

Whiting Oil and Gas Corporation

Weld County, CO

Sec. 27-T10N-R58W (#27 J Pad)

Razor #27J-3410B

Plan D

Plan: Rev D0

Sperry Drilling Services

Proposal Report

26 August, 2014

Well Coordinates: 1,541,618.75 N, 3,457,072.13 E (40° 48' 30.40" N, 103° 50' 55.77" W)

Ground Level: 4,764.00 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 Razor #27J-3410B

KB 22 ft @ 4786.00usft (Frontier 26)

N

True

API - US Survey Feet - Custom

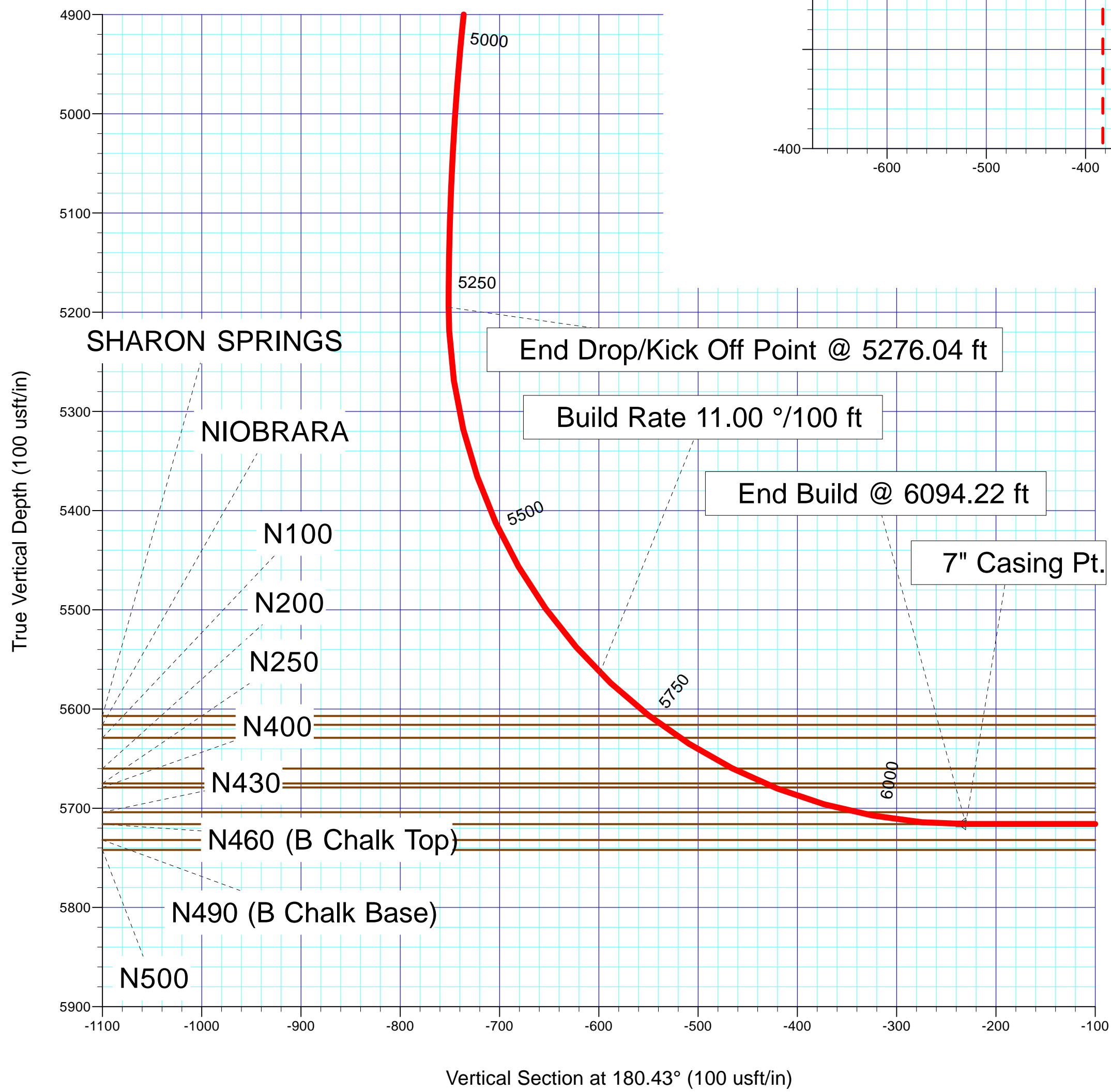
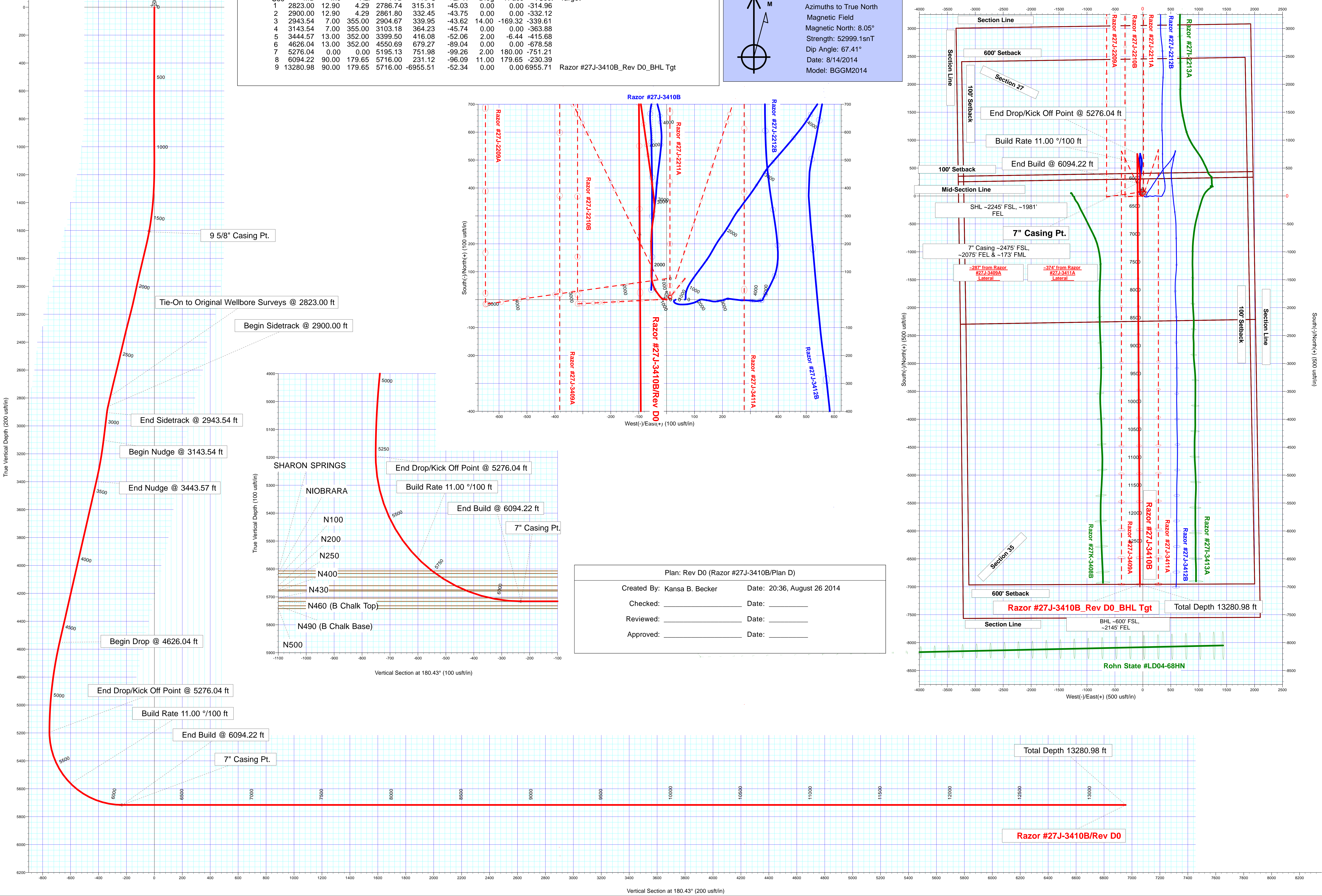
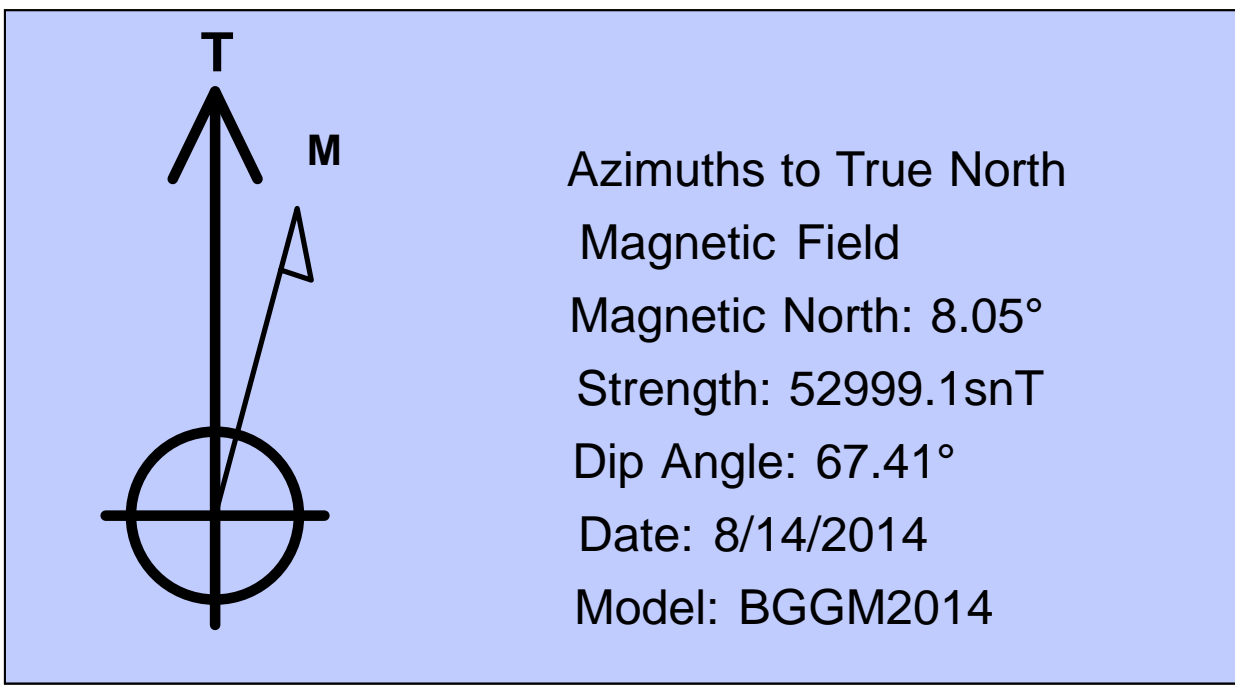
HALLIBURTON

