

Intent ☒ As Drilled ☐

API #  
**30-015-45379**

|                                                                   |                                        |                            |
|-------------------------------------------------------------------|----------------------------------------|----------------------------|
| Operator Name:<br><b>DEVON ENERGY PRODUCTION<br/>COMPANY, LP.</b> | Property Name:<br><b>TODD 36 STATE</b> | Well Number<br><b>231H</b> |
|-------------------------------------------------------------------|----------------------------------------|----------------------------|

Kick Off Point (KOP)

|                         |               |                 |              |     |                            |                 |              |                 |                |
|-------------------------|---------------|-----------------|--------------|-----|----------------------------|-----------------|--------------|-----------------|----------------|
| UL<br>M                 | Section<br>36 | Township<br>23S | Range<br>31E | Lot | Feet<br>50                 | From N/S<br>FSL | Feet<br>1240 | From E/W<br>FWL | County<br>EDDY |
| Latitude<br>32.25381200 |               |                 |              |     | Longitude<br>-103.73605400 |                 |              |                 | NAD<br>83      |

First Take Point (FTP)

|                        |               |                |             |     |                          |                   |              |                  |                |
|------------------------|---------------|----------------|-------------|-----|--------------------------|-------------------|--------------|------------------|----------------|
| UL<br>M                | Section<br>36 | Township<br>23 | Range<br>31 | Lot | Feet<br>100              | From N/S<br>SOUTH | Feet<br>1240 | From E/W<br>WEST | County<br>EDDY |
| Latitude<br>32.2539435 |               |                |             |     | Longitude<br>103.7360427 |                   |              |                  | NAD<br>83      |

Last Take Point (LTP)

|                        |               |                |             |     |                          |                   |              |                  |                |
|------------------------|---------------|----------------|-------------|-----|--------------------------|-------------------|--------------|------------------|----------------|
| UL<br>D                | Section<br>36 | Township<br>23 | Range<br>31 | Lot | Feet<br>100              | From N/S<br>NORTH | Feet<br>1240 | From E/W<br>WEST | County<br>EDDY |
| Latitude<br>32.2678987 |               |                |             |     | Longitude<br>103.7360381 |                   |              |                  | NAD<br>83      |

Is this well the defining well for the Horizontal Spacing Unit? ☒ YES

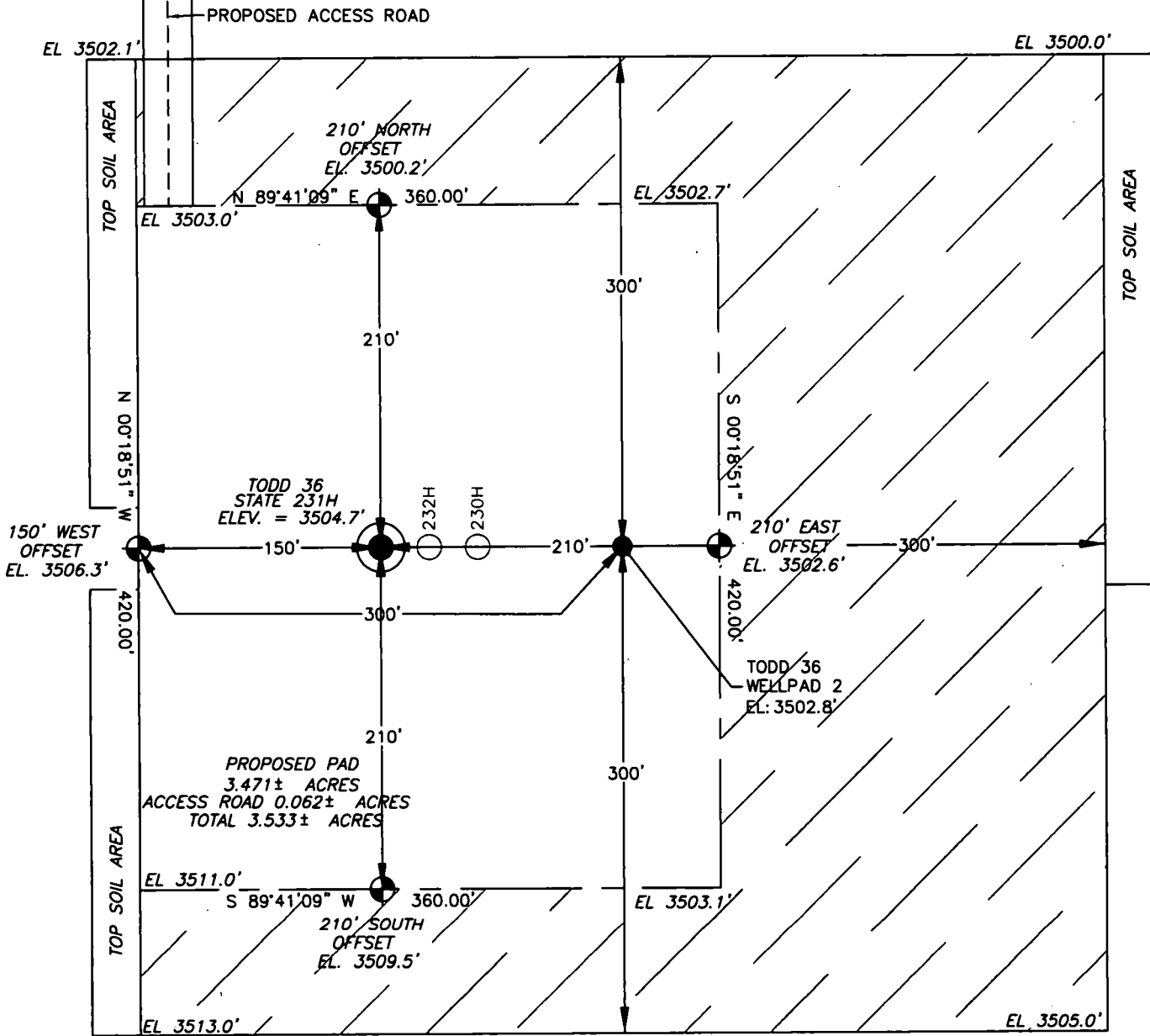
Is this well an infill well? ☐ NO

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

|                |                |             |
|----------------|----------------|-------------|
| API #          |                |             |
| Operator Name: | Property Name: | Well Number |
|                |                |             |

KZ 06/29/2018

SECTION 36, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
SITE MAP



Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

DEVON ENERGY PRODUCTION COMPANY, L.P.  
TODD 36 STATE 231H  
LOCATED 330 FT. FROM THE SOUTH LINE  
AND 1629 FT. FROM THE WEST LINE OF  
SECTION 36, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF NM-128 AND RED ROAD HEAD NORTH ON RED ROAD FOR 0.09 MILES. TURN RIGHT ONTO AN ACCESS ROAD AND HEAD NORTHEAST FOR 0.07 MILES TO THE POINT OF BEGINNING OF THE PROPOSED TODD 36 WELLPAD 1 ACCESS ROAD. LEAVE THE EXISTING ACCESS ROAD AND HEAD NORTH AND EAST ON THE PROPOSED TODD 36 WELLPAD 1 ACCESS ROAD FOR 0.19 MILES TO THE SAME EXISTING ACCESS ROAD AND THEN HEAD EAST FOR 0.18 MILES TO THE POINT OF BEGINNING OF THE PROPOSED TODD 36 WELLPAD 2 ACCESS ROAD. HEAD SOUTH ALONG THE PROPOSED TODD 36 WELLPAD 2 ACCESS ROAD FOR 200 FEET TO THE NORTHWEST CORNER OF THE TODD 36 WELLPAD 2.

HORIZON ROW LLC

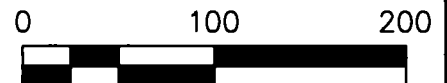
DEVON ENERGY PRODUCTION CO., L.P.

Drawn by:  
CHRIS MAAS

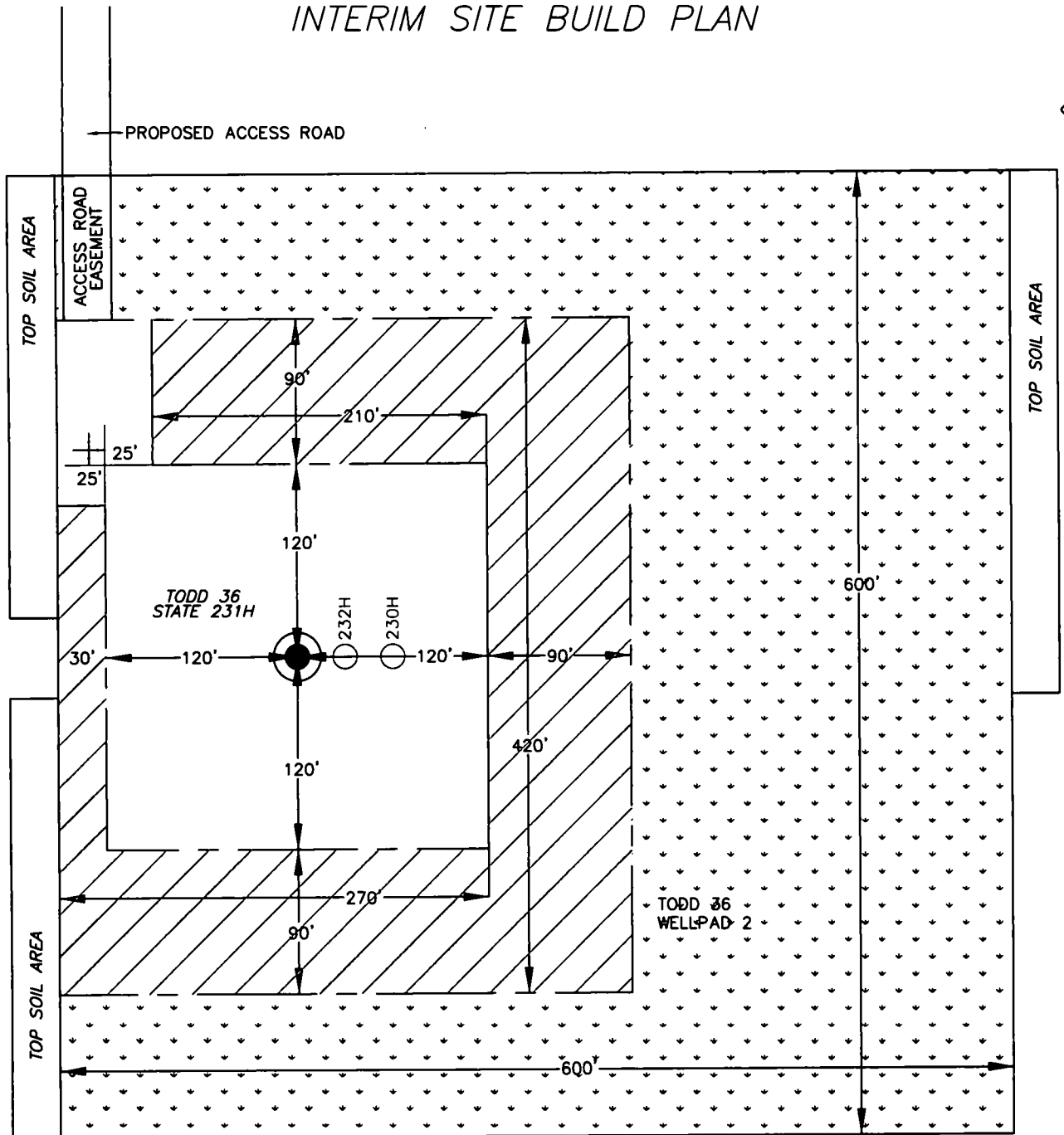
Date: 09/21/2018  
Rev. Date: 10/08/2018

Drawn for:

**devon**

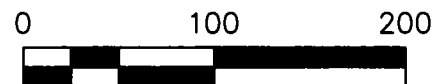


SECTION 36, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
INTERIM SITE BUILD PLAN



- DENOTES INTERIM PAD RECLAMATION AREA
- DENOTES GRADING SITE RECLAMATION AREA

2.008± ACRES INTERIM PAD RECLAMATION AREA  
4.730± ACRES GRADING SITE RECLAMATION AREA  
1.526± ACRES NON-RECLAIMED AREA  
8.264± ACRES GRADING SITE RECLAMATION AREA



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EDDY COUNTY, STATE OF NEW MEXICO

HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P.

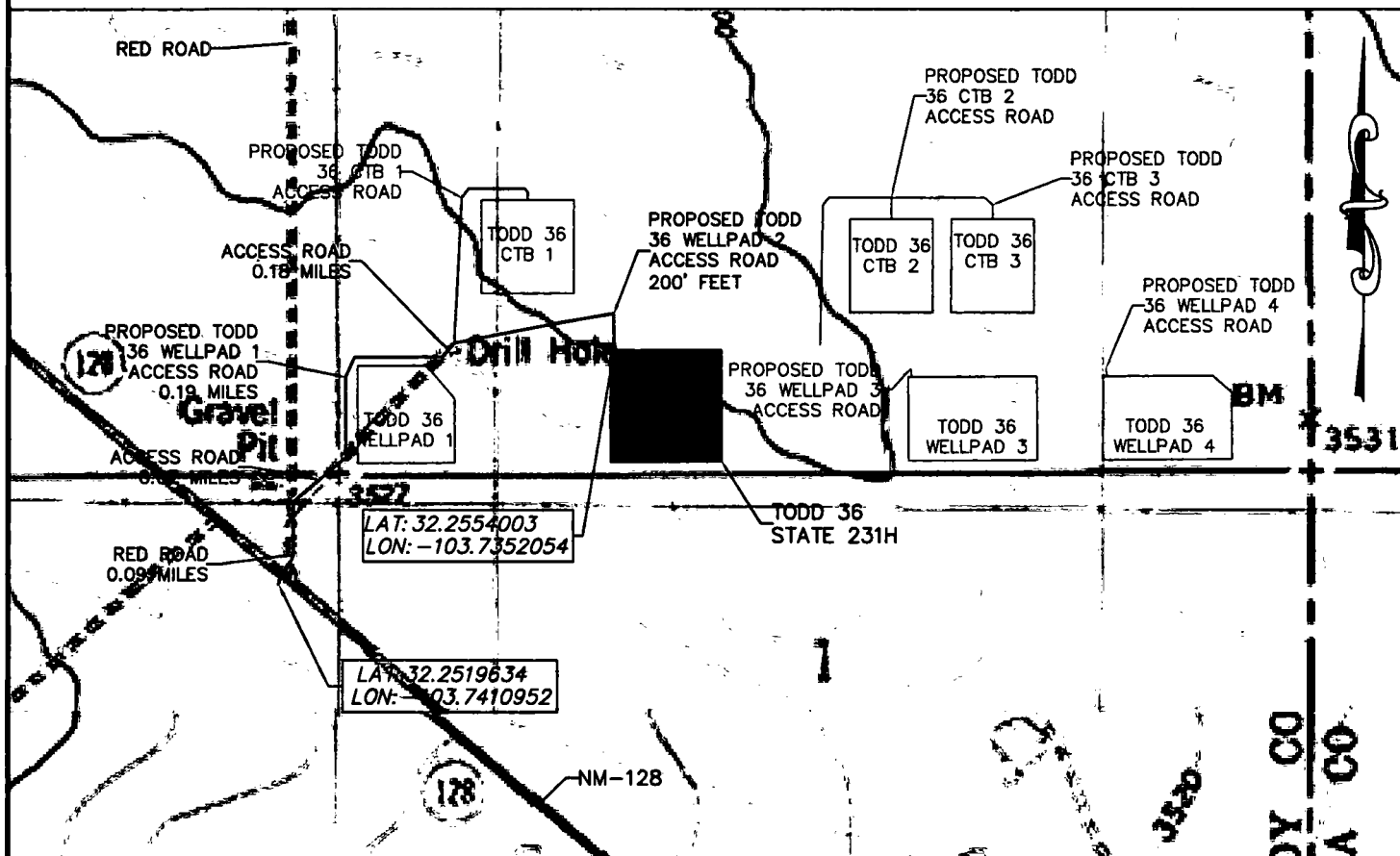
Drawn by:  
CHRIS MAAS

Date: 09/21/2018  
Rev. Date: 10/08/2018

Drawn for:

**devon**

SECTION 36, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
VICINITY MAP



DEVON ENERGY PRODUCTION COMPANY, L.P.  
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0 1000 2000



HORIZON ROW LLC

Drawn for:

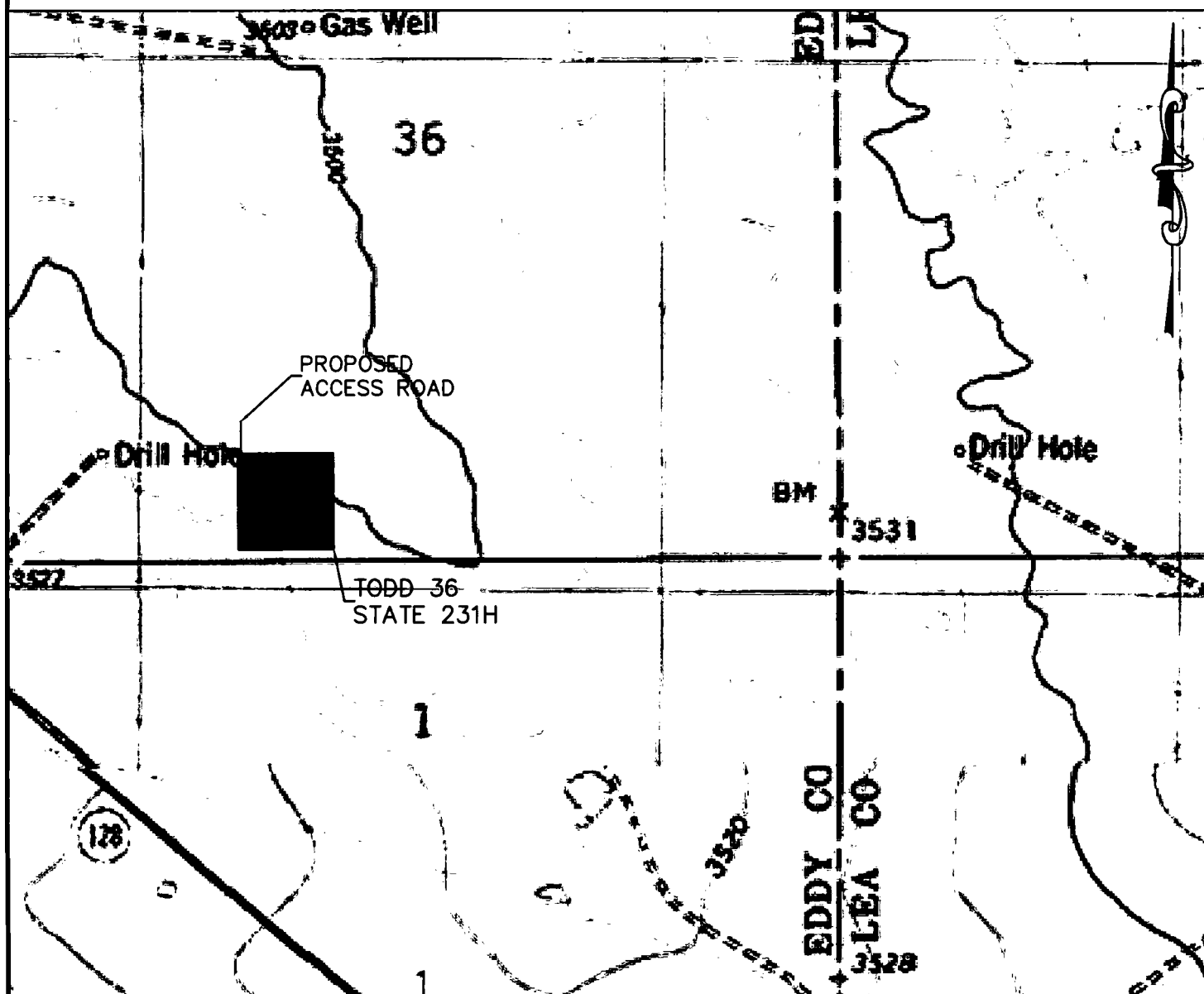
DEVON ENERGY PRODUCTION CO., L.P.

Drawn by:  
CHRIS MAAS

Date: 09/21/2018  
Rev. Date: 10/08/2018

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SECTION 36, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 LOCATION VERIFICATION MAP



DEVON ENERGY PRODUCTION COMPANY, L.P.  
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 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

0 1000 2000



HORIZON ROW LLC

Drawn for:

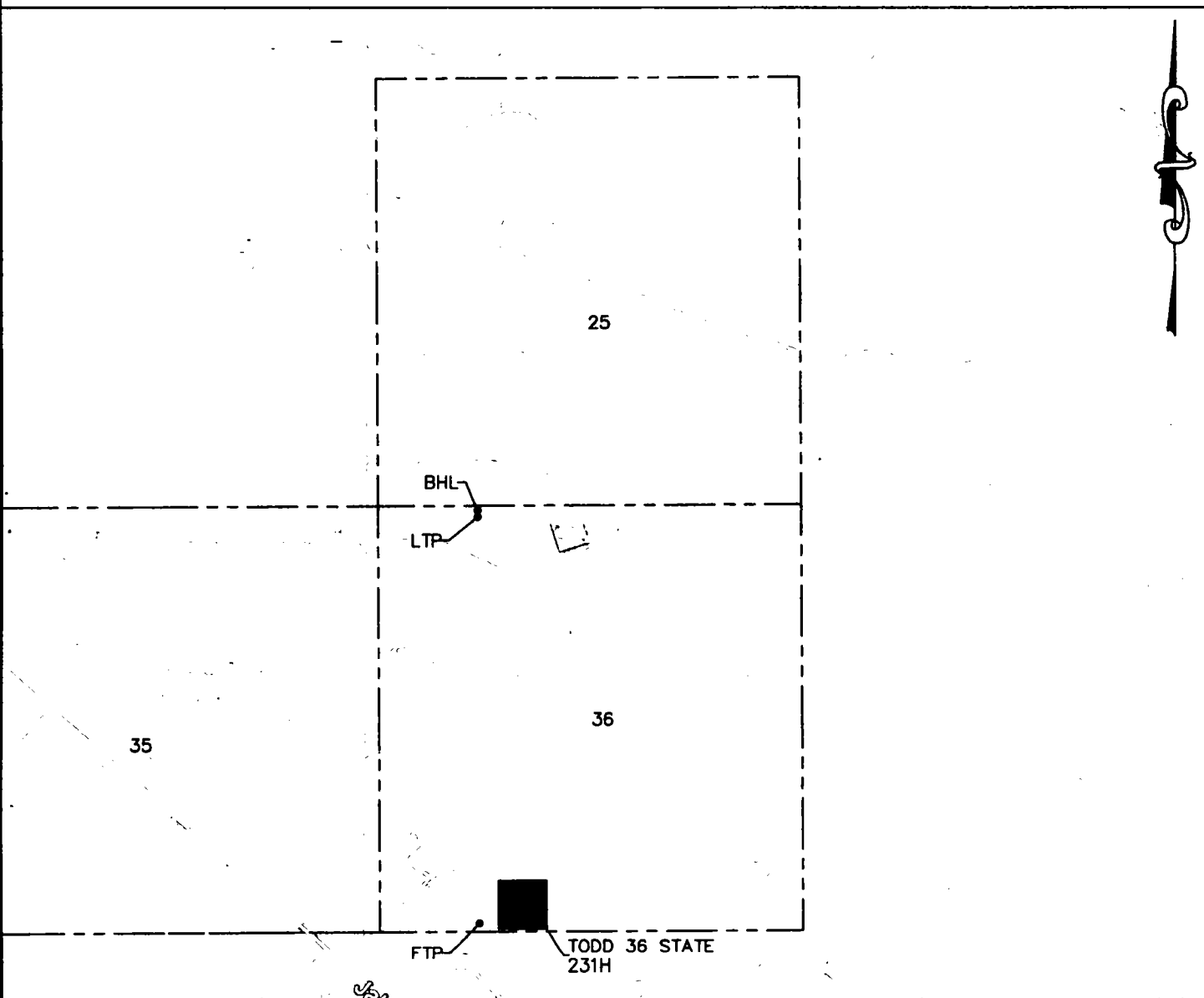
DEVON ENERGY PRODUCTION CO., L.P.

Drawn by:  
 CHRIS MAAS

Date: 09/21/2018  
 Rev. Date: 10/08/2018

**devon**

SECTION 36, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
AERIAL PHOTO



DEVON ENERGY PRODUCTION COMPANY, L.P.  
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EDDY COUNTY, STATE OF NEW MEXICO



HORIZON ROW LLC

Drawn for:

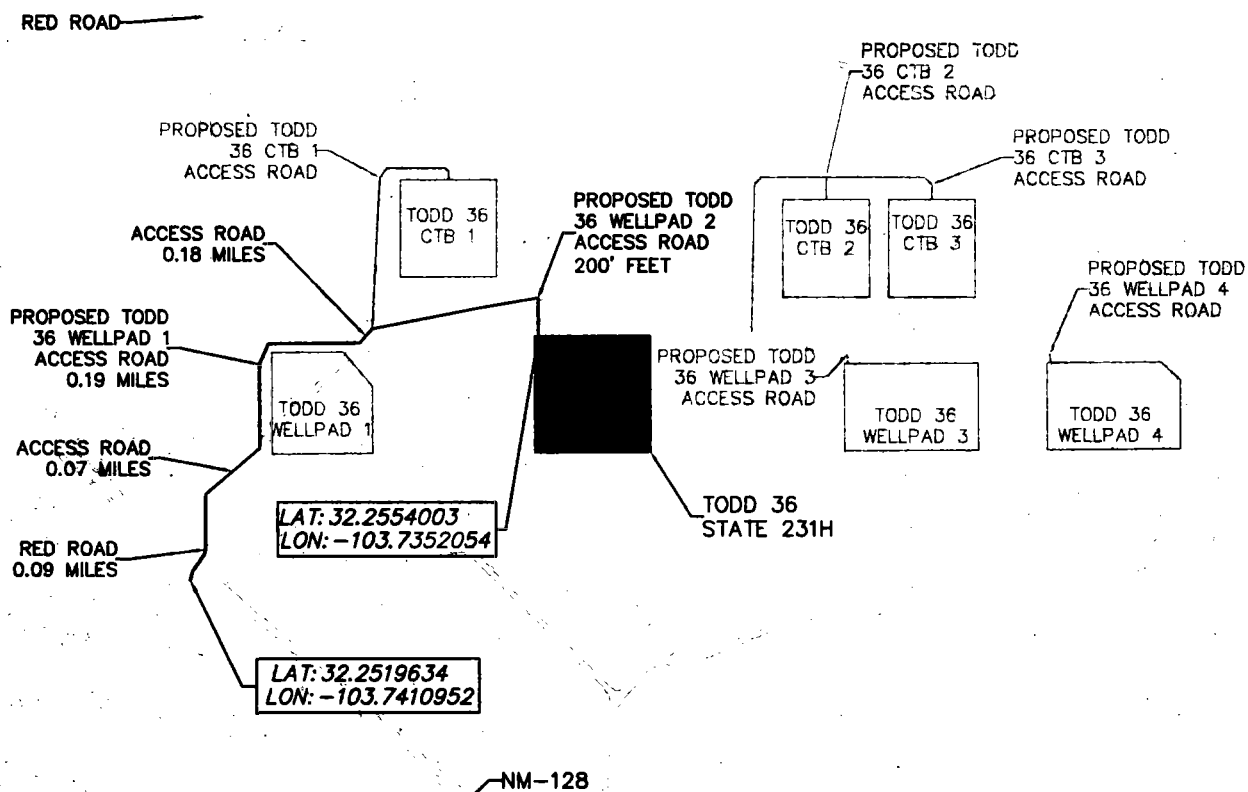
DEVON ENERGY PRODUCTION CO., L.P.

Drawn by:  
CHRIS MAAS

Date: 09/21/2018

**devon**

SECTION 36, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 AERIAL ACCESS ROUTE MAP



DEVON ENERGY PRODUCTION COMPANY, L.P.  
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 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

0 1000 2000



HORIZON ROW LLC

Drawn for:

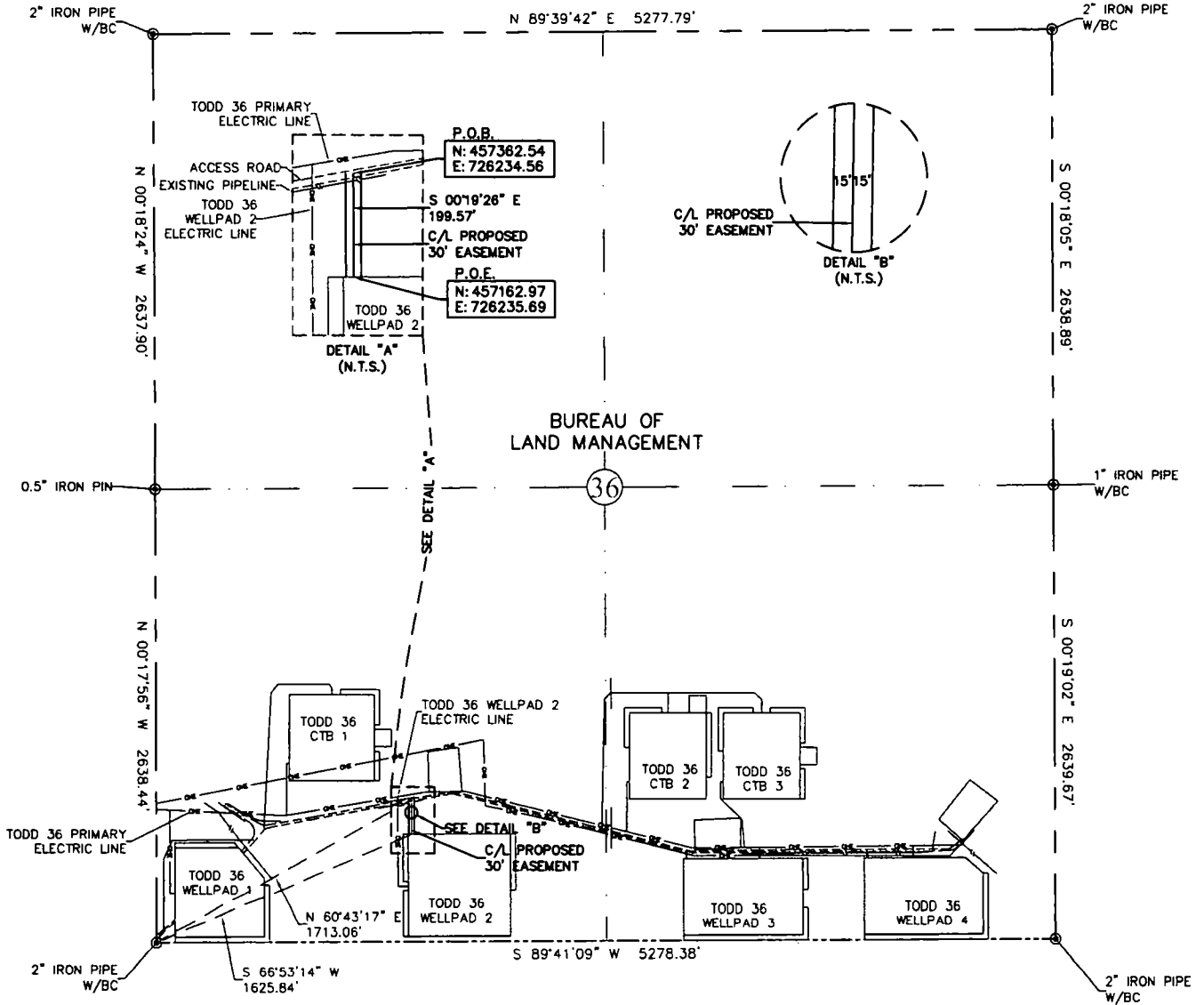
DEVON ENERGY PRODUCTION CO., L.P.

Drawn by:  
CHRIS MAAS

Date: 09/21/2018  
Rev. Date: 10/08/2018

devon

**EXHIBIT "A"**  
**ACCESS ROAD PLAT**  
**SECTION 36, T23S-R31E, N.M.P.M.**  
**EDDY COUNTY, NEW MEXICO**



30' EASEMENT AREA = 0.137 ACRE(S)  
 199.57 FEET OR 12.10 RODS

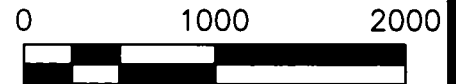
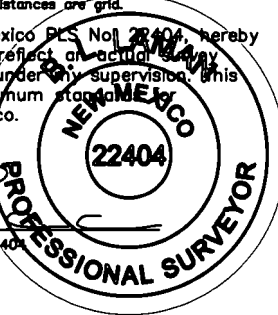
0+00.0 P.O.B./EXISTING ACCESS ROAD  
 0+08.0 EDGE OF ROAD  
 0+13.3 EXISTING FLOW LINE  
 1+99.6 P.O.E./TODD 36 WELLPAD 2

**SEE THE ATTACHED LEGAL DESCRIPTION**

Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

**B.L. Laman**  
 Date Signed: 09-25-2018  
 P.O. Box 548, Dry Creek, La.  
 (903) 388-3045 70637  
 Employee of Horizonrow, LLC



**HORIZON ROW LLC**

Drawn for:

**devon**

Drawn by:  
 CHRIS MAAS

Date: 07/06/2018

DEVON ENERGY PRODUCTION COMPANY, L.P.

TODD 36  
 WELLPAD 2 ACCESS ROAD

PROPOSED 30' EASEMENT  
 ON THE PROPERTY OF  
 BUREAU OF LAND MANAGEMENT  
 SECTION 36, T23S-R31E, N.M.P.M.

LINE NUMBER:

WBS NUMBER:

SCALE:  
 1" = 1000'

REVISIONS:

SHEET:  
 6/13/2018

**SECTION 36, T23S-R31E, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO**

**ACCESS ROAD PLAT**

**LEGAL DESCRIPTION**

**FOR**

**DEVON ENERGY PRODUCTION COMPANY, L.P.**

**BUREAU OF LAND MANAGEMENT**

**30' EASEMENT DESCRIPTION:**

**BEING** an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of the southwest quarter (SW ¼) of Section 36, Township 23 South, Range 31 East, N.M.P.M., Eddy County, New Mexico, and being out of a parcel of land owned by the Bureau of Land Management. Said centerline of easement being more particularly described as follows:

Commencing from a 2" iron pipe w/BC for the southwest corner of Section 36, T23S-R31E, N.M.P.M., Eddy County, New Mexico;

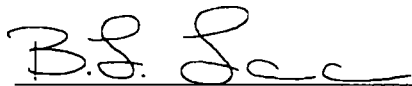
Thence N 60°43'17" E a distance of 1713.06' to the **Point of Beginning** of this easement having coordinates of Northing=457362.54, Easting=726234.56 feet and continuing the following course;

Thence S 00°19'26" E a distance of 199.57' to the **Point of Ending** having coordinates of Northing=457162.97, Easting=726235.69 feet from said point a 2" iron pipe w/BC for the southwest corner of Section 36, T23S-R31E bears S 66°53'14" W a distance of 1625.84', covering **199.57' or 12.10 rods** and having an area of **0.137 acres**.

**NOTES:**

Bearings, distances and coordinates shown herein are based on New Mexico State Plane Coordinate System, NAD 83, East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.



B.L. Laman PLS 22404

Date Signed: 09/25/2018

Horizon Row, LLC

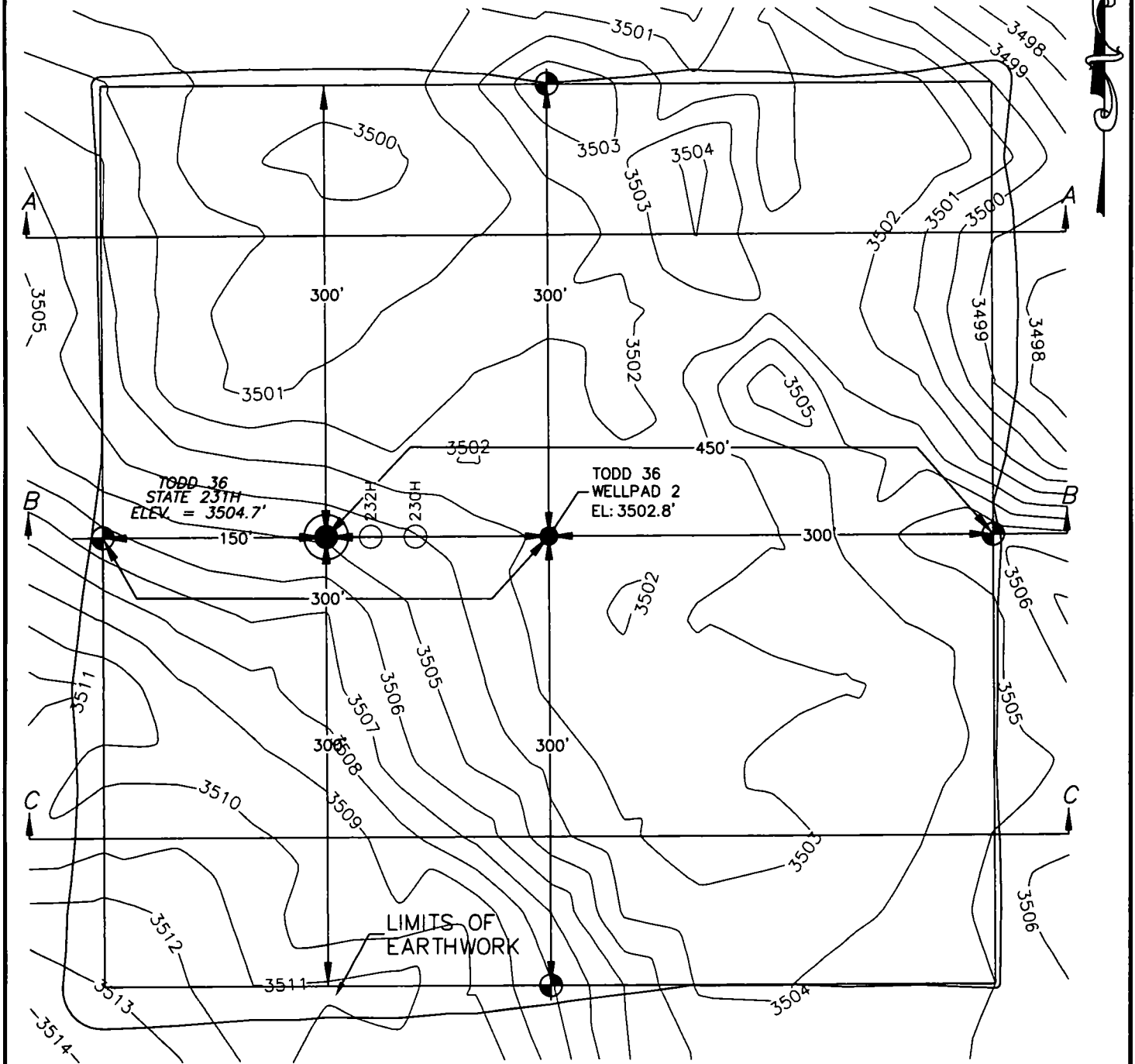
P.O. Box 548, Dry Creek, La.

(903) 388-3045 70637

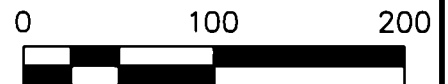
Employee of Horizon Row, LLC



SECTION 36, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
PLAN VIEW



DEVON ENERGY PRODUCTION COMPANY, L.P.  
TODD 36 STATE 231H  
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AND 1629 FT. FROM THE WEST LINE OF  
SECTION 36, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO



EARTHWORK QUANTITIES FOR  
TODD 36 WELLPAD 2

| CUT       | FILL      | NET  |
|-----------|-----------|------|
| 15,793 CY | 15,793 CY | 0 CY |

EARTHWORK QUANTITIES ARE ESTIMATED

HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P.

Drawn by:  
CHRIS MAAS

Date: 09/21/2018  
Rev. Date: 10/08/2018

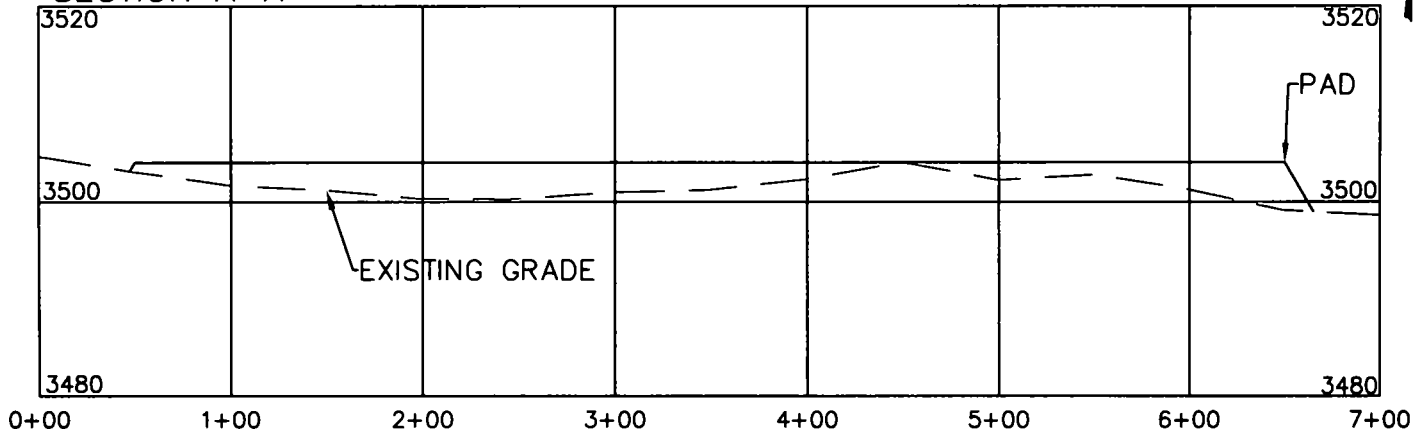
Drawn for:

  
**devon**

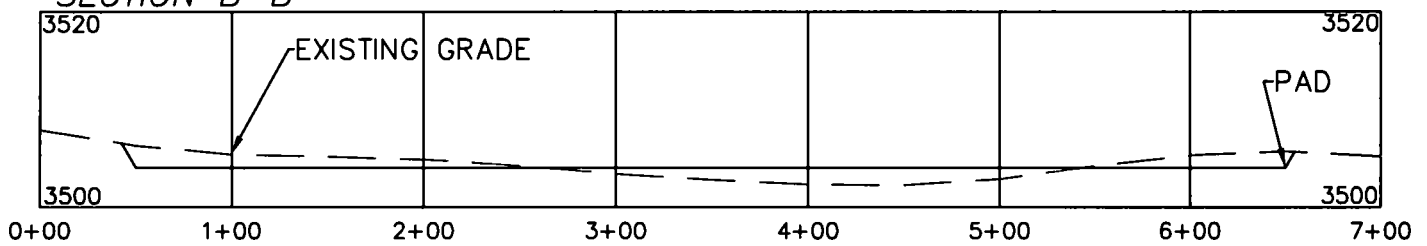
SECTION 36, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
CROSS SECTIONS



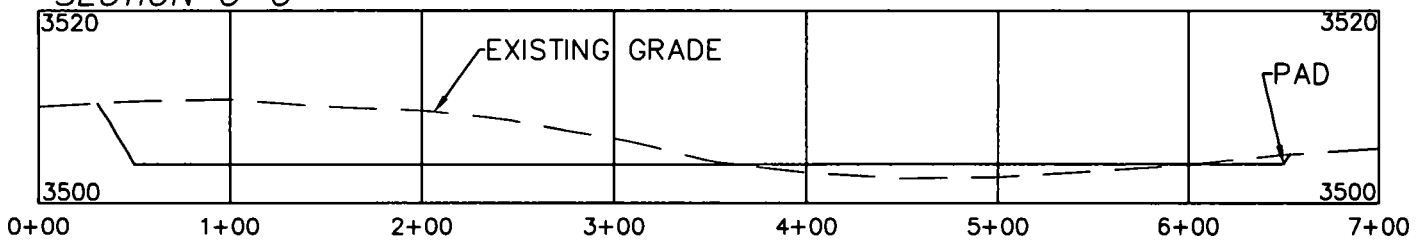
SECTION A-A



SECTION B-B



SECTION C-C



DEVON ENERGY PRODUCTION COMPANY, L.P.  
TODD 36 STATE 231H  
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SECTION 36, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

SCALE 1" = 100' HORIZONTAL  
SCALE 1" = 20' VERTICAL

EARTHWORK QUANTITIES FOR  
TODD 36 WELLPAD 2

| CUT       | FILL      | NET  |
|-----------|-----------|------|
| 15,793 CY | 15,793 CY | 0 CY |

EARTHWORK QUANTITIES ARE ESTIMATED

HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P.

Drawn by:  
CHRIS MAAS

Date: 09/21/2018  
Rev. Date: 10/08/2018

Drawn for:



Devon Energy – Todd 36 State 231H

1. Geologic Formations

|               |       |                               |     |
|---------------|-------|-------------------------------|-----|
| TVD of target | 10550 | Pilot hole depth              | N/A |
| MD at TD:     | 15526 | Deepest expected fresh water: |     |

Basin

| Formation       | Depth (TVD)<br>from KB | Water/Mineral Bearing/ Target<br>Zone? | Hazards* |
|-----------------|------------------------|----------------------------------------|----------|
| Rustler         | 798                    |                                        |          |
| Salado          | 1118                   |                                        |          |
| Base of Salt    | 4433                   |                                        |          |
| Delaware        | 4493                   |                                        |          |
| L Brushy Canyon | 8038                   |                                        |          |
| Bone Spring     | 8358                   |                                        |          |
| Leonard 'A'     | 8448                   |                                        |          |
| Leonard 'B'     | 8938                   |                                        |          |
| Leonard 'C'     | 9108                   |                                        |          |
| 2nd BSPG Lime   | 9863                   |                                        |          |
| 2nd BSPG Sand   | 10018                  |                                        |          |
| L 2nd BSPG Sand | 10498                  |                                        |          |
| Landing Point   | 10515                  |                                        |          |
| EOL             | 10515                  |                                        |          |
|                 |                        |                                        |          |
|                 |                        |                                        |          |

\*H2S, water flows, loss of circulation, abnormal pressures, etc.

## Devon Energy – Todd 36 State 231H

### 2. Casing Program

| Hole Size                 | Casing Interval |      | Csg. Size | Weight (PPF)       | Grade          | Conn.                          |
|---------------------------|-----------------|------|-----------|--------------------|----------------|--------------------------------|
|                           | From            | To   |           |                    |                |                                |
| 17.5"                     | 0               | 823  | 13.375"   | 48                 | H-40           | STC                            |
| 12.25"                    | 0               | 4593 | 9.625"    | 40                 | J-55           | BTC                            |
| 8.75"                     | 0               | TD   | 5.5"      | 17                 | P-110          | BTC                            |
| BLM Minimum Safety Factor |                 |      |           | Collapse:<br>1.125 | Burst:<br>1.00 | Tension:<br>1.6 Dry<br>1.8 Wet |

- All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h Must have table for contingency casing
- Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.
- Variance is requested for collapse rating on intermediate casing. Operator will keep pipe full while running casing. No losses are expected in subsequent hole section.
- Int casing shoe will be selected based on drilling data, gamma, and flows experienced while drilling. Setting depth will be revised accordingly if needed.
- A variance is requested to waive the centralizer requirement for the intermediate and production casing strings if drilling conditions dictate

## Devon Energy – Todd 36 State 231H

|                                                                                                                                                  |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
|                                                                                                                                                  | <b>Y or N</b> |
| Is casing new? If used, attach certification as required in Onshore Order #1                                                                     | Y             |
| Does casing meet API specifications? If no, attach casing specification sheet.                                                                   | Y             |
| Is premium or uncommon casing planned? If yes attach casing specification sheet.                                                                 | N             |
| Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria). | Y             |
| Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?                | Y             |
|                                                                                                                                                  |               |
| Is well located within Capitan Reef?                                                                                                             | N             |
| If yes, does production casing cement tie back a minimum of 50' above the Reef?                                                                  |               |
| Is well within the designated 4 string boundary.                                                                                                 |               |
|                                                                                                                                                  |               |
| Is well located in SOPA but not in R-111-P?                                                                                                      | N             |
| If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?                       |               |
|                                                                                                                                                  |               |
| Is well located in R-111-P and SOPA?                                                                                                             | N             |
| If yes, are the first three strings cemented to surface?                                                                                         |               |
| Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?                                                                               |               |
|                                                                                                                                                  |               |
| Is well located in high Cave/Karst?                                                                                                              | N             |
| If yes, are there two strings cemented to surface?                                                                                               |               |
| (For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?                                                           |               |
|                                                                                                                                                  |               |
| Is well located in critical Cave/Karst?                                                                                                          | N             |
| If yes, are there three strings cemented to surface?                                                                                             |               |

## Devon Energy – Todd 36 State 231H

### 3. Cementing Program (3-String Primary Design)

| Casing     | # Sk | TOC             | Wt.<br>(lb/gal) | H <sub>2</sub> O<br>(gal/sk) | Yld<br>(ft <sup>3</sup> /sack) | Slurry Description               |
|------------|------|-----------------|-----------------|------------------------------|--------------------------------|----------------------------------|
| Surface    | 860  | Surf            | 13.2            | 6.33                         | 1.33                           | Lead: Class C Cement + additives |
| Int        | 758  | Surf            | 9               | 20.6                         | 1.94                           | Lead: Class C Cement + additives |
|            | 196  | 500' above shoe | 13.2            | 6.42                         | 1.33                           | Tail: Class H / C + additives    |
| Production | 460  | 500' tieback    | 9               | 20.6                         | 1.94                           | Lead: Class H / C + additives    |
|            | 970  | KOP             | 13.2            | 5.31                         | 1.6                            | Tail: Class H / C + additives    |

If a DV tool is ran the depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Slurry weights will be adjusted based on estimated fracture gradient of the formation. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If cement is not returned to surface during the primary cement job on the surface casing string, a planned top job will be conducted immediately after completion of the primary job.

| Casing String | % Excess |
|---------------|----------|
| Surface       | 100%     |
| Intermediate  | 50%      |
| Production    | 10%      |

## Devon Energy – Todd 36 State 231H

### 4. Pressure Control Equipment

| BOP installed and tested before drilling which hole? | Size?   | Min. Required WP | Type       | ✓ | Tested to:                    |
|------------------------------------------------------|---------|------------------|------------|---|-------------------------------|
| Int 1                                                | 13-5/8" | 3M               | Annular    | X | 50% of rated working pressure |
|                                                      |         |                  | Blind Ram  |   | 3M                            |
|                                                      |         |                  | Pipe Ram   |   |                               |
|                                                      |         |                  | Double Ram | X |                               |
|                                                      |         |                  | Other*     |   |                               |
| Production                                           | 13-5/8" | 3M               | Annular    | X | 50% of rated working pressure |
|                                                      |         |                  | Blind Ram  |   | 3M                            |
|                                                      |         |                  | Pipe Ram   |   |                               |
|                                                      |         |                  | Double Ram | X |                               |
|                                                      |         |                  | Other*     |   |                               |
|                                                      |         |                  | Annular    |   |                               |
|                                                      |         |                  | Blind Ram  |   |                               |
|                                                      |         |                  | Pipe Ram   |   |                               |
|                                                      |         |                  | Double Ram |   |                               |
|                                                      |         |                  | Other*     |   |                               |

## Devon Energy – Todd 36 State 231H

### 5. Mud Program

| 6. Depth |      | Type  | Weight (ppg) | Vis   | Water Loss |
|----------|------|-------|--------------|-------|------------|
| From     | To   |       |              |       |            |
| 0        | 823  | FW    | 8.5 – 9.0    | 28-34 | N/C        |
| 823      | 4593 | Brine | 10 – 10.5    | 28-34 | N/C        |
| 4593     | TD   | WBM   | 8.5 – 9.0    | 28-34 | N/C        |

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

|                                                         |                             |
|---------------------------------------------------------|-----------------------------|
| What will be used to monitor the loss or gain of fluid? | PVT/Pason/Visual Monitoring |
|---------------------------------------------------------|-----------------------------|

### 6. Logging and Testing Procedures

| Logging, Coring and Testing. |                                                                                                                                                             |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X                            | Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM. |
|                              | No Logs are planned based on well control or offset log information.                                                                                        |
|                              | Drill stem test? If yes, explain                                                                                                                            |
|                              | Coring? If yes, explain                                                                                                                                     |

| Additional logs planned | Interval          |
|-------------------------|-------------------|
| Resistivity             |                   |
| Density                 |                   |
| X CBL                   | Production casing |
| X Mud log               | KOP to TD         |
|                         |                   |

### 7. Drilling Conditions

| Condition                  | Specify what type and where? |
|----------------------------|------------------------------|
| BH Pressure at deepest TVD | 4937 psi                     |
| Abnormal Temperature       | No                           |

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

|                                                                                                                                                                                                                                                                                                                                                              |                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Hydrogen Sulfide (H <sub>2</sub> S) monitors will be installed prior to drilling out the surface shoe. If H <sub>2</sub> S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM. |                                |
| N                                                                                                                                                                                                                                                                                                                                                            | H <sub>2</sub> S is present    |
| Y                                                                                                                                                                                                                                                                                                                                                            | H <sub>2</sub> S Plan attached |

## Devon Energy – Todd 36 State 231H

### 8. Other facets of operation

Is this a walking operation? Potentially

1. If operator elects, drilling rig will batch drill the surface holes and run/cement surface casing; walking the rig to next wells on the pad.
2. The drilling rig will then batch drill the intermediate sections and run/cement intermediate casing; the wellbore will be isolated with a blind flange and pressure gauge installed for monitoring the well before walking to the next well.
3. The drilling rig will then batch drill the production hole sections on the wells with OBM, run/cement production casing, and install TA caps or tubing heads for completions.

NOTE: During batch operations the drilling rig will be moved from well to well however, it will not be removed from the pad until all wells have production casing run/cemented.

Will be pre-setting casing? Potentially

1. Spudder rig will move in and drill surface hole.
  - a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.
2. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
3. The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
4. A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
5. Spudder rig operations is expected to take 4-5 days per well on a multi well pad.
6. The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
7. Drilling operations will be performed with the drilling rig. At that time an approved BOP stack will be nipped up and tested on the wellhead before drilling operations commences on each well.
  - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachments

- ☒ Directional Plan  
☐ Other, describe

# **WCDSC Permian NM**

**Eddy County (NAD 83 NM Eastern)**

**Sec. 36-T23S-R31E**

**Todd 36 State 231H**

**Wellbore #1**

**Permit Plan 1**

## **Anticollision Report**

**04 October, 2018**

# Anticollision Report

Company: WCDSC Permian NM  
 Project: Eddy County (NAD 83 NM Eastern)  
 Reference Site: Sec. 36-T23S-R31E  
 Site Error: 0.00 ft  
 Reference Well: Todd 36 State 231H  
 Well Error: 0.50 ft  
 Reference Wellbore: Wellbore #1  
 Reference Design: Permit Plan 1

Local Co-ordinate Reference: Well Todd 36 State 231H  
 TVD Reference: RKB @ 3530.10ft  
 MD Reference: RKB @ 3530.10ft  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 Output errors are at: 2.00 sigma  
 Database: EDM r5000.141\_Prod US  
 Offset TVD Reference: Offset Datum

|                              |                                                                     |                |                     |
|------------------------------|---------------------------------------------------------------------|----------------|---------------------|
| Reference                    | Permit Plan 1                                                       |                |                     |
| Filter type:                 | NO GLOBAL FILTER: Using user defined selection & filtering criteria |                |                     |
| Interpolation Method:        | MD Interval 50.00ft                                                 | Error Model:   | ISCWSA              |
| Depth Range:                 | Unlimited                                                           | Scan Method:   | Closest Approach 3D |
| Results Limited by:          | Maximum center-center distance of 1,500.00 ft                       | Error Surface: | Pedal Curve         |
| Warning Levels Evaluated at: | 2.00 Sigma                                                          | Casing Method: | Not applied         |

Survey Tool Program Date 10/4/2018

| From (ft) | To (ft)   | Survey (Wellbore)           | Tool Name | Description     |
|-----------|-----------|-----------------------------|-----------|-----------------|
| 0.00      | 15,526.07 | Permit Plan 1 (Wellbore #1) | MWD+HDGM  | OWSG MWD + HDGM |

## Summary

| Site Name                                               | Reference Measured Depth (ft) | Offset Measured Depth (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Separation Factor | Warning           |
|---------------------------------------------------------|-------------------------------|----------------------------|-------------------------------|--------------------------------|-------------------|-------------------|
| <b>Offset Well - Wellbore - Design</b>                  |                               |                            |                               |                                |                   |                   |
| Sec. 25-T23S-R31E                                       |                               |                            |                               |                                |                   |                   |
| Aldabra 25 Fed 3H - Wellbore #1 - Wellbore #1           | 15,526.07                     | 10,595.28                  | 1,051.75                      | 933.22                         | 8.873             | CC, ES, SF        |
| Aldabra 25 Fed 6H - Wellbore #1 - Wellbore #1           |                               |                            |                               |                                |                   | Out of range      |
| Aldabra 25 Fed 7H - Wellbore #1 - Wellbore #1           |                               |                            |                               |                                |                   | Out of range      |
| Aldabra 25 Fed Com 1H - Wellbore #1 - Wellbore #1       | 15,526.07                     | 10,475.66                  | 779.90                        | 671.33                         | 7.183             | CC, ES, SF        |
| Aldabra 25 Fed Com 2H - Wellbore #1 - Wellbore #1       | 15,526.07                     | 10,303.71                  | 676.09                        | 573.22                         | 6.572             | CC, ES, SF        |
| Todd 25 Fed 001Z SWD (Offset) - Wellbore #1 - Wellbor   |                               |                            |                               |                                |                   | Out of range      |
| Sec. 36-T23S-R31E                                       |                               |                            |                               |                                |                   |                   |
| Todd 36 State 01 SWD - Wellbore #1 - Wellbore #1        | 13,551.03                     | 10,544.30                  | 747.05                        | 531.32                         | 3.463             | Alert, CC, ES, SF |
| Todd 36_25 State Fed Com 232H - Wellbore #1 - Origina   | 2,650.00                      | 2,649.60                   | 29.99                         | 11.41                          | 1.614             | Minor Risk, CC    |
| Todd 36_25 State Fed Com 232H - Wellbore #1 - Origina   | 2,700.00                      | 2,700.40                   | 30.17                         | 11.24                          | 1.594             | Minor Risk, ES    |
| Todd 36_25 State Fed Com 232H - Wellbore #1 - Origina   | 2,750.00                      | 2,749.59                   | 30.71                         | 11.44                          | 1.593             | Minor Risk, SF    |
| Todd 36_25 State Fed Com 233H - Wellbore #1 - Permit    |                               |                            |                               |                                |                   | Out of range      |
| Todd 36_25 State Fed Com 235H - Wellbore #1 - Permit    |                               |                            |                               |                                |                   | Out of range      |
| Todd 36-25 State Fed Com 230H - Wellbore #1 - Permit    | 2,500.00                      | 2,499.20                   | 60.01                         | 42.51                          | 3.429             | Alert, CC         |
| Todd 36-25 State Fed Com 230H - Wellbore #1 - Permit    | 2,550.00                      | 2,548.70                   | 60.22                         | 42.36                          | 3.373             | Alert, ES         |
| Todd 36-25 State Fed Com 230H - Wellbore #1 - Permit    | 2,650.00                      | 2,647.66                   | 61.89                         | 43.35                          | 3.338             | Alert, SF         |
| Todd 36-25 State Fed Com 234H - Wellbore #1 - Permit    |                               |                            |                               |                                |                   | Out of range      |
| Todd 36B State 20H (Offset) - Wellbore #1 - Wellbore #1 |                               |                            |                               |                                |                   | Out of range      |

| Offset Design Sec. 25-T23S-R31E - Aldabra 25 Fed 3H - Wellbore #1 - Wellbore #1 |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|---------------------------------------------------------------------------------|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 122-GYRO-NS-CT, 10954-MWD+IGRF                                  |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.50 ft |
| Reference                                                                       | Offset              | Semi Major Axis     |                     | Distance       |             | Minimum Separation    |                                   | Warning    |                      |                       |                         |                    |         |
| Measured Depth (ft)                                                             | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 14,600.00                                                                       | 10,550.00           | 10,596.80           | 10,592.94           | 70.18          | 36.96       | 92.47                 | 5,063.75                          | 626.50     | 1,487.34             | 1,392.72              | 94.62                   | 15.720             |         |
| 14,650.00                                                                       | 10,550.00           | 10,596.72           | 10,592.86           | 70.80          | 36.96       | 92.47                 | 5,063.75                          | 626.51     | 1,452.12             | 1,356.37              | 95.75                   | 15.166             |         |
| 14,700.00                                                                       | 10,550.00           | 10,596.65           | 10,592.78           | 71.41          | 36.96       | 92.47                 | 5,063.75                          | 626.51     | 1,417.79             | 1,320.87              | 96.93                   | 14.627             |         |
| 14,750.00                                                                       | 10,550.00           | 10,596.57           | 10,592.71           | 72.04          | 36.96       | 92.46                 | 5,063.75                          | 626.51     | 1,384.42             | 1,286.26              | 98.16                   | 14.104             |         |
| 14,800.00                                                                       | 10,550.00           | 10,596.49           | 10,592.63           | 72.66          | 36.96       | 92.46                 | 5,063.75                          | 626.52     | 1,352.07             | 1,252.64              | 99.43                   | 13.598             |         |
| 14,850.00                                                                       | 10,550.00           | 10,596.41           | 10,592.55           | 73.29          | 36.96       | 92.45                 | 5,063.75                          | 626.52     | 1,320.83             | 1,220.08              | 100.75                  | 13.110             |         |
| 14,900.00                                                                       | 10,550.00           | 10,596.33           | 10,592.47           | 73.92          | 36.96       | 92.45                 | 5,063.75                          | 626.52     | 1,290.76             | 1,188.66              | 102.10                  | 12.642             |         |
| 14,950.00                                                                       | 10,550.00           | 10,596.25           | 10,592.39           | 74.55          | 36.96       | 92.44                 | 5,063.75                          | 626.53     | 1,261.96             | 1,158.47              | 103.49                  | 12.194             |         |
| 15,000.00                                                                       | 10,550.00           | 10,596.17           | 10,592.31           | 75.18          | 36.96       | 92.44                 | 5,063.75                          | 626.53     | 1,234.52             | 1,129.61              | 104.90                  | 11.768             |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

|                           |                                 |                                     |                         |
|---------------------------|---------------------------------|-------------------------------------|-------------------------|
| <b>Company:</b>           | WCDSC Permian NM                | <b>Local Co-ordinate Reference:</b> | Well Todd 36 State 231H |
| <b>Project:</b>           | Eddy County (NAD 83 NM Eastern) | <b>TVD Reference:</b>               | RKB @ 3530.10ft         |
| <b>Reference Site:</b>    | Sec. 36-T23S-R31E               | <b>MD Reference:</b>                | RKB @ 3530.10ft         |
| <b>Site Error:</b>        | 0.00 ft                         | <b>North Reference:</b>             | Grid                    |
| <b>Reference Well:</b>    | Todd 36 State 231H              | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Well Error:</b>        | 0.50 ft                         | <b>Output errors are at</b>         | 2.00 sigma              |
| <b>Reference Wellbore</b> | Wellbore #1                     | <b>Database:</b>                    | EDM r5000.141_Prod US   |
| <b>Reference Design:</b>  | Permit Plan 1                   | <b>Offset TVD Reference:</b>        | Offset Datum            |

|                                                                   |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                           |         |
|-------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|---------------------------|---------|
| <b>Offset Design</b>                                              |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | <b>Offset Site Error:</b> | 0.00 ft |
| Sec. 25-T23S-R31E - Aldabra 25 Fed 3H - Wellbore #1 - Wellbore #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | <b>Offset Well Error:</b> | 0.50 ft |
| Survey Program: 122-GYRO-NS-CT, 10954-MWD+IGRF                    |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                           |         |
| Reference                                                         |                     | Offset              |                     | Semi Major Axis |             | Distance              |                                   |            |                      |                       |                         |                           |         |
| Measured Depth (ft)                                               | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor         | Warning |
| 15,050.00                                                         | 10,550.00           | 10,596.09           | 10,592.23           | 75.81           | 36.96       | 92.44                 | 5,063.75                          | 626.53     | 1,208.52             | 1,102.18              | 106.34                  | 11.365                    |         |
| 15,100.00                                                         | 10,550.00           | 10,596.01           | 10,592.14           | 76.45           | 36.96       | 92.43                 | 5,063.75                          | 626.54     | 1,184.06             | 1,076.28              | 107.78                  | 10.986                    |         |
| 15,150.00                                                         | 10,550.00           | 10,595.92           | 10,592.06           | 77.08           | 36.96       | 92.43                 | 5,063.75                          | 626.54     | 1,161.24             | 1,052.02              | 109.22                  | 10.632                    |         |
| 15,200.00                                                         | 10,550.00           | 10,595.84           | 10,591.98           | 77.72           | 36.96       | 92.42                 | 5,063.75                          | 626.54     | 1,140.16             | 1,029.51              | 110.64                  | 10.305                    |         |
| 15,250.00                                                         | 10,550.00           | 10,595.76           | 10,591.89           | 78.36           | 36.96       | 92.42                 | 5,063.75                          | 626.55     | 1,120.91             | 1,008.87              | 112.04                  | 10.004                    |         |
| 15,300.00                                                         | 10,550.00           | 10,595.67           | 10,591.81           | 79.00           | 36.96       | 92.41                 | 5,063.75                          | 626.55     | 1,103.59             | 990.20                | 113.39                  | 9.732                     |         |
| 15,350.00                                                         | 10,550.00           | 10,595.59           | 10,591.72           | 79.65           | 36.96       | 92.41                 | 5,063.75                          | 626.55     | 1,088.30             | 973.61                | 114.69                  | 9.489                     |         |
| 15,400.00                                                         | 10,550.00           | 10,595.50           | 10,591.64           | 80.29           | 36.96       | 92.40                 | 5,063.75                          | 626.56     | 1,075.12             | 959.21                | 115.90                  | 9.276                     |         |
| 15,450.00                                                         | 10,550.00           | 10,595.41           | 10,591.55           | 80.94           | 36.96       | 92.40                 | 5,063.75                          | 626.56     | 1,064.12             | 947.09                | 117.03                  | 9.093                     |         |
| 15,500.00                                                         | 10,550.00           | 10,595.33           | 10,591.47           | 81.58           | 36.96       | 92.39                 | 5,063.75                          | 626.56     | 1,055.39             | 937.34                | 118.05                  | 8.940                     |         |
| 15,526.07                                                         | 10,550.00           | 10,595.28           | 10,591.42           | 81.92           | 36.96       | 92.39                 | 5,063.75                          | 626.57     | 1,051.75             | 933.22                | 118.53                  | 8.873 CC, ES, SF          |         |

# Anticollision Report

|                           |                                 |                                     |                         |
|---------------------------|---------------------------------|-------------------------------------|-------------------------|
| <b>Company:</b>           | WCDSC Permian NM                | <b>Local Co-ordinate Reference:</b> | Well Todd 36 State 231H |
| <b>Project:</b>           | Eddy County (NAD 83 NM Eastern) | <b>TVD Reference:</b>               | RKB @ 3530.10ft         |
| <b>Reference Site:</b>    | Sec. 36-T23S-R31E               | <b>MD Reference:</b>                | RKB @ 3530.10ft         |
| <b>Site Error:</b>        | 0.00 ft                         | <b>North Reference:</b>             | Grid                    |
| <b>Reference Well:</b>    | Todd 36 State 231H              | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Well Error:</b>        | 0.50 ft                         | <b>Output errors are at</b>         | 2.00 sigma              |
| <b>Reference Wellbore</b> | Wellbore #1                     | <b>Database:</b>                    | EDM r5000.141_Prod US   |
| <b>Reference Design:</b>  | Permit Plan 1                   | <b>Offset TVD Reference:</b>        | Offset Datum            |

| Offset Design                                                         |                        |                        |                        |                   |                |                             |                                         |               |                            |                             |                               | Offset Site Error:   | 0.00 ft |
|-----------------------------------------------------------------------|------------------------|------------------------|------------------------|-------------------|----------------|-----------------------------|-----------------------------------------|---------------|----------------------------|-----------------------------|-------------------------------|----------------------|---------|
| Sec. 25-T23S-R31E - Aldabra 25 Fed Com 1H - Wellbore #1 - Wellbore #1 |                        |                        |                        |                   |                |                             |                                         |               |                            |                             |                               | Offset Well Error:   | 0.50 ft |
| Survey Program: 100-GYRO-NS-CT, 8415-MWD+IGRF                         |                        |                        |                        |                   |                |                             |                                         |               |                            |                             |                               |                      |         |
| Reference                                                             |                        | Offset                 |                        | Semi Major Axis   |                | Distance                    |                                         |               |                            |                             |                               |                      |         |
| Measured Depth<br>(ft)                                                | Vertical Depth<br>(ft) | Measured Depth<br>(ft) | Vertical Depth<br>(ft) | Reference<br>(ft) | Offset<br>(ft) | Highside<br>Toolface<br>(°) | Offset Wellbore Centre<br>+N/-S<br>(ft) | +E/-W<br>(ft) | Between<br>Centres<br>(ft) | Between<br>Ellipses<br>(ft) | Minimum<br>Separation<br>(ft) | Separation<br>Factor | Warning |
| 14,450.00                                                             | 10,550.00              | 10,478.42              | 10,471.70              | 68.33             | 30.06          | -85.64                      | 5,133.64                                | -1,164.32     | 1,490.98                   | 1,415.17                    | 75.81                         | 19.667               |         |
| 14,500.00                                                             | 10,550.00              | 10,478.28              | 10,471.56              | 68.95             | 30.06          | -85.63                      | 5,133.64                                | -1,164.30     | 1,448.00                   | 1,371.46                    | 76.54                         | 18.918               |         |
| 14,550.00                                                             | 10,550.00              | 10,478.14              | 10,471.42              | 69.56             | 30.06          | -85.62                      | 5,133.64                                | -1,164.29     | 1,405.48                   | 1,328.14                    | 77.34                         | 18.173               |         |
| 14,600.00                                                             | 10,550.00              | 10,478.00              | 10,471.28              | 70.18             | 30.06          | -85.61                      | 5,133.64                                | -1,164.28     | 1,363.46                   | 1,285.26                    | 78.20                         | 17.436               |         |
| 14,650.00                                                             | 10,550.00              | 10,477.87              | 10,471.14              | 70.80             | 30.06          | -85.60                      | 5,133.64                                | -1,164.27     | 1,322.00                   | 1,242.87                    | 79.13                         | 16.706               |         |
| 14,700.00                                                             | 10,550.00              | 10,477.73              | 10,471.01              | 71.41             | 30.06          | -85.59                      | 5,133.64                                | -1,164.26     | 1,281.15                   | 1,201.01                    | 80.14                         | 15.986               |         |
| 14,750.00                                                             | 10,550.00              | 10,477.60              | 10,470.87              | 72.04             | 30.06          | -85.58                      | 5,133.64                                | -1,164.25     | 1,240.98                   | 1,159.74                    | 81.23                         | 15.277               |         |
| 14,800.00                                                             | 10,550.00              | 10,477.46              | 10,470.74              | 72.66             | 30.06          | -85.57                      | 5,133.64                                | -1,164.24     | 1,201.54                   | 1,119.12                    | 82.41                         | 14.580               |         |
| 14,850.00                                                             | 10,550.00              | 10,477.33              | 10,470.61              | 73.29             | 30.06          | -85.56                      | 5,133.64                                | -1,164.23     | 1,162.91                   | 1,079.22                    | 83.68                         | 13.897               |         |
| 14,900.00                                                             | 10,550.00              | 10,477.20              | 10,470.48              | 73.92             | 30.06          | -85.55                      | 5,133.64                                | -1,164.22     | 1,125.17                   | 1,040.12                    | 85.05                         | 13.230               |         |
| 14,950.00                                                             | 10,550.00              | 10,477.07              | 10,470.35              | 74.55             | 30.06          | -85.54                      | 5,133.64                                | -1,164.21     | 1,088.43                   | 1,001.91                    | 86.52                         | 12.581               |         |
| 15,000.00                                                             | 10,550.00              | 10,476.94              | 10,470.22              | 75.18             | 30.06          | -85.53                      | 5,133.64                                | -1,164.20     | 1,052.78                   | 964.70                      | 88.08                         | 11.952               |         |
| 15,050.00                                                             | 10,550.00              | 10,476.81              | 10,470.09              | 75.81             | 30.06          | -85.52                      | 5,133.64                                | -1,164.19     | 1,018.34                   | 928.59                      | 89.75                         | 11.346               |         |
| 15,100.00                                                             | 10,550.00              | 10,476.69              | 10,469.97              | 76.45             | 30.06          | -85.51                      | 5,133.64                                | -1,164.18     | 985.23                     | 893.71                      | 91.52                         | 10.766               |         |
| 15,150.00                                                             | 10,550.00              | 10,476.56              | 10,469.84              | 77.08             | 30.06          | -85.50                      | 5,133.64                                | -1,164.17     | 953.59                     | 860.22                      | 93.38                         | 10.212               |         |
| 15,200.00                                                             | 10,550.00              | 10,476.44              | 10,469.72              | 77.72             | 30.06          | -85.49                      | 5,133.64                                | -1,164.16     | 923.58                     | 828.26                      | 95.32                         | 9.689                |         |
| 15,250.00                                                             | 10,550.00              | 10,476.32              | 10,469.60              | 78.36             | 30.06          | -85.48                      | 5,133.64                                | -1,164.15     | 895.36                     | 798.02                      | 97.34                         | 9.199                |         |
| 15,300.00                                                             | 10,550.00              | 10,476.20              | 10,469.48              | 79.00             | 30.06          | -85.47                      | 5,133.64                                | -1,164.14     | 869.10                     | 769.70                      | 99.40                         | 8.743                |         |
| 15,350.00                                                             | 10,550.00              | 10,476.08              | 10,469.36              | 79.65             | 30.06          | -85.46                      | 5,133.64                                | -1,164.13     | 844.98                     | 743.49                      | 101.50                        | 8.325                |         |
| 15,400.00                                                             | 10,550.00              | 10,475.96              | 10,469.24              | 80.29             | 30.06          | -85.46                      | 5,133.65                                | -1,164.12     | 823.20                     | 719.62                      | 103.58                        | 7.947                |         |
| 15,450.00                                                             | 10,550.00              | 10,475.84              | 10,469.12              | 80.94             | 30.06          | -85.45                      | 5,133.65                                | -1,164.11     | 803.94                     | 698.31                      | 105.63                        | 7.611                |         |
| 15,500.00                                                             | 10,550.00              | 10,475.72              | 10,469.01              | 81.58             | 30.06          | -85.44                      | 5,133.65                                | -1,164.10     | 787.39                     | 679.80                      | 107.59                        | 7.318                |         |
| 15,528.07                                                             | 10,550.00              | 10,475.66              | 10,468.95              | 81.92             | 30.06          | -85.43                      | 5,133.65                                | -1,164.09     | 779.90                     | 671.33                      | 108.57                        | 7.183 CC, ES, SF     |         |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

|                           |                                 |                                     |                         |
|---------------------------|---------------------------------|-------------------------------------|-------------------------|
| <b>Company:</b>           | WCDSC Permian NM                | <b>Local Co-ordinate Reference:</b> | Well Todd 36 State 231H |
| <b>Project:</b>           | Eddy County (NAD 83 NM Eastern) | <b>TVD Reference:</b>               | RKB @ 3530.10ft         |
| <b>Reference Site:</b>    | Sec. 36-T23S-R31E               | <b>MD Reference:</b>                | RKB @ 3530.10ft         |
| <b>Site Error:</b>        | 0.00 ft                         | <b>North Reference:</b>             | Grid                    |
| <b>Reference Well:</b>    | Todd 36 State 231H              | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Well Error:</b>        | 0.50 ft                         | <b>Output errors are at</b>         | 2.00 sigma              |
| <b>Reference Wellbore</b> | Wellbore #1                     | <b>Database:</b>                    | EDM r5000.141_Prod US   |
| <b>Reference Design:</b>  | Permit Plan 1                   | <b>Offset TVD Reference:</b>        | Offset Datum            |

| Offset Design                                 |                        |                        |                        |                   |                |                             |                                         |               |                            |                             |                               | Offset Site Error:   | 0.00 ft |
|-----------------------------------------------|------------------------|------------------------|------------------------|-------------------|----------------|-----------------------------|-----------------------------------------|---------------|----------------------------|-----------------------------|-------------------------------|----------------------|---------|
| Survey Program: 100-GYRO-NS-CT, 9945-MWD+IGRF |                        |                        |                        |                   |                |                             |                                         |               |                            |                             |                               | Offset Well Error:   | 0.50 ft |
| Reference                                     |                        | Offset                 |                        | Semi Major Axis   |                | Distance                    |                                         |               |                            |                             |                               |                      |         |
| Measured Depth<br>(ft)                        | Vertical Depth<br>(ft) | Measured Depth<br>(ft) | Vertical Depth<br>(ft) | Reference<br>(ft) | Offset<br>(ft) | Highside<br>Toolface<br>(°) | Offset Wellbore Centre<br>+N/-S<br>(ft) | +E/-W<br>(ft) | Between<br>Centres<br>(ft) | Between<br>Ellipses<br>(ft) | Minimum<br>Separation<br>(ft) | Separation<br>Factor | Warning |
| 14,400.00                                     | 10,550.00              | 10,116.22              | 10,111.31              | 67.72             | 34.40          | -52.90                      | 5,115.19                                | -972.99       | 1,492.51                   | 1,417.86                    | 74.66                         | 19.991               |         |
| 14,450.00                                     | 10,550.00              | 10,120.48              | 10,115.34              | 68.33             | 34.40          | -53.16                      | 5,116.56                                | -972.85       | 1,448.49                   | 1,373.42                    | 75.07                         | 19.294               |         |
| 14,500.00                                     | 10,550.00              | 10,135.00              | 10,128.98              | 68.95             | 34.40          | -54.04                      | 5,121.51                                | -972.31       | 1,404.95                   | 1,329.37                    | 75.58                         | 18.589               |         |
| 14,550.00                                     | 10,550.00              | 10,135.00              | 10,128.98              | 69.56             | 34.40          | -54.04                      | 5,121.51                                | -972.31       | 1,361.56                   | 1,285.50                    | 76.06                         | 17.900               |         |
| 14,600.00                                     | 10,550.00              | 10,135.00              | 10,128.98              | 70.18             | 34.40          | -54.04                      | 5,121.51                                | -972.31       | 1,318.64                   | 1,242.04                    | 76.60                         | 17.215               |         |
| 14,650.00                                     | 10,550.00              | 10,135.00              | 10,128.98              | 70.80             | 34.40          | -54.04                      | 5,121.51                                | -972.31       | 1,276.24                   | 1,199.05                    | 77.19                         | 16.534               |         |
| 14,700.00                                     | 10,550.00              | 10,135.00              | 10,128.98              | 71.41             | 34.40          | -54.04                      | 5,121.51                                | -972.31       | 1,234.40                   | 1,156.57                    | 77.83                         | 15.859               |         |
| 14,750.00                                     | 10,550.00              | 10,149.93              | 10,142.83              | 72.04             | 34.40          | -54.96                      | 5,127.08                                | -971.72       | 1,192.86                   | 1,114.24                    | 78.62                         | 15.172               |         |
| 14,800.00                                     | 10,550.00              | 10,155.61              | 10,148.04              | 72.66             | 34.40          | -55.31                      | 5,129.32                                | -971.51       | 1,152.05                   | 1,072.61                    | 79.44                         | 14.502               |         |
| 14,850.00                                     | 10,550.00              | 10,167.00              | 10,158.40              | 73.29             | 34.41          | -56.01                      | 5,134.03                                | -971.08       | 1,111.93                   | 1,031.57                    | 80.36                         | 13.837               |         |
| 14,900.00                                     | 10,550.00              | 10,167.00              | 10,158.40              | 73.92             | 34.41          | -56.01                      | 5,134.03                                | -971.08       | 1,072.43                   | 991.11                      | 81.31                         | 13.189               |         |
| 14,950.00                                     | 10,550.00              | 10,167.00              | 10,158.40              | 74.55             | 34.41          | -56.01                      | 5,134.03                                | -971.08       | 1,033.83                   | 951.47                      | 82.36                         | 12.553               |         |
| 15,000.00                                     | 10,550.00              | 10,181.79              | 10,171.67              | 75.18             | 34.41          | -56.94                      | 5,140.55                                | -970.57       | 995.91                     | 912.34                      | 83.58                         | 11.916               |         |
| 15,050.00                                     | 10,550.00              | 10,189.35              | 10,178.36              | 75.81             | 34.41          | -57.42                      | 5,144.06                                | -970.35       | 959.03                     | 874.16                      | 84.86                         | 11.301               |         |
| 15,100.00                                     | 10,550.00              | 10,199.00              | 10,186.82              | 76.45             | 34.42          | -58.03                      | 5,148.69                                | -970.11       | 923.18                     | 836.91                      | 86.27                         | 10.701               |         |
| 15,150.00                                     | 10,550.00              | 10,199.00              | 10,186.82              | 77.08             | 34.42          | -58.03                      | 5,148.69                                | -970.11       | 888.55                     | 800.79                      | 87.75                         | 10.125               |         |
| 15,200.00                                     | 10,550.00              | 10,215.53              | 10,201.08              | 77.72             | 34.42          | -59.09                      | 5,157.04                                | -969.82       | 855.00                     | 765.57                      | 89.43                         | 9.560                |         |
| 15,250.00                                     | 10,550.00              | 10,230.00              | 10,213.33              | 78.36             | 34.43          | -60.02                      | 5,164.74                                | -969.71       | 822.94                     | 731.72                      | 91.23                         | 9.021                |         |
| 15,300.00                                     | 10,550.00              | 10,230.00              | 10,213.33              | 79.00             | 34.43          | -60.02                      | 5,164.74                                | -969.71       | 792.39                     | 699.32                      | 93.07                         | 8.514                |         |
| 15,350.00                                     | 10,550.00              | 10,248.77              | 10,228.84              | 79.65             | 34.44          | -61.24                      | 5,175.33                                | -969.65       | 763.36                     | 668.25                      | 95.11                         | 8.026                |         |
| 15,400.00                                     | 10,550.00              | 10,262.00              | 10,239.46              | 80.29             | 34.44          | -62.09                      | 5,183.21                                | -969.61       | 736.15                     | 638.93                      | 97.23                         | 7.572                |         |
| 15,450.00                                     | 10,550.00              | 10,276.94              | 10,251.14              | 80.94             | 34.46          | -63.04                      | 5,192.53                                | -969.55       | 710.81                     | 611.39                      | 99.42                         | 7.149                |         |
| 15,500.00                                     | 10,550.00              | 10,293.00              | 10,263.29              | 81.58             | 34.47          | -64.04                      | 5,203.02                                | -969.45       | 687.46                     | 585.78                      | 101.68                        | 6.761                |         |
| 15,526.07                                     | 10,550.00              | 10,303.71              | 10,271.18              | 81.92             | 34.48          | -64.70                      | 5,210.26                                | -969.38       | 676.09                     | 573.22                      | 102.87                        | 6.572 CC, ES, SF     |         |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

|                           |                                 |                                     |                         |
|---------------------------|---------------------------------|-------------------------------------|-------------------------|
| <b>Company:</b>           | WCDSC Permian NM                | <b>Local Co-ordinate Reference:</b> | Well Todd 36 State 231H |
| <b>Project:</b>           | Eddy County (NAD 83 NM Eastern) | <b>TVD Reference:</b>               | RKB @ 3530.10ft         |
| <b>Reference Site:</b>    | Sec. 36-T23S-R31E               | <b>MD Reference:</b>                | RKB @ 3530.10ft         |
| <b>Site Error:</b>        | 0.00 ft                         | <b>North Reference:</b>             | Grid                    |
| <b>Reference Well:</b>    | Todd 36 State 231H              | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Well Error:</b>        | 0.50 ft                         | <b>Output errors are at</b>         | 2.00 sigma              |
| <b>Reference Wellbore</b> | Wellbore #1                     | <b>Database:</b>                    | EDM r5000.141_Prod US   |
| <b>Reference Design:</b>  | Permit Plan 1                   | <b>Offset TVD Reference:</b>        | Offset Datum            |

| Offset Design Sec. 36-T23S-R31E - Todd 36 State 01 SWD - Wellbore #1 - Wellbore #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                         | Offset Site Error: | 0.00 ft  |
|------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------------|--------------------|----------|
| Survey Program: 10-INC-ONLY                                                        |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                         | Offset Well Error: | 10.00 ft |
| Reference                                                                          |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                         |                    | Warning  |
| Measured Depth (ft)                                                                | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor       |                    |          |
| 12,300.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 45.39           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,457.10             | 1,258.92              | 198.18                  | 7.352                   |                    |          |
| 12,350.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 45.82           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,414.40             | 1,215.91              | 198.50                  | 7.126                   |                    |          |
| 12,400.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 46.24           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,372.20             | 1,173.36              | 198.84                  | 6.901                   |                    |          |
| 12,450.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 46.68           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,330.54             | 1,131.33              | 199.21                  | 6.679                   |                    |          |
| 12,500.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 47.12           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,289.47             | 1,089.85              | 199.62                  | 6.460                   |                    |          |
| 12,550.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 47.58           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,249.05             | 1,048.99              | 200.06                  | 6.243                   |                    |          |
| 12,600.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 48.03           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,209.35             | 1,008.80              | 200.55                  | 6.030                   |                    |          |
| 12,650.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 48.50           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,170.44             | 969.36                | 201.08                  | 5.821                   |                    |          |
| 12,700.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 48.97           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,132.40             | 930.74                | 201.66                  | 5.615                   |                    |          |
| 12,750.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 49.44           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,095.32             | 893.03                | 202.28                  | 5.415                   |                    |          |
| 12,800.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 49.92           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,059.30             | 856.34                | 202.96                  | 5.219                   |                    |          |
| 12,850.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 50.42           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,024.46             | 820.76                | 203.69                  | 5.029                   |                    |          |
| 12,900.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 50.91           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 990.91               | 786.44                | 204.48                  | 4.846 Alert             |                    |          |
| 12,950.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 51.41           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 958.81               | 753.49                | 205.31                  | 4.670 Alert             |                    |          |
| 13,000.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 51.91           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 928.28               | 722.08                | 206.20                  | 4.502 Alert             |                    |          |
| 13,050.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 52.43           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 899.50               | 692.37                | 207.13                  | 4.343 Alert             |                    |          |
| 13,100.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 52.94           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 872.64               | 664.54                | 208.10                  | 4.193 Alert             |                    |          |
| 13,150.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 53.46           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 847.88               | 638.78                | 209.10                  | 4.055 Alert             |                    |          |
| 13,200.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 53.98           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 825.41               | 615.31                | 210.10                  | 3.929 Alert             |                    |          |
| 13,250.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 54.52           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 805.41               | 594.31                | 211.10                  | 3.815 Alert             |                    |          |
| 13,300.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 55.05           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 788.09               | 576.02                | 212.07                  | 3.716 Alert             |                    |          |
| 13,350.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 55.59           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 773.62               | 560.62                | 213.00                  | 3.632 Alert             |                    |          |
| 13,400.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 56.13           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 762.16               | 548.32                | 213.84                  | 3.564 Alert             |                    |          |
| 13,450.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 56.68           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 753.85               | 539.25                | 214.59                  | 3.513 Alert             |                    |          |
| 13,500.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 57.23           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 748.79               | 533.57                | 215.22                  | 3.479 Alert             |                    |          |
| 13,550.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 57.79           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 747.05               | 531.33                | 215.71                  | 3.463 Alert             |                    |          |
| 13,551.03                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 57.80           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 747.05               | 531.32                | 215.72                  | 3.463 Alert, CC, ES, SF |                    |          |
| 13,600.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 58.34           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 748.65               | 532.59                | 216.06                  | 3.465 Alert             |                    |          |
| 13,650.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 58.91           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 753.57               | 537.32                | 216.25                  | 3.485 Alert             |                    |          |
| 13,700.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 59.47           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 761.75               | 545.46                | 216.29                  | 3.522 Alert             |                    |          |
| 13,750.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 60.04           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 773.09               | 556.90                | 216.19                  | 3.576 Alert             |                    |          |
| 13,800.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 60.62           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 787.44               | 571.48                | 215.97                  | 3.646 Alert             |                    |          |
| 13,850.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 61.19           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 804.65               | 589.02                | 215.63                  | 3.732 Alert             |                    |          |
| 13,900.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 61.77           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 824.54               | 609.33                | 215.21                  | 3.831 Alert             |                    |          |
| 13,950.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 62.36           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 846.91               | 632.20                | 214.71                  | 3.944 Alert             |                    |          |
| 14,000.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 62.94           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 871.58               | 657.42                | 214.16                  | 4.070 Alert             |                    |          |
| 14,050.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 63.53           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 898.36               | 684.78                | 213.58                  | 4.206 Alert             |                    |          |
| 14,100.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 64.12           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 927.07               | 714.10                | 212.97                  | 4.353 Alert             |                    |          |
| 14,150.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 64.72           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 957.52               | 745.17                | 212.35                  | 4.509 Alert             |                    |          |
| 14,200.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 65.31           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 989.57               | 777.83                | 211.74                  | 4.674 Alert             |                    |          |
| 14,250.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 65.91           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,023.06             | 811.92                | 211.13                  | 4.846 Alert             |                    |          |
| 14,300.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 66.51           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,057.85             | 847.31                | 210.54                  | 5.024                   |                    |          |
| 14,350.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 67.12           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,093.82             | 883.85                | 209.97                  | 5.209                   |                    |          |
| 14,400.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 67.72           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,130.86             | 921.44                | 209.41                  | 5.400                   |                    |          |
| 14,450.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 68.33           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,168.86             | 959.97                | 208.89                  | 5.596                   |                    |          |
| 14,500.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 68.95           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,207.74             | 999.35                | 208.38                  | 5.796                   |                    |          |
| 14,550.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 69.56           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,247.41             | 1,039.50              | 207.91                  | 6.000                   |                    |          |
| 14,600.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 70.18           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,287.80             | 1,080.35              | 207.45                  | 6.208                   |                    |          |
| 14,650.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 70.80           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,328.84             | 1,121.82              | 207.03                  | 6.419                   |                    |          |
| 14,700.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 71.41           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,370.48             | 1,163.86              | 206.62                  | 6.633                   |                    |          |
| 14,750.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 72.04           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,412.66             | 1,206.42              | 206.24                  | 6.850                   |                    |          |
| 14,800.00                                                                          | 10,550.00           | 10,544.30           | 10,544.30           | 72.66           | 158.00      | 90.00                 | 2,953.25                          | 341.11     | 1,455.34             | 1,249.46              | 205.88                  | 7.069                   |                    |          |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

|                    |                                 |                              |                         |
|--------------------|---------------------------------|------------------------------|-------------------------|
| Company:           | WCDSC Permian NM                | Local Co-ordinate Reference: | Well Todd 36 State 231H |
| Project:           | Eddy County (NAD 83 NM Eastern) | TVD Reference:               | RKB @ 3530.10ft         |
| Reference Site:    | Sec. 36-T23S-R31E               | MD Reference:                | RKB @ 3530.10ft         |
| Site Error:        | 0.00 ft                         | North Reference:             | Grid                    |
| Reference Well:    | Todd 36 State 231H              | Survey Calculation Method:   | Minimum Curvature       |
| Well Error:        | 0.50 ft                         | Output errors are at         | 2.00 sigma              |
| Reference Wellbore | Wellbore #1                     | Database:                    | EDM r5000.141_Prod US   |
| Reference Design:  | Permit Plan 1                   | Offset TVD Reference:        | Offset Datum            |

|                                                                                         |           |           |           |                 |        |          |                        |          |          |          |            |                    |          |
|-----------------------------------------------------------------------------------------|-----------|-----------|-----------|-----------------|--------|----------|------------------------|----------|----------|----------|------------|--------------------|----------|
| Offset Design      Sec. 36-T23S-R31E - Todd 36 State 01 SWD - Wellbore #1 - Wellbore #1 |           |           |           |                 |        |          |                        |          |          |          |            | Offset Site Error: | 0.00 ft  |
| Survey Program: 10-INC-ONLY                                                             |           |           |           |                 |        |          |                        |          |          |          |            | Offset Well Error: | 10.00 ft |
| Reference                                                                               |           | Offset    |           | Semi Major Axis |        |          |                        | Distance |          |          |            |                    |          |
| Measured                                                                                | Vertical  | Measured  | Vertical  | Reference       | Offset | Highside | Offset Wellbore Centre |          | Between  | Between  | Minimum    | Separation         | Warning  |
| Depth                                                                                   | Depth     | Depth     | Depth     |                 |        | Toolface | +N/-S                  | +E/-W    | Centres  | Ellipses | Separation | Factor             |          |
| (ft)                                                                                    | (ft)      | (ft)      | (ft)      | (ft)            | (ft)   | (°)      | (ft)                   | (ft)     | (ft)     | (ft)     | (ft)       |                    |          |
| 14,850.00                                                                               | 10,550.00 | 10,544.30 | 10,544.30 | 73.29           | 158.00 | 90.00    | 2,953.25               | 341.11   | 1,498.47 | 1,292.93 | 205.54     | 7.290              |          |

# Anticollision Report

|                           |                                 |                                     |                         |
|---------------------------|---------------------------------|-------------------------------------|-------------------------|
| <b>Company:</b>           | WCDSC Permian NM                | <b>Local Co-ordinate Reference:</b> | Well Todd 36 State 231H |
| <b>Project:</b>           | Eddy County (NAD 83 NM Eastern) | <b>TVD Reference:</b>               | RKB @ 3530.10ft         |
| <b>Reference Site:</b>    | Sec. 36-T23S-R31E               | <b>MD Reference:</b>                | RKB @ 3530.10ft         |
| <b>Site Error:</b>        | 0.00 ft                         | <b>North Reference:</b>             | Grid                    |
| <b>Reference Well:</b>    | Todd 36 State 231H              | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Well Error:</b>        | 0.50 ft                         | <b>Output errors are at</b>         | 2.00 sigma              |
| <b>Reference Wellbore</b> | Wellbore #1                     | <b>Database:</b>                    | EDM r5000.141_Prod US   |
| <b>Reference Design:</b>  | Permit Plan 1                   | <b>Offset TVD Reference:</b>        | Offset Datum            |

| Offset Design Sec. 36-T23S-R31E - Todd 36_25 State Fed Com 232H - Wellbore #1 - Original Planned Path |                     |                     |                     |                 |             |                       |                                  |           |                      |                       |                         |                   | Offset Site Error: | 0.00 ft |
|-------------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|----------------------------------|-----------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 0-MWD+IFR1                                                                            |                     |                     |                     |                 |             |                       |                                  |           |                      |                       |                         |                   | Offset Well Error: | 0.50 ft |
| Reference                                                                                             |                     | Offset              |                     | Semi Major Axis |             | Distance              |                                  |           |                      |                       |                         |                   |                    | Warning |
| Measured Depth (ft)                                                                                   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N-S (ft) | +E-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |         |
| 0.00                                                                                                  | 0.00                | 0.40                | -0.40               | 0.50            | 0.50        | 89.68                 | 0.17                             | 29.99     | 29.99                |                       |                         |                   |                    |         |
| 50.00                                                                                                 | 50.00               | 49.60               | 49.60               | 0.50            | 0.50        | 89.68                 | 0.17                             | 29.99     | 29.99                | 28.98                 | 1.01                    | 29.799            |                    |         |
| 100.00                                                                                                | 100.00              | 100.40              | 99.60               | 0.52            | 0.52        | 89.68                 | 0.17                             | 29.99     | 29.99                | 28.95                 | 1.04                    | 28.952            |                    |         |
| 150.00                                                                                                | 150.00              | 149.60              | 149.60              | 0.59            | 0.59        | 89.68                 | 0.17                             | 29.99     | 29.99                | 28.81                 | 1.18                    | 25.422            |                    |         |
| 200.00                                                                                                | 200.00              | 200.40              | 199.60              | 0.70            | 0.70        | 89.68                 | 0.17                             | 29.99     | 29.99                | 28.59                 | 1.41                    | 21.342            |                    |         |
| 250.00                                                                                                | 250.00              | 249.60              | 249.60              | 0.84            | 0.84        | 89.68                 | 0.17                             | 29.99     | 29.99                | 28.32                 | 1.67                    | 17.913            |                    |         |
| 300.00                                                                                                | 300.00              | 300.40              | 299.60              | 0.99            | 0.99        | 89.68                 | 0.17                             | 29.99     | 29.99                | 28.01                 | 1.98                    | 15.178            |                    |         |
| 350.00                                                                                                | 350.00              | 349.60              | 349.60              | 1.15            | 1.14        | 89.68                 | 0.17                             | 29.99     | 29.99                | 27.70                 | 2.29                    | 13.098            |                    |         |
| 400.00                                                                                                | 400.00              | 400.40              | 399.60              | 1.31            | 1.31        | 89.68                 | 0.17                             | 29.99     | 29.99                | 27.37                 | 2.62                    | 11.449            |                    |         |
| 450.00                                                                                                | 450.00              | 449.60              | 449.60              | 1.48            | 1.47        | 89.68                 | 0.17                             | 29.99     | 29.99                | 27.04                 | 2.95                    | 10.162            |                    |         |
| 500.00                                                                                                | 500.00              | 500.40              | 499.60              | 1.65            | 1.65        | 89.68                 | 0.17                             | 29.99     | 29.99                | 26.70                 | 3.29                    | 9.106             |                    |         |
| 550.00                                                                                                | 550.00              | 549.60              | 549.60              | 1.82            | 1.82        | 89.68                 | 0.17                             | 29.99     | 29.99                | 26.36                 | 3.63                    | 8.253             |                    |         |
| 600.00                                                                                                | 600.00              | 600.40              | 599.60              | 1.99            | 1.99        | 89.68                 | 0.17                             | 29.99     | 29.99                | 26.01                 | 3.98                    | 7.530             |                    |         |
| 650.00                                                                                                | 650.00              | 649.60              | 649.60              | 2.16            | 2.16        | 89.68                 | 0.17                             | 29.99     | 29.99                | 25.66                 | 4.33                    | 6.930             |                    |         |
| 700.00                                                                                                | 700.00              | 700.40              | 699.60              | 2.34            | 2.34        | 89.68                 | 0.17                             | 29.99     | 29.99                | 25.31                 | 4.68                    | 6.408             |                    |         |
| 750.00                                                                                                | 750.00              | 749.60              | 749.60              | 2.51            | 2.51        | 89.68                 | 0.17                             | 29.99     | 29.99                | 24.96                 | 5.03                    | 5.965             |                    |         |
| 800.00                                                                                                | 800.00              | 800.40              | 799.60              | 2.69            | 2.69        | 89.68                 | 0.17                             | 29.99     | 29.99                | 24.61                 | 5.38                    | 5.572             |                    |         |
| 850.00                                                                                                | 850.00              | 849.60              | 849.60              | 2.87            | 2.87        | 89.68                 | 0.17                             | 29.99     | 29.99                | 24.26                 | 5.73                    | 5.232             |                    |         |
| 900.00                                                                                                | 900.00              | 900.40              | 899.60              | 3.04            | 3.04        | 89.68                 | 0.17                             | 29.99     | 29.99                | 23.90                 | 6.09                    | 4.926 Alert       |                    |         |
| 950.00                                                                                                | 950.00              | 949.60              | 949.60              | 3.22            | 3.22        | 89.68                 | 0.17                             | 29.99     | 29.99                | 23.55                 | 6.44                    | 4.657 Alert       |                    |         |
| 1,000.00                                                                                              | 1,000.00            | 1,000.40            | 999.60              | 3.40            | 3.40        | 89.68                 | 0.17                             | 29.99     | 29.99                | 23.19                 | 6.80                    | 4.412 Alert       |                    |         |
| 1,050.00                                                                                              | 1,050.00            | 1,049.60            | 1,049.60            | 3.58            | 3.57        | 89.68                 | 0.17                             | 29.99     | 29.99                | 22.84                 | 7.15                    | 4.195 Alert       |                    |         |
| 1,100.00                                                                                              | 1,100.00            | 1,100.40            | 1,099.60            | 3.75            | 3.75        | 89.68                 | 0.17                             | 29.99     | 29.99                | 22.48                 | 7.51                    | 3.995 Alert       |                    |         |
| 1,150.00                                                                                              | 1,150.00            | 1,149.60            | 1,149.60            | 3.93            | 3.93        | 89.68                 | 0.17                             | 29.99     | 29.99                | 22.13                 | 7.86                    | 3.816 Alert       |                    |         |
| 1,200.00                                                                                              | 1,200.00            | 1,200.40            | 1,199.60            | 4.11            | 4.11        | 89.68                 | 0.17                             | 29.99     | 29.99                | 21.77                 | 8.22                    | 3.649 Alert       |                    |         |
| 1,250.00                                                                                              | 1,250.00            | 1,249.60            | 1,249.60            | 4.29            | 4.28        | 89.68                 | 0.17                             | 29.99     | 29.99                | 21.42                 | 8.57                    | 3.499 Alert       |                    |         |
| 1,300.00                                                                                              | 1,300.00            | 1,300.40            | 1,299.60            | 4.46            | 4.47        | 89.68                 | 0.17                             | 29.99     | 29.99                | 21.06                 | 8.93                    | 3.358 Alert       |                    |         |
| 1,350.00                                                                                              | 1,350.00            | 1,349.60            | 1,349.60            | 4.64            | 4.64        | 89.68                 | 0.17                             | 29.99     | 29.99                | 20.71                 | 9.28                    | 3.231 Alert       |                    |         |
| 1,400.00                                                                                              | 1,400.00            | 1,400.40            | 1,399.60            | 4.82            | 4.82        | 89.68                 | 0.17                             | 29.99     | 29.99                | 20.35                 | 9.64                    | 3.110 Alert       |                    |         |
| 1,450.00                                                                                              | 1,450.00            | 1,449.60            | 1,449.60            | 5.00            | 5.00        | 89.68                 | 0.17                             | 29.99     | 29.99                | 19.99                 | 10.00                   | 3.000 Alert       |                    |         |
| 1,500.00                                                                                              | 1,500.00            | 1,500.40            | 1,499.60            | 5.18            | 5.18        | 89.68                 | 0.17                             | 29.99     | 29.99                | 19.63                 | 10.36                   | 2.896 Alert       |                    |         |
| 1,550.00                                                                                              | 1,550.00            | 1,549.60            | 1,549.60            | 5.36            | 5.35        | 89.68                 | 0.17                             | 29.99     | 29.99                | 19.28                 | 10.71                   | 2.800 Alert       |                    |         |
| 1,600.00                                                                                              | 1,600.00            | 1,600.40            | 1,599.60            | 5.53            | 5.54        | 89.68                 | 0.17                             | 29.99     | 29.99                | 18.92                 | 11.07                   | 2.709 Alert       |                    |         |
| 1,650.00                                                                                              | 1,650.00            | 1,649.60            | 1,649.60            | 5.71            | 5.71        | 89.68                 | 0.17                             | 29.99     | 29.99                | 18.57                 | 11.42                   | 2.625 Alert       |                    |         |
| 1,700.00                                                                                              | 1,700.00            | 1,700.40            | 1,699.60            | 5.89            | 5.89        | 89.68                 | 0.17                             | 29.99     | 29.99                | 18.21                 | 11.78                   | 2.545 Alert       |                    |         |
| 1,750.00                                                                                              | 1,750.00            | 1,749.60            | 1,749.60            | 6.07            | 6.07        | 89.68                 | 0.17                             | 29.99     | 29.99                | 17.85                 | 12.14                   | 2.471 Minor Risk  |                    |         |
| 1,800.00                                                                                              | 1,800.00            | 1,800.40            | 1,799.60            | 6.25            | 6.25        | 89.68                 | 0.17                             | 29.99     | 29.99                | 17.49                 | 12.50                   | 2.400 Minor Risk  |                    |         |
| 1,850.00                                                                                              | 1,850.00            | 1,849.60            | 1,849.60            | 6.43            | 6.43        | 89.68                 | 0.17                             | 29.99     | 29.99                | 17.14                 | 12.85                   | 2.333 Minor Risk  |                    |         |
| 1,900.00                                                                                              | 1,900.00            | 1,900.40            | 1,899.60            | 6.61            | 6.61        | 89.68                 | 0.17                             | 29.99     | 29.99                | 16.78                 | 13.21                   | 2.270 Minor Risk  |                    |         |
| 1,950.00                                                                                              | 1,950.00            | 1,949.60            | 1,949.60            | 6.78            | 6.78        | 89.68                 | 0.17                             | 29.99     | 29.99                | 16.42                 | 13.57                   | 2.210 Minor Risk  |                    |         |
| 2,000.00                                                                                              | 2,000.00            | 2,000.40            | 1,999.60            | 6.96            | 6.96        | 89.68                 | 0.17                             | 29.99     | 29.99                | 16.06                 | 13.93                   | 2.153 Minor Risk  |                    |         |
| 2,050.00                                                                                              | 2,050.00            | 2,049.60            | 2,049.60            | 7.14            | 7.14        | 89.68                 | 0.17                             | 29.99     | 29.99                | 15.71                 | 14.28                   | 2.100 Minor Risk  |                    |         |
| 2,100.00                                                                                              | 2,100.00            | 2,100.40            | 2,099.60            | 7.32            | 7.32        | 89.68                 | 0.17                             | 29.99     | 29.99                | 15.35                 | 14.64                   | 2.048 Minor Risk  |                    |         |
| 2,150.00                                                                                              | 2,150.00            | 2,149.60            | 2,149.60            | 7.50            | 7.50        | 89.68                 | 0.17                             | 29.99     | 29.99                | 14.99                 | 15.00                   | 2.000 Minor Risk  |                    |         |
| 2,200.00                                                                                              | 2,200.00            | 2,200.40            | 2,199.60            | 7.68            | 7.68        | 89.68                 | 0.17                             | 29.99     | 29.99                | 14.63                 | 15.36                   | 1.953 Minor Risk  |                    |         |
| 2,250.00                                                                                              | 2,250.00            | 2,249.60            | 2,249.60            | 7.86            | 7.86        | 89.68                 | 0.17                             | 29.99     | 29.99                | 14.28                 | 15.71                   | 1.909 Minor Risk  |                    |         |
| 2,300.00                                                                                              | 2,300.00            | 2,300.40            | 2,299.60            | 8.04            | 8.04        | 89.68                 | 0.17                             | 29.99     | 29.99                | 13.92                 | 16.07                   | 1.866 Minor Risk  |                    |         |
| 2,350.00                                                                                              | 2,350.00            | 2,349.60            | 2,349.60            | 8.22            | 8.21        | 89.68                 | 0.17                             | 29.99     | 29.99                | 13.56                 | 16.43                   | 1.825 Minor Risk  |                    |         |
| 2,400.00                                                                                              | 2,400.00            | 2,400.40            | 2,399.60            | 8.39            | 8.40        | 89.68                 | 0.17                             | 29.99     | 29.99                | 13.20                 | 16.79                   | 1.786 Minor Risk  |                    |         |
| 2,450.00                                                                                              | 2,450.00            | 2,449.60            | 2,449.60            | 8.57            | 8.57        | 89.68                 | 0.17                             | 29.99     | 29.99                | 12.85                 | 17.14                   | 1.749 Minor Risk  |                    |         |
| 2,500.00                                                                                              | 2,500.00            | 2,500.40            | 2,499.60            | 8.75            | 8.75        | 89.68                 | 0.17                             | 29.99     | 29.99                | 12.49                 | 17.51                   | 1.713 Minor Risk  |                    |         |
| 2,550.00                                                                                              | 2,550.00            | 2,549.60            | 2,549.60            | 8.93            | 8.93        | 89.68                 | 0.17                             | 29.99     | 29.99                | 12.13                 | 17.86                   | 1.679 Minor Risk  |                    |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

