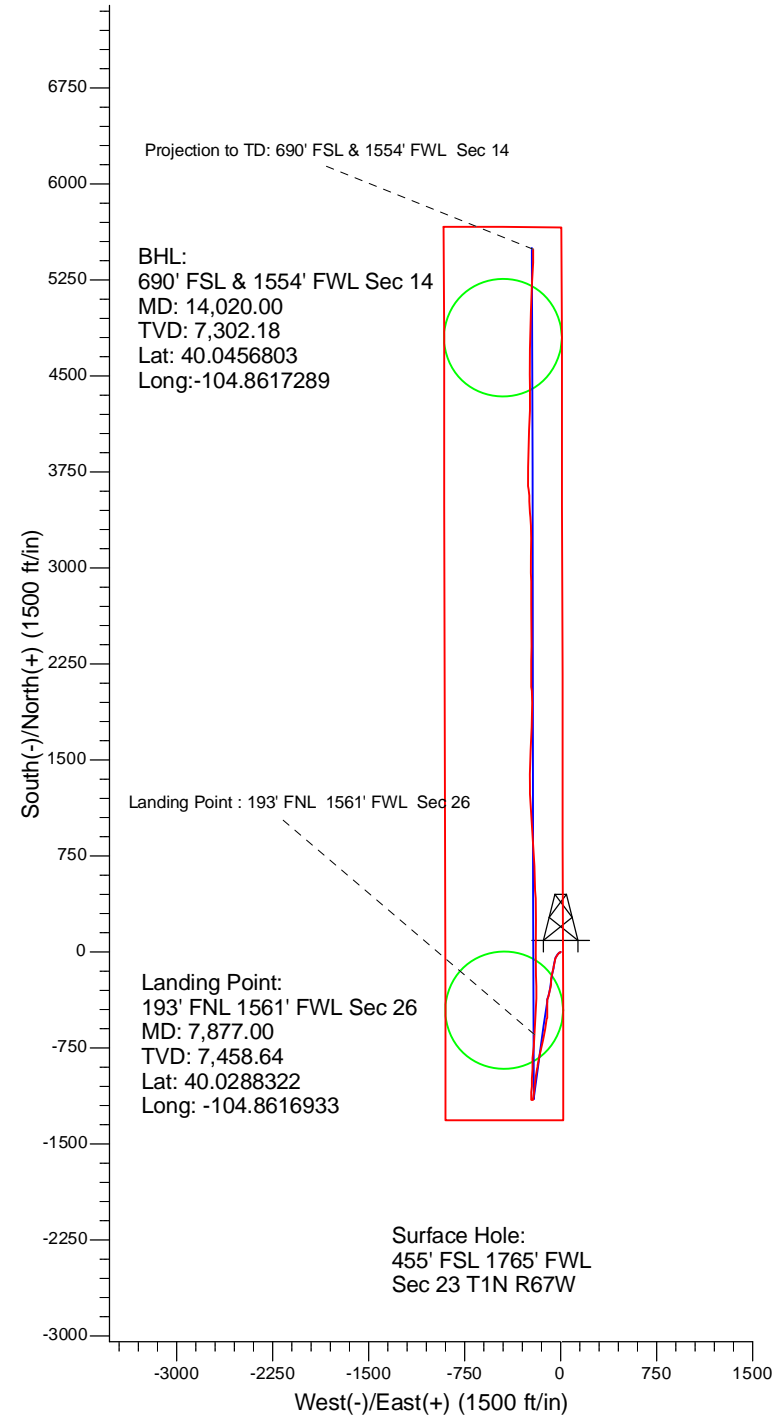
