

EXTRACTION OIL & GAS

Location:	COLORADO	Slot:	SLOT#18 LAUNER 9 (676'FSL & 428'FEL,SEC.26)
Field:	WELD COUNTY (NAD83/TRUE NORTH)	Well:	LAUNER 9
Facility:	SEC.26-T07N-R67W	Wellbore:	LAUNER 9 PWB

Plot reference wellpath is LAUNER 9 (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: 4954 feet	Depths are in feet
Mean Sea Level to Mud line (At Slot: SLOT#18 LAUNER 9 (676'FSL & 428'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#18 LAUNER 9 (676'FSL & 428'FEL,SEC.26)	-4116.87	73.90	3179964.047	1440129.128	40°32'23.104"N	104°51'08.975"W
CYCLONE 37 (28'KB) (RKB) to Mud line (At Slot: SLOT#18 LAUNER 9 (676'FSL & 428'FEL,SEC.26))					4954ft	
Mean Sea Level to Mud line (At Slot: SLOT#18 LAUNER 9 (676'FSL & 428'FEL,SEC.26))					0ft	
CYCLONE 37 (28'KB) (RKB) to Mean Sea Level					4954ft	

Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
28.00	14512.00	ISCWSA MWD, Rev. 4	ISCWSA MWD, Rev. 4 (Standard)		LAUNER 9 PWB

Well Profile Data

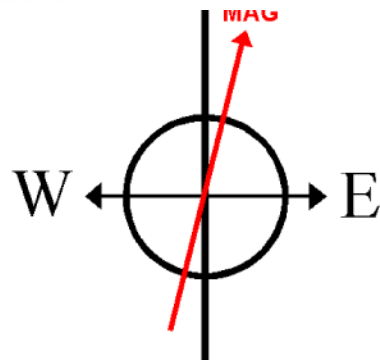
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	28.00	0.000	71.067	28.00	0.00	0.00	0.00	0.00
End of Tangent	2000.00	0.000	71.067	2000.00	0.00	0.00	0.00	0.00
End of Build	2297.25	5.945	71.067	2296.72	5.00	14.57	2.00	-14.42
End of Tangent	6298.48	5.945	71.067	6276.43	139.47	406.58	0.00	-402.28
End of 3D Arc	7254.56	90.000	270.426	6905.00	165.40	-163.46	10.00	168.28
End of Tangent	14511.54	90.000	270.426	6905.00	219.35	-7420.24	0.00	7423.48

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		-18.00	4116.83	-73.92	3179860.07	1444245.18	40°33'03.784"N	104°51'09.932"W
SEC.27-T07N-R67W		-18.00	4116.83	-73.92	3179860.07	1444245.18	40°33'03.784"N	104°51'09.932"W
LAUNER 9 BHL ON PLAT REV-2(904'FSL & 2561'FEL,SEC.27)	14511.54	6905.00	219.35	-7420.24	3172542.65	1440294.28	40°32'25.260"N	104°52'45.084"W
LAUNER 9 LANDING REV-2 (841'FSL & 591'FEL, SEC.26)	7254.56	6905.00	165.40	-163.46	3179799.39	1440293.33	40°32'24.738"N	104°51'11.092"W
LAUNER 9 BHL ON PLAT REV-1(904'FSL & 2561'FEL,SEC.27)		7034.00	219.35	-7420.24	3172542.65	1440294.28	40°32'25.260"N	104°52'45.084"W
LAUNER 9 LANDING		7034.00	165.40	-32.52	3179930.32	1440294.28	40°32'24.738"N	104°51'09.396"W
LAUNER 9 LANDING REV-1		7034.00	165.40	-163.31	3179799.53	1440293.33	40°32'24.738"N	104°51'11.090"W
SEC.26-T07N-R67W 460'FEL SETBACK	7257.00	115.49	78.94	78.94	3180042.13	1440245.19	40°32'24.245"N	104°51'07.952"W
SEC.27-T07N-R67W (MIDDLE SECTION)	7257.00	115.49	78.94	78.94	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
14511.54	90.000	270.426	6905.00	219.35	-7420.24	3172542.65	1440294.28	40°32'25.260"N	104°52'45.084"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

