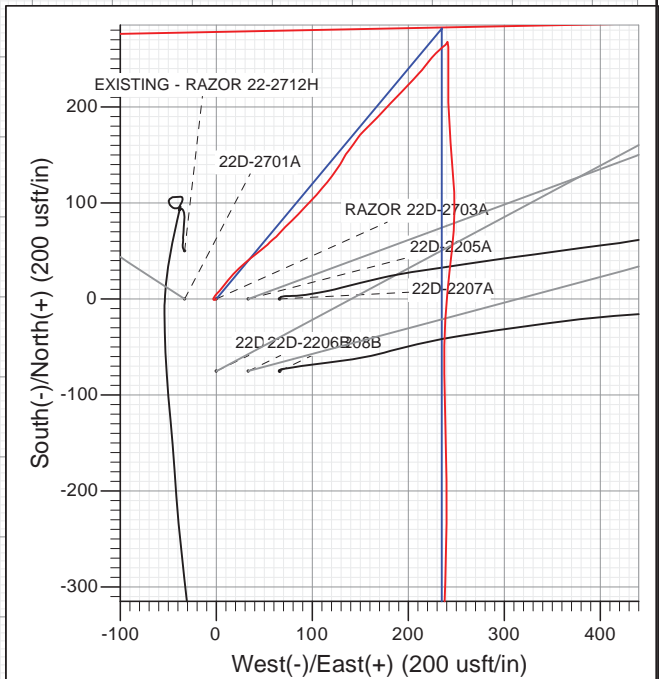
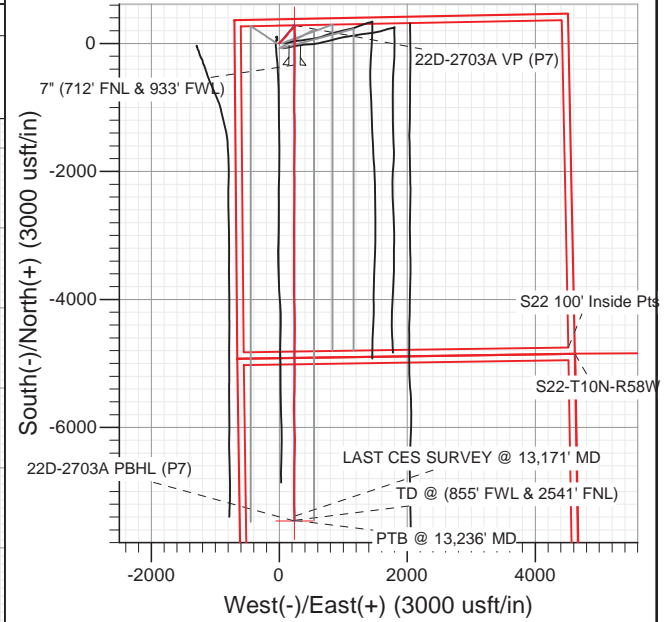
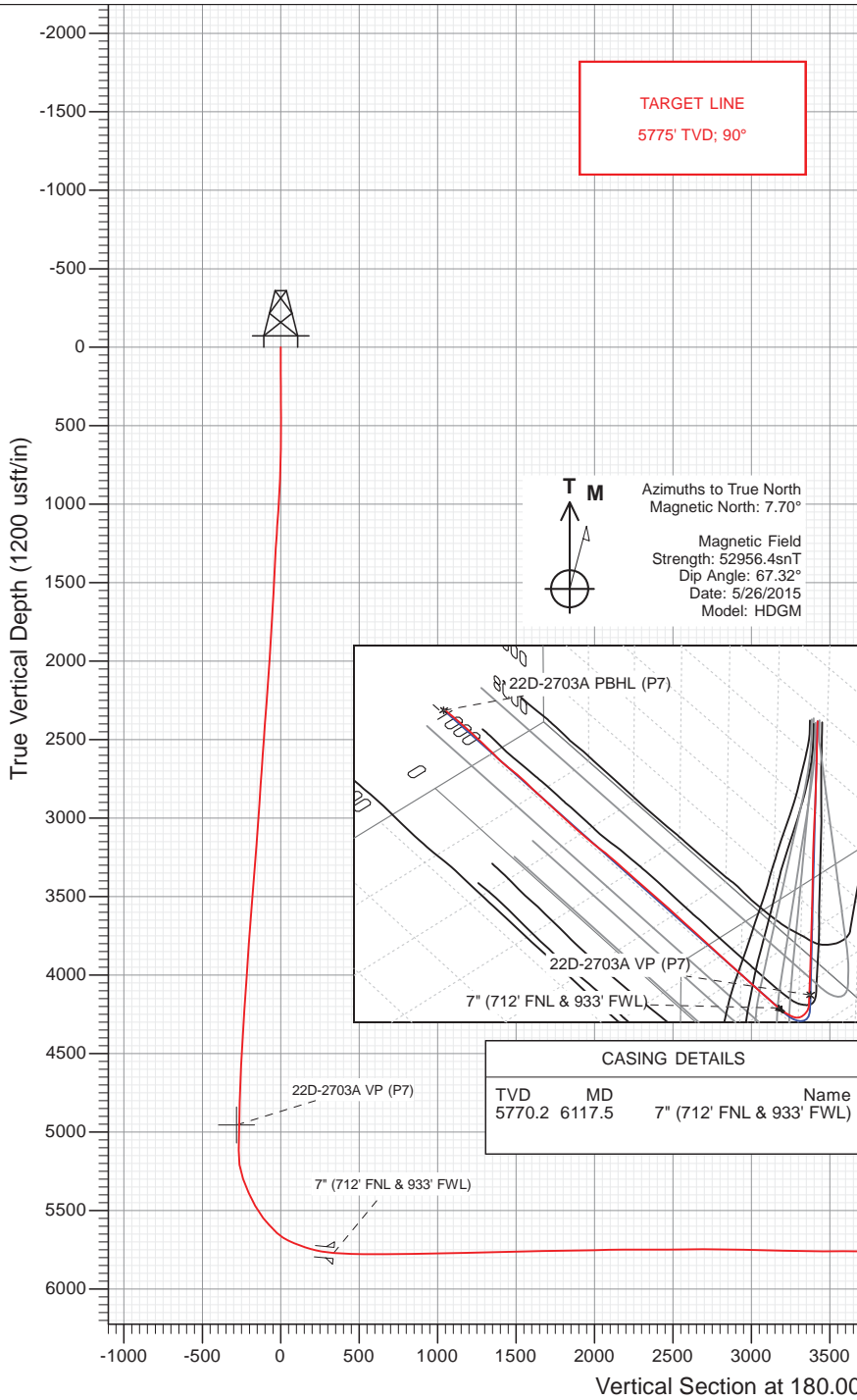