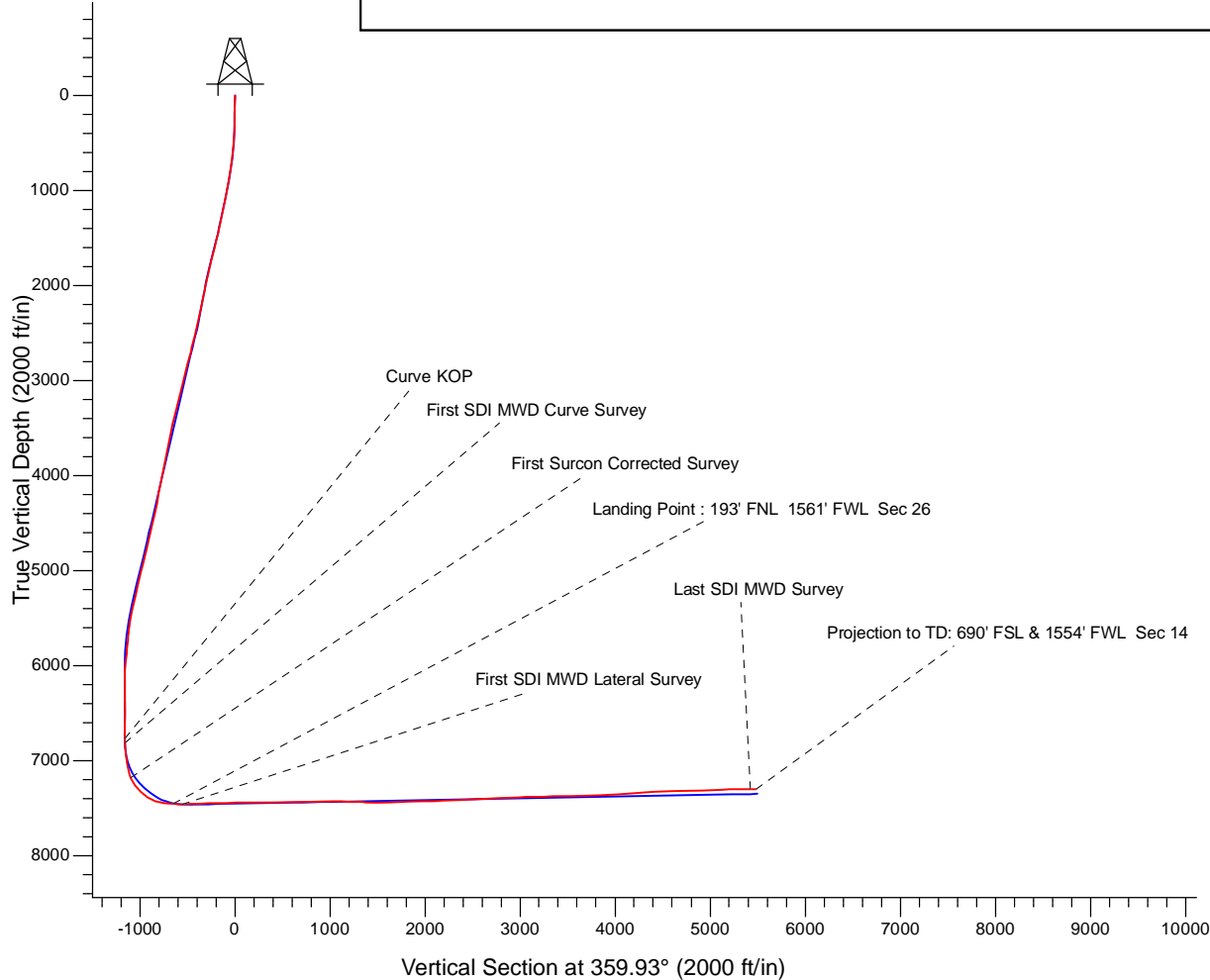


WELL DETAILS: Jaguar Fed 29N-14HZ				PROJECT DETAILS: US Rockies Wattenberg Planning UTM83	
GL 4993' & KB 17' @ 5010.00ft		4993.00		Geodetic System: Universal Transverse Mercator (US Survey Feet)	
Northings	Easting	Latitude	Longitude	Datum: North American Datum 1983	
14537910.58	1679335.88	40.0306110	-104.8609660	Ellipsoid: GRS 1980	
				Zone: Zone 13N (108 W to 102 W)	
Design: OH (Jaguar Fed 29N-14HZ/OH)					
Created By: Seth Burstad Date: 12-22-2016					
				System Datum: Mean Sea Level	
				Local North: True	

ANNOTATIONS							Annotation
TVD	MD	Inc	Azi	+N/-S	+E/-W		
6771.75	6900.00	1.25	340.17	-1157.39	-229.32		Curve KOP
6815.73	6944.00	2.11	353.96	-1156.13	-229.57		First SDI MWD Curve Survey
7180.24	7315.00	20.81	2.46	-1093.97	-228.10		First Surcon Corrected Survey
7458.64	7877.00	86.61	3.91	-647.77	-203.60		Landing Point : 193' FNL 1561' FWL Sec 26
7460.85	7971.00	90.70	4.12	-554.04	-197.02		First SDI MWD Lateral Survey
7302.16	13958.00	89.98	1.76	5425.42	-215.42		Last SDI MWD Survey
7302.18	14020.00	89.98	1.76	5487.39	-213.52		Projection to TD: 690' FSL & 1554' FWL Sec 14





# **US ROCKIES REGION PLANNING**

**US Rockies Wattenberg Planning UTM83**

**Jaguar 14-23HZ Pad 1N-67W-23**

**Jaguar Fed 29N-14HZ**

**OH**

**Design: OH**

## **Standard Survey Report**

**22 December, 2016**



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well Jaguar Fed 29N-14HZ
<b>Project:</b>	US Rockies Wattenberg Planning UTM83	<b>TVD Reference:</b>	GL 4993' & KB 17' @ 5010.00ft
<b>Site:</b>	Jaguar 14-23HZ Pad 1N-67W-23	<b>MD Reference:</b>	GL 4993' & KB 17' @ 5010.00ft
<b>Well:</b>	Jaguar Fed 29N-14HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

<b>Project</b>	US Rockies Wattenberg Planning UTM83		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Zone 13N (108 W to 102 W)		

Site	Jaguar 14-23HZ Pad 1N-67W-23				
Site Position:		Northing:	14,537,925.88 usft	Latitude:	40.0306530
From:	Lat/Long	Easting:	1,679,335.86 usft	Longitude:	-104.8609660
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.09 °

Well	Jaguar Fed 29N-14HZ, 455' FSL 1765' FWL Sec 23 T1N R67W					
Well Position	+N/-S	0.00 ft	Northing:	14,537,910.58 usft	Latitude:	40.0306110
	+E/-W	0.00 ft	Easting:	1,679,335.88 usft	Longitude:	-104.8609660
Position Uncertainty		3.28 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,993.00 ft

<b>Wellbore</b>	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/5/2015	8.33	66.59	52,490
	BGGM2016	11/2/2016	8.47	66.60	52,251
	User Defined	11/23/2016	8.20	66.39	52,384

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	359.93	

<b>Survey Program</b>	<b>Date</b>	12/22/2016			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
190.00	2,234.00	Survey #3 - Surface (OH)	APC_ISCWSA REV 2 MWD+	Fixed:v2:crustal field declination	
2,315.00	14,020.00	Survey #4 - Production (OH)	APC_ISCWSA REV 2 MWD+	Fixed:v2:crustal field declination	

<b>Survey</b>									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
190.00	0.21	164.95	190.00	-0.34	0.09	-0.34	0.11	0.11	0.00
<b>First SDI MWD Survey</b>									
220.00	0.65	201.48	220.00	-0.55	0.04	-0.55	1.66	1.47	121.77
313.00	2.16	228.13	312.97	-2.21	-1.46	-2.21	1.73	1.62	28.66
406.00	4.25	228.23	405.82	-5.67	-5.33	-5.67	2.25	2.25	0.11
498.00	5.89	226.99	497.46	-11.17	-11.33	-11.15	1.79	1.78	-1.35

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well Jaguar Fed 29N-14HZ
<b>Project:</b>	US Rockies Wattenberg Planning UTM83	<b>TVD Reference:</b>	GL 4993' & KB 17' @ 5010.00ft
<b>Site:</b>	Jaguar 14-23HZ Pad 1N-67W-23	<b>MD Reference:</b>	GL 4993' & KB 17' @ 5010.00ft
<b>Well:</b>	Jaguar Fed 29N-14HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
591.00	7.53	225.40	589.82	-18.70	-19.15	-18.68	1.77	1.76	-1.71
683.00	8.93	216.35	680.87	-28.68	-27.68	-28.65	2.07	1.52	-9.84
776.00	9.36	209.05	772.69	-41.11	-35.63	-41.07	1.33	0.46	-7.85
868.00	10.00	199.59	863.39	-55.18	-41.94	-55.12	1.86	0.70	-10.28
961.00	11.71	191.15	954.72	-72.04	-46.48	-71.99	2.51	1.84	-9.08
1,053.00	12.14	186.99	1,044.74	-90.81	-49.46	-90.75	1.04	0.47	-4.52
1,146.00	11.04	188.93	1,135.84	-109.31	-52.03	-109.25	1.25	-1.18	2.09
1,240.00	11.85	192.67	1,227.97	-127.62	-55.54	-127.55	1.17	0.86	3.98
1,334.00	12.67	192.93	1,319.83	-147.08	-59.97	-147.01	0.87	0.87	0.28
1,428.00	12.70	190.52	1,411.54	-167.29	-64.16	-167.21	0.56	0.03	-2.56
1,522.00	14.01	187.77	1,502.99	-188.72	-67.59	-188.64	1.55	1.39	-2.93
1,616.00	14.54	186.98	1,594.09	-211.71	-70.56	-211.62	0.60	0.56	-0.84
1,710.00	14.69	188.05	1,685.05	-235.22	-73.66	-235.13	0.33	0.16	1.14
1,805.00	13.68	189.04	1,777.15	-258.24	-77.11	-258.15	1.09	-1.06	1.04
1,899.00	13.25	188.23	1,868.57	-279.88	-80.40	-279.79	0.50	-0.46	-0.86
1,993.00	12.62	189.27	1,960.18	-300.68	-83.60	-300.58	0.71	-0.67	1.11
2,087.00	11.58	191.55	2,052.09	-320.06	-87.14	-319.95	1.22	-1.11	2.43
2,181.00	10.55	197.14	2,144.35	-337.53	-91.57	-337.41	1.58	-1.10	5.95
2,234.00	10.55	197.24	2,196.45	-346.80	-94.44	-346.68	0.03	0.00	0.19
Last SDI MWD Surface Survey									
2,315.00	11.46	195.06	2,275.96	-361.65	-98.72	-361.53	1.24	1.12	-2.69
First SDI MWD Production Survey									
2,408.00	13.07	188.31	2,366.84	-380.98	-102.64	-380.85	2.32	1.73	-7.26
2,502.00	15.28	182.96	2,457.98	-403.87	-104.82	-403.74	2.73	2.35	-5.69
2,596.00	13.64	178.80	2,549.00	-427.32	-105.23	-427.19	2.06	-1.74	-4.43
2,690.00	12.39	179.03	2,640.58	-448.49	-104.83	-448.36	1.33	-1.33	0.24
2,784.00	15.82	181.98	2,731.73	-471.38	-105.10	-471.25	3.73	3.65	3.14
2,878.00	14.89	181.28	2,822.38	-496.26	-105.81	-496.13	1.01	-0.99	-0.74
2,972.00	12.78	185.00	2,913.65	-518.70	-106.99	-518.57	2.43	-2.24	3.96
3,066.00	13.53	188.43	3,005.18	-539.93	-109.50	-539.80	1.15	0.80	3.65
3,160.00	14.01	190.21	3,096.48	-562.01	-113.13	-561.87	0.68	0.51	1.89
3,254.00	14.20	189.52	3,187.65	-584.58	-117.06	-584.43	0.27	0.20	-0.73
3,348.00	14.22	189.93	3,278.77	-607.32	-120.95	-607.17	0.11	0.02	0.44
3,441.00	14.79	192.43	3,368.81	-630.16	-125.48	-630.01	0.91	0.61	2.69
3,536.00	13.35	191.45	3,460.95	-652.76	-130.27	-652.60	1.54	-1.52	-1.03
3,629.00	12.06	188.83	3,551.68	-672.88	-133.89	-672.72	1.52	-1.39	-2.82
3,724.00	11.04	192.04	3,644.75	-691.58	-137.31	-691.42	1.27	-1.07	3.38
3,818.00	11.05	191.37	3,737.01	-709.22	-140.96	-709.05	0.14	0.01	-0.71
3,912.00	11.39	188.88	3,829.21	-727.22	-144.17	-727.04	0.63	0.36	-2.65
4,006.00	11.88	191.76	3,921.28	-745.86	-147.58	-745.68	0.81	0.52	3.06
4,100.00	11.94	192.67	4,013.26	-764.82	-151.68	-764.64	0.21	0.06	0.97
4,194.00	11.32	196.68	4,105.33	-783.15	-156.46	-782.96	1.08	-0.66	4.27
4,288.00	11.19	197.99	4,197.52	-800.66	-161.93	-800.46	0.31	-0.14	1.39
4,382.00	10.83	194.77	4,289.79	-817.87	-167.00	-817.67	0.76	-0.38	-3.43

