

BTA Oil Producers, LLC

Lea County, NM

Grama

Grama #2H

Wellbore #1

Plan: Design #1

Standard Planning Report - Geographic

18 May, 2016

BTA
Planning Report - Geographic

Database: EDM 5000.1 Single User Db
Company: BTA Oil Producers, LLC
Project: Lea County, NM
Site: Grama
Well: Grama #2H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Grama #2H
TVD Reference: GL @ 3476.0usft (Original Well Elev)
MD Reference: GL @ 3476.0usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Lea County, NM, Lea County, NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Ground Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		Using geodetic scale factor

Site	Grama			
Site Position:		Northing:	504,907.50 usft	Latitude: 32° 23' 6.826 N
From: Map		Easting:	762,856.00 usft	Longitude: 103° 28' 54.589 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.46 °

Well	Grama #2H				
Well Position	+N/-S	0.0 usft	Northing:	504,907.50 usft	Latitude: 32° 23' 6.826 N
	+E/-W	0.0 usft	Easting:	762,856.00 usft	Longitude: 103° 28' 54.589 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level: 3,476.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	7.72	60.41	48,900

Design	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	359.63

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.00	0.00	0.00	0.00	
9,673.0	0.00	0.00	9,673.0	0.0	0.0	0.00	0.00	0.00	0.00	
10,573.0	90.00	359.63	10,246.0	572.9	-3.7	10.00	10.00	0.00	359.63	
20,029.5	90.00	359.63	10,246.0	10,029.2	-64.4	0.00	0.00	0.00	0.00	Grama #2H BHL target

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North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
100.0	0.00	0.00	100.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
200.0	0.00	0.00	200.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
300.0	0.00	0.00	300.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
400.0	0.00	0.00	400.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
500.0	0.00	0.00	500.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
600.0	0.00	0.00	600.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
700.0	0.00	0.00	700.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
800.0	0.00	0.00	800.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
900.0	0.00	0.00	900.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
1,000.0	0.00	0.00	1,000.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
1,100.0	0.00	0.00	1,100.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
1,200.0	0.00	0.00	1,200.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
1,300.0	0.00	0.00	1,300.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
1,400.0	0.00	0.00	1,400.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
1,500.0	0.00	0.00	1,500.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
1,600.0	0.00	0.00	1,600.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
1,700.0	0.00	0.00	1,700.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
1,800.0	0.00	0.00	1,800.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
1,900.0	0.00	0.00	1,900.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
2,000.0	0.00	0.00	2,000.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
2,100.0	0.00	0.00	2,100.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
2,200.0	0.00	0.00	2,200.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
2,300.0	0.00	0.00	2,300.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
2,400.0	0.00	0.00	2,400.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
2,500.0	0.00	0.00	2,500.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
2,600.0	0.00	0.00	2,600.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
2,700.0	0.00	0.00	2,700.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
2,800.0	0.00	0.00	2,800.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
2,900.0	0.00	0.00	2,900.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
3,000.0	0.00	0.00	3,000.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
3,100.0	0.00	0.00	3,100.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
3,200.0	0.00	0.00	3,200.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
3,300.0	0.00	0.00	3,300.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
3,400.0	0.00	0.00	3,400.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
3,500.0	0.00	0.00	3,500.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
3,600.0	0.00	0.00	3,600.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
3,700.0	0.00	0.00	3,700.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
3,800.0	0.00	0.00	3,800.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
3,900.0	0.00	0.00	3,900.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
4,000.0	0.00	0.00	4,000.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
4,100.0	0.00	0.00	4,100.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
4,200.0	0.00	0.00	4,200.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
4,300.0	0.00	0.00	4,300.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
4,400.0	0.00	0.00	4,400.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
4,500.0	0.00	0.00	4,500.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
4,600.0	0.00	0.00	4,600.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
4,700.0	0.00	0.00	4,700.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
4,800.0	0.00	0.00	4,800.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
4,900.0	0.00	0.00	4,900.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
5,000.0	0.00	0.00	5,000.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
5,100.0	0.00	0.00	5,100.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
5,200.0	0.00	0.00	5,200.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
5,300.0	0.00	0.00	5,300.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
5,400.0	0.00	0.00	5,400.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W

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5,500.0	0.00	0.00	5,500.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
5,600.0	0.00	0.00	5,600.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
5,700.0	0.00	0.00	5,700.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
5,800.0	0.00	0.00	5,800.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
5,900.0	0.00	0.00	5,900.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
6,000.0	0.00	0.00	6,000.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
6,100.0	0.00	0.00	6,100.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
6,200.0	0.00	0.00	6,200.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
6,300.0	0.00	0.00	6,300.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
6,400.0	0.00	0.00	6,400.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
6,500.0	0.00	0.00	6,500.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
6,600.0	0.00	0.00	6,600.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
6,700.0	0.00	0.00	6,700.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
6,800.0	0.00	0.00	6,800.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
6,900.0	0.00	0.00	6,900.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
7,000.0	0.00	0.00	7,000.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
7,100.0	0.00	0.00	7,100.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
7,200.0	0.00	0.00	7,200.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
7,300.0	0.00	0.00	7,300.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
7,400.0	0.00	0.00	7,400.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
7,500.0	0.00	0.00	7,500.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
7,600.0	0.00	0.00	7,600.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
7,700.0	0.00	0.00	7,700.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
7,800.0	0.00	0.00	7,800.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
7,900.0	0.00	0.00	7,900.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
8,000.0	0.00	0.00	8,000.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
8,100.0	0.00	0.00	8,100.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
8,200.0	0.00	0.00	8,200.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
8,300.0	0.00	0.00	8,300.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
8,400.0	0.00	0.00	8,400.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
8,500.0	0.00	0.00	8,500.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
8,600.0	0.00	0.00	8,600.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
8,700.0	0.00	0.00	8,700.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
8,800.0	0.00	0.00	8,800.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
8,900.0	0.00	0.00	8,900.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
9,000.0	0.00	0.00	9,000.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
9,100.0	0.00	0.00	9,100.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
9,200.0	0.00	0.00	9,200.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
9,300.0	0.00	0.00	9,300.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
9,400.0	0.00	0.00	9,400.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
9,500.0	0.00	0.00	9,500.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
9,600.0	0.00	0.00	9,600.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
9,673.0	0.00	0.00	9,673.0	0.0	0.0	504,907.50	762,856.00	32° 23' 6.826 N	103° 28' 54.589 W
9,700.0	2.70	359.63	9,700.0	0.6	0.0	504,908.14	762,855.99	32° 23' 6.832 N	103° 28' 54.589 W
9,800.0	12.70	359.63	9,799.0	14.0	-0.1	504,921.51	762,855.91	32° 23' 6.965 N	103° 28' 54.589 W
9,900.0	22.70	359.63	9,894.1	44.4	-0.3	504,951.87	762,855.71	32° 23' 7.265 N	103° 28' 54.589 W
10,000.0	32.70	359.63	9,982.5	90.8	-0.6	504,998.28	762,855.41	32° 23' 7.724 N	103° 28' 54.588 W
10,100.0	42.70	359.63	10,061.6	151.9	-1.0	505,059.35	762,855.02	32° 23' 8.329 N	103° 28' 54.587 W
10,200.0	52.70	359.63	10,128.8	225.7	-1.4	505,133.21	762,854.55	32° 23' 9.059 N	103° 28' 54.585 W
10,300.0	62.70	359.63	10,182.2	310.1	-2.0	505,217.62	762,854.01	32° 23' 9.895 N	103° 28' 54.584 W
10,400.0	72.70	359.63	10,220.1	402.5	-2.6	505,310.02	762,853.41	32° 23' 10.809 N	103° 28' 54.582 W
10,500.0	82.70	359.63	10,241.4	500.1	-3.2	505,407.60	762,852.79	32° 23' 11.775 N	103° 28' 54.580 W
10,573.0	90.00	359.63	10,246.0	572.9	-3.7	505,480.44	762,852.32	32° 23' 12.495 N	103° 28' 54.579 W
10,600.0	90.00	359.63	10,246.0	599.9	-3.9	505,507.40	762,852.14	32° 23' 12.762 N	103° 28' 54.579 W
10,700.0	90.00	359.63	10,246.0	699.9	-4.5	505,607.39	762,851.50	32° 23' 13.752 N	103° 28' 54.577 W

