usft)	+E/-W (usft)	
User	No Target (Freehand)	359.60	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	7,791.26	Rev B0 Permit	MWD
7,791.26	14,952.19	Rev B0 Permit	MWD

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
943.00	943.00	9 5/8"	9-5/8	13-1/2
7,791.26	7,389.00	7"	7	8-3/4

Plan Report for Scott 28C-32HZ - Rev B0 Permit

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,822.30	3,786.00	Parkman		0.00	
4,268.07	4,225.00	Sussex		0.00	
7,145.27	7,065.00	Sharon Springs		0.00	
7,191.75	7,106.00	Niobrara A		0.00	
7,212.86	7,124.00	Niobrara B		0.00	
7,323.50	7,211.00	Niobrara C		0.00	
7,604.64	7,360.00	Fort Hays		0.00	
7,711.93	7,384.00	Codell		0.00	
7,791.26	7,389.00	Landing Target (Heel)		0.00	
14,952.19	7,345.00	Total Depth (Toe)		0.00	

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
Scott 28C-32HZ_SHL	0.00	0.00	0.00	Point
Scott 28C-32HZ_Sec	0.00	0.00	0.00	Polygon
Scott 28C-32HZ_LD	0.00	0.00	0.00	Polygon
Scott 28C-32HZ_BHL	7,345.00	6,923.04	185.44	Point
Scott 28C-32HZ_CP	7,389.00	-238.58	224.88	Point

Directional Difficulty Index

Average Dogleg over Survey:	0.74 °/100usft	Maximum Dogleg over Survey:	10.00 °/100usft at 7,791.26 usft
Net Tortousity applicable to Plans:	0.74 °/100usft	Directional Difficulty Index:	6.484

Audit Info

North Reference Sheet for Sec. 5-T2N-R67W - Scott 28C-32HZ - Plan B

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.
 Vertical Depths are relative to RKB = 17 @ 4884.00usft (Drilling Rig). Northing and Easting are relative to Scott 28C-32HZ
 Coordinate System is US State Plane 1983, Colorado Northern Zone using datum North American Datum 1983, ellipsoid GRS 1980
 Projection method is Lambert Conformal Conic (2 parallel)
 Central Meridian is -105.50°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:40° 47' 0.000 N°
 False Easting: 3,000,000.00usft, False Northing: 1,000,000.00usft, Scale Reduction: 0.99995785

Grid Coordinates of Well: 1,305,107.79 usft N, 3,164,308.13 usft E
 Geographical Coordinates of Well: 40° 10' 09.92" N, 104° 54' 43.35" W
 Grid Convergence at Surface is: 0.38°

Based upon Minimum Curvature type calculations, at a Measured Depth of 14,952.19usft
 the Bottom Hole Displacement is 6,925.52usft in the Direction of 1.53° (Grid).
 Magnetic Convergence at surface is: -8.29° (25 July 2013, , BGGM2013)

