

EXTRACTION OIL & GAS

Adams County

Sec 25-T1S-R66W

ALMA 1S-66-2524-6NH

ORIGINAL WELLBORE

Plan: PROPOSAL 1

Standard Planning Report

29 August, 2017



Project: Adams County
Site: Sec 25-T1S-R66W
Well: ALMA 1S-66-2524-6NH
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL 1

PROJECT DETAILS: Adams County

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

System Datum: Mean Sea Level



Azimuths to True North
Magnetic North: 8.13°

Magnetic Field
Strength: 52129.5snT
Dip Angle: 66.48°
Date: 8/17/2017
Model: IGRF2015

WELL DETAILS: ALMA 1S-66-2524-6NH

+N/-S	+E/-W	Northing	Easting	5179.00	Latitude	Longitude	Slot
0.00	0.00	1218273.18	3218306.90		39° 55' 47.676 N	104° 43' 17.580 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	
3	1327.59	12.55	136.90	1322.58	-50.00	46.78	2.00	136.90	-44.15	
4	6305.40	12.55	136.90	6181.42	-839.90	785.91	0.00	0.00	-741.72	
5	6932.99	0.00	0.00	6804.00	-889.90	832.69	2.00	180.00	-785.87	
6	7032.99	0.00	0.00	6904.00	-889.90	832.69	0.00	0.00	-785.87	
7	7933.06	90.00	0.02	7477.00	-316.89	832.92	10.00	0.02	-216.81	ALMA 6NH LP
8	15309.57	90.00	0.02	7477.00	7059.61	835.48	0.00	-100.46	7108.88	ALMA 6NH PBHL

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1500.00	1509.35	Fox Hills aquifer base
7283.00	7447.11	Sharon Springs
7315.00	7491.32	Top Niobrara
7325.00	7505.86	Nio A Chalk
7346.00	7537.80	Nio A Marl
7467.00	7825.84	Nio B Chalk

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	BUILD 2°/100'
1327.59	12.55	136.90	1322.58	-50.00	46.78	68.47	68.47	HOLD 12.55° INC
6305.40	12.55	136.90	6181.42	-839.90	785.91	-741.72	1150.26	DROP 2°/100'
6932.99	0.00	0.00	6804.00	-889.90	832.69	-785.87	1218.73	HOLD VERTICAL
7032.99	0.00	0.00	6904.00	-889.90	832.69	-785.87	1218.73	KOP, BUILD 10°/100'
7933.06	90.00	0.02	7477.00	-316.89	832.92	-216.81	1791.73	LP @ 90° INC, 0.02° AZM HOLD
15309.57	90.00	0.02	7477.00	7059.61	835.48	7108.88	9168.24	TD at 15309.57' MD