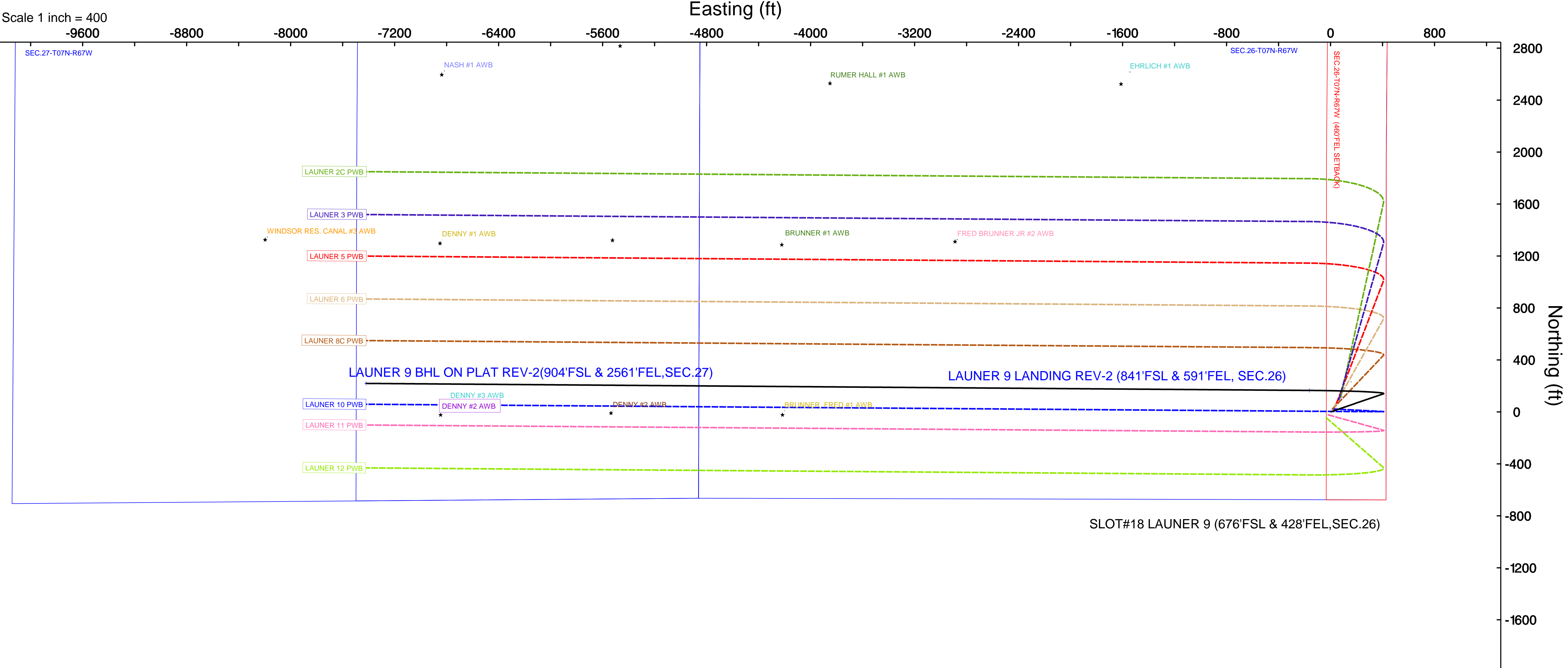
Scale 1 inch = 500

True Vertical Depth (ft)

End of Tangent : 0.00° Inc, 2000.00ft MD, 2000.00ft TVD, 0.00ft VS
2.00°/100ft
End of Build : 5.95° Inc, 2297.25ft MD, 2296.72ft TVD, -14.42ft VS

End of Tangent : 5.95° Inc, 6298.48ft MD, 6276.43ft TVD, -402.28ft VS
10.00°/100ft
End of 3D Arc : 90.00° Inc, 7254.56ft MD, 6905.00ft TVD, 168.28ft VS

LAUNER 9 LANDING REV-2 (841'FSL & 591'FEL, SEC.26)



SLOT#18 LAUNER 9 (676'FSL & 428'FEL,SEC.26)

End of Tangent : 90.00° Inc, 14511.54ft MD, 6905.00ft TVD, 7423.48ft VS

LAUNER 9 BHL ON PLAT REV-2(904'FSL & 2561'FEL,SEC.27)

Vertical Section (ft)
Azimuth 271.69° with reference 0.00 N, 0.00 E

Scale 1 inch = 500



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LAUNER 9 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#18 LAUNER 9 (676'FSL & 428'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 9
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 9 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 10:24:25 AM
Convergence at slot	0.42° East	Database/Source file	WA_DEN_Denver_Defn/LAUNER_9__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	-4116.87	73.90	3179964.05	1440129.13	40°32'23.104"N	104°51'08.975"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	4954.00ft
Horizontal Reference Pt	Slot	CYCLONE 37 (28'KB) (RKB) to Mean Sea Level	4954.00ft
Vertical Reference Pt	CYCLONE 37 (28'KB) (RKB)	CYCLONE 37 (28'KB) (RKB) to Mud Line at Slot (SLOT#18 LAUNER 9 (676'FSL & 428'FEL, SEC.26))	4954.00ft
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	271.69°



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Area	COLORADO	Well	LAUNER 9
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 9 PWB
Facility	SEC.26-T07N-R67W		

WELLPATH DATA (151 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	71.067	0.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
28.00	0.000	71.067	28.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	Tie On
128.00†	0.000	71.067	128.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
228.00†	0.000	71.067	228.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
328.00†	0.000	71.067	328.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
428.00†	0.000	71.067	428.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
528.00†	0.000	71.067	528.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
628.00†	0.000	71.067	628.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
728.00†	0.000	71.067	728.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
828.00†	0.000	71.067	828.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
928.00†	0.000	71.067	928.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
1028.00†	0.000	71.067	1028.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
1128.00†	0.000	71.067	1128.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
1228.00†	0.000	71.067	1228.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
1328.00†	0.000	71.067	1328.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
1428.00†	0.000	71.067	1428.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
1528.00†	0.000	71.067	1528.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
1628.00†	0.000	71.067	1628.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
1728.00†	0.000	71.067	1728.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
1828.00†	0.000	71.067	1828.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
1928.00†	0.000	71.067	1928.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	
2000.00	0.000	71.067	2000.00	0.00	0.00	0.00	40°32'23.104"N	104°51'08.975"W	0.00	End of Tangent
2028.00†	0.560	71.067	2028.00	-0.13	0.04	0.13	40°32'23.104"N	104°51'08.973"W	2.00	
2128.00†	2.560	71.067	2127.96	-2.68	0.93	2.70	40°32'23.113"N	104°51'08.940"W	2.00	
2228.00†	4.560	71.067	2227.76	-8.49	2.94	8.58	40°32'23.133"N	104°51'08.864"W	2.00	
2297.25	5.945	71.067	2296.72	-14.42	5.00	14.57	40°32'23.153"N	104°51'08.786"W	2.00	End of Build
2328.00†	5.945	71.067	2327.30	-17.40	6.03	17.59	40°32'23.163"N	104°51'08.747"W	0.00	
2428.00†	5.945	71.067	2426.76	-27.09	9.39	27.38	40°32'23.196"N	104°51'08.620"W	0.00	
2528.00†	5.945	71.067	2526.23	-36.79	12.75	37.18	40°32'23.230"N	104°51'08.493"W	0.00	
2628.00†	5.945	71.067	2625.69	-46.48	16.11	46.98	40°32'23.263"N	104°51'08.366"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXTRACTION OIL & GAS	Slot	SLOT#18 LAUNER 9 (676'FSL & 428'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 9
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 9 PWB
Facility	SEC.26-T07N-R67W		