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<b>Site:</b>	Jaguar 14-23HZ Pad 1N-67W-23	<b>MD Reference:</b>	GL 4993' & KB 17' @ 5010.00ft
<b>Well:</b>	Jaguar Fed 29N-14HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,476.00	13.09	192.02	4,381.75	-836.83	-171.47	-836.62	2.48	2.40	-2.93	
4,570.00	13.87	192.78	4,473.16	-858.23	-176.17	-858.01	0.85	0.83	0.81	
4,664.00	12.12	189.90	4,564.75	-878.94	-180.36	-878.72	1.98	-1.86	-3.06	
4,758.00	12.49	183.67	4,656.59	-898.80	-182.71	-898.58	1.47	0.39	-6.63	
4,852.00	13.18	185.97	4,748.24	-919.61	-184.48	-919.38	0.91	0.73	2.45	
4,946.00	14.34	188.24	4,839.55	-941.79	-187.26	-941.56	1.36	1.23	2.41	
5,040.00	14.56	189.79	4,930.57	-964.95	-190.94	-964.72	0.47	0.23	1.65	
5,134.00	13.73	187.56	5,021.72	-987.65	-194.41	-987.41	1.06	-0.88	-2.37	
5,253.00	12.25	188.93	5,137.67	-1,014.13	-198.23	-1,013.88	1.27	-1.24	1.15	
5,346.00	12.27	188.81	5,228.55	-1,033.64	-201.28	-1,033.39	0.03	0.02	-0.13	
5,440.00	13.29	184.98	5,320.22	-1,054.27	-203.74	-1,054.02	1.41	1.09	-4.07	
5,534.00	12.83	185.32	5,411.79	-1,075.43	-205.65	-1,075.18	0.50	-0.49	0.36	
5,628.00	10.93	186.08	5,503.78	-1,094.68	-207.56	-1,094.43	2.03	-2.02	0.81	
5,722.00	8.22	185.87	5,596.46	-1,110.23	-209.19	-1,109.98	2.88	-2.88	-0.22	
5,816.00	5.55	187.82	5,689.77	-1,121.42	-210.50	-1,121.16	2.85	-2.84	2.07	
5,910.00	4.13	184.31	5,783.43	-1,129.30	-211.37	-1,129.04	1.54	-1.51	-3.73	
6,004.00	6.85	188.04	5,876.99	-1,138.23	-212.41	-1,137.97	2.92	2.89	3.97	
6,098.00	6.81	190.58	5,970.33	-1,149.26	-214.22	-1,148.99	0.32	-0.04	2.70	
6,191.00	3.57	201.63	6,062.94	-1,157.37	-216.30	-1,157.11	3.63	-3.48	11.88	
6,286.00	1.68	288.16	6,157.86	-1,159.69	-218.71	-1,159.42	4.05	-1.99	91.08	
6,380.00	1.47	280.99	6,251.82	-1,159.03	-221.21	-1,158.76	0.31	-0.22	-7.63	
6,474.00	1.12	283.69	6,345.80	-1,158.58	-223.28	-1,158.31	0.38	-0.37	2.87	
6,568.00	1.04	275.12	6,439.78	-1,158.29	-225.02	-1,158.01	0.19	-0.09	-9.12	
6,662.00	0.71	268.53	6,533.77	-1,158.23	-226.46	-1,157.95	0.37	-0.35	-7.01	
6,756.00	0.78	277.52	6,627.76	-1,158.16	-227.67	-1,157.88	0.14	0.07	9.56	
6,850.00	0.67	281.66	6,721.76	-1,157.96	-228.85	-1,157.68	0.13	-0.12	4.40	
6,900.00	1.25	340.17	6,771.75	-1,157.39	-229.32	-1,157.11	2.14	1.17	117.02	
Curve KOP										
6,944.00	2.11	353.96	6,815.73	-1,156.13	-229.57	-1,155.85	2.14	1.95	31.34	
First SDI MWD Curve Survey										
7,038.00	6.43	11.59	6,909.45	-1,149.25	-228.69	-1,148.97	4.75	4.60	18.76	
7,130.00	9.55	359.09	7,000.55	-1,136.57	-227.78	-1,136.29	3.86	3.39	-13.59	
7,223.00	11.55	357.19	7,091.98	-1,119.55	-228.35	-1,119.27	2.18	2.15	-2.04	
7,315.00	20.81	2.46	7,180.24	-1,093.97	-228.10	-1,093.69	10.18	10.07	5.73	
First Surcon Corrected Survey										
7,408.00	34.00	3.94	7,262.62	-1,051.34	-225.60	-1,051.06	14.20	14.18	1.59	
7,500.00	46.58	3.43	7,332.66	-992.08	-221.82	-991.81	13.68	13.67	-0.55	
7,594.00	58.19	359.37	7,389.95	-917.80	-220.21	-917.53	12.81	12.35	-4.32	
7,688.00	70.10	3.94	7,430.88	-833.43	-217.60	-833.16	13.40	12.67	4.86	
7,783.00	84.72	4.69	7,451.54	-741.23	-210.62	-740.97	15.41	15.39	0.79	
7,877.00	86.61	3.91	7,458.64	-647.77	-203.60	-647.52	2.17	2.01	-0.83	
Landing Point : 193' FNL 1561' FWL Sec 26										
7,971.00	90.70	4.12	7,460.85	-554.04	-197.02	-553.80	4.36	4.35	0.22	
First SDI MWD Lateral Survey										

