

NM OIL CONSERVATION
ARTESIA DISTRICT

FEB 27 2017

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Caza Oil and Gas

Black River

Mad River 13 State 6H

Mad River 13 State 6H

Mad River 13 State 6H

Plan: 20170222 Mad River 13 State 6H

MOJO Standard Plan

22 February, 2017

MOJO Standard Plan

Company:	Caiza Oil and Gas	Local Co-ordinate Reference:	Well Mad River 13 State 6H
Project:	Black River	TVD Reference:	WELL @ 3124.0usft (Original Well Elev)
Site:	Mad River 13 State 6H	MD Reference:	WELL @ 3124.0usft (Original Well Elev)
Well:	Mad River 13 State 6H	North Reference:	Grid
Wellbore:	Mad River 13 State 6H	Survey Calculation Method:	Minimum Curvature
Design:	20170222 Mad River 13 State 6H	Database:	EDM 5000.1 Single User Db

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

Site	Mad River 13 State 6H		
Site Position:		Northings:	440,746.30 usft
From:	Lat/Long	Easting:	561,166.30 usft
Position Uncertainty:	1.0 usft	Slot Radius:	17-1/2 "
		Latitude:	32° 12' 41.666 N
		Longitude:	104° 8' 8.030 W
		Grid Convergence:	0.11 °

Well	Mad River 13 State 6H		
Well Position	+N/-S	Northings:	440,746.30 usft
	+E/-W	Easting:	561,166.30 usft
Position Uncertainty	1.0 usft	Wellhead Elevation:	0.0 usft
		Latitude:	32° 12' 41.666 N
		Longitude:	104° 8' 8.030 W
		Ground Level:	3,102.0 usft

Wellbore	Mad River 13 State 6H		
Magnetics	Model Name	Sample Date	Field Strength (nT)
	IGRF2010	2/22/2017	47,983
		Dip Angle (°)	59.94

Design	20170222 Mad River 13 State 6H		
Audit Notes:			
Version:	Phase:	Tie On Depth:	0.0
	PLAN	+E/-W (usft)	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	Direction (°)
	0.0	0.0	267.60

Survey Tool Program	Date	2/22/2017	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
0.0	14,624.0	20170222 Mad River 13 State 6H (Mad Ri	MWD
			MWD - Standard

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Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
0.0	0.00	0.00	0.0	-3,124.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
100.0	0.00	0.00	100.0	-3,024.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
200.0	0.00	0.00	200.0	-2,924.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
300.0	0.00	0.00	300.0	-2,824.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
400.0	0.00	0.00	400.0	-2,724.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
500.0	0.00	0.00	500.0	-2,624.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
600.0	0.00	0.00	600.0	-2,524.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
700.0	0.00	0.00	700.0	-2,424.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
800.0	0.00	0.00	800.0	-2,324.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
900.0	0.00	0.00	900.0	-2,224.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
1,000.0	0.00	0.00	1,000.0	-2,124.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
1,100.0	0.00	0.00	1,100.0	-2,024.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
1,200.0	0.00	0.00	1,200.0	-1,924.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
1,300.0	0.00	0.00	1,300.0	-1,824.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
1,400.0	0.00	0.00	1,400.0	-1,724.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
1,500.0	0.00	0.00	1,500.0	-1,624.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
1,600.0	0.00	0.00	1,600.0	-1,524.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
1,700.0	0.00	0.00	1,700.0	-1,424.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
1,800.0	0.00	0.00	1,800.0	-1,324.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
1,900.0	0.00	0.00	1,900.0	-1,224.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
2,000.0	0.00	0.00	2,000.0	-1,124.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
2,100.0	0.00	0.00	2,100.0	-1,024.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
2,200.0	0.00	0.00	2,200.0	-924.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
2,300.0	0.00	0.00	2,300.0	-824.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
2,400.0	0.00	0.00	2,400.0	-724.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
2,500.0	0.00	0.00	2,500.0	-624.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
2,600.0	0.00	0.00	2,600.0	-524.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30

