

# HRM RESOURCES

Location: COLORADO Slot: SLOT#05 ALMA 1S-66-2524-5NH (337°FSL & 1904°FEL, SEC.25)  
Field: ADAMS COUNTY Well: ALMA 1S-66-2524-5NH  
Facility: SEC.25-T01S-R66W Wellbore: ALMA 1S-66-2524-5NH PWB

Plot reference wellpath is ALMA 1S-66-2524-5NH PWP (REV-A.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: 5194 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#05 ALMA 1S-66-2524-5NH (337°FSL & 1904°FEL, SEC.25): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: ingram on 2016-10-14
	Database: WA_DEN_Denver_Defn

## Location Information

Facility Name				Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.25-T01S-R66W				3218416.711	1218223.151	39°55'47.172"N	104°43'16.176"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
SLOT#05 ALMA 1S-66-2524-5NH (337°FSL & 1904°FEL, SEC.25)	0.00	-58.89	3218357.821	1218223.833	39°55'47.172"N	104°43'16.932"W	
RIG (RKB) to Mud line (At Slot: SLOT#05 ALMA 1S-66-2524-5NH (337°FSL & 1904°FEL, SEC.25)						5194ft	
Mean Sea Level to Mud line (At Slot: SLOT#05 ALMA 1S-66-2524-5NH (337°FSL & 1904°FEL, SEC.25)						0ft	
RIG (RKB) to Mean Sea Level						5194ft	

## Well Profile Data

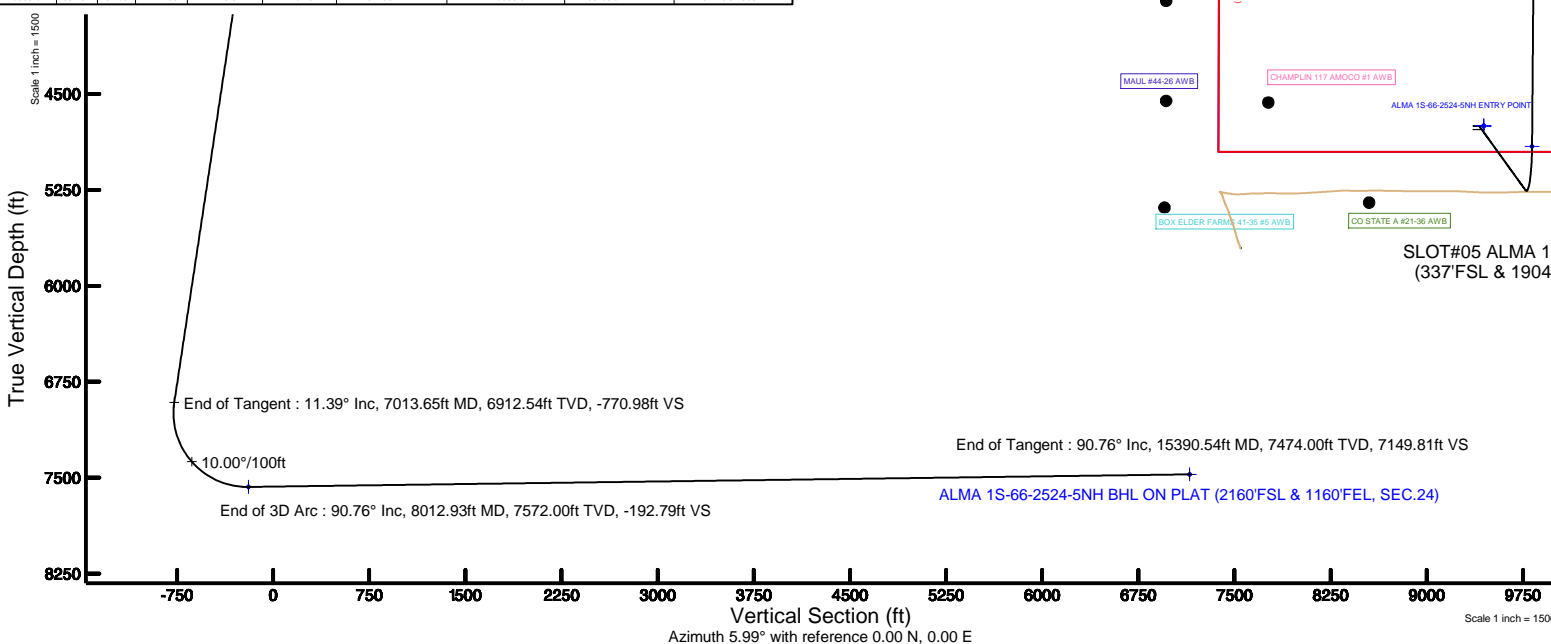
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	14.00	0.000	144.275	14.00	0.00	0.00	0.00	0.00
End of Tangent	1500.00	0.000	144.275	1500.00	0.00	0.00	0.00	0.00
End of Build	2069.49	11.390	144.275	2065.74	-45.80	32.94	2.00	-42.12
End of Tangent	7013.65	11.390	144.275	6912.54	-838.45	603.05	0.00	-770.98
End of 3D Arc	8012.93	90.761	0.456	7572.00	-265.92	687.11	10.00	-192.79
End of Tangent	15390.54	90.761	0.456	7474.00	7110.81	745.78	0.00	7149.81

