

# **Extraction Oil & Gas**

**Weld County, CO (NAD83)**

**Sec 10-T01S-R68W Interchange Pad**

**Interchange B N35-20-1N**

**Wellbore #1**

**Plan #1**

## **Anticollision Report**

**17 April, 2019**

# Anticollision Report

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Interchange B N35-20-1N
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 5265.00usft (Patterson 901)
<b>Reference Site:</b>	Sec 10-T01S-R68W Interchange Pad	<b>MD Reference:</b>	KB @ 5265.00usft (Patterson 901)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Interchange B N35-20-1N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.15 Single User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum separation factor of 6.00	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
121.30	1,606.30	Surface Surveys (Wellbore #1)	MWD	MWD - Standard
1,606.30	18,449.50	Plan #1 (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Sec 10-T01S-R68W Interchange Pad						
EXIST DD KATS 31-34 - Wellbore #1 - Wellbore #1	18,250.63	7,837.65	448.16	189.24	1.731	CC, ES, SF
EXIST DD KATS 41-34 - Wellbore #1 - Wellbore #1						Out of range
EXIST DD KATS 42-34 - Wellbore #1 - Wellbore #1						Out of range
EXIST DD KATS 6-4-34 - Wellbore #1 - Wellbore #1	16,335.15	7,836.52	1,191.06	969.94	5.387	CC, ES
EXIST DD KATS 6-4-34 - Wellbore #1 - Wellbore #1	16,400.00	7,836.38	1,192.82	970.27	5.360	SF
EXIST DD KATS 8-2-34 - Wellbore #1 - Wellbore #1						Out of range
EXIST DD LARKRIDGE MA 03-09D - Wellbore #1 - Well						Out of range
EXIST DD LARKRIDGE MA 03-15D - Wellbore #1 - Well						Out of range
EXIST DD LARKRIDGE MA 03-16D - Wellbore #1 - Well						Out of range
EXIST DD LARKRIDGE MA 03-23D - Wellbore #1 - Well						Out of range
EXIST DD STANDLEY 5-2 - Wellbore #1 - Wellbore #1						Out of range
EXIST DD STANDLEY 6-2 - Wellbore #1 - Wellbore #1						Out of range
EXIST DD STANDLEY 8-3 - Wellbore #1 - Wellbore #1						Out of range
EXIST VERT SHARPE 1-10 - Wellbore #1 - Wellbore #1						Out of range
Interchange B N35-20-1N - Wellbore #1 - Wellbore #1						Out of range
Interchange B N35-20-2C - Wellbore #1 - Plan #1	1,093.99	1,094.25	14.83	10.54	3.460	CC, ES
Interchange B N35-20-2C - Wellbore #1 - Plan #1	18,449.62	18,666.09	371.91	22.37	1.064	Level 2, SF
Interchange B N35-20-2C - Wellbore #1 - Wellbore #1	1,093.99	1,094.25	14.83	10.54	3.460	CC, ES, SF
Interchange B N35-20-3N - Wellbore #1 - Plan #1	5,400.00	5,352.23	372.10	309.81	5.974	CC
Interchange B N35-20-3N - Wellbore #1 - Plan #1	18,449.62	18,459.29	602.86	126.82	1.266	Level 3, ES, SF
Interchange B N35-20-3N - Wellbore #1 - Wellbore #1						Out of range
Interchange B N35-20-4N - Wellbore #1 - Plan #1	16,916.07	16,974.42	753.73	335.45	1.802	CC
Interchange B N35-20-4N - Wellbore #1 - Plan #1	18,449.62	18,495.64	780.04	307.26	1.650	ES, SF
Interchange B N35-20-4N - Wellbore #1 - Wellbore #1						Out of range
Interchange B N35-20-5C - Wellbore #1 - Plan #1	10,700.00	11,026.61	1,070.44	891.02	5.966	CC
Interchange B N35-20-5C - Wellbore #1 - Plan #1	18,449.62	18,770.65	1,073.48	615.86	2.346	ES, SF
Interchange B N35-20-5C - Wellbore #1 - Wellbore #1						Out of range

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<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Interchange B N35-20-1N
<b>Project:</b>	Weld County, CO (NAD83)	<b>TVD Reference:</b>	KB @ 5265.00usft (Patterson 901)
<b>Reference Site:</b>	Sec 10-T01S-R68W Interchange Pad	<b>MD Reference:</b>	KB @ 5265.00usft (Patterson 901)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Interchange B N35-20-1N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.15 Single User Db
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Sec 28-T1N-R68W Coyote Trails						
ABND VERT BICKLER A UNIT 2 - - AC Plan						Out of range
ABND VERT K & R LIVESTOCK COMM 1 - - AC Plan						Out of range
ABND VERT KATS B UNIT 1 - - AC Plan						Out of range
ABND VERT NIVEN GAYLE B 1 - - AC Plan	18,256.15	7,768.03	613.11	360.82	2.430	CC, ES
ABND VERT NIVEN GAYLE B 1 - - AC Plan	18,300.00	7,767.80	614.67	361.26	2.426	SF
Bickler 23-34 - Surveys - Surveys	15,616.33	7,832.42	921.99	719.24	4.547	CC, ES, SF
Bickler 24-34 - Surveys - Surveys	14,098.34	8,129.86	916.40	723.24	4.744	CC, ES, SF
Bickler 4-4-34 - Surveys - Surveys	16,192.48	7,781.09	153.66	-57.25	0.729	Level 1, CC, ES, SF
Bickler 4-6-34 - Wellbore #1 - Wellbore #1	14,922.66	7,881.37	179.07	-17.40	0.911	Level 1, CC, ES, SF
Coyote Trails 33S-20-6N - Wellbore #1 - Wellbore #1						Out of range
Coyote Trails 34S-20-11C - Wellbore #1 - Wellbore #1						Out of range
Coyote Trails 34S-20-12N - Wellbore #1 - Wellbore #1						Out of range
Coyote Trails 34S-20-13N - Wellbore #1 - Wellbore #1	15,266.30	12,535.48	1,393.03	1,123.69	5.172	CC
Coyote Trails 34S-20-13N - Wellbore #1 - Wellbore #1	15,300.00	12,515.75	1,393.20	1,123.05	5.157	ES
Coyote Trails 34S-20-13N - Wellbore #1 - Wellbore #1	18,200.00	9,683.74	1,412.04	1,130.94	5.023	SF
Coyote Trails 34S-20-14C - Wellbore #1 - Wellbore #1	18,449.62	9,341.81	1,030.37	754.45	3.734	CC, ES, SF
Coyote Trails 34S-20-15N - Wellbore #1 - Wellbore #1	17,054.92	11,213.93	658.62	393.93	2.488	CC
Coyote Trails 34S-20-15N - Wellbore #1 - Wellbore #1	17,100.00	11,190.59	659.94	393.14	2.474	ES
Coyote Trails 34S-20-15N - Wellbore #1 - Wellbore #1	17,200.00	11,136.64	668.14	397.52	2.469	SF
Coyote Trails 34S-20-16N - Wellbore #1 - Wellbore #1	11,901.14	16,176.74	293.36	63.68	1.277	Level 3, CC
Coyote Trails 34S-20-16N - Wellbore #1 - Wellbore #1	12,000.00	16,084.63	295.00	62.02	1.266	Level 3, ES, SF
EXIST VERT BICKLER 1 - - Surveys						Out of range
EXIST VERT WEBBER H UNIT 1 - - AC Plan						Out of range
LARKRIDGE MA 03-10D - -						Out of range
Memorial #11-3 - Wellbore #1 - Wellbore #1						Out of range
Webber #23-3 - Wellbore #1 - Wellbore #1	10,567.44	8,018.87	264.14	146.32	2.242	CC, ES, SF
Webber #3C - Wellbore #1 - Wellbore #1						Out of range

Sec 10-T01S-R68W Interchange Pad - EXIST DD KATS 31-34 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 59-MWD												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor
17,600.00	7,842.53	7,837.61	7,735.58	222.74	25.36	88.40	12,447.97	1,087.25	790.04	648.09	141.96		5.565
17,700.00	7,841.99	7,837.62	7,735.59	224.65	25.36	88.41	12,447.97	1,087.25	709.96	551.99	157.97	4.494	
17,800.00	7,841.46	7,837.63	7,735.59	226.56	25.36	88.41	12,447.97	1,087.25	635.55	458.80	176.75	3.596	
17,900.00	7,840.93	7,837.63	7,735.60	228.47	25.36	88.41	12,447.97	1,087.25	569.03	370.98	198.05	2.873	
18,000.00	7,840.40	7,837.64	7,735.61	230.38	25.36	88.41	12,447.97	1,087.25	513.48	292.86	220.62	2.327	
18,100.00	7,839.86	7,837.65	7,735.61	232.29	25.36	88.41	12,447.97	1,087.25	472.80	231.39	241.41	1.958	
18,200.00	7,839.33	7,837.65	7,735.62	234.20	25.36	88.41	12,447.97	1,087.25	451.01	195.35	255.67	1.764	
18,250.63	7,839.06	7,837.65	7,735.62	235.16	25.36	88.41	12,447.97	1,087.25	448.16	189.24	258.92	1.731 CC, ES, SF	
18,300.00	7,838.80	7,837.66	7,735.62	236.11	25.36	88.41	12,447.97	1,087.25	450.88	191.72	259.16	1.740	
18,400.00	7,838.26	7,837.66	7,735.63	238.02	25.36	88.41	12,447.97	1,087.25	472.40	220.92	251.48	1.878	
18,449.62	7,838.00	7,837.66	7,735.63	238.96	25.36	88.41	12,447.97	1,087.25	490.35	245.78	244.57	2.005	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation