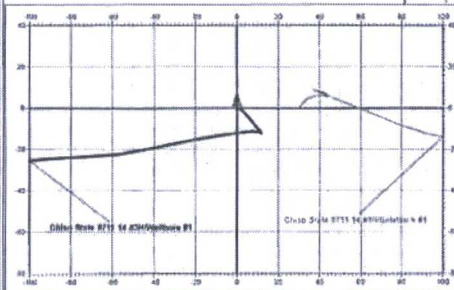
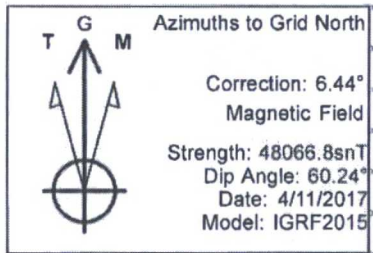
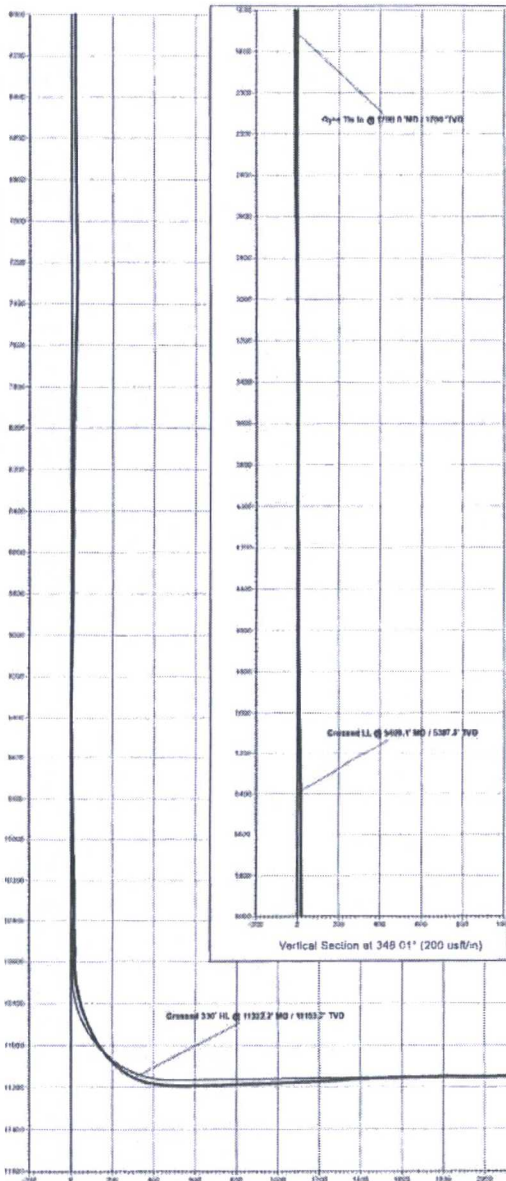
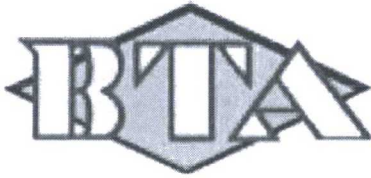


Company Name: BTA Oil Producers, LLC
 Chiso State 8711 14 #3H
 Lea County, NM
 Rig: Nomad #94
 Created By: Shane Robbins
 Date: 6/3/2017

