



WARD PETROLEUM

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Location ADAMS COUNTY, CO
Field West Brighton
Installation Anderson

Slot Slot #4
Well Anderson 19-1-10HC
Wellbore Anderson 19-1-10HC



Scale 1 cm = 200 ft

<- True Vertical Depth (feet)

East (feet) ->

Scale 1 cm = 200 ft

<- North(feet)

Scale 1 cm = 200 ft

Tie on - 0.00 Inc, 22.00 MD, 22.00 TVD, 0.00 VS

9 5/8in Surface Casing

3DS Kick off Point - 0.00 Inc, 1350.00 MD, 1350.00 TVD, 0.00 VS

End of Build - 7.53 Inc, 1726.31 MD, 1725.23 TVD, 24.15 VS

Surface 0.00 N 0.00 E

Anderson 19-1-10HC LP

WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	22.00	0.00	0.00	22.00	0.00	0.00	0.00	0.00
KOP	1350.00	0.00	0.00	1350.00	0.00	0.00	0.00	0.00
End of Build	1726.31	7.53	165.68	1725.23	-23.91	6.11	2.00	24.15
End of Hold	7114.73	7.53	165.68	7067.23	-707.75	180.73	0.00	714.90
Target Anderson 19-1-1	8145.91	89.80	179.44	7692.00	-1415.44	207.25	8.00	1423.08
T.D. & Target Anderson	12510.21	89.80	179.44	7707.00	-5779.50	250.15	0.00	5784.91

Created by admin
Date plotted 3-Sep-2014

Plot reference is Anderson 19-1-10HC.
Ref wellpath is Anderson 19-1-10HC.
Coordinates are in feet reference Slot #4.
True Vertical Depths are reference Rig Datum.
Measured Depths are reference Rig Datum.
Rig Datum: Planned Datum #1
Rig Datum to Mean Sea Level: 5027.00 ft.
Plot North is aligned to GRID North.

End of Hold - 7.53 Inc, 7114.73 MD, 7067.23 TVD, 714.90 VS

7.0in Intermediate Casing

Anderson 19-1-10HC LP

T.D. & End of Hold - 7707.00 TVD, 5779.50 S 250.15 E

Anderson 19-1-10HC BH

S/C Kick off Point - 89.80 Inc, 8145.91 MD, 7692.00 TVD, 1423.08 VS

Anderson 19-1-10HC BH

Scale 1 cm = 200 ft

Vertical Section (feet) ->

Azimuth 177.52 with reference 0.00 N, 0.00 E from Slot #4



WARD PETROLEUM

INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL
Well Design Combined Report
Wellbore: Anderson 19-1-10HC



Wellhead Details							
Name	Northing	Easting	Latitude	Longitude	North	East	Elevation Above Inst.
Slot #4	1229158.8093	3189536.6988	39.96044000	-104.82384000	0.34S	44.85W	-0.00

Declination			
Date	Source	Time	
28-Aug-2014	IGRF Model [1900.0-2015.0]	10:16	

Site Details				
Name	Northing	Easting	Coord System Name	North Alignment
Anderson	1229159.1513	3189581.5481	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Summary Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
22.00	0.00	0.000	22.00	0.00N	0.00E		0.00	1229158.81	3189536.70
1350.00	0.00	0.000	1350.00	0.00N	0.00E	==>	0.00	1229158.81	3189536.70
1726.31	7.53	165.680	1725.23	23.91S	6.11E	2.00	24.15	1229134.90	3189542.80
7114.73	7.53	165.680	7067.23	707.75S	180.73E	==>	714.90	1228451.08	3189717.42
8145.91	89.80	179.440	7692.00	1415.44S	207.25E	8.00	1423.08	1227743.41	3189743.94
12510.21	89.80	179.440	7707.00	5779.50S	250.15E	==>	5784.91	1223379.49	3189786.84