## Targets

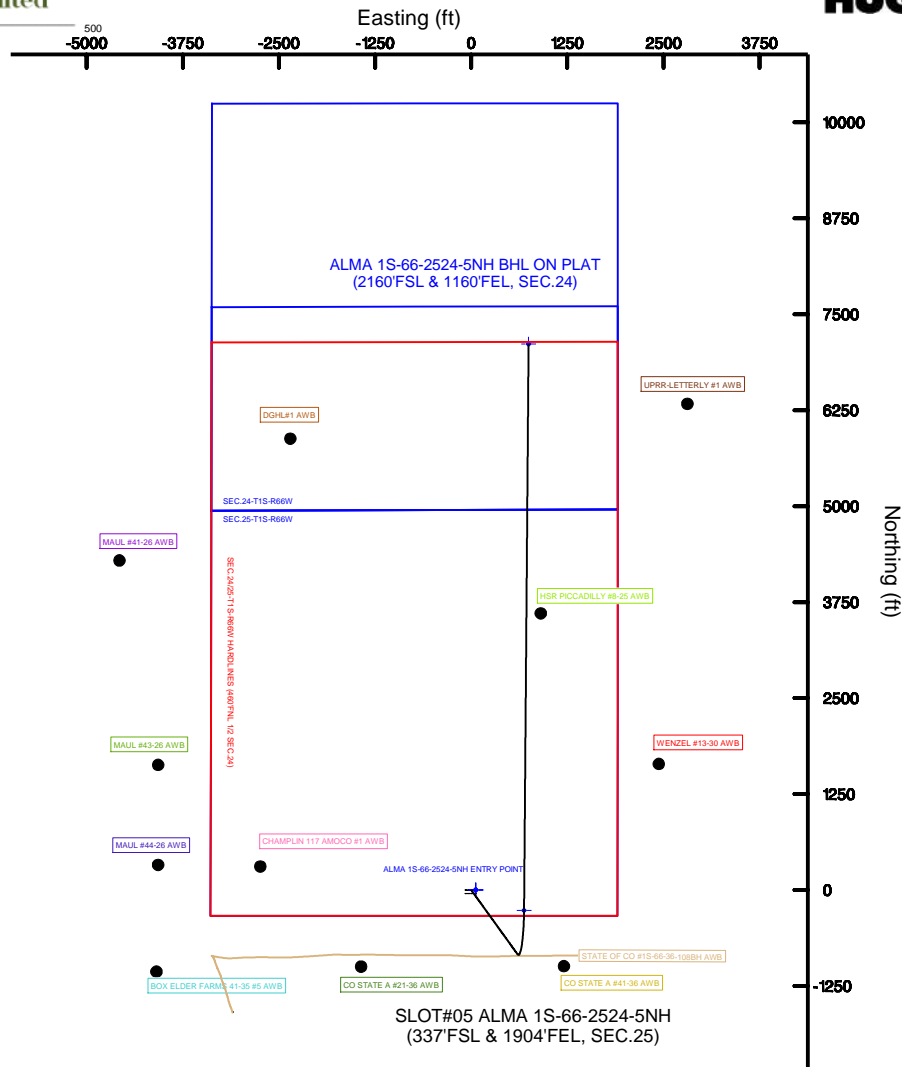
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.24-T1S-R66W		-1.00	0.00	58.89	3218416.71	1218223.15	39°55'47.12"N	104°43'16.176"W
SEC.24-T1S-R66W SOUTH 1/2 SECTION		-1.00	0.00	58.89	3218416.71	1218223.15	39°55'47.12"N	104°43'16.176"W
SEC.25-T1S-R66W		-1.00	0.00	58.89	3218416.71	1218223.15	39°55'47.12"N	104°43'16.176"W
ALMA 1S-66-2524-5NH BHL ON PLAT (2160°FSL & 1160°FEL, SEC.24)	15390.54	7474.00	7110.81	745.78	3219041.12	1225339.51	39°56'57.444"N	104°43'07.356"W
ALMA 1S-66-2524-5NH ENTRY POINT	8012.93	7572.00	-265.92	687.11	3219047.22	1217962.77	39°55'44.544"N	104°43'08.112"W
SEC.24/25-T1S-R66W HARDLINES (460°FNL 1/2 SEC.24)		7789.00	0.00	58.89	3218416.71	1218223.15	39°55'47.12"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
15390.54	90.761	0.456	7474.00	7110.81	745.78	3219041.12	1225339.51	39°56'57.444"N	104°43'07.356"W