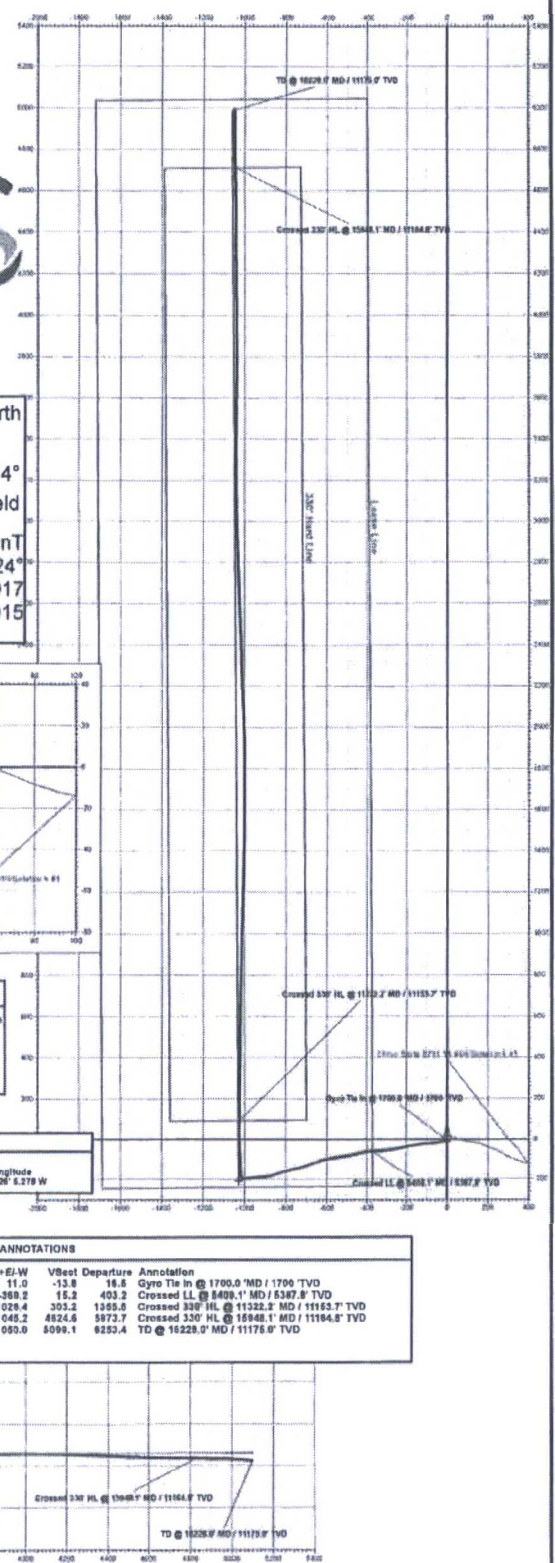
Chiso State 8711 14 #3H
 Lea County, NM
 Q170481 & WT-170399
 Design #2

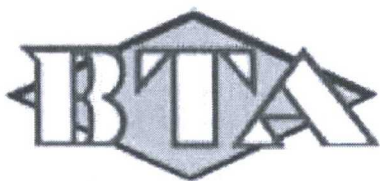


PROJECT DETAILS: Lea County, NM
 Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico East 3001
 System Datum: Mean Sea Level

WELL DETAILS: Chiso State 8711 14 #3H
 Ground Level: 2474.0
 +N-S +E-W Northing Easting
 0.0 0.0 694928.40 777318.40
 Latitude Longitude
 32° 23' 5.367" N 103° 20' 5.778" W

ANNOTATIONS									
MD	Inc	Azi	TVD	+N-S	+E-W	V/Best	Departure	Annotation	
1700.0	0.41	314.10	1899.9	-11.7	11.0	-13.8	18.6	Gyro Tie In @ 1700.0' MD / 1799.7' TVD	
5409.1	4.92	268.47	5387.8	-83.9	-389.2	15.2	403.2	Crossed 330° HL @ 5409.1' MD / 5387.8' TVD	
11322.2	68.35	0.48	11163.7	82.0	-1028.4	303.2	1365.0	Crossed 330° HL @ 11322.2' MD / 11153.7' TVD	
16948.1	88.82	359.07	11164.8	4710.2	-1045.2	4824.8	5973.7	Crossed 330° HL @ 16948.1' MD / 11164.8' TVD	
18228.0	86.50	359.10	11175.0	4989.9	-1090.0	5099.1	6253.4	TD @ 18228.0' MD / 11175.0' TVD	





