

# EXTRACTION OIL & GAS

Location:	COLORADO	Slot:	SLOT#15 LAUNER 5 (746'FSL & 380'FEL,SEC.26)
Field:	WELD COUNTY (NAD83/TRUE NORTH)	Well:	LAUNER 5
Facility:	SEC.26-T07N-R67W	Wellbore:	LAUNER 5 PWB

Plot reference wellpath is LAUNER 5 (REV-C.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to CYCLONE 37 (28'KB) (RKB)	North Reference: True north
Measured depths are referenced to CYCLONE 37 (28'KB) (RKB)	Scale: True distance
CYCLONE 37 (28'KB) (RKB) to Mean Sea Level: 4955 feet	Depths are in feet
Mean Sea Level to Mud line (At Slot: SLOT#15 LAUNER 5 (746'FSL & 380'FEL,SEC.26)): 0 feet	Created by: ingmjamm on 2017-08-25
Coordinates are in feet referenced to Slot	Database: WA_DEN_Denver_Defn

## Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.26-T07N-R67W			3179860.101	1444245.219	40°33'03.784"N	104°51'09.932"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#15 LAUNER 5 (746'FSL & 380'FEL,SEC.26)	-4047.65	121.15	3180010.789	1440198.690	40°32'23.788"N	104°51'08.363"W
CYCLONE 37 (28'KB) (RKB) to Mud line (At Slot: SLOT#15 LAUNER 5 (746'FSL & 380'FEL,SEC.26))					4955ft	
Mean Sea Level to Mud line (At Slot: SLOT#15 LAUNER 5 (746'FSL & 380'FEL,SEC.26))					0ft	
CYCLONE 37 (28'KB) (RKB) to Mean Sea Level					4955ft	

## Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
28.00	14615.50	ISCWSA MWD, Rev. 4	ISCWSA MWD, Rev. 4 (Standard)		LAUNER 5 PWB

## Well Profile Data

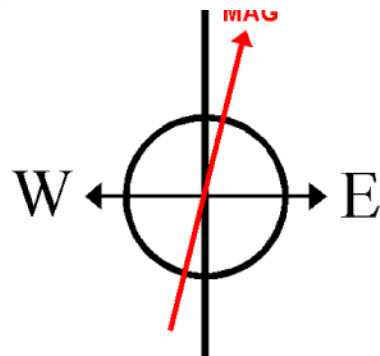
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	28.00	0.000	20.968	28.00	0.00	0.00	0.00	0.00
End of Tangent	1700.00	0.000	20.968	1700.00	0.00	0.00	0.00	0.00
End of Build	2362.69	13.254	20.968	2356.79	71.25	27.31	2.00	-16.33
End of Tangent	6414.29	13.254	20.968	6300.48	938.63	359.70	0.00	-215.15
End of 3D Arc	7360.43	90.000	270.426	6905.00	1076.21	-210.39	10.00	369.12
End of Tangent	14615.50	90.000	270.426	6905.00	1130.16	-7465.26	0.00	7550.32

## Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.26-T07N-R67W		-17.00	4047.61	-121.16	3179860.07	1444245.18	40°33'03.784"N	104°51'09.932"W
SEC.27-T07N-R67W		-17.00	4047.61	-121.16	3179860.07	1444245.18	40°33'03.784"N	104°51'09.932"W
LAUNER 5 BHL ON PLAT REV-2 (1884'FSL & 2562'FEL,SEC.27)	14615.50	6905.00	1130.16	-7465.26	3172537.71	1441274.26	40°32'34.944"N	104°52'45.059"W
LAUNER 5 LANDING REV-2 (1821'FSL & 591'FEL, SEC.26)	7360.43	6905.00	1076.21	-210.39	3179792.55	1441273.30	40°32'34.422"N	104°51'11.088"W
LAUNER 5 BHL ON PLAT REV-1(1884'FSL & 2561'FEL,SEC.27)		7035.00	1130.16	-7465.25	3172537.73	1441274.26	40°32'34.944"N	104°52'45.059"W
LAUNER 5 LANDING		7035.00	1076.20	-79.21	3179923.72	1441274.25	40°32'34.422"N	104°51'09.389"W
LAUNER 5 LANDING REV-1		7035.00	1076.20	-210.47	3179792.47	1441273.29	40°32'34.422"N	104°51'11.089"W
SEC.26-T07N-R67W 460'FEL SETBACK		7258.00	46.27	31.69	3180042.13	1440245.19	40°32'24.245"N	104°51'07.952"W
SEC.27-T07N-R67W (MIDDLE SECTION)		7258.00	46.27	31.69	3180042.13	1440245.19	40°32'24.245"N	104°51'07.952"W

## Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
14615.50	90.000	270.426	6905.00	1130.16	-7465.26	3172537.71	1441274.26	40°32'34.944"N	104°52'45.059"W



BGGM (1900.0 to 2019.0) Dip: 66.95° Field: 52463.9 nT  
Magnetic North is 8.42 degrees East of True North (at 8/22/2017)

To correct azimuth from Magnetic to True add 8.42 degrees

Scale 1 inch = 500

True Vertical Depth (ft)

End of Tangent : 0.00° Inc, 1700.00ft MD, 1700.00ft TVD, 0.00ft VS

2.00°/100ft

End of Build : 13.25° Inc, 2362.69ft MD, 2356.79ft TVD, -16.33ft VS

End of Tangent : 13.25° Inc, 6414.29ft MD, 6300.48ft TVD, -215.15ft VS

End of 3D Arc : 90.00° Inc, 7360.43ft MD, 6905.00ft TVD, 369.12ft VS

LAUNER 5 LANDING REV-2 (1821'FSL & 591'FEL, SEC.26)

End of Tangent : 90.00° Inc, 14615.50ft MD, 6905.00ft TVD, 7550.32ft VS

LAUNER 5 BHL ON PLAT REV-2 (1884'FSL & 2562'FEL,SEC.27)

Vertical Section (ft)  
Azimuth 278.61° with reference 0.00°N, 0.00°E

Scale 1 inch = 500

Northing (ft)



# Planned Wellpath Report

LAUNER 5 (REV-C.0) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#15 LAUNER 5 (746'FSL & 380'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 5
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 5 PWB
Facility	SEC.26-T07N-R67W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	True	User	Ingmjmr
Scale	0.999970	Report Generated	8/25/2017 at 10:00:07 AM
Convergence at slot	0.42° East	Database/Source file	WA_DEN_Denver_Defn/LAUNER_5__REV-C.0__PWP.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4047.65	121.15	3180010.79	1440198.69	40°32'23.788"N	104°51'08.363"W
Facility Reference Pt			3179860.10	1444245.22	40°33'03.784"N	104°51'09.932"W
Field Reference Pt			3185481.27	1419166.81	40°28'55.560"N	104°49'59.556"W

## WELLPATH DATUM

Calculation method	Minimum curvature	CYCLONE 37 (28'KB) (RKB) to Facility Vertical Datum	4955.00ft
Horizontal Reference Pt	Slot	CYCLONE 37 (28'KB) (RKB) to Mean Sea Level	4955.00ft
Vertical Reference Pt	CYCLONE 37 (28'KB) (RKB)	CYCLONE 37 (28'KB) (RKB) to Mud Line at Slot (SLOT#15 LAUNER 5 (746'FSL & 380'FEL, SEC.26))	4955.00ft
MD Reference Pt	CYCLONE 37 (28'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	278.61°





# Planned Wellpath Report

LAUNER 5 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXTRACTION OIL & GAS	Slot	SLOT#15 LAUNER 5 (746'FSL & 380'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 5
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 5 PWB
Facility	SEC.26-T07N-R67W		

WELLPATH DATA (152 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	20.968	0.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	
28.00	0.000	20.968	28.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	Tie On
128.00†	0.000	20.968	128.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	
228.00†	0.000	20.968	228.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	
328.00†	0.000	20.968	328.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	
428.00†	0.000	20.968	428.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	
528.00†	0.000	20.968	528.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	
628.00†	0.000	20.968	628.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	
728.00†	0.000	20.968	728.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	
828.00†	0.000	20.968	828.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	
928.00†	0.000	20.968	928.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	
1028.00†	0.000	20.968	1028.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	
1128.00†	0.000	20.968	1128.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	
1228.00†	0.000	20.968	1228.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	
1328.00†	0.000	20.968	1328.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	
1428.00†	0.000	20.968	1428.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	
1528.00†	0.000	20.968	1528.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	
1628.00†	0.000	20.968	1628.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	
1700.00	0.000	20.968	1700.00	0.00	0.00	0.00	40°32'23.788"N	104°51'08.363"W	0.00	End of Tangent
1728.00†	0.560	20.968	1728.00	-0.03	0.13	0.05	40°32'23.789"N	104°51'08.362"W	2.00	
1828.00†	2.560	20.968	1827.96	-0.61	2.67	1.02	40°32'23.814"N	104°51'08.350"W	2.00	
1928.00†	4.560	20.968	1927.76	-1.94	8.47	3.24	40°32'23.871"N	104°51'08.321"W	2.00	
2028.00†	6.560	20.968	2027.28	-4.01	17.51	6.71	40°32'23.961"N	104°51'08.276"W	2.00	
2128.00†	8.560	20.968	2126.41	-6.83	29.80	11.42	40°32'24.082"N	104°51'08.215"W	2.00	
2228.00†	10.560	20.968	2225.02	-10.38	45.31	17.36	40°32'24.235"N	104°51'08.138"W	2.00	
2328.00†	12.560	20.968	2322.98	-14.67	64.02	24.53	40°32'24.420"N	104°51'08.045"W	2.00	
2362.69	13.254	20.968	2356.79	-16.33	71.25	27.31	40°32'24.492"N	104°51'08.009"W	2.00	End of Build
2428.00†	13.254	20.968	2420.37	-19.54	85.24	32.66	40°32'24.630"N	104°51'07.940"W	0.00	
2528.00†	13.254	20.968	2517.70	-24.44	106.64	40.87	40°32'24.841"N	104°51'07.833"W	0.00	
2628.00†	13.254	20.968	2615.04	-29.35	128.05	49.07	40°32'25.053"N	104°51'07.727"W	0.00	



# Planned Wellpath Report

LAUNER 5 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXTRACTION OIL & GAS	Slot	SLOT#15 LAUNER 5 (746'FSL & 380'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 5
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 5 PWB
Facility	SEC.26-T07N-R67W		

WELLPATH DATA (152 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2728.00†	13.254	20.968	2712.38	-34.26	149.46	57.28	40°32'25.264"N	104°51'07.621"W	0.00	
2828.00†	13.254	20.968	2809.71	-39.17	170.87	65.48	40°32'25.476"N	104°51'07.515"W	0.00	
2928.00†	13.254	20.968	2907.05	-44.07	192.28	73.68	40°32'25.688"N	104°51'07.408"W	0.00	
3028.00†	13.254	20.968	3004.38	-48.98	213.68	81.89	40°32'25.899"N	104°51'07.302"W	0.00	
3128.00†	13.254	20.968	3101.72	-53.89	235.09	90.09	40°32'26.111"N	104°51'07.196"W	0.00	
3228.00†	13.254	20.968	3199.06	-58.79	256.50	98.30	40°32'26.322"N	104°51'07.090"W	0.00	
3328.00†	13.254	20.968	3296.39	-63.70	277.91	106.50	40°32'26.534"N	104°51'06.983"W	0.00	
3428.00†	13.254	20.968	3393.73	-68.61	299.32	114.70	40°32'26.745"N	104°51'06.877"W	0.00	
3528.00†	13.254	20.968	3491.07	-73.52	320.73	122.91	40°32'26.957"N	104°51'06.771"W	0.00	
3628.00†	13.254	20.968	3588.40	-78.42	342.13	131.11	40°32'27.168"N	104°51'06.665"W	0.00	
3728.00†	13.254	20.968	3685.74	-83.33	363.54	139.32	40°32'27.380"N	104°51'06.558"W	0.00	
3828.00†	13.254	20.968	3783.08	-88.24	384.95	147.52	40°32'27.591"N	104°51'06.452"W	0.00	
3928.00†	13.254	20.968	3880.41	-93.14	406.36	155.72	40°32'27.803"N	104°51'06.346"W	0.00	
4028.00†	13.254	20.968	3977.75	-98.05	427.77	163.93	40°32'28.015"N	104°51'06.240"W	0.00	
4128.00†	13.254	20.968	4075.09	-102.96	449.17	172.13	40°32'28.226"N	104°51'06.133"W	0.00	
4228.00†	13.254	20.968	4172.42	-107.87	470.58	180.34	40°32'28.438"N	104°51'06.027"W	0.00	
4328.00†	13.254	20.968	4269.76	-112.77	491.99	188.54	40°32'28.649"N	104°51'05.921"W	0.00	
4428.00†	13.254	20.968	4367.10	-117.68	513.40	196.74	40°32'28.861"N	104°51'05.814"W	0.00	
4528.00†	13.254	20.968	4464.43	-122.59	534.81	204.95	40°32'29.072"N	104°51'05.708"W	0.00	
4628.00†	13.254	20.968	4561.77	-127.49	556.22	213.15	40°32'29.284"N	104°51'05.602"W	0.00	
4728.00†	13.254	20.968	4659.10	-132.40	577.62	221.36	40°32'29.495"N	104°51'05.496"W	0.00	
4828.00†	13.254	20.968	4756.44	-137.31	599.03	229.56	40°32'29.707"N	104°51'05.389"W	0.00	
4928.00†	13.254	20.968	4853.78	-142.21	620.44	237.76	40°32'29.918"N	104°51'05.283"W	0.00	
5028.00†	13.254	20.968	4951.11	-147.12	641.85	245.97	40°32'30.130"N	104°51'05.177"W	0.00	
5128.00†	13.254	20.968	5048.45	-152.03	663.26	254.17	40°32'30.341"N	104°51'05.071"W	0.00	
5228.00†	13.254	20.968	5145.79	-156.94	684.66	262.38	40°32'30.553"N	104°51'04.964"W	0.00	
5328.00†	13.254	20.968	5243.12	-161.84	706.07	270.58	40°32'30.765"N	104°51'04.858"W	0.00	
5428.00†	13.254	20.968	5340.46	-166.75	727.48	278.78	40°32'30.976"N	104°51'04.752"W	0.00	
5528.00†	13.254	20.968	5437.80	-171.66	748.89	286.99	40°32'31.188"N	104°51'04.646"W	0.00	
5628.00†	13.254	20.968	5535.13	-176.56	770.30	295.19	40°32'31.399"N	104°51'04.539"W	0.00	

## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#15 LAUNER 5 (746'FSL & 380'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 5
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 5 PWB
Facility	SEC.26-T07N-R67W		

## WELLPATH DATA (152 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5728.00†	13.254	20.968	5632.47	-181.47	791.71	303.40	40°32'31.611"N	104°51'04.433"W	0.00	
5828.00†	13.254	20.968	5729.81	-186.38	813.11	311.60	40°32'31.822"N	104°51'04.327"W	0.00	
5928.00†	13.254	20.968	5827.14	-191.29	834.52	319.80	40°32'32.034"N	104°51'04.220"W	0.00	
6028.00†	13.254	20.968	5924.48	-196.19	855.93	328.01	40°32'32.245"N	104°51'04.114"W	0.00	
6128.00†	13.254	20.968	6021.81	-201.10	877.34	336.21	40°32'32.457"N	104°51'04.008"W	0.00	
6228.00†	13.254	20.968	6119.15	-206.01	898.75	344.42	40°32'32.668"N	104°51'03.902"W	0.00	
6328.00†	13.254	20.968	6216.49	-210.91	920.15	352.62	40°32'32.880"N	104°51'03.795"W	0.00	
6414.29	13.254	20.968	6300.48	-215.15	938.63	359.70	40°32'33.063"N	104°51'03.704"W	0.00	End of Tangent
6428.00†	12.848	15.166	6313.84	-215.66	941.57	360.66	40°32'33.092"N	104°51'03.691"W	10.00	
6528.00†	14.129	331.612	6411.32	-209.57	963.09	357.76	40°32'33.304"N	104°51'03.729"W	10.00	
6628.00†	20.762	306.004	6506.80	-186.43	984.30	337.57	40°32'33.514"N	104°51'03.990"W	10.00	
6728.00†	29.312	293.558	6597.38	-146.94	1004.55	300.70	40°32'33.714"N	104°51'04.468"W	10.00	
6828.00†	38.521	286.512	6680.31	-92.31	1023.24	248.27	40°32'33.899"N	104°51'05.147"W	10.00	
6928.00†	48.009	281.877	6753.07	-24.19	1039.78	181.88	40°32'34.062"N	104°51'06.007"W	10.00	
7028.00†	57.634	278.462	6813.44	55.35	1053.67	103.54	40°32'34.199"N	104°51'07.022"W	10.00	
7128.00†	67.333	275.711	6859.59	143.88	1064.51	15.63	40°32'34.306"N	104°51'08.160"W	10.00	
7228.00†	77.073	273.328	6890.12	238.73	1071.95	-79.17	40°32'34.380"N	104°51'09.388"W	10.00	
7328.00†	86.833	271.125	6904.10	337.00	1075.77	-177.98	40°32'34.418"N	104°51'10.668"W	10.00	
7360.43	90.000	270.426	6905.00†	369.12	1076.21	-210.39	40°32'34.422"N	104°51'11.088"W	10.00	End of 3D Arc
7428.00†	90.000	270.426	6905.00	435.99	1076.71	-277.96	40°32'34.427"N	104°51'11.963"W	0.00	
7528.00†	90.000	270.426	6905.00	534.98	1077.45	-377.96	40°32'34.434"N	104°51'13.258"W	0.00	
7628.00†	90.000	270.426	6905.00	633.96	1078.20	-477.95	40°32'34.442"N	104°51'14.554"W	0.00	
7728.00†	90.000	270.426	6905.00	732.94	1078.94	-577.95	40°32'34.449"N	104°51'15.849"W	0.00	
7828.00†	90.000	270.426	6905.00	831.92	1079.68	-677.95	40°32'34.456"N	104°51'17.144"W	0.00	
7928.00†	90.000	270.426	6905.00	930.90	1080.43	-777.95	40°32'34.464"N	104°51'18.439"W	0.00	
8028.00†	90.000	270.426	6905.00	1029.89	1081.17	-877.94	40°32'34.471"N	104°51'19.735"W	0.00	
8128.00†	90.000	270.426	6905.00	1128.87	1081.91	-977.94	40°32'34.478"N	104°51'21.030"W	0.00	
8228.00†	90.000	270.426	6905.00	1227.85	1082.66	-1077.94	40°32'34.486"N	104°51'22.325"W	0.00	
8328.00†	90.000	270.426	6905.00	1326.83	1083.40	-1177.94	40°32'34.493"N	104°51'23.620"W	0.00	
8428.00†	90.000	270.426	6905.00	1425.81	1084.14	-1277.93	40°32'34.500"N	104°51'24.916"W	0.00	



# Planned Wellpath Report

LAUNER 5 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXTRACTION OIL & GAS	Slot	SLOT#15 LAUNER 5 (746'FSL & 380'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 5
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 5 PWB
Facility	SEC.26-T07N-R67W		

WELLPATH DATA (152 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8528.00†	90.000	270.426	6905.00	1524.80	1084.89	-1377.93	40°32'34.507"N	104°51'26.211"W	0.00	
8628.00†	90.000	270.426	6905.00	1623.78	1085.63	-1477.93	40°32'34.515"N	104°51'27.506"W	0.00	
8728.00†	90.000	270.426	6905.00	1722.76	1086.38	-1577.92	40°32'34.522"N	104°51'28.801"W	0.00	
8828.00†	90.000	270.426	6905.00	1821.74	1087.12	-1677.92	40°32'34.529"N	104°51'30.097"W	0.00	
8928.00†	90.000	270.426	6905.00	1920.72	1087.86	-1777.92	40°32'34.537"N	104°51'31.392"W	0.00	
9028.00†	90.000	270.426	6905.00	2019.71	1088.61	-1877.92	40°32'34.544"N	104°51'32.687"W	0.00	
9128.00†	90.000	270.426	6905.00	2118.69	1089.35	-1977.91	40°32'34.551"N	104°51'33.982"W	0.00	
9228.00†	90.000	270.426	6905.00	2217.67	1090.09	-2077.91	40°32'34.558"N	104°51'35.278"W	0.00	
9328.00†	90.000	270.426	6905.00	2316.65	1090.84	-2177.91	40°32'34.566"N	104°51'36.573"W	0.00	
9428.00†	90.000	270.426	6905.00	2415.63	1091.58	-2277.91	40°32'34.573"N	104°51'37.868"W	0.00	
9528.00†	90.000	270.426	6905.00	2514.62	1092.33	-2377.90	40°32'34.580"N	104°51'39.163"W	0.00	
9628.00†	90.000	270.426	6905.00	2613.60	1093.07	-2477.90	40°32'34.587"N	104°51'40.459"W	0.00	
9728.00†	90.000	270.426	6905.00	2712.58	1093.81	-2577.90	40°32'34.595"N	104°51'41.754"W	0.00	
9828.00†	90.000	270.426	6905.00	2811.56	1094.56	-2677.89	40°32'34.602"N	104°51'43.049"W	0.00	
9928.00†	90.000	270.426	6905.00	2910.54	1095.30	-2777.89	40°32'34.609"N	104°51'44.344"W	0.00	
10028.00†	90.000	270.426	6905.00	3009.53	1096.04	-2877.89	40°32'34.616"N	104°51'45.640"W	0.00	
10128.00†	90.000	270.426	6905.00	3108.51	1096.79	-2977.89	40°32'34.624"N	104°51'46.935"W	0.00	
10228.00†	90.000	270.426	6905.00	3207.49	1097.53	-3077.88	40°32'34.631"N	104°51'48.230"W	0.00	
10328.00†	90.000	270.426	6905.00	3306.47	1098.28	-3177.88	40°32'34.638"N	104°51'49.525"W	0.00	
10428.00†	90.000	270.426	6905.00	3405.45	1099.02	-3277.88	40°32'34.645"N	104°51'50.821"W	0.00	
10528.00†	90.000	270.426	6905.00	3504.44	1099.76	-3377.87	40°32'34.653"N	104°51'52.116"W	0.00	
10628.00†	90.000	270.426	6905.00	3603.42	1100.51	-3477.87	40°32'34.660"N	104°51'53.411"W	0.00	
10728.00†	90.000	270.426	6905.00	3702.40	1101.25	-3577.87	40°32'34.667"N	104°51'54.706"W	0.00	
10828.00†	90.000	270.426	6905.00	3801.38	1101.99	-3677.87	40°32'34.674"N	104°51'56.001"W	0.00	
10928.00†	90.000	270.426	6905.00	3900.36	1102.74	-3777.86	40°32'34.681"N	104°51'57.297"W	0.00	
11028.00†	90.000	270.426	6905.00	3999.35	1103.48	-3877.86	40°32'34.689"N	104°51'58.592"W	0.00	
11128.00†	90.000	270.426	6905.00	4098.33	1104.22	-3977.86	40°32'34.696"N	104°51'59.887"W	0.00	
11228.00†	90.000	270.426	6905.00	4197.31	1104.97	-4077.86	40°32'34.703"N	104°52'01.182"W	0.00	
11328.00†	90.000	270.426	6905.00	4296.29	1105.71	-4177.85	40°32'34.710"N	104°52'02.478"W	0.00	
11428.00†	90.000	270.426	6905.00	4395.27	1106.46	-4277.85	40°32'34.717"N	104°52'03.773"W	0.00	



# Planned Wellpath Report

LAUNER 5 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXTRACTION OIL & GAS	Slot	SLOT#15 LAUNER 5 (746'FSL & 380'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 5
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 5 PWB
Facility	SEC.26-T07N-R67W		

WELLPATH DATA (152 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11528.00†	90.000	270.426	6905.00	4494.26	1107.20	-4377.85	40°32'34.724"N	104°52'05.068"W	0.00	
11628.00†	90.000	270.426	6905.00	4593.24	1107.94	-4477.84	40°32'34.732"N	104°52'06.363"W	0.00	
11728.00†	90.000	270.426	6905.00	4692.22	1108.69	-4577.84	40°32'34.739"N	104°52'07.659"W	0.00	
11828.00†	90.000	270.426	6905.00	4791.20	1109.43	-4677.84	40°32'34.746"N	104°52'08.954"W	0.00	
11928.00†	90.000	270.426	6905.00	4890.18	1110.17	-4777.84	40°32'34.753"N	104°52'10.249"W	0.00	
12028.00†	90.000	270.426	6905.00	4989.17	1110.92	-4877.83	40°32'34.760"N	104°52'11.544"W	0.00	
12128.00†	90.000	270.426	6905.00	5088.15	1111.66	-4977.83	40°32'34.767"N	104°52'12.840"W	0.00	
12228.00†	90.000	270.426	6905.00	5187.13	1112.41	-5077.83	40°32'34.775"N	104°52'14.135"W	0.00	
12328.00†	90.000	270.426	6905.00	5286.11	1113.15	-5177.82	40°32'34.782"N	104°52'15.430"W	0.00	
12428.00†	90.000	270.426	6905.00	5385.09	1113.89	-5277.82	40°32'34.789"N	104°52'16.725"W	0.00	
12528.00†	90.000	270.426	6905.00	5484.08	1114.64	-5377.82	40°32'34.796"N	104°52'18.021"W	0.00	
12628.00†	90.000	270.426	6905.00	5583.06	1115.38	-5477.82	40°32'34.803"N	104°52'19.316"W	0.00	
12728.00†	90.000	270.426	6905.00	5682.04	1116.12	-5577.81	40°32'34.810"N	104°52'20.611"W	0.00	
12828.00†	90.000	270.426	6905.00	5781.02	1116.87	-5677.81	40°32'34.817"N	104°52'21.906"W	0.00	
12928.00†	90.000	270.426	6905.00	5880.00	1117.61	-5777.81	40°32'34.824"N	104°52'23.202"W	0.00	
13028.00†	90.000	270.426	6905.00	5978.99	1118.36	-5877.81	40°32'34.832"N	104°52'24.497"W	0.00	
13128.00†	90.000	270.426	6905.00	6077.97	1119.10	-5977.80	40°32'34.839"N	104°52'25.792"W	0.00	
13228.00†	90.000	270.426	6905.00	6176.95	1119.84	-6077.80	40°32'34.846"N	104°52'27.087"W	0.00	
13328.00†	90.000	270.426	6905.00	6275.93	1120.59	-6177.80	40°32'34.853"N	104°52'28.383"W	0.00	
13428.00†	90.000	270.426	6905.00	6374.91	1121.33	-6277.79	40°32'34.860"N	104°52'29.678"W	0.00	
13528.00†	90.000	270.426	6905.00	6473.90	1122.07	-6377.79	40°32'34.867"N	104°52'30.973"W	0.00	
13628.00†	90.000	270.426	6905.00	6572.88	1122.82	-6477.79	40°32'34.874"N	104°52'32.268"W	0.00	
13728.00†	90.000	270.426	6905.00	6671.86	1123.56	-6577.79	40°32'34.881"N	104°52'33.564"W	0.00	
13828.00†	90.000	270.426	6905.00	6770.84	1124.31	-6677.78	40°32'34.888"N	104°52'34.859"W	0.00	
13928.00†	90.000	270.426	6905.00	6869.82	1125.05	-6777.78	40°32'34.895"N	104°52'36.154"W	0.00	
14028.00†	90.000	270.426	6905.00	6968.81	1125.79	-6877.78	40°32'34.903"N	104°52'37.449"W	0.00	
14128.00†	90.000	270.426	6905.00	7067.79	1126.54	-6977.78	40°32'34.910"N	104°52'38.745"W	0.00	
14228.00†	90.000	270.426	6905.00	7166.77	1127.28	-7077.77	40°32'34.917"N	104°52'40.040"W	0.00	
14328.00†	90.000	270.426	6905.00	7265.75	1128.02	-7177.77	40°32'34.924"N	104°52'41.335"W	0.00	
14428.00†	90.000	270.426	6905.00	7364.73	1128.77	-7277.77	40°32'34.931"N	104°52'42.630"W	0.00	



# Planned Wellpath Report

LAUNER 5 (REV-C.0) PWP  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXTRACTION OIL & GAS	Slot	SLOT#15 LAUNER 5 (746'FSL & 380'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 5
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 5 PWB
Facility	SEC.26-T07N-R67W		

WELLPATH DATA (152 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14528.00†	90.000	270.426	6905.00	7463.72	1129.51	-7377.76	40°32'34.938"N	104°52'43.926"W	0.00	
14615.50	90.000	270.426	6905.00 <sup>2</sup>	7550.32	1130.16	-7465.26	40°32'34.944"N	104°52'45.059"W	0.00	End of Tangent

HOLE & CASING SECTIONS - Ref Wellbore: LAUNER 5 PWB      Ref Wellpath: LAUNER 5 (REV-C.0) PWP										
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]	
7in Casing Intermediate	28.00	7457.90	7429.90	28.00	6905.00	0.00	0.00	1076.93	-307.86	





# Planned Wellpath Report

LAUNER 5 (REV-C.0) PWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#15 LAUNER 5 (746'FSL & 380'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 5
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 5 PWB
Facility	SEC.26-T07N-R67W		

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.26-T07N-R67W		-17.00	4047.61	-121.16	3179860.07	1444245.18	40°33'03.784"N	104°51'09.932"W	polygon
SEC.27-T07N-R67W		-17.00	4047.61	-121.16	3179860.07	1444245.18	40°33'03.784"N	104°51'09.932"W	polygon
2) LAUNER 5 BHL ON PLAT REV-2 (1884'FSL & 2562'FEL, SEC.27)	14615.50	6905.00	1130.16	-7465.26	3172537.71	1441274.26	40°32'34.944"N	104°52'45.059"W	point
1) LAUNER 5 LANDING REV-2 (1821'FSL & 591'FEL, SEC.26)	7360.43	6905.00	1076.21	-210.39	3179792.55	1441273.30	40°32'34.422"N	104°51'11.088"W	point
LAUNER 5 BHL ON PLAT REV-1 (1884'FSL & 2561'FEL, SEC.27)		7035.00	1130.16	-7465.25	3172537.73	1441274.26	40°32'34.944"N	104°52'45.059"W	point
LAUNER 5 LANDING		7035.00	1076.20	-79.21	3179923.72	1441274.25	40°32'34.422"N	104°51'09.389"W	point
LAUNER 5 LANDING REV-1		7035.00	1076.20	-210.47	3179792.47	1441273.29	40°32'34.422"N	104°51'11.089"W	point
SEC.26-T07N-R67W 460'FEL SETBACK		7258.00	46.27	31.69	3180042.13	1440245.19	40°32'24.245"N	104°51'07.952"W	polygon
SEC.27-T07N-R67W (MIDDLE SECTION)		7258.00	46.27	31.69	3180042.13	1440245.19	40°32'24.245"N	104°51'07.952"W	polygon

## SURVEY PROGRAM - Ref Wellbore: LAUNER 5 PWB Ref Wellpath: LAUNER 5 (REV-C.0) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
28.00	14615.50	ISCWSA MWD, Rev. 4 (Standard)		LAUNER 5 PWB



# Planned Wellpath Report

LAUNER 5 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXTRACTION OIL & GAS	Slot	SLOT#15 LAUNER 5 (746'FSL & 380'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 5
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 5 PWB
Facility	SEC.26-T07N-R67W		

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
28.00	0.000	20.968	28.00	Tie On
1700.00	0.000	20.968	1700.00	End of Tangent
2362.69	13.254	20.968	2356.79	End of Build
6414.29	13.254	20.968	6300.48	End of Tangent
7360.43	90.000	270.426	6905.00	End of 3D Arc
14615.50	90.000	270.426	6905.00	End of Tangent