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Company: BTA Oil Producers, LLC
Project: Lea County, NM
Site: Grama
Well: Grama #2H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Grama #2H
TVD Reference: GL @ 3476.0usft (Original Well Elev)
MD Reference: GL @ 3476.0usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,800.0	90.00	359.63	10,246.0	799.9	-5.1	505,707.39	762,850.86	32° 23' 14.741 N	103° 28' 54.575 W
10,900.0	90.00	359.63	10,246.0	899.9	-5.8	505,807.39	762,850.22	32° 23' 15.731 N	103° 28' 54.573 W
11,000.0	90.00	359.63	10,246.0	999.9	-6.4	505,907.38	762,849.58	32° 23' 16.720 N	103° 28' 54.571 W
11,100.0	90.00	359.63	10,246.0	1,099.9	-7.1	506,007.38	762,848.93	32° 23' 17.710 N	103° 28' 54.570 W
11,200.0	90.00	359.63	10,246.0	1,199.9	-7.7	506,107.38	762,848.29	32° 23' 18.699 N	103° 28' 54.568 W
11,300.0	90.00	359.63	10,246.0	1,299.9	-8.3	506,207.37	762,847.65	32° 23' 19.689 N	103° 28' 54.566 W
11,400.0	90.00	359.63	10,246.0	1,399.9	-9.0	506,307.37	762,847.01	32° 23' 20.678 N	103° 28' 54.564 W
11,500.0	90.00	359.63	10,246.0	1,499.9	-9.6	506,407.37	762,846.37	32° 23' 21.668 N	103° 28' 54.562 W
11,600.0	90.00	359.63	10,246.0	1,599.9	-10.3	506,507.37	762,845.72	32° 23' 22.657 N	103° 28' 54.561 W
11,700.0	90.00	359.63	10,246.0	1,699.9	-10.9	506,607.36	762,845.08	32° 23' 23.647 N	103° 28' 54.559 W
11,800.0	90.00	359.63	10,246.0	1,799.9	-11.6	506,707.36	762,844.44	32° 23' 24.636 N	103° 28' 54.557 W
11,900.0	90.00	359.63	10,246.0	1,899.9	-12.2	506,807.36	762,843.80	32° 23' 25.626 N	103° 28' 54.555 W
12,000.0	90.00	359.63	10,246.0	1,999.9	-12.8	506,907.35	762,843.16	32° 23' 26.615 N	103° 28' 54.553 W
12,100.0	90.00	359.63	10,246.0	2,099.9	-13.5	507,007.35	762,842.51	32° 23' 27.605 N	103° 28' 54.552 W
12,200.0	90.00	359.63	10,246.0	2,199.9	-14.1	507,107.35	762,841.87	32° 23' 28.595 N	103° 28' 54.550 W
12,300.0	90.00	359.63	10,246.0	2,299.9	-14.8	507,207.34	762,841.23	32° 23' 29.584 N	103° 28' 54.548 W
12,400.0	90.00	359.63	10,246.0	2,399.9	-15.4	507,307.34	762,840.59	32° 23' 30.574 N	103° 28' 54.546 W
12,500.0	90.00	359.63	10,246.0	2,499.9	-16.1	507,407.34	762,839.94	32° 23' 31.563 N	103° 28' 54.544 W
12,600.0	90.00	359.63	10,246.0	2,599.9	-16.7	507,507.33	762,839.30	32° 23' 32.553 N	103° 28' 54.543 W
12,700.0	90.00	359.63	10,246.0	2,699.9	-17.3	507,607.33	762,838.66	32° 23' 33.542 N	103° 28' 54.541 W
12,800.0	90.00	359.63	10,246.0	2,799.9	-18.0	507,707.33	762,838.02	32° 23' 34.532 N	103° 28' 54.539 W
12,900.0	90.00	359.63	10,246.0	2,899.9	-18.6	507,807.32	762,837.38	32° 23' 35.521 N	103° 28' 54.537 W
13,000.0	90.00	359.63	10,246.0	2,999.9	-19.3	507,907.32	762,836.73	32° 23' 36.511 N	103° 28' 54.535 W
13,100.0	90.00	359.63	10,246.0	3,099.9	-19.9	508,007.32	762,836.09	32° 23' 37.500 N	103° 28' 54.534 W
13,200.0	90.00	359.63	10,246.0	3,199.8	-20.5	508,107.31	762,835.45	32° 23' 38.490 N	103° 28' 54.532 W
13,300.0	90.00	359.63	10,246.0	3,299.8	-21.2	508,207.31	762,834.81	32° 23' 39.479 N	103° 28' 54.530 W