BTA Oil Producers, LLC

**Lea County, NM
Sec 14, T22-S, R34-E
Chiso State 8711 14 #3H**

Wellbore #1

Design: Wellbore #1

QES Survey Report

03 May, 2017





Survey Report



Company: BTA Oil Producers, LLC
Project: Lea County, NM
Site: Sec 14, T22-S, R34-E
Well: Chiso State 8711 14 #3H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Chiso State 8711 14 #3H
TVD Reference: WELL @ 3499.0usft (Nomac #94)
MD Reference: WELL @ 3499.0usft (Nomac #94)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5002

Project	Lea County, NM		
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 14, T22-S, R34-E

Site Position:
From: Map
Position Uncertainty: 0.0 usft
Northing: 504,928.40 usft
Easting: 777,375.60 usft
Slot Radius: 13-3/16 "
Latitude: 32° 23' 5.857 N
Longitude: 103° 26' 5.278 W
Grid Convergence: 0.48 °

Well Chiso State 8711 14 #3H

Well Position +N/-S 0.0 usft **Northing:** 504,928.40 usft **Latitude:** 32° 23' 5.857 N
 +E/-W 0.0 usft **Easting:** 777,375.60 usft **Longitude:** 103° 26' 5.278 W
Position Uncertainty 0.0 usft **Wellhead Elevation:** 0.0 usft **Ground Level:** 3,474.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	4/11/2017	6.92	60.24	48,067

Design Wellbore #1

Audit Notes:

Version: 1.0 **Phase:** ACTUAL **Tie On Depth:** 0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	348.01

Survey Program Date 5/3/2017

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	1,700.0	Gyros (Wellbore #1)	Good_gyro	Good Gyro
1,898.0	16,228.0	MWD Surveys (Wellbore #1)	MWD default	MWD - Standard

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.86	115.41	100.0	-0.3	0.7	-0.5	0.86	0.86	0.00
200.0	0.94	123.37	200.0	-1.1	2.0	-1.5	0.15	0.08	7.96
300.0	0.94	132.20	300.0	-2.1	3.3	-2.7	0.14	0.00	8.83
400.0	0.81	136.47	400.0	-3.2	4.4	-4.0	0.15	-0.13	4.27
500.0	0.78	143.48	499.9	-4.2	5.3	-5.2	0.10	-0.03	7.01
600.0	0.81	146.37	599.9	-5.4	6.1	-6.5	0.05	0.03	2.89
700.0	0.78	133.02	699.9	-6.4	7.0	-7.7	0.19	-0.03	-13.35
800.0	0.80	144.11	799.9	-7.4	7.9	-8.9	0.15	0.02	11.09
900.0	0.69	138.28	899.9	-8.5	8.7	-10.1	0.13	-0.11	-5.83



Survey Report



Company: BTA Oil Producers, LLC
Project: Lea County, NM
Site: Sec 14, T22-S, R34-E
Well: Chiso State 8711 14 #3H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Chiso State 8711 14 #3H
TVD Reference: WELL @ 3499.0usft (Nomac #94)
MD Reference: WELL @ 3499.0usft (Nomac #94)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5002

