

# HRM RESOURCES

Location: COLORADO Slot: SLOT#02 ALMA 1S-66-25-2NH (337°FSL & 1859°FEL, SEC.25)  
Field: ADAMS COUNTY Well: ALMA 1S-66-25-2NH  
Facility: SEC.25-T01S-R66W Wellbore: ALMA 1S-66-25-2NH PWB

Plot reference wellpath is ALMA 1S-66-25-2NH PWP (REV-B.0)		Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to RIG (RKB)		* = Wellpath was transformed from a different geoidic datum
Measured depths are referenced to RIG (RKB)		North Reference: True north
RIG (RKB) to Mean Sea Level: 5195 feet		Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#02 ALMA 1S-66-25-2NH (337°FSL & 1859°FEL, SEC.25): 0 feet		Depths are in feet
Coordinates are in feet referenced to Slot		Created by: guesler on 2016-12-16
		Database: WA_DEN_Denver_Deft

## Location Information

Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.25-T01S-R66W		3218416.711	1218223.151	39°56'47.172"N	104°43'16.176"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
SLOT#02 ALMA 1S-66-25-2NH (337°FSL & 1859°FEL, SEC.25)	0.00	-14.02	3218402.690	1218223.027	39°56'47.172"N
RIG (RKB) to Mud line (At Slot: SLOT#02 ALMA 1S-66-25-2NH (337°FSL & 1859°FEL, SEC.25)					5195ft
Mean Sea Level to Mud line (At Slot: SLOT#02 ALMA 1S-66-25-2NH (337°FSL & 1859°FEL, SEC.25)					0ft
RIG (RKB) to Mean Sea Level					5195ft