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
0.00	0.00	0.000	0.00	0.00N	0.00E		0.00	1229158.81	3189536.70
22.00	0.00	0.000	22.00	0.00N	0.00E	==>	0.00	1229158.81	3189536.70
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	1229158.81	3189536.70
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	1229158.81	3189536.70
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	1229158.81	3189536.70
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	1229158.81	3189536.70
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	1229158.81	3189536.70
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	1229158.81	3189536.70
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	1229158.81	3189536.70
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	1229158.81	3189536.70
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	1229158.81	3189536.70
1000.00	0.00	0.000	1000.00	0.00N	0.00E	==>	0.00	1229158.81	3189536.70
1100.00	0.00	0.000	1100.00	0.00N	0.00E	==>	0.00	1229158.81	3189536.70
1200.00	0.00	0.000	1200.00	0.00N	0.00E	==>	0.00	1229158.81	3189536.70
1300.00	0.00	0.000	1300.00	0.00N	0.00E	==>	0.00	1229158.81	3189536.70
1328.00	0.00	0.000	1328.00	0.00N	0.00E	==>	0.00	1229158.81	3189536.70
1350.00	0.00	0.000	1350.00	0.00N	0.00E	==>	0.00	1229158.81	3189536.70
1428.00	1.56	165.680	1427.99	1.03S	0.26E	2.00	1.04	1229157.78	3189536.96
1528.00	3.56	165.680	1527.89	5.36S	1.37E	2.00	5.41	1229153.45	3189538.07
1628.00	5.56	165.680	1627.56	13.06S	3.33E	2.00	13.19	1229145.75	3189540.03
1726.31	7.53	165.680	1725.23	23.91S	6.11E	2.00	24.15	1229134.90	3189542.80
1800.00	7.53	165.680	1798.28	33.26S	8.49E	==>	33.60	1229125.55	3189545.19
1900.00	7.53	165.680	1897.42	45.96S	11.73E	==>	46.42	1229112.86	3189548.43
2000.00	7.53	165.680	1996.56	58.65S	14.98E	==>	59.24	1229100.16	3189551.67
2100.00	7.53	165.680	2095.70	71.34S	18.22E	==>	72.06	1229087.47	3189554.91
2200.00	7.53	165.680	2194.84	84.03S	21.46E	==>	84.88	1229074.78	3189558.15
2300.00	7.53	165.680	2293.98	96.72S	24.70E	==>	97.70	1229062.09	3189561.40
2400.00	7.53	165.680	2393.11	109.41S	27.94E	==>	110.52	1229049.40	3189564.64
2500.00	7.53	165.680	2492.25	122.10S	31.18E	==>	123.33	1229036.71	3189567.88
2600.00	7.53	165.680	2591.39	134.79S	34.42E	==>	136.15	1229024.02	3189571.12
2700.00	7.53	165.680	2690.53	147.48S	37.66E	==>	148.97	1229011.33	3189574.36
2800.00	7.53	165.680	2789.67	160.17S	40.90E	==>	161.79	1228998.64	3189577.60
2900.00	7.53	165.680	2888.81	172.86S	44.14E	==>	174.61	1228985.95	3189580.84
3000.00	7.53	165.680	2987.95	185.56S	47.38E	==>	187.43	1228973.26	3189584.08
3100.00	7.53	165.680	3087.08	198.25S	50.62E	==>	200.25	1228960.57	3189587.32
3200.00	7.53	165.680	3186.22	210.94S	53.86E	==>	213.07	1228947.88	3189590.56

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 5027.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 177.520 degrees
Bottom hole distance is 5784.91 Feet on azimuth 177.52 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 3-Sep-2014



WARD PETROLEUM

INTEGRATED PETROLEUM TECHNOLOGIES, INC SYSDRILL

Well Design Combined Report
Wellbore: Anderson 19-1-10HC



Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
3300.00	7.53	165.680	3285.36	223.63S	57.10E	==>	225.89	1228935.19	3189593.80
3400.00	7.53	165.680	3384.50	236.32S	60.34E	==>	238.71	1228922.50	3189597.04
3500.00	7.53	165.680	3483.64	249.01S	63.59E	==>	251.53	1228909.81	3189600.28
3600.00	7.53	165.680	3582.78	261.70S	66.83E	==>	264.35	1228897.12	3189603.52
3700.00	7.53	165.680	3681.92	274.39S	70.07E	==>	277.16	1228884.43	3189606.76
3800.00	7.53	165.680	3781.05	287.08S	73.31E	==>	289.98	1228871.74	3189610.00
3900.00	7.53	165.680	3880.19	299.77S	76.55E	==>	302.80	1228859.05	3189613.24
4000.00	7.53	165.680	3979.33	312.46S	79.79E	==>	315.62	1228846.36	3189616.48
4100.00	7.53	165.680	4078.47	325.15S	83.03E	==>	328.44	1228833.66	3189619.73
4200.00	7.53	165.680	4177.61	337.85S	86.27E	==>	341.26	1228820.97	3189622.97
4300.00	7.53	165.680	4276.75	350.54S	89.51E	==>	354.08	1228808.28	3189626.21
4400.00	7.53	165.680	4375.88	363.23S	92.75E	==>	366.90	1228795.59	3189629.45
4500.00	7.53	165.680	4475.02	375.92S	95.99E	==>	379.72	1228782.90	3189632.69
4600.00	7.53	165.680	4574.16	388.61S	99.23E	==>	392.54	1228770.21	3189635.93
4700.00	7.53	165.680	4673.30	401.30S	102.47E	==>	405.36	1228757.52	3189639.17
4800.00	7.53	165.680	4772.44	413.99S	105.71E	==>	418.18	1228744.83	3189642.41
4900.00	7.53	165.680	4871.58	426.68S	108.95E	==>	430.99	1228732.14	3189645.65
5000.00	7.53	165.680	4970.72	439.37S	112.20E	==>	443.81	1228719.45	3189648.89
5100.00	7.53	165.680	5069.85	452.06S	115.44E	==>	456.63	1228706.76	3189652.13
5200.00	7.53	165.680	5168.99	464.75S	118.68E	==>	469.45	1228694.07	3189655.37
5300.00	7.53	165.680	5268.13	477.45S	121.92E	==>	482.27	1228681.38	3189658.61
5400.00	7.53	165.680	5367.27	490.14S	125.16E	==>	495.09	1228668.69	3189661.85
5500.00	7.53	165.680	5466.41	502.83S	128.40E	==>	507.91	1228656.00	3189665.09
5600.00	7.53	165.680	5565.55	515.52S	131.64E	==>	520.73	1228643.31	3189668.33
5700.00	7.53	165.680	5664.68	528.21S	134.88E	==>	533.55	1228630.62	3189671.57
5800.00	7.53	165.680	5763.82	540.90S	138.12E	==>	546.37	1228617.93	3189674.81
5900.00	7.53	165.680	5862.96	553.59S	141.36E	==>	559.19	1228605.24	3189678.06
6000.00	7.53	165.680	5962.10	566.28S	144.60E	==>	572.01	1228592.55	3189681.30
6100.00	7.53	165.680	6061.24	578.97S	147.84E	==>	584.82	1228579.86	3189684.54
6200.00	7.53	165.680	6160.38	591.66S	151.08E	==>	597.64	1228567.16	3189687.78
6300.00	7.53	165.680	6259.52	604.35S	154.32E	==>	610.46	1228554.47	3189691.02
6400.00	7.53	165.680	6358.65	617.05S	157.56E	==>	623.28	1228541.78	3189694.26
6500.00	7.53	165.680	6457.79	629.74S	160.80E	==>	636.10	1228529.09	3189697.50
6600.00	7.53	165.680	6556.93	642.43S	164.05E	==>	648.92	1228516.40	3189700.74
6700.00	7.53	165.680	6656.07	655.12S	167.29E	==>	661.74	1228503.71	3189703.98
6800.00	7.53	165.680	6755.21	667.81S	170.53E	==>	674.56	1228491.02	3189707.22
6900.00	7.53	165.680	6854.35	680.50S	173.77E	==>	687.38	1228478.33	3189710.46
7000.00	7.53	165.680	6953.49	693.19S	177.01E	==>	700.20	1228465.64	3189713.70
7100.00	7.53	165.680	7052.62	705.88S	180.25E	==>	713.02	1228452.95	3189716.94
7114.73	7.53	165.680	7067.23	707.75S	180.73E	==>	714.90	1228451.08	3189717.42
7200.00	14.24	172.330	7150.92	723.58S	183.51E	8.00	730.83	1228435.26	3189720.20
7300.00	22.20	175.020	7245.83	754.64S	186.80E	8.00	762.01	1228404.20	3189723.49
7400.00	30.18	176.340	7335.49	798.61S	190.04E	8.00	806.08	1228360.22	3189726.74
7500.00	38.17	177.150	7418.16	854.65S	193.19E	8.00	862.20	1228304.19	3189729.88
7600.00	46.16	177.710	7492.22	921.65S	196.17E	8.00	929.27	1228237.19	3189732.86
7700.00	54.15	178.140	7556.25	998.31S	198.93E	8.00	1005.98	1228160.53	3189735.62
7800.00	62.15	178.490	7608.98	1083.15S	201.41E	8.00	1090.85	1228075.69	3189738.10
7900.00	70.14	178.790	7649.39	1174.51S	203.57E	8.00	1182.21	1227984.34	3189740.26
8000.00	78.14	179.060	7676.70	1270.60S	205.36E	8.00	1278.30	1227888.25	3189742.05
8100.00	86.13	179.320	7690.37	1369.57S	206.75E	8.00	1377.23	1227789.28	3189743.45
8145.91	89.80	179.440	7692.00	1415.44S	207.25E	8.00	1423.08	1227743.41	3189743.94
8200.00	89.80	179.440	7692.19	1469.53S	207.78E	==>	1477.14	1227689.33	3189744.48
8300.00	89.80	179.440	7692.53	1569.53S	208.77E	==>	1577.08	1227589.34	3189745.46
8400.00	89.80	179.440	7692.87	1669.52S	209.75E	==>	1677.03	1227489.34	3189746.44
8500.00	89.80	179.440	7693.22	1769.51S	210.73E	==>	1776.97	1227389.35	3189747.42
8600.00	89.80	179.440	7693.56	1869.51S	211.72E	==>	1876.92	1227289.36	3189748.41
8700.00	89.80	179.440	7693.90	1969.50S	212.70E	==>	1976.86	1227189.37	3189749.39
8800.00	89.80	179.440	7694.25	2069.50S	213.68E	==>	2076.80	1227089.38	3189750.37
8900.00	89.80	179.440	7694.59	2169.49S	214.66E	==>	2176.75	1226989.39	3189751.36
9000.00	89.80	179.440	7694.94	2269.49S	215.65E	==>	2276.69	1226889.40	3189752.34

