

# EXTRACTION OIL & GAS

Location:	COLORADO	Slot:	SLOT#20 LAUNER 12 (630'FSL & 459'FEL,SEC.26)
Field:	WELD COUNTY (NAD83/TRUE NORTH)	Well:	LAUNER 12
Facility:	SEC.26-T07N-R67W	Wellbore:	LAUNER 12 PWB

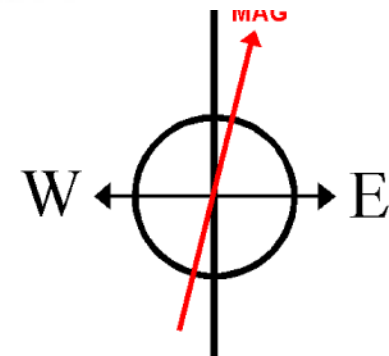
Plot reference wellpath is LAUNER 12 (REV-C.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to CYCLONE 37 (28'KB) (RKB)	North Reference: True north
Measured depths are referenced to CYCLONE 37 (28'KB) (RKB)	Scale: True distance
CYCLONE 37 (28'KB) (RKB) to Mean Sea Level: 4954 feet	Depths are in feet
Mean Sea Level to Mud line (At Slot: SLOT#20 LAUNER 12 (630'FSL & 459'FEL,SEC.26)): 0 feet	Created by: ingmjmr 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#20 LAUNER 12 (630'FSL & 459'FEL,SEC.26)	-4163.14	42.22	3179932.701	1440082.631	40°32'22.646"N	104°51'09.385"W
CYCLONE 37 (28'KB) (RKB) to Mud line (At Slot: SLOT#20 LAUNER 12 (630'FSL & 459'FEL,SEC.26))					4954ft	
Mean Sea Level to Mud line (At Slot: SLOT#20 LAUNER 12 (630'FSL & 459'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	14537.00	ISCWSA MWD, Rev. 4	ISCWSA MWD, Rev. 4 (Standard)		LAUNER 12 PWB



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, 2200.00ft MD, 2200.00ft TVD, 0.00ft VS  
2.00°/100ft  
End of Build : 8.56° Inc, 2627.80ft MD, 2626.21ft TVD, -22.94ft VS

End of Tangent : 8.56° Inc, 6312.95ft MD, 6270.35ft TVD, -417.34ft VS  
10.00°/100ft  
End of 3D Arc : 90.00° Inc, 7277.82ft MD, 6905.00ft TVD, 154.64ft VS

LAUNER 12 LANDING REV-2 (191'FSL & 591'FEL, SEC.26)

End of Tangent : 90.00° Inc, 14536.14ft MD, 6905.00ft TVD, 7400.14ft VS  
LAUNER 12 BHL ON PLAT REV-2 (254'FSL & 2561'FEL,SEC.27)

Vertical Section (ft)  
Azimuth 267.02° with reference 0.00 N, 0.00 E

## Well Profile Data

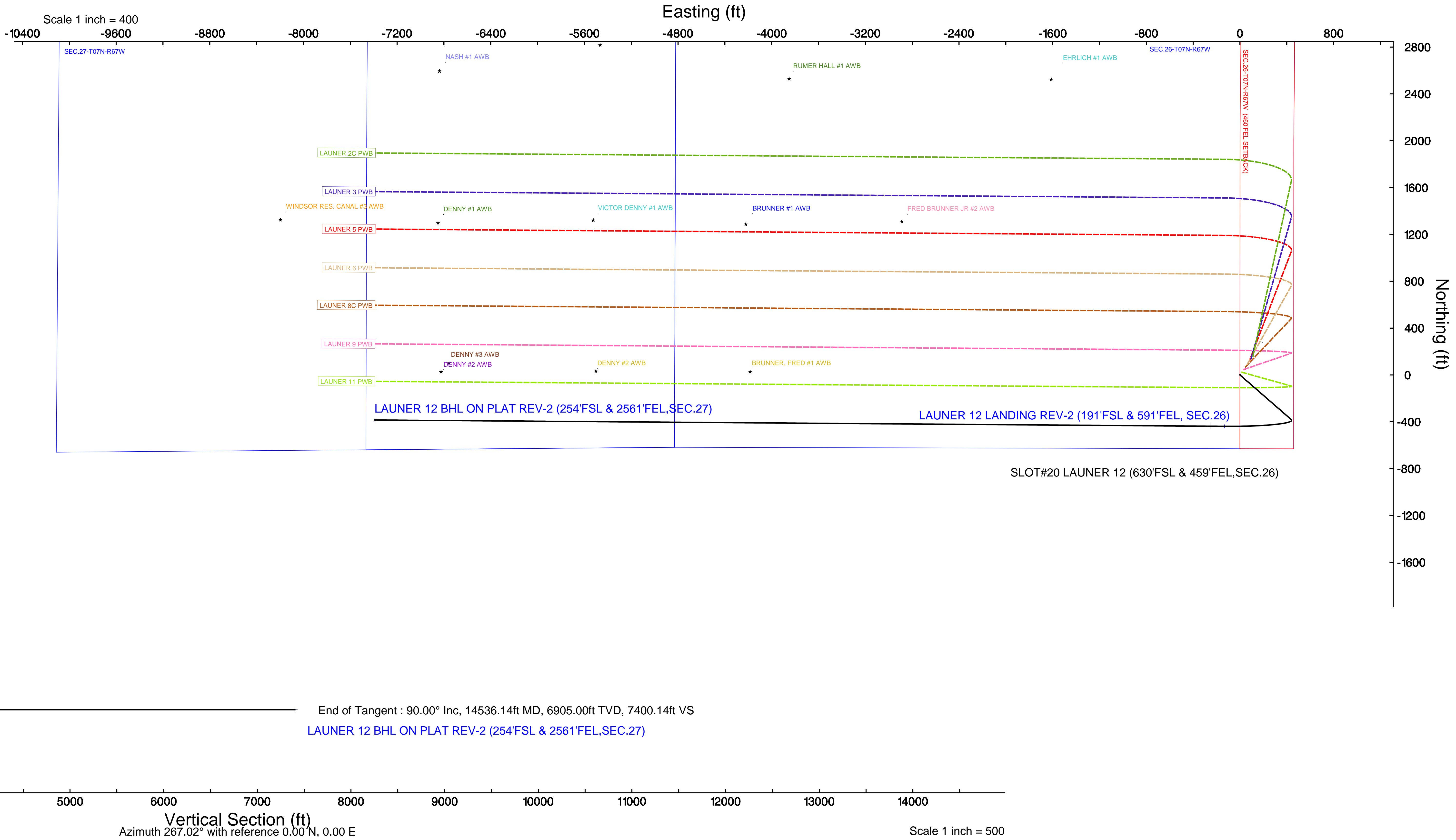
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	28.00	0.000	131.018	28.00	0.00	0.00	0.00	0.00
End of Tangent	2200.00	0.000	131.018	2200.00	0.00	0.00	0.00	0.00
End of Build	2627.80	8.556	131.018	2626.21	-20.92	24.06	2.00	-22.94
End of Tangent	6312.95	8.556	131.018	6270.35	-380.75	437.72	0.00	-417.34
End of 3D Arc	7277.82	90.000	270.426	6905.00	-438.64	-132.01	10.00	154.64
End of Tangent	14536.14	90.000	270.426	6905.00	-384.71	-7390.14	0.00	7400.14

## 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	4163.10	-42.24	3179860.07	1444245.18	40°33'03.784"N	104°51'09.932"W
SEC.27-T07N-R67W		-18.00	4163.10	-42.24	3179860.07	1444245.18	40°33'03.784"N	104°51'09.932"W
LAUNER 12 BHL ON PLAT REV-2 (254'FSL & 2561'FEL,SEC.27)	14536.14	6905.00	-384.71	-7390.14	3172545.81	1439643.99	40°32'18.834"N	104°52'45.102"W
LAUNER 12 LANDING REV-2 (191'FSL & 591'FEL, SEC.26)	7277.82	6905.00	-438.64	-132.01	3179803.90	1439643.05	40°32'18.312"N	104°51'11.095"W
LAUNER 12 BHL ON PLAT REV-1(254'FSL & 2560'FEL,SEC.27)		7034.00	-384.71	-7390.14	3172545.81	1439643.99	40°32'18.834"N	104°52'45.102"W
LAUNER 12 LANDING		7034.00	-438.64	-1.11	3179934.79	1439644.01	40°32'18.312"N	104°51'09.400"W
LAUNER 12 LANDING REV-1		7034.00	-438.64	-132.16	3179803.75	1439643.05	40°32'18.312"N	104°51'11.097"W
SEC.26-T07N-R67W 460'FEL SETBACK		7257.00	161.76	110.62	3180042.13	1440245.19	40°32'24.245"N	104°51'07.952"W
SEC.27-T07N-R67W (MIDDLE SECTION)		7257.00	161.76	110.62	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
14536.14	90.000	270.426	6905.00	-384.71	-7390.14	3172545.81	1439643.99	40°32'18.834"N	104°52'45.102"W





# Planned Wellpath Report

LAUNER 12 (REV-C.0) PWP

Page 1 of 9



## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#20 LAUNER 12 (630'FSL & 459'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 12
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 12 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 10:33:52 AM
Convergence at slot	0.42° East	Database/Source file	WA_DEN_Denver_Defn/LAUNER_12__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	-4163.14	42.22	3179932.70	1440082.63	40°32'22.646"N	104°51'09.385"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#20 LAUNER 12 (630'FSL & 459'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	267.02°





# Planned Wellpath Report

LAUNER 12 (REV-C.0) PWP

Page 2 of 9



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Area	COLORADO	Well	LAUNER 12
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 12 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	131.018	0.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
28.00	0.000	131.018	28.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	Tie On
128.00†	0.000	131.018	128.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
228.00†	0.000	131.018	228.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
328.00†	0.000	131.018	328.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
428.00†	0.000	131.018	428.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
528.00†	0.000	131.018	528.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
628.00†	0.000	131.018	628.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
728.00†	0.000	131.018	728.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
828.00†	0.000	131.018	828.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
928.00†	0.000	131.018	928.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
1028.00†	0.000	131.018	1028.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
1128.00†	0.000	131.018	1128.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
1228.00†	0.000	131.018	1228.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
1328.00†	0.000	131.018	1328.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
1428.00†	0.000	131.018	1428.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
1528.00†	0.000	131.018	1528.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
1628.00†	0.000	131.018	1628.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
1728.00†	0.000	131.018	1728.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
1828.00†	0.000	131.018	1828.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
1928.00†	0.000	131.018	1928.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
2028.00†	0.000	131.018	2028.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
2128.00†	0.000	131.018	2128.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	
2200.00	0.000	131.018	2200.00	0.00	0.00	0.00	40°32'22.646"N	104°51'09.385"W	0.00	End of Tangent
2228.00†	0.560	131.018	2228.00	-0.10	-0.09	0.10	40°32'22.646"N	104°51'09.384"W	2.00	
2328.00†	2.560	131.018	2327.96	-2.06	-1.88	2.16	40°32'22.628"N	104°51'09.357"W	2.00	
2428.00†	4.560	131.018	2427.76	-6.52	-5.95	6.84	40°32'22.588"N	104°51'09.297"W	2.00	
2528.00†	6.560	131.018	2527.28	-13.49	-12.31	14.15	40°32'22.525"N	104°51'09.202"W	2.00	
2627.80	8.556	131.018	2626.21	-22.94	-20.92	24.06	40°32'22.440"N	104°51'09.074"W	2.00	End of Build
2628.00†	8.556	131.018	2626.41	-22.96	-20.94	24.08	40°32'22.439"N	104°51'09.073"W	0.00	



# Planned Wellpath Report

LAUNER 12 (REV-C.0) PWP

Page 3 of 9



## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#20 LAUNER 12 (630'FSL & 459'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 12
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 12 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†	8.556	131.018	2725.30	-33.66	-30.71	35.30	40°32'22.343"N	104°51'08.928"W	0.00	
2828.00†	8.556	131.018	2824.18	-44.36	-40.47	46.53	40°32'22.246"N	104°51'08.783"W	0.00	
2928.00†	8.556	131.018	2923.07	-55.06	-50.24	57.75	40°32'22.150"N	104°51'08.637"W	0.00	
3028.00†	8.556	131.018	3021.96	-65.77	-60.00	68.98	40°32'22.054"N	104°51'08.492"W	0.00	
3128.00†	8.556	131.018	3120.85	-76.47	-69.76	80.20	40°32'21.957"N	104°51'08.346"W	0.00	
3228.00†	8.556	131.018	3219.73	-87.17	-79.53	91.43	40°32'21.861"N	104°51'08.201"W	0.00	
3328.00†	8.556	131.018	3318.62	-97.87	-89.29	102.66	40°32'21.764"N	104°51'08.056"W	0.00	
3428.00†	8.556	131.018	3417.51	-108.58	-99.06	113.88	40°32'21.668"N	104°51'07.910"W	0.00	
3528.00†	8.556	131.018	3516.39	-119.28	-108.82	125.11	40°32'21.571"N	104°51'07.765"W	0.00	
3628.00†	8.556	131.018	3615.28	-129.98	-118.58	136.33	40°32'21.475"N	104°51'07.619"W	0.00	
3728.00†	8.556	131.018	3714.17	-140.68	-128.35	147.56	40°32'21.378"N	104°51'07.474"W	0.00	
3828.00†	8.556	131.018	3813.05	-151.39	-138.11	158.78	40°32'21.282"N	104°51'07.329"W	0.00	
3928.00†	8.556	131.018	3911.94	-162.09	-147.88	170.01	40°32'21.185"N	104°51'07.183"W	0.00	
4028.00†	8.556	131.018	4010.83	-172.79	-157.64	181.23	40°32'21.089"N	104°51'07.038"W	0.00	
4128.00†	8.556	131.018	4109.72	-183.49	-167.41	192.46	40°32'20.992"N	104°51'06.892"W	0.00	
4228.00†	8.556	131.018	4208.60	-194.20	-177.17	203.68	40°32'20.896"N	104°51'06.747"W	0.00	
4328.00†	8.556	131.018	4307.49	-204.90	-186.93	214.91	40°32'20.799"N	104°51'06.602"W	0.00	
4428.00†	8.556	131.018	4406.38	-215.60	-196.70	226.13	40°32'20.703"N	104°51'06.456"W	0.00	
4528.00†	8.556	131.018	4505.26	-226.30	-206.46	237.36	40°32'20.606"N	104°51'06.311"W	0.00	
4628.00†	8.556	131.018	4604.15	-237.01	-216.23	248.58	40°32'20.510"N	104°51'06.166"W	0.00	
4728.00†	8.556	131.018	4703.04	-247.71	-225.99	259.81	40°32'20.413"N	104°51'06.020"W	0.00	
4828.00†	8.556	131.018	4801.93	-258.41	-235.75	271.03	40°32'20.317"N	104°51'05.875"W	0.00	
4928.00†	8.556	131.018	4900.81	-269.11	-245.52	282.26	40°32'20.220"N	104°51'05.729"W	0.00	
5028.00†	8.556	131.018	4999.70	-279.82	-255.28	293.49	40°32'20.124"N	104°51'05.584"W	0.00	
5128.00†	8.556	131.018	5098.59	-290.52	-265.05	304.71	40°32'20.027"N	104°51'05.439"W	0.00	
5228.00†	8.556	131.018	5197.47	-301.22	-274.81	315.94	40°32'19.931"N	104°51'05.293"W	0.00	
5328.00†	8.556	131.018	5296.36	-311.92	-284.57	327.16	40°32'19.834"N	104°51'05.148"W	0.00	
5428.00†	8.556	131.018	5395.25	-322.63	-294.34	338.39	40°32'19.738"N	104°51'05.002"W	0.00	
5528.00†	8.556	131.018	5494.13	-333.33	-304.10	349.61	40°32'19.641"N	104°51'04.857"W	0.00	
5628.00†	8.556	131.018	5593.02	-344.03	-313.87	360.84	40°32'19.545"N	104°51'04.712"W	0.00	



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LAUNER 12 (REV-C.0) PWP

Page 4 of 9



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Operator	EXTRACTION OIL & GAS	Slot	SLOT#20 LAUNER 12 (630'FSL & 459'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 12
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 12 PWB
Facility	SEC.26-T07N-R67W		

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MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5728.00†	8.556	131.018	5691.91	-354.73	-323.63	372.06	40°32'19.448"N	104°51'04.566"W	0.00	
5828.00†	8.556	131.018	5790.80	-365.44	-333.39	383.29	40°32'19.352"N	104°51'04.421"W	0.00	
5928.00†	8.556	131.018	5889.68	-376.14	-343.16	394.51	40°32'19.255"N	104°51'04.275"W	0.00	
6028.00†	8.556	131.018	5988.57	-386.84	-352.92	405.74	40°32'19.159"N	104°51'04.130"W	0.00	
6128.00†	8.556	131.018	6087.46	-397.54	-362.69	416.96	40°32'19.063"N	104°51'03.985"W	0.00	
6228.00†	8.556	131.018	6186.34	-408.25	-372.45	428.19	40°32'18.966"N	104°51'03.839"W	0.00	
6312.95	8.556	131.018	6270.35	-417.34	-380.75	437.72	40°32'18.884"N	104°51'03.716"W	0.00	End of Tangent
6328.00†	7.483	138.608	6285.25	-418.75	-382.22	439.22	40°32'18.870"N	104°51'03.696"W	10.00	
6428.00†	7.508	222.455	6384.65	-418.14	-391.95	439.11	40°32'18.773"N	104°51'03.698"W	10.00	
6528.00†	16.003	250.468	6482.53	-400.23	-401.40	421.67	40°32'18.680"N	104°51'03.924"W	10.00	
6628.00†	25.596	258.634	6575.93	-365.56	-410.29	387.41	40°32'18.592"N	104°51'04.367"W	10.00	
6728.00†	35.406	262.510	6661.99	-315.18	-418.34	337.39	40°32'18.513"N	104°51'05.015"W	10.00	
6828.00†	45.290	264.865	6738.11	-250.63	-425.31	273.11	40°32'18.444"N	104°51'05.848"W	10.00	
6928.00†	55.209	266.526	6801.98	-173.87	-431.00	196.54	40°32'18.388"N	104°51'06.840"W	10.00	
7028.00†	65.145	267.827	6851.65	-87.22	-435.22	110.00	40°32'18.346"N	104°51'07.961"W	10.00	
7128.00†	75.091	268.932	6885.62	6.67	-437.85	16.11	40°32'18.320"N	104°51'09.177"W	10.00	
7228.00†	85.042	269.939	6902.85	104.96	-438.80	-82.26	40°32'18.310"N	104°51'10.451"W	10.00	
7277.82	90.000	270.426	6905.00†	154.64	-438.64	-132.01	40°32'18.312"N	104°51'11.095"W	10.00	End of 3D Arc
7328.00†	90.000	270.426	6905.00	204.73	-438.27	-182.19	40°32'18.316"N	104°51'11.745"W	0.00	
7428.00†	90.000	270.426	6905.00	304.56	-437.53	-282.19	40°32'18.323"N	104°51'13.040"W	0.00	
7528.00†	90.000	270.426	6905.00	404.38	-436.78	-382.19	40°32'18.330"N	104°51'14.335"W	0.00	
7628.00†	90.000	270.426	6905.00	504.20	-436.04	-482.19	40°32'18.338"N	104°51'15.630"W	0.00	
7728.00†	90.000	270.426	6905.00	604.03	-435.30	-582.18	40°32'18.345"N	104°51'16.926"W	0.00	
7828.00†	90.000	270.426	6905.00	703.85	-434.55	-682.18	40°32'18.352"N	104°51'18.221"W	0.00	
7928.00†	90.000	270.426	6905.00	803.67	-433.81	-782.18	40°32'18.360"N	104°51'19.516"W	0.00	
8028.00†	90.000	270.426	6905.00	903.50	-433.07	-882.18	40°32'18.367"N	104°51'20.811"W	0.00	
8128.00†	90.000	270.426	6905.00	1003.32	-432.32	-982.17	40°32'18.374"N	104°51'22.106"W	0.00	
8228.00†	90.000	270.426	6905.00	1103.14	-431.58	-1082.17	40°32'18.382"N	104°51'23.401"W	0.00	
8328.00†	90.000	270.426	6905.00	1202.97	-430.84	-1182.17	40°32'18.389"N	104°51'24.697"W	0.00	
8428.00†	90.000	270.426	6905.00	1302.79	-430.10	-1282.16	40°32'18.396"N	104°51'25.992"W	0.00	



# Planned Wellpath Report

LAUNER 12 (REV-C.0) PWP

Page 5 of 9



## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#20 LAUNER 12 (630'FSL & 459'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 12
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 12 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	1402.61	-429.35	-1382.16	40°32'18.403"N	104°51'27.287"W	0.00	
8628.00†	90.000	270.426	6905.00	1502.44	-428.61	-1482.16	40°32'18.411"N	104°51'28.582"W	0.00	
8728.00†	90.000	270.426	6905.00	1602.26	-427.87	-1582.16	40°32'18.418"N	104°51'29.877"W	0.00	
8828.00†	90.000	270.426	6905.00	1702.08	-427.12	-1682.15	40°32'18.425"N	104°51'31.172"W	0.00	
8928.00†	90.000	270.426	6905.00	1801.91	-426.38	-1782.15	40°32'18.433"N	104°51'32.468"W	0.00	
9028.00†	90.000	270.426	6905.00	1901.73	-425.64	-1882.15	40°32'18.440"N	104°51'33.763"W	0.00	
9128.00†	90.000	270.426	6905.00	2001.55	-424.89	-1982.14	40°32'18.447"N	104°51'35.058"W	0.00	
9228.00†	90.000	270.426	6905.00	2101.38	-424.15	-2082.14	40°32'18.454"N	104°51'36.353"W	0.00	
9328.00†	90.000	270.426	6905.00	2201.20	-423.41	-2182.14	40°32'18.462"N	104°51'37.648"W	0.00	
9428.00†	90.000	270.426	6905.00	2301.02	-422.66	-2282.14	40°32'18.469"N	104°51'38.943"W	0.00	
9528.00†	90.000	270.426	6905.00	2400.85	-421.92	-2382.13	40°32'18.476"N	104°51'40.238"W	0.00	
9628.00†	90.000	270.426	6905.00	2500.67	-421.18	-2482.13	40°32'18.483"N	104°51'41.534"W	0.00	
9728.00†	90.000	270.426	6905.00	2600.49	-420.44	-2582.13	40°32'18.491"N	104°51'42.829"W	0.00	
9828.00†	90.000	270.426	6905.00	2700.32	-419.69	-2682.13	40°32'18.498"N	104°51'44.124"W	0.00	
9928.00†	90.000	270.426	6905.00	2800.14	-418.95	-2782.12	40°32'18.505"N	104°51'45.419"W	0.00	
10028.00†	90.000	270.426	6905.00	2899.96	-418.21	-2882.12	40°32'18.512"N	104°51'46.714"W	0.00	
10128.00†	90.000	270.426	6905.00	2999.79	-417.46	-2982.12	40°32'18.519"N	104°51'48.009"W	0.00	
10228.00†	90.000	270.426	6905.00	3099.61	-416.72	-3082.11	40°32'18.527"N	104°51'49.305"W	0.00	
10328.00†	90.000	270.426	6905.00	3199.43	-415.98	-3182.11	40°32'18.534"N	104°51'50.600"W	0.00	
10428.00†	90.000	270.426	6905.00	3299.26	-415.23	-3282.11	40°32'18.541"N	104°51'51.895"W	0.00	
10528.00†	90.000	270.426	6905.00	3399.08	-414.49	-3382.11	40°32'18.548"N	104°51'53.190"W	0.00	
10628.00†	90.000	270.426	6905.00	3498.90	-413.75	-3482.10	40°32'18.556"N	104°51'54.485"W	0.00	
10728.00†	90.000	270.426	6905.00	3598.73	-413.00	-3582.10	40°32'18.563"N	104°51'55.780"W	0.00	
10828.00†	90.000	270.426	6905.00	3698.55	-412.26	-3682.10	40°32'18.570"N	104°51'57.076"W	0.00	
10928.00†	90.000	270.426	6905.00	3798.37	-411.52	-3782.10	40°32'18.577"N	104°51'58.371"W	0.00	
11028.00†	90.000	270.426	6905.00	3898.20	-410.78	-3882.09	40°32'18.584"N	104°51'59.666"W	0.00	
11128.00†	90.000	270.426	6905.00	3998.02	-410.03	-3982.09	40°32'18.592"N	104°52'00.961"W	0.00	
11228.00†	90.000	270.426	6905.00	4097.84	-409.29	-4082.09	40°32'18.599"N	104°52'02.256"W	0.00	
11328.00†	90.000	270.426	6905.00	4197.67	-408.55	-4182.08	40°32'18.606"N	104°52'03.551"W	0.00	
11428.00†	90.000	270.426	6905.00	4297.49	-407.80	-4282.08	40°32'18.613"N	104°52'04.847"W	0.00	



# Planned Wellpath Report

LAUNER 12 (REV-C.0) PWP

Page 6 of 9



## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#20 LAUNER 12 (630'FSL & 459'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 12
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 12 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	4397.31	-407.06	-4382.08	40°32'18.620"N	104°52'06.142"W	0.00	
11628.00†	90.000	270.426	6905.00	4497.14	-406.32	-4482.08	40°32'18.627"N	104°52'07.437"W	0.00	
11728.00†	90.000	270.426	6905.00	4596.96	-405.57	-4582.07	40°32'18.635"N	104°52'08.732"W	0.00	
11828.00†	90.000	270.426	6905.00	4696.78	-404.83	-4682.07	40°32'18.642"N	104°52'10.027"W	0.00	
11928.00†	90.000	270.426	6905.00	4796.61	-404.09	-4782.07	40°32'18.649"N	104°52'11.322"W	0.00	
12028.00†	90.000	270.426	6905.00	4896.43	-403.35	-4882.06	40°32'18.656"N	104°52'12.617"W	0.00	
12128.00†	90.000	270.426	6905.00	4996.26	-402.60	-4982.06	40°32'18.663"N	104°52'13.913"W	0.00	
12228.00†	90.000	270.426	6905.00	5096.08	-401.86	-5082.06	40°32'18.670"N	104°52'15.208"W	0.00	
12328.00†	90.000	270.426	6905.00	5195.90	-401.12	-5182.06	40°32'18.677"N	104°52'16.503"W	0.00	
12428.00†	90.000	270.426	6905.00	5295.73	-400.37	-5282.05	40°32'18.685"N	104°52'17.798"W	0.00	
12528.00†	90.000	270.426	6905.00	5395.55	-399.63	-5382.05	40°32'18.692"N	104°52'19.093"W	0.00	
12628.00†	90.000	270.426	6905.00	5495.37	-398.89	-5482.05	40°32'18.699"N	104°52'20.388"W	0.00	
12728.00†	90.000	270.426	6905.00	5595.20	-398.14	-5582.05	40°32'18.706"N	104°52'21.684"W	0.00	
12828.00†	90.000	270.426	6905.00	5695.02	-397.40	-5682.04	40°32'18.713"N	104°52'22.979"W	0.00	
12928.00†	90.000	270.426	6905.00	5794.84	-396.66	-5782.04	40°32'18.720"N	104°52'24.274"W	0.00	
13028.00†	90.000	270.426	6905.00	5894.67	-395.91	-5882.04	40°32'18.727"N	104°52'25.569"W	0.00	
13128.00†	90.000	270.426	6905.00	5994.49	-395.17	-5982.03	40°32'18.734"N	104°52'26.864"W	0.00	
13228.00†	90.000	270.426	6905.00	6094.31	-394.43	-6082.03	40°32'18.741"N	104°52'28.159"W	0.00	
13328.00†	90.000	270.426	6905.00	6194.14	-393.69	-6182.03	40°32'18.749"N	104°52'29.455"W	0.00	
13428.00†	90.000	270.426	6905.00	6293.96	-392.94	-6282.03	40°32'18.756"N	104°52'30.750"W	0.00	
13528.00†	90.000	270.426	6905.00	6393.78	-392.20	-6382.02	40°32'18.763"N	104°52'32.045"W	0.00	
13628.00†	90.000	270.426	6905.00	6493.61	-391.46	-6482.02	40°32'18.770"N	104°52'33.340"W	0.00	
13728.00†	90.000	270.426	6905.00	6593.43	-390.71	-6582.02	40°32'18.777"N	104°52'34.635"W	0.00	
13828.00†	90.000	270.426	6905.00	6693.25	-389.97	-6682.02	40°32'18.784"N	104°52'35.930"W	0.00	
13928.00†	90.000	270.426	6905.00	6793.08	-389.23	-6782.01	40°32'18.791"N	104°52'37.226"W	0.00	
14028.00†	90.000	270.426	6905.00	6892.90	-388.48	-6882.01	40°32'18.798"N	104°52'38.521"W	0.00	
14128.00†	90.000	270.426	6905.00	6992.72	-387.74	-6982.01	40°32'18.805"N	104°52'39.816"W	0.00	
14228.00†	90.000	270.426	6905.00	7092.55	-387.00	-7082.00	40°32'18.812"N	104°52'41.111"W	0.00	
14328.00†	90.000	270.426	6905.00	7192.37	-386.25	-7182.00	40°32'18.819"N	104°52'42.406"W	0.00	
14428.00†	90.000	270.426	6905.00	7292.19	-385.51	-7282.00	40°32'18.826"N	104°52'43.701"W	0.00	



# Planned Wellpath Report

LAUNER 12 (REV-C.0) PWP

Page 7 of 9



## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#20 LAUNER 12 (630'FSL & 459'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 12
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 12 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	7392.02	-384.77	-7382.00	40°32'18.833"N	104°52'44.997"W	0.00	
14536.14	90.000	270.426	6905.00 <sup>2</sup>	7400.14	-384.71	-7390.14	40°32'18.834"N	104°52'45.102"W	0.00	End of Tangent

## HOLE & CASING SECTIONS - Ref Wellbore: LAUNER 12 PWB Ref Wellpath: LAUNER 12 (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	7400.27	7372.27	28.00	6905.00	0.00	0.00	-437.73	-254.46





# Planned Wellpath Report

LAUNER 12 (REV-C.0) PWP

Page 8 of 9



## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#20 LAUNER 12 (630'FSL & 459'FEL, SEC.26)
Area	COLORADO	Well	LAUNER 12
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 12 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	4163.10	-42.24	3179860.07	1444245.18	40°33'03.784"N	104°51'09.932"W	polygon
SEC.27-T07N-R67W		-18.00	4163.10	-42.24	3179860.07	1444245.18	40°33'03.784"N	104°51'09.932"W	polygon
2) LAUNER 12 BHL ON PLAT REV-2 (254'FSL & 2561'FEL, SEC.27)	14536.14	6905.00	-384.71	-7390.14	3172545.81	1439643.99	40°32'18.834"N	104°52'45.102"W	point
1) LAUNER 12 LANDING REV-2 (191'FSL & 591'FEL, SEC.26)	7277.82	6905.00	-438.64	-132.01	3179803.90	1439643.05	40°32'18.312"N	104°51'11.095"W	point
LAUNER 12 BHL ON PLAT REV-1(254'FSL & 2560'FEL, SEC.27)		7034.00	-384.71	-7390.14	3172545.81	1439643.99	40°32'18.834"N	104°52'45.102"W	point
LAUNER 12 LANDING		7034.00	-438.64	-1.11	3179934.79	1439644.01	40°32'18.312"N	104°51'09.400"W	point
LAUNER 12 LANDING REV-1		7034.00	-438.64	-132.16	3179803.75	1439643.05	40°32'18.312"N	104°51'11.097"W	point
SEC.26-T07N-R67W 460'FEL SETBACK		7257.00	161.76	110.62	3180042.13	1440245.19	40°32'24.245"N	104°51'07.952"W	polygon
SEC.27-T07N-R67W (MIDDLE SECTION)		7257.00	161.76	110.62	3180042.13	1440245.19	40°32'24.245"N	104°51'07.952"W	polygon

## SURVEY PROGRAM - Ref Wellbore: LAUNER 12 PWB Ref Wellpath: LAUNER 12 (REV-C.0) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
28.00	14537.00	ISCWSA MWD, Rev. 4 (Standard)		LAUNER 12 PWB



# Planned Wellpath Report

LAUNER 12 (REV-C.0) PWP

Page 9 of 9



## REFERENCE WELLPATH IDENTIFICATION

Operator	EXTRACTION OIL & GAS	Slot	SLOT#20 LAUNER 12 (630'FSL & 459'FEL,SEC.26)
Area	COLORADO	Well	LAUNER 12
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	LAUNER 12 PWB
Facility	SEC.26-T07N-R67W		

## DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
28.00	0.000	131.018	28.00	Tie On
2200.00	0.000	131.018	2200.00	End of Tangent
2627.80	8.556	131.018	2626.21	End of Build
6312.95	8.556	131.018	6270.35	End of Tangent
7277.82	90.000	270.426	6905.00	End of 3D Arc
14536.14	90.000	270.426	6905.00	End of Tangent