Project: Weld County, CO
Site: S22-T10N-R58W
Well: RAZOR 22D-2703A
Wellbore: HZ
Design: FINAL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
22D-2703A VP (P7)	4954.1	282.0	235.0	1549782.47	3454461.72	40.830980	-103.857707
22D-2703A PBHL (P7)	5775.0	-7462.0	235.0	1542039.75	3454605.06	40.809725	-103.857707



WELL DETAILS: RAZOR 22D-2703A

+N/-S	+E/-W	Northing	Ground Level:	4832.0	Latitude	Longitude
0.0	0.0	1549496.16	Easting	3454231.98	40.830206	-103.858556



Survey Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well RAZOR 22D-2703A
Project:	Weld County, CO	TVD Reference:	21'KB @ 4853.0usft (UNIT 406)
Site:	S22-T10N-R58W	MD Reference:	21'KB @ 4853.0usft (UNIT 406)
Well:	RAZOR 22D-2703A	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Project	Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		S22-T10N-R58W			
Site Position:		Northing:	1,549,495.40 usft	Latitude:	40.830206
From:	Lat/Long	Easting:	3,454,199.06 usft	Longitude:	-103.858675
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.06 °

Well		RAZOR 22D-2703A				
Well Position	+N/-S	0.0 usft	Northing:	1,549,496.16 usft	Latitude:	40.830206
	+E/-W	0.0 usft	Easting:	3,454,231.98 usft	Longitude:	-103.858556
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	4,832.0 usft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/26/2015	7.70	67.32	52,956