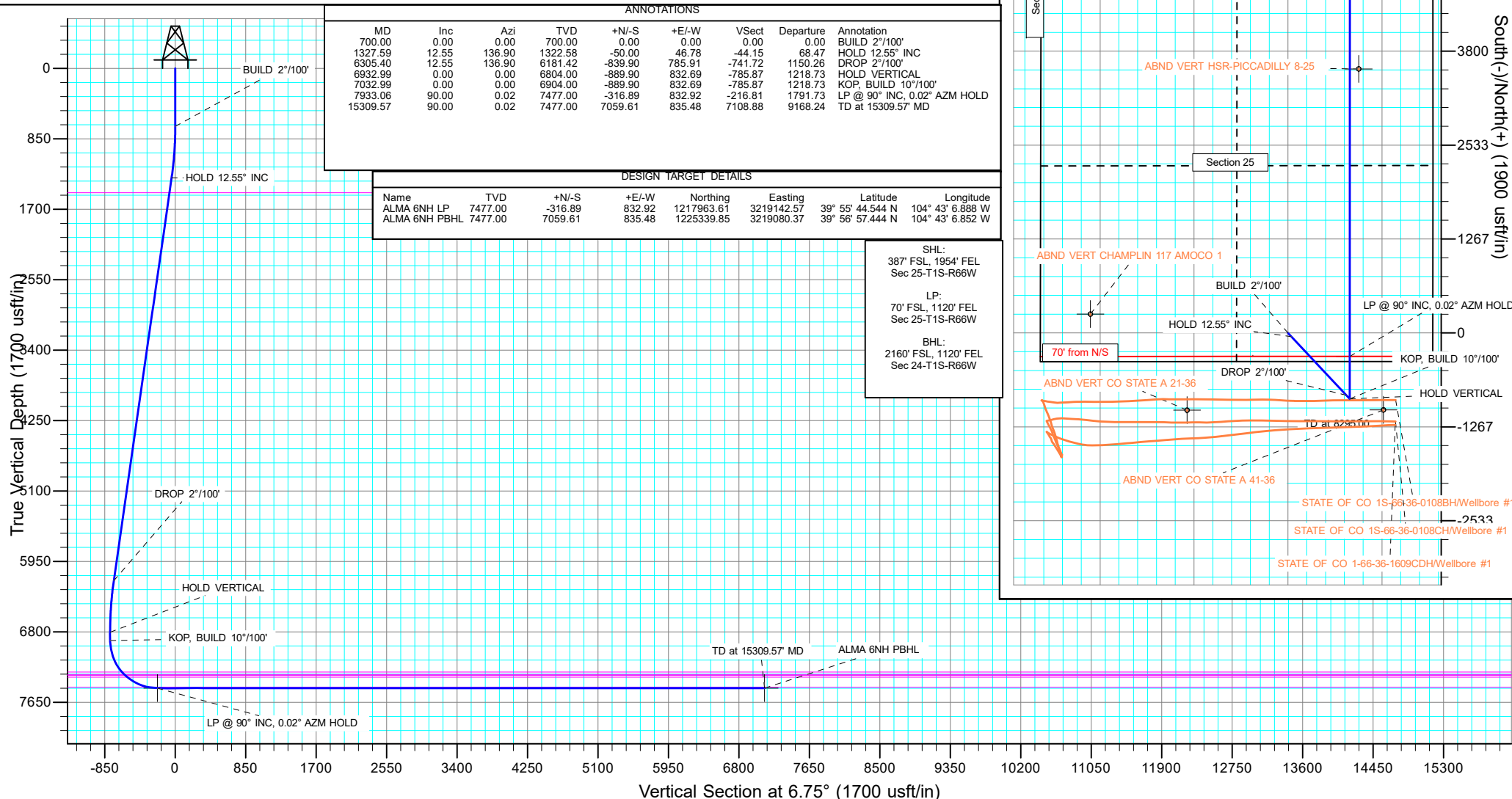
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
ALMA 6NH LP	7477.00	-316.89	832.92	1217963.61	3219142.57	39° 55' 44.544 N	104° 43' 6.888 W
