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Form 3160-3  
(June 2015)

MAY 17 2019

FORM APPROVED  
OMB No. 1004-0137  
Expires: January 31, 2018

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
DISTRICT II-ARTESIA O.C.D.

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. NMNM0405444	
6. If Indian, Allottee or Tribe Name	
7. If Unit or CA Agreement, Name and No.	
8. Lease Name and Well No. MALDIVES 15-22-FED:COM 331H 322788	
9. API Well No. 6137 30-015-46005	
1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone	
2. Name of Operator DEVON ENERGY PRODUCTION COMPANY LP	
3a. Address 333 West Sheridan Avenue Oklahoma City OK 73102	3b. Phone No. (include area code) (800)583-3866
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NWNW / 250 FNL / 570 FWL / LAT 32.3110515 / LONG -103.7723859 At proposed prod. zone SWNW / 2350 FNL / 950 FWL / LAT 32.2907655 / LONG -103.7711457	
10. Field and Pool, or Exploratory JAMES RANCH / BONE SPRING	
11. Sec., T. R. M. or Blk. and Survey or Area SEC 15 / T23S / R31E / NMP	
14. Distance in miles and direction from nearest town or post office*	12. County or Parish EDDY
	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 250 feet	16. No of acres in lease 1320
	17. Spacing Unit dedicated to this well 240
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 570 feet	19. Proposed Depth 11423 feet / 18769 feet
	20. BLM/BIA Bond No. in file FED: CO1104
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3387 feet	22. Approximate date work will start* 04/01/2019
	23. Estimated duration 45 days
24. Attachments	

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- |  |   |
|--|---|
| 1. Well plat certified by a registered surveyor.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification.  |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be requested by the BLM.            |

25. Signature (Electronic Submission)	Name (Printed/Typed) Jenny Harms / Ph: (405)552-6560	Date 08/10/2018
Title Regulatory Compliance Professional		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Christopher Walls / Ph: (575)234-2234	Date 05/15/2019
Title Petroleum Engineer		
Office CARLSBAD		

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**APPROVED WITH CONDITIONS**  
Approval Date: 05/15/2019

(Continued on page 2)

\*(Instructions on page 2)

RW 5-20-19

## INSTRUCTIONS

**GENERAL:** This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

**ITEM 1:** If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

**ITEM 4:** Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

**ITEM 14:** Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

**ITEMS 15 AND 18:** If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

**ITEM 22:** Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

**ITEM 24:** If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application:

**AUTHORITY:** 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

**PRINCIPAL PURPOSES:** The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

**ROUTINE USE:** Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

**EFFECT OF NOT PROVIDING INFORMATION:** Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM connects this information to an evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

## Additional Operator Remarks

### Location of Well

1. SHL: NWNW / 250 FNL / 570 FWL / TWSP: 23S / RANGE: 31E / SECTION: 15 / LAT: 32.3110515 / LONG: -103.7723859 ( TVD: 0 feet, MD: 0 feet )  
PPP: NWNW / 330 FNL / 950 FWL / TWSP: 23S / RANGE: 31E / SECTION: 15 / LAT: 32.310826 / LONG: -103.771156 ( TVD: 11343 feet, MD: 11457 feet )  
BHL: SWNW / 2350 FNL / 950 FWL / TWSP: 23S / RANGE: 31E / SECTION: 22 / LAT: 32.2907655 / LONG: -103.7711457 ( TVD: 11423 feet, MD: 18769 feet )

### BLM Point of Contact

Name: Katrina Ponder  
Title: Geologist  
Phone: 5752345969  
Email: kponder@blm.gov

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## Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

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## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	Devon Energy Production Company LP
<b>LEASE NO.:</b>	NMNM0405444
<b>WELL NAME &amp; NO.:</b>	Maldives 15-22 Fed Com 311H
<b>SURFACE HOLE FOOTAGE:</b>	250'N & 570'W
<b>BOTTOM HOLE FOOTAGE:</b>	2350'N & 950'W
<b>LOCATION:</b>	Section 15, T.23 S., R.31 E., NMPM
<b>COUNTY:</b>	Eddy County, New Mexico



H2S	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Potash	<input type="radio"/> None	<input checked="" type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input type="radio"/> Multibowl	<input checked="" type="radio"/> Both
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input checked="" type="checkbox"/> Fluid Filled	<input checked="" type="checkbox"/> Cement Squeeze	<input type="checkbox"/> Pilot Hole
Special Requirements	<input type="checkbox"/> Water Disposal	<input checked="" type="checkbox"/> COM	<input type="checkbox"/> Unit

### A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

### B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **620 feet** (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **24 hours in the Potash Area** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.

**Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.**

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

**Option 1 (Single Stage):**

- Cement to surface. If cement does not circulate see B.1.a, c-d above.  
**Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

**Option 2:**

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
  - Cement to surface. If cement does not circulate, contact the appropriate BLM office.  
**Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

**Operator has proposed to pump down 13-3/8" X 9-5/8" annulus. Operator must run a CBL from TD of the 9-5/8" casing to surface. Submit results to BLM.**

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
  - Cement should tie-back at least **500 feet** into previous casing string. Operator shall provide method of verification.

### C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
- 2.

#### **Option 1:**

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **5000 (5M)** psi.

#### **Option 2:**

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
  - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

### D. SPECIAL REQUIREMENT (S)

#### **Communitization Agreement**

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees

of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.

- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

## GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

Chaves and Roosevelt Counties  
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.  
During office hours call (575) 627-0272.  
After office hours call (575)

Eddy County  
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

Lea County  
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)  
393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

**B. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the

plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

## C. DRILLING MUD



Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Devon Energy Production Company LP
LEASE NO.:	NMNM0405444
WELL NAME & NO.:	Maldives 15-22 Fed Com 311H
SURFACE HOLE FOOTAGE:	250'/N & 570'/W
BOTTOM HOLE FOOTAGE:	2350'/N & 950'/W
LOCATION:	Section 15, T.23 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

**TABLE OF CONTENTS**

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- General Provisions**
- Permit Expiration**
- Archaeology, Paleontology, and Historical Sites**
- Noxious Weeds**
- Special Requirements**
  - Lesser Prairie-Chicken Timing Stipulations
  - Below Ground-level Abandoned Well Marker
  - Hydrology
  - Range
- Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- Road Section Diagram**
- Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
  - Electric Lines
- Interim Reclamation**
- Final Abandonment & Reclamation**

## **I. GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

## V. SPECIAL REQUIREMENT(S)

### **Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken:**

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

**Below Ground-level Abandoned Well Marker to avoid raptor perching:** Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

### **Timing Limitation Exceptions:**

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

### **Hydrology:**

The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

#### Livestock Watering Requirement

Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

The operator must contact the allotment holder prior to construction to identify the location of the pipeline. The operator must take measures to protect the pipeline from compression or other damages. If the pipeline is damaged or compromised in any way near the proposed project as a result of oil and gas activity, the operator is responsible for repairing the pipeline immediately. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

During construction, the proponent shall minimize disturbance to existing fences, water lines, troughs, windmills, and other improvements on public lands. The proponent is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the grazing permittee/allottee prior to disturbing any range improvement projects. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

Lessees must comply with the 2012 Secretarial Potash Order. The Order is designed to manage the efficient development of oil, gas, and potash resources. Section 6 of the Order provides general provisions which must be followed to minimize conflict between the industries and ensure the safety of operations.

To minimize impacts to potash resources, the proposed well is confined within the boundaries of the established Maldives' Drill Island (See Potash Memo and Map in attached file for Drill Island description).



## **VI. CONSTRUCTION**

### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

### **B. TOPSOIL**

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

### **D. FEDERAL MINERAL MATERIALS PIT**

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

### **F. EXCLOSURE FENCING (CELLARS & PITS)**

**Exclosure Fencing**

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

**G. ON LEASE ACCESS ROADS****Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

**Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

**Crowning**

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

**Ditching**

Ditching shall be required on both sides of the road.

**Turnouts**

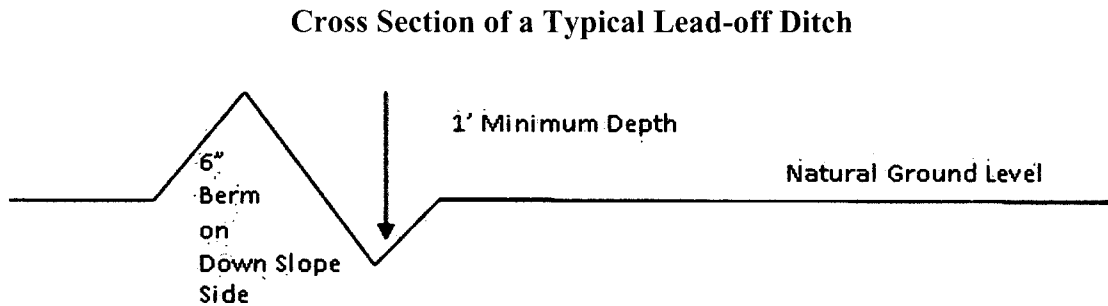
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

**Drainage**



Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

#### **Formula for Spacing Interval of Lead-off Ditches**

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

#### **Cattle guards**

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

#### **Fence Requirement**

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

#### **Public Access**

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

**Construction Steps**

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

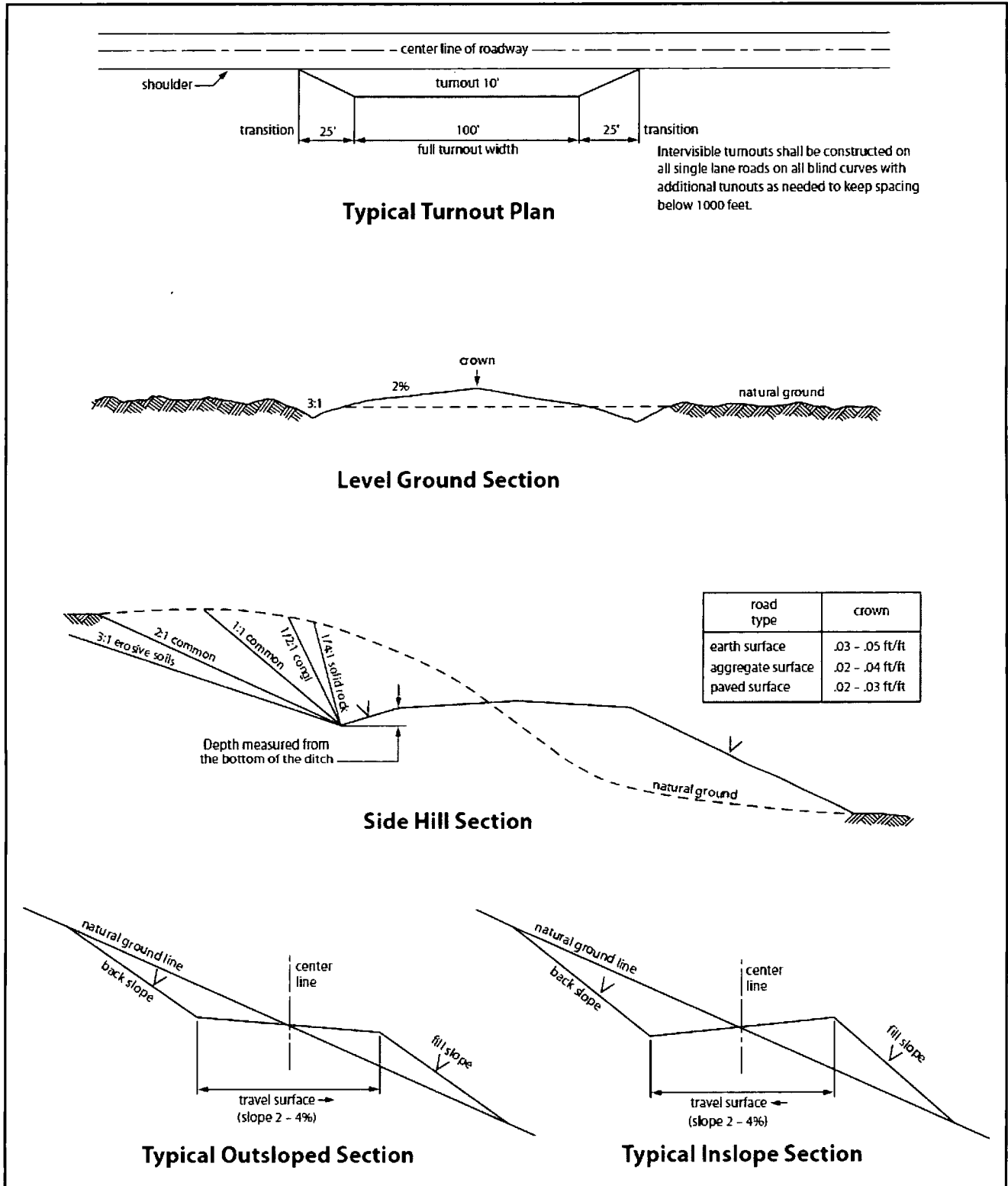


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## **VII. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Exclosure Netting (Open-top Tanks)**

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

#### **Chemical and Fuel Secondary Containment and Exclosure Screening**

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

#### **Open-Vent Exhaust Stack Exclosures**

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

#### **Containment Structures**

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

## **B. PIPELINES**

### **BURIED PIPELINE STIPULATIONS**

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.
6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.
7. The maximum allowable disturbance for construction in this right-of-way will be 30 feet:
- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed 20 feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
  - Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed 30 feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)
  - The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)
8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.
9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.
10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.
11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

- |  |  |
|--|--|
| <input type="checkbox"/> seed mixture 1                | <input type="checkbox"/> seed mixture 3          |
| <input type="checkbox"/> seed mixture 2                | <input type="checkbox"/> seed mixture 4          |
| <input checked="" type="checkbox"/> seed mixture 2/LPC | <input type="checkbox"/> Aplomado Falcon Mixture |

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates “Standard Environmental Colors” – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder’s name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches that are not otherwise fenced, screened, or netted to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or

other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

- a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
- b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

19. Special Stipulations:

### **Lesser Prairie-Chicken**

Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

### **C. ELECTRIC LINES**

#### **STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES**

**A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 *et seq.* (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b.



A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply

with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:

- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes from the poles removed.

**Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken:**

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

## **VIII. INTERIM RECLAMATION**

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce

the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

## **IX. FINAL ABANDONMENT & RECLAMATION**

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Below Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture for LPC Sand/Shinnery Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed shall be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. Seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

<u>Species</u>	<u>lb/acre</u>
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

# Operator Certification Data Report

05/16/2019

## Operator Certification

*I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.*

**NAME:** Jenny Harms

**Signed on:** 08/08/2018

**Title:** Regulatory Compliance Professional

**Street Address:** 333 W Sheridan Ave

**City:** Oklahoma City

**State:** OK

**Zip:** 73102

**Phone:** (405)552-6560

**Email address:** jenny.harms@dvn.com

## Field Representative

**Representative Name:** Ray Vaz

**Street Address:** 6488 Seven Rivers Hwy

**City:** Artesia

**State:** NM

**Zip:** 88210

**Phone:** (575)748-1871

**Email address:** ray.vaz@dvn.com



APD ID: 10400032893

Submission Date: 08/10/2018

Highlighted data reflects the most recent changes

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: MALDIVES 15-22 FED COM

Well Number: 331H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - General

APD ID: 10400032893

Tie to previous NOS?

Submission Date: 08/10/2018

BLM Office: CARLSBAD

User: Jenny Harms

Title: Regulatory Compliance Professional

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMNM0405444

Lease Acres: 1320

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? NO

APD Operator: DEVON ENERGY PRODUCTION COMPANY LP

Operator letter of designation:

### Operator Info

Operator Organization Name: DEVON ENERGY PRODUCTION COMPANY LP

Operator Address: 333 West Sheridan Avenue

Zip: 73102

Operator PO Box:

Operator City: Oklahoma City State: OK

Operator Phone: (800)583-3866

Operator Internet Address:

### Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: MALDIVES 15-22 FED COM

Well Number: 331H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: JAMES RANCH

Pool Name: BONE SPRING

Is the proposed well in an area containing other mineral resources? POTASH

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** MALDIVES 15-22 FED COM

**Well Number:** 331H

**Describe other minerals:**

**Is the proposed well in a Helium production area? N**    **Use Existing Well Pad? NO**    **New surface disturbance?**

**Type of Well Pad:** MULTIPLE WELL

**Multiple Well Pad Name:**

**Number: 1**

**Well Class:** HORIZONTAL

MALDIVES MDP 15 PAD

**Number of Legs: 1**

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

**Well sub-Type:** INFILL

**Describe sub-type:**

**Distance to town:**

**Distance to nearest well:** 570 FT

**Distance to lease line:** 250 FT

**Reservoir well spacing assigned acres Measurement:** 240 Acres

**Well plat:** Maldives\_15\_22\_Fed\_Com\_331H\_C\_102\_rev\_signed\_20180808092600.pdf

**Well work start Date:** 04/01/2019

**Duration:** 45 DAYS

### Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:** 5232B

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	250	FNL	570	FWL	23S	31E	15	Aliquot NWN W	32.31105 15	- 103.7723 859	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 040544 4	338 7	0	0
KOP Leg #1	50	FNL	949	FWL	23S	31E	15	Aliquot NWN W	32.31160 2	- 103.7711 56	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 040544 4	- 712 5	105 12	105 12
PPP Leg #1	330	FNL	950	FWL	23S	31E	15	Aliquot NWN W	32.31082 6	- 103.7711 56	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 040544 4	- 795 6	114 57	113 43

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

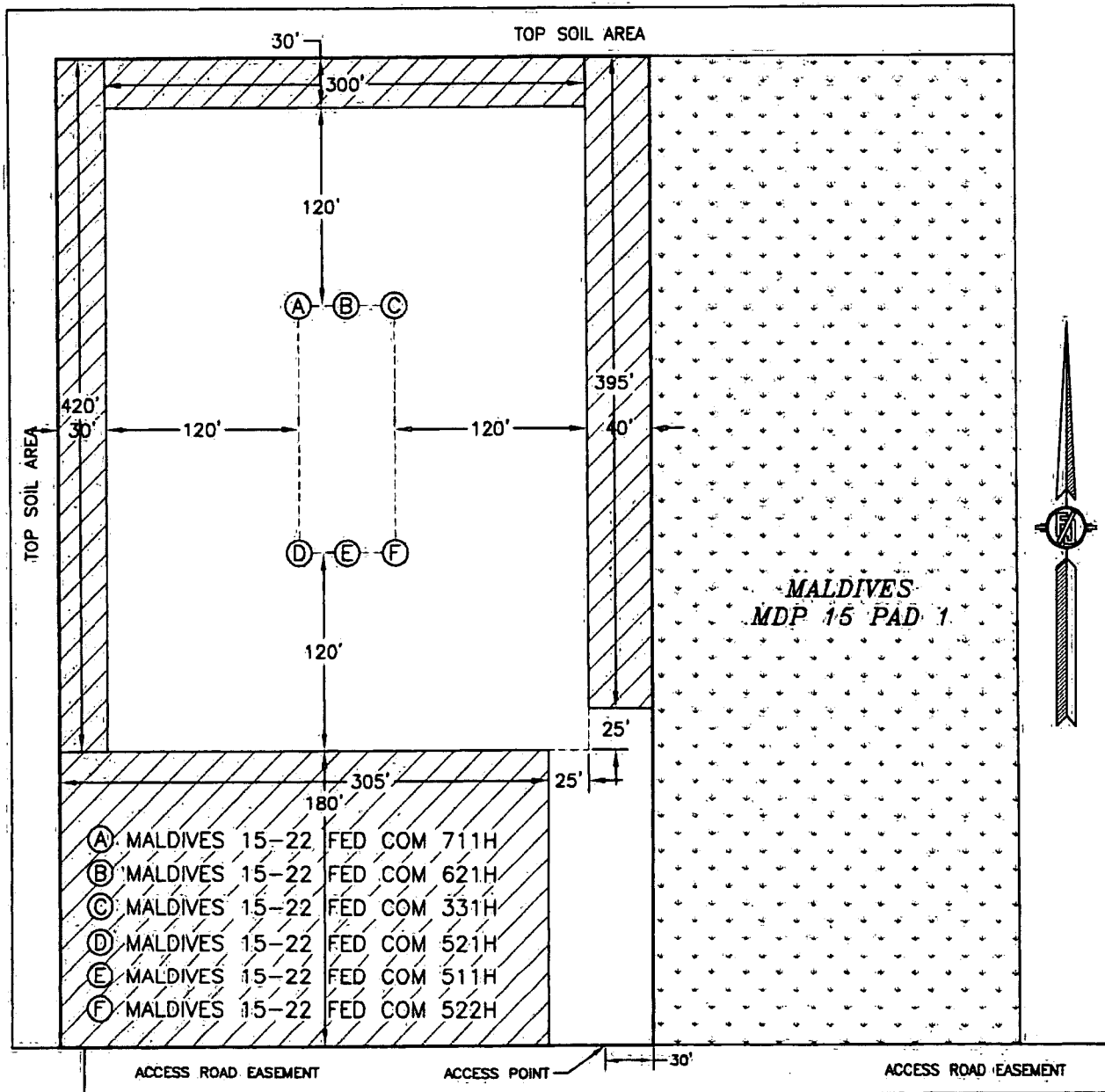
**Well Name:** MALDIVES 15-22 FED.COM

**Well Number:** 331H

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
EXIT Leg #1	235 0	FNL	950	FWL	23S	31E	22	Aliquot SWN W	32.29104	- 103.7711 5	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 040544 4A	- 803 6	187 69	114 23
BHL Leg #1	235 0	FNL	950	FWL	23S	31E	22	Aliquot SWN W	32.29076 55	- 103.7711 457	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 040544 4A	- 803 6	187 69	114 23

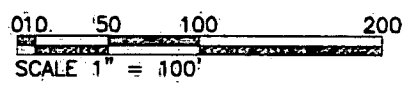


**SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 INTERIM SITE RECLAMATION**



- (A) MALDIVES 15-22 FED COM 711H
- (B) MALDIVES 15-22 FED COM 621H
- (C) MALDIVES 15-22 FED COM 331H
- (D) MALDIVES 15-22 FED COM 521H
- (E) MALDIVES 15-22 FED COM 511H
- (F) MALDIVES 15-22 FED COM 522H

DENOTES INTERIM PAD RECLAMATION AREA
  DENOTES GRADING SITE RECLAMATION AREA

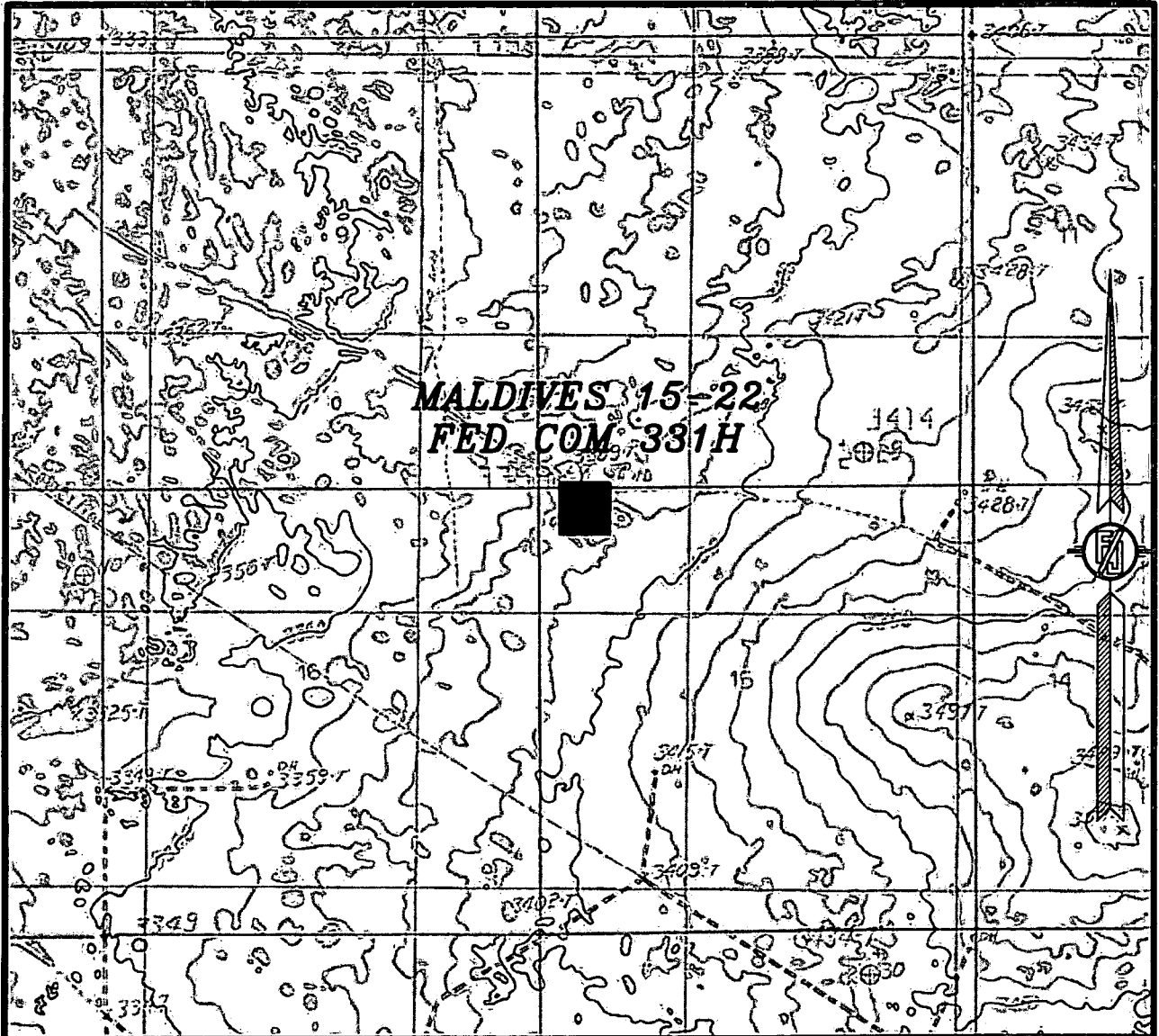


2.120± ACRES INTERIM PAD RECLAMATION AREA  
 3.169± ACRES GRADING SITE RECLAMATION AREA  
 2.977± ACRES NON-RECLAIMED AREA  
 8.266± ACRES MALDIVES MDP 15 PAD 1

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**MALDIVES 15-22 FED COM 331H**  
 LOCATED 250 FT. FROM THE NORTH LINE  
 AND 570 FT. FROM THE WEST LINE OF  
 SECTION 15, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

MAY 14, 2018 SURVEY NO. 5232B

SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
LOCATION VERIFICATION MAP



USGS QUAD MAP:  
LOS MEDANOS

NOT TO SCALE

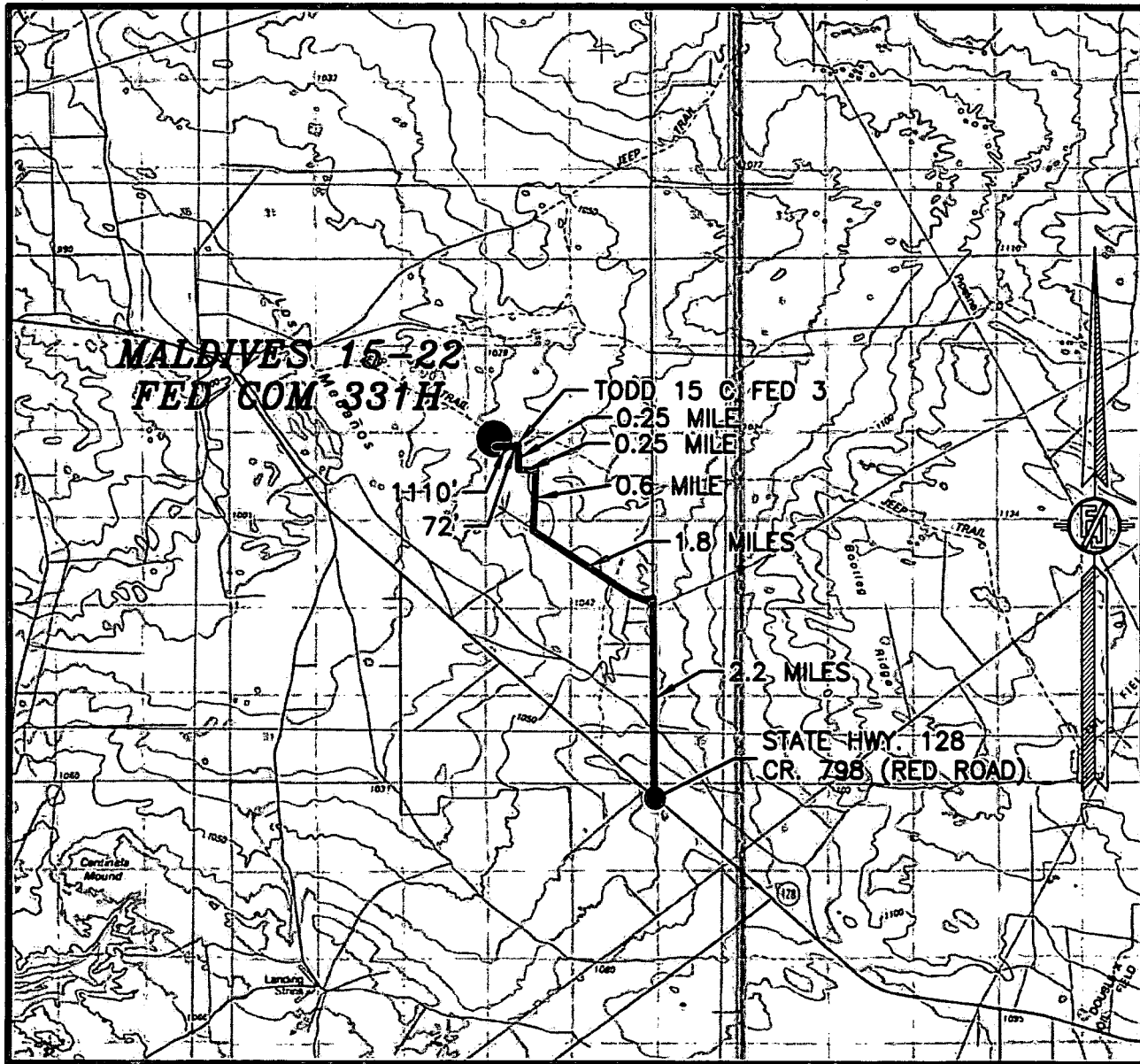
DEVON ENERGY PRODUCTION COMPANY, L.P.  
MALDIVES 15-22 FED COM 331H  
LOCATED 250 FT. FROM THE NORTH LINE  
AND 570 FT. FROM THE WEST LINE OF  
SECTION 15, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MAY 14, 2018

SURVEY NO. 5232B

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

**DIRECTIONS TO LOCATION**

FROM STATE HWY. 128 & CR. 798 (RED ROAD) GO NORTH ON RED ROAD 2.2 MILES, TURN LEFT ON CALICHE ROAD AND GO NORTHWEST 1.8 MILES, TURN RIGHT AND GO NORTH 0.6 MILE, TURN LEFT AND GO WEST 0.25 MILE, TURN RIGHT AND GO NORTH 0.25 MILE, TO THE TODD 15C FED 3 WELL. FROM SOUTHWEST EDGE OF PAD FOLLOW FLAGS WEST-SOUTHWEST 72' TO THE SOUTHEAST CORNER OF PAD 2, THEN FOLLOW FLAGS WEST 1110' TO THE SOUTHEAST CORNER OF PAD FOR THIS LOCATION.

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

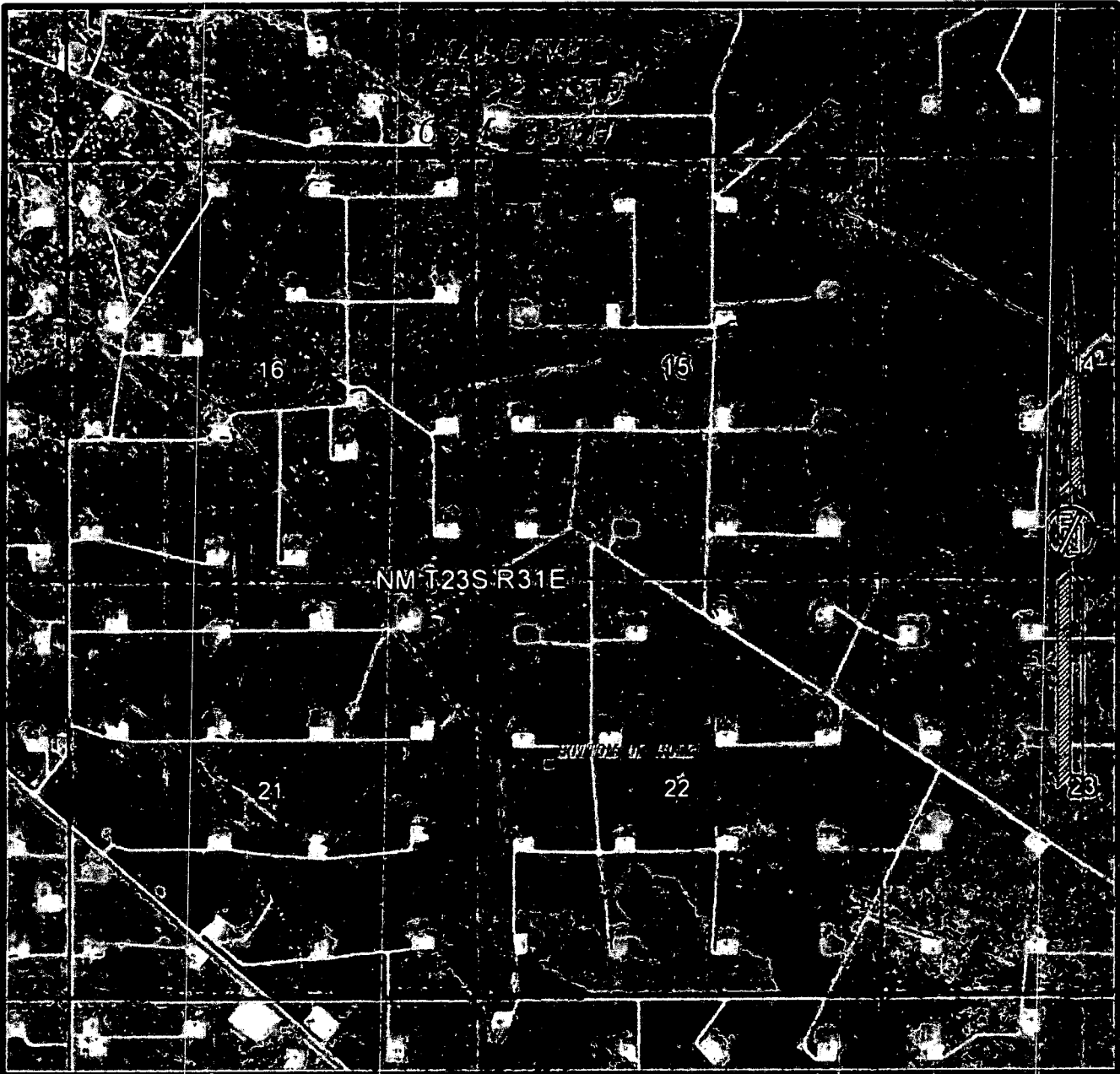
**MALDIVES 15-22 FED COM 331H**  
 LOCATED 250 FT. FROM THE NORTH LINE  
 AND 570 FT. FROM THE WEST LINE OF  
 SECTION 15, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

MAY 14, 2018

SURVEY NO. 5232B

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-3341

SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
AERIAL PHOTO



NOT TO SCALE  
AERIAL PHOTO:  
GOOGLE EARTH  
FEB. 2017

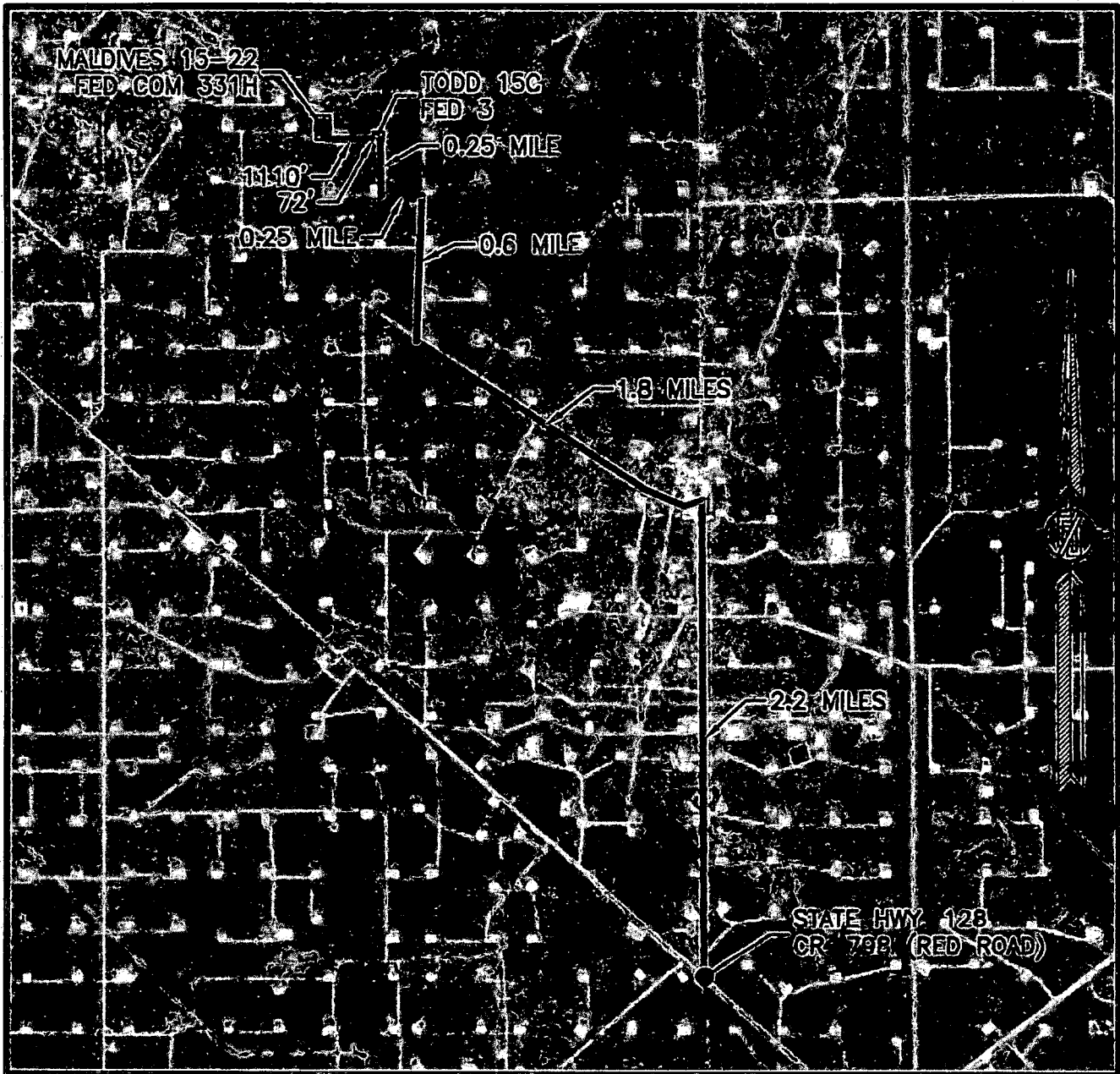
**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**MALDIVES 15-22 FED COM 331H**  
LOCATED 250 FT. FROM THE NORTH LINE  
AND 570 FT. FROM THE WEST LINE OF  
SECTION 15, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MAY 14, 2018

SURVEY NO. 5232B

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 AERIAL ACCESS ROUTE MAP



NOT TO SCALE  
 AERIAL PHOTO:  
 GOOGLE EARTH  
 FEB. 2017

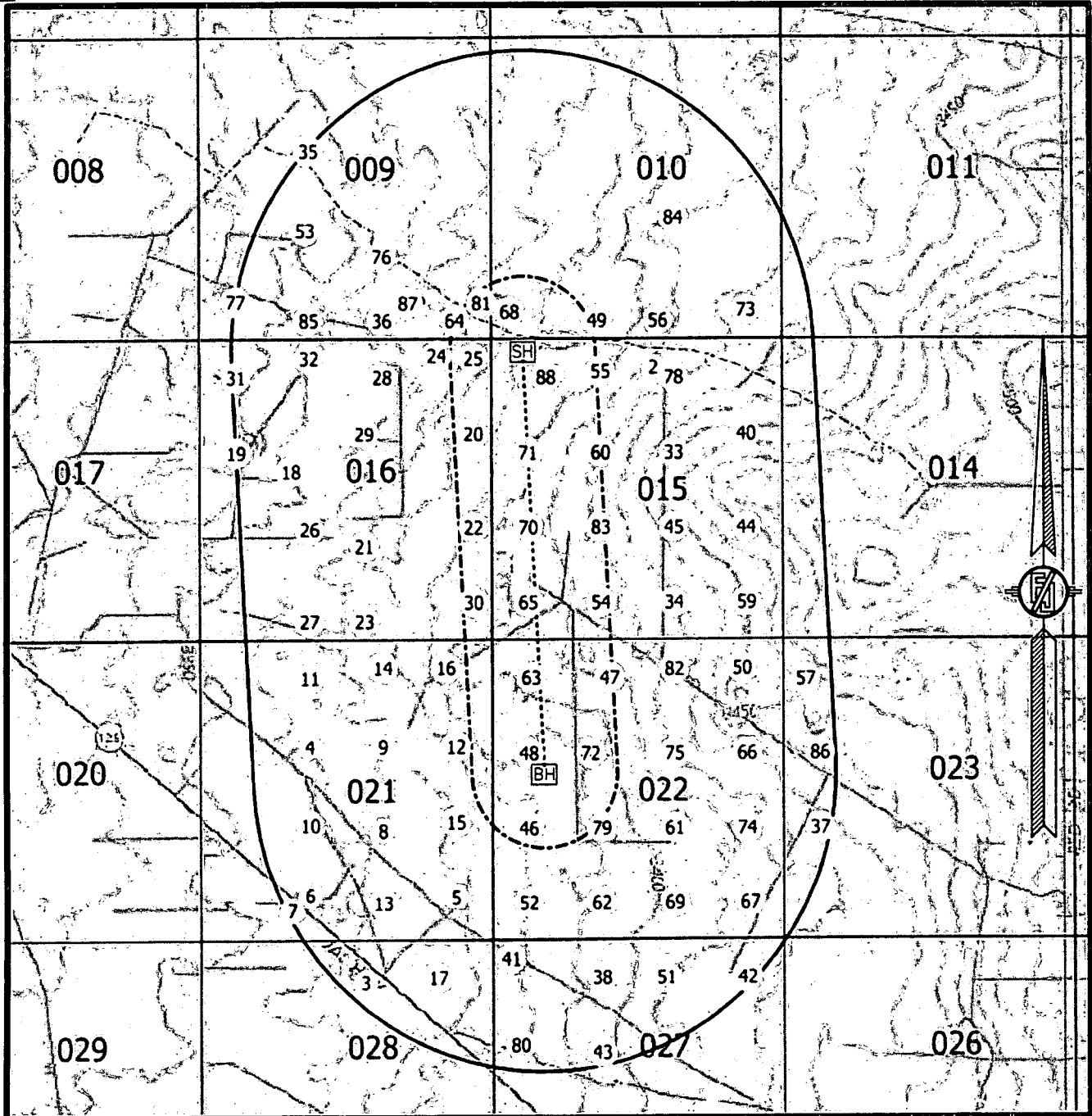
**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**MALDIVES 15-22 FED COM 331H**  
 LOCATED 250 FT. FROM THE NORTH LINE  
 AND 570 FT. FROM THE WEST LINE OF  
 SECTION 15, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

MAY 14, 2018

SURVEY NO. 5232B

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

# 1-MILE WELL MAP



WELL DATA FROM NMOC GIS - 5/9/18

SH SURFACE LOCATION

BH BOTTOM OF HOLE

XX WELLS WITHIN 1 MILE

----- WELL PATH

- - - - - 1/4 MILE BOUNDARY

————— 1-MILE BOUNDARY

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**MALDIVES 15-22 FED COM 331H**  
 LOCATED 250 FT. FROM THE NORTH LINE  
 AND 570 FT. FROM THE WEST LINE OF  
 SECTION 15, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
**EDDY COUNTY, STATE OF NEW MEXICO**

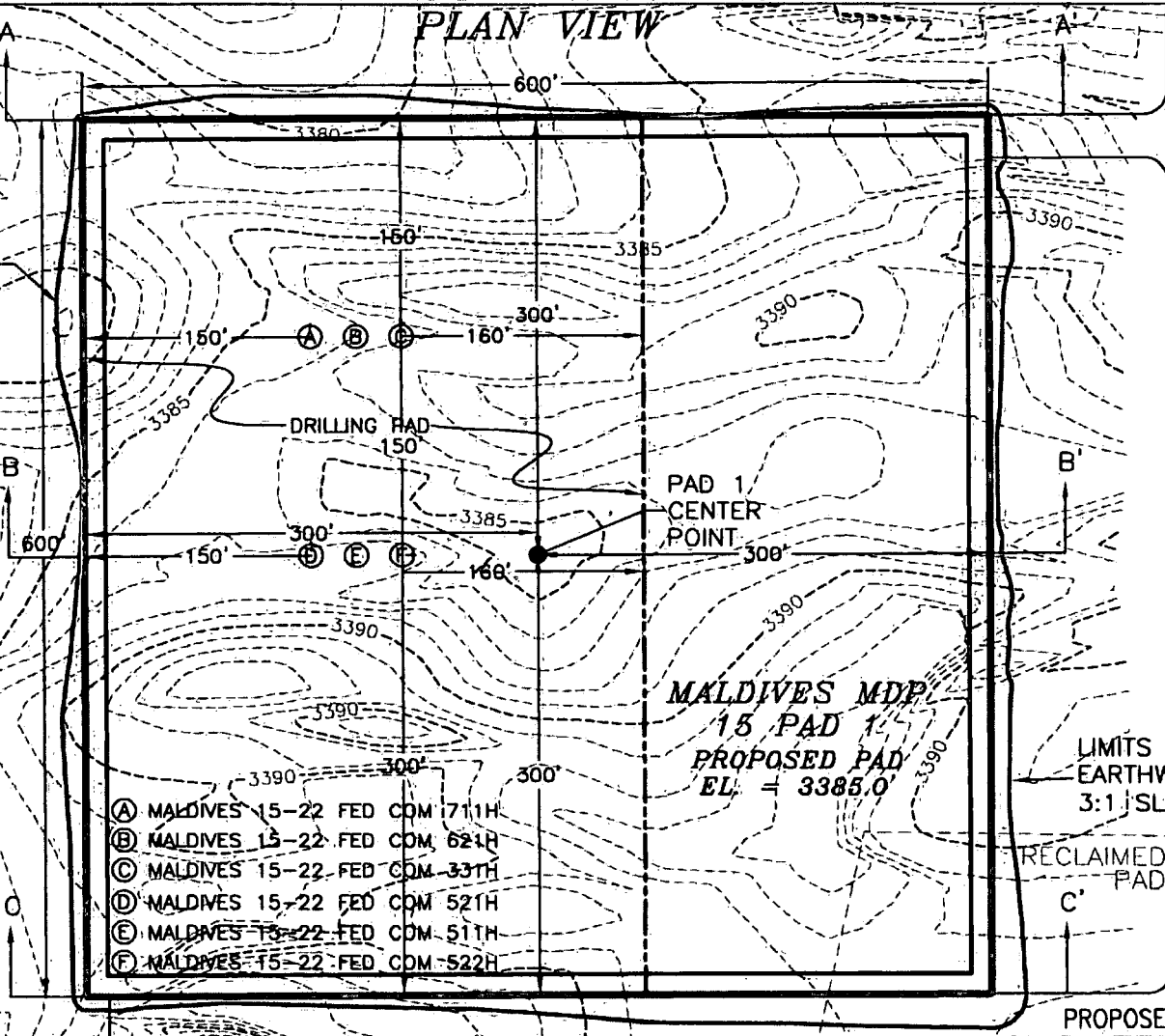
MAY 14, 2018

SURVEY NO. 5232B

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

PLAN VIEW

LIMITS OF EARTHWORK  
3:1 SLOPE (TYP.)



PROPOSED 30' ACCESS ROAD

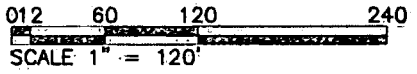
LIMITS OF EARTHWORK  
3:1 SLOPE (TYP.)

PROPOSED 30' ACCESS ROAD

- (A) MALDIVES 15-22 FED COM 711H
- (B) MALDIVES 15-22 FED COM 621H
- (C) MALDIVES 15-22 FED COM 331H
- (D) MALDIVES 15-22 FED COM 521H
- (E) MALDIVES 15-22 FED COM 511H
- (F) MALDIVES 15-22 FED COM 522H

MALDIVES MDP  
15 PAD 1  
PROPOSED PAD  
EL. = 3385.0

RECLAIMED PAD



DEVON ENERGY PRODUCTION COMPANY, L.P.  
GRADING PLAN AND CROSS SECTIONS  
FOR MALDIVES 15-22 FED COM 521H  
SECTION 15, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MALDIVES MDP 15 PAD 1  
EARTHWORK QUANTITIES

CUT	FILL	NET
46724 CU. YD	4816 CU. YD	41908 CU. YD (CUT)

EARTHWORK QUANTITIES ARE ESTIMATED

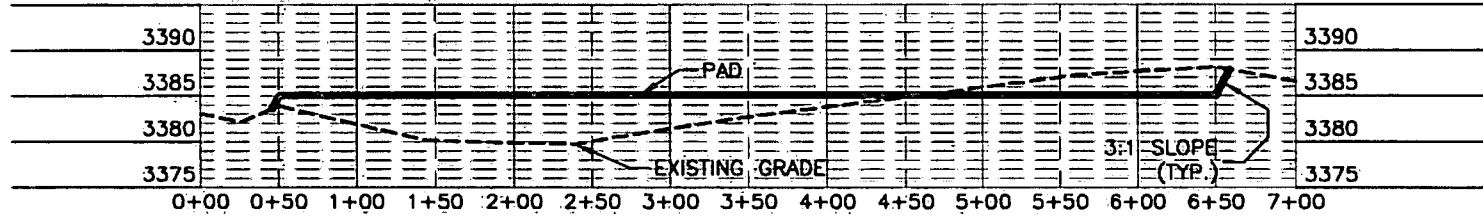
MAY 14, 2018

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO

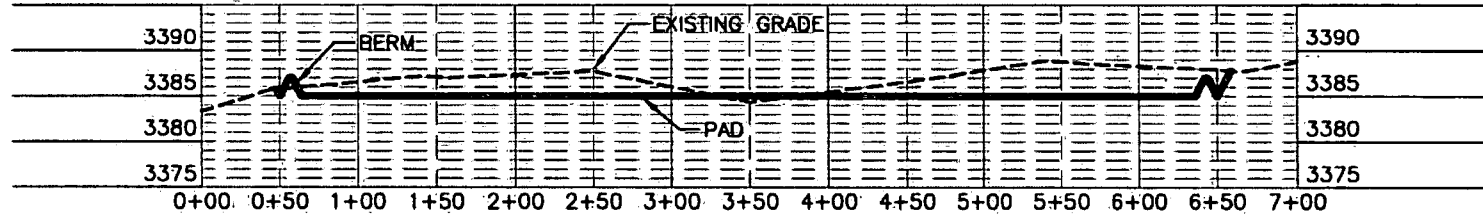
SHEET 1-2  
SURVEY NO. 6292B

# CROSS-SECTIONS

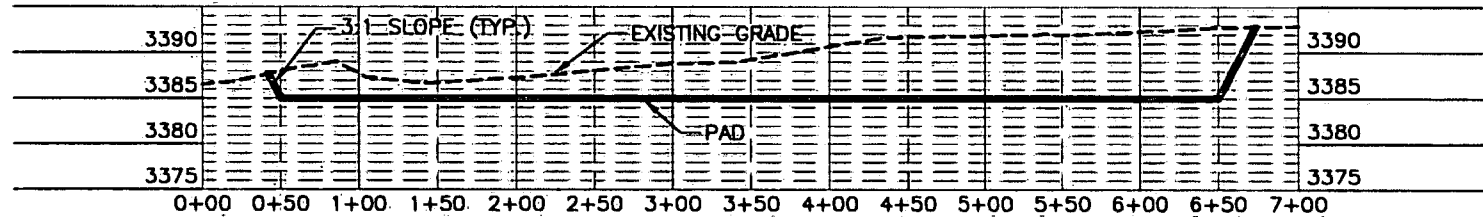
SECTION A-A'



SECTION B-B'



SECTION C-C'



0 12 60 120 240  
SCALE 1" = 120' - 1" = 20' VER.

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**GRADING PLAN AND CROSS SECTIONS**  
**FOR MALDIVES 15-22 FED COM 521H**  
SECTION 15, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MALDIVES MDP 15 PAD 1 EARTHWORK QUANTITIES		
CUT	FILL	NET
46724 CU. YD	4816 CU. YD	41908 CU. YD (CUT)
EARTHWORK QUANTITIES ARE ESTIMATED		

MAY 14, 2018

**MADRON SURVEYING, INC.** 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

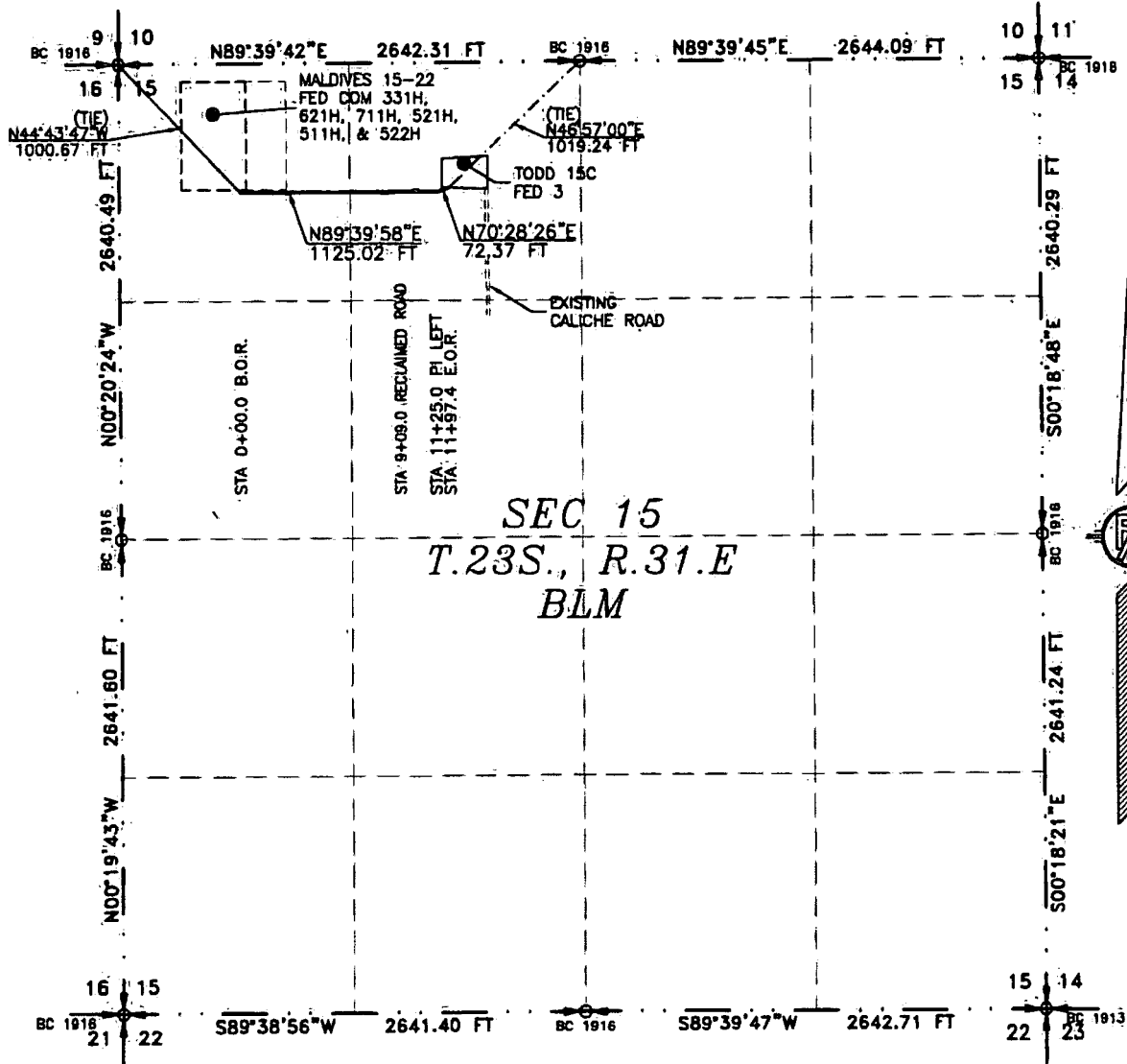
SHEET 2-2  
SURVEY NO. 6232B



**ACCESS ROAD PLAT**

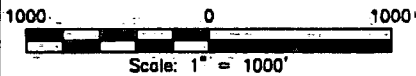
ACCESS ROAD FOR MALDIVES 15-22 FED COM 331H, 621H, 711H, 521H, 511H, & 522H

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING**  
**SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.**  
**EDDY COUNTY, STATE OF NEW MEXICO**  
**MAY 14, 2018**



**SEC 15**  
**T.23S., R.31.E**  
**BLM**

SEE NEXT SHEET (2-2) FOR DESCRIPTION



**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

**SURVEYOR CERTIFICATE**

I, FILMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 15<sup>TH</sup> DAY OF JUNE 2018

*(Signature of Filmon F. Jaramillo)*  
 FILMON F. JARAMILLO, P.L.S. 12797

MADRON SURVEYING, INC.  
 301 SOUTH CANAL  
 CARLSBAD, NEW MEXICO 88220  
 Phone (575) 234-3341

**SURVEY NO. 5232B**

**SHEET: 1-2**

**MADRON SURVEYING, INC.** 301 SOUTH CANAL (575) 234-3341 **CARLSBAD, NEW MEXICO**

**ACCESS ROAD PLAT**

ACCESS ROAD FOR MALDIVES 15-22 FED COM 331H, 621H, 711H, 521H, 511H, & 522H

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
MAY 14, 2018**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE NW/4 NW/4 OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N44°43'47"W, A DISTANCE OF 1000.67 FEET;  
THENCE N89°39'58"E A DISTANCE OF 1125.02 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N70°28'26"E A DISTANCE OF 72.37 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTH QUARTER CORNER OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N46°57'00"E, A DISTANCE OF 1019.24 FEET;

SAID STRIP OF LAND BEING 1197.39 FEET OR 72.57 RODS IN LENGTH, CONTAINING 0.825 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NW/4	621.02 L.F.	37.64 RODS	0.428 ACRES
NE/4 NW/4	576.37 L.F.	34.93 RODS	0.397 ACRES

**SURVEYOR CERTIFICATE**

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 14 DAY OF JUNE, 2018

FILIMON F. JARAMILLO PLS. 12797  
MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88220  
Phone (575) 234-3341

**GENERAL NOTES**

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SHEET: 2-2

MADRON SURVEYING INC.

FILIMON F. JARAMILLO PLS. 12797  
301 SOUTH CANAL  
(575) 234-3341  
CARLSBAD, NEW MEXICO

SURVEY NO. 5232B

CARLSBAD, NEW MEXICO

**APD ID:** 10400032893

**Submission Date:** 08/10/2018

Highlighted data reflects the most recent changes

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** MALDIVES 15-22 FED COM

**Well Number:** 331H

[Show Final Text](#)

**Well Type:** OIL WELL

**Well Work Type:** Drill

## Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	UNKNOWN	3387	0	0	ALLUVIUM	NONE	No
2	RUSTLER	2837	551	551	ANHYDRITE	NONE	No
3	SALADO	2517	871	871	SALT	NONE	No
4	DELAWARE	-873	4261	4261	SANDSTONE	NATURAL GAS,OIL	No
5	BONE SPRING	-4743	8131	8131	LIMESTONE	NATURAL GAS,OIL	No
6	BONE SPRING 1ST	-5833	9221	9221	SANDSTONE	NATURAL GAS,OIL	No
7	BONE SPRING 2ND	-6333	9721	9721	SANDSTONE	NATURAL GAS,OIL	No
8	BONE SPRING 3RD	-7603	10991	10991	SANDSTONE	NATURAL GAS,OIL	Yes

## Section 2 - Blowout Prevention

**Pressure Rating (PSI):** 5M

**Rating Depth:** 9820

**Equipment:** BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.

**Requesting Variance?** YES

**Variance request:** A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart.

**Testing Procedure:** A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

**Choke Diagram Attachment:**

Maldives\_15\_22\_Fed\_Com\_331H\_5M\_BOPE\_\_CK\_20190110081044.pdf

**BOP Diagram Attachment:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** MALDIVES 15-22 FED COM

**Well Number:** 331H

Maldives\_15\_22\_Fed\_Com\_331H\_5M\_BOPE\_\_CK\_20190110081044.pdf

Maldives\_15\_22\_Fed\_Com\_331H\_5M\_BOPE\_\_CK\_20190110081056.pdf

**Pressure Rating (PSI):** 5M

**Rating Depth:** 10200

**Equipment:** BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.

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**Choke Diagram Attachment:**

Maldives\_15\_22\_Fed\_Com\_331H\_5M\_BOPE\_\_CK\_20180808093524.pdf

**BOP Diagram Attachment:**

Maldives\_15\_22\_Fed\_Com\_331H\_5M\_BOPE\_\_CK\_20180808093533.pdf

### Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	585	0	585			585	H-40	48	STC	1.125	1	BUOY	1.6	BUOY	1.6
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4500	0	4497			4500	J-55	40	OTHER - BTC	1.125	1	BUOY	1.6	BUOY	1.6
3	INTERMEDIATE	12.25	9.625	NEW	API	N	4500	9820	4497	9809			5320	OTHER	40	OTHER - BTC	1.125	1	BUOY	1.6	BUOY	1.6
4	PRODUCTION	8.75	5.5	NEW	API	N	0	18769	0	11423			18769	P-110	17	OTHER - BTC	1.125	1	BUOY	1.6	BUOY	1.6

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** MALDIVES 15-22 FED COM

**Well Number:** 331H

### Casing Attachments

---

**Casing ID:** 1            **String Type:** SURFACE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Maldives\_15\_22\_Fed\_Com\_331H\_Surf\_Csg\_Ass\_20180808093915.pdf

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**Casing ID:** 2            **String Type:** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Maldives\_15\_22\_Fed\_Com\_331H\_Int\_Csg\_Ass\_20180808093931.pdf

---

**Casing ID:** 3            **String Type:** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Maldives\_15\_22\_Fed\_Com\_331H\_Int\_Csg\_Ass\_20190110091501.pdf

---

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: MALDIVES 15-22 FED COM

Well Number: 331H

Casing Attachments

Casing ID: 4 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Maldives\_15\_22\_Fed\_Com\_331H\_Prod\_Csg\_Ass\_20180808093955.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		0	0	0	0	0	0	0	N/A	N/A
PRODUCTION	Tail		9620	18769	1960	1.6	13.2	2683	10	H	Class C Cement + additives
INTERMEDIATE	Lead		0	0	0	0	0	0	0	n/a- see attached drilling plan	0

SURFACE	Lead		0	585	681	1.33	13.2	886	100	C	Class C + adds
---------	------	--	---	-----	-----	------	------	-----	-----	---	----------------

INTERMEDIATE	Lead		0	9320	1293	3.31	9	4316	50	C	Class C + adds
INTERMEDIATE	Tail		9320	9820	187	1.33	13.2	253	50	C	Class C + adds

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** MALDIVES 15-22 FED COM

**Well Number:** 331H

### Section 5 - Circulating Medium

**Mud System Type:** Closed

**Will an air or gas system be Used?** NO

**Description of the equipment for the circulating system in accordance with Onshore Order #2:**

**Diagram of the equipment for the circulating system in accordance with Onshore Order #2:**

**Describe what will be on location to control well or mitigate other conditions:** Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

**Describe the mud monitoring system utilized:** PVT/Pason/Visual Monitoring

### Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	585	OTHER : FRESH WATER GEL	8.4	8.6							
9820	1142 3	OTHER : OBM / WBM	9.5	10							
750	9820	OTHER : DBE / Cut Brine	8.6	9							

### Section 6 - Test, Logging, Coring

**List of production tests including testing procedures, equipment and safety measures:**

Will run GRMWD from TD to from KOP. Cement bond logs will be run in vertical to determine top of cement. Stated logs run will be in the Completion Report and submitted to the BLM.