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Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
2,700.0	0.00	0.00	2,700.0	-424.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
2,800.0	0.00	0.00	2,800.0	-324.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
2,900.0	0.00	0.00	2,900.0	-224.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
3,000.0	0.00	0.00	3,000.0	-124.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
3,100.0	0.00	0.00	3,100.0	-24.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
3,200.0	0.00	0.00	3,200.0	76.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
3,300.0	0.00	0.00	3,300.0	176.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
3,400.0	0.00	0.00	3,400.0	276.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
3,500.0	0.00	0.00	3,500.0	376.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
3,600.0	0.00	0.00	3,600.0	476.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
3,700.0	0.00	0.00	3,700.0	576.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
3,800.0	0.00	0.00	3,800.0	676.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
3,900.0	0.00	0.00	3,900.0	776.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
4,000.0	0.00	0.00	4,000.0	876.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
4,100.0	0.00	0.00	4,100.0	976.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
4,200.0	0.00	0.00	4,200.0	1,076.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
4,300.0	0.00	0.00	4,300.0	1,176.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
4,400.0	0.00	0.00	4,400.0	1,276.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
4,500.0	0.00	0.00	4,500.0	1,376.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
4,600.0	0.00	0.00	4,600.0	1,476.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
4,700.0	0.00	0.00	4,700.0	1,576.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
4,800.0	0.00	0.00	4,800.0	1,676.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
4,900.0	0.00	0.00	4,900.0	1,776.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
5,000.0	0.00	0.00	5,000.0	1,876.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
5,100.0	0.00	0.00	5,100.0	1,976.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
5,200.0	0.00	0.00	5,200.0	2,076.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
5,300.0	0.00	0.00	5,300.0	2,176.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30

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5,400.0	0.00	0.00	5,400.0	2,276.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
5,500.0	0.00	0.00	5,500.0	2,376.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
5,600.0	0.00	0.00	5,600.0	2,476.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
5,700.0	0.00	0.00	5,700.0	2,576.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
5,800.0	0.00	0.00	5,800.0	2,676.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
5,900.0	0.00	0.00	5,900.0	2,776.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
6,000.0	0.00	0.00	6,000.0	2,876.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
6,100.0	0.00	0.00	6,100.0	2,976.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
6,200.0	0.00	0.00	6,200.0	3,076.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
6,300.0	0.00	0.00	6,300.0	3,176.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
6,400.0	0.00	0.00	6,400.0	3,276.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
6,500.0	0.00	0.00	6,500.0	3,376.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
6,600.0	0.00	0.00	6,600.0	3,476.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
6,700.0	0.00	0.00	6,700.0	3,576.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
6,800.0	0.00	0.00	6,800.0	3,676.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
6,900.0	0.00	0.00	6,900.0	3,776.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
7,000.0	0.00	0.00	7,000.0	3,876.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
7,100.0	0.00	0.00	7,100.0	3,976.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
7,200.0	0.00	0.00	7,200.0	4,076.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
7,300.0	0.00	0.00	7,300.0	4,176.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
7,400.0	0.00	0.00	7,400.0	4,276.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
7,500.0	0.00	0.00	7,500.0	4,376.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
7,600.0	0.00	0.00	7,600.0	4,476.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
7,700.0	0.00	0.00	7,700.0	4,576.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
7,800.0	0.00	0.00	7,800.0	4,676.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
7,900.0	0.00	0.00	7,900.0	4,776.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
8,000.0	0.00	0.00	8,000.0	4,876.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30

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8,100.0	0.00	0.00	8,100.0	4,976.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
8,200.0	0.00	0.00	8,200.0	5,076.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
8,300.0	0.00	0.00	8,300.0	5,176.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
8,400.0	0.00	0.00	8,400.0	5,276.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
8,500.0	0.00	0.00	8,500.0	5,376.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
8,600.0	0.00	0.00	8,600.0	5,476.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
8,700.0	0.00	0.00	8,700.0	5,576.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
8,800.0	0.00	0.00	8,800.0	5,676.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
8,900.0	0.00	0.00	8,900.0	5,776.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
9,000.0	0.00	0.00	9,000.0	5,876.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
9,100.0	0.00	0.00	9,100.0	5,976.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
9,200.0	0.00	0.00	9,200.0	6,076.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
9,300.0	0.00	0.00	9,300.0	6,176.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
9,400.0	0.00	0.00	9,400.0	6,276.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
9,430.0	0.00	0.00	9,430.0	6,306.0	0.0	0.0	0.0	0.00	440,746.30	561,166.30
9,500.0	6.99	267.60	9,499.8	6,375.8	-0.2	-4.3	4.3	9.98	440,746.13	561,162.04
9,600.0	16.97	267.60	9,597.5	6,473.5	-1.0	-25.0	25.0	9.98	440,745.26	561,141.34
9,700.0	26.95	267.60	9,690.2	6,566.2	-2.6	-62.3	62.3	9.98	440,743.69	561,104.03
9,800.0	36.93	267.60	9,774.9	6,650.9	-4.8	-115.1	115.2	9.98	440,741.48	561,051.24
9,900.0	46.91	267.60	9,849.2	6,725.2	-7.6	-181.7	181.9	9.98	440,738.69	560,984.58
10,000.0	56.89	267.60	9,910.9	6,786.9	-10.9	-260.2	260.5	9.98	440,735.40	560,906.06
10,100.0	66.87	267.60	9,957.9	6,833.9	-14.6	-348.3	348.6	9.98	440,731.71	560,818.05
10,200.0	76.85	267.60	9,989.0	6,865.0	-18.6	-443.1	443.5	9.98	440,727.73	560,723.23
10,300.0	86.83	267.60	10,003.2	6,879.2	-22.7	-541.9	542.3	9.98	440,723.59	560,624.45
10,344.0	91.22	267.60	10,004.0	6,880.0	-24.6	-585.8	586.3	9.98	440,721.75	560,580.51
10,400.0	91.22	267.60	10,002.8	6,878.8	-26.9	-641.7	642.3	0.00	440,719.41	560,524.57
10,500.0	91.22	267.60	10,000.6	6,876.6	-31.1	-741.6	742.3	0.00	440,715.22	560,424.68

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10,600.0	91.22	267.60	9,998.5	6,874.5	-35.3	-841.5	842.3	0.00	440,711.03	560,324.79
10,700.0	91.22	267.60	9,996.4	6,872.4	-39.5	-941.4	942.2	0.00	440,706.85	560,224.90
10,800.0	91.22	267.60	9,994.2	6,870.2	-43.6	-1,041.3	1,042.2	0.00	440,702.66	560,125.01
10,900.0	91.22	267.60	9,992.1	6,868.1	-47.8	-1,141.2	1,142.2	0.00	440,698.48	560,025.12
11,000.0	91.22	267.60	9,990.0	6,866.0	-52.0	-1,241.1	1,242.2	0.00	440,694.29	559,925.23
11,100.0	91.22	267.60	9,987.9	6,863.9	-56.2	-1,341.0	1,342.1	0.00	440,690.10	559,825.34
11,200.0	91.22	267.60	9,985.7	6,861.7	-60.4	-1,440.9	1,442.1	0.00	440,685.92	559,725.45
11,300.0	91.22	267.60	9,983.6	6,859.6	-64.6	-1,540.7	1,542.1	0.00	440,681.73	559,625.56
11,400.0	91.22	267.60	9,981.5	6,857.5	-68.8	-1,640.6	1,642.1	0.00	440,677.54	559,525.67
11,500.0	91.22	267.60	9,979.3	6,855.3	-72.9	-1,740.5	1,742.0	0.00	440,673.36	559,425.78
11,600.0	91.22	267.60	9,977.2	6,853.2	-77.1	-1,840.4	1,842.0	0.00	440,669.17	559,325.89
11,700.0	91.22	267.60	9,975.1	6,851.1	-81.3	-1,940.3	1,942.0	0.00	440,664.98	559,226.00
11,800.0	91.22	267.60	9,973.0	6,849.0	-85.5	-2,040.2	2,042.0	0.00	440,660.80	559,126.11
11,900.0	91.22	267.60	9,970.8	6,846.8	-89.7	-2,140.1	2,142.0	0.00	440,656.61	559,026.22
12,000.0	91.22	267.60	9,968.7	6,844.7	-93.9	-2,240.0	2,241.9	0.00	440,652.42	558,926.33
12,100.0	91.22	267.60	9,966.6	6,842.6	-98.1	-2,339.9	2,341.9	0.00	440,648.24	558,826.44
12,200.0	91.22	267.60	9,964.4	6,840.4	-102.3	-2,439.7	2,441.9	0.00	440,644.05	558,726.55
12,300.0	91.22	267.60	9,962.3	6,838.3	-106.4	-2,539.6	2,541.9	0.00	440,639.86	558,626.66
12,400.0	91.22	267.60	9,960.2	6,836.2	-110.6	-2,639.5	2,641.8	0.00	440,635.68	558,526.77
12,500.0	91.22	267.60	9,958.1	6,834.1	-114.8	-2,739.4	2,741.8	0.00	440,631.49	558,426.89
12,600.0	91.22	267.60	9,955.9	6,831.9	-119.0	-2,839.3	2,841.8	0.00	440,627.30	558,327.00
12,700.0	91.22	267.60	9,953.8	6,829.8	-123.2	-2,939.2	2,941.8	0.00	440,623.12	558,227.11
12,800.0	91.22	267.60	9,951.7	6,827.7	-127.4	-3,039.1	3,041.8	0.00	440,618.93	558,127.22
12,900.0	91.22	267.60	9,949.5	6,825.5	-131.6	-3,139.0	3,141.7	0.00	440,614.74	558,027.33
13,000.0	91.22	267.60	9,947.4	6,823.4	-135.7	-3,238.9	3,241.7	0.00	440,610.56	557,927.44
13,100.0	91.22	267.60	9,945.3	6,821.3	-139.9	-3,338.8	3,341.7	0.00	440,606.37	557,827.55
13,200.0	91.22	267.60	9,943.1	6,819.1	-144.1	-3,438.6	3,441.7	0.00	440,602.18	557,727.66