ALMA 6NH PBHL	7477.00	7059.61	835.48	1225339.85	3219080.37	39° 56' 57.444 N	104° 43' 6.852 W

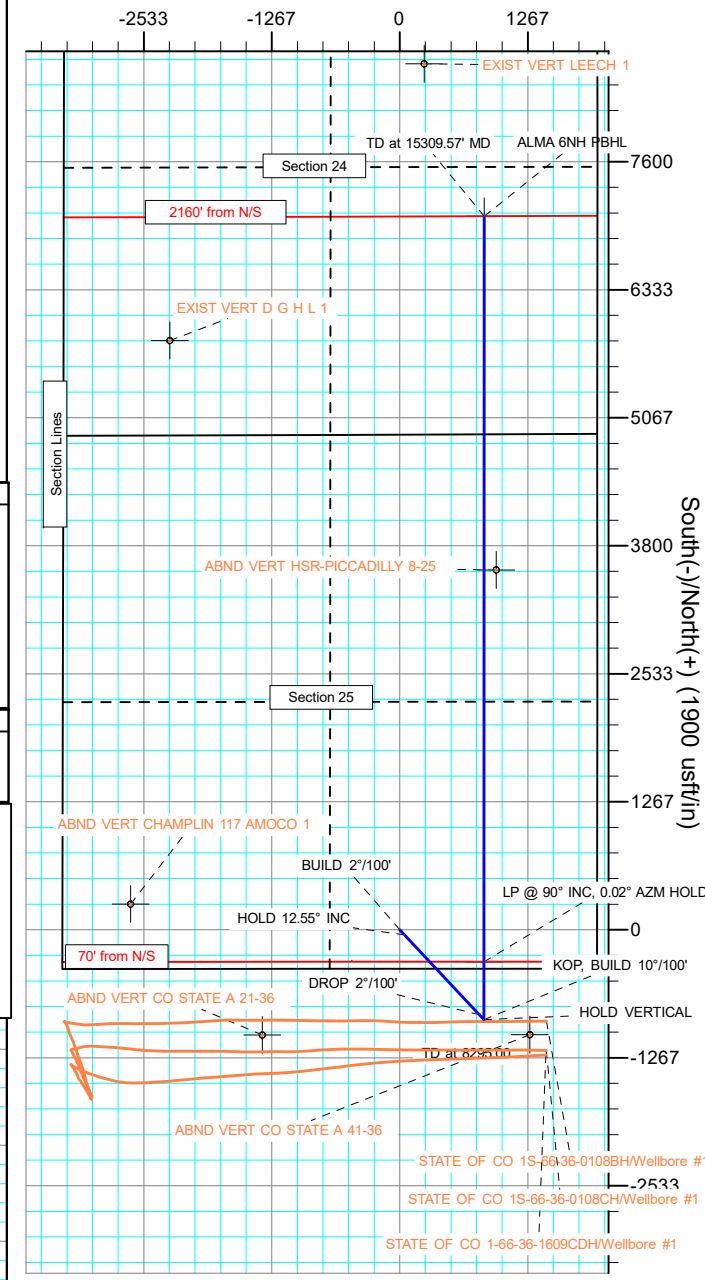
SHL:
387' FSL, 1954' FEL
Sec 25-T1S-R66W

LP:
70' FSL, 1120' FEL
Sec 25-T1S-R66W

BHL:
2160' FSL, 1120' FEL
Sec 24-T1S-R66W



West(-)/East(+) (1900 usft/in)



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well ALMA 1S-66-2524-6NH
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5204.00usft
Project:	Adams County	MD Reference:	KB 25' @ 5204.00usft
Site:	Sec 25-T1S-R66W	North Reference:	True
Well:	ALMA 1S-66-2524-6NH	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Project	Adams County		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Sec 25-T1S-R66W			
Site Position:		Northing:	1,217,904.28 usft	Latitude:	39° 55' 43.860 N
From:	Lat/Long	Easting:	3,220,262.11 usft	Longitude:	104° 42' 52.524 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.51 °

Well	ALMA 1S-66-2524-6NH					
Well Position	+N/-S	386.20 usft	Northing:	1,218,273.18 usft	Latitude:	39° 55' 47.676 N
	+E/-W	-1,951.87 usft	Easting:	3,218,306.90 usft	Longitude:	104° 43' 17.580 W
Position Uncertainty	0.00 usft		Wellhead Elevation:		Ground Level:	5,179.00 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	8/17/2017	8.13	66.48	52,129.53762166

Design	PROPOSAL 1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	6.75

Plan Survey Tool Program	Date	8/29/2017		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	15,309.54	PROPOSAL 1 (ORIGINAL WELL	MWD OWSG
			OWSG MWD - Standard	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,327.59	12.55	136.90	1,322.58	-50.00	46.78	2.00	2.00	0.00	136.90	
6,305.40	12.55	136.90	6,181.42	-839.90	785.91	0.00	0.00	0.00	0.00	
6,932.99	0.00	0.00	6,804.00	-889.90	832.69	2.00	-2.00	0.00	180.00	
7,032.99	0.00	0.00	6,904.00	-889.90	832.69	0.00	0.00	0.00	0.00	
7,933.06	90.00	0.02	7,477.00	-316.89	832.92	10.00	10.00	0.00	0.02	ALMA 6NH LP
15,309.57	90.00	0.02	7,477.00	7,059.61	835.48	0.00	0.00	0.00	-100.46	ALMA 6NH PBHL