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BGGM (1900.0 to 2018.0) Dip: 66.55° Field: 52266.2 nT  
Magnetic North is 8.40 degrees East of True North (at 10/7/2016)

To correct azimuth from Magnetic to True add 8.40 degrees



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# Planned Wellpath Report

ALMA 1S-66-2524-5NH PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	HRM RESOURCES	Slot	SLOT#05 ALMA 1S-66-2524-5NH (337'FSL & 1904'FEL, SEC.25)
Area	COLORADO	Well	ALMA 1S-66-2524-5NH
Field	ADAMS COUNTY	Wellbore	ALMA 1S-66-2524-5NH 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	Ingmjmr
Scale	0.999972	Report Generated	10/14/2016 at 12:24:50 PM
Convergence at slot	0.51° East	Database/Source file	WA_DEN_Denver_Defn/ALMA_1S-66-2524-5NH_PWP_REV-A.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	-58.89	3218357.82	1218222.63	39°55'47.172"N	104°43'16.932"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	5194.00ft
Horizontal Reference Pt	Slot	RIG (RKB) to Mean Sea Level	5194.00ft
Vertical Reference Pt	RIG (RKB)	RIG (RKB) to Mud Line at Slot (SLOT#05 ALMA 1S-66-2524-5NH (337'FSL & 1904'FEL, SEC.25))	5194.00ft
MD Reference Pt	RIG (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	5.99°



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# Planned Wellpath Report

ALMA 1S-66-2524-5NH PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	HRM RESOURCES	Slot	SLOT#05 ALMA 1S-66-2524-5NH (337'FSL & 1904'FEL, SEC.25)
Area	COLORADO	Well	ALMA 1S-66-2524-5NH
Field	ADAMS COUNTY	Wellbore	ALMA 1S-66-2524-5NH PWB
Facility	SEC.25-T01S-R66W		