13,400.0	90.00	359.63	10,246.0	3,399.8	-21.8	508,307.31	762,834.17	32° 23' 40.469 N	103° 28' 54.528 W
13,500.0	90.00	359.63	10,246.0	3,499.8	-22.5	508,407.30	762,833.52	32° 23' 41.458 N	103° 28' 54.527 W
13,600.0	90.00	359.63	10,246.0	3,599.8	-23.1	508,507.30	762,832.88	32° 23' 42.448 N	103° 28' 54.525 W
13,700.0	90.00	359.63	10,246.0	3,699.8	-23.8	508,607.30	762,832.24	32° 23' 43.437 N	103° 28' 54.523 W
13,800.0	90.00	359.63	10,246.0	3,799.8	-24.4	508,707.29	762,831.60	32° 23' 44.427 N	103° 28' 54.521 W
13,900.0	90.00	359.63	10,246.0	3,899.8	-25.0	508,807.29	762,830.96	32° 23' 45.416 N	103° 28' 54.519 W
14,000.0	90.00	359.63	10,246.0	3,999.8	-25.7	508,907.29	762,830.31	32° 23' 46.406 N	103° 28' 54.518 W
14,100.0	90.00	359.63	10,246.0	4,099.8	-26.3	509,007.28	762,829.67	32° 23' 47.395 N	103° 28' 54.516 W
14,200.0	90.00	359.63	10,246.0	4,199.8	-27.0	509,107.28	762,829.03	32° 23' 48.385 N	103° 28' 54.514 W
14,300.0	90.00	359.63	10,246.0	4,299.8	-27.6	509,207.28	762,828.39	32° 23' 49.374 N	103° 28' 54.512 W
14,400.0	90.00	359.63	10,246.0	4,399.8	-28.3	509,307.27	762,827.74	32° 23' 50.364 N	103° 28' 54.510 W
14,500.0	90.00	359.63	10,246.0	4,499.8	-28.9	509,407.27	762,827.10	32° 23' 51.354 N	103° 28' 54.509 W
14,600.0	90.00	359.63	10,246.0	4,599.8	-29.5	509,507.27	762,826.46	32° 23' 52.343 N	103° 28' 54.507 W
14,700.0	90.00	359.63	10,246.0	4,699.8	-30.2	509,607.26	762,825.82	32° 23' 53.333 N	103° 28' 54.505 W
14,800.0	90.00	359.63	10,246.0	4,799.8	-30.8	509,707.26	762,825.18	32° 23' 54.322 N	103° 28' 54.503 W
14,900.0	90.00	359.63	10,246.0	4,899.8	-31.5	509,807.26	762,824.53	32° 23' 55.312 N	103° 28' 54.501 W
15,000.0	90.00	359.63	10,246.0	4,999.8	-32.1	509,907.26	762,823.89	32° 23' 56.301 N	103° 28' 54.500 W
15,100.0	90.00	359.63	10,246.0	5,099.8	-32.7	510,007.25	762,823.25	32° 23' 57.291 N	103° 28' 54.498 W
15,200.0	90.00	359.63	10,246.0	5,199.8	-33.4	510,107.25	762,822.61	32° 23' 58.280 N	103° 28' 54.496 W
15,300.0	90.00	359.63	10,246.0	5,299.8	-34.0	510,207.25	762,821.97	32° 23' 59.270 N	103° 28' 54.494 W
15,400.0	90.00	359.63	10,246.0	5,399.8	-34.7	510,307.24	762,821.32	32° 24' 0.259 N	103° 28' 54.492 W
15,500.0	90.00	359.63	10,246.0	5,499.8	-35.3	510,407.24	762,820.68	32° 24' 1.249 N	103° 28' 54.491 W
15,600.0	90.00	359.63	10,246.0	5,599.8	-36.0	510,507.24	762,820.04	32° 24' 2.238 N	103° 28' 54.489 W
15,700.0	90.00	359.63	10,246.0	5,699.8	-36.6	510,607.23	762,819.40	32° 24' 3.228 N	103° 28' 54.487 W
15,800.0	90.00	359.63	10,246.0	5,799.8	-37.2	510,707.23	762,818.76	32° 24' 4.217 N	103° 28' 54.485 W
15,900.0	90.00	359.63	10,246.0	5,899.8	-37.9	510,807.23	762,818.11	32° 24' 5.207 N	103° 28' 54.483 W
16,000.0	90.00	359.63	10,246.0	5,999.8	-38.5	510,907.22	762,817.47	32° 24' 6.196 N	103° 28' 54.482 W
16,100.0	90.00	359.63	10,246.0	6,099.8	-39.2	511,007.22	762,816.83	32° 24' 7.186 N	103° 28' 54.480 W
16,200.0	90.00	359.63	10,246.0	6,199.8	-39.8	511,107.22	762,816.19	32° 24' 8.175 N	103° 28' 54.478 W