|                           |                                 |                                     |                         |
|---------------------------|---------------------------------|-------------------------------------|-------------------------|
| <b>Company:</b>           | WCDSC Permian NM                | <b>Local Co-ordinate Reference:</b> | Well Todd 36 State 231H |
| <b>Project:</b>           | Eddy County (NAD 83 NM Eastern) | <b>TVD Reference:</b>               | RKB @ 3530.10ft         |
| <b>Reference Site:</b>    | Sec. 36-T23S-R31E               | <b>MD Reference:</b>                | RKB @ 3530.10ft         |
| <b>Site Error:</b>        | 0.00 ft                         | <b>North Reference:</b>             | Grid                    |
| <b>Reference Well:</b>    | Todd 36 State 231H              | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Well Error:</b>        | 0.50 ft                         | <b>Output errors are at</b>         | 2.00 sigma              |
| <b>Reference Wellbore</b> | Wellbore #1                     | <b>Database:</b>                    | EDM r5000.141_Prod US   |
| <b>Reference Design:</b>  | Permit Plan 1                   | <b>Offset TVD Reference:</b>        | Offset Datum            |

| Offset Design Sec. 36-T23S-R31E - Todd 36_25 State Fed Com 232H - Wellbore #1 - Original Planned Path |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft        |
|-------------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|----------------|
| Survey Program: 0-MWD+IFR1                                                                            |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.50 ft        |
| Reference                                                                                             |                     | Offset              |                     | Semi Major Axis |             | Distance              |                                   |            |                      |                       |                         |                    |                |
| Measured Depth (ft)                                                                                   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning        |
| 2,600.00                                                                                              | 2,600.00            | 2,600.40            | 2,599.60            | 9.11            | 9.11        | 89.68                 | 0.17                              | 29.99      | 29.99                | 11.77                 | 18.22                   | 1.646              | Minor Risk     |
| 2,650.00                                                                                              | 2,650.00            | 2,649.60            | 2,649.60            | 9.29            | 9.29        | 89.68                 | 0.17                              | 29.99      | 29.99                | 11.41                 | 18.58                   | 1.614              | Minor Risk, CC |
| 2,700.00                                                                                              | 2,700.00            | 2,700.40            | 2,699.60            | 9.46            | 9.47        | -144.95               | 0.17                              | 29.99      | 30.17                | 11.24                 | 18.93                   | 1.594              | Minor Risk, ES |
| 2,750.00                                                                                              | 2,749.99            | 2,749.59            | 2,749.59            | 9.63            | 9.65        | -145.65               | 0.17                              | 29.99      | 30.71                | 11.44                 | 19.27                   | 1.593              | Minor Risk, SF |
| 2,800.00                                                                                              | 2,799.98            | 2,800.42            | 2,799.58            | 9.79            | 9.83        | -146.76               | 0.17                              | 29.99      | 31.61                | 12.00                 | 19.62                   | 1.611              | Minor Risk     |
| 2,850.00                                                                                              | 2,849.96            | 2,849.56            | 2,849.56            | 9.96            | 10.00       | -148.21               | 0.17                              | 29.99      | 32.90                | 12.94                 | 19.96                   | 1.648              | Minor Risk     |
| 2,900.00                                                                                              | 2,899.92            | 2,900.48            | 2,899.52            | 10.12           | 10.19       | -149.91               | 0.17                              | 29.99      | 34.59                | 14.28                 | 20.31                   | 1.703              | Minor Risk     |
| 2,950.00                                                                                              | 2,949.86            | 2,949.46            | 2,949.46            | 10.29           | 10.36       | -151.78               | 0.17                              | 29.99      | 36.68                | 16.03                 | 20.65                   | 1.776              | Minor Risk     |
| 3,000.00                                                                                              | 2,999.78            | 3,000.62            | 2,999.38            | 10.46           | 10.54       | -153.73               | 0.17                              | 29.99      | 39.20                | 18.20                 | 21.00                   | 1.867              | Minor Risk     |
| 3,050.00                                                                                              | 3,049.68            | 3,049.28            | 3,049.28            | 10.63           | 10.72       | -155.68               | 0.17                              | 29.99      | 42.16                | 20.82                 | 21.34                   | 1.976              | Minor Risk     |
| 3,100.00                                                                                              | 3,099.55            | 3,100.85            | 3,099.15            | 10.80           | 10.90       | -157.55               | 0.17                              | 29.99      | 45.47                | 23.77                 | 21.69                   | 2.096              | Minor Risk     |
| 3,150.00                                                                                              | 3,149.41            | 3,149.01            | 3,149.01            | 10.97           | 11.08       | -159.17               | 0.17                              | 29.99      | 48.83                | 26.79                 | 22.03                   | 2.216              | Minor Risk     |
| 3,200.00                                                                                              | 3,199.28            | 3,201.12            | 3,198.88            | 11.14           | 11.26       | -160.58               | 0.17                              | 29.99      | 52.23                | 29.84                 | 22.39                   | 2.333              | Minor Risk     |
| 3,250.00                                                                                              | 3,249.15            | 3,248.75            | 3,248.75            | 11.31           | 11.43       | -161.82               | 0.17                              | 29.99      | 55.65                | 32.92                 | 22.73                   | 2.449              | Minor Risk     |
| 3,300.00                                                                                              | 3,299.02            | 3,301.38            | 3,298.62            | 11.48           | 11.62       | -162.91               | 0.17                              | 29.99      | 59.10                | 36.01                 | 23.09                   | 2.560              | Alert          |
| 3,350.00                                                                                              | 3,348.89            | 3,348.49            | 3,348.49            | 11.65           | 11.79       | -163.88               | 0.17                              | 29.99      | 62.56                | 39.14                 | 23.42                   | 2.671              | Alert          |
| 3,400.00                                                                                              | 3,398.76            | 3,401.64            | 3,398.36            | 11.82           | 11.98       | -164.75               | 0.17                              | 29.99      | 66.05                | 42.26                 | 23.78                   | 2.777              | Alert          |
| 3,450.00                                                                                              | 3,448.63            | 3,448.23            | 3,448.23            | 11.99           | 12.15       | -165.54               | 0.17                              | 29.99      | 69.54                | 45.42                 | 24.12                   | 2.883              | Alert          |
| 3,500.00                                                                                              | 3,498.50            | 3,501.90            | 3,498.10            | 12.17           | 12.34       | -166.25               | 0.17                              | 29.99      | 73.05                | 48.57                 | 24.48                   | 2.984              | Alert          |
| 3,550.00                                                                                              | 3,548.37            | 3,547.97            | 3,547.97            | 12.34           | 12.50       | -166.89               | 0.17                              | 29.99      | 76.57                | 51.75                 | 24.82                   | 3.085              | Alert          |
| 3,600.00                                                                                              | 3,598.24            | 3,602.16            | 3,597.84            | 12.51           | 12.70       | -167.48               | 0.17                              | 29.99      | 80.10                | 54.91                 | 25.18                   | 3.181              | Alert          |
| 3,650.00                                                                                              | 3,648.10            | 3,647.70            | 3,647.70            | 12.69           | 12.86       | -168.01               | 0.17                              | 29.99      | 83.63                | 58.11                 | 25.52                   | 3.277              | Alert          |
| 3,700.00                                                                                              | 3,697.97            | 3,702.43            | 3,697.57            | 12.86           | 13.06       | -168.51               | 0.17                              | 29.99      | 87.17                | 61.29                 | 25.88                   | 3.368              | Alert          |
| 3,750.00                                                                                              | 3,747.84            | 3,747.44            | 3,747.44            | 13.04           | 13.22       | -168.96               | 0.17                              | 29.99      | 90.72                | 64.50                 | 26.22                   | 3.460              | Alert          |
| 3,800.00                                                                                              | 3,797.71            | 3,797.31            | 3,797.31            | 13.21           | 13.40       | -169.38               | 0.17                              | 29.99      | 94.27                | 67.71                 | 26.57                   | 3.548              | Alert          |
| 3,850.00                                                                                              | 3,847.58            | 3,846.50            | 3,846.50            | 13.39           | 13.57       | -169.67               | 0.08                              | 30.21      | 97.99                | 71.09                 | 26.91                   | 3.642              | Alert          |
| 3,900.00                                                                                              | 3,897.45            | 3,895.60            | 3,895.60            | 13.56           | 13.74       | -169.71               | -0.20                             | 30.92      | 102.08               | 74.83                 | 27.25                   | 3.746              | Alert          |
| 3,950.00                                                                                              | 3,947.32            | 3,944.64            | 3,944.62            | 13.74           | 13.90       | -169.55               | -0.67                             | 32.11      | 106.53               | 78.95                 | 27.58                   | 3.863              | Alert          |
| 4,000.00                                                                                              | 3,997.19            | 3,993.60            | 3,993.55            | 13.91           | 14.07       | -169.20               | -1.34                             | 33.79      | 111.35               | 83.44                 | 27.91                   | 3.990              | Alert          |
| 4,050.00                                                                                              | 4,047.06            | 4,042.48            | 4,042.37            | 14.09           | 14.23       | -168.89               | -2.19                             | 35.95      | 116.54               | 88.30                 | 28.24                   | 4.127              | Alert          |
| 4,100.00                                                                                              | 4,096.93            | 4,091.27            | 4,091.07            | 14.27           | 14.40       | -168.06               | -3.24                             | 38.59      | 122.11               | 93.55                 | 28.57                   | 4.275              | Alert          |
| 4,150.00                                                                                              | 4,146.80            | 4,139.94            | 4,139.63            | 14.44           | 14.56       | -167.31               | -4.47                             | 41.71      | 128.07               | 99.18                 | 28.89                   | 4.433              | Alert          |
| 4,200.00                                                                                              | 4,196.66            | 4,188.50            | 4,188.03            | 14.62           | 14.72       | -166.48               | -5.89                             | 45.29      | 134.43               | 105.22                | 29.21                   | 4.602              | Alert          |
| 4,250.00                                                                                              | 4,246.53            | 4,236.93            | 4,236.27            | 14.80           | 14.89       | -165.58               | -7.49                             | 49.34      | 141.21               | 111.67                | 29.53                   | 4.781              | Alert          |
| 4,300.00                                                                                              | 4,296.40            | 4,285.22            | 4,284.31            | 14.98           | 15.05       | -164.63               | -9.28                             | 53.85      | 148.40               | 118.55                | 29.85                   | 4.971              | Alert          |
| 4,350.00                                                                                              | 4,346.27            | 4,333.36            | 4,332.16            | 15.15           | 15.22       | -163.65               | -11.24                            | 58.81      | 156.02               | 125.86                | 30.17                   | 5.172              |                |
| 4,400.00                                                                                              | 4,396.14            | 4,381.50            | 4,379.94            | 15.33           | 15.38       | -162.64               | -13.39                            | 64.24      | 164.08               | 133.60                | 30.48                   | 5.383              |                |
| 4,450.00                                                                                              | 4,446.01            | 4,430.73            | 4,428.79            | 15.51           | 15.55       | -161.66               | -15.66                            | 69.97      | 172.35               | 141.53                | 30.82                   | 5.592              |                |
| 4,500.00                                                                                              | 4,495.88            | 4,479.96            | 4,477.63            | 15.69           | 15.72       | -160.77               | -17.93                            | 75.71      | 180.66               | 149.50                | 31.16                   | 5.798              |                |
| 4,550.00                                                                                              | 4,545.75            | 4,529.19            | 4,526.47            | 15.87           | 15.89       | -159.96               | -20.20                            | 81.44      | 189.00               | 157.51                | 31.49                   | 6.001              |                |
| 4,600.00                                                                                              | 4,595.62            | 4,578.42            | 4,575.32            | 16.05           | 16.06       | -159.22               | -22.47                            | 87.18      | 197.38               | 165.55                | 31.83                   | 6.201              |                |
| 4,650.00                                                                                              | 4,645.49            | 4,627.66            | 4,624.16            | 16.22           | 16.23       | -158.54               | -24.74                            | 92.91      | 205.80               | 173.62                | 32.17                   | 6.396              |                |
| 4,700.00                                                                                              | 4,695.35            | 4,676.89            | 4,673.00            | 16.40           | 16.40       | -157.91               | -27.01                            | 98.64      | 214.23               | 181.72                | 32.51                   | 6.589              |                |
| 4,750.00                                                                                              | 4,745.22            | 4,726.12            | 4,721.84            | 16.58           | 16.57       | -157.33               | -29.28                            | 104.38     | 222.69               | 189.84                | 32.86                   | 6.778              |                |
| 4,800.00                                                                                              | 4,795.09            | 4,775.35            | 4,770.69            | 16.76           | 16.74       | -156.80               | -31.55                            | 110.11     | 231.17               | 197.98                | 33.20                   | 6.964              |                |
| 4,850.00                                                                                              | 4,844.96            | 4,824.58            | 4,819.53            | 16.94           | 16.91       | -156.30               | -33.82                            | 115.85     | 239.67               | 206.13                | 33.54                   | 7.146              |                |
| 4,900.00                                                                                              | 4,894.83            | 4,873.81            | 4,868.37            | 17.12           | 17.08       | -155.83               | -36.09                            | 121.58     | 248.19               | 214.30                | 33.88                   | 7.325              |                |
| 4,950.00                                                                                              | 4,944.70            | 4,923.04            | 4,917.22            | 17.30           | 17.25       | -155.40               | -38.36                            | 127.32     | 256.72               | 222.49                | 34.23                   | 7.500              |                |
| 5,000.00                                                                                              | 4,994.57            | 4,972.27            | 4,966.06            | 17.48           | 17.42       | -154.99               | -40.63                            | 133.05     | 265.26               | 230.69                | 34.57                   | 7.673              |                |
| 5,050.00                                                                                              | 5,044.44            | 5,021.50            | 5,014.90            | 17.66           | 17.59       | -154.61               | -42.90                            | 138.79     | 273.82               | 238.90                | 34.92                   | 7.842              |                |
| 5,100.00                                                                                              | 5,094.31            | 5,070.73            | 5,063.74            | 17.84           | 17.77       | -154.25               | -45.17                            | 144.52     | 282.39               | 247.12                | 35.26                   | 8.009              |                |
| 5,150.00                                                                                              | 5,144.18            | 5,119.96            | 5,112.59            | 18.02           | 17.94       | -153.91               | -47.44                            | 150.26     | 290.96               | 255.36                | 35.61                   | 8.172              |                |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

|                           |                                 |                                     |                         |
|---------------------------|---------------------------------|-------------------------------------|-------------------------|
| <b>Company:</b>           | WCDSC Permian NM                | <b>Local Co-ordinate Reference:</b> | Well Todd 36 State 231H |
| <b>Project:</b>           | Eddy County (NAD 83 NM Eastern) | <b>TVD Reference:</b>               | RKB @ 3530.10ft         |
| <b>Reference Site:</b>    | Sec. 36-T23S-R31E               | <b>MD Reference:</b>                | RKB @ 3530.10ft         |
| <b>Site Error:</b>        | 0.00 ft                         | <b>North Reference:</b>             | Grid                    |
| <b>Reference Well:</b>    | Todd 36 State 231H              | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Well Error:</b>        | 0.50 ft                         | <b>Output errors are at</b>         | 2.00 sigma              |
| <b>Reference Wellbore</b> | Wellbore #1                     | <b>Database:</b>                    | EDM r5000.141_Prod US   |
| <b>Reference Design:</b>  | Permit Plan 1                   | <b>Offset TVD Reference:</b>        | Offset Datum            |

| Offset Design Sec. 36-T23S-R31E - Todd 36_25 State Fed Com 232H - Wellbore #1 - Original Planned Path |                        |                        |                        |                   |                |                                    |                                         |               |                            |                             |                               |                      | Offset Site Error: | 0.00 ft |
|-------------------------------------------------------------------------------------------------------|------------------------|------------------------|------------------------|-------------------|----------------|------------------------------------|-----------------------------------------|---------------|----------------------------|-----------------------------|-------------------------------|----------------------|--------------------|---------|
| Survey Program: 0-MWD+IFR1                                                                            |                        |                        |                        |                   |                |                                    |                                         |               |                            |                             |                               |                      | Offset Well Error: | 0.50 ft |
| Measured Depth<br>(ft)                                                                                | Vertical Depth<br>(ft) | Measured Depth<br>(ft) | Vertical Depth<br>(ft) | Reference<br>(ft) | Offset<br>(ft) | Semi Major Axis<br>Toolface<br>(°) | Offset Wellbore Centre<br>+N/-S<br>(ft) | +E/-W<br>(ft) | Between<br>Centres<br>(ft) | Between<br>Ellipses<br>(ft) | Minimum<br>Separation<br>(ft) | Separation<br>Factor | Warning            |         |
| 5,200.00                                                                                              | 5,194.04               | 5,169.19               | 5,161.43               | 18.20             | 18.11          | -153.59                            | -49.71                                  | 155.99        | 299.55                     | 263.60                      | 35.95                         | 8.332                |                    |         |
| 5,250.00                                                                                              | 5,243.91               | 5,218.42               | 5,210.27               | 18.38             | 18.28          | -153.29                            | -51.98                                  | 161.72        | 308.14                     | 271.85                      | 36.30                         | 8.489                |                    |         |
| 5,300.00                                                                                              | 5,293.78               | 5,267.65               | 5,259.12               | 18.57             | 18.46          | -153.01                            | -54.25                                  | 167.46        | 316.75                     | 280.10                      | 36.65                         | 8.644                |                    |         |
| 5,350.00                                                                                              | 5,343.65               | 5,316.89               | 5,307.96               | 18.75             | 18.63          | -152.74                            | -56.52                                  | 173.19        | 325.36                     | 288.37                      | 36.99                         | 8.795                |                    |         |
| 5,400.00                                                                                              | 5,393.52               | 5,366.12               | 5,356.80               | 18.93             | 18.81          | -152.49                            | -58.79                                  | 178.93        | 333.97                     | 296.63                      | 37.34                         | 8.944                |                    |         |
| 5,450.00                                                                                              | 5,443.39               | 5,415.35               | 5,405.64               | 19.11             | 18.98          | -152.24                            | -61.06                                  | 184.66        | 342.60                     | 304.91                      | 37.69                         | 9.091                |                    |         |
| 5,500.00                                                                                              | 5,493.26               | 5,464.58               | 5,454.49               | 19.29             | 19.15          | -152.01                            | -63.33                                  | 190.40        | 351.22                     | 313.19                      | 38.04                         | 9.234                |                    |         |
| 5,550.00                                                                                              | 5,543.13               | 5,513.81               | 5,503.33               | 19.47             | 19.33          | -151.79                            | -65.60                                  | 196.13        | 359.86                     | 321.47                      | 38.38                         | 9.375                |                    |         |
| 5,600.00                                                                                              | 5,593.00               | 5,563.04               | 5,552.17               | 19.65             | 19.50          | -151.58                            | -67.87                                  | 201.87        | 368.50                     | 329.76                      | 38.73                         | 9.514                |                    |         |
| 5,650.00                                                                                              | 5,642.87               | 5,612.27               | 5,601.02               | 19.83             | 19.68          | -151.39                            | -70.14                                  | 207.60        | 377.14                     | 338.06                      | 39.08                         | 9.650                |                    |         |
| 5,700.00                                                                                              | 5,692.73               | 5,661.50               | 5,649.86               | 20.02             | 19.85          | -151.19                            | -72.41                                  | 213.34        | 385.79                     | 346.36                      | 39.43                         | 9.784                |                    |         |
| 5,750.00                                                                                              | 5,742.60               | 5,710.73               | 5,698.70               | 20.20             | 20.03          | -151.01                            | -74.68                                  | 219.07        | 394.44                     | 354.66                      | 39.78                         | 9.915                |                    |         |
| 5,800.00                                                                                              | 5,792.47               | 5,759.96               | 5,747.54               | 20.38             | 20.20          | -150.84                            | -76.95                                  | 224.80        | 403.09                     | 362.96                      | 40.13                         | 10.044               |                    |         |
| 5,850.00                                                                                              | 5,842.34               | 5,809.19               | 5,796.39               | 20.56             | 20.38          | -150.67                            | -79.22                                  | 230.54        | 411.75                     | 371.27                      | 40.48                         | 10.171               |                    |         |
| 5,900.00                                                                                              | 5,892.21               | 5,858.42               | 5,845.23               | 20.74             | 20.55          | -150.51                            | -81.49                                  | 236.27        | 420.41                     | 379.58                      | 40.83                         | 10.296               |                    |         |
| 5,950.00                                                                                              | 5,942.08               | 5,907.65               | 5,894.07               | 20.93             | 20.73          | -150.36                            | -83.76                                  | 242.01        | 429.08                     | 387.90                      | 41.18                         | 10.419               |                    |         |
| 6,000.00                                                                                              | 5,991.95               | 5,956.88               | 5,942.92               | 21.11             | 20.91          | -150.21                            | -86.03                                  | 247.74        | 437.75                     | 396.21                      | 41.53                         | 10.540               |                    |         |
| 6,050.00                                                                                              | 6,041.82               | 6,006.12               | 5,991.76               | 21.29             | 21.08          | -150.07                            | -88.30                                  | 253.48        | 446.42                     | 404.53                      | 41.88                         | 10.658               |                    |         |
| 6,100.00                                                                                              | 6,091.69               | 6,055.35               | 6,040.60               | 21.47             | 21.26          | -149.93                            | -90.57                                  | 259.21        | 455.09                     | 412.85                      | 42.24                         | 10.775               |                    |         |
| 6,150.00                                                                                              | 6,141.56               | 6,104.58               | 6,089.44               | 21.66             | 21.43          | -149.80                            | -92.84                                  | 264.95        | 463.76                     | 421.18                      | 42.59                         | 10.890               |                    |         |
| 6,200.00                                                                                              | 6,191.43               | 6,153.81               | 6,138.29               | 21.84             | 21.61          | -149.67                            | -95.12                                  | 270.68        | 472.44                     | 429.50                      | 42.94                         | 11.002               |                    |         |
| 6,250.00                                                                                              | 6,241.29               | 6,203.04               | 6,187.13               | 22.02             | 21.79          | -149.55                            | -97.39                                  | 276.42        | 481.12                     | 437.83                      | 43.29                         | 11.113               |                    |         |
| 6,300.00                                                                                              | 6,291.16               | 6,252.27               | 6,235.97               | 22.20             | 21.97          | -149.43                            | -99.66                                  | 282.15        | 489.80                     | 446.16                      | 43.64                         | 11.223               |                    |         |
| 6,350.00                                                                                              | 6,341.03               | 6,301.50               | 6,284.82               | 22.39             | 22.14          | -149.32                            | -101.93                                 | 287.89        | 498.49                     | 454.49                      | 44.00                         | 11.330               |                    |         |
| 6,400.00                                                                                              | 6,390.90               | 6,350.73               | 6,333.66               | 22.57             | 22.32          | -149.21                            | -104.20                                 | 293.62        | 507.17                     | 462.82                      | 44.35                         | 11.436               |                    |         |
| 6,450.00                                                                                              | 6,440.77               | 6,400.04               | 6,382.50               | 22.75             | 22.50          | -149.10                            | -106.47                                 | 299.35        | 515.86                     | 471.16                      | 44.70                         | 11.540               |                    |         |
| 6,500.00                                                                                              | 6,490.64               | 6,449.19               | 6,431.34               | 22.93             | 22.67          | -149.00                            | -108.74                                 | 305.09        | 524.55                     | 479.49                      | 45.06                         | 11.642               |                    |         |
| 6,550.00                                                                                              | 6,540.51               | 6,501.58               | 6,480.19               | 23.12             | 22.86          | -148.90                            | -111.01                                 | 310.82        | 533.24                     | 487.82                      | 45.42                         | 11.740               |                    |         |
| 6,600.00                                                                                              | 6,590.38               | 6,547.65               | 6,529.03               | 23.30             | 23.03          | -148.81                            | -113.28                                 | 316.56        | 541.93                     | 496.17                      | 45.76                         | 11.842               |                    |         |
| 6,650.00                                                                                              | 6,640.25               | 6,596.88               | 6,577.87               | 23.48             | 23.21          | -148.71                            | -115.55                                 | 322.29        | 550.62                     | 504.51                      | 46.12                         | 11.940               |                    |         |
| 6,700.00                                                                                              | 6,690.12               | 6,646.12               | 6,626.72               | 23.67             | 23.39          | -148.62                            | -117.82                                 | 328.03        | 559.32                     | 512.85                      | 46.47                         | 12.036               |                    |         |
| 6,750.00                                                                                              | 6,739.98               | 6,704.65               | 6,675.56               | 23.85             | 23.60          | -148.54                            | -120.09                                 | 333.76        | 568.01                     | 521.16                      | 46.86                         | 12.122               |                    |         |
| 6,800.00                                                                                              | 6,789.85               | 6,744.58               | 6,724.40               | 24.03             | 23.74          | -148.45                            | -122.36                                 | 339.50        | 576.71                     | 529.53                      | 47.18                         | 12.224               |                    |         |
| 6,850.00                                                                                              | 6,839.72               | 6,806.19               | 6,773.24               | 24.22             | 23.96          | -148.37                            | -124.63                                 | 345.23        | 585.41                     | 537.83                      | 47.58                         | 12.304               |                    |         |
| 6,900.00                                                                                              | 6,889.59               | 6,843.04               | 6,822.09               | 24.40             | 24.10          | -148.29                            | -126.90                                 | 350.97        | 594.11                     | 546.22                      | 47.89                         | 12.406               |                    |         |
| 6,950.00                                                                                              | 6,939.46               | 6,907.73               | 6,870.93               | 24.58             | 24.33          | -148.21                            | -129.17                                 | 356.70        | 602.81                     | 554.51                      | 48.30                         | 12.481               |                    |         |
| 7,000.00                                                                                              | 6,989.33               | 6,941.50               | 6,919.77               | 24.77             | 24.45          | -148.14                            | -131.44                                 | 362.43        | 611.51                     | 562.91                      | 48.60                         | 12.583               |                    |         |
| 7,050.00                                                                                              | 7,039.20               | 6,990.73               | 6,968.62               | 24.95             | 24.63          | -148.06                            | -133.71                                 | 368.17        | 620.21                     | 571.26                      | 48.95                         | 12.669               |                    |         |
| 7,100.00                                                                                              | 7,089.07               | 7,039.96               | 7,017.46               | 25.13             | 24.81          | -147.99                            | -135.98                                 | 373.90        | 628.92                     | 579.61                      | 49.31                         | 12.755               |                    |         |
| 7,150.00                                                                                              | 7,138.94               | 7,089.19               | 7,066.30               | 25.32             | 24.99          | -147.92                            | -138.25                                 | 379.64        | 637.62                     | 587.96                      | 49.66                         | 12.839               |                    |         |
| 7,200.00                                                                                              | 7,188.81               | 7,138.42               | 7,115.14               | 25.50             | 25.17          | -147.86                            | -140.52                                 | 385.37        | 646.33                     | 596.31                      | 50.02                         | 12.921               |                    |         |
| 7,250.00                                                                                              | 7,238.67               | 7,187.65               | 7,163.99               | 25.68             | 25.35          | -147.79                            | -142.79                                 | 391.11        | 655.03                     | 604.66                      | 50.38                         | 13.003               |                    |         |
| 7,300.00                                                                                              | 7,288.54               | 7,236.88               | 7,212.83               | 25.87             | 25.53          | -147.73                            | -145.06                                 | 396.84        | 663.74                     | 613.01                      | 50.73                         | 13.083               |                    |         |
| 7,350.00                                                                                              | 7,338.41               | 7,286.11               | 7,261.67               | 26.05             | 25.71          | -147.67                            | -147.33                                 | 402.58        | 672.45                     | 621.36                      | 51.09                         | 13.163               |                    |         |
| 7,400.00                                                                                              | 7,388.28               | 7,335.35               | 7,310.52               | 26.24             | 25.89          | -147.60                            | -149.60                                 | 408.31        | 681.16                     | 629.71                      | 51.44                         | 13.241               |                    |         |
| 7,450.00                                                                                              | 7,438.15               | 7,384.58               | 7,359.36               | 26.42             | 26.07          | -147.55                            | -151.87                                 | 414.05        | 689.87                     | 638.07                      | 51.80                         | 13.318               |                    |         |
| 7,500.00                                                                                              | 7,488.02               | 7,433.81               | 7,408.20               | 26.60             | 26.25          | -147.49                            | -154.14                                 | 419.78        | 698.58                     | 646.42                      | 52.16                         | 13.394               |                    |         |
| 7,550.00                                                                                              | 7,537.89               | 7,483.04               | 7,457.04               | 26.79             | 26.42          | -147.43                            | -156.41                                 | 425.51        | 707.29                     | 654.78                      | 52.51                         | 13.469               |                    |         |
| 7,600.00                                                                                              | 7,587.76               | 7,532.27               | 7,505.89               | 26.97             | 26.60          | -147.38                            | -158.68                                 | 431.25        | 716.00                     | 663.13                      | 52.87                         | 13.543               |                    |         |
| 7,650.00                                                                                              | 7,637.63               | 7,581.50               | 7,554.73               | 27.16             | 26.78          | -147.32                            | -160.95                                 | 436.98        | 724.71                     | 671.49                      | 53.23                         | 13.616               |                    |         |
| 7,700.00                                                                                              | 7,687.50               | 7,630.73               | 7,603.57               | 27.34             | 26.96          | -147.27                            | -163.22                                 | 442.72        | 733.42                     | 679.84                      | 53.58                         | 13.688               |                    |         |
| 7,750.00                                                                                              | 7,737.37               | 7,679.96               | 7,652.42               | 27.52             | 27.14          | -147.22                            | -165.49                                 | 448.45        | 742.14                     | 688.20                      | 53.94                         | 13.759               |                    |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

|                           |                                 |                                     |                         |
|---------------------------|---------------------------------|-------------------------------------|-------------------------|
| <b>Company:</b>           | WCDSC Permian NM                | <b>Local Co-ordinate Reference:</b> | Well Todd 36 State 231H |
| <b>Project:</b>           | Eddy County (NAD 83 NM Eastern) | <b>TVD Reference:</b>               | RKB @ 3530.10ft         |
| <b>Reference Site:</b>    | Sec. 36-T23S-R31E               | <b>MD Reference:</b>                | RKB @ 3530.10ft         |
| <b>Site Error:</b>        | 0.00 ft                         | <b>North Reference:</b>             | Grid                    |
| <b>Reference Well:</b>    | Todd 36 State 231H              | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Well Error:</b>        | 0.50 ft                         | <b>Output errors are at</b>         | 2.00 sigma              |
| <b>Reference Wellbore</b> | Wellbore #1                     | <b>Database:</b>                    | EDM r5000.141_Prod US   |
| <b>Reference Design:</b>  | Permit Plan 1                   | <b>Offset TVD Reference:</b>        | Offset Datum            |