Project: Weld County, CO
Site: Sec. 27-T10N-R58W (#27 J Pad)
Well: Razor #27J-3410B
Wellbore: Plan D
Plan: Rev D0

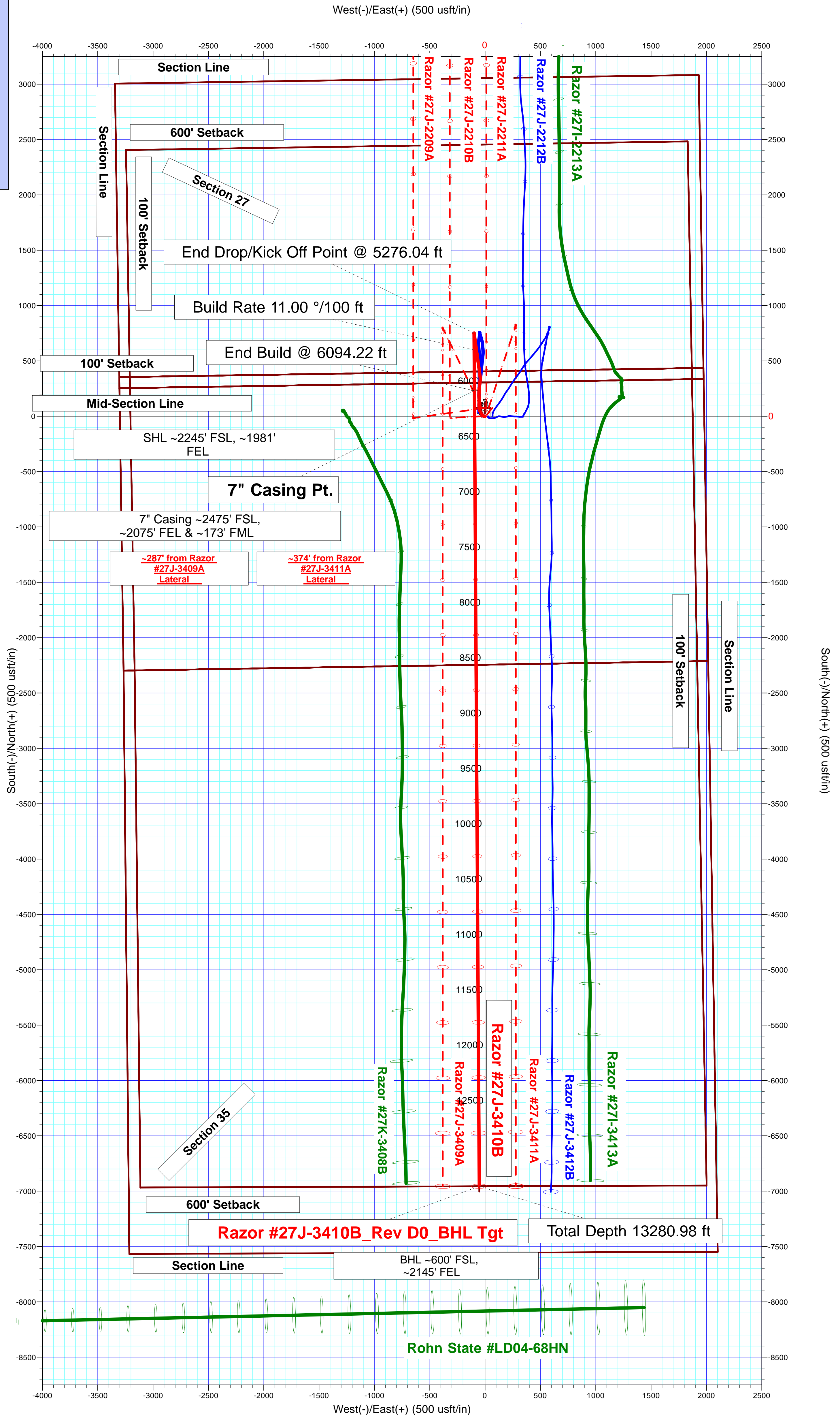
Whiting Oil and Gas Corporation



SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	
1	2823.00	12.90	4.29	2786.74	315.31	-45.03	0.00	0.00	-314.96	Razor #27J-3410B_Rev D0_BHL Tgt	
2	2900.00	12.90	4.29	2861.80	332.45	-43.75	0.00	0.00	-332.12		
3	2943.54	7.00	355.00	2904.67	339.95	-43.62	14.00	-169.32	-339.61		
4	3143.54	7.00	355.00	3103.18	364.23	-45.74	0.00	0.00	-363.88		
5	3444.57	13.00	352.00	3399.50	416.08	-52.06	2.00	-6.44	-415.68		
6	4626.04	13.00	352.00	4550.69	679.27	-89.04	0.00	0.00	-678.58		
7	5276.04	0.00	0.00	5195.13	751.98	-99.26	2.00	180.00	-751.21		
8	6094.22	90.00	179.65	5716.00	231.12	-96.09	11.00	179.65	-230.39		
9	13280.98	90.00	179.65	5716.00	-6955.51	-52.34	0.00	0.00	6955.71		



Plan: Rev D0 (Razor #27J-3410B/Plan D)	
Created By: Kansa B. Becker	Date: 20:36, August 26 2014
Checked: _____	Date: _____
Reviewed: _____	Date: _____
Approved: _____	Date: _____