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Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 5027.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 177.520 degrees
Bottom hole distance is 5784.91 Feet on azimuth 177.52 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 3-Sep-2014



WARD PETROLEUM

INTEGRATED PETROLEUM TECHNOLOGIES, INC SYSDRILL

Well Design Combined Report
Wellbore: Anderson 19-1-10HC



Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
9100.00	89.80	179.440	7695.28	2369.48S	216.63E	==>	2376.63	1226789.40	3189753.32
9200.00	89.80	179.440	7695.62	2469.48S	217.61E	==>	2476.58	1226689.41	3189754.31
9300.00	89.80	179.440	7695.97	2569.47S	218.60E	==>	2576.52	1226589.42	3189755.29
9400.00	89.80	179.440	7696.31	2669.47S	219.58E	==>	2676.46	1226489.43	3189756.27
9500.00	89.80	179.440	7696.65	2769.46S	220.56E	==>	2776.41	1226389.44	3189757.25
9600.00	89.80	179.440	7697.00	2869.45S	221.55E	==>	2876.35	1226289.45	3189758.24
9700.00	89.80	179.440	7697.34	2969.45S	222.53E	==>	2976.29	1226189.46	3189759.22
9800.00	89.80	179.440	7697.69	3069.44S	223.51E	==>	3076.24	1226089.46	3189760.20
9900.00	89.80	179.440	7698.03	3169.44S	224.49E	==>	3176.18	1225989.47	3189761.19
10000.00	89.80	179.440	7698.37	3269.43S	225.48E	==>	3276.12	1225889.48	3189762.17
10100.00	89.80	179.440	7698.72	3369.43S	226.46E	==>	3376.07	1225789.49	3189763.15
10200.00	89.80	179.440	7699.06	3469.42S	227.44E	==>	3476.01	1225689.50	3189764.14
10300.00	89.80	179.440	7699.40	3569.42S	228.43E	==>	3575.96	1225589.51	3189765.12
10400.00	89.80	179.440	7699.75	3669.41S	229.41E	==>	3675.90	1225489.52	3189766.10
10500.00	89.80	179.440	7700.09	3769.41S	230.39E	==>	3775.84	1225389.53	3189767.08
10600.00	89.80	179.440	7700.43	3869.40S	231.38E	==>	3875.79	1225289.53	3189768.07
10700.00	89.80	179.440	7700.78	3969.39S	232.36E	==>	3975.73	1225189.54	3189769.05
10800.00	89.80	179.440	7701.12	4069.39S	233.34E	==>	4075.67	1225089.55	3189770.03
10900.00	89.80	179.440	7701.47	4169.38S	234.32E	==>	4175.62	1224989.56	3189771.02
11000.00	89.80	179.440	7701.81	4269.38S	235.31E	==>	4275.56	1224889.57	3189772.00
11100.00	89.80	179.440	7702.15	4369.37S	236.29E	==>	4375.50	1224789.58	3189772.98
11200.00	89.80	179.440	7702.50	4469.37S	237.27E	==>	4475.45	1224689.59	3189773.97
11300.00	89.80	179.440	7702.84	4569.36S	238.26E	==>	4575.39	1224589.59	3189774.95
11400.00	89.80	179.440	7703.18	4669.36S	239.24E	==>	4675.33	1224489.60	3189775.93
11500.00	89.80	179.440	7703.53	4769.35S	240.22E	==>	4775.28	1224389.61	3189776.91
11600.00	89.80	179.440	7703.87	4869.35S	241.21E	==>	4875.22	1224289.62	3189777.90
11700.00	89.80	179.440	7704.22	4969.34S	242.19E	==>	4975.17	1224189.63	3189778.88
11800.00	89.80	179.440	7704.56	5069.34S	243.17E	==>	5075.11	1224089.64	3189779.86
11900.00	89.80	179.440	7704.90	5169.33S	244.16E	==>	5175.05	1223989.65	3189780.85
12000.00	89.80	179.440	7705.25	5269.32S	245.14E	==>	5275.00	1223889.66	3189781.83
12100.00	89.80	179.440	7705.59	5369.32S	246.12E	==>	5374.94	1223789.66	3189782.81
12200.00	89.80	179.440	7705.93	5469.31S	247.10E	==>	5474.88	1223689.67	3189783.79
12300.00	89.80	179.440	7706.28	5569.31S	248.09E	==>	5574.83	1223589.68	3189784.78
12400.00	89.80	179.440	7706.62	5669.30S	249.07E	==>	5674.77	1223489.69	3189785.76
12500.00	89.80	179.440	7706.96	5769.30S	250.05E	==>	5774.71	1223389.70	3189786.74
12510.21	89.80	179.440	7707.00	5779.50S	250.15E	==>	5784.91	1223379.49	3189786.84

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Vertical Section is from 0.00N 0.00E on azimuth 177.520 degrees
Bottom hole distance is 5784.91 Feet on azimuth 177.52 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 3-Sep-2014



WARD PETROLEUM

INTEGRATED PETROLEUM TECHNOLOGIES, INC

SYSDRILL

Well Design Combined Report

Wellbore: Anderson 19-1-10HC



Hole Sections

Diameter [in]	Start MD[ft]	Start TVD[ft]	Start North[ft]	Start East[ft]	End MD[ft]	End TVD[ft]	End North[ft]	End East[ft]
13 1/2	22.00	22.00	0.00N	0.00E	1200.00	1200.00	0.00N	0.00E
8 3/4	1200.00	1200.00	0.00N	0.00E	8145.00	7692.00	1414.53S	207.24E
6 1/8	8145.00	7692.00	1414.53S	207.24E	12510.23	7707.00	5779.53S	250.15E

Casings

Name	Top MD[ft]	Top TVD[ft]	Top North[ft]	Top East[ft]	Shoe MD[ft]	Shoe TVD[ft]	Shoe North[ft]	Shoe East[ft]
9 5/8in Surface Casing	22.00	22.00	0.00N	0.00E	1200.00	1200.00	0.00N	0.00E
7.0in Intermediate Casing	22.00	22.00	0.00N	0.00E	8145.00	7692.00	1414.53S	207.24E
4 1/2in Production Liner	7945.00	7663.34	1217.27S	204.42E	12510.23		5779.53S	250.15E