**List of open and cased hole logs run in the well:**

CALIPER,CBL,DS,GR,MUDLOG

**Coring operation description for the well:**

N/A

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** MALDIVES 15-22 FED COM

**Well Number:** 331H

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 5940

**Anticipated Surface Pressure:** 3426.94

**Anticipated Bottom Hole Temperature(F):** 168

**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations plan:**

Maldives\_15\_22\_Fed\_Com\_331H\_H2S\_Plan\_20180808094748.pdf

## Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**

Devon\_Maldives\_15\_22\_Fed\_com\_331H\_AC\_Report\_Permit\_Plan\_1\_20180808094811.pdf

Devon\_Maldives\_15\_22\_Fed\_com\_331H\_Permit\_Plan\_1\_20180808094812.pdf

Devon\_Maldives\_15\_22\_Fed\_com\_331H\_Plot\_Permit\_Plan\_1\_20180808094812.pdf

**Other proposed operations facets description:**

Multibowl Verb

Multibowl Wellhead revised 1/10/2019

Drilling Plan

Gas Capture Plan

Closed Loop Design

9.625 P110EC DATA SHEET- 1/10/2019

**Other proposed operations facets attachment:**

Maldives\_15\_22\_Fed\_Com\_331H\_Clsd\_Loop\_20180808095001.pdf

Maldives\_15\_22\_Fed\_Com\_331H\_MB\_Wellhd\_20180808095003.pdf

Maldives\_15\_22\_Fed\_Com\_331H\_GasCapturePlan\_20180808095025.pdf

Maldives\_15\_22\_Fed\_Com\_331H\_Drilling\_Plan\_Rev2\_20180810064805.pdf

9.625\_40\_P110EC\_BTC\_V\_M\_4230\_Collapse\_20190110092532.pdf

Multi\_Bowl\_Verbiage\_5M\_Rev1\_20190110093124.pdf

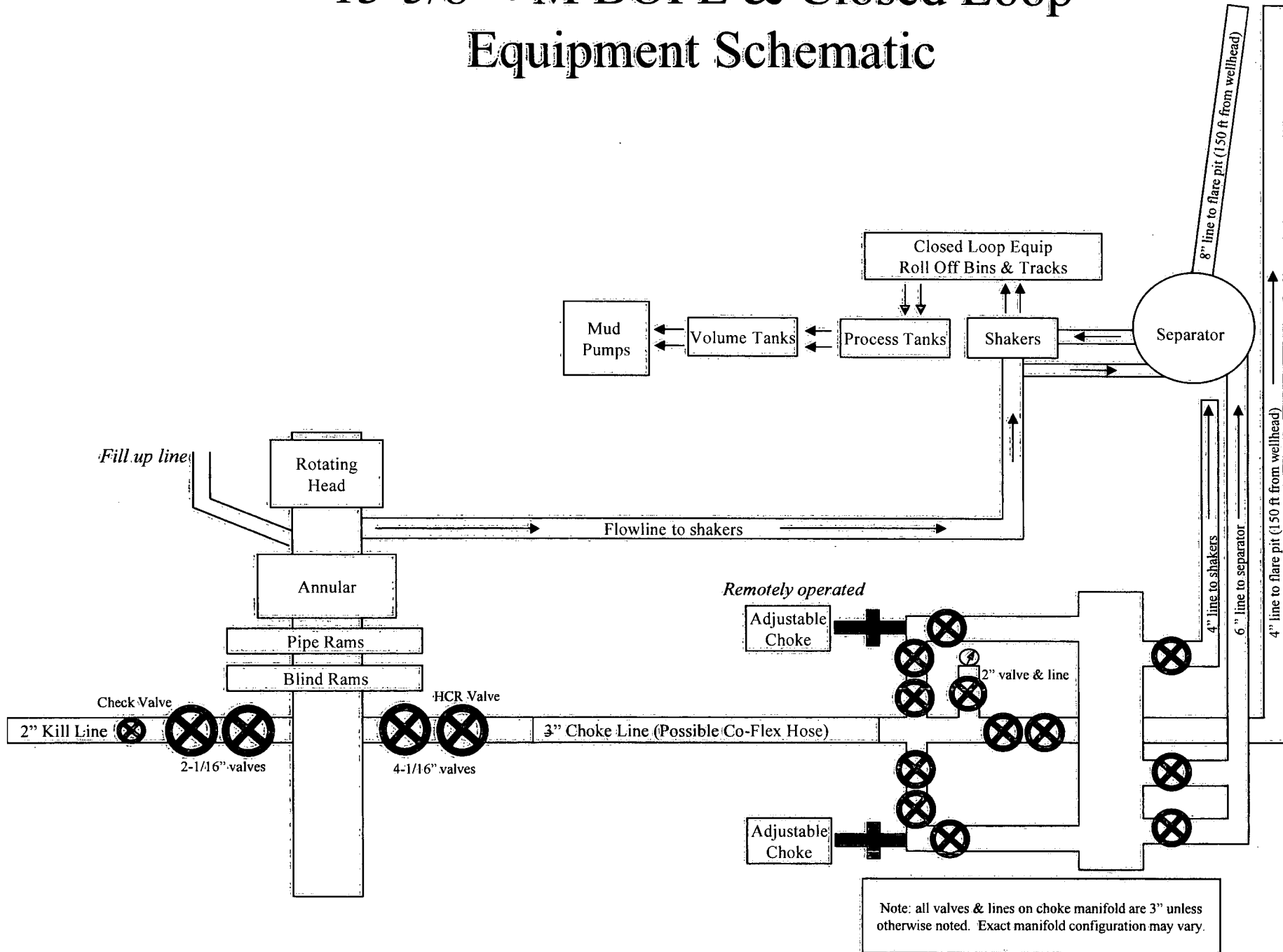
**Other Variance attachment:**

Maldives\_15\_22\_Fed\_Com\_331H\_Co\_flex\_20180808095032.pdf

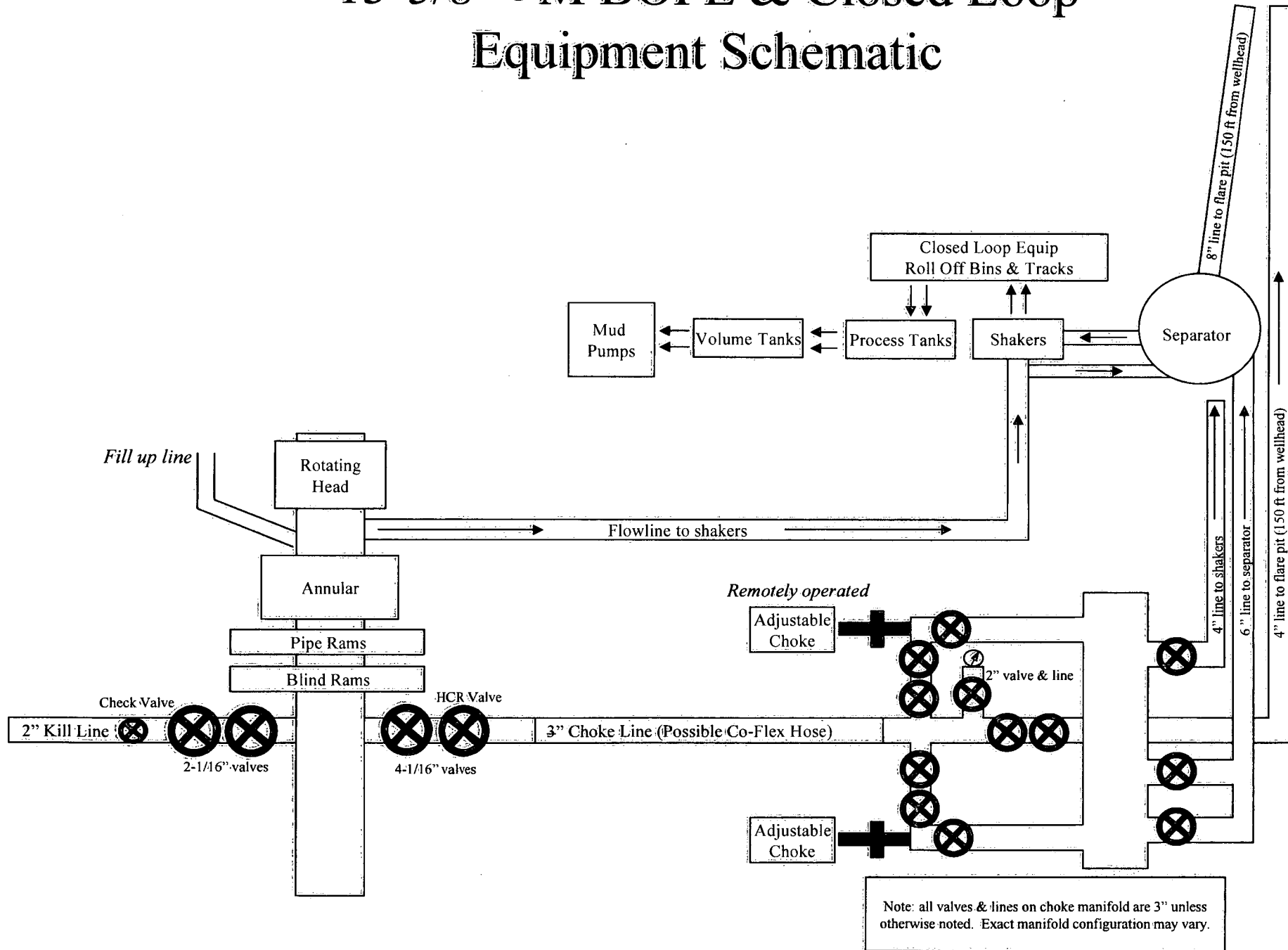




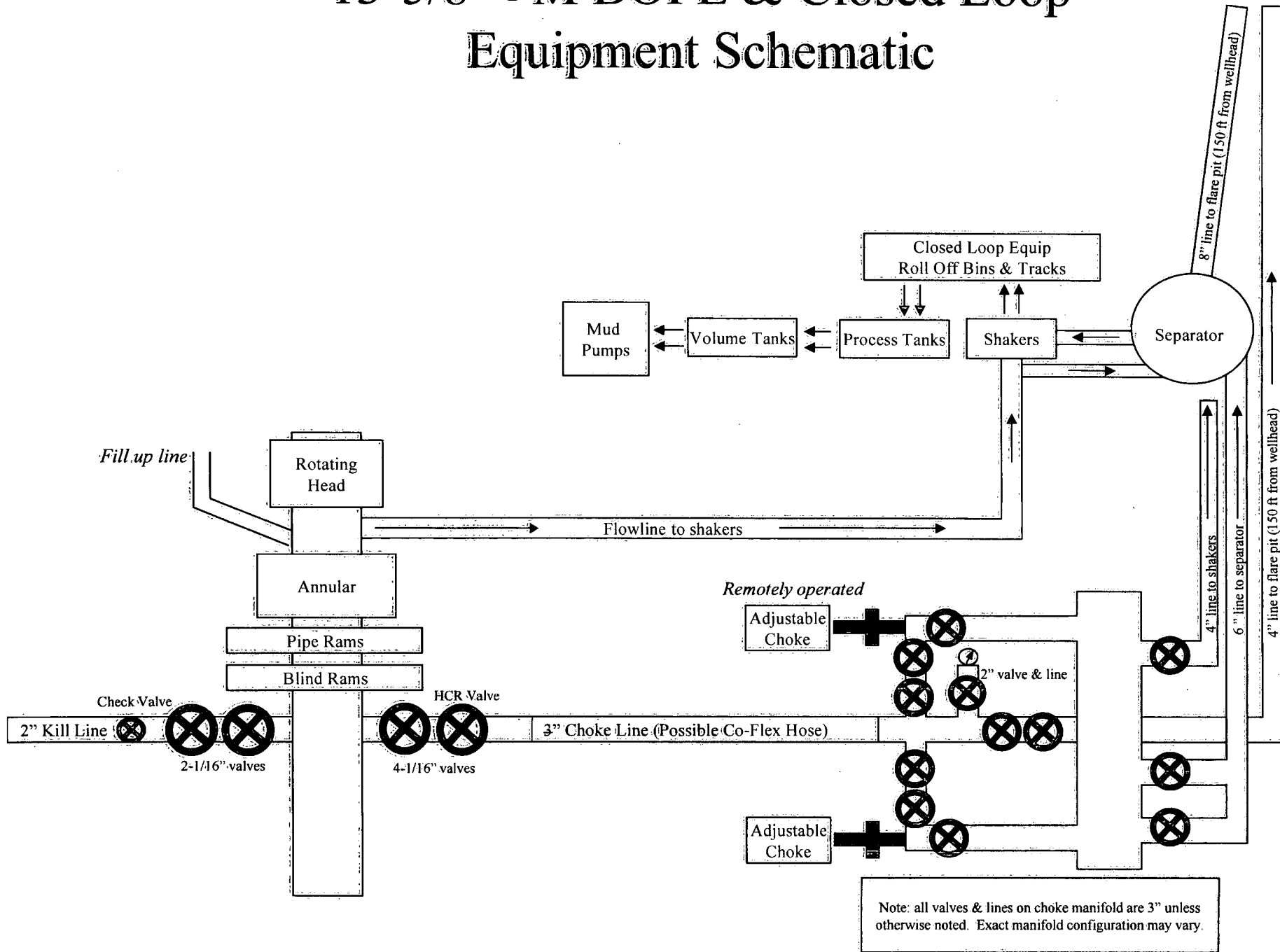
# 13-5/8" 5M BOPE & Closed Loop Equipment Schematic



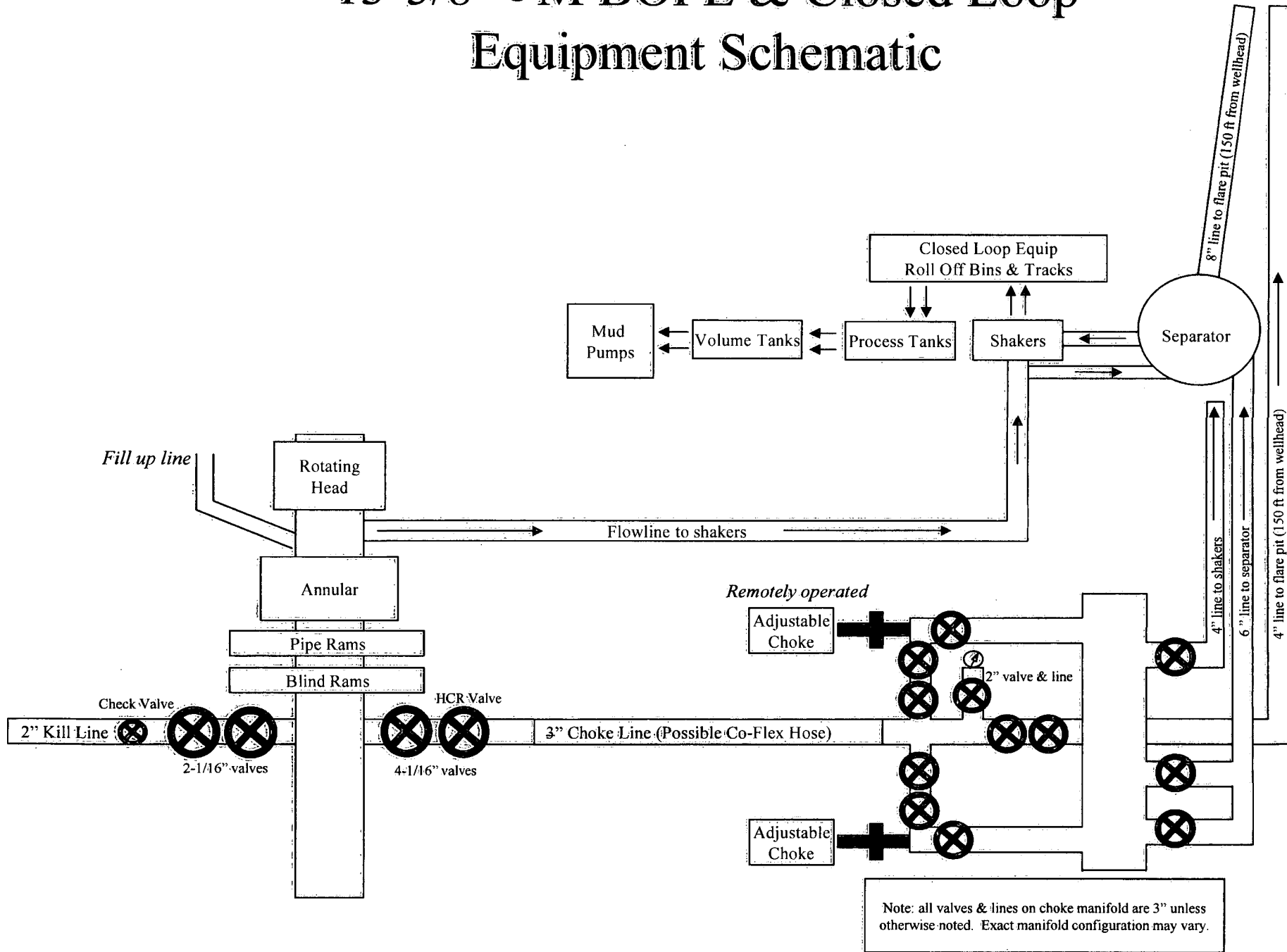
# 13-5/8" 5 M BOPE & Closed Loop Equipment Schematic



# 13-5/8" 5M BOPE & Closed Loop Equipment Schematic



# 13-5/8" 5 M BOPE & Closed Loop Equipment Schematic



Casing Assumptions and Load Cases

Intermediate

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

<b>Intermediate Casing Burst Design</b>		
<b>Load Case</b>	<b>External Pressure</b>	<b>Internal Pressure</b>
Pressure Test	Formation Pore Pressure	Max mud weight of next hole-section plus Test psi
Drill Ahead	Formation Pore Pressure	Max mud weight of next hole section
Fracture @ Shoe	Formation Pore Pressure	Dry gas

<b>Intermediate Casing Collapse Design</b>		
<b>Load Case</b>	<b>External Pressure</b>	<b>Internal Pressure</b>
Full Evacuation	Water gradient in cement, mud above TOC	None
Cementing	Wet cement weight	Water (8.33ppg)

<b>Intermediate Casing Tension Design</b>	
<b>Load Case</b>	<b>Assumptions</b>
Overpull	100kips
Runing in hole	2 ft/s
Service Loads	N/A

Casing Assumptions and Load Cases

Production

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

<b>Production Casing Burst Design</b>		
<b>Load Case</b>	<b>External Pressure</b>	<b>Internal Pressure</b>
Pressure Test	Formation Pore Pressure	Fluid in hole (water or produced water) + test psi
Tubing Leak	Formation Pore Pressure	Packer @ KOP, leak below surface 8.6 ppg packer fluid
Stimulation	Formation Pore Pressure	Max frac pressure with heaviest frac fluid

<b>Production Casing Collapse Design</b>		
<b>Load Case</b>	<b>External Pressure</b>	<b>Internal Pressure</b>
Full Evacuation	Water gradient in cement, mud above TOC.	None
Cementing	Wet cement weight	Water (8.33ppg)

<b>Production Casing Tension Design</b>	
<b>Load Case</b>	<b>Assumptions</b>
Overpull	100kips
Runing in hole	2 ft/s
Service Loads	N/A

Casing Assumptions and Load Cases

Surface

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

<b>Surface Casing Burst Design</b>		
<b>Load Case</b>	<b>External Pressure</b>	<b>Internal Pressure</b>
Pressure Test	Formation Pore Pressure	Max mud weight of next hole-section plus Test psi
Drill Ahead	Formation Pore Pressure	Max mud weight of next hole section
Displace to Gas	Formation Pore Pressure	Dry gas from next casing point

<b>Surface Casing Collapse Design</b>		
<b>Load Case</b>	<b>External Pressure</b>	<b>Internal Pressure</b>
Full Evacuation	Water gradient in cement, mud above TOC	None
Cementing	Wet cement weight	Water (8.33ppg)

<b>Surface Casing Tension Design</b>	
<b>Load Case</b>	<b>Assumptions</b>
Overpull	100kips
Runing in hole	3 ft/s
Service Loads	N/A



Casing Assumptions and Load Cases

Intermediate

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

<b>Intermediate Casing Burst Design</b>		
<b>Load Case</b>	<b>External Pressure</b>	<b>Internal Pressure</b>
Pressure Test	Formation Pore Pressure	Max mud weight of next hole-section plus Test psi
Drill Ahead	Formation Pore Pressure	Max mud weight of next hole section
Fracture @ Shoe	Formation Pore Pressure	Dry gas

<b>Intermediate Casing Collapse Design</b>		
<b>Load Case</b>	<b>External Pressure</b>	<b>Internal Pressure</b>
Full Evacuation	Water gradient in cement, mud above TOC	None
Cementing	Wet cement weight	Water (8.33ppg)

<b>Intermediate Casing Tension Design</b>	
<b>Load Case</b>	<b>Assumptions</b>
Overpull	100kips
Runing in hole	2 ft/s
Service Loads	N/A



**Devon Energy Center  
333 West Sheridan Avenue  
Oklahoma City, Oklahoma 73102-5015**

# **Hydrogen Sulfide (H<sub>2</sub>S) Contingency Plan**

**For**

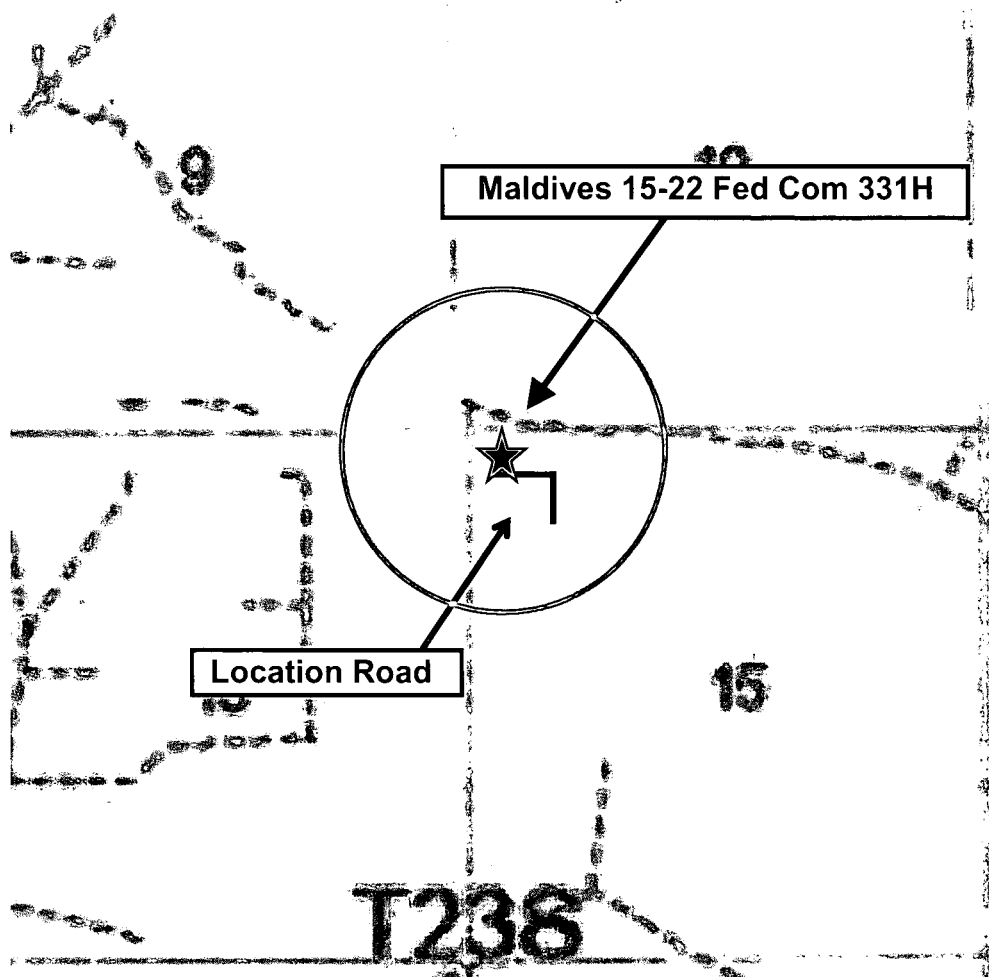
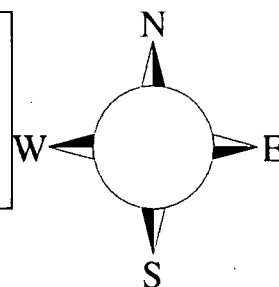
**Maldives 15-22 Fed Com 331H**

**Sec-15 T-23S R-31E  
250' FNL & 570' FWL  
LAT. = 32.3110515' N (NAD83)  
LONG = 103.7723859' W**

**Eddy County NM**

## Maldives 15-22 Fed Com 331H

This is an open drilling site. H<sub>2</sub>S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H<sub>2</sub>S, including warning signs, wind indicators and H<sub>2</sub>S monitor.



Assumed 100 ppm ROE = 3000' (Radius of Exposure)  
100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan.

### Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crews should then block the entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are no homes or buildings in or near the ROE.

**Assumed 100 ppm ROE = 3000'**

**100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan.**

### **Emergency Procedures**

**In the event of a release of gas containing H<sub>2</sub>S, the first responder(s) must**

- **Isolate the area and prevent entry by other persons into the 100 ppm ROE.**
- **Evacuate any public places encompassed by the 100 ppm ROE.**
- **Be equipped with H<sub>2</sub>S monitors and air packs in order to control the release.**
- **Use the “buddy system” to ensure no injuries occur during the response**
- **Take precautions to avoid personal injury during this operation.**
- **Contact operator and/or local officials to aid in operation. See list of phone numbers attached.**
- **Have received training in the**
  - **Detection of H<sub>2</sub>S, and**
  - **Measures for protection against the gas,**
  - **Equipment used for protection and emergency response.**

### **Ignition of Gas Source**

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

### **Characteristics of H<sub>2</sub>S and SO<sub>2</sub>**

<b>Common Name</b>	<b>Chemical Formula</b>	<b>Specific Gravity</b>	<b>Threshold Limit</b>	<b>Hazardous Limit</b>	<b>Lethal Concentration</b>
<b>Hydrogen Sulfide</b>	<b>H<sub>2</sub>S</b>	<b>1.189 Air = 1</b>	<b>10 ppm</b>	<b>100 ppm/hr</b>	<b>600 ppm</b>
<b>Sulfur Dioxide</b>	<b>SO<sub>2</sub></b>	<b>2.21 Air = 1</b>	<b>2 ppm</b>	<b>N/A</b>	<b>1000 ppm</b>

### **Contacting Authorities**

Devon Energy Corp. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Devon Energy Corp. Company response must be in coordination with the State of New Mexico’s ‘Hazardous Materials Emergency Response Plan’ (HMER)

## **Hydrogen Sulfide Drilling Operation Plan**

### **I. HYDROGEN SULFIDE (H<sub>2</sub>S) TRAINING**

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H<sub>2</sub>S metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan.

### **II. HYDROGEN SULFIDE TRAINING**

Note: All H<sub>2</sub>S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H<sub>2</sub>S.

## 1. Well Control Equipment

- A. Flare line
- B. Choke manifold – Remotely Operated
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
- D. Auxiliary equipment may include if applicable: annular preventer and rotating head.
- E. Mud/Gas Separator

## 2. Protective equipment for essential personnel:

30-minute SCBA units located at briefing areas, as indicated on well site diagram, with escape units available in the top doghouse. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

## 3. H<sub>2</sub>S detection and monitoring equipment:

Portable H<sub>2</sub>S monitors positioned on location for best coverage and response. These units have warning lights which activate when H<sub>2</sub>S levels reach 10 ppm and audible sirens which activate at 15 ppm. Sensor locations:

- Bell nipple
- Possum Belly/Shale shaker
- Rig floor
- Choke manifold
- Cellar

### Visual warning systems:

- A. Wind direction indicators as shown on well site diagram
- B. Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

#### **4. Mud program:**

The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to surface. Proper mud weight, safe drilling practices and the use of H<sub>2</sub>S scavengers will minimize hazards when penetrating H<sub>2</sub>S bearing zones.

#### **5. Metallurgy:**

- A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H<sub>2</sub>S trim.
- B. All elastomers used for packing and seals shall be H<sub>2</sub>S trim.

#### **6. Communication:**

- A. Company personnel have/use cellular telephones in the field.
- B. Land line (telephone) communications at Office

#### **7. Well testing:**

- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H<sub>2</sub>S environment will use the closed chamber method of testing.
- B. There will be no drill stem testing.

<b><u>Devon Energy Corp. Company Call List</u></b>		
Drilling Supervisor – Basin – Mark Kramer		405-823-4796
EHS Professional – Laura Wright		405-439-8129
<b><u>Agency Call List</u></b>		
<b><u>Lea County (575)</u></b>	<b>Hobbs</b>	
	Lea County Communication Authority	393-3981
	State Police	392-5588
	City Police	397-9265
	Sheriff's Office	393-2515
	<b>Ambulance</b>	<b>911</b>
	Fire Department	397-9308
	LEPC (Local Emergency Planning Committee)	393-2870
	NMOCD	393-6161
	US Bureau of Land Management	393-3612
<b><u>Eddy County (575)</u></b>	<b>Carlsbad</b>	
	State Police	885-3137
	City Police	885-2111
	Sheriff's Office	887-7551
	<b>Ambulance</b>	<b>911</b>
	Fire Department	885-3125
	LEPC (Local Emergency Planning Committee)	887-3798
	US Bureau of Land Management	887-6544
	NM Emergency Response Commission (Santa Fe)	(505) 476-9600
	24 HR	(505) 827-9126
	National Emergency Response Center	(800) 424-8802
	National Pollution Control Center: Direct	(703) 872-6000
	For Oil Spills	(800) 280-7118
	<b>Emergency Services</b>	
	Wild Well Control	(281) 784-4700
	Cudd Pressure Control	(915) 699-0139 (915) 563-3356
	Halliburton	(575) 746-2757
	B. J. Services	(575) 746-3569
	<b><u>Give GPS position:</u></b>	Native Air – Emergency Helicopter – Hobbs
Flight For Life - Lubbock, TX		(806) 743-9911
Aerocare - Lubbock, TX		(806) 747-8923
Med Flight Air Amb - Albuquerque, NM		(575) 842-4433
Lifeguard Air Med Svc. Albuquerque, NM		(800) 222-1222
	Poison Control (24/7)	(575) 272-3115
	Oil & Gas Pipeline 24 Hour Service	(800) 364-4366
	NOAA – Website - <a href="http://www.nhc.noaa.gov">www.nhc.noaa.gov</a>	

Prepared in conjunction with  
Dave Small





# **WCDSC Permian NM**

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

**Sec 15-T23S-R31E**

**Maldives 15-22 Fed Com 331H**

**Wellbore #1**

**Permit Plan 1**

## **Anticollision Report**

**14 June, 2018**

Anticollision Report

<b>Company:</b>	WCDSC Permian NM	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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>Reference</b>	Permit Plan 1		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method</b>	MD Interval 50.00ft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 1,500.00 ft	<b>Error Surface:</b>	Pedal Curve
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	Date	6/14/2018		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	18,769.09	Permit Plan 1 (Wellbore #1)	MWD+HDGM	OWSG MWD + HDGM

Site Name	Reference Measure	Offset Measure	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation	Warning
<b>Sec 15-T23S-R31E</b>						
Maldives 15-22 Fed Com 511H - Wellbore #1 - Permit Pla	2,500.00	2,500.10	152.95	135.44	8.738	CC
Maldives 15-22 Fed Com 511H - Wellbore #1 - Permit Pla	5,700.00	5,705.89	159.88	119.55	3.965	Alert, ES
Maldives 15-22 Fed Com 511H - Wellbore #1 - Permit Pla	7,600.00	7,602.94	182.65	128.70	3.386	Alert, SF
Maldives 15-22 Fed Com 521H - Wellbore #1 - Permit Pla	2,500.00	2,501.20	161.46	143.95	9.222	CC
Maldives 15-22 Fed Com 521H - Wellbore #1 - Permit Pla	2,550.00	2,548.80	161.63	143.77	9.052	ES
Maldives 15-22 Fed Com 521H - Wellbore #1 - Permit Pla	4,400.00	4,402.35	235.50	204.50	7.596	SF
Maldives 15-22 Fed Com 522H - Wellbore #1 - Permit Pla	5,158.92	5,162.26	132.52	95.91	3.620	Alert, CC
Maldives 15-22 Fed Com 522H - Wellbore #1 - Permit Pla	8,185.76	8,190.87	142.57	84.01	2.435	Minor Risk, ES
Maldives 15-22 Fed Com 522H - Wellbore #1 - Permit Pla	8,200.00	8,203.08	142.67	84.03	2.433	Minor Risk, SF
Maldives 15-22 Fed Com 621H - Wellbore #1 - Permit Pla	2,500.00	2,501.20	29.97	12.46	1.712	Minor Risk, CC
Maldives 15-22 Fed Com 621H - Wellbore #1 - Permit Pla	2,550.00	2,548.80	30.16	12.31	1.689	Minor Risk, ES
Maldives 15-22 Fed Com 621H - Wellbore #1 - Permit Pla	18,769.09	18,958.35	339.03	136.22	1.672	Minor Risk, SF
Maldives 15-22 Fed Com 711H - Wellbore #1 - Permit Pla	2,500.00	2,500.80	60.01	42.50	3.428	Alert, CC
Maldives 15-22 Fed Com 711H - Wellbore #1 - Permit Pla	2,550.00	2,550.54	60.31	42.45	3.377	Alert, ES
Maldives 15-22 Fed Com 711H - Wellbore #1 - Permit Pla	18,769.09	18,934.40	576.63	352.77	2.576	Alert, SF
Todd 15 C Fed #003 (Active) - Wellbore #1 - No Surveys	9,125.33	9,126.45	1,134.81	965.46	6.701	CC, ES, SF
Todd 15 D Fed #004 (P&A) - Wellbore #1 - Inc Only Surv	8,230.46	8,224.94	325.08	63.16	1.241	Major Risk, CC, ES, SF
Todd 15 E Fed #005 (P&A) - Wellbore #1 - No Surveys						Out of range
<b>Sec 22-T23S-R31E</b>						
Todd 22 E Fed #5 (Active) - Wellbore #1 - Wellbore #1						Out of range
Todd 22 Fed #4 (P&A) - Wellbore #1 - Wellbore #1						Out of range

<b>Offset Design</b>	Sec 15-T23S-R31E - Maldives 15-22 Fed Com 511H - Wellbore #1 - Permit Plan 2										<b>Offset Site Error:</b>	0.00 ft	
<b>Survey Program:</b>	0-MWD+HDGM										<b>Offset Well Error:</b>	0.50 ft	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.10	-0.10	0.50	0.50	-169.03	-150.15	-29.11	152.95				
50.00	50.00	49.90	49.90	0.50	0.50	-169.03	-150.15	-29.11	152.95	151.94	1.01	151.961	
100.00	100.00	100.10	99.90	0.52	0.52	-169.03	-150.15	-29.11	152.95	151.91	1.04	147.688	
150.00	150.00	149.90	149.90	0.59	0.59	-169.03	-150.15	-29.11	152.95	151.77	1.18	129.583	
200.00	200.00	200.10	199.90	0.70	0.70	-169.03	-150.15	-29.11	152.95	151.54	1.40	108.900	
250.00	250.00	249.90	249.90	0.84	0.84	-169.03	-150.15	-29.11	152.95	151.27	1.68	91.303	

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

Anticollision Report

<b>Company:</b>	WCDCS Permian NM	<b>Local Co-ordinate Reference:</b>	Well Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft
Reference: Sec 15-T23S-R31E - Maldives 15-22 Fed Com 511H - Wellbore #1 - Permit Plan 2														
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
				Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
300.00	300.00	300.10	299.90	0.99	0.99	-169.03	-150.15	-29.11	152.95	150.97	1.97	77.442		
350.00	350.00	349.90	349.90	1.15	1.15	-169.03	-150.15	-29.11	152.95	150.66	2.29	66.769		
400.00	400.00	400.10	399.90	1.31	1.31	-169.03	-150.15	-29.11	152.95	150.33	2.62	58.410		
450.00	450.00	449.90	449.90	1.48	1.48	-169.03	-150.15	-29.11	152.95	149.99	2.95	51.806		
500.00	500.00	500.10	499.90	1.65	1.65	-169.03	-150.15	-29.11	152.95	149.65	3.29	46.453		
550.00	550.00	549.90	549.90	1.82	1.82	-169.03	-150.15	-29.11	152.95	149.31	3.63	42.076		
600.00	600.00	600.10	599.90	1.99	1.99	-169.03	-150.15	-29.11	152.95	148.96	3.98	38.414		
650.00	650.00	649.90	649.90	2.16	2.16	-169.03	-150.15	-29.11	152.95	148.62	4.33	35.332		
700.00	700.00	700.10	699.90	2.34	2.34	-169.03	-150.15	-29.11	152.95	148.27	4.68	32.688		
750.00	750.00	749.90	749.90	2.51	2.51	-169.03	-150.15	-29.11	152.95	147.92	5.03	30.413		
800.00	800.00	800.10	799.90	2.69	2.69	-169.03	-150.15	-29.11	152.95	147.56	5.38	28.421		
850.00	850.00	849.90	849.90	2.87	2.87	-169.03	-150.15	-29.11	152.95	147.21	5.73	26.676		
900.00	900.00	900.10	899.90	3.04	3.04	-169.03	-150.15	-29.11	152.95	146.86	6.09	25.125		
950.00	950.00	949.90	949.90	3.22	3.22	-169.03	-150.15	-29.11	152.95	146.51	6.44	23.747		
1,000.00	1,000.00	1,000.10	999.90	3.40	3.40	-169.03	-150.15	-29.11	152.95	146.15	6.80	22.506		
1,050.00	1,050.00	1,049.90	1,049.90	3.58	3.57	-169.03	-150.15	-29.11	152.95	145.80	7.15	21.392		
1,100.00	1,100.00	1,100.10	1,099.90	3.75	3.75	-169.03	-150.15	-29.11	152.95	145.44	7.51	20.378		
1,150.00	1,150.00	1,149.90	1,149.90	3.93	3.93	-169.03	-150.15	-29.11	152.95	145.09	7.86	19.458		
1,200.00	1,200.00	1,200.10	1,199.90	4.11	4.11	-169.03	-150.15	-29.11	152.95	144.73	8.22	18.614		
1,250.00	1,250.00	1,249.90	1,249.90	4.29	4.29	-169.03	-150.15	-29.11	152.95	144.37	8.57	17.843		
1,300.00	1,300.00	1,300.10	1,299.90	4.46	4.46	-169.03	-150.15	-29.11	152.95	144.02	8.93	17.130		
1,350.00	1,350.00	1,349.90	1,349.90	4.64	4.64	-169.03	-150.15	-29.11	152.95	143.66	9.28	16.474		
1,400.00	1,400.00	1,400.10	1,399.90	4.82	4.82	-169.03	-150.15	-29.11	152.95	143.30	9.64	15.863		
1,450.00	1,450.00	1,449.90	1,449.90	5.00	5.00	-169.03	-150.15	-29.11	152.95	142.95	10.00	15.299		
1,500.00	1,500.00	1,500.10	1,499.90	5.18	5.18	-169.03	-150.15	-29.11	152.95	142.59	10.35	14.771		
1,550.00	1,550.00	1,549.90	1,549.90	5.36	5.36	-169.03	-150.15	-29.11	152.95	142.24	10.71	14.279		
1,600.00	1,600.00	1,600.10	1,599.90	5.53	5.53	-169.03	-150.15	-29.11	152.95	141.88	11.07	13.818		
1,650.00	1,650.00	1,649.90	1,649.90	5.71	5.71	-169.03	-150.15	-29.11	152.95	141.52	11.42	13.387		
1,700.00	1,700.00	1,700.10	1,699.90	5.89	5.89	-169.03	-150.15	-29.11	152.95	141.16	11.78	12.980		
1,750.00	1,750.00	1,749.90	1,749.90	6.07	6.07	-169.03	-150.15	-29.11	152.95	140.81	12.14	12.599		
1,800.00	1,800.00	1,800.10	1,799.90	6.25	6.25	-169.03	-150.15	-29.11	152.95	140.45	12.50	12.238		
1,850.00	1,850.00	1,849.90	1,849.90	6.43	6.43	-169.03	-150.15	-29.11	152.95	140.09	12.85	11.899		
1,900.00	1,900.00	1,900.10	1,899.90	6.61	6.61	-169.03	-150.15	-29.11	152.95	139.73	13.21	11.576		
1,950.00	1,950.00	1,949.90	1,949.90	6.78	6.78	-169.03	-150.15	-29.11	152.95	139.38	13.57	11.272		
2,000.00	2,000.00	2,000.10	1,999.90	6.96	6.96	-169.03	-150.15	-29.11	152.95	139.02	13.93	10.982		
2,050.00	2,050.00	2,049.90	2,049.90	7.14	7.14	-169.03	-150.15	-29.11	152.95	138.66	14.28	10.708		
2,100.00	2,100.00	2,100.10	2,099.90	7.32	7.32	-169.03	-150.15	-29.11	152.95	138.30	14.64	10.446		
2,150.00	2,150.00	2,149.90	2,149.90	7.50	7.50	-169.03	-150.15	-29.11	152.95	137.95	15.00	10.197		
2,200.00	2,200.00	2,200.10	2,199.90	7.68	7.68	-169.03	-150.15	-29.11	152.95	137.59	15.36	9.959		
2,250.00	2,250.00	2,249.90	2,249.90	7.86	7.86	-169.03	-150.15	-29.11	152.95	137.23	15.71	9.733		
2,300.00	2,300.00	2,300.10	2,299.90	8.04	8.04	-169.03	-150.15	-29.11	152.95	136.87	16.07	9.516		
2,350.00	2,350.00	2,349.90	2,349.90	8.22	8.21	-169.03	-150.15	-29.11	152.95	136.52	16.43	9.309		
2,400.00	2,400.00	2,400.10	2,399.90	8.39	8.39	-169.03	-150.15	-29.11	152.95	136.16	16.79	9.110		
2,450.00	2,450.00	2,449.90	2,449.90	8.57	8.57	-169.03	-150.15	-29.11	152.95	135.80	17.15	8.920		
2,500.00	2,500.00	2,500.10	2,499.90	8.75	8.75	-169.03	-150.15	-29.11	152.95	135.44	17.50	8.738 CC		
2,550.00	2,550.00	2,549.90	2,549.90	8.93	8.93	129.12	-150.15	-29.11	153.08	135.22	17.86	8.572		
2,600.00	2,599.99	2,600.11	2,599.89	9.11	9.11	129.31	-150.15	-29.11	153.50	135.28	18.22	8.427		
2,650.00	2,649.98	2,649.88	2,649.88	9.28	9.29	129.62	-150.15	-29.11	154.19	135.62	18.57	8.304		
2,700.00	2,699.96	2,700.14	2,699.86	9.45	9.47	130.04	-150.15	-29.11	155.17	136.25	18.92	8.200		
2,750.00	2,749.92	2,749.82	2,749.82	9.63	9.65	130.58	-150.15	-29.11	156.44	137.16	19.28	8.116		
2,800.00	2,799.86	2,799.76	2,799.76	9.81	9.83	131.23	-150.15	-29.11	158.01	138.38	19.63	8.049		

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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>													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.50 ft
Reference				Offset		Semi Major Axis			Distance			Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
2,850.00	2,849.79	2,851.07	2,851.07	9.98	10.01	131.97	-149.95	-29.00	159.62	139.63	19.99	7.986		
2,900.00	2,899.71	2,902.41	2,902.40	10.16	10.19	132.66	-149.34	-28.68	160.84	140.49	20.35	7.905		
2,950.00	2,949.63	2,953.78	2,953.76	10.33	10.37	133.31	-148.33	-28.13	161.64	140.94	20.70	7.808		
3,000.00	2,999.56	3,005.16	3,005.12	10.51	10.56	133.91	-146.92	-27.37	162.03	140.97	21.06	7.695		
3,050.00	3,049.48	3,056.56	3,056.47	10.69	10.74	134.48	-145.09	-26.39	161.99	140.58	21.41	7.566		
3,100.00	3,099.40	3,107.12	3,106.98	10.86	10.92	135.01	-142.97	-25.24	161.61	139.84	21.76	7.426		
3,150.00	3,149.33	3,157.09	3,156.89	11.04	11.10	135.54	-140.84	-24.10	161.20	139.08	22.12	7.288		
3,200.00	3,199.25	3,207.07	3,206.81	11.22	11.28	136.07	-138.71	-22.95	160.81	138.33	22.47	7.156		
3,250.00	3,249.17	3,257.05	3,256.73	11.39	11.45	136.60	-136.58	-21.80	160.43	137.60	22.83	7.028		
3,300.00	3,299.10	3,307.02	3,306.65	11.57	11.63	137.13	-134.45	-20.65	160.06	136.88	23.18	6.904		
3,350.00	3,349.02	3,357.00	3,356.56	11.75	11.81	137.67	-132.32	-19.51	159.71	136.17	23.54	6.785		
3,400.00	3,398.94	3,406.98	3,406.48	11.93	11.99	138.21	-130.18	-18.36	159.37	135.48	23.89	6.670		
3,450.00	3,448.86	3,456.95	3,456.40	12.10	12.17	138.75	-128.05	-17.21	159.05	134.80	24.25	6.559		
3,500.00	3,498.79	3,506.93	3,506.32	12.28	12.35	139.29	-125.92	-16.06	158.74	134.13	24.61	6.451		
3,550.00	3,548.71	3,556.91	3,556.23	12.46	12.53	139.84	-123.79	-14.91	158.44	133.48	24.96	6.348		
3,600.00	3,598.63	3,606.88	3,606.15	12.64	12.70	140.38	-121.66	-13.77	158.16	132.85	25.32	6.247		
3,650.00	3,648.56	3,656.86	3,656.07	12.82	12.88	140.93	-119.53	-12.62	157.90	132.22	25.67	6.150		
3,700.00	3,698.48	3,706.83	3,705.99	13.00	13.06	141.48	-117.40	-11.47	157.65	131.62	26.03	6.056		
3,750.00	3,748.40	3,756.81	3,755.90	13.18	13.24	142.04	-115.27	-10.32	157.41	131.02	26.39	5.966		
3,800.00	3,798.33	3,806.79	3,805.82	13.35	13.42	142.59	-113.14	-9.18	157.19	130.45	26.74	5.878		
3,850.00	3,848.25	3,856.76	3,855.74	13.53	13.60	143.15	-111.00	-8.03	156.98	129.88	27.10	5.793		
3,900.00	3,898.17	3,906.74	3,905.66	13.71	13.78	143.70	-108.87	-6.88	156.79	129.33	27.46	5.711		
3,950.00	3,948.10	3,956.72	3,955.58	13.89	13.96	144.26	-106.74	-5.73	156.61	128.80	27.81	5.631		
4,000.00	3,998.02	4,006.69	4,005.49	14.07	14.14	144.82	-104.61	-4.59	156.45	128.28	28.17	5.554		
4,050.00	4,047.94	4,056.67	4,055.41	14.25	14.31	145.38	-102.48	-3.44	156.30	127.77	28.53	5.479		
4,100.00	4,097.87	4,106.64	4,105.33	14.43	14.49	145.94	-100.35	-2.29	156.17	127.28	28.88	5.409		
4,150.00	4,147.79	4,156.62	4,155.25	14.61	14.67	146.51	-98.22	-1.14	156.05	126.81	29.24	5.337		
4,200.00	4,197.71	4,206.60	4,205.16	14.79	14.85	147.07	-96.09	0.01	155.95	126.35	29.60	5.269		
4,250.00	4,247.63	4,256.57	4,255.08	14.97	15.03	147.64	-93.96	1.15	155.86	125.91	29.95	5.203		
4,300.00	4,297.56	4,306.55	4,305.00	15.15	15.21	148.20	-91.82	2.30	155.79	125.48	30.31	5.140		
4,350.00	4,347.48	4,356.53	4,354.92	15.33	15.39	148.77	-89.69	3.45	155.73	125.06	30.67	5.078		
4,400.00	4,397.40	4,406.50	4,404.83	15.51	15.57	149.33	-87.56	4.60	155.69	124.66	31.03	5.018		
4,450.00	4,447.33	4,456.48	4,454.75	15.69	15.75	149.90	-85.43	5.74	155.66	124.28	31.38	4.960	Alert	
4,500.00	4,497.25	4,506.46	4,504.67	15.87	15.93	150.46	-83.30	6.89	155.65	123.91	31.74	4.904	Alert	
4,513.05	4,510.28	4,519.50	4,517.70	15.91	15.98	150.61	-82.74	7.19	155.65	123.82	31.83	4.889	Alert	
4,550.00	4,547.17	4,556.43	4,554.59	16.05	16.11	151.03	-81.17	8.04	155.65	123.56	32.10	4.849	Alert	
4,600.00	4,597.10	4,606.41	4,604.51	16.23	16.29	151.59	-79.04	9.19	155.67	123.22	32.45	4.797	Alert	
4,650.00	4,647.02	4,656.38	4,654.42	16.41	16.47	152.16	-76.91	10.33	155.71	122.89	32.81	4.745	Alert	
4,700.00	4,696.94	4,706.36	4,704.34	16.59	16.65	152.73	-74.77	11.48	155.76	122.59	33.17	4.696	Alert	
4,750.00	4,746.87	4,756.34	4,754.26	16.77	16.83	153.29	-72.64	12.63	155.82	122.29	33.53	4.648	Alert	
4,800.00	4,796.79	4,806.31	4,804.18	16.95	17.01	153.86	-70.51	13.78	155.90	122.02	33.88	4.601	Alert	
4,850.00	4,846.71	4,856.29	4,854.09	17.13	17.19	154.42	-68.38	14.93	155.99	121.75	34.24	4.556	Alert	
4,900.00	4,896.63	4,906.27	4,904.01	17.31	17.37	154.98	-66.25	16.07	156.10	121.50	34.60	4.512	Alert	
4,950.00	4,946.56	4,956.24	4,953.93	17.49	17.55	155.54	-64.12	17.22	156.23	121.27	34.96	4.469	Alert	
5,000.00	4,996.48	5,006.22	5,003.85	17.67	17.73	156.11	-61.99	18.37	156.37	121.05	35.31	4.428	Alert	
5,050.00	5,046.40	5,056.20	5,053.76	17.85	17.91	156.67	-59.86	19.52	156.52	120.85	35.67	4.388	Alert	
5,100.00	5,096.33	5,106.17	5,103.68	18.03	18.09	157.23	-57.73	20.66	156.69	120.66	36.03	4.349	Alert	
5,150.00	5,146.25	5,156.15	5,153.60	18.21	18.27	157.78	-55.59	21.81	156.88	120.49	36.39	4.311	Alert	
5,200.00	5,196.17	5,206.12	5,203.52	18.39	18.45	158.34	-53.46	22.96	157.08	120.33	36.75	4.275	Alert	
5,250.00	5,246.10	5,256.10	5,253.44	18.57	18.63	158.90	-51.33	24.11	157.29	120.19	37.10	4.239	Alert	
5,300.00	5,296.02	5,306.08	5,303.35	18.75	18.81	159.45	-49.20	25.26	157.52	120.06	37.46	4.205	Alert	

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft		
Reference													Distance		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis (ft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
5,350.00	5,345.94	5,356.05	5,353.27	18.93	18.99	160.00		-47.07	26.40	157.77	119.95	37.82	4.172	Alert		
5,400.00	5,395.87	5,406.03	5,403.19	19.11	19.17	160.55		-44.94	27.55	158.02	119.85	38.18	4.139	Alert		
5,450.00	5,445.79	5,456.01	5,453.11	19.30	19.35	161.10		-42.81	28.70	158.30	119.76	38.53	4.108	Alert		
5,500.00	5,495.71	5,505.98	5,503.02	19.48	19.53	161.65		-40.68	29.85	158.58	119.69	38.89	4.078	Alert		
5,550.00	5,545.64	5,555.96	5,552.94	19.66	19.71	162.19		-38.54	30.99	158.89	119.64	39.25	4.048	Alert		
5,600.00	5,595.56	5,605.93	5,602.86	19.84	19.89	162.73		-36.41	32.14	159.20	119.59	39.61	4.020	Alert		
5,650.00	5,645.48	5,655.91	5,652.78	20.02	20.07	163.27		-34.28	33.29	159.53	119.57	39.97	3.992	Alert		
5,700.00	5,695.40	5,705.89	5,702.69	20.20	20.25	163.81		-32.15	34.44	159.88	119.55	40.32	3.965	Alert, ES		
5,750.00	5,745.33	5,755.86	5,752.61	20.38	20.43	164.34		-30.02	35.58	160.24	119.55	40.68	3.939	Alert		
5,800.00	5,795.25	5,805.84	5,802.53	20.56	20.61	164.88		-27.89	36.73	160.61	119.57	41.04	3.914	Alert		
5,850.00	5,845.17	5,855.82	5,852.45	20.74	20.79	165.41		-25.76	37.88	160.99	119.60	41.40	3.889	Alert		
5,900.00	5,895.10	5,905.79	5,902.36	20.92	20.97	165.94		-23.63	39.03	161.39	119.64	41.76	3.865	Alert		
5,950.00	5,945.02	5,955.77	5,952.28	21.11	21.15	166.46		-21.50	40.18	161.81	119.69	42.11	3.842	Alert		
6,000.00	5,994.94	6,005.75	6,002.20	21.29	21.33	166.98		-19.36	41.32	162.23	119.76	42.47	3.820	Alert		
6,050.00	6,044.87	6,055.72	6,052.12	21.47	21.51	167.50		-17.23	42.47	162.67	119.85	42.83	3.798	Alert		
6,100.00	6,094.79	6,105.70	6,102.04	21.65	21.69	168.02		-15.10	43.62	163.13	119.94	43.19	3.777	Alert		
6,150.00	6,144.71	6,155.67	6,151.95	21.83	21.87	168.53		-12.97	44.77	163.60	120.05	43.55	3.757	Alert		
6,200.00	6,194.64	6,205.65	6,201.87	22.01	22.05	169.04		-10.84	45.91	164.08	120.17	43.90	3.737	Alert		
6,250.00	6,244.56	6,255.63	6,251.79	22.19	22.24	169.55		-8.71	47.06	164.57	120.31	44.26	3.718	Alert		
6,300.00	6,294.48	6,305.60	6,301.71	22.37	22.42	170.06		-6.58	48.21	165.08	120.45	44.62	3.700	Alert		
6,350.00	6,344.40	6,355.58	6,351.62	22.56	22.60	170.56		-4.45	49.36	165.59	120.61	44.98	3.682	Alert		
6,400.00	6,394.33	6,405.56	6,401.54	22.74	22.78	171.06		-2.32	50.50	166.13	120.79	45.34	3.664	Alert		
6,450.00	6,444.25	6,455.53	6,451.46	22.92	22.96	171.55		-0.18	51.65	166.67	120.97	45.70	3.647	Alert		
6,500.00	6,494.17	6,505.51	6,501.38	23.10	23.14	172.05		1.95	52.80	167.23	121.17	46.05	3.631	Alert		
6,550.00	6,544.10	6,555.49	6,551.29	23.28	23.32	172.53		4.08	53.95	167.79	121.38	46.41	3.615	Alert		
6,600.00	6,594.02	6,605.46	6,601.21	23.46	23.50	173.02		6.21	55.10	168.37	121.60	46.77	3.600	Alert		
6,650.00	6,643.94	6,655.44	6,651.13	23.64	23.68	173.50		8.34	56.24	168.97	121.84	47.13	3.585	Alert		
6,700.00	6,693.87	6,705.41	6,701.05	23.83	23.86	173.98		10.47	57.39	169.57	122.08	47.49	3.571	Alert		
6,750.00	6,743.79	6,755.39	6,750.97	24.01	24.04	174.46		12.60	58.54	170.19	122.34	47.85	3.557	Alert		
6,800.00	6,793.71	6,805.37	6,800.88	24.19	24.22	174.93		14.73	59.69	170.82	122.61	48.21	3.543	Alert		
6,850.00	6,843.64	6,855.34	6,850.80	24.37	24.40	175.40		16.87	60.83	171.46	122.89	48.56	3.530	Alert		
6,900.00	6,893.56	6,905.32	6,900.72	24.55	24.58	175.86		19.00	61.98	172.11	123.18	48.92	3.518	Alert		
6,950.00	6,943.48	6,955.30	6,950.64	24.73	24.76	176.32		21.13	63.13	172.77	123.49	49.28	3.506	Alert		
7,000.00	6,993.40	7,005.27	7,000.55	24.92	24.94	176.78		23.26	64.28	173.44	123.80	49.64	3.494	Alert		
7,050.00	7,043.33	7,055.25	7,050.47	25.10	25.13	177.23		25.39	65.42	174.13	124.13	50.00	3.483	Alert		
7,100.00	7,093.25	7,105.22	7,100.39	25.28	25.31	177.68		27.52	66.57	174.82	124.46	50.36	3.471	Alert		
7,150.00	7,143.17	7,155.20	7,150.31	25.46	25.49	178.13		29.65	67.72	175.53	124.81	50.72	3.461	Alert		
7,200.00	7,193.10	7,205.18	7,200.22	25.64	25.67	178.57		31.78	68.87	176.24	125.17	51.08	3.451	Alert		
7,250.00	7,243.02	7,255.15	7,250.14	25.82	25.85	179.01		33.91	70.02	176.97	125.53	51.44	3.441	Alert		
7,300.00	7,292.94	7,305.13	7,300.06	26.01	26.03	179.45		36.05	71.16	177.71	125.91	51.80	3.431	Alert		
7,350.00	7,342.87	7,355.11	7,349.98	26.19	26.21	179.88		38.18	72.31	178.46	126.30	52.15	3.422	Alert		
7,400.00	7,392.79	7,405.08	7,399.90	26.37	26.39	-179.69		40.31	73.46	179.21	126.70	52.51	3.413	Alert		
7,450.00	7,442.71	7,455.06	7,449.81	26.55	26.57	-179.26		42.44	74.61	179.98	127.11	52.87	3.404	Alert		
7,500.00	7,492.64	7,505.04	7,499.73	26.73	26.75	-178.84		44.57	75.75	180.76	127.53	53.23	3.396	Alert		
7,550.00	7,542.56	7,555.01	7,549.65	26.91	26.93	-178.42		46.70	76.90	181.54	127.95	53.59	3.388	Alert		
7,600.00	7,592.48	7,602.94	7,597.54	27.10	27.11	-178.09		48.83	77.83	182.65	128.70	53.95	3.386	Alert, SF		
7,650.00	7,642.41	7,651.03	7,645.61	27.28	27.28	-177.87		49.63	78.48	184.26	129.97	54.30	3.394	Alert		
7,700.00	7,692.33	7,699.10	7,693.67	27.46	27.45	-177.77		50.30	78.84	186.39	131.75	54.64	3.411	Alert		
7,750.00	7,742.25	7,747.58	7,742.15	27.64	27.62	-177.77		50.45	78.92	189.02	134.03	54.98	3.438	Alert		
7,800.00	7,792.17	7,802.50	7,792.07	27.82	27.82	-177.80		50.45	78.92	191.79	136.43	55.36	3.464	Alert		
7,850.00	7,842.10	7,847.43	7,842.00	28.01	27.98	-177.83		50.45	78.92	194.56	138.86	55.70	3.493	Alert		

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft
Sec 15-T23S-R31E - Maldives 15-22 Fed Com 511H - Wellbore #1 - Permit Plan 2														
Measured Depth (ft)	Vertical Depth (ft)	Reference		Offset		Semi Major Axis			Distance				Warning	
		Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
7,900.00	7,892.02	7,902.65	7,891.92	28.19	28.17	-177.86	50.45	78.92	197.33	141.25	56.07	3.519	Alert	
7,950.00	7,941.94	7,947.27	7,941.84	28.37	28.33	-177.89	50.45	78.92	200.10	143.69	56.41	3.547	Alert	
8,000.00	7,991.87	8,002.80	7,991.77	28.55	28.53	-177.92	50.45	78.92	202.87	146.08	56.79	3.572	Alert	
8,050.00	8,041.79	8,045.69	8,040.26	28.73	28.68	-177.97	50.38	78.92	205.68	148.57	57.11	3.601	Alert	
8,100.00	8,091.71	8,088.64	8,083.14	28.91	28.82	-178.56	48.08	78.93	209.62	152.27	57.35	3.655	Alert	
8,150.00	8,141.64	8,130.85	8,124.99	29.10	28.95	-179.87	42.70	78.97	215.30	157.78	57.52	3.743	Alert	
8,200.00	8,191.56	8,171.89	8,165.21	29.28	29.07	178.24	34.52	79.01	222.90	165.31	57.59	3.871	Alert	
8,250.00	8,241.48	8,211.42	8,203.29	29.46	29.18	175.93	23.95	79.07	232.64	175.12	57.53	4.044	Alert	
8,300.00	8,291.41	8,250.00	8,239.66	29.64	29.29	173.32	11.12	79.15	244.77	187.42	57.35	4.268	Alert	
8,350.00	8,341.33	8,284.93	8,271.79	29.82	29.38	170.74	-2.58	79.23	259.45	202.53	56.93	4.558	Alert	
8,400.00	8,391.25	8,318.62	8,301.92	30.01	29.46	168.11	-17.62	79.31	276.79	220.42	56.37	4.910	Alert	
8,450.00	8,441.17	8,350.00	8,329.16	30.19	29.54	165.62	-33.21	79.40	296.77	241.12	55.65	5.333		
8,500.00	8,491.10	8,379.67	8,354.08	30.37	29.61	163.25	-49.29	79.50	319.33	264.51	54.82	5.825		
8,550.00	8,541.02	8,407.11	8,376.37	30.55	29.67	161.09	-65.30	79.59	344.33	290.43	53.90	6.388		
8,600.00	8,590.94	8,432.61	8,396.37	30.73	29.72	159.13	-81.12	79.68	371.61	318.68	52.93	7.021		
8,650.00	8,640.87	8,456.27	8,414.28	30.92	29.77	157.35	-96.58	79.77	400.96	349.03	51.93	7.721		
8,700.00	8,690.79	8,478.22	8,430.31	31.10	29.82	155.76	-111.56	79.86	432.19	381.25	50.94	8.485		
8,750.00	8,740.71	8,500.00	8,445.64	31.28	29.87	154.23	-127.03	79.94	465.12	415.07	50.05	9.294		
8,800.00	8,790.64	8,517.45	8,457.49	31.46	29.91	153.05	-139.84	80.02	499.56	450.52	49.04	10.188		
8,850.00	8,840.56	8,534.97	8,468.99	31.64	29.95	151.90	-153.06	80.09	535.36	487.21	48.15	11.119		
8,900.00	8,890.48	8,550.00	8,478.53	31.83	29.98	150.95	-164.67	80.16	572.37	525.11	47.25	12.113		
8,950.00	8,940.41	8,566.39	8,488.58	32.01	30.02	149.94	-177.62	80.24	610.45	563.91	46.53	13.118		
9,000.00	8,990.33	8,580.49	8,496.93	32.19	30.06	149.10	-188.98	80.30	649.50	603.69	45.81	14.178		
9,050.00	9,040.25	8,600.00	8,508.01	32.37	30.10	147.98	-205.03	80.39	689.47	644.06	45.41	15.182		
9,100.00	9,090.18	8,600.00	8,508.01	32.55	30.10	147.98	-205.03	80.39	730.14	685.86	44.28	16.488		
9,150.00	9,140.10	8,617.37	8,517.42	32.74	30.14	147.03	-219.63	80.48	771.46	727.51	43.95	17.551		
9,200.00	9,190.02	8,628.11	8,523.01	32.92	30.17	146.46	-228.80	80.53	813.46	770.03	43.43	18.728		
9,250.00	9,239.94	8,650.00	8,533.87	33.10	30.22	145.34	-247.81	80.64	856.22	812.85	43.38	19.740		
9,300.00	9,289.87	8,650.00	8,533.87	33.28	30.22	145.34	-247.81	80.64	899.10	856.50	42.61	21.102		
9,350.00	9,339.79	8,650.00	8,533.87	33.46	30.22	145.34	-247.81	80.64	942.68	900.75	41.93	22.483		
9,400.00	9,389.71	8,664.88	8,540.83	33.65	30.26	144.62	-260.96	80.72	986.58	944.80	41.78	23.615		
9,450.00	9,439.64	8,672.77	8,544.38	33.83	30.28	144.24	-268.00	80.76	1,030.91	989.45	41.46	24.868		
9,500.00	9,489.56	8,680.21	8,547.65	34.01	30.30	143.90	-274.69	80.80	1,075.58	1,034.42	41.16	26.129		
9,550.00	9,539.48	8,700.00	8,555.90	34.19	30.35	143.00	-292.68	80.90	1,120.79	1,079.55	41.24	27.178		
9,600.00	9,589.41	8,700.00	8,555.90	34.38	30.35	143.00	-292.68	80.90	1,165.91	1,125.09	40.82	28.561		
9,650.00	9,639.33	8,700.00	8,555.90	34.56	30.35	143.00	-292.68	80.90	1,211.42	1,170.96	40.46	29.945		
9,700.00	9,689.25	8,700.00	8,555.90	34.74	30.35	143.00	-292.68	80.90	1,257.27	1,217.13	40.13	31.328		
9,750.00	9,739.18	8,700.00	8,555.90	34.92	30.35	143.00	-292.68	80.90	1,303.42	1,263.57	39.85	32.707		
9,800.00	9,789.10	8,717.30	8,562.59	35.10	30.39	142.26	-308.63	80.99	1,349.48	1,309.52	39.97	33.766		
9,850.00	9,839.02	8,722.44	8,564.49	35.29	30.40	142.04	-313.41	81.02	1,395.91	1,356.07	39.84	35.037		
9,900.00	9,888.94	8,727.35	8,566.26	35.47	30.42	141.84	-317.98	81.05	1,442.52	1,402.79	39.73	36.306		
9,950.00	9,938.87	8,732.02	8,567.91	35.65	30.43	141.65	-322.35	81.07	1,489.29	1,449.65	39.64	37.569		

Anticollision Report

<b>Company:</b>	WCDCS Permian NM	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft				
Reference													Semi Major Axis		Distance			Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor						
0.00	0.00	1.20	-1.20	0.50	0.50	-158.54	-150.27	-59.06	161.46									
50.00	50.00	48.80	48.80	0.50	0.50	-158.54	-150.27	-59.06	161.46	160.45	1.01	160.451						
100.00	100.00	101.20	98.80	0.52	0.52	-158.54	-150.27	-59.06	161.46	160.42	1.04	155.752						
150.00	150.00	148.80	148.80	0.59	0.59	-158.54	-150.27	-59.06	161.46	160.28	1.18	137.039						
200.00	200.00	201.20	198.80	0.70	0.71	-158.54	-150.27	-59.06	161.46	160.05	1.41	114.736						
250.00	250.00	248.80	248.80	0.84	0.83	-158.54	-150.27	-59.06	161.46	159.79	1.67	96.568						
300.00	300.00	301.20	298.80	0.99	0.99	-158.54	-150.27	-59.06	161.46	159.48	1.98	81.612						
350.00	350.00	348.80	348.80	1.15	1.14	-158.54	-150.27	-59.06	161.46	159.17	2.29	70.595						
400.00	400.00	401.20	398.80	1.31	1.31	-158.54	-150.27	-59.06	161.46	158.84	2.62	61.575						
450.00	450.00	448.80	448.80	1.48	1.47	-158.54	-150.27	-59.06	161.46	158.51	2.95	54.758						
500.00	500.00	501.20	498.80	1.65	1.65	-158.54	-150.27	-59.06	161.46	158.16	3.30	48.982						
550.00	550.00	548.80	548.80	1.82	1.81	-158.54	-150.27	-59.06	161.46	157.83	3.63	44.465						
600.00	600.00	601.20	598.80	1.99	1.99	-158.54	-150.27	-59.06	161.46	157.47	3.99	40.513						
650.00	650.00	648.80	648.80	2.16	2.16	-158.54	-150.27	-59.06	161.46	157.13	4.32	37.332						
700.00	700.00	701.20	698.80	2.34	2.34	-158.54	-150.27	-59.06	161.46	156.78	4.68	34.479						
750.00	750.00	748.80	748.80	2.51	2.51	-158.54	-150.27	-59.06	161.46	156.43	5.03	32.130						
800.00	800.00	801.20	798.80	2.69	2.69	-158.54	-150.27	-59.06	161.46	156.07	5.39	29.981						
850.00	850.00	848.80	848.80	2.87	2.86	-158.54	-150.27	-59.06	161.46	155.73	5.73	28.180						
900.00	900.00	901.20	898.80	3.04	3.05	-158.54	-150.27	-59.06	161.46	155.37	6.09	26.506						
950.00	950.00	948.80	948.80	3.22	3.22	-158.54	-150.27	-59.06	161.46	155.02	6.44	25.084						
1,000.00	1,000.00	1,001.20	998.80	3.40	3.40	-158.54	-150.27	-59.06	161.46	154.66	6.80	23.746						
1,050.00	1,050.00	1,048.80	1,048.80	3.58	3.57	-158.54	-150.27	-59.06	161.46	154.31	7.15	22.595						
1,100.00	1,100.00	1,101.20	1,098.80	3.75	3.76	-158.54	-150.27	-59.06	161.46	153.95	7.51	21.501						
1,150.00	1,150.00	1,148.80	1,148.80	3.93	3.93	-158.54	-150.27	-59.06	161.46	153.60	7.86	20.551						
1,200.00	1,200.00	1,201.20	1,198.80	4.11	4.11	-158.54	-150.27	-59.06	161.46	153.24	8.22	19.641						
1,250.00	1,250.00	1,248.80	1,248.80	4.29	4.28	-158.54	-150.27	-59.06	161.46	152.89	8.57	18.845						
1,300.00	1,300.00	1,301.20	1,298.80	4.46	4.47	-158.54	-150.27	-59.06	161.46	152.53	8.93	18.075						
1,350.00	1,350.00	1,348.80	1,348.80	4.64	4.64	-158.54	-150.27	-59.06	161.46	152.18	9.28	17.398						
1,400.00	1,400.00	1,401.20	1,398.80	4.82	4.82	-158.54	-150.27	-59.06	161.46	151.81	9.65	16.740						
1,450.00	1,450.00	1,448.80	1,448.80	5.00	4.99	-158.54	-150.27	-59.06	161.46	151.47	9.99	16.157						
1,500.00	1,500.00	1,501.20	1,498.80	5.18	5.18	-158.54	-150.27	-59.06	161.46	151.10	10.36	15.587						
1,550.00	1,550.00	1,548.80	1,548.80	5.36	5.35	-158.54	-150.27	-59.06	161.46	150.75	10.71	15.080						
1,600.00	1,600.00	1,601.20	1,598.80	5.53	5.54	-158.54	-150.27	-59.06	161.46	150.39	11.07	14.582						
1,650.00	1,650.00	1,648.80	1,648.80	5.71	5.71	-158.54	-150.27	-59.06	161.46	150.04	11.42	14.137						
1,700.00	1,700.00	1,701.20	1,698.80	5.89	5.90	-158.54	-150.27	-59.06	161.46	149.67	11.79	13.698						
1,750.00	1,750.00	1,748.80	1,748.80	6.07	6.07	-158.54	-150.27	-59.06	161.46	149.32	12.14	13.305						
1,800.00	1,800.00	1,801.20	1,798.80	6.25	6.25	-158.54	-150.27	-59.06	161.46	148.96	12.50	12.915						
1,850.00	1,850.00	1,848.80	1,848.80	6.43	6.42	-158.54	-150.27	-59.06	161.46	148.61	12.85	12.565						
1,900.00	1,900.00	1,901.20	1,898.80	6.61	6.61	-158.54	-150.27	-59.06	161.46	148.24	13.22	12.217						
1,950.00	1,950.00	1,948.80	1,948.80	6.78	6.78	-158.54	-150.27	-59.06	161.46	147.89	13.56	11.903						
2,000.00	2,000.00	2,001.20	1,998.80	6.96	6.97	-158.54	-150.27	-59.06	161.46	147.53	13.93	11.590						
2,050.00	2,050.00	2,048.80	2,048.80	7.14	7.14	-158.54	-150.27	-59.06	161.46	147.18	14.28	11.307						
2,100.00	2,100.00	2,101.20	2,098.80	7.32	7.33	-158.54	-150.27	-59.06	161.46	146.81	14.65	11.024						
2,150.00	2,150.00	2,148.80	2,148.80	7.50	7.50	-158.54	-150.27	-59.06	161.46	146.46	15.00	10.767						
2,200.00	2,200.00	2,201.20	2,198.80	7.68	7.68	-158.54	-150.27	-59.06	161.46	146.10	15.36	10.511						
2,250.00	2,250.00	2,248.80	2,248.80	7.86	7.85	-158.54	-150.27	-59.06	161.46	145.75	15.71	10.277						
2,300.00	2,300.00	2,301.20	2,298.80	8.04	8.04	-158.54	-150.27	-59.06	161.46	145.38	16.08	10.043						
2,350.00	2,350.00	2,348.80	2,348.80	8.22	8.21	-158.54	-150.27	-59.06	161.46	145.03	16.43	9.829						
2,400.00	2,400.00	2,401.20	2,398.80	8.39	8.40	-158.54	-150.27	-59.06	161.46	144.67	16.79	9.615						
2,450.00	2,450.00	2,448.80	2,448.80	8.57	8.57	-158.54	-150.27	-59.06	161.46	144.32	17.14	9.419						
2,500.00	2,500.00	2,501.20	2,498.80	8.75	8.76	-158.54	-150.27	-59.06	161.46	143.95	17.51	9.222 CC						

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft
Sec 15-T23S-R31E - Maldives 15-22 Fed Com 521H - Wellbore #1 - Permit Plan 1														
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
							+N/-S (ft)	+E/-W (ft)						
2,550.00	2,550.00	2,548.80	2,548.80	8.93	8.93	139.59	-150.27	-59.06	161.63	143.77	17.86	9.052 ES		
2,600.00	2,599.99	2,601.21	2,598.79	9.11	9.11	139.74	-150.27	-59.06	162.12	143.91	18.22	8.898		
2,650.00	2,649.98	2,648.78	2,648.78	9.28	9.28	139.98	-150.27	-59.06	162.96	144.39	18.56	8.778		
2,700.00	2,699.96	2,701.24	2,698.76	9.45	9.47	140.32	-150.27	-59.06	164.13	145.20	18.93	8.672		
2,750.00	2,749.92	2,748.72	2,748.72	9.63	9.64	140.74	-150.27	-59.06	165.65	146.37	19.27	8.595		
2,800.00	2,799.86	2,801.34	2,798.66	9.81	9.83	141.25	-150.27	-59.06	167.51	147.88	19.64	8.531		
2,850.00	2,849.79	2,848.59	2,848.59	9.98	10.00	141.82	-150.27	-59.06	169.66	149.68	19.98	8.491		
2,900.00	2,899.71	2,901.49	2,898.51	10.16	10.19	142.39	-150.27	-59.06	171.85	151.51	20.35	8.447		
2,950.00	2,949.63	2,948.43	2,948.43	10.33	10.36	142.95	-150.27	-59.06	174.06	153.37	20.69	8.413		
3,000.00	2,999.56	3,001.64	2,998.36	10.51	10.55	143.49	-150.27	-59.06	176.28	155.22	21.06	8.372		
3,050.00	3,049.48	3,048.28	3,048.28	10.69	10.71	144.02	-150.27	-59.06	178.51	157.12	21.40	8.342		
3,100.00	3,099.40	3,098.84	3,098.84	10.86	10.89	144.60	-150.11	-59.19	180.68	158.93	21.75	8.305		
3,150.00	3,149.33	3,149.40	3,149.40	11.04	11.07	145.30	-149.60	-59.60	182.69	160.58	22.11	8.263		
3,200.00	3,199.25	3,199.94	3,199.92	11.22	11.25	146.11	-148.75	-60.30	184.55	162.09	22.47	8.215		
3,250.00	3,249.17	3,250.44	3,250.40	11.39	11.43	147.03	-147.55	-61.27	186.29	163.47	22.82	8.163		
3,300.00	3,299.10	3,300.91	3,300.83	11.57	11.61	148.05	-146.01	-62.53	187.91	164.73	23.18	8.108		
3,350.00	3,349.02	3,351.32	3,351.18	11.75	11.79	149.19	-144.13	-64.06	189.44	165.91	23.53	8.051		
3,400.00	3,398.94	3,401.39	3,401.17	11.93	11.97	150.40	-141.97	-65.82	190.92	167.04	23.88	7.994		
3,450.00	3,448.86	3,451.20	3,450.91	12.10	12.15	151.60	-139.79	-67.60	192.48	168.24	24.24	7.941		
3,500.00	3,498.79	3,501.02	3,500.64	12.28	12.32	152.78	-137.60	-69.37	194.12	169.53	24.59	7.893		
3,550.00	3,548.71	3,550.83	3,550.37	12.46	12.50	153.94	-135.42	-71.15	195.84	170.89	24.95	7.850		
3,600.00	3,598.63	3,600.64	3,600.11	12.64	12.68	155.08	-133.24	-72.93	197.64	172.34	25.30	7.811		
3,650.00	3,648.56	3,650.46	3,649.84	12.82	12.85	156.20	-131.06	-74.71	199.52	173.86	25.66	7.776		
3,700.00	3,698.48	3,700.27	3,699.58	13.00	13.03	157.30	-128.88	-76.48	201.47	175.46	26.01	7.745		
3,750.00	3,748.40	3,750.08	3,749.31	13.18	13.21	158.38	-126.69	-78.26	203.49	177.13	26.37	7.718		
3,800.00	3,798.33	3,800.10	3,799.04	13.35	13.39	159.43	-124.51	-80.04	205.59	178.87	26.72	7.694		
3,850.00	3,848.25	3,849.71	3,848.78	13.53	13.57	160.46	-122.33	-81.81	207.75	180.68	27.08	7.673		
3,900.00	3,898.17	3,900.48	3,898.51	13.71	13.75	161.48	-120.15	-83.59	209.98	182.55	27.43	7.654		
3,950.00	3,948.10	3,949.34	3,948.24	13.89	13.92	162.47	-117.96	-85.37	212.28	184.49	27.79	7.640		
4,000.00	3,998.02	4,000.85	3,997.98	14.07	14.11	163.44	-115.78	-87.15	214.64	186.49	28.15	7.626		
4,050.00	4,047.94	4,048.96	4,047.71	14.25	14.28	164.39	-113.60	-88.92	217.05	188.56	28.50	7.617		
4,100.00	4,097.87	4,101.22	4,097.44	14.43	14.47	165.31	-111.42	-90.70	219.53	190.67	28.86	7.607		
4,150.00	4,147.79	4,148.59	4,147.18	14.61	14.64	166.22	-109.23	-92.48	222.06	192.85	29.21	7.603		
4,200.00	4,197.71	4,198.40	4,196.91	14.79	14.82	167.10	-107.05	-94.25	224.65	195.09	29.56	7.599		
4,250.00	4,247.63	4,248.22	4,246.65	14.97	14.99	167.97	-104.87	-96.03	227.29	197.37	29.92	7.597		
4,300.00	4,297.56	4,298.03	4,296.38	15.15	15.17	168.82	-102.69	-97.81	229.98	199.70	30.27	7.597		
4,350.00	4,347.48	4,347.84	4,346.11	15.33	15.35	169.64	-100.51	-99.59	232.72	202.09	30.63	7.598		
4,400.00	4,397.40	4,402.35	4,395.85	15.51	15.55	170.45	-98.32	-101.36	235.50	204.50	31.00	7.596 SF		
4,450.00	4,447.33	4,447.47	4,445.58	15.69	15.71	171.24	-96.14	-103.14	238.33	206.99	31.34	7.605		
4,500.00	4,497.25	4,502.72	4,495.31	15.87	15.91	172.00	-93.96	-104.92	241.21	209.49	31.72	7.605		
4,550.00	4,547.17	4,547.09	4,545.05	16.05	16.07	172.75	-91.78	-106.69	244.13	212.08	32.05	7.616		
4,600.00	4,597.10	4,603.09	4,594.78	16.23	16.27	173.49	-89.59	-108.47	247.09	214.66	32.43	7.619		
4,650.00	4,647.02	4,646.72	4,644.52	16.41	16.43	174.20	-87.41	-110.25	250.09	217.32	32.77	7.633		
4,700.00	4,696.94	4,703.47	4,694.25	16.59	16.63	174.90	-85.23	-112.03	253.12	219.98	33.15	7.637		
4,750.00	4,746.87	4,746.35	4,743.98	16.77	16.78	175.58	-83.05	-113.80	256.20	222.72	33.48	7.653		
4,800.00	4,796.79	4,803.84	4,793.72	16.95	16.99	176.25	-80.86	-115.58	259.31	225.44	33.86	7.658		
4,850.00	4,846.71	4,845.97	4,843.45	17.13	17.14	176.90	-78.68	-117.36	262.45	228.26	34.19	7.676		
4,900.00	4,896.63	4,904.21	4,893.18	17.31	17.35	177.54	-76.50	-119.13	265.63	231.05	34.58	7.682		
4,950.00	4,946.56	4,945.60	4,942.92	17.49	17.50	178.15	-74.32	-120.91	268.83	233.93	34.90	7.702		
5,000.00	4,996.48	5,004.59	4,992.65	17.67	17.72	178.76	-72.14	-122.69	272.07	236.78	35.29	7.709		
5,050.00	5,046.40	5,045.23	5,042.39	17.85	17.86	179.35	-69.95	-124.47	275.34	239.72	35.62	7.731		