Total Depth 13280.98 ft

Razor #27J-3410B/Rev D0

Plan Report for Razor #27J-3410B - Rev D0

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 (°)
2,823.00	12.90	4.29	2,786.74	315.31	-45.03	-314.96	0.00	0.00	0.00	0.00
Tie-On to Original Wellbore Surveys @ 2823.00 ft										
2,900.00	12.90	4.29	2,861.80	332.45	-43.75	-332.12	0.00	0.00	0.00	0.00
Begin Sidetrack @ 2900.00 ft										
2,943.54	7.00	355.00	2,904.67	339.95	-43.62	-339.61	14.00	-13.55	-21.34	-169.32
End Sidetrack @ 2943.54 ft										
3,000.00	7.00	355.00	2,960.71	346.81	-44.22	-346.46	0.00	0.00	0.00	0.00
3,100.00	7.00	355.00	3,059.96	358.95	-45.28	-358.60	0.00	0.00	0.00	0.00
3,143.54	7.00	355.00	3,103.18	364.23	-45.74	-363.88	0.00	0.00	0.00	0.00
Begin Nudge @ 3143.54 ft										
3,200.00	8.12	354.10	3,159.15	371.63	-46.45	-371.27	2.00	1.99	-1.59	-6.44
3,300.00	10.12	353.00	3,257.88	387.37	-48.25	-387.00	2.00	1.99	-1.10	-5.56
3,355.07	11.21	352.56	3,312.00	397.48	-49.53	-397.10	2.00	1.99	-0.80	-4.47
HYGIENE										
3,400.00	12.11	352.26	3,356.00	406.49	-50.73	-406.09	2.00	2.00	-0.67	-4.03
3,443.57	12.98	352.01	3,398.53	415.86	-52.03	-415.46	2.00	2.00	-0.58	-3.74
End Nudge @ 3443.57 ft										
3,444.57	13.00	352.00	3,399.50	416.08	-52.06	-415.68	2.00	2.00	-0.54	-3.49
3,500.00	13.00	352.00	3,453.51	428.43	-53.79	-428.01	0.00	0.00	0.00	0.00
3,600.00	13.00	352.00	3,550.95	450.71	-56.92	-450.26	0.00	0.00	0.00	0.00
3,614.42	13.00	352.00	3,565.00	453.92	-57.37	-453.47	0.00	0.00	0.00	0.00
LOWER PIERRE										
3,700.00	13.00	352.00	3,648.39	472.98	-60.05	-472.52	0.00	0.00	0.00	0.00
3,800.00	13.00	352.00	3,745.82	495.26	-63.18	-494.77	0.00	0.00	0.00	0.00
3,900.00	13.00	352.00	3,843.26	517.53	-66.31	-517.02	0.00	0.00	0.00	0.00
4,000.00	13.00	352.00	3,940.70	539.81	-69.45	-539.27	0.00	0.00	0.00	0.00
4,100.00	13.00	352.00	4,038.13	562.09	-72.58	-561.52	0.00	0.00	0.00	0.00
4,200.00	13.00	352.00	4,135.57	584.36	-75.71	-583.78	0.00	0.00	0.00	0.00
4,300.00	13.00	352.00	4,233.01	606.64	-78.84	-606.03	0.00	0.00	0.00	0.00
4,400.00	13.00	352.00	4,330.44	628.92	-81.97	-628.28	0.00	0.00	0.00	0.00
4,500.00	13.00	352.00	4,427.88	651.19	-85.10	-650.53	0.00	0.00	0.00	0.00
4,600.00	13.00	352.00	4,525.32	673.47	-88.23	-672.78	0.00	0.00	0.00	0.00
4,626.04	13.00	352.00	4,550.69	679.27	-89.05	-678.58	0.00	0.00	0.00	0.00
Begin Drop @ 4626.04 ft										
4,700.00	11.52	352.00	4,622.96	694.82	-91.23	-694.11	2.00	-2.00	0.00	180.00
4,800.00	9.52	352.00	4,721.28	712.90	-93.77	-712.18	2.00	-2.00	0.00	180.00
4,900.00	7.52	352.00	4,820.17	727.57	-95.83	-726.83	2.00	-2.00	0.00	180.00
5,000.00	5.52	352.00	4,919.52	738.82	-97.41	-738.06	2.00	-2.00	0.00	180.00
5,100.00	3.52	352.00	5,019.20	746.62	-98.51	-745.86	2.00	-2.00	0.00	180.00
5,200.00	1.52	352.00	5,119.10	750.98	-99.12	-750.21	2.00	-2.00	0.00	180.00
5,276.04	0.00	0.00	5,195.13	751.98	-99.26	-751.21	2.00	-2.00	0.00	180.00
End Drop/Kick Off Point @ 5276.04 ft										
5,300.00	2.64	179.65	5,219.08	751.43	-99.26	-750.66	11.00	11.00	0.00	179.65
5,400.00	13.64	179.65	5,317.92	737.30	-99.17	-736.53	11.00	11.00	0.00	0.00
5,500.00	24.64	179.65	5,412.25	704.57	-98.98	-703.80	11.00	11.00	0.00	0.00
5,600.00	35.64	179.65	5,498.60	654.44	-98.67	-653.68	11.00	11.00	0.00	0.00
5,685.00	44.99	179.65	5,563.35	599.51	-98.34	-598.76	11.00	11.00	0.00	0.00
Build Rate 11.00 °/100 ft										
5,700.00	46.64	179.65	5,573.80	588.76	-98.27	-588.00	11.00	11.00	0.00	0.00
5,751.08	52.25	179.65	5,607.00	549.96	-98.03	-549.21	11.00	11.00	0.00	0.00
SHARON SPRINGS										
5,766.06	53.90	179.65	5,616.00	537.99	-97.96	-537.23	11.00	11.00	0.00	0.00
NIOBRARA										
5,788.82	56.41	179.65	5,629.00	519.31	-97.85	-518.56	11.00	11.00	0.00	0.00
N100										
5,800.00	57.64	179.65	5,635.09	509.93	-97.79	-509.18	11.00	11.00	0.00	0.00
5,850.48	63.19	179.65	5,660.00	466.06	-97.52	-465.31	11.00	11.00	0.00	0.00