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<b>Site:</b>	Jaguar 14-23HZ Pad 1N-67W-23	<b>MD Reference:</b>	GL 4993' & KB 17' @ 5010.00ft
<b>Well:</b>	Jaguar Fed 29N-14HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,065.00	91.53	2.42	7,459.02	-460.22	-191.66	-459.98	2.01	0.88	-1.81	
8,159.00	92.29	0.48	7,455.88	-366.30	-189.28	-366.07	2.22	0.81	-2.06	
8,253.00	91.78	358.58	7,452.55	-272.37	-190.05	-272.14	2.09	-0.54	-2.02	
8,347.00	91.52	359.24	7,449.84	-178.43	-191.84	-178.19	0.75	-0.28	0.70	
8,441.00	90.96	358.93	7,447.81	-84.46	-193.34	-84.23	0.68	-0.60	-0.33	
8,535.00	90.57	358.91	7,446.55	9.51	-195.11	9.75	0.42	-0.41	-0.02	
8,629.00	90.61	0.35	7,445.58	103.50	-195.72	103.74	1.53	0.04	1.53	
8,723.00	91.90	2.16	7,443.52	197.45	-193.66	197.69	2.36	1.37	1.93	
8,817.00	90.51	359.87	7,441.55	291.41	-192.00	291.64	2.85	-1.48	-2.44	
8,912.00	90.56	358.92	7,440.66	386.40	-193.00	386.63	1.00	0.05	-1.00	
9,006.00	90.88	356.51	7,439.48	480.31	-196.75	480.55	2.59	0.34	-2.56	
9,100.00	90.40	357.06	7,438.43	574.15	-202.02	574.40	0.78	-0.51	0.59	
9,194.00	90.25	357.19	7,437.89	668.03	-206.73	668.29	0.21	-0.16	0.14	
9,288.00	92.11	357.65	7,435.96	761.91	-210.96	762.17	2.04	1.98	0.49	
9,377.00	92.18	356.51	7,432.63	850.73	-215.49	851.00	1.28	0.08	-1.28	
9,466.00	90.90	356.69	7,430.24	939.54	-220.77	939.81	1.45	-1.44	0.20	
9,555.00	89.26	356.25	7,430.11	1,028.37	-226.25	1,028.65	1.91	-1.84	-0.49	
9,644.00	88.49	356.98	7,431.86	1,117.20	-231.50	1,117.48	1.19	-0.87	0.82	
9,733.00	88.28	357.00	7,434.37	1,206.04	-236.18	1,206.33	0.24	-0.24	0.02	
9,822.00	87.84	359.14	7,437.38	1,294.93	-239.17	1,295.22	2.45	-0.49	2.40	
9,911.00	86.79	0.47	7,441.55	1,383.83	-239.47	1,384.12	1.90	-1.18	1.49	
10,000.00	88.43	1.86	7,445.26	1,472.73	-237.67	1,473.02	2.41	1.84	1.56	
10,089.00	91.28	2.38	7,445.49	1,561.66	-234.37	1,561.95	3.26	3.20	0.58	
10,178.00	93.10	3.10	7,442.09	1,650.49	-230.12	1,650.77	2.20	2.04	0.81	
10,267.00	93.35	1.54	7,437.08	1,739.27	-226.53	1,739.55	1.77	0.28	-1.75	
10,356.00	91.00	1.19	7,433.70	1,828.18	-224.41	1,828.45	2.67	-2.64	-0.39	
10,445.00	90.12	359.15	7,432.83	1,917.17	-224.14	1,917.44	2.50	-0.99	-2.29	
10,534.00	91.36	359.48	7,431.68	2,006.15	-225.21	2,006.42	1.44	1.39	0.37	
10,623.00	91.16	356.57	7,429.72	2,095.07	-228.27	2,095.34	3.28	-0.22	-3.27	
