

EXTRACTION OIL & GAS

ADAMS COUNTY

Sec 25-T1S-R66W

ALMA WEST 26W-20-03

OWB

Design: FINAL SURVEY

Standard Survey Report

06 January, 2023



Project: ADAMS COUNTY
Site: Sec 25-T1S-R66W
Well: ALMA WEST 26W-20-03
Wellbore: OWB
Design: FINAL SURVEY

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



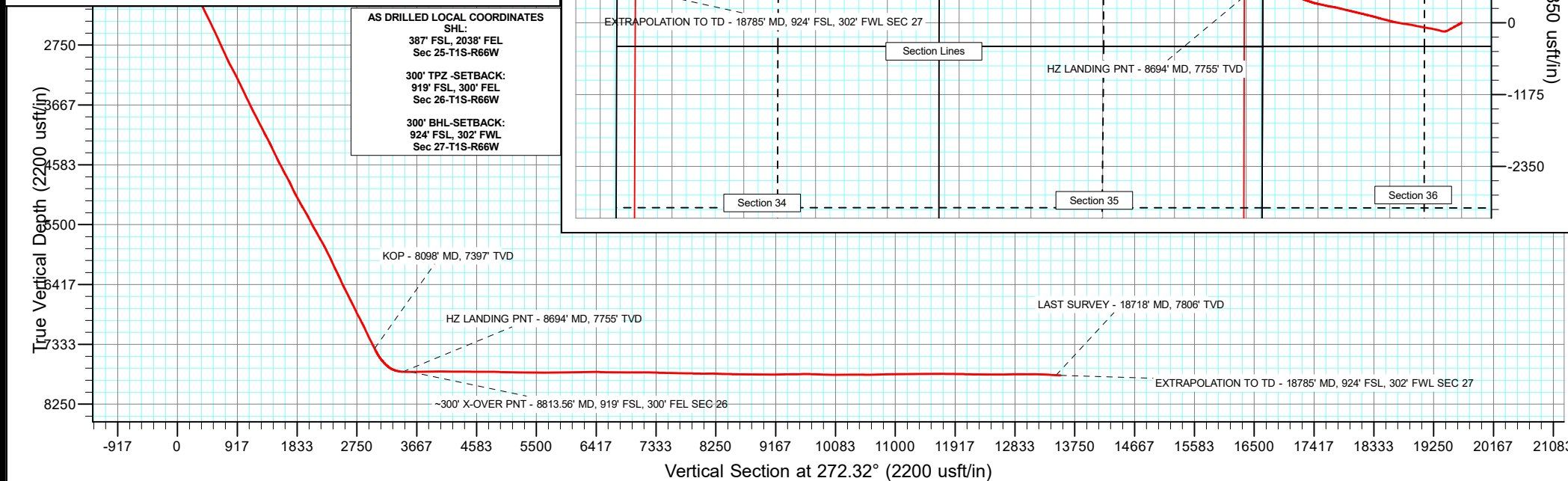
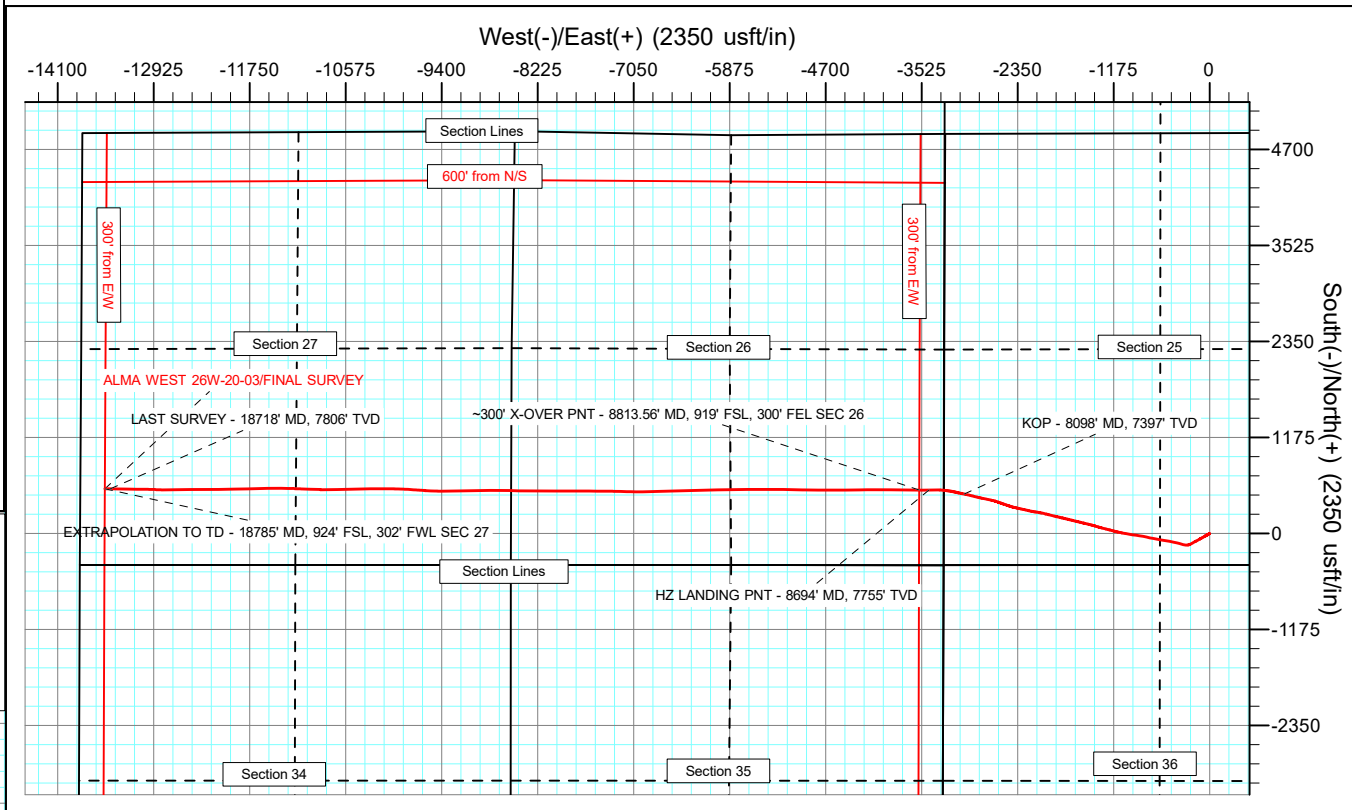
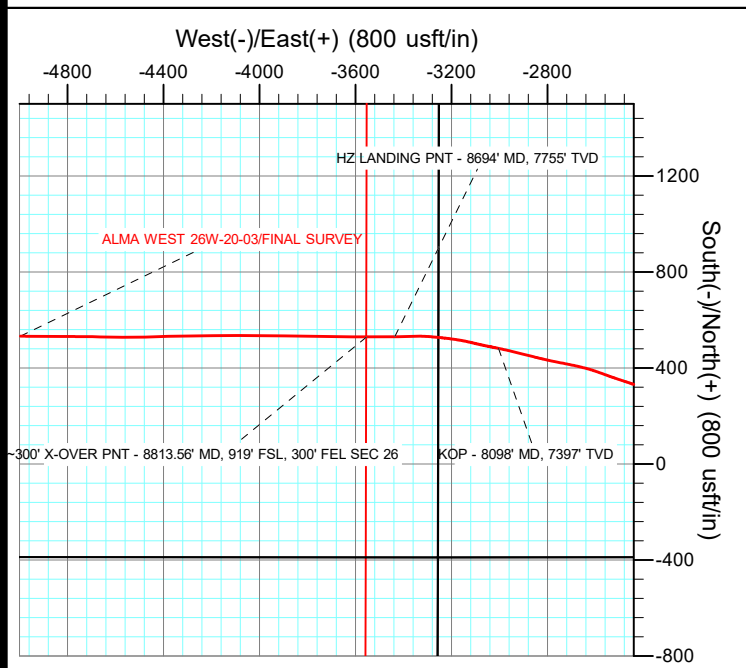
Azimuths to True North
 Magnetic North: 7.71°
 Magnetic Field
 Strength: 51639.9nT
 Dip Angle: 66.26°
 Date: 2/8/2022
 Model: IGRF2020

WELL DETAILS: ALMA WEST 26W-20-03

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1218272.07	3218222.77	39.929909°N	104.721850°W	

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
8098.00	26.66	281.57	7396.98	482.02	-3003.96	3020.98	3114.29	KOP - 8098' MD, 7397' TVD
8694.00	65.55	266.32	7754.70	531.84	-3435.76	3454.45	3551.15	HZ LANDING PNT - 8694' MD, 7755' TVD
8813.56	91.25	270.65	7756.79	529.50	-3555.18	3573.68	3670.63	~300' X-OVER PNT - 8813.56' MD, 919' FSL, 300' FEL SEC 26
18718.00	86.37	270.59	7805.92	546.24	-13455.12	13466.21	13573.14	LAST SURVEY - 18718' MD, 7806' TVD
18785.00	86.37	270.59	7810.16	546.93	-13521.99	13533.04	13640.01	EXTRAPOLATION TO TD - 18785' MD, 924' FSL, 302' FWL SEC 27



AS DRILLED LOCAL COORDINATES
SHL:
 387' FSL, 2038' FEL
 Sec 25-T1S-R66W
 300' TPZ-SETBACK:
 919' FSL, 300' FEL
 Sec 26-T1S-R66W
 300' BHL-SETBACK:
 924' FSL, 302' FWL
 Sec 27-T1S-R66W

Survey Report

Company: EXTRACTION OIL & GAS	Local Co-ordinate Reference: Well ALMA WEST 26W-20-03
Project: ADAMS COUNTY	TVD Reference: KBE 25' @ 5200.00usft
Site: Sec 25-T1S-R66W	MD Reference: KBE 25' @ 5200.00usft
Well: ALMA WEST 26W-20-03	North Reference: True
Wellbore: OWB	Survey Calculation Method: Minimum Curvature
Design: FINAL SURVEY	Database: EDT_32Bit_ODBC

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	Using geodetic scale factor	

Site Sec 25-T1S-R66W		
Site Position:	Northing: 1,217,904.28 usft	Latitude: 39.928850°N
From: Lat/Long	Easting: 3,220,262.11 usft	Longitude: 104.714590°W
Position Uncertainty: 0.00 usft	Slot Radius: 13.200 in	Grid Convergence: 0.51 °

Well ALMA WEST 26W-20-03			
Well Position	+N/-S 0.00 usft	Northing: 1,218,272.07 usft	Latitude: 39.929909°N
	+E/-W 0.00 usft	Easting: 3,218,222.77 usft	Longitude: 104.721850°W
Position Uncertainty 0.00 usft	Wellhead Elevation: usft	Ground Level: 5,175.00 usft	

Wellbore OWB					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	2/8/2022	7.72	66.26	51,639.94873982

Design FINAL SURVEY				
Audit Notes:				
Version: 1.0	Phase: ACTUAL	Tie On Depth: 0.00		
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	272.32

Survey Program		Date 1/6/2023		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
86.00	1,574.00	SURFACE SURVEY (OWB)	MWD OWSG	OWSG MWD - Standard
1,670.00	18,785.00	FINAL SURVEY (OWB)	MWD OWSG	OWSG MWD - Standard

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
86.00	1.14	230.14	85.99	-0.55	-0.66	0.63	1.33	1.33	0.00
149.00	2.59	237.92	148.96	-1.71	-2.34	2.27	2.33	2.30	12.35
232.00	4.02	240.70	231.82	-4.13	-6.47	6.30	1.73	1.72	3.35
313.00	5.21	242.17	312.56	-7.23	-12.20	11.90	1.48	1.47	1.81
396.00	5.78	238.42	395.17	-11.18	-19.09	18.62	0.81	0.69	-4.52
480.00	6.97	238.53	478.65	-16.06	-27.04	26.37	1.42	1.42	0.13
563.00	9.35	242.66	560.81	-21.78	-37.33	36.42	2.95	2.87	4.98
647.00	10.92	238.13	643.50	-29.12	-50.15	48.93	2.09	1.87	-5.39
729.00	11.91	240.47	723.87	-37.39	-64.11	62.54	1.33	1.21	2.85

Survey Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well ALMA WEST 26W-20-03
Project:	ADAMS COUNTY	TVD Reference:	KBE 25' @ 5200.00usft
Site:	Sec 25-T1S-R66W	MD Reference:	KBE 25' @ 5200.00usft
Well:	ALMA WEST 26W-20-03	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDT_32Bit_ODBC

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)
813.00	11.44	239.84	806.13	-45.85	-78.85	76.93	0.58	-0.56	-0.75
897.00	11.96	241.44	888.39	-54.19	-93.70	91.43	0.73	0.62	1.90
981.00	11.36	242.36	970.66	-62.19	-108.67	106.07	0.75	-0.71	1.10
1,066.00	12.82	240.58	1,053.77	-70.71	-124.30	121.34	1.77	1.72	-2.09
1,150.00	12.05	240.58	1,135.80	-79.59	-140.06	136.73	0.92	-0.92	0.00
1,235.00	11.94	241.59	1,218.94	-88.14	-155.52	151.83	0.28	-0.13	1.19
1,320.00	12.30	243.39	1,302.05	-96.37	-171.35	167.31	0.61	0.42	2.12
1,403.00	12.82	241.81	1,383.06	-104.68	-187.37	182.99	0.75	0.63	-1.90
1,490.00	11.97	241.74	1,468.03	-113.52	-203.82	199.07	0.98	-0.98	-0.08
1,574.00	12.45	242.22	1,550.13	-121.86	-219.51	214.40	0.58	0.57	0.57
1,670.00	12.60	242.25	1,643.85	-131.56	-237.93	232.42	0.16	0.16	0.03
1,765.00	12.96	251.78	1,736.50	-139.72	-257.22	251.36	2.25	0.38	10.03
1,859.00	15.68	267.83	1,827.61	-143.49	-279.94	273.91	5.09	2.89	17.07
1,954.00	16.00	281.53	1,919.04	-141.36	-305.61	299.64	3.94	0.34	14.42
2,048.00	18.65	288.37	2,008.77	-134.03	-332.57	326.88	3.55	2.82	7.28
2,143.00	22.29	286.46	2,097.76	-124.14	-364.28	358.96	3.90	3.83	-2.01
2,238.00	24.52	279.53	2,184.95	-115.77	-401.01	396.00	3.73	2.35	-7.29
2,333.00	26.85	281.37	2,270.56	-108.27	-441.49	436.75	2.59	2.45	1.94
2,452.00	26.38	281.28	2,376.95	-97.80	-493.76	489.40	0.40	-0.39	-0.08
2,547.00	26.22	280.50	2,462.12	-89.85	-535.09	531.02	0.40	-0.17	-0.82
2,642.00	25.53	279.90	2,547.59	-82.51	-575.89	572.09	0.78	-0.73	-0.63
2,736.00	25.01	278.98	2,632.60	-75.92	-615.48	611.91	0.69	-0.55	-0.98
2,831.00	24.09	279.11	2,719.01	-69.72	-654.46	651.10	0.97	-0.97	0.14
2,926.00	25.26	282.26	2,805.34	-62.34	-693.41	690.32	1.85	1.23	3.32
3,020.00	24.19	282.19	2,890.72	-54.02	-731.83	729.05	1.14	-1.14	-0.07
3,115.00	25.86	282.40	2,976.80	-45.46	-771.10	768.63	1.76	1.76	0.22
3,210.00	28.91	281.50	3,061.14	-36.43	-813.84	811.71	3.24	3.21	-0.95
3,304.00	28.35	279.48	3,143.65	-28.22	-858.13	856.28	1.19	-0.60	-2.15
3,398.00	27.09	277.62	3,226.86	-21.71	-901.36	899.74	1.63	-1.34	-1.98
3,493.00	25.42	277.12	3,312.06	-16.31	-943.03	941.60	1.77	-1.76	-0.53
3,587.00	26.36	280.58	3,396.63	-9.98	-983.57	982.36	1.89	1.00	3.68
3,682.00	25.20	279.08	3,482.17	-2.92	-1,024.27	1,023.32	1.40	-1.22	-1.58
3,777.00	26.87	282.16	3,567.53	4.80	-1,065.23	1,064.56	2.26	1.76	3.24
3,871.00	25.15	281.36	3,652.01	13.21	-1,105.59	1,105.22	1.87	-1.83	-0.85
3,966.00	27.04	283.92	3,737.33	22.38	-1,146.34	1,146.31	2.32	1.99	2.69
4,060.00	29.16	285.07	3,820.24	33.48	-1,189.20	1,189.58	2.33	2.26	1.22
4,155.00	26.89	283.95	3,904.10	44.67	-1,232.40	1,233.20	2.45	-2.39	-1.18
4,249.00	28.58	284.24	3,987.29	55.33	-1,274.83	1,276.03	1.80	1.80	0.31
4,344.00	26.46	284.32	4,071.54	66.16	-1,317.37	1,318.97	2.23	-2.23	0.08
4,438.00	29.86	286.41	4,154.40	77.95	-1,360.12	1,362.16	3.77	3.62	2.22
4,532.00	28.10	286.07	4,236.63	90.69	-1,403.84	1,406.36	1.88	-1.87	-0.36
4,627.00	24.69	285.77	4,321.71	102.28	-1,444.45	1,447.40	3.59	-3.59	-0.32
4,722.00	26.54	283.21	4,407.38	112.52	-1,484.21	1,487.55	2.27	1.95	-2.69

Survey Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well ALMA WEST 26W-20-03
Project:	ADAMS COUNTY	TVD Reference:	KBE 25' @ 5200.00usft
Site:	Sec 25-T1S-R66W	MD Reference:	KBE 25' @ 5200.00usft
Well:	ALMA WEST 26W-20-03	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDT_32Bit_ODBC

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)	
4,816.00	25.93	283.04	4,491.69	121.96	-1,524.68	1,528.36	0.65	-0.65	-0.18	
4,911.00	29.13	283.90	4,575.93	132.20	-1,567.37	1,571.43	3.39	3.37	0.91	
5,005.00	27.17	283.35	4,658.80	142.66	-1,610.46	1,614.91	2.10	-2.09	-0.59	
5,100.00	29.88	283.84	4,742.26	153.33	-1,654.55	1,659.40	2.86	2.85	0.52	
5,194.00	28.47	283.41	4,824.34	164.12	-1,699.08	1,704.33	1.52	-1.50	-0.46	
5,289.00	24.52	284.02	4,909.34	174.16	-1,740.25	1,745.87	4.17	-4.16	0.64	
5,383.00	26.90	282.84	4,994.03	183.61	-1,779.92	1,785.88	2.59	2.53	-1.26	
5,478.00	29.97	283.43	5,077.56	193.90	-1,823.96	1,830.31	3.25	3.23	0.62	
5,572.00	28.30	282.84	5,159.66	204.30	-1,868.52	1,875.25	1.80	-1.78	-0.63	
5,667.00	31.92	284.10	5,241.83	215.43	-1,914.85	1,922.00	3.87	3.81	1.33	
5,761.00	30.43	284.20	5,322.25	227.32	-1,962.04	1,969.62	1.59	-1.59	0.11	
5,856.00	27.23	283.08	5,405.47	238.15	-2,006.54	2,014.53	3.42	-3.37	-1.18	
5,951.00	27.72	282.53	5,489.75	247.86	-2,049.28	2,057.62	0.58	0.52	-0.58	
6,046.00	31.23	280.18	5,572.45	257.01	-2,095.10	2,103.78	3.89	3.69	-2.47	
6,140.00	28.39	277.69	5,654.01	264.31	-2,141.25	2,150.18	3.30	-3.02	-2.65	
6,235.00	30.54	282.12	5,736.72	272.40	-2,187.24	2,196.46	3.22	2.26	4.66	
6,330.00	29.24	283.37	5,819.09	282.83	-2,233.41	2,243.02	1.52	-1.37	1.32	
6,424.00	26.25	282.10	5,902.27	292.50	-2,276.08	2,286.05	3.24	-3.18	-1.35	
6,519.00	27.24	282.84	5,987.11	301.74	-2,317.83	2,328.13	1.10	1.04	0.78	
6,614.00	23.96	282.16	6,072.77	310.63	-2,357.89	2,368.52	3.47	-3.45	-0.72	
6,708.00	25.92	282.87	6,158.00	319.23	-2,396.58	2,407.53	2.11	2.09	0.76	
6,803.00	28.21	289.09	6,242.61	331.20	-2,438.06	2,449.45	3.83	2.41	6.55	
6,897.00	24.75	287.71	6,326.73	344.46	-2,477.81	2,489.70	3.74	-3.68	-1.47	
6,992.00	25.76	288.86	6,412.65	357.18	-2,516.29	2,528.67	1.18	1.06	1.21	
7,087.00	29.00	290.11	6,497.00	371.78	-2,557.46	2,570.40	3.46	3.41	1.32	
7,182.00	26.81	289.16	6,580.95	386.73	-2,599.33	2,612.83	2.35	-2.31	-1.00	
7,276.00	28.11	284.59	6,664.37	399.27	-2,640.79	2,654.77	2.63	1.38	-4.86	
7,371.00	26.36	282.22	6,748.83	409.37	-2,683.06	2,697.42	2.17	-1.84	-2.49	
7,465.00	26.98	281.47	6,832.83	418.03	-2,724.36	2,739.03	0.75	0.66	-0.80	
7,560.00	27.04	280.77	6,917.47	426.35	-2,766.69	2,781.66	0.34	0.06	-0.74	
7,654.00	28.63	283.14	7,000.59	435.46	-2,809.62	2,824.92	2.06	1.69	2.52	
7,749.00	24.98	283.65	7,085.37	445.37	-2,851.29	2,866.96	3.85	-3.84	0.54	
7,844.00	25.63	284.33	7,171.26	455.19	-2,890.69	2,906.72	0.75	0.68	0.72	
7,939.00	27.41	283.83	7,256.26	465.50	-2,931.83	2,948.25	1.89	1.87	-0.53	
8,033.00	28.37	282.87	7,339.34	475.65	-2,974.61	2,991.41	1.13	1.02	-1.02	
8,098.00	26.66	281.57	7,396.98	482.02	-3,003.96	3,020.98	2.78	-2.63	-2.00	
KOP - 8098' MD, 7397' TVD										
8,128.00	25.88	280.92	7,423.88	484.61	-3,016.98	3,034.10	2.78	-2.61	-2.17	
8,222.00	32.63	281.95	7,505.85	493.75	-3,061.97	3,079.42	7.20	7.18	1.10	
8,316.00	40.26	283.68	7,581.41	506.20	-3,116.36	3,134.27	8.19	8.12	1.84	
8,410.00	45.87	278.66	7,650.08	518.48	-3,179.29	3,197.65	6.99	5.97	-5.34	
8,505.00	61.02	275.81	7,706.50	527.87	-3,254.78	3,273.46	16.13	15.95	-3.00	
8,600.00	76.99	271.70	7,740.44	533.49	-3,342.99	3,361.82	17.28	16.81	-4.33	

Survey Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well ALMA WEST 26W-20-03
Project:	ADAMS COUNTY	TVD Reference:	KBE 25' @ 5200.00usft
Site:	Sec 25-T1S-R66W	MD Reference:	KBE 25' @ 5200.00usft
Well:	ALMA WEST 26W-20-03	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDT_32Bit_ODBC

