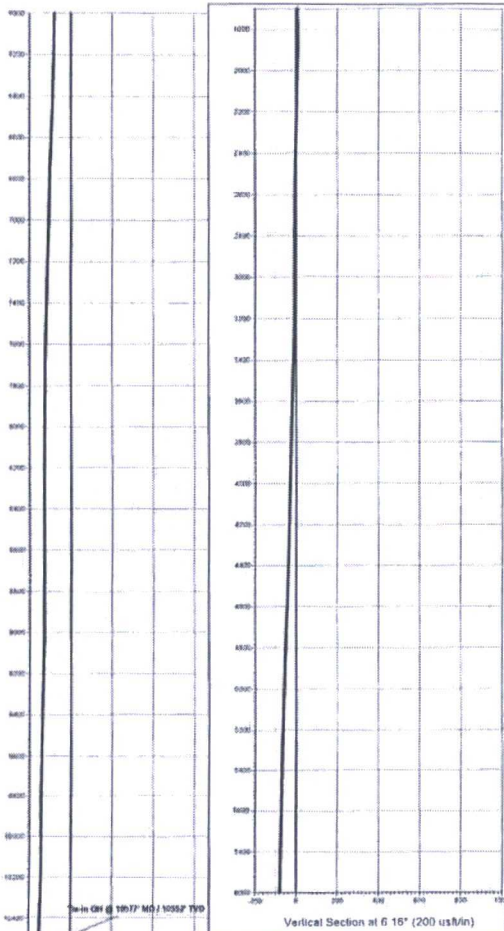
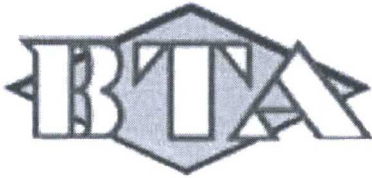


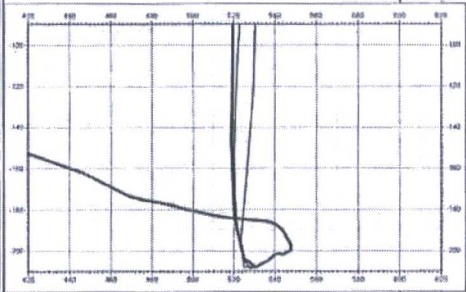
Company Name: BTA Oil Producers, LLC  
 Chiso State 8711 14 #4H  
 Lea County, NM  
 Rig: Normo #94  
 Created By: Shane Robbins  
 Date: 4/13/2017

Chiso State 8711 14 #4H  
 Lea County, NM  
 Q170330 & WT-170269  
 Design #1



**Azimuths to Grid North**

Magnetic North: 6.44°  
 Magnetic Field  
 Strength: 48069.7snT  
 Dip Angle: 60.24°  
 Date: 4/1/2017  
 Model: IGRF2015



**PROJECT DETAILS: Lee County, NM**

Geodetic System: US State Plane 1027 (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 #4H**

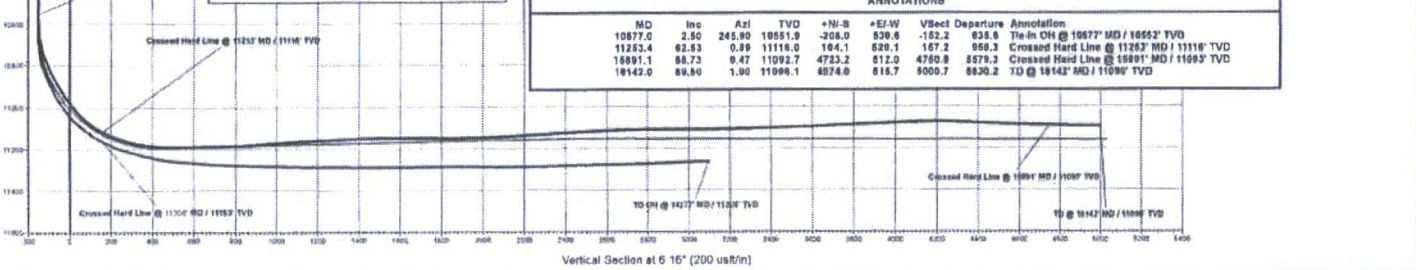
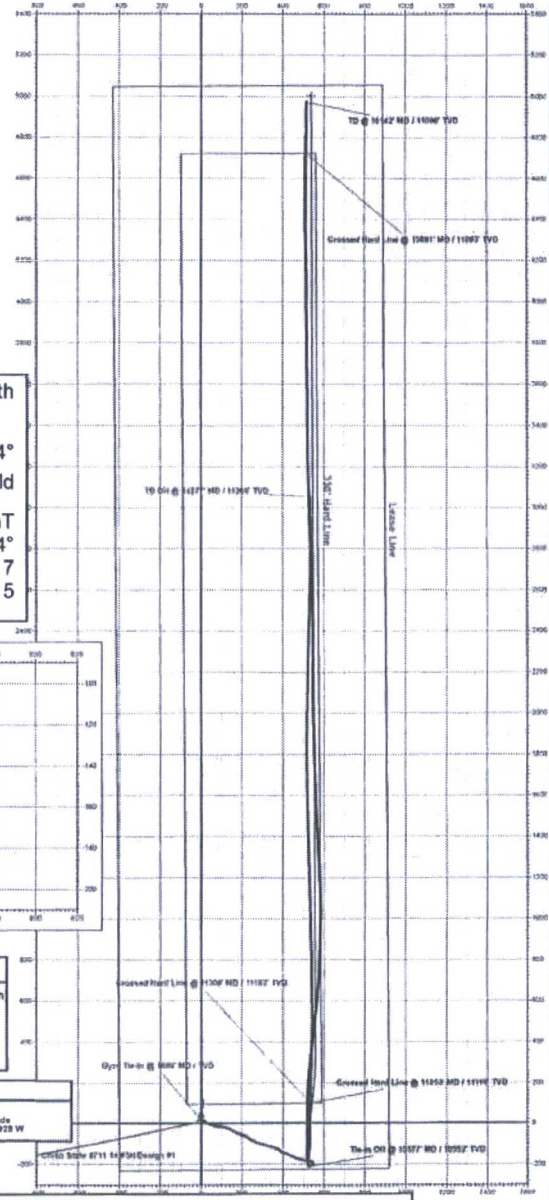
|      |      |           |           |                  |                   |          |           |
|------|------|-----------|-----------|------------------|-------------------|----------|-----------|
| *N-S | *E-W | Northing  | Easting   | Section          | 3478.0            | Latitude | Longitude |
| 0.0  | 0.0  | 604926.60 | 777400.60 | 37° 27' 9.897" N | 103° 28' 4.928" W |          |           |

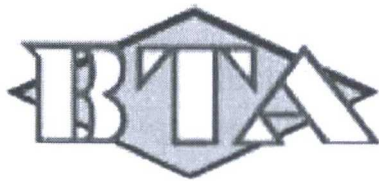
**ANNOTATIONS**

| MD      | Inc   | Azi    | TVD     | +N-S   | +E-W  | Vsect  | Departure | Annotation                                 |
|---------|-------|--------|---------|--------|-------|--------|-----------|--|
| 1689.0  | 1.39  | 276.83 | 1689.8  | 8.0    | 8.8   | 8.0    | 21.8      | Tie-In OH @ 1689' MD / TVD                 |
| 11307.7 | 62.47 | 0.51   | 11163.1 | 104.1  | 533.8 | 190.7  | 859.4     | Crossed Hard Line @ 11308' MD / 11163' TVD |
| 14277.0 | 91.40 | 359.60 | 11206.1 | 3058.4 | 534.9 | 3098.2 | 3911.8    | TD OH @ 14277' MD / 11206' TVD             |

**ANNOTATIONS**

| MD      | Inc   | Azi    | TVD     | +N-S   | +E-W  | Vsect  | Departure | Annotation                                 |
|---------|-------|--------|---------|--------|-------|--------|-----------|--|
| 10877.0 | 2.50  | 245.90 | 10851.9 | -208.0 | 839.6 | -182.2 | 826.8     | Tie-In OH @ 10877' MD / 10852' TVD         |
| 11253.4 | 62.53 | 0.39   | 11116.0 | 184.1  | 528.1 | 167.2  | 950.3     | Crossed Hard Line @ 11253' MD / 11116' TVD |
| 15891.1 | 88.73 | 9.47   | 11092.7 | 4723.2 | 812.0 | 4760.8 | 5579.3    | Crossed Hard Line @ 15891' MD / 11093' TVD |
| 16142.0 | 89.50 | 1.90   | 11096.1 | 4874.6 | 815.7 | 5000.7 | 6820.2    | TD @ 16142' MD / 11096' TVD                |





## **BTA Oil Producers, LLC**

**Lea County, NM  
Sec 14, T22-S, R34-E  
Chiso State 8711 14 #4H**

**Sidetrack #1**

**Design: Sidetrack #1**

## **QES Survey Report**

**13 April, 2017**





Survey Report



**Company:** BTA Oil Producers, LLC  
**Project:** Lea County, NM  
**Site:** Sec 14, T22-S, R34-E  
**Well:** Chiso State 8711 14 #4H  
**Wellbore:** Sidetrack #1  
**Design:** Sidetrack #1

**Local Co-ordinate Reference:** Well Chiso State 8711 14 #4H  
**TVD Reference:** WELL @ 3500.0usft (Nomac #94)  
**MD Reference:** WELL @ 3500.0usft (Nomac #94)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5002

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Lea County, NM                       |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | 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 #4H

**Well Position** **+N/-S** 0.0 usft **Northing:** 504,928.60 usft **Latitude:** 32° 23' 5.857 N  
**+E/-W** 0.0 usft **Easting:** 777,405.60 usft **Longitude:** 103° 26' 4.928 W  
**Position Uncertainty** 0.0 usft **Wellhead Elevation:** 0.0 usft **Ground Level:** 3,475.0 usft

**Wellbore** Sidetrack #1

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|-----------|------------|-------------|-----------------|---------------|---------------------|
|           | IGRF2015   | 4/1/2017    | 6.92            | 60.24         | 48,070              |

**Design** Sidetrack #1

**Audit Notes:**

**Version:** 1.0 **Phase:** ACTUAL **Tie On Depth:** 10,577.0

| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
|-------------------|-------------------------|--------------|--------------|---------------|
|                   | 0.0                     | 0.0          | 0.0          | 5.92          |

**Survey Program** Date 4/13/2017

| From (usft) | To (usft) | Survey (Wellbore)          | Tool Name   | Description    |
|-------------|-----------|----------------------------|-------------|----------------|
| 100.0       | 1,689.0   | Gyro (Wellbore #1)         | Good_gyro   | Good Gyro      |
| 1,799.0     | 10,577.0  | MWD Surveys (Wellbore #1)  | MWD default | MWD - Standard |
| 10,680.0    | 16,142.0  | MWD Surveys (Sidetrack #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) | Buld 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                 | 0.59            | 48.11       | 100.0                 | 0.3          | 0.4          | 0.4                     | 0.59                    | 0.59                  | 0.00                  |
| 200.0                 | 0.73            | 40.93       | 200.0                 | 1.2          | 1.2          | 1.3                     | 0.16                    | 0.14                  | -7.18                 |
| 300.0                 | 0.78            | 32.19       | 300.0                 | 2.2          | 2.0          | 2.4                     | 0.13                    | 0.05                  | -8.74                 |
| 400.0                 | 0.86            | 41.59       | 400.0                 | 3.4          | 2.8          | 3.6                     | 0.16                    | 0.08                  | 9.40                  |
| 500.0                 | 0.97            | 66.87       | 500.0                 | 4.3          | 4.1          | 4.7                     | 0.41                    | 0.11                  | 25.28                 |
| 600.0                 | 1.15            | 72.24       | 599.9                 | 4.9          | 5.8          | 5.5                     | 0.21                    | 0.18                  | 5.37                  |
| 700.0                 | 1.12            | 77.55       | 699.9                 | 5.4          | 7.7          | 6.2                     | 0.11                    | -0.03                 | 5.31                  |
| 800.0                 | 0.93            | 83.20       | 799.9                 | 5.7          | 9.5          | 6.7                     | 0.21                    | -0.19                 | 5.65                  |



Survey Report



**Company:** BTA Oil Producers, LLC  
**Project:** Lea County, NM  
**Site:** Sec 14, T22-S, R34-E  
**Well:** Chiso State 8711 14 #4H  
**Wellbore:** Sidetrack #1  
**Design:** Sidetrack #1

**Local Co-ordinate Reference:** Well Chiso State 8711 14 #4H  
**TVD Reference:** WELL @ 3500.0usft (Nomac #94)  
**MD Reference:** WELL @ 3500.0usft (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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 900.0                 | 0.58            | 96.04       | 899.9                 | 5.8          | 10.8         | 6.8                     | 0.39                    | -0.35                  | 12.84                 |
| 1,000.0               | 0.33            | 108.93      | 999.9                 | 5.6          | 11.6         | 6.8                     | 0.27                    | -0.25                  | 12.89                 |
| 1,100.0               | 0.44            | 92.24       | 1,099.9               | 5.5          | 12.2         | 6.7                     | 0.16                    | 0.11                   | -16.69                |
| 1,200.0               | 0.41            | 88.82       | 1,199.9               | 5.5          | 13.0         | 6.8                     | 0.04                    | -0.03                  | -3.42                 |
| 1,300.0               | 0.49            | 96.38       | 1,299.9               | 5.5          | 13.8         | 6.9                     | 0.10                    | 0.08                   | 7.56                  |
| 1,400.0               | 0.36            | 357.07      | 1,399.9               | 5.7          | 14.2         | 7.2                     | 0.65                    | -0.13                  | -99.31                |
| 1,500.0               | 0.94            | 304.83      | 1,499.9               | 6.5          | 13.5         | 7.9                     | 0.77                    | 0.58                   | -52.24                |
| 1,600.0               | 1.31            | 292.35      | 1,599.9               | 7.4          | 11.8         | 8.6                     | 0.44                    | 0.37                   | -12.48                |
| 1,689.0               | 1.36            | 278.93      | 1,688.8               | 8.0          | 9.8          | 8.9                     | 0.35                    | 0.06                   | -15.08                |
| 1,799.0               | 1.40            | 292.60      | 1,798.8               | 8.7          | 7.2          | 9.4                     | 0.30                    | 0.04                   | 12.43                 |
| 1,894.0               | 1.10            | 114.40      | 1,893.8               | 8.8          | 7.0          | 9.4                     | 2.63                    | -0.32                  | -187.58               |
| 2,021.0               | 4.70            | 113.00      | 2,020.6               | 6.2          | 12.9         | 7.5                     | 2.83                    | 2.83                   | -1.10                 |
| 2,084.0               | 5.50            | 111.40      | 2,083.4               | 4.1          | 18.1         | 5.9                     | 1.29                    | 1.27                   | -2.54                 |
| 2,274.0               | 4.90            | 112.80      | 2,272.6               | -2.4         | 34.1         | 1.2                     | 0.32                    | -0.32                  | 0.74                  |
| 2,464.0               | 4.60            | 110.50      | 2,461.9               | -8.2         | 48.7         | -3.1                    | 0.19                    | -0.16                  | -1.21                 |
| 2,654.0               | 4.40            | 105.80      | 2,651.3               | -12.8        | 62.8         | -6.3                    | 0.22                    | -0.11                  | -2.47                 |
| 2,844.0               | 4.20            | 98.00       | 2,840.8               | -15.8        | 76.7         | -7.8                    | 0.33                    | -0.11                  | -4.11                 |
| 3,034.0               | 6.50            | 96.80       | 3,030.0               | -18.0        | 94.3         | -8.2                    | 1.21                    | 1.21                   | -0.63                 |
| 3,224.0               | 7.20            | 98.70       | 3,218.6               | -21.1        | 116.7        | -8.9                    | 0.39                    | 0.37                   | 1.00                  |
| 3,414.0               | 7.20            | 115.10      | 3,407.1               | -28.0        | 139.3        | -13.4                   | 1.08                    | 0.00                   | 8.63                  |
| 3,604.0               | 4.00            | 118.40      | 3,596.2               | -36.2        | 155.9        | -19.9                   | 1.69                    | -1.68                  | 1.74                  |
| 3,794.0               | 3.80            | 115.60      | 3,785.8               | -42.0        | 167.4        | -24.5                   | 0.15                    | -0.11                  | -1.47                 |
| 3,984.0               | 3.50            | 116.00      | 3,975.4               | -47.3        | 178.3        | -28.7                   | 0.16                    | -0.16                  | 0.21                  |
| 4,174.0               | 4.90            | 111.40      | 4,164.9               | -52.8        | 191.1        | -32.8                   | 0.76                    | 0.74                   | -2.42                 |
| 4,364.0               | 5.10            | 107.50      | 4,354.1               | -58.3        | 206.7        | -36.7                   | 0.21                    | 0.11                   | -2.05                 |
| 4,555.0               | 5.40            | 122.60      | 4,544.3               | -65.7        | 222.4        | -42.4                   | 0.74                    | 0.16                   | 7.91                  |
| 4,745.0               | 5.40            | 119.80      | 4,733.5               | -75.0        | 237.6        | -50.0                   | 0.14                    | 0.00                   | -1.47                 |
| 4,935.0               | 4.80            | 117.50      | 4,922.8               | -83.1        | 252.5        | -56.6                   | 0.33                    | -0.32                  | -1.21                 |
| 5,125.0               | 4.50            | 118.60      | 5,112.1               | -90.3        | 266.0        | -62.4                   | 0.16                    | -0.16                  | 0.58                  |
| 5,315.0               | 4.70            | 109.50      | 5,301.5               | -96.5        | 279.9        | -67.1                   | 0.40                    | 0.11                   | -4.79                 |
| 5,505.0               | 4.90            | 106.70      | 5,490.9               | -101.4       | 295.0        | -70.4                   | 0.16                    | 0.11                   | -1.47                 |
| 5,695.0               | 5.10            | 107.30      | 5,680.1               | -106.2       | 310.9        | -73.6                   | 0.11                    | 0.11                   | 0.32                  |
| 5,827.0               | 5.20            | 107.90      | 5,811.6               | -109.8       | 322.2        | -76.0                   | 0.09                    | 0.08                   | 0.45                  |
| 6,017.0               | 5.10            | 109.80      | 6,000.8               | -115.3       | 338.3        | -79.8                   | 0.10                    | -0.05                  | 1.00                  |
| 6,207.0               | 5.10            | 108.80      | 6,190.1               | -120.9       | 354.2        | -83.7                   | 0.05                    | 0.00                   | -0.53                 |
| 6,397.0               | 5.70            | 108.40      | 6,379.2               | -126.6       | 371.2        | -87.7                   | 0.32                    | 0.32                   | -0.21                 |
| 6,587.0               | 4.70            | 135.50      | 6,568.5               | -135.1       | 385.6        | -94.7                   | 1.38                    | -0.53                  | 14.26                 |
| 6,777.0               | 5.60            | 113.00      | 6,757.7               | -144.3       | 399.6        | -102.3                  | 1.15                    | 0.47                   | -11.84                |
| 6,967.0               | 4.80            | 113.80      | 6,946.9               | -151.2       | 415.4        | -107.5                  | 0.42                    | -0.42                  | 0.42                  |
| 7,157.0               | 5.30            | 104.70      | 7,136.2               | -156.6       | 431.2        | -111.3                  | 0.50                    | 0.26                   | -4.79                 |
| 7,347.0               | 5.00            | 114.70      | 7,325.4               | -162.3       | 447.2        | -115.3                  | 0.50                    | -0.16                  | 5.26                  |
| 7,537.0               | 5.00            | 121.10      | 7,514.7               | -170.0       | 461.8        | -121.5                  | 0.29                    | 0.00                   | 3.37                  |
| 7,727.0               | 4.40            | 98.40       | 7,704.1               | -175.4       | 476.1        | -125.3                  | 1.02                    | -0.32                  | -11.95                |



Survey Report



**Company:** BTA Oil Producers, LLC  
**Project:** Lea County, NM  
**Site:** Sec 14, T22-S, R34-E  
**Well:** Chiso State 8711 14 #4H  
**Wellbore:** Sidetrack #1  
**Design:** Sidetrack #1

**Local Co-ordinate Reference:** Well Chiso State 8711 14 #4H  
**TVD Reference:** WELL @ 3500.0usft (Nomac #94)  
**MD Reference:** WELL @ 3500.0usft (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) |
|---|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 7,917.0   | 3.30            | 104.00      | 7,893.7               | -177.7       | 488.6        | -126.4                  | 0.61                    | -0.58                  | 2.95                  |
| 8,108.0   | 3.00            | 105.80      | 8,084.4               | -180.4       | 498.8        | -128.0                  | 0.17                    | -0.16                  | 0.94                  |
| 8,298.0   | 2.60            | 100.80      | 8,274.2               | -182.6       | 507.8        | -129.3                  | 0.25                    | -0.21                  | -2.63                 |
| 8,488.0   | 1.90            | 97.70       | 8,464.0               | -183.8       | 515.1        | -129.7                  | 0.37                    | -0.37                  | -1.63                 |
| 8,678.0   | 3.40            | 95.00       | 8,653.8               | -184.7       | 523.9        | -129.7                  | 0.79                    | 0.79                   | -1.42                 |
| 8,867.0   | 2.50            | 94.50       | 8,842.5               | -185.5       | 533.6        | -129.5                  | 0.48                    | -0.48                  | -0.26                 |
| 9,057.0   | 1.90            | 116.50      | 9,032.4               | -187.3       | 540.5        | -130.5                  | 0.54                    | -0.32                  | 11.58                 |
| 9,247.0   | 2.30            | 154.80      | 9,222.3               | -192.1       | 544.9        | -134.9                  | 0.75                    | 0.21                   | 20.16                 |
| 9,437.0   | 1.10            | 138.10      | 9,412.2               | -196.9       | 547.8        | -139.4                  | 0.68                    | -0.63                  | -8.79                 |
| 9,627.0   | 1.20            | 219.30      | 9,602.2               | -199.8       | 547.7        | -142.3                  | 0.79                    | 0.05                   | 42.74                 |
| 9,817.0   | 1.50            | 258.50      | 9,792.1               | -201.9       | 544.0        | -144.7                  | 0.50                    | 0.16                   | 20.63                 |
| 10,007.0  | 0.50            | 320.80      | 9,982.1               | -201.7       | 541.1        | -144.9                  | 0.71                    | -0.53                  | 32.79                 |
| 10,197.0  | 0.90            | 212.80      | 10,172.1              | -202.3       | 539.8        | -145.6                  | 0.61                    | 0.21                   | -56.84                |
| 10,387.0  | 1.60            | 238.80      | 10,362.0              | -205.0       | 536.7        | -148.5                  | 0.47                    | 0.37                   | 13.68                 |
| <b>Tie-In OH @ 10577' MD / 10552' TVD</b>         |                 |             |                       |              |              |                         |                         |                        |                       |
| 10,577.0  | 2.50            | 245.90      | 10,551.9              | -208.0       | 530.6        | -152.2                  | 0.49                    | 0.47                   | 3.74                  |
| 10,680.0  | 6.90            | 325.00      | 10,654.6              | -203.9       | 525.0        | -148.6                  | 6.68                    | 4.27                   | 76.80                 |
| 10,775.0  | 18.70           | 354.70      | 10,747.2              | -184.0       | 520.3        | -129.3                  | 13.83                   | 12.42                  | 31.26                 |
| 10,870.0  | 26.60           | 0.00        | 10,834.8              | -147.5       | 518.9        | -93.2                   | 8.58                    | 8.32                   | 5.58                  |
| 10,965.0  | 32.90           | 1.50        | 10,917.2              | -100.3       | 519.6        | -46.2                   | 6.68                    | 6.63                   | 1.58                  |
| 11,060.0  | 40.00           | 0.00        | 10,993.6              | -44.0        | 520.3        | 9.9                     | 7.53                    | 7.47                   | -1.58                 |
| 11,155.0  | 49.30           | 359.40      | 11,061.1              | 22.7         | 519.9        | 76.2                    | 9.80                    | 9.79                   | -0.63                 |
| 11,250.0  | 62.20           | 0.80        | 11,114.5              | 101.1        | 520.1        | 154.2                   | 13.63                   | 13.58                  | 1.47                  |
| <b>Crossed Hard Line @ 11253' MD / 11116' TVD</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 11,253.4  | 62.53           | 0.89        | 11,116.0              | 104.1        | 520.1        | 157.2                   | 9.94                    | 9.67                   | 2.60                  |
| 11,345.0  | 71.40           | 3.10        | 11,151.9              | 188.3        | 523.1        | 241.2                   | 9.94                    | 9.68                   | 2.41                  |
| 11,440.0  | 78.40           | 5.90        | 11,176.6              | 279.6        | 530.3        | 332.8                   | 7.90                    | 7.37                   | 2.95                  |
| 11,534.0  | 87.60           | 6.40        | 11,188.0              | 372.3        | 540.3        | 426.0                   | 9.80                    | 9.79                   | 0.53                  |
| 11,563.0  | 88.60           | 6.60        | 11,189.0              | 401.1        | 543.6        | 455.0                   | 3.52                    | 3.45                   | 0.69                  |
| 11,658.0  | 90.30           | 6.80        | 11,189.9              | 495.4        | 554.7        | 550.0                   | 1.80                    | 1.79                   | 0.21                  |
| 11,753.0  | 90.80           | 5.80        | 11,189.0              | 589.8        | 565.1        | 645.0                   | 1.18                    | 0.53                   | -1.05                 |
| 11,848.0  | 91.20           | 3.80        | 11,187.3              | 684.5        | 573.1        | 739.9                   | 2.15                    | 0.42                   | -2.11                 |
| 11,943.0  | 92.60           | 2.80        | 11,184.2              | 779.3        | 578.5        | 834.8                   | 1.81                    | 1.47                   | -1.05                 |
| 12,038.0  | 93.30           | 1.00        | 11,179.3              | 874.1        | 581.7        | 929.4                   | 2.03                    | 0.74                   | -1.89                 |
| 12,133.0  | 93.90           | 1.00        | 11,173.3              | 968.9        | 583.3        | 1,023.9                 | 0.63                    | 0.63                   | 0.00                  |
| 12,228.0  | 93.70           | 359.80      | 11,167.0              | 1,063.7      | 584.0        | 1,118.2                 | 1.28                    | -0.21                  | -1.26                 |
| 12,323.0  | 92.60           | 357.30      | 11,161.8              | 1,158.5      | 581.6        | 1,212.3                 | 2.87                    | -1.16                  | -2.63                 |
| 12,418.0  | 93.20           | 357.00      | 11,157.0              | 1,253.3      | 576.9        | 1,306.1                 | 0.71                    | 0.63                   | -0.32                 |
| 12,512.0  | 92.00           | 357.30      | 11,152.7              | 1,347.0      | 572.2        | 1,398.9                 | 1.32                    | -1.28                  | 0.32                  |
| 12,607.0  | 90.30           | 357.00      | 11,150.8              | 1,441.9      | 567.5        | 1,492.7                 | 1.82                    | -1.79                  | -0.32                 |
| 12,702.0  | 90.50           | 357.80      | 11,150.2              | 1,536.8      | 563.2        | 1,586.7                 | 0.87                    | 0.21                   | 0.84                  |
| 12,797.0  | 89.20           | 357.80      | 11,150.4              | 1,631.7      | 559.5        | 1,680.7                 | 1.37                    | -1.37                  | 0.00                  |
| 12,892.0  | 89.60           | 358.20      | 11,151.4              | 1,726.7      | 556.2        | 1,774.8                 | 0.60                    | 0.42                   | 0.42                  |
| 12,987.0  | 90.00           | 358.40      | 11,151.7              | 1,821.6      | 553.4        | 1,869.0                 | 0.47                    | 0.42                   | 0.21                  |



Survey Report



**Company:** BTA Oil Producers, LLC  
**Project:** Lea County, NM  
**Site:** Sec 14, T22-S, R34-E  
**Well:** Chiso State 8711 14 #4H  
**Wellbore:** Sidetrack #1  
**Design:** Sidetrack #1

**Local Co-ordinate Reference:** Well Chiso State 8711 14 #4H  
**TVD Reference:** WELL @ 3500.0usft (Nomac #94)  
**MD Reference:** WELL @ 3500.0usft (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) |  |
|---|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|--|
| 13,082.0  | 91.20           | 358.50      | 11,150.8              | 1,916.6      | 550.8        | 1,963.2                 | 1.27                    | 1.26                   | 0.11                  |  |
| 13,177.0  | 92.90           | 359.10      | 11,147.4              | 2,011.5      | 548.8        | 2,057.4                 | 1.90                    | 1.79                   | 0.63                  |  |
| 13,272.0  | 93.10           | 359.20      | 11,142.4              | 2,106.4      | 547.4        | 2,151.6                 | 0.24                    | 0.21                   | 0.11                  |  |
| 13,367.0  | 93.70           | 0.30        | 11,136.7              | 2,201.2      | 547.0        | 2,245.9                 | 1.32                    | 0.63                   | 1.16                  |  |
| 13,462.0  | 93.80           | 0.80        | 11,130.5              | 2,296.0      | 547.9        | 2,340.2                 | 0.54                    | 0.11                   | 0.53                  |  |
| 13,557.0  | 93.30           | 359.60      | 11,124.7              | 2,390.8      | 548.3        | 2,434.6                 | 1.37                    | -0.53                  | -1.26                 |  |
| 13,652.0  | 92.10           | 358.50      | 11,120.2              | 2,485.7      | 546.7        | 2,528.8                 | 1.71                    | -1.26                  | -1.16                 |  |
| 13,747.0  | 92.90           | 358.90      | 11,116.0              | 2,580.6      | 544.5        | 2,623.0                 | 0.94                    | 0.84                   | 0.42                  |  |
| 13,842.0  | 90.60           | 358.00      | 11,113.1              | 2,675.5      | 542.0        | 2,717.1                 | 2.60                    | -2.42                  | -0.95                 |  |
| 13,937.0  | 90.60           | 357.70      | 11,112.1              | 2,770.4      | 538.4        | 2,811.2                 | 0.32                    | 0.00                   | -0.32                 |  |
| 14,032.0  | 90.40           | 357.70      | 11,111.3              | 2,865.3      | 534.6        | 2,905.2                 | 0.21                    | -0.21                  | 0.00                  |  |
| 14,127.0  | 90.20           | 358.20      | 11,110.8              | 2,960.3      | 531.2        | 2,999.3                 | 0.57                    | -0.21                  | 0.53                  |  |
| 14,221.0  | 89.90           | 358.20      | 11,110.7              | 3,054.2      | 528.2        | 3,092.4                 | 0.32                    | -0.32                  | 0.00                  |  |
| 14,316.0  | 90.80           | 358.40      | 11,110.1              | 3,149.2      | 525.4        | 3,186.6                 | 0.97                    | 0.95                   | 0.21                  |  |
| 14,411.0  | 91.40           | 359.10      | 11,108.3              | 3,244.1      | 523.3        | 3,280.8                 | 0.97                    | 0.63                   | 0.74                  |  |
| 14,506.0  | 91.90           | 359.60      | 11,105.6              | 3,339.1      | 522.3        | 3,375.1                 | 0.74                    | 0.53                   | 0.53                  |  |
| 14,601.0  | 92.30           | 0.00        | 11,102.1              | 3,434.0      | 521.9        | 3,469.5                 | 0.60                    | 0.42                   | 0.42                  |  |
| 14,696.0  | 91.60           | 358.70      | 11,098.9              | 3,529.0      | 520.9        | 3,563.9                 | 1.55                    | -0.74                  | -1.37                 |  |
| 14,791.0  | 92.50           | 359.40      | 11,095.5              | 3,623.9      | 519.3        | 3,658.1                 | 1.20                    | 0.95                   | 0.74                  |  |