| Offset Design      Sec. 36-T23S-R31E - Todd 36_25 State Fed Com 232H - Wellbore #1 - Original Planned Path |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Site Error: | 0.00 ft |
|------------------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program:    0-MWD+IFR1                                                                              |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Well Error: | 0.50 ft |
| Reference                                                                                                  |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                   |                    |         |
| Measured Depth (ft)                                                                                        | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | Warning            |         |
| 7,800.00                                                                                                   | 7,787.23            | 7,729.19            | 7,701.26            | 27.71           | 27.32       | -147.17               | -167.76                           | 454.19     | 750.85               | 696.55                | 54.30                   | 13.829            |                    |         |
| 7,850.00                                                                                                   | 7,837.10            | 7,778.42            | 7,750.10            | 27.89           | 27.50       | -147.12               | -170.03                           | 459.92     | 759.57               | 704.91                | 54.65                   | 13.898            |                    |         |
| 7,900.00                                                                                                   | 7,886.97            | 7,827.65            | 7,798.94            | 28.08           | 27.68       | -147.07               | -172.30                           | 465.66     | 768.28               | 713.27                | 55.01                   | 13.966            |                    |         |
| 7,950.00                                                                                                   | 7,936.84            | 7,876.88            | 7,847.79            | 28.26           | 27.86       | -147.03               | -174.57                           | 471.39     | 777.00               | 721.63                | 55.37                   | 14.033            |                    |         |
| 8,000.00                                                                                                   | 7,986.71            | 7,926.11            | 7,896.63            | 28.44           | 28.04       | -146.98               | -176.84                           | 477.13     | 785.71               | 729.98                | 55.73                   | 14.099            |                    |         |
| 8,050.00                                                                                                   | 8,036.58            | 7,975.34            | 7,945.47            | 28.63           | 28.22       | -146.94               | -179.11                           | 482.86     | 794.43               | 738.34                | 56.08                   | 14.165            |                    |         |
| 8,100.00                                                                                                   | 8,086.45            | 8,024.58            | 7,994.32            | 28.81           | 28.40       | -146.90               | -181.38                           | 488.59     | 803.14               | 746.70                | 56.44                   | 14.230            |                    |         |
| 8,150.00                                                                                                   | 8,136.32            | 8,073.81            | 8,043.16            | 29.00           | 28.58       | -146.85               | -183.65                           | 494.33     | 811.86               | 755.06                | 56.80                   | 14.293            |                    |         |
| 8,200.00                                                                                                   | 8,186.19            | 8,123.04            | 8,092.00            | 29.18           | 28.76       | -146.81               | -185.92                           | 500.06     | 820.58               | 763.42                | 57.16                   | 14.356            |                    |         |
| 8,250.00                                                                                                   | 8,236.06            | 8,172.27            | 8,140.84            | 29.37           | 28.95       | -146.77               | -188.19                           | 505.80     | 829.30               | 771.78                | 57.52                   | 14.419            |                    |         |
| 8,300.00                                                                                                   | 8,285.92            | 8,221.50            | 8,189.69            | 29.55           | 29.13       | -146.73               | -190.46                           | 511.53     | 838.02               | 780.14                | 57.87                   | 14.480            |                    |         |
| 8,350.00                                                                                                   | 8,335.79            | 8,270.73            | 8,238.53            | 29.74           | 29.31       | -146.69               | -192.73                           | 517.27     | 846.73               | 788.50                | 58.23                   | 14.541            |                    |         |
| 8,400.00                                                                                                   | 8,385.66            | 8,319.96            | 8,287.37            | 29.92           | 29.49       | -146.65               | -195.00                           | 523.00     | 855.45               | 796.86                | 58.59                   | 14.600            |                    |         |
| 8,450.00                                                                                                   | 8,435.53            | 8,369.19            | 8,336.22            | 30.10           | 29.67       | -146.62               | -197.27                           | 528.74     | 864.17               | 805.22                | 58.95                   | 14.660            |                    |         |
| 8,500.00                                                                                                   | 8,485.40            | 8,418.42            | 8,385.06            | 30.29           | 29.85       | -146.58               | -199.54                           | 534.47     | 872.89               | 813.58                | 59.31                   | 14.718            |                    |         |
| 8,550.00                                                                                                   | 8,535.27            | 8,467.65            | 8,433.90            | 30.47           | 30.03       | -146.54               | -201.81                           | 540.21     | 881.61               | 821.95                | 59.67                   | 14.776            |                    |         |
| 8,600.00                                                                                                   | 8,585.14            | 8,516.88            | 8,482.74            | 30.66           | 30.21       | -146.51               | -204.08                           | 545.94     | 890.33               | 830.31                | 60.03                   | 14.833            |                    |         |
| 8,650.00                                                                                                   | 8,635.01            | 8,566.11            | 8,531.59            | 30.84           | 30.39       | -146.47               | -206.35                           | 551.68     | 899.05               | 838.67                | 60.38                   | 14.889            |                    |         |
| 8,700.00                                                                                                   | 8,684.88            | 8,615.34            | 8,580.43            | 31.03           | 30.57       | -146.44               | -208.62                           | 557.41     | 907.77               | 847.03                | 60.74                   | 14.945            |                    |         |
| 8,750.00                                                                                                   | 8,734.75            | 8,664.57            | 8,629.27            | 31.21           | 30.75       | -146.41               | -210.89                           | 563.14     | 916.50               | 855.39                | 61.10                   | 14.999            |                    |         |
| 8,800.00                                                                                                   | 8,784.61            | 8,713.81            | 8,678.12            | 31.40           | 30.93       | -146.37               | -213.16                           | 568.88     | 925.22               | 863.76                | 61.46                   | 15.054            |                    |         |
| 8,850.00                                                                                                   | 8,834.48            | 8,763.04            | 8,726.96            | 31.58           | 31.12       | -146.34               | -215.43                           | 574.61     | 933.94               | 872.12                | 61.82                   | 15.107            |                    |         |
| 8,900.00                                                                                                   | 8,884.35            | 8,812.27            | 8,775.80            | 31.77           | 31.30       | -146.31               | -217.70                           | 580.35     | 942.66               | 880.48                | 62.18                   | 15.160            |                    |         |
| 8,950.00                                                                                                   | 8,934.22            | 8,869.29            | 8,832.40            | 31.95           | 31.51       | -146.28               | -220.28                           | 586.85     | 951.28               | 888.67                | 62.61                   | 15.195            |                    |         |
| 9,000.00                                                                                                   | 8,984.09            | 8,933.33            | 8,896.06            | 32.14           | 31.74       | -146.26               | -222.82                           | 593.28     | 959.22               | 896.13                | 63.08                   | 15.206            |                    |         |
| 9,050.00                                                                                                   | 9,033.96            | 8,997.67            | 8,960.13            | 32.32           | 31.97       | -146.28               | -224.99                           | 598.75     | 966.40               | 902.85                | 63.55                   | 15.207            |                    |         |
| 9,100.00                                                                                                   | 9,083.83            | 9,062.27            | 9,024.55            | 32.51           | 32.21       | -146.32               | -226.76                           | 603.22     | 972.81               | 908.81                | 64.00                   | 15.199            |                    |         |
| 9,150.00                                                                                                   | 9,133.70            | 9,127.11            | 9,089.28            | 32.69           | 32.44       | -146.38               | -228.13                           | 606.70     | 978.45               | 914.01                | 64.45                   | 15.182            |                    |         |
| 9,200.00                                                                                                   | 9,183.57            | 9,192.14            | 9,154.26            | 32.88           | 32.67       | -146.47               | -229.11                           | 609.16     | 983.33               | 918.45                | 64.88                   | 15.156            |                    |         |
| 9,250.00                                                                                                   | 9,233.44            | 9,257.33            | 9,219.43            | 33.06           | 32.90       | -146.59               | -229.67                           | 610.59     | 987.42               | 922.12                | 65.30                   | 15.121            |                    |         |
| 9,300.00                                                                                                   | 9,283.30            | 9,320.81            | 9,282.90            | 33.25           | 33.12       | -146.72               | -229.83                           | 610.99     | 990.75               | 925.05                | 65.70                   | 15.079            |                    |         |
| 9,350.00                                                                                                   | 9,333.17            | 9,370.68            | 9,332.77            | 33.43           | 33.29       | -146.84               | -229.83                           | 610.99     | 993.78               | 927.72                | 66.06                   | 15.045            |                    |         |
| 9,400.00                                                                                                   | 9,383.05            | 9,420.56            | 9,382.65            | 33.61           | 33.46       | -146.96               | -229.83                           | 610.99     | 996.70               | 930.29                | 66.41                   | 15.009            |                    |         |
| 9,450.00                                                                                                   | 9,432.97            | 9,470.48            | 9,432.57            | 33.80           | 33.64       | -147.07               | -229.83                           | 610.99     | 999.10               | 932.34                | 66.76                   | 14.966            |                    |         |
| 9,500.00                                                                                                   | 9,482.92            | 9,520.43            | 9,482.52            | 33.98           | 33.81       | -147.16               | -229.83                           | 610.99     | 1,000.96             | 933.85                | 67.11                   | 14.915            |                    |         |
| 9,550.00                                                                                                   | 9,532.90            | 9,570.40            | 9,532.50            | 34.16           | 33.98       | -147.22               | -229.83                           | 610.99     | 1,002.27             | 934.81                | 67.46                   | 14.857            |                    |         |
| 9,600.00                                                                                                   | 9,582.89            | 9,620.39            | 9,582.49            | 34.34           | 34.15       | -147.25               | -229.83                           | 610.99     | 1,003.03             | 935.22                | 67.81                   | 14.791            |                    |         |
| 9,650.00                                                                                                   | 9,632.89            | 9,670.39            | 9,632.49            | 34.51           | 34.33       | 87.13                 | -229.83                           | 610.99     | 1,003.25             | 935.09                | 68.16                   | 14.719            |                    |         |
| 9,700.00                                                                                                   | 9,682.89            | 9,716.21            | 9,678.24            | 34.67           | 34.48       | 87.00                 | -227.54                           | 610.98     | 1,003.36             | 934.87                | 68.48                   | 14.651            |                    |         |
| 9,750.00                                                                                                   | 9,732.89            | 9,761.77            | 9,723.41            | 34.84           | 34.64       | 86.67                 | -221.67                           | 610.95     | 1,003.69             | 934.88                | 68.81                   | 14.587            |                    |         |
| 9,800.00                                                                                                   | 9,782.89            | 9,806.13            | 9,766.80            | 35.01           | 34.79       | 86.15                 | -212.53                           | 610.90     | 1,004.29             | 935.17                | 69.12                   | 14.529            |                    |         |
| 9,850.00                                                                                                   | 9,832.89            | 9,848.83            | 9,807.78            | 35.18           | 34.93       | 85.47                 | -200.58                           | 610.84     | 1,005.29             | 935.86                | 69.42                   | 14.481            |                    |         |
| 9,900.00                                                                                                   | 9,882.89            | 9,889.52            | 9,845.91            | 35.35           | 35.05       | 84.66                 | -186.38                           | 610.77     | 1,006.80             | 937.09                | 69.71                   | 14.443            |                    |         |
| 9,950.00                                                                                                   | 9,932.89            | 9,927.95            | 9,880.91            | 35.52           | 35.17       | 83.76                 | -170.52                           | 610.69     | 1,008.97             | 939.01                | 69.97                   | 14.421            |                    |         |
| 10,000.00                                                                                                  | 9,982.89            | 9,964.01            | 9,912.71            | 35.68           | 35.27       | 83.03                 | -153.54                           | 610.60     | 1,011.96             | 941.76                | 70.20                   | 14.416            |                    |         |
| 10,050.00                                                                                                  | 10,032.80           | 10,000.00           | 9,943.32            | 35.85           | 35.38       | 81.71                 | -134.63                           | 610.50     | 1,015.54             | 945.14                | 70.40                   | 14.425            |                    |         |
| 10,100.00                                                                                                  | 10,082.29           | 10,032.83           | 9,970.16            | 36.01           | 35.46       | 80.49                 | -115.73                           | 610.41     | 1,019.44             | 948.89                | 70.55                   | 14.449            |                    |         |
| 10,150.00                                                                                                  | 10,130.97           | 10,066.43           | 9,996.46            | 36.16           | 35.54       | 79.28                 | -94.83                            | 610.30     | 1,023.58             | 952.90                | 70.68                   | 14.482            |                    |         |
| 10,200.00                                                                                                  | 10,178.49           | 10,100.00           | 10,021.48           | 36.31           | 35.63       | 78.12                 | -72.45                            | 610.19     | 1,027.85             | 957.07                | 70.77                   | 14.523            |                    |         |
| 10,250.00                                                                                                  | 10,224.47           | 10,132.34           | 10,044.30           | 36.44           | 35.70       | 77.04                 | -49.53                            | 610.07     | 1,032.16             | 961.33                | 70.83                   | 14.573            |                    |         |
| 10,300.00                                                                                                  | 10,268.57           | 10,164.77           | 10,065.84           | 36.56           | 35.77       | 76.01                 | -25.30                            | 609.95     | 1,036.43             | 965.57                | 70.86                   | 14.627            |                    |         |
| 10,350.00                                                                                                  | 10,310.45           | 10,200.00           | 10,087.65           | 36.67           | 35.84       | 75.01                 | 2.36                              | 609.80     | 1,040.58             | 969.70                | 70.89                   | 14.679            |                    |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

|                           |                                 |                                     |                         |
|---------------------------|---------------------------------|-------------------------------------|-------------------------|
| <b>Company:</b>           | WCDSC Permian NM                | <b>Local Co-ordinate Reference:</b> | Well Todd 36 State 231H |
| <b>Project:</b>           | Eddy County (NAD 83 NM Eastern) | <b>TVD Reference:</b>               | RKB @ 3530.10ft         |
| <b>Reference Site:</b>    | Sec. 36-T23S-R31E               | <b>MD Reference:</b>                | RKB @ 3530.10ft         |
| <b>Site Error:</b>        | 0.00 ft                         | <b>North Reference:</b>             | Grid                    |
| <b>Reference Well:</b>    | Todd 36 State 231H              | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Well Error:</b>        | 0.50 ft                         | <b>Output errors are at</b>         | 2.00 sigma              |
| <b>Reference Wellbore</b> | Wellbore #1                     | <b>Database:</b>                    | EDM r5000.141_Prod US   |
| <b>Reference Design:</b>  | Permit Plan 1                   | <b>Offset TVD Reference:</b>        | Offset Datum            |

| Offset Design Sec. 36-T23S-R31E - Todd 36_25 State Fed Com 232H - Wellbore #1 - Original Planned Path |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|-------------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD+IFR1                                                                            |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.50 ft |
| Reference                                                                                             |                     | Offset              |                     | Semi Major Axis |             | Distance              |                                   |            |                      |                       |                         |                    |         |
| Measured Depth (ft)                                                                                   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 10,400.00                                                                                             | 10,349.79           | 10,228.81           | 10,104.19           | 36.77           | 35.89       | 74.19                 | 25.94                             | 609.68     | 1,044.52             | 973.68                | 70.85                   | 14.744             |         |
| 10,450.00                                                                                             | 10,386.30           | 10,260.49           | 10,120.99           | 36.86           | 35.95       | 73.41                 | 52.79                             | 609.55     | 1,048.20             | 977.38                | 70.82                   | 14.801             |         |
| 10,500.00                                                                                             | 10,419.69           | 10,291.98           | 10,136.20           | 36.94           | 36.00       | 72.72                 | 80.37                             | 609.41     | 1,051.55             | 980.76                | 70.79                   | 14.855             |         |
| 10,550.00                                                                                             | 10,449.71           | 10,323.33           | 10,149.80           | 37.00           | 36.05       | 72.12                 | 108.60                            | 609.26     | 1,054.51             | 983.75                | 70.76                   | 14.903             |         |
| 10,600.00                                                                                             | 10,476.13           | 10,350.00           | 10,160.15           | 37.06           | 36.09       | 71.65                 | 133.18                            | 609.14     | 1,057.05             | 986.35                | 70.70                   | 14.951             |         |
| 10,650.00                                                                                             | 10,498.76           | 10,385.68           | 10,172.18           | 37.12           | 36.14       | 71.21                 | 166.76                            | 608.97     | 1,059.09             | 988.36                | 70.73                   | 14.974             |         |
| 10,700.00                                                                                             | 10,517.42           | 10,416.73           | 10,180.93           | 37.19           | 36.18       | 70.91                 | 196.55                            | 608.81     | 1,060.64             | 989.90                | 70.75                   | 14.992             |         |
| 10,750.00                                                                                             | 10,531.96           | 10,450.00           | 10,188.51           | 37.26           | 36.22       | 70.71                 | 228.94                            | 608.65     | 1,061.67             | 990.87                | 70.80                   | 14.995             |         |
| 10,800.00                                                                                             | 10,542.28           | 10,478.69           | 10,193.52           | 37.35           | 36.25       | 70.62                 | 257.18                            | 608.50     | 1,062.15             | 991.28                | 70.87                   | 14.988             |         |
| 10,850.00                                                                                             | 10,548.30           | 10,509.64           | 10,197.33           | 37.45           | 36.29       | 70.63                 | 287.90                            | 608.35     | 1,062.08             | 991.10                | 70.98                   | 14.964             |         |
| 10,900.00                                                                                             | 10,550.00           | 10,540.61           | 10,199.48           | 37.56           | 36.32       | 70.74                 | 318.79                            | 608.19     | 1,061.47             | 990.34                | 71.12                   | 14.925             |         |
| 10,950.00                                                                                             | 10,550.00           | 10,575.74           | 10,200.00           | 37.68           | 36.35       | 70.76                 | 353.91                            | 608.01     | 1,061.17             | 989.88                | 71.29                   | 14.886             |         |
| 11,000.00                                                                                             | 10,550.00           | 10,625.74           | 10,200.00           | 37.81           | 36.40       | 70.76                 | 403.91                            | 607.75     | 1,061.15             | 989.67                | 71.48                   | 14.846             |         |
| 11,050.00                                                                                             | 10,550.00           | 10,675.74           | 10,200.00           | 37.96           | 36.46       | 70.76                 | 453.91                            | 607.50     | 1,061.12             | 989.43                | 71.70                   | 14.800             |         |
| 11,100.00                                                                                             | 10,550.00           | 10,725.74           | 10,200.00           | 38.12           | 36.52       | 70.76                 | 503.91                            | 607.24     | 1,061.10             | 989.18                | 71.92                   | 14.754             |         |
| 11,150.00                                                                                             | 10,550.00           | 10,775.74           | 10,200.00           | 38.29           | 36.59       | 70.76                 | 553.91                            | 606.99     | 1,061.08             | 988.90                | 72.18                   | 14.701             |         |
| 11,200.00                                                                                             | 10,550.00           | 10,825.74           | 10,200.00           | 38.48           | 36.67       | 70.76                 | 603.91                            | 606.73     | 1,061.06             | 988.61                | 72.44                   | 14.647             |         |
| 11,250.00                                                                                             | 10,550.00           | 10,875.74           | 10,200.00           | 38.68           | 36.76       | 70.76                 | 653.91                            | 606.48     | 1,061.03             | 988.30                | 72.74                   | 14.587             |         |
| 11,300.00                                                                                             | 10,550.00           | 10,925.74           | 10,200.00           | 38.89           | 36.86       | 70.76                 | 703.91                            | 606.22     | 1,061.01             | 987.97                | 73.04                   | 14.527             |         |
| 11,350.00                                                                                             | 10,550.00           | 10,975.74           | 10,200.00           | 39.12           | 36.96       | 70.76                 | 753.91                            | 605.97     | 1,060.99             | 987.62                | 73.37                   | 14.461             |         |
| 11,400.00                                                                                             | 10,550.00           | 11,025.74           | 10,200.00           | 39.35           | 37.07       | 70.76                 | 803.91                            | 605.71     | 1,060.96             | 987.26                | 73.70                   | 14.395             |         |
| 11,450.00                                                                                             | 10,550.00           | 11,075.74           | 10,200.00           | 39.60           | 37.18       | 70.76                 | 853.91                            | 605.46     | 1,060.94             | 986.87                | 74.07                   | 14.323             |         |
| 11,500.00                                                                                             | 10,550.00           | 11,125.74           | 10,200.00           | 39.85           | 37.30       | 70.76                 | 903.91                            | 605.20     | 1,060.92             | 986.48                | 74.44                   | 14.251             |         |
| 11,550.00                                                                                             | 10,550.00           | 11,175.74           | 10,200.00           | 40.13           | 37.43       | 70.76                 | 953.90                            | 604.95     | 1,060.89             | 986.05                | 74.84                   | 14.175             |         |
| 11,600.00                                                                                             | 10,550.00           | 11,225.74           | 10,200.00           | 40.40           | 37.56       | 70.76                 | 1,003.90                          | 604.69     | 1,060.87             | 985.62                | 75.25                   | 14.098             |         |
| 11,650.00                                                                                             | 10,550.00           | 11,275.74           | 10,200.00           | 40.70           | 37.70       | 70.76                 | 1,053.90                          | 604.44     | 1,060.85             | 985.17                | 75.68                   | 14.017             |         |
| 11,700.00                                                                                             | 10,550.00           | 11,325.74           | 10,200.00           | 41.00           | 37.85       | 70.76                 | 1,103.90                          | 604.18     | 1,060.83             | 984.71                | 76.12                   | 13.936             |         |
| 11,750.00                                                                                             | 10,550.00           | 11,375.74           | 10,200.00           | 41.32           | 38.00       | 70.76                 | 1,153.90                          | 603.92     | 1,060.80             | 984.22                | 76.58                   | 13.851             |         |
| 11,800.00                                                                                             | 10,550.00           | 11,425.74           | 10,200.00           | 41.64           | 38.16       | 70.76                 | 1,203.90                          | 603.67     | 1,060.78             | 983.73                | 77.06                   | 13.767             |         |
| 11,850.00                                                                                             | 10,550.00           | 11,475.74           | 10,200.00           | 41.98           | 38.32       | 70.76                 | 1,253.90                          | 603.41     | 1,060.76             | 983.21                | 77.55                   | 13.678             |         |
| 11,900.00                                                                                             | 10,550.00           | 11,525.74           | 10,200.00           | 42.32           | 38.49       | 70.76                 | 1,303.90                          | 603.16     | 1,060.73             | 982.68                | 78.05                   | 13.590             |         |
| 11,950.00                                                                                             | 10,550.00           | 11,575.74           | 10,200.00           | 42.67           | 38.67       | 70.76                 | 1,353.90                          | 602.90     | 1,060.71             | 982.14                | 78.58                   | 13.499             |         |
| 12,000.00                                                                                             | 10,550.00           | 11,625.74           | 10,200.00           | 43.03           | 38.85       | 70.76                 | 1,403.90                          | 602.65     | 1,060.69             | 981.58                | 79.10                   | 13.409             |         |
| 12,050.00                                                                                             | 10,550.00           | 11,675.74           | 10,200.00           | 43.41           | 39.03       | 70.76                 | 1,453.90                          | 602.39     | 1,060.67             | 981.01                | 79.66                   | 13.315             |         |
| 12,100.00                                                                                             | 10,550.00           | 11,725.74           | 10,200.00           | 43.78           | 39.22       | 70.75                 | 1,503.90                          | 602.14     | 1,060.64             | 980.43                | 80.22                   | 13.222             |         |
| 12,150.00                                                                                             | 10,550.00           | 11,775.74           | 10,200.00           | 44.18           | 39.42       | 70.75                 | 1,553.90                          | 601.88     | 1,060.62             | 979.83                | 80.79                   | 13.127             |         |
| 12,200.00                                                                                             | 10,550.00           | 11,825.74           | 10,200.00           | 44.57           | 39.62       | 70.75                 | 1,603.90                          | 601.63     | 1,060.60             | 979.22                | 81.38                   | 13.033             |         |
| 12,250.00                                                                                             | 10,550.00           | 11,875.74           | 10,200.00           | 44.98           | 39.82       | 70.75                 | 1,653.90                          | 601.37     | 1,060.57             | 978.59                | 81.98                   | 12.936             |         |
| 12,300.00                                                                                             | 10,550.00           | 11,925.74           | 10,200.00           | 45.39           | 40.03       | 70.75                 | 1,703.89                          | 601.12     | 1,060.55             | 977.96                | 82.59                   | 12.841             |         |
| 12,350.00                                                                                             | 10,550.00           | 11,975.74           | 10,200.00           | 45.82           | 40.25       | 70.75                 | 1,753.89                          | 600.86     | 1,060.53             | 977.31                | 83.22                   | 12.743             |         |
| 12,400.00                                                                                             | 10,550.00           | 12,025.74           | 10,200.00           | 46.24           | 40.47       | 70.75                 | 1,803.89                          | 600.61     | 1,060.51             | 976.65                | 83.86                   | 12.647             |         |
| 12,450.00                                                                                             | 10,550.00           | 12,075.74           | 10,200.00           | 46.68           | 40.69       | 70.75                 | 1,853.89                          | 600.35     | 1,060.48             | 975.97                | 84.51                   | 12.549             |         |
| 12,500.00                                                                                             | 10,550.00           | 12,125.74           | 10,200.00           | 47.12           | 40.92       | 70.75                 | 1,903.89                          | 600.10     | 1,060.46             | 975.29                | 85.17                   | 12.452             |         |
| 12,550.00                                                                                             | 10,550.00           | 12,175.74           | 10,200.00           | 47.58           | 41.15       | 70.75                 | 1,953.89                          | 599.84     | 1,060.44             | 974.60                | 85.84                   | 12.353             |         |
| 12,600.00                                                                                             | 10,550.00           | 12,225.74           | 10,200.00           | 48.03           | 41.39       | 70.75                 | 2,003.89                          | 599.58     | 1,060.41             | 973.89                | 86.52                   | 12.256             |         |
| 12,650.00                                                                                             | 10,550.00           | 12,275.74           | 10,200.00           | 48.50           | 41.63       | 70.75                 | 2,053.89                          | 599.33     | 1,060.39             | 973.17                | 87.22                   | 12.158             |         |
| 12,700.00                                                                                             | 10,550.00           | 12,325.74           | 10,200.00           | 48.97           | 41.88       | 70.75                 | 2,103.89                          | 599.07     | 1,060.37             | 972.45                | 87.92                   | 12.061             |         |
| 12,750.00                                                                                             | 10,550.00           | 12,375.74           | 10,200.00           | 49.44           | 42.13       | 70.75                 | 2,153.89                          | 598.82     | 1,060.35             | 971.71                | 88.63                   | 11.963             |         |
| 12,800.00                                                                                             | 10,550.00           | 12,425.74           | 10,200.00           | 49.92           | 42.38       | 70.75                 | 2,203.89                          | 598.56     | 1,060.32             | 970.97                | 89.35                   | 11.867             |         |
| 12,850.00                                                                                             | 10,550.00           | 12,475.74           | 10,200.00           | 50.42           | 42.64       | 70.75                 | 2,253.89                          | 598.31     | 1,060.30             | 970.21                | 90.09                   | 11.769             |         |
| 12,900.00                                                                                             | 10,550.00           | 12,525.74           | 10,200.00           | 50.91           | 42.90       | 70.75                 | 2,303.89                          | 598.05     | 1,060.28             | 969.45                | 90.83                   | 11.673             |         |
| 12,950.00                                                                                             | 10,550.00           | 12,575.74           | 10,200.00           | 51.41           | 43.17       | 70.75                 | 2,353.89                          | 597.80     | 1,060.25             | 968.67                | 91.58                   | 11.577             |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

Company: WCDSC Permian NM  
Project: Eddy County (NAD 83 NM Eastern)  
Reference Site: Sec. 36-T23S-R31E  
Site Error: 0.00 ft  
Reference Well: Todd 36 State 231H  
Well Error: 0.50 ft  
Reference Wellbore: Wellbore #1  
Reference Design: Permit Plan 1

Local Co-ordinate Reference: Well Todd 36 State 231H  
TVD Reference: RKB @ 3530.10ft  
MD Reference: RKB @ 3530.10ft  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Output errors are at: 2.00 sigma  
Database: EDM r5000.141\_Prod US  
Offset TVD Reference: Offset Datum

| Offset Design              |                |                |                |                 |        |                   |                              |        |                 |                  |                    | Sec. 36-T23S-R31E - Todd 36_25 State Fed Com 232H - Wellbore #1 - Original Planned Path |         | Offset Site Error: 0.00 ft |  |
|----------------------------|----------------|----------------|----------------|-----------------|--------|-------------------|------------------------------|--------|-----------------|------------------|--------------------|-----------------------------------------------------------------------------------------|---------|----------------------------|--|
| Survey Program: 0-MWD+IFR1 |                |                |                |                 |        |                   |                              |        |                 |                  |                    | Offset Well Error: 0.50 ft                                                              |         |                            |  |
| Reference                  |                | Offset         |                | Semi Major Axis |        |                   | Distance                     |        |                 |                  |                    |                                                                                         | Warning |                            |  |
| Measured Depth             | Vertical Depth | Measured Depth | Vertical Depth | Reference       | Offset | Highside Toolface | Offset Wellbore Centre +N/-S | +E/-W  | Between Centres | Between Ellipses | Minimum Separation | Separation Factor                                                                       |         |                            |  |
| (ft)                       | (ft)           | (ft)           | (ft)           | (ft)            | (ft)   | (°)               | (ft)                         | (ft)   | (ft)            | (ft)             | (ft)               |                                                                                         |         |                            |  |
| 13,000.00                  | 10,550.00      | 12,625.74      | 10,200.00      | 51.91           | 43.44  | 70.75             | 2,403.89                     | 597.54 | 1,060.23        | 967.89           | 92.34              | 11.482                                                                                  |         |                            |  |
| 13,050.00                  | 10,550.00      | 12,675.74      | 10,200.00      | 52.43           | 43.71  | 70.75             | 2,453.88                     | 597.29 | 1,060.21        | 967.10           | 93.11              | 11.387                                                                                  |         |                            |  |
| 13,100.00                  | 10,550.00      | 12,725.74      | 10,200.00      | 52.94           | 43.99  | 70.75             | 2,503.88                     | 597.03 | 1,060.19        | 966.30           | 93.88              | 11.293                                                                                  |         |                            |  |
| 13,150.00                  | 10,550.00      | 12,775.74      | 10,200.00      | 53.46           | 44.27  | 70.75             | 2,553.88                     | 596.78 | 1,060.16        | 965.49           | 94.67              | 11.198                                                                                  |         |                            |  |
| 13,200.00                  | 10,550.00      | 12,825.74      | 10,200.00      | 53.98           | 44.56  | 70.75             | 2,603.88                     | 596.52 | 1,060.14        | 964.68           | 95.46              | 11.105                                                                                  |         |                            |  |
| 13,250.00                  | 10,550.00      | 12,875.74      | 10,200.00      | 54.52           | 44.85  | 70.74             | 2,653.88                     | 596.27 | 1,060.12        | 963.85           | 96.26              | 11.013                                                                                  |         |                            |  |
| 13,300.00                  | 10,550.00      | 12,925.74      | 10,200.00      | 55.05           | 45.14  | 70.74             | 2,703.88                     | 596.01 | 1,060.09        | 963.02           | 97.07              | 10.921                                                                                  |         |                            |  |
| 13,350.00                  | 10,550.00      | 12,975.74      | 10,200.00      | 55.59           | 45.43  | 70.74             | 2,753.88                     | 595.76 | 1,060.07        | 962.18           | 97.89              | 10.829                                                                                  |         |                            |  |
| 13,400.00                  | 10,550.00      | 13,025.74      | 10,200.00      | 56.13           | 45.73  | 70.74             | 2,803.88                     | 595.50 | 1,060.05        | 961.34           | 98.71              | 10.739                                                                                  |         |                            |  |
| 13,450.00                  | 10,550.00      | 13,075.74      | 10,200.00      | 56.68           | 46.03  | 70.74             | 2,853.88                     | 595.24 | 1,060.03        | 960.48           | 99.54              | 10.649                                                                                  |         |                            |  |
| 13,500.00                  | 10,550.00      | 13,125.74      | 10,200.00      | 57.23           | 46.34  | 70.74             | 2,903.88                     | 594.99 | 1,060.00        | 959.63           | 100.38             | 10.560                                                                                  |         |                            |  |
| 13,550.00                  | 10,550.00      | 13,175.74      | 10,200.00      | 57.79           | 46.64  | 70.74             | 2,953.88                     | 594.73 | 1,059.98        | 958.76           | 101.22             | 10.472                                                                                  |         |                            |  |
| 13,600.00                  | 10,550.00      | 13,225.74      | 10,200.00      | 58.34           | 46.95  | 70.74             | 3,003.88                     | 594.48 | 1,059.96        | 957.89           | 102.07             | 10.385                                                                                  |         |                            |  |
| 13,650.00                  | 10,550.00      | 13,275.74      | 10,200.00      | 58.91           | 47.27  | 70.74             | 3,053.88                     | 594.22 | 1,059.93        | 957.01           | 102.93             | 10.298                                                                                  |         |                            |  |
| 13,700.00                  | 10,550.00      | 13,325.74      | 10,200.00      | 59.47           | 47.58  | 70.74             | 3,103.88                     | 593.97 | 1,059.91        | 956.12           | 103.79             | 10.212                                                                                  |         |                            |  |
| 13,750.00                  | 10,550.00      | 13,375.74      | 10,200.00      | 60.04           | 47.90  | 70.74             | 3,153.88                     | 593.71 | 1,059.89        | 955.23           | 104.66             | 10.127                                                                                  |         |                            |  |
| 13,800.00                  | 10,550.00      | 13,425.74      | 10,200.00      | 60.62           | 48.22  | 70.74             | 3,203.87                     | 593.46 | 1,059.87        | 954.33           | 105.53             | 10.043                                                                                  |         |                            |  |
| 13,850.00                  | 10,550.00      | 13,475.74      | 10,200.00      | 61.19           | 48.55  | 70.74             | 3,253.87                     | 593.20 | 1,059.84        | 953.43           | 106.41             | 9.960                                                                                   |         |                            |  |
| 13,900.00                  | 10,550.00      | 13,525.74      | 10,200.00      | 61.77           | 48.87  | 70.74             | 3,303.87                     | 592.95 | 1,059.82        | 952.52           | 107.30             | 9.877                                                                                   |         |                            |  |
| 13,950.00                  | 10,550.00      | 13,575.74      | 10,200.00      | 62.36           | 49.20  | 70.74             | 3,353.87                     | 592.69 | 1,059.80        | 951.61           | 108.19             | 9.796                                                                                   |         |                            |  |
| 14,000.00                  | 10,550.00      | 13,625.74      | 10,200.00      | 62.94           | 49.54  | 70.74             | 3,403.87                     | 592.44 | 1,059.77        | 950.69           | 109.08             | 9.715                                                                                   |         |                            |  |
| 14,050.00                  | 10,550.00      | 13,675.74      | 10,200.00      | 63.53           | 49.87  | 70.74             | 3,453.87                     | 592.18 | 1,059.75        | 949.76           | 109.99             | 9.635                                                                                   |         |                            |  |
| 14,100.00                  | 10,550.00      | 13,725.74      | 10,200.00      | 64.12           | 50.21  | 70.74             | 3,503.87                     | 591.93 | 1,059.73        | 948.84           | 110.89             | 9.556                                                                                   |         |                            |  |
| 14,150.00                  | 10,550.00      | 13,775.74      | 10,200.00      | 64.72           | 50.55  | 70.74             | 3,553.87                     | 591.67 | 1,059.71        | 947.90           | 111.81             | 9.478                                                                                   |         |                            |  |
| 14,200.00                  | 10,550.00      | 13,825.74      | 10,200.00      | 65.31           | 50.89  | 70.74             | 3,603.87                     | 591.41 | 1,059.68        | 946.96           | 112.72             | 9.401                                                                                   |         |                            |  |
| 14,250.00                  | 10,550.00      | 13,875.74      | 10,200.00      | 65.91           | 51.24  | 70.74             | 3,653.87                     | 591.16 | 1,059.66        | 946.02           | 113.64             | 9.324                                                                                   |         |                            |  |
| 14,300.00                  | 10,550.00      | 13,925.74      | 10,200.00      | 66.51           | 51.58  | 70.74             | 3,703.87                     | 590.90 | 1,059.64        | 945.07           | 114.57             | 9.249                                                                                   |         |                            |  |
| 14,350.00                  | 10,550.00      | 13,975.74      | 10,200.00      | 67.12           | 51.93  | 70.74             | 3,753.87                     | 590.65 | 1,059.61        | 944.11           | 115.50             | 9.174                                                                                   |         |                            |  |
| 14,400.00                  | 10,550.00      | 14,025.74      | 10,200.00      | 67.72           | 52.28  | 70.73             | 3,803.87                     | 590.39 | 1,059.59        | 943.16           | 116.43             | 9.100                                                                                   |         |                            |  |
| 14,450.00                  | 10,550.00      | 14,075.74      | 10,200.00      | 68.33           | 52.64  | 70.73             | 3,853.87                     | 590.14 | 1,059.57        | 942.20           | 117.37             | 9.027                                                                                   |         |                            |  |
| 14,500.00                  | 10,550.00      | 14,125.74      | 10,200.00      | 68.95           | 52.99  | 70.73             | 3,903.87                     | 589.88 | 1,059.55        | 941.23           | 118.31             | 8.955                                                                                   |         |                            |  |
| 14,550.00                  | 10,550.00      | 14,175.74      | 10,200.00      | 69.56           | 53.35  | 70.73             | 3,953.87                     | 589.63 | 1,059.52        | 940.26           | 119.26             | 8.884                                                                                   |         |                            |  |
| 14,600.00                  | 10,550.00      | 14,225.74      | 10,200.00      | 70.18           | 53.71  | 70.73             | 4,003.86                     | 589.37 | 1,059.50        | 939.29           | 120.21             | 8.814                                                                                   |         |                            |  |
| 14,650.00                  | 10,550.00      | 14,275.74      | 10,200.00      | 70.80           | 54.07  | 70.73             | 4,053.86                     | 589.12 | 1,059.48        | 938.31           | 121.17             | 8.744                                                                                   |         |                            |  |
| 14,700.00                  | 10,550.00      | 14,325.74      | 10,200.00      | 71.41           | 54.43  | 70.73             | 4,103.86                     | 588.86 | 1,059.45        | 937.33           | 122.13             | 8.675                                                                                   |         |                            |  |
| 14,750.00                  | 10,550.00      | 14,375.74      | 10,200.00      | 72.04           | 54.80  | 70.73             | 4,153.86                     | 588.61 | 1,059.43        | 936.34           | 123.09             | 8.607                                                                                   |         |                            |  |
| 14,800.00                  | 10,550.00      | 14,425.74      | 10,200.00      | 72.66           | 55.16  | 70.73             | 4,203.86                     | 588.35 | 1,059.41        | 935.35           | 124.05             | 8.540                                                                                   |         |                            |  |
| 14,850.00                  | 10,550.00      | 14,475.74      | 10,200.00      | 73.29           | 55.53  | 70.73             | 4,253.86                     | 588.10 | 1,059.39        | 934.36           | 125.03             | 8.473                                                                                   |         |                            |  |
| 14,900.00                  | 10,550.00      | 14,525.74      | 10,200.00      | 73.92           | 55.90  | 70.73             | 4,303.86                     | 587.84 | 1,059.36        | 933.36           | 126.00             | 8.408                                                                                   |         |                            |  |
| 14,950.00                  | 10,550.00      | 14,575.74      | 10,200.00      | 74.55           | 56.28  | 70.73             | 4,353.86                     | 587.59 | 1,059.34        | 932.36           | 126.97             | 8.343                                                                                   |         |                            |  |
| 15,000.00                  | 10,550.00      | 14,625.74      | 10,200.00      | 75.18           | 56.65  | 70.73             | 4,403.86                     | 587.33 | 1,059.32        | 931.36           | 127.95             | 8.279                                                                                   |         |                            |  |
| 15,050.00                  | 10,550.00      | 14,675.74      | 10,200.00      | 75.81           | 57.03  | 70.73             | 4,453.86                     | 587.07 | 1,059.29        | 930.36           | 128.94             | 8.216                                                                                   |         |                            |  |
| 15,100.00                  | 10,550.00      | 14,725.74      | 10,200.00      | 76.45           | 57.40  | 70.73             | 4,503.86                     | 586.82 | 1,059.27        | 929.35           | 129.92             | 8.153                                                                                   |         |                            |  |
| 15,150.00                  | 10,550.00      | 14,775.74      | 10,200.00      | 77.08           | 57.78  | 70.73             | 4,553.86                     | 586.56 | 1,059.25        | 928.34           | 130.91             | 8.091                                                                                   |         |                            |  |
| 15,200.00                  | 10,550.00      | 14,825.74      | 10,200.00      | 77.72           | 58.16  | 70.73             | 4,603.86                     | 586.31 | 1,059.22        | 927.32           | 131.90             | 8.030                                                                                   |         |                            |  |
| 15,250.00                  | 10,550.00      | 14,875.74      | 10,200.00      | 78.36           | 58.55  | 70.73             | 4,653.86                     | 586.05 | 1,059.20        | 926.30           | 132.90             | 7.970                                                                                   |         |                            |  |
| 15,300.00                  | 10,550.00      | 14,925.74      | 10,200.00      | 79.00           | 58.93  | 70.73             | 4,703.86                     | 585.80 | 1,059.18        | 925.28           | 133.90             | 7.910                                                                                   |         |                            |  |
| 15,350.00                  | 10,550.00      | 14,975.74      | 10,200.00      | 79.65           | 59.31  | 70.73             | 4,753.85                     | 585.54 | 1,059.16        | 924.26           | 134.90             | 7.852                                                                                   |         |                            |  |
| 15,400.00                  | 10,550.00      | 15,025.74      | 10,200.00      | 80.29           | 59.70  | 70.73             | 4,803.85                     | 585.29 | 1,059.13        | 923.23           | 135.90             | 7.793                                                                                   |         |                            |  |
| 15,450.00                  | 10,550.00      | 15,075.74      | 10,200.00      | 80.94           | 60.09  | 70.73             | 4,853.85                     | 585.03 | 1,059.11        | 922.20           | 136.91             | 7.736                                                                                   |         |                            |  |
| 15,500.00                  | 10,550.00      | 15,125.74      | 10,200.00      | 81.58           | 60.48  | 70.73             | 4,903.85                     | 584.78 | 1,059.09        | 921.17           | 137.92             | 7.679                                                                                   |         |                            |  |
| 15,526.07                  | 10,550.00      | 15,151.81      | 10,200.00      | 81.92           | 60.68  | 70.73             | 4,929.92                     | 584.64 | 1,059.08        | 920.63           | 138.44             | 7.650                                                                                   |         |                            |  |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

|                           |                                 |                                     |                         |
|---------------------------|---------------------------------|-------------------------------------|-------------------------|
| <b>Company:</b>           | WCDSC Permian NM                | <b>Local Co-ordinate Reference:</b> | Well Todd 36 State 231H |
| <b>Project:</b>           | Eddy County (NAD 83 NM Eastern) | <b>TVD Reference:</b>               | RKB @ 3530.10ft         |
| <b>Reference Site:</b>    | Sec. 36-T23S-R31E               | <b>MD Reference:</b>                | RKB @ 3530.10ft         |
| <b>Site Error:</b>        | 0.00 ft                         | <b>North Reference:</b>             | Grid                    |
| <b>Reference Well:</b>    | Todd 36 State 231H              | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Well Error:</b>        | 0.50 ft                         | <b>Output errors are at</b>         | 2.00 sigma              |
| <b>Reference Wellbore</b> | Wellbore #1                     | <b>Database:</b>                    | EDM r5000.141_Prod US   |
| <b>Reference Design:</b>  | Permit Plan 1                   | <b>Offset TVD Reference:</b>        | Offset Datum            |

# Anticollision Report

|                           |                                 |                                     |                         |
|---------------------------|---------------------------------|-------------------------------------|-------------------------|
| <b>Company:</b>           | WCDSC Permian NM                | <b>Local Co-ordinate Reference:</b> | Well Todd 36 State 231H |
| <b>Project:</b>           | Eddy County (NAD 83 NM Eastern) | <b>TVD Reference:</b>               | RKB @ 3530.10ft         |
| <b>Reference Site:</b>    | Sec. 36-T23S-R31E               | <b>MD Reference:</b>                | RKB @ 3530.10ft         |
| <b>Site Error:</b>        | 0.00 ft                         | <b>North Reference:</b>             | Grid                    |
| <b>Reference Well:</b>    | Todd 36 State 231H              | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Well Error:</b>        | 0.50 ft                         | <b>Output errors are at</b>         | 2.00 sigma              |
| <b>Reference Wellbore</b> | Wellbore #1                     | <b>Database:</b>                    | EDM r5000.141_Prod US   |
| <b>Reference Design:</b>  | Permit Plan 1                   | <b>Offset TVD Reference:</b>        | Offset Datum            |

| Offset Design Sec. 36-T23S-R31E - Todd 36-25 State Fed Com 230H - Wellbore #1 - Permit Plan 1 |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|-----------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD+HDGM                                                                    |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.50 ft |
| Reference                                                                                     | Offset              | Semi Major Axis     |                     | Distance       |             | Warning               |                                   |            |                      |                       |                         |                    |         |
| Measured Depth (ft)                                                                           | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  |         |
| 0.00                                                                                          | 0.00                | 0.80                | -0.80               | 0.50           | 0.50        | 89.68                 | 0.33                              | 60.01      | 60.01                |                       |                         |                    |         |
| 50.00                                                                                         | 50.00               | 49.20               | 49.20               | 0.50           | 0.50        | 89.68                 | 0.33                              | 60.01      | 60.01                | 59.00                 | 1.01                    | 59.632             |         |
| 100.00                                                                                        | 100.00              | 100.80              | 99.20               | 0.52           | 0.52        | 89.68                 | 0.33                              | 60.01      | 60.01                | 58.97                 | 1.04                    | 57.911             |         |
| 150.00                                                                                        | 150.00              | 149.20              | 149.20              | 0.59           | 0.59        | 89.68                 | 0.33                              | 60.01      | 60.01                | 58.83                 | 1.18                    | 50.902             |         |
| 200.00                                                                                        | 200.00              | 200.80              | 199.20              | 0.70           | 0.70        | 89.68                 | 0.33                              | 60.01      | 60.01                | 58.60                 | 1.41                    | 42.675             |         |
| 250.00                                                                                        | 250.00              | 249.20              | 249.20              | 0.84           | 0.84        | 89.68                 | 0.33                              | 60.01      | 60.01                | 58.34                 | 1.67                    | 35.868             |         |
| 300.00                                                                                        | 300.00              | 300.80              | 299.20              | 0.99           | 0.99        | 89.68                 | 0.33                              | 60.01      | 60.01                | 58.03                 | 1.98                    | 30.352             |         |
| 350.00                                                                                        | 350.00              | 349.20              | 349.20              | 1.15           | 1.14        | 89.68                 | 0.33                              | 60.01      | 60.01                | 57.72                 | 2.29                    | 26.224             |         |
| 400.00                                                                                        | 400.00              | 400.80              | 399.20              | 1.31           | 1.31        | 89.68                 | 0.33                              | 60.01      | 60.01                | 57.39                 | 2.62                    | 22.898             |         |
| 450.00                                                                                        | 450.00              | 449.20              | 449.20              | 1.48           | 1.47        | 89.68                 | 0.33                              | 60.01      | 60.01                | 57.06                 | 2.95                    | 20.343             |         |
| 500.00                                                                                        | 500.00              | 500.80              | 499.20              | 1.65           | 1.65        | 89.68                 | 0.33                              | 60.01      | 60.01                | 56.72                 | 3.29                    | 18.213             |         |
| 550.00                                                                                        | 550.00              | 549.20              | 549.20              | 1.82           | 1.81        | 89.68                 | 0.33                              | 60.01      | 60.01                | 56.38                 | 3.63                    | 16.520             |         |
| 600.00                                                                                        | 600.00              | 600.80              | 599.20              | 1.99           | 1.99        | 89.68                 | 0.33                              | 60.01      | 60.01                | 56.03                 | 3.98                    | 15.063             |         |
| 650.00                                                                                        | 650.00              | 649.20              | 649.20              | 2.16           | 2.16        | 89.68                 | 0.33                              | 60.01      | 60.01                | 55.68                 | 4.33                    | 13.871             |         |
| 700.00                                                                                        | 700.00              | 700.80              | 699.20              | 2.34           | 2.34        | 89.68                 | 0.33                              | 60.01      | 60.01                | 55.33                 | 4.68                    | 12.819             |         |
| 750.00                                                                                        | 750.00              | 749.20              | 749.20              | 2.51           | 2.51        | 89.68                 | 0.33                              | 60.01      | 60.01                | 54.98                 | 5.03                    | 11.939             |         |
| 800.00                                                                                        | 800.00              | 800.80              | 799.20              | 2.69           | 2.69        | 89.68                 | 0.33                              | 60.01      | 60.01                | 54.63                 | 5.38                    | 11.146             |         |
| 850.00                                                                                        | 850.00              | 849.20              | 849.20              | 2.87           | 2.86        | 89.68                 | 0.33                              | 60.01      | 60.01                | 54.28                 | 5.73                    | 10.471             |         |
| 900.00                                                                                        | 900.00              | 900.80              | 899.20              | 3.04           | 3.05        | 89.68                 | 0.33                              | 60.01      | 60.01                | 53.92                 | 6.09                    | 9.854              |         |
| 950.00                                                                                        | 950.00              | 949.20              | 949.20              | 3.22           | 3.22        | 89.68                 | 0.33                              | 60.01      | 60.01                | 53.57                 | 6.44                    | 9.321              |         |
| 1,000.00                                                                                      | 1,000.00            | 1,000.80            | 999.20              | 3.40           | 3.40        | 89.68                 | 0.33                              | 60.01      | 60.01                | 53.21                 | 6.80                    | 8.828              |         |
| 1,050.00                                                                                      | 1,050.00            | 1,049.20            | 1,049.20            | 3.58           | 3.57        | 89.68                 | 0.33                              | 60.01      | 60.01                | 52.86                 | 7.15                    | 8.396              |         |
| 1,100.00                                                                                      | 1,100.00            | 1,100.80            | 1,099.20            | 3.75           | 3.76        | 89.68                 | 0.33                              | 60.01      | 60.01                | 52.50                 | 7.51                    | 7.993              |         |
| 1,150.00                                                                                      | 1,150.00            | 1,149.20            | 1,149.20            | 3.93           | 3.93        | 89.68                 | 0.33                              | 60.01      | 60.01                | 52.15                 | 7.86                    | 7.637              |         |
| 1,200.00                                                                                      | 1,200.00            | 1,200.80            | 1,199.20            | 4.11           | 4.11        | 89.68                 | 0.33                              | 60.01      | 60.01                | 51.79                 | 8.22                    | 7.301              |         |
| 1,250.00                                                                                      | 1,250.00            | 1,249.20            | 1,249.20            | 4.29           | 4.28        | 89.68                 | 0.33                              | 60.01      | 60.01                | 51.44                 | 8.57                    | 7.003              |         |
| 1,300.00                                                                                      | 1,300.00            | 1,300.80            | 1,299.20            | 4.46           | 4.47        | 89.68                 | 0.33                              | 60.01      | 60.01                | 51.08                 | 8.93                    | 6.719              |         |
| 1,350.00                                                                                      | 1,350.00            | 1,349.20            | 1,349.20            | 4.64           | 4.64        | 89.68                 | 0.33                              | 60.01      | 60.01                | 50.73                 | 9.28                    | 6.465              |         |
| 1,400.00                                                                                      | 1,400.00            | 1,400.80            | 1,399.20            | 4.82           | 4.82        | 89.68                 | 0.33                              | 60.01      | 60.01                | 50.37                 | 9.64                    | 6.223              |         |
| 1,450.00                                                                                      | 1,450.00            | 1,449.20            | 1,449.20            | 5.00           | 5.00        | 89.68                 | 0.33                              | 60.01      | 60.01                | 50.02                 | 9.99                    | 6.004              |         |
| 1,500.00                                                                                      | 1,500.00            | 1,500.80            | 1,499.20            | 5.18           | 5.18        | 89.68                 | 0.33                              | 60.01      | 60.01                | 49.65                 | 10.36                   | 5.794              |         |
| 1,550.00                                                                                      | 1,550.00            | 1,549.20            | 1,549.20            | 5.36           | 5.35        | 89.68                 | 0.33                              | 60.01      | 60.01                | 49.30                 | 10.71                   | 5.604              |         |
| 1,600.00                                                                                      | 1,600.00            | 1,600.80            | 1,599.20            | 5.53           | 5.54        | 89.68                 | 0.33                              | 60.01      | 60.01                | 48.94                 | 11.07                   | 5.421              |         |
| 1,650.00                                                                                      | 1,650.00            | 1,649.20            | 1,649.20            | 5.71           | 5.71        | 89.68                 | 0.33                              | 60.01      | 60.01                | 48.59                 | 11.42                   | 5.254              |         |
| 1,700.00                                                                                      | 1,700.00            | 1,700.80            | 1,699.20            | 5.89           | 5.89        | 89.68                 | 0.33                              | 60.01      | 60.01                | 48.23                 | 11.79                   | 5.092              |         |
| 1,750.00                                                                                      | 1,750.00            | 1,749.20            | 1,749.20            | 6.07           | 6.07        | 89.68                 | 0.33                              | 60.01      | 60.01                | 47.87                 | 12.14                   | 4.945 Alert        |         |
| 1,800.00                                                                                      | 1,800.00            | 1,800.80            | 1,799.20            | 6.25           | 6.25        | 89.68                 | 0.33                              | 60.01      | 60.01                | 47.51                 | 12.50                   | 4.801 Alert        |         |
| 1,850.00                                                                                      | 1,850.00            | 1,849.20            | 1,849.20            | 6.43           | 6.42        | 89.68                 | 0.33                              | 60.01      | 60.01                | 47.16                 | 12.85                   | 4.670 Alert        |         |
| 1,900.00                                                                                      | 1,900.00            | 1,900.80            | 1,899.20            | 6.61           | 6.61        | 89.68                 | 0.33                              | 60.01      | 60.01                | 46.80                 | 13.21                   | 4.541 Alert        |         |
| 1,950.00                                                                                      | 1,950.00            | 1,949.20            | 1,949.20            | 6.78           | 6.78        | 89.68                 | 0.33                              | 60.01      | 60.01                | 46.44                 | 13.57                   | 4.424 Alert        |         |
| 2,000.00                                                                                      | 2,000.00            | 2,000.80            | 1,999.20            | 6.96           | 6.97        | 89.68                 | 0.33                              | 60.01      | 60.01                | 46.08                 | 13.93                   | 4.308 Alert        |         |
| 2,050.00                                                                                      | 2,050.00            | 2,049.20            | 2,049.20            | 7.14           | 7.14        | 89.68                 | 0.33                              | 60.01      | 60.01                | 45.73                 | 14.28                   | 4.202 Alert        |         |
| 2,100.00                                                                                      | 2,100.00            | 2,100.80            | 2,099.20            | 7.32           | 7.32        | 89.68                 | 0.33                              | 60.01      | 60.01                | 45.37                 | 14.64                   | 4.098 Alert        |         |
| 2,150.00                                                                                      | 2,150.00            | 2,149.20            | 2,149.20            | 7.50           | 7.50        | 89.68                 | 0.33                              | 60.01      | 60.01                | 45.01                 | 15.00                   | 4.002 Alert        |         |
| 2,200.00                                                                                      | 2,200.00            | 2,200.80            | 2,199.20            | 7.68           | 7.68        | 89.68                 | 0.33                              | 60.01      | 60.01                | 44.65                 | 15.36                   | 3.907 Alert        |         |
| 2,250.00                                                                                      | 2,250.00            | 2,249.20            | 2,249.20            | 7.86           | 7.85        | 89.68                 | 0.33                              | 60.01      | 60.01                | 44.30                 | 15.71                   | 3.819 Alert        |         |
| 2,300.00                                                                                      | 2,300.00            | 2,300.80            | 2,299.20            | 8.04           | 8.04        | 89.68                 | 0.33                              | 60.01      | 60.01                | 43.94                 | 16.08                   | 3.733 Alert        |         |
| 2,350.00                                                                                      | 2,350.00            | 2,349.20            | 2,349.20            | 8.22           | 8.21        | 89.68                 | 0.33                              | 60.01      | 60.01                | 43.58                 | 16.43                   | 3.653 Alert        |         |
| 2,400.00                                                                                      | 2,400.00            | 2,400.80            | 2,399.20            | 8.39           | 8.40        | 89.68                 | 0.33                              | 60.01      | 60.01                | 43.22                 | 16.79                   | 3.574 Alert        |         |
| 2,450.00                                                                                      | 2,450.00            | 2,449.20            | 2,449.20            | 8.57           | 8.57        | 89.68                 | 0.33                              | 60.01      | 60.01                | 42.87                 | 17.14                   | 3.501 Alert        |         |
| 2,500.00                                                                                      | 2,500.00            | 2,499.20            | 2,499.20            | 8.75           | 8.75        | 89.68                 | 0.33                              | 60.01      | 60.01                | 42.51                 | 17.50                   | 3.429 Alert, CC    |         |
| 2,550.00                                                                                      | 2,550.00            | 2,548.70            | 2,548.70            | 8.93           | 8.92        | 89.72                 | 0.29                              | 60.21      | 60.22                | 42.36                 | 17.85                   | 3.373 Alert, ES    |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

|                           |                                 |                                     |                         |
|---------------------------|---------------------------------|-------------------------------------|-------------------------|
| <b>Company:</b>           | WCDSC Permian NM                | <b>Local Co-ordinate Reference:</b> | Well Todd 36 State 231H |
| <b>Project:</b>           | Eddy County (NAD 83 NM Eastern) | <b>TVD Reference:</b>               | RKB @ 3530.10ft         |
| <b>Reference Site:</b>    | Sec. 36-T23S-R31E               | <b>MD Reference:</b>                | RKB @ 3530.10ft         |
| <b>Site Error:</b>        | 0.00 ft                         | <b>North Reference:</b>             | Grid                    |
| <b>Reference Well:</b>    | Todd 36 State 231H              | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Well Error:</b>        | 0.50 ft                         | <b>Output errors are at</b>         | 2.00 sigma              |
| <b>Reference Wellbore</b> | Wellbore #1                     | <b>Database:</b>                    | EDM r5000.141_Prod US   |
| <b>Reference Design:</b>  | Permit Plan 1                   | <b>Offset TVD Reference:</b>        | Offset Datum            |

| Offset Design Sec. 36-T23S-R31E - Todd 36-25 State Fed Com 230H - Wellbore #1 - Permit Plan 1 |                        |                        |                        |                   |                |                          |                                         |                                         |                         |                          |                            |                   | Offset Site Error: | 0.00 ft |
|-----------------------------------------------------------------------------------------------|------------------------|------------------------|------------------------|-------------------|----------------|--------------------------|-----------------------------------------|-----------------------------------------|-------------------------|--------------------------|----------------------------|-------------------|--------------------|---------|
| Survey Program: 0-MWD+HDGM                                                                    |                        |                        |                        |                   |                |                          |                                         |                                         |                         |                          |                            |                   | Offset Well Error: | 0.50 ft |
| Reference                                                                                     |                        | Offset                 |                        | Semi Major Axis   |                | Highside Toolface<br>(°) | Distance                                |                                         | Between Centres<br>(ft) | Between Ellipses<br>(ft) | Minimum Separation<br>(ft) | Separation Factor | Warning            |         |
| Measured Depth<br>(ft)                                                                        | Vertical Depth<br>(ft) | Measured Depth<br>(ft) | Vertical Depth<br>(ft) | Reference<br>(ft) | Offset<br>(ft) |                          | Offset Wellbore Centre<br>+N/-S<br>(ft) | Offset Wellbore Centre<br>+E/-W<br>(ft) |                         |                          |                            |                   |                    |         |
| 2,600.00                                                                                      | 2,600.00               | 2,598.19               | 2,598.18               | 9.11              | 9.09           | 89.85                    | 0.16                                    | 60.83                                   | 60.84                   | 42.64                    | 18.20                      | 3.343             | Alert              |         |
| 2,650.00                                                                                      | 2,650.00               | 2,647.66               | 2,647.64               | 9.29              | 9.26           | 90.06                    | -0.06                                   | 61.87                                   | 61.89                   | 43.35                    | 18.54                      | 3.338             | Alert, SF          |         |
| 2,700.00                                                                                      | 2,700.00               | 2,697.10               | 2,697.06               | 9.46              | 9.43           | -144.16                  | -0.37                                   | 63.33                                   | 63.54                   | 44.66                    | 18.88                      | 3.366             | Alert              |         |
| 2,750.00                                                                                      | 2,749.99               | 2,746.49               | 2,746.42               | 9.63              | 9.60           | -144.13                  | -0.77                                   | 65.19                                   | 65.96                   | 46.76                    | 19.21                      | 3.435             | Alert              |         |
| 2,800.00                                                                                      | 2,799.98               | 2,795.82               | 2,795.69               | 9.79              | 9.76           | -144.24                  | -1.26                                   | 67.48                                   | 69.16                   | 49.63                    | 19.53                      | 3.541             | Alert              |         |
| 2,850.00                                                                                      | 2,849.96               | 2,845.07               | 2,844.86               | 9.96              | 9.93           | -144.46                  | -1.83                                   | 70.17                                   | 73.13                   | 53.28                    | 19.86                      | 3.683             | Alert              |         |
| 2,900.00                                                                                      | 2,899.92               | 2,894.20               | 2,893.89               | 10.12             | 10.10          | -144.77                  | -2.49                                   | 73.27                                   | 77.88                   | 57.70                    | 20.18                      | 3.859             | Alert              |         |
| 2,950.00                                                                                      | 2,949.86               | 2,943.22               | 2,942.78               | 10.29             | 10.27          | -145.14                  | -3.24                                   | 76.77                                   | 83.40                   | 62.90                    | 20.50                      | 4.068             | Alert              |         |
| 3,000.00                                                                                      | 2,999.78               | 2,992.10               | 2,991.50               | 10.46             | 10.44          | -145.56                  | -4.07                                   | 80.66                                   | 89.69                   | 68.87                    | 20.83                      | 4.307             | Alert              |         |
| 3,050.00                                                                                      | 3,049.68               | 3,040.82               | 3,040.02               | 10.63             | 10.61          | -145.99                  | -4.99                                   | 84.95                                   | 96.76                   | 75.61                    | 21.15                      | 4.576             | Alert              |         |
| 3,100.00                                                                                      | 3,099.55               | 3,089.39               | 3,088.35               | 10.80             | 10.78          | -146.43                  | -5.99                                   | 89.63                                   | 104.51                  | 83.04                    | 21.47                      | 4.869             | Alert              |         |
| 3,150.00                                                                                      | 3,149.41               | 3,137.82               | 3,136.50               | 10.97             | 10.94          | -146.77                  | -7.07                                   | 94.69                                   | 112.68                  | 90.90                    | 21.78                      | 5.173             |                    |         |
| 3,200.00                                                                                      | 3,199.28               | 3,186.12               | 3,184.48               | 11.14             | 11.11          | -147.01                  | -8.23                                   | 100.14                                  | 121.26                  | 99.16                    | 22.10                      | 5.487             |                    |         |
| 3,250.00                                                                                      | 3,249.15               | 3,234.29               | 3,232.28               | 11.31             | 11.29          | -147.18                  | -9.47                                   | 105.96                                  | 130.25                  | 107.83                   | 22.42                      | 5.811             |                    |         |
| 3,300.00                                                                                      | 3,299.02               | 3,282.31               | 3,279.88               | 11.48             | 11.46          | -147.28                  | -10.79                                  | 112.16                                  | 139.63                  | 116.90                   | 22.73                      | 6.143             |                    |         |
| 3,350.00                                                                                      | 3,348.89               | 3,330.18               | 3,327.27               | 11.65             | 11.63          | -147.32                  | -12.19                                  | 118.73                                  | 149.41                  | 126.36                   | 23.04                      | 6.484             |                    |         |
| 3,400.00                                                                                      | 3,398.76               | 3,377.89               | 3,374.46               | 11.82             | 11.80          | -147.33                  | -13.67                                  | 125.66                                  | 159.58                  | 136.23                   | 23.35                      | 6.834             |                    |         |
| 3,450.00                                                                                      | 3,448.63               | 3,425.44               | 3,421.42               | 11.99             | 11.97          | -147.29                  | -15.23                                  | 132.94                                  | 170.14                  | 146.48                   | 23.66                      | 7.191             |                    |         |
| 3,500.00                                                                                      | 3,498.50               | 3,472.82               | 3,468.15               | 12.17             | 12.14          | -147.23                  | -16.86                                  | 140.59                                  | 181.10                  | 157.13                   | 23.97                      | 7.556             |                    |         |
| 3,550.00                                                                                      | 3,548.37               | 3,520.03               | 3,514.65               | 12.34             | 12.32          | -147.14                  | -18.56                                  | 148.57                                  | 192.44                  | 168.17                   | 24.27                      | 7.928             |                    |         |
| 3,600.00                                                                                      | 3,598.24               | 3,567.06               | 3,560.90               | 12.51             | 12.49          | -147.04                  | -20.34                                  | 156.91                                  | 204.17                  | 179.60                   | 24.58                      | 8.307             |                    |         |
| 3,650.00                                                                                      | 3,648.10               | 3,613.91               | 3,606.90               | 12.69             | 12.67          | -146.91                  | -22.19                                  | 165.57                                  | 216.29                  | 191.41                   | 24.88                      | 8.693             |                    |         |
| 3,700.00                                                                                      | 3,697.97               | 3,661.74               | 3,653.81               | 12.86             | 12.85          | -146.78                  | -24.14                                  | 174.72                                  | 228.71                  | 203.50                   | 25.21                      | 9.073             |                    |         |
| 3,750.00                                                                                      | 3,747.84               | 3,710.16               | 3,701.30               | 13.04             | 13.03          | -146.66                  | -26.12                                  | 184.00                                  | 241.15                  | 215.61                   | 25.55                      | 9.440             |                    |         |
| 3,800.00                                                                                      | 3,797.71               | 3,758.59               | 3,748.78               | 13.21             | 13.22          | -146.55                  | -28.10                                  | 193.28                                  | 253.60                  | 227.71                   | 25.88                      | 9.797             |                    |         |
| 3,850.00                                                                                      | 3,847.58               | 3,807.01               | 3,796.27               | 13.39             | 13.41          | -146.45                  | -30.08                                  | 202.56                                  | 266.04                  | 239.82                   | 26.23                      | 10.144            |                    |         |
| 3,900.00                                                                                      | 3,897.45               | 3,855.44               | 3,843.76               | 13.56             | 13.60          | -146.36                  | -32.06                                  | 211.84                                  | 278.49                  | 251.92                   | 26.57                      | 10.483            |                    |         |
| 3,950.00                                                                                      | 3,947.32               | 3,903.86               | 3,891.24               | 13.74             | 13.78          | -146.28                  | -34.04                                  | 221.12                                  | 290.93                  | 264.02                   | 26.91                      | 10.812            |                    |         |
| 4,000.00                                                                                      | 3,997.19               | 3,952.29               | 3,938.73               | 13.91             | 13.97          | -146.21                  | -36.02                                  | 230.40                                  | 303.38                  | 276.13                   | 27.25                      | 11.133            |                    |         |
| 4,050.00                                                                                      | 4,047.06               | 4,000.71               | 3,986.21               | 14.09             | 14.16          | -146.14                  | -38.00                                  | 239.68                                  | 315.83                  | 288.23                   | 27.59                      | 11.445            |                    |         |
| 4,100.00                                                                                      | 4,096.93               | 4,049.14               | 4,033.70               | 14.27             | 14.36          | -146.07                  | -39.98                                  | 248.96                                  | 328.27                  | 300.34                   | 27.94                      | 11.750            |                    |         |
| 4,150.00                                                                                      | 4,146.80               | 4,097.56               | 4,081.18               | 14.44             | 14.55          | -146.01                  | -41.97                                  | 258.25                                  | 340.72                  | 312.44                   | 28.28                      | 12.047            |                    |         |
| 4,200.00                                                                                      | 4,196.68               | 4,145.99               | 4,128.67               | 14.62             | 14.74          | -145.96                  | -43.95                                  | 267.53                                  | 353.17                  | 324.54                   | 28.63                      | 12.337            |                    |         |
| 4,250.00                                                                                      | 4,246.53               | 4,194.41               | 4,176.16               | 14.80             | 14.94          | -145.90                  | -45.93                                  | 276.81                                  | 365.62                  | 336.64                   | 28.97                      | 12.619            |                    |         |
| 4,300.00                                                                                      | 4,296.40               | 4,242.84               | 4,223.64               | 14.98             | 15.13          | -145.86                  | -47.91                                  | 286.09                                  | 378.07                  | 348.75                   | 29.32                      | 12.895            |                    |         |
| 4,350.00                                                                                      | 4,346.27               | 4,308.74               | 4,271.13               | 15.15             | 15.40          | -145.81                  | -49.89                                  | 295.37                                  | 390.51                  | 360.78                   | 29.73                      | 13.136            |                    |         |
| 4,400.00                                                                                      | 4,396.14               | 4,339.68               | 4,318.61               | 15.33             | 15.52          | -145.77                  | -51.87                                  | 304.65                                  | 402.96                  | 372.95                   | 30.01                      | 13.426            |                    |         |
| 4,450.00                                                                                      | 4,446.01               | 4,388.11               | 4,366.10               | 15.51             | 15.72          | -145.73                  | -53.85                                  | 313.93                                  | 415.41                  | 385.05                   | 30.36                      | 13.683            |                    |         |
| 4,500.00                                                                                      | 4,495.88               | 4,436.53               | 4,413.58               | 15.69             | 15.92          | -145.69                  | -55.83                                  | 323.21                                  | 427.86                  | 397.15                   | 30.71                      | 13.933            |                    |         |
| 4,550.00                                                                                      | 4,545.75               | 4,484.96               | 4,461.07               | 15.87             | 16.12          | -145.66                  | -57.81                                  | 332.49                                  | 440.31                  | 409.25                   | 31.06                      | 14.177            |                    |         |
| 4,600.00                                                                                      | 4,595.62               | 4,533.38               | 4,508.56               | 16.05             | 16.31          | -145.62                  | -59.79                                  | 341.77                                  | 452.76                  | 421.35                   | 31.41                      | 14.416            |                    |         |
| 4,650.00                                                                                      | 4,645.49               | 4,581.81               | 4,556.04               | 16.22             | 16.51          | -145.59                  | -61.77                                  | 351.05                                  | 465.21                  | 433.45                   | 31.76                      | 14.649            |                    |         |
| 4,700.00                                                                                      | 4,695.35               | 4,630.23               | 4,603.53               | 16.40             | 16.71          | -145.56                  | -63.75                                  | 360.33                                  | 477.66                  | 445.55                   | 32.11                      | 14.878            |                    |         |
| 4,750.00                                                                                      | 4,745.22               | 4,678.66               | 4,651.01               | 16.58             | 16.91          | -145.53                  | -65.73                                  | 369.62                                  | 490.11                  | 457.65                   | 32.46                      | 15.101            |                    |         |
| 4,800.00                                                                                      | 4,795.09               | 4,727.08               | 4,698.50               | 16.76             | 17.12          | -145.51                  | -67.71                                  | 378.90                                  | 502.56                  | 469.75                   | 32.81                      | 15.319            |                    |         |
| 4,850.00                                                                                      | 4,844.96               | 4,775.51               | 4,745.98               | 16.94             | 17.32          | -145.48                  | -69.69                                  | 388.18                                  | 515.01                  | 481.85                   | 33.16                      | 15.532            |                    |         |
| 4,900.00                                                                                      | 4,894.83               | 4,823.93               | 4,793.47               | 17.12             | 17.52          | -145.45                  | -71.67                                  | 397.46                                  | 527.46                  | 493.95                   | 33.51                      | 15.741            |                    |         |
| 4,950.00                                                                                      | 4,944.70               | 4,872.36               | 4,840.95               | 17.30             | 17.72          | -145.43                  | -73.65                                  | 406.74                                  | 539.91                  | 506.05                   | 33.86                      | 15.945            |                    |         |
| 5,000.00                                                                                      | 4,994.57               | 4,920.78               | 4,888.44               | 17.48             | 17.92          | -145.41                  | -75.63                                  | 416.02                                  | 552.36                  | 518.15                   | 34.21                      | 16.144            |                    |         |
| 5,050.00                                                                                      | 5,044.44               | 4,969.20               | 4,935.93               | 17.66             | 18.13          | -145.39                  | -77.61                                  | 425.30                                  | 564.81                  | 530.25                   | 34.57                      | 16.340            |                    |         |
| 5,100.00                                                                                      | 5,094.31               | 5,017.63               | 4,983.41               | 17.84             | 18.33          | -145.37                  | -79.59                                  | 434.58                                  | 577.26                  | 542.34                   | 34.92                      | 16.531            |                    |         |
| 5,150.00                                                                                      | 5,144.18               | 5,066.05               | 5,030.90               | 18.02             | 18.54          | -145.35                  | -81.57                                  | 443.86                                  | 589.71                  | 554.44                   | 35.27                      | 16.719            |                    |         |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

|                           |                                 |                                     |                         |
|---------------------------|---------------------------------|-------------------------------------|-------------------------|
| <b>Company:</b>           | WCDSC Permian NM                | <b>Local Co-ordinate Reference:</b> | Well Todd 36 State 231H |
| <b>Project:</b>           | Eddy County (NAD 83 NM Eastern) | <b>TVD Reference:</b>               | RKB @ 3530.10ft         |
| <b>Reference Site:</b>    | Sec. 36-T23S-R31E               | <b>MD Reference:</b>                | RKB @ 3530.10ft         |
| <b>Site Error:</b>        | 0.00 ft                         | <b>North Reference:</b>             | Grid                    |
| <b>Reference Well:</b>    | Todd 36 State 231H              | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Well Error:</b>        | 0.50 ft                         | <b>Output errors are at</b>         | 2.00 sigma              |
| <b>Reference Wellbore</b> | Wellbore #1                     | <b>Database:</b>                    | EDM r5000.141_Prod US   |
| <b>Reference Design:</b>  | Permit Plan 1                   | <b>Offset TVD Reference:</b>        | Offset Datum            |