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)
1,000.0	0.68	139.75	999.9	-9.4	9.5	-11.1	0.02	-0.01	1.47
1,100.0	0.68	134.55	1,099.9	-10.2	10.3	-12.1	0.06	0.00	-5.20
1,200.0	0.55	140.88	1,199.9	-11.0	11.0	-13.1	0.15	-0.13	6.33
1,300.0	0.48	150.45	1,299.9	-11.8	11.5	-13.9	0.11	-0.07	9.57
1,400.0	0.14	132.86	1,399.9	-12.2	11.8	-14.4	0.35	-0.34	-17.59
1,500.0	0.19	281.07	1,499.9	-12.2	11.8	-14.4	0.32	0.05	148.21
1,600.0	0.25	303.40	1,599.9	-12.1	11.4	-14.2	0.10	0.06	22.33
Gyro Tie In @ 1700.0' MD / 1700' TVD									
1,700.0	0.41	314.10	1,699.9	-11.7	11.0	-13.8	0.17	0.16	10.70
1,898.0	1.90	267.50	1,897.8	-11.4	7.2	-12.6	0.83	0.75	-23.54
1,993.0	4.40	262.50	1,992.7	-11.9	2.0	-12.1	2.64	2.63	-5.26
2,088.0	7.20	262.00	2,087.2	-13.2	-7.5	-11.4	2.95	2.95	-0.53
2,183.0	8.10	260.10	2,181.3	-15.2	-20.0	-10.7	0.98	0.95	-2.00
2,373.0	7.30	256.60	2,369.6	-20.3	-44.9	-10.5	0.49	-0.42	-1.84
2,563.0	7.50	269.10	2,558.1	-23.3	-69.1	-8.4	0.85	0.11	6.58
2,753.0	6.80	264.10	2,746.6	-24.6	-92.6	-4.9	0.49	-0.37	-2.63
2,943.0	5.50	264.30	2,935.5	-26.7	-112.9	-2.7	0.68	-0.68	0.11
3,133.0	7.90	261.50	3,124.2	-29.5	-134.9	-0.9	1.27	1.26	-1.47
3,323.0	6.70	261.10	3,312.6	-33.2	-158.7	0.5	0.63	-0.63	-0.21
3,513.0	6.40	258.20	3,501.4	-37.1	-180.1	1.1	0.23	-0.16	-1.53
3,703.0	5.90	258.00	3,690.3	-41.3	-200.0	1.2	0.26	-0.26	-0.11
3,893.0	6.10	256.90	3,879.3	-45.6	-219.4	1.0	0.12	0.11	-0.58
4,083.0	6.40	260.40	4,068.1	-49.6	-239.6	1.2	0.26	0.16	1.84
4,274.0	6.00	259.70	4,258.0	-53.2	-259.9	2.0	0.21	-0.21	-0.37
4,464.0	5.90	260.40	4,447.0	-56.6	-279.3	2.7	0.07	-0.05	0.37
4,654.0	5.60	265.00	4,636.0	-59.0	-298.2	4.2	0.29	-0.16	2.42
4,844.0	5.80	264.80	4,825.1	-60.7	-317.0	6.5	0.11	0.11	-0.11
5,034.0	5.50	268.70	5,014.2	-61.8	-335.7	9.3	0.26	-0.16	2.05
5,224.0	5.20	267.60	5,203.3	-62.4	-353.4	12.4	0.17	-0.16	-0.58
Crossed LL @ 5409.1' MD / 5387.8' TVD									
5,409.1	4.62	268.47	5,387.8	-62.9	-369.2	15.2	0.32	-0.32	0.47
5,414.0	4.60	268.50	5,392.6	-62.9	-369.6	15.2	0.32	-0.32	0.53
5,604.0	4.00	264.10	5,582.1	-63.8	-383.8	17.3	0.36	-0.32	-2.32
5,688.0	3.90	264.30	5,665.9	-64.4	-389.6	17.9	0.12	-0.12	0.24
5,823.0	4.50	263.60	5,800.6	-65.4	-399.4	19.0	0.45	0.44	-0.52
5,919.0	7.60	258.50	5,896.0	-67.1	-409.4	19.4	3.27	3.23	-5.31
6,013.0	9.20	258.50	5,989.0	-69.9	-422.8	19.5	1.70	1.70	0.00
6,203.0	8.60	258.90	6,176.7	-75.6	-451.6	19.9	0.32	-0.32	0.21
6,393.0	9.10	259.70	6,364.4	-81.0	-480.4	20.5	0.27	0.26	0.42
6,583.0	9.00	260.30	6,552.1	-86.2	-509.8	21.6	0.07	-0.05	0.32
6,773.0	8.40	262.40	6,739.9	-90.6	-538.2	23.2	0.36	-0.32	1.11
6,963.0	8.30	262.40	6,927.9	-94.2	-565.5	25.3	0.05	-0.05	0.00
7,153.0	8.40	263.10	7,115.9	-97.7	-592.9	27.6	0.08	0.05	0.37