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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5204.00usft
Project:	Adams County	MD Reference:	KB 25' @ 5204.00usft
Site:	Sec 25-T1S-R66W	North Reference:	True
Well:	ALMA 1S-66-2524-6NH	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
BUILD 2°/100'									
800.00	2.00	136.90	799.98	-1.27	1.19	-1.13	2.00	2.00	0.00
900.00	4.00	136.90	899.84	-5.10	4.77	-4.50	2.00	2.00	0.00
1,000.00	6.00	136.90	999.45	-11.46	10.72	-10.12	2.00	2.00	0.00
1,100.00	8.00	136.90	1,098.70	-20.36	19.05	-17.98	2.00	2.00	0.00
1,200.00	10.00	136.90	1,197.47	-31.78	29.74	-28.06	2.00	2.00	0.00
1,300.00	12.00	136.90	1,295.62	-45.71	42.77	-40.37	2.00	2.00	0.00
1,327.59	12.55	136.90	1,322.58	-50.00	46.78	-44.15	2.00	2.00	0.00
HOLD 12.55° INC									
1,400.00	12.55	136.90	1,393.26	-61.49	57.53	-54.30	0.00	0.00	0.00
1,500.00	12.55	136.90	1,490.87	-77.35	72.38	-68.31	0.00	0.00	0.00
1,509.35	12.55	136.90	1,500.00	-78.84	73.77	-69.62	0.00	0.00	0.00
Fox Hills aquifer base									
1,600.00	12.55	136.90	1,588.48	-93.22	87.23	-82.33	0.00	0.00	0.00
1,700.00	12.55	136.90	1,686.09	-109.09	102.08	-96.34	0.00	0.00	0.00
1,800.00	12.55	136.90	1,783.70	-124.96	116.93	-110.35	0.00	0.00	0.00
1,900.00	12.55	136.90	1,881.31	-140.83	131.78	-124.37	0.00	0.00	0.00
2,000.00	12.55	136.90	1,978.92	-156.70	146.62	-138.38	0.00	0.00	0.00
2,100.00	12.55	136.90	2,076.53	-172.57	161.47	-152.39	0.00	0.00	0.00
2,200.00	12.55	136.90	2,174.14	-188.43	176.32	-166.41	0.00	0.00	0.00
2,300.00	12.55	136.90	2,271.75	-204.30	191.17	-180.42	0.00	0.00	0.00
2,400.00	12.55	136.90	2,369.36	-220.17	206.02	-194.43	0.00	0.00	0.00
2,500.00	12.55	136.90	2,466.97	-236.04	220.87	-208.45	0.00	0.00	0.00
2,600.00	12.55	136.90	2,564.58	-251.91	235.71	-222.46	0.00	0.00	0.00
2,700.00	12.55	136.90	2,662.19	-267.78	250.56	-236.47	0.00	0.00	0.00
2,800.00	12.55	136.90	2,759.80	-283.65	265.41	-250.49	0.00	0.00	0.00
2,900.00	12.55	136.90	2,857.41	-299.52	280.26	-264.50	0.00	0.00	0.00
3,000.00	12.55	136.90	2,955.02	-315.38	295.11	-278.52	0.00	0.00	0.00
3,100.00	12.55	136.90	3,052.63	-331.25	309.96	-292.53	0.00	0.00	0.00
3,200.00	12.55	136.90	3,150.24	-347.12	324.81	-306.54	0.00	0.00	0.00
3,300.00	12.55	136.90	3,247.85	-362.99	339.65	-320.56	0.00	0.00	0.00
3,400.00	12.55	136.90	3,345.46	-378.86	354.50	-334.57	0.00	0.00	0.00
3,500.00	12.55	136.90	3,443.07	-394.73	369.35	-348.58	0.00	0.00	0.00
3,600.00	12.55	136.90	3,540.68	-410.60	384.20	-362.60	0.00	0.00	0.00
3,700.00	12.55	136.90	3,638.29	-426.46	399.05	-376.61	0.00	0.00	0.00
3,800.00	12.55	136.90	3,735.90	-442.33	413.90	-390.62	0.00	0.00	0.00
3,900.00	12.55	136.90	3,833.51	-458.20	428.74	-404.64	0.00	0.00	0.00
4,000.00	12.55	136.90	3,931.12	-474.07	443.59	-418.65	0.00	0.00	0.00
4,100.00	12.55	136.90	4,028.73	-489.94	458.44	-432.66	0.00	0.00	0.00
4,200.00	12.55	136.90	4,126.34	-505.81	473.29	-446.68	0.00	0.00	0.00
4,300.00	12.55	136.90	4,223.95	-521.68	488.14	-460.69	0.00	0.00	0.00
4,400.00	12.55	136.90	4,321.56	-537.54	502.99	-474.71	0.00	0.00	0.00
4,500.00	12.55	136.90	4,419.17	-553.41	517.84	-488.72	0.00	0.00	0.00
4,600.00	12.55	136.90	4,516.78	-569.28	532.68	-502.73	0.00	0.00	0.00
4,700.00	12.55	136.90	4,614.39	-585.15	547.53	-516.75	0.00	0.00	0.00

