



NM OIL CONSERVATION  
ARTESIA DISTRICT

DEC 12 2018

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## **Concho Resources, Inc.**

Eddy County (NAD27 NME)

(SRO 4 State Com) Sec-4\_T-26-S\_R-28-E

SRO 4 State Com #501H

*30-015-45547*

OWB

Plan: Plan #1

## **Standard Planning Report**

11 December, 2018



**Database:** EDM 5000.15 Single User Db  
**Company:** Concho Resources, Inc.  
**Project:** Eddy County (NAD27 NME)  
**Site:** (SRO 4 State Com) Sec-4\_T-26-S\_R-28-E  
**Well:** SRO 4 State Com #501H  
**Wellbore:** OWB  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well SRO 4 State Com #501H  
**TVD Reference:** KB @ 3020.7usft (Precision 106)  
**MD Reference:** KB @ 3020.7usft (Precision 106)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Eddy County (NAD27 NME)              |                      |                |
| <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                 |                      |                |

|                              |                                       |                          |                  |
|------------------------------|---------------------------------------|--------------------------|------------------|
| <b>Site</b>                  | (SRO 4 State Com) Sec-4_T-26-S_R-28-E |                          |                  |
| <b>Site Position:</b>        |                                       | <b>Northing:</b>         | 392,249.80 usft  |
| <b>From:</b>                 | Map                                   | <b>Easting:</b>          | 573,329.70 usft  |
| <b>Position Uncertainty:</b> | 0.0 usft                              | <b>Slot Radius:</b>      | 13-3/16 "        |
|                              |                                       | <b>Latitude:</b>         | 32° 4' 41.481 N  |
|                              |                                       | <b>Longitude:</b>        | 104° 5' 47.692 W |
|                              |                                       | <b>Grid Convergence:</b> | 0.13 °           |

|                             |                       |                            |                                    |
|-----------------------------|-----------------------|----------------------------|------------------------------------|
| <b>Well</b>                 | SRO 4 State Com #501H |                            |                                    |
| <b>Well Position</b>        | <b>+N/-S</b>          | 0.0 usft                   | <b>Northing:</b> 392,249.80 usft   |
|                             | <b>+E/-W</b>          | 60.0 usft                  | <b>Easting:</b> 573,389.70 usft    |
| <b>Position Uncertainty</b> | 0.0 usft              | <b>Wellhead Elevation:</b> | <b>Latitude:</b> 32° 4' 41.480 N   |
|                             |                       |                            | <b>Longitude:</b> 104° 5' 46.994 W |
|                             |                       |                            | <b>Ground Level:</b> 2,989.7 usft  |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | OWB               |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2015          | 12/11/18           | 7.03                   | 59.83                | 47,646.50189931            |

|                          |                                |                     |                      |                      |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| <b>Design</b>            | Plan #1                        |                     |                      |                      |
| <b>Audit Notes:</b>      |                                |                     |                      |                      |
| <b>Version:</b>          | <b>Phase:</b>                  | PLAN                | <b>Tie On Depth:</b> | 0.0                  |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b>  | <b>Direction (°)</b> |
|                          | 0.0                            | 0.0                 | 0.0                  | 177.93               |

|                                 |                        |                          |                            |                |
|---------------------------------|------------------------|--------------------------|----------------------------|----------------|
| <b>Plan Survey Tool Program</b> | <b>Date</b> 12/11/18   |                          |                            |                |
| <b>Depth From (usft)</b>        | <b>Depth To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b>           | <b>Remarks</b> |
| 1 0.0                           | 7,487.6                | Plan #1 (OWB)            | MWD                        |                |
|                                 |                        |                          | OWSG MWD - Standard        |                |
| 2 7,487.6                       | 18,307.8               | Plan #1 (OWB)            | MWD+IFR1+MS                |                |
|                                 |                        |                          | MWD + IFR1 + Multi-Station |                |

|                              |                        |                    |                              |                     |                     |                                |                               |                              |                |                        |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|-------------------------------|------------------------------|----------------|------------------------|
| <b>Plan Sections</b>         |                        |                    |                              |                     |                     |                                |                               |                              |                |                        |
| <b>Measured Depth (usft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Dogleg Rate (°/100usft)</b> | <b>Build Rate (°/100usft)</b> | <b>Turn Rate (°/100usft)</b> | <b>TFO (°)</b> | <b>Target</b>          |
| 0.0                          | 0.00                   | 0.00               | 0.0                          | 0.0                 | 0.0                 | 0.00                           | 0.00                          | 0.00                         | 0.00           |                        |
| 2,500.0                      | 0.00                   | 0.00               | 2,500.0                      | 0.0                 | 0.0                 | 0.00                           | 0.00                          | 0.00                         | 0.00           |                        |
| 2,747.3                      | 4.95                   | 66.08              | 2,747.0                      | 4.3                 | 9.7                 | 2.00                           | 2.00                          | 26.72                        | 66.08          |                        |
| 7,487.6                      | 4.95                   | 66.08              | 7,469.6                      | 170.0               | 383.3               | 0.00                           | 0.00                          | 0.00                         | 0.00           |                        |
| 8,409.5                      | 90.17                  | 180.31             | 8,061.0                      | -404.5              | 426.9               | 10.00                          | 9.24                          | 12.39                        | 114.14         |                        |
| 18,307.8                     | 90.17                  | 180.31             | 8,032.0                      | -10,302.6           | 372.6               | 0.00                           | 0.00                          | 0.00                         | 0.00           | 0.00 PBHL (SRO 4 State |



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Planning Report



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North Reference: Grid  
Survey Calculation Method: Minimum Curvature