## WELLPATH DATA (160 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	144.275	0.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.932"W	0.00	
14.00	0.000	144.275	14.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.932"W	0.00	Tie On
114.00†	0.000	144.275	114.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.932"W	0.00	
214.00†	0.000	144.275	214.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.932"W	0.00	
314.00†	0.000	144.275	314.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.932"W	0.00	
414.00†	0.000	144.275	414.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.932"W	0.00	
514.00†	0.000	144.275	514.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.932"W	0.00	
614.00†	0.000	144.275	614.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.932"W	0.00	
714.00†	0.000	144.275	714.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.932"W	0.00	
814.00†	0.000	144.275	814.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.932"W	0.00	
914.00†	0.000	144.275	914.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.932"W	0.00	
1014.00†	0.000	144.275	1014.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.932"W	0.00	
1114.00†	0.000	144.275	1114.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.932"W	0.00	
1214.00†	0.000	144.275	1214.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.932"W	0.00	
1314.00†	0.000	144.275	1314.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.932"W	0.00	
1414.00†	0.000	144.275	1414.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.932"W	0.00	
1500.00	0.000	144.275	1500.00	0.00	0.00	0.00	39°55'47.172"N	104°43'16.932"W	0.00	End of Tangent
1514.00†	0.280	144.275	1514.00	-0.03	-0.03	0.02	39°55'47.172"N	104°43'16.932"W	2.00	
1614.00†	2.280	144.275	1613.97	-1.69	-1.84	1.32	39°55'47.154"N	104°43'16.915"W	2.00	
1714.00†	4.280	144.275	1713.80	-5.96	-6.49	4.66	39°55'47.108"N	104°43'16.872"W	2.00	
1814.00†	6.280	144.275	1813.37	-12.83	-13.96	10.04	39°55'47.034"N	104°43'16.803"W	2.00	
1914.00†	8.280	144.275	1912.56	-22.29	-24.24	17.44	39°55'46.932"N	104°43'16.708"W	2.00	
2014.00†	10.280	144.275	2011.25	-34.33	-37.33	26.85	39°55'46.803"N	104°43'16.587"W	2.00	
2069.49	11.390	144.275	2065.74	-42.12	-45.80	32.94	39°55'46.719"N	104°43'16.509"W	2.00	End of Build
2114.00†	11.390	144.275	2109.38	-48.68	-52.94	38.07	39°55'46.649"N	104°43'16.443"W	0.00	
2214.00†	11.390	144.275	2207.41	-63.42	-68.97	49.61	39°55'46.490"N	104°43'16.295"W	0.00	
2314.00†	11.390	144.275	2305.44	-78.16	-85.00	61.14	39°55'46.332"N	104°43'16.147"W	0.00	
2414.00†	11.390	144.275	2403.47	-92.90	-101.03	72.67	39°55'46.174"N	104°43'15.999"W	0.00	
2514.00†	11.390	144.275	2501.50	-107.64	-117.07	84.20	39°55'46.015"N	104°43'15.851"W	0.00	
2614.00†	11.390	144.275	2599.53	-122.39	-133.10	95.73	39°55'45.857"N	104°43'15.703"W	0.00	
2714.00†	11.390	144.275	2697.56	-137.13	-149.13	107.26	39°55'45.698"N	104°43'15.555"W	0.00	
2814.00†	11.390	144.275	2795.59	-151.87	-165.16	118.79	39°55'45.540"N	104°43'15.407"W	0.00	
2914.00†	11.390	144.275	2893.63	-166.61	-181.19	130.32	39°55'45.381"N	104°43'15.259"W	0.00	
3014.00†	11.390	144.275	2991.66	-181.35	-197.23	141.85	39°55'45.223"N	104°43'15.111"W	0.00	
3114.00†	11.390	144.275	3089.69	-196.10	-213.26	153.38	39°55'45.064"N	104°43'14.963"W	0.00	
3214.00†	11.390	144.275	3187.72	-210.84	-229.29	164.92	39°55'44.906"N	104°43'14.815"W	0.00	
3314.00†	11.390	144.275	3285.75	-225.58	-245.32	176.45	39°55'44.748"N	104°43'14.667"W	0.00	
3414.00†	11.390	144.275	3383.78	-240.32	-261.36	187.98	39°55'44.589"N	104°43'14.519"W	0.00	
3514.00†	11.390	144.275	3481.81	-255.06	-277.39	199.51	39°55'44.431"N	104°43'14.371"W	0.00	
3614.00†	11.390	144.275	3579.84	-269.81	-293.42	211.04	39°55'44.272"N	104°43'14.223"W	0.00	
3714.00†	11.390	144.275	3677.87	-284.55	-309.45	222.57	39°55'44.114"N	104°43'14.075"W	0.00	
3814.00†	11.390	144.275	3775.90	-299.29	-325.48	234.10	39°55'43.955"N	104°43'13.927"W	0.00	
3914.00†	11.390	144.275	3873.93	-314.03	-341.52	245.63	39°55'43.797"N	104°43'13.779"W	0.00	
4014.00†	11.390	144.275	3971.96	-328.77	-357.55	257.16	39°55'43.639"N	104°43'13.631"W	0.00	
4114.00†	11.390	144.275	4069.99	-343.52	-373.58	268.69	39°55'43.480"N	104°43'13.483"W	0.00	



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# Planned Wellpath Report

ALMA 1S-66-2524-5NH PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	HRM RESOURCES	Slot	SLOT#05 ALMA 1S-66-2524-5NH (337'FSL & 1904'FEL, SEC.25)
Area	COLORADO	Well	ALMA 1S-66-2524-5NH
Field	ADAMS COUNTY	Wellbore	ALMA 1S-66-2524-5NH PWB
Facility	SEC.25-T01S-R66W		

## WELLPATH DATA (160 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4214.00†	11.390	144.275	4168.02	-358.26	-389.61	280.23	39°55'43.322"N	104°43'13.335"W	0.00	
4314.00†	11.390	144.275	4266.05	-373.00	-405.64	291.76	39°55'43.163"N	104°43'13.187"W	0.00	
4414.00†	11.390	144.275	4364.08	-387.74	-421.68	303.29	39°55'43.005"N	104°43'13.039"W	0.00	
4514.00†	11.390	144.275	4462.12	-402.48	-437.71	314.82	39°55'42.846"N	104°43'12.891"W	0.00	
4614.00†	11.390	144.275	4560.15	-417.22	-453.74	326.35	39°55'42.688"N	104°43'12.743"W	0.00	
4714.00†	11.390	144.275	4658.18	-431.97	-469.77	337.88	39°55'42.529"N	104°43'12.595"W	0.00	
4814.00†	11.390	144.275	4756.21	-446.71	-485.80	349.41	39°55'42.371"N	104°43'12.447"W	0.00	
4914.00†	11.390	144.275	4854.24	-461.45	-501.84	360.94	39°55'42.213"N	104°43'12.299"W	0.00	
5014.00†	11.390	144.275	4952.27	-476.19	-517.87	372.47	39°55'42.054"N	104°43'12.151"W	0.00	
5114.00†	11.390	144.275	5050.30	-490.93	-533.90	384.00	39°55'41.896"N	104°43'12.003"W	0.00	
5214.00†	11.390	144.275	5148.33	-505.68	-549.93	395.53	39°55'41.737"N	104°43'11.855"W	0.00	
5314.00†	11.390	144.275	5246.36	-520.42	-565.97	407.07	39°55'41.579"N	104°43'11.707"W	0.00	
5414.00†	11.390	144.275	5344.39	-535.16	-582.00	418.60	39°55'41.420"N	104°43'11.559"W	0.00	
5514.00†	11.390	144.275	5442.42	-549.90	-598.03	430.13	39°55'41.262"N	104°43'11.411"W	0.00	
5614.00†	11.390	144.275	5540.45	-564.64	-614.06	441.66	39°55'41.104"N	104°43'11.263"W	0.00	
5714.00†	11.390	144.275	5638.48	-579.39	-630.09	453.19	39°55'40.945"N	104°43'11.115"W	0.00	
5814.00†	11.390	144.275	5736.51	-594.13	-646.13	464.72	39°55'40.787"N	104°43'10.967"W	0.00	
5914.00†	11.390	144.275	5834.54	-608.87	-662.16	476.25	39°55'40.628"N	104°43'10.819"W	0.00	
6014.00†	11.390	144.275	5932.58	-623.61	-678.19	487.78	39°55'40.470"N	104°43'10.671"W	0.00	
6114.00†	11.390	144.275	6030.61	-638.35	-694.22	499.31	39°55'40.311"N	104°43'10.523"W	0.00	
6214.00†	11.390	144.275	6128.64	-653.09	-710.25	510.84	39°55'40.153"N	104°43'10.375"W	0.00	
6314.00†	11.390	144.275	6226.67	-667.84	-726.29	522.38	39°55'39.994"N	104°43'10.227"W	0.00	
6414.00†	11.390	144.275	6324.70	-682.58	-742.32	533.91	39°55'39.836"N	104°43'10.079"W	0.00	
6514.00†	11.390	144.275	6422.73	-697.32	-758.35	545.44	39°55'39.678"N	104°43'09.931"W	0.00	
6614.00†	11.390	144.275	6520.76	-712.06	-774.38	556.97	39°55'39.519"N	104°43'09.783"W	0.00	
6714.00†	11.390	144.275	6618.79	-726.80	-790.41	568.50	39°55'39.361"N	104°43'09.635"W	0.00	
6814.00†	11.390	144.275	6716.82	-741.55	-806.45	580.03	39°55'39.202"N	104°43'09.487"W	0.00	
6914.00†	11.390	144.275	6814.85	-756.29	-822.48	591.56	39°55'39.044"N	104°43'09.339"W	0.00	
7013.65	11.390	144.275	6912.54	-770.98	-838.45	603.05	39°55'38.886"N	104°43'09.191"W	0.00	End of Tangent
7014.00†	11.362	144.168	6912.88	-771.03	-838.51	603.09	39°55'38.885"N	104°43'09.191"W	10.00	
7114.00†	6.852	83.202	7011.80	-777.07	-845.81	614.81	39°55'38.813"N	104°43'09.040"W	10.00	
7214.00†	12.801	32.182	7110.45	-765.78	-835.70	626.67	39°55'38.913"N	104°43'08.888"W	10.00	
7314.00†	21.905	17.787	7205.84	-737.50	-808.49	638.29	39°55'39.182"N	104°43'08.739"W	10.00	
7414.00†	31.541	11.743	7295.07	-693.11	-765.01	649.34	39°55'39.612"N	104°43'08.597"W	10.00	
7514.00†	41.337	8.333	7375.43	-633.94	-706.58	659.48	39°55'40.189"N	104°43'08.467"W	10.00	
7614.00†	51.201	6.045	7444.47	-561.79	-634.97	668.39	39°55'40.897"N	104°43'08.352"W	10.00	
7714.00†	61.098	4.319	7500.11	-478.86	-552.36	675.81	39°55'41.713"N	104°43'08.257"W	10.00	
7814.00†	71.013	2.897	7540.65	-387.66	-461.27	681.51	39°55'42.613"N	104°43'08.184"W	10.00	
7914.00†	80.939	1.636	7564.85	-290.97	-364.44	685.32	39°55'43.570"N	104°43'08.135"W	10.00	
8012.93	90.761	0.456	7572.00†	-192.79	-265.92	687.11	39°55'44.544"N	104°43'08.112"W	10.00	End of 3D Arc
8014.00†	90.761	0.456	7571.99	-191.73	-264.84	687.12	39°55'44.555"N	104°43'08.112"W	0.00	
8114.00†	90.761	0.456	7570.66	-92.20	-164.86	687.91	39°55'45.543"N	104°43'08.102"W	0.00	
8214.00†	90.761	0.456	7569.33	7.32	-64.87	688.71	39°55'46.531"N	104°43'08.091"W	0.00	
8314.00†	90.761	0.456	7568.00	106.85	35.12	689.51	39°55'47.519"N	104°43'08.081"W	0.00	
8414.00†	90.761	0.456	7566.67	206.38	135.11	690.30	39°55'48.507"N	104°43'08.071"W	0.00	