Planning Report

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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5204.00usft
Project:	Adams County	MD Reference:	KB 25' @ 5204.00usft
Site:	Sec 25-T1S-R66W	North Reference:	True
Well:	ALMA 1S-66-2524-6NH	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,800.00	12.55	136.90	4,712.00	-601.02	562.38	-530.76	0.00	0.00	0.00
4,900.00	12.55	136.90	4,809.61	-616.89	577.23	-544.77	0.00	0.00	0.00
5,000.00	12.55	136.90	4,907.22	-632.76	592.08	-558.79	0.00	0.00	0.00
5,100.00	12.55	136.90	5,004.83	-648.63	606.93	-572.80	0.00	0.00	0.00
5,200.00	12.55	136.90	5,102.44	-664.49	621.77	-586.81	0.00	0.00	0.00
5,300.00	12.55	136.90	5,200.05	-680.36	636.62	-600.83	0.00	0.00	0.00
5,400.00	12.55	136.90	5,297.66	-696.23	651.47	-614.84	0.00	0.00	0.00
5,500.00	12.55	136.90	5,395.27	-712.10	666.32	-628.85	0.00	0.00	0.00
5,600.00	12.55	136.90	5,492.88	-727.97	681.17	-642.87	0.00	0.00	0.00
5,700.00	12.55	136.90	5,590.49	-743.84	696.02	-656.88	0.00	0.00	0.00
5,800.00	12.55	136.90	5,688.10	-759.71	710.87	-670.90	0.00	0.00	0.00
5,900.00	12.55	136.90	5,785.71	-775.57	725.71	-684.91	0.00	0.00	0.00
6,000.00	12.55	136.90	5,883.32	-791.44	740.56	-698.92	0.00	0.00	0.00
6,100.00	12.55	136.90	5,980.93	-807.31	755.41	-712.94	0.00	0.00	0.00
6,200.00	12.55	136.90	6,078.54	-823.18	770.26	-726.95	0.00	0.00	0.00
6,305.40	12.55	136.90	6,181.42	-839.90	785.91	-741.72	0.00	0.00	0.00
DROP 2°/100'									
6,400.00	10.66	136.90	6,274.08	-853.80	798.91	-753.99	2.00	-2.00	0.00
6,500.00	8.66	136.90	6,372.66	-866.05	810.38	-764.81	2.00	-2.00	0.00
6,600.00	6.66	136.90	6,471.76	-875.79	819.48	-773.41	2.00	-2.00	0.00
6,700.00	4.66	136.90	6,571.27	-882.99	826.22	-779.76	2.00	-2.00	0.00
6,800.00	2.66	136.90	6,671.06	-887.65	830.58	-783.88	2.00	-2.00	0.00
6,900.00	0.66	136.90	6,771.01	-889.76	832.56	-785.75	2.00	-2.00	0.00
6,932.99	0.00	0.00	6,804.00	-889.90	832.69	-785.87	2.00	-2.00	0.00
HOLD VERTICAL									
7,000.00	0.00	0.00	6,871.01	-889.90	832.69	-785.87	0.00	0.00	0.00
7,032.99	0.00	0.00	6,904.00	-889.90	832.69	-785.87	0.00	0.00	0.00
KOP, BUILD 10°/100'									
7,050.00	1.70	0.02	6,921.01	-889.65	832.69	-785.62	10.00	10.00	0.00
7,100.00	6.70	0.02	6,970.86	-885.99	832.69	-781.98	10.00	10.00	0.00
7,150.00	11.70	0.02	7,020.20	-877.99	832.69	-774.05	10.00	10.00	0.00
7,200.00	16.70	0.02	7,068.66	-865.73	832.70	-761.87	10.00	10.00	0.00
7,250.00	21.70	0.02	7,115.86	-849.29	832.71	-745.54	10.00	10.00	0.00
7,300.00	26.70	0.02	7,161.45	-828.80	832.71	-725.19	10.00	10.00	0.00
7,350.00	31.70	0.02	7,205.09	-804.42	832.72	-700.98	10.00	10.00	0.00
7,400.00	36.70	0.02	7,246.43	-776.33	832.74	-673.08	10.00	10.00	0.00
7,447.11	41.41	0.02	7,283.00	-746.65	832.75	-643.61	10.00	10.00	0.00
Sharon Springs									
7,450.00	41.70	0.02	7,285.16	-744.73	832.75	-641.70	10.00	10.00	0.00
7,491.32	45.83	0.02	7,315.00	-716.16	832.76	-613.33	10.00	10.00	0.00
Top Niobrara									
7,500.00	46.70	0.02	7,321.00	-709.89	832.76	-607.10	10.00	10.00	0.00
7,505.86	47.28	0.02	7,325.00	-705.60	832.76	-602.84	10.00	10.00	0.00
Nio A Chalk									
7,537.80	50.48	0.02	7,346.00	-681.54	832.77	-578.95	10.00	10.00	0.00
Nio A Marl									
7,550.00	51.70	0.02	7,353.66	-672.05	832.78	-569.52	10.00	10.00	0.00
7,600.00	56.70	0.02	7,382.90	-631.51	832.79	-529.26	10.00	10.00	0.00
7,650.00	61.70	0.02	7,408.50	-588.58	832.81	-486.62	10.00	10.00	0.00
7,700.00	66.70	0.02	7,430.26	-543.58	832.83	-441.93	10.00	10.00	0.00
7,750.00	71.70	0.02	7,448.01	-496.85	832.85	-395.53	10.00	10.00	0.00
7,800.00	76.70	0.02	7,461.62	-448.76	832.87	-347.77	10.00	10.00	0.00
7,825.84	79.28	0.02	7,467.00	-423.48	832.88	-322.66	10.00	10.00	0.00