Planned Survey

| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| 0.0                         | 0.00               | 0.00           | 0.0                         | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 100.0                       | 0.00               | 0.00           | 100.0                       | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 200.0                       | 0.00               | 0.00           | 200.0                       | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 300.0                       | 0.00               | 0.00           | 300.0                       | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 400.0                       | 0.00               | 0.00           | 400.0                       | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 500.0                       | 0.00               | 0.00           | 500.0                       | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 600.0                       | 0.00               | 0.00           | 600.0                       | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 700.0                       | 0.00               | 0.00           | 700.0                       | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 800.0                       | 0.00               | 0.00           | 800.0                       | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 900.0                       | 0.00               | 0.00           | 900.0                       | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 1,000.0                     | 0.00               | 0.00           | 1,000.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 1,100.0                     | 0.00               | 0.00           | 1,100.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 1,200.0                     | 0.00               | 0.00           | 1,200.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 1,300.0                     | 0.00               | 0.00           | 1,300.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 1,400.0                     | 0.00               | 0.00           | 1,400.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 1,500.0                     | 0.00               | 0.00           | 1,500.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 1,600.0                     | 0.00               | 0.00           | 1,600.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 1,700.0                     | 0.00               | 0.00           | 1,700.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 1,800.0                     | 0.00               | 0.00           | 1,800.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 1,900.0                     | 0.00               | 0.00           | 1,900.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 2,000.0                     | 0.00               | 0.00           | 2,000.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 2,100.0                     | 0.00               | 0.00           | 2,100.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 2,200.0                     | 0.00               | 0.00           | 2,200.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 2,300.0                     | 0.00               | 0.00           | 2,300.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 2,400.0                     | 0.00               | 0.00           | 2,400.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| 2,500.0                     | 0.00               | 0.00           | 2,500.0                     | 0.0             | 0.0             | 0.0                           | 0.00                          | 0.00                         | 0.00                        |
| NUDGE - DLS 2.00 TFO 66.08  |                    |                |                             |                 |                 |                               |                               |                              |                             |
| 2,600.0                     | 2.00               | 66.08          | 2,600.0                     | 0.7             | 1.6             | -0.6                          | 2.00                          | 2.00                         | 0.00                        |
| 2,700.0                     | 4.00               | 66.08          | 2,699.8                     | 2.8             | 6.4             | -2.6                          | 2.00                          | 2.00                         | 0.00                        |
| 2,747.3                     | 4.95               | 66.08          | 2,747.0                     | 4.3             | 9.7             | -4.0                          | 2.00                          | 2.00                         | 0.00                        |
| HOLD - 4740.3 at 2747.3 MD  |                    |                |                             |                 |                 |                               |                               |                              |                             |
| 2,800.0                     | 4.95               | 66.08          | 2,799.5                     | 6.2             | 13.9            | -5.7                          | 0.00                          | 0.00                         | 0.00                        |
| 2,900.0                     | 4.95               | 66.08          | 2,899.1                     | 9.7             | 21.8            | -8.9                          | 0.00                          | 0.00                         | 0.00                        |
| 3,000.0                     | 4.95               | 66.08          | 2,998.8                     | 13.2            | 29.7            | -12.1                         | 0.00                          | 0.00                         | 0.00                        |
| 3,100.0                     | 4.95               | 66.08          | 3,098.4                     | 16.7            | 37.5            | -15.3                         | 0.00                          | 0.00                         | 0.00                        |
| 3,200.0                     | 4.95               | 66.08          | 3,198.0                     | 20.1            | 45.4            | -18.5                         | 0.00                          | 0.00                         | 0.00                        |
| 3,300.0                     | 4.95               | 66.08          | 3,297.6                     | 23.6            | 53.3            | -21.7                         | 0.00                          | 0.00                         | 0.00                        |
| 3,400.0                     | 4.95               | 66.08          | 3,397.3                     | 27.1            | 61.2            | -24.9                         | 0.00                          | 0.00                         | 0.00                        |
| 3,500.0                     | 4.95               | 66.08          | 3,496.9                     | 30.6            | 69.1            | -28.1                         | 0.00                          | 0.00                         | 0.00                        |
| 3,600.0                     | 4.95               | 66.08          | 3,596.5                     | 34.1            | 76.9            | -31.3                         | 0.00                          | 0.00                         | 0.00                        |
| 3,700.0                     | 4.95               | 66.08          | 3,696.1                     | 37.6            | 84.8            | -34.5                         | 0.00                          | 0.00                         | 0.00                        |
| 3,800.0                     | 4.95               | 66.08          | 3,795.8                     | 41.1            | 92.7            | -37.7                         | 0.00                          | 0.00                         | 0.00                        |
| 3,900.0                     | 4.95               | 66.08          | 3,895.4                     | 44.6            | 100.6           | -40.9                         | 0.00                          | 0.00                         | 0.00                        |
| 4,000.0                     | 4.95               | 66.08          | 3,995.0                     | 48.1            | 108.5           | -44.2                         | 0.00                          | 0.00                         | 0.00                        |
| 4,100.0                     | 4.95               | 66.08          | 4,094.7                     | 51.6            | 116.3           | -47.4                         | 0.00                          | 0.00                         | 0.00                        |
| 4,200.0                     | 4.95               | 66.08          | 4,194.3                     | 55.1            | 124.2           | -50.6                         | 0.00                          | 0.00                         | 0.00                        |
| 4,300.0                     | 4.95               | 66.08          | 4,293.9                     | 58.6            | 132.1           | -53.8                         | 0.00                          | 0.00                         | 0.00                        |
| 4,400.0                     | 4.95               | 66.08          | 4,393.5                     | 62.1            | 140.0           | -57.0                         | 0.00                          | 0.00                         | 0.00                        |
| 4,500.0                     | 4.95               | 66.08          | 4,493.2                     | 65.6            | 147.9           | -60.2                         | 0.00                          | 0.00                         | 0.00                        |
| 4,600.0                     | 4.95               | 66.08          | 4,592.8                     | 69.1            | 155.8           | -63.4                         | 0.00                          | 0.00                         | 0.00                        |
| 4,700.0                     | 4.95               | 66.08          | 4,692.4                     | 72.6            | 163.6           | -66.6                         | 0.00                          | 0.00                         | 0.00                        |
| 4,800.0                     | 4.95               | 66.08          | 4,792.1                     | 76.1            | 171.5           | -69.8                         | 0.00                          | 0.00                         | 0.00                        |
| 4,900.0                     | 4.95               | 66.08          | 4,891.7                     | 79.6            | 179.4           | -73.0                         | 0.00                          | 0.00                         | 0.00                        |