Design	FINAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	180.00	

Survey Program	Date	6/8/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
164.0	13,236.0	Survey #1 (HZ)	ISCWSA MWD	MWD - ISCWSA	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
164.0	0.29	242.86	164.0	-0.2	-0.4	0.2	0.18	0.18		
257.0	0.31	240.26	257.0	-0.4	-0.8	0.4	0.03	0.02		
350.0	0.44	245.19	350.0	-0.7	-1.3	0.7	0.14	0.14		
444.0	0.25	268.75	444.0	-0.9	-1.9	0.9	0.25	-0.20		
537.0	0.29	280.85	537.0	-0.8	-2.3	0.8	0.07	0.04		
629.0	0.58	276.64	629.0	-0.7	-3.0	0.7	0.32	0.32		
722.0	1.53	13.01	722.0	0.5	-3.2	-0.5	1.82	1.02		
816.0	3.28	42.74	815.9	3.7	-1.1	-3.7	2.23	1.86		
909.0	4.72	41.13	908.7	8.6	3.2	-8.6	1.55	1.55		
1,003.0	4.58	39.54	1,002.4	14.4	8.2	-14.4	0.20	-0.15		
1,096.0	4.03	38.60	1,095.1	19.8	12.6	-19.8	0.60	-0.59		
1,191.0	5.58	41.34	1,189.8	25.9	17.7	-25.9	1.65	1.63		