| 14,886.0  | 93.10           | 0.00        | 11,090.8              | 3,718.8      | 518.8        | 3,752.4                 | 0.89                    | 0.63                   | 0.63                  |  |
| 14,981.0  | 92.30           | 359.20      | 11,086.4              | 3,813.7      | 518.1        | 3,846.8                 | 1.19                    | -0.84                  | -0.84                 |  |
| 15,076.0  | 92.20           | 359.40      | 11,082.6              | 3,908.6      | 517.0        | 3,941.0                 | 0.24                    | -0.11                  | 0.21                  |  |
| 15,172.0  | 92.60           | 359.60      | 11,078.6              | 4,004.5      | 516.1        | 4,036.4                 | 0.47                    | 0.42                   | 0.21                  |  |
| 15,268.0  | 91.60           | 359.10      | 11,075.2              | 4,098.4      | 515.1        | 4,129.7                 | 1.19                    | -1.06                  | -0.53                 |  |
| 15,361.0  | 89.10           | 359.10      | 11,074.6              | 4,193.4      | 513.6        | 4,224.0                 | 2.63                    | -2.63                  | 0.00                  |  |
| 15,456.0  | 87.30           | 359.40      | 11,077.6              | 4,288.3      | 512.3        | 4,318.3                 | 1.92                    | -1.89                  | 0.32                  |  |
| 15,551.0  | 87.70           | 359.60      | 11,081.7              | 4,383.2      | 511.5        | 4,412.6                 | 0.47                    | 0.42                   | 0.21                  |  |
| 15,646.0  | 88.10           | 0.00        | 11,085.2              | 4,478.2      | 511.2        | 4,507.0                 | 0.60                    | 0.42                   | 0.42                  |  |
| 15,741.0  | 88.00           | 0.10        | 11,088.4              | 4,573.1      | 511.3        | 4,601.5                 | 0.15                    | -0.11                  | 0.11                  |  |
| 15,836.0  | 88.50           | 0.30        | 11,091.3              | 4,668.1      | 511.6        | 4,695.9                 | 0.57                    | 0.53                   | 0.21                  |  |
| <b>Crossed Hard Line @ 15891' MD / 11093' TVD</b> |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 15,891.1  | 88.73           | 0.47        | 11,092.7              | 4,723.2      | 512.0        | 4,750.8                 | 0.53                    | 0.42                   | 0.32                  |  |
| 15,931.0  | 88.90           | 0.60        | 11,093.5              | 4,763.0      | 512.3        | 4,790.5                 | 0.53                    | 0.42                   | 0.32                  |  |
| 16,026.0  | 89.30           | 1.00        | 11,095.0              | 4,858.0      | 513.7        | 4,885.1                 | 0.60                    | 0.42                   | 0.42                  |  |
| 16,086.0  | 89.50           | 1.00        | 11,095.6              | 4,918.0      | 514.7        | 4,944.9                 | 0.33                    | 0.33                   | 0.00                  |  |
| <b>TD @ 16142' MD / 11096' TVD</b>                |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 16,142.0  | 89.50           | 1.00        | 11,096.1              | 4,974.0      | 515.7        | 5,000.7                 | 0.00                    | 0.00                   | 0.00                  |  |



Survey Report



**Company:** BTA Oil Producers, LLC  
**Project:** Lea County, NM  
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**Design:** Sidetrack #1

**Local Co-ordinate Reference:** Well Chiso State 8711 14 #4H  
**TVD Reference:** WELL @ 3500.0usft (Nomac #94)  
**MD Reference:** WELL @ 3500.0usft (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) |  |
| 10,577.0              | 10,551.9              | -208.0            | 530.6        | Tie-in OH @ 10577' MD / 10552' TVD         |
| 11,253.4              | 11,118.0              | 104.1             | 520.1        | Crossed Hard Line @ 11253' MD / 11118' TVD |
| 15,891.1              | 11,092.7              | 4,723.2           | 512.0        | Crossed Hard Line @ 15891' MD / 11093' TVD |
| 16,142.0              | 11,096.1              | 4,974.0           | 515.7        | TD @ 16142' MD / 11096' TVD                |

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_