Resources Limited

# Planned Wellpath Report

ALMA 1S-66-2524-5NH PWP (REV-A.0)

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**BAKER  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	HRM RESOURCES	Slot	SLOT#05 ALMA 1S-66-2524-5NH (337'FSL & 1904'FEL, SEC.25)
Area	COLORADO	Well	ALMA 1S-66-2524-5NH
Field	ADAMS COUNTY	Wellbore	ALMA 1S-66-2524-5NH PWB
Facility	SEC.25-T01S-R66W		

## WELLPATH DATA (160 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8514.00†	90.761	0.456	7565.34	305.90	235.10	691.10	39°55'49.495"N	104°43'08.061"W	0.00	
8614.00†	90.761	0.456	7564.02	405.43	335.08	691.89	39°55'50.483"N	104°43'08.050"W	0.00	
8714.00†	90.761	0.456	7562.69	504.95	435.07	692.69	39°55'51.471"N	104°43'08.040"W	0.00	
8814.00†	90.761	0.456	7561.36	604.48	535.06	693.48	39°55'52.460"N	104°43'08.030"W	0.00	
8914.00†	90.761	0.456	7560.03	704.00	635.05	694.28	39°55'53.448"N	104°43'08.020"W	0.00	
9014.00†	90.761	0.456	7558.70	803.53	735.04	695.07	39°55'54.436"N	104°43'08.009"W	0.00	
9114.00†	90.761	0.456	7557.37	903.05	835.02	695.87	39°55'55.424"N	104°43'07.999"W	0.00	
9214.00†	90.761	0.456	7556.05	1002.58	935.01	696.66	39°55'56.412"N	104°43'07.989"W	0.00	
9314.00†	90.761	0.456	7554.72	1102.11	1035.00	697.46	39°55'57.400"N	104°43'07.979"W	0.00	
9414.00†	90.761	0.456	7553.39	1201.63	1134.99	698.25	39°55'58.388"N	104°43'07.968"W	0.00	
9514.00†	90.761	0.456	7552.06	1301.16	1234.98	699.05	39°55'59.376"N	104°43'07.958"W	0.00	
9614.00†	90.761	0.456	7550.73	1400.68	1334.96	699.84	39°56'00.365"N	104°43'07.948"W	0.00	
9714.00†	90.761	0.456	7549.40	1500.21	1434.95	700.64	39°56'01.353"N	104°43'07.938"W	0.00	
9814.00†	90.761	0.456	7548.08	1599.73	1534.94	701.43	39°56'02.341"N	104°43'07.927"W	0.00	
9914.00†	90.761	0.456	7546.75	1699.26	1634.93	702.23	39°56'03.329"N	104°43'07.917"W	0.00	
10014.00†	90.761	0.456	7545.42	1798.78	1734.92	703.03	39°56'04.317"N	104°43'07.907"W	0.00	
10114.00†	90.761	0.456	7544.09	1898.31	1834.91	703.82	39°56'05.305"N	104°43'07.897"W	0.00	
10214.00†	90.761	0.456	7542.76	1997.84	1934.89	704.62	39°56'06.293"N	104°43'07.886"W	0.00	
10314.00†	90.761	0.456	7541.43	2097.36	2034.88	705.41	39°56'07.281"N	104°43'07.876"W	0.00	
10414.00†	90.761	0.456	7540.11	2196.89	2134.87	706.21	39°56'08.270"N	104°43'07.866"W	0.00	
10514.00†	90.761	0.456	7538.78	2296.41	2234.86	707.00	39°56'09.258"N	104°43'07.856"W	0.00	
10614.00†	90.761	0.456	7537.45	2395.94	2334.85	707.80	39°56'10.246"N	104°43'07.846"W	0.00	
10714.00†	90.761	0.456	7536.12	2495.46	2434.83	708.59	39°56'11.234"N	104°43'07.835"W	0.00	
10814.00†	90.761	0.456	7534.79	2594.99	2534.82	709.39	39°56'12.222"N	104°43'07.825"W	0.00	
10914.00†	90.761	0.456	7533.46	2694.51	2634.81	710.18	39°56'13.210"N	104°43'07.815"W	0.00	
11014.00†	90.761	0.456	7532.14	2794.04	2734.80	710.98	39°56'14.198"N	104°43'07.805"W	0.00	
11114.00†	90.761	0.456	7530.81	2893.57	2834.79	711.77	39°56'15.186"N	104°43'07.794"W	0.00	
11214.00†	90.761	0.456	7529.48	2993.09	2934.77	712.57	39°56'16.175"N	104°43'07.784"W	0.00	
11314.00†	90.761	0.456	7528.15	3092.62	3034.76	713.36	39°56'17.163"N	104°43'07.774"W	0.00	
11414.00†	90.761	0.456	7526.82	3192.14	3134.75	714.16	39°56'18.151"N	104°43'07.764"W	0.00	
11514.00†	90.761	0.456	7525.49	3291.67	3234.74	714.95	39°56'19.139"N	104°43'07.753"W	0.00	
11614.00†	90.761	0.456	7524.17	3391.19	3334.73	715.75	39°56'20.127"N	104°43'07.743"W	0.00	
11714.00†	90.761	0.456	7522.84	3490.72	3434.71	716.55	39°56'21.115"N	104°43'07.733"W	0.00	
11814.00†	90.761	0.456	7521.51	3590.24	3534.70	717.34	39°56'22.103"N	104°43'07.723"W	0.00	
11914.00†	90.761	0.456	7520.18	3689.77	3634.69	718.14	39°56'23.091"N	104°43'07.712"W	0.00	
12014.00†	90.761	0.456	7518.85	3789.30	3734.68	718.93	39°56'24.080"N	104°43'07.702"W	0.00	
12114.00†	90.761	0.456	7517.52	3888.82	3834.67	719.73	39°56'25.068"N	104°43'07.692"W	0.00	
12214.00†	90.761	0.456	7516.20	3988.35	3934.65	720.52	39°56'26.056"N	104°43'07.682"W	0.00	
12314.00†	90.761	0.456	7514.87	4087.87	4034.64	721.32	39°56'27.044"N	104°43'07.671"W	0.00	
12414.00†	90.761	0.456	7513.54	4187.40	4134.63	722.11	39°56'28.032"N	104°43'07.661"W	0.00	
12514.00†	90.761	0.456	7512.21	4286.92	4234.62	722.91	39°56'29.020"N	104°43'07.651"W	0.00	
12614.00†	90.761	0.456	7510.88	4386.45	4334.61	723.70	39°56'30.008"N	104°43'07.641"W	0.00	
12714.00†	90.761	0.456	7509.55	4485.97	4434.59	724.50	39°56'30.996"N	104°43'07.630"W	0.00	
12814.00†	90.761	0.456	7508.23	4585.50	4534.58	725.29	39°56'31.985"N	104°43'07.620"W	0.00	
12914.00†	90.761	0.456	7506.90	4685.02	4634.57	726.09	39°56'32.973"N	104°43'07.610"W	0.00	





Resources Limited

## Planned Wellpath Report

ALMA 1S-66-2524-5NH PWP (REV-A.0)

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**BAKER  
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Operator	HRM RESOURCES	Slot	SLOT#05 ALMA 1S-66-2524-5NH (337'FSL & 1904'FEL, SEC.25)
Area	COLORADO	Well	ALMA 1S-66-2524-5NH
Field	ADAMS COUNTY	Wellbore	ALMA 1S-66-2524-5NH PWB
Facility	SEC.25-T01S-R66W		

**WELLPATH DATA (160 stations)** † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13014.00†	90.761	0.456	7505.57	4784.55	4734.56	726.88	39°56'33.961"N	104°43'07.600"W	0.00	
13114.00†	90.761	0.456	7504.24	4884.08	4834.55	727.68	39°56'34.949"N	104°43'07.589"W	0.00	
13214.00†	90.761	0.456	7502.91	4983.60	4934.53	728.47	39°56'35.937"N	104°43'07.579"W	0.00	
13314.00†	90.761	0.456	7501.58	5083.13	5034.52	729.27	39°56'36.925"N	104°43'07.569"W	0.00	
13414.00†	90.761	0.456	7500.26	5182.65	5134.51	730.07	39°56'37.913"N	104°43'07.559"W	0.00	
13514.00†	90.761	0.456	7498.93	5282.18	5234.50	730.86	39°56'38.901"N	104°43'07.548"W	0.00	
13614.00†	90.761	0.456	7497.60	5381.70	5334.49	731.66	39°56'39.890"N	104°43'07.538"W	0.00	
13714.00†	90.761	0.456	7496.27	5481.23	5434.47	732.45	39°56'40.878"N	104°43'07.528"W	0.00	
13814.00†	90.761	0.456	7494.94	5580.75	5534.46	733.25	39°56'41.866"N	104°43'07.518"W	0.00	
13914.00†	90.761	0.456	7493.61	5680.28	5634.45	734.04	39°56'42.854"N	104°43'07.507"W	0.00	
14014.00†	90.761	0.456	7492.29	5779.81	5734.44	734.84	39°56'43.842"N	104°43'07.497"W	0.00	
14114.00†	90.761	0.456	7490.96	5879.33	5834.43	735.63	39°56'44.830"N	104°43'07.487"W	0.00	
14214.00†	90.761	0.456	7489.63	5978.86	5934.41	736.43	39°56'45.818"N	104°43'07.477"W	0.00	
14314.00†	90.761	0.456	7488.30	6078.38	6034.40	737.22	39°56'46.806"N	104°43'07.466"W	0.00	
14414.00†	90.761	0.456	7486.97	6177.91	6134.39	738.02	39°56'47.795"N	104°43'07.456"W	0.00	
14514.00†	90.761	0.456	7485.64	6277.43	6234.38	738.81	39°56'48.783"N	104°43'07.446"W	0.00	
14614.00†	90.761	0.456	7484.32	6376.96	6334.37	739.61	39°56'49.771"N	104°43'07.436"W	0.00	
14714.00†	90.761	0.456	7482.99	6476.48	6434.35	740.40	39°56'50.759"N	104°43'07.425"W	0.00	
14814.00†	90.761	0.456	7481.66	6576.01	6534.34	741.20	39°56'51.747"N	104°43'07.415"W	0.00	
14914.00†	90.761	0.456	7480.33	6675.54	6634.33	741.99	39°56'52.735"N	104°43'07.405"W	0.00	
15014.00†	90.761	0.456	7479.00	6775.06	6734.32	742.79	39°56'53.723"N	104°43'07.395"W	0.00	
15114.00†	90.761	0.456	7477.67	6874.59	6834.31	743.59	39°56'54.711"N	104°43'07.384"W	0.00	
15214.00†	90.761	0.456	7476.35	6974.11	6934.29	744.38	39°56'55.700"N	104°43'07.374"W	0.00	
15314.00†	90.761	0.456	7475.02	7073.64	7034.28	745.18	39°56'56.688"N	104°43'07.364"W	0.00	
15390.54	90.761	0.456	7474.00 <sup>2</sup>	7149.81	7110.81	745.78	39°56'57.444"N	104°43'07.356"W	0.00	End of Tangent

**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		-1.00	0.00	58.89	3218416.71	1218223.15	39°55'47.172"N	104°43'16.176"W	polygon
SEC.24-T1S-R66W SOUTH 1/2 SECTION		-1.00	0.00	58.89	3218416.71	1218223.15	39°55'47.172"N	104°43'16.176"W	polygon
SEC.25-T1S-R66W		-1.00	0.00	58.89	3218416.71	1218223.15	39°55'47.172"N	104°43'16.176"W	polygon
2) ALMA 1S-66-2524-5NH BHL ON PLAT (2160'FSL & 1160'FEL, SEC.24)	15390.54	7474.00	7110.81	745.78	3219041.12	1225339.51	39°56'57.444"N	104°43'07.356"W	point
1) ALMA 1S-66-2524-5NH ENTRY POINT	8012.93	7572.00	-265.92	687.11	3219047.22	1217962.77	39°55'44.544"N	104°43'08.112"W	point
SEC.24/25-T1S-R66W HARDLINES (460'FNL 1/2 SEC.24)		7799.00	0.00	58.89	3218416.71	1218223.15	39°55'47.172"N	104°43'16.176"W	polygon



Resources Limited

# Planned Wellpath Report

ALMA 1S-66-2524-5NH PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	HRM RESOURCES	Slot	SLOT#05 ALMA 1S-66-2524-5NH (337'FSL & 1904'FEL, SEC.25)
Area	COLORADO	Well	ALMA 1S-66-2524-5NH
Field	ADAMS COUNTY	Wellbore	ALMA 1S-66-2524-5NH PWB
Facility	SEC.25-T01S-R66W		

## SURVEY PROGRAM -

Ref Wellbore: ALMA 1S-66-2524-5NH PWB Ref Wellpath: ALMA 1S-66-2524-5NH PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
14.00	15390.54	Custom BHI AutoTrak Curve (Axial Corr, Short spacing) (Rockies 0.03Gt model)		ALMA 1S-66-2524-5NH PWB



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# Planned Wellpath Report

ALMA 1S-66-2524-5NH PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	HRM RESOURCES	Slot	SLOT#05 ALMA 1S-66-2524-5NH (337'FSL & 1904'FEL, SEC.25)
Area	COLORADO	Well	ALMA 1S-66-2524-5NH
Field	ADAMS COUNTY	Wellbore	ALMA 1S-66-2524-5NH PWB
Facility	SEC.25-T01S-R66W		

## DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
14.00	0.000	144.275	14.00	Tie On
1500.00	0.000	144.275	1500.00	End of Tangent
2069.49	11.390	144.275	2065.74	End of Build
7013.65	11.390	144.275	6912.54	End of Tangent
8012.93	90.761	0.456	7572.00	End of 3D Arc
15390.54	90.761	0.456	7474.00	End of Tangent