Plan Report for Razor #27J-3410B - Rev D0

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 (°)
N200										
5,886.18	67.12	179.65	5,675.00	433.67	-97.33	-432.92	11.00	11.00	0.00	0.00
N250										
5,896.72	68.27	179.65	5,679.00	423.92	-97.27	-423.17	11.00	11.00	0.00	0.00
N400										
5,900.00	68.64	179.65	5,680.21	420.86	-97.25	-420.12	11.00	11.00	0.00	0.00
5,982.21	77.68	179.65	5,704.00	342.27	-96.77	-341.53	11.00	11.00	0.00	0.00
N430										
6,000.00	79.64	179.65	5,707.50	324.82	-96.66	-324.09	11.00	11.00	0.00	0.00
6,094.22	90.00	179.65	5,716.00	231.12	-96.09	-230.39	11.00	11.00	0.00	0.00
End Build @ 6094.22 ft - N460 (B Chalk Top) - 7" Casing Pt.										
6,100.00	90.00	179.65	5,716.00	225.34	-96.06	-224.61	0.00	0.00	0.00	0.00
6,200.00	90.00	179.65	5,716.00	125.34	-95.45	-124.62	0.00	0.00	0.00	0.00
6,300.00	90.00	179.65	5,716.00	25.34	-94.84	-24.63	0.00	0.00	0.00	0.00
6,400.00	90.00	179.65	5,716.00	-74.66	-94.23	75.36	0.00	0.00	0.00	0.00
6,500.00	90.00	179.65	5,716.00	-174.66	-93.62	175.35	0.00	0.00	0.00	0.00
6,600.00	90.00	179.65	5,716.00	-274.65	-93.01	275.35	0.00	0.00	0.00	0.00
6,700.00	90.00	179.65	5,716.00	-374.65	-92.40	375.34	0.00	0.00	0.00	0.00
6,800.00	90.00	179.65	5,716.00	-474.65	-91.80	475.33	0.00	0.00	0.00	0.00
6,900.00	90.00	179.65	5,716.00	-574.65	-91.19	575.32	0.00	0.00	0.00	0.00
7,000.00	90.00	179.65	5,716.00	-674.65	-90.58	675.31	0.00	0.00	0.00	0.00
7,100.00	90.00	179.65	5,716.00	-774.64	-89.97	775.30	0.00	0.00	0.00	0.00
7,200.00	90.00	179.65	5,716.00	-874.64	-89.36	875.29	0.00	0.00	0.00	0.00
7,300.00	90.00	179.65	5,716.00	-974.64	-88.75	975.28	0.00	0.00	0.00	0.00
7,400.00	90.00	179.65	5,716.00	-1,074.64	-88.14	1,075.27	0.00	0.00	0.00	0.00
7,500.00	90.00	179.65	5,716.00	-1,174.64	-87.53	1,175.26	0.00	0.00	0.00	0.00
7,600.00	90.00	179.65	5,716.00	-1,274.63	-86.93	1,275.25	0.00	0.00	0.00	0.00
7,700.00	90.00	179.65	5,716.00	-1,374.63	-86.32	1,375.24	0.00	0.00	0.00	0.00
7,800.00	90.00	179.65	5,716.00	-1,474.63	-85.71	1,475.23	0.00	0.00	0.00	0.00
7,900.00	90.00	179.65	5,716.00	-1,574.63	-85.10	1,575.22	0.00	0.00	0.00	0.00
8,000.00	90.00	179.65	5,716.00	-1,674.63	-84.49	1,675.22	0.00	0.00	0.00	0.00