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**Wellbore:** OWB  
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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) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 5,000.0                               | 4.95            | 66.08       | 4,991.3               | 83.1         | 187.3        | -76.2                   | 0.00                    | 0.00                   | 0.00                  |
| 5,100.0                               | 4.95            | 66.08       | 5,090.9               | 86.6         | 195.2        | -79.4                   | 0.00                    | 0.00                   | 0.00                  |
| 5,200.0                               | 4.95            | 66.08       | 5,190.6               | 90.0         | 203.0        | -82.7                   | 0.00                    | 0.00                   | 0.00                  |
| 5,300.0                               | 4.95            | 66.08       | 5,290.2               | 93.5         | 210.9        | -85.9                   | 0.00                    | 0.00                   | 0.00                  |
| 5,400.0                               | 4.95            | 66.08       | 5,389.8               | 97.0         | 218.8        | -89.1                   | 0.00                    | 0.00                   | 0.00                  |
| 5,500.0                               | 4.95            | 66.08       | 5,489.4               | 100.5        | 226.7        | -92.3                   | 0.00                    | 0.00                   | 0.00                  |
| 5,600.0                               | 4.95            | 66.08       | 5,589.1               | 104.0        | 234.6        | -95.5                   | 0.00                    | 0.00                   | 0.00                  |
| 5,700.0                               | 4.95            | 66.08       | 5,688.7               | 107.5        | 242.4        | -98.7                   | 0.00                    | 0.00                   | 0.00                  |
| 5,800.0                               | 4.95            | 66.08       | 5,788.3               | 111.0        | 250.3        | -101.9                  | 0.00                    | 0.00                   | 0.00                  |
| 5,900.0                               | 4.95            | 66.08       | 5,888.0               | 114.5        | 258.2        | -105.1                  | 0.00                    | 0.00                   | 0.00                  |
| 6,000.0                               | 4.95            | 66.08       | 5,987.6               | 118.0        | 266.1        | -108.3                  | 0.00                    | 0.00                   | 0.00                  |
| 6,100.0                               | 4.95            | 66.08       | 6,087.2               | 121.5        | 274.0        | -111.5                  | 0.00                    | 0.00                   | 0.00                  |
| 6,200.0                               | 4.95            | 66.08       | 6,186.8               | 125.0        | 281.8        | -114.7                  | 0.00                    | 0.00                   | 0.00                  |
| 6,300.0                               | 4.95            | 66.08       | 6,286.5               | 128.5        | 289.7        | -117.9                  | 0.00                    | 0.00                   | 0.00                  |
| 6,400.0                               | 4.95            | 66.08       | 6,386.1               | 132.0        | 297.6        | -121.1                  | 0.00                    | 0.00                   | 0.00                  |
| 6,500.0                               | 4.95            | 66.08       | 6,485.7               | 135.5        | 305.5        | -124.4                  | 0.00                    | 0.00                   | 0.00                  |
| 6,600.0                               | 4.95            | 66.08       | 6,585.4               | 139.0        | 313.4        | -127.6                  | 0.00                    | 0.00                   | 0.00                  |
| 6,700.0                               | 4.95            | 66.08       | 6,685.0               | 142.5        | 321.2        | -130.8                  | 0.00                    | 0.00                   | 0.00                  |
| 6,800.0                               | 4.95            | 66.08       | 6,784.6               | 146.0        | 329.1        | -134.0                  | 0.00                    | 0.00                   | 0.00                  |
| 6,900.0                               | 4.95            | 66.08       | 6,884.2               | 149.5        | 337.0        | -137.2                  | 0.00                    | 0.00                   | 0.00                  |
| 7,000.0                               | 4.95            | 66.08       | 6,983.9               | 153.0        | 344.9        | -140.4                  | 0.00                    | 0.00                   | 0.00                  |
| 7,100.0                               | 4.95            | 66.08       | 7,083.5               | 156.5        | 352.8        | -143.6                  | 0.00                    | 0.00                   | 0.00                  |
| 7,200.0                               | 4.95            | 66.08       | 7,183.1               | 159.9        | 360.6        | -146.8                  | 0.00                    | 0.00                   | 0.00                  |
| 7,300.0                               | 4.95            | 66.08       | 7,282.7               | 163.4        | 368.5        | -150.0                  | 0.00                    | 0.00                   | 0.00                  |
| 7,400.0                               | 4.95            | 66.08       | 7,382.4               | 166.9        | 376.4        | -153.2                  | 0.00                    | 0.00                   | 0.00                  |
| 7,487.6                               | 4.95            | 66.08       | 7,469.6               | 170.0        | 383.3        | -156.0                  | 0.00                    | 0.00                   | 0.00                  |
| <b>KOP - DLS 10.00 TFO 114.14</b>     |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,500.0                               | 4.58            | 80.46       | 7,482.0               | 170.3        | 384.3        | -156.3                  | 10.00                   | -2.94                  | 115.50                |
| 7,550.0                               | 6.17            | 133.45      | 7,531.8               | 168.8        | 388.2        | -154.6                  | 10.00                   | 3.19                   | 105.99                |
| 7,600.0                               | 10.25           | 154.44      | 7,581.3               | 162.9        | 392.1        | -148.6                  | 10.00                   | 8.16                   | 41.97                 |
| 7,650.0                               | 14.90           | 163.05      | 7,630.1               | 152.7        | 395.9        | -138.3                  | 10.00                   | 9.30                   | 17.23                 |
| 7,700.0                               | 19.72           | 167.58      | 7,677.8               | 138.3        | 399.6        | -123.8                  | 10.00                   | 9.64                   | 9.06                  |
| 7,750.0                               | 24.61           | 170.38      | 7,724.1               | 119.8        | 403.1        | -105.2                  | 10.00                   | 9.78                   | 5.59                  |
| 7,800.0                               | 29.53           | 172.29      | 7,768.6               | 97.3         | 406.5        | -82.6                   | 10.00                   | 9.85                   | 3.83                  |
| 7,850.0                               | 34.48           | 173.70      | 7,811.0               | 71.0         | 409.7        | -56.2                   | 10.00                   | 9.89                   | 2.82                  |
| 7,900.0                               | 39.44           | 174.80      | 7,850.9               | 41.1         | 412.7        | -26.2                   | 10.00                   | 9.91                   | 2.19                  |
| 7,950.0                               | 44.40           | 175.68      | 7,888.1               | 7.9          | 415.5        | 7.2                     | 10.00                   | 9.93                   | 1.77                  |
| 8,000.0                               | 49.37           | 176.42      | 7,922.3               | -28.5        | 418.0        | 43.6                    | 10.00                   | 9.94                   | 1.48                  |
| 8,050.0                               | 54.35           | 177.06      | 7,953.2               | -67.8        | 420.2        | 82.9                    | 10.00                   | 9.95                   | 1.27                  |
| 8,100.0                               | 59.32           | 177.62      | 7,980.5               | -109.6       | 422.1        | 124.8                   | 10.00                   | 9.96                   | 1.12                  |
| 8,150.0                               | 64.30           | 178.13      | 8,004.1               | -153.6       | 423.8        | 168.8                   | 10.00                   | 9.96                   | 1.01                  |
| 8,200.0                               | 69.29           | 178.59      | 8,023.8               | -199.5       | 425.1        | 214.8                   | 10.00                   | 9.96                   | 0.93                  |
| 8,250.0                               | 74.27           | 179.03      | 8,039.5               | -247.0       | 426.1        | 262.2                   | 10.00                   | 9.97                   | 0.87                  |
| 8,300.0                               | 79.25           | 179.44      | 8,050.9               | -295.6       | 426.7        | 310.9                   | 10.00                   | 9.97                   | 0.83                  |
| 8,350.0                               | 84.24           | 179.84      | 8,058.1               | -345.1       | 427.0        | 360.3                   | 10.00                   | 9.97                   | 0.80                  |
| 8,400.0                               | 89.22           | 180.24      | 8,060.9               | -395.0       | 427.0        | 410.2                   | 10.00                   | 9.97                   | 0.79                  |
| 8,409.5                               | 90.17           | 180.31      | 8,061.0               | -404.5       | 426.9        | 419.7                   | 10.00                   | 9.97                   | 0.79                  |
| <b>EOC - 9898.3 hold at 8409.5 MD</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 8,500.0                               | 90.17           | 180.31      | 8,060.7               | -495.0       | 426.4        | 510.1                   | 0.00                    | 0.00                   | 0.00                  |
| 8,600.0                               | 90.17           | 180.31      | 8,060.4               | -595.0       | 425.9        | 610.0                   | 0.00                    | 0.00                   | 0.00                  |
| 8,700.0                               | 90.17           | 180.31      | 8,060.1               | -695.0       | 425.4        | 709.9                   | 0.00                    | 0.00                   | 0.00                  |
| 8,800.0                               | 90.17           | 180.31      | 8,059.8               | -795.0       | 424.8        | 809.8                   | 0.00                    | 0.00                   | 0.00                  |
| 8,900.0                               | 90.17           | 180.31      | 8,059.5               | -895.0       | 424.3        | 909.8                   | 0.00                    | 0.00                   | 0.00                  |
| 9,000.0                               | 90.17           | 180.31      | 8,059.3               | -995.0       | 423.7        | 1,009.7                 | 0.00                    | 0.00                   | 0.00                  |