## Well Profile Data

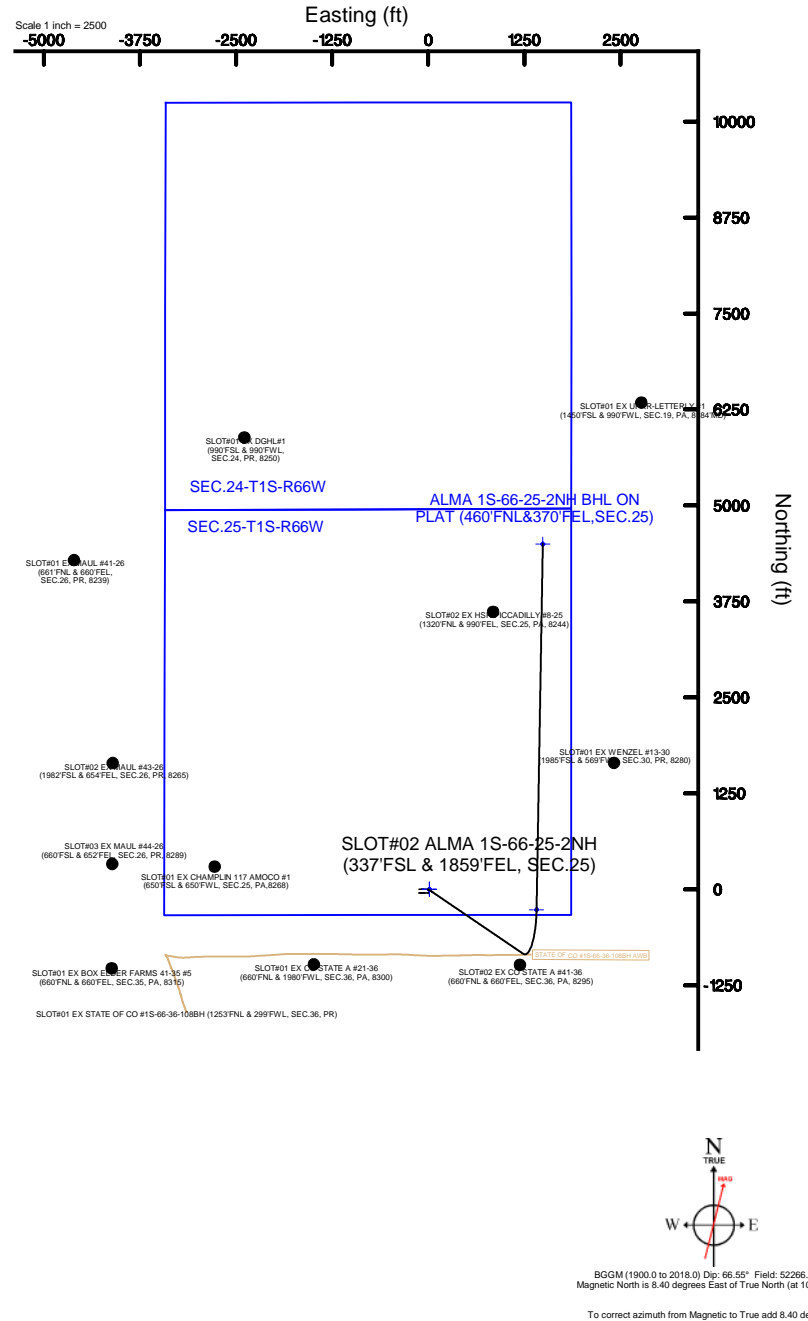
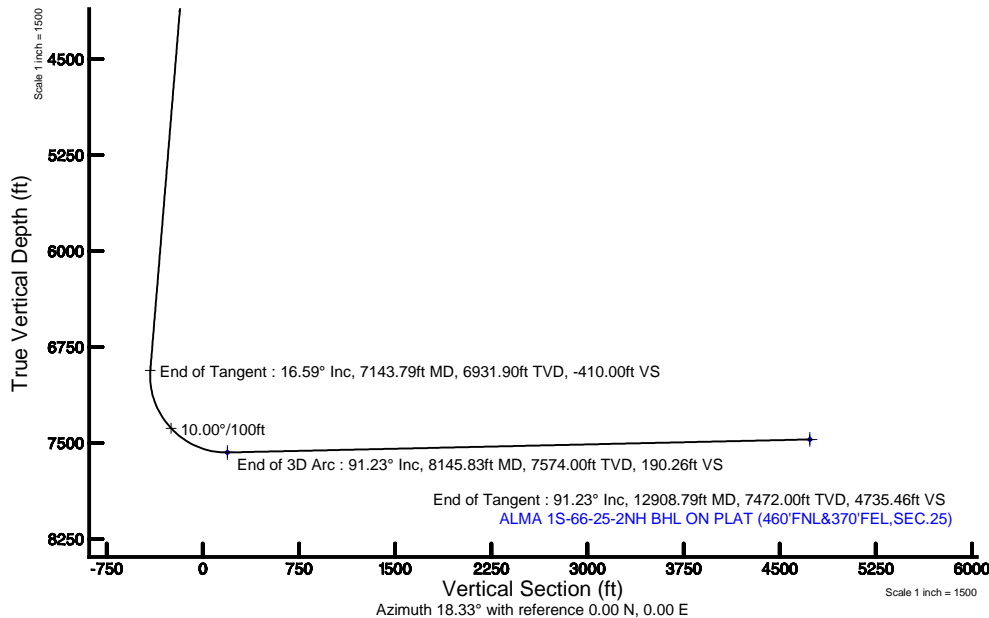
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	14.00	0.000	124.258	14.00	0.00	0.00	0.00	0.00
End of Tangent	1500.00	0.000	124.258	1500.00	0.00	0.00	0.00	0.00
End of Build	2329.38	16.588	124.258	2317.84	-67.11	98.54	2.00	-32.73
End of Tangent	7143.79	16.588	124.258	6931.90	-840.80	1234.52	0.00	-410.00
End of 3D Arc	8145.83	91.227	0.975	7574.00	-265.89	1407.88	10.00	190.26
End of Tangent	12908.79	91.227	0.975	7472.00	4495.29	1488.92	0.00	4735.46

## Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.24-T1S-R66W		0.00	0.00	14.02	3218416.71	1218223.15	39°56'47.172"N	104°43'16.176"W
SEC.24-T1S-R66W SOUTH 1/2 SECTION		0.00	0.00	14.02	3218416.71	1218223.15	39°56'47.172"N	104°43'16.176"W
SEC.25-T1S-R66W		0.00	0.00	14.02	3218416.71	1218223.15	39°56'47.172"N	104°43'16.176"W
ALMA 1S-66-25-2NH BHL ON PLAT (460°FNL&370°FEL, SEC.25)	12908.79	7472.00	4495.29	1488.92	3219852.03	1222731.09	39°56'31.596"N	104°42'57.240"W
ALMA 1S-66-25-2NH ENTRY POINT	8145.83	7574.00	-265.89	1407.88	3219812.80	1217969.52	39°55'44.544"N	104°42'58.284"W
SEC.24/25-T1S-R66W HARDLINES (460°FNL 1/2 SEC.24)		7800.00	0.00	14.02	3218416.71	1218223.15	39°56'47.172"N	104°43'16.176"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
12908.79	91.227	0.975	7472.00	4495.29	1488.92	3219852.03	1222731.09	39°56'31.596"N	104°42'57.240"W