BTA
Planning Report - Geographic

Database: EDM 5000.1 Single User Db
Company: BTA Oil Producers, LLC
Project: Lea County, NM
Site: Grama
Well: Grama #2H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Grama #2H
TVD Reference: GL @ 3476.0usft (Original Well Elev)
MD Reference: GL @ 3476.0usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
16,300.0	90.00	359.63	10,246.0	6,299.8	-40.5	511,207.21	762,815.54	32° 24' 9.165 N	103° 28' 54.476 W
16,400.0	90.00	359.63	10,246.0	6,399.8	-41.1	511,307.21	762,814.90	32° 24' 10.154 N	103° 28' 54.474 W
16,500.0	90.00	359.63	10,246.0	6,499.8	-41.7	511,407.21	762,814.26	32° 24' 11.144 N	103° 28' 54.473 W
16,600.0	90.00	359.63	10,246.0	6,599.8	-42.4	511,507.20	762,813.62	32° 24' 12.133 N	103° 28' 54.471 W
16,700.0	90.00	359.63	10,246.0	6,699.8	-43.0	511,607.20	762,812.98	32° 24' 13.123 N	103° 28' 54.469 W
16,800.0	90.00	359.63	10,246.0	6,799.8	-43.7	511,707.20	762,812.33	32° 24' 14.112 N	103° 28' 54.467 W
16,900.0	90.00	359.63	10,246.0	6,899.8	-44.3	511,807.19	762,811.69	32° 24' 15.102 N	103° 28' 54.465 W
17,000.0	90.00	359.63	10,246.0	6,999.8	-44.9	511,907.19	762,811.05	32° 24' 16.091 N	103° 28' 54.464 W
17,100.0	90.00	359.63	10,246.0	7,099.8	-45.6	512,007.19	762,810.41	32° 24' 17.081 N	103° 28' 54.462 W
17,200.0	90.00	359.63	10,246.0	7,199.8	-46.2	512,107.18	762,809.77	32° 24' 18.071 N	103° 28' 54.460 W
17,300.0	90.00	359.63	10,246.0	7,299.8	-46.9	512,207.18	762,809.12	32° 24' 19.060 N	103° 28' 54.458 W
17,400.0	90.00	359.63	10,246.0	7,399.8	-47.5	512,307.18	762,808.48	32° 24' 20.050 N	103° 28' 54.456 W
17,500.0	90.00	359.63	10,246.0	7,499.8	-48.2	512,407.17	762,807.84	32° 24' 21.039 N	103° 28' 54.455 W
17,600.0	90.00	359.63	10,246.0	7,599.8	-48.8	512,507.17	762,807.20	32° 24' 22.029 N	103° 28' 54.453 W
17,700.0	90.00	359.63	10,246.0	7,699.8	-49.4	512,607.17	762,806.56	32° 24' 23.018 N	103° 28' 54.451 W
17,800.0	90.00	359.63	10,246.0	7,799.8	-50.1	512,707.16	762,805.91	32° 24' 24.008 N	103° 28' 54.449 W
17,900.0	90.00	359.63	10,246.0	7,899.8	-50.7	512,807.16	762,805.27	32° 24' 24.997 N	103° 28' 54.447 W
18,000.0	90.00	359.63	10,246.0	7,999.8	-51.4	512,907.16	762,804.63	32° 24' 25.987 N	103° 28' 54.446 W
18,100.0	90.00	359.63	10,246.0	8,099.7	-52.0	513,007.15	762,803.99	32° 24' 26.976 N	103° 28' 54.444 W
18,200.0	90.00	359.63	10,246.0	8,199.7	-52.7	513,107.15	762,803.34	32° 24' 27.966 N	103° 28' 54.442 W
18,300.0	90.00	359.63	10,246.0	8,299.7	-53.3	513,207.15	762,802.70	32° 24' 28.955 N	103° 28' 54.440 W
18,400.0	90.00	359.63	10,246.0	8,399.7	-53.9	513,307.14	762,802.06	32° 24' 29.945 N	103° 28' 54.438 W
18,500.0	90.00	359.63	10,246.0	8,499.7	-54.6	513,407.14	762,801.42	32° 24' 30.934 N	103° 28' 54.437 W
18,600.0	90.00	359.63	10,246.0	8,599.7	-55.2	513,507.14	762,800.78	32° 24' 31.924 N	103° 28' 54.435 W
18,700.0	90.00	359.63	10,246.0	8,699.7	-55.9	513,607.14	762,800.13	32° 24' 32.913 N	103° 28' 54.433 W
18,800.0	90.00	359.63	10,246.0	8,799.7	-56.5	513,707.13	762,799.49	32° 24' 33.903 N	103° 28' 54.431 W
18,900.0	90.00	359.63	10,246.0	8,899.7	-57.1	513,807.13	762,798.85	32° 24' 34.892 N	103° 28' 54.429 W
19,000.0	90.00	359.63	10,246.0	8,999.7	-57.8	513,907.13	762,798.21	32° 24' 35.882 N	103° 28' 54.428 W
19,100.0	90.00	359.63	10,246.0	9,099.7	-58.4	514,007.12	762,797.57	32° 24' 36.871 N	103° 28' 54.426 W
19,200.0	90.00	359.63	10,246.0	9,199.7	-59.1	514,107.12	762,796.92	32° 24' 37.861 N	103° 28' 54.424 W
19,300.0	90.00	359.63	10,246.0	9,299.7	-59.7	514,207.12	762,796.28	32° 24' 38.850 N	103° 28' 54.422 W
19,400.0	90.00	359.63	10,246.0	9,399.7	-60.4	514,307.11	762,795.64	32° 24' 39.840 N	103° 28' 54.420 W
19,500.0	90.00	359.63	10,246.0	9,499.7	-61.0	514,407.11	762,795.00	32° 24' 40.829 N	103° 28' 54.418 W
19,600.0	90.00	359.63	10,246.0	9,599.7	-61.6	514,507.11	762,794.35	32° 24' 41.819 N	103° 28' 54.417 W
19,700.0	90.00	359.63	10,246.0	9,699.7	-62.3	514,607.10	762,793.71	32° 24' 42.808 N	103° 28' 54.415 W
19,800.0	90.00	359.63	10,246.0	9,799.7	-62.9	514,707.10	762,793.07	32° 24' 43.798 N	103° 28' 54.413 W
19,900.0	90.00	359.63	10,246.0	9,899.7	-63.6	514,807.10	762,792.43	32° 24' 44.788 N	103° 28' 54.411 W
20,000.0	90.00	359.63	10,246.0	9,999.7	-64.2	514,907.09	762,791.79	32° 24' 45.777 N	103° 28' 54.409 W
20,029.5	90.00	359.63	10,246.0	10,029.2	-64.4	514,936.60	762,791.60	32° 24' 46.069 N	103° 28' 54.409 W