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



Anticollision Report

<b>Company:</b>	WCDCS Permian NM	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft				
Reference													Distance		Separation		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis			Offset Wellbore Centre		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor						
				Reference (ft)	Offset (ft)	Highside Tooface (°)	+N/-S (ft)	+E/-W (ft)										
5,100.00	5,096.33	5,104.96	5,092.12	18.03	18.08	179.93	-67.77	-126.24	278.64	242.63	36.01	7.738						
5,150.00	5,146.25	5,144.85	5,141.85	18.21	18.22	-179.51	-65.59	-128.02	281.96	245.63	36.33	7.761						
5,200.00	5,196.17	5,205.33	5,191.59	18.39	18.44	-178.96	-63.41	-129.80	285.31	248.59	36.73	7.769						
5,250.00	5,246.10	5,244.48	5,241.32	18.57	18.58	-178.42	-61.22	-131.57	288.69	251.65	37.04	7.793						
5,300.00	5,296.02	5,305.71	5,291.05	18.75	18.80	-177.90	-59.04	-133.35	292.09	254.65	37.44	7.801						
5,350.00	5,345.94	5,344.11	5,340.79	18.93	18.94	-177.38	-56.86	-135.13	295.52	257.76	37.76	7.827						
5,400.00	5,395.87	5,406.08	5,390.52	19.11	19.17	-176.88	-54.68	-136.91	298.96	260.81	38.16	7.835						
5,450.00	5,445.79	5,443.73	5,440.26	19.30	19.30	-176.39	-52.50	-138.68	302.44	263.96	38.47	7.861						
5,500.00	5,495.71	5,506.45	5,489.99	19.48	19.53	-175.91	-50.31	-140.46	305.93	267.05	38.88	7.869						
5,550.00	5,545.64	5,543.36	5,539.72	19.66	19.66	-175.45	-48.13	-142.24	309.44	270.25	39.19	7.897						
5,600.00	5,595.56	5,606.83	5,589.46	19.84	19.89	-174.99	-45.95	-144.01	312.97	273.38	39.59	7.905						
5,650.00	5,645.48	5,642.99	5,639.19	20.02	20.02	-174.54	-43.77	-145.79	316.53	276.62	39.90	7.933						
5,700.00	5,695.40	5,707.20	5,688.92	20.20	20.25	-174.11	-41.58	-147.57	320.10	279.79	40.31	7.941						
5,750.00	5,745.33	5,742.61	5,738.66	20.38	20.38	-173.66	-39.40	-149.35	323.69	283.07	40.62	7.969						
5,800.00	5,795.25	5,807.57	5,788.39	20.56	20.62	-173.26	-37.22	-151.12	327.29	286.27	41.03	7.977						
5,850.00	5,845.17	5,842.24	5,838.13	20.74	20.74	-172.85	-35.04	-152.90	330.92	289.59	41.33	8.006						
5,900.00	5,895.10	5,907.95	5,887.86	20.92	20.98	-172.45	-32.85	-154.68	334.56	292.81	41.75	8.014						
5,950.00	5,945.02	5,941.87	5,937.59	21.11	21.10	-172.06	-30.67	-156.45	338.22	296.17	42.05	8.044						
6,000.00	5,994.94	6,008.32	5,987.33	21.29	21.34	-171.68	-28.49	-158.23	341.89	299.42	42.46	8.051						
6,050.00	6,044.87	6,041.49	6,037.06	21.47	21.46	-171.30	-26.31	-160.01	345.57	302.81	42.76	8.081						
6,100.00	6,094.79	6,108.69	6,086.79	21.65	21.71	-170.93	-24.13	-161.79	349.28	306.09	43.18	8.088						
6,150.00	6,144.71	6,141.12	6,136.53	21.83	21.83	-170.57	-21.94	-163.56	352.99	309.51	43.48	8.119						
6,200.00	6,194.64	6,190.93	6,186.26	22.01	22.01	-170.22	-19.76	-165.34	356.72	312.88	43.84	8.138						
6,250.00	6,244.56	6,240.75	6,235.99	22.19	22.19	-169.88	-17.58	-167.12	360.46	316.27	44.19	8.156						
6,300.00	6,294.48	6,309.44	6,285.73	22.37	22.44	-169.54	-15.40	-168.89	364.22	319.60	44.62	8.163						
6,350.00	6,344.40	6,340.37	6,335.46	22.56	22.55	-169.21	-13.21	-170.67	367.98	323.07	44.91	8.194						
6,400.00	6,394.33	6,409.81	6,385.20	22.74	22.80	-168.89	-11.03	-172.45	371.76	326.42	45.34	8.200						
6,450.00	6,444.25	6,440.00	6,434.93	22.92	22.91	-168.57	-8.85	-174.23	375.55	329.93	45.63	8.231						
6,500.00	6,494.17	6,489.81	6,484.66	23.10	23.09	-168.26	-6.67	-176.00	379.35	333.37	45.98	8.250						
6,550.00	6,544.10	6,539.63	6,534.40	23.28	23.27	-167.95	-4.49	-177.78	383.17	336.83	46.34	8.268						
6,600.00	6,594.02	6,589.44	6,584.13	23.46	23.45	-167.65	-2.30	-179.56	386.99	340.29	46.70	8.287						
6,650.00	6,643.94	6,639.25	6,633.86	23.64	23.63	-167.36	-0.12	-181.33	390.82	343.77	47.06	8.305						
6,700.00	6,693.87	6,689.07	6,683.60	23.83	23.81	-167.07	2.06	-183.11	394.67	347.25	47.42	8.323						
6,750.00	6,743.79	6,738.88	6,733.33	24.01	23.99	-166.79	4.24	-184.89	398.52	350.75	47.78	8.342						
6,800.00	6,793.71	6,788.69	6,783.07	24.19	24.17	-166.51	6.43	-186.67	402.38	354.25	48.13	8.360						
6,850.00	6,843.64	6,838.51	6,832.80	24.37	24.35	-166.24	8.61	-188.44	406.26	357.76	48.49	8.378						
6,900.00	6,893.56	6,888.32	6,882.53	24.55	24.54	-165.98	10.79	-190.22	410.14	361.29	48.85	8.396						
6,950.00	6,943.48	6,938.13	6,932.27	24.73	24.72	-165.72	12.97	-192.00	414.03	364.82	49.21	8.414						
7,000.00	6,993.40	6,987.95	6,982.00	24.92	24.90	-165.46	15.16	-193.77	417.92	368.36	49.57	8.431						
7,050.00	7,043.33	7,037.76	7,031.73	25.10	25.08	-165.21	17.34	-195.55	421.83	371.90	49.93	8.449						
7,100.00	7,093.25	7,087.57	7,081.47	25.28	25.26	-164.96	19.52	-197.33	425.74	375.46	50.29	8.467						
7,150.00	7,143.17	7,137.39	7,131.20	25.46	25.44	-164.72	21.70	-199.11	429.67	379.02	50.64	8.484						
7,200.00	7,193.10	7,187.20	7,180.94	25.64	25.62	-164.48	23.88	-200.88	433.59	382.59	51.00	8.501						
7,250.00	7,243.02	7,237.01	7,230.67	25.82	25.80	-164.25	26.07	-202.66	437.53	386.17	51.36	8.519						
7,300.00	7,292.94	7,286.83	7,280.40	26.01	25.98	-164.02	28.25	-204.44	441.47	389.75	51.72	8.536						
7,350.00	7,342.87	7,336.64	7,330.14	26.19	26.16	-163.79	30.43	-206.21	445.42	393.35	52.08	8.553						
7,400.00	7,392.79	7,386.45	7,379.87	26.37	26.34	-163.57	32.61	-207.99	449.38	396.94	52.44	8.570						
7,450.00	7,442.71	7,436.27	7,429.60	26.55	26.53	-163.35	34.80	-209.77	453.35	400.55	52.80	8.587						
7,500.00	7,492.64	7,486.08	7,479.34	26.73	26.71	-163.14	36.98	-211.55	457.32	404.16	53.16	8.603						
7,550.00	7,542.56	7,535.89	7,529.07	26.91	26.89	-162.93	39.16	-213.32	461.29	407.78	53.51	8.620						
7,600.00	7,592.48	7,585.71	7,578.81	27.10	27.07	-162.72	41.34	-215.10	465.27	411.40	53.87	8.637						

## Anticollision Report

<b>Company:</b>	WCDSC Permian NM	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft
Reference: Sec 15-T23S-R31E - Maldives 15-22 Fed Com 521H - Wellbore #1 - Permit Plan 1														
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis			Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
				Reference (ft)	Offset (ft)	Highside Tooface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
7,650.00	7,642.41	7,635.52	7,628.54	27.28	27.25	-162.52	43.53	-216.88	469.26	415.03	54.23	8.653		
7,700.00	7,692.33	7,687.87	7,680.82	27.46	27.44	-162.34	45.63	-218.59	473.15	418.54	54.61	8.665		
7,750.00	7,742.25	7,740.91	7,733.82	27.64	27.63	-162.23	47.21	-219.88	476.71	421.73	54.99	8.670		
7,800.00	7,792.17	7,794.01	7,786.91	27.82	27.82	-162.20	48.22	-220.70	479.94	424.58	55.36	8.669		
7,850.00	7,842.10	7,847.16	7,840.05	28.01	28.01	-162.25	48.66	-221.06	482.84	427.10	55.73	8.663		
7,900.00	7,892.02	7,902.07	7,890.82	28.19	28.21	-162.35	48.68	-221.07	485.49	429.38	56.11	8.653		
7,950.00	7,941.94	7,947.85	7,940.74	28.37	28.37	-162.44	48.68	-221.07	488.13	431.68	56.45	8.647		
8,000.00	7,991.87	8,002.22	7,990.67	28.55	28.56	-162.54	48.68	-221.07	490.78	433.95	56.82	8.637		
8,050.00	8,041.79	8,047.70	8,040.59	28.73	28.72	-162.64	48.68	-221.07	493.42	436.26	57.16	8.632		
8,100.00	8,091.71	8,102.38	8,090.51	28.91	28.92	-162.73	48.68	-221.07	496.07	438.53	57.54	8.622		
8,150.00	8,141.64	8,147.55	8,140.44	29.10	29.08	-162.83	48.68	-221.07	498.72	440.84	57.88	8.617		
8,200.00	8,191.56	8,192.36	8,185.24	29.28	29.23	-163.01	47.83	-221.07	501.55	443.35	58.20	8.617		
8,250.00	8,241.48	8,234.78	8,227.47	29.46	29.36	-163.52	43.95	-221.05	505.09	446.59	58.50	8.634		
8,300.00	8,291.41	8,276.25	8,268.37	29.64	29.49	-164.34	37.16	-221.01	509.44	450.67	58.77	8.669		
8,350.00	8,341.33	8,316.39	8,307.38	29.82	29.61	-165.44	27.78	-220.95	514.76	455.75	59.00	8.724		
8,400.00	8,391.25	8,354.87	8,344.09	30.01	29.71	-166.74	16.24	-220.89	521.21	462.02	59.19	8.805		
8,450.00	8,441.17	8,391.49	8,378.22	30.19	29.81	-168.20	3.00	-220.81	529.00	469.68	59.32	8.917		
8,500.00	8,491.10	8,426.09	8,409.64	30.37	29.90	-169.75	-11.49	-220.73	538.32	478.95	59.37	9.067		
8,550.00	8,541.02	8,458.60	8,438.31	30.55	29.98	-171.35	-26.81	-220.64	549.34	490.00	59.34	9.258		
8,600.00	8,590.94	8,489.03	8,464.31	30.73	30.05	-172.96	-42.60	-220.55	562.20	503.00	59.20	9.496		
8,650.00	8,640.87	8,517.40	8,487.78	30.92	30.11	-174.53	-58.55	-220.46	577.01	518.05	58.96	9.786		
8,700.00	8,690.79	8,543.80	8,508.87	31.10	30.17	-176.06	-74.41	-220.36	593.82	535.21	58.61	10.131		
8,750.00	8,740.71	8,568.32	8,527.79	31.28	30.21	-177.52	-90.01	-220.27	612.66	554.49	58.17	10.532		
8,800.00	8,790.64	8,591.07	8,544.74	31.46	30.26	-178.91	-105.19	-220.19	633.51	575.87	57.64	10.991		
8,850.00	8,840.56	8,612.18	8,559.91	31.64	30.30	-179.79	-119.86	-220.10	656.32	599.29	57.03	11.508		
8,900.00	8,890.48	8,631.77	8,573.50	31.83	30.33	-178.57	-133.97	-220.02	681.01	624.65	56.36	12.082		
8,950.00	8,940.41	8,650.00	8,585.70	32.01	30.37	-177.43	-147.51	-219.94	707.50	651.84	55.66	12.712		
9,000.00	8,990.33	8,666.83	8,596.58	32.19	30.40	-176.37	-160.36	-219.87	735.67	680.75	54.92	13.396		
9,050.00	9,040.25	8,682.53	8,606.39	32.37	30.43	-175.38	-172.62	-219.80	765.42	711.25	54.16	14.131		
9,100.00	9,090.18	8,700.00	8,616.90	32.55	30.47	-174.29	-186.57	-219.72	796.64	743.15	53.49	14.894		
9,150.00	9,140.10	8,710.76	8,623.16	32.74	30.49	-173.62	-195.32	-219.67	829.20	776.53	52.66	15.745		
9,200.00	9,190.02	8,723.47	8,630.34	32.92	30.52	-172.83	-205.81	-219.60	863.01	811.08	51.93	16.618		
9,250.00	9,239.94	8,735.34	8,636.84	33.10	30.55	-172.09	-215.74	-219.55	897.98	846.75	51.23	17.530		
9,300.00	9,289.87	8,750.00	8,644.57	33.28	30.59	-171.19	-228.19	-219.48	934.00	883.37	50.63	18.447		
9,350.00	9,339.79	8,750.00	8,644.57	33.46	30.59	-171.19	-228.19	-219.48	971.02	921.30	49.73	19.527		
9,400.00	9,389.71	8,766.64	8,652.96	33.65	30.63	-170.18	-242.56	-219.39	1,008.82	959.54	49.28	20.472		
9,450.00	9,439.64	8,775.82	8,657.41	33.83	30.65	-169.63	-250.59	-219.35	1,047.49	998.79	48.69	21.511		
9,500.00	9,489.56	8,784.45	8,661.47	34.01	30.67	-169.11	-258.21	-219.30	1,086.89	1,038.74	48.14	22.575		
9,550.00	9,539.48	8,800.00	8,668.51	34.19	30.71	-168.19	-272.07	-219.22	1,127.04	1,079.25	47.79	23.584		
9,600.00	9,589.41	8,800.00	8,668.51	34.38	30.71	-168.19	-272.07	-219.22	1,167.67	1,120.53	47.14	24.770		
9,650.00	9,639.33	8,800.00	8,668.51	34.56	30.71	-168.19	-272.07	-219.22	1,209.01	1,162.46	46.54	25.976		
9,700.00	9,689.25	8,800.00	8,668.51	34.74	30.71	-168.19	-272.07	-219.22	1,250.98	1,204.98	46.00	27.198		
9,750.00	9,739.18	8,820.89	8,677.36	34.92	30.76	-166.97	-290.99	-219.11	1,293.01	1,247.11	45.89	28.174		
9,800.00	9,789.10	8,827.05	8,679.84	35.10	30.77	-166.61	-296.63	-219.08	1,335.72	1,290.19	45.54	29.333		
9,850.00	9,839.02	8,832.90	8,682.13	35.29	30.79	-166.28	-302.01	-219.05	1,378.85	1,333.64	45.21	30.501		
9,900.00	9,888.94	8,850.00	8,688.53	35.47	30.83	-165.31	-317.87	-218.96	1,422.51	1,377.40	45.10	31.538		
9,950.00	9,938.87	8,850.00	8,688.53	35.65	30.83	-165.31	-317.87	-218.96	1,466.25	1,421.52	44.73	32.779		

### Anticollision Report

<b>Company:</b>	WCDSC Permian NM	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft
Reference: Sec 15-T23S-R31E - Maldives 15-22 Fed Com 522H - Wellbore #1 - Permit Plan 1														
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	1.60	-1.60	0.50	0.50	179.65	-149.91	0.92	149.91					
50.00	50.00	48.40	48.40	0.50	0.50	179.65	-149.91	0.92	149.91	148.91	1.01	148.987		
100.00	100.00	101.60	98.40	0.52	0.52	179.65	-149.91	0.92	149.91	148.88	1.04	144.560		
150.00	150.00	148.40	148.40	0.59	0.59	179.65	-149.91	0.92	149.91	148.74	1.18	127.320		
200.00	200.00	201.60	198.40	0.70	0.71	179.65	-149.91	0.92	149.91	148.50	1.41	106.454		
250.00	250.00	248.40	248.40	0.84	0.83	179.65	-149.91	0.92	149.91	148.24	1.67	89.724		
300.00	300.00	301.60	298.40	0.99	0.99	179.65	-149.91	0.92	149.91	147.93	1.98	75.728		
350.00	350.00	348.40	348.40	1.15	1.14	179.65	-149.91	0.92	149.91	147.63	2.29	65.584		
400.00	400.00	401.60	398.40	1.31	1.31	179.65	-149.91	0.92	149.91	147.29	2.62	57.143		
450.00	450.00	448.40	448.40	1.48	1.47	179.65	-149.91	0.92	149.91	146.97	2.95	50.865		
500.00	500.00	501.60	498.40	1.65	1.65	179.65	-149.91	0.92	149.91	146.62	3.30	45.461		
550.00	550.00	548.40	548.40	1.82	1.81	179.65	-149.91	0.92	149.91	146.28	3.63	41.300		
600.00	600.00	601.60	598.40	1.99	2.00	179.65	-149.91	0.92	149.91	145.93	3.99	37.603		
650.00	650.00	648.40	648.40	2.16	2.16	179.65	-149.91	0.92	149.91	145.59	4.32	34.674		
700.00	700.00	701.60	698.40	2.34	2.34	179.65	-149.91	0.92	149.91	145.23	4.68	32.004		
750.00	750.00	748.40	748.40	2.51	2.51	179.65	-149.91	0.92	149.91	144.89	5.02	29.841		
800.00	800.00	801.60	798.40	2.69	2.70	179.65	-149.91	0.92	149.91	144.53	5.39	27.830		
850.00	850.00	848.40	848.40	2.87	2.86	179.65	-149.91	0.92	149.91	144.18	5.73	26.171		
900.00	900.00	901.60	898.40	3.04	3.05	179.65	-149.91	0.92	149.91	143.82	6.09	24.605		
950.00	950.00	948.40	948.40	3.22	3.21	179.65	-149.91	0.92	149.91	143.48	6.44	23.295		
1,000.00	1,000.00	1,001.60	998.40	3.40	3.40	179.65	-149.91	0.92	149.91	143.11	6.80	22.043		
1,050.00	1,050.00	1,048.40	1,048.40	3.58	3.57	179.65	-149.91	0.92	149.91	142.77	7.14	20.983		
1,100.00	1,100.00	1,101.60	1,098.40	3.75	3.76	179.65	-149.91	0.92	149.91	142.40	7.51	19.959		
1,150.00	1,150.00	1,148.40	1,148.40	3.93	3.92	179.65	-149.91	0.92	149.91	142.06	7.85	19.085		
1,200.00	1,200.00	1,201.60	1,198.40	4.11	4.11	179.65	-149.91	0.92	149.91	141.69	8.22	18.233		
1,250.00	1,250.00	1,248.40	1,248.40	4.29	4.28	179.65	-149.91	0.92	149.91	141.35	8.57	17.500		
1,300.00	1,300.00	1,301.60	1,298.40	4.46	4.47	179.65	-149.91	0.92	149.91	140.98	8.93	16.780		
1,350.00	1,350.00	1,348.40	1,348.40	4.64	4.64	179.65	-149.91	0.92	149.91	140.63	9.28	16.156		
1,400.00	1,400.00	1,401.60	1,398.40	4.82	4.83	179.65	-149.91	0.92	149.91	140.27	9.65	15.540		
1,450.00	1,450.00	1,448.40	1,448.40	5.00	4.99	179.65	-149.91	0.92	149.91	139.92	9.99	15.003		
1,500.00	1,500.00	1,501.60	1,498.40	5.18	5.18	179.65	-149.91	0.92	149.91	139.55	10.36	14.470		
1,550.00	1,550.00	1,548.40	1,548.40	5.36	5.35	179.65	-149.91	0.92	149.91	139.21	10.71	14.003		
1,600.00	1,600.00	1,601.60	1,598.40	5.53	5.54	179.65	-149.91	0.92	149.91	138.84	11.07	13.537		
1,650.00	1,650.00	1,648.40	1,648.40	5.71	5.71	179.65	-149.91	0.92	149.91	138.49	11.42	13.128		
1,700.00	1,700.00	1,701.60	1,698.40	5.89	5.90	179.65	-149.91	0.92	149.91	138.12	11.79	12.717		
1,750.00	1,750.00	1,748.40	1,748.40	6.07	6.06	179.65	-149.91	0.92	149.91	137.78	12.13	12.355		
1,800.00	1,800.00	1,801.60	1,798.40	6.25	6.25	179.65	-149.91	0.92	149.91	137.41	12.50	11.990		
1,850.00	1,850.00	1,848.40	1,848.40	6.43	6.42	179.65	-149.91	0.92	149.91	137.06	12.85	11.668		
1,900.00	1,900.00	1,901.60	1,898.40	6.61	6.61	179.65	-149.91	0.92	149.91	136.70	13.22	11.342		
1,950.00	1,950.00	1,948.40	1,948.40	6.78	6.78	179.65	-149.91	0.92	149.91	136.35	13.56	11.053		
2,000.00	2,000.00	2,001.60	1,998.40	6.96	6.97	179.65	-149.91	0.92	149.91	135.98	13.93	10.760		
2,050.00	2,050.00	2,048.40	2,048.40	7.14	7.14	179.65	-149.91	0.92	149.91	135.63	14.28	10.499		
2,100.00	2,100.00	2,101.60	2,098.40	7.32	7.33	179.65	-149.91	0.92	149.91	135.27	14.65	10.235		
2,150.00	2,150.00	2,148.40	2,148.40	7.50	7.49	179.65	-149.91	0.92	149.91	134.92	14.99	9.998		
2,200.00	2,200.00	2,201.60	2,198.40	7.68	7.68	179.65	-149.91	0.92	149.91	134.55	15.36	9.758		
2,250.00	2,250.00	2,248.40	2,248.40	7.86	7.85	179.65	-149.91	0.92	149.91	134.20	15.71	9.543		
2,300.00	2,300.00	2,301.60	2,298.40	8.04	8.04	179.65	-149.91	0.92	149.91	133.83	16.08	9.324		
2,350.00	2,350.00	2,348.40	2,348.40	8.22	8.21	179.65	-149.91	0.92	149.91	133.49	16.42	9.127		
2,400.00	2,400.00	2,401.60	2,398.40	8.39	8.40	179.65	-149.91	0.92	149.91	133.12	16.79	8.927		
2,450.00	2,450.00	2,448.40	2,448.40	8.57	8.57	179.65	-149.91	0.92	149.91	132.77	17.14	8.746		
2,500.00	2,500.00	2,498.40	2,498.40	8.75	8.75	179.65	-149.91	0.92	149.91	132.41	17.50	8.567		

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWVD+HDGM													Offset Well Error:		0.50 ft
Sec 15-T23S-R31E - Maldives 15-22 Fed Com 522H - Wellbore #1 - Permit Plan 1															
Measured Depth (ft)	Vertical Depth (ft)	Offset		Semi Major Axis			Distance						Warning		
		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			
2,550.00	2,550.00	2,549.00	2,549.00	8.93	8.93	117.74	-149.81	1.10	149.92	132.06	17.85	8.397			
2,600.00	2,599.99	2,599.62	2,599.61	9.11	9.10	117.74	-149.50	1.68	149.92	131.71	18.21	8.233			
2,650.00	2,649.98	2,650.23	2,650.22	9.28	9.28	117.74	-148.98	2.66	149.92	131.36	18.56	8.078			
2,700.00	2,699.96	2,700.85	2,700.81	9.45	9.46	117.74	-148.25	4.02	149.92	131.01	18.91	7.928			
2,750.00	2,749.92	2,751.47	2,751.39	9.63	9.64	117.74	-147.31	5.79	149.91	130.65	19.26	7.783			
2,800.00	2,799.86	2,802.08	2,801.94	9.81	9.81	117.73	-146.16	7.94	149.90	130.29	19.61	7.643			
2,850.00	2,849.79	2,852.70	2,852.48	9.98	9.99	117.69	-144.79	10.49	149.85	129.88	19.97	7.505			
2,900.00	2,899.71	2,903.31	2,902.98	10.16	10.17	117.52	-143.22	13.43	149.60	129.28	20.32	7.363			
2,950.00	2,949.63	2,953.91	2,953.44	10.33	10.35	117.18	-141.44	16.77	149.16	128.49	20.67	7.216			
3,000.00	2,999.56	3,004.39	3,003.74	10.51	10.53	116.70	-139.45	20.48	148.52	127.49	21.02	7.064			
3,050.00	3,049.48	3,054.36	3,053.52	10.69	10.70	116.16	-137.41	24.29	147.82	126.44	21.38	6.915			
3,100.00	3,099.40	3,104.34	3,103.31	10.86	10.88	115.62	-135.38	28.10	147.14	125.41	21.73	6.771			
3,150.00	3,149.33	3,154.31	3,153.10	11.04	11.06	115.07	-133.34	31.91	146.47	124.38	22.09	6.631			
3,200.00	3,199.25	3,204.29	3,202.89	11.22	11.24	114.52	-131.31	35.71	145.82	123.37	22.44	6.497			
3,250.00	3,249.17	3,254.27	3,252.68	11.39	11.41	113.96	-129.27	39.52	145.18	122.38	22.80	6.368			
3,300.00	3,299.10	3,304.24	3,302.47	11.57	11.59	113.40	-127.23	43.33	144.55	121.39	23.16	6.242			
3,350.00	3,349.02	3,354.22	3,352.26	11.75	11.77	112.83	-125.20	47.14	143.94	120.42	23.51	6.121			
3,400.00	3,398.94	3,404.19	3,402.05	11.93	11.95	112.26	-123.16	50.95	143.34	119.47	23.87	6.005			
3,450.00	3,448.86	3,454.17	3,451.84	12.10	12.13	111.69	-121.12	54.76	142.75	118.52	24.23	5.892			
3,500.00	3,498.79	3,504.14	3,501.62	12.28	12.31	111.11	-119.09	58.57	142.18	117.60	24.59	5.783			
3,550.00	3,548.71	3,554.12	3,551.41	12.46	12.49	110.52	-117.05	62.38	141.63	116.68	24.95	5.677			
3,600.00	3,598.63	3,604.10	3,601.20	12.64	12.67	109.93	-115.01	66.19	141.09	115.78	25.30	5.575			
3,650.00	3,648.56	3,654.07	3,650.99	12.82	12.85	109.34	-112.98	69.99	140.56	114.90	25.66	5.477			
3,700.00	3,698.48	3,704.05	3,700.78	13.00	13.03	108.74	-110.94	73.80	140.05	114.03	26.02	5.382			
3,750.00	3,748.40	3,754.02	3,750.57	13.18	13.21	108.14	-108.90	77.61	139.56	113.17	26.38	5.289			
3,800.00	3,798.33	3,804.00	3,800.36	13.35	13.39	107.53	-106.87	81.42	139.08	112.33	26.74	5.200			
3,850.00	3,848.25	3,853.98	3,850.15	13.53	13.58	106.92	-104.83	85.23	138.61	111.51	27.11	5.114			
3,900.00	3,898.17	3,903.95	3,899.94	13.71	13.76	106.30	-102.79	89.04	138.17	110.70	27.47	5.030			
3,950.00	3,948.10	3,953.93	3,949.72	13.89	13.94	105.68	-100.76	92.85	137.74	109.91	27.83	4.950 Alert			
4,000.00	3,998.02	4,003.90	3,999.51	14.07	14.12	105.06	-98.72	96.66	137.32	109.13	28.19	4.872 Alert			
4,050.00	4,047.94	4,053.88	4,049.30	14.25	14.30	104.43	-96.68	100.46	136.92	108.37	28.55	4.796 Alert			
4,100.00	4,097.87	4,103.86	4,099.09	14.43	14.49	103.80	-94.65	104.27	136.54	107.63	28.91	4.723 Alert			
4,150.00	4,147.79	4,153.83	4,148.88	14.61	14.67	103.17	-92.61	108.08	136.17	106.90	29.27	4.652 Alert			
4,200.00	4,197.71	4,203.81	4,198.67	14.79	14.85	102.53	-90.57	111.89	135.82	106.19	29.64	4.583 Alert			
4,250.00	4,247.63	4,253.78	4,248.46	14.97	15.03	101.89	-88.54	115.70	135.49	105.49	30.00	4.517 Alert			
4,300.00	4,297.56	4,303.76	4,298.25	15.15	15.22	101.25	-86.50	119.51	135.18	104.82	30.36	4.452 Alert			
4,350.00	4,347.48	4,353.73	4,348.04	15.33	15.40	100.60	-84.46	123.32	134.88	104.16	30.72	4.390 Alert			
4,400.00	4,397.40	4,403.71	4,397.82	15.51	15.58	99.95	-82.43	127.13	134.60	103.51	31.09	4.330 Alert			
4,450.00	4,447.33	4,453.69	4,447.61	15.69	15.76	99.30	-80.39	130.94	134.34	102.89	31.45	4.271 Alert			
4,500.00	4,497.25	4,503.66	4,497.40	15.87	15.95	98.64	-78.35	134.74	134.09	102.28	31.81	4.215 Alert			
4,550.00	4,547.17	4,553.64	4,547.19	16.05	16.13	97.99	-76.32	138.55	133.86	101.69	32.16	4.160 Alert			
4,600.00	4,597.10	4,603.61	4,596.98	16.23	16.31	97.33	-74.28	142.36	133.65	101.11	32.54	4.107 Alert			
4,650.00	4,647.02	4,653.59	4,646.77	16.41	16.50	96.67	-72.24	146.17	133.46	100.56	32.90	4.056 Alert			
4,700.00	4,696.94	4,703.57	4,696.56	16.59	16.68	96.01	-70.21	149.98	133.28	100.02	33.27	4.007 Alert			
4,750.00	4,746.87	4,753.54	4,746.35	16.77	16.86	95.34	-68.17	153.79	133.13	99.50	33.63	3.959 Alert			
4,800.00	4,796.79	4,803.52	4,796.14	16.95	17.05	94.68	-66.13	157.60	132.99	98.99	33.99	3.912 Alert			
4,850.00	4,846.71	4,853.49	4,845.92	17.13	17.23	94.01	-64.10	161.41	132.87	98.51	34.36	3.867 Alert			
4,900.00	4,896.63	4,903.47	4,895.71	17.31	17.42	93.34	-62.06	165.21	132.76	98.04	34.72	3.824 Alert			
4,950.00	4,946.56	4,953.45	4,945.50	17.49	17.60	92.67	-60.02	169.02	132.68	97.59	35.08	3.782 Alert			
5,000.00	4,996.48	5,003.42	4,995.29	17.67	17.78	92.00	-57.99	172.83	132.61	97.16	35.45	3.741 Alert			
5,050.00	5,046.40	5,053.40	5,045.08	17.85	17.97	91.33	-55.95	176.64	132.56	96.75	35.81	3.702 Alert			

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM														Offset Well Error:		0.50 ft
Sec 15-T23S-R31E - Maldives 15-22 Fed Com 522H - Wellbore #1 - Permit Plan 1																
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 Tooface (")	Offset Wellbore Centre		Between Centres (ft)	Between Ellipses (ft)	Separation (ft)	Factor				
							+N-S (ft)	+E-W (ft)								
5,100.00	5,096.33	5,103.37	5,094.87	18.03	18.15	90.66	-53.91	180.45	132.53	96.36	36.18	3.664	Alert			
5,150.00	5,146.25	5,153.35	5,144.66	18.21	18.34	89.99	-51.88	184.26	132.52	95.98	36.54	3.627	Alert			
5,158.92	5,155.15	5,162.26	5,153.54	18.24	18.37	89.87	-51.51	184.94	132.52	95.91	36.60	3.620	Alert, CC			
5,200.00	5,196.17	5,203.32	5,194.45	18.39	18.52	89.32	-49.84	188.07	132.52	95.62	36.90	3.591	Alert			
5,250.00	5,246.10	5,253.30	5,244.24	18.57	18.71	88.65	-47.80	191.88	132.55	95.28	37.27	3.557	Alert			
5,300.00	5,296.02	5,303.28	5,294.02	18.75	18.89	87.98	-45.77	195.69	132.59	94.96	37.63	3.523	Alert			
5,350.00	5,345.94	5,353.25	5,343.81	18.93	19.08	87.31	-43.73	199.49	132.65	94.66	37.99	3.491	Alert			
5,400.00	5,395.87	5,403.23	5,393.60	19.11	19.26	86.64	-41.69	203.30	132.73	94.37	38.36	3.460	Alert			
5,450.00	5,445.79	5,453.20	5,443.39	19.30	19.44	85.97	-39.66	207.11	132.83	94.11	38.72	3.430	Alert			
5,500.00	5,495.71	5,503.18	5,493.18	19.48	19.63	85.30	-37.62	210.92	132.94	93.86	39.09	3.401	Alert			
5,550.00	5,545.64	5,553.16	5,542.97	19.66	19.81	84.64	-35.58	214.73	133.07	93.63	39.45	3.373	Alert			
5,600.00	5,595.56	5,603.13	5,592.76	19.84	20.00	83.97	-33.55	218.54	133.22	93.41	39.81	3.346	Alert			
5,650.00	5,645.48	5,653.11	5,642.55	20.02	20.18	83.31	-31.51	222.35	133.39	93.22	40.18	3.320	Alert			
5,700.00	5,695.40	5,703.08	5,692.34	20.20	20.37	82.65	-29.47	226.16	133.58	93.04	40.54	3.295	Alert			
5,750.00	5,745.33	5,753.06	5,742.12	20.38	20.55	81.99	-27.44	229.96	133.78	92.88	40.90	3.271	Alert			
5,800.00	5,795.25	5,803.04	5,791.91	20.56	20.74	81.33	-25.40	233.77	134.01	92.74	41.27	3.247	Alert			
5,850.00	5,845.17	5,853.01	5,841.70	20.74	20.92	80.67	-23.36	237.58	134.25	92.62	41.63	3.225	Alert			
5,900.00	5,895.10	5,902.99	5,891.49	20.92	21.11	80.02	-21.33	241.39	134.50	92.51	41.99	3.203	Alert			
5,950.00	5,945.02	5,952.96	5,941.28	21.11	21.30	79.37	-19.29	245.20	134.78	92.42	42.35	3.182	Alert			
6,000.00	5,994.94	6,002.94	5,991.07	21.29	21.48	78.72	-17.25	249.01	135.07	92.35	42.72	3.162	Alert			
6,050.00	6,044.87	6,052.91	6,040.86	21.47	21.67	78.08	-15.22	252.82	135.38	92.30	43.08	3.143	Alert			
6,100.00	6,094.79	6,102.89	6,090.65	21.65	21.85	77.44	-13.18	256.63	135.70	92.26	43.44	3.124	Alert			
6,150.00	6,144.71	6,152.87	6,140.44	21.83	22.04	76.80	-11.14	260.43	136.05	92.24	43.80	3.106	Alert			
6,200.00	6,194.64	6,202.84	6,190.22	22.01	22.22	76.16	-9.11	264.24	136.41	92.24	44.17	3.088	Alert			
6,250.00	6,244.56	6,252.82	6,240.01	22.19	22.41	75.53	-7.07	268.05	136.78	92.25	44.53	3.072	Alert			
6,300.00	6,294.48	6,302.79	6,289.80	22.37	22.59	74.90	-5.03	271.86	137.18	92.28	44.89	3.056	Alert			
6,350.00	6,344.40	6,352.77	6,339.59	22.56	22.78	74.28	-3.00	275.67	137.59	92.33	45.25	3.040	Alert			
6,400.00	6,394.33	6,402.75	6,389.38	22.74	22.96	73.66	-0.96	279.48	138.01	92.40	45.61	3.026	Alert			
6,450.00	6,444.25	6,452.72	6,439.17	22.92	23.15	73.04	1.08	283.29	138.45	92.48	45.98	3.011	Alert			
6,500.00	6,494.17	6,502.70	6,488.96	23.10	23.34	72.43	3.11	287.10	138.91	92.57	46.34	2.998	Alert			
6,550.00	6,544.10	6,552.67	6,538.75	23.28	23.52	71.82	5.15	290.91	139.38	92.68	46.70	2.985	Alert			
6,600.00	6,594.02	6,602.65	6,588.54	23.46	23.71	71.22	7.19	294.71	139.87	92.81	47.06	2.972	Alert			
6,650.00	6,643.94	6,652.63	6,638.32	23.64	23.89	70.62	9.22	298.52	140.38	92.95	47.42	2.960	Alert			
6,700.00	6,693.87	6,702.60	6,688.11	23.83	24.08	70.02	11.26	302.33	140.90	93.11	47.78	2.949	Alert			
6,750.00	6,743.79	6,752.58	6,737.90	24.01	24.27	69.43	13.30	306.14	141.43	93.29	48.15	2.938	Alert			
6,800.00	6,793.71	6,802.55	6,787.69	24.19	24.45	68.84	15.33	309.95	141.98	93.48	48.51	2.927	Alert			
6,850.00	6,843.64	6,852.53	6,837.48	24.37	24.64	68.26	17.37	313.76	142.55	93.68	48.87	2.917	Alert			
6,900.00	6,893.56	6,902.50	6,887.27	24.55	24.82	67.68	19.41	317.57	143.13	93.90	49.23	2.907	Alert			
6,950.00	6,943.48	6,952.48	6,937.06	24.73	25.01	67.11	21.44	321.38	143.72	94.13	49.59	2.898	Alert			
7,000.00	6,993.40	7,002.46	6,986.85	24.92	25.20	66.54	23.48	325.18	144.33	94.38	49.95	2.890	Alert			
7,050.00	7,043.33	7,052.43	7,036.64	25.10	25.38	65.98	25.52	328.99	144.95	94.64	50.31	2.881	Alert			
7,100.00	7,093.25	7,102.41	7,086.42	25.28	25.57	65.42	27.55	332.80	145.59	94.92	50.67	2.873	Alert			
7,150.00	7,143.17	7,152.38	7,136.21	25.46	25.75	64.86	29.59	336.61	146.24	95.21	51.03	2.866	Alert			
7,200.00	7,193.10	7,202.36	7,186.00	25.64	25.94	64.32	31.63	340.42	146.90	95.51	51.39	2.859	Alert			
7,250.00	7,243.02	7,252.34	7,235.79	25.82	26.13	63.77	33.66	344.23	147.58	95.83	51.75	2.852	Alert			
7,300.00	7,292.94	7,302.31	7,285.58	26.01	26.31	63.23	35.70	348.04	148.27	96.16	52.11	2.845	Alert			
7,350.00	7,342.87	7,352.29	7,335.37	26.19	26.50	62.70	37.74	351.85	148.97	96.50	52.47	2.839	Alert			
7,400.00	7,392.79	7,402.26	7,385.16	26.37	26.68	62.17	39.77	355.66	149.69	96.86	52.83	2.833	Alert			
7,450.00	7,442.71	7,452.24	7,434.95	26.55	26.87	61.65	41.81	359.46	150.41	97.22	53.19	2.828	Alert			
7,500.00	7,492.64	7,502.22	7,484.74	26.73	27.06	61.13	43.85	363.27	151.16	97.61	53.55	2.823	Alert			
7,550.00	7,542.56	7,552.39	7,534.73	26.91	27.24	60.62	45.88	367.08	151.90	97.99	53.91	2.818	Alert			

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft	
Sec 15-T23S-R31E - Maldives 15-22 Fed Com 522H - Wellbore #1 - Permit Plan 1															
Measured Depth (ft)	Vertical Depth (ft)	Offset		Semi Major Axis			Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
		Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)							
7.600.00	7,592.48	7,603.38	7,585.56	27.10	27.43	60.25	47.74	370.55	152.43	98.15	54.28	2.808	Alert		
7.650.00	7,642.41	7,654.39	7,636.47	27.28	27.62	60.12	49.27	373.42	152.64	97.99	54.65	2.793	Alert		
7.700.00	7,692.33	7,705.40	7,687.42	27.46	27.80	60.20	50.48	375.69	152.51	97.50	55.02	2.772	Alert		
7.750.00	7,742.25	7,756.40	7,738.38	27.64	27.99	60.50	51.38	377.36	152.06	96.68	55.38	2.746	Alert		
7.800.00	7,792.17	7,807.36	7,789.32	27.82	28.17	61.04	51.95	378.42	151.28	95.54	55.75	2.714	Alert		
7.850.00	7,842.10	7,858.27	7,840.23	28.01	28.35	61.80	52.20	378.89	150.20	94.09	56.11	2.677	Alert		
7.900.00	7,892.02	7,908.46	7,890.42	28.19	28.52	62.74	52.21	378.92	148.92	92.45	56.48	2.637	Alert		
7.950.00	7,941.94	7,958.39	7,940.34	28.37	28.70	63.69	52.21	378.92	147.67	90.83	56.84	2.598	Alert		
8.000.00	7,991.87	8,008.31	7,990.27	28.55	28.87	64.66	52.21	378.92	146.47	89.26	57.21	2.560	Alert		
8.050.00	8,041.79	8,058.23	8,040.19	28.73	29.04	65.65	52.21	378.92	145.30	87.73	57.57	2.524	Alert		
8.100.00	8,091.71	8,108.15	8,090.11	28.91	29.22	66.65	52.21	378.92	144.18	86.24	57.94	2.488	Minor Risk		
8.150.00	8,141.64	8,158.08	8,140.04	29.10	29.39	67.67	52.21	378.92	143.10	84.79	58.31	2.454	Minor Risk		
8.185.76	8,177.34	8,190.87	8,172.83	29.23	29.50	68.43	51.93	378.92	142.57	84.01	58.56	2.435	Minor Risk, ES		
8.200.00	8,191.56	8,203.08	8,185.02	29.28	29.54	68.84	51.42	378.92	142.67	84.03	58.65	2.433	Minor Risk, SF		
8.250.00	8,241.48	8,245.52	8,227.29	29.46	29.67	70.84	47.62	378.94	144.74	85.88	58.86	2.459	Minor Risk		
8.300.00	8,291.41	8,287.02	8,268.23	29.64	29.80	73.57	40.90	378.98	149.66	90.75	58.91	2.540	Alert		
8.350.00	8,341.33	8,327.20	8,307.30	29.82	29.92	76.74	31.58	379.03	157.70	98.96	58.75	2.684	Alert		
8.400.00	8,391.25	8,365.73	8,344.07	30.01	30.02	80.08	20.09	379.10	169.05	110.72	58.34	2.898	Alert		
8.450.00	8,441.17	8,402.40	8,378.27	30.19	30.12	83.36	6.89	379.18	183.78	126.09	57.69	3.186	Alert		
8.500.00	8,491.10	8,437.05	8,409.76	30.37	30.21	86.42	-7.58	379.26	201.81	144.97	56.84	3.550	Alert		
8.550.00	8,541.02	8,469.62	8,438.50	30.55	30.29	89.17	-22.88	379.35	222.96	167.11	55.85	3.992	Alert		
8.600.00	8,590.94	8,500.00	8,464.49	30.73	30.36	91.58	-38.61	379.44	246.98	192.22	54.75	4.511	Alert		
8.650.00	8,640.87	8,528.53	8,488.10	30.92	30.41	93.69	-54.62	379.53	273.59	219.95	53.64	5.101			
8.700.00	8,690.79	8,550.00	8,505.33	31.10	30.46	95.16	-67.43	379.61	302.58	250.50	52.08	5.810			
8.750.00	8,740.71	8,579.54	8,528.23	31.28	30.51	97.04	-86.09	379.71	333.50	282.09	51.41	6.487			
8.800.00	8,790.64	8,600.00	8,543.51	31.46	30.55	98.24	-99.69	379.79	366.31	316.14	50.17	7.301			
8.850.00	8,840.56	8,623.49	8,560.44	31.64	30.59	99.52	-115.97	379.88	400.70	351.35	49.35	8.120			
8.900.00	8,890.48	8,650.00	8,578.73	31.83	30.63	100.84	-135.16	380.00	436.61	387.72	48.89	8.931			
8.950.00	8,940.41	8,661.33	8,586.27	32.01	30.64	101.37	-143.61	380.04	473.57	426.05	47.53	9.964			
9.000.00	8,990.33	8,678.25	8,597.21	32.19	30.67	102.11	-156.51	380.12	511.74	465.03	46.71	10.955			
9.050.00	9,040.25	8,700.00	8,610.72	32.37	30.70	103.01	-173.56	380.22	550.96	504.65	46.31	11.897			
9.100.00	9,090.18	8,700.00	8,610.72	32.55	30.70	103.01	-173.56	380.22	591.05	546.25	44.80	13.194			
9.150.00	9,140.10	8,722.26	8,623.86	32.74	30.73	103.85	-191.52	380.32	631.74	587.10	44.64	14.153			
9.200.00	9,190.02	8,734.99	8,631.06	32.92	30.74	104.30	-202.02	380.38	673.24	629.19	44.06	15.282			
9.250.00	9,239.94	8,750.00	8,639.25	33.10	30.76	104.81	-214.61	380.45	715.39	671.73	43.67	16.382			
9.300.00	9,289.87	8,750.00	8,639.25	33.28	30.76	104.81	-214.61	380.45	758.18	715.47	42.70	17.754			
9.350.00	9,339.79	8,768.44	8,648.84	33.46	30.79	105.39	-230.35	380.54	801.29	758.68	42.61	18.805			
9.400.00	9,389.71	8,778.22	8,653.73	33.65	30.80	105.68	-238.82	380.59	844.96	802.74	42.22	20.015			
9.450.00	9,439.64	8,800.00	8,664.08	33.83	30.83	106.30	-257.98	380.70	889.27	846.95	42.31	21.016			
9.500.00	9,489.56	8,800.00	8,664.08	34.01	30.83	106.30	-257.98	380.70	933.53	891.85	41.67	22.402			
9.550.00	9,539.48	8,800.00	8,664.08	34.19	30.83	106.30	-257.98	380.70	978.34	937.23	41.11	23.797			
9.600.00	9,589.41	8,800.00	8,664.08	34.38	30.83	106.30	-257.98	380.70	1,023.63	983.01	40.63	25.196			
9.650.00	9,639.33	8,819.17	8,672.59	34.56	30.87	106.80	-275.16	380.80	1,068.85	1,028.09	40.76	26.223			
9.700.00	9,689.25	8,826.05	8,675.50	34.74	30.88	106.97	-281.39	380.84	1,114.53	1,073.97	40.56	27.482			
9.750.00	9,739.18	8,832.55	8,678.18	34.92	30.89	107.13	-287.32	380.87	1,160.45	1,120.07	40.37	28.742			
9.800.00	9,789.10	8,850.00	8,685.05	35.10	30.93	107.53	-303.36	380.96	1,206.76	1,166.26	40.50	29.796			
9.850.00	9,839.02	8,850.00	8,685.05	35.29	30.93	107.53	-303.36	380.96	1,252.98	1,212.77	40.21	31.162			
9.900.00	9,888.94	8,850.00	8,685.05	35.47	30.93	107.53	-303.36	380.96	1,299.48	1,259.53	39.96	32.524			
9.950.00	9,938.87	8,850.00	8,685.05	35.65	30.93	107.53	-303.36	380.96	1,346.24	1,306.50	39.74	33.878			
10.000.00	9,988.79	8,850.00	8,685.05	35.83	30.93	107.53	-303.36	380.96	1,393.22	1,353.67	39.55	35.225			
10.050.00	10,038.71	8,850.00	8,685.05	36.02	30.93	107.53	-303.36	380.96	1,440.40	1,401.01	39.40	36.562			

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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>												Offset Site Error:	0.00 ft		
Survey Program: 0-MWD+HDGM												Offset Well Error:	0.50 ft		
Sec 15-T23S-R31E - Maldives 15-22 Fed Com 522H - Wellbore #1 - Permit Plan 1															
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		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
							+N/-S (ft)	+E/-W (ft)							
10,100.00	10,088.64	8,869.88	8,692.27	36.20	30.97	107.96	-321.88	381.07	1,487.29	1,447.65	39.64	37.516			

### Anticollision Report

<b>Company:</b>	WCDSC Permian NM	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft
Sec 15-T23S-R31E - Maldives 15-22 Fed Com 621H - Wellbore #1 - Permit Plan 1														
Reference Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis			Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
				Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.00	0.00	1.20	-1.20	0.50	0.50	-90.29	-0.15	-29.97	29.97					
50.00	50.00	48.80	48.80	0.50	0.50	-90.29	-0.15	-29.97	29.97	28.96	1.01	29.783		
100.00	100.00	101.20	98.80	0.52	0.52	-90.29	-0.15	-29.97	29.97	28.93	1.04	28.911		
150.00	150.00	148.80	148.80	0.59	0.59	-90.29	-0.15	-29.97	29.97	28.79	1.18	25.437		
200.00	200.00	201.20	198.80	0.70	0.71	-90.29	-0.15	-29.97	29.97	28.56	1.41	21.297		
250.00	250.00	248.80	248.80	0.84	0.83	-90.29	-0.15	-29.97	29.97	28.30	1.67	17.925		
300.00	300.00	301.20	298.80	0.99	0.99	-90.29	-0.15	-29.97	29.97	27.99	1.98	15.149		
350.00	350.00	348.80	348.80	1.15	1.14	-90.29	-0.15	-29.97	29.97	27.68	2.29	13.104		
400.00	400.00	401.20	398.80	1.31	1.31	-90.29	-0.15	-29.97	29.97	27.35	2.62	11.430		
450.00	450.00	448.80	448.80	1.48	1.47	-90.29	-0.15	-29.97	29.97	27.02	2.95	10.164		
500.00	500.00	501.20	498.80	1.65	1.65	-90.29	-0.15	-29.97	29.97	26.67	3.30	9.092		
550.00	550.00	548.80	548.80	1.82	1.81	-90.29	-0.15	-29.97	29.97	26.34	3.63	8.254		
600.00	600.00	601.20	598.80	1.99	1.99	-90.29	-0.15	-29.97	29.97	25.99	3.99	7.520		
650.00	650.00	648.80	648.80	2.16	2.16	-90.29	-0.15	-29.97	29.97	25.65	4.32	6.930		
700.00	700.00	701.20	698.80	2.34	2.34	-90.29	-0.15	-29.97	29.97	25.29	4.68	6.400		
750.00	750.00	748.80	748.80	2.51	2.51	-90.29	-0.15	-29.97	29.97	24.95	5.03	5.964		
800.00	800.00	801.20	798.80	2.69	2.69	-90.29	-0.15	-29.97	29.97	24.59	5.39	5.565		
850.00	850.00	848.80	848.80	2.87	2.86	-90.29	-0.15	-29.97	29.97	24.24	5.73	5.231		
900.00	900.00	901.20	898.80	3.04	3.05	-90.29	-0.15	-29.97	29.97	23.88	6.09	4.920 Alert		
950.00	950.00	948.80	948.80	3.22	3.22	-90.29	-0.15	-29.97	29.97	23.53	6.44	4.656 Alert		
1,000.00	1,000.00	1,001.20	998.80	3.40	3.40	-90.29	-0.15	-29.97	29.97	23.17	6.80	4.408 Alert		
1,050.00	1,050.00	1,048.80	1,048.80	3.58	3.57	-90.29	-0.15	-29.97	29.97	22.82	7.15	4.194 Alert		
1,100.00	1,100.00	1,101.20	1,098.80	3.75	3.76	-90.29	-0.15	-29.97	29.97	22.46	7.51	3.991 Alert		
1,150.00	1,150.00	1,148.80	1,148.80	3.93	3.93	-90.29	-0.15	-29.97	29.97	22.11	7.86	3.815 Alert		
1,200.00	1,200.00	1,201.20	1,198.80	4.11	4.11	-90.29	-0.15	-29.97	29.97	21.75	8.22	3.646 Alert		
1,250.00	1,250.00	1,248.80	1,248.80	4.29	4.28	-90.29	-0.15	-29.97	29.97	21.40	8.57	3.498 Alert		
1,300.00	1,300.00	1,301.20	1,298.80	4.46	4.47	-90.29	-0.15	-29.97	29.97	21.04	8.93	3.355 Alert		
1,350.00	1,350.00	1,348.80	1,348.80	4.64	4.64	-90.29	-0.15	-29.97	29.97	20.69	9.28	3.229 Alert		
1,400.00	1,400.00	1,401.20	1,398.80	4.82	4.82	-90.29	-0.15	-29.97	29.97	20.33	9.65	3.107 Alert		
1,450.00	1,450.00	1,448.80	1,448.80	5.00	4.99	-90.29	-0.15	-29.97	29.97	19.98	9.99	2.999 Alert		
1,500.00	1,500.00	1,501.20	1,498.80	5.18	5.18	-90.29	-0.15	-29.97	29.97	19.61	10.36	2.893 Alert		
1,550.00	1,550.00	1,548.80	1,548.80	5.36	5.35	-90.29	-0.15	-29.97	29.97	19.26	10.71	2.799 Alert		
1,600.00	1,600.00	1,601.20	1,598.80	5.53	5.54	-90.29	-0.15	-29.97	29.97	18.90	11.07	2.707 Alert		
1,650.00	1,650.00	1,648.80	1,648.80	5.71	5.71	-90.29	-0.15	-29.97	29.97	18.55	11.42	2.624 Alert		
1,700.00	1,700.00	1,701.20	1,698.80	5.89	5.90	-90.29	-0.15	-29.97	29.97	18.18	11.79	2.543 Alert		
1,750.00	1,750.00	1,748.80	1,748.80	6.07	6.07	-90.29	-0.15	-29.97	29.97	17.84	12.14	2.470 Minor Risk		
1,800.00	1,800.00	1,801.20	1,798.80	6.25	6.25	-90.29	-0.15	-29.97	29.97	17.47	12.50	2.397 Minor Risk		
1,850.00	1,850.00	1,848.80	1,848.80	6.43	6.42	-90.29	-0.15	-29.97	29.97	17.12	12.85	2.332 Minor Risk		
1,900.00	1,900.00	1,901.20	1,898.80	6.61	6.61	-90.29	-0.15	-29.97	29.97	16.75	13.22	2.268 Minor Risk		
1,950.00	1,950.00	1,948.80	1,948.80	6.78	6.78	-90.29	-0.15	-29.97	29.97	16.41	13.56	2.209 Minor Risk		
2,000.00	2,000.00	2,001.20	1,998.80	6.96	6.97	-90.29	-0.15	-29.97	29.97	16.04	13.93	2.151 Minor Risk		
2,050.00	2,050.00	2,048.80	2,048.80	7.14	7.14	-90.29	-0.15	-29.97	29.97	15.69	14.28	2.099 Minor Risk		
2,100.00	2,100.00	2,101.20	2,098.80	7.32	7.33	-90.29	-0.15	-29.97	29.97	15.32	14.65	2.046 Minor Risk		
2,150.00	2,150.00	2,148.80	2,148.80	7.50	7.50	-90.29	-0.15	-29.97	29.97	14.98	15.00	1.999 Minor Risk		
2,200.00	2,200.00	2,201.20	2,198.80	7.68	7.68	-90.29	-0.15	-29.97	29.97	14.61	15.36	1.951 Minor Risk		
2,250.00	2,250.00	2,248.80	2,248.80	7.86	7.85	-90.29	-0.15	-29.97	29.97	14.26	15.71	1.908 Minor Risk		
2,300.00	2,300.00	2,301.20	2,298.80	8.04	8.04	-90.29	-0.15	-29.97	29.97	13.89	16.08	1.864 Minor Risk		
2,350.00	2,350.00	2,348.80	2,348.80	8.22	8.21	-90.29	-0.15	-29.97	29.97	13.54	16.43	1.825 Minor Risk		
2,400.00	2,400.00	2,401.20	2,398.80	8.39	8.40	-90.29	-0.15	-29.97	29.97	13.18	16.79	1.785 Minor Risk		
2,450.00	2,450.00	2,448.80	2,448.80	8.57	8.57	-90.29	-0.15	-29.97	29.97	12.83	17.14	1.748 Minor Risk		
2,500.00	2,500.00	2,501.20	2,498.80	8.75	8.76	-90.29	-0.15	-29.97	29.97	12.46	17.51	1.712 Minor Risk, CC		

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



Anticollision Report

<b>Company:</b>	WCDCS Permian NM	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft		
Reference													Distance		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
2.550.00	2.550.00	2.548.80	2.548.80	8.93	8.93	-152.39		-0.15	-29.97	30.16	12.31	17.86	1.689	Minor Risk, ES		
2.600.00	2.599.99	2.601.21	2.598.79	9.11	9.11	-152.95		-0.15	-29.97	30.75	12.53	18.22	1.687	Minor Risk		
2.650.00	2.649.98	2.648.78	2.648.78	9.28	9.28	-153.85		-0.15	-29.97	31.72	13.16	18.56	1.709	Minor Risk		
2.700.00	2.699.96	2.701.24	2.698.76	9.45	9.47	-155.01		-0.15	-29.97	33.10	14.17	18.93	1.749	Minor Risk		
2.750.00	2.749.92	2.748.72	2.748.72	9.63	9.64	-156.36		-0.15	-29.97	34.89	15.62	19.27	1.810	Minor Risk		
2.800.00	2.799.86	2.801.34	2.798.66	9.81	9.83	-157.84		-0.15	-29.97	37.10	17.46	19.63	1.889	Minor Risk		
2.850.00	2.849.79	2.848.59	2.848.59	9.98	10.00	-159.33		-0.15	-29.97	39.65	19.68	19.98	1.985	Minor Risk		
2.900.00	2.899.71	2.901.49	2.898.51	10.16	10.19	-160.66		-0.15	-29.97	42.26	21.92	20.34	2.077	Minor Risk		
2.950.00	2.949.63	2.948.43	2.948.43	10.33	10.36	-161.83		-0.15	-29.97	44.88	24.20	20.68	2.170	Minor Risk		
3.000.00	2.999.56	3.001.64	2.998.36	10.51	10.55	-162.87		-0.15	-29.97	47.53	26.48	21.05	2.258	Minor Risk		
3.050.00	3.049.48	3.048.28	3.048.28	10.69	10.71	-163.80		-0.15	-29.97	50.18	28.79	21.39	2.346	Minor Risk		
3.100.00	3.099.40	3.101.80	3.098.20	10.86	10.91	-164.64		-0.15	-29.97	52.85	31.09	21.76	2.429	Minor Risk		
3.150.00	3.149.33	3.148.13	3.148.13	11.04	11.07	-165.40		-0.15	-29.97	55.53	33.43	22.10	2.512	Alert		
3.200.00	3.199.25	3.201.95	3.198.05	11.22	11.27	-166.09		-0.15	-29.97	58.21	35.75	22.47	2.591	Alert		
3.250.00	3.249.17	3.247.97	3.247.97	11.39	11.43	-166.71		-0.15	-29.97	60.91	38.10	22.81	2.670	Alert		
3.300.00	3.299.10	3.302.10	3.297.90	11.57	11.62	-167.29		-0.15	-29.97	63.61	40.43	23.18	2.744	Alert		
3.350.00	3.349.02	3.347.82	3.347.82	11.75	11.79	-167.81		-0.15	-29.97	66.32	42.80	23.52	2.820	Alert		
3.400.00	3.398.94	3.402.26	3.397.74	11.93	11.98	-168.30		-0.15	-29.97	69.03	45.14	23.89	2.889	Alert		
3.450.00	3.448.86	3.447.66	3.447.66	12.10	12.15	-168.75		-0.15	-29.97	71.75	47.52	24.23	2.961	Alert		
3.500.00	3.498.79	3.497.59	3.497.59	12.28	12.32	-169.16		-0.15	-29.97	74.47	49.88	24.59	3.029	Alert		
3.550.00	3.548.71	3.548.02	3.548.01	12.46	12.50	-169.46		0.02	-29.86	77.04	52.09	24.94	3.089	Alert		
3.600.00	3.598.63	3.598.50	3.598.50	12.64	12.68	-169.54		0.55	-29.50	79.26	53.97	25.30	3.133	Alert		
3.650.00	3.648.56	3.649.02	3.649.00	12.82	12.86	-169.42		1.46	-28.89	81.15	55.50	25.65	3.163	Alert		
3.700.00	3.698.48	3.700.48	3.699.48	13.00	13.05	-169.11		2.74	-28.04	82.69	56.68	26.01	3.179	Alert		
3.750.00	3.748.40	3.749.50	3.749.43	13.18	13.22	-168.73		4.16	-27.09	84.09	57.72	26.36	3.190	Alert		
3.800.00	3.798.33	3.800.52	3.799.38	13.35	13.40	-168.36		5.59	-26.14	85.48	58.77	26.72	3.199	Alert		
3.850.00	3.848.25	3.849.45	3.849.32	13.53	13.58	-168.01		7.01	-25.19	86.89	59.82	27.07	3.210	Alert		
3.900.00	3.898.17	3.900.57	3.899.27	13.71	13.76	-167.66		8.44	-24.24	88.29	60.86	27.43	3.219	Alert		
3.950.00	3.948.10	3.949.41	3.949.22	13.89	13.93	-167.33		9.86	-23.29	89.70	61.92	27.78	3.229	Alert		
4.000.00	3.998.02	4.000.61	3.999.17	14.07	14.11	-167.01		11.29	-22.34	91.11	62.97	28.14	3.238	Alert		
4.050.00	4.047.94	4.049.36	4.049.12	14.25	14.29	-166.69		12.71	-21.39	92.52	64.03	28.49	3.248	Alert		
4.100.00	4.097.87	4.100.66	4.099.07	14.43	14.47	-166.39		14.14	-20.44	93.94	65.09	28.85	3.256	Alert		
4.150.00	4.147.79	4.149.32	4.149.01	14.61	14.64	-166.09		15.56	-19.49	95.36	66.16	29.20	3.266	Alert		
4.200.00	4.197.71	4.200.70	4.198.96	14.79	14.83	-165.81		16.99	-18.54	96.78	67.22	29.56	3.274	Alert		
4.250.00	4.247.63	4.249.27	4.248.91	14.97	15.00	-165.53		18.41	-17.59	98.20	68.29	29.91	3.283	Alert		
4.300.00	4.297.56	4.300.75	4.298.86	15.15	15.18	-165.26		19.84	-16.64	99.63	69.36	30.27	3.291	Alert		
4.350.00	4.347.48	4.349.23	4.348.81	15.33	15.36	-165.00		21.26	-15.69	101.06	70.44	30.62	3.300	Alert		
4.400.00	4.397.40	4.400.79	4.398.75	15.51	15.54	-164.75		22.69	-14.74	102.49	71.51	30.98	3.308	Alert		
4.450.00	4.447.33	4.449.18	4.448.70	15.69	15.71	-164.50		24.11	-13.79	103.92	72.59	31.33	3.317	Alert		
4.500.00	4.497.25	4.499.16	4.498.65	15.87	15.89	-164.26		25.54	-12.84	105.36	73.67	31.69	3.325	Alert		
4.550.00	4.547.17	4.549.14	4.548.60	16.05	16.07	-164.02		26.96	-11.89	106.79	74.75	32.05	3.332	Alert		
4.600.00	4.597.10	4.600.88	4.598.55	16.23	16.25	-163.79		28.39	-10.94	108.23	75.82	32.41	3.340	Alert		
4.650.00	4.647.02	4.649.09	4.648.49	16.41	16.43	-163.57		29.81	-9.98	109.67	76.91	32.76	3.348	Alert		
4.700.00	4.696.94	4.700.93	4.698.44	16.59	16.61	-163.35		31.24	-9.03	111.11	77.99	33.12	3.355	Alert		
4.750.00	4.746.87	4.749.05	4.748.39	16.77	16.78	-163.14		32.66	-8.08	112.55	79.08	33.47	3.363	Alert		
4.800.00	4.796.79	4.800.97	4.798.34	16.95	16.97	-162.94		34.09	-7.13	114.00	80.16	33.84	3.369	Alert		
4.850.00	4.846.71	4.849.00	4.848.29	17.13	17.14	-162.74		35.51	-6.18	115.44	81.26	34.18	3.377	Alert		
4.900.00	4.896.63	4.901.02	4.898.24	17.31	17.33	-162.54		36.94	-5.23	116.89	82.34	34.55	3.383	Alert		
4.950.00	4.946.56	4.948.96	4.948.18	17.49	17.50	-162.35		38.36	-4.28	118.34	83.44	34.90	3.391	Alert		
5.000.00	4.996.48	5.001.07	4.998.13	17.67	17.68	-162.17		39.79	-3.33	119.79	84.52	35.26	3.397	Alert		
5.050.00	5.046.40	5.048.91	5.048.08	17.85	17.86	-161.98		41.21	-2.38	121.24	85.63	35.61	3.404	Alert		

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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 15-T23S-R31E - Maldives 15-22 Fed Com 621H - 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	Warning	
5.100.00	5.096.33	5.101.11	5.098.03	18.03	18.04	-161.81	42.64	-1.43	122.69	86.71	35.98	3.410	Alert	
5.150.00	5.146.25	5.148.87	5.147.98	18.21	18.21	-161.63	44.06	-0.48	124.14	87.82	36.33	3.417	Alert	
5.200.00	5.196.17	5.201.16	5.197.92	18.39	18.40	-161.46	45.49	0.47	125.60	88.90	36.69	3.423	Alert	
5.250.00	5.246.10	5.248.82	5.247.87	18.57	18.57	-161.30	46.91	1.42	127.05	90.01	37.04	3.430	Alert	
5.300.00	5.296.02	5.301.20	5.297.82	18.75	18.76	-161.14	48.34	2.37	128.51	91.10	37.41	3.435	Alert	
5.350.00	5.345.94	5.348.78	5.347.77	18.93	18.93	-160.98	49.76	3.32	129.97	92.21	37.76	3.442	Alert	
5.400.00	5.395.87	5.398.76	5.397.72	19.11	19.11	-160.82	51.19	4.27	131.42	93.31	38.11	3.448	Alert	
5.450.00	5.445.79	5.448.73	5.447.66	19.30	19.29	-160.67	52.61	5.22	132.88	94.41	38.47	3.454	Alert	
5.500.00	5.495.71	5.501.29	5.497.61	19.48	19.47	-160.53	54.04	6.17	134.34	95.51	38.84	3.459	Alert	
5.550.00	5.545.64	5.548.69	5.547.56	19.66	19.64	-160.38	55.46	7.12	135.80	96.62	39.18	3.466	Alert	
5.600.00	5.595.56	5.601.34	5.597.51	19.84	19.83	-160.24	56.89	8.07	137.27	97.71	39.55	3.470	Alert	
5.650.00	5.645.48	5.648.64	5.647.46	20.02	20.00	-160.10	58.31	9.02	138.73	98.83	39.90	3.477	Alert	
5.700.00	5.695.40	5.701.38	5.697.41	20.20	20.19	-159.97	59.74	9.97	140.19	99.92	40.27	3.481	Alert	
5.750.00	5.745.33	5.748.60	5.747.35	20.38	20.36	-159.83	61.16	10.92	141.66	101.04	40.62	3.488	Alert	
5.800.00	5.795.25	5.801.43	5.797.30	20.56	20.55	-159.70	62.59	11.88	143.12	102.14	40.98	3.492	Alert	
5.850.00	5.845.17	5.848.55	5.847.25	20.74	20.72	-159.57	64.01	12.83	144.59	103.25	41.33	3.498	Alert	
5.900.00	5.895.10	5.901.47	5.897.20	20.92	20.91	-159.45	65.44	13.78	146.05	104.35	41.70	3.502	Alert	
5.950.00	5.945.02	5.948.51	5.947.15	21.11	21.08	-159.33	66.86	14.73	147.52	105.47	42.05	3.508	Alert	
6.000.00	5.994.94	6.001.52	5.997.09	21.29	21.27	-159.21	68.29	15.68	148.99	106.57	42.42	3.513	Alert	
6.050.00	6.044.87	6.048.46	6.047.04	21.47	21.43	-159.09	69.71	16.63	150.46	107.69	42.76	3.518	Alert	
6.100.00	6.094.79	6.101.56	6.096.99	21.65	21.62	-158.97	71.14	17.58	151.92	108.79	43.13	3.522	Alert	
6.150.00	6.144.71	6.148.42	6.146.94	21.83	21.79	-158.86	72.56	18.53	153.39	109.91	43.48	3.528	Alert	
6.200.00	6.194.64	6.201.61	6.196.89	22.01	21.98	-158.75	73.99	19.48	154.86	111.01	43.85	3.532	Alert	
6.250.00	6.244.56	6.248.37	6.246.83	22.19	22.15	-158.64	75.41	20.43	156.33	112.14	44.20	3.537	Alert	
6.300.00	6.294.48	6.301.65	6.296.78	22.37	22.34	-158.53	76.84	21.38	157.81	113.24	44.57	3.541	Alert	
6.350.00	6.344.40	6.348.33	6.346.73	22.56	22.51	-158.43	78.26	22.33	159.28	114.37	44.91	3.546	Alert	
6.400.00	6.394.33	6.401.70	6.396.68	22.74	22.70	-158.33	79.69	23.28	160.75	115.47	45.28	3.550	Alert	
6.450.00	6.444.25	6.448.28	6.446.63	22.92	22.87	-158.22	81.11	24.23	162.22	116.59	45.63	3.555	Alert	
6.500.00	6.494.17	6.501.74	6.496.58	23.10	23.06	-158.13	82.54	25.18	163.70	117.70	46.00	3.559	Alert	
6.550.00	6.544.10	6.548.24	6.546.52	23.28	23.23	-158.03	83.96	26.13	165.17	118.82	46.34	3.564	Alert	
6.600.00	6.594.02	6.601.79	6.596.47	23.46	23.42	-157.93	85.39	27.08	166.64	119.93	46.72	3.567	Alert	
6.650.00	6.643.94	6.648.19	6.646.42	23.64	23.58	-157.84	86.81	28.03	168.12	121.06	47.06	3.572	Alert	
6.700.00	6.693.87	6.701.83	6.696.37	23.83	23.78	-157.75	88.24	28.98	169.59	122.16	47.43	3.575	Alert	
6.750.00	6.743.79	6.748.15	6.746.32	24.01	23.94	-157.65	89.66	29.93	171.07	123.29	47.78	3.580	Alert	
6.800.00	6.793.71	6.801.88	6.796.26	24.19	24.14	-157.56	91.09	30.88	172.55	124.39	48.15	3.583	Alert	
6.850.00	6.843.64	6.848.10	6.846.21	24.37	24.30	-157.48	92.51	31.83	174.02	125.53	48.50	3.588	Alert	
6.900.00	6.893.56	6.901.92	6.896.16	24.55	24.50	-157.39	93.94	32.78	175.50	126.63	48.87	3.591	Alert	
6.950.00	6.943.48	6.948.06	6.946.11	24.73	24.66	-157.31	95.36	33.74	176.98	127.76	49.21	3.596	Alert	
7.000.00	6.993.40	7.001.97	6.996.06	24.92	24.85	-157.22	96.79	34.69	178.45	128.87	49.59	3.599	Alert	
7.050.00	7.043.33	7.048.01	7.046.00	25.10	25.02	-157.14	98.21	35.64	179.93	130.00	49.93	3.604	Alert	
7.100.00	7.093.25	7.102.01	7.095.95	25.28	25.21	-157.06	99.64	36.59	181.41	131.11	50.30	3.606	Alert	
7.150.00	7.143.17	7.147.97	7.145.90	25.46	25.38	-156.98	101.06	37.54	182.89	132.24	50.65	3.611	Alert	
7.200.00	7.193.10	7.202.06	7.195.85	25.64	25.57	-156.90	102.49	38.49	184.37	133.35	51.02	3.614	Alert	
7.250.00	7.243.02	7.247.92	7.245.80	25.82	25.74	-156.82	103.91	39.44	185.85	134.48	51.37	3.618	Alert	
7.300.00	7.292.94	7.302.10	7.295.75	26.01	25.93	-156.75	105.34	40.39	187.33	135.59	51.74	3.621	Alert	
7.350.00	7.342.87	7.347.88	7.345.69	26.19	26.10	-156.67	106.76	41.34	188.81	136.72	52.08	3.625	Alert	
7.400.00	7.392.79	7.402.15	7.395.64	26.37	26.29	-156.60	108.19	42.29	190.29	137.83	52.46	3.627	Alert	
7.450.00	7.442.71	7.447.83	7.445.59	26.55	26.46	-156.53	109.61	43.24	191.77	138.97	52.80	3.632	Alert	
7.500.00	7.492.64	7.502.19	7.495.54	26.73	26.65	-156.46	111.04	44.19	193.25	140.07	53.18	3.634	Alert	
7.550.00	7.542.56	7.547.79	7.545.49	26.91	26.81	-156.39	112.46	45.14	194.73	141.21	53.52	3.639	Alert	
7.600.00	7.592.48	7.602.24	7.595.43	27.10	27.01	-156.32	113.89	46.09	196.21	142.32	53.89	3.641	Alert	

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft								
Reference																						
Reference				Offset				Semi Major Axis			Distance											
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning									
7.650.00	7,642.41	7,647.74	7,645.38	27.28	27.17	-156.25	115.31	47.04	197.69	143.46	54.24	3.645	Alert									
7.700.00	7,692.33	7,702.28	7,695.33	27.46	27.37	-156.18	116.74	47.99	199.18	144.56	54.61	3.647	Alert									
7.750.00	7,742.25	7,747.70	7,745.28	27.64	27.53	-156.12	118.16	48.94	200.66	145.70	54.95	3.651	Alert									
7.800.00	7,792.17	7,802.33	7,795.23	27.82	27.73	-156.05	119.59	49.89	202.14	146.81	55.33	3.653	Alert									
7.850.00	7,842.10	7,847.65	7,845.17	28.01	27.89	-155.99	121.01	50.84	203.62	147.95	55.67	3.658	Alert									
7.900.00	7,892.02	7,902.37	7,895.12	28.19	28.09	-155.92	122.44	51.79	205.11	149.06	56.05	3.659	Alert									
7.950.00	7,941.94	7,947.61	7,945.07	28.37	28.25	-155.86	123.86	52.74	206.59	150.20	56.39	3.664	Alert									
8.000.00	7,991.87	8,002.42	7,995.02	28.55	28.45	-155.80	125.29	53.69	208.07	151.31	56.77	3.665	Alert									
8.050.00	8,041.79	8,047.56	8,044.97	28.73	28.61	-155.74	126.71	54.64	209.56	152.45	57.11	3.669	Alert									
8.100.00	8,091.71	8,102.46	8,094.92	28.91	28.81	-155.68	128.14	55.60	211.04	153.56	57.49	3.671	Alert									
8.150.00	8,141.64	8,147.52	8,144.86	29.10	28.97	-155.62	129.56	56.55	212.53	154.70	57.83	3.675	Alert									
8.200.00	8,191.56	8,202.51	8,194.81	29.28	29.17	-155.56	130.99	57.50	214.01	155.81	58.20	3.677	Alert									
8.250.00	8,241.48	8,247.47	8,244.76	29.46	29.33	-155.51	132.41	58.45	215.49	156.95	58.54	3.681	Alert									
8.300.00	8,291.41	8,302.55	8,294.71	29.64	29.53	-155.45	133.84	59.40	216.98	158.06	58.92	3.682	Alert									
8.350.00	8,341.33	8,347.43	8,344.66	29.82	29.69	-155.39	135.26	60.35	218.46	159.20	59.26	3.686	Alert									
8.400.00	8,391.25	8,402.60	8,394.60	30.01	29.89	-155.34	136.69	61.30	219.95	160.31	59.64	3.688	Alert									
8.450.00	8,441.17	8,447.38	8,444.55	30.19	30.05	-155.29	138.11	62.25	221.44	161.45	59.98	3.692	Alert									
8.500.00	8,491.10	8,502.64	8,494.50	30.37	30.25	-155.23	139.54	63.20	222.92	162.56	60.36	3.693	Alert									
8.550.00	8,541.02	8,547.34	8,544.45	30.55	30.41	-155.18	140.96	64.15	224.41	163.71	60.70	3.697	Alert									
8.600.00	8,590.94	8,602.69	8,594.40	30.73	30.61	-155.13	142.39	65.10	225.89	164.81	61.08	3.698	Alert									
8.650.00	8,640.87	8,647.29	8,644.35	30.92	30.77	-155.08	143.81	66.05	227.38	165.96	61.42	3.702	Alert									
8.700.00	8,690.79	8,702.73	8,694.29	31.10	30.97	-155.03	145.24	67.00	228.87	167.07	61.80	3.703	Alert									
8.750.00	8,740.71	8,747.25	8,744.24	31.28	31.13	-154.98	146.66	67.95	230.35	168.22	62.14	3.707	Alert									
8.800.00	8,790.64	8,802.78	8,794.19	31.46	31.32	-154.93	148.09	68.90	231.84	169.32	62.52	3.708	Alert									
8.850.00	8,840.56	8,847.20	8,844.14	31.64	31.48	-154.88	149.51	69.85	233.33	170.47	62.86	3.712	Alert									
8.900.00	8,890.48	8,902.82	8,894.09	31.83	31.68	-154.83	150.94	70.80	234.81	171.58	63.24	3.713	Alert									
8.950.00	8,940.41	8,947.16	8,944.03	32.01	31.84	-154.78	152.36	71.75	236.30	172.73	63.57	3.717	Alert									
9.000.00	8,990.33	9,002.87	8,993.98	32.19	32.04	-154.73	153.79	72.70	237.79	173.83	63.95	3.718	Alert									
9.050.00	9,040.25	9,047.11	9,043.93	32.37	32.20	-154.69	155.21	73.65	239.28	174.98	64.29	3.722	Alert									
9.100.00	9,090.18	9,102.91	9,093.88	32.55	32.40	-154.64	156.64	74.60	240.76	176.09	64.67	3.723	Alert									
9.150.00	9,140.10	9,147.07	9,143.83	32.74	32.56	-154.60	158.06	75.55	242.25	177.24	65.01	3.726	Alert									
9.200.00	9,190.02	9,202.96	9,193.77	32.92	32.76	-154.55	159.49	76.51	243.74	178.35	65.39	3.727	Alert									
9.250.00	9,239.94	9,247.02	9,243.72	33.10	32.92	-154.51	160.91	77.46	245.23	179.50	65.73	3.731	Alert									
9.300.00	9,289.87	9,303.00	9,293.67	33.28	33.12	-154.46	162.34	78.41	246.72	180.60	66.11	3.732	Alert									
9.350.00	9,339.79	9,346.98	9,343.62	33.46	33.28	-154.42	163.76	79.36	248.21	181.76	66.45	3.735	Alert									
9.400.00	9,389.71	9,396.95	9,393.57	33.65	33.46	-154.38	165.19	80.31	249.69	182.88	66.81	3.737	Alert									
9.450.00	9,439.64	9,446.93	9,443.52	33.83	33.64	-154.34	166.61	81.26	251.18	184.01	67.17	3.740	Alert									
9.500.00	9,489.56	9,503.09	9,493.46	34.01	33.84	-154.30	168.04	82.21	252.67	185.12	67.55	3.740	Alert									
9.550.00	9,539.48	9,546.89	9,543.41	34.19	34.00	-154.25	169.46	83.16	254.16	186.27	67.89	3.744	Alert									
9.600.00	9,589.41	9,603.14	9,593.36	34.38	34.20	-154.21	170.89	84.11	255.65	187.38	68.27	3.745	Alert									
9.650.00	9,639.33	9,646.84	9,643.31	34.56	34.36	-154.17	172.31	85.06	257.14	188.53	68.61	3.748	Alert									
9.700.00	9,689.25	9,703.18	9,693.26	34.74	34.56	-154.13	173.74	86.01	258.63	189.64	68.99	3.749	Alert									
9.750.00	9,739.18	9,746.80	9,743.20	34.92	34.72	-154.09	175.16	86.96	260.12	190.79	69.33	3.752	Alert									
9.800.00	9,789.10	9,803.23	9,793.15	35.10	34.92	-154.06	176.59	87.91	261.61	191.90	69.71	3.753	Alert									
9.850.00	9,839.02	9,846.75	9,843.10	35.29	35.08	-154.02	178.01	88.86	263.10	193.05	70.05	3.756	Alert									
9.900.00	9,888.94	9,903.27	9,893.05	35.47	35.28	-153.98	179.44	89.81	264.59	194.16	70.43	3.757	Alert									
9.950.00	9,938.87	9,946.71	9,943.00	35.65	35.44	-153.94	180.86	90.76	266.08	195.31	70.77	3.760	Alert									
10.000.00	9,988.79	10,003.32	9,992.94	35.83	35.64	-153.90	182.29	91.71	267.57	196.42	71.15	3.761	Alert									
10.050.00	10,038.71	10,046.66	10,042.89	36.02	35.80	-153.87	183.71	92.66	269.06	197.57	71.48	3.764	Alert									
10.100.00	10,088.64	10,103.36	10,092.84	36.20	36.00	-153.83	185.14	93.61	270.55	198.68	71.87	3.765	Alert									
10.150.00	10,138.56	10,146.62	10,142.79	36.38	36.16	-153.80	186.56	94.56	272.04	199.84	72.20	3.768	Alert									

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft		
Reference																
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			
10,200.00	10,188.48	10,203.41	10,192.74	36.56	36.36	-153.76	187.99	95.51	273.53	200.94	72.59	3.768	Alert			
10,250.00	10,238.41	10,246.57	10,242.69	36.74	36.52	-153.73	189.41	96.46	275.02	202.10	72.92	3.771	Alert			
10,299.90	10,288.23	10,303.55	10,292.54	36.93	36.72	-153.69	190.84	97.41	276.51	203.20	73.31	3.772	Alert			
10,350.00	10,338.27	10,346.53	10,342.59	37.11	36.88	-153.63	192.26	98.37	277.71	204.07	73.64	3.771	Alert			
10,400.00	10,388.24	10,403.47	10,392.55	37.29	37.08	-153.51	193.69	99.32	278.32	204.29	74.03	3.760	Alert			
10,450.00	10,438.22	10,446.52	10,442.51	37.47	37.24	-153.33	195.11	100.27	278.35	203.99	74.36	3.743	Alert			
10,500.00	10,488.22	10,503.50	10,492.47	37.64	37.44	-153.08	196.54	101.22	277.79	203.05	74.74	3.717	Alert			
10,550.00	10,538.22	10,546.47	10,542.41	37.82	37.60	-90.88	197.96	102.17	276.83	201.76	75.08	3.687	Alert			
10,600.00	10,588.22	10,595.53	10,591.44	37.99	37.77	-90.60	199.31	103.06	275.90	200.48	75.43	3.658	Alert			
10,650.00	10,638.22	10,643.57	10,639.47	38.17	37.95	-90.42	200.19	103.65	275.28	199.51	75.77	3.633	Alert			
10,700.00	10,688.22	10,691.63	10,687.52	38.34	38.12	-90.34	200.58	103.91	275.01	198.90	76.11	3.613	Alert			
10,722.51	10,710.73	10,713.63	10,709.53	38.42	38.20	-90.34	200.59	103.92	275.00	198.73	76.27	3.606	Alert			
10,750.00	10,738.22	10,741.13	10,737.02	38.52	38.29	-90.34	200.59	103.92	275.00	198.54	76.46	3.597	Alert			
10,800.00	10,788.22	10,808.88	10,787.02	38.69	38.54	-90.34	200.59	103.92	275.00	198.12	76.88	3.577	Alert			
10,850.00	10,838.22	10,841.13	10,837.02	38.87	38.65	-90.34	200.59	103.92	275.00	197.83	77.17	3.564	Alert			
10,859.87	10,848.09	10,850.99	10,846.89	38.90	38.69	90.00	200.59	103.92	275.00	197.76	77.24	3.560	Alert			
10,900.00	10,888.19	10,908.90	10,886.99	39.04	38.89	90.25	200.59	103.92	275.00	197.42	77.58	3.545	Alert			
10,950.00	10,937.87	10,940.78	10,936.67	39.20	39.00	91.38	200.59	103.92	275.08	197.22	77.86	3.533	Alert			
11,000.00	10,986.89	10,989.79	10,985.69	39.35	39.18	93.34	200.59	103.92	275.50	197.30	78.20	3.523	Alert			
11,050.00	11,034.86	11,037.76	11,033.66	39.49	39.35	96.00	200.59	103.92	276.69	198.16	78.53	3.523	Alert			
11,100.00	11,081.42	11,087.36	11,083.23	39.63	39.52	99.24	199.45	103.93	279.10	200.24	78.86	3.539	Alert			
11,150.00	11,126.22	11,139.43	11,134.98	39.76	39.69	102.50	193.80	103.96	282.55	203.38	79.17	3.569	Alert			
11,200.00	11,168.92	11,193.39	11,187.83	39.87	39.85	105.66	183.03	104.02	286.91	207.51	79.40	3.614	Alert			
11,250.00	11,209.20	11,249.39	11,241.35	39.98	40.01	108.68	166.64	104.11	292.06	212.55	79.50	3.674	Alert			
11,300.00	11,246.74	11,307.59	11,295.01	40.07	40.17	111.55	144.16	104.24	297.81	218.38	79.43	3.749	Alert			
11,350.00	11,281.26	11,368.12	11,348.09	40.15	40.31	114.23	115.13	104.40	303.96	224.83	79.13	3.841	Alert			
11,400.00	11,312.50	11,431.08	11,399.74	40.23	40.45	116.69	79.17	104.61	310.27	231.69	78.58	3.949	Alert			
11,450.00	11,340.22	11,496.53	11,448.91	40.30	40.59	118.90	36.03	104.85	316.50	238.71	77.79	4.068	Alert			
11,500.00	11,364.21	11,564.44	11,494.38	40.39	40.74	120.85	-14.36	105.14	322.39	245.58	76.82	4.197	Alert			
11,550.00	11,384.29	11,634.70	11,534.81	40.50	40.89	122.51	-71.76	105.46	327.70	251.96	75.75	4.326	Alert			
11,600.00	11,400.30	11,707.09	11,568.80	40.61	41.05	123.85	-135.62	105.82	332.20	257.48	74.71	4.446	Alert			
11,650.00	11,412.12	11,781.25	11,594.99	40.72	41.21	124.85	-204.94	106.21	335.67	261.80	73.87	4.544	Alert			
11,700.00	11,419.67	11,856.73	11,612.24	40.83	41.37	125.49	-278.37	106.63	337.95	264.59	73.37	4.606	Alert			
11,750.00	11,422.88	11,932.97	11,619.71	40.95	41.53	125.77	-354.19	107.06	338.95	265.62	73.33	4.622	Alert			
11,800.00	11,423.00	11,989.26	11,620.00	41.07	41.65	125.78	-410.47	107.37	338.99	265.43	73.55	4.609	Alert			
11,850.00	11,423.00	12,039.26	11,620.00	41.20	41.77	125.78	-460.47	107.66	338.99	265.20	73.79	4.594	Alert			
11,900.00	11,423.00	12,089.26	11,620.00	41.34	41.90	125.78	-510.47	107.94	338.99	264.96	74.03	4.579	Alert			
11,950.00	11,423.00	12,139.26	11,620.00	41.49	42.04	125.78	-560.47	108.22	338.99	264.68	74.31	4.562	Alert			
12,000.00	11,423.00	12,189.26	11,620.00	41.65	42.19	125.78	-610.47	108.51	338.99	264.40	74.59	4.545	Alert			
12,050.00	11,423.00	12,239.26	11,620.00	41.83	42.36	125.78	-660.46	108.79	338.99	264.08	74.91	4.526	Alert			
12,100.00	11,423.00	12,289.26	11,620.00	42.01	42.54	125.78	-710.46	109.07	338.99	263.76	75.23	4.506	Alert			
12,150.00	11,423.00	12,339.26	11,620.00	42.22	42.73	125.78	-760.46	109.35	338.99	263.40	75.59	4.485	Alert			
12,200.00	11,423.00	12,389.26	11,620.00	42.42	42.93	125.78	-810.46	109.64	338.99	263.04	75.95	4.463	Alert			
12,250.00	11,423.00	12,439.26	11,620.00	42.64	43.15	125.78	-860.46	109.92	338.99	262.65	76.34	4.440	Alert			
12,300.00	11,423.00	12,489.26	11,620.00	42.87	43.37	125.78	-910.46	110.20	338.99	262.25	76.74	4.417	Alert			
12,350.00	11,423.00	12,539.26	11,620.00	43.12	43.60	125.78	-960.46	110.48	338.99	261.81	77.18	4.392	Alert			
12,400.00	11,423.00	12,589.26	11,620.00	43.36	43.85	125.78	-1,010.46	110.77	338.99	261.38	77.61	4.368	Alert			
12,450.00	11,423.00	12,639.26	11,620.00	43.63	44.11	125.78	-1,060.46	111.05	338.99	260.91	78.08	4.341	Alert			
12,500.00	11,423.00	12,689.26	11,620.00	43.90	44.37	125.78	-1,110.46	111.33	338.99	260.43	78.56	4.315	Alert			
12,550.00	11,423.00	12,739.26	11,620.00	44.19	44.65	125.78	-1,160.46	111.61	338.99	259.93	79.06	4.288	Alert			
12,600.00	11,423.00	12,789.26	11,620.00	44.48	44.93	125.78	-1,210.46	111.90	338.99	259.42	79.57	4.260	Alert			

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft		
Reference													Distance		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis (ft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (ft)	+E-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
12,650.00	11,423.00	12,839.26	11,620.00	44.78	45.23	125.78		-1,260.46	112.18	338.99	258.88	80.11	4.232	Alert		
12,700.00	11,423.00	12,889.26	11,620.00	45.09	45.54	125.78		-1,310.45	112.46	338.99	258.34	80.65	4.203	Alert		
12,750.00	11,423.00	12,939.26	11,620.00	45.42	45.86	125.78		-1,360.45	112.74	338.99	257.77	81.22	4.174	Alert		
12,800.00	11,423.00	12,989.26	11,620.00	45.74	46.18	125.78		-1,410.45	113.03	338.99	257.20	81.80	4.144	Alert		
12,850.00	11,423.00	13,039.26	11,620.00	46.09	46.52	125.78		-1,460.45	113.31	338.99	256.59	82.40	4.114	Alert		
12,900.00	11,423.00	13,089.26	11,620.00	46.43	46.86	125.78		-1,510.45	113.59	338.99	255.99	83.00	4.084	Alert		
12,950.00	11,423.00	13,139.26	11,620.00	46.80	47.21	125.78		-1,560.45	113.88	338.99	255.36	83.64	4.053	Alert		
13,000.00	11,423.00	13,189.26	11,620.00	47.16	47.57	125.78		-1,610.45	114.16	338.99	254.72	84.27	4.023	Alert		
13,050.00	11,423.00	13,239.26	11,620.00	47.54	47.94	125.78		-1,660.45	114.44	338.99	254.06	84.93	3.991	Alert		
13,100.00	11,423.00	13,289.26	11,620.00	47.92	48.32	125.78		-1,710.45	114.72	338.99	253.40	85.59	3.961	Alert		
13,150.00	11,423.00	13,339.26	11,620.00	48.31	48.70	125.78		-1,760.45	115.01	339.00	252.72	86.28	3.929	Alert		
13,200.00	11,423.00	13,389.26	11,620.00	48.71	49.09	125.78		-1,810.45	115.29	339.00	252.03	86.97	3.898	Alert		
13,250.00	11,423.00	13,439.26	11,620.00	49.12	49.50	125.78		-1,860.45	115.57	339.00	251.31	87.68	3.866	Alert		
13,300.00	11,423.00	13,489.26	11,620.00	49.53	49.90	125.78		-1,910.44	115.85	339.00	250.60	88.40	3.835	Alert		
13,350.00	11,423.00	13,539.26	11,620.00	49.95	50.32	125.78		-1,960.44	116.14	339.00	249.86	89.13	3.803	Alert		
13,400.00	11,423.00	13,589.26	11,620.00	50.38	50.74	125.78		-2,010.44	116.42	339.00	249.12	89.87	3.772	Alert		
13,450.00	11,423.00	13,639.26	11,620.00	50.81	51.17	125.78		-2,060.44	116.70	339.00	248.36	90.64	3.740	Alert		
13,500.00	11,423.00	13,689.26	11,620.00	51.25	51.61	125.78		-2,110.44	116.98	339.00	247.60	91.40	3.709	Alert		
13,550.00	11,423.00	13,739.26	11,620.00	51.70	52.05	125.78		-2,160.44	117.27	339.00	246.82	92.18	3.678	Alert		
13,600.00	11,423.00	13,789.26	11,620.00	52.15	52.50	125.78		-2,210.44	117.55	339.00	246.03	92.97	3.646	Alert		
13,650.00	11,423.00	13,839.26	11,620.00	52.62	52.96	125.78		-2,260.44	117.83	339.00	245.23	93.77	3.615	Alert		
13,700.00	11,423.00	13,889.26	11,620.00	53.08	53.42	125.78		-2,310.44	118.11	339.00	244.42	94.58	3.584	Alert		
13,750.00	11,423.00	13,939.26	11,620.00	53.55	53.88	125.78		-2,360.44	118.40	339.00	243.60	95.40	3.553	Alert		
13,800.00	11,423.00	13,989.26	11,620.00	54.03	54.36	125.78		-2,410.44	118.68	339.00	242.77	96.23	3.523	Alert		
13,850.00	11,423.00	14,039.26	11,620.00	54.52	54.84	125.78		-2,460.44	118.96	339.00	241.93	97.07	3.492	Alert		
13,900.00	11,423.00	14,089.26	11,620.00	55.00	55.32	125.78		-2,510.44	119.25	339.00	241.09	97.91	3.462	Alert		
13,950.00	11,423.00	14,139.26	11,620.00	55.50	55.81	125.78		-2,560.43	119.53	339.00	240.22	98.78	3.432	Alert		
14,000.00	11,423.00	14,189.26	11,620.00	55.99	56.30	125.78		-2,610.43	119.81	339.00	239.36	99.64	3.402	Alert		
14,050.00	11,423.00	14,239.26	11,620.00	56.50	56.80	125.78		-2,660.43	120.09	339.00	238.48	100.52	3.373	Alert		
14,100.00	11,423.00	14,289.26	11,620.00	57.01	57.31	125.78		-2,710.43	120.38	339.00	237.60	101.40	3.343	Alert		
14,150.00	11,423.00	14,339.26	11,620.00	57.52	57.82	125.78		-2,760.43	120.66	339.00	236.71	102.29	3.314	Alert		
14,200.00	11,423.00	14,389.26	11,620.00	58.04	58.33	125.78		-2,810.43	120.94	339.00	235.81	103.19	3.285	Alert		
14,250.00	11,423.00	14,439.26	11,620.00	58.57	58.85	125.78		-2,860.43	121.22	339.00	234.90	104.10	3.257	Alert		
14,300.00	11,423.00	14,489.26	11,620.00	59.09	59.37	125.78		-2,910.43	121.51	339.00	233.99	105.01	3.228	Alert		
14,350.00	11,423.00	14,539.26	11,620.00	59.62	59.90	125.78		-2,960.43	121.79	339.00	233.07	105.93	3.200	Alert		
14,400.00	11,423.00	14,589.26	11,620.00	60.16	60.43	125.78		-3,010.43	122.07	339.00	232.14	106.86	3.172	Alert		
14,450.00	11,423.00	14,639.26	11,620.00	60.70	60.97	125.78		-3,060.43	122.35	339.00	231.20	107.80	3.145	Alert		
14,500.00	11,423.00	14,689.26	11,620.00	61.24	61.51	125.78		-3,110.43	122.64	339.00	230.26	108.74	3.118	Alert		
14,550.00	11,423.00	14,739.26	11,620.00	61.79	62.05	125.78		-3,160.43	122.92	339.01	229.31	109.69	3.091	Alert		
14,600.00	11,423.00	14,789.26	11,620.00	62.34	62.60	125.78		-3,210.42	123.20	339.01	228.36	110.65	3.064	Alert		
14,650.00	11,423.00	14,839.26	11,620.00	62.89	63.15	125.78		-3,260.42	123.49	339.01	227.40	111.61	3.037	Alert		
14,700.00	11,423.00	14,889.26	11,620.00	63.45	63.70	125.78		-3,310.42	123.77	339.01	226.43	112.58	3.011	Alert		
14,750.00	11,423.00	14,939.26	11,620.00	64.01	64.26	125.78		-3,360.42	124.05	339.01	225.46	113.55	2.985	Alert		
14,800.00	11,423.00	14,989.26	11,620.00	64.58	64.82	125.78		-3,410.42	124.33	339.01	224.48	114.53	2.960	Alert		
14,850.00	11,423.00	15,039.26	11,620.00	65.15	65.39	125.78		-3,460.42	124.62	339.01	223.49	115.52	2.935	Alert		
14,900.00	11,423.00	15,089.26	11,620.00	65.72	65.95	125.78		-3,510.42	124.90	339.01	222.50	116.51	2.910	Alert		
14,950.00	11,423.00	15,139.26	11,620.00	66.29	66.52	125.78		-3,560.42	125.18	339.01	221.50	117.50	2.885	Alert		
15,000.00	11,423.00	15,189.26	11,620.00	66.87	67.10	125.78		-3,610.42	125.46	339.01	220.51	118.50	2.861	Alert		
15,050.00	11,423.00	15,239.26	11,620.00	67.45	67.68	125.78		-3,660.42	125.75	339.01	219.50	119.51	2.837	Alert		
15,100.00	11,423.00	15,289.26	11,620.00	68.03	68.25	125.78		-3,710.42	126.03	339.01	218.49	120.52	2.813	Alert		
15,150.00	11,423.00	15,339.26	11,620.00	68.62	68.84	125.78		-3,760.42	126.31	339.01	217.47	121.54	2.789	Alert		

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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 15-T23S-R31E - Maldives 15-22 Fed Com 621H - Wellbore #1 - Permit Plan 1													Offset Site Error:	0.00 ft
Survey Program: 0-MVWD+HDGM													Offset Well Error:	0.50 ft
Measured Depth (ft)	Vertical Depth (ft)	Offset		Semi Major Axis			Distance				Minimum Separation (ft)	Separation Factor	Warning	
		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)				
15.200.00	11,423.00	15,389.26	11,620.00	69.21	69.42	125.78	-3,810.41	126.59	339.01	216.45	122.56	2.766	Alert	
15.250.00	11,423.00	15,439.26	11,620.00	69.80	70.01	125.78	-3,860.41	126.88	339.01	215.42	123.59	2.743	Alert	
15.300.00	11,423.00	15,489.26	11,620.00	70.39	70.60	125.78	-3,910.41	127.16	339.01	214.40	124.61	2.720	Alert	
15.350.00	11,423.00	15,539.26	11,620.00	70.99	71.20	125.78	-3,960.41	127.44	339.01	213.36	125.65	2.698	Alert	
15.400.00	11,423.00	15,589.26	11,620.00	71.59	71.79	125.78	-4,010.41	127.72	339.01	212.32	126.69	2.676	Alert	
15.450.00	11,423.00	15,639.26	11,620.00	72.19	72.39	125.78	-4,060.41	128.01	339.01	211.28	127.73	2.654	Alert	
15.500.00	11,423.00	15,689.26	11,620.00	72.79	72.99	125.78	-4,110.41	128.29	339.01	210.23	128.78	2.633	Alert	
15.550.00	11,423.00	15,739.26	11,620.00	73.40	73.59	125.78	-4,160.41	128.57	339.01	209.18	129.83	2.611	Alert	
15.600.00	11,423.00	15,789.26	11,620.00	74.01	74.20	125.78	-4,210.41	128.86	339.01	208.13	130.88	2.590	Alert	
15.650.00	11,423.00	15,839.26	11,620.00	74.62	74.81	125.78	-4,260.41	129.14	339.01	207.07	131.94	2.569	Alert	
15.700.00	11,423.00	15,889.26	11,620.00	75.23	75.42	125.78	-4,310.41	129.42	339.01	206.01	133.00	2.549	Alert	
15.750.00	11,423.00	15,939.26	11,620.00	75.85	76.03	125.78	-4,360.41	129.70	339.01	204.94	134.07	2.529	Alert	
15.800.00	11,423.00	15,989.26	11,620.00	76.46	76.64	125.78	-4,410.41	129.99	339.01	203.87	135.14	2.509	Alert	
15.850.00	11,423.00	16,039.26	11,620.00	77.08	77.26	125.78	-4,460.40	130.27	339.01	202.80	136.21	2.489	Minor Risk	
15.900.00	11,423.00	16,089.26	11,620.00	77.70	77.87	125.78	-4,510.40	130.55	339.01	201.73	137.29	2.469	Minor Risk	
15.950.00	11,423.00	16,139.26	11,620.00	78.32	78.49	125.78	-4,560.40	130.83	339.01	200.65	138.37	2.450	Minor Risk	
16.000.00	11,423.00	16,189.26	11,620.00	78.95	79.12	125.78	-4,610.40	131.12	339.02	199.56	139.45	2.431	Minor Risk	
16.050.00	11,423.00	16,239.26	11,620.00	79.57	79.74	125.78	-4,660.40	131.40	339.02	198.48	140.54	2.412	Minor Risk	
16.100.00	11,423.00	16,289.26	11,620.00	80.20	80.36	125.78	-4,710.40	131.68	339.02	197.39	141.63	2.394	Minor Risk	
16.150.00	11,423.00	16,339.26	11,620.00	80.83	80.99	125.78	-4,760.40	131.96	339.02	196.30	142.72	2.375	Minor Risk	
16.200.00	11,423.00	16,389.26	11,620.00	81.46	81.62	125.78	-4,810.40	132.25	339.02	195.20	143.81	2.357	Minor Risk	
16.250.00	11,423.00	16,439.26	11,620.00	82.09	82.25	125.78	-4,860.40	132.53	339.02	194.11	144.91	2.339	Minor Risk	
16.300.00	11,423.00	16,489.26	11,620.00	82.73	82.88	125.78	-4,910.40	132.81	339.02	193.01	146.01	2.322	Minor Risk	
16.350.00	11,423.00	16,539.26	11,620.00	83.36	83.51	125.78	-4,960.40	133.09	339.02	191.90	147.11	2.304	Minor Risk	
16.400.00	11,423.00	16,589.26	11,620.00	84.00	84.15	125.78	-5,010.40	133.38	339.02	190.80	148.22	2.287	Minor Risk	
16.450.00	11,423.00	16,639.26	11,620.00	84.64	84.79	125.78	-5,060.39	133.66	339.02	189.69	149.33	2.270	Minor Risk	
16.500.00	11,423.00	16,689.26	11,620.00	85.28	85.42	125.78	-5,110.39	133.94	339.02	188.58	150.44	2.254	Minor Risk	
16.550.00	11,423.00	16,739.26	11,620.00	85.92	86.06	125.78	-5,160.39	134.23	339.02	187.47	151.55	2.237	Minor Risk	
16.600.00	11,423.00	16,789.26	11,620.00	86.56	86.70	125.78	-5,210.39	134.51	339.02	186.35	152.67	2.221	Minor Risk	
16.650.00	11,423.00	16,839.26	11,620.00	87.21	87.35	125.78	-5,260.39	134.79	339.02	185.23	153.79	2.204	Minor Risk	
16.700.00	11,423.00	16,889.26	11,620.00	87.85	87.99	125.78	-5,310.39	135.07	339.02	184.11	154.91	2.189	Minor Risk	
16.750.00	11,423.00	16,939.26	11,620.00	88.50	88.63	125.78	-5,360.39	135.36	339.02	182.99	156.03	2.173	Minor Risk	
16.800.00	11,423.00	16,989.26	11,620.00	89.15	89.28	125.78	-5,410.39	135.64	339.02	181.87	157.15	2.157	Minor Risk	
16.850.00	11,423.00	17,039.26	11,620.00	89.80	89.93	125.78	-5,460.39	135.92	339.02	180.74	158.28	2.142	Minor Risk	
16.900.00	11,423.00	17,089.26	11,620.00	90.45	90.58	125.78	-5,510.39	136.20	339.02	179.61	159.41	2.127	Minor Risk	
16.950.00	11,423.00	17,139.26	11,620.00	91.10	91.23	125.78	-5,560.39	136.49	339.02	178.48	160.54	2.112	Minor Risk	
17.000.00	11,423.00	17,189.26	11,620.00	91.75	91.88	125.78	-5,610.39	136.77	339.02	177.35	161.68	2.097	Minor Risk	
17.050.00	11,423.00	17,239.26	11,620.00	92.41	92.53	125.78	-5,660.39	137.05	339.02	176.21	162.81	2.082	Minor Risk	
17.100.00	11,423.00	17,289.26	11,620.00	93.06	93.18	125.78	-5,710.38	137.33	339.02	175.07	163.95	2.068	Minor Risk	
17.150.00	11,423.00	17,339.26	11,620.00	93.72	93.84	125.78	-5,760.38	137.62	339.02	173.93	165.09	2.054	Minor Risk	
17.200.00	11,423.00	17,389.26	11,620.00	94.37	94.49	125.78	-5,810.38	137.90	339.02	172.79	166.23	2.039	Minor Risk	
17.250.00	11,423.00	17,439.26	11,620.00	95.03	95.15	125.78	-5,860.38	138.18	339.02	171.65	167.37	2.026	Minor Risk	
17.300.00	11,423.00	17,489.26	11,620.00	95.69	95.81	125.78	-5,910.38	138.47	339.02	170.51	168.52	2.012	Minor Risk	
17.350.00	11,423.00	17,539.26	11,620.00	96.35	96.47	125.78	-5,960.38	138.75	339.02	169.36	169.66	1.998	Minor Risk	
17.400.00	11,423.00	17,589.26	11,620.00	97.01	97.13	125.78	-6,010.38	139.03	339.02	168.21	170.81	1.985	Minor Risk	
17.450.00	11,423.00	17,639.26	11,620.00	97.68	97.79	125.78	-6,060.38	139.31	339.03	167.06	171.96	1.972	Minor Risk	
17.500.00	11,423.00	17,689.26	11,620.00	98.34	98.45	125.78	-6,110.38	139.60	339.03	165.91	173.11	1.958	Minor Risk	
17.550.00	11,423.00	17,739.26	11,620.00	99.00	99.11	125.78	-6,160.38	139.88	339.03	164.76	174.27	1.945	Minor Risk	
17.600.00	11,423.00	17,789.26	11,620.00	99.67	99.77	125.78	-6,210.38	140.16	339.03	163.60	175.42	1.933	Minor Risk	
17.650.00	11,423.00	17,839.26	11,620.00	100.34	100.44	125.78	-6,260.38	140.44	339.03	162.45	176.58	1.920	Minor Risk	
17.700.00	11,423.00	17,889.26	11,620.00	101.00	101.10	125.78	-6,310.37	140.73	339.03	161.29	177.74	1.907	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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:		0.50 ft
Reference															
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		
17,750.00	11,423.00	17,939.26	11,620.00	101.67	101.77	125.78	-6,360.37	141.01	339.03	160.13	178.90	1.895	Minor Risk		
17,800.00	11,423.00	17,989.26	11,620.00	102.34	102.44	125.78	-6,410.37	141.29	339.03	158.97	180.06	1.883	Minor Risk		
17,850.00	11,423.00	18,039.26	11,620.00	103.01	103.10	125.78	-6,460.37	141.57	339.03	157.81	181.22	1.871	Minor Risk		
17,900.00	11,423.00	18,089.26	11,620.00	103.68	103.77	125.78	-6,510.37	141.86	339.03	156.64	182.38	1.859	Minor Risk		
17,950.00	11,423.00	18,139.26	11,620.00	104.35	104.44	125.78	-6,560.37	142.14	339.03	155.48	183.55	1.847	Minor Risk		
18,000.00	11,423.00	18,189.26	11,620.00	105.02	105.11	125.78	-6,610.37	142.42	339.03	154.31	184.72	1.835	Minor Risk		
18,050.00	11,423.00	18,239.26	11,620.00	105.69	105.78	125.78	-6,660.37	142.70	339.03	153.14	185.88	1.824	Minor Risk		
18,100.00	11,423.00	18,289.26	11,620.00	106.37	106.46	125.78	-6,710.37	142.99	339.03	151.98	187.05	1.812	Minor Risk		
18,150.00	11,423.00	18,339.26	11,620.00	107.04	107.13	125.78	-6,760.37	143.27	339.03	150.81	188.22	1.801	Minor Risk		
18,200.00	11,423.00	18,389.26	11,620.00	107.71	107.80	125.78	-6,810.37	143.55	339.03	149.63	189.40	1.790	Minor Risk		
18,250.00	11,423.00	18,439.26	11,620.00	108.39	108.48	125.78	-6,860.37	143.84	339.03	148.46	190.57	1.779	Minor Risk		
18,300.00	11,423.00	18,489.26	11,620.00	109.07	109.15	125.78	-6,910.37	144.12	339.03	147.29	191.74	1.768	Minor Risk		
18,350.00	11,423.00	18,539.26	11,620.00	109.74	109.83	125.78	-6,960.36	144.40	339.03	146.11	192.92	1.757	Minor Risk		
18,400.00	11,423.00	18,589.26	11,620.00	110.42	110.50	125.78	-7,010.36	144.68	339.03	144.94	194.10	1.747	Minor Risk		
18,450.00	11,423.00	18,639.26	11,620.00	111.10	111.18	125.78	-7,060.36	144.97	339.03	143.76	195.27	1.736	Minor Risk		
18,500.00	11,423.00	18,689.26	11,620.00	111.78	111.86	125.78	-7,110.36	145.25	339.03	142.58	196.45	1.726	Minor Risk		
18,550.00	11,423.00	18,739.26	11,620.00	112.46	112.53	125.78	-7,160.36	145.53	339.03	141.40	197.63	1.715	Minor Risk		
18,600.00	11,423.00	18,789.26	11,620.00	113.14	113.21	125.77	-7,210.36	145.81	339.03	140.22	198.81	1.705	Minor Risk		
18,650.00	11,423.00	18,839.26	11,620.00	113.82	113.89	125.77	-7,260.36	146.10	339.03	139.04	200.00	1.695	Minor Risk		
18,700.00	11,423.00	18,889.26	11,620.00	114.50	114.57	125.77	-7,310.36	146.38	339.03	137.85	201.18	1.685	Minor Risk		
18,750.00	11,423.00	18,939.26	11,620.00	115.18	115.25	125.77	-7,360.36	146.66	339.03	136.67	202.36	1.675	Minor Risk		
18,769.09	11,423.00	18,958.35	11,620.00	115.44	115.51	125.77	-7,379.45	146.77	339.03	136.22	202.82	1.672	Minor Risk, SF		

### Anticollision Report

<b>Company:</b>	WCDSC Permian NM	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MVVD+HDGM													Offset Well Error:	0.50 ft		
Reference													Distance		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +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	-90.32		-0.34	-60.01	60.01						
50.00	50.00	50.80	50.80	0.50	0.50	-90.32		-0.34	-60.01	60.01	59.00	1.01	59.615			
100.00	100.00	100.80	100.80	0.52	0.52	-90.32		-0.34	-60.01	60.01	58.97	1.04	57.911			
150.00	150.00	150.80	150.80	0.59	0.59	-90.32		-0.34	-60.01	60.01	58.83	1.18	50.770			
200.00	200.00	200.80	200.80	0.70	0.70	-90.32		-0.34	-60.01	60.01	58.60	1.41	42.675			
250.00	250.00	250.80	250.80	0.84	0.84	-90.32		-0.34	-60.01	60.01	58.33	1.68	35.769			
300.00	300.00	300.80	300.80	0.99	0.99	-90.32		-0.34	-60.01	60.01	58.03	1.98	30.352			
350.00	350.00	350.80	350.80	1.15	1.15	-90.32		-0.34	-60.01	60.01	57.72	2.29	26.165			
400.00	400.00	400.80	400.80	1.31	1.31	-90.32		-0.34	-60.01	60.01	57.39	2.62	22.898			
450.00	450.00	450.80	450.80	1.48	1.48	-90.32		-0.34	-60.01	60.01	57.06	2.96	20.306			
500.00	500.00	500.80	500.80	1.65	1.65	-90.32		-0.34	-60.01	60.01	56.72	3.29	18.213			
550.00	550.00	550.80	550.80	1.82	1.82	-90.32		-0.34	-60.01	60.01	56.37	3.64	16.495			
600.00	600.00	600.80	600.80	1.99	1.99	-90.32		-0.34	-60.01	60.01	56.03	3.98	15.063			
650.00	650.00	650.80	650.80	2.16	2.17	-90.32		-0.34	-60.01	60.01	55.68	4.33	13.853			
700.00	700.00	700.80	700.80	2.34	2.34	-90.32		-0.34	-60.01	60.01	55.33	4.68	12.819			
750.00	750.00	750.80	750.80	2.51	2.52	-90.32		-0.34	-60.01	60.01	54.98	5.03	11.925			
800.00	800.00	800.80	800.80	2.69	2.69	-90.32		-0.34	-60.01	60.01	54.63	5.38	11.146			
850.00	850.00	850.80	850.80	2.87	2.87	-90.32		-0.34	-60.01	60.01	54.27	5.74	10.461			
900.00	900.00	900.80	900.80	3.04	3.05	-90.32		-0.34	-60.01	60.01	53.92	6.09	9.854			
950.00	950.00	950.80	950.80	3.22	3.22	-90.32		-0.34	-60.01	60.01	53.57	6.44	9.313			
1,000.00	1,000.00	1,000.80	1,000.80	3.40	3.40	-90.32		-0.34	-60.01	60.01	53.21	6.80	8.828			
1,050.00	1,050.00	1,050.80	1,050.80	3.58	3.58	-90.32		-0.34	-60.01	60.01	52.86	7.15	8.390			
1,100.00	1,100.00	1,100.80	1,100.80	3.75	3.76	-90.32		-0.34	-60.01	60.01	52.50	7.51	7.993			
1,150.00	1,150.00	1,150.80	1,150.80	3.93	3.93	-90.32		-0.34	-60.01	60.01	52.15	7.86	7.632			
1,200.00	1,200.00	1,200.80	1,200.80	4.11	4.11	-90.32		-0.34	-60.01	60.01	51.79	8.22	7.301			
1,250.00	1,250.00	1,250.80	1,250.80	4.29	4.29	-90.32		-0.34	-60.01	60.01	51.44	8.58	6.998			
1,300.00	1,300.00	1,300.80	1,300.80	4.46	4.47	-90.32		-0.34	-60.01	60.01	51.08	8.93	6.719			
1,350.00	1,350.00	1,350.80	1,350.80	4.64	4.65	-90.32		-0.34	-60.01	60.01	50.72	9.29	6.461			
1,400.00	1,400.00	1,400.80	1,400.80	4.82	4.82	-90.32		-0.34	-60.01	60.01	50.37	9.64	6.223			
1,450.00	1,450.00	1,450.80	1,450.80	5.00	5.00	-90.32		-0.34	-60.01	60.01	50.01	10.00	6.001			
1,500.00	1,500.00	1,500.80	1,500.80	5.18	5.18	-90.32		-0.34	-60.01	60.01	49.65	10.36	5.794			
1,550.00	1,550.00	1,550.80	1,550.80	5.36	5.36	-90.32		-0.34	-60.01	60.01	49.30	10.71	5.601			
1,600.00	1,600.00	1,600.80	1,600.80	5.53	5.54	-90.32		-0.34	-60.01	60.01	48.94	11.07	5.421			
1,650.00	1,650.00	1,650.80	1,650.80	5.71	5.72	-90.32		-0.34	-60.01	60.01	48.58	11.43	5.251			
1,700.00	1,700.00	1,700.80	1,700.80	5.89	5.89	-90.32		-0.34	-60.01	60.01	48.23	11.79	5.092			
1,750.00	1,750.00	1,750.80	1,750.80	6.07	6.07	-90.32		-0.34	-60.01	60.01	47.87	12.14	4.942 Alert			
1,800.00	1,800.00	1,800.80	1,800.80	6.25	6.25	-90.32		-0.34	-60.01	60.01	47.51	12.50	4.801 Alert			
1,850.00	1,850.00	1,850.80	1,850.80	6.43	6.43	-90.32		-0.34	-60.01	60.01	47.15	12.86	4.668 Alert			
1,900.00	1,900.00	1,900.80	1,900.80	6.61	6.61	-90.32		-0.34	-60.01	60.01	46.80	13.21	4.541 Alert			
1,950.00	1,950.00	1,950.80	1,950.80	6.78	6.79	-90.32		-0.34	-60.01	60.01	46.44	13.57	4.422 Alert			
2,000.00	2,000.00	2,000.80	2,000.80	6.96	6.97	-90.32		-0.34	-60.01	60.01	46.08	13.93	4.308 Alert			
2,050.00	2,050.00	2,050.80	2,050.80	7.14	7.15	-90.32		-0.34	-60.01	60.01	45.72	14.29	4.200 Alert			
2,100.00	2,100.00	2,100.80	2,100.80	7.32	7.32	-90.32		-0.34	-60.01	60.01	45.37	14.64	4.098 Alert			
2,150.00	2,150.00	2,150.80	2,150.80	7.50	7.50	-90.32		-0.34	-60.01	60.01	45.01	15.00	4.000 Alert			
2,200.00	2,200.00	2,200.80	2,200.80	7.68	7.68	-90.32		-0.34	-60.01	60.01	44.65	15.36	3.907 Alert			
2,250.00	2,250.00	2,250.80	2,250.80	7.86	7.86	-90.32		-0.34	-60.01	60.01	44.29	15.72	3.818 Alert			
2,300.00	2,300.00	2,300.80	2,300.80	8.04	8.04	-90.32		-0.34	-60.01	60.01	43.94	16.08	3.733 Alert			
2,350.00	2,350.00	2,350.80	2,350.80	8.22	8.22	-90.32		-0.34	-60.01	60.01	43.58	16.43	3.652 Alert			
2,400.00	2,400.00	2,400.80	2,400.80	8.39	8.40	-90.32		-0.34	-60.01	60.01	43.22	16.79	3.574 Alert			
2,450.00	2,450.00	2,450.80	2,450.80	8.57	8.58	-90.32		-0.34	-60.01	60.01	42.86	17.15	3.499 Alert			
2,500.00	2,500.00	2,500.80	2,500.80	8.75	8.75	-90.32		-0.34	-60.01	60.01	42.50	17.51	3.428 Alert, CC			

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft						
Reference																				
Reference				Offset		Semi Major Axis			Distance											
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre -E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning							
2,550.00	2,550.00	2,550.54	2,550.54	8.93	8.93	-152.15	-0.15	-60.12	60.31	42.45	17.86	3.377	Alert, ES							
2,600.00	2,599.99	2,600.28	2,600.27	9.11	9.11	-151.89	0.43	-60.44	61.21	43.00	18.21	3.361	Alert							
2,650.00	2,649.98	2,649.99	2,649.97	9.28	9.29	-151.48	1.37	-60.97	62.70	44.14	18.56	3.378	Alert							
2,700.00	2,699.96	2,700.12	2,699.84	9.45	9.47	-151.04	2.60	-61.65	64.74	45.82	18.92	3.422	Alert							
2,750.00	2,749.92	2,749.82	2,749.76	9.63	9.64	-150.79	3.84	-62.34	67.17	47.90	19.27	3.486	Alert							
2,800.00	2,799.86	2,800.26	2,799.66	9.81	9.82	-150.73	5.07	-63.03	69.98	50.35	19.62	3.566	Alert							
2,850.00	2,849.79	2,849.64	2,849.55	9.98	10.00	-150.82	6.31	-63.72	73.08	53.11	19.97	3.659	Alert							
2,900.00	2,899.71	2,900.46	2,899.43	10.16	10.18	-150.91	7.55	-64.41	76.22	55.89	20.33	3.750	Alert							
2,950.00	2,949.63	2,949.45	2,949.31	10.33	10.35	-151.00	8.78	-65.09	79.35	58.68	20.68	3.838	Alert							
3,000.00	2,999.56	3,000.65	2,999.19	10.51	10.54	-151.08	10.02	-65.78	82.49	61.45	21.03	3.922	Alert							
3,050.00	3,049.48	3,049.25	3,049.07	10.69	10.71	-151.15	11.26	-66.47	85.62	64.24	21.38	4.004	Alert							
3,100.00	3,099.40	3,100.85	3,098.95	10.86	10.89	-151.22	12.49	-67.16	88.75	67.01	21.74	4.082	Alert							
3,150.00	3,149.33	3,149.05	3,148.83	11.04	11.07	-151.29	13.73	-67.85	91.89	69.80	22.09	4.160	Alert							
3,200.00	3,199.25	3,201.05	3,198.72	11.22	11.25	-151.35	14.97	-68.54	95.02	72.57	22.45	4.233	Alert							
3,250.00	3,249.17	3,248.86	3,248.60	11.39	11.42	-151.40	16.21	-69.23	98.16	75.36	22.80	4.306	Alert							
3,300.00	3,299.10	3,301.24	3,298.48	11.57	11.61	-151.45	17.44	-69.92	101.29	78.13	23.16	4.374	Alert							
3,350.00	3,349.02	3,348.66	3,348.36	11.75	11.78	-151.50	18.68	-70.61	104.42	80.92	23.50	4.443	Alert							
3,400.00	3,398.94	3,401.44	3,398.24	11.93	11.97	-151.55	19.92	-71.30	107.56	83.69	23.87	4.507	Alert							
3,450.00	3,448.86	3,448.46	3,448.12	12.10	12.14	-151.59	21.15	-71.99	110.69	86.48	24.21	4.572	Alert							
3,500.00	3,498.79	3,501.64	3,498.00	12.28	12.33	-151.64	22.39	-72.68	113.83	89.25	24.58	4.631	Alert							
3,550.00	3,548.71	3,548.26	3,547.89	12.46	12.49	-151.68	23.63	-73.37	116.96	92.04	24.92	4.693	Alert							
3,600.00	3,598.63	3,601.83	3,597.77	12.64	12.68	-151.71	24.86	-74.05	120.10	94.81	25.29	4.749	Alert							
3,650.00	3,648.56	3,648.07	3,647.65	12.82	12.85	-151.75	26.10	-74.74	123.23	97.60	25.63	4.808	Alert							
3,700.00	3,698.48	3,702.03	3,697.53	13.00	13.04	-151.78	27.34	-75.43	126.37	100.37	26.00	4.860	Alert							
3,750.00	3,748.40	3,747.87	3,747.41	13.18	13.21	-151.81	28.57	-76.12	129.50	103.16	26.34	4.917	Alert							
3,800.00	3,798.33	3,802.23	3,797.29	13.35	13.40	-151.85	29.81	-76.81	132.64	105.93	26.71	4.966	Alert							
3,850.00	3,848.25	3,847.67	3,847.17	13.53	13.56	-151.87	31.05	-77.50	135.77	108.72	27.05	5.019								
3,900.00	3,898.17	3,902.42	3,897.06	13.71	13.76	-151.90	32.28	-78.19	138.91	111.48	27.42	5.065								
3,950.00	3,948.10	3,947.48	3,946.94	13.89	13.92	-151.93	33.52	-78.88	142.04	114.28	27.76	5.116								
4,000.00	3,998.02	4,002.62	3,996.82	14.07	14.12	-151.95	34.76	-79.57	145.18	117.04	28.14	5.160								
4,050.00	4,047.94	4,047.28	4,046.70	14.25	14.28	-151.98	35.99	-80.26	148.31	119.84	28.47	5.209								
4,100.00	4,097.87	4,102.82	4,096.58	14.43	14.48	-152.00	37.23	-80.95	151.45	122.60	28.85	5.250								
4,150.00	4,147.79	4,147.08	4,146.46	14.61	14.64	-152.02	38.47	-81.64	154.58	125.40	29.19	5.297								
4,200.00	4,197.71	4,196.98	4,196.35	14.79	14.81	-152.05	39.70	-82.32	157.72	128.18	29.54	5.339								
4,250.00	4,247.63	4,246.89	4,246.23	14.97	14.99	-152.07	40.94	-83.01	160.85	130.96	29.90	5.380								
4,300.00	4,297.56	4,303.21	4,296.11	15.15	15.19	-152.09	42.18	-83.70	163.99	133.71	30.28	5.416								
4,350.00	4,347.48	4,346.69	4,345.99	15.33	15.35	-152.11	43.41	-84.39	167.13	136.51	30.61	5.460								
4,400.00	4,397.40	4,403.41	4,395.87	15.51	15.55	-152.12	44.65	-85.08	170.26	139.27	30.99	5.494								
4,450.00	4,447.33	4,446.49	4,445.75	15.69	15.71	-152.14	45.89	-85.77	173.40	142.07	31.32	5.536								
4,500.00	4,497.25	4,503.61	4,495.63	15.87	15.91	-152.16	47.12	-86.46	176.53	144.83	31.71	5.568								
4,550.00	4,547.17	4,546.30	4,545.52	16.05	16.07	-152.18	48.36	-87.15	179.67	147.63	32.04	5.608								
4,600.00	4,597.10	4,603.80	4,595.40	16.23	16.27	-152.19	49.60	-87.84	182.80	150.38	32.42	5.638								
4,650.00	4,647.02	4,646.10	4,645.28	16.41	16.42	-152.21	50.84	-88.53	185.94	153.19	32.75	5.677								
4,700.00	4,696.94	4,704.00	4,695.16	16.59	16.63	-152.22	52.07	-89.22	189.07	155.94	33.14	5.706								
4,750.00	4,746.87	4,745.90	4,745.04	16.77	16.78	-152.24	53.31	-89.91	192.21	158.74	33.46	5.744								
4,800.00	4,796.79	4,804.20	4,794.92	16.95	16.99	-152.25	54.55	-90.60	195.34	161.49	33.85	5.771								
4,850.00	4,846.71	4,845.71	4,844.80	17.13	17.14	-152.26	55.78	-91.28	198.48	164.30	34.18	5.807								
4,900.00	4,896.63	4,904.39	4,894.69	17.31	17.35	-152.28	57.02	-91.97	201.61	167.05	34.57	5.833								
4,950.00	4,946.56	4,945.51	4,944.57	17.49	17.50	-152.29	58.26	-92.66	204.75	169.86	34.89	5.868								
5,000.00	4,996.48	5,004.59	4,994.45	17.67	17.71	-152.30	59.49	-93.35	207.89	172.60	35.28	5.892								
5,050.00	5,046.40	5,045.31	5,044.33	17.85	17.85	-152.31	60.73	-94.04	211.02	175.41	35.61	5.927								

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MVD+HDGM													Offset Well Error:	0.50 ft
Sec 15-T23S-R31E - Maldives 15-22 Fed Com 711H - Wellbore #1 - Permit Plan 1														
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		
5,100.00	5,096.33	5,104.79	5,094.21	18.03	18.07	-152.33	61.97	-94.73	214.16	178.16	36.00	5.949		
5,150.00	5,146.25	5,145.11	5,144.09	18.21	18.21	-152.34	63.20	-95.42	217.29	180.97	36.32	5.983		
5,200.00	5,196.17	5,204.98	5,193.98	18.39	18.43	-152.35	64.44	-96.11	220.43	183.71	36.71	6.004		
5,250.00	5,246.10	5,244.92	5,243.86	18.57	18.57	-152.36	65.68	-96.80	223.56	186.53	37.04	6.036		
5,300.00	5,296.02	5,305.18	5,293.74	18.75	18.79	-152.37	66.91	-97.49	226.70	189.27	37.43	6.057		
5,350.00	5,345.94	5,344.72	5,343.62	18.93	18.93	-152.38	68.15	-98.18	229.83	192.08	37.75	6.088		
5,400.00	5,395.87	5,405.38	5,393.50	19.11	19.15	-152.39	69.39	-98.87	232.97	194.82	38.15	6.107		
5,450.00	5,445.79	5,444.52	5,443.38	19.30	19.29	-152.40	70.62	-99.55	236.10	197.64	38.47	6.138		
5,500.00	5,495.71	5,505.57	5,493.26	19.48	19.51	-152.41	71.86	-100.24	239.24	200.38	38.86	6.156		
5,550.00	5,545.64	5,544.33	5,543.15	19.66	19.65	-152.42	73.10	-100.93	242.38	203.20	39.18	6.186		
5,600.00	5,595.56	5,605.77	5,593.03	19.84	19.87	-152.43	74.33	-101.62	245.51	205.93	39.58	6.203		
5,650.00	5,645.48	5,644.13	5,642.91	20.02	20.00	-152.43	75.57	-102.31	248.65	208.75	39.90	6.232		
5,700.00	5,695.40	5,705.97	5,692.79	20.20	20.23	-152.44	76.81	-103.00	251.78	211.49	40.30	6.248		
5,750.00	5,745.33	5,743.93	5,742.67	20.38	20.36	-152.45	78.04	-103.69	254.92	214.31	40.61	6.277		
5,800.00	5,795.25	5,806.17	5,792.55	20.56	20.59	-152.46	79.28	-104.38	258.05	217.04	41.01	6.292		
5,850.00	5,845.17	5,843.74	5,842.43	20.74	20.72	-152.47	80.52	-105.07	261.19	219.86	41.33	6.320		
5,900.00	5,895.10	5,906.36	5,892.32	20.92	20.94	-152.47	81.75	-105.76	264.33	222.59	41.73	6.334		
5,950.00	5,945.02	5,943.54	5,942.20	21.11	21.08	-152.48	82.99	-106.45	267.46	225.42	42.04	6.362		
6,000.00	5,994.94	6,006.56	5,992.08	21.29	21.30	-152.49	84.23	-107.14	270.60	228.15	42.45	6.375		
6,050.00	6,044.87	6,043.34	6,041.96	21.47	21.44	-152.50	85.47	-107.82	273.73	230.97	42.76	6.402		
6,100.00	6,094.79	6,106.76	6,091.84	21.65	21.66	-152.50	86.70	-108.51	276.87	233.70	43.16	6.414		
6,150.00	6,144.71	6,143.15	6,141.72	21.83	21.79	-152.51	87.94	-109.20	280.00	236.53	43.47	6.441		
6,200.00	6,194.64	6,206.95	6,191.60	22.01	22.02	-152.52	89.18	-109.89	283.14	239.26	43.88	6.452		
6,250.00	6,244.56	6,242.95	6,241.49	22.19	22.15	-152.52	90.41	-110.58	286.27	242.08	44.19	6.478		
6,300.00	6,294.48	6,307.15	6,291.37	22.37	22.38	-152.53	91.65	-111.27	289.41	244.81	44.60	6.489		
6,350.00	6,344.40	6,342.75	6,341.25	22.56	22.51	-152.53	92.89	-111.96	292.55	247.64	44.91	6.515		
6,400.00	6,394.33	6,407.35	6,391.13	22.74	22.74	-152.54	94.12	-112.65	295.68	250.36	45.32	6.525		
6,450.00	6,444.25	6,442.56	6,441.01	22.92	22.87	-152.55	95.36	-113.34	298.82	253.19	45.62	6.550		
6,500.00	6,494.17	6,507.54	6,490.89	23.10	23.10	-152.55	96.60	-114.03	301.95	255.92	46.04	6.559		
6,550.00	6,544.10	6,542.36	6,540.78	23.28	23.23	-152.56	97.83	-114.72	305.09	258.75	46.34	6.584		
6,600.00	6,594.02	6,607.74	6,590.66	23.46	23.46	-152.56	99.07	-115.41	308.22	261.47	46.75	6.593		
6,650.00	6,643.94	6,642.16	6,640.54	23.64	23.59	-152.57	100.31	-116.10	311.36	264.30	47.06	6.617		
6,700.00	6,693.87	6,707.94	6,690.42	23.83	23.82	-152.57	101.54	-116.78	314.50	267.02	47.47	6.625		
6,750.00	6,743.79	6,741.97	6,740.30	24.01	23.95	-152.58	102.78	-117.47	317.63	269.86	47.77	6.649		
6,800.00	6,793.71	6,808.13	6,790.18	24.19	24.18	-152.59	104.02	-118.16	320.77	272.58	48.19	6.656		
6,850.00	6,843.64	6,841.77	6,840.06	24.37	24.30	-152.59	105.25	-118.85	323.90	275.41	48.49	6.680		
6,900.00	6,893.56	6,908.33	6,889.95	24.55	24.54	-152.60	106.49	-119.54	327.04	278.13	48.91	6.687		
6,950.00	6,943.48	6,941.57	6,939.83	24.73	24.66	-152.60	107.73	-120.23	330.17	280.97	49.21	6.710		
7,000.00	6,993.40	7,008.53	6,989.71	24.92	24.90	-152.60	108.96	-120.92	333.31	283.68	49.63	6.716		
7,050.00	7,043.33	7,041.37	7,039.59	25.10	25.02	-152.61	110.20	-121.61	336.44	286.52	49.92	6.739		
7,100.00	7,093.25	7,108.72	7,089.47	25.28	25.26	-152.61	111.44	-122.30	339.58	289.24	50.34	6.745		
7,150.00	7,143.17	7,141.18	7,139.35	25.46	25.38	-152.62	112.67	-122.99	342.72	292.08	50.64	6.768		
7,200.00	7,193.10	7,208.92	7,189.23	25.64	25.62	-152.62	113.91	-123.68	345.85	294.79	51.06	6.773		
7,250.00	7,243.02	7,240.98	7,239.12	25.82	25.74	-152.63	115.15	-124.37	348.99	297.63	51.36	6.795		
7,300.00	7,292.94	7,309.12	7,289.00	26.01	25.98	-152.63	116.38	-125.05	352.12	300.34	51.78	6.800		
7,350.00	7,342.87	7,340.78	7,338.88	26.19	26.10	-152.64	117.62	-125.74	355.26	303.19	52.07	6.822		
7,400.00	7,392.79	7,409.31	7,388.76	26.37	26.34	-152.64	118.86	-126.43	358.39	305.90	52.50	6.827		
7,450.00	7,442.71	7,440.59	7,438.64	26.55	26.46	-152.64	120.10	-127.12	361.53	308.74	52.79	6.848		
7,500.00	7,492.64	7,509.51	7,488.52	26.73	26.70	-152.65	121.33	-127.81	364.67	311.45	53.22	6.852		
7,550.00	7,542.56	7,540.39	7,538.40	26.91	26.81	-152.65	122.57	-128.50	367.80	314.29	53.51	6.874		
7,600.00	7,592.48	7,609.71	7,588.29	27.10	27.06	-152.66	123.81	-129.19	370.94	317.00	53.94	6.877		

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft
Reference: Sec 15-T23S-R31E - Maldives 15-22 Fed Com 711H - Wellbore #1 - Permit Plan 1														
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
				Reference (ft)	Offset (ft)		+N-S (ft)	+E-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
7,650.00	7,642.41	7,640.19	7,638.17	27.28	27.17	-152.66	125.04	-129.88	374.07	319.85	54.23	6.899		
7,700.00	7,692.33	7,709.91	7,688.05	27.46	27.42	-152.66	126.28	-130.57	377.21	322.55	54.65	6.902		
7,750.00	7,742.25	7,740.00	7,737.93	27.64	27.53	-152.67	127.52	-131.26	380.34	325.40	54.94	6.923		
7,800.00	7,792.17	7,789.90	7,787.81	27.82	27.71	-152.67	128.75	-131.95	383.48	328.18	55.30	6.934		
7,850.00	7,842.10	7,839.80	7,837.69	28.01	27.89	-152.67	129.99	-132.64	386.62	330.96	55.66	6.946		
7,900.00	7,892.02	7,889.70	7,887.58	28.19	28.07	-152.68	131.23	-133.33	389.75	333.73	56.02	6.958		
7,950.00	7,941.94	7,939.60	7,937.46	28.37	28.25	-152.68	132.46	-134.01	392.89	336.51	56.38	6.969		
8,000.00	7,991.87	7,989.50	7,987.34	28.55	28.43	-152.68	133.70	-134.70	396.02	339.29	56.74	6.980		
8,050.00	8,041.79	8,039.41	8,037.22	28.73	28.61	-152.69	134.94	-135.39	399.16	342.06	57.09	6.991		
8,100.00	8,091.71	8,089.31	8,087.10	28.91	28.79	-152.69	136.17	-136.08	402.29	344.84	57.45	7.002		
8,150.00	8,141.64	8,139.21	8,136.98	29.10	28.97	-152.69	137.41	-136.77	405.43	347.62	57.81	7.013		
8,200.00	8,191.56	8,189.11	8,186.86	29.28	29.15	-152.70	138.65	-137.46	408.57	350.39	58.17	7.024		
8,250.00	8,241.48	8,239.01	8,236.75	29.46	29.33	-152.70	139.88	-138.15	411.70	353.17	58.53	7.034		
8,300.00	8,291.41	8,288.91	8,286.63	29.64	29.50	-152.70	141.12	-138.84	414.84	355.95	58.89	7.044		
8,350.00	8,341.33	8,338.82	8,336.51	29.82	29.68	-152.71	142.36	-139.53	417.97	358.73	59.25	7.055		
8,400.00	8,391.25	8,388.72	8,386.39	30.01	29.86	-152.71	143.59	-140.22	421.11	361.50	59.61	7.065		
8,450.00	8,441.17	8,438.62	8,436.27	30.19	30.04	-152.71	144.83	-140.91	424.24	364.28	59.96	7.075		
8,500.00	8,491.10	8,488.52	8,486.15	30.37	30.22	-152.72	146.07	-141.60	427.38	367.06	60.32	7.085		
8,550.00	8,541.02	8,538.42	8,536.03	30.55	30.40	-152.72	147.30	-142.28	430.52	369.83	60.68	7.095		
8,600.00	8,590.94	8,588.32	8,585.92	30.73	30.58	-152.72	148.54	-142.97	433.65	372.61	61.04	7.104		
8,650.00	8,640.87	8,638.22	8,635.80	30.92	30.76	-152.72	149.78	-143.66	436.79	375.39	61.40	7.114		
8,700.00	8,690.79	8,688.13	8,685.68	31.10	30.94	-152.73	151.01	-144.35	439.92	378.16	61.76	7.123		
8,750.00	8,740.71	8,738.03	8,735.56	31.28	31.12	-152.73	152.25	-145.04	443.06	380.94	62.12	7.133		
8,800.00	8,790.64	8,787.93	8,785.44	31.46	31.30	-152.73	153.49	-145.73	446.19	383.72	62.48	7.142		
8,850.00	8,840.56	8,837.83	8,835.32	31.64	31.48	-152.73	154.73	-146.42	449.33	386.49	62.84	7.151		
8,900.00	8,890.48	8,887.73	8,885.20	31.83	31.66	-152.74	155.96	-147.11	452.47	389.27	63.19	7.160		
8,950.00	8,940.41	8,937.63	8,935.09	32.01	31.84	-152.74	157.20	-147.80	455.60	392.05	63.55	7.169		
9,000.00	8,990.33	8,987.54	8,984.97	32.19	32.02	-152.74	158.44	-148.49	458.74	394.82	63.91	7.178		
9,050.00	9,040.25	9,037.44	9,034.85	32.37	32.20	-152.74	159.67	-149.18	461.87	397.60	64.27	7.186		
9,100.00	9,090.18	9,087.34	9,084.73	32.55	32.37	-152.75	160.91	-149.87	465.01	400.38	64.63	7.195		
9,150.00	9,140.10	9,137.24	9,134.61	32.74	32.55	-152.75	162.15	-150.56	468.14	403.15	64.99	7.203		
9,200.00	9,190.02	9,187.14	9,184.49	32.92	32.73	-152.75	163.38	-151.24	471.28	405.93	65.35	7.212		
9,250.00	9,239.94	9,237.04	9,234.38	33.10	32.91	-152.75	164.62	-151.93	474.42	408.71	65.71	7.220		
9,300.00	9,289.87	9,286.95	9,284.26	33.28	33.09	-152.76	165.86	-152.62	477.55	411.48	66.07	7.228		
9,350.00	9,339.79	9,336.85	9,334.14	33.46	33.27	-152.76	167.09	-153.31	480.69	414.26	66.43	7.236		
9,400.00	9,389.71	9,386.75	9,384.02	33.65	33.45	-152.76	168.33	-154.00	483.82	417.04	66.78	7.245		
9,450.00	9,439.64	9,436.65	9,433.90	33.83	33.63	-152.76	169.57	-154.69	486.96	419.81	67.14	7.252		
9,500.00	9,489.56	9,486.55	9,483.78	34.01	33.81	-152.77	170.80	-155.38	490.09	422.59	67.50	7.260		
9,550.00	9,539.48	9,536.45	9,533.66	34.19	33.99	-152.77	172.04	-156.07	493.23	425.37	67.86	7.268		
9,600.00	9,589.41	9,586.35	9,583.55	34.38	34.17	-152.77	173.28	-156.76	496.37	428.14	68.22	7.276		
9,650.00	9,639.33	9,636.26	9,633.43	34.56	34.35	-152.77	174.51	-157.45	499.50	430.92	68.58	7.283		
9,700.00	9,689.25	9,686.16	9,683.31	34.74	34.53	-152.77	175.75	-158.14	502.64	433.70	68.94	7.291		
9,750.00	9,739.18	9,736.06	9,733.19	34.92	34.71	-152.78	176.99	-158.83	505.77	436.47	69.30	7.299		
9,800.00	9,789.10	9,785.96	9,783.07	35.10	34.89	-152.78	178.22	-159.51	508.91	439.25	69.66	7.306		
9,850.00	9,839.02	9,835.86	9,832.95	35.29	35.07	-152.78	179.46	-160.20	512.04	442.03	70.02	7.313		
9,900.00	9,888.94	9,885.76	9,882.83	35.47	35.25	-152.78	180.70	-160.89	515.18	444.80	70.38	7.320		
9,950.00	9,938.87	9,935.67	9,932.72	35.65	35.42	-152.78	181.93	-161.58	518.32	447.58	70.73	7.328		
10,000.00	9,988.79	9,985.57	9,982.60	35.83	35.60	-152.79	183.17	-162.27	521.45	450.36	71.09	7.335		
10,050.00	10,038.71	10,035.47	10,032.48	36.02	35.78	-152.79	184.41	-162.96	524.59	453.13	71.45	7.342		
10,100.00	10,088.64	10,085.37	10,082.36	36.20	35.96	-152.79	185.64	-163.65	527.72	455.91	71.81	7.349		
10,150.00	10,138.56	10,135.27	10,132.24	36.38	36.14	-152.79	186.88	-164.34	530.86	458.69	72.17	7.356		

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft				
Reference													Distance					
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning					
10,200.00	10,188.48	10,185.17	10,182.12	36.56	36.32	-152.79	188.12	-165.03	533.99	461.46	72.53	7.362						
10,250.00	10,238.41	10,235.08	10,232.00	36.74	36.50	-152.80	189.36	-165.72	537.13	464.24	72.89	7.369						
10,299.90	10,288.23	10,284.88	10,281.79	36.93	36.68	-152.80	190.59	-166.41	540.26	467.01	73.25	7.376						
10,350.00	10,338.27	10,334.90	10,331.78	37.11	36.86	-152.80	191.83	-167.10	543.11	469.50	73.61	7.378						
10,400.00	10,388.24	10,384.84	10,381.71	37.29	37.04	-152.77	193.07	-167.79	545.37	471.41	73.97	7.373						
10,450.00	10,438.22	10,434.81	10,431.66	37.47	37.22	-152.71	194.31	-168.48	547.05	472.73	74.32	7.360						
10,500.00	10,488.22	10,484.78	10,481.61	37.64	37.40	-152.61	195.54	-169.17	548.16	473.47	74.68	7.340						
10,550.00	10,538.22	10,534.76	10,531.57	37.82	37.58	-90.57	196.78	-169.86	548.85	473.81	75.04	7.314						
10,600.00	10,588.22	10,585.93	10,582.72	37.99	37.76	-90.44	198.02	-170.54	549.51	474.11	75.40	7.288						
10,650.00	10,638.22	10,639.64	10,636.42	38.17	37.96	-90.35	198.81	-170.99	549.92	474.14	75.77	7.257						
10,700.00	10,688.22	10,707.76	10,689.02	38.34	38.20	-90.34	198.97	-171.08	550.00	473.80	76.20	7.218						
10,750.00	10,738.22	10,742.24	10,739.02	38.52	38.32	-90.34	198.97	-171.08	550.00	473.51	76.50	7.190						
10,800.00	10,788.22	10,807.76	10,789.02	38.69	38.55	-90.34	198.97	-171.08	550.00	473.10	76.90	7.152						
10,850.00	10,838.22	10,842.24	10,839.02	38.87	38.68	-90.34	198.97	-171.08	550.00	472.80	77.20	7.124						
10,863.96	10,852.18	10,856.20	10,852.98	38.92	38.73	90.00	198.97	-171.08	550.00	472.70	77.30	7.115						
10,900.00	10,888.19	10,907.79	10,888.99	39.04	38.91	90.12	198.97	-171.08	550.00	472.40	77.61	7.087						
10,950.00	10,937.87	10,941.89	10,938.67	39.20	39.03	90.68	198.97	-171.08	550.04	472.15	77.89	7.062						
11,000.00	10,986.89	10,990.90	10,987.69	39.35	39.21	91.66	198.97	-171.08	550.25	472.03	78.22	7.035						
11,050.00	11,034.86	11,039.53	11,036.31	39.49	39.38	93.01	198.84	-171.07	550.84	472.30	78.54	7.014						
11,100.00	11,081.42	11,090.58	11,087.23	39.63	39.54	94.51	195.47	-171.06	551.88	473.03	78.85	6.999						
11,150.00	11,126.22	11,143.16	11,139.15	39.76	39.70	95.99	187.29	-171.01	553.31	474.16	79.14	6.991						
11,200.00	11,168.92	11,197.38	11,191.67	39.87	39.86	97.44	173.90	-170.93	555.09	475.68	79.41	6.990						
11,250.00	11,209.20	11,253.35	11,244.31	39.98	40.02	98.86	154.94	-170.83	557.19	477.55	79.64	6.996						
11,300.00	11,246.74	11,311.15	11,296.46	40.07	40.17	100.22	130.07	-170.69	559.54	479.72	79.82	7.010						
11,350.00	11,281.26	11,370.86	11,347.41	40.15	40.31	101.52	99.00	-170.51	562.06	482.11	79.95	7.031						
11,400.00	11,312.50	11,432.51	11,396.34	40.23	40.44	102.74	61.53	-170.30	564.65	484.65	80.00	7.058						
11,450.00	11,340.22	11,496.11	11,442.29	40.30	40.57	103.86	17.61	-170.05	567.23	487.23	80.00	7.091						
11,500.00	11,364.21	11,561.58	11,484.21	40.39	40.72	104.86	-32.63	-169.76	569.67	489.73	79.94	7.126						
11,550.00	11,384.29	11,628.80	11,521.01	40.50	40.86	105.73	-88.84	-169.45	571.89	492.02	79.87	7.160						
11,600.00	11,400.30	11,697.58	11,551.57	40.61	41.01	106.44	-150.40	-169.10	573.77	493.96	79.81	7.189						
11,650.00	11,412.12	11,767.63	11,574.90	40.72	41.16	106.98	-216.40	-168.72	575.23	495.43	79.79	7.209						
11,700.00	11,419.67	11,838.61	11,590.15	40.83	41.31	107.32	-285.68	-168.33	576.19	496.33	79.87	7.215						
11,750.00	11,422.88	11,910.13	11,596.74	40.95	41.45	107.47	-356.85	-167.93	576.61	496.56	80.05	7.203						
11,800.00	11,423.00	11,965.31	11,597.00	41.07	41.57	107.48	-412.03	-167.62	576.63	496.35	80.27	7.183						
11,850.00	11,423.00	12,015.31	11,597.00	41.20	41.69	107.48	-462.03	-167.33	576.63	496.11	80.52	7.162						
11,900.00	11,423.00	12,065.31	11,597.00	41.34	41.82	107.48	-512.03	-167.05	576.63	495.86	80.77	7.139						
11,950.00	11,423.00	12,115.31	11,597.00	41.49	41.96	107.48	-562.03	-166.77	576.63	495.57	81.06	7.114						
12,000.00	11,423.00	12,165.31	11,597.00	41.65	42.12	107.48	-612.02	-166.48	576.63	495.26	81.36	7.087						
12,050.00	11,423.00	12,215.31	11,597.00	41.83	42.29	107.48	-662.02	-166.20	576.63	494.93	81.70	7.058						
12,100.00	11,423.00	12,265.31	11,597.00	42.01	42.47	107.48	-712.02	-165.92	576.63	494.58	82.05	7.028						
12,150.00	11,423.00	12,315.31	11,597.00	42.22	42.65	107.48	-762.02	-165.63	576.63	494.20	82.43	6.996						
12,200.00	11,423.00	12,365.31	11,597.00	42.42	42.86	107.48	-812.02	-165.35	576.63	493.81	82.82	6.962						
12,250.00	11,423.00	12,415.31	11,597.00	42.64	43.07	107.48	-862.02	-165.07	576.63	493.38	83.24	6.927						
12,300.00	11,423.00	12,465.31	11,597.00	42.87	43.29	107.48	-912.02	-164.79	576.63	492.94	83.68	6.891						
12,350.00	11,423.00	12,515.31	11,597.00	43.12	43.53	107.48	-962.02	-164.50	576.63	492.48	84.15	6.852						
12,400.00	11,423.00	12,565.31	11,597.00	43.36	43.77	107.48	-1,012.02	-164.22	576.63	492.00	84.63	6.814						
12,450.00	11,423.00	12,615.31	11,597.00	43.63	44.03	107.48	-1,062.02	-163.94	576.63	491.49	85.14	6.773						
12,500.00	11,423.00	12,665.31	11,597.00	43.90	44.30	107.48	-1,112.02	-163.65	576.63	490.97	85.66	6.732						
12,550.00	11,423.00	12,715.31	11,597.00	44.19	44.57	107.48	-1,162.02	-163.37	576.63	490.42	86.21	6.689						
12,600.00	11,423.00	12,765.31	11,597.00	44.48	44.86	107.48	-1,212.02	-163.09	576.63	489.86	86.77	6.646						
12,650.00	11,423.00	12,815.31	11,597.00	44.78	45.16	107.48	-1,262.01	-162.80	576.63	489.27	87.36	6.601						

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft		
Reference																
Measured	Vertical	Measured	Vertical	Semi Major Axis		Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning			
Depth	Depth	Depth	Depth	Reference	Offset		Toolface	+N/-S	+E/-W	Between				Between	Separation	Factor
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)					
12,700.00	11,423.00	12,865.31	11,597.00	45.09	45.47	107.48	-1,312.01	-162.52	576.63	488.67	87.96	6.556				
12,750.00	11,423.00	12,915.31	11,597.00	45.42	45.78	107.48	-1,362.01	-162.24	576.63	488.05	88.58	6.510				
12,800.00	11,423.00	12,965.31	11,597.00	45.74	46.11	107.48	-1,412.01	-161.96	576.63	487.41	89.21	6.463				
12,850.00	11,423.00	13,015.31	11,597.00	46.06	46.44	107.48	-1,462.01	-161.67	576.63	486.75	89.87	6.416				
12,900.00	11,423.00	13,065.31	11,597.00	46.43	46.79	107.48	-1,512.01	-161.39	576.63	486.08	90.54	6.368				
12,950.00	11,423.00	13,115.31	11,597.00	46.80	47.14	107.48	-1,562.01	-161.11	576.63	485.39	91.24	6.320				
13,000.00	11,423.00	13,165.31	11,597.00	47.16	47.50	107.48	-1,612.01	-160.82	576.63	484.69	91.94	6.272				
13,050.00	11,423.00	13,215.31	11,597.00	47.54	47.87	107.48	-1,662.01	-160.54	576.63	483.96	92.67	6.223				
13,100.00	11,423.00	13,265.31	11,597.00	47.92	48.25	107.48	-1,712.01	-160.26	576.63	483.22	93.40	6.174				
13,150.00	11,423.00	13,315.31	11,597.00	48.31	48.63	107.48	-1,762.01	-159.97	576.63	482.47	94.16	6.124				
13,200.00	11,423.00	13,365.31	11,597.00	48.71	49.03	107.48	-1,812.01	-159.69	576.63	481.70	94.93	6.075				
13,250.00	11,423.00	13,415.31	11,597.00	49.12	49.43	107.48	-1,862.00	-159.41	576.63	480.92	95.71	6.025				
13,300.00	11,423.00	13,465.31	11,597.00	49.53	49.84	107.48	-1,912.00	-159.12	576.63	480.12	96.51	5.975				
13,350.00	11,423.00	13,515.31	11,597.00	49.95	50.25	107.48	-1,962.00	-158.84	576.63	479.31	97.32	5.925				
13,400.00	11,423.00	13,565.31	11,597.00	50.38	50.67	107.48	-2,012.00	-158.56	576.63	478.48	98.14	5.875				
13,450.00	11,423.00	13,615.31	11,597.00	50.81	51.10	107.48	-2,062.00	-158.28	576.63	477.64	98.98	5.825				
13,500.00	11,423.00	13,665.31	11,597.00	51.25	51.54	107.48	-2,112.00	-157.99	576.63	476.79	99.83	5.776				
13,550.00	11,423.00	13,715.31	11,597.00	51.70	51.98	107.48	-2,162.00	-157.71	576.63	475.93	100.70	5.726				
13,600.00	11,423.00	13,765.31	11,597.00	52.15	52.43	107.48	-2,212.00	-157.43	576.63	475.05	101.57	5.677				
13,650.00	11,423.00	13,815.31	11,597.00	52.62	52.89	107.48	-2,262.00	-157.14	576.63	474.16	102.46	5.628				
13,700.00	11,423.00	13,865.31	11,597.00	53.08	53.35	107.48	-2,312.00	-156.86	576.63	473.27	103.36	5.579				
13,750.00	11,423.00	13,915.31	11,597.00	53.55	53.82	107.48	-2,362.00	-156.58	576.63	472.35	104.27	5.530				
13,800.00	11,423.00	13,965.31	11,597.00	54.03	54.29	107.48	-2,412.00	-156.29	576.63	471.43	105.19	5.482				
13,850.00	11,423.00	14,015.31	11,597.00	54.52	54.77	107.48	-2,462.00	-156.01	576.63	470.50	106.13	5.433				
13,900.00	11,423.00	14,065.31	11,597.00	55.00	55.26	107.48	-2,511.99	-155.73	576.63	469.56	107.07	5.385				
13,950.00	11,423.00	14,115.31	11,597.00	55.50	55.74	107.48	-2,561.99	-155.44	576.63	468.60	108.03	5.338				
14,000.00	11,423.00	14,165.31	11,597.00	55.99	56.24	107.48	-2,611.99	-155.16	576.63	467.64	108.99	5.291				
14,050.00	11,423.00	14,215.31	11,597.00	56.50	56.74	107.48	-2,661.99	-154.88	576.63	466.67	109.96	5.244				
14,100.00	11,423.00	14,265.31	11,597.00	57.01	57.24	107.48	-2,711.99	-154.60	576.63	465.68	110.94	5.198				
14,150.00	11,423.00	14,315.31	11,597.00	57.52	57.75	107.48	-2,761.99	-154.31	576.63	464.69	111.94	5.151				
14,200.00	11,423.00	14,365.31	11,597.00	58.04	58.27	107.48	-2,811.99	-154.03	576.63	463.69	112.93	5.106				
14,250.00	11,423.00	14,415.31	11,597.00	58.57	58.79	107.48	-2,861.99	-153.75	576.63	462.68	113.95	5.061				
14,300.00	11,423.00	14,465.31	11,597.00	59.09	59.31	107.48	-2,911.99	-153.46	576.63	461.67	114.96	5.016				
14,350.00	11,423.00	14,515.31	11,597.00	59.62	59.84	107.48	-2,961.99	-153.18	576.63	460.64	115.99	4.971	Alert			
14,400.00	11,423.00	14,565.31	11,597.00	60.16	60.37	107.48	-3,011.99	-152.90	576.63	459.61	117.02	4.928	Alert			
14,450.00	11,423.00	14,615.31	11,597.00	60.70	60.91	107.48	-3,061.99	-152.61	576.63	458.56	118.06	4.884	Alert			
14,500.00	11,423.00	14,665.31	11,597.00	61.24	61.45	107.48	-3,111.98	-152.33	576.63	457.52	119.11	4.841	Alert			
14,550.00	11,423.00	14,715.31	11,597.00	61.79	61.99	107.48	-3,161.98	-152.05	576.63	456.46	120.17	4.798	Alert			
14,600.00	11,423.00	14,765.31	11,597.00	62.34	62.54	107.48	-3,211.98	-151.76	576.63	455.40	121.23	4.756	Alert			
14,650.00	11,423.00	14,815.31	11,597.00	62.89	63.09	107.48	-3,261.98	-151.48	576.63	454.32	122.30	4.715	Alert			
14,700.00	11,423.00	14,865.31	11,597.00	63.45	63.64	107.48	-3,311.98	-151.20	576.63	453.25	123.38	4.674	Alert			
14,750.00	11,423.00	14,915.31	11,597.00	64.01	64.20	107.48	-3,361.98	-150.92	576.63	452.16	124.47	4.633	Alert			
14,800.00	11,423.00	14,965.31	11,597.00	64.58	64.76	107.48	-3,411.98	-150.63	576.63	451.07	125.56	4.593	Alert			
14,850.00	11,423.00	15,015.31	11,597.00	65.15	65.33	107.48	-3,461.98	-150.35	576.63	449.97	126.65	4.553	Alert			
14,900.00	11,423.00	15,065.31	11,597.00	65.72	65.90	107.48	-3,511.98	-150.07	576.63	448.87	127.76	4.513	Alert			
14,950.00	11,423.00	15,115.31	11,597.00	66.29	66.47	107.48	-3,561.96	-149.78	576.63	447.76	128.87	4.475	Alert			
15,000.00	11,423.00	15,165.31	11,597.00	66.87	67.04	107.48	-3,611.96	-149.50	576.63	446.65	129.98	4.436	Alert			
15,050.00	11,423.00	15,215.31	11,597.00	67.45	67.62	107.48	-3,661.96	-149.22	576.63	445.52	131.10	4.398	Alert			
15,100.00	11,423.00	15,265.31	11,597.00	68.03	68.20	107.48	-3,711.96	-148.93	576.63	444.40	132.23	4.361	Alert			
15,150.00	11,423.00	15,315.31	11,597.00	68.62	68.78	107.48	-3,761.97	-148.65	576.63	443.27	133.36	4.324	Alert			
15,200.00	11,423.00	15,365.31	11,597.00	69.21	69.37	107.48	-3,811.97	-148.37	576.63	442.13	134.50	4.287	Alert			

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:		0.50 ft
Sec 15-T23S-R31E - Maldives 15-22 Fed Com 711H - Wellbore #1 - Permit Plan 1															
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			
15.250.00	11.423.00	15.415.31	11.597.00	69.80	69.96	107.48	-3.861.97	-148.08	576.63	440.99	135.64	4.251	Alert		
15.300.00	11.423.00	15.465.31	11.597.00	70.39	70.55	107.48	-3.911.97	-147.80	576.63	439.84	136.79	4.216	Alert		
15.350.00	11.423.00	15.515.31	11.597.00	70.99	71.14	107.48	-3.961.97	-147.52	576.63	438.69	137.94	4.180	Alert		
15.400.00	11.423.00	15.565.31	11.597.00	71.59	71.74	107.48	-4.011.97	-147.24	576.63	437.53	139.10	4.146	Alert		
15.450.00	11.423.00	15.615.31	11.597.00	72.19	72.34	107.48	-4.061.97	-146.95	576.63	436.37	140.26	4.111	Alert		
15.500.00	11.423.00	15.665.31	11.597.00	72.79	72.94	107.48	-4.111.97	-146.67	576.63	435.20	141.42	4.077	Alert		
15.550.00	11.423.00	15.715.31	11.597.00	73.40	73.54	107.48	-4.161.97	-146.39	576.63	434.03	142.59	4.044	Alert		
15.600.00	11.423.00	15.765.31	11.597.00	74.01	74.15	107.48	-4.211.97	-146.10	576.63	432.86	143.77	4.011	Alert		
15.650.00	11.423.00	15.815.31	11.597.00	74.62	74.75	107.48	-4.261.97	-145.82	576.63	431.68	144.95	3.978	Alert		
15.700.00	11.423.00	15.865.31	11.597.00	75.23	75.36	107.48	-4.311.97	-145.54	576.63	430.50	146.13	3.946	Alert		
15.750.00	11.423.00	15.915.31	11.597.00	75.85	75.98	107.48	-4.361.96	-145.25	576.63	429.31	147.32	3.914	Alert		
15.800.00	11.423.00	15.965.31	11.597.00	76.46	76.59	107.48	-4.411.96	-144.97	576.63	428.12	148.51	3.883	Alert		
15.850.00	11.423.00	16.015.31	11.597.00	77.08	77.21	107.48	-4.461.96	-144.69	576.63	426.92	149.70	3.852	Alert		
15.900.00	11.423.00	16.065.31	11.597.00	77.70	77.82	107.48	-4.511.96	-144.40	576.63	425.73	150.90	3.821	Alert		
15.950.00	11.423.00	16.115.31	11.597.00	78.32	78.44	107.48	-4.561.96	-144.12	576.63	424.52	152.10	3.791	Alert		
16.000.00	11.423.00	16.165.31	11.597.00	78.95	79.07	107.48	-4.611.96	-143.84	576.63	423.32	153.31	3.761	Alert		
16.050.00	11.423.00	16.215.31	11.597.00	79.57	79.69	107.48	-4.661.96	-143.56	576.63	422.11	154.52	3.732	Alert		
16.100.00	11.423.00	16.265.31	11.597.00	80.20	80.31	107.48	-4.711.96	-143.27	576.63	420.90	155.73	3.703	Alert		
16.150.00	11.423.00	16.315.31	11.597.00	80.83	80.94	107.48	-4.761.96	-142.99	576.63	419.68	156.95	3.674	Alert		
16.200.00	11.423.00	16.365.31	11.597.00	81.46	81.57	107.48	-4.811.96	-142.71	576.63	418.46	158.17	3.646	Alert		
16.250.00	11.423.00	16.415.31	11.597.00	82.09	82.20	107.48	-4.861.96	-142.42	576.63	417.24	159.39	3.618	Alert		
16.300.00	11.423.00	16.465.31	11.597.00	82.73	82.83	107.48	-4.911.96	-142.14	576.63	416.01	160.61	3.590	Alert		
16.350.00	11.423.00	16.515.31	11.597.00	83.36	83.47	107.48	-4.961.96	-141.86	576.63	414.78	161.84	3.563	Alert		
16.400.00	11.423.00	16.565.31	11.597.00	84.00	84.10	107.48	-5.011.95	-141.57	576.63	413.55	163.07	3.536	Alert		
16.450.00	11.423.00	16.615.31	11.597.00	84.64	84.74	107.48	-5.061.95	-141.29	576.63	412.32	164.31	3.509	Alert		
16.500.00	11.423.00	16.665.31	11.597.00	85.28	85.38	107.48	-5.111.95	-141.01	576.63	411.08	165.55	3.483	Alert		
16.550.00	11.423.00	16.715.31	11.597.00	85.92	86.02	107.48	-5.161.95	-140.72	576.63	409.84	166.79	3.457	Alert		
16.600.00	11.423.00	16.765.31	11.597.00	86.56	86.66	107.48	-5.211.95	-140.44	576.63	408.60	168.03	3.432	Alert		
16.650.00	11.423.00	16.815.31	11.597.00	87.21	87.30	107.48	-5.261.95	-140.16	576.63	407.35	169.27	3.406	Alert		
16.700.00	11.423.00	16.865.31	11.597.00	87.85	87.94	107.48	-5.311.95	-139.88	576.63	406.11	170.52	3.382	Alert		
16.750.00	11.423.00	16.915.31	11.597.00	88.50	88.59	107.48	-5.361.95	-139.59	576.63	404.86	171.77	3.357	Alert		
16.800.00	11.423.00	16.965.31	11.597.00	89.15	89.23	107.48	-5.411.95	-139.31	576.63	403.60	173.02	3.333	Alert		
16.850.00	11.423.00	17.015.31	11.597.00	89.80	89.88	107.48	-5.461.95	-139.03	576.63	402.35	174.28	3.309	Alert		
16.900.00	11.423.00	17.065.31	11.597.00	90.45	90.53	107.48	-5.511.95	-138.74	576.63	401.09	175.54	3.285	Alert		
16.950.00	11.423.00	17.115.31	11.597.00	91.10	91.18	107.48	-5.561.95	-138.46	576.63	399.83	176.80	3.262	Alert		
17.000.00	11.423.00	17.165.31	11.597.00	91.75	91.83	107.48	-5.611.94	-138.18	576.63	398.57	178.06	3.238	Alert		
17.050.00	11.423.00	17.215.31	11.597.00	92.41	92.48	107.48	-5.661.94	-137.89	576.63	397.31	179.32	3.216	Alert		
17.100.00	11.423.00	17.265.31	11.597.00	93.06	93.14	107.48	-5.711.94	-137.61	576.63	396.04	180.59	3.193	Alert		
17.150.00	11.423.00	17.315.31	11.597.00	93.72	93.79	107.48	-5.761.94	-137.33	576.63	394.77	181.86	3.171	Alert		
17.200.00	11.423.00	17.365.31	11.597.00	94.37	94.45	107.48	-5.811.94	-137.04	576.63	393.50	183.13	3.149	Alert		
17.250.00	11.423.00	17.415.31	11.597.00	95.03	95.11	107.48	-5.861.94	-136.76	576.63	392.23	184.40	3.127	Alert		
17.300.00	11.423.00	17.465.31	11.597.00	95.69	95.76	107.48	-5.911.94	-136.48	576.63	390.95	185.68	3.106	Alert		
17.350.00	11.423.00	17.515.31	11.597.00	96.35	96.42	107.48	-5.961.94	-136.20	576.63	389.68	186.95	3.084	Alert		
17.400.00	11.423.00	17.565.31	11.597.00	97.01	97.08	107.48	-6.011.94	-135.91	576.63	388.40	188.23	3.063	Alert		
17.450.00	11.423.00	17.615.31	11.597.00	97.68	97.74	107.48	-6.061.94	-135.63	576.63	387.12	189.51	3.043	Alert		
17.500.00	11.423.00	17.665.31	11.597.00	98.34	98.40	107.48	-6.111.94	-135.35	576.63	385.84	190.79	3.022	Alert		
17.550.00	11.423.00	17.715.31	11.597.00	99.00	99.07	107.48	-6.161.94	-135.06	576.63	384.55	192.08	3.002	Alert		
17.600.00	11.423.00	17.765.31	11.597.00	99.67	99.73	107.48	-6.211.94	-134.78	576.63	383.27	193.36	2.982	Alert		
17.650.00	11.423.00	17.815.31	11.597.00	100.34	100.40	107.48	-6.261.93	-134.50	576.63	381.98	194.65	2.962	Alert		
17.700.00	11.423.00	17.865.31	11.597.00	101.00	101.06	107.48	-6.311.93	-134.21	576.63	380.69	195.94	2.943	Alert		
17.750.00	11.423.00	17.915.31	11.597.00	101.67	101.73	107.48	-6.361.93	-133.93	576.63	379.40	197.23	2.924	Alert		

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

### Anticollision Report

<b>Company:</b>	WCDCS Permian NM	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 0-MWD+HDGM													Offset Well Error:	0.50 ft
Sec 15-T23S-R31E - Maldives 15-22 Fed Com 711H - Wellbore #1 - Permit Plan 1														
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 Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Separation (ft)	Factor		
17,800.00	11,423.00	17,965.31	11,597.00	102.34	102.39	107.48	-6,411.93	-133.65	576.63	378.11	198.52	2.905	Alert	
17,850.00	11,423.00	18,015.31	11,597.00	103.01	103.06	107.48	-6,461.93	-133.37	576.63	376.81	199.82	2.886	Alert	
17,900.00	11,423.00	18,065.31	11,597.00	103.68	103.73	107.48	-6,511.93	-133.08	576.63	375.52	201.11	2.867	Alert	
17,950.00	11,423.00	18,115.31	11,597.00	104.35	104.40	107.48	-6,561.93	-132.80	576.63	374.22	202.41	2.849	Alert	
18,000.00	11,423.00	18,165.31	11,597.00	105.02	105.07	107.48	-6,611.93	-132.52	576.63	372.92	203.71	2.831	Alert	
18,050.00	11,423.00	18,215.31	11,597.00	105.69	105.74	107.48	-6,661.93	-132.23	576.63	371.62	205.01	2.813	Alert	
18,100.00	11,423.00	18,265.31	11,597.00	106.37	106.41	107.48	-6,711.93	-131.95	576.63	370.32	206.31	2.795	Alert	
18,150.00	11,423.00	18,315.31	11,597.00	107.04	107.09	107.48	-6,761.93	-131.67	576.63	369.01	207.61	2.777	Alert	
18,200.00	11,423.00	18,365.31	11,597.00	107.71	107.76	107.48	-6,811.93	-131.38	576.63	367.71	208.92	2.760	Alert	
18,250.00	11,423.00	18,415.31	11,597.00	108.39	108.43	107.48	-6,861.92	-131.10	576.63	366.40	210.22	2.743	Alert	
18,300.00	11,423.00	18,465.31	11,597.00	109.07	109.11	107.48	-6,911.92	-130.82	576.63	365.10	211.53	2.726	Alert	
18,350.00	11,423.00	18,515.31	11,597.00	109.74	109.79	107.48	-6,961.92	-130.53	576.63	363.79	212.84	2.709	Alert	
18,400.00	11,423.00	18,565.31	11,597.00	110.42	110.46	107.48	-7,011.92	-130.25	576.63	362.48	214.15	2.693	Alert	
18,450.00	11,423.00	18,615.31	11,597.00	111.10	111.14	107.48	-7,061.92	-129.97	576.63	361.17	215.46	2.676	Alert	
18,500.00	11,423.00	18,665.31	11,597.00	111.78	111.82	107.48	-7,111.92	-129.69	576.63	359.86	216.77	2.660	Alert	
18,550.00	11,423.00	18,715.31	11,597.00	112.46	112.49	107.48	-7,161.92	-129.40	576.63	358.54	218.09	2.644	Alert	
18,600.00	11,423.00	18,765.31	11,597.00	113.14	113.17	107.48	-7,211.92	-129.12	576.63	357.23	219.40	2.628	Alert	
18,650.00	11,423.00	18,815.31	11,597.00	113.82	113.85	107.48	-7,261.92	-128.84	576.63	355.91	220.72	2.613	Alert	
18,700.00	11,423.00	18,865.31	11,597.00	114.50	114.53	107.48	-7,311.92	-128.55	576.63	354.59	222.03	2.597	Alert	
18,750.00	11,423.00	18,915.31	11,597.00	115.18	115.21	107.48	-7,361.92	-128.27	576.63	353.28	223.35	2.582	Alert	
18,769.09	11,423.00	18,934.40	11,597.00	115.44	115.47	107.48	-7,381.01	-128.16	576.63	352.77	223.86	2.576	Alert, 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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 10-INC-ONLY													Offset Well Error:	10.00 ft
Sec 15-T23S-R31E - Todd 15 C Fed #003 (Active) - Wellbore #1 - No Surveys														
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	0.00	0.00	0.50	10.00	102.06	-301.70	1,411.88	1,443.75					
50.00	50.00	47.45	47.45	0.50	10.02	102.06	-301.70	1,411.88	1,443.75	1,433.23	10.52	137.268		
100.00	100.00	97.51	97.51	0.52	10.09	102.06	-301.69	1,411.88	1,443.75	1,433.15	10.60	136.160		
150.00	150.00	147.57	147.57	0.59	10.21	102.06	-301.66	1,411.88	1,443.74	1,432.94	10.80	133.676		
200.00	200.00	197.64	197.64	0.70	10.39	102.06	-301.63	1,411.88	1,443.74	1,432.65	11.09	130.189		
250.00	250.00	247.70	247.70	0.84	10.61	102.06	-301.58	1,411.88	1,443.73	1,432.27	11.45	126.061		
300.00	300.00	297.77	297.77	0.99	10.89	102.06	-301.53	1,411.88	1,443.72	1,431.84	11.88	121.558		
350.00	350.00	347.83	347.83	1.15	11.21	102.05	-301.46	1,411.88	1,443.70	1,431.35	12.35	116.872		
400.00	400.00	397.89	397.89	1.31	11.57	102.05	-301.39	1,411.88	1,443.69	1,430.81	12.87	112.136		
450.00	450.00	447.96	447.96	1.48	11.96	102.05	-301.30	1,411.88	1,443.67	1,430.23	13.44	107.448		
500.00	500.00	498.02	498.02	1.65	12.39	102.04	-301.20	1,411.88	1,443.65	1,429.61	14.03	102.876		
550.00	550.00	548.08	548.08	1.82	12.84	102.04	-301.09	1,411.88	1,443.63	1,428.96	14.66	98.465		
600.00	600.00	598.15	598.15	1.99	13.33	102.03	-300.98	1,411.88	1,443.60	1,428.28	15.32	94.244		
650.00	650.00	648.21	648.21	2.16	13.83	102.03	-300.85	1,411.88	1,443.57	1,427.57	16.00	90.230		
700.00	700.00	698.27	698.27	2.34	14.36	102.02	-300.71	1,411.88	1,443.54	1,426.84	16.70	86.430		
750.00	750.00	748.34	748.33	2.51	14.91	102.02	-300.56	1,411.88	1,443.51	1,426.09	17.42	82.843		
800.00	800.00	798.40	798.40	2.69	15.47	102.01	-300.40	1,411.88	1,443.48	1,425.31	18.16	79.465		
850.00	850.00	848.46	848.46	2.87	16.05	102.00	-300.22	1,411.88	1,443.44	1,424.52	18.92	76.289		
900.00	900.00	898.52	898.52	3.04	16.65	102.00	-300.04	1,411.88	1,443.41	1,423.72	19.69	73.304		
950.00	950.00	948.59	948.59	3.22	17.25	101.99	-299.85	1,411.88	1,443.37	1,422.89	20.47	70.501		
1,000.00	1,000.00	998.65	998.65	3.40	17.87	101.98	-299.65	1,411.88	1,443.32	1,422.06	21.27	67.868		
1,050.00	1,050.00	1,048.71	1,048.71	3.58	18.50	101.97	-299.43	1,411.88	1,443.28	1,421.21	22.07	65.395		
1,100.00	1,100.00	1,098.78	1,098.77	3.75	19.13	101.97	-299.21	1,411.88	1,443.23	1,420.35	22.88	63.071		
1,150.00	1,150.00	1,148.84	1,148.83	3.93	19.77	101.96	-298.97	1,411.88	1,443.18	1,419.48	23.70	60.885		
1,200.00	1,200.00	1,198.90	1,198.90	4.11	20.42	101.95	-298.73	1,411.88	1,443.13	1,418.60	24.53	58.827		
1,250.00	1,250.00	1,248.96	1,248.96	4.29	21.08	101.94	-298.47	1,411.88	1,443.08	1,417.71	25.37	56.888		
1,300.00	1,300.00	1,299.02	1,299.02	4.46	21.74	101.93	-298.21	1,411.88	1,443.03	1,416.82	26.21	55.061		
1,350.00	1,350.00	1,349.09	1,349.08	4.64	22.41	101.92	-297.93	1,411.88	1,442.97	1,415.91	27.05	53.335		
1,400.00	1,400.00	1,399.15	1,399.14	4.82	23.09	101.90	-297.64	1,411.88	1,442.91	1,415.00	27.91	51.705		
1,450.00	1,450.00	1,449.21	1,449.20	5.00	23.76	101.89	-297.34	1,411.88	1,442.85	1,414.09	28.76	50.164		
1,500.00	1,500.00	1,499.27	1,499.26	5.18	24.45	101.88	-297.03	1,411.88	1,442.79	1,413.16	29.62	48.704		
1,550.00	1,550.00	1,549.33	1,549.32	5.36	25.13	101.87	-296.72	1,411.88	1,442.72	1,412.23	30.49	47.321		
1,600.00	1,600.00	1,599.40	1,599.38	5.53	25.82	101.86	-296.39	1,411.88	1,442.65	1,411.30	31.36	46.009		
1,650.00	1,650.00	1,649.46	1,649.44	5.71	26.52	101.84	-296.05	1,411.88	1,442.58	1,410.35	32.23	44.762		
1,700.00	1,700.00	1,699.52	1,699.50	5.89	27.21	101.83	-295.69	1,411.88	1,442.51	1,409.41	33.10	43.578		
1,750.00	1,750.00	1,749.58	1,749.56	6.07	27.91	101.81	-295.33	1,411.88	1,442.44	1,408.46	33.98	42.450		
1,800.00	1,800.00	1,799.64	1,799.62	6.25	28.61	101.80	-294.96	1,411.88	1,442.36	1,407.50	34.86	41.377		
1,850.00	1,850.00	1,849.70	1,849.68	6.43	29.32	101.79	-294.58	1,411.88	1,442.28	1,406.54	35.74	40.353		
1,900.00	1,900.00	1,899.76	1,899.74	6.61	30.02	101.77	-294.19	1,411.88	1,442.20	1,405.58	36.63	39.376		
1,950.00	1,950.00	1,949.82	1,949.80	6.78	30.73	101.75	-293.78	1,411.88	1,442.12	1,404.61	37.51	38.443		
2,000.00	2,000.00	1,999.88	1,999.86	6.96	31.44	101.74	-293.37	1,411.88	1,442.04	1,403.63	38.40	37.551		
2,050.00	2,050.00	2,049.94	2,049.92	7.14	32.15	101.72	-292.94	1,411.88	1,441.95	1,402.66	39.29	36.698		
2,100.00	2,100.00	2,100.00	2,099.97	7.32	32.86	101.70	-292.51	1,411.88	1,441.86	1,401.68	40.18	35.881		
2,150.00	2,150.00	2,150.06	2,150.03	7.50	33.58	101.69	-292.06	1,411.88	1,441.77	1,400.69	41.08	35.098		
2,200.00	2,200.00	2,200.12	2,200.09	7.68	34.30	101.67	-291.61	1,411.88	1,441.68	1,399.70	41.97	34.347		
2,250.00	2,250.00	2,250.18	2,250.15	7.86	35.01	101.65	-291.14	1,411.88	1,441.58	1,398.71	42.87	33.626		
2,300.00	2,300.00	2,300.24	2,300.20	8.04	35.73	101.63	-290.66	1,411.88	1,441.49	1,397.72	43.77	32.934		
2,350.00	2,350.00	2,350.30	2,350.26	8.22	36.45	101.61	-290.17	1,411.88	1,441.39	1,396.72	44.67	32.269		
2,400.00	2,400.00	2,400.36	2,400.32	8.39	37.18	101.59	-289.67	1,411.88	1,441.29	1,395.72	45.57	31.629		
2,450.00	2,450.00	2,450.41	2,450.37	8.57	37.90	101.57	-289.17	1,411.88	1,441.19	1,394.72	46.47	31.013		
2,500.00	2,500.00	2,500.47	2,500.43	8.75	38.62	101.55	-288.65	1,411.88	1,441.08	1,393.71	47.37	30.420		

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 10-INC-ONLY													Offset Well Error:		10.00 ft
Reference															
Measured															
Depth	Vertical	Measured	Vertical	Semi Major Axis		Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning		
(ft)	Depth	Depth	Depth	Reference	Offset		Tooface	+N/-S	+E/-W	Centres				Ellipses	Separation
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)			
2,550.00	2,550.00	2,550.53	2,550.48	8.93	39.35	39.63	-288.12	1,411.88	1,440.81	1,392.54	48.27	29.846			
2,600.00	2,599.99	2,600.59	2,600.54	9.11	40.07	39.63	-287.57	1,411.88	1,440.20	1,391.02	49.18	29.286			
2,650.00	2,649.98	2,650.64	2,650.58	9.28	40.80	39.64	-287.02	1,411.88	1,439.25	1,389.17	50.08	28.741			
2,700.00	2,699.96	2,700.68	2,700.62	9.45	41.53	39.67	-286.46	1,411.88	1,437.96	1,386.98	50.98	28.207			
2,750.00	2,749.92	2,750.71	2,750.65	9.63	42.25	39.70	-285.89	1,411.88	1,436.33	1,384.45	51.88	27.685			
2,800.00	2,799.86	2,800.72	2,800.66	9.81	42.98	39.75	-285.31	1,411.88	1,434.37	1,381.59	52.78	27.175			
2,850.00	2,849.79	2,850.72	2,850.65	9.98	43.71	39.81	-284.71	1,411.88	1,432.14	1,378.45	53.69	26.676			
2,900.00	2,899.71	2,900.72	2,900.65	10.16	44.44	39.85	-284.11	1,411.88	1,429.89	1,375.30	54.59	26.193			
2,950.00	2,949.63	2,950.71	2,950.64	10.33	45.17	39.90	-283.50	1,411.88	1,427.63	1,372.14	55.50	25.725			
3,000.00	2,999.56	3,000.71	3,000.63	10.51	45.90	39.95	-282.87	1,411.88	1,425.38	1,368.98	56.40	25.272			
3,050.00	3,049.48	3,050.71	3,050.62	10.69	46.63	39.99	-282.24	1,411.88	1,423.12	1,365.81	57.31	24.833			
3,100.00	3,099.40	3,100.71	3,100.62	10.86	47.36	40.04	-281.59	1,411.88	1,420.87	1,362.65	58.22	24.407			
3,150.00	3,149.33	3,150.70	3,150.61	11.04	48.10	40.09	-280.94	1,411.88	1,418.61	1,359.48	59.12	23.994			
3,200.00	3,199.25	3,200.70	3,200.60	11.22	48.83	40.13	-280.27	1,411.88	1,416.35	1,356.32	60.03	23.593			
3,250.00	3,249.17	3,250.70	3,250.60	11.39	49.56	40.18	-279.59	1,411.88	1,414.09	1,353.15	60.94	23.204			
3,300.00	3,299.10	3,300.70	3,300.59	11.57	50.30	40.22	-278.91	1,411.88	1,411.83	1,349.97	61.85	22.826			
3,350.00	3,349.02	3,350.70	3,350.59	11.75	51.03	40.27	-278.21	1,411.88	1,409.56	1,346.80	62.76	22.459			
3,400.00	3,398.94	3,400.70	3,400.58	11.93	51.76	40.31	-277.50	1,411.88	1,407.30	1,343.62	63.67	22.102			
3,450.00	3,448.86	3,450.69	3,450.57	12.10	52.50	40.36	-276.78	1,411.88	1,405.03	1,340.45	64.58	21.755			
3,500.00	3,498.79	3,500.69	3,500.57	12.28	53.24	40.40	-276.05	1,411.88	1,402.76	1,337.27	65.50	21.417			
3,550.00	3,548.71	3,550.69	3,550.56	12.46	53.97	40.45	-275.31	1,411.88	1,400.49	1,334.08	66.41	21.089			
3,600.00	3,598.63	3,600.69	3,600.56	12.64	54.71	40.49	-274.56	1,411.88	1,398.22	1,330.90	67.32	20.769			
3,650.00	3,648.56	3,650.69	3,650.55	12.82	55.44	40.53	-273.80	1,411.88	1,395.95	1,327.71	68.24	20.458			
3,700.00	3,698.48	3,700.69	3,700.55	13.00	56.18	40.58	-273.03	1,411.88	1,393.68	1,324.53	69.15	20.154			
3,750.00	3,748.40	3,750.70	3,750.54	13.18	56.92	40.62	-272.24	1,411.88	1,391.40	1,321.34	70.06	19.859			
3,800.00	3,798.33	3,800.70	3,800.54	13.35	57.65	40.66	-271.45	1,411.88	1,389.13	1,318.15	70.98	19.571			
3,850.00	3,848.25	3,850.70	3,850.53	13.53	58.39	40.70	-270.65	1,411.88	1,386.85	1,314.95	71.89	19.290			
3,900.00	3,898.17	3,900.70	3,900.52	13.71	59.13	40.75	-269.83	1,411.88	1,384.57	1,311.76	72.81	19.016			
3,950.00	3,948.10	3,950.70	3,950.52	13.89	59.87	40.79	-269.01	1,411.88	1,382.29	1,308.56	73.73	18.749			
4,000.00	3,998.02	4,000.70	4,000.51	14.07	60.61	40.83	-268.18	1,411.88	1,380.01	1,305.36	74.64	18.488			
4,050.00	4,047.94	4,050.70	4,050.51	14.25	61.35	40.87	-267.33	1,411.88	1,377.72	1,302.16	75.56	18.234			
4,100.00	4,097.87	4,100.71	4,100.50	14.43	62.09	40.91	-266.47	1,411.88	1,375.44	1,298.96	76.48	17.985			
4,150.00	4,147.79	4,150.71	4,150.50	14.61	62.82	40.95	-265.61	1,411.88	1,373.15	1,295.75	77.39	17.742			
4,200.00	4,197.71	4,200.71	4,200.49	14.79	63.56	40.99	-264.73	1,411.88	1,370.86	1,292.55	78.31	17.505			
4,250.00	4,247.63	4,250.71	4,250.49	14.97	64.30	41.03	-263.84	1,411.88	1,368.57	1,289.34	79.23	17.274			
4,300.00	4,297.56	4,300.72	4,300.48	15.15	65.04	41.07	-262.95	1,411.88	1,366.28	1,286.13	80.15	17.047			
4,350.00	4,347.48	4,350.72	4,350.48	15.33	65.78	41.11	-262.04	1,411.88	1,363.98	1,282.92	81.07	16.826			
4,400.00	4,397.40	4,400.72	4,400.47	15.51	66.52	41.15	-261.12	1,411.88	1,361.69	1,279.70	81.98	16.609			
4,450.00	4,447.33	4,450.73	4,450.47	15.69	67.27	41.19	-260.19	1,411.88	1,359.39	1,276.49	82.90	16.397			
4,500.00	4,497.25	4,500.73	4,500.46	15.87	68.01	41.23	-259.25	1,411.88	1,357.09	1,273.27	83.82	16.190			
4,550.00	4,547.17	4,550.73	4,550.46	16.05	68.75	41.27	-258.30	1,411.88	1,354.79	1,270.05	84.74	15.987			
4,600.00	4,597.10	4,600.74	4,600.45	16.23	69.49	41.30	-257.34	1,411.88	1,352.48	1,266.82	85.66	15.789			
4,650.00	4,647.02	4,650.74	4,650.45	16.41	70.23	41.34	-256.36	1,411.88	1,350.18	1,263.60	86.58	15.595			
4,700.00	4,696.94	4,700.74	4,700.44	16.59	70.97	41.38	-255.38	1,411.88	1,347.87	1,260.37	87.50	15.404			
4,750.00	4,746.87	4,750.75	4,750.43	16.77	71.71	41.42	-254.39	1,411.88	1,345.56	1,257.14	88.42	15.218			
4,800.00	4,796.79	4,800.75	4,800.43	16.95	72.45	41.45	-253.39	1,411.88	1,343.25	1,253.91	89.34	15.035			
4,850.00	4,846.71	4,850.76	4,850.42	17.13	73.20	41.49	-252.37	1,411.88	1,340.94	1,250.68	90.26	14.856			
4,900.00	4,896.63	4,900.76	4,900.42	17.31	73.94	41.52	-251.35	1,411.88	1,338.63	1,247.45	91.18	14.681			
4,950.00	4,946.56	4,950.77	4,950.41	17.49	74.68	41.56	-250.31	1,411.88	1,336.31	1,244.21	92.10	14.509			
5,000.00	4,996.48	5,000.77	5,000.40	17.67	75.42	41.60	-249.27	1,411.88	1,333.99	1,240.97	93.02	14.340			
5,050.00	5,046.40	5,050.78	5,050.40	17.85	76.17	41.63	-248.21	1,411.88	1,331.67	1,237.73	93.95	14.175			

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 10-INC-ONLY													Offset Well Error:	10.00 ft
Sec 15-T23S-R31E - Todd 15 C Fed #003 (Active) - Wellbore #1 - No Surveys														
				Semi Major Axis			Distance							
Reference		Offset		Reference	Offset	Highside	Offset Wellbore Centre		Between	Between	Minimum	Separation	Warning	
Measured	Vertical	Measured	Vertical			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
Depth	Depth	Depth	Depth	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
5.100.00	5,096.33	5,100.78	5,100.39	18.03	76.91	41.67	-247.14	1,411.88	1,329.35	1,234.48	94.87	14.013		
5.150.00	5,146.25	5,150.79	5,150.39	18.21	77.65	41.70	-246.07	1,411.88	1,327.03	1,231.24	95.79	13.854		
5.200.00	5,196.17	5,200.79	5,200.38	18.39	78.39	41.73	-244.98	1,411.88	1,324.70	1,227.99	96.71	13.697		
5.250.00	5,246.10	5,250.80	5,250.37	18.57	79.14	41.77	-243.88	1,411.88	1,322.38	1,224.74	97.63	13.544		
5.300.00	5,296.02	5,300.80	5,300.36	18.75	79.88	41.80	-242.77	1,411.88	1,320.05	1,221.49	98.56	13.394		
5.350.00	5,345.94	5,350.81	5,350.36	18.93	80.62	41.83	-241.65	1,411.88	1,317.71	1,218.24	99.48	13.246		
5.400.00	5,395.87	5,400.81	5,400.35	19.11	81.37	41.87	-240.52	1,411.88	1,315.38	1,214.98	100.40	13.101		
5.450.00	5,445.79	5,450.82	5,450.34	19.30	82.11	41.90	-239.38	1,411.88	1,313.04	1,211.72	101.32	12.959		
5.500.00	5,495.71	5,500.82	5,500.34	19.48	82.85	41.93	-238.23	1,411.88	1,310.71	1,208.46	102.25	12.819		
5.550.00	5,545.64	5,550.83	5,550.33	19.66	83.60	41.96	-237.07	1,411.88	1,308.37	1,205.20	103.17	12.682		
5.600.00	5,595.56	5,600.84	5,600.32	19.84	84.34	41.99	-235.90	1,411.88	1,306.02	1,201.93	104.09	12.547		
5.650.00	5,645.48	5,650.84	5,650.31	20.02	85.08	42.03	-234.72	1,411.88	1,303.68	1,198.66	105.01	12.414		
5.700.00	5,695.40	5,700.85	5,700.30	20.20	85.83	42.06	-233.52	1,411.88	1,301.33	1,195.39	105.94	12.284		
5.750.00	5,745.33	5,750.85	5,750.30	20.38	86.57	42.09	-232.32	1,411.88	1,298.98	1,192.12	106.86	12.156		
5.800.00	5,795.25	5,800.86	5,800.29	20.56	87.32	42.12	-231.11	1,411.88	1,296.63	1,188.85	107.78	12.030		
5.850.00	5,845.17	5,850.87	5,850.28	20.74	88.06	42.15	-229.88	1,411.88	1,294.28	1,185.57	108.71	11.906		
5.900.00	5,895.10	5,900.87	5,900.27	20.92	88.80	42.18	-228.65	1,411.88	1,291.92	1,182.29	109.63	11.784		
5.950.00	5,945.02	5,950.88	5,950.26	21.11	89.55	42.21	-227.40	1,411.88	1,289.57	1,179.01	110.56	11.664		
6.000.00	5,994.94	6,000.88	6,000.25	21.29	90.29	42.23	-226.15	1,411.88	1,287.21	1,175.73	111.48	11.547		
6.050.00	6,044.87	6,050.89	6,050.24	21.47	91.04	42.26	-224.88	1,411.88	1,284.84	1,172.44	112.40	11.431		
6.100.00	6,094.79	6,100.90	6,100.23	21.65	91.78	42.29	-223.60	1,411.88	1,282.48	1,169.15	113.33	11.317		
6.150.00	6,144.71	6,150.90	6,150.22	21.83	92.53	42.32	-222.31	1,411.88	1,280.11	1,165.86	114.25	11.204		
6.200.00	6,194.64	6,200.91	6,200.21	22.01	93.27	42.35	-221.02	1,411.88	1,277.75	1,162.57	115.18	11.094		
6.250.00	6,244.56	6,250.92	6,250.20	22.19	94.02	42.37	-219.71	1,411.88	1,275.37	1,159.27	116.10	10.985		
6.300.00	6,294.48	6,300.92	6,300.19	22.37	94.76	42.40	-218.39	1,411.88	1,273.00	1,155.98	117.02	10.878		
6.350.00	6,344.40	6,350.93	6,350.17	22.56	95.51	42.43	-217.06	1,411.88	1,270.62	1,152.68	117.95	10.773		
6.400.00	6,394.33	6,400.93	6,400.16	22.74	96.25	42.45	-215.72	1,411.88	1,268.25	1,149.37	118.87	10.669		
6.450.00	6,444.25	6,450.94	6,450.15	22.92	97.00	42.48	-214.37	1,411.88	1,265.87	1,146.07	119.80	10.567		
6.500.00	6,494.17	6,500.95	6,500.14	23.10	97.74	42.50	-213.01	1,411.88	1,263.48	1,142.76	120.72	10.466		
6.550.00	6,544.10	6,550.95	6,550.13	23.28	98.49	42.53	-211.63	1,411.88	1,261.10	1,139.45	121.65	10.367		
6.600.00	6,594.02	6,600.96	6,600.11	23.46	99.23	42.55	-210.25	1,411.88	1,258.71	1,136.14	122.57	10.269		
6.650.00	6,643.94	6,650.96	6,650.10	23.64	99.98	42.57	-208.86	1,411.88	1,256.32	1,132.82	123.50	10.173		
6.700.00	6,693.87	6,700.97	6,700.09	23.83	100.72	42.60	-207.46	1,411.88	1,253.93	1,129.51	124.42	10.078		
6.750.00	6,743.79	6,750.98	6,750.07	24.01	101.47	42.62	-206.04	1,411.88	1,251.53	1,126.19	125.35	9.984		
6.800.00	6,793.71	6,800.98	6,800.06	24.19	102.21	42.64	-204.62	1,411.88	1,249.14	1,122.86	126.27	9.892		
6.850.00	6,843.64	6,850.99	6,850.04	24.37	102.96	42.67	-203.18	1,411.88	1,246.74	1,119.54	127.20	9.802		
6.900.00	6,893.56	6,900.99	6,900.03	24.55	103.70	42.69	-201.74	1,411.88	1,244.34	1,116.21	128.12	9.712		
6.950.00	6,943.48	6,951.00	6,950.01	24.73	104.45	42.71	-200.28	1,411.88	1,241.93	1,112.88	129.05	9.624		
7.000.00	6,993.40	7,001.01	7,000.00	24.92	105.20	42.73	-198.81	1,411.88	1,239.52	1,109.55	129.97	9.537		
7.050.00	7,043.33	7,051.01	7,049.98	25.10	105.94	42.75	-197.34	1,411.88	1,237.11	1,106.21	130.90	9.451		
7.100.00	7,093.25	7,101.02	7,099.96	25.28	106.69	42.77	-195.85	1,411.88	1,234.70	1,102.88	131.83	9.366		
7.150.00	7,143.17	7,151.02	7,149.95	25.46	107.43	42.79	-194.35	1,411.88	1,232.29	1,099.54	132.75	9.283		
7.200.00	7,193.10	7,201.03	7,199.93	25.64	108.18	42.81	-192.84	1,411.88	1,229.87	1,096.19	133.66	9.200		
7.250.00	7,243.02	7,251.03	7,249.91	25.82	108.92	42.83	-191.32	1,411.88	1,227.45	1,092.85	134.60	9.119		
7.300.00	7,292.94	7,301.04	7,299.89	26.01	109.67	42.85	-189.79	1,411.88	1,225.03	1,089.50	135.53	9.039		
7.350.00	7,342.87	7,351.04	7,349.87	26.19	110.42	42.87	-188.25	1,411.88	1,222.60	1,086.15	136.45	8.960		
7.400.00	7,392.79	7,401.05	7,399.85	26.37	111.16	42.89	-186.70	1,411.88	1,220.18	1,082.80	137.38	8.882		
7.450.00	7,442.71	7,451.05	7,449.84	26.55	111.91	42.91	-185.14	1,411.88	1,217.75	1,079.44	138.31	8.805		
7.500.00	7,492.64	7,501.06	7,499.82	26.73	112.65	42.92	-183.57	1,411.88	1,215.32	1,076.08	139.23	8.729		
7.550.00	7,542.56	7,551.06	7,549.79	26.91	113.40	42.94	-181.99	1,411.88	1,212.88	1,072.72	140.16	8.654		
7.600.00	7,592.48	7,601.07	7,599.77	27.10	114.15	42.96	-180.40	1,411.88	1,210.44	1,069.36	141.08	8.580		

Anticollision Report

<b>Company:</b>	WCDCS Permian NM	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 10-INC-ONLY													Offset Well Error:	10.00 ft
Sec 15-T23S-R31E - Todd 15 C Fed #003 (Active) - Wellbore #1 - No Surveys														
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
7.650.00	7,642.41	7,651.07	7,649.75	27.28	114.89	42.97	-178.79	1,411.88	1,208.00	1,065.99	142.01	8.506		
7.700.00	7,692.33	7,701.08	7,699.73	27.46	115.64	42.99	-177.18	1,411.88	1,205.56	1,062.62	142.94	8.434		
7.750.00	7,742.25	7,751.08	7,749.71	27.64	116.38	43.00	-175.55	1,411.88	1,203.12	1,059.25	143.86	8.363		
7.800.00	7,792.17	7,801.08	7,799.69	27.82	117.13	43.02	-173.92	1,411.88	1,200.67	1,055.88	144.79	8.293		
7.850.00	7,842.10	7,851.09	7,849.66	28.01	117.88	43.03	-172.27	1,411.88	1,198.22	1,052.50	145.72	8.223		
7.900.00	7,892.02	7,901.09	7,899.64	28.19	118.62	43.05	-170.62	1,411.88	1,195.76	1,049.12	146.64	8.154		
7.950.00	7,941.94	7,951.09	7,949.62	28.37	119.37	43.06	-168.95	1,411.88	1,193.31	1,045.74	147.57	8.086		
8.000.00	7,991.87	8,001.10	7,999.59	28.55	120.12	43.07	-167.27	1,411.88	1,190.85	1,042.36	148.50	8.019		
8.050.00	8,041.79	8,051.10	8,049.57	28.73	120.86	43.09	-165.59	1,411.88	1,188.39	1,038.97	149.42	7.953		
8.100.00	8,091.71	8,101.10	8,099.54	28.91	121.61	43.10	-163.89	1,411.88	1,185.93	1,035.58	150.35	7.888		
8.150.00	8,141.64	8,151.11	8,149.51	29.10	122.36	43.11	-162.18	1,411.88	1,183.46	1,032.19	151.27	7.823		
8.200.00	8,191.56	8,201.11	8,199.49	29.28	123.10	43.12	-160.46	1,411.88	1,180.99	1,028.79	152.20	7.759		
8.250.00	8,241.48	8,251.11	8,249.46	29.46	123.85	43.13	-158.73	1,411.88	1,178.52	1,025.39	153.13	7.696		
8.300.00	8,291.41	8,301.12	8,299.43	29.64	124.60	43.14	-156.99	1,411.88	1,176.05	1,021.99	154.05	7.634		
8.350.00	8,341.33	8,351.12	8,349.40	29.82	125.34	43.15	-155.24	1,411.88	1,173.57	1,018.59	154.98	7.572		
8.400.00	8,391.25	8,401.12	8,399.37	30.01	126.09	43.16	-153.48	1,411.88	1,171.09	1,015.18	155.91	7.511		
8.450.00	8,441.17	8,451.12	8,449.34	30.19	126.84	43.17	-151.71	1,411.88	1,168.61	1,011.77	156.83	7.451		
8.500.00	8,491.10	8,501.12	8,499.31	30.37	127.58	43.18	-149.93	1,411.88	1,166.12	1,008.36	157.76	7.392		
8.550.00	8,541.02	8,551.12	8,549.28	30.55	128.33	43.19	-148.13	1,411.88	1,163.63	1,004.94	158.69	7.333		
8.600.00	8,590.94	8,601.13	8,599.25	30.73	129.08	43.20	-146.33	1,411.88	1,161.14	1,001.53	159.62	7.275		
8.650.00	8,640.87	8,651.13	8,649.22	30.92	129.82	43.20	-144.52	1,411.88	1,158.65	998.11	160.54	7.217		
8.700.00	8,690.79	8,701.13	8,699.19	31.10	130.57	43.21	-142.69	1,411.88	1,156.15	994.68	161.47	7.160		
8.750.00	8,740.71	8,751.13	8,749.15	31.28	131.32	43.22	-140.86	1,411.88	1,153.65	991.26	162.40	7.104		
8.800.00	8,790.64	8,801.13	8,799.12	31.46	132.06	43.22	-139.01	1,411.88	1,151.15	987.83	163.32	7.048		
8.850.00	8,840.56	8,851.13	8,849.09	31.64	132.81	43.23	-137.16	1,411.88	1,148.65	984.40	164.25	6.993		
8.900.00	8,890.48	8,901.13	8,899.05	31.83	133.56	43.23	-135.29	1,411.88	1,146.14	980.97	165.18	6.939		
8.950.00	8,940.41	8,951.13	8,949.02	32.01	134.30	43.24	-133.41	1,411.88	1,143.63	977.53	166.10	6.885		
9.000.00	8,990.33	9,001.13	8,998.98	32.19	135.05	43.24	-131.53	1,411.88	1,141.12	974.09	167.03	6.832		
9.050.00	9,040.25	9,051.13	9,048.94	32.37	135.80	43.25	-129.63	1,411.88	1,138.61	970.65	167.96	6.779		
9.100.00	9,090.18	9,101.13	9,098.91	32.55	136.54	43.25	-127.72	1,411.88	1,136.09	967.20	168.89	6.727		
9.125.33	9,115.46	9,126.45	9,124.21	32.65	136.92	43.25	-126.75	1,411.88	1,134.81	965.46	169.35	6.701	CC, ES, SF	
9.150.00	9,140.10	8,300.00	8,298.32	32.74	124.58	43.14	-157.03	1,411.88	1,417.21	1,287.17	130.04	10.898		
9.200.00	9,190.02	8,300.00	8,298.32	32.92	124.58	43.14	-157.03	1,411.88	1,445.78	1,317.97	127.80	11.312		
9.250.00	9,239.94	8,300.00	8,298.32	33.10	124.58	43.14	-157.03	1,411.88	1,475.49	1,349.90	125.58	11.749		

Anticollision Report

<b>Company:</b>	WCDSC Permian NM	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 262-INC-ONLY													Offset Well Error:	10.00 ft
Reference													Warning	
Reference		Offset		Semi Major Axis			Distance				Separation		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	0.00	0.00	0.50	10.00	133.97	-407.54	422.48	587.08					
50.00	50.00	41.24	41.24	0.50	10.01	133.97	-407.50	422.48	586.98	576.47	10.51	55.852		
100.00	100.00	92.28	92.28	0.52	10.04	133.95	-407.33	422.48	586.86	576.31	10.56	55.599		
150.00	150.00	143.32	143.31	0.59	10.09	133.93	-407.08	422.48	586.66	575.98	10.68	54.928		
200.00	200.00	194.35	194.35	0.70	10.17	133.90	-406.60	422.48	586.36	575.50	10.87	53.956		
250.00	250.00	245.38	245.38	0.84	10.26	133.86	-406.04	422.48	585.98	574.88	11.10	52.791		
300.00	300.00	295.97	295.96	0.99	10.49	133.82	-405.37	422.48	585.53	574.05	11.47	51.033		
350.00	350.00	346.33	346.32	1.15	10.84	133.77	-404.66	422.48	585.04	573.05	11.99	48.811		
400.00	400.00	396.70	396.68	1.31	11.28	133.71	-403.90	422.48	584.52	571.93	12.59	46.439		
450.00	450.00	447.06	447.03	1.48	11.79	133.66	-403.09	422.48	583.96	570.70	13.27	44.022		
500.00	500.00	497.42	497.39	1.65	12.37	133.59	-402.24	422.48	583.38	569.37	14.01	41.638		
550.00	550.00	548.67	548.62	1.82	13.11	133.53	-401.28	422.48	582.73	567.81	14.93	39.042		
600.00	600.00	600.00	599.94	1.99	13.93	133.44	-400.14	422.48	581.97	566.05	15.92	36.560		
650.00	650.00	651.32	651.24	2.16	14.80	133.35	-398.83	422.48	581.09	564.13	16.97	34.249		
700.00	700.00	702.63	702.53	2.34	15.73	133.24	-397.35	422.48	580.10	562.04	18.06	32.118		
750.00	750.00	753.37	753.25	2.51	16.83	133.13	-395.75	422.48	579.03	559.68	19.35	29.931		
800.00	800.00	804.10	803.95	2.69	17.99	133.01	-394.06	422.48	577.88	557.21	20.67	27.955		
850.00	850.00	853.28	853.11	2.87	19.06	132.89	-392.39	422.48	576.73	554.81	21.92	26.312		
900.00	900.00	901.89	901.69	3.04	20.11	132.78	-390.90	422.48	575.69	552.54	23.15	24.871		
950.00	950.00	950.51	950.29	3.22	21.18	132.68	-389.58	422.48	574.77	550.37	24.39	23.563		
1,000.00	1,000.00	999.14	998.91	3.40	22.26	132.60	-388.43	422.48	573.97	548.31	25.66	22.372		
1,050.00	1,050.00	1,074.60	1,047.16	3.58	23.92	132.52	-387.45	422.48	573.28	545.79	27.49	20.851		
1,100.00	1,100.00	1,097.40	1,097.15	3.75	24.36	132.46	-386.58	422.48	572.69	544.58	28.11	20.372		
1,150.00	1,150.00	1,147.39	1,147.13	3.93	25.33	132.40	-385.71	422.48	572.10	542.84	29.26	19.553		
1,200.00	1,200.00	1,197.38	1,197.12	4.11	26.31	132.33	-384.83	422.48	571.51	541.10	30.41	18.792		
1,250.00	1,250.00	1,247.37	1,247.10	4.29	27.29	132.27	-383.96	422.48	570.93	539.35	31.57	18.082		
1,300.00	1,300.00	1,297.37	1,297.09	4.46	28.28	132.20	-383.09	422.48	570.34	537.60	32.74	17.420		
1,350.00	1,350.00	1,347.36	1,347.07	4.64	29.27	132.14	-382.22	422.48	569.75	535.84	33.91	16.801		
1,400.00	1,400.00	1,397.35	1,397.06	4.82	30.27	132.07	-381.34	422.48	569.17	534.08	35.09	16.221		
1,450.00	1,450.00	1,447.34	1,447.04	5.00	31.27	132.01	-380.47	422.48	568.58	532.32	36.27	15.677		
1,500.00	1,500.00	1,497.34	1,497.03	5.18	32.28	131.94	-379.60	422.48	568.00	530.55	37.45	15.166		
1,550.00	1,550.00	1,547.44	1,547.13	5.36	33.32	131.87	-378.72	422.48	567.42	528.74	38.67	14.672		
1,600.00	1,600.00	1,597.79	1,597.46	5.53	34.43	131.81	-377.80	422.48	566.81	526.84	39.96	14.183		
1,650.00	1,650.00	1,648.13	1,647.80	5.71	35.55	131.73	-376.84	422.48	566.17	524.91	41.26	13.722		
1,700.00	1,700.00	1,698.48	1,698.13	5.89	36.67	131.66	-375.83	422.48	565.50	522.94	42.56	13.288		
1,750.00	1,750.00	1,748.82	1,748.46	6.07	37.79	131.58	-374.77	422.48	564.80	520.94	43.86	12.878		
1,800.00	1,800.00	1,799.16	1,798.79	6.25	38.92	131.49	-373.66	422.48	564.07	518.91	45.16	12.490		
1,850.00	1,850.00	1,849.49	1,849.11	6.43	40.05	131.40	-372.51	422.48	563.32	516.85	46.47	12.123		
1,900.00	1,900.00	1,899.83	1,899.43	6.61	41.18	131.31	-371.31	422.48	562.53	514.75	47.77	11.775		
1,950.00	1,950.00	1,950.16	1,949.75	6.78	42.31	131.22	-370.06	422.48	561.71	512.63	49.08	11.444		
2,000.00	2,000.00	2,000.49	2,000.06	6.96	43.44	131.12	-368.77	422.48	560.86	510.47	50.40	11.129		
2,050.00	2,050.00	2,050.47	2,050.02	7.14	44.66	131.02	-367.46	422.48	560.00	508.21	51.80	10.811		
2,100.00	2,100.00	2,100.45	2,099.99	7.32	45.89	130.91	-366.15	422.48	559.15	505.94	53.20	10.510		
2,150.00	2,150.00	2,150.43	2,149.95	7.50	47.12	130.81	-364.84	422.48	558.29	503.68	54.61	10.224		
2,200.00	2,200.00	2,200.42	2,199.92	7.68	48.34	130.71	-363.53	422.48	557.43	501.42	56.01	9.952		
2,250.00	2,250.00	2,250.40	2,249.89	7.86	49.57	130.61	-362.23	422.48	556.56	499.16	57.42	9.693		
2,300.00	2,300.00	2,300.38	2,299.85	8.04	50.81	130.51	-360.92	422.48	555.73	496.90	58.83	9.446		
2,350.00	2,350.00	2,350.36	2,349.82	8.22	52.04	130.40	-359.61	422.48	554.88	494.64	60.24	9.210		
2,400.00	2,400.00	2,400.35	2,399.78	8.39	53.27	130.30	-358.30	422.48	554.03	492.38	61.66	8.986		
2,450.00	2,450.00	2,450.33	2,449.75	8.57	54.51	130.20	-356.99	422.48	553.19	490.12	63.07	8.771		
2,500.00	2,500.00	2,501.28	2,500.68	8.75	56.07	130.09	-355.62	422.48	552.32	487.51	64.81	8.522		