**Database:** EDM 5000.15 Single User Db  
**Company:** Concho Resources, Inc.  
**Project:** Eddy County (NAD27 NME)  
**Site:** (SRO 4 State Com) Sec-4\_T-26-S\_R-28-E  
**Well:** SRO 4 State Com #501H  
**Wellbore:** OWB  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well SRO 4 State Com #501H  
**TVD Reference:** KB @ 3020.7usft (Precision 106)  
**MD Reference:** KB @ 3020.7usft (Precision 106)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 9,100.0               | 90.17           | 180.31      | 8,059.0               | -1,095.0     | 423.2        | 1,109.6                 | 0.00                    | 0.00                   | 0.00                  |
| 9,200.0               | 90.17           | 180.31      | 8,058.7               | -1,195.0     | 422.6        | 1,209.5                 | 0.00                    | 0.00                   | 0.00                  |
| 9,300.0               | 90.17           | 180.31      | 8,058.4               | -1,295.0     | 422.1        | 1,309.4                 | 0.00                    | 0.00                   | 0.00                  |
| 9,400.0               | 90.17           | 180.31      | 8,058.1               | -1,395.0     | 421.5        | 1,409.3                 | 0.00                    | 0.00                   | 0.00                  |
| 9,500.0               | 90.17           | 180.31      | 8,057.8               | -1,495.0     | 421.0        | 1,509.2                 | 0.00                    | 0.00                   | 0.00                  |
| 9,600.0               | 90.17           | 180.31      | 8,057.5               | -1,595.0     | 420.4        | 1,609.1                 | 0.00                    | 0.00                   | 0.00                  |
| 9,700.0               | 90.17           | 180.31      | 8,057.2               | -1,695.0     | 419.9        | 1,709.1                 | 0.00                    | 0.00                   | 0.00                  |
| 9,800.0               | 90.17           | 180.31      | 8,056.9               | -1,795.0     | 419.3        | 1,809.0                 | 0.00                    | 0.00                   | 0.00                  |
| 9,900.0               | 90.17           | 180.31      | 8,056.6               | -1,895.0     | 418.8        | 1,908.9                 | 0.00                    | 0.00                   | 0.00                  |
| 10,000.0              | 90.17           | 180.31      | 8,056.3               | -1,995.0     | 418.2        | 2,008.8                 | 0.00                    | 0.00                   | 0.00                  |
| 10,100.0              | 90.17           | 180.31      | 8,056.0               | -2,095.0     | 417.7        | 2,108.7                 | 0.00                    | 0.00                   | 0.00                  |
| 10,200.0              | 90.17           | 180.31      | 8,055.7               | -2,195.0     | 417.1        | 2,208.6                 | 0.00                    | 0.00                   | 0.00                  |
| 10,300.0              | 90.17           | 180.31      | 8,055.4               | -2,295.0     | 416.6        | 2,308.5                 | 0.00                    | 0.00                   | 0.00                  |
| 10,400.0              | 90.17           | 180.31      | 8,055.2               | -2,395.0     | 416.0        | 2,408.4                 | 0.00                    | 0.00                   | 0.00                  |
| 10,500.0              | 90.17           | 180.31      | 8,054.9               | -2,495.0     | 415.5        | 2,508.4                 | 0.00                    | 0.00                   | 0.00                  |
| 10,600.0              | 90.17           | 180.31      | 8,054.6               | -2,595.0     | 414.9        | 2,608.3                 | 0.00                    | 0.00                   | 0.00                  |
| 10,700.0              | 90.17           | 180.31      | 8,054.3               | -2,695.0     | 414.4        | 2,708.2                 | 0.00                    | 0.00                   | 0.00                  |
| 10,800.0              | 90.17           | 180.31      | 8,054.0               | -2,795.0     | 413.8        | 2,808.1                 | 0.00                    | 0.00                   | 0.00                  |
| 10,900.0              | 90.17           | 180.31      | 8,053.7               | -2,895.0     | 413.3        | 2,908.0                 | 0.00                    | 0.00                   | 0.00                  |
| 11,000.0              | 90.17           | 180.31      | 8,053.4               | -2,995.0     | 412.7        | 3,007.9                 | 0.00                    | 0.00                   | 0.00                  |
| 11,100.0              | 90.17           | 180.31      | 8,053.1               | -3,095.0     | 412.2        | 3,107.8                 | 0.00                    | 0.00                   | 0.00                  |
| 11,200.0              | 90.17           | 180.31      | 8,052.8               | -3,195.0     | 411.6        | 3,207.8                 | 0.00                    | 0.00                   | 0.00                  |
| 11,300.0              | 90.17           | 180.31      | 8,052.5               | -3,295.0     | 411.1        | 3,307.7                 | 0.00                    | 0.00                   | 0.00                  |
| 11,400.0              | 90.17           | 180.31      | 8,052.2               | -3,395.0     | 410.5        | 3,407.6                 | 0.00                    | 0.00                   | 0.00                  |
| 11,500.0              | 90.17           | 180.31      | 8,051.9               | -3,495.0     | 410.0        | 3,507.5                 | 0.00                    | 0.00                   | 0.00                  |
| 11,600.0              | 90.17           | 180.31      | 8,051.6               | -3,595.0     | 409.4        | 3,607.4                 | 0.00                    | 0.00                   | 0.00                  |
| 11,700.0              | 90.17           | 180.31      | 8,051.3               | -3,695.0     | 408.9        | 3,707.3                 | 0.00                    | 0.00                   | 0.00                  |
| 11,800.0              | 90.17           | 180.31      | 8,051.1               | -3,795.0     | 408.3        | 3,807.2                 | 0.00                    | 0.00                   | 0.00                  |
| 11,900.0              | 90.17           | 180.31      | 8,050.8               | -3,894.9     | 407.8        | 3,907.1                 | 0.00                    | 0.00                   | 0.00                  |
| 12,000.0              | 90.17           | 180.31      | 8,050.5               | -3,994.9     | 407.2        | 4,007.1                 | 0.00                    | 0.00                   | 0.00                  |
| 12,100.0              | 90.17           | 180.31      | 8,050.2               | -4,094.9     | 406.7        | 4,107.0                 | 0.00                    | 0.00                   | 0.00                  |
| 12,200.0              | 90.17           | 180.31      | 8,049.9               | -4,194.9     | 406.1        | 4,206.9                 | 0.00                    | 0.00                   | 0.00                  |
| 12,300.0              | 90.17           | 180.31      | 8,049.6               | -4,294.9     | 405.6        | 4,306.8                 | 0.00                    | 0.00                   | 0.00                  |
| 12,400.0              | 90.17           | 180.31      | 8,049.3               | -4,394.9     | 405.0        | 4,406.7                 | 0.00                    | 0.00                   | 0.00                  |
| 12,500.0              | 90.17           | 180.31      | 8,049.0               | -4,494.9     | 404.5        | 4,506.6                 | 0.00                    | 0.00                   | 0.00                  |
| 12,600.0              | 90.17           | 180.31      | 8,048.7               | -4,594.9     | 403.9        | 4,606.5                 | 0.00                    | 0.00                   | 0.00                  |
| 12,700.0              | 90.17           | 180.31      | 8,048.4               | -4,694.9     | 403.4        | 4,706.4                 | 0.00                    | 0.00                   | 0.00                  |
| 12,800.0              | 90.17           | 180.31      | 8,048.1               | -4,794.9     | 402.8        | 4,806.4                 | 0.00                    | 0.00                   | 0.00                  |
| 12,900.0              | 90.17           | 180.31      | 8,047.8               | -4,894.9     | 402.3        | 4,906.3                 | 0.00                    | 0.00                   | 0.00                  |
| 13,000.0              | 90.17           | 180.31      | 8,047.5               | -4,994.9     | 401.7        | 5,006.2                 | 0.00                    | 0.00                   | 0.00                  |
| 13,100.0              | 90.17           | 180.31      | 8,047.2               | -5,094.9     | 401.2        | 5,106.1                 | 0.00                    | 0.00                   | 0.00                  |
| 13,200.0              | 90.17           | 180.31      | 8,047.0               | -5,194.9     | 400.6        | 5,206.0                 | 0.00                    | 0.00                   | 0.00                  |
| 13,300.0              | 90.17           | 180.31      | 8,046.7               | -5,294.9     | 400.1        | 5,305.9                 | 0.00                    | 0.00                   | 0.00                  |
| 13,400.0              | 90.17           | 180.31      | 8,046.4               | -5,394.9     | 399.5        | 5,405.8                 | 0.00                    | 0.00                   | 0.00                  |
| 13,500.0              | 90.17           | 180.31      | 8,046.1               | -5,494.9     | 399.0        | 5,505.7                 | 0.00                    | 0.00                   | 0.00                  |
| 13,600.0              | 90.17           | 180.31      | 8,045.8               | -5,594.9     | 398.4        | 5,605.7                 | 0.00                    | 0.00                   | 0.00                  |
| 13,700.0              | 90.17           | 180.31      | 8,045.5               | -5,694.9     | 397.9        | 5,705.6                 | 0.00                    | 0.00                   | 0.00                  |
| 13,800.0              | 90.17           | 180.31      | 8,045.2               | -5,794.9     | 397.3        | 5,805.5                 | 0.00                    | 0.00                   | 0.00                  |
| 13,900.0              | 90.17           | 180.31      | 8,044.9               | -5,894.9     | 396.8        | 5,905.4                 | 0.00                    | 0.00                   | 0.00                  |
| 14,000.0              | 90.17           | 180.31      | 8,044.6               | -5,994.9     | 396.3        | 6,005.3                 | 0.00                    | 0.00                   | 0.00                  |
| 14,100.0              | 90.17           | 180.31      | 8,044.3               | -6,094.9     | 395.7        | 6,105.2                 | 0.00                    | 0.00                   | 0.00                  |
| 14,200.0              | 90.17           | 180.31      | 8,044.0               | -6,194.9     | 395.2        | 6,205.1                 | 0.00                    | 0.00                   | 0.00                  |
| 14,300.0              | 90.17           | 180.31      | 8,043.7               | -6,294.9     | 394.6        | 6,305.1                 | 0.00                    | 0.00                   | 0.00                  |
| 14,400.0              | 90.17           | 180.31      | 8,043.4               | -6,394.9     | 394.1        | 6,405.0                 | 0.00                    | 0.00                   | 0.00                  |