Planning Report

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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5204.00usft
Project:	Adams County	MD Reference:	KB 25' @ 5204.00usft
Site:	Sec 25-T1S-R66W	North Reference:	True
Well:	ALMA 1S-66-2524-6NH	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Nio B Chalk									
7,850.00	81.70	0.02	7,470.99	-399.66	832.89	-299.01	10.00	10.00	0.00
7,900.00	86.70	0.02	7,476.05	-349.93	832.91	-249.62	10.00	10.00	0.00
7,933.06	90.00	0.02	7,477.00	-316.89	832.92	-216.81	10.00	10.00	0.00
LP @ 90° INC, 0.02° AZM HOLD									
8,000.00	90.00	0.02	7,477.00	-249.95	832.95	-150.33	0.00	0.00	0.00
8,100.00	90.00	0.02	7,477.00	-149.95	832.99	-51.02	0.00	0.00	0.00
8,200.00	90.00	0.02	7,477.00	-49.95	833.03	48.30	0.00	0.00	0.00
8,300.00	90.00	0.02	7,477.00	50.05	833.07	147.61	0.00	0.00	0.00
8,400.00	90.00	0.02	7,477.00	150.05	833.11	246.92	0.00	0.00	0.00
8,500.00	90.00	0.02	7,476.99	250.05	833.15	346.23	0.00	0.00	0.00
8,600.00	90.00	0.02	7,476.99	350.05	833.19	445.54	0.00	0.00	0.00
8,700.00	90.00	0.02	7,476.99	450.05	833.23	544.85	0.00	0.00	0.00
8,800.00	90.00	0.02	7,476.99	550.05	833.27	644.17	0.00	0.00	0.00
8,900.00	90.00	0.02	7,476.99	650.05	833.31	743.48	0.00	0.00	0.00
9,000.00	90.00	0.02	7,476.99	750.05	833.34	842.79	0.00	0.00	0.00
9,100.00	90.00	0.02	7,476.99	850.05	833.38	942.10	0.00	0.00	0.00
9,200.00	90.00	0.02	7,476.99	950.05	833.42	1,041.41	0.00	0.00	0.00
9,300.00	90.00	0.02	7,476.99	1,050.05	833.46	1,140.72	0.00	0.00	0.00
9,400.00	90.00	0.02	7,476.99	1,150.05	833.50	1,240.04	0.00	0.00	0.00
9,500.00	90.00	0.02	7,476.99	1,250.05	833.54	1,339.35	0.00	0.00	0.00
9,600.00	90.00	0.02	7,476.99	1,350.05	833.57	1,438.66	0.00	0.00	0.00
9,700.00	90.00	0.02	7,476.99	1,450.05	833.61	1,537.97	0.00	0.00	0.00
9,800.00	90.00	0.02	7,476.99	1,550.05	833.65	1,637.28	0.00	0.00	0.00
9,900.00	90.00	0.02	7,476.98	1,650.05	833.69	1,736.59	0.00	0.00	0.00
10,000.00	90.00	0.02	7,476.98	1,750.05	833.72	1,835.90	0.00	0.00	0.00
10,100.00	90.00	0.02	7,476.98	1,850.05	833.76	1,935.22	0.00	0.00	0.00
10,200.00	90.00	0.02	7,476.98	1,950.05	833.80	2,034.53	0.00	0.00	0.00
10,300.00	90.00	0.02	7,476.98	2,050.05	833.84	2,133.84	0.00	0.00	0.00
10,400.00	90.00	0.02	7,476.98	2,150.05	833.87	2,233.15	0.00	0.00	0.00
10,500.00	90.00	0.02	7,476.98	2,250.05	833.91	2,332.46	0.00	0.00	0.00
10,600.00	90.00	0.02	7,476.98	2,350.05	833.95	2,431.77	0.00	0.00	0.00
10,700.00	90.00	0.02	7,476.98	2,450.05	833.98	2,531.08	0.00	0.00	0.00
10,800.00	90.00	0.02	7,476.98	2,550.05	834.02	2,630.39	0.00	0.00	0.00
10,900.00	90.00	0.02	7,476.98	2,650.05	834.05	2,729.71	0.00	0.00	0.00
11,000.00	90.00	0.02	7,476.98	2,750.05	834.09	2,829.02	0.00	0.00	0.00
11,100.00	90.00	0.02	7,476.98	2,850.05	834.12	2,928.33	0.00	0.00	0.00
11,200.00	90.00	0.02	7,476.98	2,950.05	834.16	3,027.64	0.00	0.00	0.00
11,300.00	90.00	0.02	7,476.98	3,050.05	834.20	3,126.95	0.00	0.00	0.00
11,400.00	90.00	0.02	7,476.98	3,150.05	834.23	3,226.26	0.00	0.00	0.00
11,500.00	90.00	0.02	7,476.98	3,250.05	834.27	3,325.57	0.00	0.00	0.00
11,600.00	90.00	0.02	7,476.98	3,350.05	834.30	3,424.88	0.00	0.00	0.00
11,700.00	90.00	0.02	7,476.98	3,450.05	834.33	3,524.19	0.00	0.00	0.00
11,800.00	90.00	0.02	7,476.98	3,550.05	834.37	3,623.51	0.00	0.00	0.00
11,900.00	90.00	0.02	7,476.98	3,650.05	834.40	3,722.82	0.00	0.00	0.00
12,000.00	90.00	0.02	7,476.98	3,750.05	834.44	3,822.13	0.00	0.00	0.00
12,100.00	90.00	0.02	7,476.98	3,850.05	834.47	3,921.44	0.00	0.00	0.00
12,200.00	90.00	0.02	7,476.98	3,950.05	834.51	4,020.75	0.00	0.00	0.00
12,300.00	90.00	0.02	7,476.98	4,050.05	834.54	4,120.06	0.00	0.00	0.00
12,400.00	90.00	0.02	7,476.98	4,150.05	834.57	4,219.37	0.00	0.00	0.00