Survey Report



Company: BTA Oil Producers, LLC
Project: Lea County, NM
Site: Sec 14, T22-S, R34-E
Well: Chiso State 8711 14 #3H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Chiso State 8711 14 #3H
TVD Reference: WELL @ 3499.0usft (Nomac #94)
MD Reference: WELL @ 3499.0usft (Nomac #94)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5002

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)
7,343.0	9.00	253.20	7,303.7	-103.7	-620.9	27.6	0.85	0.32	-5.21
7,533.0	8.30	248.50	7,491.5	-113.0	-647.9	24.1	0.52	-0.37	-2.47
7,723.0	7.60	247.30	7,679.7	-122.9	-672.3	19.5	0.38	-0.37	-0.63
7,914.0	7.50	252.40	7,869.0	-131.5	-695.8	15.9	0.35	-0.05	2.67
8,104.0	6.10	255.50	8,057.7	-137.8	-717.4	14.3	0.76	-0.74	1.63
8,294.0	7.60	255.40	8,246.3	-143.5	-739.3	13.2	0.79	0.79	-0.05
8,484.0	6.50	255.20	8,434.9	-149.4	-761.9	12.1	0.58	-0.58	-0.11
8,673.0	6.70	255.90	8,622.7	-154.8	-782.9	11.2	0.11	0.11	0.37
8,864.0	7.00	258.50	8,812.3	-159.8	-805.1	10.9	0.23	0.16	1.36
9,054.0	6.90	244.40	9,000.9	-167.1	-826.8	8.3	0.90	-0.05	-7.42
9,244.0	9.10	251.30	9,189.1	-176.8	-851.3	3.9	1.26	1.16	3.63
9,434.0	9.40	259.60	9,376.6	-184.5	-880.8	2.5	0.72	0.16	4.37
9,624.0	6.90	264.10	9,564.7	-188.4	-907.4	4.2	1.36	-1.32	2.37
9,814.0	6.40	265.00	9,753.4	-190.5	-929.3	6.7	0.27	-0.26	0.47
10,004.0	6.20	266.20	9,942.2	-192.1	-950.1	9.4	0.13	-0.11	0.63
10,193.0	6.80	264.00	10,130.0	-194.0	-971.4	12.1	0.34	0.32	-1.16
10,385.0	5.70	265.40	10,320.9	-195.9	-992.2	14.5	0.58	-0.57	0.73
10,575.0	4.00	276.10	10,510.2	-196.0	-1,008.2	17.7	1.01	-0.89	5.63
10,670.0	2.00	272.40	10,605.1	-195.6	-1,013.2	19.2	2.11	-2.11	-3.89
10,777.0	7.80	349.90	10,711.7	-188.3	-1,016.3	26.9	7.12	5.42	72.43
10,872.0	15.80	0.60	10,804.6	-169.0	-1,017.3	46.0	8.70	8.42	11.26
10,967.0	23.10	356.40	10,894.1	-137.4	-1,018.3	77.1	7.82	7.68	-4.42
11,062.0	30.10	353.60	10,979.0	-95.1	-1,022.2	119.3	7.48	7.37	-2.95
11,157.0	41.70	358.20	11,055.9	-39.6	-1,025.8	174.3	12.53	12.21	4.84
11,252.0	55.00	0.10	11,118.9	31.2	-1,026.8	243.8	14.08	14.00	2.00
Crossed 330' HL @ 11322.2' MD / 11153.7' TVD									
11,322.2	65.35	0.48	11,153.7	92.0	-1,026.4	303.2	14.74	14.74	0.54
11,347.0	69.00	0.60	11,163.3	114.8	-1,026.2	325.5	14.74	14.74	0.48
11,442.0	83.10	0.60	11,186.2	206.8	-1,025.3	415.3	14.84	14.84	0.00
11,563.0	90.20	1.20	11,193.3	327.5	-1,023.4	532.9	5.89	5.87	0.50
11,658.0	90.80	0.50	11,192.4	422.5	-1,022.0	625.6	0.97	0.63	-0.74
11,753.0	92.10	0.60	11,190.0	517.4	-1,021.0	718.3	1.37	1.37	0.11
11,848.0	91.90	1.00	11,186.7	612.4	-1,019.7	810.9	0.47	-0.21	0.42
11,943.0	91.60	1.00	11,183.8	707.3	-1,018.1	903.4	0.32	-0.32	0.00
12,038.0	91.70	1.90	11,181.1	802.2	-1,015.7	995.7	0.95	0.11	0.95
12,133.0	92.20	1.00	11,177.8	897.2	-1,013.3	1,088.1	1.08	0.53	-0.95
12,228.0	92.20	1.00	11,174.2	992.1	-1,011.6	1,180.6	0.00	0.00	0.00
12,323.0	93.40	1.50	11,169.6	1,086.9	-1,009.5	1,272.9	1.37	1.26	0.53
12,418.0	93.30	1.30	11,164.0	1,181.7	-1,007.2	1,365.2	0.24	-0.11	-0.21
12,513.0	93.40	1.70	11,158.5	1,276.6	-1,004.7	1,457.4	0.43	0.11	0.42
12,608.0	90.80	0.80	11,155.0	1,371.5	-1,002.7	1,549.8	2.90	-2.74	-0.95
12,703.0	91.30	1.00	11,153.2	1,466.4	-1,001.2	1,642.4	0.57	0.53	0.21
12,798.0	90.80	359.60	11,151.5	1,561.4	-1,000.7	1,735.2	1.56	-0.53	-1.47
12,893.0	90.00	359.60	11,150.8	1,656.4	-1,001.3	1,828.3	0.84	-0.84	0.00



Survey Report



Company: BTA Oil Producers, LLC
Project: Lea County, NM
Site: Sec 14, T22-S, R34-E
Well: Chiso State 8711 14 #3H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Chiso State 8711 14 #3H
TVD Reference: WELL @ 3499.0usft (Nomac #94)
MD Reference: WELL @ 3499.0usft (Nomac #94)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5002

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)
12,988.0	89.60	0.50	11,151.2	1,751.4	-1,001.3	1,921.2	1.04	-0.42	0.95
13,083.0	90.40	359.90	11,151.2	1,846.4	-1,000.9	2,014.1	1.05	0.84	-0.63
13,178.0	90.90	359.60	11,150.1	1,941.4	-1,001.3	2,107.1	0.61	0.53	-0.32
13,273.0	90.40	357.30	11,149.0	2,036.3	-1,003.9	2,200.5	2.48	-0.53	-2.42
13,368.0	89.30	357.60	11,149.2	2,131.2	-1,008.1	2,294.2	1.20	-1.16	0.32
13,463.0	90.30	358.00	11,149.6	2,226.2	-1,011.8	2,387.8	1.13	1.05	0.42
13,558.0	89.80	358.50	11,149.5	2,321.1	-1,014.7	2,481.3	0.74	-0.53	0.53
13,653.0	90.10	358.20	11,149.6	2,416.1	-1,017.4	2,574.7	0.45	0.32	-0.32
13,748.0	88.60	357.60	11,150.7	2,511.0	-1,020.9	2,668.3	1.70	-1.58	-0.63
13,843.0	88.70	358.20	11,152.9	2,605.9	-1,024.4	2,761.9	0.64	0.11	0.63
13,938.0	89.90	357.80	11,154.1	2,700.9	-1,027.7	2,855.4	1.33	1.26	-0.42
14,033.0	89.70	358.20	11,154.4	2,795.8	-1,031.0	2,949.0	0.47	-0.21	0.42
14,127.0	91.20	358.50	11,153.7	2,889.8	-1,033.7	3,041.5	1.63	1.60	0.32
14,222.0	90.60	358.90	11,152.2	2,984.7	-1,035.9	3,134.8	0.76	-0.63	0.42
14,317.0	90.60	359.10	11,151.2	3,079.7	-1,037.5	3,228.1	0.21	0.00	0.21
14,412.0	90.50	359.10	11,150.3	3,174.7	-1,039.0	3,321.3	0.11	-0.11	0.00
14,507.0	90.20	359.60	11,149.7	3,269.7	-1,040.1	3,414.4	0.61	-0.32	0.53
14,602.0	90.30	359.90	11,149.3	3,364.7	-1,040.5	3,507.4	0.33	0.11	0.32
14,697.0	89.90	0.60	11,149.1	3,459.7	-1,040.1	3,600.3	0.85	-0.42	0.74
14,792.0	89.40	1.20	11,149.7	3,554.7	-1,038.6	3,692.9	0.82	-0.53	0.63
14,887.0	92.20	359.90	11,148.3	3,649.6	-1,037.7	3,785.6	3.25	2.95	-1.37
14,982.0	92.00	0.30	11,144.9	3,744.6	-1,037.5	3,878.4	0.47	-0.21	0.42
15,077.0	90.40	359.20	11,142.9	3,839.5	-1,037.9	3,971.4	2.04	-1.68	-1.16
15,172.0	89.70	359.40	11,142.8	3,934.5	-1,039.1	4,064.6	0.77	-0.74	0.21
15,267.0	88.70	359.40	11,144.1	4,029.5	-1,040.1	4,157.7	1.05	-1.05	0.00
15,362.0	88.30	359.60	11,146.6	4,124.5	-1,040.9	4,250.7	0.47	-0.42	0.21
15,457.0	87.50	359.80	11,150.1	4,219.4	-1,041.4	4,343.7	0.87	-0.84	0.21
15,552.0	87.00	359.90	11,154.6	4,314.3	-1,041.7	4,436.6	0.54	-0.53	0.11
15,647.0	87.50	359.60	11,159.2	4,409.2	-1,042.1	4,529.5	0.61	0.53	-0.32
15,742.0	89.40	359.80	11,161.8	4,504.2	-1,042.6	4,622.5	2.01	2.00	0.21
15,837.0	89.60	359.10	11,162.6	4,599.1	-1,043.5	4,715.6	0.77	0.21	-0.74
15,932.0	88.30	359.10	11,164.3	4,694.1	-1,045.0	4,808.8	1.37	-1.37	0.00
Crossed 330' HL @ 15948.1' MD / 11164.8' TVD									
15,948.1	88.52	359.07	11,164.8	4,710.2	-1,045.2	4,824.6	1.38	1.37	-0.21
16,027.0	89.60	358.90	11,166.1	4,789.1	-1,046.6	4,902.0	1.38	1.37	-0.21
16,122.0	87.10	359.10	11,168.8	4,884.0	-1,048.3	4,995.2	2.64	-2.63	0.21
16,174.0	86.50	359.10	11,171.7	4,935.9	-1,049.1	5,046.2	1.15	-1.15	0.00
TD @ 16228.0' MD / 11175.0' TVD									
16,228.0	86.50	359.10	11,175.0	4,989.8	-1,050.0	5,099.1	0.00	0.00	0.00



Survey Report



Company: BTA Oil Producers, LLC
Project: Lea County, NM
Site: Sec 14, T22-S, R34-E
Well: Chiso State 8711 14 #3H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Chiso State 8711 14 #3H
TVD Reference: WELL @ 3499.0usft (Nomac #94)
MD Reference: WELL @ 3499.0usft (Nomac #94)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5002

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,700.0	1,699.9	-11.7	11.0	Gyro Tie In @ 1700.0' MD / 1700' TVD
5,409.1	5,387.8	-62.9	-369.2	Crossed LL @ 5409.1' MD / 5387.8' TVD
11,322.2	11,153.7	92.0	-1,026.4	Crossed 330' HL @ 11322.2' MD / 11153.7' TVD
15,948.1	11,164.8	4,710.2	-1,045.2	Crossed 330' HL @ 15948.1' MD / 11164.8' TVD
16,228.0	11,175.0	4,989.8	-1,050.0	TD @ 16228.0' MD / 11175.0' TVD

Checked By: _____ Approved By: _____ Date: _____