**Intrepid**  
Planning Report



**Database:** EDM 5000.15 Single User Db  
**Company:** Concho Resources, Inc.  
**Project:** Eddy County (NAD27 NME)  
**Site:** (SRO 4 State Com) Sec-4\_T-26-S\_R-28-E  
**Well:** SRO 4 State Com #501H  
**Wellbore:** OWB  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well SRO 4 State Com #501H  
**TVD Reference:** KB @ 3020.7usft (Precision 106)  
**MD Reference:** KB @ 3020.7usft (Precision 106)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 14,500.0              | 90.17           | 180.31      | 8,043.1               | -6,494.9     | 393.5        | 6,504.9                 | 0.00                    | 0.00                   | 0.00                  |
| 14,600.0              | 90.17           | 180.31      | 8,042.9               | -6,594.9     | 393.0        | 6,604.8                 | 0.00                    | 0.00                   | 0.00                  |
| 14,700.0              | 90.17           | 180.31      | 8,042.6               | -6,694.9     | 392.4        | 6,704.7                 | 0.00                    | 0.00                   | 0.00                  |
| 14,800.0              | 90.17           | 180.31      | 8,042.3               | -6,794.9     | 391.9        | 6,804.6                 | 0.00                    | 0.00                   | 0.00                  |
| 14,900.0              | 90.17           | 180.31      | 8,042.0               | -6,894.9     | 391.3        | 6,904.5                 | 0.00                    | 0.00                   | 0.00                  |
| 15,000.0              | 90.17           | 180.31      | 8,041.7               | -6,994.9     | 390.8        | 7,004.4                 | 0.00                    | 0.00                   | 0.00                  |
| 15,100.0              | 90.17           | 180.31      | 8,041.4               | -7,094.9     | 390.2        | 7,104.4                 | 0.00                    | 0.00                   | 0.00                  |
| 15,200.0              | 90.17           | 180.31      | 8,041.1               | -7,194.9     | 389.7        | 7,204.3                 | 0.00                    | 0.00                   | 0.00                  |
| 15,300.0              | 90.17           | 180.31      | 8,040.8               | -7,294.9     | 389.1        | 7,304.2                 | 0.00                    | 0.00                   | 0.00                  |
| 15,400.0              | 90.17           | 180.31      | 8,040.5               | -7,394.9     | 388.6        | 7,404.1                 | 0.00                    | 0.00                   | 0.00                  |
| 15,500.0              | 90.17           | 180.31      | 8,040.2               | -7,494.9     | 388.0        | 7,504.0                 | 0.00                    | 0.00                   | 0.00                  |
| 15,600.0              | 90.17           | 180.31      | 8,039.9               | -7,594.9     | 387.5        | 7,603.9                 | 0.00                    | 0.00                   | 0.00                  |
| 15,700.0              | 90.17           | 180.31      | 8,039.6               | -7,694.9     | 386.9        | 7,703.8                 | 0.00                    | 0.00                   | 0.00                  |
| 15,800.0              | 90.17           | 180.31      | 8,039.3               | -7,794.9     | 386.4        | 7,803.7                 | 0.00                    | 0.00                   | 0.00                  |
| 15,900.0              | 90.17           | 180.31      | 8,039.0               | -7,894.9     | 385.8        | 7,903.7                 | 0.00                    | 0.00                   | 0.00                  |
| 16,000.0              | 90.17           | 180.31      | 8,038.8               | -7,994.9     | 385.3        | 8,003.6                 | 0.00                    | 0.00                   | 0.00                  |
| 16,100.0              | 90.17           | 180.31      | 8,038.5               | -8,094.9     | 384.7        | 8,103.5                 | 0.00                    | 0.00                   | 0.00                  |
| 16,200.0              | 90.17           | 180.31      | 8,038.2               | -8,194.9     | 384.2        | 8,203.4                 | 0.00                    | 0.00                   | 0.00                  |
| 16,300.0              | 90.17           | 180.31      | 8,037.9               | -8,294.9     | 383.6        | 8,303.3                 | 0.00                    | 0.00                   | 0.00                  |
| 16,400.0              | 90.17           | 180.31      | 8,037.6               | -8,394.9     | 383.1        | 8,403.2                 | 0.00                    | 0.00                   | 0.00                  |
| 16,500.0              | 90.17           | 180.31      | 8,037.3               | -8,494.9     | 382.5        | 8,503.1                 | 0.00                    | 0.00                   | 0.00                  |
| 16,600.0              | 90.17           | 180.31      | 8,037.0               | -8,594.9     | 382.0        | 8,603.0                 | 0.00                    | 0.00                   | 0.00                  |
| 16,700.0              | 90.17           | 180.31      | 8,036.7               | -8,694.9     | 381.4        | 8,703.0                 | 0.00                    | 0.00                   | 0.00                  |
| 16,800.0              | 90.17           | 180.31      | 8,036.4               | -8,794.9     | 380.9        | 8,802.9                 | 0.00                    | 0.00                   | 0.00                  |
| 16,900.0              | 90.17           | 180.31      | 8,036.1               | -8,894.9     | 380.3        | 8,902.8                 | 0.00                    | 0.00                   | 0.00                  |
| 17,000.0              | 90.17           | 180.31      | 8,035.8               | -8,994.9     | 379.8        | 9,002.7                 | 0.00                    | 0.00                   | 0.00                  |
| 17,100.0              | 90.17           | 180.31      | 8,035.5               | -9,094.8     | 379.2        | 9,102.6                 | 0.00                    | 0.00                   | 0.00                  |
| 17,200.0              | 90.17           | 180.31      | 8,035.2               | -9,194.8     | 378.7        | 9,202.5                 | 0.00                    | 0.00                   | 0.00                  |
| 17,300.0              | 90.17           | 180.31      | 8,035.0               | -9,294.8     | 378.1        | 9,302.4                 | 0.00                    | 0.00                   | 0.00                  |
| 17,400.0              | 90.17           | 180.31      | 8,034.7               | -9,394.8     | 377.6        | 9,402.4                 | 0.00                    | 0.00                   | 0.00                  |
| 17,500.0              | 90.17           | 180.31      | 8,034.4               | -9,494.8     | 377.0        | 9,502.3                 | 0.00                    | 0.00                   | 0.00                  |
| 17,600.0              | 90.17           | 180.31      | 8,034.1               | -9,594.8     | 376.5        | 9,602.2                 | 0.00                    | 0.00                   | 0.00                  |
| 17,700.0              | 90.17           | 180.31      | 8,033.8               | -9,694.8     | 375.9        | 9,702.1                 | 0.00                    | 0.00                   | 0.00                  |
| 17,800.0              | 90.17           | 180.31      | 8,033.5               | -9,794.8     | 375.4        | 9,802.0                 | 0.00                    | 0.00                   | 0.00                  |
| 17,900.0              | 90.17           | 180.31      | 8,033.2               | -9,894.8     | 374.8        | 9,901.9                 | 0.00                    | 0.00                   | 0.00                  |
| 18,000.0              | 90.17           | 180.31      | 8,032.9               | -9,994.8     | 374.3        | 10,001.8                | 0.00                    | 0.00                   | 0.00                  |
| 18,100.0              | 90.17           | 180.31      | 8,032.6               | -10,094.8    | 373.7        | 10,101.7                | 0.00                    | 0.00                   | 0.00                  |
| 18,200.0              | 90.17           | 180.31      | 8,032.3               | -10,194.8    | 373.2        | 10,201.7                | 0.00                    | 0.00                   | 0.00                  |
| 18,307.8              | 90.17           | 180.31      | 8,032.0               | -10,302.6    | 372.6        | 10,309.3                | 0.00                    | 0.00                   | 0.00                  |

TD at 18307.8

**Database:** EDM 5000.15 Single User Db  
**Company:** Concho Resources, Inc.  
**Project:** Eddy County (NAD27 NME)  
**Site:** (SRO 4 State Com) Sec-4\_T-26-S\_R-28-E  
**Well:** SRO 4 State Com #501H  
**Wellbore:** OWB  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well SRO 4 State Com #501H  
**TVD Reference:** KB @ 3020.7usft (Precision 106)  
**MD Reference:** KB @ 3020.7usft (Precision 106)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

**Design Targets**
**Target Name**

| - hit/miss target<br>- Shape                                                                                                 | Dip Angle<br>(°) | Dip Dir.<br>(°) | TVD<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Northing<br>(usft) | Easting<br>(usft) | Latitude        | Longitude        |
|------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------|---------------|-----------------|-----------------|--------------------|-------------------|-----------------|------------------|
| PBHL (SRO 4 State C<br>- plan hits target center<br>- Rectangle (sides W60.0 H10,427.0 D20.0)                                | -0.17            | 180.31          | 8,032.0       | -10,302.6       | 372.6           | 381,947.20         | 573,762.30        | 32° 2' 59.511 N | 104° 5' 42.928 W |
| LTP (SRO 4 State Co<br>- plan misses target center by 0.1usft at 18257.8usft MD (8032.1 TVD, -10252.6 N, 372.9 E)<br>- Point | 0.00             | 0.00            | 8,032.0       | -10,252.6       | 372.9           | 381,997.20         | 573,762.60        | 32° 3' 0.006 N  | 104° 5' 42.923 W |
| FTP (SRO 4 State Co<br>- plan misses target center by 205.0usft at 7984.6usft MD (7912.1 TVD, -17.0 N, 417.2 E)<br>- Point   | 0.00             | 0.00            | 8,061.0       | 123.5           | 428.5           | 392,373.30         | 573,818.20        | 32° 4' 42.693 N | 104° 5' 42.011 W |