8,100.00	90.00	179.65	5,716.00	-1,774.63	-83.88	1,775.21	0.00	0.00	0.00	0.00
8,200.00	90.00	179.65	5,716.00	-1,874.62	-83.27	1,875.20	0.00	0.00	0.00	0.00
8,300.00	90.00	179.65	5,716.00	-1,974.62	-82.66	1,975.19	0.00	0.00	0.00	0.00
8,400.00	90.00	179.65	5,716.00	-2,074.62	-82.06	2,075.18	0.00	0.00	0.00	0.00
8,500.00	90.00	179.65	5,716.00	-2,174.62	-81.45	2,175.17	0.00	0.00	0.00	0.00
8,600.00	90.00	179.65	5,716.00	-2,274.62	-80.84	2,275.16	0.00	0.00	0.00	0.00
8,700.00	90.00	179.65	5,716.00	-2,374.61	-80.23	2,375.15	0.00	0.00	0.00	0.00
8,800.00	90.00	179.65	5,716.00	-2,474.61	-79.62	2,475.14	0.00	0.00	0.00	0.00
8,900.00	90.00	179.65	5,716.00	-2,574.61	-79.01	2,575.13	0.00	0.00	0.00	0.00
9,000.00	90.00	179.65	5,716.00	-2,674.61	-78.40	2,675.12	0.00	0.00	0.00	0.00
9,100.00	90.00	179.65	5,716.00	-2,774.61	-77.79	2,775.11	0.00	0.00	0.00	0.00
9,200.00	90.00	179.65	5,716.00	-2,874.61	-77.18	2,875.10	0.00	0.00	0.00	0.00
9,300.00	90.00	179.65	5,716.00	-2,974.60	-76.58	2,975.10	0.00	0.00	0.00	0.00
9,400.00	90.00	179.65	5,716.00	-3,074.60	-75.97	3,075.09	0.00	0.00	0.00	0.00
9,500.00	90.00	179.65	5,716.00	-3,174.60	-75.36	3,175.08	0.00	0.00	0.00	0.00
9,600.00	90.00	179.65	5,716.00	-3,274.60	-74.75	3,275.07	0.00	0.00	0.00	0.00
9,700.00	90.00	179.65	5,716.00	-3,374.60	-74.14	3,375.06	0.00	0.00	0.00	0.00
9,800.00	90.00	179.65	5,716.00	-3,474.59	-73.53	3,475.05	0.00	0.00	0.00	0.00
9,900.00	90.00	179.65	5,716.00	-3,574.59	-72.92	3,575.04	0.00	0.00	0.00	0.00
10,000.00	90.00	179.65	5,716.00	-3,674.59	-72.31	3,675.03	0.00	0.00	0.00	0.00
10,100.00	90.00	179.65	5,716.00	-3,774.59	-71.71	3,775.02	0.00	0.00	0.00	0.00
10,200.00	90.00	179.65	5,716.00	-3,874.59	-71.10	3,875.01	0.00	0.00	0.00	0.00
10,300.00	90.00	179.65	5,716.00	-3,974.58	-70.49	3,975.00	0.00	0.00	0.00	0.00
10,400.00	90.00	179.65	5,716.00	-4,074.58	-69.88	4,074.99	0.00	0.00	0.00	0.00
10,500.00	90.00	179.65	5,716.00	-4,174.58	-69.27	4,174.98	0.00	0.00	0.00	0.00
10,600.00	90.00	179.65	5,716.00	-4,274.58	-68.66	4,274.97	0.00	0.00	0.00	0.00
10,700.00	90.00	179.65	5,716.00	-4,374.58	-68.05	4,374.97	0.00	0.00	0.00	0.00
10,800.00	90.00	179.65	5,716.00	-4,474.58	-67.44	4,474.96	0.00	0.00	0.00	0.00

Plan Report for Razor #27J-3410B - Rev D0

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 (°)
10,900.00	90.00	179.65	5,716.00	-4,574.57	-66.84	4,574.95	0.00	0.00	0.00	0.00
11,000.00	90.00	179.65	5,716.00	-4,674.57	-66.23	4,674.94	0.00	0.00	0.00	0.00
11,100.00	90.00	179.65	5,716.00	-4,774.57	-65.62	4,774.93	0.00	0.00	0.00	0.00
11,200.00	90.00	179.65	5,716.00	-4,874.57	-65.01	4,874.92	0.00	0.00	0.00	0.00
11,300.00	90.00	179.65	5,716.00	-4,974.57	-64.40	4,974.91	0.00	0.00	0.00	0.00
11,400.00	90.00	179.65	5,716.00	-5,074.56	-63.79	5,074.90	0.00	0.00	0.00	0.00
11,500.00	90.00	179.65	5,716.00	-5,174.56	-63.18	5,174.89	0.00	0.00	0.00	0.00
11,600.00	90.00	179.65	5,716.00	-5,274.56	-62.57	5,274.88	0.00	0.00	0.00	0.00
11,700.00	90.00	179.65	5,716.00	-5,374.56	-61.96	5,374.87	0.00	0.00	0.00	0.00
11,800.00	90.00	179.65	5,716.00	-5,474.56	-61.36	5,474.86	0.00	0.00	0.00	0.00
11,900.00	90.00	179.65	5,716.00	-5,574.56	-60.75	5,574.85	0.00	0.00	0.00	0.00
12,000.00	90.00	179.65	5,716.00	-5,674.55	-60.14	5,674.85	0.00	0.00	0.00	0.00
12,100.00	90.00	179.65	5,716.00	-5,774.55	-59.53	5,774.84	0.00	0.00	0.00	0.00
12,200.00	90.00	179.65	5,716.00	-5,874.55	-58.92	5,874.83	0.00	0.00	0.00	0.00
12,300.00	90.00	179.65	5,716.00	-5,974.55	-58.31	5,974.82	0.00	0.00	0.00	0.00
12,400.00	90.00	179.65	5,716.00	-6,074.55	-57.70	6,074.81	0.00	0.00	0.00	0.00
12,500.00	90.00	179.65	5,716.00	-6,174.54	-57.09	6,174.80	0.00	0.00	0.00	0.00
12,600.00	90.00	179.65	5,716.00	-6,274.54	-56.49	6,274.79	0.00	0.00	0.00	0.00
12,700.00	90.00	179.65	5,716.00	-6,374.54	-55.88	6,374.78	0.00	0.00	0.00	0.00
12,800.00	90.00	179.65	5,716.00	-6,474.54	-55.27	6,474.77	0.00	0.00	0.00	0.00
12,900.00	90.00	179.65	5,716.00	-6,574.54	-54.66	6,574.76	0.00	0.00	0.00	0.00
13,000.00	90.00	179.65	5,716.00	-6,674.53	-54.05	6,674.75	0.00	0.00	0.00	0.00
13,100.00	90.00	179.65	5,716.00	-6,774.53	-53.44	6,774.74	0.00	0.00	0.00	0.00
13,200.00	90.00	179.65	5,716.00	-6,874.53	-52.83	6,874.73	0.00	0.00	0.00	0.00
13,280.98	90.00	179.65	5,716.00	-6,955.51	-52.34	6,955.71	0.00	0.00	0.00	0.00
Total Depth 13280.98 ft										