MOJO Standard Plan

Company: Caiza Oil and Gas
Project: Black River
Site: Mad River 13 State 6H
Well: Mad River 13 State 6H
Wellbore: Mad River 13 State 6H
Design: 20170222 Mad River 13 State 6H

Local Co-ordinate Reference: Well Mad River 13 State 6H
TVD Reference: WELL @ 3124.0usft (Original Well Elev)
MD Reference: WELL @ 3124.0usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
13,300.0	91.22	267.60	9,941.0	6,817.0	-148.3	-3,538.5	3,541.6	0.00	440,598.00	557,627.77
13,400.0	91.22	267.60	9,938.9	6,814.9	-152.5	-3,638.4	3,641.6	0.00	440,593.81	557,527.88
13,500.0	91.22	267.60	9,936.8	6,812.8	-156.7	-3,738.3	3,741.6	0.00	440,589.62	557,427.99
13,600.0	91.22	267.60	9,934.6	6,810.6	-160.9	-3,838.2	3,841.6	0.00	440,585.44	557,328.10
13,700.0	91.22	267.60	9,932.5	6,808.5	-165.1	-3,938.1	3,941.6	0.00	440,581.25	557,228.21
13,800.0	91.22	267.60	9,930.4	6,806.4	-169.2	-4,038.0	4,041.5	0.00	440,577.06	557,128.32
13,900.0	91.22	267.60	9,928.2	6,804.2	-173.4	-4,137.9	4,141.5	0.00	440,572.88	557,028.43
14,000.0	91.22	267.60	9,926.1	6,802.1	-177.6	-4,237.8	4,241.5	0.00	440,568.69	556,928.54
14,100.0	91.22	267.60	9,924.0	6,800.0	-181.8	-4,337.7	4,341.5	0.00	440,564.50	556,828.65
14,200.0	91.22	267.60	9,921.9	6,797.9	-186.0	-4,437.5	4,441.4	0.00	440,560.32	556,728.76
14,300.0	91.22	267.60	9,919.7	6,795.7	-190.2	-4,537.4	4,541.4	0.00	440,556.13	556,628.87
14,400.0	91.22	267.60	9,917.6	6,793.6	-194.4	-4,637.3	4,641.4	0.00	440,551.94	556,528.98
14,500.0	91.22	267.60	9,915.5	6,791.5	-198.5	-4,737.2	4,741.4	0.00	440,547.76	556,429.09
14,600.0	91.22	267.60	9,913.3	6,789.3	-202.7	-4,837.1	4,841.3	0.00	440,543.57	556,329.20
14,624.0	91.22	267.60	9,912.8	6,788.8	-203.7	-4,861.1	4,865.3	0.00	440,542.57	556,305.23

Checked By: _____

Approved By: _____

Date: _____