Survey Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well RAZOR 22D-2703A
Project:	Weld County, CO	TVD Reference:	21'KB @ 4853.0usft (UNIT 406)
Site:	S22-T10N-R58W	MD Reference:	21'KB @ 4853.0usft (UNIT 406)
Well:	RAZOR 22D-2703A	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
1,283.0	5.35	47.20	1,281.3	32.2	23.8	-32.2	0.66	-0.25	
1,377.0	4.86	49.07	1,375.0	37.7	30.0	-37.7	0.55	-0.52	
1,470.0	4.69	50.62	1,467.6	42.7	36.0	-42.7	0.23	-0.18	
1,564.0	4.44	53.19	1,561.3	47.4	41.8	-47.4	0.34	-0.27	
1,635.0	4.25	52.59	1,632.1	50.6	46.1	-50.6	0.28	-0.27	
1,763.0	4.19	44.99	1,759.8	56.8	53.2	-56.8	0.44	-0.05	
1,857.0	5.49	51.58	1,853.5	62.0	59.2	-62.0	1.50	1.38	
1,950.0	5.66	38.81	1,946.0	68.4	65.5	-68.4	1.34	0.18	
2,044.0	5.79	47.44	2,039.6	75.2	71.9	-75.2	0.93	0.14	
2,137.0	5.72	44.78	2,132.1	81.6	78.6	-81.6	0.30	-0.08	
2,231.0	5.85	44.65	2,225.6	88.4	85.3	-88.4	0.14	0.14	
2,324.0	5.84	42.79	2,318.1	95.2	91.8	-95.2	0.20	-0.01	
2,418.0	5.80	43.70	2,411.6	102.2	98.4	-102.2	0.11	-0.04	
2,511.0	5.31	41.52	2,504.2	108.8	104.5	-108.8	0.57	-0.53	
2,605.0	5.21	40.79	2,597.8	115.3	110.1	-115.3	0.13	-0.11	
2,699.0	5.08	38.94	2,691.4	121.7	115.5	-121.7	0.22	-0.14	
2,792.0	4.74	36.23	2,784.1	128.0	120.4	-128.0	0.44	-0.37	
2,886.0	4.65	35.11	2,877.8	134.3	124.9	-134.3	0.14	-0.10	
2,979.0	4.31	33.91	2,970.5	140.3	129.0	-140.3	0.38	-0.37	
3,073.0	5.33	26.58	3,064.2	147.1	132.9	-147.1	1.27	1.09	
3,166.0	5.47	39.57	3,156.7	154.4	137.7	-154.4	1.32	0.15	
3,260.0	5.07	34.75	3,250.3	161.2	142.9	-161.2	0.63	-0.43	
3,353.0	4.98	34.27	3,343.0	168.0	147.5	-168.0	0.11	-0.10	
3,447.0	6.23	45.02	3,436.5	174.9	153.4	-174.9	1.73	1.33	
3,540.0	6.37	46.32	3,529.0	182.1	160.7	-182.1	0.21	0.15	
3,634.0	6.12	43.05	3,622.4	189.3	167.9	-189.3	0.46	-0.27	
3,727.0	6.20	43.09	3,714.9	196.6	174.7	-196.6	0.09	0.09	
3,821.0	5.90	43.39	3,808.4	203.8	181.5	-203.8	0.32	-0.32	
3,914.0	5.07	44.30	3,900.9	210.3	187.7	-210.3	0.90	-0.89	
4,008.0	4.18	43.74	3,994.6	215.7	192.9	-215.7	0.95	-0.95	
4,101.0	6.33	43.74	4,087.2	221.9	198.8	-221.9	2.31	2.31	
4,195.0	5.58	42.15	4,180.7	229.0	205.5	-229.0	0.82	-0.80	
4,288.0	5.44	42.10	4,273.3	235.6	211.5	-235.6	0.15	-0.15	
4,382.0	3.89	38.68	4,367.0	241.4	216.5	-241.4	1.67	-1.65	
4,476.0	3.60	37.95	4,460.8	246.2	220.3	-246.2	0.31	-0.31	
4,569.0	4.39	40.54	4,553.6	251.2	224.4	-251.2	0.87	0.85	
4,663.0	3.64	46.63	4,647.3	256.0	228.9	-256.0	0.92	-0.80	
4,757.0	2.81	45.26	4,741.2	259.7	232.7	-259.7	0.89	-0.88	
4,850.0	2.22	51.39	4,834.1	262.4	235.7	-262.4	0.70	-0.63	
4,944.0	1.77	49.31	4,928.0	264.5	238.2	-264.5	0.48	-0.48	
5,037.0	1.37	34.78	5,021.0	266.3	240.0	-266.3	0.60	-0.43	
5,131.0	0.83	30.63	5,115.0	267.9	240.9	-267.9	0.58	-0.57	
5,225.0	7.01	176.31	5,208.8	262.7	241.7	-262.7	8.20	6.57	
5,318.0	20.76	181.26	5,298.8	240.5	241.7	-240.5	14.83	14.78	
5,412.0	23.80	178.96	5,385.8	204.8	241.6	-204.8	3.36	3.23	
5,506.0	29.22	174.60	5,469.9	163.0	244.2	-163.0	6.12	5.77	
5,599.0	38.30	176.97	5,547.1	111.5	247.8	-111.5	9.86	9.76	
5,630.0	40.98	180.75	5,571.0	91.7	248.2	-91.7	11.63	8.65	
5,661.0	40.51	184.39	5,594.5	71.5	247.3	-71.5	7.81	-1.52	
5,693.0	43.19	186.17	5,618.3	50.3	245.3	-50.3	9.16	8.37	
5,724.0	48.65	186.41	5,639.9	28.1	242.9	-28.1	17.62	17.61	
5,755.0	54.15	185.34	5,659.2	4.1	240.4	-4.1	17.95	17.74	
5,786.0	59.04	183.07	5,676.3	-21.7	238.5	21.7	16.92	15.77	