12,500.00	90.00	0.02	7,476.98	4,250.05	834.61	4,318.68	0.00	0.00	0.00
12,600.00	90.00	0.02	7,476.98	4,350.05	834.64	4,417.99	0.00	0.00	0.00
12,700.00	90.00	0.02	7,476.98	4,450.05	834.67	4,517.30	0.00	0.00	0.00
12,800.00	90.00	0.02	7,476.98	4,550.05	834.71	4,616.61	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well ALMA 1S-66-2524-6NH
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5204.00usft
Project:	Adams County	MD Reference:	KB 25' @ 5204.00usft
Site:	Sec 25-T1S-R66W	North Reference:	True
Well:	ALMA 1S-66-2524-6NH	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
12,900.00	90.00	0.02	7,476.98	4,650.05	834.74	4,715.93	0.00	0.00	0.00	
13,000.00	90.00	0.02	7,476.98	4,750.05	834.77	4,815.24	0.00	0.00	0.00	
13,100.00	90.00	0.02	7,476.98	4,850.05	834.80	4,914.55	0.00	0.00	0.00	
13,200.00	90.00	0.02	7,476.98	4,950.05	834.83	5,013.86	0.00	0.00	0.00	
13,300.00	90.00	0.02	7,476.98	5,050.05	834.87	5,113.17	0.00	0.00	0.00	
13,400.00	90.00	0.02	7,476.98	5,150.05	834.90	5,212.48	0.00	0.00	0.00	
13,500.00	90.00	0.02	7,476.99	5,250.05	834.93	5,311.79	0.00	0.00	0.00	
13,600.00	90.00	0.02	7,476.99	5,350.05	834.96	5,411.10	0.00	0.00	0.00	
13,700.00	90.00	0.02	7,476.99	5,450.05	834.99	5,510.41	0.00	0.00	0.00	
13,800.00	90.00	0.02	7,476.99	5,550.05	835.03	5,609.72	0.00	0.00	0.00	
13,900.00	90.00	0.02	7,476.99	5,650.05	835.06	5,709.03	0.00	0.00	0.00	
14,000.00	90.00	0.02	7,476.99	5,750.05	835.09	5,808.34	0.00	0.00	0.00	
14,100.00	90.00	0.02	7,476.99	5,850.05	835.12	5,907.65	0.00	0.00	0.00	
14,200.00	90.00	0.02	7,476.99	5,950.05	835.15	6,006.96	0.00	0.00	0.00	
14,300.00	90.00	0.02	7,476.99	6,050.05	835.18	6,106.27	0.00	0.00	0.00	
14,400.00	90.00	0.02	7,476.99	6,150.05	835.21	6,205.59	0.00	0.00	0.00	
14,500.00	90.00	0.02	7,476.99	6,250.05	835.24	6,304.90	0.00	0.00	0.00	
14,600.00	90.00	0.02	7,476.99	6,350.05	835.27	6,404.21	0.00	0.00	0.00	
14,700.00	90.00	0.02	7,476.99	6,450.05	835.30	6,503.52	0.00	0.00	0.00	
14,800.00	90.00	0.02	7,477.00	6,550.05	835.33	6,602.83	0.00	0.00	0.00	
14,900.00	90.00	0.02	7,477.00	6,650.05	835.36	6,702.14	0.00	0.00	0.00	
15,000.00	90.00	0.02	7,477.00	6,750.05	835.39	6,801.45	0.00	0.00	0.00	
15,100.00	90.00	0.02	7,477.00	6,850.05	835.42	6,900.76	0.00	0.00	0.00	
15,200.00	90.00	0.02	7,477.00	6,950.05	835.45	7,000.07	0.00	0.00	0.00	
15,309.57	90.00	0.02	7,477.00	7,059.61	835.48	7,108.88	0.00	0.00	0.00	
TD at 15309.57' MD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
ALMA 6NH LP	0.00	0.00	7,477.00	-316.89	832.92	1,217,963.61	3,219,142.57	39° 55' 44.544 N	104° 43' 6.888 W	
- plan hits target center										
- Point										
ALMA 6NH PBHL	0.00	0.00	7,477.00	7,059.61	835.48	1,225,339.85	3,219,080.37	39° 56' 57.444 N	104° 43' 6.852 W	
- plan hits target center										
- Point										

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,509.35	1,500.00	Fox Hills aquifer base				
7,447.11	7,283.00	Sharon Springs				
7,491.32	7,315.00	Top Niobrara				
7,505.86	7,325.00	Nio A Chalk				
7,537.80	7,346.00	Nio A Marl				
7,825.84	7,467.00	Nio B Chalk				

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well ALMA 1S-66-2524-6NH
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5204.00usft
Project:	Adams County	MD Reference:	KB 25' @ 5204.00usft
Site:	Sec 25-T1S-R66W	North Reference:	True
Well:	ALMA 1S-66-2524-6NH	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
700.00	700.00	0.00	0.00	BUILD 2°/100'
1,327.59	1,322.58	-50.00	46.78	HOLD 12.55° INC
6,305.40	6,181.42	-839.90	785.91	DROP 2°/100'
6,932.99	6,804.00	-889.90	832.69	HOLD VERTICAL
7,032.99	6,904.00	-889.90	832.69	KOP, BUILD 10°/100'
7,933.06	7,477.00	-316.89	832.92	LP @ 90° INC, 0.02° AZM HOLD
15,309.57	7,477.00	7,059.61	835.48	TD at 15309.57' MD