| Offset Design Sec. 36-T23S-R31E - Todd 36-25 State Fed Com 230H - Wellbore #1 - Permit Plan 1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Site Error: | 0.00 ft |
|-----------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 0-MWD+HDGM                                                                    |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                   | Offset Well Error: | 0.50 ft |
| Reference                                                                                     |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |            |                      |                       |                         |                   |                    | Warning |
| Measured Depth (ft)                                                                           | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                    |         |
| 5,200.00                                                                                      | 5,194.04            | 5,114.48            | 5,078.38            | 18.20           | 18.74       | -145.33               | -83.55                            | 453.14     | 602.16               | 566.54                | 35.63                   | 16.903            |                    |         |
| 5,250.00                                                                                      | 5,243.91            | 5,162.90            | 5,125.87            | 18.38           | 18.95       | -145.31               | -85.53                            | 462.42     | 614.62               | 578.64                | 35.98                   | 17.082            |                    |         |
| 5,300.00                                                                                      | 5,293.78            | 5,211.33            | 5,173.35            | 18.57           | 19.15       | -145.29               | -87.51                            | 471.70     | 627.07               | 590.73                | 36.33                   | 17.259            |                    |         |
| 5,350.00                                                                                      | 5,343.65            | 5,259.75            | 5,220.84            | 18.75           | 19.36       | -145.28               | -89.49                            | 480.99     | 639.52               | 602.83                | 36.69                   | 17.431            |                    |         |
| 5,400.00                                                                                      | 5,393.52            | 5,308.18            | 5,268.33            | 18.93           | 19.56       | -145.26               | -91.47                            | 490.27     | 651.97               | 614.93                | 37.04                   | 17.601            |                    |         |
| 5,450.00                                                                                      | 5,443.39            | 5,356.60            | 5,315.81            | 19.11           | 19.77       | -145.25               | -93.45                            | 499.55     | 664.42               | 627.02                | 37.40                   | 17.766            |                    |         |
| 5,500.00                                                                                      | 5,493.26            | 5,405.03            | 5,363.30            | 19.29           | 19.98       | -145.23               | -95.44                            | 508.83     | 676.87               | 639.12                | 37.75                   | 17.929            |                    |         |
| 5,550.00                                                                                      | 5,543.13            | 5,453.45            | 5,410.78            | 19.47           | 20.18       | -145.22               | -97.42                            | 518.11     | 689.32               | 651.21                | 38.11                   | 18.089            |                    |         |
| 5,600.00                                                                                      | 5,593.00            | 5,501.88            | 5,458.27            | 19.65           | 20.39       | -145.20               | -99.40                            | 527.39     | 701.77               | 663.31                | 38.46                   | 18.245            |                    |         |
| 5,650.00                                                                                      | 5,642.87            | 5,550.30            | 5,505.75            | 19.83           | 20.60       | -145.19               | -101.38                           | 536.67     | 714.22               | 675.40                | 38.82                   | 18.398            |                    |         |
| 5,700.00                                                                                      | 5,692.73            | 5,601.28            | 5,553.24            | 20.02           | 20.82       | -145.18               | -103.36                           | 545.95     | 726.67               | 687.49                | 39.19                   | 18.545            |                    |         |
| 5,750.00                                                                                      | 5,742.60            | 5,647.15            | 5,600.73            | 20.20           | 21.02       | -145.16               | -105.34                           | 555.23     | 739.13               | 699.59                | 39.53                   | 18.697            |                    |         |
| 5,800.00                                                                                      | 5,792.47            | 5,704.43            | 5,648.21            | 20.38           | 21.26       | -145.15               | -107.32                           | 564.51     | 751.58               | 711.65                | 39.92                   | 18.826            |                    |         |
| 5,850.00                                                                                      | 5,842.34            | 5,744.00            | 5,695.70            | 20.56           | 21.43       | -145.14               | -109.30                           | 573.79     | 764.03               | 723.78                | 40.25                   | 18.984            |                    |         |
| 5,900.00                                                                                      | 5,892.21            | 5,807.58            | 5,743.18            | 20.74           | 21.71       | -145.13               | -111.28                           | 583.07     | 776.48               | 735.82                | 40.66                   | 19.097            |                    |         |
| 5,950.00                                                                                      | 5,942.08            | 5,840.85            | 5,790.67            | 20.93           | 21.85       | -145.12               | -113.26                           | 592.36     | 788.93               | 747.97                | 40.96                   | 19.261            |                    |         |
| 6,000.00                                                                                      | 5,991.95            | 5,889.27            | 5,838.15            | 21.11           | 22.06       | -145.11               | -115.24                           | 601.64     | 801.38               | 760.06                | 41.32                   | 19.396            |                    |         |
| 6,050.00                                                                                      | 6,041.82            | 5,937.70            | 5,885.64            | 21.29           | 22.27       | -145.10               | -117.22                           | 610.92     | 813.83               | 772.16                | 41.68                   | 19.528            |                    |         |
| 6,100.00                                                                                      | 6,091.69            | 5,986.12            | 5,933.13            | 21.47           | 22.48       | -145.09               | -119.20                           | 620.20     | 826.29               | 784.25                | 42.03                   | 19.658            |                    |         |
| 6,150.00                                                                                      | 6,141.56            | 6,034.55            | 5,980.61            | 21.66           | 22.69       | -145.08               | -121.18                           | 629.48     | 838.74               | 796.35                | 42.39                   | 19.786            |                    |         |
| 6,200.00                                                                                      | 6,191.43            | 6,082.97            | 6,028.10            | 21.84           | 22.90       | -145.07               | -123.16                           | 638.76     | 851.19               | 808.44                | 42.75                   | 19.911            |                    |         |
| 6,250.00                                                                                      | 6,241.29            | 6,131.40            | 6,075.58            | 22.02           | 23.11       | -145.06               | -125.14                           | 648.04     | 863.64               | 820.53                | 43.11                   | 20.034            |                    |         |
| 6,300.00                                                                                      | 6,291.16            | 6,179.82            | 6,123.07            | 22.20           | 23.32       | -145.05               | -127.12                           | 657.32     | 876.09               | 832.62                | 43.47                   | 20.156            |                    |         |
| 6,350.00                                                                                      | 6,341.03            | 6,228.24            | 6,170.55            | 22.39           | 23.54       | -145.04               | -129.10                           | 666.60     | 888.54               | 844.72                | 43.83                   | 20.275            |                    |         |
| 6,400.00                                                                                      | 6,390.90            | 6,276.67            | 6,218.04            | 22.57           | 23.75       | -145.03               | -131.08                           | 675.88     | 900.99               | 856.81                | 44.18                   | 20.392            |                    |         |
| 6,450.00                                                                                      | 6,440.77            | 6,325.09            | 6,265.52            | 22.75           | 23.96       | -145.03               | -133.06                           | 685.16     | 913.45               | 868.90                | 44.54                   | 20.507            |                    |         |
| 6,500.00                                                                                      | 6,490.64            | 6,373.52            | 6,313.01            | 22.93           | 24.17       | -145.02               | -135.04                           | 694.44     | 925.90               | 880.99                | 44.90                   | 20.620            |                    |         |
| 6,550.00                                                                                      | 6,540.51            | 6,421.94            | 6,360.50            | 23.12           | 24.38       | -145.01               | -137.02                           | 703.73     | 938.35               | 893.09                | 45.26                   | 20.731            |                    |         |
| 6,600.00                                                                                      | 6,590.38            | 6,470.37            | 6,407.98            | 23.30           | 24.59       | -145.00               | -139.00                           | 713.01     | 950.80               | 905.18                | 45.62                   | 20.841            |                    |         |
| 6,650.00                                                                                      | 6,640.25            | 6,518.79            | 6,455.47            | 23.48           | 24.81       | -145.00               | -140.98                           | 722.29     | 963.25               | 917.27                | 45.98                   | 20.949            |                    |         |
| 6,700.00                                                                                      | 6,690.12            | 6,567.22            | 6,502.95            | 23.67           | 25.02       | -144.99               | -142.96                           | 731.57     | 975.70               | 929.36                | 46.34                   | 21.055            |                    |         |
| 6,750.00                                                                                      | 6,739.98            | 6,615.64            | 6,550.44            | 23.85           | 25.23       | -144.98               | -144.94                           | 740.85     | 988.16               | 941.45                | 46.70                   | 21.159            |                    |         |
| 6,800.00                                                                                      | 6,789.85            | 6,664.07            | 6,597.92            | 24.03           | 25.44       | -144.97               | -146.92                           | 750.13     | 1,000.61             | 953.55                | 47.06                   | 21.262            |                    |         |
| 6,850.00                                                                                      | 6,839.72            | 6,712.49            | 6,645.41            | 24.22           | 25.66       | -144.97               | -148.90                           | 759.41     | 1,013.06             | 965.64                | 47.42                   | 21.363            |                    |         |
| 6,900.00                                                                                      | 6,889.59            | 6,760.92            | 6,692.90            | 24.40           | 25.87       | -144.96               | -150.89                           | 768.69     | 1,025.51             | 977.73                | 47.78                   | 21.462            |                    |         |
| 6,950.00                                                                                      | 6,939.46            | 6,809.34            | 6,740.38            | 24.58           | 26.08       | -144.96               | -152.87                           | 777.97     | 1,037.96             | 989.82                | 48.14                   | 21.560            |                    |         |
| 7,000.00                                                                                      | 6,989.33            | 6,857.76            | 6,787.87            | 24.77           | 26.30       | -144.95               | -154.85                           | 787.25     | 1,050.41             | 1,001.91              | 48.50                   | 21.656            |                    |         |
| 7,050.00                                                                                      | 7,039.20            | 6,906.19            | 6,835.35            | 24.95           | 26.51       | -144.94               | -156.83                           | 796.53     | 1,062.87             | 1,014.00              | 48.86                   | 21.751            |                    |         |
| 7,100.00                                                                                      | 7,089.07            | 6,954.61            | 6,882.84            | 25.13           | 26.72       | -144.94               | -158.81                           | 805.82     | 1,075.32             | 1,026.09              | 49.23                   | 21.845            |                    |         |
| 7,150.00                                                                                      | 7,138.94            | 7,003.04            | 6,930.32            | 25.32           | 26.94       | -144.93               | -160.79                           | 815.10     | 1,087.77             | 1,038.18              | 49.59                   | 21.937            |                    |         |
| 7,200.00                                                                                      | 7,188.81            | 7,051.46            | 6,977.81            | 25.50           | 27.15       | -144.93               | -162.77                           | 824.38     | 1,100.22             | 1,050.27              | 49.95                   | 22.027            |                    |         |
| 7,250.00                                                                                      | 7,238.67            | 7,100.11            | 7,025.30            | 25.68           | 27.37       | -144.92               | -164.75                           | 833.66     | 1,112.67             | 1,062.36              | 50.31                   | 22.116            |                    |         |
| 7,300.00                                                                                      | 7,288.54            | 7,148.31            | 7,072.78            | 25.87           | 27.58       | -144.92               | -166.73                           | 842.94     | 1,125.12             | 1,074.45              | 50.67                   | 22.204            |                    |         |
| 7,350.00                                                                                      | 7,338.41            | 7,203.26            | 7,120.27            | 26.05           | 27.82       | -144.91               | -168.71                           | 852.22     | 1,137.58             | 1,086.52              | 51.06                   | 22.280            |                    |         |
| 7,400.00                                                                                      | 7,388.28            | 7,245.16            | 7,167.75            | 26.24           | 28.01       | -144.90               | -170.69                           | 861.50     | 1,150.03             | 1,098.63              | 51.39                   | 22.376            |                    |         |
| 7,450.00                                                                                      | 7,438.15            | 7,306.41            | 7,215.24            | 26.42           | 28.28       | -144.90               | -172.67                           | 870.78     | 1,162.48             | 1,110.67              | 51.81                   | 22.439            |                    |         |
| 7,500.00                                                                                      | 7,488.02            | 7,342.01            | 7,262.72            | 26.60           | 28.44       | -144.90               | -174.65                           | 880.06     | 1,174.93             | 1,122.81              | 52.12                   | 22.543            |                    |         |
| 7,550.00                                                                                      | 7,537.89            | 7,409.56            | 7,310.21            | 26.79           | 28.74       | -144.89               | -176.63                           | 889.34     | 1,187.38             | 1,134.83              | 52.55                   | 22.594            |                    |         |
| 7,600.00                                                                                      | 7,587.76            | 7,438.86            | 7,357.69            | 26.97           | 28.87       | -144.89               | -178.61                           | 898.62     | 1,199.84             | 1,146.99              | 52.84                   | 22.706            |                    |         |
| 7,650.00                                                                                      | 7,637.63            | 7,487.28            | 7,405.18            | 27.16           | 29.08       | -144.88               | -180.59                           | 907.90     | 1,212.29             | 1,159.08              | 53.21                   | 22.785            |                    |         |
| 7,700.00                                                                                      | 7,687.50            | 7,535.71            | 7,452.67            | 27.34           | 29.30       | -144.88               | -182.57                           | 917.19     | 1,224.74             | 1,171.17              | 53.57                   | 22.863            |                    |         |
| 7,750.00                                                                                      | 7,737.37            | 7,584.13            | 7,500.15            | 27.52           | 29.51       | -144.87               | -184.55                           | 926.47     | 1,237.19             | 1,183.26              | 53.93                   | 22.941            |                    |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

|                           |                                 |                                     |                         |
|---------------------------|---------------------------------|-------------------------------------|-------------------------|
| <b>Company:</b>           | WCDSC Permian NM                | <b>Local Co-ordinate Reference:</b> | Well Todd 36 State 231H |
| <b>Project:</b>           | Eddy County (NAD 83 NM Eastern) | <b>TVD Reference:</b>               | RKB @ 3530.10ft         |
| <b>Reference Site:</b>    | Sec. 36-T23S-R31E               | <b>MD Reference:</b>                | RKB @ 3530.10ft         |
| <b>Site Error:</b>        | 0.00 ft                         | <b>North Reference:</b>             | Grid                    |
| <b>Reference Well:</b>    | Todd 36 State 231H              | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Well Error:</b>        | 0.50 ft                         | <b>Output errors are at</b>         | 2.00 sigma              |
| <b>Reference Wellbore</b> | Wellbore #1                     | <b>Database:</b>                    | EDM r5000.141_Prod US   |
| <b>Reference Design:</b>  | Permit Plan 1                   | <b>Offset TVD Reference:</b>        | Offset Datum            |

| Offset Design Sec. 36-T23S-R31E - Todd 36-25 State Fed Com 230H - Wellbore #1 - Permit Plan 1 |                           |                           |                           |                   |                |                                                |                                         |               |                            |                             |                               |                      | Offset Site Error: | 0.00 ft |
|-----------------------------------------------------------------------------------------------|---------------------------|---------------------------|---------------------------|-------------------|----------------|------------------------------------------------|-----------------------------------------|---------------|----------------------------|-----------------------------|-------------------------------|----------------------|--------------------|---------|
| Survey Program: 0-MWD+HDGM                                                                    |                           |                           |                           |                   |                |                                                |                                         |               |                            |                             |                               |                      | Offset Well Error: | 0.50 ft |
| Measured<br>Depth<br>(ft)                                                                     | Vertical<br>Depth<br>(ft) | Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Reference<br>(ft) | Offset<br>(ft) | Semi Major Axis<br>Highside<br>Toolface<br>(°) | Offset Wellbore Centre<br>+N/-S<br>(ft) | +E/-W<br>(ft) | Between<br>Centres<br>(ft) | Between<br>Ellipses<br>(ft) | Minimum<br>Separation<br>(ft) | Separation<br>Factor | Warning            |         |
| 7,800.00                                                                                      | 7,787.23                  | 7,632.56                  | 7,547.64                  | 27.71             | 29.73          | -144.87                                        | -186.53                                 | 935.75        | 1,249.64                   | 1,195.35                    | 54.29                         | 23.017               |                    |         |
| 7,850.00                                                                                      | 7,837.10                  | 7,680.98                  | 7,595.12                  | 27.89             | 29.94          | -144.86                                        | -188.51                                 | 945.03        | 1,262.09                   | 1,207.44                    | 54.66                         | 23.092               |                    |         |
| 7,900.00                                                                                      | 7,886.97                  | 7,729.41                  | 7,642.61                  | 28.08             | 30.16          | -144.86                                        | -190.49                                 | 954.31        | 1,274.55                   | 1,219.53                    | 55.02                         | 23.168               |                    |         |
| 7,950.00                                                                                      | 7,936.84                  | 7,777.83                  | 7,690.09                  | 28.26             | 30.37          | -144.86                                        | -192.47                                 | 963.59        | 1,287.00                   | 1,231.62                    | 55.38                         | 23.239               |                    |         |
| 8,000.00                                                                                      | 7,986.71                  | 7,826.26                  | 7,737.58                  | 28.44             | 30.59          | -144.85                                        | -194.45                                 | 972.87        | 1,299.45                   | 1,243.71                    | 55.74                         | 23.311               |                    |         |
| 8,050.00                                                                                      | 8,036.58                  | 7,874.68                  | 7,785.07                  | 28.63             | 30.81          | -144.85                                        | -196.43                                 | 982.15        | 1,311.90                   | 1,255.79                    | 56.11                         | 23.382               |                    |         |
| 8,100.00                                                                                      | 8,086.45                  | 7,923.11                  | 7,832.55                  | 28.81             | 31.02          | -144.84                                        | -198.41                                 | 991.43        | 1,324.35                   | 1,267.88                    | 56.47                         | 23.452               |                    |         |
| 8,150.00                                                                                      | 8,136.32                  | 7,971.53                  | 7,880.04                  | 29.00             | 31.24          | -144.84                                        | -200.39                                 | 1,000.71      | 1,336.81                   | 1,279.97                    | 56.83                         | 23.521               |                    |         |
| 8,200.00                                                                                      | 8,186.19                  | 8,019.96                  | 7,927.52                  | 29.18             | 31.45          | -144.84                                        | -202.37                                 | 1,009.99      | 1,349.26                   | 1,292.06                    | 57.20                         | 23.589               |                    |         |
| 8,250.00                                                                                      | 8,236.06                  | 8,068.38                  | 7,975.01                  | 29.37             | 31.67          | -144.83                                        | -204.36                                 | 1,019.27      | 1,361.71                   | 1,304.15                    | 57.56                         | 23.657               |                    |         |
| 8,300.00                                                                                      | 8,285.92                  | 8,116.80                  | 8,022.49                  | 29.55             | 31.89          | -144.83                                        | -206.34                                 | 1,028.56      | 1,374.16                   | 1,316.24                    | 57.93                         | 23.723               |                    |         |
| 8,350.00                                                                                      | 8,335.79                  | 8,165.23                  | 8,069.98                  | 29.74             | 32.10          | -144.83                                        | -208.32                                 | 1,037.84      | 1,386.61                   | 1,328.32                    | 58.29                         | 23.789               |                    |         |
| 8,400.00                                                                                      | 8,385.66                  | 8,213.65                  | 8,117.47                  | 29.92             | 32.32          | -144.82                                        | -210.30                                 | 1,047.12      | 1,399.07                   | 1,340.41                    | 58.65                         | 23.853               |                    |         |
| 8,450.00                                                                                      | 8,435.53                  | 8,262.08                  | 8,164.95                  | 30.10             | 32.53          | -144.82                                        | -212.28                                 | 1,056.40      | 1,411.52                   | 1,352.50                    | 59.02                         | 23.917               |                    |         |
| 8,500.00                                                                                      | 8,485.40                  | 8,310.50                  | 8,212.44                  | 30.29             | 32.75          | -144.82                                        | -214.26                                 | 1,065.68      | 1,423.97                   | 1,364.59                    | 59.38                         | 23.980               |                    |         |
| 8,550.00                                                                                      | 8,535.27                  | 8,358.93                  | 8,259.92                  | 30.47             | 32.97          | -144.81                                        | -216.24                                 | 1,074.96      | 1,436.42                   | 1,376.68                    | 59.74                         | 24.043               |                    |         |
| 8,600.00                                                                                      | 8,585.14                  | 8,407.35                  | 8,307.41                  | 30.66             | 33.18          | -144.81                                        | -218.22                                 | 1,084.24      | 1,448.87                   | 1,388.76                    | 60.11                         | 24.104               |                    |         |
| 8,650.00                                                                                      | 8,635.01                  | 8,455.78                  | 8,354.89                  | 30.84             | 33.40          | -144.81                                        | -220.20                                 | 1,093.52      | 1,461.32                   | 1,400.85                    | 60.47                         | 24.165               |                    |         |
| 8,700.00                                                                                      | 8,684.88                  | 8,504.20                  | 8,402.38                  | 31.03             | 33.62          | -144.80                                        | -222.18                                 | 1,102.80      | 1,473.78                   | 1,412.94                    | 60.84                         | 24.225               |                    |         |
| 8,750.00                                                                                      | 8,734.75                  | 8,552.63                  | 8,449.86                  | 31.21             | 33.83          | -144.80                                        | -224.16                                 | 1,112.08      | 1,485.23                   | 1,425.03                    | 61.20                         | 24.284               |                    |         |
| 8,800.00                                                                                      | 8,784.61                  | 8,601.05                  | 8,497.35                  | 31.40             | 34.05          | -144.80                                        | -226.14                                 | 1,121.36      | 1,498.68                   | 1,437.11                    | 61.57                         | 24.343               |                    |         |

# Anticollision Report

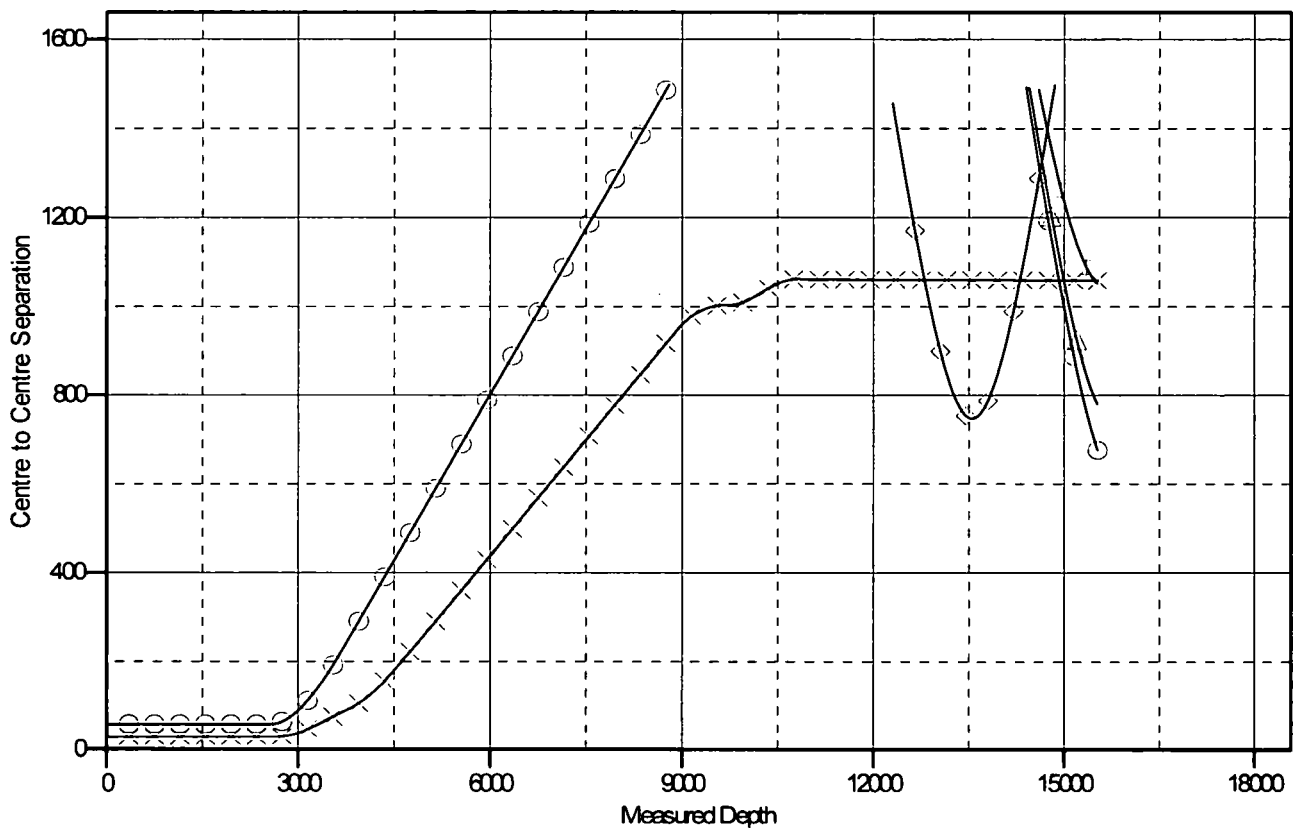
**Company:** WCDSC Permian NM  
**Project:** Eddy County (NAD 83 NM Eastern)  
**Reference Site:** Sec. 36-T23S-R31E  
**Site Error:** 0.00 ft  
**Reference Well:** Todd 36 State 231H  
**Well Error:** 0.50 ft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Permit Plan 1

**Local Co-ordinate Reference:** Well Todd 36 State 231H  
**TVD Reference:** RKB @ 3530.10ft  
**MD Reference:** RKB @ 3530.10ft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at:** 2.00 sigma  
**Database:** EDM r5000.141\_Prod US  
**Offset TVD Reference:** Offset Datum

Reference Depths are relative to RKB @ 3530.10ft  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -104.333334

Coordinates are relative to: Todd 36 State 231H  
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone  
 Grid Convergence at Surface is: 0.32°

## Ladder Plot



### LEGEND

Todd 36\_25 State Fed Com 232H, Wellbore #1, Original Planned Perm V0  
 Todd 36-25 State Fed Com 230H, Wellbore #1, Permit Plan 1 V0

Todd 36 State 01 SWD, Wellbore #1, Wellbore #1 V0  
 Alabore 25 Fed Com 2H, Wellbore #1, Wellbore #1 V0

Alabore 25 Fed 3H, Wellbore #1, Wellbore #1 V0  
 Alabore 25 Fed Com 1H, Wellbore #1, Wellbore #1 V0

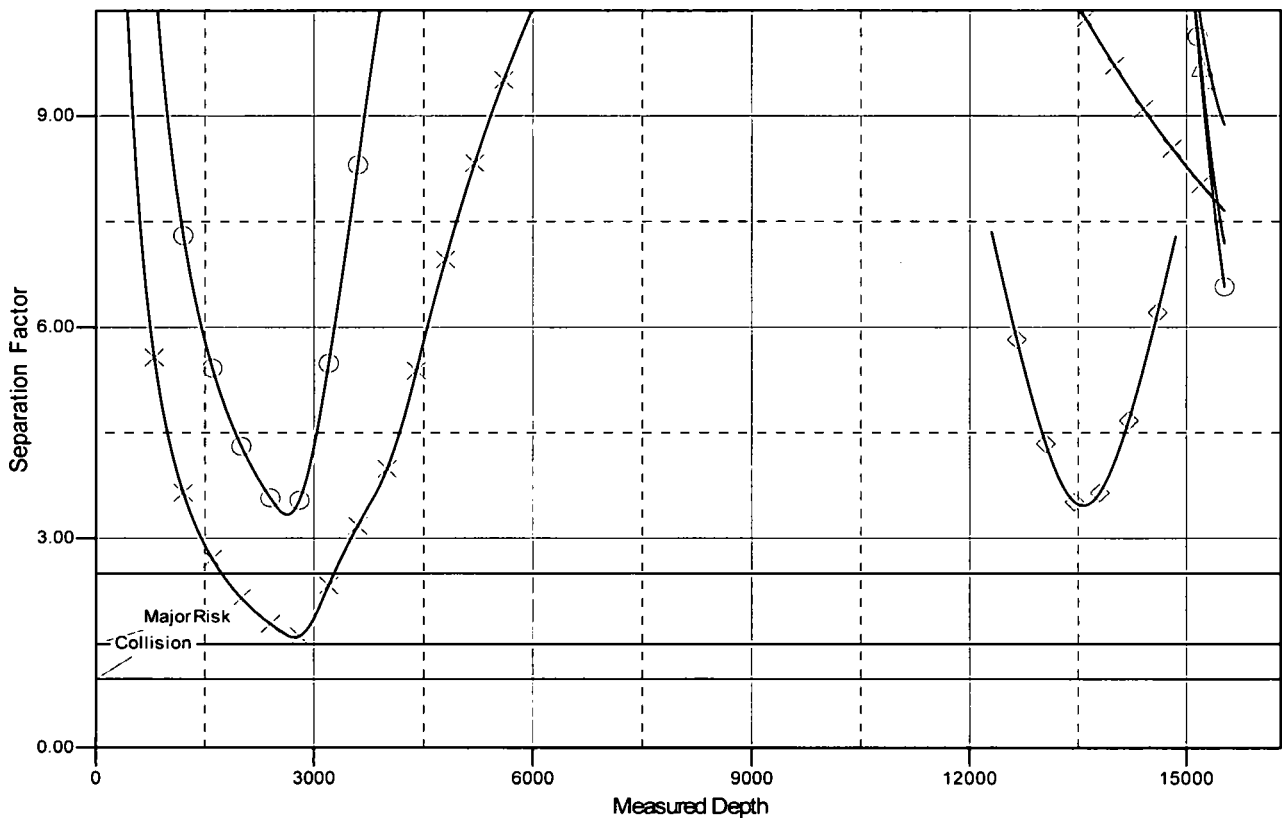
# Anticollision Report

|                           |                                 |                                     |                         |
|---------------------------|---------------------------------|-------------------------------------|-------------------------|
| <b>Company:</b>           | WCDSC Permian NM                | <b>Local Co-ordinate Reference:</b> | Well Todd 36 State 231H |
| <b>Project:</b>           | Eddy County (NAD 83 NM Eastern) | <b>TVD Reference:</b>               | RKB @ 3530.10ft         |
| <b>Reference Site:</b>    | Sec. 36-T23S-R31E               | <b>MD Reference:</b>                | RKB @ 3530.10ft         |
| <b>Site Error:</b>        | 0.00 ft                         | <b>North Reference:</b>             | Grid                    |
| <b>Reference Well:</b>    | Todd 36 State 231H              | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Well Error:</b>        | 0.50 ft                         | <b>Output errors are at</b>         | 2.00 sigma              |
| <b>Reference Wellbore</b> | Wellbore #1                     | <b>Database:</b>                    | EDM r5000.141_Prod US   |
| <b>Reference Design:</b>  | Permit Plan 1                   | <b>Offset TVD Reference:</b>        | Offset Datum            |

Reference Depths are relative to RKB @ 3530.10ft  
Offset Depths are relative to Offset Datum  
Central Meridian is -104.333334

Coordinates are relative to: Todd 36 State 231H  
Coordinate System is US State Plane 1983, New Mexico Eastern Zone  
Grid Convergence at Surface is: 0.32°

## Separation Factor Plot



### LEGEND

Todd 36 State Fed Com 232H, Wellbore #1, Original Planned Path V0  
 Todd 36 State Fed Com 230H, Wellbore #1, Permit Plan 1 V0

Todd 36 State 01 SWD, Wellbore #1, Wellbore #1 V0  
 Alabara 25 Fed Com 2H, Wellbore #1, Wellbore #1 V0

Alabara 25 Fed 3H, Wellbore #1, Wellbore #1 V0  
 Alabara 25 Fed Com 1H, Wellbore #1, Wellbore #1 V0

# **WCDSC Permian NM**

**Eddy County (NAD 83 NM Eastern)**

**Sec. 36-T23S-R31E**

**Todd 36 State 231H**

**Wellbore #1**

**Plan: Permit Plan 1**

## **Standard Planning Report - Geographic**

**04 October, 2018**

# Planning Report - Geographic

|                  |                                 |                                     |                         |
|------------------|---------------------------------|-------------------------------------|-------------------------|
| <b>Database:</b> | EDM r5000.141_Prod US           | <b>Local Co-ordinate Reference:</b> | Well Todd 36 State 231H |
| <b>Company:</b>  | WCDSC Permian NM                | <b>TVD Reference:</b>               | RKB @ 3530.10ft         |
| <b>Project:</b>  | Eddy County (NAD 83 NM Eastern) | <b>MD Reference:</b>                | RKB @ 3530.10ft         |
| <b>Site:</b>     | Sec. 36-T23S-R31E               | <b>North Reference:</b>             | Grid                    |
| <b>Well:</b>     | Todd 36 State 231H              | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Wellbore:</b> | Wellbore #1                     |                                     |                         |
| <b>Design:</b>   | Permit Plan 1                   |                                     |                         |

|                    |                                 |                      |                |
|--------------------|---------------------------------|----------------------|----------------|
| <b>Project</b>     | Eddy County (NAD 83 NM Eastern) |                      |                |
| <b>Map System:</b> | US State Plane 1983             | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | North American Datum 1983       |                      |                |
| <b>Map Zone:</b>   | New Mexico Eastern Zone         |                      |                |

|             |                   |  |  |
|-------------|-------------------|--|--|
| <b>Site</b> | Sec. 36-T23S-R31E |  |  |
|-------------|-------------------|--|--|

|                              |         |                     |                 |                          |             |
|------------------------------|---------|---------------------|-----------------|--------------------------|-------------|
| <b>Site Position:</b>        |         | <b>Northing:</b>    | 461,801.03 usft | <b>Latitude:</b>         | 32.268172   |
| <b>From:</b>                 | Map     | <b>Easting:</b>     | 724,712.45 usft | <b>Longitude:</b>        | -103.740050 |
| <b>Position Uncertainty:</b> | 0.00 ft | <b>Slot Radius:</b> | 13-3/16 "       | <b>Grid Convergence:</b> | 0.32 °      |

|                             |                    |         |                            |                 |                                  |
|-----------------------------|--------------------|---------|----------------------------|-----------------|----------------------------------|
| <b>Well</b>                 | Todd 36 State 231H |         |                            |                 |                                  |
| <b>Well Position</b>        | +N/-S              | 0.00 ft | <b>Northing:</b>           | 456,863.54 usft | <b>Latitude:</b> 32.254575       |
|                             | +E/-W              | 0.00 ft | <b>Easting:</b>            | 726,367.60 usft | <b>Longitude:</b> -103.734784    |
| <b>Position Uncertainty</b> |                    | 0.50 ft | <b>Wellhead Elevation:</b> |                 | <b>Ground Level:</b> 3,505.10 ft |

|                 |             |  |  |  |  |
|-----------------|-------------|--|--|--|--|
| <b>Wellbore</b> | Wellbore #1 |  |  |  |  |
|-----------------|-------------|--|--|--|--|

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|-----------|------------|-------------|-----------------|---------------|---------------------|
|           | IGRF2015   | 10/1/2018   | 6.89            | 60.05         | 47,805.80293456     |

|               |               |  |  |  |  |
|---------------|---------------|--|--|--|--|
| <b>Design</b> | Permit Plan 1 |  |  |  |  |
|---------------|---------------|--|--|--|--|

|                     |  |               |           |                      |      |
|---------------------|--|---------------|-----------|----------------------|------|
| <b>Audit Notes:</b> |  |               |           |                      |      |
| <b>Version:</b>     |  | <b>Phase:</b> | PROTOTYPE | <b>Tie On Depth:</b> | 0.00 |

| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
|-------------------|-----------------------|------------|------------|---------------|
|                   | 0.00                  | 0.00       | 0.00       | 355.18        |

|                          |          |                   |           |         |  |
|--------------------------|----------|-------------------|-----------|---------|--|
| Plan Survey Tool Program |          | Date              | 10/4/2018 |         |  |
| Depth From               | Depth To |                   |           |         |  |
| (ft)                     | (ft)     | Survey (Wellbore) | Tool Name | Remarks |  |

|   |      |           |                             |                             |
|---|------|-----------|-----------------------------|-----------------------------|
| 1 | 0.00 | 15,526.07 | Permit Plan 1 (Wellbore #1) | MWD+HDGM<br>OWSG MWD + HDGM |
|---|------|-----------|-----------------------------|-----------------------------|

| Plan Sections       |                 |             |                     |            |            |                         |                        |                       |         |                      |
|---------------------|-----------------|-------------|---------------------|------------|------------|-------------------------|------------------------|-----------------------|---------|----------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target               |
| 0.00                | 0.00            | 0.00        | 0.00                | 0.00       | 0.00       | 0.00                    | 0.00                   | 0.00                  | 0.00    |                      |
| 2,650.00            | 0.00            | 0.00        | 2,650.00            | 0.00       | 0.00       | 0.00                    | 0.00                   | 0.00                  | 0.00    |                      |
| 3,064.80            | 4.15            | 234.39      | 3,064.44            | -8.74      | -12.20     | 1.00                    | 1.00                   | 0.00                  | 234.39  |                      |
| 9,367.58            | 4.15            | 234.39      | 9,350.71            | -274.17    | -382.86    | 0.00                    | 0.00                   | 0.00                  | 0.00    |                      |
| 9,644.11            | 0.00            | 0.01        | 9,627.00            | -280.00    | -391.00    | 1.50                    | -1.50                  | 0.00                  | 180.00  |                      |
| 9,994.15            | 0.00            | 0.01        | 9,977.04            | -280.00    | -391.00    | 0.00                    | 0.00                   | 0.00                  | 0.01    |                      |
| 10,894.16           | 90.00           | 359.74      | 10,550.00           | 292.95     | -393.65    | 10.00                   | 10.00                  | 0.00                  | 359.74  | PBHL - Todd 36 State |
| 15,526.07           | 90.00           | 359.74      | 10,550.00           | 4,924.81   | -415.05    | 0.00                    | 0.00                   | 0.00                  | 0.00    | PBHL - Todd 36 State |

# Planning Report - Geographic

|                  |                                 |                                     |                         |
|------------------|---------------------------------|-------------------------------------|-------------------------|
| <b>Database:</b> | EDM r5000.141_Prod US           | <b>Local Co-ordinate Reference:</b> | Well Todd 36 State 231H |
| <b>Company:</b>  | WCDSC Permian NM                | <b>TVD Reference:</b>               | RKB @ 3530.10ft         |
| <b>Project:</b>  | Eddy County (NAD 83 NM Eastern) | <b>MD Reference:</b>                | RKB @ 3530.10ft         |
| <b>Site:</b>     | Sec. 36-T23S-R31E               | <b>North Reference:</b>             | Grid                    |
| <b>Well:</b>     | Todd 36 State 231H              | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Wellbore:</b> | Wellbore #1                     |                                     |                         |
| <b>Design:</b>   | Permit Plan 1                   |                                     |                         |

## Planned Survey

| Measured<br>Depth<br>(ft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Map<br>Northing<br>(usft) | Map<br>Easting<br>(usft) | Latitude  | Longitude   |
|---------------------------|--------------------|----------------|---------------------------|---------------|---------------|---------------------------|--------------------------|-----------|-------------|
| 0.00                      | 0.00               | 0.00           | 0.00                      | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 100.00                    | 0.00               | 0.00           | 100.00                    | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 200.00                    | 0.00               | 0.00           | 200.00                    | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 300.00                    | 0.00               | 0.00           | 300.00                    | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 400.00                    | 0.00               | 0.00           | 400.00                    | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 500.00                    | 0.00               | 0.00           | 500.00                    | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 600.00                    | 0.00               | 0.00           | 600.00                    | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 700.00                    | 0.00               | 0.00           | 700.00                    | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 800.00                    | 0.00               | 0.00           | 800.00                    | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 900.00                    | 0.00               | 0.00           | 900.00                    | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 1,000.00                  | 0.00               | 0.00           | 1,000.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 1,100.00                  | 0.00               | 0.00           | 1,100.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 1,200.00                  | 0.00               | 0.00           | 1,200.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 1,300.00                  | 0.00               | 0.00           | 1,300.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 1,400.00                  | 0.00               | 0.00           | 1,400.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 1,500.00                  | 0.00               | 0.00           | 1,500.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 1,600.00                  | 0.00               | 0.00           | 1,600.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 1,700.00                  | 0.00               | 0.00           | 1,700.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 1,800.00                  | 0.00               | 0.00           | 1,800.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 1,900.00                  | 0.00               | 0.00           | 1,900.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 2,000.00                  | 0.00               | 0.00           | 2,000.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 2,100.00                  | 0.00               | 0.00           | 2,100.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 2,200.00                  | 0.00               | 0.00           | 2,200.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 2,300.00                  | 0.00               | 0.00           | 2,300.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 2,400.00                  | 0.00               | 0.00           | 2,400.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 2,500.00                  | 0.00               | 0.00           | 2,500.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 2,600.00                  | 0.00               | 0.00           | 2,600.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 2,650.00                  | 0.00               | 0.00           | 2,650.00                  | 0.00          | 0.00          | 456,863.54                | 726,367.60               | 32.254575 | -103.734784 |
| 2,700.00                  | 0.50               | 234.39         | 2,700.00                  | -0.13         | -0.18         | 456,863.41                | 726,367.42               | 32.254575 | -103.734785 |
| 2,800.00                  | 1.50               | 234.39         | 2,799.98                  | -1.14         | -1.60         | 456,862.40                | 726,366.00               | 32.254572 | -103.734790 |
| 2,900.00                  | 2.50               | 234.39         | 2,899.92                  | -3.18         | -4.43         | 456,860.36                | 726,363.16               | 32.254567 | -103.734799 |
| 3,000.00                  | 3.50               | 234.39         | 2,999.78                  | -6.22         | -8.69         | 456,857.32                | 726,358.91               | 32.254558 | -103.734813 |
| 3,064.80                  | 4.15               | 234.39         | 3,064.44                  | -8.74         | -12.20        | 456,854.80                | 726,355.39               | 32.254551 | -103.734824 |
| 3,100.00                  | 4.15               | 234.39         | 3,099.55                  | -10.22        | -14.27        | 456,853.32                | 726,353.32               | 32.254547 | -103.734831 |
| 3,200.00                  | 4.15               | 234.39         | 3,199.28                  | -14.43        | -20.15        | 456,849.11                | 726,347.44               | 32.254536 | -103.734850 |
| 3,300.00                  | 4.15               | 234.39         | 3,299.02                  | -18.64        | -26.03        | 456,844.90                | 726,341.56               | 32.254524 | -103.734869 |
| 3,400.00                  | 4.15               | 234.39         | 3,398.76                  | -22.85        | -31.92        | 456,840.68                | 726,335.68               | 32.254513 | -103.734888 |
| 3,500.00                  | 4.15               | 234.39         | 3,498.50                  | -27.07        | -37.80        | 456,836.47                | 726,329.80               | 32.254502 | -103.734907 |
| 3,600.00                  | 4.15               | 234.39         | 3,598.24                  | -31.28        | -43.68        | 456,832.26                | 726,323.92               | 32.254490 | -103.734926 |
| 3,700.00                  | 4.15               | 234.39         | 3,697.97                  | -35.49        | -49.56        | 456,828.05                | 726,318.04               | 32.254479 | -103.734945 |
| 3,800.00                  | 4.15               | 234.39         | 3,797.71                  | -39.70        | -55.44        | 456,823.84                | 726,312.16               | 32.254467 | -103.734964 |
| 3,900.00                  | 4.15               | 234.39         | 3,897.45                  | -43.91        | -61.32        | 456,819.63                | 726,306.28               | 32.254456 | -103.734983 |
| 4,000.00                  | 4.15               | 234.39         | 3,997.19                  | -48.12        | -67.20        | 456,815.42                | 726,300.40               | 32.254444 | -103.735003 |
| 4,100.00                  | 4.15               | 234.39         | 4,096.93                  | -52.33        | -73.08        | 456,811.20                | 726,294.51               | 32.254433 | -103.735022 |
| 4,200.00                  | 4.15               | 234.39         | 4,196.66                  | -56.55        | -78.96        | 456,806.99                | 726,288.63               | 32.254421 | -103.735041 |
| 4,300.00                  | 4.15               | 234.39         | 4,296.40                  | -60.76        | -84.84        | 456,802.78                | 726,282.75               | 32.254410 | -103.735060 |
| 4,400.00                  | 4.15               | 234.39         | 4,396.14                  | -64.97        | -90.72        | 456,798.57                | 726,276.87               | 32.254398 | -103.735079 |
| 4,500.00                  | 4.15               | 234.39         | 4,495.88                  | -69.18        | -96.61        | 456,794.36                | 726,270.99               | 32.254387 | -103.735098 |
| 4,600.00                  | 4.15               | 234.39         | 4,595.62                  | -73.39        | -102.49       | 456,790.15                | 726,265.11               | 32.254375 | -103.735117 |
| 4,700.00                  | 4.15               | 234.39         | 4,695.35                  | -77.60        | -108.37       | 456,785.94                | 726,259.23               | 32.254364 | -103.735136 |
| 4,800.00                  | 4.15               | 234.39         | 4,795.09                  | -81.81        | -114.25       | 456,781.72                | 726,253.35               | 32.254352 | -103.735155 |
| 4,900.00                  | 4.15               | 234.39         | 4,894.83                  | -86.03        | -120.13       | 456,777.51                | 726,247.47               | 32.254341 | -103.735174 |
| 5,000.00                  | 4.15               | 234.39         | 4,994.57                  | -90.24        | -126.01       | 456,773.30                | 726,241.59               | 32.254329 | -103.735194 |
| 5,100.00                  | 4.15               | 234.39         | 5,094.31                  | -94.45        | -131.89       | 456,769.09                | 726,235.71               | 32.254318 | -103.735213 |
| 5,200.00                  | 4.15               | 234.39         | 5,194.04                  | -98.66        | -137.77       | 456,764.88                | 726,229.82               | 32.254306 | -103.735232 |

# Planning Report - Geographic

Database: EDM r5000.141\_Prod US  
 Company: WCDSC Permian NM  
 Project: Eddy County (NAD 83 NM Eastern)  
 Site: Sec. 36-T23S-R31E  
 Well: Todd 36 State 231H  
 Wellbore: Wellbore #1  
 Design: Permit Plan 1

Local Co-ordinate Reference: Well Todd 36 State 231H  
 TVD Reference: RKB @ 3530.10ft  
 MD Reference: RKB @ 3530.10ft  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

## Planned Survey

| Measured<br>Depth<br>(ft)          | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Map<br>Northing<br>(usft) | Map<br>Easting<br>(usft) | Latitude  | Longitude   |
|------------------------------------|--------------------|----------------|---------------------------|---------------|---------------|---------------------------|--------------------------|-----------|-------------|
| 5,300.00                           | 4.15               | 234.39         | 5,293.78                  | -102.87       | -143.65       | 456,760.67                | 726,223.94               | 32.254295 | -103.735251 |
| 5,400.00                           | 4.15               | 234.39         | 5,393.52                  | -107.08       | -149.53       | 456,756.46                | 726,218.06               | 32.254283 | -103.735270 |
| 5,500.00                           | 4.15               | 234.39         | 5,493.26                  | -111.29       | -155.41       | 456,752.24                | 726,212.18               | 32.254272 | -103.735289 |
| 5,600.00                           | 4.15               | 234.39         | 5,593.00                  | -115.51       | -161.30       | 456,748.03                | 726,206.30               | 32.254260 | -103.735308 |
| 5,700.00                           | 4.15               | 234.39         | 5,692.73                  | -119.72       | -167.18       | 456,743.82                | 726,200.42               | 32.254249 | -103.735327 |
| 5,800.00                           | 4.15               | 234.39         | 5,792.47                  | -123.93       | -173.06       | 456,739.61                | 726,194.54               | 32.254237 | -103.735346 |
| 5,900.00                           | 4.15               | 234.39         | 5,892.21                  | -128.14       | -178.94       | 456,735.40                | 726,188.66               | 32.254226 | -103.735365 |
| 6,000.00                           | 4.15               | 234.39         | 5,991.95                  | -132.35       | -184.82       | 456,731.19                | 726,182.78               | 32.254214 | -103.735385 |
| 6,100.00                           | 4.15               | 234.39         | 6,091.69                  | -136.56       | -190.70       | 456,726.98                | 726,176.90               | 32.254203 | -103.735404 |
| 6,200.00                           | 4.15               | 234.39         | 6,191.43                  | -140.77       | -196.58       | 456,722.76                | 726,171.02               | 32.254191 | -103.735423 |
| 6,300.00                           | 4.15               | 234.39         | 6,291.16                  | -144.99       | -202.46       | 456,718.55                | 726,165.13               | 32.254180 | -103.735442 |
| 6,400.00                           | 4.15               | 234.39         | 6,390.90                  | -149.20       | -208.34       | 456,714.34                | 726,159.25               | 32.254168 | -103.735461 |
| 6,500.00                           | 4.15               | 234.39         | 6,490.64                  | -153.41       | -214.22       | 456,710.13                | 726,153.37               | 32.254157 | -103.735480 |
| 6,600.00                           | 4.15               | 234.39         | 6,590.38                  | -157.62       | -220.11       | 456,705.92                | 726,147.49               | 32.254145 | -103.735499 |
| 6,700.00                           | 4.15               | 234.39         | 6,690.12                  | -161.83       | -225.99       | 456,701.71                | 726,141.61               | 32.254134 | -103.735518 |
| 6,800.00                           | 4.15               | 234.39         | 6,789.85                  | -166.04       | -231.87       | 456,697.50                | 726,135.73               | 32.254122 | -103.735537 |
| 6,900.00                           | 4.15               | 234.39         | 6,889.59                  | -170.25       | -237.75       | 456,693.28                | 726,129.85               | 32.254111 | -103.735556 |
| 7,000.00                           | 4.15               | 234.39         | 6,989.33                  | -174.47       | -243.63       | 456,689.07                | 726,123.97               | 32.254099 | -103.735576 |
| 7,100.00                           | 4.15               | 234.39         | 7,089.07                  | -178.68       | -249.51       | 456,684.86                | 726,118.09               | 32.254088 | -103.735595 |
| 7,200.00                           | 4.15               | 234.39         | 7,188.81                  | -182.89       | -255.39       | 456,680.65                | 726,112.21               | 32.254077 | -103.735614 |
| 7,300.00                           | 4.15               | 234.39         | 7,288.54                  | -187.10       | -261.27       | 456,676.44                | 726,106.32               | 32.254065 | -103.735633 |
| 7,400.00                           | 4.15               | 234.39         | 7,388.28                  | -191.31       | -267.15       | 456,672.23                | 726,100.44               | 32.254054 | -103.735652 |
| 7,500.00                           | 4.15               | 234.39         | 7,488.02                  | -195.52       | -273.03       | 456,668.02                | 726,094.56               | 32.254042 | -103.735671 |
| 7,600.00                           | 4.15               | 234.39         | 7,587.76                  | -199.73       | -278.91       | 456,663.80                | 726,088.68               | 32.254031 | -103.735690 |
| 7,700.00                           | 4.15               | 234.39         | 7,687.50                  | -203.95       | -284.80       | 456,659.59                | 726,082.80               | 32.254019 | -103.735709 |
| 7,800.00                           | 4.15               | 234.39         | 7,787.23                  | -208.16       | -290.68       | 456,655.38                | 726,076.92               | 32.254008 | -103.735728 |
| 7,900.00                           | 4.15               | 234.39         | 7,886.97                  | -212.37       | -296.56       | 456,651.17                | 726,071.04               | 32.253996 | -103.735747 |
| 8,000.00                           | 4.15               | 234.39         | 7,986.71                  | -216.58       | -302.44       | 456,646.96                | 726,065.16               | 32.253985 | -103.735767 |
| 8,100.00                           | 4.15               | 234.39         | 8,086.45                  | -220.79       | -308.32       | 456,642.75                | 726,059.28               | 32.253973 | -103.735786 |
| 8,200.00                           | 4.15               | 234.39         | 8,186.19                  | -225.00       | -314.20       | 456,638.54                | 726,053.40               | 32.253962 | -103.735805 |
| 8,300.00                           | 4.15               | 234.39         | 8,285.92                  | -229.21       | -320.08       | 456,634.32                | 726,047.52               | 32.253950 | -103.735824 |
| 8,400.00                           | 4.15               | 234.39         | 8,385.66                  | -233.43       | -325.96       | 456,630.11                | 726,041.63               | 32.253939 | -103.735843 |
| 8,500.00                           | 4.15               | 234.39         | 8,485.40                  | -237.64       | -331.84       | 456,625.90                | 726,035.75               | 32.253927 | -103.735862 |
| 8,600.00                           | 4.15               | 234.39         | 8,585.14                  | -241.85       | -337.72       | 456,621.69                | 726,029.87               | 32.253916 | -103.735881 |
| 8,700.00                           | 4.15               | 234.39         | 8,684.88                  | -246.06       | -343.61       | 456,617.48                | 726,023.99               | 32.253904 | -103.735900 |
| 8,800.00                           | 4.15               | 234.39         | 8,784.61                  | -250.27       | -349.49       | 456,613.27                | 726,018.11               | 32.253893 | -103.735919 |
| 8,900.00                           | 4.15               | 234.39         | 8,884.35                  | -254.48       | -355.37       | 456,609.06                | 726,012.23               | 32.253881 | -103.735938 |
| 9,000.00                           | 4.15               | 234.39         | 8,984.09                  | -258.69       | -361.25       | 456,604.84                | 726,006.35               | 32.253870 | -103.735958 |
| 9,100.00                           | 4.15               | 234.39         | 9,083.83                  | -262.91       | -367.13       | 456,600.63                | 726,000.47               | 32.253858 | -103.735977 |
| 9,200.00                           | 4.15               | 234.39         | 9,183.57                  | -267.12       | -373.01       | 456,596.42                | 725,994.59               | 32.253847 | -103.735996 |
| 9,300.00                           | 4.15               | 234.39         | 9,283.30                  | -271.33       | -378.89       | 456,592.21                | 725,988.71               | 32.253835 | -103.736015 |
| 9,367.58                           | 4.15               | 234.39         | 9,350.71                  | -274.17       | -382.86       | 456,589.36                | 725,984.73               | 32.253828 | -103.736028 |
| 9,400.00                           | 3.66               | 234.39         | 9,383.05                  | -275.46       | -384.66       | 456,588.08                | 725,982.94               | 32.253824 | -103.736034 |
| 9,500.00                           | 2.16               | 234.39         | 9,482.92                  | -278.42       | -388.79       | 456,585.12                | 725,978.81               | 32.253816 | -103.736047 |
| 9,600.00                           | 0.66               | 234.39         | 9,582.89                  | -279.85       | -390.79       | 456,583.69                | 725,976.80               | 32.253812 | -103.736053 |
| 9,644.11                           | 0.00               | 0.01           | 9,627.00                  | -280.00       | -391.00       | 456,583.54                | 725,976.60               | 32.253812 | -103.736054 |
| 9,700.00                           | 0.00               | 0.00           | 9,682.89                  | -280.00       | -391.00       | 456,583.54                | 725,976.60               | 32.253812 | -103.736054 |
| 9,800.00                           | 0.00               | 0.00           | 9,782.89                  | -280.00       | -391.00       | 456,583.54                | 725,976.60               | 32.253812 | -103.736054 |
| 9,900.00                           | 0.00               | 0.00           | 9,882.89                  | -280.00       | -391.00       | 456,583.54                | 725,976.60               | 32.253812 | -103.736054 |
| 9,994.00                           | 0.00               | 0.00           | 9,976.89                  | -280.00       | -391.00       | 456,583.54                | 725,976.60               | 32.253812 | -103.736054 |
| KOP @ 9994' MD, 50' FSL, 1240' FWL |                    |                |                           |               |               |                           |                          |           |             |
| 9,994.15                           | 0.00               | 0.01           | 9,977.04                  | -280.00       | -391.00       | 456,583.54                | 725,976.60               | 32.253812 | -103.736054 |
| 10,000.00                          | 0.58               | 359.74         | 9,982.89                  | -279.97       | -391.00       | 456,583.57                | 725,976.60               | 32.253812 | -103.736054 |
| 10,100.00                          | 10.58              | 359.74         | 10,082.29                 | -270.25       | -391.05       | 456,593.29                | 725,976.55               | 32.253838 | -103.736054 |

# Planning Report - Geographic

Database: EDM r5000.141\_Prod US  
 Company: WCDSC Permian NM  
 Project: Eddy County (NAD 83 NM Eastern)  
 Site: Sec. 36-T23S-R31E  
 Well: Todd 36 State 231H  
 Wellbore: Wellbore #1  
 Design: Permit Plan 1

Local Co-ordinate Reference: Well Todd 36 State 231H  
 TVD Reference: RKB @ 3530.10ft  
 MD Reference: RKB @ 3530.10ft  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

## Planned Survey

| Measured<br>Depth<br>(ft)            | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Map<br>Northing<br>(usft) | Map<br>Easting<br>(usft) | Latitude  | Longitude   |
|--------------------------------------|--------------------|----------------|---------------------------|---------------|---------------|---------------------------|--------------------------|-----------|-------------|
| 10,200.00                            | 20.58              | 359.74         | 10,178.49                 | -243.42       | -391.17       | 456,620.12                | 725,976.43               | 32.253912 | -103.736054 |
| 10,236.27                            | 24.21              | 359.74         | 10,212.01                 | -229.60       | -391.23       | 456,633.94                | 725,976.36               | 32.253950 | -103.736054 |
| FTP @ 10236' MD, 100' FSL, 1240' FWL |                    |                |                           |               |               |                           |                          |           |             |
| 10,300.00                            | 30.58              | 359.74         | 10,268.57                 | -200.29       | -391.37       | 456,663.25                | 725,976.23               | 32.254031 | -103.736054 |
| 10,400.00                            | 40.58              | 359.74         | 10,349.79                 | -142.17       | -391.64       | 456,721.36                | 725,975.96               | 32.254191 | -103.736054 |
| 10,500.00                            | 50.58              | 359.74         | 10,419.69                 | -70.84        | -391.97       | 456,792.70                | 725,975.63               | 32.254387 | -103.736054 |
| 10,600.00                            | 60.58              | 359.74         | 10,476.13                 | 11.55         | -392.35       | 456,875.09                | 725,975.25               | 32.254613 | -103.736053 |
| 10,700.00                            | 70.58              | 359.74         | 10,517.42                 | 102.49        | -392.77       | 456,966.03                | 725,974.83               | 32.254863 | -103.736053 |
| 10,800.00                            | 80.58              | 359.74         | 10,542.28                 | 199.22        | -393.21       | 457,062.76                | 725,974.38               | 32.255129 | -103.736053 |
| 10,894.16                            | 90.00              | 359.74         | 10,550.00                 | 292.95        | -393.65       | 457,156.49                | 725,973.95               | 32.255387 | -103.736052 |
| 10,900.00                            | 90.00              | 359.74         | 10,550.00                 | 298.80        | -393.67       | 457,162.34                | 725,973.92               | 32.255403 | -103.736052 |
| 11,000.00                            | 90.00              | 359.74         | 10,550.00                 | 398.80        | -394.14       | 457,262.33                | 725,973.46               | 32.255678 | -103.736052 |
| 11,100.00                            | 90.00              | 359.74         | 10,550.00                 | 498.79        | -394.60       | 457,362.33                | 725,973.00               | 32.255952 | -103.736052 |
| 11,200.00                            | 90.00              | 359.74         | 10,550.00                 | 598.79        | -395.06       | 457,462.33                | 725,972.54               | 32.256227 | -103.736051 |
| 11,300.00                            | 90.00              | 359.74         | 10,550.00                 | 698.79        | -395.52       | 457,562.33                | 725,972.07               | 32.256502 | -103.736051 |
| 11,400.00                            | 90.00              | 359.74         | 10,550.00                 | 798.79        | -395.99       | 457,662.33                | 725,971.61               | 32.256777 | -103.736051 |
| 11,500.00                            | 90.00              | 359.74         | 10,550.00                 | 898.79        | -396.45       | 457,762.33                | 725,971.15               | 32.257052 | -103.736051 |
| 11,600.00                            | 90.00              | 359.74         | 10,550.00                 | 998.79        | -396.91       | 457,862.33                | 725,970.69               | 32.257327 | -103.736050 |
| 11,700.00                            | 90.00              | 359.74         | 10,550.00                 | 1,098.79      | -397.37       | 457,962.32                | 725,970.23               | 32.257602 | -103.736050 |
| 11,800.00                            | 90.00              | 359.74         | 10,550.00                 | 1,198.79      | -397.83       | 458,062.32                | 725,969.76               | 32.257877 | -103.736050 |
| 11,900.00                            | 90.00              | 359.74         | 10,550.00                 | 1,298.79      | -398.30       | 458,162.32                | 725,969.30               | 32.258151 | -103.736049 |
| 12,000.00                            | 90.00              | 359.74         | 10,550.00                 | 1,398.79      | -398.76       | 458,262.32                | 725,968.84               | 32.258426 | -103.736049 |
| 12,100.00                            | 90.00              | 359.74         | 10,550.00                 | 1,498.78      | -399.22       | 458,362.32                | 725,968.38               | 32.258701 | -103.736049 |
| 12,200.00                            | 90.00              | 359.74         | 10,550.00                 | 1,598.78      | -399.68       | 458,462.32                | 725,967.91               | 32.258976 | -103.736048 |
| 12,300.00                            | 90.00              | 359.74         | 10,550.00                 | 1,698.78      | -400.14       | 458,562.32                | 725,967.45               | 32.259251 | -103.736048 |
| 12,400.00                            | 90.00              | 359.74         | 10,550.00                 | 1,798.78      | -400.61       | 458,662.32                | 725,966.99               | 32.259526 | -103.736048 |
| 12,500.00                            | 90.00              | 359.74         | 10,550.00                 | 1,898.78      | -401.07       | 458,762.31                | 725,966.53               | 32.259801 | -103.736048 |
| 12,600.00                            | 90.00              | 359.74         | 10,550.00                 | 1,998.78      | -401.53       | 458,862.31                | 725,966.07               | 32.260076 | -103.736047 |
| 12,700.00                            | 90.00              | 359.74         | 10,550.00                 | 2,098.78      | -401.99       | 458,962.31                | 725,965.60               | 32.260350 | -103.736047 |
| 12,800.00                            | 90.00              | 359.74         | 10,550.00                 | 2,198.78      | -402.46       | 459,062.31                | 725,965.14               | 32.260625 | -103.736047 |
| 12,900.00                            | 90.00              | 359.74         | 10,550.00                 | 2,298.78      | -402.92       | 459,162.31                | 725,964.68               | 32.260900 | -103.736046 |
| 13,000.00                            | 90.00              | 359.74         | 10,550.00                 | 2,398.77      | -403.38       | 459,262.31                | 725,964.22               | 32.261175 | -103.736046 |
| 13,100.00                            | 90.00              | 359.74         | 10,550.00                 | 2,498.77      | -403.84       | 459,362.31                | 725,963.76               | 32.261450 | -103.736046 |
| 13,200.00                            | 90.00              | 359.74         | 10,550.00                 | 2,598.77      | -404.30       | 459,462.31                | 725,963.29               | 32.261725 | -103.736045 |
| 13,300.00                            | 90.00              | 359.74         | 10,550.00                 | 2,698.77      | -404.77       | 459,562.30                | 725,962.83               | 32.262000 | -103.736045 |
| 13,400.00                            | 90.00              | 359.74         | 10,550.00                 | 2,798.77      | -405.23       | 459,662.30                | 725,962.37               | 32.262275 | -103.736045 |
| 13,500.00                            | 90.00              | 359.74         | 10,550.00                 | 2,898.77      | -405.69       | 459,762.30                | 725,961.91               | 32.262549 | -103.736044 |
| 13,600.00                            | 90.00              | 359.74         | 10,550.00                 | 2,998.77      | -406.15       | 459,862.30                | 725,961.44               | 32.262824 | -103.736044 |
| 13,700.00                            | 90.00              | 359.74         | 10,550.00                 | 3,098.77      | -406.61       | 459,962.30                | 725,960.98               | 32.263099 | -103.736044 |
| 13,800.00                            | 90.00              | 359.74         | 10,550.00                 | 3,198.77      | -407.08       | 460,062.30                | 725,960.52               | 32.263374 | -103.736044 |
| 13,900.00                            | 90.00              | 359.74         | 10,550.00                 | 3,298.77      | -407.54       | 460,162.30                | 725,960.06               | 32.263649 | -103.736043 |
| 14,000.00                            | 90.00              | 359.74         | 10,550.00                 | 3,398.76      | -408.00       | 460,262.30                | 725,959.60               | 32.263924 | -103.736043 |
| 14,100.00                            | 90.00              | 359.74         | 10,550.00                 | 3,498.76      | -408.46       | 460,362.29                | 725,959.13               | 32.264199 | -103.736043 |
| 14,200.00                            | 90.00              | 359.74         | 10,550.00                 | 3,598.76      | -408.93       | 460,462.29                | 725,958.67               | 32.264474 | -103.736042 |
| 14,300.00                            | 90.00              | 359.74         | 10,550.00                 | 3,698.76      | -409.39       | 460,562.29                | 725,958.21               | 32.264749 | -103.736042 |
| 14,400.00                            | 90.00              | 359.74         | 10,550.00                 | 3,798.76      | -409.85       | 460,662.29                | 725,957.75               | 32.265023 | -103.736042 |
| 14,500.00                            | 90.00              | 359.74         | 10,550.00                 | 3,898.76      | -410.31       | 460,762.29                | 725,957.29               | 32.265298 | -103.736041 |
| 14,600.00                            | 90.00              | 359.74         | 10,550.00                 | 3,998.76      | -410.77       | 460,862.29                | 725,956.82               | 32.265573 | -103.736041 |
| 14,700.00                            | 90.00              | 359.74         | 10,550.00                 | 4,098.76      | -411.24       | 460,962.29                | 725,956.36               | 32.265848 | -103.736041 |
| 14,800.00                            | 90.00              | 359.74         | 10,550.00                 | 4,198.76      | -411.70       | 461,062.29                | 725,955.90               | 32.266123 | -103.736040 |
| 14,900.00                            | 90.00              | 359.74         | 10,550.00                 | 4,298.75      | -412.16       | 461,162.28                | 725,955.44               | 32.266398 | -103.736040 |
| 15,000.00                            | 90.00              | 359.74         | 10,550.00                 | 4,398.75      | -412.62       | 461,262.28                | 725,954.97               | 32.266673 | -103.736040 |
| 15,100.00                            | 90.00              | 359.74         | 10,550.00                 | 4,498.75      | -413.08       | 461,362.28                | 725,954.51               | 32.266948 | -103.736040 |
| 15,200.00                            | 90.00              | 359.74         | 10,550.00                 | 4,598.75      | -413.55       | 461,462.28                | 725,954.05               | 32.267222 | -103.736039 |

# Planning Report - Geographic

**Database:** EDM r5000.141\_Prod US  
**Company:** WCDSC Permian NM  
**Project:** Eddy County (NAD 83 NM Eastern)  
**Site:** Sec. 36-T23S-R31E  
**Well:** Todd 36 State 231H  
**Wellbore:** Wellbore #1  
**Design:** Permit Plan 1

**Local Co-ordinate Reference:** Well Todd 36 State 231H  
**TVD Reference:** RKB @ 3530.10ft  
**MD Reference:** RKB @ 3530.10ft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

## Planned Survey

| Measured Depth (ft)                  | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (usft) | Map Easting (usft) | Latitude  | Longitude   |
|--------------------------------------|-----------------|-------------|---------------------|------------|------------|---------------------|--------------------|-----------|-------------|
| 15,226.05                            | 90.00           | 359.74      | 10,550.00           | 4,624.80   | -413.67    | 461,488.33          | 725,953.93         | 32.267294 | -103.736039 |
| PBHL; 20' FNL, 1240' FWL             |                 |             |                     |            |            |                     |                    |           |             |
| 15,300.00                            | 90.00           | 359.74      | 10,550.00           | 4,698.75   | -414.01    | 461,562.28          | 725,953.59         | 32.267497 | -103.736039 |
| 15,400.00                            | 90.00           | 359.74      | 10,550.00           | 4,798.75   | -414.47    | 461,662.28          | 725,953.13         | 32.267772 | -103.736039 |
| 15,447.04                            | 90.00           | 359.74      | 10,550.00           | 4,845.79   | -414.69    | 461,709.32          | 725,952.91         | 32.267901 | -103.736039 |
| LTP @ 15447' MD, 100' FNL, 1240' FWL |                 |             |                     |            |            |                     |                    |           |             |
| 15,500.00                            | 90.00           | 359.74      | 10,550.00           | 4,898.75   | -414.93    | 461,762.28          | 725,952.66         | 32.268047 | -103.736038 |
| 15,526.07                            | 90.00           | 359.74      | 10,550.00           | 4,924.81   | -415.05    | 461,788.34          | 725,952.54         | 32.268119 | -103.736038 |

## Design Targets

| Target Name                                                                      | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude  | Longitude   |
|----------------------------------------------------------------------------------|---------------|--------------|----------|------------|------------|-----------------|----------------|-----------|-------------|
| - hit/miss target                                                                |               |              |          |            |            |                 |                |           |             |
| - Shape                                                                          |               |              |          |            |            |                 |                |           |             |
| PBHL - Todd 36 State 231H                                                        | 0.00          | 0.00         | 0.00     | 4,924.81   | -415.05    | 461,788.34      | 725,952.54     | 32.268119 | -103.736038 |
| - plan misses target center by 4942.27ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E) |               |              |          |            |            |                 |                |           |             |
| - Point                                                                          |               |              |          |            |            |                 |                |           |             |

## Plan Annotations

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            | Comment                              |
|---------------------|---------------------|-------------------|------------|--------------------------------------|
|                     |                     | +N/-S (ft)        | +E/-W (ft) |                                      |
| 9,994.00            | 9,976.89            | -280.00           | -391.00    | KOP @ 9994' MD, 50' FSL, 1240' FWL   |
| 10,236.27           | 10,212.01           | -229.60           | -391.23    | FTP @ 10236' MD, 100' FSL, 1240' FWL |
| 15,226.05           | 10,550.00           | 4,624.80          | -413.67    | PBHL; 20' FNL, 1240' FWL             |
| 15,447.04           | 10,550.00           | 4,845.79          | -414.69    | LTP @ 15447' MD, 100' FNL, 1240' FWL |

# Devon Energy

WELL DETAILS: Todd 36 State 231H

RKB @ 3530.10R  
3505.10  
Northing 456863.54 Easting 726367.60 Latitude 32.254575 Longitude -103.734784

## SECTION DETAILS Permit Plan 1

| MD       | Inc   | Azi    | TVD      | +N/-S   | +E/-W   | Dleg  | VSect   | Annotation                         |
|----------|-------|--------|----------|---------|---------|-------|---------|------------------------------------|
| 0.00     | 0.00  | 0.00   | 0.00     | 0.00    | 0.00    | 0.00  | 0.00    |                                    |
| 2650.00  | 0.00  | 0.00   | 2650.00  | 0.00    | 0.00    | 0.00  | 0.00    |                                    |
| 3064.80  | 4.15  | 234.39 | 3064.44  | -8.74   | -12.20  | 1.00  | -7.68   |                                    |
| 9367.58  | 4.15  | 234.39 | 9350.71  | -274.17 | -382.86 | 0.00  | -241.05 |                                    |
| 9644.11  | 0.00  | 0.00   | 9627.00  | -280.00 | -391.00 | 1.50  | -246.17 |                                    |
| 9994.15  | 0.00  | 0.00   | 9977.04  | -280.00 | -391.00 | 0.00  | -246.17 | KOP @ 9994' MD, 50' FSL, 1240' FWL |
| 10894.16 | 90.00 | 359.74 | 10550.00 | 292.95  | -393.65 | 10.00 | 324.98  |                                    |
| 15526.06 | 90.00 | 359.74 | 10550.00 | 4924.81 | -415.05 | 0.00  | 4942.27 |                                    |