Survey Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well RAZOR 22D-2703A
Project:	Weld County, CO	TVD Reference:	21'KB @ 4853.0usft (UNIT 406)
Site:	S22-T10N-R58W	MD Reference:	21'KB @ 4853.0usft (UNIT 406)
Well:	RAZOR 22D-2703A	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
5,817.0	63.77	180.92	5,691.1	-48.9	237.6	48.9	16.43	15.26	
5,849.0	65.88	179.54	5,704.7	-77.9	237.5	77.9	7.66	6.59	
5,880.0	68.73	178.28	5,716.7	-106.5	238.0	106.5	9.93	9.19	
5,911.0	71.31	178.35	5,727.3	-135.6	238.9	135.6	8.33	8.32	
5,942.0	72.33	179.05	5,737.0	-165.0	239.5	165.0	3.93	3.29	
5,973.0	74.15	179.72	5,745.9	-194.7	239.9	194.7	6.22	5.87	
6,005.0	77.22	180.67	5,753.8	-225.7	239.8	225.7	10.02	9.59	
6,036.0	80.78	181.03	5,759.7	-256.2	239.3	256.2	11.54	11.48	
6,075.0	82.35	181.25	5,765.4	-294.7	238.5	294.7	4.06	4.03	
6,166.0	87.77	181.28	5,773.3	-385.3	236.5	385.3	5.96	5.96	
6,260.0	88.47	180.62	5,776.4	-479.3	235.0	479.3	1.02	0.74	
6,355.0	89.82	179.83	5,777.8	-574.2	234.6	574.2	1.65	1.42	
6,450.0	90.04	180.83	5,777.9	-669.2	234.1	669.2	1.08	0.23	
6,544.0	90.25	180.55	5,777.7	-763.2	232.9	763.2	0.37	0.22	
6,639.0	91.63	181.23	5,776.1	-858.2	231.5	858.2	1.62	1.45	
6,734.0	90.26	179.35	5,774.5	-953.2	231.0	953.2	2.45	-1.44	
6,829.0	91.85	179.14	5,772.8	-1,048.2	232.2	1,048.2	1.69	1.67	
6,923.0	91.43	177.08	5,770.1	-1,142.1	235.3	1,142.1	2.24	-0.45	
7,018.0	91.97	177.75	5,767.3	-1,236.9	239.6	1,236.9	0.91	0.57	
7,113.0	90.75	180.03	5,765.0	-1,331.9	241.4	1,331.9	2.72	-1.28	
7,207.0	91.44	181.42	5,763.2	-1,425.8	240.3	1,425.8	1.65	0.73	
7,301.0	90.79	180.20	5,761.4	-1,519.8	238.9	1,519.8	1.47	-0.69	
7,397.0	91.23	182.12	5,759.7	-1,615.8	237.0	1,615.8	2.05	0.46	
7,492.0	90.98	180.81	5,757.9	-1,710.7	234.6	1,710.7	1.40	-0.26	
7,586.0	90.70	180.57	5,756.5	-1,804.7	233.4	1,804.7	0.39	-0.30	
7,681.0	91.16	180.29	5,754.9	-1,899.7	232.7	1,899.7	0.57	0.48	
7,776.0	91.56	179.76	5,752.7	-1,994.7	232.7	1,994.7	0.70	0.42	
7,871.0	91.24	179.09	5,750.4	-2,089.6	233.6	2,089.6	0.78	-0.34	
7,965.0	90.42	179.89	5,749.0	-2,183.6	234.5	2,183.6	1.22	-0.87	
8,060.0	89.80	178.79	5,748.8	-2,278.6	235.6	2,278.6	1.33	-0.65	
8,155.0	89.80	181.29	5,749.2	-2,373.6	235.5	2,373.6	2.63	0.00	
8,249.0	90.92	181.19	5,748.6	-2,467.6	233.5	2,467.6	1.20	1.19	
8,344.0	90.35	180.67	5,747.5	-2,562.6	231.9	2,562.6	0.81	-0.60	
8,437.0	90.26	180.51	5,747.0	-2,655.6	231.0	2,655.6	0.20	-0.10	
8,531.0	89.64	180.38	5,747.1	-2,749.5	230.2	2,749.5	0.67	-0.66	
8,624.0	89.34	180.12	5,747.9	-2,842.5	229.8	2,842.5	0.43	-0.32	
8,717.0	88.94	179.91	5,749.3	-2,935.5	229.8	2,935.5	0.49	-0.43	
8,810.0	89.14	179.82	5,750.9	-3,028.5	230.0	3,028.5	0.24	0.22	
8,903.0	88.28	179.60	5,753.0	-3,121.5	230.5	3,121.5	0.95	-0.92	
8,995.0	87.85	179.43	5,756.1	-3,213.4	231.3	3,213.4	0.50	-0.47	
9,089.0	90.12	181.62	5,757.7	-3,307.4	230.4	3,307.4	3.36	2.41	
9,182.0	89.61	180.91	5,758.0	-3,400.4	228.3	3,400.4	0.94	-0.55	
9,276.0	89.70	179.97	5,758.5	-3,494.4	227.6	3,494.4	1.00	0.10	
9,369.0	89.59	179.98	5,759.1	-3,587.4	227.7	3,587.4	0.12	-0.12	
9,463.0	89.54	179.44	5,759.8	-3,681.4	228.1	3,681.4	0.58	-0.05	
9,556.0	89.42	179.56	5,760.7	-3,774.4	229.0	3,774.4	0.18	-0.13	
9,650.0	88.61	179.52	5,762.3	-3,868.3	229.7	3,868.3	0.86	-0.86	
9,743.0	88.03	179.75	5,765.0	-3,961.3	230.3	3,961.3	0.67	-0.62	
9,837.0	85.85	176.10	5,770.0	-4,055.1	233.7	4,055.1	4.52	-2.32	
9,931.0	89.48	179.23	5,773.9	-4,148.9	237.5	4,148.9	5.10	3.86	
10,024.0	88.40	178.61	5,775.6	-4,241.9	239.3	4,241.9	1.34	-1.16	
10,118.0	87.24	177.80	5,779.2	-4,335.8	242.2	4,335.8	1.50	-1.23	
10,211.0	87.80	181.18	5,783.2	-4,428.6	243.0	4,428.6	3.68	0.60	