Targets

Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting	Last Revised
Anderson 19-1-10HC BH	5779.50S	243.15E	7707.00	39.94457000	-104.82313000	1223379.49	3189779.84	28-Aug-2014
Anderson 19-1-10HC LP	1415.44S	218.25E	7692.00	39.95655000	-104.82310000	1227743.41	3189754.94	28-Aug-2014

Survey Tool Program

Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
299498	Planned	12510.21	7707.00	WdW Rate Gyro	Standard

Notes

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SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: Anderson 19-1-10HC



Ellipse separations are reported ONLY if BOTH wells have uncertainty data
Only Depth and Magnetic Reference Field error terms are correlated across tie points
Proximities beyond 2000.00ft with expansion rate of 0.00ft/1000ft are not reported
Scan limit is calculated on CENTRE to CENTRE distance

Summary data uses Closest Approach clearance calculation for all minima
Hole size/Casings ARE included
Hole size/Casings are NOT subtracted from Centre-Centre distance
Confidence limit of 95.00% / 2.80 SD.

Wellbore		
Name	Created	Last Revised
Anderson 19-1-10HC	28-Aug-2014	3-Sep-2014

Well		
Name	Government ID	Last Revised
Anderson 19-1-10HC		29-Aug-2014

Slot						
Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #4	1229158.8093	3189536.6988	39.96044000	-104.82384000	0.34S	44.85W

Installation				
Name	Easting	Northing	Coord System Name	North Alignment
Anderson	3189581.5481	1229159.1513	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Field				
Name	Easting	Northing	Coord System Name	North Alignment
West Brighton	3178196.4983	1231661.3262	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Clearance Summary								
Offset Wellbore	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
Anderson 18-3-9HC	Anderson	12.28	1350.00	7664.59	9.35	1517.38	3.95	1651.25
Anderson 18-3-10HN	Anderson	13.79	1285.12	7477.89	10.95	1186.70	1.60	7477.89
Anderson 19-1-9HN	Anderson	13.88	1433.42	12510.21	10.95	1433.42	4.71	1465.57
Anderson 19-1-11HN	Anderson	16.82	1301.53	1301.53	13.98	1186.70	5.11	12510.21
Anderson 18-3-11HC	Anderson	24.95	1250.00	7641.33	22.11	1186.70	8.78	1186.70
Anderson 18-3-8HN	Anderson	24.95	1285.12	7510.91	22.11	1186.70	8.78	1186.70
Anderson 19-1-8HC	Anderson	28.04	1350.74	12510.21	25.19	1186.70	8.39	12510.21
Anderson 19-1-12HC	Anderson	30.84	1250.00	1250.00	28.00	1186.70	8.12	12510.21
Anderson 18-3-7HC	Anderson	38.05	1250.00	7703.90	35.21	1186.70	13.39	1186.70
Anderson 18-3-12HN	Anderson	40.74	1200.00	7458.90	37.88	1200.00	14.24	1200.00
Anderson 19-1-7HN	Anderson	44.85	1285.12	12510.21	42.01	1186.70	12.90	12510.21
W RITCHEY #1-19 (AWB)	Offsets	546.81	11980.66	11980.66	474.07	11980.66	7.50	12013.47

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Closest Approach + Clearance Factor Summary Report
Wellbore: Anderson 19-1-10HC



Offset Wellbore	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
W RITCHEY #1-19 (AWB)	Offsets	546.81	11980.66	11980.66	473.98	11980.66	7.49	12013.47
Schaefer 24-3-1HC (PWB)	Schaefer	1309.56	8131.91	8131.91	1254.64	8142.08	22.03	12510.21
Schaefer 25-1-1HN (PWB)	Schaefer	1505.33	12510.21	12510.21	1444.33	12510.21	24.68	12510.21
Schaefer 24-3-2HN (PWB)	Schaefer	1755.94	8130.25	8130.25	1701.57	8142.08	29.94	12510.21
Schaefer 25-1-2HC (PWB)	Schaefer	1882.61	12510.21	12510.21	1821.47	12510.21	30.79	12510.21