Grama #2H BHL target

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									
Grama #2H BHL target	0.00	0.00	10,246.0	10,029.2	-64.4	514,936.60	762,791.60	32° 24' 46.069 N	103° 28' 54.409 W
- plan hits target center									
- Point									

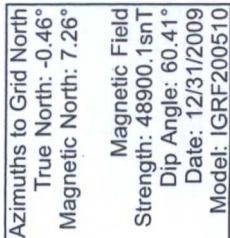
BTA

Planning Report - Geographic

Database: EDM 5000.1 Single User Db
Company: BTA Oil Producers, LLC
Project: Lea County, NM
Site: Grama
Well: Grama #2H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Grama #2H
TVD Reference: GL @ 3476.0usft (Original Well Elev)
MD Reference: GL @ 3476.0usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,592.0	1,592.0	Anhydrite		0.00		
2,024.0	2,024.0	Top of Salt		0.00		
3,340.0	3,340.0	Bottom of Salt		0.00		
5,215.0	5,215.0	Delaware		0.00		
8,432.0	8,432.0	Bonespring lime		0.00		
9,054.0	9,054.0	Avalon		0.00		
9,469.0	9,469.0	1st Bone		0.00		
10,573.0	10,246.0	2nd Bone Target		0.00		



WELL DETAILS: Grama #2H

+N/-S	+E/-W	Ground Level:	3476.0	Latitude	Longitude
0.0	0.0	Easting	762856.00	32° 23' 6.826 N	103° 28' 54.589 W
		Northing	504907.50		

BTA Oil Producers, LLC

PROJECT DETAILS: Lea County, NM

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

System Datum: Ground Level

CASING DETAILS

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
100.0	0.00	0.00	100.0	0.0	0.0	0.00	0.00	0.0	
9673.0	0.00	0.00	9673.0	0.0	0.0	0.00	0.00	0.0	
10573.0	90.00	359.63	10246.0	572.9	-3.7	10.00	359.63	573.0	
20029.5	90.00	359.63	10246.0	10029.2	-64.4	0.00	0.00	10029.4	Grana #2H BHL target