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)	
8,694.00	85.55	266.32	7,754.71	531.84	-3,435.76	3,454.45	10.72	9.11	-5.72	
HZ LANDING PNT - 8694' MD, 7755' TVD										
8,789.00	91.28	270.54	7,757.33	529.24	-3,530.63	3,549.13	7.49	6.03	4.44	
8,813.56	91.25	270.65	7,756.79	529.50	-3,555.18	3,573.68	0.46	-0.13	0.44	
~300' X-OVER PNT - 8813.56' MD, 919' FSL, 300' FEL SEC 26										
8,884.00	91.16	270.96	7,755.31	530.49	-3,625.60	3,644.08	0.46	-0.13	0.44	
8,978.00	90.99	270.80	7,753.55	531.93	-3,719.57	3,738.03	0.25	-0.18	-0.17	
9,073.00	91.00	270.69	7,751.90	533.17	-3,814.55	3,832.98	0.12	0.01	-0.12	
9,167.00	90.95	270.48	7,750.30	534.13	-3,908.53	3,926.92	0.23	-0.05	-0.22	
9,261.00	89.77	270.66	7,749.71	535.06	-4,002.52	4,020.88	1.27	-1.26	0.19	
9,356.00	89.62	270.05	7,750.21	535.65	-4,097.52	4,115.82	0.66	-0.16	-0.64	
9,451.00	89.15	269.25	7,751.23	535.07	-4,192.51	4,210.71	0.98	-0.49	-0.84	
9,545.00	89.73	269.35	7,752.15	533.92	-4,286.50	4,304.58	0.63	0.62	0.11	
9,640.00	89.68	268.52	7,752.64	532.15	-4,381.48	4,399.41	0.88	-0.05	-0.87	
9,735.00	89.42	268.25	7,753.39	529.48	-4,476.44	4,494.18	0.39	-0.27	-0.28	
9,829.00	89.97	270.83	7,753.89	528.72	-4,570.43	4,588.06	2.81	0.59	2.74	
9,923.00	90.09	270.77	7,753.84	530.04	-4,664.42	4,682.03	0.14	0.13	-0.06	
10,018.00	90.12	270.53	7,753.66	531.11	-4,759.41	4,776.99	0.25	0.03	-0.25	
10,113.00	87.59	270.24	7,755.56	531.75	-4,854.38	4,871.91	2.68	-2.66	-0.31	
10,207.00	88.68	270.57	7,758.62	532.42	-4,948.33	4,965.80	1.21	1.16	0.35	
10,302.00	89.10	272.03	7,760.46	534.57	-5,043.28	5,060.77	1.60	0.44	1.54	
10,397.00	89.08	270.19	7,761.97	536.41	-5,138.25	5,155.73	1.94	-0.02	-1.94	
10,491.00	88.74	270.58	7,763.76	537.04	-5,232.23	5,249.66	0.55	-0.36	0.41	
10,586.00	88.91	269.96	7,765.71	537.49	-5,327.21	5,344.58	0.68	0.18	-0.65	
10,680.00	89.34	269.84	7,767.14	537.33	-5,421.20	5,438.48	0.47	0.46	-0.13	
10,775.00	90.20	270.77	7,767.52	537.83	-5,516.19	5,533.42	1.33	0.91	0.98	
10,869.00	90.38	270.70	7,767.05	539.04	-5,610.18	5,627.39	0.21	0.19	-0.07	
10,964.00	90.28	269.00	7,766.50	538.79	-5,705.18	5,722.29	1.79	-0.11	-1.79	
11,059.00	91.29	269.08	7,765.20	537.20	-5,800.16	5,817.13	1.07	1.06	0.08	
11,153.00	90.59	267.48	7,763.66	534.38	-5,894.10	5,910.88	1.86	-0.74	-1.70	
11,248.00	90.43	269.42	7,762.81	531.81	-5,989.05	6,005.65	2.05	-0.17	2.04	
11,342.00	90.55	269.19	7,762.01	530.67	-6,083.04	6,099.52	0.28	0.13	-0.24	
11,437.00	90.84	268.33	7,760.85	528.61	-6,178.01	6,194.33	0.96	0.31	-0.91	
11,531.00	91.60	269.26	7,758.85	526.63	-6,271.97	6,288.13	1.28	0.81	0.99	
11,626.00	90.44	269.68	7,757.16	525.76	-6,366.95	6,382.99	1.30	-1.22	0.44	
11,720.00	88.60	267.63	7,757.95	523.55	-6,460.91	6,476.79	2.93	-1.96	-2.18	
11,815.00	88.26	267.21	7,760.55	519.27	-6,555.78	6,571.41	0.57	-0.36	-0.44	
11,910.00	89.80	268.25	7,762.16	515.51	-6,650.69	6,666.09	1.96	1.62	1.09	
12,004.00	89.65	268.70	7,762.61	513.01	-6,744.65	6,759.87	0.50	-0.16	0.48	
12,099.00	90.08	268.76	7,762.84	510.91	-6,839.63	6,854.69	0.46	0.45	0.06	
12,193.00	89.72	270.42	7,763.00	510.23	-6,933.62	6,948.58	1.81	-0.38	1.77	
12,288.00	90.89	269.99	7,762.49	510.57	-7,028.62	7,043.51	1.31	1.23	-0.45	
12,382.00	89.48	271.18	7,762.19	511.53	-7,122.61	7,137.46	1.96	-1.50	1.27	
12,477.00	88.66	271.54	7,763.73	513.79	-7,217.57	7,232.44	0.94	-0.86	0.38	

Survey Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well ALMA WEST 26W-20-03
Project:	ADAMS COUNTY	TVD Reference:	KBE 25' @ 5200.00usft
Site:	Sec 25-T1S-R66W	MD Reference:	KBE 25' @ 5200.00usft
Well:	ALMA WEST 26W-20-03	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDT_32Bit_ODBC

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)	
12,571.00	87.34	270.47	7,767.01	515.44	-7,311.49	7,326.35	1.81	-1.40	-1.14	
12,666.00	88.81	270.77	7,770.20	516.46	-7,406.43	7,421.25	1.58	1.55	0.32	
12,760.00	89.06	270.43	7,771.95	517.45	-7,500.41	7,515.19	0.45	0.27	-0.36	
12,855.00	88.37	270.46	7,774.08	518.18	-7,595.38	7,610.12	0.73	-0.73	0.03	
12,949.00	88.76	270.15	7,776.44	518.68	-7,689.35	7,704.03	0.53	0.41	-0.33	
13,044.00	88.86	270.67	7,778.41	519.36	-7,784.33	7,798.96	0.56	0.11	0.55	
13,139.00	89.49	269.69	7,779.78	519.66	-7,879.32	7,893.88	1.23	0.66	-1.03	
13,233.00	88.48	269.31	7,781.44	518.84	-7,973.30	7,987.75	1.15	-1.07	-0.40	
13,328.00	90.08	270.40	7,782.64	518.60	-8,068.28	8,082.65	2.04	1.68	1.15	
13,423.00	90.81	270.51	7,781.90	519.36	-8,163.28	8,177.60	0.78	0.77	0.12	
13,517.00	87.16	270.59	7,783.56	520.26	-8,257.24	8,271.52	3.88	-3.88	0.09	
13,612.00	88.36	269.92	7,787.28	520.68	-8,352.17	8,366.39	1.45	1.26	-0.71	
13,707.00	88.37	271.15	7,789.99	521.57	-8,447.12	8,461.30	1.29	0.01	1.29	
13,801.00	89.92	271.28	7,791.39	523.56	-8,541.09	8,555.27	1.65	1.65	0.14	
13,896.00	89.22	271.39	7,792.10	525.77	-8,636.06	8,650.25	0.75	-0.74	0.12	
13,990.00	88.36	269.99	7,794.09	526.91	-8,730.03	8,744.19	1.75	-0.91	-1.49	
14,085.00	89.84	269.53	7,795.58	526.51	-8,825.01	8,839.08	1.63	1.56	-0.48	
14,180.00	89.35	269.61	7,796.25	525.79	-8,920.01	8,933.97	0.52	-0.52	0.08	
14,274.00	90.97	268.29	7,795.99	524.07	-9,013.98	9,027.80	2.22	1.72	-1.40	
14,463.00	90.89	268.38	7,792.92	518.58	-9,202.88	9,216.32	0.06	-0.04	0.05	
14,558.00	89.92	269.88	7,792.25	517.14	-9,297.86	9,311.17	1.88	-1.02	1.58	
14,653.00	89.74	270.02	7,792.53	517.06	-9,392.86	9,406.09	0.24	-0.19	0.15	
14,755.00	91.82	272.21	7,791.14	519.04	-9,494.82	9,508.04	2.96	2.04	2.15	
14,842.00	90.51	273.49	7,789.37	523.37	-9,581.69	9,595.02	2.10	-1.51	1.47	
14,936.00	88.51	274.19	7,790.18	529.66	-9,675.47	9,688.97	2.25	-2.13	0.74	
15,031.00	88.15	273.54	7,792.95	536.06	-9,770.22	9,783.90	0.78	-0.38	-0.68	
15,125.00	87.19	273.11	7,796.77	541.51	-9,863.98	9,877.80	1.12	-1.02	-0.46	
15,219.00	88.58	271.65	7,800.24	545.41	-9,957.83	9,971.74	2.14	1.48	-1.55	
15,314.00	90.08	269.25	7,801.35	546.15	-10,052.81	10,066.67	2.98	1.58	-2.53	
15,409.00	91.70	271.10	7,799.87	546.44	-10,147.79	10,161.58	2.59	1.71	1.95	
15,504.00	89.52	269.92	7,798.86	547.29	-10,242.77	10,256.52	2.61	-2.29	-1.24	
15,598.00	89.18	269.62	7,799.93	546.91	-10,336.77	10,350.42	0.48	-0.36	-0.32	
15,693.00	91.27	269.68	7,799.55	546.33	-10,431.76	10,445.32	2.20	2.20	0.06	
15,788.00	88.06	266.14	7,800.11	542.87	-10,526.67	10,540.01	5.03	-3.38	-3.73	
15,882.00	90.30	268.28	7,801.45	538.29	-10,620.53	10,633.61	3.30	2.38	2.28	
15,976.00	92.15	269.48	7,799.44	536.46	-10,714.49	10,727.42	2.35	1.97	1.28	
16,070.00	92.75	269.59	7,795.43	535.69	-10,808.40	10,821.22	0.65	0.64	0.12	
16,164.00	91.91	272.01	7,791.60	537.01	-10,902.30	10,915.10	2.72	-0.89	2.57	
16,259.00	89.60	272.04	7,790.35	540.36	-10,997.23	11,010.08	2.43	-2.43	0.03	
16,353.00	90.52	272.80	7,790.25	544.33	-11,091.15	11,104.08	1.27	0.98	0.81	
16,448.00	90.04	271.45	7,789.79	547.85	-11,186.08	11,199.08	1.51	-0.51	-1.42	
16,543.00	91.00	271.17	7,788.93	550.03	-11,281.05	11,294.06	1.05	1.01	-0.29	
16,637.00	90.78	270.26	7,787.47	551.20	-11,375.03	11,388.01	1.00	-0.23	-0.97	

Survey Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well ALMA WEST 26W-20-03
Project:	ADAMS COUNTY	TVD Reference:	KBE 25' @ 5200.00usft
Site:	Sec 25-T1S-R66W	MD Reference:	KBE 25' @ 5200.00usft
Well:	ALMA WEST 26W-20-03	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDT_32Bit_ODBC

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)	
16,732.00	89.27	269.33	7,787.43	550.86	-11,470.02	11,482.91	1.87	-1.59	-0.98	
16,826.00	90.73	269.84	7,787.43	550.18	-11,564.02	11,576.80	1.65	1.55	0.54	
16,921.00	91.15	268.09	7,785.87	548.46	-11,658.98	11,671.63	1.89	0.44	-1.84	
17,015.00	87.91	268.13	7,786.64	545.36	-11,752.92	11,765.36	3.45	-3.45	0.04	
17,110.00	89.98	270.22	7,788.39	544.00	-11,847.88	11,860.19	3.10	2.18	2.20	
17,205.00	89.15	268.62	7,789.11	543.03	-11,942.87	11,955.06	1.90	-0.87	-1.68	
17,299.00	89.03	268.36	7,790.60	540.56	-12,036.83	12,048.84	0.30	-0.13	-0.28	
17,394.00	88.61	269.07	7,792.56	538.43	-12,131.78	12,143.63	0.87	-0.44	0.75	
17,488.00	89.81	270.75	7,793.85	538.28	-12,225.77	12,237.53	2.20	1.28	1.79	
17,582.00	88.87	269.59	7,794.94	538.56	-12,319.76	12,331.46	1.59	-1.00	-1.23	
17,677.00	88.75	269.26	7,796.91	537.61	-12,414.73	12,426.32	0.37	-0.13	-0.35	
17,771.00	90.85	270.13	7,797.24	537.11	-12,508.72	12,520.21	2.42	2.23	0.93	
17,866.00	90.71	268.95	7,795.95	536.34	-12,603.71	12,615.09	1.25	-0.15	-1.24	
17,960.00	91.09	267.93	7,794.47	533.78	-12,697.66	12,708.86	1.16	0.40	-1.09	
18,055.00	90.99	271.25	7,792.74	533.11	-12,792.63	12,803.72	3.50	-0.11	3.49	
18,150.00	89.89	272.26	7,792.01	536.01	-12,887.58	12,898.71	1.57	-1.16	1.06	
18,245.00	89.85	270.98	7,792.23	538.70	-12,982.54	12,993.71	1.35	-0.04	-1.35	
18,339.00	90.45	270.27	7,791.98	539.73	-13,076.53	13,087.66	0.99	0.64	-0.76	
18,434.00	88.99	271.14	7,792.45	540.89	-13,171.52	13,182.62	1.79	-1.54	0.92	
18,528.00	87.19	271.73	7,795.58	543.25	-13,265.44	13,276.55	2.02	-1.91	0.63	
18,623.00	86.98	270.65	7,800.41	545.22	-13,360.29	13,371.41	1.16	-0.22	-1.14	
18,718.00	86.37	270.59	7,805.92	546.24	-13,455.13	13,466.21	0.65	-0.64	-0.06	
LAST SURVEY - 18718' MD, 7806' TVD										
18,785.00	86.37	270.59	7,810.16	546.93	-13,521.99	13,533.04	0.00	0.00	0.00	
EXTRAPOLATION TO TD - 18785' MD, 924' FSL, 302' FWL SEC 27										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
LP-ALMA W 26W-03 - hit/miss target - Shape - Point	0.00	0.00	7,775.00	533.58	-3,555.18	1,218,774.41	3,214,663.15	39.931373°N	104.734527°W	
- actual wellpath misses target center by 18.66usft at 8813.20usft MD (7756.80 TVD, 529.49 N, -3554.82 E)										
PBHL-ALMA W 26W-03 - hit/miss target - Shape - Point	0.00	0.00	7,825.00	546.11	-13,523.53	1,218,699.47	3,204,695.34	39.931398°N	104.770072°W	
- actual wellpath misses target center by 14.94usft at 18785.00usft MD (7810.16 TVD, 546.93 N, -13521.99 E)										

Survey Report

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well ALMA WEST 26W-20-03
Project:	ADAMS COUNTY	TVD Reference:	KBE 25' @ 5200.00usft
Site:	Sec 25-T1S-R66W	MD Reference:	KBE 25' @ 5200.00usft
Well:	ALMA WEST 26W-20-03	North Reference:	True
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEY	Database:	EDT_32Bit_ODBC

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,098.00	7,396.98	482.02	-3,003.96	KOP - 8098' MD, 7397' TVD
8,694.00	7,754.71	531.84	-3,435.76	HZ LANDING PNT - 8694' MD, 7755' TVD
8,813.56	7,756.79	529.50	-3,555.18	~300' X-OVER PNT - 8813.56' MD, 919' FSL, 300' FEL SEC 26
18,718.00	7,805.92	546.24	-13,455.13	LAST SURVEY - 18718' MD, 7806' TVD
18,785.00	7,810.16	546.93	-13,521.99	EXTRAPOLATION TO TD - 18785' MD, 924' FSL, 302' FWL SEC 27

Checked By: _____ Approved By: _____ Date: _____