

# **EXTRACTION OIL & GAS**

**WELD COUNTY, COLORADO (NAD 83)**

**NE SE SEC. 7 T4N R68W 6th P.M.**

**TROTT 17E-10-19N**

**JOB #2017-517-88**

**09 December, 2017**

**Survey: FINAL SURVEYS - SURFACE**





Project: WELD COUNTY, COLORADO (NAD 83)  
Site: NE SE SEC. 7 T4N R68W 6th P.M.  
Well: TROTT 17E-10-19N  
Wellbore: JOB #2017-517-88  
Design: SURFACE



ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
1476.16	1482.00	12.83	161.32	-74.02	28.99	79.49	92.88	LAST SURVEY - DEC 9, 2017
1524.91	1532.00	12.83	161.32	-84.54	32.54	90.58	103.98	EXTRAPOLATION TO TD - SURFACE

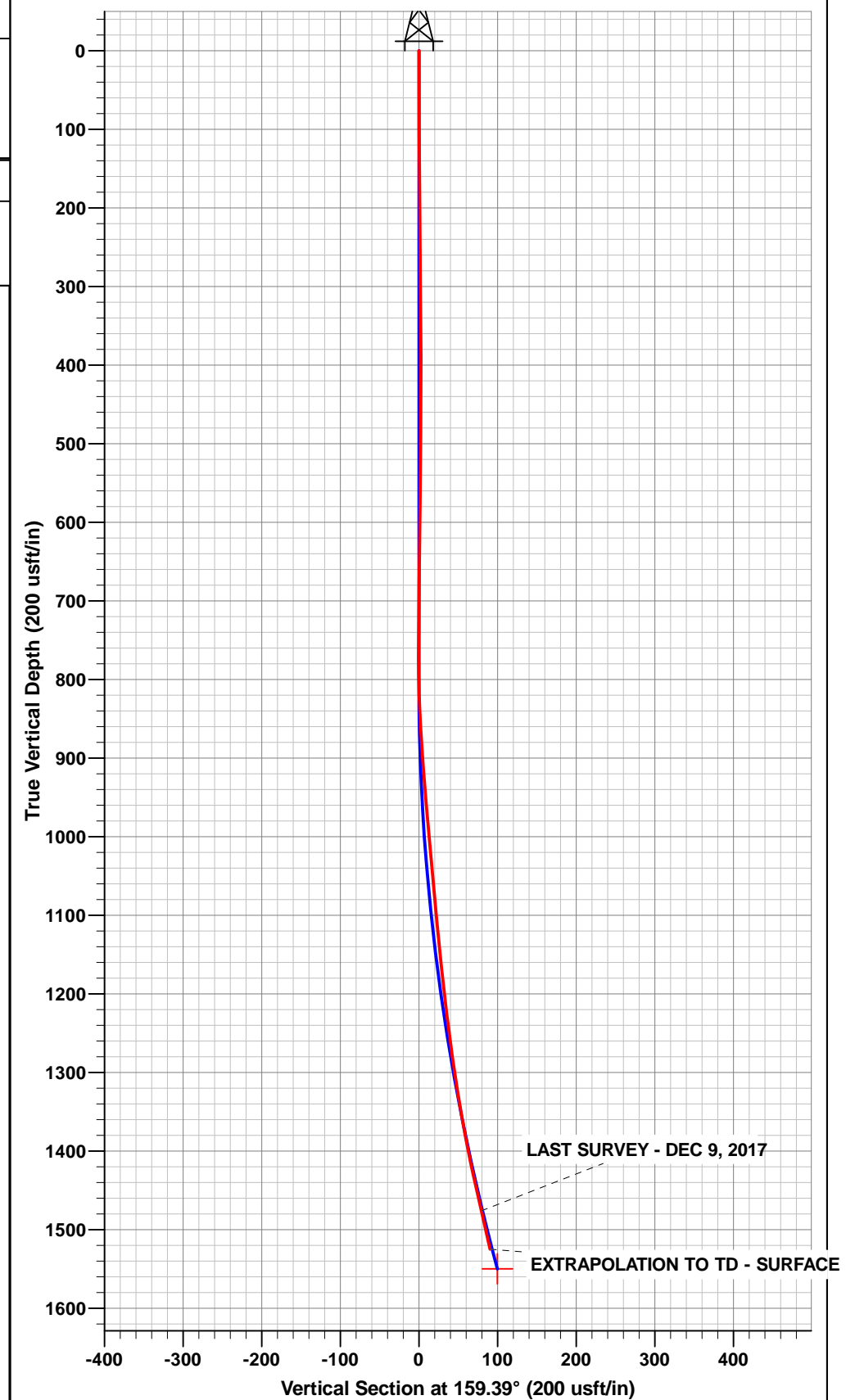
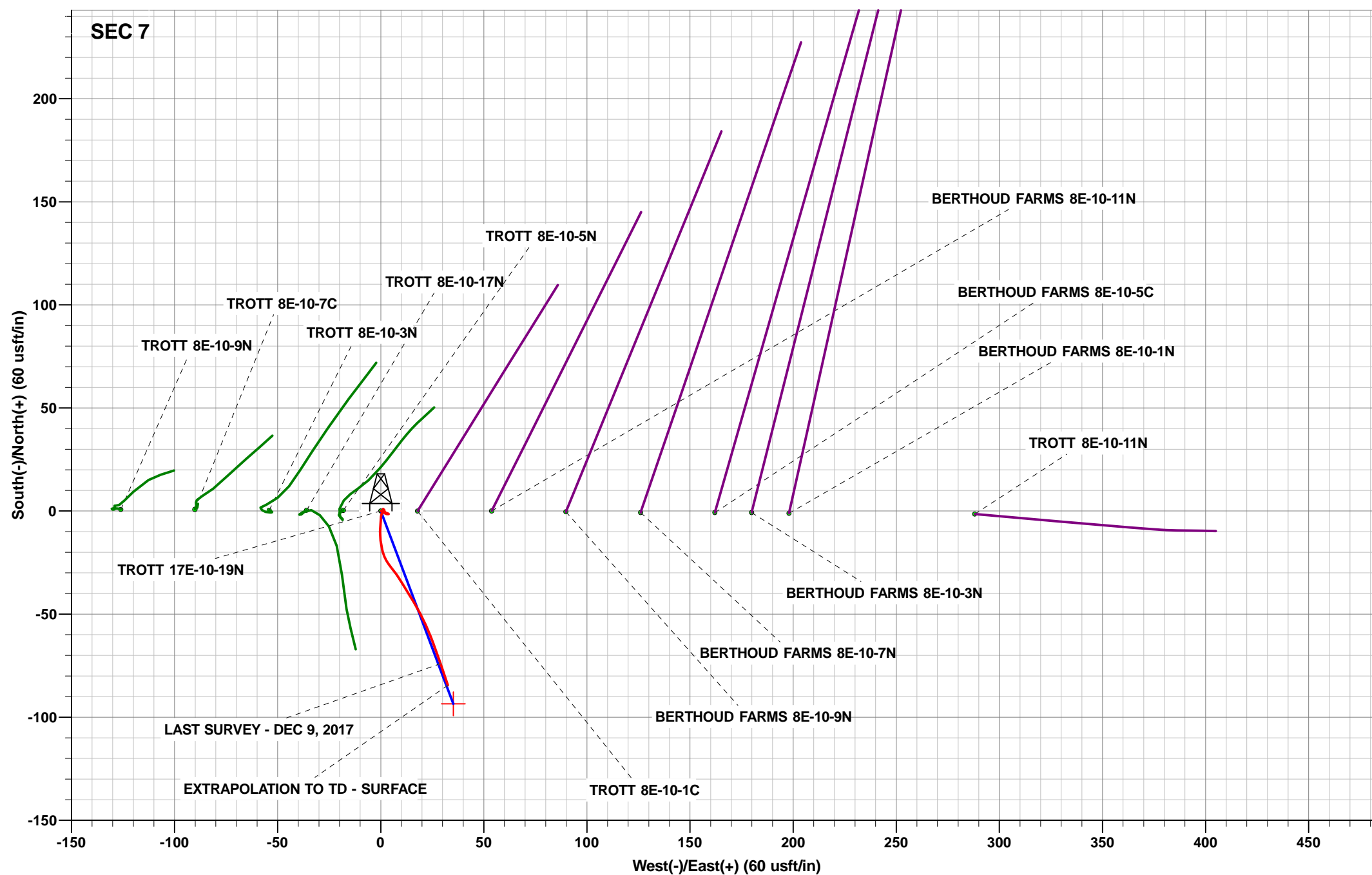
WELL DETAILS: TROTT 17E-10-19N

+N/-S	+E/-W	Northing	Ground Level:	5034.00	
0.00	0.00	1361363.09	Easting	3128066.01	Latitude
				40.324432	Longitude
				-105.040685	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
TD - SURFACE - TROTT 17E-10-19N	1550.00	-93.52	35.17	1361269.76	3128101.66

SEC 7



# Survey Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well TROTT 17E-10-19N
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 5042.00usft (Original Well Elev)
<b>Site:</b>	NE SE SEC. 7 T4N R68W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 5042.00usft (Original Well Elev)
<b>Well:</b>	TROTT 17E-10-19N	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2017-517-88	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	SURFACE	<b>Database:</b>	EDM 5000.1 Single User Db

<b>Project</b>	WELD COUNTY, COLORADO (NAD 83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site	NE SE SEC. 7 T4N R68W 6th P.M.				
Site Position:		Northing:	1,361,363.03 usft	Latitude:	40.324429
From:	Lat/Long	Easting:	3,128,263.97 usft	Longitude:	-105.039975
Position Uncertainty:	0.00 usft	Slot Radius:	1.10000ft	Grid Convergence:	0.30 °

Well	TROTT 17E-10-19N					
Well Position	+N-S	0.00 usft	Northing:	1,361,363.09 usft	Latitude:	40.324432
	+E-W	0.00 usft	Easting:	3,128,066.01 usft	Longitude:	-105.040685
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,034.00 usft

<b>Wellbore</b>	JOB #2017-517-88				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	04/12/2017	8.30	66.74	52,269

Design	SURFACE			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	0.00	0.00	0.00	159.39

<b>Survey Program</b>	<b>Date</b>	09/12/2017			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
105.00	1,532.00	FINAL SURVEYS - SURFACE (JOB #201	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>Subsea Depth (usft)</b>	<b>+N-S (usft)</b>	<b>+E-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>
0.00	0.00	0.00	0.00	5,042.00	0.00	0.00	0.00	0.00	0.00	0.00
105.00	0.66	108.76	105.00	4,937.00	-0.19	0.57	0.38	0.63	0.63	0.00
200.00	0.75	104.89	199.99	4,842.01	-0.53	1.69	1.09	0.11	0.09	-4.07
294.00	0.97	111.84	293.98	4,748.02	-0.98	3.02	1.99	0.26	0.23	7.39
389.00	0.22	154.99	388.97	4,653.03	-1.45	3.85	2.71	0.87	-0.79	45.42
485.00	1.32	276.28	484.97	4,557.03	-1.49	2.83	2.39	1.51	1.15	126.34
580.00	0.53	3.47	579.96	4,462.04	-0.94	1.77	1.50	1.47	-0.83	91.78
675.00	1.10	358.54	674.95	4,367.05	0.41	1.77	0.24	0.60	0.60	-5.19
770.00	0.79	243.30	769.94	4,272.06	1.03	1.16	-0.56	1.69	-0.33	-121.31
863.00	3.96	188.12	862.85	4,179.15	-2.44	0.13	2.33	3.84	3.41	-59.33
959.00	5.14	179.95	958.55	4,083.45	-10.02	-0.33	9.26	1.40	1.23	-8.51
1,052.00	5.76	167.12	1,051.13	3,990.87	-18.74	0.71	17.79	1.47	0.67	-13.80
1,147.00	5.45	140.66	1,145.69	3,896.31	-26.87	4.64	26.79	2.72	-0.33	-27.85

# Survey Report



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<b>Well:</b>	TROTT 17E-10-19N	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB #2017-517-88	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	SURFACE	<b>Database:</b>	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,243.00	7.65	148.05	1,241.06	3,800.94	-35.82	10.91	37.37	2.45	2.29	7.70
1,338.00	9.18	150.24	1,335.04	3,706.96	-47.77	18.02	51.05	1.65	1.61	2.31
1,433.00	12.44	159.38	1,428.35	3,613.65	-63.93	25.38	68.77	3.87	3.43	9.62
<b>LAST SURVEY - DEC 9, 2017</b>										
<b>1,482.00</b>	<b>12.83</b>	<b>161.32</b>	<b>1,476.16</b>	<b>3,565.84</b>	<b>-74.02</b>	<b>28.99</b>	<b>79.49</b>	<b>1.18</b>	<b>0.80</b>	<b>3.96</b>
<b>EXTRAPOLATION TO TD - SURFACE</b>										
<b>1,532.00</b>	<b>12.83</b>	<b>161.32</b>	<b>1,524.91</b>	<b>3,517.09</b>	<b>-84.54</b>	<b>32.54</b>	<b>90.58</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Targets										
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TD - SURFACE - TRC		0.00	0.00	1,550.00	-93.52	35.17	1,361,269.76	3,128,101.66	40.324175	-105.040559
- survey misses target center by 26.78usft at 1532.00usft MD (1524.91 TVD, -84.54 N, 32.54 E)										
- Point										

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
1,482.00	1,476.16	-74.02	28.99	LAST SURVEY - DEC 9, 2017	
1,532.00	1,524.91	-84.54	32.54	EXTRAPOLATION TO TD - SURFACE	

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