10,712.00	92.44	1.13	7,426.93	2,183.98	-230.06	2,184.26	5.32	1.44	5.12	
10,801.00	93.06	0.72	7,422.66	2,272.86	-228.62	2,273.14	0.83	0.70	-0.46	
10,890.00	93.54	0.65	7,417.53	2,361.71	-227.56	2,361.99	0.55	0.54	-0.08	
10,979.00	91.96	0.27	7,413.26	2,450.60	-226.85	2,450.88	1.83	-1.78	-0.43	
11,068.00	92.55	359.05	7,409.76	2,539.53	-227.38	2,539.81	1.52	0.66	-1.37	
11,157.00	93.76	358.49	7,404.86	2,628.37	-229.28	2,628.65	1.50	1.36	-0.63	
11,246.00	92.12	0.09	7,400.30	2,717.24	-230.38	2,717.52	2.57	-1.84	1.80	
11,335.00	92.11	359.51	7,397.01	2,806.18	-230.69	2,806.46	0.65	-0.01	-0.65	
11,424.00	93.02	359.00	7,393.03	2,895.08	-231.85	2,895.36	1.17	1.02	-0.57	
11,513.00	92.76	359.40	7,388.54	2,983.96	-233.09	2,984.24	0.54	-0.29	0.45	
11,602.00	92.60	1.06	7,384.38	3,072.86	-232.73	3,073.14	1.87	-0.18	1.87	
11,691.00	91.20	0.95	7,381.43	3,161.79	-231.17	3,162.08	1.58	-1.57	-0.12	
11,780.00	90.72	359.72	7,379.94	3,250.78	-230.65	3,251.06	1.48	-0.54	-1.38	
11,869.00	90.56	358.01	7,378.95	3,339.75	-232.42	3,340.03	1.93	-0.18	-1.92	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well Jaguar Fed 29N-14HZ
<b>Project:</b>	US Rockies Wattenberg Planning UTM83	<b>TVD Reference:</b>	GL 4993' & KB 17' @ 5010.00ft
<b>Site:</b>	Jaguar 14-23HZ Pad 1N-67W-23	<b>MD Reference:</b>	GL 4993' & KB 17' @ 5010.00ft
<b>Well:</b>	Jaguar Fed 29N-14HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
11,958.00	90.74	355.60	7,377.94	3,428.60	-237.38	3,428.89	2.72	0.20	-2.71	
12,047.00	91.47	355.60	7,376.22	3,517.32	-244.20	3,517.62	0.82	0.82	0.00	
12,136.00	91.68	357.16	7,373.77	3,606.11	-249.82	3,606.41	1.77	0.24	1.75	
12,225.00	91.44	0.10	7,371.35	3,695.04	-251.95	3,695.35	3.31	-0.27	3.30	
12,314.00	92.22	359.26	7,368.51	3,783.99	-252.44	3,784.30	1.29	0.88	-0.94	
12,403.00	92.16	0.21	7,365.11	3,872.93	-252.85	3,873.23	1.07	-0.07	1.07	
12,492.00	91.78	2.30	7,362.05	3,961.85	-250.91	3,962.15	2.39	-0.43	2.35	
12,581.00	93.11	2.76	7,358.25	4,050.68	-246.98	4,050.97	1.58	1.49	0.52	
12,670.00	94.84	1.13	7,352.08	4,139.40	-243.97	4,139.70	2.67	1.94	-1.83	
12,759.00	95.40	0.22	7,344.14	4,228.04	-242.92	4,228.34	1.20	0.63	-1.02	
12,848.00	92.54	0.42	7,337.98	4,316.82	-242.43	4,317.11	3.22	-3.21	0.22	
12,937.00	93.89	0.29	7,332.99	4,405.67	-241.88	4,405.97	1.52	1.52	-0.15	
13,026.00	93.05	0.34	7,327.60	4,494.51	-241.39	4,494.80	0.95	-0.94	0.06	
13,115.00	89.75	359.73	7,325.42	4,583.47	-241.33	4,583.76	3.77	-3.71	-0.69	
13,204.00	90.41	359.13	7,325.30	4,672.46	-242.22	4,672.76	1.00	0.74	-0.67	
13,293.00	91.38	2.22	7,323.91	4,761.44	-241.17	4,761.73	3.64	1.09	3.47	
13,383.00	92.59	3.16	7,320.79	4,851.28	-236.95	4,851.57	1.70	1.34	1.04	
13,472.00	92.22	2.57	7,317.06	4,940.09	-232.51	4,940.37	0.78	-0.42	-0.66	
13,561.00	91.75	1.99	7,313.97	5,028.96	-228.97	5,029.24	0.84	-0.53	-0.65	
13,650.00	93.25	2.26	7,310.09	5,117.82	-225.67	5,118.09	1.71	1.69	0.30	
13,740.00	93.44	2.48	7,304.84	5,207.59	-221.95	5,207.85	0.32	0.21	0.24	
13,829.00	90.36	1.26	7,301.89	5,296.48	-219.05	5,296.74	3.72	-3.46	-1.37	
13,918.00	89.52	1.81	7,301.98	5,385.44	-216.67	5,385.70	1.13	-0.94	0.62	
13,958.00	89.98	1.76	7,302.16	5,425.42	-215.42	5,425.68	1.16	1.15	-0.13	
Last SDI MWD Survey										
14,020.00	89.98	1.76	7,302.18	5,487.40	-213.52	5,487.65	0.00	0.00	0.00	
Projection to TD: 690' FSL & 1554' FWL Sec 14										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,828.51	1,800.00	9 5/8"	9.625	13.500	
7,935.02	7,460.79	Top of Production	5.500	7.875	

<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well Jaguar Fed 29N-14HZ
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<b>Site:</b>	Jaguar 14-23HZ Pad 1N-67W-23	<b>MD Reference:</b>	GL 4993' & KB 17' @ 5010.00ft
<b>Well:</b>	Jaguar Fed 29N-14HZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales Office

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
190.00	190.00	-0.34	0.09	First SDI MWD Survey
2,234.00	2,196.45	-346.80	-94.44	Last SDI MWD Surface Survey
2,315.00	2,275.96	-361.65	-98.72	First SDI MWD Production Survey
6,900.00	6,771.75	-1,157.39	-229.32	Curve KOP
6,944.00	6,815.73	-1,156.13	-229.57	First SDI MWD Curve Survey
7,315.00	7,180.24	-1,093.97	-228.10	First Surcon Corrected Survey
7,877.00	7,458.64	-647.77	-203.60	Landing Point : 193' FNL 1561' FWL Sec 26
7,971.00	7,460.85	-554.04	-197.02	First SDI MWD Lateral Survey
13,958.00	7,302.16	5,425.42	-215.42	Last SDI MWD Survey
14,020.00	7,302.18	5,487.40	-213.52	Prrojection to TD: 690' FSL & 1554' FWL Sec 14

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_