Survey Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well RAZOR 22D-2703A
Project:	Weld County, CO	TVD Reference:	21'KB @ 4853.0usft (UNIT 406)
Site:	S22-T10N-R58W	MD Reference:	21'KB @ 4853.0usft (UNIT 406)
Well:	RAZOR 22D-2703A	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
10,305.0	87.40	180.03	5,787.1	-4,522.6	242.0	4,522.6	1.29	-0.43	
10,398.0	90.76	183.14	5,788.6	-4,615.5	239.5	4,615.5	4.92	3.61	
10,492.0	91.61	179.98	5,786.7	-4,709.4	236.9	4,709.4	3.48	0.90	
10,585.0	91.51	178.88	5,784.1	-4,802.4	237.8	4,802.4	1.19	-0.11	
10,679.0	92.69	180.01	5,780.7	-4,896.3	238.7	4,896.3	1.74	1.26	
10,772.0	92.70	179.49	5,776.3	-4,989.2	239.2	4,989.2	0.56	0.01	
10,866.0	91.72	180.52	5,772.7	-5,083.1	239.1	5,083.1	1.51	-1.04	
10,959.0	91.79	179.60	5,769.8	-5,176.1	239.0	5,176.1	0.99	0.08	
11,053.0	89.65	180.71	5,768.7	-5,270.1	238.8	5,270.1	2.56	-2.28	
11,146.0	89.40	180.30	5,769.4	-5,363.1	238.0	5,363.1	0.52	-0.27	
11,240.0	90.09	182.42	5,769.9	-5,457.0	235.7	5,457.0	2.37	0.73	
11,333.0	90.97	182.41	5,769.0	-5,549.9	231.8	5,549.9	0.95	0.95	
11,427.0	90.65	181.52	5,767.7	-5,643.9	228.6	5,643.9	1.01	-0.34	
11,504.0	90.71	180.90	5,766.7	-5,720.9	227.0	5,720.9	0.81	0.08	
11,598.0	90.23	178.92	5,766.0	-5,814.8	227.1	5,814.8	2.17	-0.51	
11,691.0	89.95	176.34	5,765.8	-5,907.8	231.0	5,907.8	2.79	-0.30	
11,785.0	93.14	176.20	5,763.3	-6,001.5	237.1	6,001.5	3.40	3.39	
11,879.0	92.45	177.07	5,758.7	-6,095.2	242.6	6,095.2	1.18	-0.73	
11,972.0	90.87	179.61	5,756.0	-6,188.1	245.3	6,188.1	3.22	-1.70	
12,066.0	91.10	182.40	5,754.4	-6,282.1	243.6	6,282.1	2.98	0.24	
12,159.0	91.19	182.15	5,752.5	-6,375.0	239.9	6,375.0	0.29	0.10	
12,253.0	91.42	181.56	5,750.4	-6,468.9	236.9	6,468.9	0.67	0.24	
12,347.0	92.11	181.36	5,747.5	-6,562.9	234.5	6,562.9	0.76	0.73	
12,440.0	92.50	180.75	5,743.8	-6,655.8	232.8	6,655.8	0.78	0.42	
12,534.0	90.69	180.73	5,741.2	-6,749.7	231.6	6,749.7	1.93	-1.93	
12,628.0	91.08	180.36	5,739.7	-6,843.7	230.7	6,843.7	0.57	0.41	
12,721.0	90.94	179.98	5,738.1	-6,936.7	230.4	6,936.7	0.44	-0.15	
12,815.0	91.05	179.47	5,736.4	-7,030.7	230.9	7,030.7	0.55	0.12	
12,908.0	91.83	180.12	5,734.1	-7,123.7	231.2	7,123.7	1.09	0.84	
13,002.0	87.74	178.54	5,734.4	-7,217.6	232.3	7,217.6	4.66	-4.35	
13,095.0	87.72	178.67	5,738.1	-7,310.5	234.6	7,310.5	0.14	-0.02	
13,171.0	87.67	178.59	5,741.2	-7,386.4	236.4	7,386.4	0.12	-0.07	LAST CES SURVEY @ 13,171' MD
13,236.0	87.67	178.59	5,743.8	-7,451.4	238.0	7,451.4	0.00	0.00	PTB @ 13,236' MD - TD @ (855' FWL & 2541' FN

