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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.O.D.

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NM0405444A
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: ☐ Hydraulic Fracturing ☒ Single Zone ☐ Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator DEVON ENERGY PRODUCTION COMPANY LP		8. Lease Name and Well No. MALDIVES 15-22-FED/COM 621H 322788
3a. Address 333 West Sheridan Avenue Oklahoma City OK 73102	3b. Phone No. (include area code) (800)583-3866	9. API Well No. 30-015-46006 SPIND DAWG 96991
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NWNW / 250 FNL / 540 FWL / LAT 32.3110515 / LONG -103.7724829 At proposed prod. zone SWNW / 2350 FNL / 675 FWL / LAT 32.2907648 / LONG -103.7720358		10. Field No. of Well PURPLE SAGE / WOLFCAMP
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Blk. and Survey or Area SEC 15 / T23S / R31E / NMP
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 1240	17. Spacing Unit dedicated to this well 240
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 605 feet	19. Proposed Depth 11620 feet / 18958 feet	20. BLM/BIA Bond No. in file FED: CO1104
21. Elevations (Show whether DF, KDB, RT, GL., etc.) 3386 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

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

- I. SHL: NWNW / 250 FNL / 540 FWL / TWSP: 23S / RANGE: 31E / SECTION: 15 / LAT: 32.3110515 / LONG: -103.7724829 (TVD: 0 feet, MD: 0 feet)
PPP: NWNW / 330 FNL / 675 FWL / TWSP: 23S / RANGE: 31E / SECTION: 15 / LAT: 32.310695 / LONG: -103.772046 (TVD: 11539 feet, MD: 11644 feet)
BHL: SWNW / 2350 FNL / 675 FWL / TWSP: 23S / RANGE: 31E / SECTION: 22 / LAT: 32.2907648 / LONG: -103.7720358 (TVD: 11620 feet, MD: 18958 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

OPERATOR'S NAME:	Devon Energy Production Company LP
LEASE NO.:	NMNM0405444
WELL NAME & NO.:	Maldives 15-22 Fed Com 621H
SURFACE HOLE FOOTAGE:	250'/N & 540'/W
BOTTOM HOLE FOOTAGE:	2350'/N & 675'/W
LOCATION:	Section 15, T.23 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

COA

H2S	☐ Yes	☒ No	
Potash	☐ None	☒ Secretary	☐ R-111-P
Cave/Karst Potential	☒ Low	☐ Medium	☐ High
Variance	☐ None	☒ Flex Hose	☐ Other
Wellhead	☐ Conventional	☐ Multibowl	☒ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☒ Fluid Filled	☒ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☒ COM	☐ 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

Primary Casing Design:

1. The 13-3/8 inch surface casing shall be set at approximately **637 feet** (a minimum of 70 feet (Eddy County) 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 7-5/8 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.
Cement excess is less than 25%, more cement might be required.

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.
Cement excess is less than 25%, more cement might be required.

Operator has proposed to pump down 13-3/8" X 7-5/8" annulus. Operator must run a CBL from TD of the 7-5/8" 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.

Alternate Casing Design:

4. The **13-3/8** inch surface casing shall be set at approximately **637 feet** (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.

- e. 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.
- f. 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)
- g. 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.
- h. 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.

5. The minimum required fill of cement behind the **9-5/8** inch intermediate casing shall be set at approximately **6000** is:

- 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.

6. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

Option 1 (Single Stage):

- Cement should tie-back at least **500 feet** into previous casing string. Operator shall provide method of verification.
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.

- c. 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.
- d. Second stage above DV tool:
 - Cement should tie-back at least **500 feet** into previous casing string. Operator shall provide method of verification.
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 9-5/8" X 7-5/8" annulus. Operator must run a CBL from TD of the 7-5/8" casing to surface. Submit results to BLM.

- 7. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.
Cement excess is less than 25%, more cement might be required. (-13%)

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 2nd 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 621H
SURFACE HOLE FOOTAGE:	250'/N & 540'/W
BOTTOM HOLE FOOTAGE:	2350'/N & 675'/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.

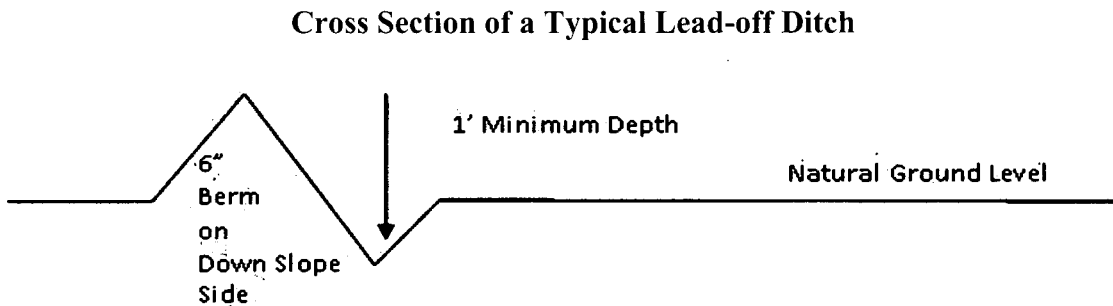
Turnouts

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 outslowing 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

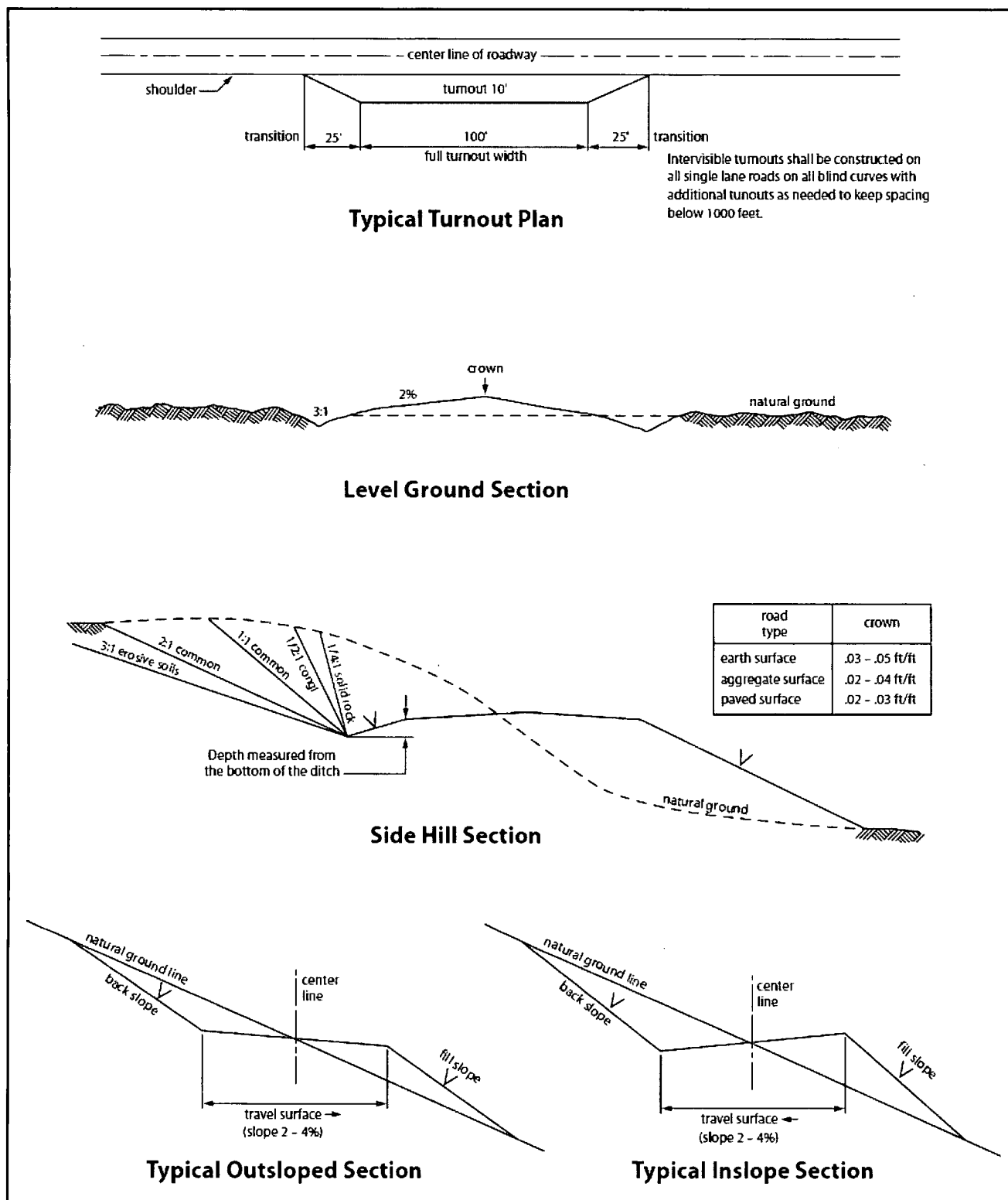


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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.

- | | |
|--|--|
| ☐ seed mixture 1 | ☐ seed mixture 3 |
| ☐ seed mixture 2 | ☐ seed mixture 4 |
| ☒ seed mixture 2/LPC | ☐ 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: 08/10/2018

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



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

Application Data Report

05/16/2019

APD ID: 10400032898

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: 621H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - General

APD ID: 10400032898

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: NMNM0405444A

Lease Acres: 1240

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: 621H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: PURPLE SAGE

Pool Name: WOLFCAMP

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: 621H

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

MALDIVES MDP 15 PAD

Well Class: HORIZONTAL

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: 605 FT

Distance to lease line: 250 FT

Reservoir well spacing assigned acres Measurement: 240 Acres

Well plat: Maldives_15_22_Fed_Com_621H_C_102_rev_signed_8_9_2018_20180809123445.pdf

Well work start Date: 04/01/2019

Duration: 45 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

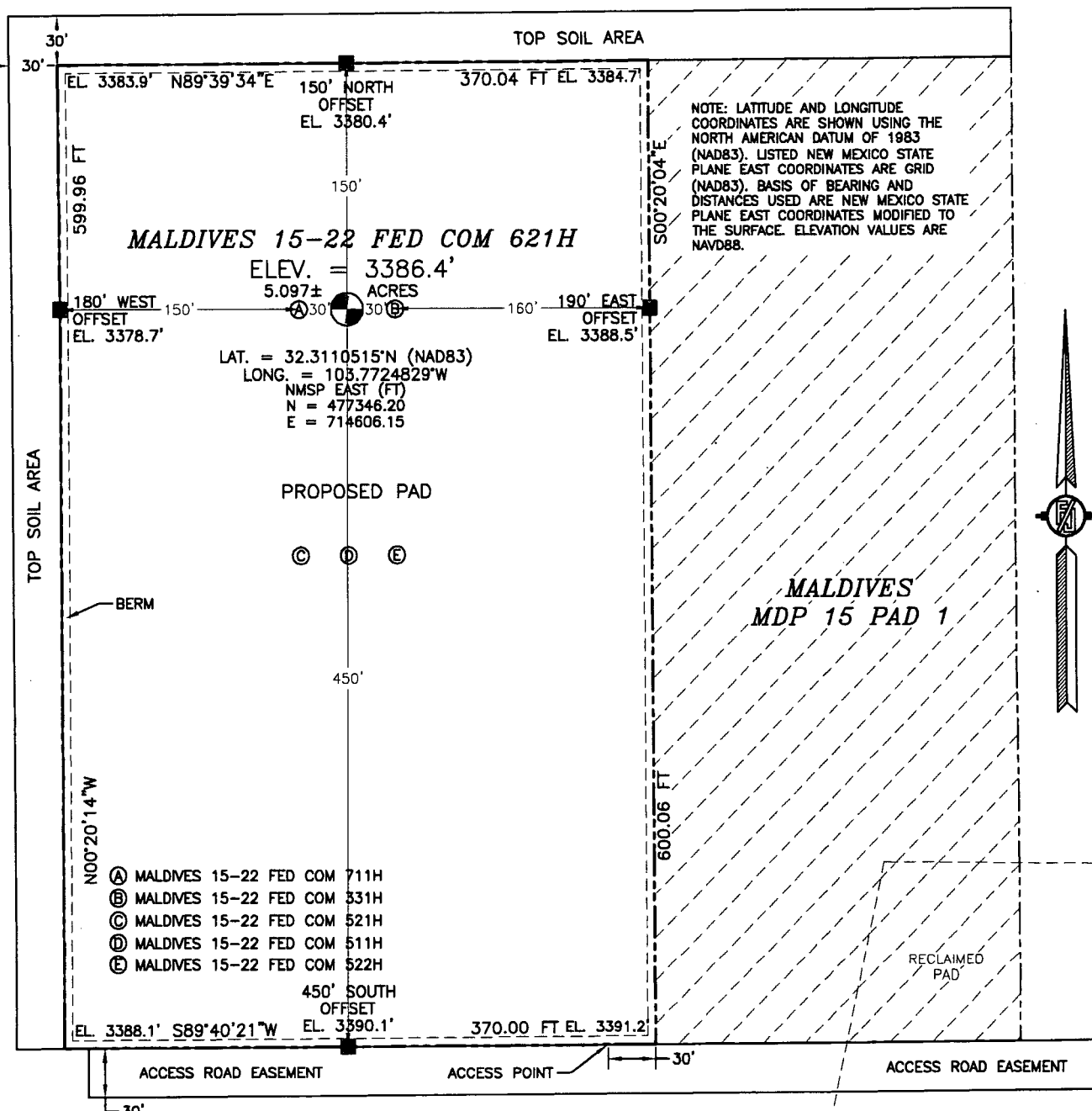
Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number: 5233B

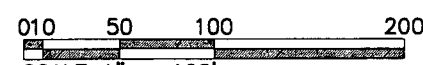
	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	250	FNL	540	FWL	23S	31E	15	Aliquot NWN W	32.31105 15	- 103.7724 829	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 040544 4	338 6	0	0
KOP Leg #1	50	FNL	684	FWL	23S	31E	15	Aliquot NWN W	32.31160 1	- 103.7720 46	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 040544 4	- 766 1	110 51	110 47
PPP Leg #1	330	FNL	675	FWL	23S	31E	15	Aliquot NWN W	32.31069 5	- 103.7720 46	EDD Y	NEW MEXI CO	NEW MEXI CO	F	NMNM 040544 4	- 815 3	116 44	115 39



NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE. ELEVATION VALUES ARE NAVD88.

~~MALDIVES~~
~~MDP 15 PAD 1~~

RECLAIMED
PAD



SCALE 1" = 100'

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 4 FOR THIS LOCATION.

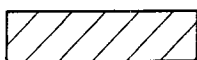
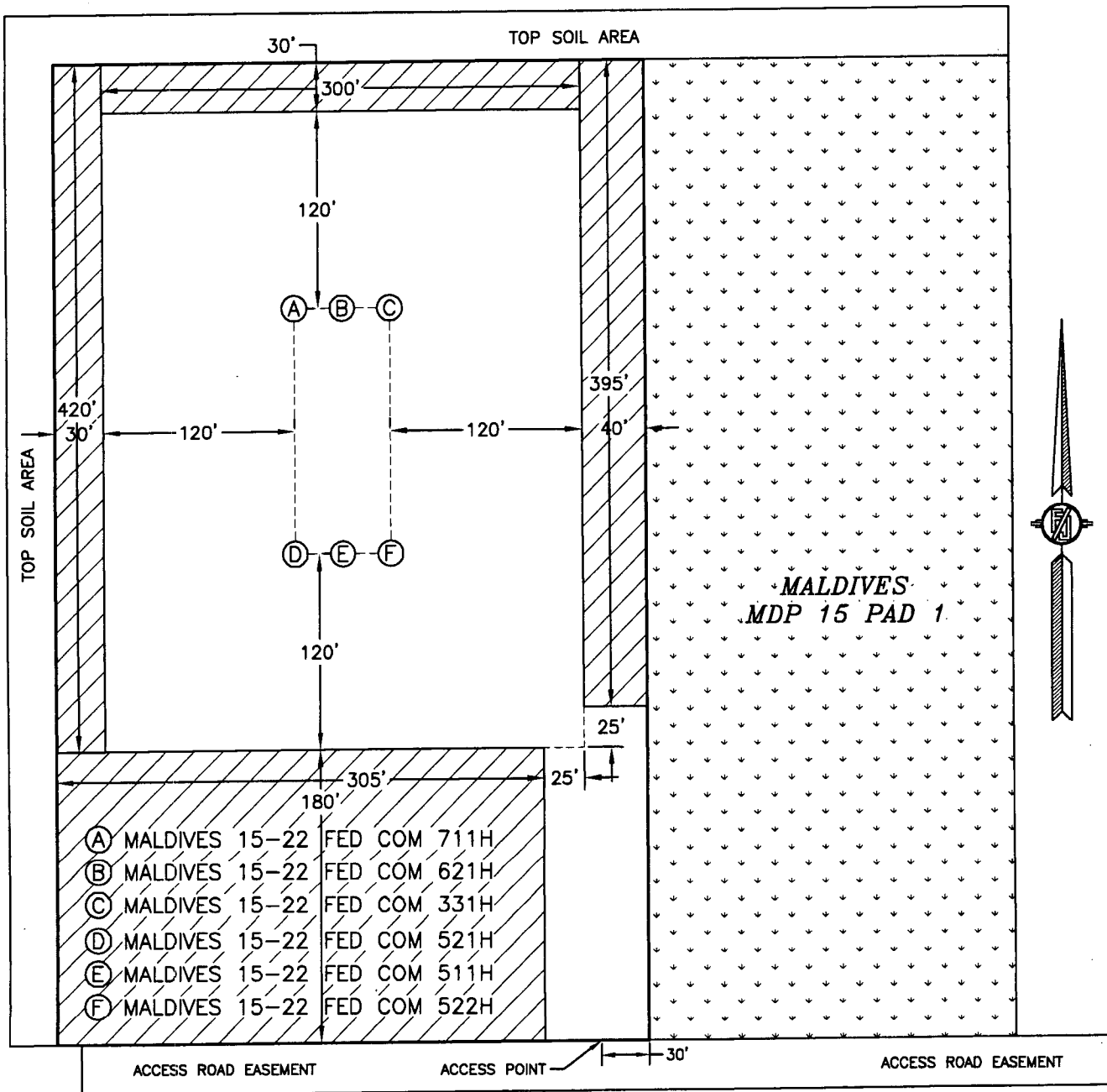
DEVON ENERGY PRODUCTION COMPANY, L.P.
MALDIVES 15-22 FED COM 621H
LOCATED 250 FT. FROM THE NORTH LINE
AND 540 FT. FROM THE WEST LINE OF
SECTION 15, TOWNSHIP 23 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

MAY 14, 2018

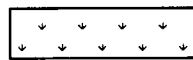
SURVEY NO. 5233B

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
INTERIM SITE RECLAMATION



DENOTES INTERIM PAD
RECLAMATION AREA



DENOTES GRADING SITE
RECLAMATION AREA

010 50 100 200
SCALE 1" = 100'

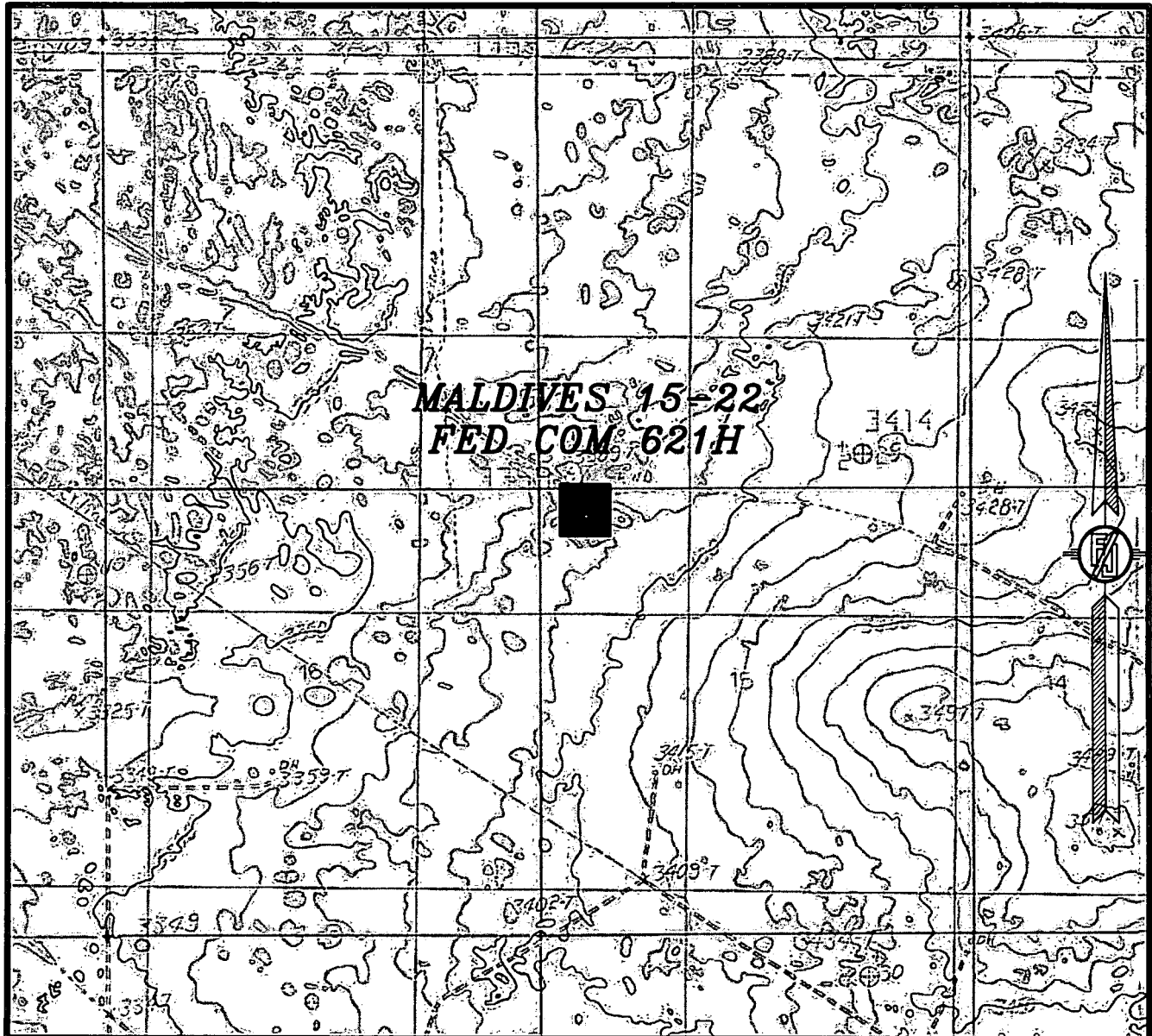
2.120± ACRES INTERIM PAD RECLAMATION AREA
3.169± ACRES GRADING SITE RECLAMATION AREA
2.977± ACRES NON-RECLAIMED AREA
8.266± ACRES MALDIVES MDP 15 PAD 1

DEVON ENERGY PRODUCTION COMPANY, L.P.
MALDIVES 15-22 FED COM 621H
LOCATED 250 FT. FROM THE NORTH LINE
AND 540 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. 5233B

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
LOCATION VERIFICATION MAP



USGS QUAD MAP:
LOS MEDANOS

NOT TO SCALE

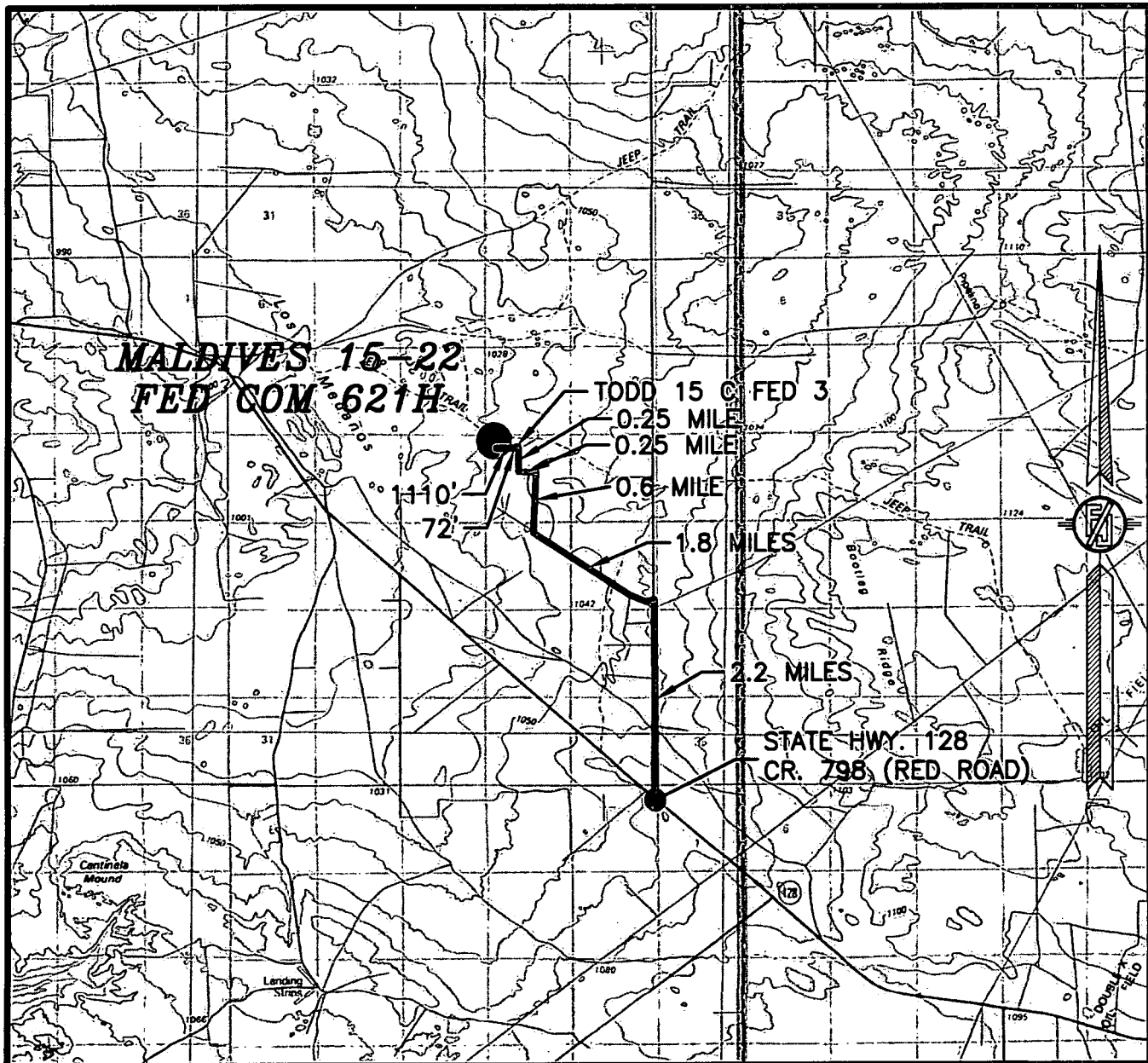
DEVON ENERGY PRODUCTION COMPANY, L.P.
MALDIVES 15-22 FED COM 621H
LOCATED 250 FT. FROM THE NORTH LINE
AND 540 FT. FROM THE WEST LINE OF
SECTION 15, TOWNSHIP 23 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

MAY 14, 2018

SURVEY NO. 5233B

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
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 621H

LOCATED 250 FT. FROM THE NORTH LINE

AND 540 FT. FROM THE WEST LINE OF

SECTION 15, TOWNSHIP 23 SOUTH,

RANGE 31 EAST, N.M.P.M.

EDDY COUNTY, STATE OF NEW MEXICO

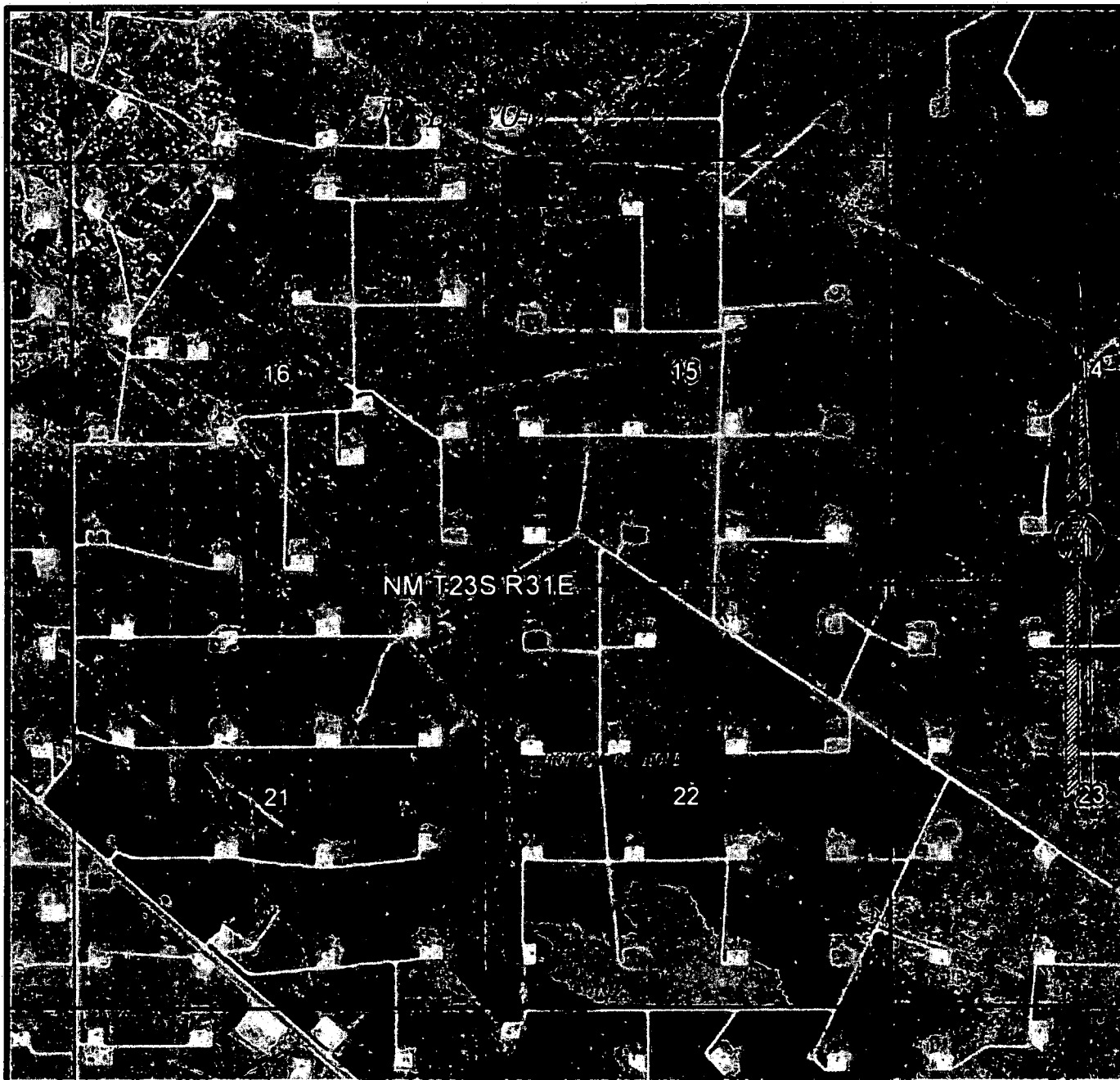
MAY 14, 2018

SURVEY NO. 5233B

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 PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
FEB. 2017

DEVON ENERGY PRODUCTION COMPANY, L.P.
MALDIVES 15-22 FED COM 621H
LOCATED 250 FT. FROM THE NORTH LINE
AND 540 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. 5233B

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

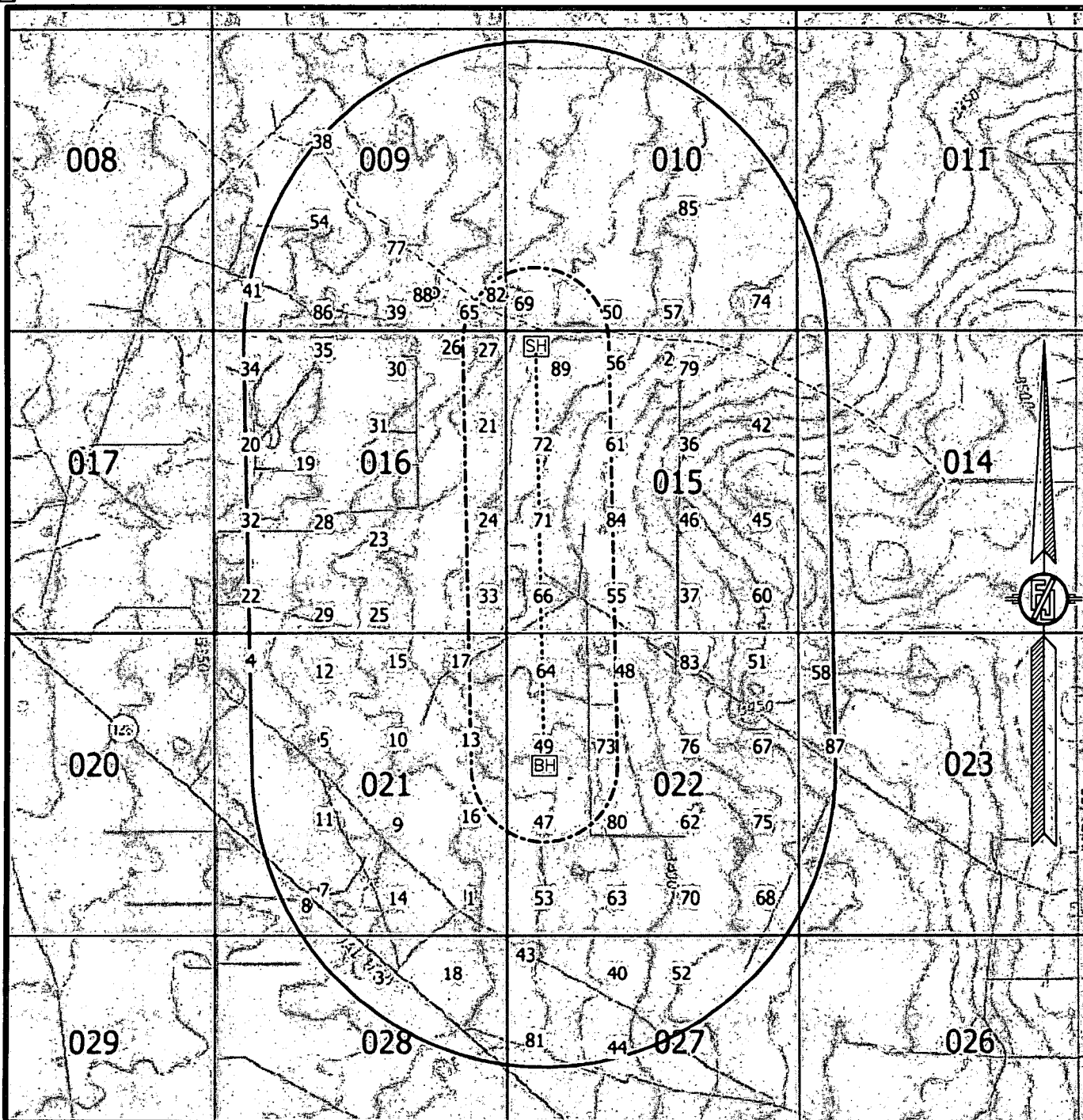
DEVON ENERGY PRODUCTION COMPANY, L.P.
 MALDIVES 15-22 FED COM 621H
 LOCATED 250 FT. FROM THE NORTH LINE
 AND 540 FT. FROM THE WEST LINE OF
 SECTION 15, TOWNSHIP 23 SOUTH,
 RANGE 31 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

MAY 14, 2018

SURVEY NO. 5233B

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 621H
 LOCATED 250 FT. FROM THE NORTH LINE
 AND 540 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

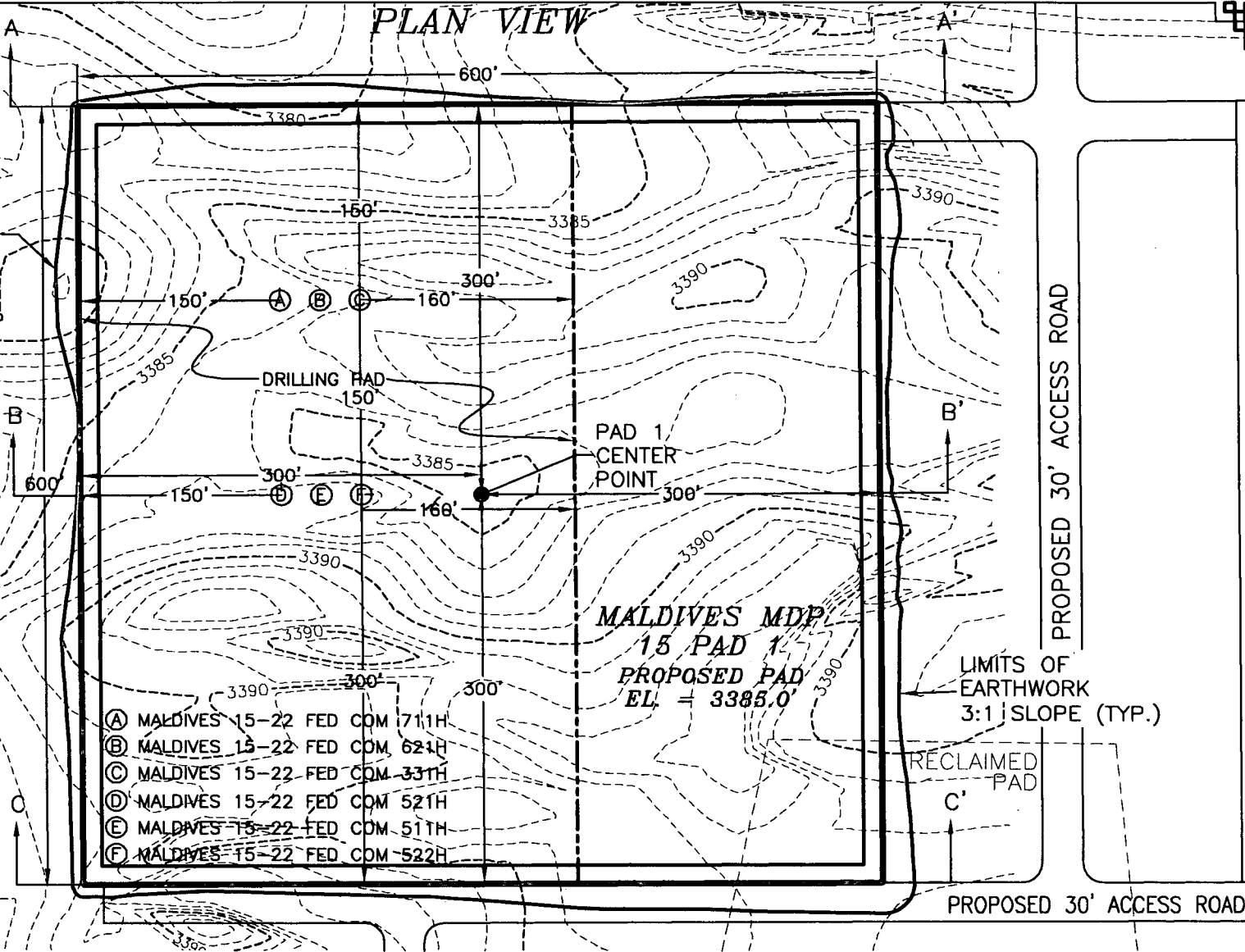
SURVEY NO. 5233B

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

CARLSBAD, NEW MEXICO

PLAN VIEW

LIMITS OF
EARTHWORK
3:1 SLOPE (TYP.)



- (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'

LIMITS OF
EARTHWORK
3:1 SLOPE (TYP.)

RECLAIMED
PAD

PROPOSED 30' ACCESS ROAD

012 60 120 240
SCALE 1" = 120'

DEVON ENERGY PRODUCTION COMPANY, L.P.
GRADING PLAN AND CROSS SECTIONS
FOR MALDIVES 15-22 FED COM 621H
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

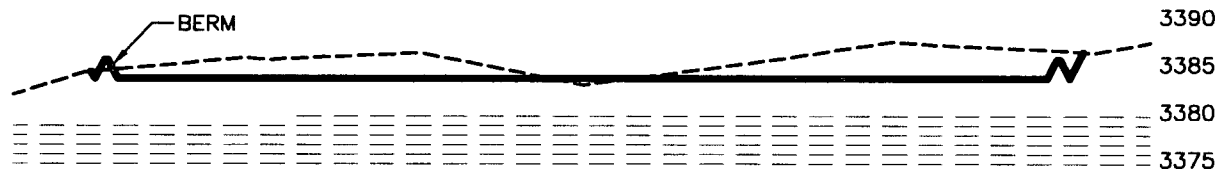
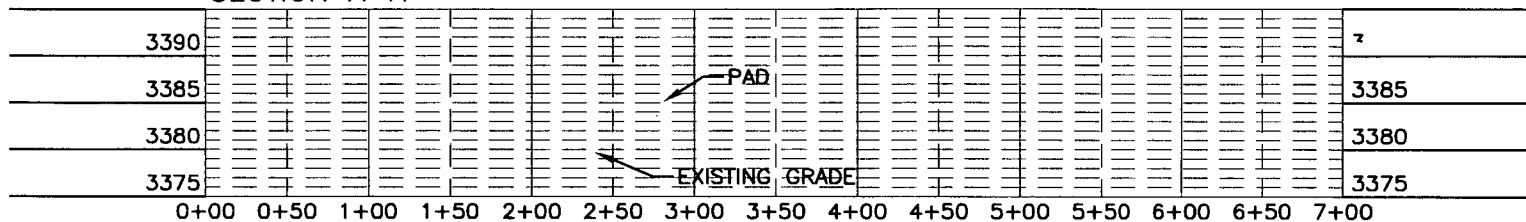
MAY 14, 2018

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

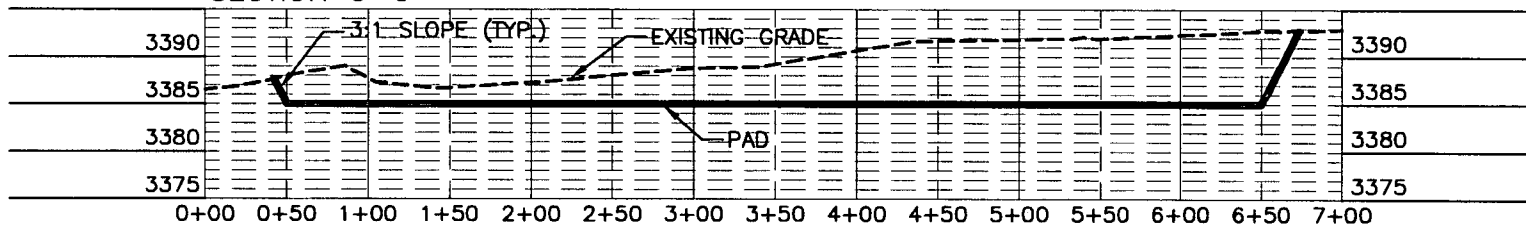
SHEET 1-2
SURVEY NO. 5233B

CROSS-SECTIONS

SECTION A-A'



SECTION C-C'



012 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 621H
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

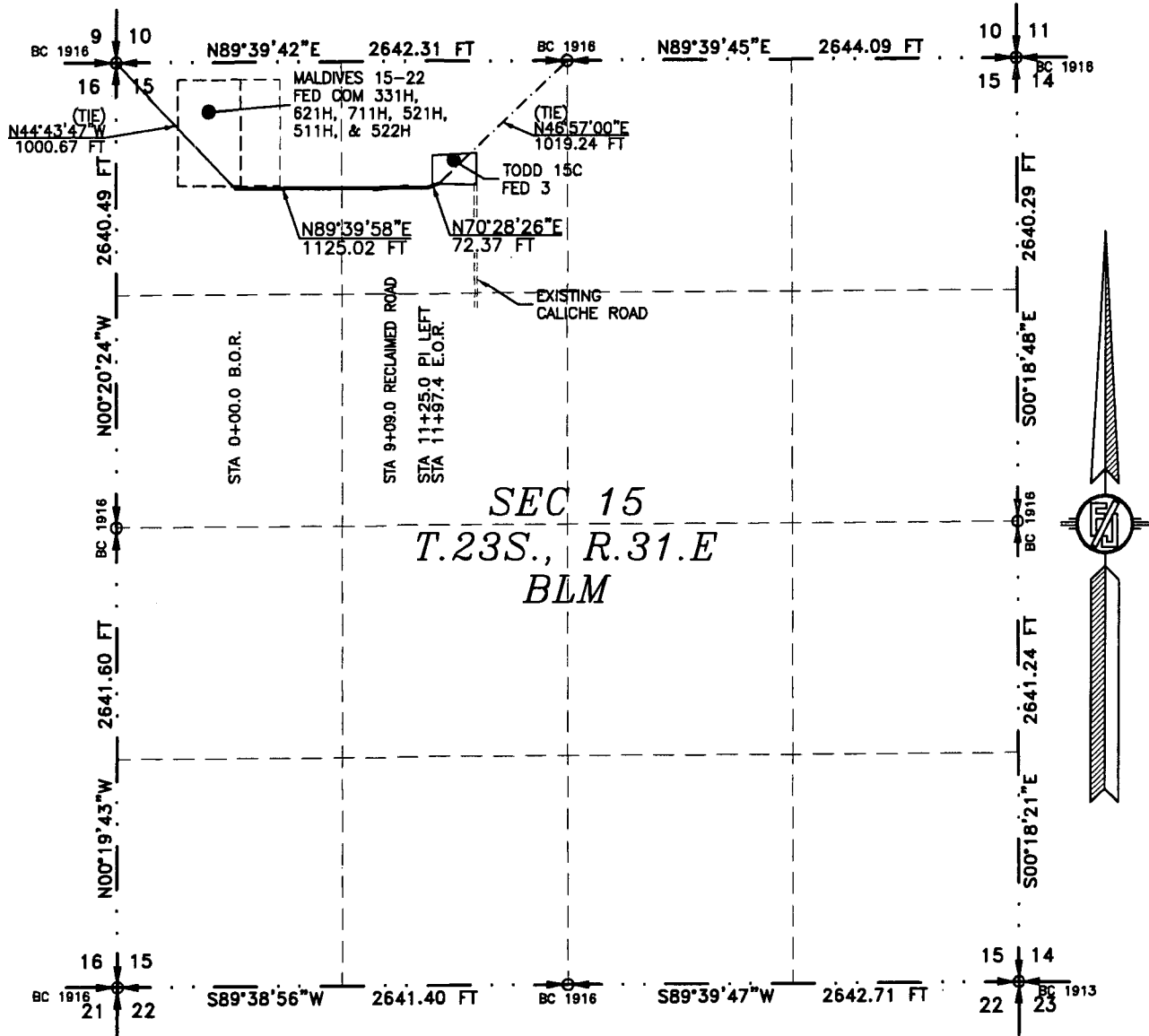
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO
(575) 234-3341

SHEET 2-2
SURVEY NO. 5233B

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



SEE NEXT SHEET (2-2) FOR DESCRIPTION

SURVEYOR CERTIFICATE

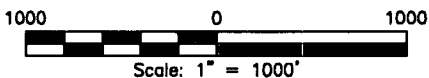
I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE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

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 15 DAY OF MAY 2018

FILIMON F. JARAMILLO PLS. 12797

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

SURVEY NO. 5233B



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: 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

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.

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 15TH DAY OF MAY 2018

FILIMON F. JARAMILLO, PLS. 12797

301 SOUTH CANAL
(575) 234-3341

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

SURVEY NO. 5233B

CARLSBAD, NEW MEXICO



APD ID: 10400032898

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: 621H

[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	3386	0	0	ALLUVIUM	NONE	No
2	RUSTLER	2836	551	551	ANHYDRITE	NONE	No
3	SALADO	2516	871	871	SALT	NONE	No
4	DELAWARE	-874	4261	4261	SANDSTONE	NATURAL GAS,OIL	No
5	BONE SPRING	-4744	8131	8131	LIMESTONE	NATURAL GAS,OIL	No
6	BONE SPRING 1ST	-5834	9221	9221	SANDSTONE	NATURAL GAS,OIL	No
7	BONE SPRING 2ND	-6334	9721	9721	SANDSTONE	NATURAL GAS,OIL	No
8	BONE SPRING 3RD	-7604	10991	10991	SANDSTONE	NATURAL GAS,OIL	No
9	WOLFCAMP	-8055	11441	11441	SHALE	OIL	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M

Rating Depth: 11051

Equipment: BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below intermediate casing, a BOP/BOPE system with the above minimum rating 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_621H_5M_BOPE__CK_20190110072731.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: MALDIVES 15-22 FED COM

Well Number: 621H

Maldives_15_22_Fed_Com_621H_5M_BOPE__CK_20190110072731.pdf

BOP Diagram Attachment:

Maldives_15_22_Fed_Com_621H_5M_BOPE__CK_20190110072748.pdf

Pressure Rating (PSI): 5M

Rating Depth: 11620

Equipment: BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below intermediate casing, a BOP/BOPE system with the above minimum rating 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

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Choke Diagram Attachment:

Maldives_15_22_Fed_Com_621H_5M_BOPE__CK_20180809125507.pdf

BOP Diagram Attachment:

Maldives_15_22_Fed_Com_621H_5M_BOPE__CK_20180809125516.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	600	0	600			600	J-55	54.5	OTHER - BTC	1.125	1	BUOY	1.6	BUOY	1.6
2	INTERMEDIATE	9.875	7.625	NEW	API	N	0	11051	0	11051			11051	P-110	29.7	OTHER - BTC	1.125	1.25	BUOY	1.6	BUOY	1.6
3	INTERMEDIATE	8.75	7.625	NEW	API	N	11051	11800	11051	11652			749	P-110	29.7	OTHER - FLUSHMAX	1.125	1.25	BUOY	1.6	BUOY	1.6
4	PRODUCTION	6.75	5.5	NEW	API	N	0	18958	0	11620			18958	OTHER	20	OTHER - VAM SG	1.125	1.125	BUOY	1.6	BUOY	1.6

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: MALDIVES 15-22 FED COM

Well Number: 621H

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_621H_Surf_Csg_Ass_20180809131842.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Maldives_15_22_Fed_Com_621H_Int_Csg_Ass_20180809131902.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_621H_Int_Csg_Ass_20180809131922.pdf

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: MALDIVES 15-22 FED COM

Well Number: 621H

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_621H_Prod_Csg_Ass_20180809131937.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
INTERMEDIATE	Lead		0	0	0	0	0	0	0	0	N/A
INTERMEDIATE	Tail		0	0	0	0	0	0	0	0	0
PRODUCTION	Lead		0	0	0	0	0	0	0	N/A	N/A
PRODUCTION	Tail		1160 0	1895 8	507	1.33	13.2	675	10	H	Class H / C + additives
SURFACE	Lead		0	600	681	1.33	13.2	886	100	C	Class C + adds

INTERMEDIATE	Lead		0	1105 1	607	3.31	9	2011	30	TUNED	TUNED LIGHT
INTERMEDIATE	Tail		1105 1	1180 0	766	1.33	13.2	1019	30	CLASS H	Class H / C + additives

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: MALDIVES 15-22 FED COM

Well Number: 621H

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	600	OTHER : FRESH WATER GEL	8.4	8.6							
9820	1142 3	OTHER : OBM	9.8	11							
600	1195 1	OTHER : DBE / Cut Brine	8.6	9.3							

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: 621H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 6645

Anticipated Surface Pressure: 4088.6

Anticipated Bottom Hole Temperature(F): 192

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_621H_H2S_Plan_20180809134553.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Devon_Maldives_15_22_Fed_com_621H_AC_Report_Permit_Plan_1_20180809134654.pdf

Devon_Maldives_15_22_Fed_com_621H_Permit_Plan_1_20180809134655.pdf

Devon_Maldives_15_22_Fed_com_621H_Plot_Permit_Plan_1_20180809134655.pdf

Other proposed operations facets description:

Multibowl Verb-REVISED 11/30/2018

Multibowl Wellhead

Revised Drilling Plan- Please see the 4 string contingency plan. 3/19/2019

Gas Capture Plan

Closed Loop Design

Attached casing spec-Flushmax III/Vam SG

Other proposed operations facets attachment:

Maldives_15_22_Fed_Com_621H_Clsd_Loop_20180810054820.pdf

Maldives_15_22_Fed_Com_621H_gas_capture_20180810054823.pdf

5.5_x_20_P110_EC_VAMSG_20181218074212.pdf

7.625_29.70_P110_Flushmax_20181218074711.pdf

MB_Verb_5M_20190320070234.pdf

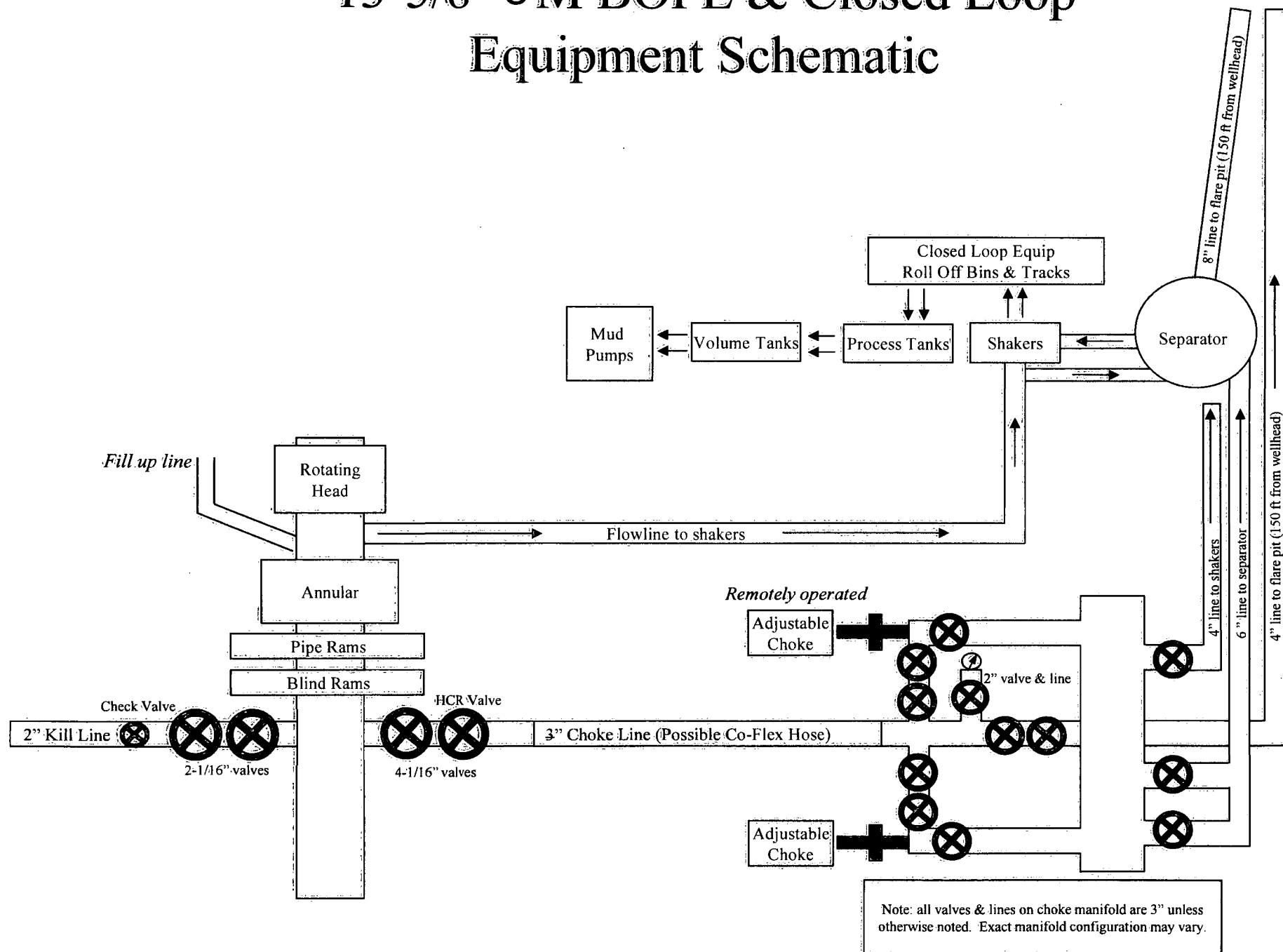
MB_Wellhd_5M_20190320070238.pdf

Maldives_15_22_621H_Drilling_Plan_3_18_19_20190320070638.pdf

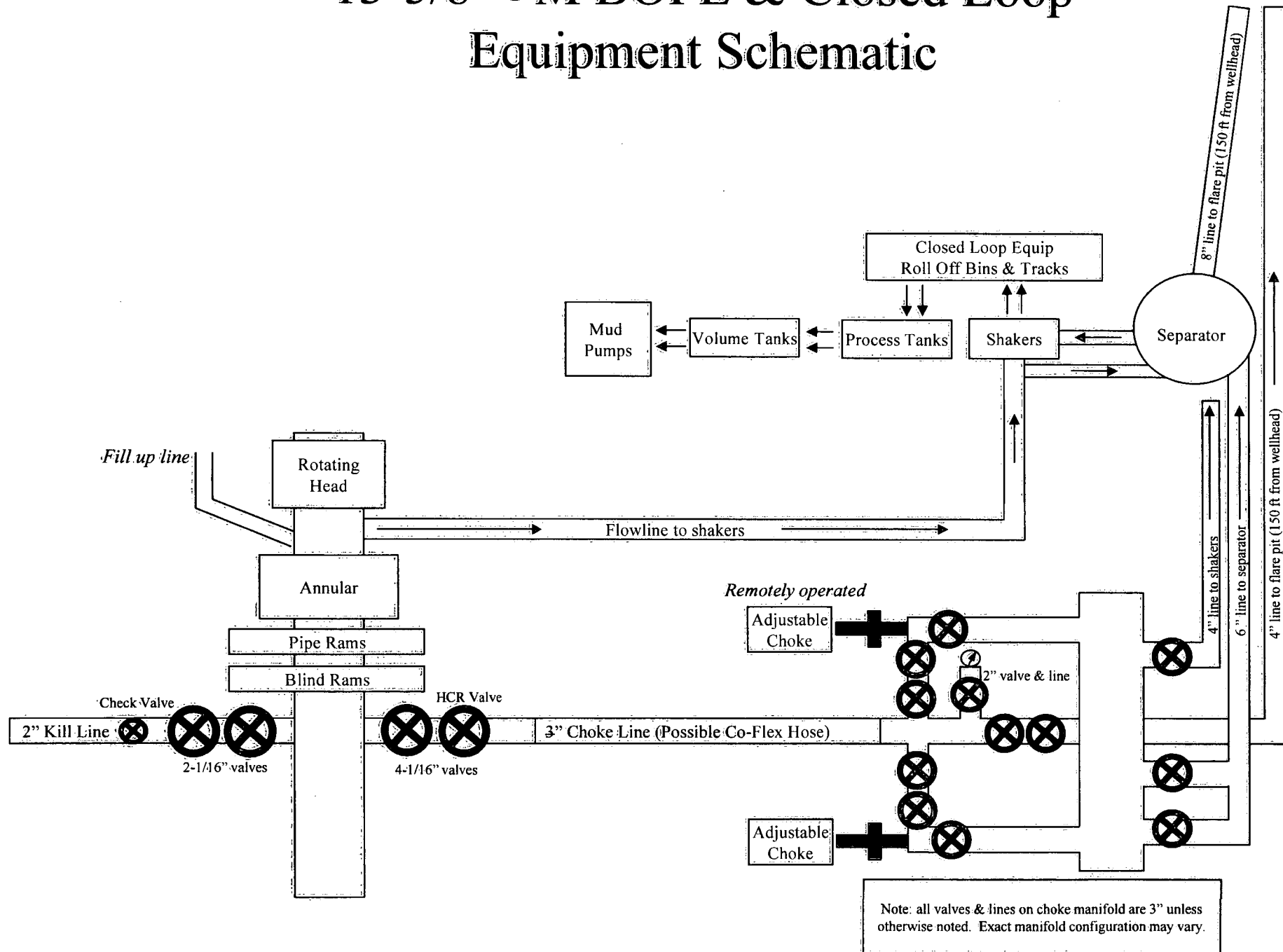
Other Variance attachment:

Maldives_15_22_Fed_Com_621H_Co_flex_20180810054837.pdf

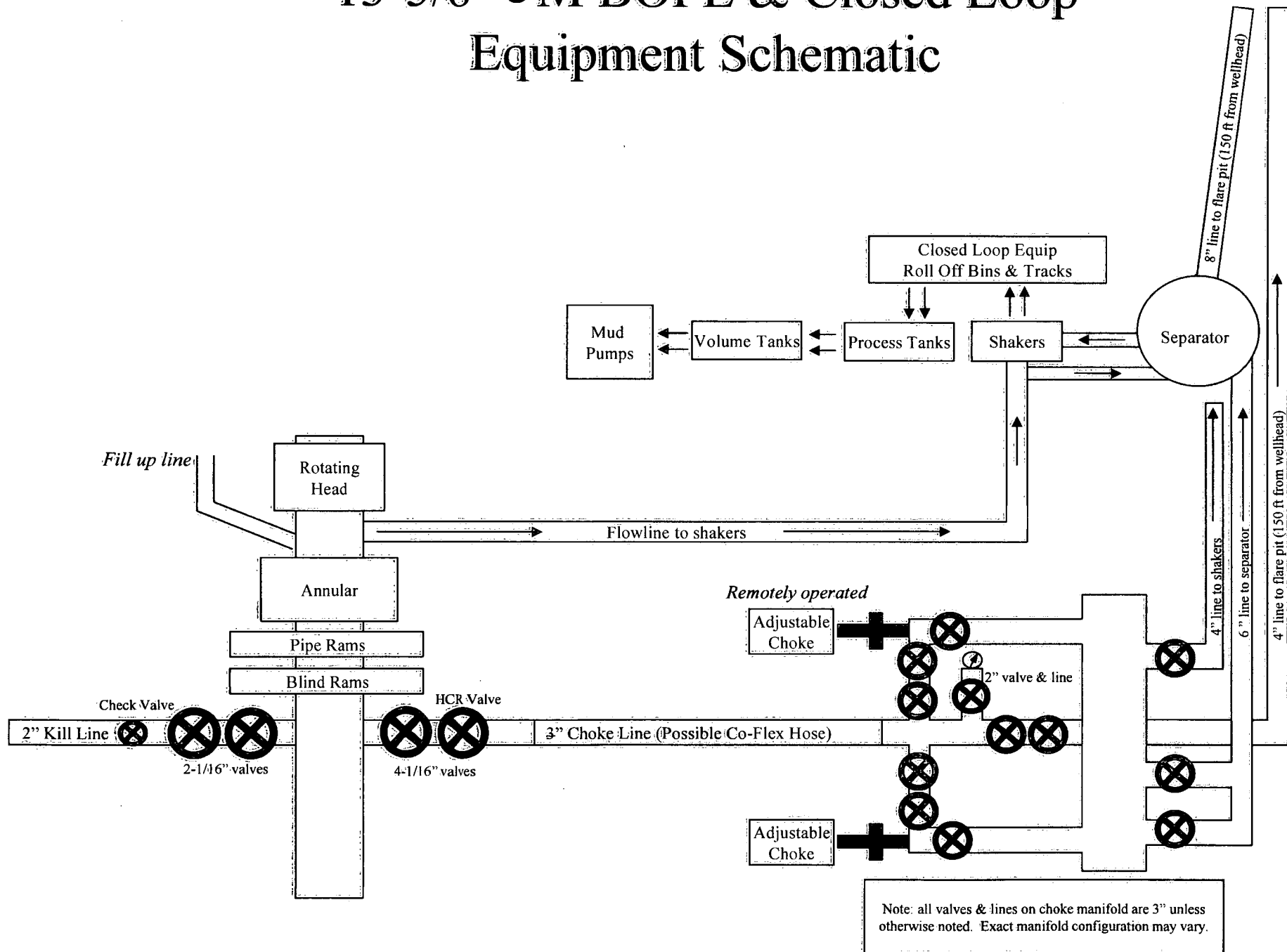
13-5/8" 5M BOPE & Closed Loop Equipment Schematic



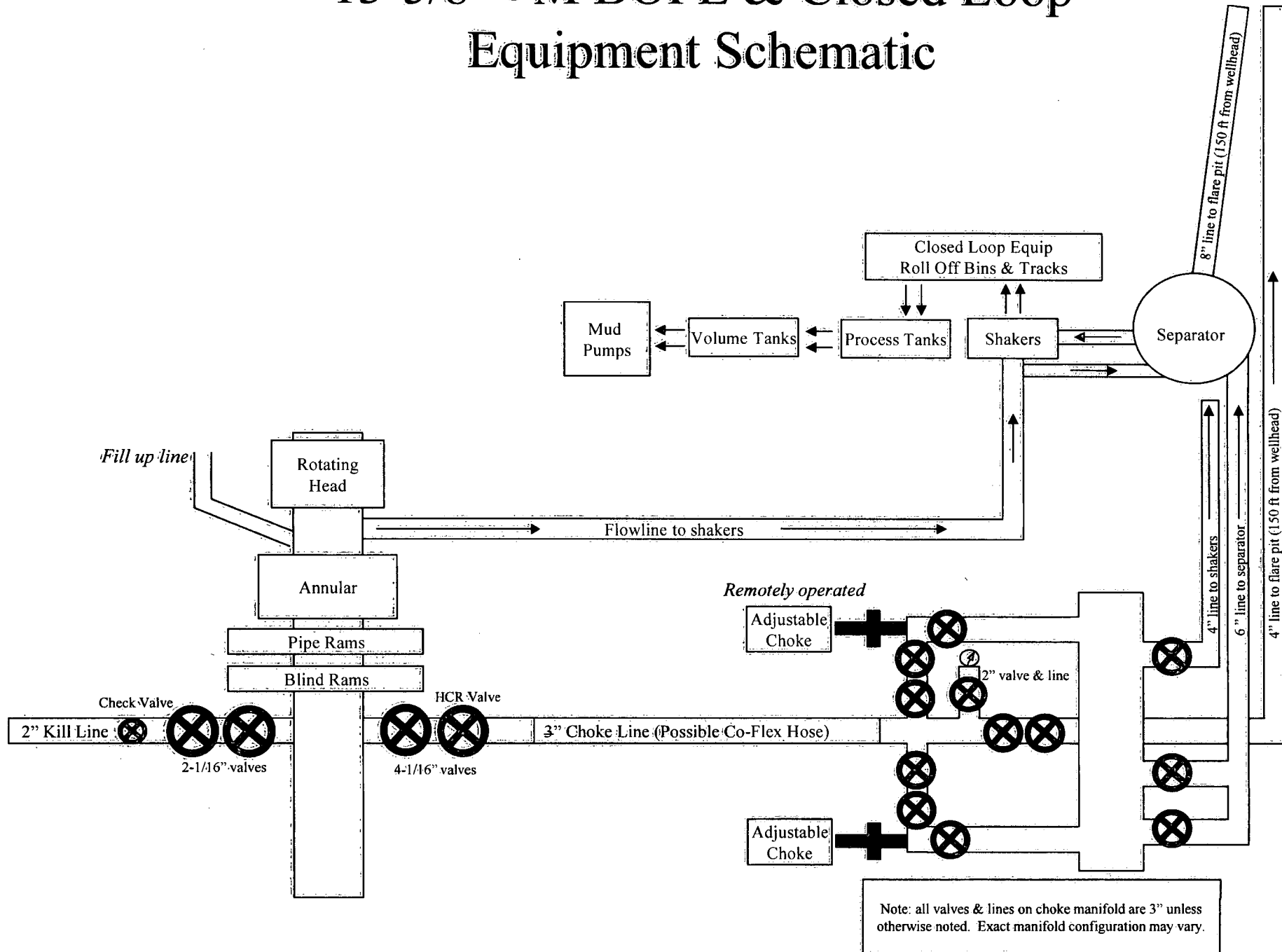
13-5/8" 5M BOPE & Closed Loop Equipment Schematic



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



13-5/8" 5M 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.

Intermediate Casing Burst Design		
Load Case	External Pressure	Internal Pressure
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

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

Intermediate Casing Tension Design	
Load Case	Assumptions
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.

Production Casing Burst Design		
Load Case	External Pressure	Internal Pressure
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

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

Production Casing Tension Design	
Load Case	Assumptions
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.

Surface Casing Burst Design		
Load Case	External Pressure	Internal Pressure
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

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

Surface Casing Tension Design	
Load Case	Assumptions
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.

Intermediate Casing Burst Design		
Load Case	External Pressure	Internal Pressure
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

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

Intermediate Casing Tension Design	
Load Case	Assumptions
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 (H₂S) Contingency Plan

For

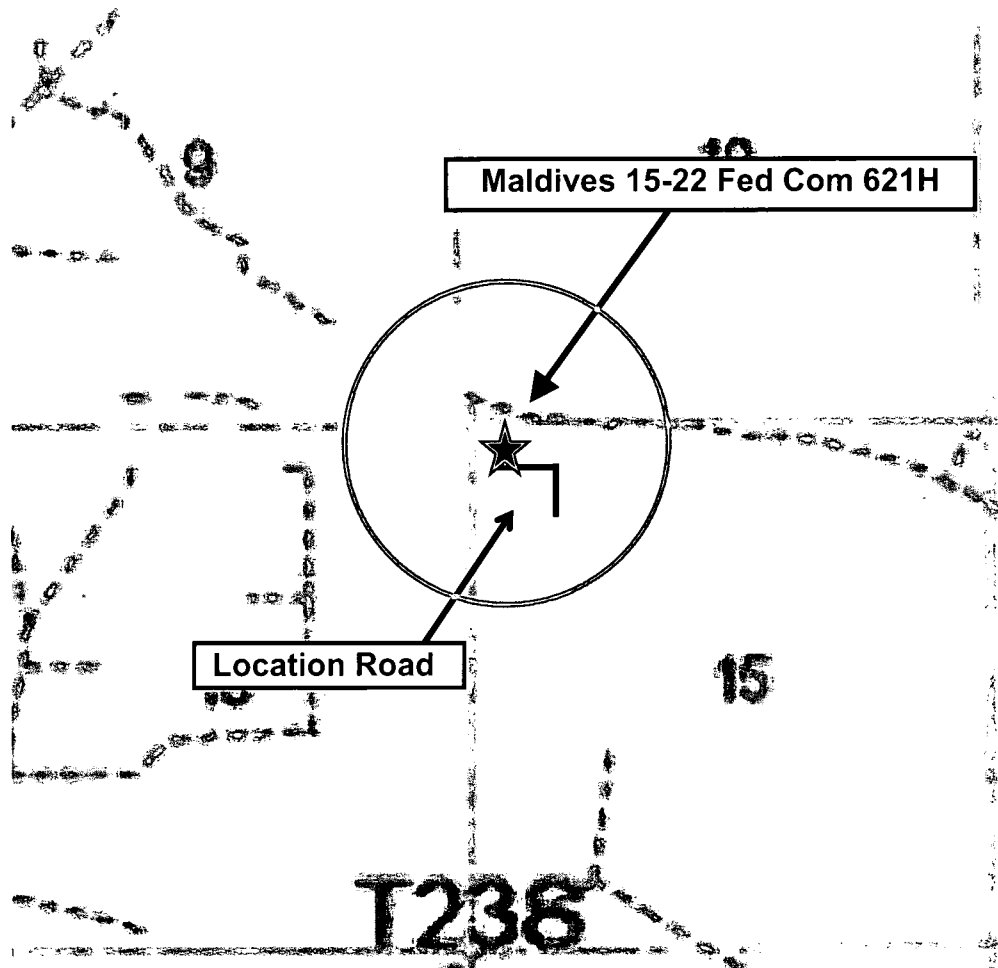
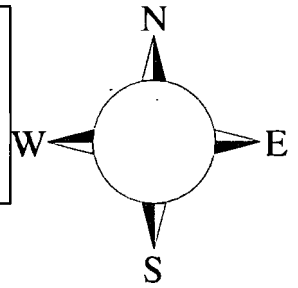
Maldives 15-22 Fed Com 621H

**Sec-15 T-23S R-31E
250' FNL & 540' FWL
LAT. = 32.3110515' N (NAD83)
LONG = 103.7724829' W**

Eddy County NM

Maldives 15-22 Fed Com 621H

This is an open drilling site. H₂S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H₂S, including warning signs, wind indicators and H₂S monitor.



Assumed 100 ppm ROE = 3000' (Radius of Exposure)
100 ppm H₂S 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 H₂S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H₂S, 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 H₂S 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 H₂S, 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 (SO₂). 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 H₂S and SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H₂S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO₂	2.21 Air = 1	2 ppm	N/A	1000 ppm

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 (H₂S) 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 (H₂S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H₂S 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 H₂S 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 H₂S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H₂S zone (within 3 days or 500 feet) and weekly H₂S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H₂S Drilling Operations Plan and the Public Protection Plan.

II. HYDROGEN SULFIDE TRAINING

Note: All H₂S 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 H₂S.

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. H₂S detection and monitoring equipment:

Portable H₂S monitors positioned on location for best coverage and response. These units have warning lights which activate when H₂S 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 H₂S circulated to surface. Proper mud weight, safe drilling practices and the use of H₂S scavengers will minimize hazards when penetrating H₂S bearing zones.

5. Metallurgy:

- A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H₂S trim.
- B. All elastomers used for packing and seals shall be H₂S 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 H₂S environment will use the closed chamber method of testing.
- B. There will be no drill stem testing.

<u>Devon Energy Corp. Company Call List</u>		
Drilling Supervisor – Basin – Mark Kramer		405-823-4796
EHS Professional – Laura Wright		405-439-8129
<u>Agency Call List</u>		
<u>Lea County (575)</u>	<u>Hobbs</u>	
	Lea County Communication Authority	393-3981
	State Police	392-5588
	City Police	397-9265
	Sheriff's Office	393-2515
	Ambulance	911
	Fire Department	397-9308
	LEPC (Local Emergency Planning Committee)	393-2870
	NMOCD	393-6161
	US Bureau of Land Management	393-3612
<u>Eddy County (575)</u>	<u>Carlsbad</u>	
	State Police	885-3137
	City Police	885-2111
	Sheriff's Office	887-7551
	Ambulance	911
	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
	Emergency Services	
	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
	Native Air – Emergency Helicopter – Hobbs	(575) 392-6429
	Flight For Life - Lubbock, TX	(806) 743-9911
<u>Give GPS position:</u>	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 - www.nhc.noaa.gov	

Prepared in conjunction with
Dave Small



WCDSC Permian NM

Eddy County (NAD 83 NM Eastern)

Sec 15-T23S-R31E

Maldives 15-22 Fed Com 621H

Wellbore #1

Permit Plan 1

Anticollision Report

07 June, 2018

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft.	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft.	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

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

Survey Tool Program		Date	6/7/2018		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	18,958.49	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
Sec 15-T23S-R31E						
Maldives 15-22 Fed Com 331H - Wellbore #1 - Permit Pla	2,500.00	2,501.20	29.97	12.46	1.712	Minor Risk, CC
Maldives 15-22 Fed Com 331H - Wellbore #1 - Permit Pla	2,550.00	2,550.96	30.17	12.31	1.689	Minor Risk, ES
Maldives 15-22 Fed Com 331H - Wellbore #1 - Permit Pla	2,600.00	2,600.72	30.76	12.54	1.689	Minor Risk, SF
Maldives 15-22 Fed Com 511H - Wellbore #1 - Permit Pla	7,616.66	7,622.09	72.73	18.50	1.341	Major Risk, CC
Maldives 15-22 Fed Com 511H - Wellbore #1 - Permit Pla	7,650.00	7,655.07	72.81	18.35	1.337	Major Risk, ES
Maldives 15-22 Fed Com 511H - Wellbore #1 - Permit Pla	7,700.00	7,704.50	73.27	18.45	1.337	Major Risk, SF
Maldives 15-22 Fed Com 521H - Wellbore #1 - Permit Pla	3,674.61	3,679.34	140.12	114.22	5.409	CC
Maldives 15-22 Fed Com 521H - Wellbore #1 - Permit Pla	3,800.00	3,804.53	140.77	113.97	5.253	ES
Maldives 15-22 Fed Com 521H - Wellbore #1 - Permit Pla	5,250.00	5,252.19	171.45	134.28	4.613	Alert, SF
Maldives 15-22 Fed Com 522H - Wellbore #1 - Permit Pla	3,248.48	3,249.65	146.63	123.80	6.423	CC
Maldives 15-22 Fed Com 522H - Wellbore #1 - Permit Pla	3,400.00	3,400.60	147.21	123.31	6.157	ES
Maldives 15-22 Fed Com 522H - Wellbore #1 - Permit Pla	8,250.00	8,252.88	331.98	273.27	5.654	SF
Maldives 15-22 Fed Com 711H - Wellbore #1 - Permit Pla	2,500.00	2,502.00	30.04	12.53	1.716	Minor Risk, CC
Maldives 15-22 Fed Com 711H - Wellbore #1 - Permit Pla	2,600.00	2,601.73	30.49	12.26	1.673	Minor Risk, ES
Maldives 15-22 Fed Com 711H - Wellbore #1 - Permit Pla	18,958.49	18,934.54	276.07	45.78	1.199	Major Risk, SF
Todd 15 C Fed #003 (Active) - Wellbore #1 - No Surveys	9,125.29	9,133.82	1,366.60	1,197.12	8.063	CC, ES, SF
Todd 15 D Fed #004 (P&A) - Wellbore #1 - Inc Only Surv	8,225.86	8,227.01	456.39	194.52	1.743	Minor Risk, CC, ES, SF
Todd 15 E Fed #005 (P&A) - Wellbore #1 - No Surveys						Out of range
Sec. 22-T23S-R31E						
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

Sec 15-T23S-R31E - Maldives 15-22 Fed Com 331H - 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	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre		Between	Between	Minimum	Separation	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
0.00	0.00	1.20	1.20	0.50	0.50	89.71	0.15	29.97	29.97				
50.00	50.00	51.20	51.20	0.50	0.50	89.71	0.15	29.97	29.97	28.96	1.01	29.770	
100.00	100.00	101.20	101.20	0.52	0.52	89.71	0.15	29.97	29.97	28.93	1.04	28.911	
150.00	150.00	151.20	151.20	0.59	0.59	89.71	0.15	29.97	29.97	28.79	1.18	25.339	
200.00	200.00	201.20	201.20	0.70	0.71	89.71	0.15	29.97	29.97	28.56	1.41	21.297	
250.00	250.00	251.20	251.20	0.84	0.84	89.71	0.15	29.97	29.97	28.29	1.68	17.851	

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 15-T23S-R31E - Maldives 15-22 Fed Com 331H - Wellbore #1 - Permit Plan 1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.50 ft
Reference Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis		Highside Tooface (")	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	301.20	301.20	0.99	0.99	89.71	0.15	29.97	29.97	27.99	1.98	15.149		
350.00	350.00	351.20	351.20	1.15	1.15	89.71	0.15	29.97	29.97	27.68	2.29	13.060		
400.00	400.00	401.20	401.20	1.31	1.31	89.71	0.15	29.97	29.97	27.35	2.62	11.430		
450.00	450.00	451.20	451.20	1.48	1.48	89.71	0.15	29.97	29.97	27.01	2.96	10.136		
500.00	500.00	501.20	501.20	1.65	1.65	89.71	0.15	29.97	29.97	26.67	3.30	9.092		
550.00	550.00	551.20	551.20	1.82	1.82	89.71	0.15	29.97	29.97	26.33	3.64	8.235		
600.00	600.00	601.20	601.20	1.99	1.99	89.71	0.15	29.97	29.97	25.99	3.99	7.520		
650.00	650.00	651.20	651.20	2.16	2.17	89.71	0.15	29.97	29.97	25.64	4.33	6.916		
700.00	700.00	701.20	701.20	2.34	2.34	89.71	0.15	29.97	29.97	25.29	4.68	6.400		
750.00	750.00	751.20	751.20	2.51	2.52	89.71	0.15	29.97	29.97	24.94	5.03	5.954		
800.00	800.00	801.20	801.20	2.69	2.69	89.71	0.15	29.97	29.97	24.59	5.39	5.565		
850.00	850.00	851.20	851.20	2.87	2.87	89.71	0.15	29.97	29.97	24.23	5.74	5.223		
900.00	900.00	901.20	901.20	3.04	3.05	89.71	0.15	29.97	29.97	23.88	6.09	4.920	Alert	
950.00	950.00	951.20	951.20	3.22	3.22	89.71	0.15	29.97	29.97	23.53	6.45	4.650	Alert	
1,000.00	1,000.00	1,001.20	1,001.20	3.40	3.40	89.71	0.15	29.97	29.97	23.17	6.80	4.408	Alert	
1,050.00	1,050.00	1,051.20	1,051.20	3.58	3.58	89.71	0.15	29.97	29.97	22.82	7.15	4.189	Alert	
1,100.00	1,100.00	1,101.20	1,101.20	3.75	3.76	89.71	0.15	29.97	29.97	22.46	7.51	3.991	Alert	
1,150.00	1,150.00	1,151.20	1,151.20	3.93	3.93	89.71	0.15	29.97	29.97	22.11	7.86	3.811	Alert	
1,200.00	1,200.00	1,201.20	1,201.20	4.11	4.11	89.71	0.15	29.97	29.97	21.75	8.22	3.646	Alert	
1,250.00	1,250.00	1,251.20	1,251.20	4.29	4.29	89.71	0.15	29.97	29.97	21.39	8.58	3.494	Alert	
1,300.00	1,300.00	1,301.20	1,301.20	4.46	4.47	89.71	0.15	29.97	29.97	21.04	8.93	3.355	Alert	
1,350.00	1,350.00	1,351.20	1,351.20	4.64	4.65	89.71	0.15	29.97	29.97	20.68	9.29	3.226	Alert	
1,400.00	1,400.00	1,401.20	1,401.20	4.82	4.82	89.71	0.15	29.97	29.97	20.33	9.65	3.107	Alert	
1,450.00	1,450.00	1,451.20	1,451.20	5.00	5.00	89.71	0.15	29.97	29.97	19.97	10.00	2.996	Alert	
1,500.00	1,500.00	1,501.20	1,501.20	5.18	5.18	89.71	0.15	29.97	29.97	19.61	10.36	2.893	Alert	
1,550.00	1,550.00	1,551.20	1,551.20	5.36	5.36	89.71	0.15	29.97	29.97	19.25	10.72	2.797	Alert	
1,600.00	1,600.00	1,601.20	1,601.20	5.53	5.54	89.71	0.15	29.97	29.97	18.90	11.07	2.707	Alert	
1,650.00	1,650.00	1,651.20	1,651.20	5.71	5.72	89.71	0.15	29.97	29.97	18.54	11.43	2.622	Alert	
1,700.00	1,700.00	1,701.20	1,701.20	5.89	5.90	89.71	0.15	29.97	29.97	18.18	11.79	2.543	Alert	
1,750.00	1,750.00	1,751.20	1,751.20	6.07	6.07	89.71	0.15	29.97	29.97	17.83	12.14	2.468	Minor Risk	
1,800.00	1,800.00	1,801.20	1,801.20	6.25	6.25	89.71	0.15	29.97	29.97	17.47	12.50	2.397	Minor Risk	
1,850.00	1,850.00	1,851.20	1,851.20	6.43	6.43	89.71	0.15	29.97	29.97	17.11	12.86	2.331	Minor Risk	
1,900.00	1,900.00	1,901.20	1,901.20	6.61	6.61	89.71	0.15	29.97	29.97	16.75	13.22	2.268	Minor Risk	
1,950.00	1,950.00	1,951.20	1,951.20	6.78	6.79	89.71	0.15	29.97	29.97	16.40	13.57	2.208	Minor Risk	
2,000.00	2,000.00	2,001.20	2,001.20	6.96	6.97	89.71	0.15	29.97	29.97	16.04	13.93	2.151	Minor Risk	
2,050.00	2,050.00	2,051.20	2,051.20	7.14	7.15	89.71	0.15	29.97	29.97	15.68	14.29	2.098	Minor Risk	
2,100.00	2,100.00	2,101.20	2,101.20	7.32	7.33	89.71	0.15	29.97	29.97	15.32	14.65	2.046	Minor Risk	
2,150.00	2,150.00	2,151.20	2,151.20	7.50	7.50	89.71	0.15	29.97	29.97	14.97	15.00	1.998	Minor Risk	
2,200.00	2,200.00	2,201.20	2,201.20	7.68	7.68	89.71	0.15	29.97	29.97	14.61	15.36	1.951	Minor Risk	
2,250.00	2,250.00	2,251.20	2,251.20	7.86	7.86	89.71	0.15	29.97	29.97	14.25	15.72	1.907	Minor Risk	
2,300.00	2,300.00	2,301.20	2,301.20	8.04	8.04	89.71	0.15	29.97	29.97	13.89	16.08	1.864	Minor Risk	
2,350.00	2,350.00	2,351.20	2,351.20	8.22	8.22	89.71	0.15	29.97	29.97	13.54	16.43	1.824	Minor Risk	
2,400.00	2,400.00	2,401.20	2,401.20	8.39	8.40	89.71	0.15	29.97	29.97	13.18	16.79	1.785	Minor Risk	
2,450.00	2,450.00	2,451.20	2,451.20	8.57	8.58	89.71	0.15	29.97	29.97	12.82	17.15	1.747	Minor Risk	
2,500.00	2,500.00	2,501.20	2,501.20	8.75	8.76	89.71	0.15	29.97	29.97	12.46	17.51	1.712	Minor Risk, CC	
2,550.00	2,550.00	2,550.96	2,550.96	8.93	8.93	89.51	0.26	30.17	30.17	12.31	17.86	1.689	Minor Risk, ES	
2,600.00	2,600.00	2,600.72	2,600.72	9.11	9.11	88.94	0.57	30.75	30.76	12.54	18.22	1.689	Minor Risk, SF	
2,650.00	2,650.00	2,650.47	2,650.45	9.29	9.28	88.05	1.08	31.71	31.74	13.17	18.57	1.710	Minor Risk	
2,700.00	2,700.00	2,700.19	2,700.15	9.47	9.46	86.89	1.80	33.06	33.12	14.21	18.91	1.751	Minor Risk	
2,750.00	2,750.00	2,749.88	2,749.81	9.65	9.63	85.54	2.72	34.78	34.91	15.65	19.26	1.812	Minor Risk	
2,800.00	2,800.00	2,799.54	2,799.40	9.83	9.80	84.06	3.84	36.88	37.12	17.51	19.61	1.893	Minor Risk	

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

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													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 331H - 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		
2,850.00	2,850.00	2,849.35	2,849.14	10.00	9.98	82.57	5.12	39.29	39.67	19.71	19.96	1.988 Minor Risk		
2,900.00	2,900.00	2,900.72	2,898.99	10.18	10.16	81.25	6.43	41.73	42.28	21.96	20.32	2.081 Minor Risk		
2,950.00	2,950.00	2,949.20	2,948.83	10.36	10.33	80.08	7.73	44.17	44.90	24.24	20.66	2.173 Minor Risk		
3,000.00	3,000.00	3,000.88	2,998.68	10.54	10.51	79.03	9.03	46.61	47.55	26.52	21.02	2.261 Minor Risk		
3,050.00	3,050.00	3,049.05	3,048.53	10.72	10.68	78.10	10.33	49.05	50.20	28.83	21.37	2.349 Minor Risk		
3,100.00	3,100.00	3,101.03	3,098.37	10.90	10.87	77.27	11.64	51.50	52.87	31.14	21.73	2.433 Minor Risk		
3,150.00	3,150.00	3,148.89	3,148.22	11.08	11.04	76.51	12.94	53.94	55.55	33.47	22.08	2.516 Alert		
3,200.00	3,200.00	3,201.19	3,198.07	11.26	11.22	75.82	14.24	56.38	58.24	35.79	22.44	2.595 Alert		
3,250.00	3,250.00	3,248.74	3,247.91	11.44	11.39	75.19	15.55	58.82	60.93	38.14	22.79	2.674 Alert		
3,300.00	3,300.00	3,301.34	3,297.76	11.62	11.58	74.62	16.85	61.26	63.63	40.48	23.15	2.748 Alert		
3,350.00	3,350.00	3,348.58	3,347.60	11.80	11.74	74.09	18.15	63.71	66.34	42.84	23.50	2.823 Alert		
3,400.00	3,400.00	3,401.49	3,397.45	11.97	11.93	73.61	19.46	66.15	69.05	45.19	23.86	2.894 Alert		
3,450.00	3,450.00	3,448.43	3,447.30	12.15	12.10	73.16	20.76	68.59	71.77	47.56	24.21	2.965 Alert		
3,500.00	3,500.00	3,501.65	3,497.14	12.33	12.29	72.74	22.06	71.03	74.49	49.91	24.58	3.031 Alert		
3,550.00	3,550.00	3,548.29	3,547.00	12.51	12.46	72.31	23.37	73.47	77.04	52.12	24.92	3.092 Alert		
3,600.00	3,600.00	3,601.76	3,596.87	12.69	12.65	71.86	24.67	75.92	79.26	53.97	25.29	3.135 Alert		
3,650.00	3,649.98	3,648.20	3,646.76	12.87	12.81	71.41	25.97	78.36	81.13	55.51	25.63	3.166 Alert		
3,700.00	3,699.96	3,701.82	3,696.66	13.04	13.00	70.97	27.28	80.80	82.67	56.68	25.99	3.180 Alert		
3,750.00	3,749.93	3,748.15	3,746.56	13.22	13.17	70.52	28.58	83.25	84.07	57.73	26.33	3.192 Alert		
3,800.00	3,799.90	3,801.87	3,796.46	13.40	13.36	70.07	29.89	85.69	85.46	58.76	26.70	3.201 Alert		
3,850.00	3,849.87	3,848.11	3,846.36	13.58	13.53	69.62	31.19	88.14	86.87	59.82	27.04	3.212 Alert		
3,900.00	3,899.84	3,901.91	3,896.26	13.76	13.72	69.17	32.50	90.58	88.27	60.86	27.41	3.220 Alert		
3,950.00	3,949.81	3,948.06	3,946.16	13.93	13.88	68.72	33.80	93.03	89.68	61.93	27.75	3.231 Alert		
4,000.00	3,999.78	4,001.96	3,996.06	14.11	14.08	68.27	35.11	95.47	91.09	62.97	28.12	3.239 Alert		
4,050.00	4,049.75	4,048.02	4,045.96	14.29	14.24	67.82	36.41	97.92	92.50	64.04	28.46	3.250 Alert		
4,100.00	4,099.72	4,102.00	4,095.86	14.47	14.44	67.37	37.71	100.36	93.92	65.09	28.83	3.257 Alert		
4,150.00	4,149.70	4,147.97	4,145.76	14.65	14.60	66.92	39.02	102.80	95.34	66.17	29.17	3.268 Alert		
4,200.00	4,199.67	4,202.05	4,195.67	14.82	14.80	66.47	40.32	105.25	96.76	67.22	29.54	3.275 Alert		
4,250.00	4,249.64	4,247.93	4,245.57	15.00	14.96	66.02	41.63	107.69	98.19	68.30	29.89	3.285 Alert		
4,300.00	4,299.61	4,302.09	4,295.47	15.18	15.15	65.57	42.93	110.14	99.61	69.36	30.26	3.292 Alert		
4,350.00	4,349.58	4,347.88	4,345.37	15.36	15.32	65.12	44.24	112.58	101.04	70.44	30.60	3.302 Alert		
4,400.00	4,399.55	4,402.14	4,395.27	15.54	15.51	64.67	45.54	115.03	102.47	71.50	30.97	3.309 Alert		
4,450.00	4,449.52	4,447.84	4,445.17	15.72	15.68	64.22	46.85	117.47	103.90	72.59	31.31	3.319 Alert		
4,500.00	4,499.49	4,502.18	4,495.07	15.89	15.87	63.77	48.15	119.92	105.34	73.66	31.68	3.325 Alert		
4,550.00	4,549.46	4,547.79	4,544.97	16.07	16.04	63.32	49.46	122.36	106.77	74.75	32.02	3.334 Alert		
4,600.00	4,599.43	4,602.23	4,594.87	16.25	16.23	62.87	50.76	124.80	108.21	75.82	32.39	3.341 Alert		
4,650.00	4,649.40	4,647.75	4,644.77	16.43	16.40	62.42	52.06	127.25	109.65	76.92	32.73	3.350 Alert		
4,700.00	4,699.37	4,702.27	4,694.67	16.61	16.60	61.97	53.37	129.69	111.09	77.98	33.11	3.356 Alert		
4,750.00	4,749.34	4,747.70	4,744.57	16.79	16.76	61.52	54.67	132.14	112.53	79.09	33.45	3.365 Alert		
4,800.00	4,799.31	4,802.32	4,794.47	16.97	16.96	61.07	55.98	134.58	113.98	80.16	33.82	3.370 Alert		
4,850.00	4,849.28	4,847.66	4,844.37	17.14	17.12	60.62	57.28	137.03	115.42	81.26	34.16	3.379 Alert		
4,900.00	4,899.25	4,902.36	4,894.27	17.32	17.32	60.17	58.59	139.47	116.87	82.34	34.53	3.384 Alert		
4,950.00	4,949.23	4,947.61	4,944.17	17.50	17.48	59.72	59.89	141.92	118.32	83.44	34.87	3.393 Alert		
5,000.00	4,999.20	5,002.41	4,994.08	17.68	17.68	59.27	61.20	144.36	119.77	84.52	35.25	3.398 Alert		
5,050.00	5,049.17	5,047.57	5,043.98	17.86	17.84	58.82	62.50	146.80	121.22	85.63	35.59	3.406 Alert		
5,100.00	5,099.14	5,102.45	5,093.88	18.04	18.04	58.37	63.80	149.25	122.67	86.71	35.96	3.411 Alert		
5,150.00	5,149.11	5,147.52	5,143.78	18.22	18.20	57.92	65.11	151.69	124.12	87.82	36.30	3.419 Alert		
5,200.00	5,199.08	5,202.50	5,193.58	18.40	18.40	57.47	66.41	154.14	125.58	88.90	36.68	3.424 Alert		
5,250.00	5,249.05	5,247.48	5,243.58	18.57	18.56	57.02	67.72	156.58	127.03	90.02	37.02	3.432 Alert		
5,300.00	5,299.02	5,302.54	5,293.48	18.75	18.76	56.57	69.02	159.03	128.49	91.10	37.39	3.436 Alert		
5,350.00	5,348.99	5,347.43	5,343.38	18.93	18.92	56.12	70.33	161.47	129.95	92.22	37.73	3.444 Alert		