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# Planned Wellpath Report

ALMA 1S-66-25-2NH PWP (REV-B.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	HRM RESOURCES	Slot	SLOT#02 ALMA 1S-66-25-2NH (337'FSL & 1859'FEL, SEC.25)
Area	COLORADO	Well	ALMA 1S-66-25-2NH
Field	ADAMS COUNTY	Wellbore	ALMA 1S-66-25-2NH PWB
Facility	SEC.25-T01S-R66W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Guenaler
Scale	0.999972	Report Generated	12/16/2016 at 4:26:42 PM
Convergence at slot	0.51° East	Database/Source file	WA_DEN_Denver_Defn/ALMA_1S-66-25-2NH_PWP_REV-B.0_.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	-14.02	3218402.69	1218223.03	39°55'47.172"N	104°43'16.356"W
Facility Reference Pt			3218416.71	1218223.15	39°55'47.172"N	104°43'16.176"W
Field Reference Pt			3218416.71	1218223.15	39°55'47.172"N	104°43'16.176"W

## WELLPATH DATUM

Calculation method	Minimum curvature	RIG (RKB) to Facility Vertical Datum	5195.00ft
Horizontal Reference Pt	Slot	RIG (RKB) to Mean Sea Level	5195.00ft
Vertical Reference Pt	RIG (RKB)	RIG (RKB) to Mud Line at Slot (SLOT#02 ALMA 1S-66-25-2NH (337'FSL & 1859'FEL, SEC.25))	5195.00ft
MD Reference Pt	RIG (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	18.33°



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ALMA 1S-66-25-2NH PWP (REV-B.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	HRM RESOURCES	Slot	SLOT#02 ALMA 1S-66-25-2NH (337'FSL & 1859'FEL, SEC.25)
Area	COLORADO	Well	ALMA 1S-66-25-2NH
Field	ADAMS COUNTY	Wellbore	ALMA 1S-66-25-2NH PWB
Facility	SEC.25-T01S-R66W		

## WELLPATH DATA (135 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	124.258	0.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.356"W	0.00	
14.00	0.000	124.258	14.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.356"W	0.00	Tie On
114.00†	0.000	124.258	114.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.356"W	0.00	
214.00†	0.000	124.258	214.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.356"W	0.00	
314.00†	0.000	124.258	314.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.356"W	0.00	
414.00†	0.000	124.258	414.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.356"W	0.00	
514.00†	0.000	124.258	514.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.356"W	0.00	
614.00†	0.000	124.258	614.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.356"W	0.00	
714.00†	0.000	124.258	714.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.356"W	0.00	
814.00†	0.000	124.258	814.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.356"W	0.00	
914.00†	0.000	124.258	914.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.356"W	0.00	
1014.00†	0.000	124.258	1014.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.356"W	0.00	
1114.00†	0.000	124.258	1114.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.356"W	0.00	
1214.00†	0.000	124.258	1214.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.356"W	0.00	
1314.00†	0.000	124.258	1314.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.356"W	0.00	
1414.00†	0.000	124.258	1414.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.356"W	0.00	
1500.00	0.000	124.258	1500.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.356"W	0.00	End of Tangent
1514.00†	0.280	124.258	1514.00	-0.01	-0.02	0.03	39°55'47.172"N	104°43'16.356"W	2.00	
1614.00†	2.280	124.258	1613.97	-0.62	-1.28	1.87	39°55'47.159"N	104°43'16.332"W	2.00	
1714.00†	4.280	124.258	1713.80	-2.19	-4.50	6.60	39°55'47.128"N	104°43'16.271"W	2.00	
1814.00†	6.280	124.258	1813.37	-4.72	-9.68	14.21	39°55'47.076"N	104°43'16.174"W	2.00	
1914.00†	8.280	124.258	1912.56	-8.20	-16.81	24.68	39°55'47.006"N	104°43'16.039"W	2.00	
2014.00†	10.280	124.258	2011.25	-12.62	-25.89	38.01	39°55'46.916"N	104°43'15.868"W	2.00	
2114.00†	12.280	124.258	2109.31	-17.99	-36.90	54.18	39°55'46.807"N	104°43'15.661"W	2.00	
2214.00†	14.280	124.258	2206.63	-24.30	-49.83	73.16	39°55'46.680"N	104°43'15.417"W	2.00	
2314.00†	16.280	124.258	2303.09	-31.53	-64.66	94.94	39°55'46.533"N	104°43'15.137"W	2.00	
2329.38	16.588	124.258	2317.84	-32.73	-67.11	98.54	39°55'46.509"N	104°43'15.091"W	2.00	End of Build
2414.00†	16.588	124.258	2398.94	-39.36	-80.71	118.50	39°55'46.374"N	104°43'14.835"W	0.00	
2514.00†	16.588	124.258	2494.78	-47.19	-96.78	142.10	39°55'46.216"N	104°43'14.532"W	0.00	
2614.00†	16.588	124.258	2590.62	-55.03	-112.85	165.69	39°55'46.057"N	104°43'14.229"W	0.00	