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 262-INC-ONLY													Offset Well Error:		10.00 ft
Reference															
Measured															
Depth	Vertical	Measured	Vertical	Semi Major Axis		Highside Tooface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning		
(ft)	Depth (ft)	Depth (ft)	Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
2,550.00	2,550.00	2,552.95	2,552.32	8.93	57.89	68.08	-354.00	422.48	551.23	484.43	66.81	8.251			
2,600.00	2,599.99	2,604.61	2,603.95	9.11	59.72	68.01	-352.14	422.48	549.83	481.03	68.80	7.992			
2,650.00	2,649.98	2,656.26	2,655.56	9.28	61.54	67.97	-350.03	422.48	548.11	477.32	70.79	7.743			
2,700.00	2,699.96	2,707.89	2,707.14	9.45	63.36	67.95	-347.68	422.48	546.08	473.30	72.78	7.503			
2,750.00	2,749.92	2,759.50	2,758.68	9.63	65.19	67.96	-345.08	422.48	543.73	468.95	74.77	7.272			
2,800.00	2,799.86	2,811.09	2,810.19	9.81	67.01	67.99	-342.24	422.48	541.06	464.30	76.77	7.048			
2,850.00	2,849.79	2,862.65	2,861.65	9.98	68.84	68.03	-339.15	422.48	538.11	459.36	78.76	6.833			
2,900.00	2,899.71	2,914.19	2,913.09	10.16	70.66	68.04	-335.82	422.48	535.00	454.26	80.74	6.626			
2,950.00	2,949.63	2,965.71	2,964.48	10.33	72.49	68.03	-332.25	422.48	531.74	449.01	82.73	6.427			
3,000.00	2,999.56	3,013.95	3,012.62	10.51	74.94	68.03	-329.00	422.48	528.54	443.18	85.37	6.191			
3,050.00	3,049.48	3,062.70	3,061.26	10.69	77.14	68.03	-325.80	422.48	525.40	437.65	87.75	5.988			
3,100.00	3,099.40	3,110.05	3,108.52	10.86	79.12	68.06	-322.97	422.48	522.45	432.52	89.92	5.810			
3,150.00	3,149.33	3,158.10	3,156.51	11.04	80.94	68.12	-320.44	422.48	519.72	427.80	91.92	5.654			
3,200.00	3,199.25	3,206.77	3,205.12	11.22	82.60	68.20	-318.09	422.48	517.13	423.36	93.77	5.515			
3,250.00	3,249.17	3,255.44	3,253.74	11.39	84.27	68.29	-315.91	422.48	514.67	419.05	95.62	5.382			
3,300.00	3,299.10	3,304.12	3,302.38	11.57	85.93	68.40	-313.93	422.48	512.32	414.86	97.47	5.256			
3,350.00	3,349.02	3,352.80	3,351.03	11.75	87.60	68.53	-312.12	422.48	510.11	410.79	99.32	5.136			
3,400.00	3,398.94	3,403.59	3,401.78	11.93	89.29	68.67	-310.28	422.48	507.92	406.74	101.18	5.020			
3,450.00	3,448.86	3,454.52	3,452.67	12.10	90.98	68.80	-308.29	422.48	505.63	402.60	103.04	4.907 Alert			
3,500.00	3,498.79	3,505.44	3,503.55	12.28	92.67	68.91	-306.13	422.48	503.25	398.35	104.90	4.797 Alert			
3,550.00	3,548.71	3,556.36	3,554.42	12.46	94.36	69.01	-303.83	422.48	500.78	394.02	106.76	4.691 Alert			
3,600.00	3,598.63	3,605.81	3,603.82	12.64	95.97	69.10	-301.51	422.48	498.25	389.70	108.55	4.590 Alert			
3,650.00	3,648.56	3,654.27	3,652.23	12.82	97.52	69.21	-299.42	422.48	495.85	385.56	110.29	4.496 Alert			
3,700.00	3,698.48	3,702.74	3,700.66	13.00	99.08	69.34	-297.56	422.48	493.60	381.57	112.03	4.406 Alert			
3,750.00	3,748.40	3,751.21	3,749.10	13.18	100.64	69.49	-295.91	422.48	491.50	377.73	113.77	4.320 Alert			
3,800.00	3,798.33	3,801.51	3,799.38	13.35	102.25	69.66	-294.32	422.48	489.49	373.92	115.57	4.236 Alert			
3,850.00	3,848.25	3,852.46	3,850.30	13.53	103.89	69.81	-292.57	422.48	487.39	370.01	117.38	4.152 Alert			
3,900.00	3,898.17	3,903.41	3,901.21	13.71	105.53	69.96	-290.66	422.48	485.18	366.00	119.19	4.071 Alert			
3,950.00	3,948.10	3,954.36	3,952.12	13.89	107.17	70.09	-288.59	422.48	482.88	361.88	120.99	3.991 Alert			
4,000.00	3,998.02	4,005.30	4,003.01	14.07	108.80	70.21	-286.35	422.48	480.47	357.66	122.80	3.913 Alert			
4,050.00	4,047.94	4,056.23	4,053.89	14.25	110.44	70.31	-283.96	422.48	477.96	353.35	124.61	3.836 Alert			
4,100.00	4,097.87	4,104.64	4,102.25	14.43	112.07	70.42	-281.76	422.48	475.49	349.07	126.43	3.761 Alert			
4,150.00	4,147.79	4,153.41	4,150.98	14.61	113.70	70.55	-279.72	422.48	473.15	344.91	128.24	3.690 Alert			
4,200.00	4,197.71	4,202.19	4,199.71	14.79	115.32	70.69	-277.85	422.48	470.94	340.89	130.06	3.621 Alert			
4,250.00	4,247.63	4,251.71	4,249.21	14.97	116.91	70.85	-276.10	422.48	468.83	337.01	131.82	3.557 Alert			
4,300.00	4,297.56	4,301.79	4,299.25	15.15	118.46	71.01	-274.33	422.48	466.72	333.17	133.55	3.495 Alert			
4,350.00	4,347.48	4,351.86	4,349.30	15.33	120.02	71.17	-272.54	422.48	464.60	329.32	135.29	3.434 Alert			
4,400.00	4,397.40	4,401.94	4,399.34	15.51	121.57	71.34	-270.73	422.48	462.47	325.45	137.02	3.375 Alert			
4,450.00	4,447.33	4,452.01	4,449.38	15.69	123.13	71.50	-268.89	422.48	460.33	321.58	138.75	3.318 Alert			
4,500.00	4,497.25	4,502.09	4,499.42	15.87	124.68	71.66	-267.03	422.48	458.17	317.69	140.48	3.261 Alert			
4,550.00	4,547.17	4,552.16	4,549.46	16.05	126.24	71.82	-265.15	422.48	456.01	313.80	142.21	3.207 Alert			
4,600.00	4,597.10	4,602.24	4,599.50	16.23	127.79	71.98	-263.25	422.48	453.83	309.89	143.95	3.153 Alert			
4,650.00	4,647.02	4,652.31	4,649.54	16.41	129.34	72.14	-261.32	422.48	451.64	305.96	145.68	3.100 Alert			
4,700.00	4,696.94	4,702.39	4,699.57	16.59	130.90	72.29	-259.38	422.48	449.44	302.03	147.41	3.049 Alert			
4,750.00	4,746.87	4,752.46	4,749.61	16.77	132.45	72.45	-257.41	422.48	447.23	298.09	149.14	2.999 Alert			
4,800.00	4,796.79	4,801.33	4,798.45	16.95	133.88	72.62	-255.62	422.48	445.11	294.36	150.76	2.953 Alert			
4,850.00	4,846.71	4,850.67	4,847.75	17.13	135.35	72.80	-253.88	422.48	443.06	290.64	152.41	2.907 Alert			
4,900.00	4,896.63	4,900.00	4,897.06	17.31	136.82	72.99	-252.24	422.48	441.07	287.00	154.07	2.863 Alert			
4,950.00	4,946.56	4,949.43	4,946.46	17.49	138.29	73.19	-250.70	422.48	439.16	283.43	155.72	2.820 Alert			
5,000.00	4,996.48	4,999.51	4,996.52	17.67	139.73	73.39	-249.15	422.48	437.26	279.93	157.34	2.779 Alert			
5,050.00	5,046.40	5,049.60	5,046.58	17.85	141.16	73.60	-247.59	422.48	435.36	276.41	158.95	2.739 Alert			

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 Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 262-INC-ONLY													Offset Well Error:	10.00 ft
Sec 15-T23S-R31E - Todd 15 D Fed #004 (P&A) - Wellbore #1 - Inc Only Surveys														
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	
5,100.00	5,096.33	5,099.68	5,096.64	18.03	142.60	73.80	-246.00	422.48	433.45	272.88	160.57	2.699	Alert	
5,150.00	5,146.25	5,149.76	5,146.70	18.21	144.04	74.01	-244.38	422.48	431.52	269.34	162.18	2.661	Alert	
5,200.00	5,196.17	5,199.85	5,196.75	18.39	145.47	74.21	-242.75	422.48	429.59	265.79	163.79	2.623	Alert	
5,250.00	5,246.10	5,249.93	5,246.81	18.57	146.91	74.41	-241.09	422.48	427.64	262.23	165.41	2.585	Alert	
5,300.00	5,296.02	5,300.01	5,296.86	18.75	148.34	74.62	-239.40	422.48	425.68	258.66	167.02	2.549	Alert	
5,350.00	5,345.94	5,350.09	5,346.91	18.93	149.78	74.82	-237.70	422.48	423.71	255.07	168.64	2.513	Alert	
5,400.00	5,395.87	5,400.17	5,396.96	19.11	151.22	75.02	-235.97	422.48	421.73	251.48	170.25	2.477	Minor Risk	
5,450.00	5,445.79	5,450.25	5,447.02	19.30	152.65	75.23	-234.21	422.48	419.74	247.87	171.87	2.442	Minor Risk	
5,500.00	5,495.71	5,500.33	5,497.06	19.48	154.30	75.43	-232.44	422.48	417.73	244.04	173.69	2.405	Minor Risk	
5,550.00	5,545.64	5,550.41	5,547.11	19.66	155.86	75.63	-230.64	422.48	415.72	240.29	175.43	2.370	Minor Risk	
5,600.00	5,595.56	5,600.49	5,597.16	19.84	157.41	75.83	-228.81	422.48	413.69	236.52	177.16	2.335	Minor Risk	
5,650.00	5,645.48	5,650.57	5,647.20	20.02	158.97	76.04	-226.97	422.48	411.65	232.75	178.90	2.301	Minor Risk	
5,700.00	5,695.40	5,700.65	5,697.25	20.20	160.53	76.24	-225.10	422.48	409.59	228.96	180.63	2.268	Minor Risk	
5,750.00	5,745.33	5,750.73	5,747.29	20.38	162.08	76.44	-223.21	422.48	407.53	225.16	182.37	2.235	Minor Risk	
5,800.00	5,795.25	5,800.81	5,797.33	20.56	163.64	76.64	-221.29	422.48	405.45	221.35	184.10	2.202	Minor Risk	
5,850.00	5,845.17	5,850.88	5,847.37	20.74	165.20	76.84	-219.35	422.48	403.36	217.52	185.84	2.170	Minor Risk	
5,900.00	5,895.10	5,900.96	5,897.41	20.92	166.76	77.04	-217.39	422.48	401.26	213.68	187.58	2.139	Minor Risk	
5,950.00	5,945.02	5,950.85	5,947.26	21.11	168.39	77.25	-215.43	422.48	399.16	209.77	189.39	2.108	Minor Risk	
6,000.00	5,994.94	6,000.79	5,997.16	21.29	170.00	77.45	-213.47	422.48	397.07	205.88	191.18	2.077	Minor Risk	
6,050.00	6,044.87	6,050.72	6,047.05	21.47	171.62	77.66	-211.51	422.48	394.98	202.00	192.98	2.047	Minor Risk	
6,100.00	6,094.79	6,100.66	6,096.95	21.65	173.23	77.87	-209.55	422.48	392.89	198.12	194.77	2.017	Minor Risk	
6,150.00	6,144.71	6,150.59	6,146.85	21.83	174.85	78.08	-207.59	422.48	390.81	194.24	196.57	1.988	Minor Risk	
6,200.00	6,194.64	6,200.53	6,196.75	22.01	176.46	78.29	-205.63	422.48	388.74	190.38	198.36	1.960	Minor Risk	
6,250.00	6,244.56	6,250.47	6,246.64	22.19	178.08	78.51	-203.67	422.48	386.67	186.51	200.16	1.932	Minor Risk	
6,300.00	6,294.48	6,300.40	6,296.54	22.37	179.69	78.73	-201.71	422.48	384.60	182.65	201.95	1.904	Minor Risk	
6,350.00	6,344.40	6,350.34	6,346.44	22.56	181.31	78.95	-199.75	422.48	382.55	178.80	203.75	1.878	Minor Risk	
6,400.00	6,394.33	6,400.27	6,396.34	22.74	182.92	79.17	-197.79	422.48	380.50	174.96	205.54	1.851	Minor Risk	
6,450.00	6,444.25	6,449.68	6,445.71	22.92	184.29	79.40	-195.93	422.48	378.52	171.42	207.10	1.828	Minor Risk	
6,500.00	6,494.17	6,499.35	6,495.34	23.10	185.77	79.64	-194.10	422.48	376.56	167.80	208.77	1.804	Minor Risk	
6,550.00	6,544.10	6,549.02	6,544.98	23.28	187.26	79.88	-192.30	422.48	374.65	164.22	210.44	1.780	Minor Risk	
6,600.00	6,594.02	6,598.68	6,594.61	23.46	188.75	80.13	-190.56	422.48	372.79	160.68	212.11	1.758	Minor Risk	
6,650.00	6,643.94	6,648.35	6,644.25	23.64	190.23	80.39	-188.85	422.48	370.96	157.19	213.78	1.735	Minor Risk	
6,700.00	6,693.87	6,698.02	6,693.89	23.83	191.72	80.65	-187.20	422.48	369.19	153.74	215.45	1.714	Minor Risk	
6,750.00	6,743.79	6,747.69	6,743.54	24.01	193.20	80.93	-185.59	422.48	367.45	150.33	217.12	1.692	Minor Risk	
6,800.00	6,793.71	6,850.79	6,793.04	24.19	196.22	81.20	-184.02	422.48	365.76	145.43	220.32	1.660	Minor Risk	
6,850.00	6,843.64	6,847.15	6,842.95	24.37	196.12	81.49	-182.50	422.48	364.12	143.71	220.41	1.652	Minor Risk	
6,900.00	6,893.56	6,897.09	6,892.87	24.55	197.50	81.78	-180.97	422.48	362.48	140.52	221.96	1.633	Minor Risk	
6,950.00	6,943.48	6,947.03	6,942.79	24.73	198.87	82.07	-179.45	422.48	360.86	137.35	223.51	1.614	Minor Risk	
7,000.00	6,993.40	6,996.97	6,992.70	24.92	200.24	82.36	-177.92	422.48	359.25	134.18	225.07	1.596	Minor Risk	
7,050.00	7,043.33	7,046.91	7,042.62	25.10	201.61	82.66	-176.40	422.48	357.64	131.02	226.62	1.578	Minor Risk	
7,100.00	7,093.25	7,096.85	7,092.54	25.28	202.99	82.96	-174.87	422.48	356.05	127.87	228.17	1.560	Minor Risk	
7,150.00	7,143.17	7,146.79	7,142.45	25.46	204.36	83.26	-173.35	422.48	354.46	124.73	229.73	1.543	Minor Risk	
7,200.00	7,193.10	7,196.73	7,192.37	25.64	205.73	83.57	-171.82	422.48	352.89	121.60	231.28	1.526	Minor Risk	
7,250.00	7,243.02	7,246.67	7,242.28	25.82	207.10	83.88	-170.30	422.48	351.32	118.49	232.84	1.509	Minor Risk	
7,300.00	7,292.94	7,296.62	7,292.21	26.01	208.48	84.19	-168.77	422.48	349.77	115.37	234.39	1.492	Major Risk	
7,350.00	7,342.87	7,346.76	7,342.33	26.19	209.92	84.50	-167.22	422.48	348.21	112.20	236.01	1.475	Major Risk	
7,400.00	7,392.79	7,396.90	7,392.44	26.37	211.36	84.81	-165.63	422.48	346.63	109.00	237.63	1.459	Major Risk	
7,450.00	7,442.71	7,447.04	7,442.56	26.55	212.80	85.12	-164.01	422.48	345.03	105.79	239.24	1.442	Major Risk	
7,500.00	7,492.64	7,497.18	7,492.67	26.73	214.24	85.44	-162.36	422.48	343.42	102.56	240.86	1.426	Major Risk	
7,550.00	7,542.56	7,547.32	7,542.78	26.91	215.68	85.75	-160.67	422.48	341.78	99.30	242.48	1.410	Major Risk	
7,600.00	7,592.48	7,597.46	7,592.89	27.10	217.12	86.06	-158.95	422.48	340.13	96.03	244.09	1.393	Major Risk	

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

Anticollision Report

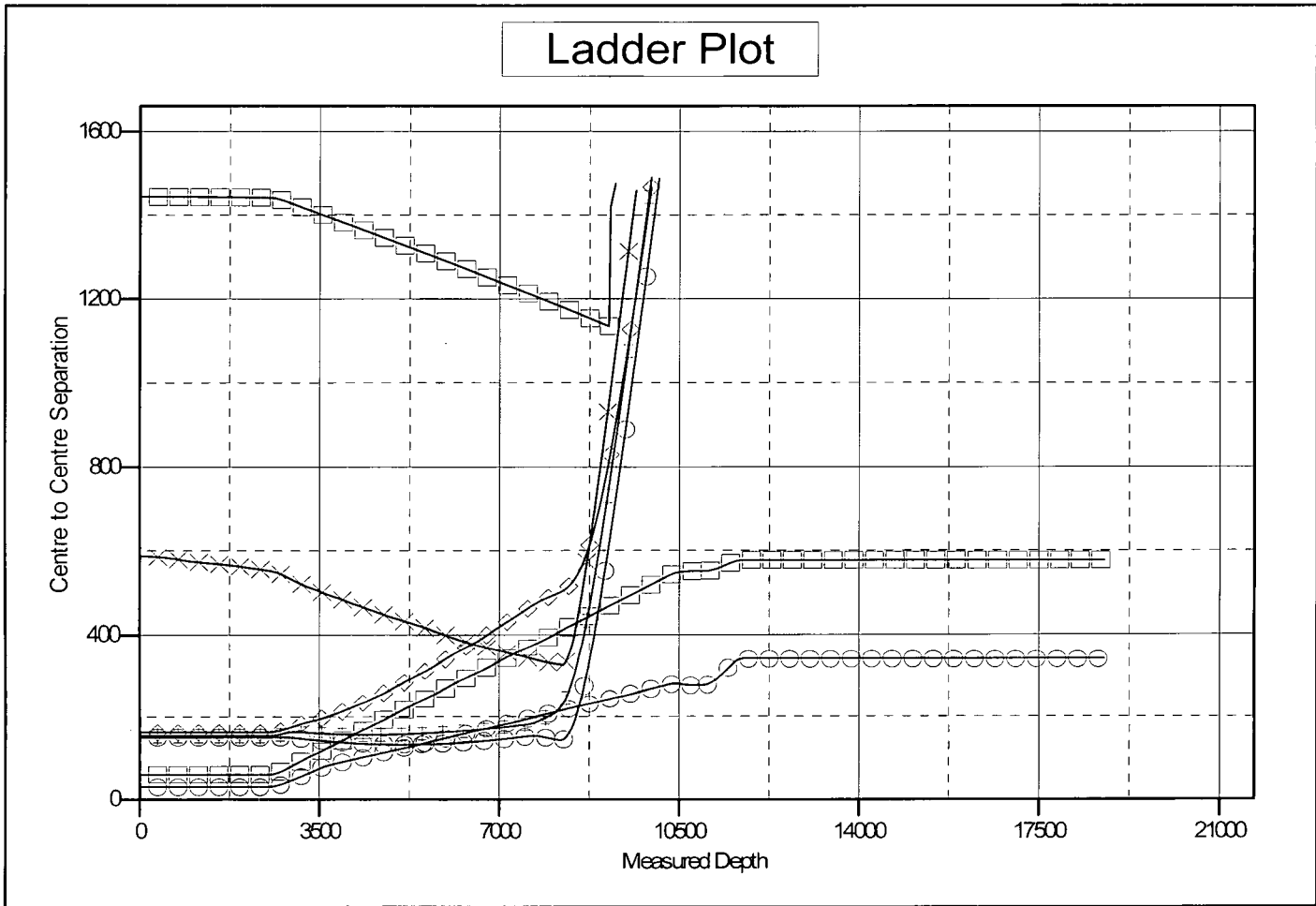
<b>Company:</b>	WCDSC Permian NM	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft.	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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: 262-INC-ONLY													Offset Well Error:	10.00 ft
Sec 15-T23S-R31E - Todd 15 D Fed #004 (P&A) - Wellbore #1 - Inc Only Surveys														
Reference	Offset	Semi Major Axis		Distance		Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
7.650.00	7,642.41	7,647.06	7,642.46	27.28	218.40	86.37	-157.24	422.48	338.48	92.92	245.57	1.378	Major Risk	
7.700.00	7,692.33	7,696.50	7,691.88	27.46	219.64	86.69	-155.62	422.48	336.92	89.92	247.00	1.364	Major Risk	
7.750.00	7,742.25	7,745.95	7,741.30	27.64	220.88	87.02	-154.09	422.48	335.44	87.01	248.43	1.350	Major Risk	
7.800.00	7,792.17	7,795.39	7,790.72	27.82	222.12	87.37	-152.65	422.48	334.05	84.19	249.86	1.337	Major Risk	
7.850.00	7,842.10	7,844.83	7,840.14	28.01	223.36	87.72	-151.29	422.48	332.75	81.46	251.29	1.324	Major Risk	
7.900.00	7,892.02	7,894.28	7,889.57	28.19	224.60	88.08	-150.01	422.48	331.53	78.81	252.72	1.312	Major Risk	
7.950.00	7,941.94	7,943.72	7,939.00	28.37	225.84	88.45	-148.82	422.48	330.40	76.25	254.15	1.300	Major Risk	
8.000.00	7,991.87	7,993.17	7,988.43	28.55	227.08	88.83	-147.72	422.48	329.36	73.79	255.58	1.289	Major Risk	
8.050.00	8,041.79	8,042.61	8,037.86	28.73	228.32	89.22	-146.70	422.48	328.41	71.41	257.00	1.278	Major Risk	
8.100.00	8,091.71	8,092.05	8,087.30	28.91	229.56	89.63	-145.76	422.48	327.56	69.12	258.43	1.267	Major Risk	
8.150.00	8,141.64	8,142.64	8,137.88	29.10	230.74	90.04	-144.83	422.48	326.73	66.94	259.79	1.258	Major Risk	
8.200.00	8,191.56	8,193.78	8,189.01	29.28	231.90	90.44	-143.68	422.48	325.75	64.64	261.11	1.248	Major Risk	
8.230.46	8,221.97	8,224.94	8,220.15	29.39	232.61	90.68	-142.88	422.48	325.08	63.16	261.92	1.241	Major Risk, CC, ES, SF	
8.250.00	8,241.48	8,215.00	8,210.22	29.46	232.38	90.61	-143.15	422.48	325.95	64.67	261.29	1.247	Major Risk	
8.300.00	8,291.41	8,215.00	8,210.22	29.64	232.38	90.61	-143.15	422.48	333.07	76.92	256.14	1.300	Major Risk	
8.350.00	8,341.33	8,215.00	8,210.22	29.82	232.38	90.61	-143.15	422.48	347.31	101.01	246.30	1.410	Major Risk	
8.400.00	8,391.25	8,215.00	8,210.22	30.01	232.38	90.61	-143.15	422.48	367.85	134.45	233.39	1.576	Minor Risk	
8.450.00	8,441.17	8,215.00	8,210.22	30.19	232.38	90.61	-143.15	422.48	393.70	174.64	219.06	1.797	Minor Risk	
8.500.00	8,491.10	8,215.00	8,210.22	30.37	232.38	90.61	-143.15	422.48	423.90	219.32	204.58	2.072	Minor Risk	
8.550.00	8,541.02	8,215.00	8,210.22	30.55	232.38	90.61	-143.15	422.48	457.58	266.85	190.73	2.399	Minor Risk	
8.600.00	8,590.94	8,215.00	8,210.22	30.73	232.38	90.61	-143.15	422.48	494.03	316.10	177.93	2.777	Alert	
8.650.00	8,640.87	8,215.00	8,210.22	30.92	232.38	90.61	-143.15	422.48	532.69	366.35	166.34	3.202	Alert	
8.700.00	8,690.79	8,215.00	8,210.22	31.10	232.38	90.61	-143.15	422.48	573.10	417.14	155.96	3.675	Alert	
8.750.00	8,740.71	8,215.00	8,210.22	31.28	232.38	90.61	-143.15	422.48	614.92	468.20	146.72	4.191	Alert	
8.800.00	8,790.64	8,215.00	8,210.22	31.46	232.38	90.61	-143.15	422.48	657.89	519.37	138.52	4.749	Alert	
8.850.00	8,840.56	8,215.00	8,210.22	31.64	232.38	90.61	-143.15	422.48	701.79	570.55	131.24	5.347		
8.900.00	8,890.48	8,215.00	8,210.22	31.83	232.38	90.61	-143.15	422.48	746.46	621.68	124.78	5.982		
8.950.00	8,940.41	8,215.00	8,210.22	32.01	232.38	90.61	-143.15	422.48	791.76	672.75	119.02	6.653		
9.000.00	8,990.33	8,215.00	8,210.22	32.19	232.38	90.61	-143.15	422.48	837.60	723.73	113.88	7.355		
9.050.00	9,040.25	8,215.00	8,210.22	32.37	232.38	90.61	-143.15	422.48	883.89	774.62	109.27	8.089		
9.100.00	9,090.18	8,215.00	8,210.22	32.55	232.38	90.61	-143.15	422.48	930.57	825.42	105.14	8.850		
9.150.00	9,140.10	8,215.00	8,210.22	32.74	232.38	90.61	-143.15	422.48	977.57	876.14	101.43	9.638		
9.200.00	9,190.02	8,215.00	8,210.22	32.92	232.38	90.61	-143.15	422.48	1,024.86	926.78	98.07	10.450		
9.250.00	9,239.94	8,215.00	8,210.22	33.10	232.38	90.61	-143.15	422.48	1,072.39	977.35	95.04	11.284		
9.300.00	9,289.87	8,215.00	8,210.22	33.28	232.38	90.61	-143.15	422.48	1,120.14	1,027.85	92.28	12.138		
9.350.00	9,339.79	8,215.00	8,210.22	33.46	232.38	90.61	-143.15	422.48	1,168.07	1,078.29	89.78	13.010		
9.400.00	9,389.71	8,215.00	8,210.22	33.65	232.38	90.61	-143.15	422.48	1,216.18	1,128.68	87.50	13.899		
9.450.00	9,439.64	8,215.00	8,210.22	33.83	232.38	90.61	-143.15	422.48	1,264.43	1,179.01	85.42	14.803		
9.500.00	9,489.56	8,215.00	8,210.22	34.01	232.38	90.61	-143.15	422.48	1,312.81	1,229.30	83.51	15.720		
9.550.00	9,539.48	8,215.00	8,210.22	34.19	232.38	90.61	-143.15	422.48	1,361.31	1,279.54	81.76	16.649		
9.600.00	9,589.41	8,215.00	8,210.22	34.38	232.38	90.61	-143.15	422.48	1,409.91	1,329.75	80.16	17.589		
9.650.00	9,639.33	8,215.00	8,210.22	34.56	232.38	90.61	-143.15	422.48	1,458.61	1,379.92	78.69	18.537		

# Anticollision Report

<b>Company:</b> WCDSC Permian NM <b>Project:</b> Eddy County (NAD 83 NM Eastern) <b>Reference Site:</b> Sec 15-T23S-R31E <b>Site Error:</b> 0.00 ft <b>Reference Well:</b> Maldives 15-22 Fed Com 331H <b>Well Error:</b> 0.50 ft <b>Reference Wellbore:</b> Wellbore #1 <b>Reference Design:</b> Permit Plan 1	<b>Local Co-ordinate Reference</b> <b>TVD Reference:</b> <b>MD Reference:</b> <b>North Reference:</b> <b>Survey Calculation Method:</b> <b>Output errors are at</b> <b>Database:</b> <b>Offset TVD Reference:</b>	Well Maldives 15-22 Fed Com 331H RKB @ 3412.60ft RKB @ 3412.60ft Grid Minimum Curvature 2.00 sigma EDM r5000.141_Prod US Offset Datum
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Reference Depths are relative to RKB @ 3412.60ft Offset Depths are relative to Offset Datum Central Meridian is -104.333334	Coordinates are relative to: Maldives 15-22 Fed Com 331H Coordinate System is US State Plane 1983, New Mexico Eastern Zone Grid Convergence at Surface is: 0.30°
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### LEGEND

- |  |   |   |
|--|---|---|
| <ul style="list-style-type: none"> <li> Maldives 15-22 Fed Com 511H, Wellbore #1, Permit Plan 2 V0</li> <li> Todd 15 C Fed #003 (Active), Wellbore #1, No Surveys V0</li> <li> Maldives 15-22 Fed Com 522H, Wellbore #1, Permit Plan 1 V0</li> </ul> | <ul style="list-style-type: none"> <li> Maldives 15-22 Fed Com 521H, Wellbore #1, Permit Plan 1 V0</li> <li> Todd 15 D Fed #004 (P&amp;A), Wellbore #1, Inc Only Surveys V0</li> <li> Maldives 15-22 Fed Com 621H, Wellbore #1, Permit Plan 1 V0</li> </ul> | <ul style="list-style-type: none"> <li> Maldives 15-22 Fed Com 711H, Wellbore #1, Permit Plan 1 V0</li> </ul> |
|--|---|---|



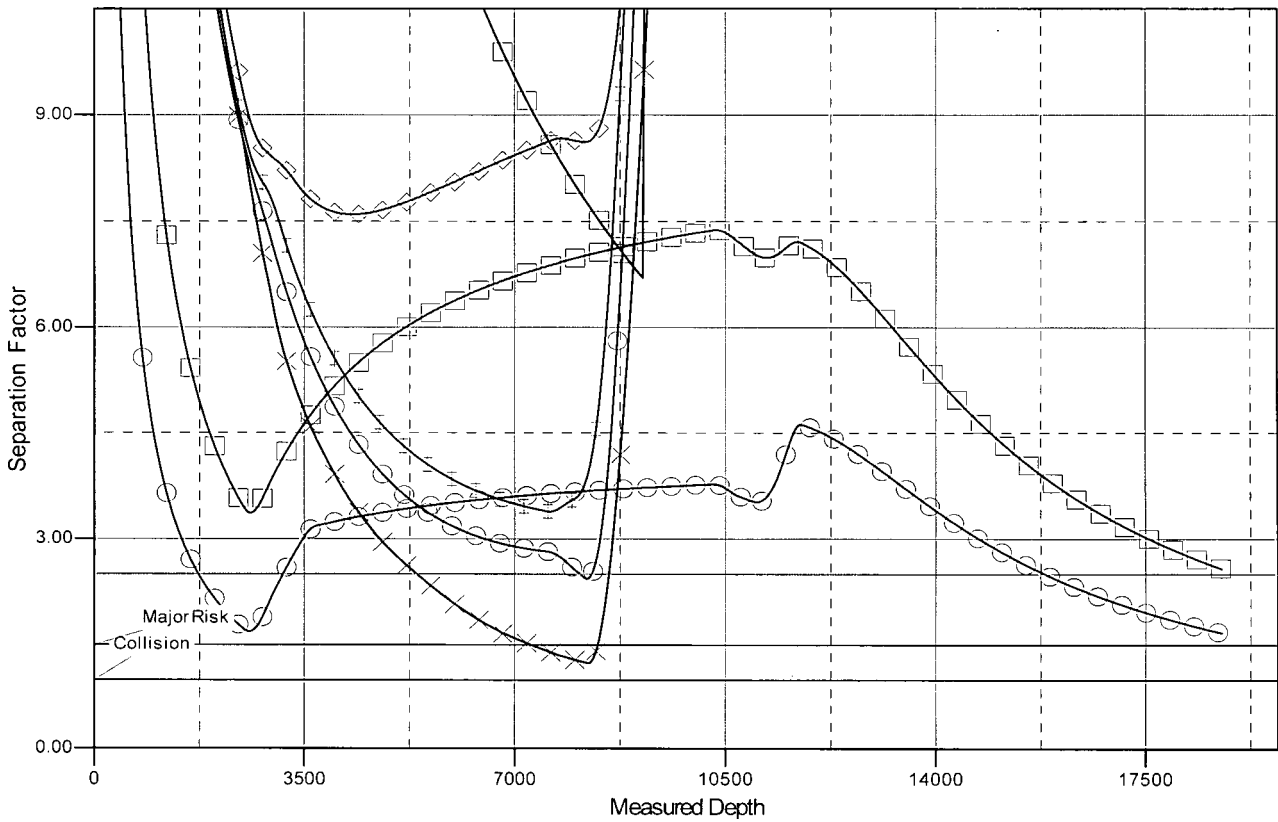
# Anticollision Report

<b>Company:</b>	WCDSC Permian NM	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Reference Site:</b>	Sec 15-T23S-R31E	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Maldives 15-22 Fed Com 331H	<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 @ 3412.60ft  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -104.333334

Coordinates are relative to: Maldives 15-22 Fed Com 331H  
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone  
 Grid Convergence at Surface is: 0.30°

## Separation Factor Plot



### LEGEND

- Maldives 15-22 Fed Com 511H, Wellbore #1, Permit Plan 2 V0
- Todd 15 C Fed #003 (Active), Wellbore #1, No Surveys V0
- Maldives 15-22 Fed Com 521H, Wellbore #1, Permit Plan 1 V0
- Todd 15 D Fed #004 (P & A), Wellbore #1, Inc Only Surveys V0
- Maldives 15-22 Fed Com 621H, Wellbore #1, Permit Plan 1 V0
- Maldives 15-22 Fed Com 711H, Wellbore #1, Permit Plan 1 V0

# **WCDSC Permian NM**

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

**Sec 15-T23S-R31E**

**Maldives 15-22 Fed Com 331H**

**Wellbore #1**

**Plan: Permit Plan 1**

## **Standard Planning Report - Geographic**

**14 June, 2018**

Planning Report - Geographic

<b>Database:</b>	EDM r5000.141_Prod US	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Company:</b>	WCDSC Permian NM	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site:</b>	Sec 15-T23S-R31E	<b>North Reference:</b>	Grid
<b>Well:</b>	Maldives 15-22 Fed Com 331H	<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 15-T23S-R31E				
<b>Site Position:</b>		<b>Northing:</b>	477,592.96 usft	<b>Latitude:</b>	32.311738
<b>From:</b>	Map	<b>Easting:</b>	714,064.76 usft	<b>Longitude:</b>	-103.774231
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.30 °

<b>Well:</b>	Maldives 15-22 Fed Com 331H					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	477,346.35 usft	<b>Latitude:</b>	32.311052
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	714,636.12 usft	<b>Longitude:</b>	-103.772386
<b>Position Uncertainty</b>		0.50 ft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	3,387.60 ft

<b>Wellbore:</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	IGRF2015	5/1/2018	6.96	60.10	47,879.21705218

<b>Design:</b>	Permit Plan 1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0.00	0.00	0.00	176.73	

<b>Plan Survey Tool Program</b>	Date 6/14/2018				
<b>Depth From</b>	<b>Depth To</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
(ft)	(ft)				
1	0.00	18,769.09 Permit Plan 1 (Wellbore #1)	MWD+HDGM		
			OWSG MWD + HDGM		

<b>Plan Sections</b>										
<b>Measured</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Dogleg</b>	<b>Build</b>	<b>Turn</b>	<b>TFO</b>	<b>Target</b>
Depth	(°)	(°)	Depth	(ft)	(ft)	Rate	Rate	Rate	(°)	
(ft)			(ft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,817.81	3.18	61.91	2,817.65	4.15	7.77	1.00	1.00	0.00	61.91	
10,299.90	3.18	61.91	10,288.23	199.45	373.73	0.00	0.00	0.00	0.00	
10,511.78	0.00	0.01	10,500.00	202.21	378.92	1.50	-1.50	0.00	180.00	VP - Maldives 331H
10,861.82	0.00	0.01	10,850.04	202.21	378.92	0.00	0.00	0.00	0.01	
11,761.82	90.00	179.68	11,423.00	-370.74	382.16	10.00	10.00	0.00	179.68	PBHL - Maldives 15-2
18,769.09	90.00	179.68	11,423.00	-7,377.89	421.83	0.00	0.00	0.00	0.00	PBHL - Maldives 15-2

Planning Report - Geographic

<b>Database:</b>	EDM r5000.141_Prod US	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Company:</b>	WCDSC Permian NM	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site:</b>	Sec 15-T23S-R31E	<b>North Reference:</b>	Grid
<b>Well:</b>	Maldives 15-22 Fed Com 331H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Permit Plan 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
100.00	0.00	0.00	100.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
200.00	0.00	0.00	200.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
300.00	0.00	0.00	300.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
400.00	0.00	0.00	400.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
500.00	0.00	0.00	500.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
600.00	0.00	0.00	600.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
700.00	0.00	0.00	700.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
800.00	0.00	0.00	800.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
900.00	0.00	0.00	900.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
1,000.00	0.00	0.00	1,000.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
1,100.00	0.00	0.00	1,100.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
1,200.00	0.00	0.00	1,200.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
1,300.00	0.00	0.00	1,300.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
1,400.00	0.00	0.00	1,400.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
1,500.00	0.00	0.00	1,500.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
1,600.00	0.00	0.00	1,600.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
1,700.00	0.00	0.00	1,700.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
1,800.00	0.00	0.00	1,800.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
1,900.00	0.00	0.00	1,900.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
2,000.00	0.00	0.00	2,000.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
2,100.00	0.00	0.00	2,100.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
2,200.00	0.00	0.00	2,200.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
2,300.00	0.00	0.00	2,300.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
2,400.00	0.00	0.00	2,400.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
2,500.00	0.00	0.00	2,500.00	0.00	0.00	477,346.35	714,636.12	32.311052	-103.772386
2,600.00	1.00	61.91	2,599.99	0.41	0.77	477,346.76	714,636.89	32.311053	-103.772384
2,700.00	2.00	61.91	2,699.96	1.64	3.08	477,347.99	714,639.20	32.311056	-103.772376
2,800.00	3.00	61.91	2,799.86	3.70	6.93	477,350.05	714,643.04	32.311062	-103.772364
2,817.81	3.18	61.91	2,817.65	4.15	7.77	477,350.50	714,643.89	32.311063	-103.772361
2,900.00	3.18	61.91	2,899.71	6.29	11.79	477,352.64	714,647.91	32.311069	-103.772348
3,000.00	3.18	61.91	2,999.56	8.90	16.69	477,355.25	714,652.80	32.311076	-103.772332
3,100.00	3.18	61.91	3,099.40	11.51	21.58	477,357.87	714,657.69	32.311083	-103.772316
3,200.00	3.18	61.91	3,199.25	14.12	26.47	477,360.48	714,662.58	32.311090	-103.772300
3,300.00	3.18	61.91	3,299.10	16.74	31.36	477,363.09	714,667.47	32.311097	-103.772284
3,400.00	3.18	61.91	3,398.94	19.35	36.25	477,365.70	714,672.37	32.311104	-103.772268
3,500.00	3.18	61.91	3,498.79	21.96	41.14	477,368.31	714,677.26	32.311111	-103.772253
3,600.00	3.18	61.91	3,598.63	24.57	46.03	477,370.92	714,682.15	32.311118	-103.772237
3,700.00	3.18	61.91	3,698.48	27.18	50.92	477,373.53	714,687.04	32.311125	-103.772221
3,800.00	3.18	61.91	3,798.33	29.79	55.81	477,376.14	714,691.93	32.311133	-103.772205
3,900.00	3.18	61.91	3,898.17	32.40	60.71	477,378.75	714,696.82	32.311140	-103.772189
4,000.00	3.18	61.91	3,998.02	35.01	65.60	477,381.36	714,701.71	32.311147	-103.772173
4,100.00	3.18	61.91	4,097.87	37.62	70.49	477,383.97	714,706.60	32.311154	-103.772157
4,200.00	3.18	61.91	4,197.71	40.23	75.38	477,386.58	714,711.49	32.311161	-103.772141
4,300.00	3.18	61.91	4,297.56	42.84	80.27	477,389.19	714,716.39	32.311168	-103.772126
4,400.00	3.18	61.91	4,397.40	45.45	85.16	477,391.80	714,721.28	32.311175	-103.772110
4,500.00	3.18	61.91	4,497.25	48.06	90.05	477,394.41	714,726.17	32.311182	-103.772094
4,600.00	3.18	61.91	4,597.10	50.67	94.94	477,397.02	714,731.06	32.311189	-103.772078
4,700.00	3.18	61.91	4,696.94	53.28	99.83	477,399.63	714,735.95	32.311197	-103.772062
4,800.00	3.18	61.91	4,796.79	55.89	104.73	477,402.24	714,740.84	32.311204	-103.772046
4,900.00	3.18	61.91	4,896.63	58.50	109.62	477,404.85	714,745.73	32.311211	-103.772030
5,000.00	3.18	61.91	4,996.48	61.11	114.51	477,407.46	714,750.62	32.311218	-103.772014
5,100.00	3.18	61.91	5,096.33	63.72	119.40	477,410.07	714,755.51	32.311225	-103.771999
5,200.00	3.18	61.91	5,196.17	66.33	124.29	477,412.68	714,760.41	32.311232	-103.771983

Planning Report - Geographic

<b>Database:</b>	EDM r5000.141_Prod US	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Company:</b>	WCDSC Permian NM	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site:</b>	Sec 15-T23S-R31E	<b>North Reference:</b>	Grid
<b>Well:</b>	Maldives 15-22 Fed Com 331H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Permit Plan 1		

Planned Survey										
Measured			Vertical			Map	Map			
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)			
5,300.00	3.18	61.91	5,296.02	68.94	129.18	477,415.29	714,765.30	32.311239	-103.771967	
5,400.00	3.18	61.91	5,395.87	71.55	134.07	477,417.90	714,770.19	32.311246	-103.771951	
5,500.00	3.18	61.91	5,495.71	74.16	138.96	477,420.51	714,775.08	32.311253	-103.771935	
5,600.00	3.18	61.91	5,595.56	76.77	143.85	477,423.12	714,779.97	32.311260	-103.771919	
5,700.00	3.18	61.91	5,695.40	79.38	148.75	477,425.73	714,784.86	32.311268	-103.771903	
5,800.00	3.18	61.91	5,795.25	81.99	153.64	477,428.34	714,789.75	32.311275	-103.771887	
5,900.00	3.18	61.91	5,895.10	84.60	158.53	477,430.95	714,794.64	32.311282	-103.771872	
6,000.00	3.18	61.91	5,994.94	87.21	163.42	477,433.56	714,799.53	32.311289	-103.771856	
6,100.00	3.18	61.91	6,094.79	89.82	168.31	477,436.17	714,804.43	32.311296	-103.771840	
6,200.00	3.18	61.91	6,194.64	92.43	173.20	477,438.78	714,809.32	32.311303	-103.771824	
6,300.00	3.18	61.91	6,294.48	95.04	178.09	477,441.39	714,814.21	32.311310	-103.771808	
6,400.00	3.18	61.91	6,394.33	97.65	182.98	477,444.00	714,819.10	32.311317	-103.771792	
6,500.00	3.18	61.91	6,494.17	100.26	187.87	477,446.61	714,823.99	32.311324	-103.771776	
6,600.00	3.18	61.91	6,594.02	102.87	192.77	477,449.22	714,828.88	32.311332	-103.771760	
6,700.00	3.18	61.91	6,693.87	105.48	197.66	477,451.83	714,833.77	32.311339	-103.771745	
6,800.00	3.18	61.91	6,793.71	108.09	202.55	477,454.44	714,838.66	32.311346	-103.771729	
6,900.00	3.18	61.91	6,893.56	110.70	207.44	477,457.05	714,843.55	32.311353	-103.771713	
7,000.00	3.18	61.91	6,993.40	113.31	212.33	477,459.66	714,848.45	32.311360	-103.771697	
7,100.00	3.18	61.91	7,093.25	115.92	217.22	477,462.27	714,853.34	32.311367	-103.771681	
7,200.00	3.18	61.91	7,193.10	118.53	222.11	477,464.88	714,858.23	32.311374	-103.771665	
7,300.00	3.18	61.91	7,292.94	121.14	227.00	477,467.49	714,863.12	32.311381	-103.771649	
7,400.00	3.18	61.91	7,392.79	123.75	231.90	477,470.10	714,868.01	32.311388	-103.771633	
7,500.00	3.18	61.91	7,492.64	126.36	236.79	477,472.71	714,872.90	32.311395	-103.771618	
7,600.00	3.18	61.91	7,592.48	128.97	241.68	477,475.32	714,877.79	32.311403	-103.771602	
7,700.00	3.18	61.91	7,692.33	131.58	246.57	477,477.94	714,882.68	32.311410	-103.771586	
7,800.00	3.18	61.91	7,792.17	134.19	251.46	477,480.55	714,887.58	32.311417	-103.771570	
7,900.00	3.18	61.91	7,892.02	136.81	256.35	477,483.16	714,892.47	32.311424	-103.771554	
8,000.00	3.18	61.91	7,991.87	139.42	261.24	477,485.77	714,897.36	32.311431	-103.771538	
8,100.00	3.18	61.91	8,091.71	142.03	266.13	477,488.38	714,902.25	32.311438	-103.771522	
8,200.00	3.18	61.91	8,191.56	144.64	271.02	477,490.99	714,907.14	32.311445	-103.771506	
8,300.00	3.18	61.91	8,291.41	147.25	275.92	477,493.60	714,912.03	32.311452	-103.771491	
8,400.00	3.18	61.91	8,391.25	149.86	280.81	477,496.21	714,916.92	32.311459	-103.771475	
8,500.00	3.18	61.91	8,491.10	152.47	285.70	477,498.82	714,921.81	32.311467	-103.771459	
8,600.00	3.18	61.91	8,590.94	155.08	290.59	477,501.43	714,926.70	32.311474	-103.771443	
8,700.00	3.18	61.91	8,690.79	157.69	295.48	477,504.04	714,931.60	32.311481	-103.771427	
8,800.00	3.18	61.91	8,790.64	160.30	300.37	477,506.65	714,936.49	32.311488	-103.771411	
8,900.00	3.18	61.91	8,890.48	162.91	305.26	477,509.26	714,941.38	32.311495	-103.771395	
9,000.00	3.18	61.91	8,990.33	165.52	310.15	477,511.87	714,946.27	32.311502	-103.771379	
9,100.00	3.18	61.91	9,090.18	168.13	315.04	477,514.48	714,951.16	32.311509	-103.771364	
9,200.00	3.18	61.91	9,190.02	170.74	319.94	477,517.09	714,956.05	32.311516	-103.771348	
9,300.00	3.18	61.91	9,289.87	173.35	324.83	477,519.70	714,960.94	32.311523	-103.771332	
9,400.00	3.18	61.91	9,389.71	175.96	329.72	477,522.31	714,965.83	32.311530	-103.771316	
9,500.00	3.18	61.91	9,489.56	178.57	334.61	477,524.92	714,970.72	32.311538	-103.771300	
9,600.00	3.18	61.91	9,589.41	181.18	339.50	477,527.53	714,975.62	32.311545	-103.771284	
9,700.00	3.18	61.91	9,689.25	183.79	344.39	477,530.14	714,980.51	32.311552	-103.771268	
9,800.00	3.18	61.91	9,789.10	186.40	349.28	477,532.75	714,985.40	32.311559	-103.771252	
9,900.00	3.18	61.91	9,888.94	189.01	354.17	477,535.36	714,990.29	32.311566	-103.771237	
10,000.00	3.18	61.91	9,988.79	191.62	359.06	477,537.97	714,995.18	32.311573	-103.771221	
10,100.00	3.18	61.91	10,088.64	194.23	363.96	477,540.58	715,000.07	32.311580	-103.771205	
10,200.00	3.18	61.91	10,188.48	196.84	368.85	477,543.19	715,004.96	32.311587	-103.771189	
10,299.90	3.18	61.91	10,288.23	199.45	373.73	477,545.80	715,009.85	32.311594	-103.771173	
10,300.00	3.18	61.91	10,288.33	199.45	373.74	477,545.80	715,009.85	32.311594	-103.771173	
10,400.00	1.68	61.91	10,388.24	201.44	377.47	477,547.79	715,013.59	32.311600	-103.771161	
10,500.00	0.18	61.91	10,488.22	202.21	378.90	477,548.56	715,015.02	32.311602	-103.771156	

Planning Report - Geographic

<b>Database:</b>	EDM r5000.141_Prod US	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Company:</b>	WCDSC Permian NM	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site:</b>	Sec 15-T23S-R31E	<b>North Reference:</b>	Grid
<b>Well:</b>	Maldives 15-22 Fed Com 331H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Permit Plan 1		

Planned Survey										
Measured				Vertical			Map	Map		
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)			
10,511.78	0.00	0.01	10,500.00	202.21	378.92	477,548.56	715,015.03	32.311602	-103.771156	
<b>KOP @ 10512' MD, 50' FNL, 949' FWL</b>										
10,600.00	0.00	0.00	10,588.22	202.21	378.92	477,548.56	715,015.03	32.311602	-103.771156	
10,700.00	0.00	0.00	10,688.22	202.21	378.92	477,548.56	715,015.03	32.311602	-103.771156	
10,800.00	0.00	0.00	10,788.22	202.21	378.92	477,548.56	715,015.03	32.311602	-103.771156	
10,861.82	0.00	0.01	10,850.04	202.21	378.92	477,548.56	715,015.03	32.311602	-103.771156	
10,900.00	3.82	179.68	10,888.19	200.94	378.92	477,547.29	715,015.04	32.311598	-103.771156	
11,000.00	13.82	179.68	10,986.89	185.63	379.01	477,531.98	715,015.13	32.311556	-103.771156	
11,100.00	23.82	179.68	11,081.42	153.42	379.19	477,499.77	715,015.31	32.311468	-103.771156	
11,200.00	33.82	179.68	11,168.92	105.28	379.46	477,451.63	715,015.58	32.311335	-103.771156	
11,300.00	43.82	179.68	11,246.74	42.67	379.82	477,389.02	715,015.93	32.311163	-103.771156	
11,400.00	53.82	179.68	11,312.50	-32.49	380.24	477,313.86	715,016.36	32.310957	-103.771156	
11,456.89	59.51	179.68	11,343.75	-80.00	380.51	477,266.35	715,016.63	32.310826	-103.771156	
<b>1st Take Point @ 11457' MD, 330' FNL, 950' FWL</b>										
11,500.00	63.82	179.68	11,364.21	-117.94	380.73	477,228.41	715,016.84	32.310722	-103.771156	
11,600.00	73.82	179.68	11,400.30	-211.06	381.26	477,135.29	715,017.37	32.310466	-103.771156	
11,700.00	83.82	179.68	11,419.67	-309.04	381.81	477,037.32	715,017.93	32.310197	-103.771156	
11,761.82	90.00	179.68	11,423.00	-370.74	382.16	476,975.62	715,018.28	32.310027	-103.771155	
11,800.00	90.00	179.68	11,423.00	-408.91	382.38	476,937.44	715,018.49	32.309922	-103.771155	
11,900.00	90.00	179.68	11,423.00	-508.91	382.94	476,837.44	715,019.06	32.309647	-103.771155	
12,000.00	90.00	179.68	11,423.00	-608.91	383.51	476,737.44	715,019.62	32.309372	-103.771155	
12,100.00	90.00	179.68	11,423.00	-708.91	384.07	476,637.44	715,020.19	32.309097	-103.771155	
12,200.00	90.00	179.68	11,423.00	-808.91	384.64	476,537.44	715,020.76	32.308823	-103.771155	
12,300.00	90.00	179.68	11,423.00	-908.91	385.21	476,437.45	715,021.32	32.308548	-103.771155	
12,400.00	90.00	179.68	11,423.00	-1,008.90	385.77	476,337.45	715,021.89	32.308273	-103.771155	
12,500.00	90.00	179.68	11,423.00	-1,108.90	386.34	476,237.45	715,022.45	32.307998	-103.771154	
12,600.00	90.00	179.68	11,423.00	-1,208.90	386.91	476,137.45	715,023.02	32.307723	-103.771154	
12,700.00	90.00	179.68	11,423.00	-1,308.90	387.47	476,037.45	715,023.59	32.307448	-103.771154	
12,800.00	90.00	179.68	11,423.00	-1,408.90	388.04	475,937.46	715,024.15	32.307173	-103.771154	
12,900.00	90.00	179.68	11,423.00	-1,508.90	388.60	475,837.46	715,024.72	32.306898	-103.771154	
13,000.00	90.00	179.68	11,423.00	-1,608.90	389.17	475,737.46	715,025.28	32.306623	-103.771154	
13,100.00	90.00	179.68	11,423.00	-1,708.89	389.74	475,637.46	715,025.85	32.306349	-103.771154	
13,200.00	90.00	179.68	11,423.00	-1,808.89	390.30	475,537.46	715,026.42	32.306074	-103.771154	
13,300.00	90.00	179.68	11,423.00	-1,908.89	390.87	475,437.46	715,026.98	32.305799	-103.771153	
13,400.00	90.00	179.68	11,423.00	-2,008.89	391.43	475,337.47	715,027.55	32.305524	-103.771153	
13,500.00	90.00	179.68	11,423.00	-2,108.89	392.00	475,237.47	715,028.12	32.305249	-103.771153	
13,600.00	90.00	179.68	11,423.00	-2,208.89	392.57	475,137.47	715,028.68	32.304974	-103.771153	
13,700.00	90.00	179.68	11,423.00	-2,308.88	393.13	475,037.47	715,029.25	32.304699	-103.771153	
13,800.00	90.00	179.68	11,423.00	-2,408.88	393.70	474,937.47	715,029.81	32.304424	-103.771153	
13,900.00	90.00	179.68	11,423.00	-2,508.88	394.26	474,837.47	715,030.38	32.304150	-103.771153	
14,000.00	90.00	179.68	11,423.00	-2,608.88	394.83	474,737.48	715,030.95	32.303875	-103.771152	
14,100.00	90.00	179.68	11,423.00	-2,708.88	395.40	474,637.48	715,031.51	32.303600	-103.771152	
14,200.00	90.00	179.68	11,423.00	-2,808.88	395.96	474,537.48	715,032.08	32.303325	-103.771152	
14,300.00	90.00	179.68	11,423.00	-2,908.87	396.53	474,437.48	715,032.64	32.303050	-103.771152	
14,400.00	90.00	179.68	11,423.00	-3,008.87	397.10	474,337.48	715,033.21	32.302775	-103.771152	
14,500.00	90.00	179.68	11,423.00	-3,108.87	397.66	474,237.49	715,033.78	32.302500	-103.771152	
14,600.00	90.00	179.68	11,423.00	-3,208.87	398.23	474,137.49	715,034.34	32.302225	-103.771152	
14,700.00	90.00	179.68	11,423.00	-3,308.87	398.79	474,037.49	715,034.91	32.301951	-103.771151	
14,800.00	90.00	179.68	11,423.00	-3,408.87	399.36	473,937.49	715,035.48	32.301676	-103.771151	
14,900.00	90.00	179.68	11,423.00	-3,508.86	399.93	473,837.49	715,036.04	32.301401	-103.771151	
15,000.00	90.00	179.68	11,423.00	-3,608.86	400.49	473,737.49	715,036.61	32.301126	-103.771151	
15,100.00	90.00	179.68	11,423.00	-3,708.86	401.06	473,637.50	715,037.17	32.300851	-103.771151	
15,200.00	90.00	179.68	11,423.00	-3,808.86	401.62	473,537.50	715,037.74	32.300576	-103.771151	

Planning Report - Geographic

<b>Database:</b>	EDM r5000.141_Prod US	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Company:</b>	WCDSC Permian NM	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site:</b>	Sec 15-T23S-R31E	<b>North Reference:</b>	Grid
<b>Well:</b>	Maldives 15-22 Fed Com 331H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Permit Plan 1		

Planned Survey										
Measured			Vertical			Map	Map			
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)			
15,300.00	90.00	179.68	11,423.00	-3,908.86	402.19	473,437.50	715,038.31	32.300301	-103.771151	
15,400.00	90.00	179.68	11,423.00	-4,008.86	402.76	473,337.50	715,038.87	32.300026	-103.771151	
15,500.00	90.00	179.68	11,423.00	-4,108.86	403.32	473,237.50	715,039.44	32.299752	-103.771150	
15,600.00	90.00	179.68	11,423.00	-4,208.85	403.89	473,137.51	715,040.00	32.299477	-103.771150	
15,700.00	90.00	179.68	11,423.00	-4,308.85	404.46	473,037.51	715,040.57	32.299202	-103.771150	
15,800.00	90.00	179.68	11,423.00	-4,408.85	405.02	472,937.51	715,041.14	32.298927	-103.771150	
15,900.00	90.00	179.68	11,423.00	-4,508.85	405.59	472,837.51	715,041.70	32.298652	-103.771150	
16,000.00	90.00	179.68	11,423.00	-4,608.85	406.15	472,737.51	715,042.27	32.298377	-103.771150	
16,100.00	90.00	179.68	11,423.00	-4,708.85	406.72	472,637.51	715,042.84	32.298102	-103.771150	
16,200.00	90.00	179.68	11,423.00	-4,808.84	407.29	472,537.52	715,043.40	32.297827	-103.771149	
16,300.00	90.00	179.68	11,423.00	-4,908.84	407.85	472,437.52	715,043.97	32.297553	-103.771149	
16,400.00	90.00	179.68	11,423.00	-5,008.84	408.42	472,337.52	715,044.53	32.297278	-103.771149	
16,500.00	90.00	179.68	11,423.00	-5,108.84	408.98	472,237.52	715,045.10	32.297003	-103.771149	
16,600.00	90.00	179.68	11,423.00	-5,208.84	409.55	472,137.52	715,045.67	32.296728	-103.771149	
16,700.00	90.00	179.68	11,423.00	-5,308.84	410.12	472,037.53	715,046.23	32.296453	-103.771149	
16,800.00	90.00	179.68	11,423.00	-5,408.83	410.68	471,937.53	715,046.80	32.296178	-103.771149	
16,900.00	90.00	179.68	11,423.00	-5,508.83	411.25	471,837.53	715,047.36	32.295903	-103.771149	
17,000.00	90.00	179.68	11,423.00	-5,608.83	411.82	471,737.53	715,047.93	32.295628	-103.771148	
17,100.00	90.00	179.68	11,423.00	-5,708.83	412.38	471,637.53	715,048.50	32.295354	-103.771148	
17,200.00	90.00	179.68	11,423.00	-5,808.83	412.95	471,537.53	715,049.06	32.295079	-103.771148	
17,300.00	90.00	179.68	11,423.00	-5,908.83	413.51	471,437.54	715,049.63	32.294804	-103.771148	
17,400.00	90.00	179.68	11,423.00	-6,008.82	414.08	471,337.54	715,050.20	32.294529	-103.771148	
17,500.00	90.00	179.68	11,423.00	-6,108.82	414.65	471,237.54	715,050.76	32.294254	-103.771148	
17,600.00	90.00	179.68	11,423.00	-6,208.82	415.21	471,137.54	715,051.33	32.293979	-103.771148	
17,700.00	90.00	179.68	11,423.00	-6,308.82	415.78	471,037.54	715,051.89	32.293704	-103.771147	
17,800.00	90.00	179.68	11,423.00	-6,408.82	416.34	470,937.55	715,052.46	32.293429	-103.771147	
17,900.00	90.00	179.68	11,423.00	-6,508.82	416.91	470,837.55	715,053.03	32.293155	-103.771147	
18,000.00	90.00	179.68	11,423.00	-6,608.82	417.48	470,737.55	715,053.59	32.292880	-103.771147	
18,100.00	90.00	179.68	11,423.00	-6,708.81	418.04	470,637.55	715,054.16	32.292605	-103.771147	
18,200.00	90.00	179.68	11,423.00	-6,808.81	418.61	470,537.55	715,054.72	32.292330	-103.771147	
18,300.00	90.00	179.68	11,423.00	-6,908.81	419.18	470,437.55	715,055.29	32.292055	-103.771147	
18,400.00	90.00	179.68	11,423.00	-7,008.81	419.74	470,337.56	715,055.86	32.291780	-103.771146	
18,500.00	90.00	179.68	11,423.00	-7,108.81	420.31	470,237.56	715,056.42	32.291505	-103.771146	
18,600.00	90.00	179.68	11,423.00	-7,208.81	420.87	470,137.56	715,056.99	32.291230	-103.771146	
18,669.09	90.00	179.68	11,423.00	-7,277.89	421.26	470,068.47	715,057.38	32.291040	-103.771146	
<b>Last Take Point @ 18669' MD, 2250' FNL, 950' FWL</b>										
18,700.00	90.00	179.68	11,423.00	-7,308.80	421.44	470,037.56	715,057.55	32.290955	-103.771146	
18,769.09	90.00	179.68	11,423.00	-7,377.89	421.83	469,968.47	715,057.95	32.290766	-103.771146	
<b>PBHL; 2350' FNL, 950' FWL</b>										

Design Targets										
Target Name	hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Shape		(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
PBHL - Maldives 15-22 I		0.00	0.01	0.00	-7,377.89	421.83	469,968.47	715,057.95	32.290766	-103.771146
- plan misses target center by 7389.94ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)										
- Point										
VP - Maldives 331H		0.00	0.00	10,500.00	202.21	378.92	477,548.56	715,015.03	32.311602	-103.771156
- plan hits target center										
- Point										

Planning Report - Geographic

<b>Database:</b>	EDM r5000.141_Prod US	<b>Local Co-ordinate Reference</b>	Well Maldives 15-22 Fed Com 331H
<b>Company:</b>	WCDSC Permian NM	<b>TVD Reference:</b>	RKB @ 3412.60ft
<b>Project:</b>	Eddy County (NAD 83 NM Eastern)	<b>MD Reference:</b>	RKB @ 3412.60ft
<b>Site:</b>	Sec 15-T23S-R31E	<b>North Reference:</b>	Grid
<b>Well:</b>	Maldives 15-22 Fed Com 331H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Permit Plan 1		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
10,511.78	10,500.00	202.21	378.92	KOP @ 10512' MD, 50' FNL, 949' FWL
11,456.89	11,343.75	-80.00	380.51	1st Take Point @ 11457' MD, 330' FNL, 950' FWL
18,669.09	11,423.00	-7,277.89	421.26	Last Take Point @ 18669' MD, 2250' FNL, 950' FWL
18,769.09	11,423.00	-7,377.89	421.83	PBHL; 2350' FNL, 950' FWL



# WCDSC Permian NM

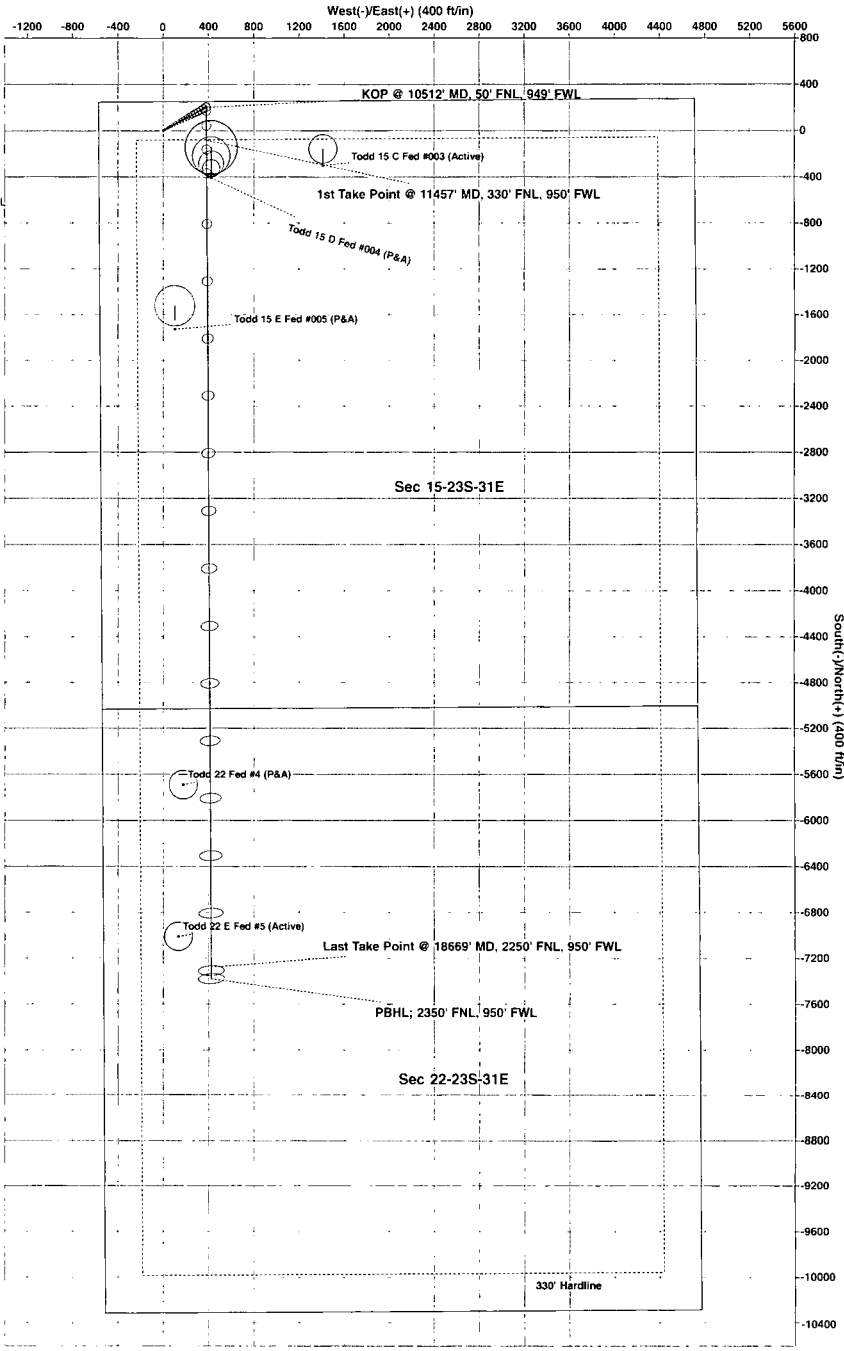
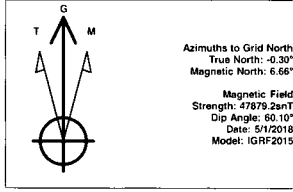
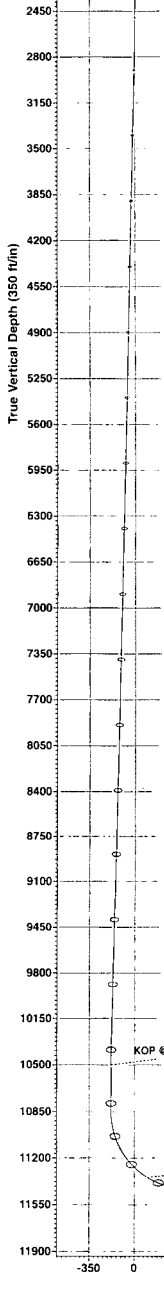
WELL DETAILS: Maldives 15-22 Fed Com 331H

RKB @ 3412.60R  
3387.60

Northing 477346.35 Easting 714636.12 Latitude 32.311051 Longitude -103.772386

SECTION DETAILS Permit Plan 1

MD	inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	
2817.81	3.18	61.91	2817.65	4.15	7.77	1.00	-3.70	
10299.90	3.18	61.91	10288.23	199.45	373.73	0.00	-177.79	
10511.78	0.00	0.00	10500.00	202.21	378.92	1.50	-180.26	KOP @ 10512' MD, 50' FNL, 949' FWL
10861.82	0.00	0.00	10850.04	202.21	378.92	0.00	-180.26	
11761.82	90.00	179.68	11423.00	-370.74	382.16	10.00	391.95	
18789.09	90.00	179.68	11423.00	-7377.89	421.83	0.00	7389.94	PBHL; 2350' FNL, 950' FWL

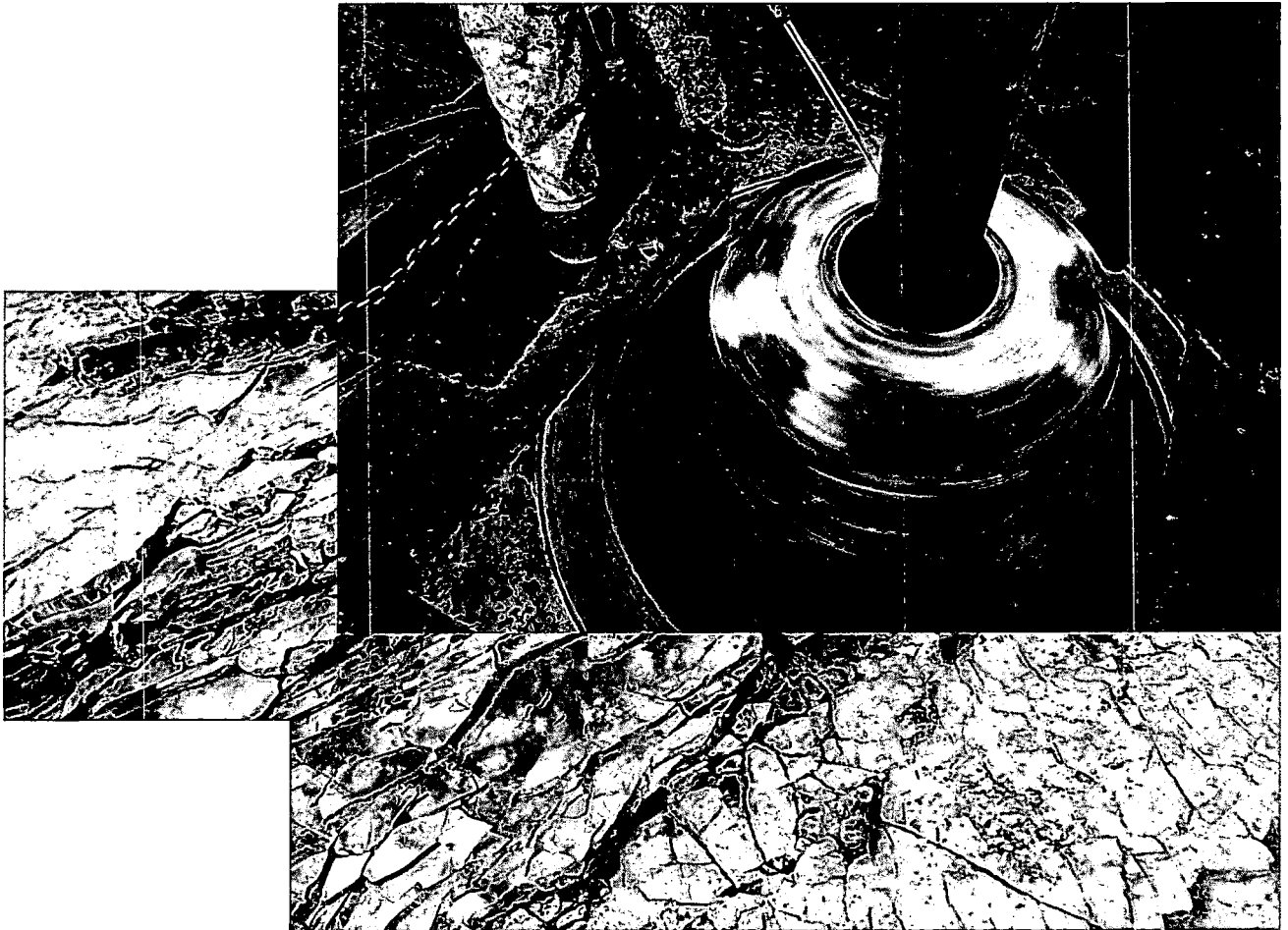


Last Take Point @ 18669' MD, 2250' FNL, 950' FWL  
PBHL; 2350' FNL, 950' FWL

Vertical Section at 176.73°(350 ft/in)



Commitment Runs Deep



Design Plan  
Operation and Maintenance Plan  
Closure Plan

SENM - Closed Loop Systems  
June 2010

## I. Design Plan

Devon uses MI SWACO closed loop system (CLS). The MI SWACO CLS is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This insures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

Signs will be posted on the fence surrounding the closed-loop system unless the closed-loop system is located on a site where there is an existing well, that is operated by Devon.

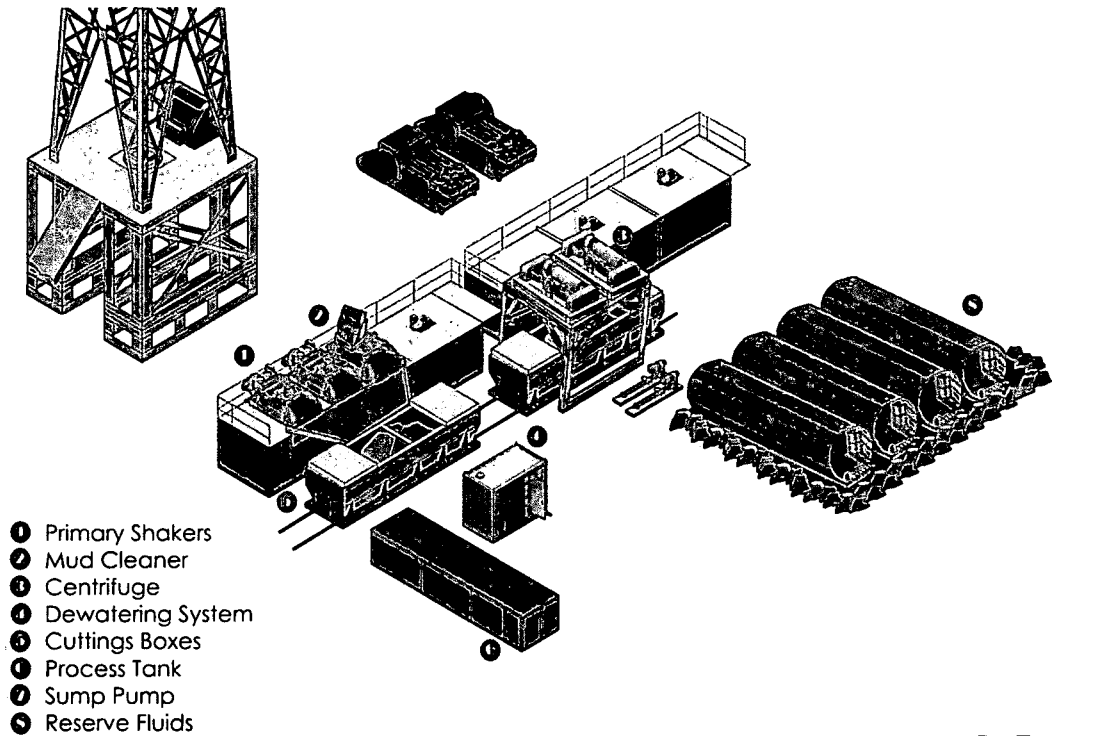
## II. Operations and Maintenance Plan

*Primary Shakers:* The primary shakers make the first removal of drill solids from the drilling mud as it leaves the well bore. The shakers are sized to handle maximum drilling rate at optimal screen size. The shakers normally remove solids down to 74 microns.

*Mud Cleaner:* The Mud Cleaner cleans the fluid after it leaves the shakers. A set of hydrocyclones are sized to handle 1.25 to 1.5 times the maximum circulating rate. This ensures all the fluid is being processed to an average cut point of 25 microns. The wet discharged is dewatered on a shaker equipped with ultra fine mesh screens and generally cut at 40 microns.



### Closed Loop Schematic



*Centrifuges:* The centrifuges can be one or two in number depending on the well geometry or depth of well. The centrifuges are sized to maintain low gravity solids at 5% or below. They may or may not need a dewatering system to enhance the removal rates. The centrifuges can make a cut point of 8-10 microns depending on bowl speed, feed rate, solids loading and other factors.

The centrifuge system is designed to work on the active system and be flexible to process incoming fluids from other locations. This set-up is also dependant on well factors.

*Dewatering System:* The dewatering system is a chemical mixing and dosing system designed to enhance the solids removal of the centrifuge. Not commonly used in shallow wells. It may contain pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing. Chemical flocculation binds ultra fine solids into a mass that is within the centrifuge operating design. The

dewatering system improves the centrifuge cut point to infinity or allows for the return of clear water or brine fluid. This ability allows for the ultimate control of low gravity solids.

*Cuttings Boxes:* Cuttings boxes are utilized to capture drill solids that are discarded from the solids control equipment. These boxes are set upon a rail system that allows for the removal and replacement of a full box of cuttings with an empty one. They are equipped with a cover that insures no product is spilled into the environment during the transportation phase.

*Process Tank:* (Optional) The process tank allows for the holding and process of fluids that are being transferred into the mud system. Additionally, during times of lost circulation the process tank may hold active fluids that are removed for additional treatment. It can further be used as a mixing tank during well control conditions.

*Sump and Sump Pump:* The sump is used to collect storm water and the pump is used to transfer this fluid to the active system or to the tank for to hold in reserve. It can also be used to collect fluids that may escape during spills. The location contains drainage ditches that allow the location fluids to drain to the sump.

*Reserve Fluids (Tank Farm):* A series of frac tanks are used to replace the reserve pit. These are steel tanks that are equipped with a manifold system and a transfer pump. These tanks can contain any number of fluids used during the drilling process. These can include fresh water, cut brine, and saturated salt fluid. The fluid can be from the active well or reclaimed fluid from other locations. A 20 ml liner and berm system is employed to ensure the fluids do not migrate to the environment during a spill.

If a leak develops, the appropriate division district office will be notified within 48 hours of the discovery and the leak will be addressed. Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and testing will be performed to determine if a release has occurred.

All trash is kept in a wire mesh enclosure and removed to an approved landfill when full. All spent motor oils are kept in separate containers and they are removed and sent to an approved recycling center. Any spilled lubricants, pipe

dope, or regulated chemicals are removed from soil and sent to landfills approved for these products.

These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

### **III. Closure Plan**

A maximum 340' X 340' caliche pad is built per well. All of the trucks and steel tanks fit on this pad. All fluid cuttings go to the steel tanks to be hauled by various trucking companies to an agency approved disposal.

## Devon Energy, Maldives 15-22 Fed Com 331H

### 1. Geologic Formations

TVD of target	11,423	Pilot hole depth	N/A
MD at TD:	18,769	Deepest expected fresh water:	

#### Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	552		
Salado	922		
Base of Salt	4024		
Delaware	4252		
Bell Canyon	4292		
Cherry Canyon	5172		
Brushy Canyon	6457		
Lower Brushy	7832		
1BSLM	8162		
1BSSS	9217		
2BSLM	9422		
2BSSS	9719		
3BSLM	10272		
3BSSS	10997		
3BSSS LWR	11317		

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

## Devon Energy, Maldives 15-22 Fed Com 331H

### 2. Casing Program (3-String Primary Design)

Hole Size	Casing Interval		Csg. Size	Weight (PPF)	Grade	Conn.
	From	To				
17.5"	0	585'	13.375"	48	H-40	STC
12.25"	0	4,500'	9.625"	40	J-55	BTC
	4,500'	9,820'	9.625"	40	P-110EC	BTC
8.75"	0	TD	5.5"	17	P-110	BTC
BLM Minimum Safety Factor				Collapse: 1.125	Burst: 1.00	Tension: 1.6 Dry 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.
- Int casing shoe will be selected based on drilling data / gamma, setting depth with be revised accordingly if needed.



**Devon Energy, Maldives 15-22 Fed Com 331H**

	Y or N
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, Maldives 15-22 Fed Com 331H**

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

Casing	# Sks	TOC	Wt. (lb/gal)	H <sub>2</sub> O (gal/sk)	Yld (ft <sup>3</sup> /sack)	Slurry Description
Surface	681	Surf	13.2	6.33	1.33	Lead: Class C Cement + additives
Int	1293	Surf	9	20.6	3.31	Lead: Class C Cement + additives
	187	2000' above shoe	13.2	6.42	1.33	Tail: Class H / C + additives
Int Two Stage (DV @ ~4500' MD)	745	Surf	9	20.6	3.31	1 <sup>st</sup> stage Lead: Class C Cement + additives
	131	500' above shoe	13.2	6.42	1.33	1 <sup>st</sup> stage Tail: Class H / C + additives
	553	Surf	9	20.6	3.31	2 <sup>nd</sup> stage Lead: Class C Cement + additives
	187	500' above DV	13.2	6.42	1.33	2 <sup>nd</sup> stage Tail: Class H / C + additives
Int Squeeze	1688	Surf	13.2	6.32	1.33	Squeeze Lead: Class C Cement + additives
	1293	Surf	9	20.6	3.31	Lead: Class C Cement + additives
	187	2000' above shoe	13.2	6.42	1.33	Tail: Class H / C + additives
Production	1960	500' tieback	13.2	5.31	1.6	Lead: 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 Braden head squeeze will be conducted immediately after completion of the primary job.

Casing String	% Excess
Surface	100%
Intermediate	50%
Intermediate (Two Stage)	25%
Production	10%

**Devon Energy, Maldives 15-22 Fed Com 331H**

**4. Pressure Control Equipment**

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

**Devon Energy, Maldives 15-22 Fed Com 331H**

**5. Mud Program**

6. Depth		Type	Weight (ppg)	Vis	Water Loss
From	To				
0	585'	FW Gel	8.4-8.6	28-34	N/C
750'	9820'	DBE / Cut Brine	8.6 – 9.0	28-34	N/C
9820'	TD	OBM / WBM	9.5 – 10.0	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
---	-----------------------------

**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	5940 psi
Abnormal Temperature	No

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

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S 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	H2S is present
Y	H2S Plan attached

**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).

## Devon Energy, Maldives 15-22 Fed Com 331H

3. The wellhead will be installed and tested once the 10 3/4" 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

# OCTG Casing Data Sheet



VALLOUREC & MANNESMANN TUBES

O.D.	T&C LB/FT	PE LB/FT	GRADE
9.625	40.00	38.97	P110 EC

## Grade - Material Properties

Minimum Yield Strength:	125.0	ksi
Maximum Yield Strength:	140	ksi
Minimum Tensile Strength:	135	ksi

## Pipe Body Data (PE)

### Geometry

Nominal ID:	8.835	inch
Wall:	0.395	inch
Nominal Area:	11.454	inch <sup>2</sup>
API Drift:	8.679	inch
Alternate Drift:	8.750	inch

### Performance

Pipe Body Yield Strength:	1,432	kips
Collapse Resistance:	4,230	psi
Internal Yield Pressure ( <i>API Historical</i> ):	8,980	psi

### Lamé - Internal Yield Pressure

Lamé open:	8,950	psi
Lamé capped:	9,970	psi
Lamé ductile rupture:	9,700	psi

## API Connection Data

STC Internal Pressure:	8,980	psi
STC Joint Strength:	861	kips
LC Internal Pressure:	8,980	psi
LC Joint Strength:	988	kips
BC Internal Pressure:	8,980	psi
BC Joint Strength:	1,266	kips

## LC Torque (ft-lbs)

minimum: 7,410                      optimum: 9,880                      maximum: 12,350

This data sheet is for informational purposes only. While every effort has been made to ensure the accuracy of all data and that the information contained herein is correct, this material is presented as a reference guide only. V & M Tubes assumes no responsibility for the results obtained through the use of this material.

API grades with enhanced performance are supplied with API couplings produced from standard API grades.

7/5/2011 12:40

A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi.

- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial BOP test.
- Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 5M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time.
- If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted.
- Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating.
- Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.

After running the surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 5M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 5,000 psi high pressure test. The 5,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2.

After running the intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 5M will already be installed on the wellhead.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 5,000 psi WP.

Devon's proposed wellhead manufacturers will be FMC Technologies, Cactus Wellhead, or Cameron.



Fluid Technology

ContiTech Beattie Corp.  
Website: [www.contitechbeattie.com](http://www.contitechbeattie.com)

Monday, June 14, 2010

RE: Drilling & Production Hoses  
Lifting & Safety Equipment

To Helmerich & Payne,

A Continental ContiTech hose assembly can perform as intended and suitable for the application regardless of whether the hose is secured or unsecured in its configuration. As a manufacturer of High Pressure Hose Assemblies for use in Drilling & Production, we do offer the corresponding lifting and safety equipment, this has the added benefit of easing the lifting and handling of each hose assembly whilst affording hose longevity by ensuring correct handling methods and procedures as well as securing the hose in the unlikely event of a failure; but in no way does the lifting and safety equipment affect the performance of the hoses providing the hoses have been handled and installed correctly. It is good practice to use lifting & safety equipment but not mandatory.

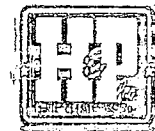
Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

ContiTech Beattie is part of the Continental AG Corporation and can offer the full support resources associated with a global organization.

Best regards,

Robin Hodgson  
Sales Manager  
ContiTech Beattie Corp

ContiTech Beattie Corp,  
11535 Brittmoore Park Drive,  
Houston, TX 77041  
Phone: +1 (832) 327-0141  
Fax: +1 (832) 327-0148  
[www.contitechbeattie.com](http://www.contitechbeattie.com)





RIG 212



QUALITY DOCUMENT

PHOENIX RUBBER

INDUSTRIAL LTD.

6728 Szeged, Budapest út 10, Hungary • H-6701 Szeged, P. O. Box 152  
Phone: (3662) 566-737 • Fax: (3662) 566-738

SALES & MARKETING: H-1092 Budapest, Ráday u. 42-44, Hungary • H-1440 Budapest, P. O. Box 26  
Phone: (361) 456-4200 • Fax: (361) 217-2972, 456-4273 • www.taurusemerge.hu

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 552	
PURCHASER: Phoenix Beattie Co.			P.O. N°: 1519FA-871		
PHOENIX RUBBER order N°: 170466		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 34128		NOMINAL / ACTUAL LENGTH: 11,43 m			
W.P. 68,96 MPa 10000 psi		T.P. 103,4 MPa 15000 psi		Duration: 60 min.	
<p>Pressure test with water at ambient temperature</p> <p style="text-align: center;">See attachment. (1 page)</p> <p>↑ 10 mm = 10 Min. → 10 mm = 25 MPa</p>					
COUPLINGS					
Type	Serial N°		Quality	Heat N°	
3" coupling with 4 1/16" Flange end	720 719		AISI 4130	C7626	
			AISI 4130	47357	
API Spec 16 C Temperature rate: "B"					
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
Date: 29. April, 2002.	Inspector		Quality Control PHOENIX RUBBER Industrial Ltd. <i>[Signature]</i> Hose Inspection and VERIFIED TRUE COPY PHOENIX RUBBER S.C.		

14094-65

N8006

40920-0-00015

6	GNL +0.000 °C	14:00			
	RDL +0.000 °C	14:00			
	PL +0.000 °C	14:00			
7	GNL +0.000 °C	13:40	40	60	80
	RDL +0.000 °C	13:40			
	PL +0.000 °C	13:40			
8	GNL +0.000 °C	13:20			
	RDL +0.000 °C	13:20			
	PL +0.000 °C	13:20			
5	GNL +0.000 °C	13:00			
	RDL +0.000 °C	13:00			
	PL +0.000 °C	13:00			
4					
3					
2					

*[Signature]*  
**PHOENIX RUBBER**  
 Industrial Ltd.  
 Hose Inspection and  
 Certification Dept.

VERIFIED TRUE CO.  
 PHOENIX RUBBER CO.  
*[Signature]*



APD ID: 10400032893

Submission Date: 08/10/2018

Highlighted data reflects the most recent changes

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: MALDIVES 15-22 FED COM

Well Number: 331H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Maldives\_15\_22\_Fed\_Com\_331H\_Ex\_Access\_Rd\_20180808095127.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? YES

Existing Road Improvement Description: Improve road to accommodate Drilling and Completion operations.

Existing Road Improvement Attachment:

### Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Maldives\_15\_22\_Fed\_Com\_331H\_Access\_Rd\_20180808095208.pdf

New road type: COLLECTOR,RESOURCE

Length: 1197 Feet Width (ft.): 30

Max slope (%): 6 Max grade (%): 4

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Water drainage ditch

New road access plan or profile prepared? NO

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** MALDIVES 15-22 FED COM

**Well Number:** 331H

**Access surfacing type:** GRAVEL

**Access topsoil source:** ONSITE

**Access surfacing type description:**

**Access onsite topsoil source depth:** 6

**Offsite topsoil source description:**

**Onsite topsoil removal process:** See attached reclamation diagram

**Access other construction information:**

**Access miscellaneous information:**

**Number of access turnouts:**

**Access turnout map:**

### Drainage Control

**New road drainage crossing:** OTHER

**Drainage Control comments:** N/A

**Road Drainage Control Structures (DCS) description:** N/A

**Road Drainage Control Structures (DCS) attachment:**

### Access Additional Attachments

**Additional Attachment(s):**

### Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Attach Well map:**

Maldives\_15\_22\_Fed\_Com\_331H\_1Mile\_Map\_20180808095225.pdf

**Existing Wells description:**

### Section 4 - Location of Existing and/or Proposed Production Facilities

**Submit or defer a Proposed Production Facilities plan?** DEFER

**Estimated Production Facilities description:** All flowlines will be buried going to Maldives 15 CTB 1.

### Section 5 - Location and Types of Water Supply

#### Water Source Table

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** MALDIVES 15-22 FED COM

**Well Number:** 331H

**Water source use type:** STIMULATION

**Water source type:** RECYCLED

**Describe type:**

**Source latitude:**

**Source longitude:**

**Source datum:**

**Water source permit type:** OTHER

**Source land ownership:** FEDERAL

**Water source transport method:** PIPELINE

**Source transportation land ownership:** FEDERAL

**Water source volume (barrels):** 240000

**Source volume (acre-feet):** 30.934343

**Source volume (gal):** 10080000

**Water source and transportation map:**

Maldives\_15\_22\_Fed\_Com\_331H\_Wtr\_Xfr\_Map\_20180808095446.pdf

**Water source comments:** The attached Water Transfer Map is a proposal only and the final route and documentation will be provided by a Devon contractor prior to installation. When available Devon will always follow existing disturbance.

**New water well?** NO

**New Water Well Info**

**Well latitude:**

**Well Longitude:**

**Well datum:**

**Well target aquifer:**

**Est. depth to top of aquifer(ft):**

**Est thickness of aquifer:**

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft):**

**Well casing type:**

**Well casing outside diameter (in.):**

**Well casing inside diameter (in.):**

**New water well casing?**

**Used casing source:**

**Drilling method:**

**Drill material:**

**Grout material:**

**Grout depth:**

**Casing length (ft.):**

**Casing top depth (ft.):**

**Well Production type:**

**Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** MALDIVES 15-22 FED COM

**Well Number:** 331H

## Section 6 - Construction Materials

**Construction Materials description:** Dirt fill and caliche will be used to construct well pad. See attached map.

**Construction Materials source location attachment:**

Maldives\_15\_22\_Fed\_Com\_331H\_Caliche\_Map\_20180808095503.pdf

## Section 7 - Methods for Handling Waste

**Waste type:** FLOWBACK

**Waste content description:** Produced water during flowback operations. This amount is a daily average during flowback (BWPD).

**Amount of waste:** 1500 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

**Waste disposal type:** OFF-LEASE INJECTION      **Disposal location ownership:** PRIVATE

**Disposal type description:**

**Disposal location description:** Various disposal locations in Lea and Eddy counties.

**Waste type:** DRILLING

**Waste content description:** Water based cuttings

**Amount of waste:** 1463 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY      **Disposal location ownership:** COMMERCIAL FACILITY

**Disposal type description:**

**Disposal location description:** All cuttings will disposed of at R360, Sundance, or equivalent.

**Waste type:** COMPLETIONS/STIMULATION

**Waste content description:** Flowback water during completion operations.

**Amount of waste:** 3000 barrels

**Waste disposal frequency :** One Time Only

**Safe containment description:** N/A

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY      **Disposal location ownership:** COMMERCIAL FACILITY

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** MALDIVES 15-22 FED COM

**Well Number:** 331H

**Disposal type description:**

**Disposal location description:** Various disposal locations in Lea and Eddy counties.

**Waste type:** PRODUCED WATER

**Waste content description:** Produced water during flowback operations. This amount is a daily average during flowback (BWPD).

**Amount of waste:** 1000 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

**Waste disposal type:** OFF-LEASE INJECTION      **Disposal location ownership:** COMMERCIAL

**Disposal type description:**

**Disposal location description:** Various disposal locations in Lea and Eddy counties.

### Reserve Pit

**Reserve Pit being used?** NO

**Temporary disposal of produced water into reserve pit?**

**Reserve pit length (ft.)**                      **Reserve pit width (ft.)**

**Reserve pit depth (ft.)**                                      **Reserve pit volume (cu. yd.)**

**Is at least 50% of the reserve pit in cut?**

**Reserve pit liner**

**Reserve pit liner specifications and installation description**

### Cuttings Area

**Cuttings Area being used?** NO

**Are you storing cuttings on location?** NO

**Description of cuttings location**

**Cuttings area length (ft.)**                                      **Cuttings area width (ft.)**

**Cuttings area depth (ft.)**                                      **Cuttings area volume (cu. yd.)**

**Is at least 50% of the cuttings area in cut?**

**WCuttings area liner**

**Cuttings area liner specifications and installation description**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** MALDIVES 15-22 FED COM

**Well Number:** 331H

### Section 8 - Ancillary Facilities

**Are you requesting any Ancillary Facilities?:** NO

**Ancillary Facilities attachment:**

**Comments:**

### Section 9 - Well Site Layout

**Well Site Layout Diagram:**

Maldives\_15\_22\_Fed\_Com\_331H\_Rig\_Layout\_20180808095556.pdf

**Comments:**

### Section 10 - Plans for Surface Reclamation

**Type of disturbance:** New Surface Disturbance

**Multiple Well Pad Name:** MALDIVES MDP 15 PAD

**Multiple Well Pad Number:** 1

**Recontouring attachment:**

Maldives\_15\_22\_Fed\_Com\_331H\_Reclamation\_20180808095744.pdf

**Drainage/Erosion control construction:** All areas disturbed shall be reclaimed as early and as nearly as practicable to their original condition or their final land use and shall be maintained to control dust and minimize erosion to the extent practicable.

**Drainage/Erosion control reclamation:** Topsoils and subsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns. The disturbed area then shall be reseeded in the first favorable growing season.

<b>Well pad proposed disturbance (acres):</b> 5.097	<b>Well pad interim reclamation (acres):</b> 2.12	<b>Well pad long term disturbance (acres):</b> 2.977
<b>Road proposed disturbance (acres):</b> 0.825	<b>Road interim reclamation (acres):</b> 0	<b>Road long term disturbance (acres):</b> 0.825
<b>Powerline proposed disturbance (acres):</b> 1.043	<b>Powerline interim reclamation (acres):</b> 0	<b>Powerline long term disturbance (acres):</b> 1.043
<b>Pipeline proposed disturbance (acres):</b> 1.213	<b>Pipeline interim reclamation (acres):</b> 0	<b>Pipeline long term disturbance (acres):</b> 1.213
<b>Other proposed disturbance (acres):</b> 0	<b>Other interim reclamation (acres):</b> 0	<b>Other long term disturbance (acres):</b> 0
<b>Total proposed disturbance:</b> 8.178	<b>Total interim reclamation:</b> 2.12	<b>Total long term disturbance:</b> 6.058

**Disturbance Comments:**

**Reconstruction method:** Operator will use Best Management Practices"BMP" to mechanically recontour to obtain the desired outcome.

**Topsoil redistribution:** Topsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.

**Soil treatment:** Topsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.

**Existing Vegetation at the well pad:** Shinnery, yucca, grasses and mesquite.

**Existing Vegetation at the well pad attachment:**



**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** MALDIVES 15-22 FED COM

**Well Number:** 331H

**Existing Vegetation Community at the road:** Shinnery, yucca, grasses and mesquite.

**Existing Vegetation Community at the road attachment:**

**Existing Vegetation Community at the pipeline:** Shinnery, yucca, grasses and mesquite.

**Existing Vegetation Community at the pipeline attachment:**

**Existing Vegetation Community at other disturbances:** Shinnery, yucca, grasses and mesquite.

**Existing Vegetation Community at other disturbances attachment:**

**Non native seed used?** NO

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** NO

**Seedling transplant description attachment:**

**Will seed be harvested for use in site reclamation?** NO

**Seed harvest description:**

**Seed harvest description attachment:**

**Seed Management**

**Seed Table**

**Seed type:**

**Seed source:**

**Seed name:**

**Source name:**

**Source address:**

**Source phone:**

**Seed cultivar:**

**Seed use location:**

**PLS pounds per acre:**

**Proposed seeding season:**

**Seed Summary**

**Total pounds/Acre:**

Seed Summary	
Seed Type	Pounds/Acre

**Seed reclamation attachment:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** MALDIVES 15-22 FED COM

**Well Number:** 331H

### Operator Contact/Responsible Official Contact Info

**First Name:** Jacob

**Last Name:** Ochoa

**Phone:** (575)748-9934

**Email:** jacob.ochoa@dvn.com

**Seedbed prep:**

**Seed BMP:**

**Seed method:**

**Existing invasive species?** NO

**Existing invasive species treatment description:**

**Existing invasive species treatment attachment:**

**Weed treatment plan description:** Maintain weeds on an as need basis.

**Weed treatment plan attachment:**

**Monitoring plan description:** Monitor as needed

**Monitoring plan attachment:**

**Success standards:** N/A

**Pit closure description:** N/A

**Pit closure attachment:**

### Section 11 - Surface Ownership

**Disturbance type:** NEW ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** MALDIVES 15-22 FED COM

**Well Number:** 331H

**Disturbance type:** EXISTING ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** MALDIVES 15-22 FED COM

**Well Number:** 331H

**Disturbance type:** PIPELINE

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

## Section 12 - Other Information

**Right of Way needed?** NO

**Use APD as ROW?**

**ROW Type(s):**

**ROW Applications**

**SUPO Additional Information:**

**Use a previously conducted onsite?** NO

**Previous Onsite information:**

## Other SUPO Attachment

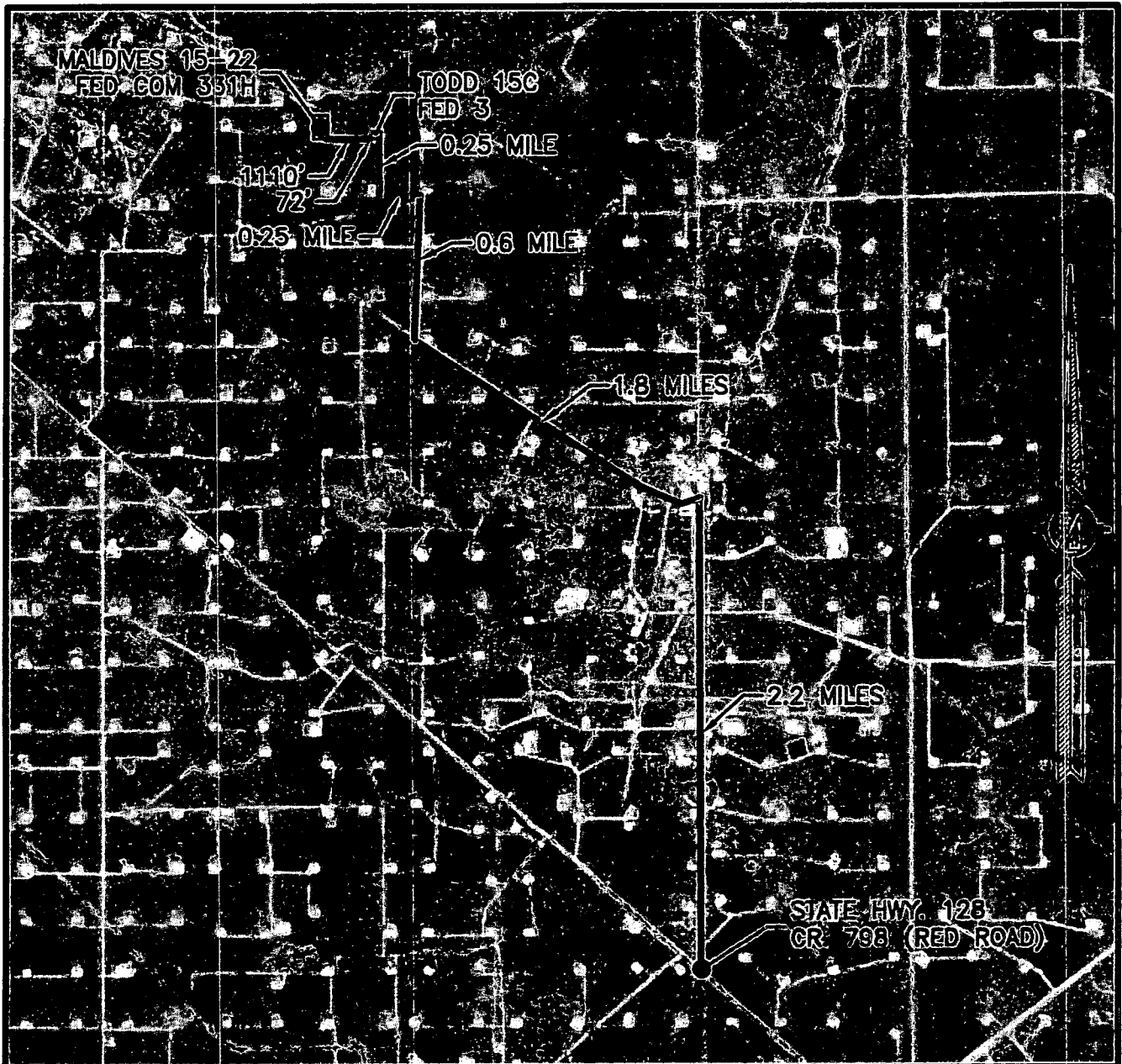
Maldives\_15\_22\_Fed\_Com\_331H\_Electric\_20180808095933.pdf

Maldives\_15\_22\_Fed\_Com\_331H\_Flowline\_20180808095950.pdf

MALDIVES\_MDP\_15\_CTB\_1\_PAD\_P\_20180808100241.pdf

Pay.gov\_\_Receipt\_20180810072021.pdf

SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
AERIAL ACCESS ROUTE MAP



NOT TO SCALE  
AERIAL PHOTO:  
GOOGLE EARTH  
FEB. 2017

DEVON ENERGY PRODUCTION COMPANY, L.P.  
**MALDIVES 15-22 FED COM 331H**  
LOCATED 250 FT. FROM THE NORTH LINE  
AND 570 FT. FROM THE WEST LINE OF  
SECTION 15, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MAY 17, 2017

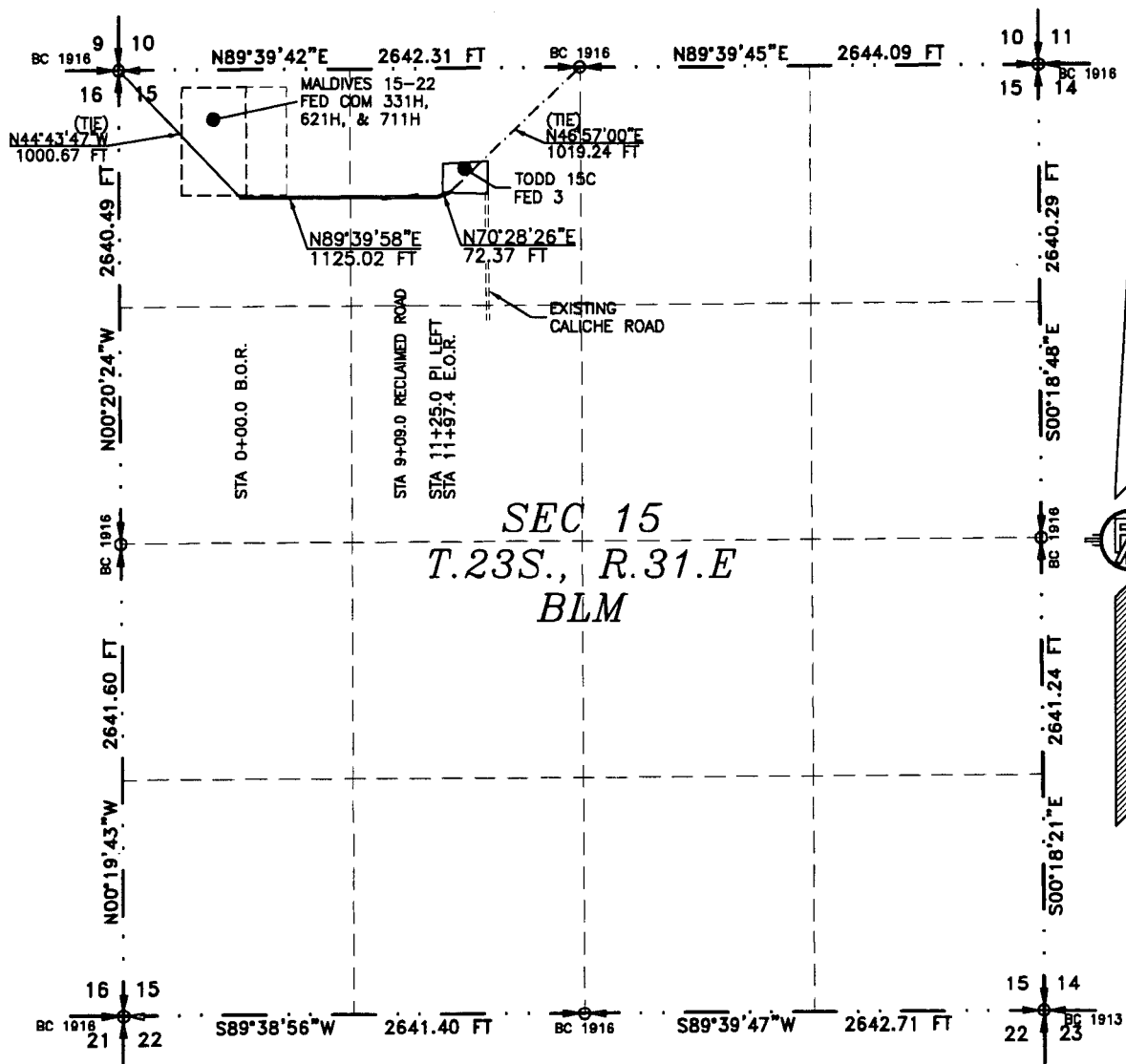
SURVEY NO. 5232

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

**ACCESS ROAD PLAT**

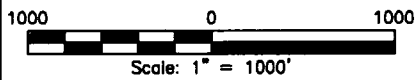
ACCESS ROAD FOR MALDIVES 15-22 FED COM 331H, 621H, & 711H

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING**  
**SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.**  
**EDDY COUNTY, STATE OF NEW MEXICO**  
**MAY 17, 2017**



**SEC 15**  
**T.23S., R.31.E**  
**BLM**

SEE NEXT SHEET (2-2) FOR DESCRIPTION



**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

**SURVEYOR CERTIFICATE**

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 17 DAY OF MAY 2016

*Filimon F. Jaramillo*  
 FILIMON F. JARAMILLO, P.E.S. 12797  
 (575) 234-3341

MADRON SURVEYING, INC.  
 301 SOUTH CANAL  
 CARLSBAD, NEW MEXICO 88220  
 Phone (575) 234-3341

**SURVEY NO. 5232**

**MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO**

**SHEET: 1-2**

**ACCESS ROAD PLAT**

ACCESS ROAD FOR MALDIVES 15-22 FED COM 331H, 621H, & 711H

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
MAY 17, 2017**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE NW/4 NW/4 OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N44°43'47"W, A DISTANCE OF 1000.67 FEET;  
THENCE N89°39'58"E A DISTANCE OF 1125.02 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N70°28'26"E A DISTANCE OF 72.37 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTH QUARTER CORNER OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N46°57'00"E, A DISTANCE OF 1019.24 FEET;

SAID STRIP OF LAND BEING 1197.39 FEET OR 72.57 RODS IN LENGTH, CONTAINING 0.825 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NW/4	621.02 L.F.	37.64 RODS	0.428 ACRES
NE/4 NW/4	576.37 L.F.	34.93 RODS	0.397 ACRES

**SURVEYOR CERTIFICATE**

I, FILMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 29 DAY OF MAY 2016

*Filmon F. Jaramillo*  
REGISTERED PROFESSIONAL SURVEYOR  
NEW MEXICO

MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88220  
Phone (575) 234-3341

**GENERAL NOTES**

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SHEET: 2-2

**MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO**

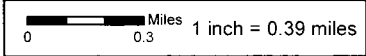
**SURVEY NO. 5232**

301 SOUTH CANAL  
(575) 234-3341

**PLAT**  
**One Mile Radius Map**

**devon**  
This map is for illustrative purposes only and is neither a legally recorded map nor a survey and is not intended to be used as one. Devon makes no warranty, representation, or guarantee of any kind regarding this map.

USA Contiguous Equidistant Conic  
Datum: North American 1983  
Created by: FME Server  
Map is current as of 4/5/2018

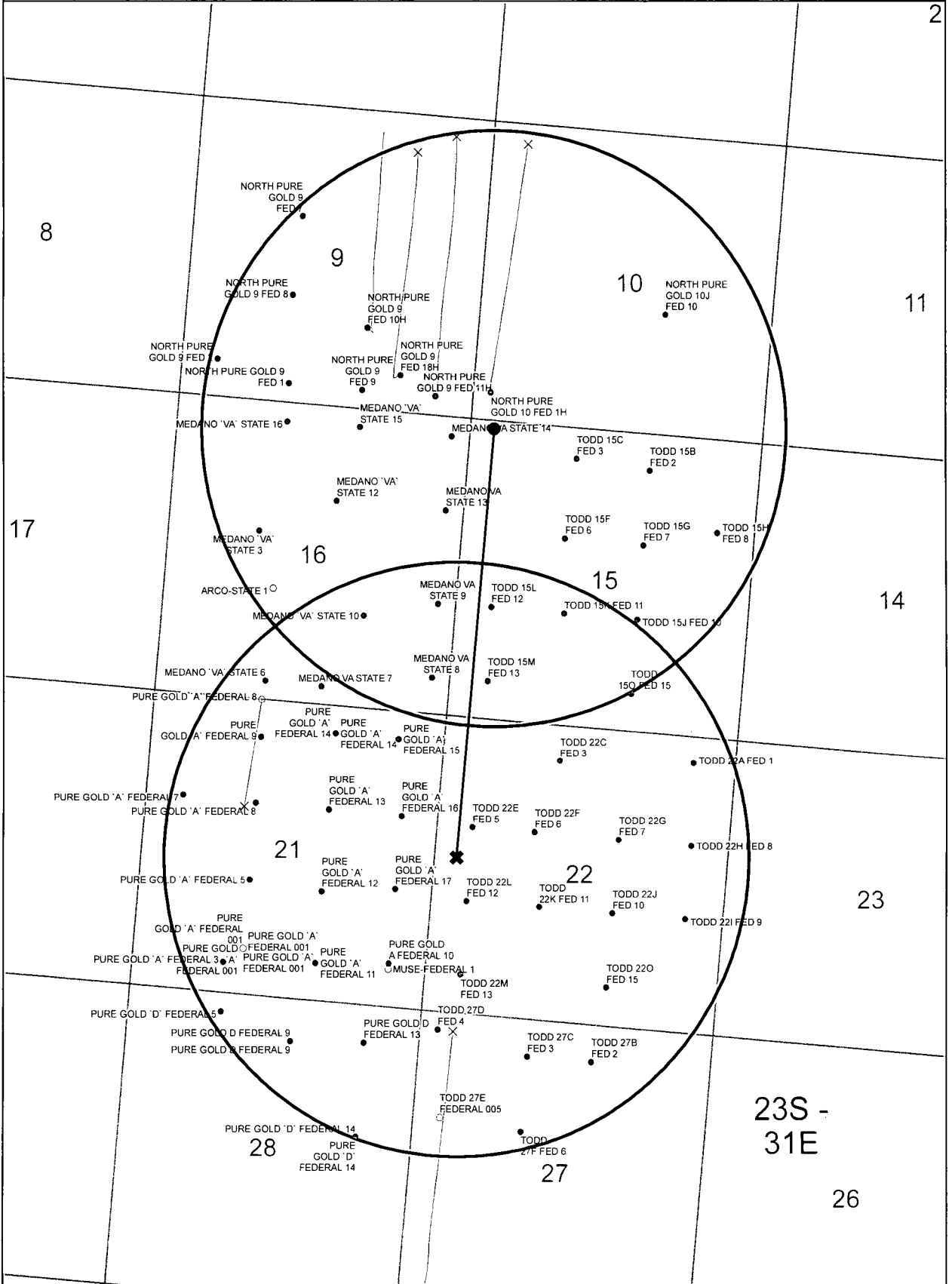


**MALDIVES 15-22 FED COM 331H**  
**WA016886895**

**NORTH PURE GOLD 10 FED 1H**  
Nearest wellbore to SHL: 608 ft.

**ALDABRA 27 FED 1H**  
Nearest wellbore to BHL: 3084 ft.

- Unknown SHL
- Active SHL
- Inactive SHL
- × BHL





MALDIVES 15-22 FED COM 331H, 621H, 711H

MALDIVES 15-22 FED COM 521H, 522H, 511H



This map is for illustrative purposes only and is neither a legally recorded map nor survey and is not intended to be used as one. Devon makes no warranty, representation, or guarantee of any kind regarding this map.

WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere

Prepared by: \_User

Map is current as of: 11-Apr-2018



Miles

0 0.14 0.28 0.56 1:28,457

**DEVON 30 DAYS INSTALL PRIOR TO COMPLETION**  
**DEVON WILL CONTACT BLM IF ADDITIONAL TIME IS NEEDED**  
**DISTURBANCE: EXISTING**  
**CONTENTS: TW WATER & FW WATER**  
**SIZE OF PIPE: 10" OR 12"**  
**LENGTH OF PIPE: 14,903' TW & 24,824' FW**

CROFT FW POND

FW LINE: 24,824'

TODD 2 TW POND

MALDIVES 15-22 FED COM 331H

MALDIVES 15-22 FED COM 621H

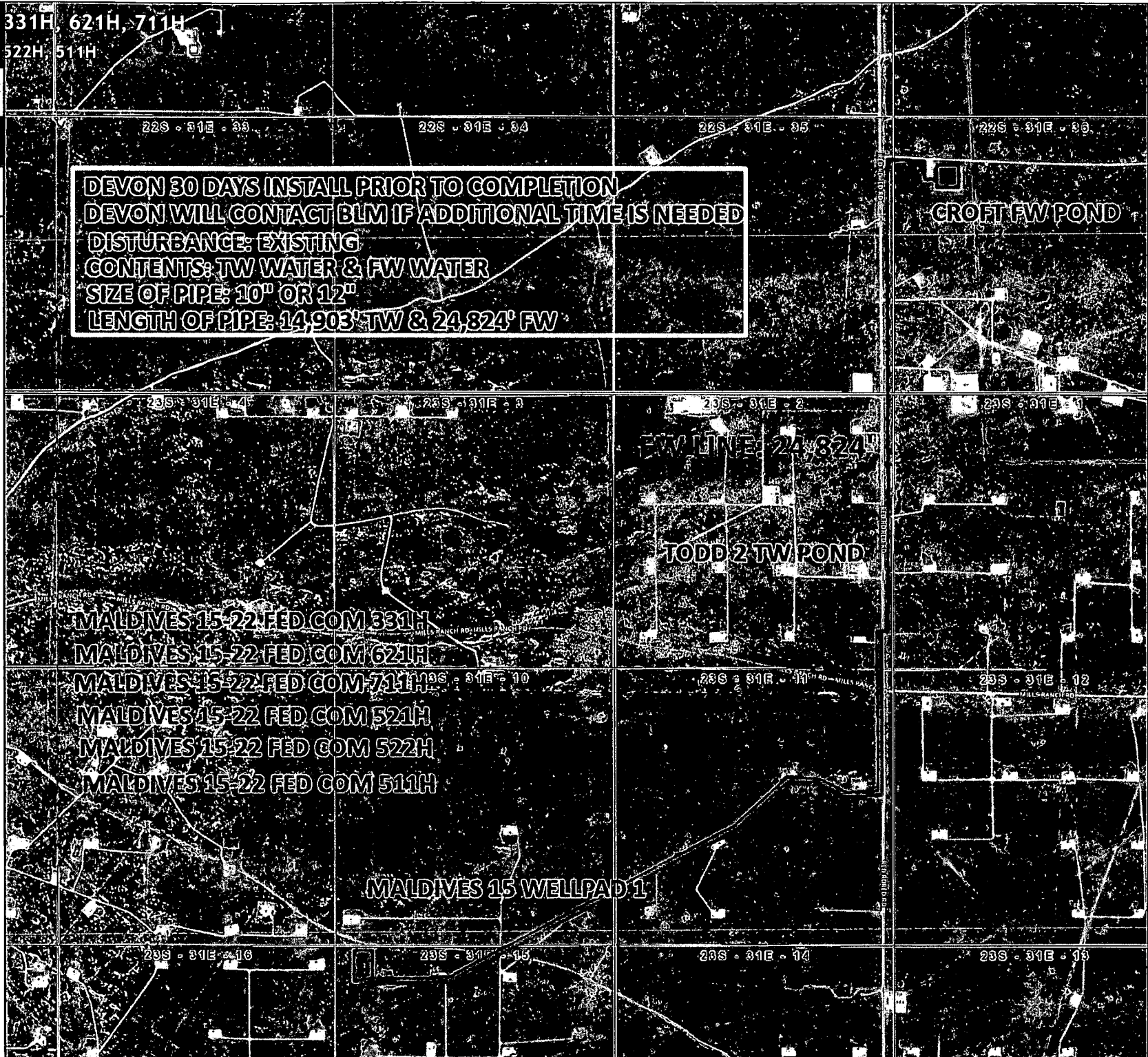
MALDIVES 15-22 FED COM 711H

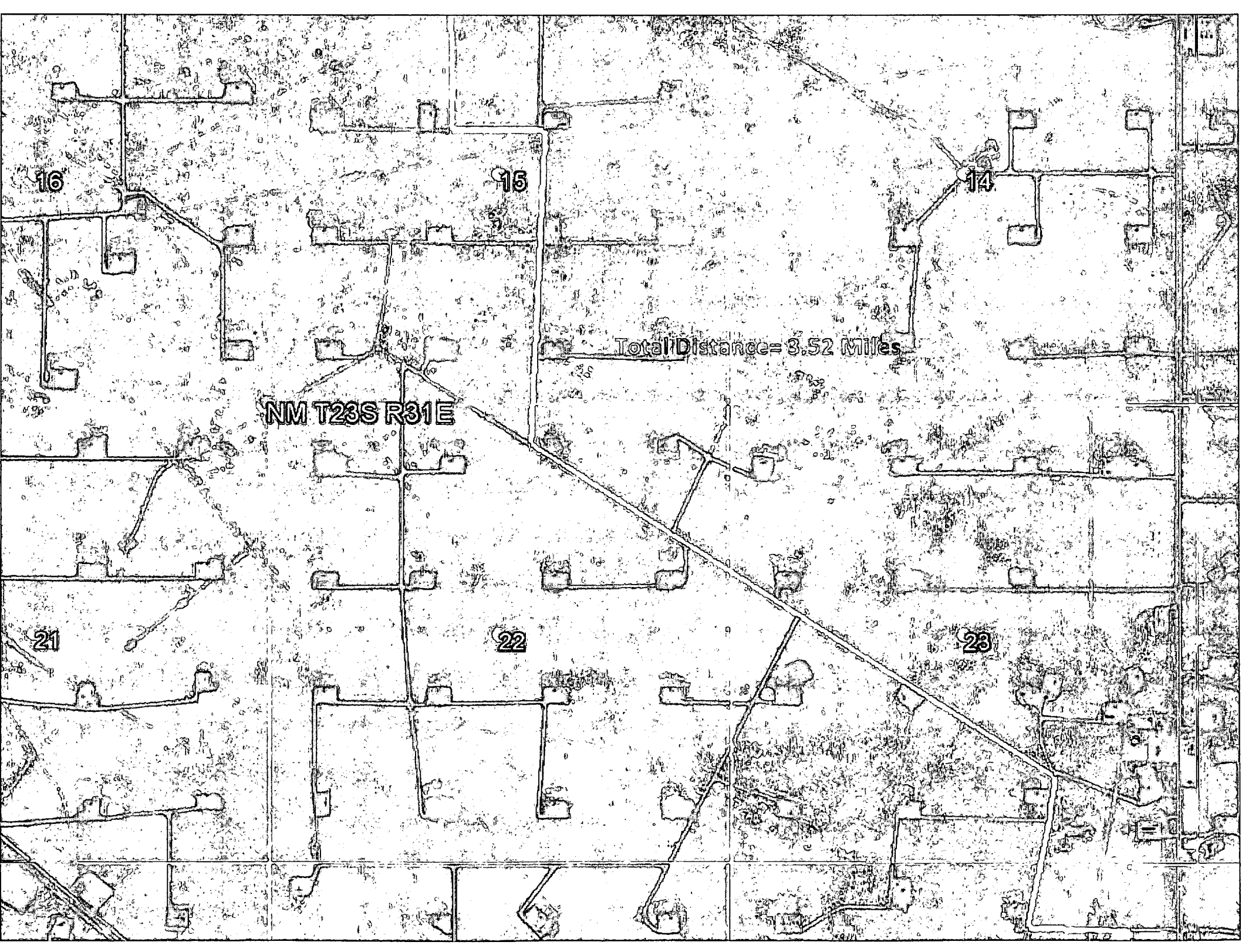
MALDIVES 15-22 FED COM 521H

MALDIVES 15-22 FED COM 522H

MALDIVES 15-22 FED COM 511H

MALDIVES 15 WELLPAD 1





16

16

14

NM T23S R31E

Total Distance = 3.52 Miles

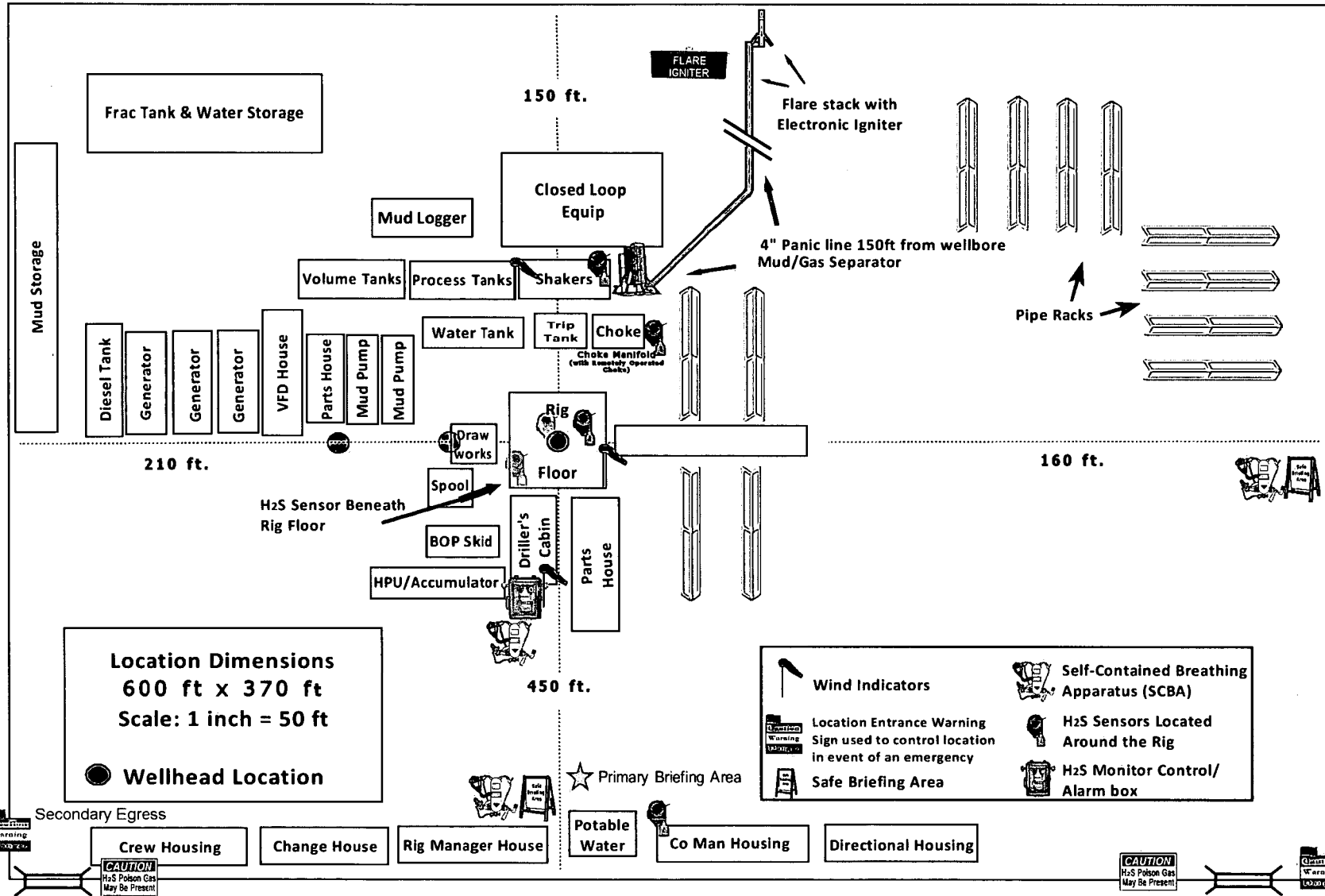
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22

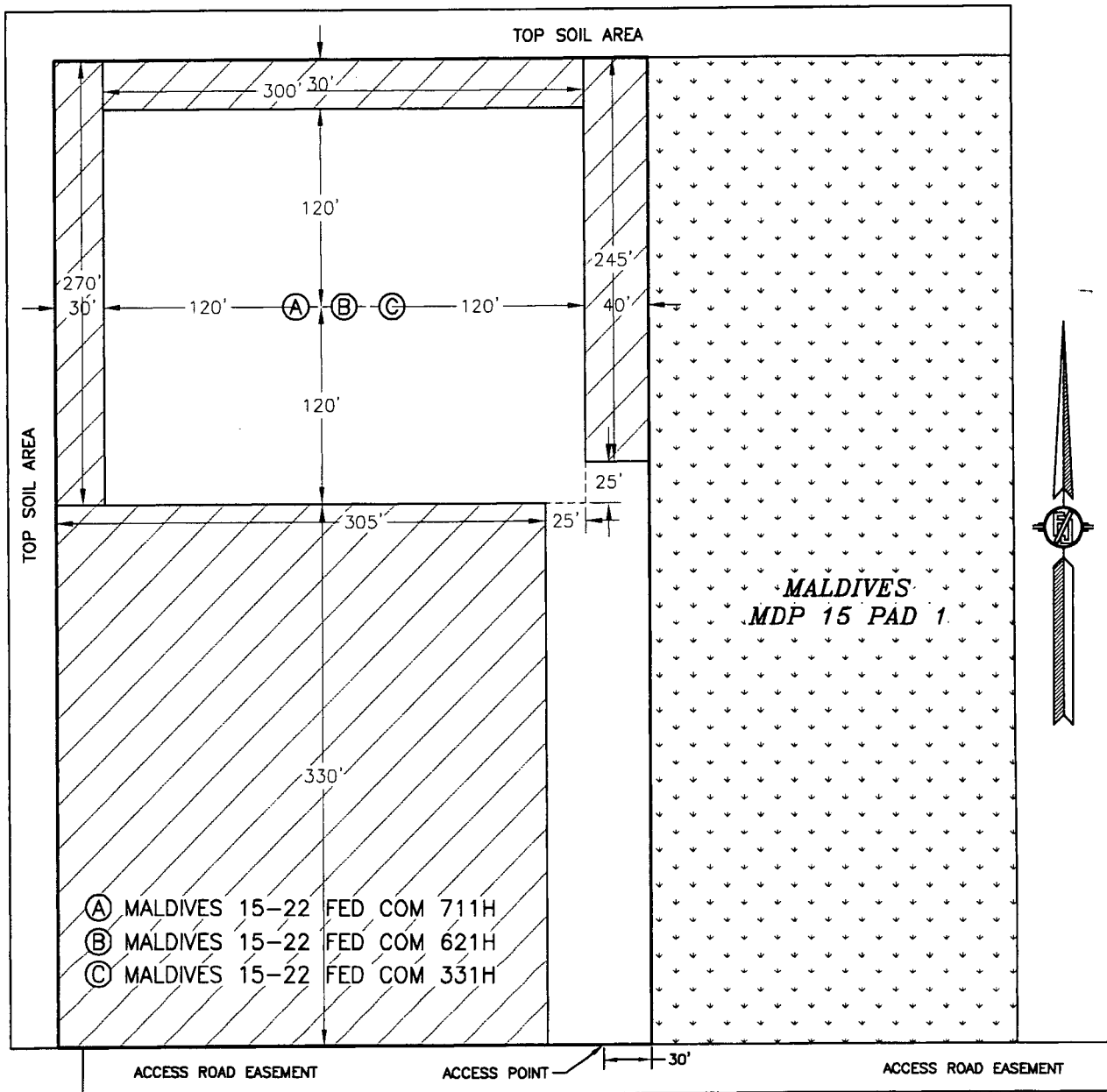
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# Devon Energy - Well Pad Rig Location Layout Safety Equipment Location



**SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 INTERIM SITE RECLAMATION**



- (A) MALDIVES 15-22 FED COM 711H
- (B) MALDIVES 15-22 FED COM 621H
- (C) MALDIVES 15-22 FED COM 331H

DENOTES INTERIM PAD RECLAMATION AREA

DENOTES GRADING SITE RECLAMATION AREA

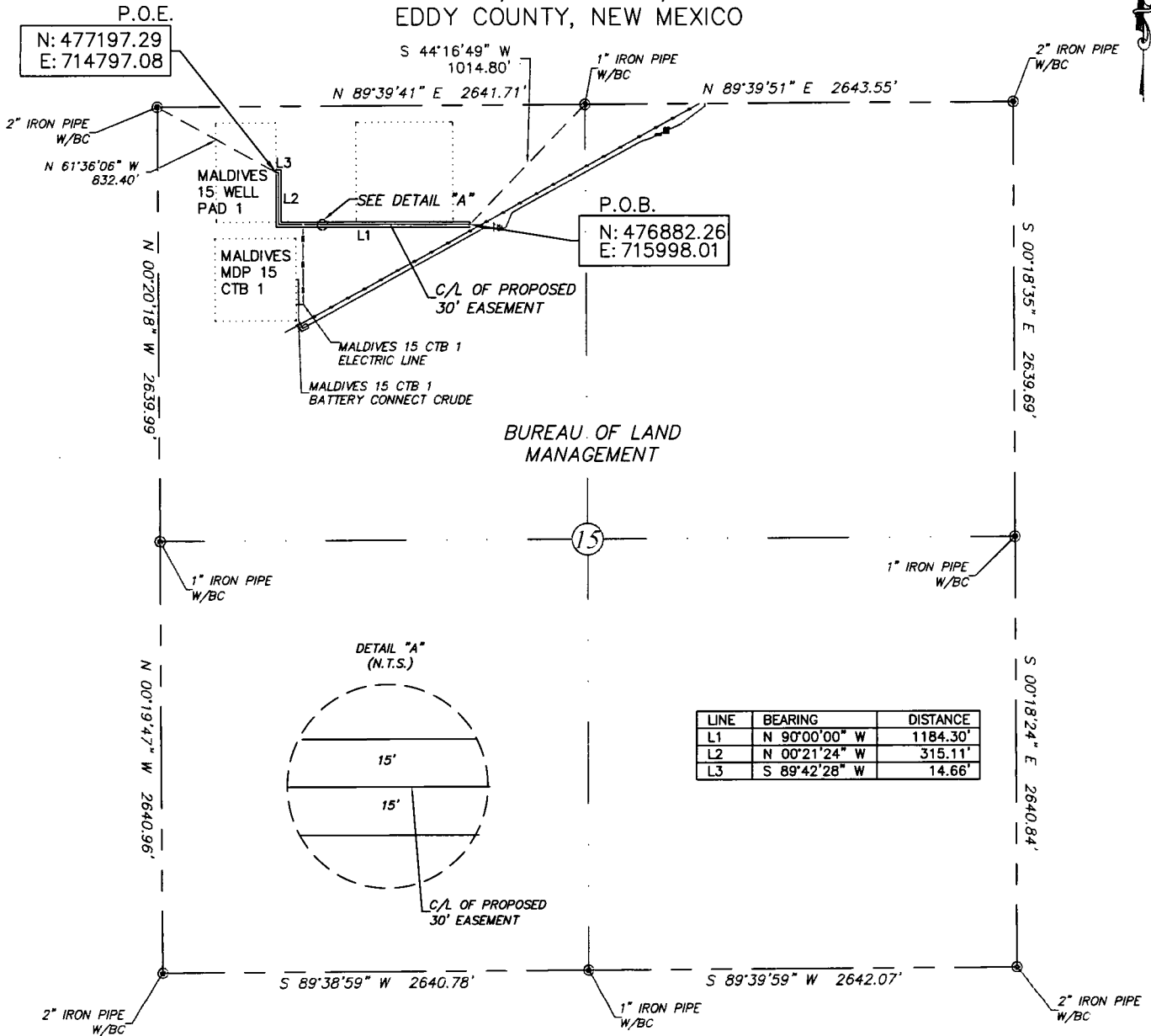
0 10 50 100 200  
 SCALE 1" = 100'

2.928± ACRES INTERIM PAD RECLAMATION AREA  
 3.169± ACRES GRADING SITE RECLAMATION AREA  
 2.169± ACRES NON-RECLAIMED AREA  
 8.266± ACRES MALDIVES MDP 15 PAD 1

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**MALDIVES 15-22 FED COM 331H**  
 LOCATED 250 FT. FROM THE NORTH LINE  
 AND 570 FT. FROM THE WEST LINE OF  
 SECTION 15, TOWNSHIP 23 SOUTH,  
 RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

MAY 17, 2017 SURVEY NO. 5232

EXHIBIT "A"  
 PAGE 1 of 4  
 SECTION 15, T23S-R31E, N.M.P.M.  
 EDDY COUNTY, NEW MEXICO



LINE	BEARING	DISTANCE
L1	N 90°00'00" W	1184.30'
L2	N 00°21'24" W	315.11'
L3	S 89°42'28" W	14.66'

30' EASEMENT AREA = 1.043 ACRE(S)  
 1514.07 FEET OR 91.76 RODS

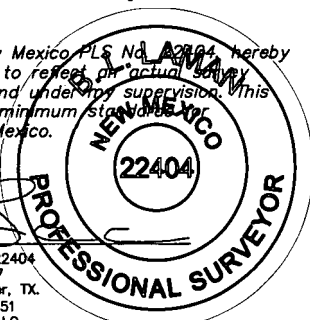
SEE THE ATTACHED LEGAL DESCRIPTION  
 Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

- 0+00.0 P.O.B.
- 2+49.6 STAKED POWER POLE
- 5+11.2 STAKED POWER POLE
- 7+72.6 STAKED POWER POLE
- 10+34.2 STAKED POWER LINE/MALDIVES 15 CTB 1 EL
- 11+84.3 STAKED POWER POLE
- 14+00.6 STAKED POWER POLE
- 14+99.4 STAKED POWER POLE
- 15+14.1 P.O.E./MALDIVES 15 WELL PAD 1

0 1000 2000



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: 08-30-2017  
 924 Richardson Dr., Jasper, TX.  
 (903) 388-3045 75951  
 Employee of Horizonrow, LLC

**HORIZON ROW LLC**

Drawn for:



Drawn by: JEANNIE PERRY

Date: 08/21/2017

DEVON ENERGY PRODUCTION COMPANY, L.P.

MALDIVES 15 WELL PAD 1  
 ELECTRIC LINE

PROPOSED 30' EASEMENT  
 ON THE PROPERTY OF  
 BUREAU OF LAND MANAGEMENT  
 SECTION 15, T23S-R31E, N.M.P.M.

LINE NUMBER:  
 EL8007

WBS NUMBER:  
 CC-123117.1B.ELE

SCALE:  
 1" = 1000'

REVISIONS:  
 8-29-17 CMAAS

SHEET:  
 1 OF 4

**SECTION 15, T23S-R31E, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO**

**ELECTRIC LINE 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 northwest quarter (NW ¼) of Section 15, Township 23 South, Range 31 East, N.M.P.M., Lea 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 1" iron pipe w/BC found for the north quarter corner of Section 15, T23S-R31E, N.M.P.M., Eddy County, New Mexico;

Thence S 44°16'49" W, a distance of 1014.80' to the **Point of Beginning** of this easement, having coordinates of Northing=476882.26 feet, Easting=715998.01 feet, and continuing the following courses;

Thence N 90°00'00" W, a distance of 1184.30' to an angle point;

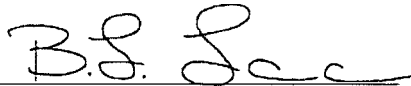
Thence N 00°21'24" W, a distance of 315.11' to an angle point;

Thence S 89°42'28" W, a distance of 14.66' to the **Point of Ending** of this easement, having coordinates of Northing=477197.29 feet, Easting=714797.08 feet, from said point a 2" iron pipe w/BC found for the northwest corner of Section 15, T23S-R31E, N.M.P.M., Eddy County, New Mexico bears N 61°36'06" W a distance of 832.40', covering **1514.07' or 91.76 rods** and having an area of **1.043 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.

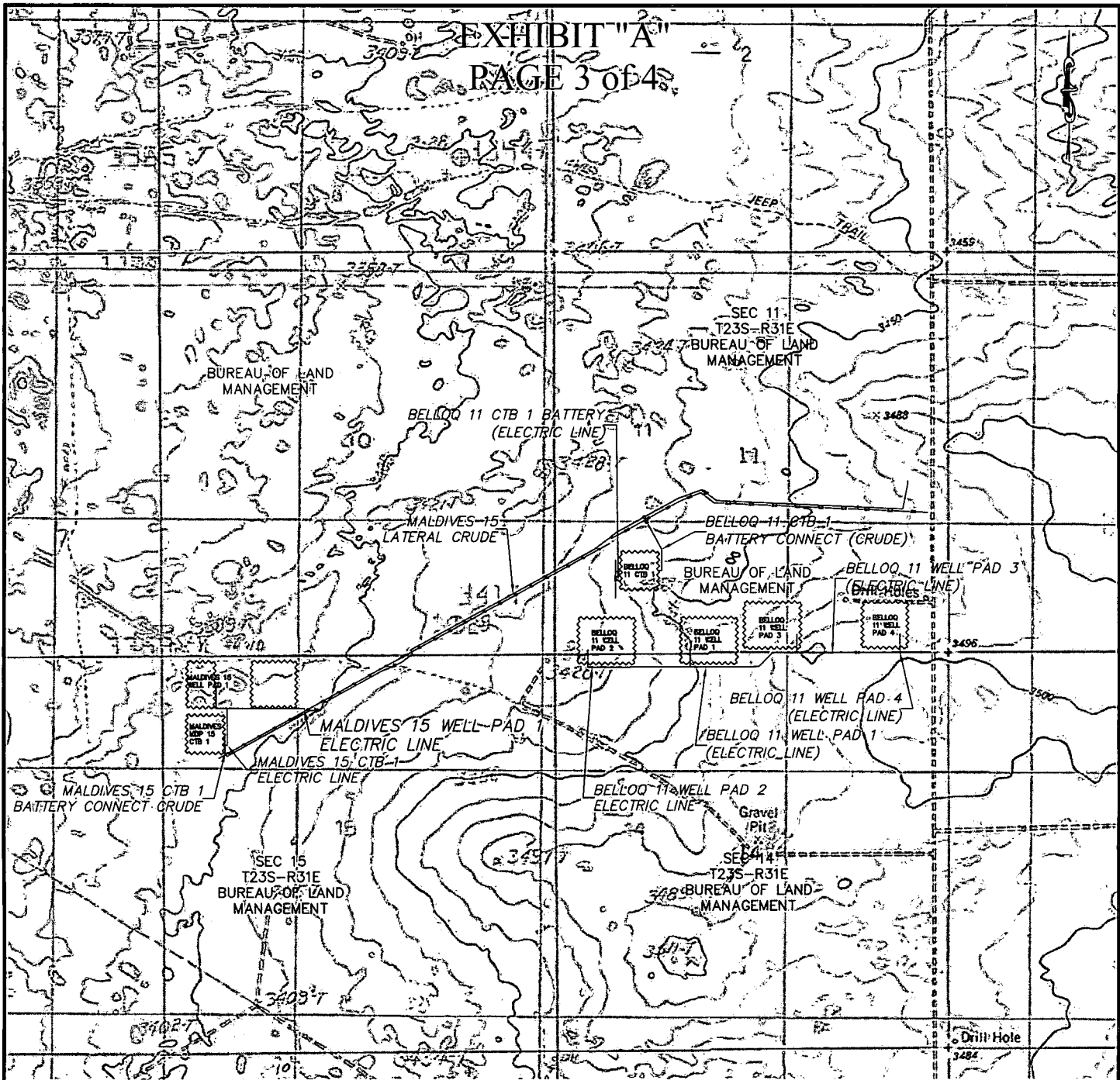
I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.



B.L. Laman PLS 22404  
Date Signed: 08/30/2017  
Horizon Row, LLC  
924 Richardson Dr., Jasper, TX  
(903) 388-3045 75951  
Employee of Horizon Row, LLC



EXHIBIT "A"  
PAGE 3 OF 4



QUAD MAP

SECTION 15, T23S-R31E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO

**HORIZON ROW LLC**

DEVON ENERGY PRODUCTION CO., L.P.

PROPOSED 30' EASEMENT

Drawn by:  
JEANNIE PERRY

Date: 08/19/2017

Drawn for:



LINE NUMBER:  
EL8007

WBS NUMBER:  
CC-123117.18.ELE

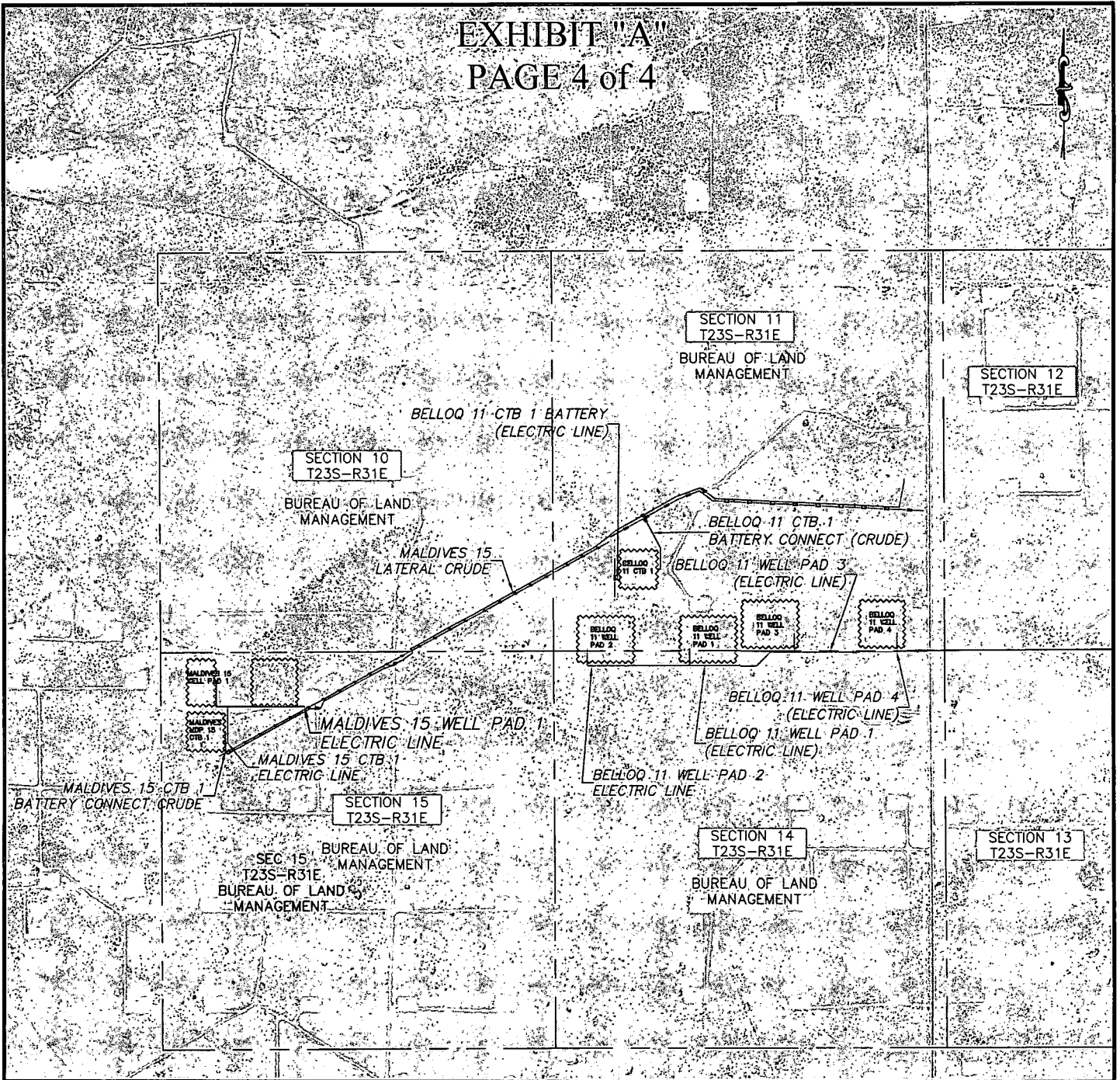
SCALE:  
1" = 2000'

REVISIONS:  
8-29-17 CMAAS

SHEET:  
3 OF 4



EXHIBIT "A"  
PAGE 4 of 4



AERIAL MAP

SECTION 15, T23S-R31E, N.M.P.M.  
EDDY COUNTY, NEW MEXICO

**HORIZON ROW LLC**

DEVON ENERGY PRODUCTION CO., L.P.

PROPOSED 30' EASEMENT

Drawn by:  
JEANNIE PERRY

Date: 08/19/2017

Drawn for:



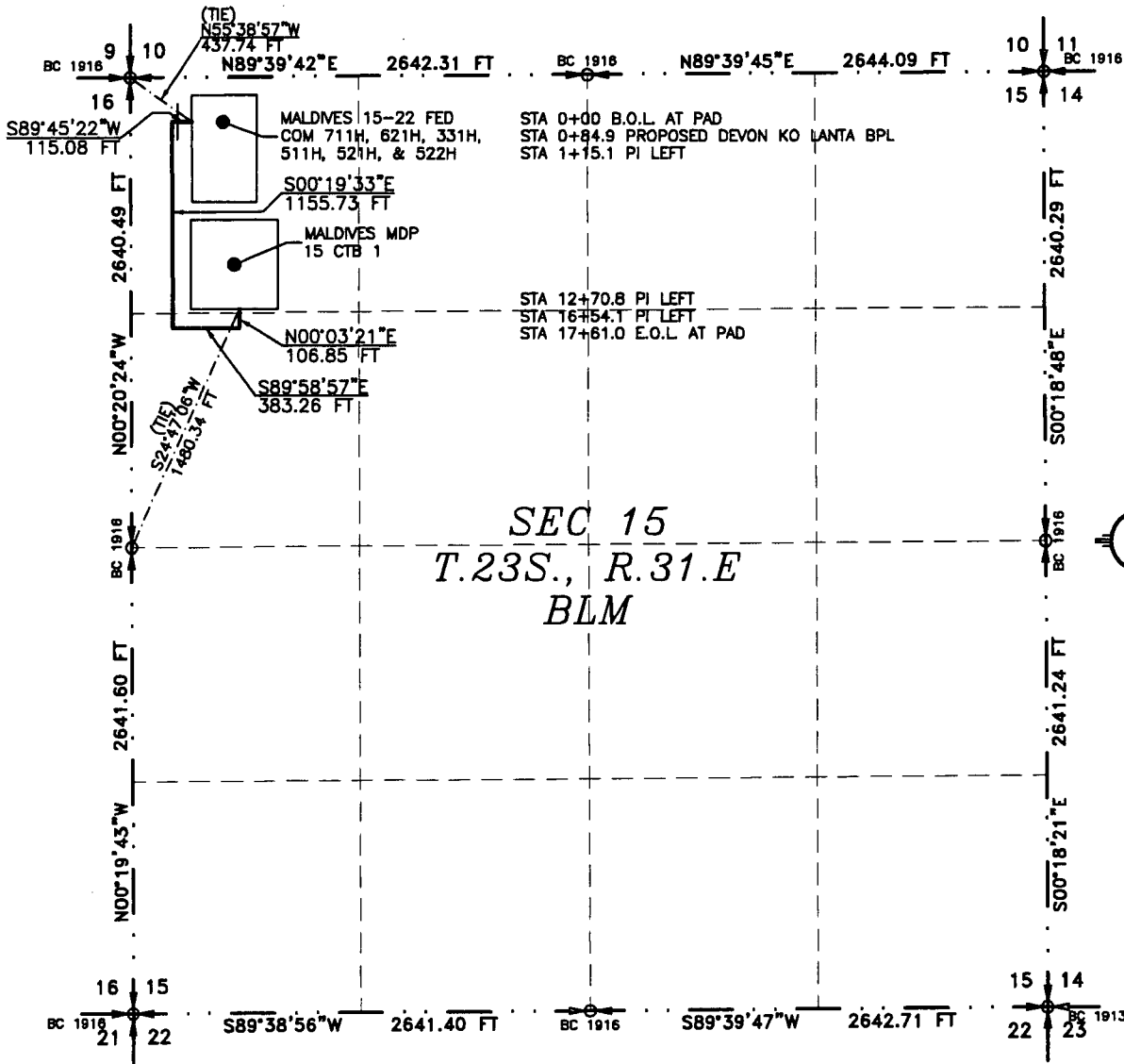
LINE NUMBER:  
EL8007  
WBS NUMBER:  
CC-123117.18.ELE  
SCALE:  
1" = 2000'  
REVISIONS:  
8-29-17 CMAAS  
SHEET:  
4 OF 4



**FLOWLINE PLAT**

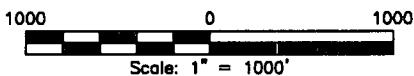
SIX-4" POLY FLOWLINES AND ONE-6" GAS LIFT LINE (BURIED IN THE SAME TRENCH) FROM MALDIVES 15-22 FED COM 711H, 621H, 331H, 511H, 521H, & 522H TO MALDIVES MDP 15 CTB 1

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**CENTERLINE SURVEY OF A PIPELINE CROSSING**  
**SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.**  
**EDDY COUNTY, STATE OF NEW MEXICO**  
**JUNE 12, 2017**



SEC 15  
 T.23S., R.31.E  
 BLM

SEE NEXT SHEET (2-4) FOR DESCRIPTION



**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

**SURVEYOR CERTIFICATE**

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 21<sup>ST</sup> DAY OF JUNE 2017

*(Signature of Filimon F. Jaramillo)*  
 FILIMON F. JARAMILLO, P.E.S. #12797  
 SURVEYOR

MADRON SURVEYING, INC.  
 301 SOUTH CANAL  
 CARLSBAD, NEW MEXICO 88220  
 Phone (575) 234-3341

SHEET: 1-4

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO (575) 234-3341 SURVEY NO. 5290

**FLOWLINE PLAT**

SIX-4" POLY FLOWLINES AND ONE-6" GAS LIFT LINE (BURIED IN THE SAME TRENCH) FROM MALDIVES 15-22 FED COM 711H, 621H, 331H, 511H, 521H, & 522H TO MALDIVES MDP 15 CTB 1

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
JUNE 12, 2017**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE NW/4 NW/4 OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N55°38'57"W, A DISTANCE OF 437.74 FEET;  
THENCE S89°45'22"W A DISTANCE OF 115.08 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE S00°19'33"E A DISTANCE OF 1155.73 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE S89°58'57"E A DISTANCE OF 383.26 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N00°03'21"E A DISTANCE OF 106.85 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE WEST QUARTER CORNER OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S24°47'06"W, A DISTANCE OF 1480.34 FEET;

SAID STRIP OF LAND BEING 1760.92 FEET OR 106.72 RODS IN LENGTH, CONTAINING 1.213 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NW/4	1206.42 L.F.	73.12 RODS	0.831 ACRES
SW/4 NW/4	554.50 L.F.	33.61 RODS	0.382 ACRES

**SURVEYOR CERTIFICATE**

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 20 DAY OF JUNE 2017

*Filimon F. Jaramillo*  
12797

MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88220  
Phone (575) 234-3341

**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SHEET: 2-4

**MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO**

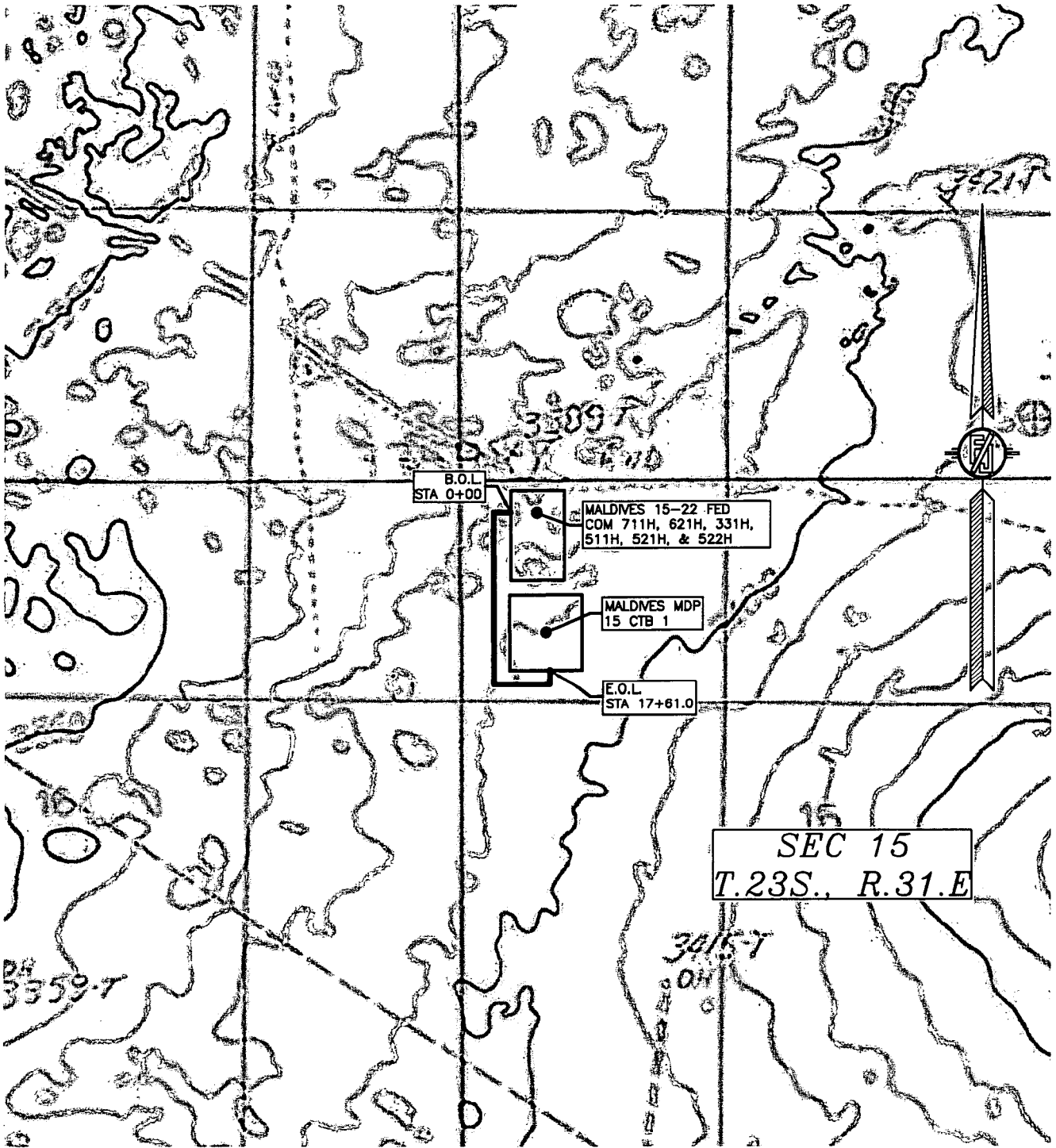
**SURVEY NO. 5290**

FILIMON F. JARAMILLO, P.E.S. 12797  
301 SOUTH CANAL  
(575) 234-3341

**FLOWLINE PLAT**

SIX-4" POLY FLOWLINES AND ONE-6" GAS LIFT LINE (BURIED IN THE SAME TRENCH) FROM MALDIVES 15-22 FED COM 711H, 621H, 331H, 511H, 521H, & 522H TO MALDIVES MDP 15 CTB 1

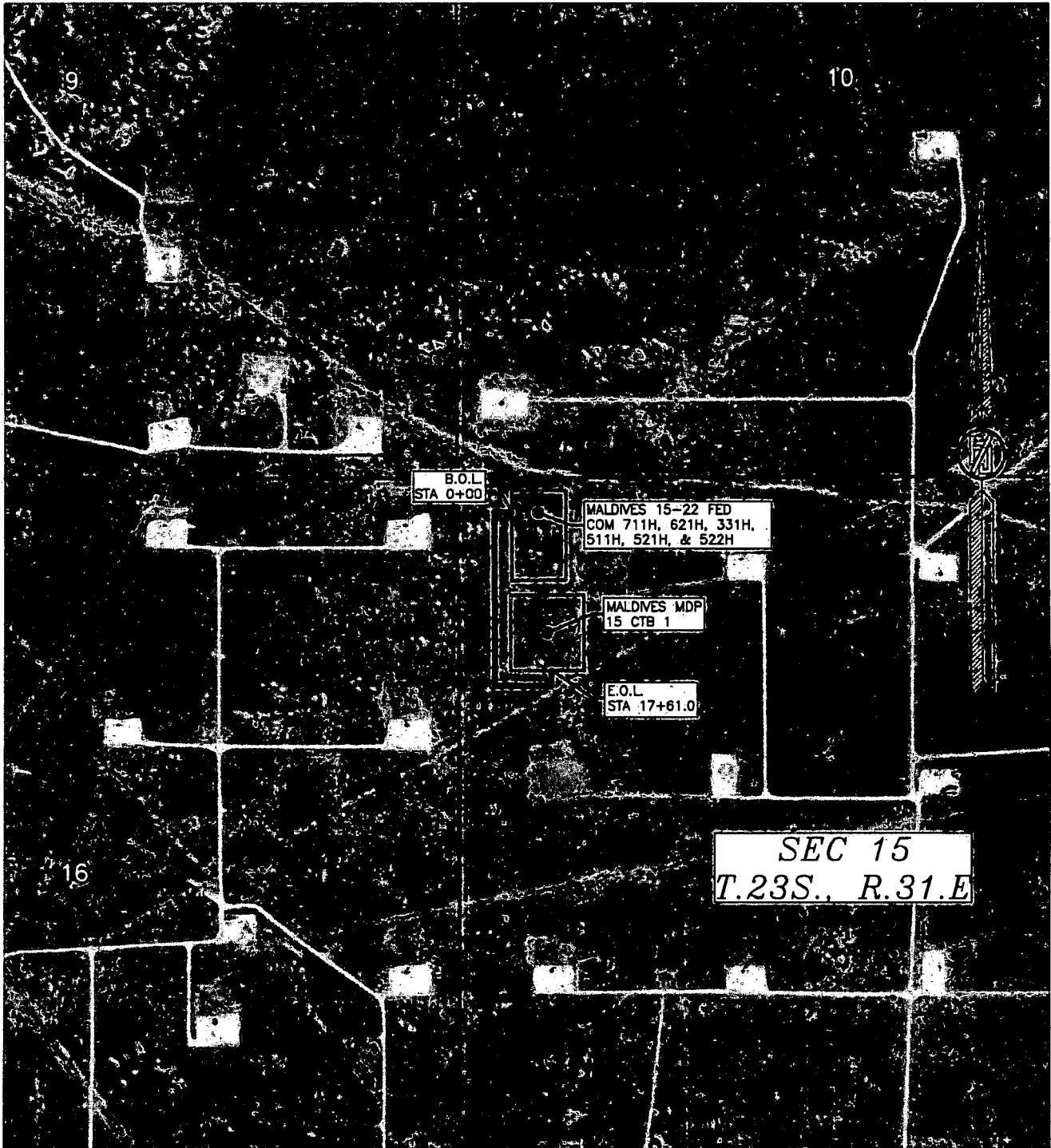
**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
JUNE 12, 2017



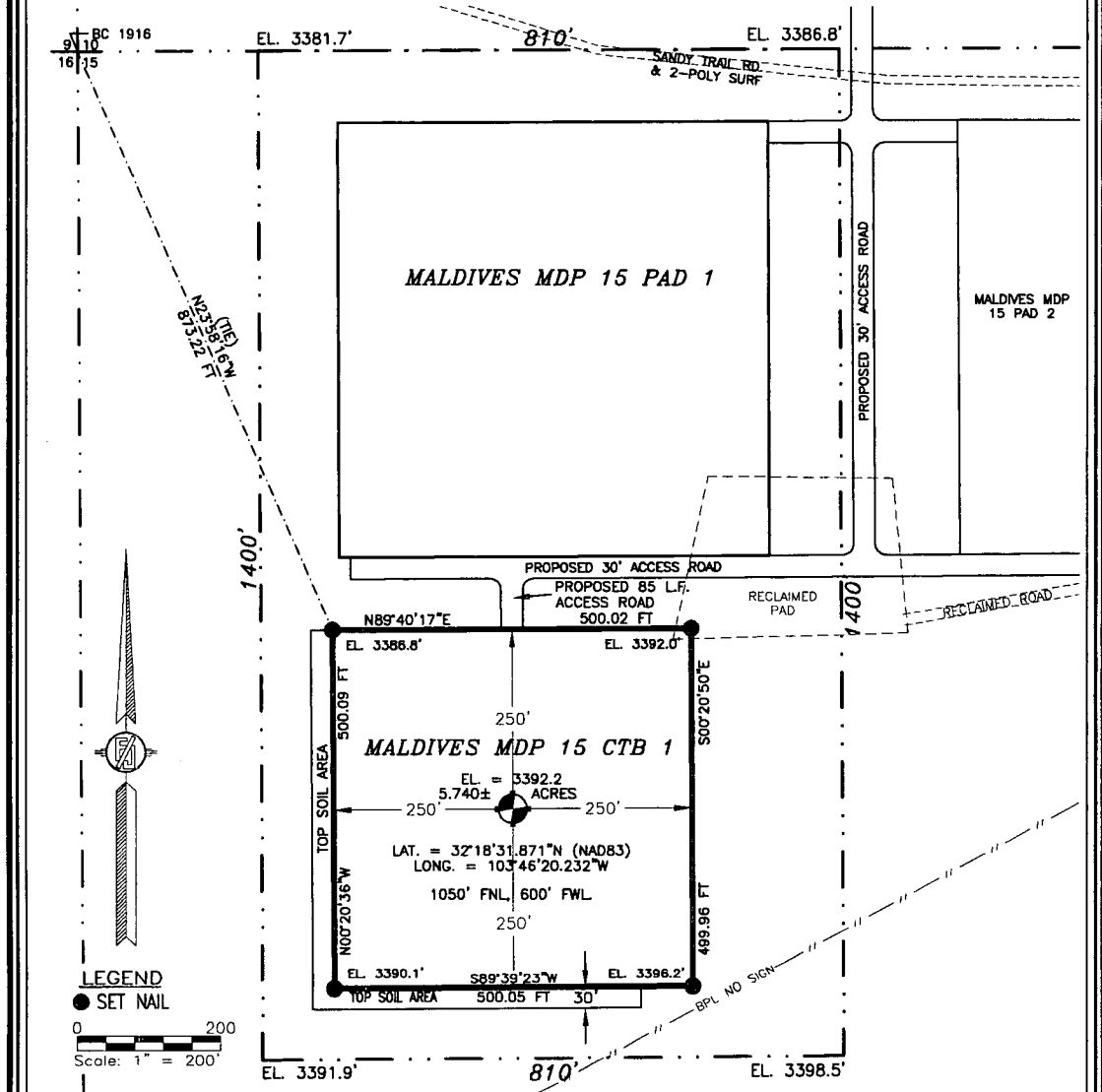
**FLOWLINE PLAT**

SIX-4" POLY FLOWLINES AND ONE-6" GAS LIFT LINE (BURIED IN THE SAME TRENCH) FROM MALDIVES 15-22 FED COM 711H, 621H, 331H, 511H, 521H, & 522H TO MALDIVES MDP 15 CTB 1

DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF A PIPELINE CROSSING  
SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
JUNE 12, 2017



**MALDIVES MDP 15 CTB 1**  
**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
 IN THE NW/4 NW/4 OF  
**SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.**  
**EDDY COUNTY, STATE OF NEW MEXICO**  
 MAY 4, 2017



**DESCRIPTION**

A CERTAIN PIECE OR PARCEL OF LAND AND REAL ESTATE LYING IN BUREAU OF LAND MANAGEMENT LAND IN THE NW/4 NW/4 OF SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

BEGINNING AT THE NORTHWEST CORNER OF THE PARCEL, WHENCE THE NORTHWEST CORNER OF SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N23°58'16"W, A DISTANCE OF 873.22 FEET;  
 THENCE N89°40'17"E A DISTANCE OF 500.02 FEET TO THE NORTHEAST CORNER OF THE PARCEL;  
 THENCE S00°20'50"E A DISTANCE OF 499.96 FEET TO THE SOUTHEAST CORNER OF THE PARCEL;  
 THENCE S89°39'23"W A DISTANCE OF 500.05 FEET TO THE SOUTHWEST CORNER OF THE PARCEL;  
 THENCE N00°20'36"W A DISTANCE OF 500.09 FEET TO THE NORTHWEST CORNER OF THE PARCEL, THE POINT OF BEGINNING;  
 CONTAINING 5.740 ACRES MORE OR LESS.

**GENERAL NOTES**

- 1.) THE INTENT OF THIS SURVEY IS TO ACQUIRE A BUSINESS LEASE FOR THE PURPOSE OF BUILDING A CENTRAL TANK BATTERY
  - 2.) BASIS OF BEARING IS NEW MEXICO STATE PLANE EAST ZONE MODIFIED TO THE SURFACE (NAD83), COORDINATES ARE NAD 83, ELEVATIONS ARE NAVD 88
- DRIVING DIRECTIONS:** FROM STATE HWY. 128 & CR. 79B (RED ROAD) GO NORTH ON RED ROAD 2.2 MILES, TURN LEFT ON CALICHE ROAD AND GO NORTHWEST 1.8 MILES, TURN RIGHT AND GO NORTH 0.6 MILE, TURN LEFT AND GO WEST 0.25 MILE, TURN RIGHT AND GO NORTH 0.25 MILE, TO THE TODD 15C FED 3 WELL FROM SOUTHWEST EDGE OF PAD FOLLOW FLAGS WEST-SOUTHWEST 72° TO THE SOUTHEAST CORNER OF PAD 1, THEN FOLLOW FLAGS WEST 865° TO THE SOUTHEAST CORNER OF PAD 1, THEN ANOTHER 36° WEST TO "T" LEFT, AND FOLLOW FLAGS SOUTH 85° TO NORTH EDGE OF PAD FOR CTB 1.

**SURVEYOR CERTIFICATE**

I, FILMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 10 DAY OF MAY 2017.

*Filmon F. Jaramillo*  
 FILMON F. JARAMILLO, SURVEYOR NO. 12797  
 301 SOUTH CANAL  
 CARLSBAD, NEW MEXICO 88220  
 Phone (575) 234-3341

MADRON SURVEYING, INC.  
 301 SOUTH CANAL  
 CARLSBAD, NEW MEXICO 88220  
 Phone (575) 234-3341

**SURVEY NO. 5252**

**SHEET: 1-3**

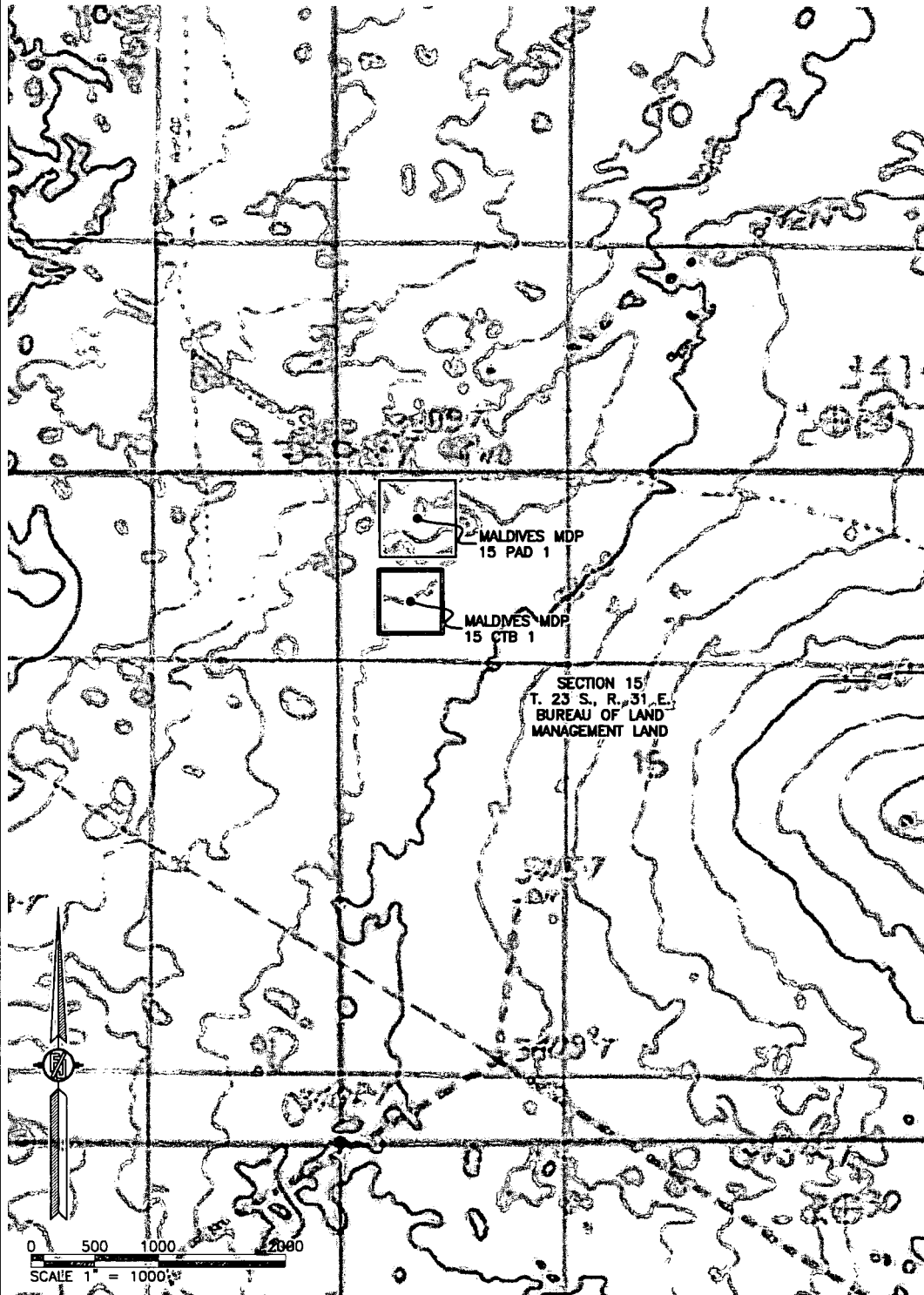
**MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO**

MALDIVES MDP 15 CTB 1

DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE NW/4 NW/4 OF  
SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MAY 4, 2017

QUAD MAP



SHEET: 2-3

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SURVEY NO. 5252

MALDIVES MDP 15 CTB 1

DEVON ENERGY PRODUCTION COMPANY, L.P.  
IN THE NW/4 NW/4 OF  
SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

MAY 4, 2017

AERIAL PHOTO



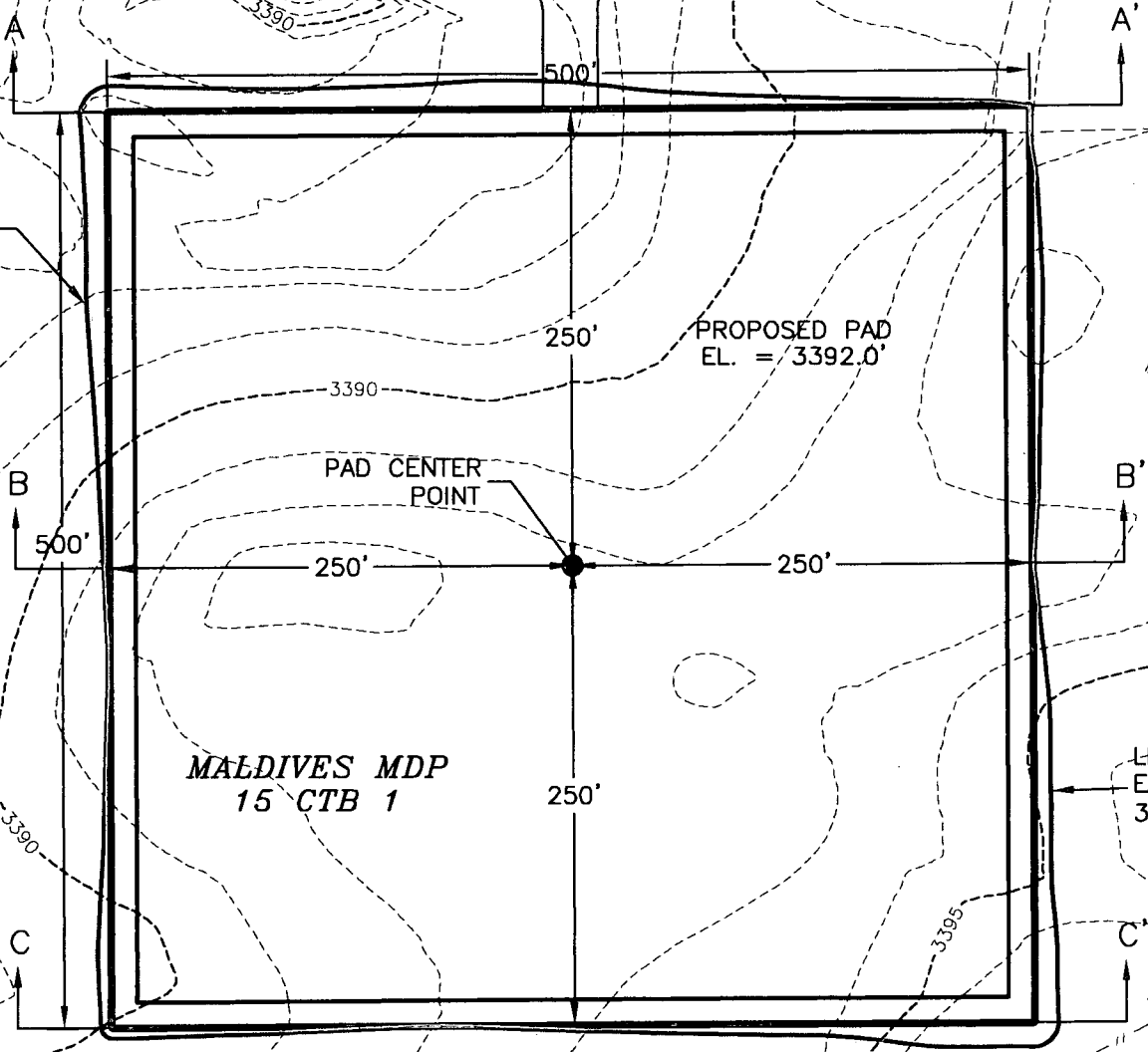
SHEET: 3-3

SURVEY NO. 5252

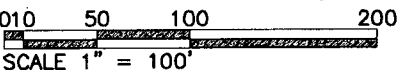
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

PLAN VIEW

LIMITS OF EARTHWORK  
3:1 SLOPE (TYP.)



LIMITS OF EARTHWORK  
3:1 SLOPE (TYP.)



DEVON ENERGY PRODUCTION COMPANY, L.P.  
PAD ELEVATIONS AND CROSS SECTIONS  
**FOR MALDIVES MDP 15 CTB 1**  
SECTION 15, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

CUT	FILL	NET
4204 CU. YD	11248 CU. YD	7044 CU. YD (FILL)

EARTHWORK QUANTITIES ARE ESTIMATED

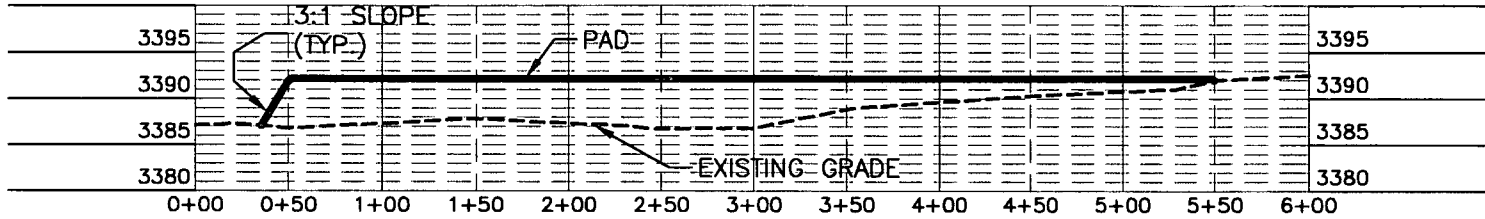
MAY 4, 2017  
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO (575) 234-3341

SHEET 1-2  
SURVEY NO. 5252

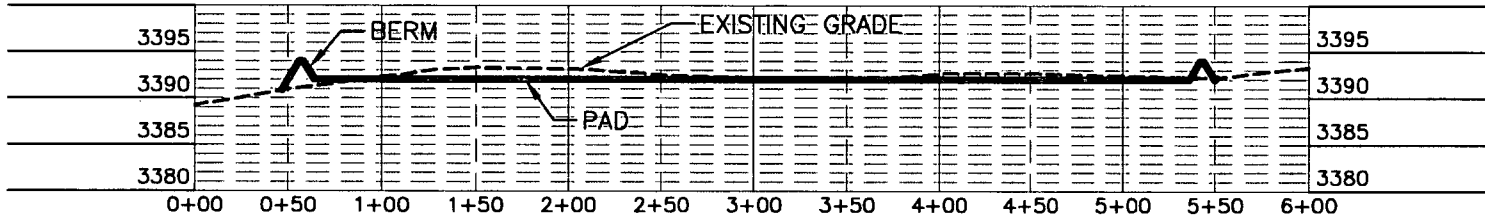


# CROSS-SECTIONS

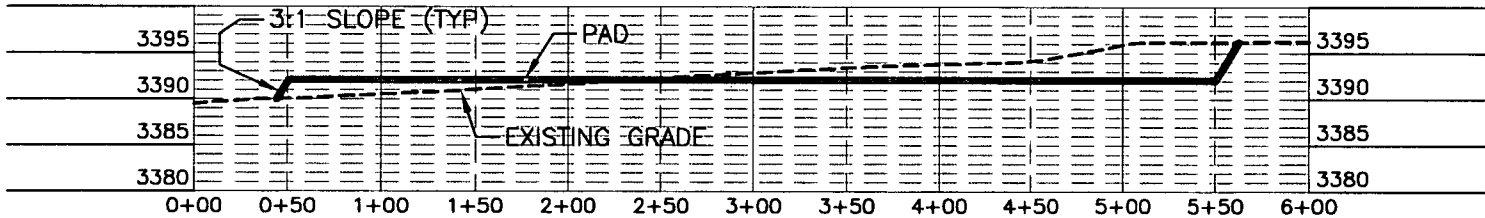
SECTION A-A'



SECTION B-B'



SECTION C-C'



0 10 50 100 200  
SCALE 1" = 100' - 1" = 20' VER

DEVON ENERGY PRODUCTION COMPANY, L.P.  
PAD ELEVATIONS AND CROSS SECTIONS  
FOR MALDIVES MDP 15 CTB 1  
SECTION 15, TOWNSHIP 23 SOUTH,  
RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO

CUT	FILL	NET
4204 CU. YD	11248 CU. YD	7044 CU. YD (FILL)

EARTHWORK QUANTITIES ARE ESTIMATED

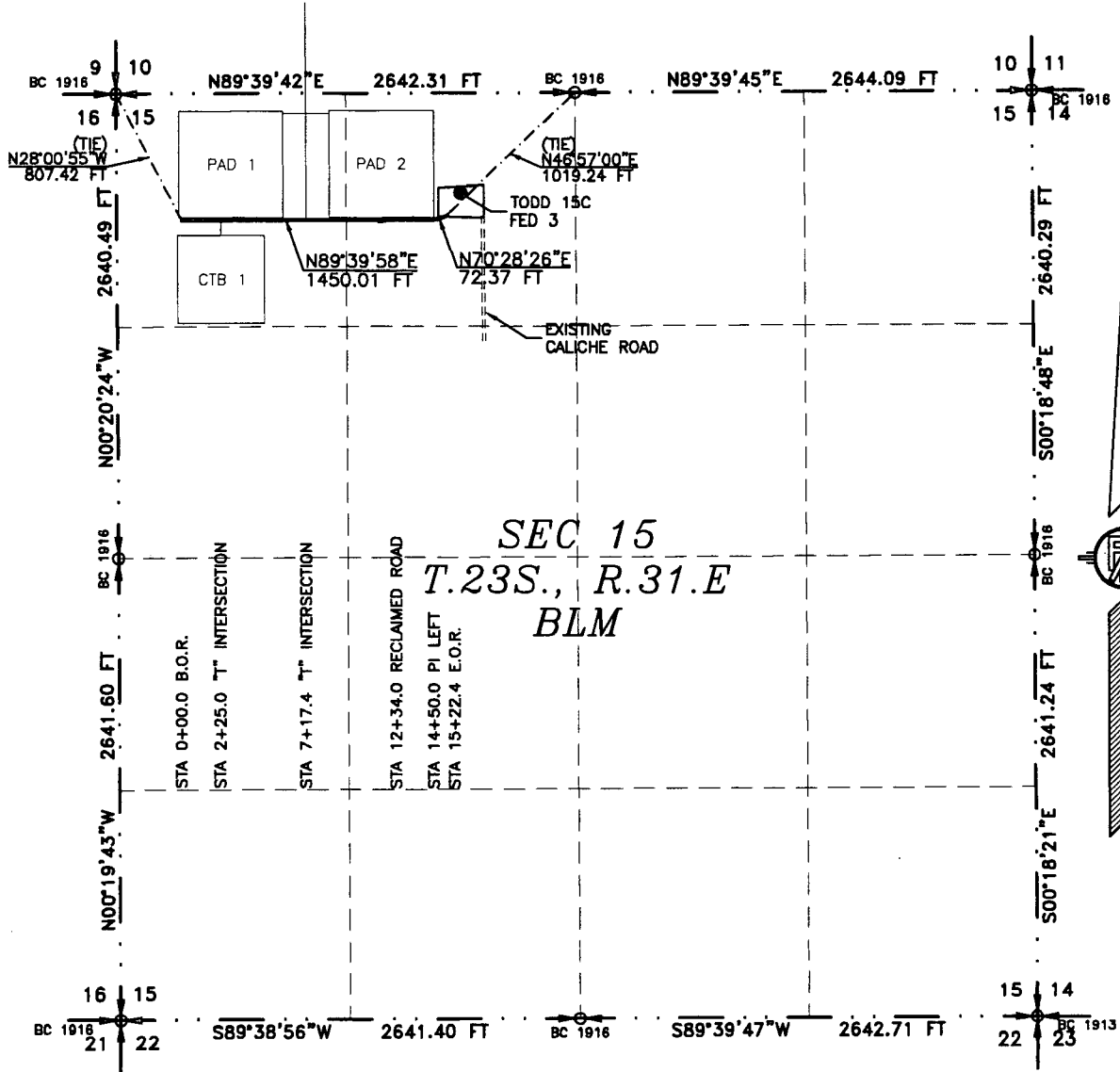
MAY 4, 2017  
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

SHEET 2-2  
SURVEY NO. 5252

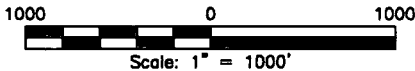
**ACCESS ROAD PLAT**

PRIMARY ACCESS ROAD FOR MALDIVES MDP 15 CTB 1 AND PADS 1 & 2

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
 CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
 SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 MAY 5, 2017



SEE NEXT SHEET (2-10) FOR DESCRIPTION



**GENERAL NOTES**

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

**SURVEYOR CERTIFICATE**

I, FILMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 5 DAY OF MAY, 2016

*(Signature of Filmon F. Jaramillo)*  
 FILMON F. JARAMILLO, P.S. 12797

MADRON SURVEYING, INC.  
 301 SOUTH CANAL  
 CARLSBAD, NEW MEXICO 88220  
 Phone (575) 234-3341

**SURVEY NO. 5261**

**SHEET: 1-10**

**MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO**

**ACCESS ROAD PLAT**

**PRIMARY ACCESS ROAD FOR MALDIVES MDP 15 CTB 1 AND PADS 1 & 2**

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
MAY 5, 2017**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE NW/4 NW/4 OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N28°00'55"W, A DISTANCE OF 807.42 FEET;  
THENCE N89°39'58"E A DISTANCE OF 1450.01 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;  
THENCE N70°28'26"E A DISTANCE OF 72.37 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTH QUARTER CORNER OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N46°57'00"E, A DISTANCE OF 1019.24 FEET;

SAID STRIP OF LAND BEING 1522.38 FEET OR 92.27 RODS IN LENGTH, CONTAINING 1.048 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NW/4	946.01 L.F.	57.34 RODS	0.651 ACRES
NE/4 NW/4	576.37 L.F.	34.93 RODS	0.397 ACRES

**SURVEYOR CERTIFICATE**

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 5<sup>TH</sup> DAY OF MAY 2016

*Filimon F. Jaramillo*  
REGISTRAR  
12797  
SURVEYOR

MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88220  
Phone (575) 234-3341

**SURVEY NO. 5261**

**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

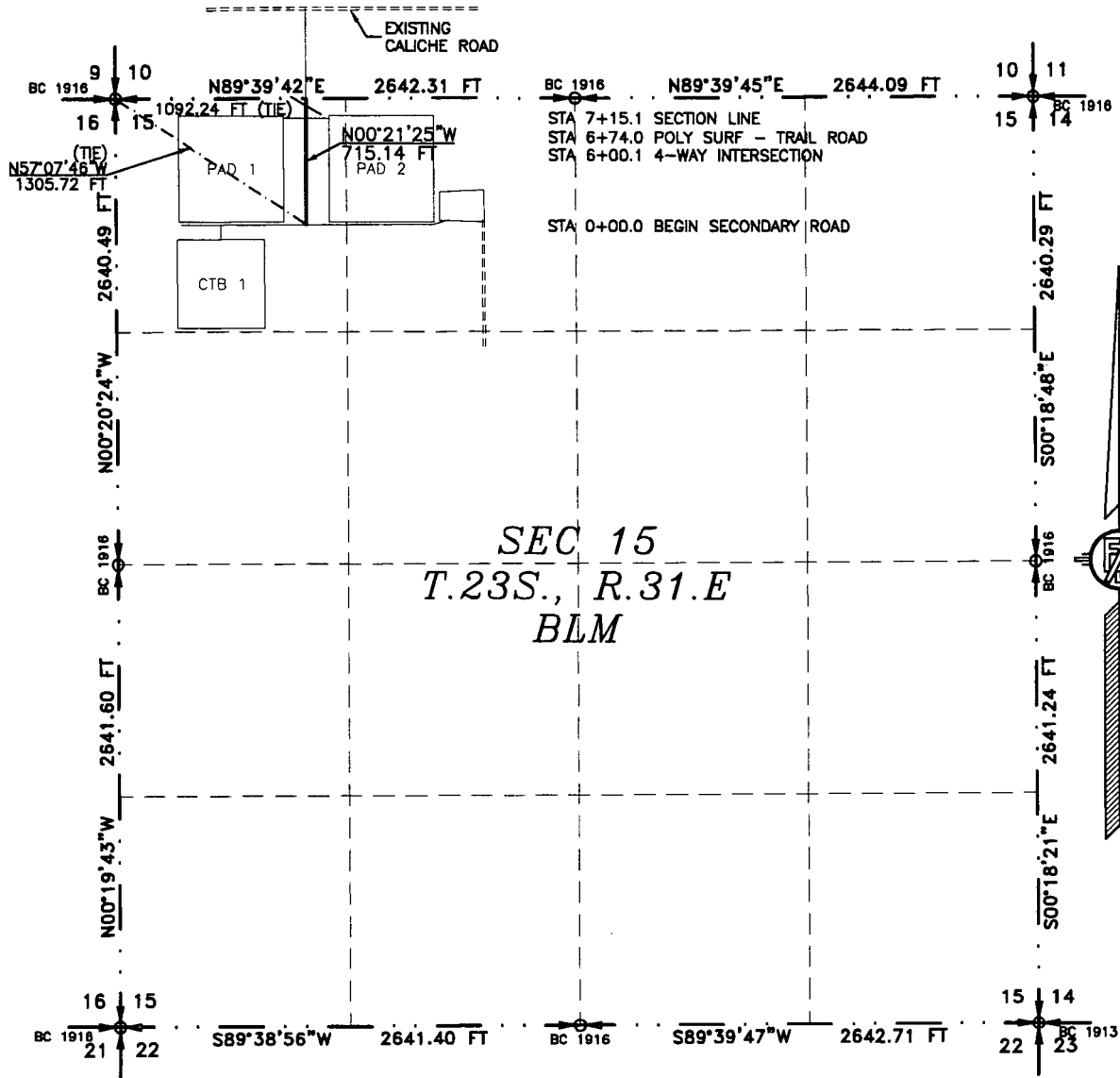
**SHEET: 2-10**

**MADRON SURVEYING INC. CARLSBAD, NEW MEXICO**

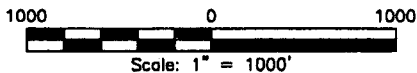
301 SOUTH CANAL  
(575) 234-3341

**ACCESS ROAD PLAT**  
 SECONDARY ACCESS ROAD FOR MALDIVES MDP 15

DEVON ENERGY PRODUCTION COMPANY, L.P.  
 CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
 SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 MAY 5, 2017



SEE NEXT SHEET (4-10) FOR DESCRIPTION



**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

**SURVEYOR CERTIFICATE**

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 5 DAY OF MAY 2016

RE: *[Signature]*  
 FILIMON F. JARAMILLO, PLS. 12797

MADRON SURVEYING, INC.  
 301 SOUTH CANAL  
 CARLSBAD, NEW MEXICO 88220  
 Phone (575) 234-3341

SURVEY NO. 5261

SHEET: 3-10

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-3341

**ACCESS ROAD PLAT**  
**SECONDARY ACCESS ROAD FOR MALDIVES MDP 15**

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING**  
**SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.**  
**EDDY COUNTY, STATE OF NEW MEXICO**  
**MAY 5, 2017**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE NW/4 NW/4 OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N57°07'46"W, A DISTANCE OF 1305.72 FEET;

THENCE N00°21'25"W A DISTANCE OF 715.14 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHWEST CORNER OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S89°39'42"W, A DISTANCE OF 1092.24 FEET;

SAID STRIP OF LAND BEING 715.14 FEET OR 43.34 RODS IN LENGTH, CONTAINING 0.493 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NW/4    715.14 L.F.    43.34 RODS    0.493 ACRES

**SURVEYOR CERTIFICATE**

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 15 DAY OF MAY 2016

  
FILIMON F. JARAMILLO, P.S.S. 12797

MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88220  
Phone (575) 234-3341

**SURVEY NO. 5261**

**GENERAL NOTES**

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

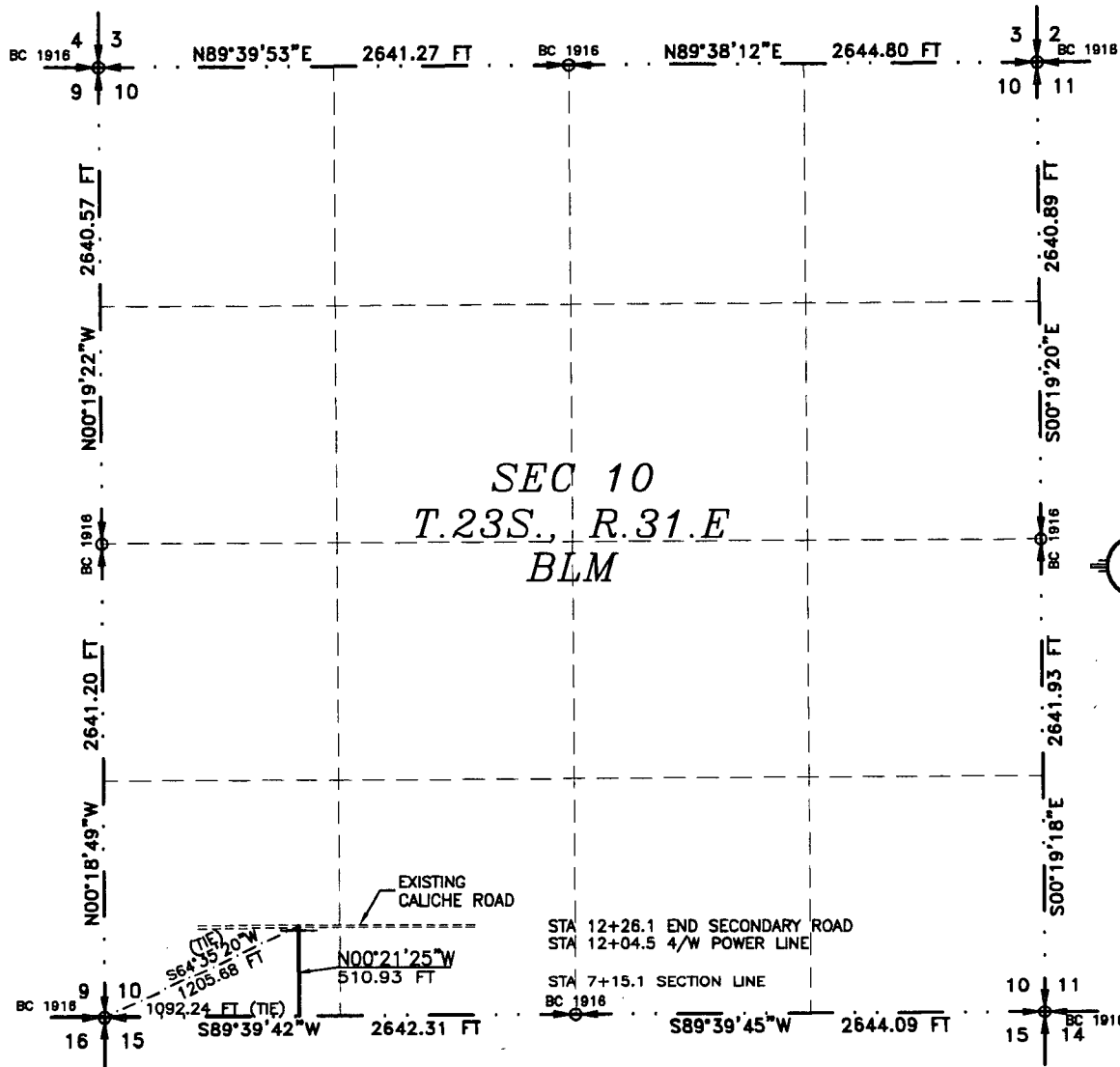
**SHEET: 4-10**

**MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO**

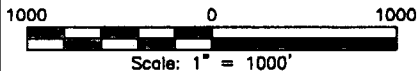
301 SOUTH CANAL  
(575) 234-3341

**ACCESS ROAD PLAT**  
 SECONDARY ACCESS ROAD FOR MALDIVES MDP 15

DEVON ENERGY PRODUCTION COMPANY, L.P.  
 CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
 SECTION 10, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 MAY 5, 2017



SEE NEXT SHEET (6-10) FOR DESCRIPTION



**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

**SURVEYOR CERTIFICATE**

I, FILMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 5 DAY OF MAY 2016

MADRON SURVEYING, INC.  
 301 SOUTH CANAL  
 CARLSBAD, NEW MEXICO 88220  
 Phone (575) 234-3341

FILMON F. JARAMILLO PLS. 12797

SURVEY NO. 5261

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

**ACCESS ROAD PLAT**

**SECONDARY ACCESS ROAD FOR MALDIVES MDP 16**

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 10, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
MAY 5, 2017**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION WW, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE SW/4 SW/4 OF SAID SECTION 10, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE SOUTHWEST CORNER OF SAID SECTION 10, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S89°39'42"W, A DISTANCE OF 1092.24 FEET;  
THENCE N00°21'25"W A DISTANCE OF 510.93 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHWEST CORNER OF SAID SECTION 10, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S64°35'20"W, A DISTANCE OF 1205.68 FEET;

SAID STRIP OF LAND BEING 510.93 FEET OR 30.97 RODS IN LENGTH, CONTAINING 0.352 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/ 4 SW/4    510.93 L.F.    30.97 RODS    0.352 ACRES

**SURVEYOR CERTIFICATE**

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 05 DAY OF MAY 2016

*Filimon F. Jaramillo*  
FILIMON F. JARAMILLO, PLS. # 12797  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88220  
Phone (575) 234-3341

MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88220  
Phone (575) 234-3341

**SURVEY NO. 5261**

**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

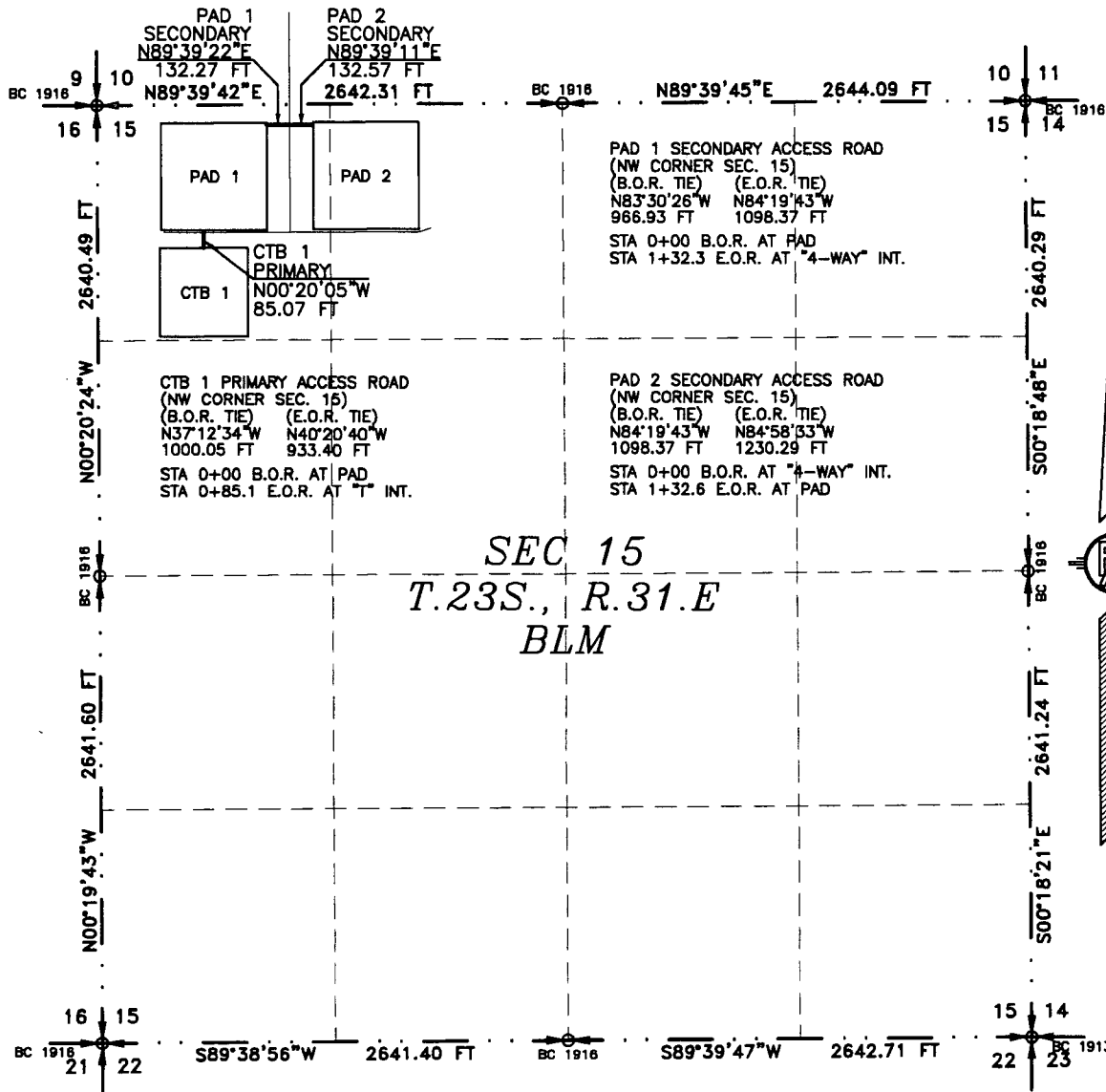
**SHEET: 6-10**

**MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO**

**ACCESS ROAD PLAT**

ACCESS ROADS FOR MALDIVES MDP 15 CTB 1 AND PADS 1 & 2

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING**  
**SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.**  
**EDDY COUNTY, STATE OF NEW MEXICO**  
**MAY 5, 2017**



SEE NEXT SHEET (8-10) FOR DESCRIPTION

**SURVEYOR CERTIFICATE**

I, FILMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

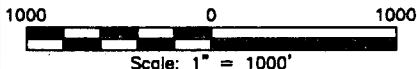
IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 12 DAY OF MAY 2016

*Filmon F. Jaramillo*  
 REGISTRAR  
 FILMON F. JARAMILLO - PLS. 12797

MADRON SURVEYING, INC.  
 301 SOUTH CANAL  
 CARLSBAD, NEW MEXICO 88220  
 Phone (575) 234-3341

**SURVEY NO. 5261**

**MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO**



**GENERAL NOTES**

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING AND DISTANCE IS NMSF EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

**SHEET: 7-10**

301 SOUTH CANAL  
 (575) 234-3341



**ACCESS ROAD PLAT**

**ACCESS ROADS FOR MALDIVES MDP 15 CTB 1 AND PADS 1 & 2**

**DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
MAY 5, 2017**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

**PRIMARY ACCESS FOR CTB 1**

BEGINNING AT A POINT WITHIN THE NW/4 NW/4 OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N37°12'34"W, A DISTANCE OF 1000.05 FEET;  
THENCE N00°20'05"W A DISTANCE OF 85.07 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHWEST CORNER OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N40°20'40"W, A DISTANCE OF 933.40 FEET;

SAID STRIP OF LAND BEING 85.07 FEET OR 5.16 RODS IN LENGTH, CONTAINING 0.059 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NW/4 85.07 L.F. 5.16 RODS 0.059 ACRES

**SECONDARY ACCESS FOR PAD 1**

BEGINNING AT A POINT WITHIN THE NW/4 NW/4 OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N83°30'26"W, A DISTANCE OF 966.93 FEET;  
THENCE N89°39'22"E A DISTANCE OF 132.27 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHWEST CORNER OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N84°19'43"W, A DISTANCE OF 1098.37 FEET;

SAID STRIP OF LAND BEING 132.27 FEET OR 8.02 RODS IN LENGTH, CONTAINING 0.091 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NW/4 132.27 L.F. 8.02 RODS 0.091 ACRES

**SECONDARY ACCESS FOR PAD 2**

BEGINNING AT A POINT WITHIN THE NW/4 NW/4 OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N84°19'43"W, A DISTANCE OF 1098.37 FEET;  
THENCE N89°39'11"E A DISTANCE OF 132.57 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHWEST CORNER OF SAID SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N84°58'33"W, A DISTANCE OF 1230.29 FEET;

SAID STRIP OF LAND BEING 132.57 FEET OR 8.03 RODS IN LENGTH, CONTAINING 0.091 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NW/4 132.57 L.F. 8.03 RODS 0.091 ACRES

**SURVEYOR CERTIFICATE**

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 5<sup>TH</sup> DAY OF MAY 2016

FILIMON F. JARAMILLO PLS 12797  
MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88220  
Phone (575) 234-3341

**GENERAL NOTES**

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

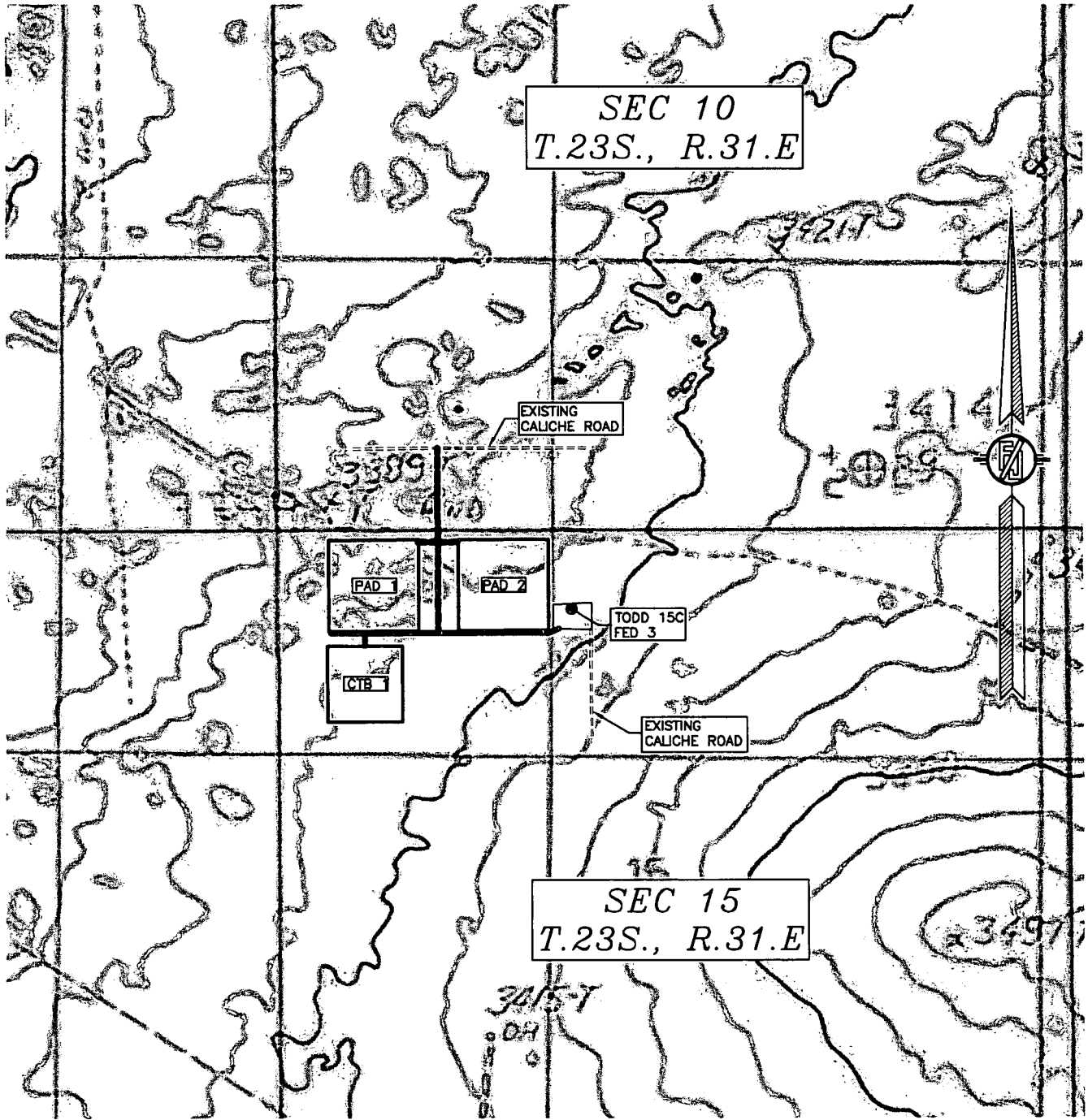
2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SHEET: 8-10

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO SURVEY NO. 5261

**ACCESS ROAD PLAT**  
ACCESS ROADS FOR MALDIVES MDP 15

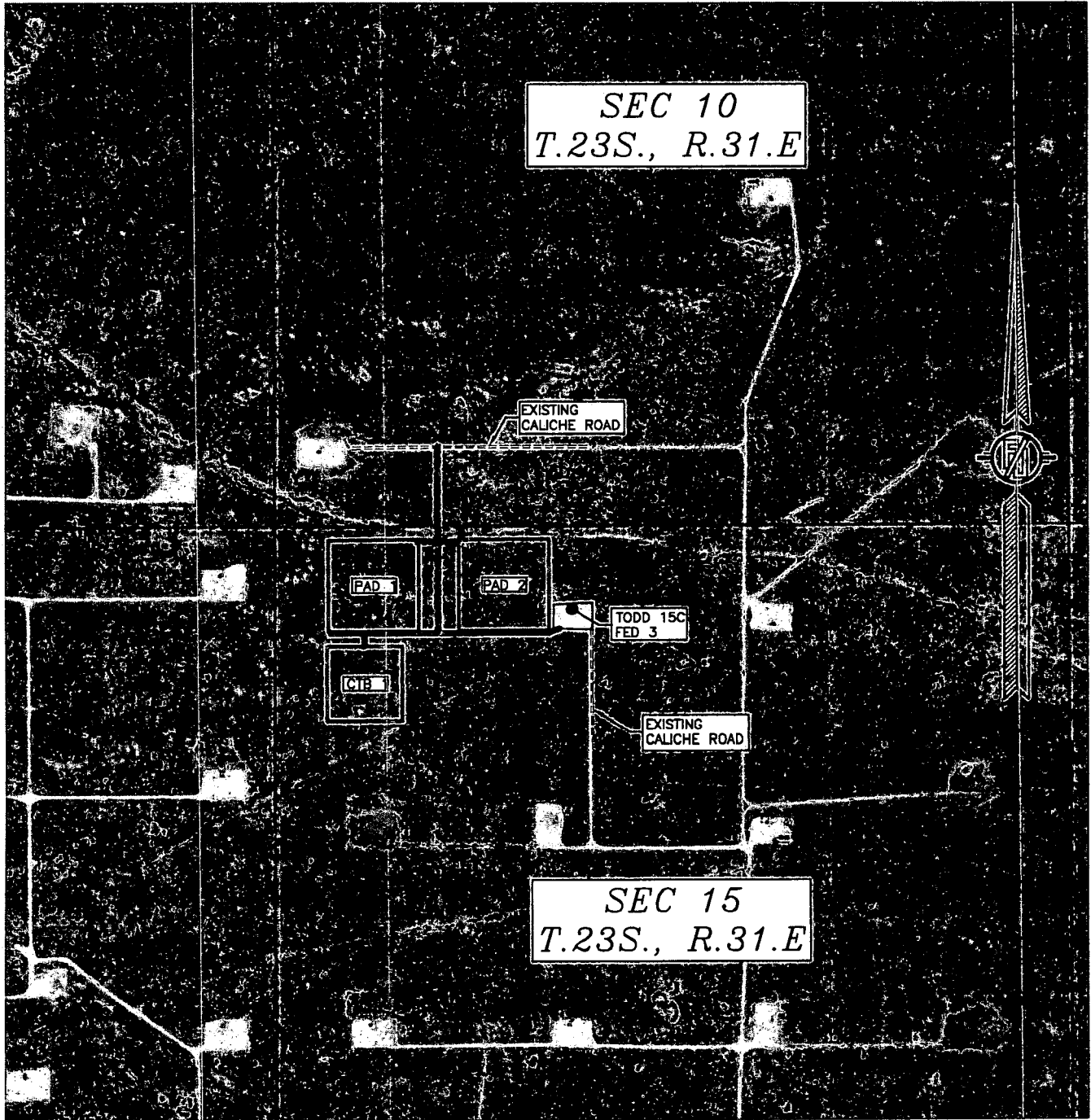
DEVON ENERGY PRODUCTION COMPANY, L.P.  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTIONS 15 & 10, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
MAY 5, 2017



———— PRIMARY ACCESS ROAD  
----- SECONDARY ACCESS ROAD

**ACCESS ROAD PLAT**  
**ACCESS ROADS FOR MALDIVES MDP 15**

**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING**  
**SECTIONS 15 & 10, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.**  
**EDDY COUNTY, STATE OF NEW MEXICO**  
**MAY 5, 2017**



———— PRIMARY ACCESS ROAD  
- - - - - SECONDARY ACCESS ROAD

SHEET: 10-10

SURVEY NO. 5261

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341



## Receipt

### Your payment is submitted

Pay.gov Tracking ID: 26BGNV85

Agency Tracking ID: 75548904355

Form Name: Bureau of Land Management (BLM) Application for Permit to Drill (APD) Fee

Application Name: BLM Oil and Gas Online Payment

### Payment Information

Payment Type: Bank account (ACH)

Payment Amount: \$29,370.00

Transaction Date: 08/10/2018 09:16:57 AM EDT

Payment Date: 08/13/2018

Company: DEVON ENERGY PRODUCTION CO., L.P.

APD IDs: 10400032893, 10400032898, 10400032982

Lease Numbers: NMNM0405444A, NMNM0405444A, NMNM0405444A

Well Numbers: 311H, 621H, 711H

Note: You will need your Pay.gov Tracking ID to complete your APD transaction in AFMSS II. Please ensure you write this number down upon completion of payment.

### Account Information

Account Holder Name: Devon Energy Production Company, L.P.

Routing Number: 061000052

Account Number: \*\*\*\*\*9892

### Email Confirmation Receipt

Confirmation Receipts have been emailed to:

JENNY.HARMS@DVN.COM

jeff.walla@dvn.com

lisa.othon@dvn.com



**Section 1 - General**

Would you like to address long-term produced water disposal? NO

**Section 2 - Lined Pits**

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

### **Section 3 - Unlined Pits**

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

### **Section 4 - Injection**

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

**Injection well type:**

**Injection well number:**

**Injection well name:**

**Assigned injection well API number?**

**Injection well API number:**

**Injection well new surface disturbance (acres):**

**Minerals protection information:**

**Mineral protection attachment:**

**Underground Injection Control (UIC) Permit?**

**UIC Permit attachment:**

### **Section 5 - Surface Discharge**

**Would you like to utilize Surface Discharge PWD options? NO**

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Surface discharge PWD discharge volume (bbl/day):**

**Surface Discharge NPDES Permit?**

**Surface Discharge NPDES Permit attachment:**

**Surface Discharge site facilities information:**

**Surface discharge site facilities map:**

### **Section 6 - Other**

**Would you like to utilize Other PWD options? NO**

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Other PWD discharge volume (bbl/day):**

**Other PWD type description:**

**Other PWD type attachment:**

**Have other regulatory requirements been met?**

**Other regulatory requirements attachment:**



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

**Bond Information**

Federal/Indian APD: FED

BLM Bond number: CO1104

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment: