

Plan Proposal

FOR

COG Operating, LLC
Pan Head Fee #4H
Lea Co., NM

Design #1

Presented By:

Aaron Boger
Account Manager

Dusty Moyer
Well Planner

SHL
330' FNL & 2320' FWL
Penetration Point
2254' FNL 2307' FWL
PBHL
2300' FNL & 2307' FWL

Attachment

Archer

COG Operating, LLC

Lea County(NM27E)

Sec.11-T17S-R32E

Pan Head Fee #4H

Wellbore #1

Plan: Design #1

HOBBS OCD

DEC 17 2012

RECEIVED

Standard Planning Report

28 November, 2012



Database:	EDMDBBW	Local Co-ordinate Reference:	Well Pan Head Fee #4H
Company:	COG Operating, LLC	TVD Reference:	WELL @ 4180.00usft (Original Well Elev)
Project:	Lea County(NM27E)	MD Reference:	WELL @ 4180.00usft (Original Well Elev)
Site:	Sec.11-T17S-R32E	North Reference:	Grid
Well:	Pan Head Fee #4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project:	Lea County(NM27E)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	Sec.11-T17S-R32E		
Site Position:		Northing:	675,378.000 usft
From:	Map	Easting:	680,940.300 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"
		Latitude:	32° 51' 19.118 N
		Longitude:	103° 44' 38.811 W
		Grid Convergence:	0.32 °

Well:	Pan Head Fee #4H		
Well Position	+N/-S 8.60 usft	Northing:	675,386.600 usft
	+E/-W 1,989.50 usft	Easting:	682,929.800 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 51' 19.093 N
		Longitude:	103° 44' 15.489 W
		Ground Level:	4,163.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/28/12	7.53	60.70	48,827

Design:	Design #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	179.76

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,322.61	0.00	0.00	6,322.61	0.00	0.00	0.00	0.00	0.00	0.00	
7,080.94	91.00	179.76	6,800.00	-485.79	2.03	12.00	12.00	0.00	179.76	Pan Head Fee #4H P
13,850.34	91.00	179.76	6,681.86	-7,254.10	30.30	0.00	0.00	0.00	0.00	Pan Head Fee #4H P

Database:	EDMDBBW	Local Co-ordinate Reference:	Well Pan Head Fee #4H
Company:	COG Operating, LLC	TVD Reference:	WELL @ 4180.00usft (Original Well Elev)
Project:	Lea County (NM27E)	MD Reference:	WELL @ 4180.00usft (Original Well Elev)
Site:	Sec. 11-T17S-R32E	North Reference:	Grid
Well:	Pan Head Fee #4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00

Database:	EDMDBBW	Local Co-ordinate Reference:	Well Pan Head Fee #4H
Company:	COG Operating, LLC	TVD Reference:	WELL @ 4180.00usft (Original Well Elev)
Project:	Lea County(NM27E)	MD Reference:	WELL @ 4180.00usft (Original Well Elev)
Site:	Sec.11-T17S-R32E	North Reference:	Grid
Well:	Pan Head Fee #4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP 12°/100'									
6,322.61	0.00	0.00	6,322.61	0.00	0.00	0.00	0.00	0.00	0.00
6,325.00	0.29	179.76	6,325.00	-0.01	0.00	0.01	12.00	12.00	0.00
6,350.00	3.29	179.76	6,349.98	-0.79	0.00	0.79	12.00	12.00	0.00
6,375.00	6.29	179.76	6,374.89	-2.87	0.01	2.87	12.00	12.00	0.00
6,400.00	9.29	179.76	6,399.66	-6.26	0.03	6.26	12.00	12.00	0.00
6,425.00	12.29	179.76	6,424.22	-10.94	0.05	10.94	12.00	12.00	0.00
6,450.00	15.29	179.76	6,448.49	-16.89	0.07	16.89	12.00	12.00	0.00
6,475.00	18.29	179.76	6,472.43	-24.11	0.10	24.11	12.00	12.00	0.00
6,500.00	21.29	179.76	6,495.95	-32.57	0.14	32.58	12.00	12.00	0.00
6,525.00	24.29	179.76	6,518.99	-42.26	0.18	42.26	12.00	12.00	0.00
6,550.00	27.29	179.76	6,541.50	-53.13	0.22	53.13	12.00	12.00	0.00
6,575.00	30.29	179.76	6,563.41	-65.17	0.27	65.17	12.00	12.00	0.00
6,600.00	33.29	179.76	6,584.66	-78.34	0.33	78.34	12.00	12.00	0.00
6,625.00	36.29	179.76	6,605.19	-92.60	0.39	92.60	12.00	12.00	0.00
6,650.00	39.29	179.76	6,624.94	-107.91	0.45	107.91	12.00	12.00	0.00
6,675.00	42.29	179.76	6,643.87	-124.24	0.52	124.24	12.00	12.00	0.00
6,700.00	45.29	179.76	6,661.91	-141.54	0.59	141.54	12.00	12.00	0.00
6,725.00	48.29	179.76	6,679.03	-159.76	0.67	159.76	12.00	12.00	0.00
6,750.00	51.29	179.76	6,695.17	-178.85	0.75	178.85	12.00	12.00	0.00
6,775.00	54.29	179.76	6,710.29	-198.75	0.83	198.76	12.00	12.00	0.00
6,800.00	57.29	179.76	6,724.34	-219.42	0.92	219.43	12.00	12.00	0.00
6,825.00	60.29	179.76	6,737.30	-240.80	1.01	240.81	12.00	12.00	0.00
6,850.00	63.29	179.76	6,749.11	-262.83	1.10	262.83	12.00	12.00	0.00
6,875.00	66.29	179.76	6,759.76	-285.45	1.19	285.45	12.00	12.00	0.00
6,900.00	69.29	179.76	6,769.21	-308.59	1.29	308.59	12.00	12.00	0.00
6,925.00	72.29	179.76	6,777.44	-332.19	1.39	332.19	12.00	12.00	0.00
6,950.00	75.29	179.76	6,784.42	-356.19	1.49	356.20	12.00	12.00	0.00
6,975.00	78.29	179.76	6,790.13	-380.53	1.59	380.53	12.00	12.00	0.00
7,000.00	81.29	179.76	6,794.56	-405.13	1.69	405.13	12.00	12.00	0.00
7,025.00	84.29	179.76	6,797.70	-429.93	1.80	429.93	12.00	12.00	0.00
7,050.00	87.29	179.76	6,799.54	-454.86	1.90	454.86	12.00	12.00	0.00
7,075.00	90.29	179.76	6,800.07	-479.85	2.00	479.85	12.00	12.00	0.00
EOC / Hold to TD									
7,080.94	91.00	179.76	6,800.00	-485.79	2.03	485.80	12.00	12.00	0.00
7,100.00	91.00	179.76	6,799.67	-504.85	2.11	504.85	0.00	0.00	0.00
7,200.00	91.00	179.76	6,797.92	-604.83	2.53	604.84	0.00	0.00	0.00
7,300.00	91.00	179.76	6,796.18	-704.81	2.94	704.82	0.00	0.00	0.00
7,400.00	91.00	179.76	6,794.43	-804.80	3.36	804.81	0.00	0.00	0.00
7,500.00	91.00	179.76	6,792.69	-904.78	3.78	904.79	0.00	0.00	0.00
7,600.00	91.00	179.76	6,790.94	-1,004.77	4.20	1,004.78	0.00	0.00	0.00
7,700.00	91.00	179.76	6,789.20	-1,104.75	4.61	1,104.76	0.00	0.00	0.00
7,800.00	91.00	179.76	6,787.45	-1,204.73	5.03	1,204.74	0.00	0.00	0.00

Database:	EDMDBBW	Local Co-ordinate Reference:	Well Pan Head Fee #4H
Company:	COG Operating, LLC	TVD Reference:	WELL @ 4180.00usft (Original Well Elev)
Project:	Lea County(NM27E)	MD Reference:	WELL @ 4180.00usft (Original Well Elev)
Site:	Sec.11-T17S-R32E	North Reference:	Grid
Well:	Pan Head Fee #4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
7,900.00	91.00	179.76	6,785.71	-1,304.72	5.45	1,304.73	0.00	0.00	0.00	
8,000.00	91.00	179.76	6,783.96	-1,404.70	5.87	1,404.71	0.00	0.00	0.00	
8,100.00	91.00	179.76	6,782.22	-1,504.69	6.28	1,504.70	0.00	0.00	0.00	
8,200.00	91.00	179.76	6,780.47	-1,604.67	6.70	1,604.68	0.00	0.00	0.00	
8,300.00	91.00	179.76	6,778.73	-1,704.65	7.12	1,704.67	0.00	0.00	0.00	
8,400.00	91.00	179.76	6,776.98	-1,804.64	7.54	1,804.65	0.00	0.00	0.00	
8,500.00	91.00	179.76	6,775.24	-1,904.62	7.96	1,904.64	0.00	0.00	0.00	
8,600.00	91.00	179.76	6,773.49	-2,004.61	8.37	2,004.62	0.00	0.00	0.00	
8,700.00	91.00	179.76	6,771.75	-2,104.59	8.79	2,104.61	0.00	0.00	0.00	
8,800.00	91.00	179.76	6,770.00	-2,204.57	9.21	2,204.59	0.00	0.00	0.00	
8,900.00	91.00	179.76	6,768.26	-2,304.56	9.63	2,304.58	0.00	0.00	0.00	
9,000.00	91.00	179.76	6,766.51	-2,404.54	10.04	2,404.56	0.00	0.00	0.00	
9,100.00	91.00	179.76	6,764.76	-2,504.53	10.46	2,504.55	0.00	0.00	0.00	
9,200.00	91.00	179.76	6,763.02	-2,604.51	10.88	2,604.53	0.00	0.00	0.00	
9,300.00	91.00	179.76	6,761.27	-2,704.49	11.30	2,704.52	0.00	0.00	0.00	
9,400.00	91.00	179.76	6,759.53	-2,804.48	11.71	2,804.50	0.00	0.00	0.00	
9,500.00	91.00	179.76	6,757.78	-2,904.46	12.13	2,904.49	0.00	0.00	0.00	
9,600.00	91.00	179.76	6,756.04	-3,004.44	12.55	3,004.47	0.00	0.00	0.00	
9,700.00	91.00	179.76	6,754.29	-3,104.43	12.97	3,104.46	0.00	0.00	0.00	
9,800.00	91.00	179.76	6,752.55	-3,204.41	13.38	3,204.44	0.00	0.00	0.00	
9,900.00	91.00	179.76	6,750.80	-3,304.40	13.80	3,304.43	0.00	0.00	0.00	
10,000.00	91.00	179.76	6,749.06	-3,404.38	14.22	3,404.41	0.00	0.00	0.00	
10,100.00	91.00	179.76	6,747.31	-3,504.36	14.64	3,504.39	0.00	0.00	0.00	
10,200.00	91.00	179.76	6,745.57	-3,604.35	15.06	3,604.38	0.00	0.00	0.00	
10,300.00	91.00	179.76	6,743.82	-3,704.33	15.47	3,704.36	0.00	0.00	0.00	
10,400.00	91.00	179.76	6,742.08	-3,804.32	15.89	3,804.35	0.00	0.00	0.00	
10,500.00	91.00	179.76	6,740.33	-3,904.30	16.31	3,904.33	0.00	0.00	0.00	
10,600.00	91.00	179.76	6,738.59	-4,004.28	16.73	4,004.32	0.00	0.00	0.00	
10,700.00	91.00	179.76	6,736.84	-4,104.27	17.14	4,104.30	0.00	0.00	0.00	
10,800.00	91.00	179.76	6,735.10	-4,204.25	17.56	4,204.29	0.00	0.00	0.00	
10,900.00	91.00	179.76	6,733.35	-4,304.24	17.98	4,304.27	0.00	0.00	0.00	
11,000.00	91.00	179.76	6,731.61	-4,404.22	18.40	4,404.26	0.00	0.00	0.00	
11,100.00	91.00	179.76	6,729.86	-4,504.20	18.81	4,504.24	0.00	0.00	0.00	
11,200.00	91.00	179.76	6,728.11	-4,604.19	19.23	4,604.23	0.00	0.00	0.00	
11,300.00	91.00	179.76	6,726.37	-4,704.17	19.65	4,704.21	0.00	0.00	0.00	
11,400.00	91.00	179.76	6,724.62	-4,804.15	20.07	4,804.20	0.00	0.00	0.00	
11,500.00	91.00	179.76	6,722.88	-4,904.14	20.48	4,904.18	0.00	0.00	0.00	
11,600.00	91.00	179.76	6,721.13	-5,004.12	20.90	5,004.17	0.00	0.00	0.00	
11,700.00	91.00	179.76	6,719.39	-5,104.11	21.32	5,104.15	0.00	0.00	0.00	
11,800.00	91.00	179.76	6,717.64	-5,204.09	21.74	5,204.14	0.00	0.00	0.00	
11,900.00	91.00	179.76	6,715.90	-5,304.07	22.15	5,304.12	0.00	0.00	0.00	
12,000.00	91.00	179.76	6,714.15	-5,404.06	22.57	5,404.11	0.00	0.00	0.00	
12,100.00	91.00	179.76	6,712.41	-5,504.04	22.99	5,504.09	0.00	0.00	0.00	
12,200.00	91.00	179.76	6,710.66	-5,604.03	23.41	5,604.07	0.00	0.00	0.00	
12,300.00	91.00	179.76	6,708.92	-5,704.01	23.83	5,704.06	0.00	0.00	0.00	
12,400.00	91.00	179.76	6,707.17	-5,803.99	24.24	5,804.04	0.00	0.00	0.00	
12,500.00	91.00	179.76	6,705.43	-5,903.98	24.66	5,904.03	0.00	0.00	0.00	
12,600.00	91.00	179.76	6,703.68	-6,003.96	25.08	6,004.01	0.00	0.00	0.00	
12,700.00	91.00	179.76	6,701.94	-6,103.95	25.50	6,104.00	0.00	0.00	0.00	
12,800.00	91.00	179.76	6,700.19	-6,203.93	25.91	6,203.98	0.00	0.00	0.00	
12,900.00	91.00	179.76	6,698.45	-6,303.91	26.33	6,303.97	0.00	0.00	0.00	
13,000.00	91.00	179.76	6,696.70	-6,403.90	26.75	6,403.95	0.00	0.00	0.00	
13,100.00	91.00	179.76	6,694.96	-6,503.88	27.17	6,503.94	0.00	0.00	0.00	
13,200.00	91.00	179.76	6,693.21	-6,603.86	27.58	6,603.92	0.00	0.00	0.00	

Database:	EDMDBBW	Local Co-ordinate Reference:	Well Pan Head Fee #4H
Company:	COG Operating, LLC	TVD Reference:	WELL @ 4180.00usft (Original Well Elev)
Project:	Lea County(NM27E)	MD Reference:	WELL @ 4180.00usft (Original Well Elev)
Site:	Sec.11-T17S-R32E	North Reference:	Grid
Well:	Pan Head Fee #4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,300.00	91.00	179.76	6,691.46	-6,703.85	28.00	6,703.91	0.00	0.00	0.00
13,400.00	91.00	179.76	6,689.72	-6,803.83	28.42	6,803.89	0.00	0.00	0.00
13,500.00	91.00	179.76	6,687.97	-6,903.82	28.84	6,903.88	0.00	0.00	0.00
13,600.00	91.00	179.76	6,686.23	-7,003.80	29.25	7,003.86	0.00	0.00	0.00
13,700.00	91.00	179.76	6,684.48	-7,103.78	29.67	7,103.85	0.00	0.00	0.00
13,800.00	91.00	179.76	6,682.74	-7,203.77	30.09	7,203.83	0.00	0.00	0.00
TD at 13850.34									
13,850.34	91.00	179.76	6,681.86	-7,254.10	30.30	7,254.16	0.00	0.00	0.00

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									
Pan Head Fee #4H PBH	0.00	0.00	6,681.86	-7,254.10	30.30	668,132.500	682,960.100	32° 50' 7.313 N	103° 44' 15.613 W
- plan hits target center									
- Point									

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
6,322.61	6,322.61	0.00	0.00	KOP 12°/100'	
7,080.94	6,800.00	-485.79	2.03	EOC / Hold to TD	
13,850.34	6,681.86	-7,254.10	30.30	TD at 13850.34	



Project: Lea County(NM27E)
Site: Sec.11-T17S-R32E
Well: Pan Head Fee #4H
Wellbore: Wellbore #1
Design: Design #1
Lat: 32° 51' 19.093 N
Long: 103° 44' 15.489 W
GL: 4163.00
KB: WELL @ 4180.00usft (Original Well Elev)

Archer

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6322.61	0.00	0.00	6322.61	0.00	0.00	0.00	0.00	0.00	KOP 12°/100'
7080.94	91.00	179.76	6800.00	-485.79	2.03	12.00	179.76	485.80	EOC / Hold to TD
13850.34	91.00	179.76	6681.86	-7254.10	30.30	0.00	0.00	7254.16	TD at 13850.34

WELL DETAILS: Pan Head Fee #4H

+N/-S	+E/-W	Northing	Ground Level: Easting	4163.00 Latitude	Longitude	Slot
0.00	0.00	675386.600	682929.800	32° 51' 19.093 N	103° 44' 15.489 W	

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape Point
Pan Head Fee #4H PBHL	6681.86	-7254.10	30.30	32° 50' 7.313 N	103° 44' 15.613 W	

PROJECT DETAILS: Lea County(NM27E)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

SITE DETAILS: Sec.11-T17S-R32E

Site Centre Latitude: 32° 51' 19.118 N
Longitude: 103° 44' 38.811 W

Positional Uncertainty: 0.00
Convergence: 0.32
Local North: Grid