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# Planned Wellpath Report

ALMA 1S-66-25-2NH PWP (REV-B.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	HRM RESOURCES	Slot	SLOT#02 ALMA 1S-66-25-2NH (337'FSL & 1859'FEL, SEC.25)
Area	COLORADO	Well	ALMA 1S-66-25-2NH
Field	ADAMS COUNTY	Wellbore	ALMA 1S-66-25-2NH PWB
Facility	SEC.25-T01S-R66W		

## WELLPATH DATA (135 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2714.00†	16.588	124.258	2686.46	-62.87	-128.92	189.29	39°55'45.898"N	104°43'13.926"W	0.00	
2814.00†	16.588	124.258	2782.29	-70.70	-144.99	212.88	39°55'45.739"N	104°43'13.623"W	0.00	
2914.00†	16.588	124.258	2878.13	-78.54	-161.06	236.48	39°55'45.580"N	104°43'13.320"W	0.00	
3014.00†	16.588	124.258	2973.97	-86.37	-177.13	260.08	39°55'45.421"N	104°43'13.018"W	0.00	
3114.00†	16.588	124.258	3069.81	-94.21	-193.20	283.67	39°55'45.263"N	104°43'12.715"W	0.00	
3214.00†	16.588	124.258	3165.65	-102.05	-209.27	307.27	39°55'45.104"N	104°43'12.412"W	0.00	
3314.00†	16.588	124.258	3261.49	-109.88	-225.34	330.86	39°55'44.945"N	104°43'12.109"W	0.00	
3414.00†	16.588	124.258	3357.33	-117.72	-241.41	354.46	39°55'44.786"N	104°43'11.806"W	0.00	
3514.00†	16.588	124.258	3453.16	-125.56	-257.48	378.05	39°55'44.627"N	104°43'11.503"W	0.00	
3614.00†	16.588	124.258	3549.00	-133.39	-273.55	401.65	39°55'44.469"N	104°43'11.200"W	0.00	
3714.00†	16.588	124.258	3644.84	-141.23	-289.62	425.24	39°55'44.310"N	104°43'10.897"W	0.00	
3814.00†	16.588	124.258	3740.68	-149.07	-305.69	448.84	39°55'44.151"N	104°43'10.595"W	0.00	
3914.00†	16.588	124.258	3836.52	-156.90	-321.76	472.43	39°55'43.992"N	104°43'10.292"W	0.00	
4014.00†	16.588	124.258	3932.36	-164.74	-337.83	496.03	39°55'43.833"N	104°43'09.989"W	0.00	
4114.00†	16.588	124.258	4028.19	-172.57	-353.90	519.63	39°55'43.675"N	104°43'09.686"W	0.00	
4214.00†	16.588	124.258	4124.03	-180.41	-369.97	543.22	39°55'43.516"N	104°43'09.383"W	0.00	
4314.00†	16.588	124.258	4219.87	-188.25	-386.04	566.82	39°55'43.357"N	104°43'09.080"W	0.00	
4414.00†	16.588	124.258	4315.71	-196.08	-402.11	590.41	39°55'43.198"N	104°43'08.777"W	0.00	
4514.00†	16.588	124.258	4411.55	-203.92	-418.18	614.01	39°55'43.039"N	104°43'08.474"W	0.00	
4614.00†	16.588	124.258	4507.39	-211.76	-434.25	637.60	39°55'42.880"N	104°43'08.172"W	0.00	
4714.00†	16.588	124.258	4603.23	-219.59	-450.32	661.20	39°55'42.722"N	104°43'07.869"W	0.00	
4814.00†	16.588	124.258	4699.06	-227.43	-466.40	684.79	39°55'42.563"N	104°43'07.566"W	0.00	
4914.00†	16.588	124.258	4794.90	-235.27	-482.47	708.39	39°55'42.404"N	104°43'07.263"W	0.00	
5014.00†	16.588	124.258	4890.74	-243.10	-498.54	731.98	39°55'42.245"N	104°43'06.960"W	0.00	
5114.00†	16.588	124.258	4986.58	-250.94	-514.61	755.58	39°55'42.086"N	104°43'06.657"W	0.00	
5214.00†	16.588	124.258	5082.42	-258.77	-530.68	779.17	39°55'41.928"N	104°43'06.354"W	0.00	
5314.00†	16.588	124.258	5178.26	-266.61	-546.75	802.77	39°55'41.769"N	104°43'06.051"W	0.00	
5414.00†	16.588	124.258	5274.09	-274.45	-562.82	826.37	39°55'41.610"N	104°43'05.749"W	0.00	
5514.00†	16.588	124.258	5369.93	-282.28	-578.89	849.96	39°55'41.451"N	104°43'05.446"W	0.00	
5614.00†	16.588	124.258	5465.77	-290.12	-594.96	873.56	39°55'41.292"N	104°43'05.143"W	0.00	