WELLPATH DATA (151 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2728.00†	5.945	71.067	2725.15	-56.17	19.48	56.77	40°32'23.296"N	104°51'08.239"W	0.00	
2828.00†	5.945	71.067	2824.61	-65.87	22.84	66.57	40°32'23.329"N	104°51'08.113"W	0.00	
2928.00†	5.945	71.067	2924.07	-75.56	26.20	76.37	40°32'23.362"N	104°51'07.986"W	0.00	
3028.00†	5.945	71.067	3023.54	-85.25	29.56	86.17	40°32'23.396"N	104°51'07.859"W	0.00	
3128.00†	5.945	71.067	3123.00	-94.95	32.92	95.96	40°32'23.429"N	104°51'07.732"W	0.00	
3228.00†	5.945	71.067	3222.46	-104.64	36.28	105.76	40°32'23.462"N	104°51'07.605"W	0.00	
3328.00†	5.945	71.067	3321.92	-114.34	39.64	115.56	40°32'23.495"N	104°51'07.478"W	0.00	
3428.00†	5.945	71.067	3421.39	-124.03	43.00	125.35	40°32'23.528"N	104°51'07.351"W	0.00	
3528.00†	5.945	71.067	3520.85	-133.72	46.36	135.15	40°32'23.562"N	104°51'07.224"W	0.00	
3628.00†	5.945	71.067	3620.31	-143.42	49.72	144.95	40°32'23.595"N	104°51'07.097"W	0.00	
3728.00†	5.945	71.067	3719.77	-153.11	53.08	154.75	40°32'23.628"N	104°51'06.971"W	0.00	
3828.00†	5.945	71.067	3819.23	-162.80	56.44	164.54	40°32'23.661"N	104°51'06.844"W	0.00	
3928.00†	5.945	71.067	3918.70	-172.50	59.80	174.34	40°32'23.695"N	104°51'06.717"W	0.00	
4028.00†	5.945	71.067	4018.16	-182.19	63.16	184.14	40°32'23.728"N	104°51'06.590"W	0.00	
4128.00†	5.945	71.067	4117.62	-191.88	66.52	193.93	40°32'23.761"N	104°51'06.463"W	0.00	
4228.00†	5.945	71.067	4217.08	-201.58	69.88	203.73	40°32'23.794"N	104°51'06.336"W	0.00	
4328.00†	5.945	71.067	4316.54	-211.27	73.25	213.53	40°32'23.827"N	104°51'06.209"W	0.00	
4428.00†	5.945	71.067	4416.01	-220.96	76.61	223.32	40°32'23.861"N	104°51'06.082"W	0.00	
4528.00†	5.945	71.067	4515.47	-230.66	79.97	233.12	40°32'23.894"N	104°51'05.955"W	0.00	
4628.00†	5.945	71.067	4614.93	-240.35	83.33	242.92	40°32'23.927"N	104°51'05.828"W	0.00	
4728.00†	5.945	71.067	4714.39	-250.04	86.69	252.72	40°32'23.960"N	104°51'05.702"W	0.00	
4828.00†	5.945	71.067	4813.86	-259.74	90.05	262.51	40°32'23.993"N	104°51'05.575"W	0.00	
4928.00†	5.945	71.067	4913.32	-269.43	93.41	272.31	40°32'24.027"N	104°51'05.448"W	0.00	
5028.00†	5.945	71.067	5012.78	-279.12	96.77	282.11	40°32'24.060"N	104°51'05.321"W	0.00	
5128.00†	5.945	71.067	5112.24	-288.82	100.13	291.90	40°32'24.093"N	104°51'05.194"W	0.00	
5228.00†	5.945	71.067	5211.70	-298.51	103.49	301.70	40°32'24.126"N	104°51'05.067"W	0.00	
5328.00†	5.945	71.067	5311.17	-308.21	106.85	311.50	40°32'24.159"N	104°51'04.940"W	0.00	
5428.00†	5.945	71.067	5410.63	-317.90	110.21	321.30	40°32'24.193"N	104°51'04.813"W	0.00	
5528.00†	5.945	71.067	5510.09	-327.59	113.57	331.09	40°32'24.226"N	104°51'04.686"W	0.00	
5628.00†	5.945	71.067	5609.55	-337.29	116.93	340.89	40°32'24.259"N	104°51'04.560"W	0.00	



Planned Wellpath Report

LAUNER 9 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#18 LAUNER 9 (676'FSL & 428'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 9
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 9 PWB
Facility	SEC.26-T07N-R67W		

WELLPATH DATA (151 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5728.00†	5.945	71.067	5709.02	-346.98	120.29	350.69	40°32'24.292"N	104°51'04.433"W	0.00	
5828.00†	5.945	71.067	5808.48	-356.67	123.66	360.48	40°32'24.325"N	104°51'04.306"W	0.00	
5928.00†	5.945	71.067	5907.94	-366.37	127.02	370.28	40°32'24.359"N	104°51'04.179"W	0.00	
6028.00†	5.945	71.067	6007.40	-376.06	130.38	380.08	40°32'24.392"N	104°51'04.052"W	0.00	
6128.00†	5.945	71.067	6106.86	-385.75	133.74	389.87	40°32'24.425"N	104°51'03.925"W	0.00	
6228.00†	5.945	71.067	6206.33	-395.45	137.10	399.67	40°32'24.458"N	104°51'03.798"W	0.00	
6298.48	5.945	71.067	6276.43	-402.28	139.47	406.58	40°32'24.482"N	104°51'03.709"W	0.00	End of Tangent
6328.00†	3.311	53.787	6305.85	-404.38	140.47	408.71	40°32'24.492"N	104°51'03.681"W	10.00	
6428.00†	7.604	285.411	6405.58	-400.22	143.94	404.65	40°32'24.526"N	104°51'03.734"W	10.00	
6528.00†	17.453	276.729	6503.09	-378.80	147.46	383.33	40°32'24.561"N	104°51'04.010"W	10.00	
6628.00†	27.410	274.243	6595.41	-340.77	150.93	345.38	40°32'24.595"N	104°51'04.501"W	10.00	
6728.00†	37.389	273.015	6679.73	-287.29	154.24	291.97	40°32'24.628"N	104°51'05.193"W	10.00	
6828.00†	47.376	272.246	6753.51	-219.98	157.29	224.72	40°32'24.658"N	104°51'06.064"W	10.00	
6928.00†	57.366	271.693	6814.48	-140.88	159.98	145.67	40°32'24.684"N	104°51'07.088"W	10.00	
7028.00†	67.358	271.251	6860.81	-52.40	162.24	57.22	40°32'24.707"N	104°51'08.234"W	10.00	
7128.00†	77.352	270.870	6891.09	42.77	163.99	-37.94	40°32'24.724"N	104°51'09.466"W	10.00	
7228.00†	87.346	270.518	6904.38	141.73	165.18	-136.91	40°32'24.736"N	104°51'10.748"W	10.00	
7254.56	90.000	270.426	6905.00†	168.28	165.40	-163.46	40°32'24.738"N	104°51'11.092"W	10.00	End of 3D Arc
7328.00†	90.000	270.426	6905.00	241.70	165.95	-236.90	40°32'24.743"N	104°51'12.043"W	0.00	
7428.00†	90.000	270.426	6905.00	341.68	166.69	-336.90	40°32'24.751"N	104°51'13.338"W	0.00	
7528.00†	90.000	270.426	6905.00	441.65	167.43	-436.90	40°32'24.758"N	104°51'14.634"W	0.00	
7628.00†	90.000	270.426	6905.00	541.63	168.18	-536.89	40°32'24.765"N	104°51'15.929"W	0.00	
7728.00†	90.000	270.426	6905.00	641.60	168.92	-636.89	40°32'24.773"N	104°51'17.224"W	0.00	
7828.00†	90.000	270.426	6905.00	741.58	169.66	-736.89	40°32'24.780"N	104°51'18.519"W	0.00	
7928.00†	90.000	270.426	6905.00	841.55	170.41	-836.88	40°32'24.787"N	104°51'19.814"W	0.00	
8028.00†	90.000	270.426	6905.00	941.53	171.15	-936.88	40°32'24.795"N	104°51'21.110"W	0.00	
8128.00†	90.000	270.426	6905.00	1041.50	171.89	-1036.88	40°32'24.802"N	104°51'22.405"W	0.00	
8228.00†	90.000	270.426	6905.00	1141.48	172.64	-1136.88	40°32'24.809"N	104°51'23.700"W	0.00	
8328.00†	90.000	270.426	6905.00	1241.46	173.38	-1236.87	40°32'24.817"N	104°51'24.995"W	0.00	
8428.00†	90.000	270.426	6905.00	1341.43	174.12	-1336.87	40°32'24.824"N	104°51'26.290"W	0.00	



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LAUNER 9 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#18 LAUNER 9 (676'FSL & 428'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 9
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 9 PWB
Facility	SEC.26-T07N-R67W		

WELLPATH DATA (151 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	1441.41	174.87	-1436.87	40°32'24.831"N	104°51'27.586"W	0.00	
8628.00†	90.000	270.426	6905.00	1541.38	175.61	-1536.86	40°32'24.838"N	104°51'28.881"W	0.00	
8728.00†	90.000	270.426	6905.00	1641.36	176.35	-1636.86	40°32'24.846"N	104°51'30.176"W	0.00	
8828.00†	90.000	270.426	6905.00	1741.33	177.10	-1736.86	40°32'24.853"N	104°51'31.471"W	0.00	
8928.00†	90.000	270.426	6905.00	1841.31	177.84	-1836.86	40°32'24.860"N	104°51'32.766"W	0.00	
9028.00†	90.000	270.426	6905.00	1941.28	178.58	-1936.85	40°32'24.868"N	104°51'34.061"W	0.00	
9128.00†	90.000	270.426	6905.00	2041.26	179.33	-2036.85	40°32'24.875"N	104°51'35.357"W	0.00	
9228.00†	90.000	270.426	6905.00	2141.24	180.07	-2136.85	40°32'24.882"N	104°51'36.652"W	0.00	
9328.00†	90.000	270.426	6905.00	2241.21	180.81	-2236.85	40°32'24.889"N	104°51'37.947"W	0.00	
9428.00†	90.000	270.426	6905.00	2341.19	181.56	-2336.84	40°32'24.897"N	104°51'39.242"W	0.00	
9528.00†	90.000	270.426	6905.00	2441.16	182.30	-2436.84	40°32'24.904"N	104°51'40.537"W	0.00	
9628.00†	90.000	270.426	6905.00	2541.14	183.04	-2536.84	40°32'24.911"N	104°51'41.833"W	0.00	
9728.00†	90.000	270.426	6905.00	2641.11	183.79	-2636.83	40°32'24.918"N	104°51'43.128"W	0.00	
9828.00†	90.000	270.426	6905.00	2741.09	184.53	-2736.83	40°32'24.926"N	104°51'44.423"W	0.00	
9928.00†	90.000	270.426	6905.00	2841.06	185.27	-2836.83	40°32'24.933"N	104°51'45.718"W	0.00	
10028.00†	90.000	270.426	6905.00	2941.04	186.02	-2936.83	40°32'24.940"N	104°51'47.013"W	0.00	
10128.00†	90.000	270.426	6905.00	3041.02	186.76	-3036.82	40°32'24.947"N	104°51'48.309"W	0.00	
10228.00†	90.000	270.426	6905.00	3140.99	187.50	-3136.82	40°32'24.954"N	104°51'49.604"W	0.00	
10328.00†	90.000	270.426	6905.00	3240.97	188.25	-3236.82	40°32'24.962"N	104°51'50.899"W	0.00	
10428.00†	90.000	270.426	6905.00	3340.94	188.99	-3336.81	40°32'24.969"N	104°51'52.194"W	0.00	
10528.00†	90.000	270.426	6905.00	3440.92	189.73	-3436.81	40°32'24.976"N	104°51'53.489"W	0.00	
10628.00†	90.000	270.426	6905.00	3540.89	190.48	-3536.81	40°32'24.983"N	104°51'54.785"W	0.00	
10728.00†	90.000	270.426	6905.00	3640.87	191.22	-3636.81	40°32'24.990"N	104°51'56.080"W	0.00	
10828.00†	90.000	270.426	6905.00	3740.84	191.96	-3736.80	40°32'24.998"N	104°51'57.375"W	0.00	
10928.00†	90.000	270.426	6905.00	3840.82	192.71	-3836.80	40°32'25.005"N	104°51'58.670"W	0.00	
11028.00†	90.000	270.426	6905.00	3940.80	193.45	-3936.80	40°32'25.012"N	104°51'59.965"W	0.00	
11128.00†	90.000	270.426	6905.00	4040.77	194.19	-4036.80	40°32'25.019"N	104°52'01.261"W	0.00	
11228.00†	90.000	270.426	6905.00	4140.75	194.94	-4136.79	40°32'25.026"N	104°52'02.556"W	0.00	
11328.00†	90.000	270.426	6905.00	4240.72	195.68	-4236.79	40°32'25.034"N	104°52'03.851"W	0.00	
11428.00†	90.000	270.426	6905.00	4340.70	196.42	-4336.79	40°32'25.041"N	104°52'05.146"W	0.00	



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LAUNER 9 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#18 LAUNER 9 (676'FSL & 428'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 9
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 9 PWB
Facility	SEC.26-T07N-R67W		

WELLPATH DATA (151 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	4440.67	197.17	-4436.78	40°32'25.048"N	104°52'06.441"W	0.00	
11628.00†	90.000	270.426	6905.00	4540.65	197.91	-4536.78	40°32'25.055"N	104°52'07.737"W	0.00	
11728.00†	90.000	270.426	6905.00	4640.62	198.65	-4636.78	40°32'25.062"N	104°52'09.032"W	0.00	
11828.00†	90.000	270.426	6905.00	4740.60	199.40	-4736.78	40°32'25.069"N	104°52'10.327"W	0.00	
11928.00†	90.000	270.426	6905.00	4840.58	200.14	-4836.77	40°32'25.077"N	104°52'11.622"W	0.00	
12028.00†	90.000	270.426	6905.00	4940.55	200.88	-4936.77	40°32'25.084"N	104°52'12.917"W	0.00	
12128.00†	90.000	270.426	6905.00	5040.53	201.63	-5036.77	40°32'25.091"N	104°52'14.213"W	0.00	
12228.00†	90.000	270.426	6905.00	5140.50	202.37	-5136.77	40°32'25.098"N	104°52'15.508"W	0.00	
12328.00†	90.000	270.426	6905.00	5240.48	203.11	-5236.76	40°32'25.105"N	104°52'16.803"W	0.00	
12428.00†	90.000	270.426	6905.00	5340.45	203.86	-5336.76	40°32'25.112"N	104°52'18.098"W	0.00	
12528.00†	90.000	270.426	6905.00	5440.43	204.60	-5436.76	40°32'25.119"N	104°52'19.393"W	0.00	
12628.00†	90.000	270.426	6905.00	5540.40	205.34	-5536.75	40°32'25.127"N	104°52'20.688"W	0.00	
12728.00†	90.000	270.426	6905.00	5640.38	206.09	-5636.75	40°32'25.134"N	104°52'21.984"W	0.00	
12828.00†	90.000	270.426	6905.00	5740.36	206.83	-5736.75	40°32'25.141"N	104°52'23.279"W	0.00	
12928.00†	90.000	270.426	6905.00	5840.33	207.57	-5836.75	40°32'25.148"N	104°52'24.574"W	0.00	
13028.00†	90.000	270.426	6905.00	5940.31	208.32	-5936.74	40°32'25.155"N	104°52'25.869"W	0.00	
13128.00†	90.000	270.426	6905.00	6040.28	209.06	-6036.74	40°32'25.162"N	104°52'27.164"W	0.00	
13228.00†	90.000	270.426	6905.00	6140.26	209.80	-6136.74	40°32'25.169"N	104°52'28.460"W	0.00	
13328.00†	90.000	270.426	6905.00	6240.23	210.55	-6236.73	40°32'25.176"N	104°52'29.755"W	0.00	
13428.00†	90.000	270.426	6905.00	6340.21	211.29	-6336.73	40°32'25.183"N	104°52'31.050"W	0.00	
13528.00†	90.000	270.426	6905.00	6440.18	212.03	-6436.73	40°32'25.190"N	104°52'32.345"W	0.00	
13628.00†	90.000	270.426	6905.00	6540.16	212.78	-6536.73	40°32'25.198"N	104°52'33.640"W	0.00	
13728.00†	90.000	270.426	6905.00	6640.14	213.52	-6636.72	40°32'25.205"N	104°52'34.936"W	0.00	
13828.00†	90.000	270.426	6905.00	6740.11	214.26	-6736.72	40°32'25.212"N	104°52'36.231"W	0.00	
13928.00†	90.000	270.426	6905.00	6840.09	215.01	-6836.72	40°32'25.219"N	104°52'37.526"W	0.00	
14028.00†	90.000	270.426	6905.00	6940.06	215.75	-6936.72	40°32'25.226"N	104°52'38.821"W	0.00	
14128.00†	90.000	270.426	6905.00	7040.04	216.49	-7036.71	40°32'25.233"N	104°52'40.116"W	0.00	
14228.00†	90.000	270.426	6905.00	7140.01	217.24	-7136.71	40°32'25.240"N	104°52'41.412"W	0.00	
14328.00†	90.000	270.426	6905.00	7239.99	217.98	-7236.71	40°32'25.247"N	104°52'42.707"W	0.00	
14428.00†	90.000	270.426	6905.00	7339.96	218.72	-7336.70	40°32'25.254"N	104°52'44.002"W	0.00	



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LAUNER 9 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXTRACTION OIL & GAS	Slot	SLOT#18 LAUNER 9 (676'FSL & 428'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 9
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 9 PWB
Facility	SEC.26-T07N-R67W		

WELLPATH DATA (151 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14511.54	90.000	270.426	6905.00 ²	7423.48	219.35	-7420.24	40°32'25.260"N	104°52'45.084"W	0.00	End of Tangent

HOLE & CASING SECTIONS - Ref Wellbore: LAUNER 9 PWB Ref Wellpath: LAUNER 9 (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	7380.01	7352.01	28.00	6905.00	0.00	0.00	166.33	-288.91	



Planned Wellpath Report

LAUNER 9 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXTRACTION OIL & GAS	Slot	SLOT#18 LAUNER 9 (676'FSL & 428'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 9
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 9 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		-18.00	4116.83	-73.92	3179860.07	1444245.18	40°33'03.784"N	104°51'09.932"W	polygon
SEC.27-T07N-R67W		-18.00	4116.83	-73.92	3179860.07	1444245.18	40°33'03.784"N	104°51'09.932"W	polygon
2) LAUNER 9 BHL ON PLAT REV-2(904'FSL & 2561'FEL, SEC.27)	14511.54	6905.00	219.35	-7420.24	3172542.65	1440294.28	40°32'25.260"N	104°52'45.084"W	point
1) LAUNER 9 LANDING REV-2 (841'FSL & 591'FEL, SEC.26)	7254.56	6905.00	165.40	-163.46	3179799.39	1440293.33	40°32'24.738"N	104°51'11.092"W	point
LAUNER 9 BHL ON PLAT REV-1 (904'FSL & 2561'FEL, SEC.27)		7034.00	219.35	-7420.24	3172542.65	1440294.28	40°32'25.260"N	104°52'45.084"W	point
LAUNER 9 LANDING		7034.00	165.40	-32.52	3179930.32	1440294.28	40°32'24.738"N	104°51'09.396"W	point
LAUNER 9 LANDING REV-1		7034.00	165.40	-163.31	3179799.53	1440293.33	40°32'24.738"N	104°51'11.090"W	point
SEC.26-T07N-R67W 460'FEL SETBACK		7257.00	115.49	78.94	3180042.13	1440245.19	40°32'24.245"N	104°51'07.952"W	polygon
SEC.27-T07N-R67W (MIDDLE SECTION)		7257.00	115.49	78.94	3180042.13	1440245.19	40°32'24.245"N	104°51'07.952"W	polygon

SURVEY PROGRAM - Ref Wellbore: LAUNER 9 PWB Ref Wellpath: LAUNER 9 (REV-C.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
28.00	14512.00	ISCWSA MWD, Rev. 4 (Standard)		LAUNER 9 PWB



Planned Wellpath Report

LAUNER 9 (REV-C.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXTRACTION OIL & GAS	Slot	SLOT#18 LAUNER 9 (676'FSL & 428'FEL,SEC.26)
Area	COLORADO	Well	LAUNER 9
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 9 PWB
Facility	SEC.26-T07N-R67W		

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
28.00	0.000	71.067	28.00	Tie On
2000.00	0.000	71.067	2000.00	End of Tangent
2297.25	5.945	71.067	2296.72	End of Build
6298.48	5.945	71.067	6276.43	End of Tangent
7254.56	90.000	270.426	6905.00	End of 3D Arc
14511.54	90.000	270.426	6905.00	End of Tangent