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
2,823.00	2,786.74	315.31	-45.03	Tie-On to Original Wellbore Surveys @ 2823.00 ft
2,900.00	2,861.80	332.45	-43.75	Begin Sidetrack @ 2900.00 ft
2,943.54	2,904.67	339.95	-43.62	End Sidetrack @ 2943.54 ft
3,143.54	3,103.18	364.23	-45.74	Begin Nudge @ 3143.54 ft
3,443.57	3,398.53	415.86	-52.03	End Nudge @ 3443.57 ft
4,626.04	4,550.69	679.27	-89.05	Begin Drop @ 4626.04 ft
5,276.04	5,195.13	751.98	-99.26	End Drop/Kick Off Point @ 5276.04 ft
5,685.00	5,563.35	599.51	-98.34	Build Rate 11.00 °/100 ft
6,094.22	5,716.00	231.12	-96.09	End Build @ 6094.22 ft
13,280.98	5,716.00	-6,955.51	-52.34	Total Depth 13280.98 ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (usft)	Origin +E/-W (usft)	Start TVD (usft)
Target	Razor #27J-3410B_Rev D0_BHL Tgt	180.43	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
177.00	1,552.00	Surface_Sperry MWD+IFR1+MS+sag	MWD+IFR1+MS+sag
1,635.00	2,823.00	Vertical & Build_Sperry MWD+IFR1+MS+sag	MWD+IFR1+MS+sag
2,823.00	6,094.22	Rev D0	MWD+IFR1+MS+sag
6,094.22	13,280.98	Rev D0	MWD+IFR1+MS+sag

Plan Report for Razor #27J-3410B - Rev D0**Casing Details**

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,613.00	1,609.59	9 5/8" Casing Pt.	9-5/8	13-1/2
6,094.22	5,716.00	7" Casing Pt.	7	8-3/4

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,355.07	3,312.00	HYGIENE			
3,614.42	3,565.00	LOWER PIERRE			
5,751.08	5,607.00	SHARON SPRINGS		0.00	
5,766.06	5,616.00	NIOBRARA			
5,788.82	5,629.00	N100		0.00	
5,850.48	5,660.00	N200		0.00	
5,886.18	5,675.00	N250		0.00	
5,896.72	5,679.00	N400		0.00	
5,982.21	5,704.00	N430		0.00	
6,094.22	5,716.00	N460 (B Chalk Top)		0.00	

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
Razor #27J_Sec 27_Mid-Line	0.00	75.08	-0.83	Polygon
Razor #27J_Sec 27_100 ft S of Mid-Line	0.00	75.08	-0.83	Polygon
Razor #27J_Southern_SB	0.00	75.07	-32.94	Polygon
Razor #27J_Southern_SL	0.00	75.07	-32.94	Polygon
Razor #27J-3410B_Rev D0_BHL Tgt	5,716.00	-6,955.51	-52.34	Point

Directional Difficulty Index

Average Dogleg over Survey:	1.10 °/100usft	Maximum Dogleg over Survey:	14.00 °/100usft at 2,943.54 usft
Net Tortousity applicable to Plans:	1.10 °/100usft	Directional Difficulty Index:	6.489

Audit Info

North Reference Sheet for Sec. 27-T10N-R58W (#27 J Pad) - Razor #27J-3410B - Plan D

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

Vertical Depths are relative to KB 22 ft @ 4786.00usft (Frontier 26). Northing and Easting are relative to Razor #27J-3410B

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: 1.00000417

Grid Coordinates of Well: 1,541,618.75 usft N, 3,457,072.13 usft E

Geographical Coordinates of Well: 40° 48' 30.40" N, 103° 50' 55.77" W

Grid Convergence at Surface is: 1.07°

Based upon Minimum Curvature type calculations, at a Measured Depth of 13,280.98usft the Bottom Hole Displacement is 6,955.71usft in the Direction of 180.43° (True).

Magnetic Convergence at surface is: -6.98° (14 August 2014, , BGGM2014)