Survey Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well RAZOR 22D-2703A
Project:	Weld County, CO	TVD Reference:	21'KB @ 4853.0usft (UNIT 406)
Site:	S22-T10N-R58W	MD Reference:	21'KB @ 4853.0usft (UNIT 406)
Well:	RAZOR 22D-2703A	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
22D-2703A PBHL (P5) - actual wellpath misses target center by 53.3usft at 13236.0usft MD (5743.8 TVD, -7451.4 N, 238.0 E) - Point	0.00	1.06	5,796.0	-7,462.0	235.0	1,542,039.75	3,454,605.06	40.809725	-103.857707
22D-2703A PBHL (P7) - actual wellpath misses target center by 33.1usft at 13236.0usft MD (5743.8 TVD, -7451.4 N, 238.0 E) - Point	0.00	1.06	5,775.0	-7,462.0	235.0	1,542,039.75	3,454,605.06	40.809725	-103.857707
22D-2703A PBHL - actual wellpath misses target center by 2662.5usft at 13236.0usft MD (5743.8 TVD, -7451.4 N, 238.0 E) - Point	0.00	1.06	5,775.0	-10,113.7	251.7	1,539,388.86	3,454,670.80	40.802447	-103.857647
22D-2703A PBHL P2 - actual wellpath misses target center by 41.7usft at 13236.0usft MD (5743.8 TVD, -7451.4 N, 238.0 E) - Point	0.00	1.06	5,775.0	-7,462.0	212.4	1,542,039.33	3,454,582.42	40.809725	-103.857789
22D-2703A PBHL (P6) - actual wellpath misses target center by 48.5usft at 13236.0usft MD (5743.8 TVD, -7451.4 N, 238.0 E) - Point	0.00	1.06	5,791.0	-7,462.0	235.0	1,542,039.75	3,454,605.06	40.809725	-103.857707
22D-2703A VP (P5) - actual wellpath misses target center by 17.1usft at 4991.3usft MD (4975.4 TVD, 265.4 N, 239.2 E) - Point	0.00	1.06	4,975.1	282.0	235.0	1,549,782.47	3,454,461.72	40.830980	-103.857707
22D-2703A VP (P7) - actual wellpath misses target center by 17.4usft at 4970.4usft MD (4954.4 TVD, 265.0 N, 238.8 E) - Point	0.00	1.06	4,954.1	282.0	235.0	1,549,782.47	3,454,461.72	40.830980	-103.857707

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
6,117.5	5,770.2	7" (712' FNL & 933' FWL)	0	0

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
13,171.0	5,741.2	-7,386.4	236.4	LAST CES SURVEY @ 13,171' MD
13,236.0	5,743.8	-7,451.4	238.0	PTB @ 13,236' MD
13,236.0	5,743.8	-7,451.4	238.0	TD @ (855' FWL & 2541' FNL)

Checked By: _____	Approved By: _____	Date: _____
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