**Formations**

| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Name                | Lithology | Dip<br>(°) | Dip<br>Direction<br>(°) |
|-----------------------------|-----------------------------|---------------------|-----------|------------|-------------------------|
| 669.0                       | 669.0                       | Rustler             |           |            |                         |
| 840.0                       | 840.0                       | TOS                 |           |            |                         |
| 2,247.0                     | 2,247.0                     | BOS (Fletcher)      |           |            |                         |
| 2,439.0                     | 2,439.0                     | LMAR (Top Delaware) |           |            |                         |
| 2,478.0                     | 2,478.0                     | BLCN                |           |            |                         |
| 3,352.6                     | 3,350.0                     | CYCN                |           |            |                         |
| 4,561.1                     | 4,554.0                     | BYCN                |           |            |                         |
| 6,130.9                     | 6,118.0                     | Bone Sprg (BSGL)    |           |            |                         |
| 6,464.1                     | 6,450.0                     | U Avalon Sh         |           |            |                         |
| 6,679.9                     | 6,665.0                     | L Avalon Sh         |           |            |                         |
| 6,860.6                     | 6,845.0                     | B Avalon Sh         |           |            |                         |
| 7,065.4                     | 7,049.0                     | FBSG_sand           |           |            |                         |
| 7,747.7                     | 7,722.0                     | SBSG_sand           |           |            |                         |

**Plan Annotations**

| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 | Comment                        |
|-----------------------------|-----------------------------|-------------------|-----------------|--------------------------------|
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) |                                |
| 2,500.0                     | 2,500.0                     | 0.0               | 0.0             | NUDGE - DLS 2.00 TFO 66.08     |
| 2,747.3                     | 2,747.0                     | 4.3               | 9.7             | HOLD - 4740.3 at 2747.3 MD     |
| 7,487.6                     | 7,469.6                     | 170.0             | 383.3           | KOP - DLS 10.00 TFO 114.14     |
| 8,409.5                     | 8,061.0                     | -404.5            | 426.9           | EOC - 9898.3 hold at 8409.5 MD |
| 18,307.8                    | 8,032.0                     | -10,302.6         | 372.6           | TD at 18307.8                  |

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit Original  
to Appropriate  
District Office

### GAS CAPTURE PLAN

Date: 12/10/2018

☒ Original

Operator & OGRID No.: COG Operating LLC, OGRID 229137

☐ Amended - Reason for Amendment: \_\_\_\_\_

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

*Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).*

#### Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

| Well Name            | API     | Well Location (ULSTR) | Footages             | Expected MCF/D | Flared or Vented | Comments                      |
|----------------------|---------|-----------------------|----------------------|----------------|------------------|-------------------------------|
| SRO 4 State Com 501H | 30-015- | D-4-26S-28E           | 223' FNL & 1220' FWL | 2,270 MCF      |                  | Gas will connect on well pad. |
|                      |         |                       |                      |                |                  |                               |

#### Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to ETC. and will be connected to Red Bluff low/high pressure gathering system located in Culberson, County, Texas. It will require 0' to an undetermined amount of feet of pipeline to connect the facility to low/high pressure gathering system. COG Operating LLC provides (periodically) to ETC. a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, COG Operating LLC and ETC. have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Red Bluff Processing Plant located in Sec 35-Blk 57, T2 Culberson, County, Texas. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

#### Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Gas Transporter system at that time. Based on current information, it is Operator's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

#### Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines



## **SRO 4 State Com #501H**

### **Casing and Cement**

| <u>String</u>  | <u>Hole Size</u> | <u>Csg OD</u> | <u>PPF</u> | <u>Depth</u> | <u>Sx Cement</u> | <u>TOC</u> |
|----------------|------------------|---------------|------------|--------------|------------------|------------|
| Surface        | 17-1/2"          | 13-3/8"       | 54.5#      | 700'         | 500              | 0'         |
| Intermediate 2 | 12-1/4"          | 9-5/8"        | 40#        | 2,450'       | 900              | 0'         |
| Production     | 8-3/4"           | 5-1/2"        | 17#        | 18,308'      | 3,300            | 2,000'     |

### **Well Plan**

Drill 17-1/2" hole to 700' into the Rustler. Run 13-3/8" 54.5# J55 STC casing to TD and cement to surface in one stage. Will set in Rustler and cover water depth.

Drill 12-1/4" hole to ~2,450' with Brine. Run 9-5/8" 40# J-55 casing to TD and cement to surface in one stage.

Drill 8-3/4" vertical hole, curve & lateral to 18,308' with Cut Brine. Run 5-1/2" 17# P110 BTC casing to TD and cement to 2,000' in one stage.

### **Well Control**

After setting 13-3/8" casing and installing 3000 psi casing head, NU 13-5/8" Cameron BOP. Test annular and casing to 1500 psi and other BOP equipment to 3000 psi.

After setting 9-5/8" casing and installing 3000 psi casing spool, NU 13-5/8" Cameron BOP. Test annular to 1500 psi and other BOP equipment to 3000 psi.



Concho Resources, Inc.  
Project: Eddy County (NAD27 NME)  
Site: (SRO 4 State Com) Sec 4, T-28-S, R-28-E  
Well: SRO 4 State Com #501H  
Wellbore: OWS  
Design: Plan #1  
Lat: 32° 4' 41.480 N  
Long: 104° 5' 48.994 W  
Pad CL: 2959.7  
KB: KB @ 3020.7usft (Precision 100)