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# Planned Wellpath Report

ALMA 1S-66-25-2NH PWP (REV-B.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	HRM RESOURCES	Slot	SLOT#02 ALMA 1S-66-25-2NH (337'FSL & 1859'FEL, SEC.25)
Area	COLORADO	Well	ALMA 1S-66-25-2NH
Field	ADAMS COUNTY	Wellbore	ALMA 1S-66-25-2NH PWB
Facility	SEC.25-T01S-R66W		

## WELLPATH DATA (135 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5714.00†	16.588	124.258	5561.61	-297.96	-611.03	897.15	39°55'41.133"N	104°43'04.840"W	0.00	
5814.00†	16.588	124.258	5657.45	-305.79	-627.10	920.75	39°55'40.975"N	104°43'04.537"W	0.00	
5914.00†	16.588	124.258	5753.29	-313.63	-643.17	944.34	39°55'40.816"N	104°43'04.234"W	0.00	
6014.00†	16.588	124.258	5849.12	-321.46	-659.24	967.94	39°55'40.657"N	104°43'03.931"W	0.00	
6114.00†	16.588	124.258	5944.96	-329.30	-675.31	991.53	39°55'40.498"N	104°43'03.629"W	0.00	
6214.00†	16.588	124.258	6040.80	-337.14	-691.38	1015.13	39°55'40.339"N	104°43'03.326"W	0.00	
6314.00†	16.588	124.258	6136.64	-344.97	-707.45	1038.72	39°55'40.180"N	104°43'03.023"W	0.00	
6414.00†	16.588	124.258	6232.48	-352.81	-723.52	1062.32	39°55'40.022"N	104°43'02.720"W	0.00	
6514.00†	16.588	124.258	6328.32	-360.65	-739.59	1085.91	39°55'39.863"N	104°43'02.417"W	0.00	
6614.00†	16.588	124.258	6424.16	-368.48	-755.66	1109.51	39°55'39.704"N	104°43'02.114"W	0.00	
6714.00†	16.588	124.258	6519.99	-376.32	-771.73	1133.11	39°55'39.545"N	104°43'01.811"W	0.00	
6814.00†	16.588	124.258	6615.83	-384.16	-787.80	1156.70	39°55'39.386"N	104°43'01.508"W	0.00	
6914.00†	16.588	124.258	6711.67	-391.99	-803.87	1180.30	39°55'39.228"N	104°43'01.206"W	0.00	
7014.00†	16.588	124.258	6807.51	-399.83	-819.94	1203.89	39°55'39.069"N	104°43'00.903"W	0.00	
7114.00†	16.588	124.258	6903.35	-407.66	-836.01	1227.49	39°55'38.910"N	104°43'00.600"W	0.00	
7143.79	16.588	124.258	6931.90	-410.00	-840.80	1234.52	39°55'38.863"N	104°43'00.510"W	0.00	End of Tangent
7214.00†	14.158	99.147	6999.67	-411.38	-847.81	1251.30	39°55'38.793"N	104°43'00.294"W	10.00	
7314.00†	16.151	60.923	7096.42	-399.16	-842.99	1275.59	39°55'38.841"N	104°42'59.982"W	10.00	
7414.00†	22.742	37.877	7190.80	-370.64	-820.91	1299.67	39°55'39.059"N	104°42'59.673"W	10.00	
7514.00†	31.135	25.718	7279.93	-326.67	-782.27	1322.82	39°55'39.441"N	104°42'59.376"W	10.00	
7614.00†	40.213	18.473	7361.12	-268.61	-728.22	1344.32	39°55'39.975"N	104°42'59.100"W	10.00	
7714.00†	49.599	13.562	7431.89	-198.20	-660.41	1363.53	39°55'40.645"N	104°42'58.854"W	10.00	
7814.00†	59.141	9.869	7490.09	-117.60	-580.91	1379.85	39°55'41.431"N	104°42'58.644"W	10.00	
7914.00†	68.768	6.853	7533.96	-29.24	-492.13	1392.80	39°55'42.308"N	104°42'58.478"W	10.00	
8014.00†	78.442	4.211	7562.15	64.18	-396.76	1401.99	39°55'43.251"N	104°42'58.360"W	10.00	
8114.00†	88.139	1.747	7573.82	159.82	-297.70	1407.12	39°55'44.230"N	104°42'58.294"W	10.00	
8145.83	91.227	0.975	7574.00†	190.26	-265.89	1407.88	39°55'44.544"N	104°42'58.284"W	10.00	End of 3D Arc
8214.00†	91.227	0.975	7572.54	255.32	-197.74	1409.04	39°55'45.217"N	104°42'58.269"W	0.00	
8314.00†	91.227	0.975	7570.40	350.74	-97.78	1410.74	39°55'46.205"N	104°42'58.247"W	0.00	
8414.00†	91.227	0.975	7568.26	446.17	2.18	1412.44	39°55'47.193"N	104°42'58.225"W	0.00	



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# Planned Wellpath Report

ALMA 1S-66-25-2NH PWP (REV-B.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	HRM RESOURCES	Slot	SLOT#02 ALMA 1S-66-25-2NH (337'FSL & 1859'FEL, SEC.25)
Area	COLORADO	Well	ALMA 1S-66-25-2NH
Field	ADAMS COUNTY	Wellbore	ALMA 1S-66-25-2NH PWB
Facility	SEC.25-T01S-R66W		

## WELLPATH DATA (135 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8514.00†	91.227	0.975	7566.12	541.60	102.15	1414.14	39°55'48.181"N	104°42'58.203"W	0.00	
8614.00†	91.227	0.975	7563.97	637.03	202.11	1415.84	39°55'49.169"N	104°42'58.181"W	0.00	
8714.00†	91.227	0.975	7561.83	732.46	302.07	1417.54	39°55'50.157"N	104°42'58.159"W	0.00	
8814.00†	91.227	0.975	7559.69	827.88	402.03	1419.25	39°55'51.145"N	104°42'58.138"W	0.00	
8914.00†	91.227	0.975	7557.55	923.31	502.00	1420.95	39°55'52.133"N	104°42'58.116"W	0.00	
9014.00†	91.227	0.975	7555.41	1018.74	601.96	1422.65	39°55'53.120"N	104°42'58.094"W	0.00	
9114.00†	91.227	0.975	7553.27	1114.17	701.92	1424.35	39°55'54.108"N	104°42'58.072"W	0.00	
9214.00†	91.227	0.975	7551.12	1209.60	801.88	1426.05	39°55'55.096"N	104°42'58.050"W	0.00	
9314.00†	91.227	0.975	7548.98	1305.02	901.85	1427.75	39°55'56.084"N	104°42'58.028"W	0.00	
9414.00†	91.227	0.975	7546.84	1400.45	1001.81	1429.46	39°55'57.072"N	104°42'58.006"W	0.00	
9514.00†	91.227	0.975	7544.70	1495.88	1101.77	1431.16	39°55'58.060"N	104°42'57.984"W	0.00	
9614.00†	91.227	0.975	7542.56	1591.31	1201.74	1432.86	39°55'59.048"N	104°42'57.962"W	0.00	
9714.00†	91.227	0.975	7540.42	1686.74	1301.70	1434.56	39°56'00.036"N	104°42'57.940"W	0.00	
9814.00†	91.227	0.975	7538.28	1782.16	1401.66	1436.26	39°56'01.023"N	104°42'57.918"W	0.00	
9914.00†	91.227	0.975	7536.13	1877.59	1501.62	1437.96	39°56'02.011"N	104°42'57.896"W	0.00	
10014.00†	91.227	0.975	7533.99	1973.02	1601.59	1439.66	39°56'02.999"N	104°42'57.875"W	0.00	
10114.00†	91.227	0.975	7531.85	2068.45	1701.55	1441.37	39°56'03.987"N	104°42'57.853"W	0.00	
10214.00†	91.227	0.975	7529.71	2163.87	1801.51	1443.07	39°56'04.975"N	104°42'57.831"W	0.00	
10314.00†	91.227	0.975	7527.57	2259.30	1901.47	1444.77	39°56'05.963"N	104°42'57.809"W	0.00	
10414.00†	91.227	0.975	7525.43	2354.73	2001.44	1446.47	39°56'06.951"N	104°42'57.787"W	0.00	
10514.00†	91.227	0.975	7523.29	2450.16	2101.40	1448.17	39°56'07.939"N	104°42'57.765"W	0.00	
10614.00†	91.227	0.975	7521.14	2545.59	2201.36	1449.87	39°56'08.926"N	104°42'57.743"W	0.00	
10714.00†	91.227	0.975	7519.00	2641.01	2301.32	1451.58	39°56'09.914"N	104°42'57.721"W	0.00	
10814.00†	91.227	0.975	7516.86	2736.44	2401.29	1453.28	39°56'10.902"N	104°42'57.699"W	0.00	
10914.00†	91.227	0.975	7514.72	2831.87	2501.25	1454.98	39°56'11.890"N	104°42'57.677"W	0.00	
11014.00†	91.227	0.975	7512.58	2927.30	2601.21	1456.68	39°56'12.878"N	104°42'57.655"W	0.00	
11114.00†	91.227	0.975	7510.44	3022.73	2701.17	1458.38	39°56'13.866"N	104°42'57.633"W	0.00	
11214.00†	91.227	0.975	7508.29	3118.15	2801.14	1460.08	39°56'14.854"N	104°42'57.612"W	0.00	
11314.00†	91.227	0.975	7506.15	3213.58	2901.10	1461.79	39°56'15.842"N	104°42'57.590"W	0.00	
11414.00†	91.227	0.975	7504.01	3309.01	3001.06	1463.49	39°56'16.829"N	104°42'57.568"W	0.00	





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## REFERENCE WELLPATH IDENTIFICATION

Operator	HRM RESOURCES	Slot	SLOT#02 ALMA 1S-66-25-2NH (337'FSL & 1859'FEL, SEC.25)
Area	COLORADO	Well	ALMA 1S-66-25-2NH
Field	ADAMS COUNTY	Wellbore	ALMA 1S-66-25-2NH PWB
Facility	SEC.25-T01S-R66W		

## WELLPATH DATA (135 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11514.00†	91.227	0.975	7501.87	3404.44	3101.02	1465.19	39°56'17.817"N	104°42'57.546"W	0.00	
11614.00†	91.227	0.975	7499.73	3499.87	3200.99	1466.89	39°56'18.805"N	104°42'57.524"W	0.00	
11714.00†	91.227	0.975	7497.59	3595.29	3300.95	1468.59	39°56'19.793"N	104°42'57.502"W	0.00	
11814.00†	91.227	0.975	7495.45	3690.72	3400.91	1470.29	39°56'20.781"N	104°42'57.480"W	0.00	
11914.00†	91.227	0.975	7493.30	3786.15	3500.87	1472.00	39°56'21.769"N	104°42'57.458"W	0.00	
12014.00†	91.227	0.975	7491.16	3881.58	3600.84	1473.70	39°56'22.757"N	104°42'57.436"W	0.00	
12114.00†	91.227	0.975	7489.02	3977.00	3700.80	1475.40	39°56'23.744"N	104°42'57.414"W	0.00	
12214.00†	91.227	0.975	7486.88	4072.43	3800.76	1477.10	39°56'24.732"N	104°42'57.392"W	0.00	
12314.00†	91.227	0.975	7484.74	4167.86	3900.73	1478.80	39°56'25.720"N	104°42'57.370"W	0.00	
12414.00†	91.227	0.975	7482.60	4263.29	4000.69	1480.50	39°56'26.708"N	104°42'57.348"W	0.00	
12514.00†	91.227	0.975	7480.45	4358.72	4100.65	1482.20	39°56'27.696"N	104°42'57.327"W	0.00	
12614.00†	91.227	0.975	7478.31	4454.14	4200.61	1483.91	39°56'28.684"N	104°42'57.305"W	0.00	
12714.00†	91.227	0.975	7476.17	4549.57	4300.58	1485.61	39°56'29.672"N	104°42'57.283"W	0.00	
12814.00†	91.227	0.975	7474.03	4645.00	4400.54	1487.31	39°56'30.660"N	104°42'57.261"W	0.00	
12908.79	91.227	0.975	7472.00 <sup>2</sup>	4735.46	4495.29	1488.92	39°56'31.596"N	104°42'57.240"W	0.00	End of Tangent



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# Planned Wellpath Report

ALMA 1S-66-25-2NH PWP (REV-B.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	HRM RESOURCES	Slot	SLOT#02 ALMA 1S-66-25-2NH (337'FSL & 1859'FEL, SEC.25)
Area	COLORADO	Well	ALMA 1S-66-25-2NH
Field	ADAMS COUNTY	Wellbore	ALMA 1S-66-25-2NH PWB
Facility	SEC.25-T01S-R66W		

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.24-T1S-R66W		0.00	0.00	14.02	3218416.71	1218223.15	39°55'47.172"N	104°43'16.176"W	polygon
SEC.24-T1S-R66W SOUTH 1/2 SECTION		0.00	0.00	14.02	3218416.71	1218223.15	39°55'47.172"N	104°43'16.176"W	polygon
SEC.25-T1S-R66W		0.00	0.00	14.02	3218416.71	1218223.15	39°55'47.172"N	104°43'16.176"W	polygon
2) ALMA 1S-66-25-2NH BHL ON PLAT (460'FNL&370'FEL,SEC.25)	12908.79	7472.00	4495.29	1488.92	3219852.03	1222731.09	39°56'31.596"N	104°42'57.240"W	point
1) ALMA 1S-66-25-2NH ENTRY POINT	8145.83	7574.00	-265.89	1407.88	3219812.80	1217969.52	39°55'44.544"N	104°42'58.284"W	point
SEC.24/25-T1S-R66W HARDLINES (460'FNL 1/2 SEC.24)		7800.00	0.00	14.02	3218416.71	1218223.15	39°55'47.172"N	104°43'16.176"W	polygon

## SURVEY PROGRAM -

Ref Wellbore: ALMA 1S-66-25-2NH PWB Ref Wellpath: ALMA 1S-66-25-2NH PWP (REV-B.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
14.00	15523.35	Custom BHI AutoTrak Curve (Axial Corr, Short spacing) (Rockies 0.03Gt model)		ALMA 1S-66-25-2NH PWB





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# Planned Wellpath Report

ALMA 1S-66-25-2NH PWP (REV-B.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	HRM RESOURCES	Slot	SLOT#02 ALMA 1S-66-25-2NH (337'FSL & 1859'FEL, SEC.25)
Area	COLORADO	Well	ALMA 1S-66-25-2NH
Field	ADAMS COUNTY	Wellbore	ALMA 1S-66-25-2NH PWB
Facility	SEC.25-T01S-R66W		

## DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
14.00	0.000	124.258	14.00	Tie On
1500.00	0.000	124.258	1500.00	End of Tangent
2329.38	16.588	124.258	2317.84	End of Build
7143.79	16.588	124.258	6931.90	End of Tangent
8145.83	91.227	0.975	7574.00	End of 3D Arc
12908.79	91.227	0.975	7472.00	End of Tangent