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

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at:	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													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 331H - 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		
5,400.00	5,398.96	5,402.59	5,393.28	19.11	19.12	47.36	71.63	163.92	131.40	93.30	38.11	3.448	Alert	
5,450.00	5,448.93	5,447.39	5,443.18	19.29	19.29	47.51	72.94	166.36	132.86	94.42	38.45	3.456	Alert	
5,500.00	5,498.90	5,502.63	5,493.08	19.47	19.49	47.66	74.24	168.80	134.32	95.50	38.82	3.460	Alert	
5,550.00	5,548.87	5,547.34	5,542.98	19.65	19.65	47.80	75.55	171.25	135.78	96.62	39.16	3.467	Alert	
5,600.00	5,598.84	5,602.68	5,592.88	19.83	19.85	47.94	76.85	173.69	137.25	97.71	39.54	3.471	Alert	
5,650.00	5,648.81	5,647.30	5,642.78	20.01	20.01	48.08	78.15	176.14	138.71	98.83	39.88	3.479	Alert	
5,700.00	5,698.78	5,702.72	5,692.68	20.19	20.21	48.22	79.46	178.58	140.17	99.92	40.25	3.482	Alert	
5,750.00	5,748.76	5,747.25	5,742.58	20.36	20.37	48.35	80.76	181.03	141.64	101.04	40.59	3.489	Alert	
5,800.00	5,798.73	5,802.77	5,792.49	20.54	20.57	48.48	82.07	183.47	143.10	102.13	40.97	3.493	Alert	
5,850.00	5,848.70	5,847.21	5,842.39	20.72	20.73	48.61	83.37	185.92	144.57	103.26	41.31	3.500	Alert	
5,900.00	5,898.67	5,902.81	5,892.29	20.90	20.93	48.73	84.68	188.36	146.03	104.35	41.68	3.503	Alert	
5,950.00	5,948.64	5,947.16	5,942.19	21.08	21.10	48.86	85.98	190.80	147.50	105.48	42.02	3.510	Alert	
6,000.00	5,998.61	6,002.86	5,992.09	21.26	21.30	48.98	87.29	193.25	148.97	106.57	42.40	3.513	Alert	
6,050.00	6,048.58	6,047.12	6,041.99	21.44	21.46	49.09	88.59	195.69	150.44	107.70	42.74	3.520	Alert	
6,100.00	6,098.55	6,102.90	6,091.89	21.62	21.66	49.21	89.90	198.14	151.90	108.79	43.12	3.523	Alert	
6,150.00	6,148.52	6,147.07	6,141.79	21.80	21.82	49.32	91.20	200.58	153.37	109.92	43.45	3.530	Alert	
6,200.00	6,198.49	6,202.95	6,191.69	21.98	22.02	49.43	92.50	203.03	154.84	111.01	43.83	3.533	Alert	
6,250.00	6,248.46	6,247.03	6,241.59	22.16	22.18	49.54	93.81	205.47	156.31	112.14	44.17	3.539	Alert	
6,300.00	6,298.43	6,302.99	6,291.49	22.34	22.39	49.65	95.11	207.92	157.79	113.24	44.55	3.542	Alert	
6,350.00	6,348.40	6,346.98	6,341.39	22.52	22.55	49.75	96.42	210.36	159.26	114.37	44.89	3.548	Alert	
6,400.00	6,398.37	6,403.04	6,391.29	22.69	22.75	49.86	97.72	212.81	160.73	115.46	45.27	3.551	Alert	
6,450.00	6,448.34	6,446.94	6,441.19	22.87	22.91	49.96	99.03	215.25	162.20	116.60	45.60	3.557	Alert	
6,500.00	6,498.31	6,503.08	6,491.09	23.05	23.11	50.06	100.33	217.69	163.68	117.69	45.98	3.559	Alert	
6,550.00	6,548.29	6,546.89	6,540.99	23.23	23.27	50.16	101.64	220.14	165.15	118.83	46.32	3.565	Alert	
6,600.00	6,598.26	6,603.13	6,590.90	23.41	23.47	50.25	102.94	222.58	166.62	119.92	46.70	3.568	Alert	
6,650.00	6,648.23	6,646.85	6,640.80	23.59	23.63	50.35	104.25	225.03	168.10	121.06	47.04	3.574	Alert	
6,700.00	6,698.20	6,703.18	6,690.70	23.77	23.84	50.44	105.55	227.47	169.57	122.15	47.42	3.576	Alert	
6,750.00	6,748.17	6,746.80	6,740.60	23.95	24.00	50.53	106.85	229.92	171.05	123.29	47.75	3.582	Alert	
6,800.00	6,798.14	6,803.22	6,790.50	24.13	24.20	50.62	108.16	232.36	172.53	124.39	48.14	3.584	Alert	
6,850.00	6,848.11	6,846.76	6,840.40	24.31	24.36	50.71	109.46	234.81	174.00	125.53	48.47	3.590	Alert	
6,900.00	6,898.08	6,903.27	6,890.30	24.49	24.56	50.79	110.77	237.25	175.48	126.62	48.85	3.592	Alert	
6,950.00	6,948.05	6,946.71	6,940.20	24.67	24.72	50.88	112.07	239.69	176.96	127.77	49.19	3.597	Alert	
7,000.00	6,998.02	7,003.31	6,990.10	24.85	24.93	50.96	113.38	242.14	178.43	128.86	49.57	3.600	Alert	
7,050.00	7,047.99	7,046.67	7,040.00	25.03	25.09	51.04	114.68	244.58	179.91	130.01	49.91	3.605	Alert	
7,100.00	7,097.96	7,103.36	7,089.90	25.21	25.29	51.12	115.99	247.03	181.39	131.10	50.29	3.607	Alert	
7,150.00	7,147.93	7,146.62	7,139.80	25.39	25.45	51.20	117.29	249.47	182.87	132.24	50.62	3.612	Alert	
7,200.00	7,197.90	7,196.60	7,189.70	25.57	25.63	51.28	118.59	251.92	184.35	133.36	50.98	3.616	Alert	
7,250.00	7,247.87	7,246.58	7,239.60	25.75	25.81	51.36	119.90	254.36	185.83	134.49	51.34	3.619	Alert	
7,300.00	7,297.84	7,303.45	7,289.50	25.92	26.02	51.43	121.20	256.81	187.31	135.58	51.72	3.621	Alert	
7,350.00	7,347.82	7,346.53	7,339.40	26.10	26.17	51.51	122.51	259.25	188.79	136.73	52.06	3.626	Alert	
7,400.00	7,397.79	7,403.49	7,389.31	26.28	26.38	51.58	123.81	261.69	190.27	137.82	52.44	3.628	Alert	
7,450.00	7,447.76	7,446.49	7,439.21	26.46	26.54	51.66	125.12	264.14	191.75	138.97	52.78	3.633	Alert	
7,500.00	7,497.73	7,503.54	7,489.11	26.64	26.75	51.73	126.42	266.58	193.23	140.07	53.16	3.635	Alert	
7,550.00	7,547.70	7,546.44	7,539.01	26.82	26.90	51.80	127.73	269.03	194.71	141.22	53.49	3.640	Alert	
7,600.00	7,597.67	7,603.58	7,588.91	27.00	27.11	51.87	129.03	271.47	196.19	142.31	53.88	3.641	Alert	
7,650.00	7,647.64	7,646.40	7,638.81	27.18	27.26	51.93	130.34	273.92	197.67	143.46	54.21	3.646	Alert	
7,700.00	7,697.61	7,703.63	7,688.71	27.36	27.47	52.00	131.64	276.36	199.16	144.56	54.60	3.648	Alert	
7,750.00	7,747.58	7,746.35	7,738.61	27.54	27.63	52.07	132.94	278.81	200.64	145.71	54.93	3.653	Alert	
7,800.00	7,797.55	7,796.33	7,788.51	27.72	27.81	52.13	134.25	281.25	202.12	146.83	55.29	3.656	Alert	
7,850.00	7,847.52	7,846.31	7,838.41	27.90	27.99	52.20	135.55	283.69	203.60	147.95	55.65	3.659	Alert	
7,900.00	7,897.49	7,903.72	7,888.31	28.08	28.20	52.26	136.86	286.14	205.09	149.05	56.03	3.660	Alert	

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													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 331H - Wellbore #1 - Permit Plan 1														
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
7,950.00	7,947.46	7,946.26	7,938.21	28.26	28.36	52.32	138.16	288.58	206.57	150.20	56.37	3.665	Alert	
8,000.00	7,997.43	8,003.76	7,988.11	28.44	28.56	52.38	139.47	291.03	208.05	151.30	56.75	3.666	Alert	
8,050.00	8,047.40	8,046.22	8,038.01	28.62	28.72	52.44	140.77	293.47	209.54	152.45	57.08	3.671	Alert	
8,100.00	8,097.37	8,103.81	8,087.91	28.80	28.93	52.50	142.08	295.92	211.02	153.55	57.47	3.672	Alert	
8,150.00	8,147.35	8,146.17	8,137.81	28.98	29.08	52.56	143.38	298.36	212.51	154.70	57.80	3.676	Alert	
8,200.00	8,197.32	8,203.85	8,187.72	29.16	29.29	52.62	144.69	300.81	213.99	155.80	58.19	3.677	Alert	
8,250.00	8,247.29	8,246.13	8,237.62	29.34	29.45	52.68	145.99	303.25	215.47	156.95	58.52	3.682	Alert	
8,300.00	8,297.26	8,303.90	8,287.52	29.52	29.66	52.73	147.29	305.69	216.96	158.05	58.91	3.683	Alert	
8,350.00	8,347.23	8,346.08	8,337.42	29.70	29.81	52.79	148.60	308.14	218.44	159.20	59.24	3.687	Alert	
8,400.00	8,397.20	8,396.06	8,387.32	29.88	29.99	52.84	149.90	310.58	219.93	160.33	59.60	3.690	Alert	
8,450.00	8,447.17	8,446.04	8,437.22	30.06	30.17	52.90	151.21	313.03	221.42	161.46	59.96	3.693	Alert	
8,500.00	8,497.14	8,503.99	8,487.12	30.24	30.38	52.95	152.51	315.47	222.90	162.56	60.35	3.694	Alert	
8,550.00	8,547.11	8,545.99	8,537.02	30.42	30.54	53.00	153.82	317.92	224.39	163.71	60.68	3.698	Alert	
8,600.00	8,597.08	8,604.03	8,586.92	30.60	30.75	53.06	155.12	320.36	225.87	164.81	61.07	3.699	Alert	
8,650.00	8,647.05	8,645.95	8,636.82	30.78	30.90	53.11	156.43	322.81	227.36	165.96	61.40	3.703	Alert	
8,700.00	8,697.02	8,695.92	8,686.72	30.96	31.08	53.16	157.73	325.25	228.85	167.09	61.75	3.706	Alert	
8,750.00	8,746.99	8,745.90	8,736.62	31.14	31.27	53.21	159.04	327.70	230.33	168.22	62.11	3.708	Alert	
8,800.00	8,796.96	8,804.12	8,786.52	31.31	31.48	53.26	160.34	330.14	231.82	169.32	62.50	3.709	Alert	
8,850.00	8,846.93	8,845.86	8,836.42	31.49	31.63	53.31	161.64	332.58	233.31	170.47	62.83	3.713	Alert	
8,900.00	8,896.90	8,904.17	8,886.32	31.67	31.84	53.36	162.95	335.03	234.79	171.57	63.22	3.714	Alert	
8,950.00	8,946.88	8,945.81	8,936.22	31.85	31.99	53.40	164.25	337.47	236.28	172.73	63.55	3.718	Alert	
9,000.00	8,996.85	9,004.21	8,986.13	32.03	32.21	53.45	165.56	339.92	237.77	173.83	63.94	3.719	Alert	
9,050.00	9,046.82	9,045.77	9,036.03	32.21	32.36	53.50	166.86	342.36	239.26	174.99	64.27	3.723	Alert	
9,100.00	9,096.79	9,095.74	9,086.93	32.39	32.54	53.54	168.17	344.81	240.74	176.11	64.63	3.725	Alert	
9,150.00	9,146.76	9,145.72	9,135.83	32.57	32.72	53.59	169.47	347.25	242.23	177.24	64.99	3.727	Alert	
9,200.00	9,196.73	9,204.30	9,185.73	32.75	32.93	53.63	170.78	349.70	243.72	178.34	65.38	3.728	Alert	
9,250.00	9,246.70	9,245.68	9,235.63	32.93	33.09	53.68	172.08	352.14	245.21	179.50	65.71	3.732	Alert	
9,300.00	9,296.67	9,304.35	9,285.53	33.11	33.30	53.72	173.38	354.58	246.70	180.60	66.10	3.732	Alert	
9,350.00	9,346.64	9,345.63	9,335.43	33.29	33.45	53.76	174.69	357.03	248.19	181.76	66.43	3.736	Alert	
9,400.00	9,396.61	9,404.39	9,385.33	33.47	33.66	53.81	175.99	359.47	249.67	182.86	66.82	3.737	Alert	
9,450.00	9,446.58	9,445.59	9,435.23	33.65	33.81	53.85	177.30	361.92	251.16	184.02	67.15	3.741	Alert	
9,500.00	9,496.55	9,504.44	9,485.13	33.83	34.03	53.89	178.60	364.36	252.65	185.11	67.54	3.741	Alert	
9,550.00	9,546.52	9,545.54	9,535.03	34.01	34.18	53.93	179.91	366.81	254.14	186.28	67.87	3.745	Alert	
9,600.00	9,596.49	9,604.48	9,584.93	34.19	34.39	53.97	181.21	369.25	255.63	187.37	68.26	3.745	Alert	
9,650.00	9,646.46	9,645.50	9,634.83	34.37	34.54	54.01	182.52	371.70	257.12	188.54	68.58	3.749	Alert	
9,700.00	9,696.43	9,704.53	9,684.73	34.55	34.76	54.05	183.82	374.14	258.61	189.63	68.98	3.749	Alert	
9,750.00	9,746.41	9,745.45	9,734.63	34.73	34.91	54.09	185.13	376.58	260.10	190.80	69.30	3.753	Alert	
9,800.00	9,796.38	9,804.57	9,784.54	34.91	35.12	54.13	186.43	379.03	261.59	191.89	69.70	3.753	Alert	
9,850.00	9,846.35	9,845.41	9,834.44	35.09	35.27	54.17	187.73	381.47	263.08	193.06	70.02	3.757	Alert	
9,900.00	9,896.32	9,895.38	9,884.34	35.27	35.45	54.20	189.04	383.92	264.57	194.19	70.38	3.759	Alert	
9,950.00	9,946.29	9,945.36	9,934.24	35.45	35.63	54.24	190.34	386.36	266.06	195.32	70.74	3.761	Alert	
10,000.00	9,996.26	10,004.66	9,984.14	35.63	35.85	54.28	191.65	388.81	267.55	196.41	71.14	3.761	Alert	
10,050.00	10,046.23	10,045.32	10,034.04	35.81	36.00	54.32	192.95	391.25	269.04	197.58	71.46	3.765	Alert	
10,100.00	10,096.20	10,095.29	10,083.94	35.99	36.18	54.35	194.26	393.70	270.53	198.71	71.82	3.767	Alert	
10,150.00	10,146.17	10,145.27	10,133.84	36.17	36.36	54.39	195.56	396.14	272.02	199.84	72.18	3.769	Alert	
10,200.00	10,196.14	10,204.75	10,183.74	36.35	36.58	54.42	196.87	398.58	273.51	200.94	72.57	3.769	Alert	
10,250.00	10,246.11	10,245.23	10,233.64	36.53	36.73	54.46	198.17	401.03	275.00	202.10	72.90	3.772	Alert	
10,300.00	10,296.08	10,295.20	10,283.54	36.71	36.91	54.49	199.48	403.47	276.49	203.23	73.26	3.774	Alert	
10,350.00	10,346.05	10,348.34	10,336.61	36.89	37.10	54.56	200.72	405.80	277.73	204.08	73.64	3.771	Alert	
10,400.00	10,396.02	10,401.82	10,390.05	37.07	37.29	54.69	202.62	407.49	278.34	204.32	74.02	3.760	Alert	
10,450.00	10,445.99	10,455.29	10,443.52	37.25	37.49	54.89	202.17	408.52	278.32	203.93	74.39	3.741	Alert	

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

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference:	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at:	2.00 sigma
Reference Wellbore:	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:
Survey Program: 0-MWD+HDGM													Offset Well Error:
Sec 15-T23S-R31E - Maldives 15-22 Fed Com 331H - Wellbore #1 - Permit Plan 1													0.00 ft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,500.00	10,495.96	10,508.75	10,496.97	37.43	37.68	55.16	202.36	408.89	277.69	202.94	74.75	3.715	Alert
10,550.00	10,545.94	10,558.91	10,547.14	37.61	37.85	55.45	202.36	408.89	276.71	201.61	75.11	3.684	Alert
10,600.00	10,595.91	10,608.89	10,597.11	37.79	38.03	55.73	202.36	408.89	275.80	200.33	75.46	3.655	Alert
10,650.00	10,645.90	10,658.88	10,647.10	37.97	38.20	55.90	202.36	408.89	275.22	199.40	75.82	3.630	Alert
10,700.00	10,695.90	10,708.88	10,697.10	38.15	38.37	55.96	202.36	408.89	275.00	198.83	76.17	3.610	Alert
10,743.41	10,739.30	10,752.28	10,740.50	38.30	38.53	55.96	202.36	408.89	274.99	198.51	76.48	3.596	Alert
10,750.00	10,745.90	10,758.88	10,747.10	38.33	38.55	89.66	202.36	408.89	275.00	198.47	76.53	3.594	Alert
10,800.00	10,795.90	10,808.88	10,797.10	38.50	38.72	89.66	202.36	408.89	275.00	198.12	76.88	3.577	Alert
10,850.00	10,845.90	10,858.88	10,847.10	38.68	38.90	89.66	202.36	408.89	275.00	197.77	77.23	3.561	Alert
10,862.87	10,858.76	10,871.74	10,859.96	38.73	38.94	89.68	202.28	408.89	275.00	197.68	77.32	3.557	Alert
10,900.00	10,895.90	10,908.78	10,896.95	38.86	39.07	90.06	200.44	408.90	275.01	197.43	77.58	3.545	Alert
10,950.00	10,945.90	10,957.98	10,945.75	39.04	39.22	91.34	194.31	408.93	275.12	197.20	77.92	3.531	Alert
11,000.00	10,995.90	11,005.79	10,992.50	39.22	39.37	93.41	184.37	408.99	275.62	197.36	78.26	3.522	Alert
11,050.00	11,045.90	11,051.64	11,036.41	39.39	39.50	96.13	171.21	409.06	276.96	198.38	78.58	3.525	Alert
11,100.00	11,095.84	11,095.81	11,077.58	39.56	39.62	-80.41	155.24	409.15	279.33	200.50	78.82	3.544	Alert
11,150.00	11,145.41	11,139.03	11,116.56	39.72	39.73	-77.39	136.60	409.25	282.48	203.52	78.97	3.577	Alert
11,200.00	11,194.23	11,181.40	11,153.30	39.87	39.83	-74.53	115.53	409.37	286.28	207.29	78.99	3.624	Alert
11,250.00	11,241.93	11,223.00	11,187.77	40.01	39.92	-71.84	92.25	409.50	290.59	211.71	78.88	3.684	Alert
11,300.00	11,288.15	11,263.91	11,219.93	40.15	40.00	-69.34	66.97	409.64	295.27	216.63	78.64	3.755	Alert
11,350.00	11,332.53	11,304.23	11,249.78	40.27	40.08	-67.02	39.88	409.79	300.17	221.89	78.28	3.835	Alert
11,400.00	11,374.74	11,344.00	11,277.29	40.38	40.14	-64.91	11.17	409.95	305.16	227.36	77.81	3.922	Alert
11,450.00	11,414.45	11,383.30	11,302.45	40.49	40.20	-63.00	-19.01	410.12	310.12	232.88	77.25	4.015	Alert
11,500.00	11,451.37	11,422.18	11,325.24	40.59	40.26	-61.29	-50.49	410.30	314.94	238.31	76.63	4.110	Alert
11,550.00	11,485.22	11,460.69	11,345.67	40.71	40.32	-59.77	-83.14	410.48	319.51	243.52	75.99	4.205	Alert
11,600.00	11,515.72	11,500.00	11,364.21	40.82	40.39	-58.42	-117.79	410.67	323.76	248.36	75.39	4.294	Alert
11,650.00	11,542.66	11,536.83	11,379.39	40.93	40.47	-57.31	-151.33	410.86	327.58	252.82	74.76	4.382	Alert
11,700.00	11,565.83	11,574.53	11,392.66	41.04	40.55	-56.36	-186.62	411.06	330.93	256.71	74.22	4.459	Alert
11,750.00	11,585.05	11,612.05	11,403.54	41.14	40.63	-55.58	-222.52	411.26	333.75	259.96	73.79	4.523	Alert
11,800.00	11,600.18	11,650.00	11,412.12	41.25	40.72	-54.98	-259.48	411.47	335.99	262.51	73.48	4.573	Alert
11,850.00	11,611.09	11,686.69	11,418.08	41.35	40.80	-54.56	-295.67	411.67	337.61	264.33	73.29	4.607	Alert
11,900.00	11,617.72	11,723.88	11,421.74	41.46	40.89	-54.30	-332.67	411.87	338.61	265.35	73.26	4.622	Alert
11,950.00	11,620.00	11,762.88	11,423.00	41.56	40.98	-54.22	-369.53	412.08	338.95	265.56	73.39	4.618	Alert
12,000.00	11,620.00	11,810.76	11,423.00	41.67	41.10	-54.21	-419.53	412.36	338.95	265.35	73.60	4.605	Alert
12,050.00	11,620.00	11,860.76	11,423.00	41.80	41.23	-54.21	-469.52	412.64	338.94	265.11	73.84	4.590	Alert
12,100.00	11,620.00	11,910.76	11,423.00	41.93	41.37	-54.21	-519.52	412.92	338.94	264.86	74.08	4.575	Alert
12,150.00	11,620.00	11,960.76	11,423.00	42.08	41.52	-54.21	-569.52	413.20	338.94	264.58	74.36	4.558	Alert
12,166.30	11,620.00	11,977.06	11,423.00	42.13	41.58	-54.21	-585.82	413.29	338.94	264.49	74.45	4.552	Alert
12,200.00	11,620.00	11,970.09	11,423.00	42.23	41.55	-54.21	-578.85	413.25	341.37	266.53	74.84	4.561	Alert
12,250.00	11,620.00	11,970.09	11,423.00	42.40	41.55	-54.21	-578.85	413.25	350.85	275.25	75.60	4.641	Alert
12,300.00	11,620.00	11,970.09	11,423.00	42.58	41.55	-54.21	-578.85	413.25	366.96	290.47	76.50	4.797	Alert
12,350.00	11,620.00	11,970.09	11,423.00	42.77	41.55	-54.21	-578.85	413.25	388.88	311.47	77.41	5.024	
12,400.00	11,620.00	11,970.09	11,423.00	42.97	41.55	-54.21	-578.85	413.25	415.68	337.45	78.24	5.313	
12,450.00	11,620.00	11,970.09	11,423.00	43.19	41.55	-54.21	-578.85	413.25	446.50	367.53	78.96	5.655	
12,500.00	11,620.00	11,970.09	11,423.00	43.41	41.55	-54.21	-578.85	413.25	480.55	400.98	79.56	6.040	
12,550.00	11,620.00	11,970.09	11,423.00	43.66	41.55	-54.21	-578.85	413.25	517.19	437.13	80.06	6.460	
12,600.00	11,620.00	11,970.09	11,423.00	43.90	41.55	-54.21	-578.85	413.25	555.93	475.47	80.46	6.910	
12,650.00	11,620.00	11,970.09	11,423.00	44.16	41.55	-54.21	-578.85	413.25	596.34	515.56	80.78	7.382	
12,700.00	11,620.00	11,970.09	11,423.00	44.43	41.55	-54.21	-578.85	413.25	638.11	557.07	81.04	7.874	
12,750.00	11,620.00	11,970.09	11,423.00	44.71	41.55	-54.21	-578.85	413.25	680.99	599.74	81.25	8.381	
12,800.00	11,620.00	11,970.09	11,423.00	44.99	41.55	-54.21	-578.85	413.25	724.79	643.36	81.42	8.901	
12,850.00	11,620.00	11,970.09	11,423.00	45.30	41.55	-54.21	-578.85	413.25	769.34	687.77	81.57	9.432	

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 15-T23S-R31E - Maldives 15-22 Fed Com 331H - 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			Offset Wellbore Centre		Distance				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)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
12,900.00	11,620.00	11,970.09	11,423.00	45.60	41.55	-54.21	-578.85	413.25	814.52	732.84	81.68	9.972	
12,950.00	11,620.00	11,970.09	11,423.00	45.92	41.55	-54.21	-578.85	413.25	860.24	778.46	81.78	10.519	
13,000.00	11,620.00	11,970.09	11,423.00	46.25	41.55	-54.21	-578.85	413.25	906.41	824.55	81.86	11.073	
13,050.00	11,620.00	11,970.09	11,423.00	46.59	41.55	-54.21	-578.85	413.25	952.96	871.03	81.93	11.631	
13,100.00	11,620.00	11,970.09	11,423.00	46.93	41.55	-54.21	-578.85	413.25	999.85	917.86	81.99	12.195	
13,150.00	11,620.00	11,970.09	11,423.00	47.29	41.55	-54.21	-578.85	413.25	1,047.03	964.99	82.04	12.762	
13,200.00	11,620.00	11,970.09	11,423.00	47.65	41.55	-54.21	-578.85	413.25	1,094.46	1,012.37	82.08	13.333	
13,250.00	11,620.00	11,970.09	11,423.00	48.02	41.55	-54.21	-578.85	413.25	1,142.10	1,059.98	82.12	13.907	
13,300.00	11,620.00	11,970.09	11,423.00	48.40	41.55	-54.21	-578.85	413.25	1,189.94	1,107.79	82.16	14.484	
13,350.00	11,620.00	11,970.09	11,423.00	48.79	41.55	-54.21	-578.85	413.25	1,237.96	1,155.77	82.19	15.062	
13,400.00	11,620.00	11,970.09	11,423.00	49.18	41.55	-54.21	-578.85	413.25	1,286.12	1,203.90	82.22	15.643	
13,450.00	11,620.00	11,970.09	11,423.00	49.59	41.55	-54.21	-578.85	413.25	1,334.42	1,252.17	82.24	16.225	
13,500.00	11,620.00	11,970.09	11,423.00	49.99	41.55	-54.21	-578.85	413.25	1,382.83	1,300.57	82.26	16.810	
13,550.00	11,620.00	11,970.09	11,423.00	50.41	41.55	-54.21	-578.85	413.25	1,431.36	1,349.07	82.29	17.395	
13,600.00	11,620.00	11,970.09	11,423.00	50.83	41.55	-54.21	-578.85	413.25	1,479.99	1,397.68	82.31	17.981	

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 15-T23S-R31E - Maldives 15-22 Fed Com 511H - Wellbore #1 - Permit Plan 2													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.50 ft
Reference Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis		Highside Tooface (")	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)				
0.00	0.00	1.10	1.10	0.50	0.50	179.67	-150.00	0.86	150.00					
50.00	50.00	51.10	51.10	0.50	0.50	179.67	-150.00	0.86	150.00	149.00	1.01	149.004		
100.00	100.00	101.10	101.10	0.52	0.52	179.67	-150.00	0.86	150.00	148.97	1.04	144.714		
150.00	150.00	151.10	151.10	0.59	0.59	179.67	-150.00	0.86	150.00	148.82	1.18	126.843		
200.00	200.00	201.10	201.10	0.70	0.70	179.67	-150.00	0.86	150.00	148.60	1.41	106.613		
250.00	250.00	251.10	251.10	0.84	0.84	179.67	-150.00	0.86	150.00	148.32	1.68	89.362		
300.00	300.00	301.10	301.10	0.99	0.99	179.67	-150.00	0.86	150.00	148.02	1.98	75.833		
350.00	350.00	351.10	351.10	1.15	1.15	179.67	-150.00	0.86	150.00	147.71	2.29	65.374		
400.00	400.00	401.10	401.10	1.31	1.31	179.67	-150.00	0.86	150.00	147.38	2.62	57.213		
450.00	450.00	451.10	451.10	1.48	1.48	179.67	-150.00	0.86	150.00	147.05	2.96	50.739		
500.00	500.00	501.10	501.10	1.65	1.65	179.67	-150.00	0.86	150.00	146.71	3.30	45.511		
550.00	550.00	551.10	551.10	1.82	1.82	179.67	-150.00	0.86	150.00	146.36	3.64	41.219		
600.00	600.00	601.10	601.10	1.99	1.99	179.67	-150.00	0.86	150.00	146.02	3.99	37.642		
650.00	650.00	651.10	651.10	2.16	2.17	179.67	-150.00	0.86	150.00	145.67	4.33	34.619		
700.00	700.00	701.10	701.10	2.34	2.34	179.67	-150.00	0.86	150.00	145.32	4.68	32.035		
750.00	750.00	751.10	751.10	2.51	2.52	179.67	-150.00	0.86	150.00	144.97	5.03	29.802		
800.00	800.00	801.10	801.10	2.69	2.69	179.67	-150.00	0.86	150.00	144.62	5.39	27.855		
850.00	850.00	851.10	851.10	2.87	2.87	179.67	-150.00	0.86	150.00	144.27	5.74	26.143		
900.00	900.00	901.10	901.10	3.04	3.05	179.67	-150.00	0.86	150.00	143.91	6.09	24.627		
950.00	950.00	951.10	951.10	3.22	3.22	179.67	-150.00	0.86	150.00	143.56	6.44	23.275		
1,000.00	1,000.00	1,001.10	1,001.10	3.40	3.40	179.67	-150.00	0.86	150.00	143.20	6.80	22.062		
1,050.00	1,050.00	1,051.10	1,051.10	3.58	3.58	179.67	-150.00	0.86	150.00	142.85	7.15	20.968		
1,100.00	1,100.00	1,101.10	1,101.10	3.75	3.76	179.67	-150.00	0.86	150.00	142.49	7.51	19.976		
1,150.00	1,150.00	1,151.10	1,151.10	3.93	3.93	179.67	-150.00	0.86	150.00	142.14	7.86	19.073		
1,200.00	1,200.00	1,201.10	1,201.10	4.11	4.11	179.67	-150.00	0.86	150.00	141.78	8.22	18.248		
1,250.00	1,250.00	1,251.10	1,251.10	4.29	4.29	179.67	-150.00	0.86	150.00	141.43	8.58	17.491		
1,300.00	1,300.00	1,301.10	1,301.10	4.46	4.47	179.67	-150.00	0.86	150.00	141.07	8.93	16.793		
1,350.00	1,350.00	1,351.10	1,351.10	4.64	4.65	179.67	-150.00	0.86	150.00	140.71	9.29	16.149		
1,400.00	1,400.00	1,401.10	1,401.10	4.82	4.82	179.67	-150.00	0.86	150.00	140.36	9.65	15.552		
1,450.00	1,450.00	1,451.10	1,451.10	5.00	5.00	179.67	-150.00	0.86	150.00	140.00	10.00	14.998		
1,500.00	1,500.00	1,501.10	1,501.10	5.18	5.18	179.67	-150.00	0.86	150.00	139.64	10.36	14.481		
1,550.00	1,550.00	1,551.10	1,551.10	5.36	5.36	179.67	-150.00	0.86	150.00	139.29	10.72	13.999		
1,600.00	1,600.00	1,601.10	1,601.10	5.53	5.54	179.67	-150.00	0.86	150.00	138.93	11.07	13.548		
1,650.00	1,650.00	1,651.10	1,651.10	5.71	5.72	179.67	-150.00	0.86	150.00	138.57	11.43	13.124		
1,700.00	1,700.00	1,701.10	1,701.10	5.89	5.90	179.67	-150.00	0.86	150.00	138.22	11.79	12.727		
1,750.00	1,750.00	1,751.10	1,751.10	6.07	6.07	179.67	-150.00	0.86	150.00	137.86	12.14	12.352		
1,800.00	1,800.00	1,801.10	1,801.10	6.25	6.25	179.67	-150.00	0.86	150.00	137.50	12.50	11.999		
1,850.00	1,850.00	1,851.10	1,851.10	6.43	6.43	179.67	-150.00	0.86	150.00	137.14	12.86	11.666		
1,900.00	1,900.00	1,901.10	1,901.10	6.61	6.61	179.67	-150.00	0.86	150.00	136.79	13.22	11.350		
1,950.00	1,950.00	1,951.10	1,951.10	6.78	6.79	179.67	-150.00	0.86	150.00	136.43	13.57	11.051		
2,000.00	2,000.00	2,001.10	2,001.10	6.96	6.97	179.67	-150.00	0.86	150.00	136.07	13.93	10.768		
2,050.00	2,050.00	2,051.10	2,051.10	7.14	7.15	179.67	-150.00	0.86	150.00	135.71	14.29	10.498		
2,100.00	2,100.00	2,101.10	2,101.10	7.32	7.32	179.67	-150.00	0.86	150.00	135.36	14.65	10.242		
2,150.00	2,150.00	2,151.10	2,151.10	7.50	7.50	179.67	-150.00	0.86	150.00	135.00	15.00	9.998		
2,200.00	2,200.00	2,201.10	2,201.10	7.68	7.68	179.67	-150.00	0.86	150.00	134.64	15.36	9.765		
2,250.00	2,250.00	2,251.10	2,251.10	7.86	7.86	179.67	-150.00	0.86	150.00	134.28	15.72	9.543		
2,300.00	2,300.00	2,301.10	2,301.10	8.04	8.04	179.67	-150.00	0.86	150.00	133.93	16.08	9.330		
2,350.00	2,350.00	2,351.10	2,351.10	8.22	8.22	179.67	-150.00	0.86	150.00	133.57	16.43	9.127		
2,400.00	2,400.00	2,401.10	2,401.10	8.39	8.40	179.67	-150.00	0.86	150.00	133.21	16.79	8.933		
2,450.00	2,450.00	2,451.10	2,451.10	8.57	8.58	179.67	-150.00	0.86	150.00	132.85	17.15	8.746		
2,500.00	2,500.00	2,501.10	2,501.10	8.75	8.76	179.67	-150.00	0.86	150.00	132.49	17.51	8.568		

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

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 15-T23S-R31E - Maldives 15-22 Fed Com 511H - Wellbore #1 - Permit Plan 2													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		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		
2,550.00	2,550.00	2,551.10	2,551.10	8.93	8.93	179.67	-150.00	0.86	150.00	132.14	17.87	8.396		
2,600.00	2,600.00	2,601.10	2,601.10	9.11	9.11	179.67	-150.00	0.86	150.00	131.78	18.22	8.231		
2,650.00	2,650.00	2,651.10	2,651.10	9.29	9.29	179.67	-150.00	0.86	150.00	131.42	18.58	8.073		
2,700.00	2,700.00	2,701.10	2,701.10	9.47	9.47	179.67	-150.00	0.86	150.00	131.06	18.94	7.920		
2,750.00	2,750.00	2,751.10	2,751.10	9.65	9.65	179.67	-150.00	0.86	150.00	130.71	19.30	7.773		
2,800.00	2,800.00	2,801.13	2,801.13	9.83	9.83	179.67	-150.00	0.86	150.00	130.35	19.66	7.631		
2,850.00	2,850.00	2,852.30	2,852.30	10.00	10.01	179.63	-149.79	0.97	149.80	129.78	20.02	7.484		
2,900.00	2,900.00	2,903.47	2,903.46	10.18	10.20	179.50	-149.18	1.30	149.20	128.83	20.38	7.322		
2,950.00	2,950.00	2,954.62	2,954.60	10.36	10.38	179.28	-148.16	1.85	148.22	127.48	20.74	7.148		
3,000.00	3,000.00	3,005.74	3,005.70	10.54	10.56	178.98	-146.75	2.61	146.84	125.75	21.09	6.962		
3,050.00	3,050.00	3,056.83	3,056.75	10.72	10.74	178.58	-144.93	3.59	145.09	123.64	21.45	6.764		
3,100.00	3,100.00	3,107.23	3,107.09	10.90	10.92	178.10	-142.82	4.73	143.02	121.22	21.81	6.559		
3,150.00	3,150.00	3,157.17	3,156.97	11.08	11.10	177.61	-140.69	5.88	140.93	118.77	22.16	6.359		
3,200.00	3,200.00	3,207.11	3,206.85	11.26	11.28	177.10	-138.56	7.02	138.85	116.34	22.52	6.166		
3,250.00	3,250.00	3,257.06	3,256.74	11.44	11.45	176.57	-136.43	8.17	136.79	113.91	22.88	5.979		
3,300.00	3,300.00	3,307.00	3,306.62	11.62	11.63	176.03	-134.30	9.32	134.73	111.50	23.23	5.799		
3,350.00	3,350.00	3,356.94	3,356.50	11.80	11.81	175.47	-132.17	10.46	132.69	109.10	23.59	5.625		
3,400.00	3,400.00	3,406.88	3,406.38	11.97	11.99	174.90	-130.04	11.61	130.66	106.71	23.95	5.456		
3,450.00	3,450.00	3,456.82	3,456.27	12.15	12.17	174.30	-127.91	12.76	128.65	104.34	24.31	5.293		
3,500.00	3,500.00	3,506.76	3,506.15	12.33	12.35	173.69	-125.78	13.90	126.65	101.98	24.66	5.135		
3,550.00	3,550.00	3,556.71	3,556.04	12.51	12.52	139.43	-123.65	15.05	124.83	99.80	25.02	4.989 Alert		
3,600.00	3,600.00	3,606.68	3,605.95	12.69	12.70	138.99	-121.52	16.20	123.35	97.97	25.38	4.860 Alert		
3,650.00	3,649.98	3,656.66	3,655.88	12.87	12.88	138.68	-119.39	17.35	122.20	96.47	25.73	4.749 Alert		
3,700.00	3,699.96	3,706.66	3,705.81	13.04	13.06	138.49	-117.26	18.49	121.39	95.30	26.09	4.652 Alert		
3,750.00	3,749.93	3,756.65	3,755.74	13.22	13.24	138.35	-115.12	19.64	120.71	94.27	26.45	4.564 Alert		
3,800.00	3,799.90	3,806.64	3,805.68	13.40	13.42	138.21	-112.99	20.79	120.04	93.24	26.80	4.478 Alert		
3,850.00	3,849.87	3,856.64	3,855.62	13.58	13.60	138.07	-110.86	21.94	119.37	92.21	27.16	4.395 Alert		
3,900.00	3,899.84	3,906.63	3,905.55	13.76	13.78	137.92	-108.73	23.09	118.70	91.18	27.52	4.313 Alert		
3,950.00	3,949.81	3,956.63	3,955.49	13.93	13.96	137.78	-106.60	24.23	118.03	90.15	27.88	4.234 Alert		
4,000.00	3,999.78	4,006.62	4,005.42	14.11	14.14	137.63	-104.46	25.38	117.36	89.12	28.23	4.157 Alert		
4,050.00	4,049.75	4,056.62	4,055.36	14.29	14.31	137.48	-102.33	26.53	116.69	88.10	28.59	4.081 Alert		
4,100.00	4,099.72	4,106.61	4,105.30	14.47	14.49	137.33	-100.20	27.68	116.02	87.07	28.95	4.008 Alert		
4,150.00	4,149.70	4,156.61	4,155.23	14.65	14.67	137.18	-98.07	28.83	115.35	86.05	29.31	3.936 Alert		
4,200.00	4,199.67	4,206.60	4,205.17	14.82	14.85	137.03	-95.94	29.98	114.69	85.02	29.66	3.866 Alert		
4,250.00	4,249.64	4,256.60	4,255.10	15.00	15.03	136.87	-93.80	31.12	114.02	84.00	30.02	3.798 Alert		
4,300.00	4,299.61	4,306.59	4,305.04	15.18	15.21	136.71	-91.67	32.27	113.36	82.98	30.38	3.732 Alert		
4,350.00	4,349.58	4,356.59	4,354.98	15.36	15.39	136.56	-89.54	33.42	112.69	81.96	30.74	3.666 Alert		
4,400.00	4,399.55	4,406.58	4,404.91	15.54	15.57	136.39	-87.41	34.57	112.03	80.94	31.09	3.603 Alert		
4,450.00	4,449.52	4,456.57	4,454.85	15.72	15.75	136.23	-85.28	35.72	111.37	79.92	31.45	3.541 Alert		
4,500.00	4,499.49	4,506.57	4,504.78	15.89	15.93	136.07	-83.14	36.86	110.71	78.90	31.81	3.480 Alert		
4,550.00	4,549.46	4,556.56	4,554.72	16.07	16.11	135.90	-81.01	38.01	110.05	77.88	32.17	3.421 Alert		
4,600.00	4,599.43	4,606.56	4,604.66	16.25	16.29	135.73	-78.88	39.16	109.39	76.86	32.53	3.363 Alert		
4,650.00	4,649.40	4,656.55	4,654.59	16.43	16.47	135.56	-76.75	40.31	108.73	75.84	32.88	3.306 Alert		
4,700.00	4,699.37	4,706.55	4,704.53	16.61	16.65	135.39	-74.62	41.46	108.07	74.83	33.24	3.251 Alert		
4,750.00	4,749.34	4,756.54	4,754.46	16.79	16.83	135.21	-72.48	42.61	107.42	73.81	33.60	3.197 Alert		
4,800.00	4,799.31	4,806.54	4,804.40	16.97	17.01	135.04	-70.35	43.75	106.76	72.80	33.96	3.144 Alert		
4,850.00	4,849.28	4,856.53	4,854.34	17.14	17.19	134.86	-68.22	44.90	106.11	71.79	34.32	3.092 Alert		
4,900.00	4,899.25	4,906.53	4,904.27	17.32	17.37	134.68	-66.09	46.05	105.45	70.78	34.68	3.041 Alert		
4,950.00	4,949.23	4,956.52	4,954.21	17.50	17.55	134.49	-63.96	47.20	104.80	69.77	35.04	2.991 Alert		
5,000.00	4,999.20	5,006.52	5,004.14	17.68	17.73	134.31	-61.83	48.35	104.15	68.76	35.39	2.943 Alert		
5,050.00	5,049.17	5,056.51	5,054.08	17.86	17.91	134.12	-59.69	49.49	103.50	67.75	35.75	2.895 Alert		

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

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 15-T23S-R31E - Maldives 15-22 Fed Com 511H - Wellbore #1 - Permit Plan 2												Offset Site Error:	0.00 ft
Survey Program: O-MWD+HDGM												Offset Well Error:	0.50 ft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,100.00	5,099.14	5,106.50	5,104.01	18.04	18.09	133.93	-57.56	50.64	102.85	66.74	36.11	2.848	Alert
5,150.00	5,149.11	5,156.50	5,153.95	18.22	18.27	133.73	-55.43	51.79	102.20	65.73	36.47	2.802	Alert
5,200.00	5,199.08	5,206.49	5,203.89	18.40	18.45	133.54	-53.30	52.94	101.56	64.73	36.83	2.757	Alert
5,250.00	5,249.05	5,256.49	5,253.82	18.57	18.63	133.34	-51.17	54.09	100.91	63.72	37.19	2.714	Alert
5,300.00	5,299.02	5,306.48	5,303.76	18.75	18.81	133.14	-49.03	55.23	100.27	62.72	37.55	2.670	Alert
5,350.00	5,348.99	5,356.48	5,353.69	18.93	18.99	132.94	-46.90	56.38	99.62	61.72	37.91	2.628	Alert
5,400.00	5,398.96	5,406.47	5,403.63	19.11	19.17	132.73	-44.77	57.53	98.98	60.72	38.27	2.587	Alert
5,450.00	5,448.93	5,456.47	5,453.57	19.29	19.35	132.52	-42.64	58.68	98.34	59.72	38.62	2.546	Alert
5,500.00	5,498.90	5,506.46	5,503.50	19.47	19.53	132.31	-40.51	59.83	97.70	58.72	38.98	2.506	Alert
5,550.00	5,548.87	5,556.46	5,553.44	19.65	19.71	132.10	-38.37	60.98	97.07	57.72	39.34	2.467	Minor Risk
5,600.00	5,598.84	5,606.45	5,603.37	19.83	19.89	131.88	-36.24	62.12	96.43	56.73	39.70	2.429	Minor Risk
5,650.00	5,648.81	5,656.45	5,653.31	20.01	20.07	131.66	-34.11	63.27	95.80	55.73	40.06	2.391	Minor Risk
5,700.00	5,698.78	5,706.44	5,703.25	20.19	20.25	131.44	-31.98	64.42	95.16	54.74	40.42	2.354	Minor Risk
5,750.00	5,748.76	5,756.43	5,753.18	20.36	20.43	131.21	-29.85	65.57	94.53	53.75	40.78	2.318	Minor Risk
5,800.00	5,798.73	5,806.43	5,803.12	20.54	20.61	130.98	-27.71	66.72	93.90	52.76	41.14	2.282	Minor Risk
5,850.00	5,848.70	5,856.42	5,853.05	20.72	20.79	130.75	-25.58	67.86	93.27	51.77	41.50	2.248	Minor Risk
5,900.00	5,898.67	5,906.42	5,902.99	20.90	20.97	130.51	-23.45	69.01	92.64	50.78	41.86	2.213	Minor Risk
5,950.00	5,948.64	5,956.41	5,952.93	21.08	21.15	130.28	-21.32	70.16	92.02	49.80	42.22	2.180	Minor Risk
6,000.00	5,998.61	6,006.41	6,002.86	21.26	21.34	130.04	-19.19	71.31	91.39	48.81	42.58	2.146	Minor Risk
6,050.00	6,048.58	6,056.40	6,052.80	21.44	21.52	129.79	-17.05	72.46	90.77	47.83	42.94	2.114	Minor Risk
6,100.00	6,098.55	6,106.40	6,102.73	21.62	21.70	129.54	-14.92	73.60	90.15	46.85	43.30	2.082	Minor Risk
6,150.00	6,148.52	6,156.39	6,152.67	21.80	21.88	129.29	-12.79	74.75	89.53	45.87	43.66	2.051	Minor Risk
6,200.00	6,198.49	6,206.39	6,202.61	21.98	22.06	129.04	-10.66	75.90	88.91	44.90	44.02	2.020	Minor Risk
6,250.00	6,248.46	6,256.38	6,252.54	22.16	22.24	128.78	-8.53	77.05	88.30	43.92	44.38	1.990	Minor Risk
6,300.00	6,298.43	6,306.38	6,302.48	22.34	22.42	128.51	-6.39	78.20	87.68	42.95	44.74	1.960	Minor Risk
6,350.00	6,348.40	6,356.37	6,352.41	22.52	22.60	128.25	-4.26	79.35	87.07	41.98	45.10	1.931	Minor Risk
6,400.00	6,398.37	6,406.36	6,402.35	22.69	22.78	127.98	-2.13	80.49	86.46	41.01	45.46	1.902	Minor Risk
6,450.00	6,448.34	6,456.36	6,452.29	22.87	22.96	127.71	0.00	81.64	85.85	40.04	45.82	1.874	Minor Risk
6,500.00	6,498.31	6,506.35	6,502.22	23.05	23.14	127.43	2.13	82.79	85.25	39.07	46.18	1.846	Minor Risk
6,550.00	6,548.29	6,556.35	6,552.16	23.23	23.32	127.15	4.27	83.94	84.64	38.11	46.54	1.819	Minor Risk
6,600.00	6,598.26	6,606.34	6,602.09	23.41	23.50	126.86	6.40	85.09	84.04	37.14	46.90	1.792	Minor Risk
6,650.00	6,648.23	6,656.34	6,652.03	23.59	23.68	126.57	8.53	86.23	83.44	36.18	47.26	1.766	Minor Risk
6,700.00	6,698.20	6,706.33	6,701.96	23.77	23.86	126.28	10.66	87.38	82.84	35.23	47.62	1.740	Minor Risk
6,750.00	6,748.17	6,756.33	6,751.90	23.95	24.04	125.98	12.79	88.53	82.25	34.27	47.98	1.714	Minor Risk
6,800.00	6,798.14	6,806.32	6,801.84	24.13	24.23	125.68	14.92	89.68	81.65	33.32	48.34	1.689	Minor Risk
6,850.00	6,848.11	6,856.32	6,851.77	24.31	24.41	125.37	17.06	90.83	81.06	32.37	48.70	1.665	Minor Risk
6,900.00	6,898.08	6,906.31	6,901.71	24.49	24.59	125.06	19.19	91.97	80.48	31.42	49.06	1.640	Minor Risk
6,950.00	6,948.05	6,956.31	6,951.64	24.67	24.77	124.74	21.32	93.12	79.89	30.47	49.42	1.617	Minor Risk
7,000.00	6,998.02	7,006.30	7,001.58	24.85	24.95	124.42	23.45	94.27	79.31	29.53	49.78	1.593	Minor Risk
7,050.00	7,047.99	7,056.29	7,051.52	25.03	25.13	124.10	25.58	95.42	78.72	28.59	50.14	1.570	Minor Risk
7,100.00	7,097.96	7,106.29	7,101.45	25.21	25.31	123.77	27.72	96.57	78.15	27.65	50.50	1.547	Minor Risk
7,150.00	7,147.93	7,156.28	7,151.39	25.39	25.49	123.43	29.85	97.72	77.57	26.71	50.86	1.525	Minor Risk
7,200.00	7,197.90	7,206.28	7,201.32	25.57	25.67	123.09	31.98	98.86	77.00	25.78	51.22	1.503	Minor Risk
7,250.00	7,247.87	7,256.27	7,251.26	25.75	25.85	122.75	34.11	100.01	76.43	24.85	51.58	1.482	Major Risk
7,300.00	7,297.84	7,306.27	7,301.20	25.92	26.03	122.40	36.24	101.16	75.86	23.92	51.94	1.460	Major Risk
7,350.00	7,347.82	7,356.26	7,351.13	26.10	26.21	122.04	38.38	102.31	75.29	22.99	52.30	1.440	Major Risk
7,400.00	7,397.79	7,406.26	7,401.07	26.28	26.40	121.68	40.51	103.46	74.73	22.07	52.66	1.419	Major Risk
7,450.00	7,447.76	7,456.25	7,451.00	26.46	26.58	121.31	42.64	104.60	74.17	21.15	53.02	1.399	Major Risk
7,500.00	7,497.73	7,506.25	7,500.94	26.64	26.76	120.94	44.77	105.75	73.62	20.23	53.38	1.379	Major Risk
7,550.00	7,547.70	7,556.18	7,550.81	26.82	26.94	120.57	46.90	106.90	73.07	19.32	53.74	1.360	Major Risk
7,600.00	7,597.67	7,605.62	7,600.22	27.00	27.12	120.44	48.66	107.84	72.75	18.64	54.11	1.345	Major Risk

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference:	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid:
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at:	2.00 sigma
Reference Wellbore:	Wellbore #1	Database:	EDM r5000.141 Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design: Sec 15-T23S-R31E - Maldives 15-22 Fed Com 511H - Wellbore #1 - Permit Plan 2													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		Separation Factor		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		
7,616.66	7,614.32	7,622.09	7,616.68	27.06	27.17	120.49	49.12	108.09	72.73	18.50	54.23	1.341	Major Risk, CC	
7,650.00	7,647.64	7,655.07	7,649.64	27.18	27.29	120.72	49.86	108.49	72.81	18.35	54.46	1.337	Major Risk, ES	
7,700.00	7,697.61	7,704.50	7,699.07	27.36	27.47	121.41	50.49	108.83	73.27	18.45	54.82	1.337	Major Risk, SF	
7,750.00	7,747.58	7,754.11	7,748.68	27.54	27.65	122.45	50.60	108.89	74.10	18.92	55.17	1.343	Major Risk	
7,800.00	7,797.55	7,804.08	7,798.65	27.72	27.82	123.56	50.60	108.89	75.03	19.50	55.53	1.351	Major Risk	
7,850.00	7,847.52	7,854.05	7,848.62	27.90	28.00	124.63	50.60	108.89	75.99	20.11	55.88	1.360	Major Risk	
7,900.00	7,897.49	7,904.02	7,898.59	28.08	28.18	125.68	50.60	108.89	76.98	20.74	56.24	1.369	Major Risk	
7,950.00	7,947.46	7,953.99	7,948.56	28.26	28.36	126.71	50.60	108.89	77.99	21.40	56.59	1.378	Major Risk	
8,000.00	7,997.43	8,003.96	7,998.53	28.44	28.53	127.70	50.60	108.89	79.03	22.08	56.95	1.388	Major Risk	
8,050.00	8,047.40	8,053.93	8,048.50	28.62	28.70	128.68	50.39	108.89	80.31	23.05	57.26	1.402	Major Risk	
8,100.00	8,097.37	8,093.90	8,092.93	28.80	28.84	130.05	47.55	108.91	84.52	27.19	57.32	1.474	Major Risk	
8,150.00	8,147.35	8,138.51	8,132.54	28.98	28.97	131.79	41.54	108.94	92.42	35.29	57.13	1.618	Minor Risk	
8,200.00	8,197.32	8,188.09	8,173.16	29.16	29.09	133.62	32.70	108.99	103.94	47.24	56.70	1.833	Minor Risk	
8,250.00	8,247.29	8,220.02	8,211.46	29.34	29.21	135.34	21.45	109.06	118.95	62.88	56.07	2.121	Minor Risk	
8,300.00	8,297.26	8,258.02	8,247.11	29.52	29.31	136.83	8.30	109.13	137.22	81.95	55.27	2.483	Minor Risk	
8,350.00	8,347.23	8,293.92	8,279.92	29.70	29.40	138.08	-6.27	109.22	158.53	104.16	54.36	2.916	Alert	
8,400.00	8,397.20	8,327.64	8,309.84	29.88	29.49	139.10	-21.80	109.31	182.59	129.21	53.37	3.421	Alert	
8,450.00	8,447.17	8,359.16	8,336.94	30.06	29.56	139.93	-37.89	109.40	209.15	156.80	52.35	3.995	Alert	
8,500.00	8,497.14	8,388.51	8,361.35	30.24	29.63	140.61	-54.18	109.50	237.95	186.64	51.31	4.638	Alert	
8,550.00	8,547.11	8,415.77	8,383.24	30.42	29.68	141.16	-70.42	109.59	268.76	218.48	50.28	5.346		
8,600.00	8,597.08	8,441.04	8,402.82	30.60	29.74	141.60	-86.39	109.68	301.36	252.09	49.28	6.116		
8,650.00	8,647.05	8,464.45	8,420.32	30.78	29.79	141.97	-101.94	109.77	335.56	287.24	48.32	6.945		
8,700.00	8,697.02	8,486.13	8,435.94	30.96	29.84	142.28	-116.96	109.86	371.18	323.77	47.41	7.829		
8,750.00	8,746.99	8,500.00	8,445.64	31.14	29.87	142.46	-126.88	109.91	408.14	362.05	46.08	8.857		
8,800.00	8,796.96	8,524.79	8,462.36	31.31	29.93	142.76	-145.19	110.02	446.06	400.31	45.75	9.749		
8,850.00	8,846.93	8,550.00	8,478.53	31.49	29.98	143.02	-164.52	110.13	485.18	439.65	45.53	10.656		
8,900.00	8,896.90	8,550.00	8,478.53	31.67	29.98	143.02	-164.52	110.13	525.08	481.25	43.83	11.980		
8,950.00	8,946.88	8,572.90	8,492.47	31.85	30.04	143.24	-182.68	110.24	565.66	521.97	43.69	12.948		
9,000.00	8,996.85	8,586.73	8,500.53	32.03	30.07	143.36	-193.92	110.30	607.08	563.97	43.11	14.083		
9,050.00	9,046.82	8,600.00	8,508.01	32.21	30.10	143.47	-204.88	110.36	649.14	606.54	42.60	15.239		
9,100.00	9,096.79	8,611.63	8,514.36	32.39	30.13	143.56	-214.63	110.42	691.77	649.68	42.09	16.435		
9,150.00	9,146.76	8,622.87	8,520.30	32.57	30.16	143.64	-224.17	110.48	734.94	693.29	41.65	17.645		
9,200.00	9,196.73	8,633.38	8,525.69	32.75	30.18	143.71	-233.19	110.53	778.57	737.32	41.25	18.874		
9,250.00	9,246.70	8,650.00	8,533.87	32.93	30.22	143.82	-247.66	110.61	822.70	781.55	41.15	19.992		
9,300.00	9,296.67	8,650.00	8,533.87	33.11	30.22	143.82	-247.66	110.61	867.09	826.62	40.47	21.425		
9,350.00	9,346.64	8,650.00	8,533.87	33.29	30.22	143.82	-247.66	110.61	912.06	872.18	39.89	22.867		
9,400.00	9,396.61	8,669.34	8,542.85	33.47	30.27	143.93	-264.79	110.71	957.01	917.00	40.00	23.923		
9,450.00	9,446.58	8,677.05	8,546.27	33.65	30.29	143.98	-271.70	110.75	1,002.43	962.86	39.77	25.206		
9,500.00	9,496.55	8,684.33	8,549.41	33.83	30.31	144.02	-278.26	110.79	1,048.12	1,008.56	39.56	26.494		
9,550.00	9,546.52	8,700.00	8,555.90	34.01	30.35	144.10	-292.53	110.87	1,094.16	1,054.54	39.62	27.616		
9,600.00	9,596.49	8,700.00	8,555.90	34.19	30.35	144.10	-292.53	110.87	1,140.23	1,100.96	39.27	29.033		
9,650.00	9,646.46	8,700.00	8,555.90	34.37	30.35	144.10	-292.53	110.87	1,186.62	1,147.64	38.97	30.446		
9,700.00	9,696.43	8,700.00	8,555.90	34.55	30.35	144.10	-292.53	110.87	1,233.29	1,194.57	38.72	31.854		
9,750.00	9,746.41	8,700.00	8,555.90	34.73	30.35	144.10	-292.53	110.87	1,280.21	1,241.71	38.50	33.254		
9,800.00	9,796.38	8,720.55	8,563.80	34.91	30.40	144.19	-311.50	110.98	1,326.83	1,288.07	38.75	34.237		
9,850.00	9,846.35	8,725.57	8,565.63	35.09	30.41	144.22	-316.18	111.01	1,373.89	1,335.21	38.68	35.518		
9,900.00	9,896.32	8,730.36	8,567.33	35.27	30.42	144.24	-320.65	111.03	1,421.10	1,382.48	38.62	36.795		
9,950.00	9,946.29	8,750.00	8,573.93	35.45	30.47	144.32	-339.15	111.14	1,468.72	1,429.86	38.87	37.789		

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec.15-T23S-R31E - Maldives 15-22 Fed Com 521H - Wellbore #1 - Permit Plan 1													Offset Site Error:	0.00 ft
Survey Program: O-MWD+HDGM													Offset Well Error:	0.50 ft
Reference Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.50	0.50	-169.03	-150.12	-29.09	152.91					
50.00	50.00	50.00	50.00	0.50	0.50	-169.03	-150.12	-29.09	152.91	151.91	1.01	151.925		
100.00	100.00	100.00	100.00	0.52	0.52	-169.03	-150.12	-29.09	152.91	151.88	1.04	147.669		
150.00	150.00	150.00	150.00	0.59	0.59	-169.03	-150.12	-29.09	152.91	151.73	1.18	129.534		
200.00	200.00	200.00	200.00	0.70	0.70	-169.03	-150.12	-29.09	152.91	151.51	1.40	108.896		
250.00	250.00	250.00	250.00	0.84	0.84	-169.03	-150.12	-29.09	152.91	151.24	1.68	91.268		
300.00	300.00	300.00	300.00	0.99	0.99	-169.03	-150.12	-29.09	152.91	150.94	1.97	77.437		
350.00	350.00	350.00	350.00	1.15	1.15	-169.03	-150.12	-29.09	152.91	150.62	2.29	66.746		
400.00	400.00	400.00	400.00	1.31	1.31	-169.03	-150.12	-29.09	152.91	150.29	2.62	58.404		
450.00	450.00	450.00	450.00	1.48	1.48	-169.03	-150.12	-29.09	152.91	149.96	2.95	51.788		
500.00	500.00	500.00	500.00	1.65	1.65	-169.03	-150.12	-29.09	152.91	149.62	3.29	46.447		
550.00	550.00	550.00	550.00	1.82	1.82	-169.03	-150.12	-29.09	152.91	149.28	3.64	42.063		
600.00	600.00	600.00	600.00	1.99	1.99	-169.03	-150.12	-29.09	152.91	148.93	3.98	38.409		
650.00	650.00	650.00	650.00	2.16	2.16	-169.03	-150.12	-29.09	152.91	148.58	4.33	35.322		
700.00	700.00	700.00	700.00	2.34	2.34	-169.03	-150.12	-29.09	152.91	148.23	4.68	32.683		
750.00	750.00	750.00	750.00	2.51	2.51	-169.03	-150.12	-29.09	152.91	147.88	5.03	30.404		
800.00	800.00	800.00	800.00	2.69	2.69	-169.03	-150.12	-29.09	152.91	147.53	5.38	28.416		
850.00	850.00	850.00	850.00	2.87	2.87	-169.03	-150.12	-29.09	152.91	147.18	5.73	26.669		
900.00	900.00	900.00	900.00	3.04	3.04	-169.03	-150.12	-29.09	152.91	146.83	6.09	25.121		
950.00	950.00	950.00	950.00	3.22	3.22	-169.03	-150.12	-29.09	152.91	146.47	6.44	23.741		
1,000.00	1,000.00	1,000.00	1,000.00	3.40	3.40	-169.03	-150.12	-29.09	152.91	146.12	6.80	22.503		
1,050.00	1,050.00	1,050.00	1,050.00	3.58	3.58	-169.03	-150.12	-29.09	152.91	145.76	7.15	21.386		
1,100.00	1,100.00	1,100.00	1,100.00	3.75	3.75	-169.03	-150.12	-29.09	152.91	145.41	7.51	20.374		
1,150.00	1,150.00	1,150.00	1,150.00	3.93	3.93	-169.03	-150.12	-29.09	152.91	145.05	7.86	19.453		
1,200.00	1,200.00	1,200.00	1,200.00	4.11	4.11	-169.03	-150.12	-29.09	152.91	144.70	8.22	18.611		
1,250.00	1,250.00	1,250.00	1,250.00	4.29	4.29	-169.03	-150.12	-29.09	152.91	144.34	8.57	17.838		
1,300.00	1,300.00	1,300.00	1,300.00	4.46	4.46	-169.03	-150.12	-29.09	152.91	143.98	8.93	17.127		
1,350.00	1,350.00	1,350.00	1,350.00	4.64	4.64	-169.03	-150.12	-29.09	152.91	143.63	9.28	16.469		
1,400.00	1,400.00	1,400.00	1,400.00	4.82	4.82	-169.03	-150.12	-29.09	152.91	143.27	9.64	15.860		
1,450.00	1,450.00	1,450.00	1,450.00	5.00	5.00	-169.03	-150.12	-29.09	152.91	142.92	10.00	15.295		
1,500.00	1,500.00	1,500.00	1,500.00	5.18	5.18	-169.03	-150.12	-29.09	152.91	142.56	10.35	14.768		
1,550.00	1,550.00	1,550.00	1,550.00	5.36	5.36	-169.03	-150.12	-29.09	152.91	142.20	10.71	14.276		
1,600.00	1,600.00	1,600.00	1,600.00	5.53	5.53	-169.03	-150.12	-29.09	152.91	141.84	11.07	13.815		
1,650.00	1,650.00	1,650.00	1,650.00	5.71	5.71	-169.03	-150.12	-29.09	152.91	141.49	11.43	13.384		
1,700.00	1,700.00	1,700.00	1,700.00	5.89	5.89	-169.03	-150.12	-29.09	152.91	141.13	11.78	12.978		
1,750.00	1,750.00	1,750.00	1,750.00	6.07	6.07	-169.03	-150.12	-29.09	152.91	140.77	12.14	12.596		
1,800.00	1,800.00	1,800.00	1,800.00	6.25	6.25	-169.03	-150.12	-29.09	152.91	140.42	12.50	12.236		
1,850.00	1,850.00	1,850.00	1,850.00	6.43	6.43	-169.03	-150.12	-29.09	152.91	140.06	12.85	11.896		
1,900.00	1,900.00	1,900.00	1,900.00	6.61	6.61	-169.03	-150.12	-29.09	152.91	139.70	13.21	11.574		
1,950.00	1,950.00	1,950.00	1,950.00	6.78	6.78	-169.03	-150.12	-29.09	152.91	139.34	13.57	11.269		
2,000.00	2,000.00	2,000.00	2,000.00	6.96	6.96	-169.03	-150.12	-29.09	152.91	138.99	13.93	10.980		
2,050.00	2,050.00	2,050.00	2,050.00	7.14	7.14	-169.03	-150.12	-29.09	152.91	138.63	14.28	10.705		
2,100.00	2,100.00	2,100.00	2,100.00	7.32	7.32	-169.03	-150.12	-29.09	152.91	138.27	14.64	10.444		
2,150.00	2,150.00	2,150.00	2,150.00	7.50	7.50	-169.03	-150.12	-29.09	152.91	137.91	15.00	10.194		
2,200.00	2,200.00	2,200.00	2,200.00	7.68	7.68	-169.03	-150.12	-29.09	152.91	137.56	15.36	9.957		
2,250.00	2,250.00	2,250.00	2,250.00	7.86	7.86	-169.03	-150.12	-29.09	152.91	137.20	15.71	9.730		
2,300.00	2,300.00	2,300.00	2,300.00	8.04	8.04	-169.03	-150.12	-29.09	152.91	136.84	16.07	9.514		
2,350.00	2,350.00	2,350.00	2,350.00	8.22	8.22	-169.03	-150.12	-29.09	152.91	136.48	16.43	9.307		
2,400.00	2,400.00	2,400.00	2,400.00	8.39	8.39	-169.03	-150.12	-29.09	152.91	136.12	16.79	9.108		
2,450.00	2,450.00	2,450.00	2,450.00	8.57	8.57	-169.03	-150.12	-29.09	152.91	135.77	17.15	8.918		
2,500.00	2,500.00	2,500.00	2,500.00	8.75	8.75	-169.03	-150.12	-29.09	152.91	135.41	17.50	8.736		

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

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													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		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		
2,550.00	2,550.00	2,550.00	2,550.00	8.93	8.93	-169.03	-150.12	-29.09	152.91	135.05	17.86	8.561		
2,600.00	2,600.00	2,600.00	2,600.00	9.11	9.11	-169.03	-150.12	-29.09	152.91	134.69	18.22	8.393		
2,650.00	2,650.00	2,650.00	2,650.00	9.29	9.29	-169.03	-150.12	-29.09	152.91	134.34	18.58	8.231		
2,700.00	2,700.00	2,700.00	2,700.00	9.47	9.47	-169.03	-150.12	-29.09	152.91	133.98	18.94	8.075		
2,750.00	2,750.00	2,750.00	2,750.00	9.65	9.65	-169.03	-150.12	-29.09	152.91	133.62	19.29	7.926		
2,800.00	2,800.00	2,800.00	2,800.00	9.83	9.83	-169.03	-150.12	-29.09	152.91	133.26	19.65	7.781		
2,850.00	2,850.00	2,850.00	2,850.00	10.00	10.00	-169.03	-150.12	-29.09	152.91	132.90	20.01	7.642		
2,900.00	2,900.00	2,900.00	2,900.00	10.18	10.18	-169.03	-150.12	-29.09	152.91	132.55	20.37	7.508		
2,950.00	2,950.00	2,950.00	2,950.00	10.36	10.36	-169.03	-150.12	-29.09	152.91	132.19	20.73	7.378		
3,000.00	3,000.00	3,000.00	3,000.00	10.54	10.54	-169.03	-150.12	-29.09	152.91	131.83	21.08	7.253		
3,050.00	3,050.00	3,050.00	3,050.00	10.72	10.72	-169.03	-150.12	-29.09	152.91	131.47	21.44	7.131		
3,100.00	3,100.00	3,100.87	3,100.87	10.90	10.90	-168.97	-149.95	-29.23	152.77	130.97	21.80	7.007		
3,150.00	3,150.00	3,151.73	3,151.72	11.08	11.08	-168.77	-149.42	-29.66	152.35	130.18	22.16	6.875		
3,200.00	3,200.00	3,202.58	3,202.56	11.26	11.26	-168.44	-148.55	-30.37	151.64	129.12	22.52	6.734		
3,250.00	3,250.00	3,253.40	3,253.35	11.44	11.44	-167.98	-147.32	-31.37	150.66	127.79	22.88	6.586		
3,300.00	3,300.00	3,304.19	3,304.10	11.62	11.62	-167.37	-145.75	-32.65	149.42	126.19	23.23	6.432		
3,350.00	3,350.00	3,354.93	3,354.79	11.80	11.80	-166.62	-143.83	-34.21	147.92	124.33	23.59	6.271		
3,400.00	3,400.00	3,405.15	3,404.93	11.97	11.98	-165.75	-141.65	-35.98	146.24	122.29	23.94	6.107		
3,450.00	3,450.00	3,455.07	3,454.77	12.15	12.16	-164.85	-139.47	-37.77	144.57	120.27	24.30	5.949		
3,500.00	3,500.00	3,504.99	3,504.61	12.33	12.34	-163.93	-137.28	-39.55	142.94	118.28	24.66	5.797		
3,550.00	3,550.00	3,554.92	3,554.45	12.51	12.51	-163.34	-135.09	-41.33	141.55	116.54	25.02	5.659		
3,600.00	3,600.00	3,604.84	3,604.30	12.69	12.69	-164.37	-132.91	-43.11	140.63	115.26	25.37	5.543		
3,650.00	3,649.98	3,654.77	3,654.15	12.87	12.87	-165.46	-130.72	-44.89	140.17	114.44	25.73	5.448		
3,674.61	3,674.58	3,679.34	3,678.68	12.95	12.96	-166.02	-129.64	-45.77	140.12	114.22	25.90	5.409 CC		
3,700.00	3,699.96	3,704.69	3,703.99	13.04	13.05	-166.60	-128.53	-46.67	140.19	114.11	26.08	5.374		
3,750.00	3,749.93	3,754.61	3,753.83	13.22	13.23	-167.75	-126.34	-48.45	140.45	114.01	26.44	5.312		
3,800.00	3,799.90	3,804.53	3,803.67	13.40	13.40	-168.90	-124.16	-50.23	140.77	113.97	26.80	5.253 ES		
3,850.00	3,849.87	3,854.45	3,853.51	13.58	13.58	-170.04	-121.97	-52.01	141.14	113.98	27.15	5.197		
3,900.00	3,899.84	3,904.37	3,903.35	13.76	13.76	-171.18	-119.78	-53.79	141.56	114.05	27.51	5.146		
3,950.00	3,949.81	3,954.29	3,953.19	13.93	13.94	-172.31	-117.60	-55.58	142.05	114.18	27.87	5.097		
4,000.00	3,999.78	4,004.21	4,003.03	14.11	14.12	-173.43	-115.41	-57.36	142.58	114.36	28.23	5.052		
4,050.00	4,049.75	4,054.13	4,052.87	14.29	14.30	-174.54	-113.22	-59.14	143.18	114.59	28.58	5.009		
4,100.00	4,099.72	4,104.05	4,102.71	14.47	14.48	-175.64	-111.04	-60.92	143.82	114.88	28.94	4.970 Alert		
4,150.00	4,149.70	4,153.96	4,152.55	14.65	14.66	-176.73	-108.85	-62.70	144.52	115.22	29.30	4.933 Alert		
4,200.00	4,199.67	4,203.88	4,202.39	14.82	14.83	-177.81	-106.66	-64.48	145.27	115.62	29.65	4.899 Alert		
4,250.00	4,249.64	4,253.80	4,252.23	15.00	15.01	-178.88	-104.48	-66.26	146.07	116.06	30.01	4.867 Alert		
4,300.00	4,299.61	4,303.72	4,302.07	15.18	15.19	-179.94	-102.29	-68.04	146.93	116.56	30.37	4.838 Alert		
4,350.00	4,349.58	4,353.64	4,351.90	15.36	15.37	-179.01	-100.10	-69.82	147.83	117.10	30.73	4.811 Alert		
4,400.00	4,399.55	4,403.56	4,401.74	15.54	15.55	-177.98	-97.91	-71.60	148.78	117.69	31.08	4.786 Alert		
4,450.00	4,449.52	4,453.48	4,451.58	15.72	15.73	-176.96	-95.73	-73.38	149.78	118.34	31.44	4.764 Alert		
4,500.00	4,499.49	4,503.40	4,501.42	15.89	15.91	-175.96	-93.54	-75.17	150.82	119.02	31.80	4.743 Alert		
4,550.00	4,549.46	4,553.32	4,551.26	16.07	16.09	-174.97	-91.35	-76.95	151.91	119.76	32.16	4.724 Alert		
4,600.00	4,599.43	4,603.24	4,601.10	16.25	16.27	-173.99	-89.17	-78.73	153.05	120.54	32.51	4.707 Alert		
4,650.00	4,649.40	4,653.16	4,650.94	16.43	16.45	-173.03	-86.98	-80.51	154.23	121.36	32.87	4.692 Alert		
4,700.00	4,699.37	4,703.08	4,700.78	16.61	16.63	-172.08	-84.79	-82.29	155.45	122.22	33.23	4.678 Alert		
4,750.00	4,749.34	4,753.00	4,750.62	16.79	16.81	-171.15	-82.61	-84.07	156.72	123.13	33.59	4.666 Alert		
4,800.00	4,799.31	4,802.92	4,800.46	16.97	16.99	-170.23	-80.42	-85.85	158.02	124.08	33.95	4.655 Alert		
4,850.00	4,849.28	4,852.84	4,850.30	17.14	17.17	-169.33	-78.23	-87.63	159.37	125.07	34.30	4.646 Alert		
4,900.00	4,899.25	4,902.75	4,900.14	17.32	17.35	-168.44	-76.05	-89.41	160.75	126.09	34.66	4.638 Alert		
4,950.00	4,949.23	4,952.67	4,949.98	17.50	17.53	-167.57	-73.86	-91.19	162.18	127.16	35.02	4.631 Alert		
5,000.00	4,999.20	5,002.59	4,999.82	17.68	17.71	-166.72	-71.67	-92.97	163.63	128.26	35.38	4.625 Alert		

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

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 15-T23S-R31E - Maldives 15-22 Fed Com 521H - Wellbore #1 - Permit Plan 1													Offset Site Error:	0.00 ft
Survey Program: 0-MVD+HDGM													Offset Well Error:	0.50 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Tooface (")	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,050.00	5,049.17	5,052.51	5,049.66	17.86	17.89	-165.88	-69.48	-94.76	165.13	129.39	35.73	4.621	Alert	
5,100.00	5,099.14	5,102.43	5,099.50	18.04	18.07	-165.05	-67.30	-96.54	166.66	130.57	36.09	4.618	Alert	
5,150.00	5,149.11	5,152.35	5,149.34	18.22	18.25	-164.24	-65.11	-98.32	168.22	131.77	36.45	4.615	Alert	
5,200.00	5,199.08	5,202.27	5,199.18	18.40	18.43	-163.45	-62.92	-100.10	169.82	133.01	36.81	4.614	Alert	
5,250.00	5,249.05	5,252.19	5,249.02	18.57	18.61	-162.67	-60.74	-101.88	171.45	134.28	37.17	4.613	Alert, SF	
5,300.00	5,299.02	5,302.11	5,298.86	18.75	18.79	-161.90	-58.55	-103.66	173.11	135.59	37.52	4.613	Alert	
5,350.00	5,348.99	5,352.03	5,348.70	18.93	18.97	-161.15	-56.36	-105.44	174.80	136.92	37.88	4.614	Alert	
5,400.00	5,398.96	5,401.95	5,398.54	19.11	19.15	-160.41	-54.18	-107.22	176.52	138.28	38.24	4.616	Alert	
5,450.00	5,448.93	5,451.87	5,448.38	19.29	19.33	-159.69	-51.99	-109.00	178.27	139.67	38.60	4.619	Alert	
5,500.00	5,498.90	5,501.79	5,498.22	19.47	19.51	-158.98	-49.80	-110.78	180.05	141.09	38.96	4.622	Alert	
5,550.00	5,548.87	5,551.71	5,548.06	19.65	19.69	-158.29	-47.62	-112.57	181.85	142.54	39.31	4.625	Alert	
5,600.00	5,598.84	5,601.63	5,597.89	19.83	19.87	-157.61	-45.43	-114.35	183.68	144.01	39.67	4.630	Alert	
5,650.00	5,648.81	5,651.55	5,647.73	20.01	20.05	-156.94	-43.24	-116.13	185.54	145.50	40.03	4.635	Alert	
5,700.00	5,698.78	5,701.46	5,697.57	20.19	20.23	-156.29	-41.05	-117.91	187.42	147.03	40.39	4.640	Alert	
5,750.00	5,748.76	5,751.38	5,747.41	20.36	20.41	-155.65	-38.87	-119.69	189.32	148.57	40.75	4.646	Alert	
5,800.00	5,798.73	5,801.30	5,797.25	20.54	20.59	-155.02	-36.68	-121.47	191.25	150.14	41.11	4.653	Alert	
5,850.00	5,848.70	5,851.22	5,847.09	20.72	20.78	-154.41	-34.49	-123.25	193.20	151.73	41.46	4.659	Alert	
5,900.00	5,898.67	5,901.14	5,896.93	20.90	20.96	-153.80	-32.31	-125.03	195.17	153.34	41.82	4.667	Alert	
5,950.00	5,948.64	5,951.06	5,946.77	21.08	21.14	-153.21	-30.12	-126.81	197.16	154.98	42.18	4.674	Alert	
6,000.00	5,998.61	6,000.98	5,996.61	21.26	21.32	-152.63	-27.93	-128.59	199.17	156.63	42.54	4.682	Alert	
6,050.00	6,048.58	6,050.90	6,046.45	21.44	21.50	-152.07	-25.75	-130.37	201.20	158.31	42.90	4.690	Alert	
6,100.00	6,098.55	6,100.82	6,096.29	21.62	21.68	-151.51	-23.56	-132.16	203.26	160.00	43.26	4.699	Alert	
6,150.00	6,148.52	6,150.74	6,146.13	21.80	21.86	-150.97	-21.37	-133.94	205.33	161.71	43.61	4.708	Alert	
6,200.00	6,198.49	6,200.66	6,195.97	21.98	22.04	-150.43	-19.19	-135.72	207.42	163.44	43.97	4.717	Alert	
6,250.00	6,248.46	6,250.58	6,245.81	22.16	22.22	-149.91	-17.00	-137.50	209.52	165.19	44.33	4.726	Alert	
6,300.00	6,298.43	6,300.50	6,295.65	22.34	22.40	-149.40	-14.81	-139.28	211.65	166.96	44.69	4.736	Alert	
6,350.00	6,348.40	6,350.42	6,345.49	22.52	22.58	-148.89	-12.62	-141.06	213.79	168.74	45.05	4.746	Alert	
6,400.00	6,398.37	6,400.34	6,395.33	22.69	22.77	-148.40	-10.44	-142.84	215.94	170.54	45.41	4.756	Alert	
6,450.00	6,448.34	6,450.25	6,445.17	22.87	22.95	-147.92	-8.25	-144.62	218.12	172.35	45.77	4.766	Alert	
6,500.00	6,498.31	6,500.17	6,495.01	23.05	23.13	-147.45	-6.06	-146.40	220.30	174.18	46.12	4.776	Alert	
6,550.00	6,548.29	6,550.09	6,544.85	23.23	23.31	-146.98	-3.88	-148.18	222.51	176.02	46.48	4.787	Alert	
6,600.00	6,598.26	6,600.01	6,594.69	23.41	23.49	-146.53	-1.69	-149.96	224.72	177.88	46.84	4.798	Alert	
6,650.00	6,648.23	6,649.93	6,644.53	23.59	23.67	-146.08	0.50	-151.75	226.95	179.75	47.20	4.808	Alert	
6,700.00	6,698.20	6,700.15	6,694.37	23.77	23.85	-145.64	2.68	-153.53	229.20	181.64	47.56	4.819	Alert	
6,750.00	6,748.17	6,749.77	6,744.21	23.95	24.03	-145.22	4.87	-155.31	231.45	183.54	47.92	4.830	Alert	
6,800.00	6,798.14	6,799.69	6,794.05	24.13	24.21	-144.79	7.06	-157.09	233.72	185.45	48.28	4.841	Alert	
6,850.00	6,848.11	6,849.61	6,843.89	24.31	24.40	-144.38	9.25	-158.87	236.00	187.37	48.63	4.853	Alert	
6,900.00	6,898.08	6,900.47	6,893.72	24.49	24.58	-143.98	11.43	-160.65	238.30	189.30	49.00	4.864	Alert	
6,950.00	6,948.05	6,949.45	6,943.56	24.67	24.76	-143.58	13.62	-162.43	240.60	191.25	49.35	4.875	Alert	
7,000.00	6,998.02	6,999.37	6,993.40	24.85	24.94	-143.19	15.81	-164.21	242.92	193.21	49.71	4.887	Alert	
7,050.00	7,047.99	7,049.29	7,043.24	25.03	25.12	-142.81	17.99	-165.99	245.25	195.18	50.07	4.898	Alert	
7,100.00	7,097.96	7,100.79	7,093.08	25.21	25.31	-142.44	20.18	-167.77	247.59	197.15	50.43	4.909	Alert	
7,150.00	7,147.93	7,149.13	7,142.92	25.39	25.48	-142.07	22.37	-169.55	249.94	199.15	50.79	4.921	Alert	
7,200.00	7,197.90	7,200.96	7,192.76	25.57	25.67	-141.71	24.55	-171.34	252.29	201.14	51.15	4.932	Alert	
7,250.00	7,247.87	7,248.96	7,242.60	25.75	25.85	-141.35	26.74	-173.12	254.66	203.16	51.50	4.944	Alert	
7,300.00	7,297.84	7,301.12	7,292.44	25.92	26.03	-141.01	28.93	-174.90	257.04	205.17	51.87	4.955	Alert	
7,350.00	7,347.82	7,348.80	7,342.28	26.10	26.21	-140.67	31.11	-176.68	259.43	207.21	52.22	4.968	Alert	
7,400.00	7,397.79	7,401.28	7,392.12	26.28	26.40	-140.33	33.30	-178.46	261.82	209.23	52.59	4.979	Alert	
7,450.00	7,447.76	7,448.64	7,441.96	26.46	26.57	-140.00	35.49	-180.24	264.23	211.29	52.94	4.991	Alert	
7,500.00	7,497.73	7,501.44	7,491.80	26.64	26.76	-139.68	37.68	-182.02	266.64	213.33	53.31	5.002		
7,550.00	7,547.70	7,548.48	7,541.64	26.82	26.93	-139.36	39.86	-183.80	269.07	215.41	53.66	5.014		

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 15-T23S-R31E - Maldives 15-22 Fed Com 521H - 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		
7,600.00	7,597.67	7,598.40	7,591.48	27.00	27.11	-139.05	42.05	-185.58	271.50	217.48	54.02	5.026		
7,650.00	7,647.64	7,648.41	7,641.41	27.18	27.30	-138.74	44.24	-187.37	273.93	219.56	54.38	5.038		
7,700.00	7,697.61	7,699.87	7,692.81	27.36	27.48	-138.51	46.19	-188.96	276.22	221.48	54.75	5.045		
7,750.00	7,747.58	7,751.37	7,744.27	27.54	27.67	-138.41	47.61	-190.11	278.24	223.12	55.11	5.048		
7,800.00	7,797.55	7,802.90	7,795.79	27.72	27.85	-138.44	48.49	-190.82	279.97	224.49	55.48	5.046		
7,850.00	7,847.52	7,854.43	7,847.32	27.90	28.04	-138.59	48.83	-191.10	281.43	225.59	55.84	5.040		
7,900.00	7,897.49	7,904.60	7,897.49	28.08	28.21	-138.82	48.83	-191.10	282.72	226.52	56.20	5.031		
7,950.00	7,947.46	7,954.57	7,947.46	28.26	28.39	-139.05	48.83	-191.10	284.02	227.46	56.56	5.022		
8,000.00	7,997.43	8,004.54	7,997.43	28.44	28.57	-139.28	48.83	-191.10	285.31	228.40	56.92	5.013		
8,050.00	8,047.40	8,054.51	8,047.40	28.62	28.75	-139.50	48.83	-191.10	286.61	229.34	57.27	5.004		
8,100.00	8,097.37	8,104.48	8,097.37	28.80	28.92	-139.72	48.83	-191.10	287.92	230.29	57.63	4.996 Alert		
8,150.00	8,147.35	8,154.46	8,147.35	28.98	29.10	-139.94	48.83	-191.10	289.23	231.24	57.99	4.988 Alert		
8,200.00	8,197.32	8,199.02	8,191.89	29.16	29.25	-140.37	47.58	-191.10	290.94	232.64	58.31	4.990 Alert		
8,250.00	8,247.29	8,242.15	8,234.77	29.34	29.39	-141.39	43.11	-191.07	293.79	235.20	58.59	5.015		
8,300.00	8,297.26	8,284.20	8,276.15	29.52	29.51	-142.94	35.67	-191.03	297.95	239.14	58.82	5.066		
8,350.00	8,347.23	8,324.77	8,315.45	29.70	29.63	-144.90	25.62	-190.97	303.69	244.72	58.97	5.150		
8,400.00	8,397.20	8,363.57	8,352.27	29.88	29.74	-147.16	13.45	-190.90	311.30	252.27	59.03	5.274		
8,450.00	8,447.17	8,400.00	8,386.03	30.06	29.84	-149.58	-0.24	-190.82	321.06	262.12	58.94	5.448		
8,500.00	8,497.14	8,435.03	8,417.61	30.24	29.92	-152.12	-15.39	-190.73	333.21	274.50	58.71	5.676		
8,550.00	8,547.11	8,467.52	8,446.02	30.42	30.00	-154.61	-31.15	-190.64	347.90	289.61	58.30	5.968		
8,600.00	8,597.08	8,500.00	8,473.48	30.60	30.08	-157.20	-48.48	-190.54	365.24	307.43	57.81	6.318		
8,650.00	8,647.05	8,526.05	8,494.77	30.78	30.13	-159.31	-63.49	-190.46	385.17	328.17	57.00	6.757		
8,700.00	8,697.02	8,550.00	8,513.72	30.96	30.18	-161.26	-78.13	-190.37	407.66	351.61	56.06	7.272		
8,750.00	8,746.99	8,576.52	8,533.97	31.14	30.23	-163.41	-95.25	-190.27	432.55	377.31	55.23	7.831		
8,800.00	8,796.96	8,600.00	8,551.22	31.31	30.28	-165.29	-111.18	-190.18	459.68	405.38	54.31	8.465		
8,850.00	8,846.93	8,619.84	8,565.28	31.49	30.31	-166.85	-125.17	-190.10	488.87	435.61	53.26	9.179		
8,900.00	8,896.90	8,639.14	8,578.48	31.67	30.35	-168.35	-139.25	-190.02	519.93	467.66	52.27	9.948		
8,950.00	8,946.88	8,650.00	8,585.70	31.85	30.37	-169.17	-147.36	-189.97	552.75	501.77	50.98	10.843		
9,000.00	8,996.85	8,673.64	8,600.88	32.03	30.41	-170.93	-165.49	-189.87	586.93	536.57	50.36	11.655		
9,050.00	9,046.82	8,689.06	8,610.37	32.21	30.45	-172.05	-177.64	-189.80	622.55	573.08	49.47	12.585		
9,100.00	9,096.79	8,700.00	8,616.90	32.39	30.47	-172.82	-186.42	-189.75	659.39	610.90	48.49	13.598		
9,150.00	9,146.76	8,716.77	8,626.58	32.57	30.51	-173.99	-200.10	-189.67	697.29	649.45	47.84	14.575		
9,200.00	9,196.73	8,729.22	8,633.51	32.75	30.54	-174.83	-210.45	-189.61	736.17	689.06	47.11	15.626		
9,250.00	9,246.70	8,750.00	8,644.57	32.93	30.59	-176.19	-228.04	-189.51	776.04	729.27	46.76	16.595		
9,300.00	9,296.67	8,750.00	8,644.57	33.11	30.59	-176.19	-228.04	-189.51	816.45	770.70	45.75	17.846		
9,350.00	9,346.64	8,750.00	8,644.57	33.29	30.59	-176.19	-228.04	-189.51	857.87	813.02	44.85	19.129		
9,400.00	9,396.61	8,771.49	8,655.33	33.47	30.64	-177.55	-246.64	-189.40	899.52	854.81	44.71	20.118		
9,450.00	9,446.58	8,780.47	8,659.61	33.65	30.66	-178.10	-254.53	-189.35	941.95	897.72	44.23	21.296		
9,500.00	9,496.55	8,800.00	8,668.51	33.83	30.71	-179.26	-271.92	-189.25	985.05	940.94	44.11	22.331		
9,550.00	9,546.52	8,800.00	8,668.51	34.01	30.71	-179.26	-271.92	-189.25	1,028.31	984.83	43.48	23.650		
9,600.00	9,596.49	8,800.00	8,668.51	34.19	30.71	-179.26	-271.92	-189.25	1,072.15	1,029.23	42.92	24.981		
9,650.00	9,646.46	8,800.00	8,668.51	34.37	30.71	-179.26	-271.92	-189.25	1,116.50	1,074.09	42.42	26.321		
9,700.00	9,696.43	8,818.18	8,676.25	34.55	30.75	-179.71	-288.37	-189.16	1,160.90	1,118.49	42.41	27.373		
9,750.00	9,746.41	8,824.53	8,678.83	34.73	30.77	-179.36	-294.17	-189.12	1,205.79	1,163.64	42.15	28.610		
9,800.00	9,796.38	8,830.55	8,681.22	34.91	30.78	-179.03	-299.70	-189.09	1,250.97	1,209.06	41.91	29.851		
9,850.00	9,846.35	8,850.00	8,688.53	35.09	30.83	-177.99	-317.72	-188.99	1,296.66	1,254.67	41.99	30.882		
9,900.00	9,896.32	8,850.00	8,688.53	35.27	30.83	-177.99	-317.72	-188.99	1,342.21	1,300.54	41.68	32.206		
9,950.00	9,946.29	8,850.00	8,688.53	35.45	30.83	-177.99	-317.72	-188.99	1,388.07	1,346.67	41.40	33.528		
10,000.00	9,996.26	8,850.00	8,688.53	35.63	30.83	-177.99	-317.72	-188.99	1,434.21	1,393.05	41.16	34.846		
10,050.00	10,046.23	8,850.00	8,688.53	35.81	30.83	-177.99	-317.72	-188.99	1,480.60	1,439.65	40.95	36.158		

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 15-T23S-R31E - Maldives 15-22 Fed Com 522H - 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							
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	
0.00	0.00	0.40	-0.40	0.50	0.50	168.35	-149.76	30.89	152.91					
50.00	50.00	49.60	49.60	0.50	0.50	168.35	-149.76	30.89	152.91	151.91	1.01	151.936		
100.00	100.00	100.40	99.60	0.52	0.52	168.35	-149.76	30.89	152.91	151.88	1.04	147.616		
150.00	150.00	149.60	149.60	0.59	0.59	168.35	-149.76	30.89	152.91	151.73	1.18	129.618		
200.00	200.00	200.40	199.60	0.70	0.70	168.35	-149.76	30.89	152.91	151.51	1.41	108.818		
250.00	250.00	249.60	249.60	0.84	0.84	168.35	-149.76	30.89	152.91	151.24	1.67	91.331		
300.00	300.00	300.40	299.60	0.99	0.99	168.35	-149.76	30.89	152.91	150.94	1.98	77.389		
350.00	350.00	349.60	349.60	1.15	1.14	168.35	-149.76	30.89	152.91	150.62	2.29	66.783		
400.00	400.00	400.40	399.60	1.31	1.31	168.35	-149.76	30.89	152.91	150.29	2.62	58.375		
450.00	450.00	449.60	449.60	1.48	1.47	168.35	-149.76	30.89	152.91	149.96	2.95	51.812		
500.00	500.00	500.40	499.60	1.65	1.65	168.35	-149.76	30.89	152.91	149.62	3.29	46.428		
550.00	550.00	549.60	549.60	1.82	1.82	168.35	-149.76	30.89	152.91	149.28	3.63	42.079		
600.00	600.00	600.40	599.60	1.99	1.99	168.35	-149.76	30.89	152.91	148.93	3.98	38.395		
650.00	650.00	649.60	649.60	2.16	2.16	168.35	-149.76	30.89	152.91	148.59	4.33	35.333		
700.00	700.00	700.40	699.60	2.34	2.34	168.35	-149.76	30.89	152.91	148.23	4.68	32.673		
750.00	750.00	749.60	749.60	2.51	2.51	168.35	-149.76	30.89	152.91	147.88	5.03	30.412		
800.00	800.00	800.40	799.60	2.69	2.69	168.35	-149.76	30.89	152.91	147.53	5.38	28.409		
850.00	850.00	849.60	849.60	2.87	2.87	168.35	-149.76	30.89	152.91	147.18	5.73	26.675		
900.00	900.00	900.40	899.60	3.04	3.04	168.35	-149.76	30.89	152.91	146.82	6.09	25.115		
950.00	950.00	949.60	949.60	3.22	3.22	168.35	-149.76	30.89	152.91	146.47	6.44	23.746		
1,000.00	1,000.00	1,000.40	999.60	3.40	3.40	168.35	-149.76	30.89	152.91	146.12	6.80	22.498		
1,050.00	1,050.00	1,049.60	1,049.60	3.58	3.57	168.35	-149.76	30.89	152.91	145.76	7.15	21.390		
1,100.00	1,100.00	1,100.40	1,099.60	3.75	3.75	168.35	-149.76	30.89	152.91	145.41	7.51	20.370		
1,150.00	1,150.00	1,149.60	1,149.60	3.93	3.93	168.35	-149.76	30.89	152.91	145.05	7.86	19.457		
1,200.00	1,200.00	1,200.40	1,199.60	4.11	4.11	168.35	-149.76	30.89	152.91	144.70	8.22	18.608		
1,250.00	1,250.00	1,249.60	1,249.60	4.29	4.28	168.35	-149.76	30.89	152.91	144.34	8.57	17.841		
1,300.00	1,300.00	1,300.40	1,299.60	4.46	4.47	168.35	-149.76	30.89	152.91	143.98	8.93	17.124		
1,350.00	1,350.00	1,349.60	1,349.60	4.64	4.64	168.35	-149.76	30.89	152.91	143.63	9.28	16.472		
1,400.00	1,400.00	1,400.40	1,399.60	4.82	4.82	168.35	-149.76	30.89	152.91	143.27	9.64	15.858		
1,450.00	1,450.00	1,449.60	1,449.60	5.00	5.00	168.35	-149.76	30.89	152.91	142.92	10.00	15.297		
1,500.00	1,500.00	1,500.40	1,499.60	5.18	5.18	168.35	-149.76	30.89	152.91	142.56	10.36	14.766		
1,550.00	1,550.00	1,549.60	1,549.60	5.36	5.35	168.35	-149.76	30.89	152.91	142.20	10.71	14.278		
1,600.00	1,600.00	1,600.40	1,599.60	5.53	5.54	168.35	-149.76	30.89	152.91	141.84	11.07	13.814		
1,650.00	1,650.00	1,649.60	1,649.60	5.71	5.71	168.35	-149.76	30.89	152.91	141.49	11.42	13.385		
1,700.00	1,700.00	1,700.40	1,699.60	5.89	5.89	168.35	-149.76	30.89	152.91	141.13	11.78	12.976		
1,750.00	1,750.00	1,749.60	1,749.60	6.07	6.07	168.35	-149.76	30.89	152.91	140.77	12.14	12.598		
1,800.00	1,800.00	1,800.40	1,799.60	6.25	6.25	168.35	-149.76	30.89	152.91	140.41	12.50	12.235		
1,850.00	1,850.00	1,849.60	1,849.60	6.43	6.43	168.35	-149.76	30.89	152.91	140.06	12.85	11.897		
1,900.00	1,900.00	1,900.40	1,899.60	6.61	6.61	168.35	-149.76	30.89	152.91	139.70	13.21	11.573		
1,950.00	1,950.00	1,949.60	1,949.60	6.78	6.78	168.35	-149.76	30.89	152.91	139.35	13.57	11.270		
2,000.00	2,000.00	2,000.40	1,999.60	6.96	6.96	168.35	-149.76	30.89	152.91	138.98	13.93	10.979		
2,050.00	2,050.00	2,049.60	2,049.60	7.14	7.14	168.35	-149.76	30.89	152.91	138.63	14.28	10.706		
2,100.00	2,100.00	2,100.40	2,099.60	7.32	7.32	168.35	-149.76	30.89	152.91	138.27	14.64	10.442		
2,150.00	2,150.00	2,149.60	2,149.60	7.50	7.50	168.35	-149.76	30.89	152.91	137.91	15.00	10.195		
2,200.00	2,200.00	2,200.40	2,199.60	7.68	7.68	168.35	-149.76	30.89	152.91	137.55	15.36	9.956		
2,250.00	2,250.00	2,249.60	2,249.60	7.86	7.86	168.35	-149.76	30.89	152.91	137.20	15.71	9.731		
2,300.00	2,300.00	2,300.40	2,299.60	8.04	8.04	168.35	-149.76	30.89	152.91	136.84	16.07	9.513		
2,350.00	2,350.00	2,349.60	2,349.60	8.22	8.21	168.35	-149.76	30.89	152.91	136.48	16.43	9.307		
2,400.00	2,400.00	2,400.40	2,399.60	8.39	8.40	168.35	-149.76	30.89	152.91	136.12	16.79	9.107		
2,450.00	2,450.00	2,449.60	2,449.60	8.57	8.57	168.35	-149.76	30.89	152.91	135.77	17.14	8.919		
2,500.00	2,500.00	2,499.60	2,499.60	8.75	8.75	168.35	-149.76	30.89	152.91	135.41	17.50	8.737		

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

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 15-T23S-R31E - Maldives 15-22 Fed Com 522H - 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									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
2,550.00	2,550.00	2,549.98	2,549.98	8.93	8.93	168.27	-149.66	31.08	152.85	134.99	17.86	8.559	
2,600.00	2,600.00	2,600.35	2,600.34	9.11	9.11	168.03	-149.35	31.66	152.67	134.45	18.22	8.381	
2,650.00	2,650.00	2,650.71	2,650.69	9.29	9.28	167.63	-148.83	32.64	152.37	133.80	18.57	8.205	
2,700.00	2,700.00	2,701.04	2,701.00	9.47	9.46	167.07	-148.10	34.00	151.96	133.03	18.93	8.029	
2,750.00	2,750.00	2,751.34	2,751.26	9.65	9.63	166.35	-147.16	35.75	151.45	132.17	19.28	7.855	
2,800.00	2,800.00	2,801.61	2,801.47	9.83	9.81	165.45	-146.02	37.89	150.87	131.23	19.64	7.683	
2,850.00	2,850.00	2,851.82	2,851.60	10.00	9.99	164.39	-144.67	40.41	150.22	130.23	19.99	7.514	
2,900.00	2,900.00	2,901.99	2,901.86	10.18	10.16	163.16	-143.11	43.32	149.54	129.19	20.35	7.350	
2,950.00	2,950.00	2,952.09	2,951.62	10.36	10.34	161.75	-141.35	46.61	148.85	128.15	20.70	7.190	
3,000.00	3,000.00	3,002.10	3,001.46	10.54	10.52	160.17	-139.39	50.28	148.20	127.14	21.06	7.038	
3,050.00	3,050.00	3,051.91	3,051.08	10.72	10.69	158.51	-137.36	54.07	147.63	126.22	21.41	6.894	
3,100.00	3,100.00	3,101.72	3,100.71	10.90	10.87	156.85	-135.33	57.87	147.19	125.42	21.77	6.761	
3,150.00	3,150.00	3,151.54	3,150.34	11.08	11.05	155.18	-133.30	61.66	146.88	124.75	22.13	6.638	
3,200.00	3,200.00	3,201.35	3,199.96	11.26	11.23	153.50	-131.27	65.46	146.69	124.21	22.48	6.525	
3,248.48	3,248.48	3,249.65	3,248.08	11.43	11.40	151.87	-129.31	69.14	146.63	123.80	22.83	6.423 CC	
3,250.00	3,250.00	3,251.16	3,249.59	11.44	11.40	151.81	-129.24	69.26	146.63	123.79	22.84	6.420	
3,300.00	3,300.00	3,300.98	3,299.22	11.62	11.58	150.13	-127.21	73.05	146.70	123.50	23.20	6.324	
3,350.00	3,350.00	3,350.79	3,348.84	11.80	11.76	148.45	-125.18	76.85	146.89	123.34	23.55	6.237	
3,400.00	3,400.00	3,400.60	3,398.47	11.97	11.94	146.78	-123.15	80.65	147.21	123.31	23.91	6.157 ES	
3,450.00	3,450.00	3,450.41	3,448.09	12.15	12.12	145.12	-121.12	84.44	147.66	123.40	24.27	6.085	
3,500.00	3,500.00	3,500.23	3,497.72	12.33	12.30	143.46	-119.09	88.24	148.23	123.61	24.62	6.020	
3,550.00	3,550.00	3,550.06	3,547.36	12.51	12.48	108.19	-117.06	92.04	149.00	124.02	24.98	5.965	
3,600.00	3,600.00	3,600.09	3,597.04	12.69	12.66	106.80	-115.03	95.84	150.00	124.66	25.34	5.920	
3,650.00	3,649.98	3,649.80	3,646.73	12.87	12.84	105.58	-113.00	99.64	151.20	125.51	25.69	5.885	
3,700.00	3,699.96	3,700.30	3,696.45	13.04	13.02	104.54	-110.97	103.44	152.58	126.53	26.05	5.857	
3,750.00	3,749.93	3,749.62	3,746.18	13.22	13.20	103.59	-108.93	107.25	154.05	127.64	26.40	5.834	
3,800.00	3,799.90	3,800.47	3,795.91	13.40	13.38	102.66	-106.90	111.05	155.56	128.79	26.76	5.812	
3,850.00	3,849.87	3,849.45	3,845.63	13.58	13.56	101.75	-104.86	114.85	157.11	129.99	27.12	5.794	
3,900.00	3,899.84	3,900.64	3,895.36	13.76	13.75	100.86	-102.83	118.66	158.70	131.22	27.48	5.775	
3,950.00	3,949.81	3,949.28	3,945.09	13.93	13.92	99.99	-100.80	122.46	160.33	132.50	27.83	5.761	
4,000.00	3,999.78	3,999.19	3,994.82	14.11	14.10	99.13	-98.76	126.27	161.99	133.80	28.19	5.747	
4,050.00	4,049.75	4,049.10	4,044.54	14.29	14.29	98.30	-96.73	130.07	163.69	135.15	28.54	5.735	
4,100.00	4,099.72	4,100.98	4,094.27	14.47	14.47	97.47	-94.69	133.87	165.42	136.52	28.91	5.722	
4,150.00	4,149.70	4,148.93	4,144.00	14.65	14.65	96.67	-92.66	137.68	167.19	137.93	29.26	5.714	
4,200.00	4,199.67	4,201.15	4,193.73	14.82	14.84	95.88	-90.62	141.48	168.99	139.37	29.62	5.705	
4,250.00	4,249.64	4,248.76	4,243.45	15.00	15.01	95.11	-88.59	145.29	170.82	140.85	29.97	5.699	
4,300.00	4,299.61	4,301.33	4,293.18	15.18	15.21	94.36	-86.56	149.09	172.68	142.34	30.34	5.692	
4,350.00	4,349.58	4,348.59	4,342.91	15.36	15.38	93.62	-84.52	152.90	174.57	143.89	30.69	5.689	
4,400.00	4,399.55	4,401.50	4,392.64	15.54	15.57	92.90	-82.49	156.70	176.49	145.44	31.06	5.683	
4,450.00	4,449.52	4,448.42	4,442.36	15.72	15.74	92.20	-80.45	160.50	178.44	147.04	31.40	5.682	
4,500.00	4,499.49	4,501.67	4,492.09	15.89	15.94	91.50	-78.42	164.31	180.41	148.64	31.77	5.678	
4,550.00	4,549.46	4,548.25	4,541.82	16.07	16.11	90.83	-76.39	168.11	182.41	150.29	32.12	5.679	
4,600.00	4,599.43	4,601.84	4,591.55	16.25	16.31	90.17	-74.35	171.92	184.43	151.94	32.49	5.677	
4,650.00	4,649.40	4,648.07	4,641.27	16.43	16.48	89.52	-72.32	175.72	186.48	153.65	32.83	5.679	
4,700.00	4,699.37	4,702.01	4,691.00	16.61	16.68	88.89	-70.28	179.52	188.55	155.34	33.21	5.678	
4,750.00	4,749.34	4,747.90	4,740.73	16.79	16.84	88.27	-68.25	183.33	190.64	157.09	33.55	5.682	
4,800.00	4,799.31	4,802.18	4,790.46	16.97	17.04	87.67	-66.22	187.13	192.76	158.83	33.92	5.682	
4,850.00	4,849.28	4,847.73	4,840.18	17.14	17.21	87.07	-64.18	190.94	194.89	160.63	34.27	5.688	
4,900.00	4,899.25	4,902.35	4,889.91	17.32	17.41	86.49	-62.15	194.74	197.05	162.41	34.64	5.688	
4,950.00	4,949.23	4,947.56	4,939.64	17.50	17.58	85.93	-60.11	198.54	199.22	164.24	34.98	5.695	
5,000.00	4,999.20	5,002.53	4,989.37	17.68	17.78	85.37	-58.08	202.35	201.42	166.06	35.36	5.696	

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

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													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 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			
5,050.00	5,049.17	5,047.39	5,039.09	17.86	17.95	84.83	-56.04	206.15	203.63	167.93	35.70	5.704			
5,100.00	5,099.14	5,102.70	5,088.82	18.04	18.15	84.30	-54.01	209.96	205.86	169.79	36.08	5.706			
5,150.00	5,149.11	5,147.22	5,138.55	18.22	18.31	83.78	-51.98	213.76	208.11	171.70	36.42	5.715			
5,200.00	5,199.08	5,202.87	5,188.28	18.40	18.52	83.27	-49.94	217.57	210.38	173.58	36.79	5.718			
5,250.00	5,249.05	5,247.05	5,238.00	18.57	18.68	82.78	-47.91	221.37	212.66	175.52	37.13	5.727			
5,300.00	5,299.02	5,303.04	5,287.73	18.75	18.89	82.29	-45.87	225.17	214.95	177.44	37.51	5.730			
5,350.00	5,348.99	5,346.87	5,337.46	18.93	19.05	81.81	-43.84	228.98	217.27	179.42	37.85	5.740			
5,400.00	5,398.96	5,403.21	5,387.19	19.11	19.26	81.35	-41.81	232.78	219.59	181.36	38.23	5.744			
5,450.00	5,448.93	5,446.70	5,436.91	19.29	19.42	80.89	-39.77	236.59	221.93	183.37	38.57	5.755			
5,500.00	5,498.90	5,503.38	5,486.64	19.47	19.63	80.44	-37.74	240.39	224.29	185.34	38.95	5.758			
5,550.00	5,548.87	5,546.53	5,536.37	19.65	19.79	80.01	-35.70	244.19	226.66	187.37	39.28	5.770			
5,600.00	5,598.84	5,603.56	5,586.10	19.83	20.00	79.58	-33.67	248.00	229.04	189.37	39.67	5.774			
5,650.00	5,648.81	5,646.36	5,635.82	20.01	20.16	79.16	-31.64	251.80	231.43	191.43	40.00	5.786			
5,700.00	5,698.78	5,703.73	5,685.55	20.19	20.37	78.75	-29.60	255.61	233.84	193.45	40.39	5.790			
5,750.00	5,748.76	5,746.19	5,735.28	20.36	20.53	78.34	-27.57	259.41	236.25	195.53	40.72	5.802			
5,800.00	5,798.73	5,803.90	5,785.01	20.54	20.74	77.95	-25.53	263.21	238.68	197.58	41.11	5.807			
5,850.00	5,848.70	5,846.02	5,834.73	20.72	20.90	77.56	-23.50	267.02	241.12	199.69	41.44	5.819			
5,900.00	5,898.67	5,904.07	5,884.46	20.90	21.11	77.18	-21.46	270.82	243.57	201.75	41.82	5.824			
5,950.00	5,948.64	5,945.84	5,934.19	21.08	21.27	76.81	-19.43	274.63	246.03	203.88	42.15	5.837			
6,000.00	5,998.61	6,004.24	5,983.92	21.26	21.49	76.45	-17.40	278.43	248.50	205.96	42.54	5.841			
6,050.00	6,048.58	6,045.67	6,033.64	21.44	21.64	76.09	-15.36	282.24	250.99	208.11	42.87	5.854			
6,100.00	6,098.55	6,104.41	6,083.37	21.62	21.86	75.74	-13.33	286.04	253.48	210.21	43.26	5.859			
6,150.00	6,148.52	6,145.50	6,133.10	21.80	22.01	75.40	-11.29	289.84	255.98	212.39	43.59	5.872			
6,200.00	6,198.49	6,204.58	6,182.83	21.98	22.23	75.06	-9.26	293.65	258.48	214.50	43.98	5.877			
6,250.00	6,248.46	6,245.33	6,232.55	22.16	22.38	74.73	-7.23	297.45	261.00	216.69	44.31	5.891			
6,300.00	6,298.43	6,304.76	6,282.28	22.34	22.60	74.41	-5.19	301.26	263.53	218.83	44.70	5.895			
6,350.00	6,348.40	6,345.16	6,332.01	22.52	22.75	74.09	-3.16	305.06	266.06	221.04	45.03	5.909			
6,400.00	6,398.37	6,404.93	6,381.74	22.69	22.97	73.78	-1.12	308.86	268.60	223.18	45.42	5.914			
6,450.00	6,448.34	6,444.99	6,431.46	22.87	23.12	73.47	0.91	312.67	271.15	225.41	45.74	5.928			
6,500.00	6,498.31	6,505.10	6,481.19	23.05	23.34	73.17	2.94	316.47	273.71	227.57	46.14	5.932			
6,550.00	6,548.29	6,544.82	6,530.92	23.23	23.49	72.88	4.98	320.28	276.28	229.81	46.46	5.946			
6,600.00	6,598.26	6,605.27	6,580.65	23.41	23.72	72.59	7.01	324.08	278.85	231.99	46.86	5.951			
6,650.00	6,648.23	6,644.64	6,630.37	23.59	23.86	72.31	9.05	327.88	281.43	234.25	47.18	5.965			
6,700.00	6,698.20	6,694.56	6,680.10	23.77	24.05	72.03	11.08	331.69	284.01	236.47	47.54	5.974			
6,750.00	6,748.17	6,744.47	6,729.83	23.95	24.24	71.75	13.12	335.49	286.61	238.71	47.90	5.983			
6,800.00	6,798.14	6,805.61	6,779.56	24.13	24.46	71.49	15.15	339.30	289.20	240.90	48.30	5.988			
6,850.00	6,848.11	6,844.30	6,829.28	24.31	24.61	71.22	17.18	343.10	291.81	243.19	48.62	6.002			
6,900.00	6,898.08	6,905.79	6,879.01	24.49	24.84	70.96	19.22	346.91	294.42	245.40	49.02	6.006			
6,950.00	6,948.05	6,944.13	6,928.74	24.67	24.98	70.71	21.25	350.71	297.04	247.70	49.34	6.020			
7,000.00	6,998.02	6,994.04	6,978.46	24.85	25.16	70.46	23.29	354.51	299.66	249.96	49.70	6.030			
7,050.00	7,047.99	7,043.96	7,028.19	25.03	25.35	70.21	25.32	358.32	302.29	252.23	50.06	6.039			
7,100.00	7,097.96	7,106.13	7,077.92	25.21	25.58	69.97	27.35	362.12	304.92	254.46	50.46	6.043			
7,150.00	7,147.93	7,143.79	7,127.65	25.39	25.72	69.73	29.39	365.93	307.56	256.78	50.78	6.057			
7,200.00	7,197.90	7,206.30	7,177.37	25.57	25.95	69.50	31.42	369.73	310.20	259.02	51.18	6.061			
7,250.00	7,247.87	7,243.61	7,227.10	25.75	26.09	69.27	33.46	373.53	312.85	261.36	51.50	6.075			
7,300.00	7,297.84	7,306.47	7,276.83	25.92	26.33	69.05	35.49	377.34	315.51	263.61	51.90	6.079			
7,350.00	7,347.82	7,343.44	7,326.56	26.10	26.47	68.82	37.52	381.14	318.17	265.95	52.21	6.093			
7,400.00	7,397.79	7,406.64	7,376.28	26.28	26.70	68.61	39.56	384.95	320.83	268.21	52.62	6.097			
7,450.00	7,447.76	7,443.27	7,426.01	26.46	26.84	68.39	41.59	388.75	323.50	270.56	52.93	6.111			
7,500.00	7,497.73	7,493.19	7,475.74	26.64	27.02	68.18	43.63	392.55	326.17	272.88	53.29	6.120			
7,550.00	7,547.70	7,543.17	7,525.54	26.82	27.21	67.97	45.66	396.36	328.85	275.19	53.65	6.129			

Anticollision Report

Company:	WCDSC-Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore:	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design: Sec 15-T23S-R31E - Maldives 15-22 Fed Com 522H - 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		Minimum		Separation		Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
7,600.00	7,597.67	7,596.66	7,578.86	27.00	27.41	67.80	47.66	400.10	331.25	277.21	54.04	6.129	
7,650.00	7,647.64	7,650.21	7,632.29	27.18	27.60	67.71	49.31	403.18	333.11	278.69	54.43	6.120	
7,700.00	7,697.61	7,703.80	7,685.82	27.36	27.80	67.70	50.60	405.60	334.44	279.63	54.81	6.102	
7,750.00	7,747.58	7,757.42	7,739.39	27.54	27.99	67.77	51.54	407.35	335.22	280.04	55.18	6.075	
7,800.00	7,797.55	7,811.03	7,792.99	27.72	28.18	67.93	52.13	408.45	335.47	279.91	55.55	6.039	
7,850.00	7,847.52	7,864.62	7,846.58	27.90	28.37	68.16	52.36	408.88	335.17	279.26	55.91	5.994	
7,900.00	7,897.49	7,915.13	7,897.09	28.08	28.55	68.44	52.36	408.89	334.55	278.28	56.27	5.945	
7,950.00	7,947.46	7,965.10	7,947.06	28.26	28.72	68.71	52.36	408.89	333.92	277.29	56.63	5.897	
8,000.00	7,997.43	8,015.07	7,997.03	28.44	28.89	68.99	52.36	408.89	333.30	276.32	56.98	5.849	
8,050.00	8,047.40	8,065.05	8,047.00	28.62	29.07	69.26	52.36	408.89	332.69	275.35	57.34	5.802	
8,100.00	8,097.37	8,115.02	8,096.97	28.80	29.24	69.54	52.36	408.89	332.09	274.39	57.70	5.756	
8,150.00	8,147.35	8,164.99	8,146.95	28.98	29.41	69.82	52.36	408.89	331.49	273.44	58.05	5.710	
8,189.13	8,186.45	8,200.24	8,182.19	29.12	29.53	70.12	51.71	408.89	331.21	272.89	58.32	5.679	
8,200.00	8,197.32	8,209.72	8,191.66	29.16	29.56	70.26	51.18	408.89	331.24	272.84	58.40	5.672	
8,250.00	8,247.29	8,252.88	8,234.58	29.34	29.70	71.23	46.80	408.92	331.98	273.27	58.71	5.654 SF	
8,300.00	8,297.26	8,294.96	8,276.00	29.52	29.82	72.69	39.42	408.96	333.92	274.92	58.99	5.660	
8,350.00	8,347.23	8,335.58	8,315.36	29.70	29.94	74.54	29.44	409.02	337.31	278.08	59.22	5.696	
8,400.00	8,397.20	8,374.42	8,352.25	29.88	30.05	76.68	17.31	409.09	342.44	283.08	59.36	5.769	
8,450.00	8,447.17	8,411.27	8,386.42	30.06	30.15	79.01	3.52	409.17	349.63	290.25	59.39	5.888	
8,500.00	8,497.14	8,445.99	8,417.74	30.24	30.23	81.44	-11.47	409.25	359.15	299.89	59.26	6.060	
8,550.00	8,547.11	8,478.54	8,446.22	30.42	30.31	83.87	-27.21	409.34	371.20	312.23	58.97	6.295	
8,600.00	8,597.08	8,508.92	8,471.96	30.60	30.37	86.24	-43.34	409.44	385.91	327.41	58.51	6.596	
8,650.00	8,647.05	8,537.18	8,495.10	30.78	30.43	88.51	-59.55	409.53	403.33	345.45	57.88	6.968	
8,700.00	8,697.02	8,563.42	8,515.85	30.96	30.48	90.64	-75.61	409.62	423.40	366.29	57.11	7.414	
8,750.00	8,746.99	8,587.75	8,534.42	31.14	30.53	92.62	-91.33	409.71	446.04	389.81	56.23	7.932	
8,800.00	8,796.96	8,610.28	8,551.00	31.31	30.57	94.45	-106.58	409.80	471.08	415.80	55.28	8.522	
8,850.00	8,846.93	8,631.16	8,565.82	31.49	30.60	96.12	-121.28	409.89	498.36	444.08	54.28	9.181	
8,900.00	8,896.90	8,650.00	8,578.73	31.67	30.63	97.62	-135.01	409.97	527.68	474.43	53.25	9.910	
8,950.00	8,946.88	8,668.43	8,590.91	31.85	30.65	99.05	-148.83	410.04	558.85	506.59	52.26	10.693	
9,000.00	8,996.85	8,685.06	8,601.51	32.03	30.68	100.32	-161.65	410.12	591.70	540.41	51.28	11.538	
9,050.00	9,046.82	8,700.00	8,610.72	32.21	30.70	101.44	-173.41	410.19	626.04	575.71	50.33	12.439	
9,100.00	9,096.79	8,714.88	8,619.58	32.39	30.72	102.53	-185.37	410.26	661.72	612.26	49.46	13.379	
9,150.00	9,146.76	8,728.27	8,627.29	32.57	30.73	103.49	-196.31	410.32	698.60	649.98	48.63	14.367	
9,200.00	9,196.73	8,750.00	8,639.25	32.75	30.76	105.01	-214.46	410.42	736.68	688.51	48.18	15.291	
9,250.00	9,246.70	8,750.00	8,639.25	32.93	30.76	105.01	-214.46	410.42	775.48	728.45	47.03	16.490	
9,300.00	9,296.67	8,763.30	8,646.22	33.11	30.78	105.92	-225.78	410.49	815.24	768.80	46.44	17.555	
9,350.00	9,346.64	8,773.51	8,651.39	33.29	30.79	106.59	-234.58	410.54	855.79	809.96	45.82	18.677	
9,400.00	9,396.61	8,783.08	8,656.10	33.47	30.81	107.22	-242.91	410.59	897.02	851.77	45.25	19.823	
9,450.00	9,446.58	8,800.00	8,664.08	33.65	30.83	108.30	-257.83	410.67	938.97	894.00	44.97	20.880	
9,500.00	9,496.55	8,800.00	8,664.08	33.83	30.83	108.30	-257.83	410.67	981.31	937.07	44.24	22.181	
9,550.00	9,546.52	8,800.00	8,664.08	34.01	30.83	108.30	-257.83	410.67	1,024.34	980.75	43.59	23.499	
9,600.00	9,596.49	8,816.03	8,671.23	34.19	30.86	109.28	-272.17	410.76	1,067.64	1,024.21	43.43	24.582	
9,650.00	9,646.46	8,823.13	8,674.27	34.37	30.87	109.71	-278.59	410.79	1,111.46	1,068.39	43.08	25.802	
9,700.00	9,696.43	8,829.84	8,677.07	34.55	30.89	110.11	-284.69	410.83	1,155.67	1,112.91	42.75	27.031	
9,750.00	9,746.41	8,850.00	8,685.05	34.73	30.93	111.27	-303.21	410.93	1,200.46	1,157.67	42.79	28.058	
9,800.00	9,796.38	8,850.00	8,685.05	34.91	30.93	111.27	-303.21	410.93	1,245.17	1,202.79	42.38	29.384	
9,850.00	9,846.35	8,850.00	8,685.05	35.09	30.93	111.27	-303.21	410.93	1,290.26	1,248.25	42.01	30.711	
9,900.00	9,896.32	8,850.00	8,685.05	35.27	30.93	111.27	-303.21	410.93	1,335.71	1,294.02	41.69	32.038	
9,950.00	9,946.29	8,850.00	8,685.05	35.45	30.93	111.27	-303.21	410.93	1,381.47	1,340.06	41.41	33.363	
10,000.00	9,996.26	8,850.00	8,685.05	35.63	30.93	111.27	-303.21	410.93	1,427.51	1,386.36	41.16	34.684	
10,050.00	10,046.23	8,868.18	8,691.68	35.81	30.97	112.27	-320.13	411.03	1,473.42	1,432.15	41.27	35.702	

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

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Anticollision Report

Company:	WCDSC Permian NM.	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+HDGM													Offset Well Error:	0.50 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.00	0.00	2.00	2.00	0.50	0.50	-90.36	-0.19	-30.04	30.04					
50.00	50.00	52.00	52.00	0.50	0.50	-90.36	-0.19	-30.04	30.04	29.03	1.01	29.836		
100.00	100.00	102.00	102.00	0.52	0.52	-90.36	-0.19	-30.04	30.04	29.00	1.04	28.957		
150.00	150.00	152.00	152.00	0.59	0.59	-90.36	-0.19	-30.04	30.04	28.86	1.18	25.365		
200.00	200.00	202.00	202.00	0.70	0.71	-90.36	-0.19	-30.04	30.04	28.63	1.41	21.317		
250.00	250.00	252.00	252.00	0.84	0.84	-90.36	-0.19	-30.04	30.04	28.36	1.68	17.869		
300.00	300.00	302.00	302.00	0.99	0.99	-90.36	-0.19	-30.04	30.04	28.06	1.98	15.165		
350.00	350.00	352.00	352.00	1.15	1.15	-90.36	-0.19	-30.04	30.04	27.74	2.30	13.076		
400.00	400.00	402.00	402.00	1.31	1.32	-90.36	-0.19	-30.04	30.04	27.42	2.62	11.445		
450.00	450.00	452.00	452.00	1.48	1.48	-90.36	-0.19	-30.04	30.04	27.08	2.96	10.151		
500.00	500.00	502.00	502.00	1.65	1.65	-90.36	-0.19	-30.04	30.04	26.74	3.30	9.106		
550.00	550.00	552.00	552.00	1.82	1.82	-90.36	-0.19	-30.04	30.04	26.40	3.64	8.248		
600.00	600.00	602.00	602.00	1.99	2.00	-90.36	-0.19	-30.04	30.04	26.05	3.99	7.532		
650.00	650.00	652.00	652.00	2.16	2.17	-90.36	-0.19	-30.04	30.04	25.70	4.34	6.928		
700.00	700.00	702.00	702.00	2.34	2.35	-90.36	-0.19	-30.04	30.04	25.36	4.69	6.411		
750.00	750.00	752.00	752.00	2.51	2.52	-90.36	-0.19	-30.04	30.04	25.00	5.04	5.965		
800.00	800.00	802.00	802.00	2.69	2.70	-90.36	-0.19	-30.04	30.04	24.65	5.39	5.575		
850.00	850.00	852.00	852.00	2.87	2.87	-90.36	-0.19	-30.04	30.04	24.30	5.74	5.233		
900.00	900.00	902.00	902.00	3.04	3.05	-90.36	-0.19	-30.04	30.04	23.95	6.09	4.929 Alert		
950.00	950.00	952.00	952.00	3.22	3.23	-90.36	-0.19	-30.04	30.04	23.59	6.45	4.659 Alert		
1,000.00	1,000.00	1,002.00	1,002.00	3.40	3.40	-90.36	-0.19	-30.04	30.04	23.24	6.80	4.416 Alert		
1,050.00	1,050.00	1,052.00	1,052.00	3.58	3.58	-90.36	-0.19	-30.04	30.04	22.88	7.16	4.197 Alert		
1,100.00	1,100.00	1,102.00	1,102.00	3.75	3.76	-90.36	-0.19	-30.04	30.04	22.53	7.51	3.999 Alert		
1,150.00	1,150.00	1,152.00	1,152.00	3.93	3.94	-90.36	-0.19	-30.04	30.04	22.17	7.87	3.818 Alert		
1,200.00	1,200.00	1,202.00	1,202.00	4.11	4.12	-90.36	-0.19	-30.04	30.04	21.82	8.22	3.653 Alert		
1,250.00	1,250.00	1,252.00	1,252.00	4.29	4.29	-90.36	-0.19	-30.04	30.04	21.46	8.58	3.502 Alert		
1,300.00	1,300.00	1,302.00	1,302.00	4.46	4.47	-90.36	-0.19	-30.04	30.04	21.11	8.94	3.362 Alert		
1,350.00	1,350.00	1,352.00	1,352.00	4.64	4.65	-90.36	-0.19	-30.04	30.04	20.75	9.29	3.233 Alert		
1,400.00	1,400.00	1,402.00	1,402.00	4.82	4.83	-90.36	-0.19	-30.04	30.04	20.39	9.65	3.114 Alert		
1,450.00	1,450.00	1,452.00	1,452.00	5.00	5.01	-90.36	-0.19	-30.04	30.04	20.04	10.00	3.003 Alert		
1,500.00	1,500.00	1,502.00	1,502.00	5.18	5.18	-90.36	-0.19	-30.04	30.04	19.68	10.36	2.899 Alert		
1,550.00	1,550.00	1,552.00	1,552.00	5.36	5.36	-90.36	-0.19	-30.04	30.04	19.32	10.72	2.803 Alert		
1,600.00	1,600.00	1,602.00	1,602.00	5.53	5.54	-90.36	-0.19	-30.04	30.04	18.97	11.08	2.712 Alert		
1,650.00	1,650.00	1,652.00	1,652.00	5.71	5.72	-90.36	-0.19	-30.04	30.04	18.61	11.43	2.628 Alert		
1,700.00	1,700.00	1,702.00	1,702.00	5.89	5.90	-90.36	-0.19	-30.04	30.04	18.25	11.79	2.548 Alert		
1,750.00	1,750.00	1,752.00	1,752.00	6.07	6.08	-90.36	-0.19	-30.04	30.04	17.89	12.15	2.473 Minor Risk		
1,800.00	1,800.00	1,802.00	1,802.00	6.25	6.26	-90.36	-0.19	-30.04	30.04	17.54	12.50	2.402 Minor Risk		
1,850.00	1,850.00	1,852.00	1,852.00	6.43	6.43	-90.36	-0.19	-30.04	30.04	17.18	12.86	2.336 Minor Risk		
1,900.00	1,900.00	1,902.00	1,902.00	6.61	6.61	-90.36	-0.19	-30.04	30.04	16.82	13.22	2.273 Minor Risk		
1,950.00	1,950.00	1,952.00	1,952.00	6.78	6.79	-90.36	-0.19	-30.04	30.04	16.46	13.58	2.213 Minor Risk		
2,000.00	2,000.00	2,002.00	2,002.00	6.96	6.97	-90.36	-0.19	-30.04	30.04	16.11	13.93	2.156 Minor Risk		
2,050.00	2,050.00	2,052.00	2,052.00	7.14	7.15	-90.36	-0.19	-30.04	30.04	15.75	14.29	2.102 Minor Risk		
2,100.00	2,100.00	2,102.00	2,102.00	7.32	7.33	-90.36	-0.19	-30.04	30.04	15.39	14.65	2.051 Minor Risk		
2,150.00	2,150.00	2,152.00	2,152.00	7.50	7.51	-90.36	-0.19	-30.04	30.04	15.03	15.01	2.002 Minor Risk		
2,200.00	2,200.00	2,202.00	2,202.00	7.68	7.69	-90.36	-0.19	-30.04	30.04	14.68	15.36	1.955 Minor Risk		
2,250.00	2,250.00	2,252.00	2,252.00	7.86	7.86	-90.36	-0.19	-30.04	30.04	14.32	15.72	1.911 Minor Risk		
2,300.00	2,300.00	2,302.00	2,302.00	8.04	8.04	-90.36	-0.19	-30.04	30.04	13.96	16.08	1.868 Minor Risk		
2,350.00	2,350.00	2,352.00	2,352.00	8.22	8.22	-90.36	-0.19	-30.04	30.04	13.60	16.44	1.828 Minor Risk		
2,400.00	2,400.00	2,402.00	2,402.00	8.39	8.40	-90.36	-0.19	-30.04	30.04	13.25	16.80	1.789 Minor Risk		
2,450.00	2,450.00	2,452.00	2,452.00	8.57	8.58	-90.36	-0.19	-30.04	30.04	12.89	17.15	1.751 Minor Risk		
2,500.00	2,500.00	2,502.00	2,502.00	8.75	8.76	-90.36	-0.19	-30.04	30.04	12.53	17.51	1.716 Minor Risk, CC		

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

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at:	2.00 sigma
Reference Wellbore:	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 15-T23S-R31E - Maldives 15-22 Fed Com 711H - 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		Minimum Separation		Separation Factor		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			
2,550.00	2,550.00	2,551.87	2,551.87	8.93	8.94	-89.97	0.02	-30.15	30.15	12.29	17.87	1.688	Minor Risk		
2,600.00	2,600.00	2,601.73	2,601.73	9.11	9.12	-88.87	0.60	-30.48	30.49	12.26	18.22	1.673	Minor Risk, ES		
2,650.00	2,650.00	2,651.58	2,651.56	9.29	9.29	-87.12	1.56	-31.02	31.06	12.48	18.58	1.672	Minor Risk		
2,700.00	2,700.00	2,701.53	2,701.49	9.47	9.47	-84.97	2.79	-31.70	31.83	12.89	18.94	1.681	Minor Risk		
2,750.00	2,750.00	2,751.51	2,751.45	9.65	9.65	-82.91	4.03	-32.39	32.65	13.35	19.29	1.692	Minor Risk		
2,800.00	2,800.00	2,801.49	2,801.41	9.83	9.83	-80.95	5.27	-33.08	33.50	13.86	19.65	1.705	Minor Risk		
2,850.00	2,850.00	2,851.47	2,851.37	10.00	10.00	-79.10	6.51	-33.77	34.40	14.39	20.00	1.720	Minor Risk		
2,900.00	2,900.00	2,901.45	2,901.33	10.18	10.18	-77.33	7.75	-34.46	35.33	14.97	20.36	1.735	Minor Risk		
2,950.00	2,950.00	2,951.43	2,951.29	10.36	10.36	-75.66	8.98	-35.15	36.29	15.57	20.72	1.752	Minor Risk		
3,000.00	3,000.00	3,001.41	3,001.25	10.54	10.54	-74.08	10.22	-35.84	37.28	16.20	21.07	1.769	Minor Risk		
3,050.00	3,050.00	3,051.39	3,051.21	10.72	10.72	-72.58	11.46	-36.53	38.30	16.87	21.43	1.787	Minor Risk		
3,100.00	3,100.00	3,101.37	3,101.17	10.90	10.90	-71.16	12.70	-37.22	39.34	17.55	21.79	1.806	Minor Risk		
3,150.00	3,150.00	3,151.35	3,151.13	11.08	11.07	-69.81	13.94	-37.91	40.40	18.26	22.15	1.825	Minor Risk		
3,200.00	3,200.00	3,201.33	3,201.09	11.26	11.25	-68.54	15.18	-38.60	41.49	18.99	22.50	1.844	Minor Risk		
3,250.00	3,250.00	3,251.31	3,251.05	11.44	11.43	-67.33	16.42	-39.29	42.60	19.74	22.86	1.863	Minor Risk		
3,300.00	3,300.00	3,301.29	3,301.01	11.62	11.61	-66.18	17.65	-39.98	43.72	20.50	23.22	1.883	Minor Risk		
3,350.00	3,350.00	3,351.27	3,350.97	11.80	11.79	-65.08	18.89	-40.67	44.86	21.29	23.57	1.903	Minor Risk		
3,400.00	3,400.00	3,401.25	3,400.93	11.97	11.97	-64.05	20.13	-41.36	46.02	22.09	23.93	1.923	Minor Risk		
3,450.00	3,450.00	3,451.23	3,450.89	12.15	12.15	-63.06	21.37	-42.05	47.19	22.90	24.29	1.943	Minor Risk		
3,500.00	3,500.00	3,501.21	3,500.85	12.33	12.32	-62.12	22.61	-42.75	48.37	23.72	24.65	1.963	Minor Risk		
3,550.00	3,550.00	3,551.19	3,550.81	12.51	12.50	-60.97	23.85	-43.44	49.59	24.58	25.00	1.983	Minor Risk		
3,600.00	3,600.00	3,601.17	3,600.77	12.69	12.68	-59.54	25.09	-44.13	50.84	25.48	25.36	2.005	Minor Risk		
3,650.00	3,649.98	3,651.16	3,650.74	12.87	12.86	-58.39	26.33	-44.82	52.14	26.43	25.71	2.028	Minor Risk		
3,700.00	3,699.96	3,701.13	3,700.69	13.04	13.04	-56.99	27.56	-45.51	53.48	27.41	26.07	2.052	Minor Risk		
3,750.00	3,749.93	3,751.11	3,750.65	13.22	13.22	-55.15	28.80	-46.20	54.86	28.44	26.43	2.076	Minor Risk		
3,800.00	3,799.90	3,801.08	3,800.60	13.40	13.40	-53.07	30.04	-46.89	56.25	29.47	26.78	2.100	Minor Risk		
3,850.00	3,849.87	3,851.05	3,850.55	13.58	13.58	-50.94	31.28	-47.58	57.66	30.52	27.14	2.125	Minor Risk		
3,900.00	3,899.84	3,901.02	3,900.50	13.76	13.75	-49.77	32.52	-48.27	59.08	31.59	27.49	2.149	Minor Risk		
3,950.00	3,949.81	3,951.00	3,950.46	13.93	13.93	-47.56	33.76	-48.96	60.51	32.66	27.85	2.173	Minor Risk		
4,000.00	3,999.78	4,000.97	4,000.41	14.11	14.11	-45.12	35.00	-49.65	61.95	33.75	28.21	2.196	Minor Risk		
4,050.00	4,049.75	4,050.94	4,050.36	14.29	14.29	-42.04	36.23	-50.34	63.40	34.84	28.56	2.220	Minor Risk		
4,100.00	4,099.72	4,100.91	4,100.31	14.47	14.47	-38.72	37.47	-51.03	64.86	35.95	28.92	2.243	Minor Risk		
4,150.00	4,149.70	4,150.89	4,150.27	14.65	14.65	-35.38	38.71	-51.72	66.34	37.06	29.28	2.266	Minor Risk		
4,200.00	4,199.67	4,200.86	4,200.22	14.82	14.83	-32.01	39.95	-52.41	67.81	38.18	29.63	2.289	Minor Risk		
4,250.00	4,249.64	4,250.83	4,250.17	15.00	15.01	-28.61	41.19	-53.10	69.30	39.31	29.99	2.311	Minor Risk		
4,300.00	4,299.61	4,300.80	4,300.12	15.18	15.19	-25.19	42.43	-53.79	70.79	40.45	30.35	2.333	Minor Risk		
4,350.00	4,349.58	4,350.78	4,350.08	15.36	15.36	-21.54	43.67	-54.48	72.29	41.59	30.70	2.355	Minor Risk		
4,400.00	4,399.55	4,400.75	4,400.03	15.54	15.54	-17.07	44.90	-55.17	73.80	42.74	31.06	2.376	Minor Risk		
4,450.00	4,449.52	4,450.72	4,449.98	15.72	15.72	-12.08	46.14	-55.86	75.32	43.90	31.42	2.397	Minor Risk		
4,500.00	4,499.49	4,500.70	4,499.93	15.89	15.90	-7.27	47.38	-56.55	76.83	45.06	31.77	2.418	Minor Risk		
4,550.00	4,549.46	4,550.67	4,549.89	16.07	16.08	-2.74	48.62	-57.24	78.36	46.23	32.13	2.439	Minor Risk		
4,600.00	4,599.43	4,600.64	4,599.84	16.25	16.26	2.19	49.86	-57.93	79.89	47.40	32.49	2.459	Minor Risk		
4,650.00	4,649.40	4,650.61	4,649.79	16.43	16.44	7.63	51.10	-58.62	81.42	48.58	32.84	2.479	Minor Risk		
4,700.00	4,699.37	4,700.59	4,699.74	16.61	16.62	12.05	52.34	-59.31	82.96	49.76	33.20	2.499	Minor Risk		
4,750.00	4,749.34	4,750.56	4,749.70	16.79	16.80	16.45	53.57	-60.00	84.50	50.95	33.56	2.518	Alert		
4,800.00	4,799.31	4,800.53	4,799.65	16.97	16.98	20.84	54.81	-60.69	86.05	52.14	33.91	2.537	Alert		
4,850.00	4,849.28	4,850.50	4,849.60	17.14	17.16	25.21	56.05	-61.38	87.60	53.33	34.27	2.556	Alert		
4,900.00	4,899.25	4,900.48	4,899.55	17.32	17.34	29.58	57.29	-62.07	89.16	54.53	34.63	2.575	Alert		
4,950.00	4,949.23	4,950.45	4,949.51	17.50	17.51	33.95	58.53	-62.76	90.71	55.73	34.99	2.593	Alert		
5,000.00	4,999.20	5,000.42	4,999.46	17.68	17.69	38.32	59.77	-63.45	92.28	56.93	35.34	2.611	Alert		
5,050.00	5,049.17	5,050.40	5,049.41	17.86	17.87	42.69	61.01	-64.14	93.84	58.14	35.70	2.628	Alert		

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

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													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		
5,100.00	5,099.14	5,100.37	5,099.37	18.04	18.05	-111.91	62.24	-64.83	95.41	59.35	36.06	2.646	Alert	
5,150.00	5,149.11	5,150.34	5,149.32	18.22	18.23	-112.21	63.48	-65.52	96.98	60.56	36.42	2.663	Alert	
5,200.00	5,199.08	5,200.31	5,199.27	18.40	18.41	-112.51	64.72	-66.21	98.55	61.77	36.77	2.680	Alert	
5,250.00	5,249.05	5,250.29	5,249.22	18.57	18.59	-112.80	65.96	-66.90	100.12	62.99	37.13	2.696	Alert	
5,300.00	5,299.02	5,300.26	5,299.18	18.75	18.77	-113.07	67.20	-67.59	101.70	64.21	37.49	2.713	Alert	
5,350.00	5,348.99	5,350.23	5,349.13	18.93	18.95	-113.34	68.44	-68.28	103.28	65.43	37.85	2.729	Alert	
5,400.00	5,398.96	5,400.20	5,399.08	19.11	19.13	-113.61	69.68	-68.97	104.86	66.66	38.21	2.745	Alert	
5,450.00	5,448.93	5,450.18	5,449.03	19.29	19.31	-113.86	70.91	-69.66	106.45	67.89	38.56	2.760	Alert	
5,500.00	5,498.90	5,500.15	5,498.99	19.47	19.49	-114.10	72.15	-70.35	108.04	69.11	38.92	2.776	Alert	
5,550.00	5,548.87	5,550.12	5,548.94	19.65	19.67	-114.34	73.39	-71.04	109.62	70.34	39.28	2.791	Alert	
5,600.00	5,598.84	5,600.10	5,598.89	19.83	19.85	-114.58	74.63	-71.73	111.21	71.58	39.64	2.806	Alert	
5,650.00	5,648.81	5,650.07	5,648.84	20.01	20.02	-114.80	75.87	-72.42	112.81	72.81	39.99	2.821	Alert	
5,700.00	5,698.78	5,700.04	5,698.80	20.19	20.20	-115.02	77.11	-73.11	114.40	74.05	40.35	2.835	Alert	
5,750.00	5,748.76	5,750.01	5,748.75	20.36	20.38	-115.23	78.35	-73.80	115.99	75.28	40.71	2.849	Alert	
5,800.00	5,798.73	5,800.01	5,798.70	20.54	20.56	-115.44	79.58	-74.49	117.59	76.52	41.07	2.863	Alert	
5,850.00	5,848.70	5,849.96	5,848.65	20.72	20.74	-115.64	80.82	-75.18	119.19	77.76	41.43	2.877	Alert	
5,900.00	5,898.67	5,900.07	5,898.61	20.90	20.92	-115.84	82.06	-75.87	120.79	79.00	41.78	2.891	Alert	
5,950.00	5,948.64	5,949.90	5,948.56	21.08	21.10	-116.03	83.30	-76.56	122.39	80.25	42.14	2.904	Alert	
6,000.00	5,998.61	6,000.12	5,998.51	21.26	21.28	-116.22	84.54	-77.25	123.99	81.49	42.50	2.917	Alert	
6,050.00	6,048.58	6,049.85	6,048.46	21.44	21.46	-116.40	85.78	-77.94	125.60	82.74	42.86	2.931	Alert	
6,100.00	6,098.55	6,100.18	6,098.42	21.62	21.64	-116.58	87.02	-78.63	127.20	83.98	43.22	2.943	Alert	
6,150.00	6,148.52	6,149.80	6,148.37	21.80	21.82	-116.75	88.25	-79.33	128.81	85.23	43.57	2.956	Alert	
6,200.00	6,198.49	6,200.23	6,198.32	21.98	22.00	-116.92	89.49	-80.02	130.41	86.48	43.93	2.968	Alert	
6,250.00	6,248.46	6,249.74	6,248.27	22.16	22.18	-117.08	90.73	-80.71	132.02	87.73	44.29	2.981	Alert	
6,300.00	6,298.43	6,300.29	6,298.23	22.34	22.36	-117.24	91.97	-81.40	133.63	88.98	44.65	2.993	Alert	
6,350.00	6,348.40	6,349.69	6,348.18	22.52	22.54	-117.40	93.21	-82.09	135.24	90.24	45.01	3.005	Alert	
6,400.00	6,398.37	6,400.34	6,398.13	22.69	22.72	-117.55	94.45	-82.78	136.85	91.49	45.37	3.017	Alert	
6,450.00	6,448.34	6,449.63	6,448.09	22.87	22.90	-117.70	95.68	-83.47	138.47	92.74	45.72	3.028	Alert	
6,500.00	6,498.31	6,500.40	6,498.04	23.05	23.08	-117.85	96.92	-84.16	140.08	93.99	46.08	3.040	Alert	
6,550.00	6,548.29	6,549.58	6,547.99	23.23	23.25	-117.99	98.16	-84.85	141.69	95.25	46.44	3.051	Alert	
6,600.00	6,598.26	6,600.45	6,597.94	23.41	23.44	-118.13	99.40	-85.54	143.31	96.51	46.80	3.062	Alert	
6,650.00	6,648.23	6,649.52	6,647.90	23.59	23.61	-118.27	100.64	-86.23	144.92	97.77	47.16	3.073	Alert	
6,700.00	6,698.20	6,700.51	6,697.85	23.77	23.80	-118.40	101.88	-86.92	146.54	99.02	47.52	3.084	Alert	
6,750.00	6,748.17	6,749.47	6,747.80	23.95	23.97	-118.53	103.12	-87.61	148.16	100.29	47.87	3.095	Alert	
6,800.00	6,798.14	6,800.56	6,797.75	24.13	24.16	-118.66	104.35	-88.30	149.78	101.54	48.24	3.105	Alert	
6,850.00	6,848.11	6,849.41	6,847.71	24.31	24.33	-118.78	105.59	-88.99	151.40	102.81	48.59	3.116	Alert	
6,900.00	6,898.08	6,900.61	6,897.66	24.49	24.52	-118.90	106.83	-89.68	153.02	104.06	48.95	3.126	Alert	
6,950.00	6,948.05	6,949.36	6,947.61	24.67	24.69	-119.02	108.07	-90.37	154.64	105.33	49.31	3.136	Alert	
7,000.00	6,998.02	7,000.67	6,997.56	24.85	24.88	-119.14	109.31	-91.06	156.26	106.59	49.67	3.146	Alert	
7,050.00	7,047.99	7,049.30	7,047.52	25.03	25.05	-119.26	110.55	-91.75	157.88	107.85	50.02	3.156	Alert	
7,100.00	7,097.96	7,100.72	7,097.47	25.21	25.23	-119.37	111.79	-92.44	159.50	109.11	50.39	3.165	Alert	
7,150.00	7,147.93	7,149.25	7,147.42	25.39	25.41	-119.48	113.02	-93.13	161.12	110.38	50.74	3.175	Alert	
7,200.00	7,197.90	7,200.78	7,197.37	25.57	25.59	-119.59	114.26	-93.82	162.75	111.64	51.11	3.185	Alert	
7,250.00	7,247.87	7,249.19	7,247.33	25.75	25.77	-119.69	115.50	-94.51	164.37	112.91	51.46	3.194	Alert	
7,300.00	7,297.84	7,300.83	7,297.28	25.92	25.95	-119.80	116.74	-95.20	166.00	114.17	51.82	3.203	Alert	
7,350.00	7,347.82	7,349.14	7,347.23	26.10	26.13	-119.90	117.98	-95.89	167.62	115.45	52.18	3.213	Alert	
7,400.00	7,397.79	7,400.89	7,397.18	26.28	26.31	-120.00	119.22	-96.58	169.25	116.71	52.54	3.221	Alert	
7,450.00	7,447.76	7,449.09	7,447.14	26.46	26.49	-120.09	120.46	-97.27	170.87	117.98	52.89	3.231	Alert	
7,500.00	7,497.73	7,500.94	7,497.09	26.64	26.67	-120.19	121.69	-97.96	172.50	119.24	53.26	3.239	Alert	
7,550.00	7,547.70	7,549.03	7,547.04	26.82	26.85	-120.28	122.93	-98.65	174.13	120.52	53.61	3.248	Alert	
7,600.00	7,597.67	7,601.00	7,596.99	27.00	27.03	-120.38	124.17	-99.34	175.75	121.78	53.98	3.256	Alert	

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

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: O-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 Tooface (")	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
7,650.00	7,647.64	7,648.98	7,646.95	27.18	27.20	-120.47	125.41	-100.03	177.38	123.05	54.33	3.265 Alert		
7,700.00	7,697.61	7,701.05	7,696.90	27.36	27.39	-120.56	126.65	-100.72	179.01	124.32	54.69	3.273 Alert		
7,750.00	7,747.58	7,748.92	7,746.85	27.54	27.56	-120.64	127.89	-101.41	180.64	125.59	55.04	3.282 Alert		
7,800.00	7,797.55	7,801.11	7,796.81	27.72	27.75	-120.73	129.13	-102.10	182.27	126.86	55.41	3.289 Alert		
7,850.00	7,847.52	7,848.87	7,846.76	27.90	27.92	-120.81	130.36	-102.79	183.90	128.14	55.76	3.298 Alert		
7,900.00	7,897.49	7,901.16	7,896.71	28.08	28.11	-120.90	131.60	-103.48	185.53	129.40	56.13	3.305 Alert		
7,950.00	7,947.46	7,948.81	7,946.66	28.26	28.28	-120.98	132.84	-104.17	187.16	130.68	56.48	3.314 Alert		
8,000.00	7,997.43	8,001.21	7,996.62	28.44	28.47	-121.06	134.08	-104.86	188.79	131.94	56.85	3.321 Alert		
8,050.00	8,047.40	8,048.76	8,046.57	28.62	28.64	-121.14	135.32	-105.55	190.42	133.22	57.20	3.329 Alert		
8,100.00	8,097.37	8,101.27	8,096.52	28.80	28.83	-121.22	136.56	-106.24	192.05	134.49	57.56	3.336 Alert		
8,150.00	8,147.35	8,148.70	8,146.47	28.98	29.00	-121.29	137.80	-106.93	193.68	135.77	57.91	3.344 Alert		
8,200.00	8,197.32	8,201.32	8,196.43	29.16	29.19	-121.37	139.03	-107.62	195.31	137.03	58.28	3.351 Alert		
8,250.00	8,247.29	8,248.65	8,246.38	29.34	29.36	-121.44	140.27	-108.31	196.95	138.32	58.63	3.359 Alert		
8,300.00	8,297.26	8,301.38	8,296.33	29.52	29.55	-121.51	141.51	-109.00	198.58	139.58	59.00	3.366 Alert		
8,350.00	8,347.23	8,348.59	8,346.28	29.70	29.72	-121.58	142.75	-109.69	200.21	140.86	59.35	3.374 Alert		
8,400.00	8,397.20	8,401.43	8,396.24	29.88	29.91	-121.65	143.99	-110.38	201.85	142.13	59.72	3.380 Alert		
8,450.00	8,447.17	8,448.54	8,446.19	30.06	30.08	-121.72	145.23	-111.07	203.48	143.41	60.07	3.388 Alert		
8,500.00	8,497.14	8,501.49	8,496.14	30.24	30.27	-121.79	146.47	-111.76	205.11	144.68	60.44	3.394 Alert		
8,550.00	8,547.11	8,548.49	8,546.09	30.42	30.44	-121.86	147.70	-112.45	206.75	145.96	60.78	3.401 Alert		
8,600.00	8,597.08	8,601.54	8,596.05	30.60	30.63	-121.92	148.94	-113.14	208.38	147.23	61.15	3.408 Alert		
8,650.00	8,647.05	8,648.43	8,646.00	30.78	30.80	-121.99	150.18	-113.83	210.02	148.52	61.50	3.415 Alert		
8,700.00	8,697.02	8,701.60	8,695.95	30.96	30.99	-122.05	151.42	-114.52	211.65	149.78	61.87	3.421 Alert		
8,750.00	8,746.99	8,748.38	8,745.90	31.14	31.16	-122.11	152.66	-115.21	213.29	151.07	62.22	3.428 Alert		
8,800.00	8,796.96	8,801.65	8,795.86	31.31	31.35	-122.18	153.90	-115.90	214.92	152.33	62.59	3.434 Alert		
8,850.00	8,846.93	8,848.32	8,845.81	31.49	31.52	-122.24	155.14	-116.59	216.56	153.62	62.94	3.441 Alert		
8,900.00	8,896.90	8,901.71	8,895.76	31.67	31.71	-122.30	156.37	-117.28	218.20	154.89	63.31	3.447 Alert		
8,950.00	8,946.88	8,948.27	8,945.71	31.85	31.87	-122.36	157.61	-117.98	219.83	156.18	63.65	3.454 Alert		
9,000.00	8,996.85	9,001.76	8,995.67	32.03	32.07	-122.41	158.85	-118.67	221.47	157.44	64.03	3.459 Alert		
9,050.00	9,046.82	9,048.21	9,045.62	32.21	32.23	-122.47	160.09	-119.36	223.11	158.73	64.37	3.466 Alert		
9,100.00	9,096.79	9,101.82	9,095.57	32.39	32.43	-122.53	161.33	-120.05	224.74	160.00	64.74	3.471 Alert		
9,150.00	9,146.76	9,148.16	9,145.53	32.57	32.59	-122.58	162.57	-120.74	226.38	161.29	65.09	3.478 Alert		
9,200.00	9,196.73	9,201.87	9,195.48	32.75	32.79	-122.64	163.80	-121.43	228.02	162.55	65.46	3.483 Alert		
9,250.00	9,246.70	9,248.10	9,245.43	32.93	32.95	-122.69	165.04	-122.12	229.65	163.85	65.81	3.490 Alert		
9,300.00	9,296.67	9,301.92	9,295.38	33.11	33.15	-122.74	166.28	-122.81	231.29	165.11	66.18	3.495 Alert		
9,350.00	9,346.64	9,348.05	9,345.34	33.29	33.31	-122.80	167.52	-123.50	232.93	166.40	66.53	3.501 Alert		
9,400.00	9,396.61	9,401.98	9,395.29	33.47	33.51	-122.85	168.76	-124.19	234.57	167.67	66.90	3.506 Alert		
9,450.00	9,446.58	9,447.99	9,445.24	33.65	33.67	-122.90	170.00	-124.88	236.21	168.96	67.24	3.513 Alert		
9,500.00	9,496.55	9,502.03	9,495.19	33.83	33.87	-122.95	171.24	-125.57	237.85	170.23	67.62	3.518 Alert		
9,550.00	9,546.52	9,547.94	9,545.15	34.01	34.03	-123.00	172.47	-126.26	239.48	171.52	67.96	3.524 Alert		
9,600.00	9,596.49	9,597.91	9,595.10	34.19	34.21	-123.05	173.71	-126.95	241.12	172.80	68.32	3.529 Alert		
9,650.00	9,646.46	9,647.88	9,645.05	34.37	34.39	-123.10	174.95	-127.64	242.76	174.08	68.68	3.535 Alert		
9,700.00	9,696.43	9,702.14	9,695.00	34.55	34.59	-123.15	176.19	-128.33	244.40	175.35	69.05	3.539 Alert		
9,750.00	9,746.41	9,747.83	9,744.96	34.73	34.75	-123.19	177.43	-129.02	246.04	176.64	69.40	3.545 Alert		
9,800.00	9,796.38	9,802.20	9,794.91	34.91	34.94	-123.24	178.67	-129.71	247.68	177.91	69.77	3.550 Alert		
9,850.00	9,846.35	9,847.78	9,844.86	35.09	35.11	-123.28	179.91	-130.40	249.32	179.21	70.12	3.556 Alert		
9,900.00	9,896.32	9,902.25	9,894.81	35.27	35.30	-123.33	181.14	-131.09	250.96	180.47	70.49	3.560 Alert		
9,950.00	9,946.29	9,947.72	9,944.77	35.45	35.47	-123.37	182.38	-131.78	252.60	181.77	70.83	3.566 Alert		
10,000.00	9,996.26	10,002.31	9,994.72	35.63	35.66	-123.42	183.62	-132.47	254.24	183.03	71.21	3.570 Alert		
10,050.00	10,046.23	10,047.67	10,044.67	35.81	35.83	-123.46	184.86	-133.16	255.88	184.33	71.55	3.576 Alert		
10,100.00	10,096.20	10,102.36	10,094.62	35.99	36.02	-123.51	186.10	-133.85	257.52	185.59	71.93	3.580 Alert		
10,150.00	10,146.17	10,147.61	10,144.58	36.17	36.19	-123.55	187.34	-134.54	259.16	186.89	72.27	3.586 Alert		

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 15-T23S-R31E - Maldives 15-22 Fed Com 711H - 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		
10,200.00	10,196.14	10,202.42	10,194.53	36.35	36.38	-123.59	188.58	-135.23	260.80	188.16	72.65	3.590	Alert	
10,250.00	10,246.11	10,247.56	10,244.48	36.53	36.55	-123.63	189.81	-135.92	262.44	189.46	72.99	3.596	Alert	
10,300.00	10,296.08	10,302.47	10,294.43	36.71	36.74	-123.67	191.05	-136.61	264.09	190.72	73.36	3.600	Alert	
10,350.00	10,346.05	10,347.50	10,344.39	36.89	36.91	-123.71	192.29	-137.30	265.73	192.02	73.71	3.605	Alert	
10,400.00	10,396.02	10,402.52	10,394.34	37.07	37.10	-123.75	193.53	-137.99	267.37	193.29	74.08	3.609	Alert	
10,450.00	10,445.99	10,447.45	10,444.29	37.25	37.27	-123.79	194.77	-138.68	269.01	194.59	74.42	3.615	Alert	
10,500.00	10,495.96	10,497.42	10,494.24	37.43	37.44	-123.83	196.01	-139.37	270.65	195.87	74.78	3.619	Alert	
10,550.00	10,545.94	10,547.39	10,544.20	37.61	37.62	-123.87	197.25	-140.06	272.29	197.15	75.14	3.624	Alert	
10,600.00	10,595.91	10,598.39	10,595.18	37.79	37.81	-123.92	198.41	-140.71	273.83	198.32	75.51	3.627	Alert	
10,650.00	10,645.90	10,650.18	10,646.96	37.97	37.99	-123.99	199.04	-141.06	274.74	198.87	75.87	3.621	Alert	
10,700.00	10,695.90	10,701.12	10,697.90	38.15	38.17	-124.04	199.12	-141.11	275.00	198.77	76.23	3.607	Alert	
10,750.00	10,745.90	10,751.12	10,747.90	38.33	38.35	-90.34	199.12	-141.11	275.00	198.41	76.59	3.591	Alert	
10,800.00	10,795.90	10,801.12	10,797.90	38.50	38.53	-90.34	199.12	-141.11	275.00	198.05	76.95	3.574	Alert	
10,850.00	10,845.90	10,851.12	10,847.90	38.68	38.71	-90.34	199.12	-141.11	275.00	197.70	77.30	3.557	Alert	
10,900.00	10,895.90	10,901.12	10,897.90	38.86	38.89	-90.34	199.12	-141.11	275.00	197.34	77.66	3.541	Alert	
10,950.00	10,945.90	10,951.12	10,947.90	39.04	39.07	-90.34	199.12	-141.11	275.00	196.99	78.01	3.525	Alert	
11,000.00	10,995.90	11,001.12	10,997.90	39.22	39.24	-90.34	199.12	-141.11	275.00	196.63	78.37	3.509	Alert	
11,002.29	10,998.18	11,003.40	11,000.18	39.22	39.25	-90.34	199.12	-141.11	275.00	196.61	78.39	3.508	Alert	
11,050.00	11,045.90	11,051.10	11,047.87	39.39	39.42	-90.44	198.62	-141.10	275.00	196.28	78.72	3.493	Alert	
11,100.00	11,095.84	11,100.91	11,097.49	39.56	39.57	89.43	194.39	-141.08	275.01	195.97	79.05	3.479	Alert	
11,150.00	11,145.41	11,150.53	11,146.36	39.72	39.73	88.98	185.91	-141.03	275.04	195.69	79.35	3.466	Alert	
11,200.00	11,194.23	11,199.98	11,194.15	39.87	39.87	88.55	173.28	-140.96	275.09	195.45	79.64	3.454	Alert	
11,250.00	11,241.93	11,249.24	11,240.51	40.01	40.01	88.12	156.65	-140.87	275.15	195.23	79.92	3.443	Alert	
11,300.00	11,288.15	11,298.35	11,285.12	40.15	40.14	87.71	136.18	-140.75	275.22	195.04	80.19	3.432	Alert	
11,350.00	11,332.53	11,347.29	11,327.68	40.27	40.26	87.31	112.05	-140.61	275.30	194.87	80.43	3.423	Alert	
11,400.00	11,374.74	11,396.08	11,367.91	40.38	40.36	86.94	84.46	-140.46	275.39	194.72	80.67	3.414	Alert	
11,450.00	11,414.45	11,444.73	11,405.54	40.49	40.46	86.59	53.65	-140.28	275.49	194.60	80.89	3.406	Alert	
11,500.00	11,451.37	11,493.25	11,440.33	40.59	40.57	86.27	19.85	-140.09	275.58	194.49	81.10	3.398	Alert	
11,550.00	11,485.22	11,541.65	11,472.06	40.71	40.67	85.97	-16.68	-139.88	275.68	194.39	81.29	3.391	Alert	
11,600.00	11,515.72	11,589.95	11,500.54	40.82	40.78	85.70	-55.67	-139.66	275.77	194.29	81.49	3.384	Alert	
11,650.00	11,542.66	11,638.15	11,525.59	40.93	40.88	85.47	-96.83	-139.43	275.86	194.19	81.67	3.378	Alert	
11,700.00	11,565.83	11,686.26	11,547.06	41.04	40.98	85.27	-139.88	-139.19	275.94	194.08	81.85	3.371	Alert	
11,750.00	11,585.05	11,734.32	11,564.82	41.14	41.09	85.10	-184.51	-138.93	276.00	193.97	82.04	3.364	Alert	
11,800.00	11,600.18	11,782.31	11,578.76	41.25	41.19	84.97	-230.42	-138.67	276.06	193.84	82.22	3.357	Alert	
11,850.00	11,611.09	11,830.26	11,588.81	41.35	41.29	84.88	-277.30	-138.41	276.10	193.69	82.41	3.350	Alert	
11,900.00	11,617.72	11,878.19	11,594.90	41.46	41.39	84.82	-324.82	-138.14	276.12	193.52	82.60	3.343	Alert	
11,950.00	11,620.00	11,928.47	11,597.00	41.56	41.49	84.81	-372.62	-137.87	276.13	193.32	82.80	3.335	Alert	
12,000.00	11,620.00	11,976.05	11,597.00	41.67	41.60	84.81	-422.62	-137.59	276.13	193.11	83.02	3.326	Alert	
12,050.00	11,620.00	12,026.05	11,597.00	41.80	41.72	84.81	-472.62	-137.30	276.13	192.87	83.26	3.316	Alert	
12,100.00	11,620.00	12,076.05	11,597.00	41.93	41.85	84.81	-522.62	-137.02	276.13	192.61	83.52	3.306	Alert	
12,150.00	11,620.00	12,126.05	11,597.00	42.08	42.00	84.81	-572.62	-136.74	276.13	192.31	83.81	3.295	Alert	
12,200.00	11,620.00	12,176.05	11,597.00	42.23	42.15	84.81	-622.61	-136.45	276.13	192.01	84.12	3.283	Alert	
12,250.00	11,620.00	12,226.05	11,597.00	42.40	42.32	84.81	-672.61	-136.17	276.13	191.67	84.46	3.269	Alert	
12,300.00	11,620.00	12,276.05	11,597.00	42.58	42.50	84.81	-722.61	-135.89	276.13	191.31	84.81	3.256	Alert	
12,350.00	11,620.00	12,326.05	11,597.00	42.77	42.70	84.81	-772.61	-135.60	276.13	190.92	85.20	3.241	Alert	
12,400.00	11,620.00	12,376.05	11,597.00	42.97	42.90	84.81	-822.61	-135.32	276.13	190.53	85.60	3.226	Alert	
12,450.00	11,620.00	12,426.05	11,597.00	43.19	43.12	84.81	-872.61	-135.04	276.13	190.09	86.03	3.209	Alert	
12,500.00	11,620.00	12,476.05	11,597.00	43.41	43.34	84.81	-922.61	-134.75	276.13	189.65	86.48	3.193	Alert	
12,550.00	11,620.00	12,526.05	11,597.00	43.66	43.58	84.81	-972.61	-134.47	276.12	189.17	86.96	3.175	Alert	
12,600.00	11,620.00	12,576.05	11,597.00	43.90	43.83	84.81	-1,022.61	-134.19	276.12	188.68	87.45	3.158	Alert	
12,650.00	11,620.00	12,626.05	11,597.00	44.16	44.09	84.81	-1,072.61	-133.91	276.12	188.16	87.97	3.139	Alert	

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

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft.
Survey Program: O-MWD+HDGM													Offset Well Error:	0.50 ft
Reference														
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	
12,700.00	11,620.00	12,676.05	11,597.00	44.43	44.35	84.81	-1,122.61	-133.62	276.12	187.63	88.50	3.120	Alert	
12,750.00	11,620.00	12,726.05	11,597.00	44.71	44.63	84.81	-1,172.61	-133.34	276.12	187.07	89.06	3.100	Alert	
12,800.00	11,620.00	12,776.05	11,597.00	44.99	44.92	84.81	-1,222.60	-133.06	276.12	186.49	89.63	3.081	Alert	
12,850.00	11,620.00	12,826.05	11,597.00	45.30	45.22	84.81	-1,272.60	-132.77	276.12	185.89	90.23	3.060	Alert	
12,900.00	11,620.00	12,876.05	11,597.00	45.60	45.53	84.81	-1,322.60	-132.49	276.12	185.28	90.84	3.040	Alert	
12,950.00	11,620.00	12,926.05	11,597.00	45.92	45.85	84.81	-1,372.60	-132.21	276.12	184.64	91.48	3.018	Alert	
13,000.00	11,620.00	12,976.05	11,597.00	46.25	46.18	84.81	-1,422.60	-131.92	276.12	183.99	92.13	2.997	Alert	
13,050.00	11,620.00	13,026.05	11,597.00	46.59	46.51	84.81	-1,472.60	-131.64	276.12	183.32	92.80	2.975	Alert	
13,100.00	11,620.00	13,076.05	11,597.00	46.93	46.86	84.81	-1,522.60	-131.36	276.12	182.63	93.49	2.953	Alert	
13,150.00	11,620.00	13,126.05	11,597.00	47.29	47.21	84.81	-1,572.60	-131.07	276.12	181.92	94.20	2.931	Alert	
13,200.00	11,620.00	13,176.05	11,597.00	47.65	47.58	84.81	-1,622.60	-130.79	276.12	181.20	94.92	2.909	Alert	
13,250.00	11,620.00	13,226.05	11,597.00	48.02	47.95	84.81	-1,672.60	-130.51	276.12	180.46	95.66	2.886	Alert	
13,300.00	11,620.00	13,276.05	11,597.00	48.40	48.33	84.81	-1,722.60	-130.23	276.12	179.70	96.42	2.864	Alert	
13,350.00	11,620.00	13,326.05	11,597.00	48.79	48.72	84.81	-1,772.60	-129.94	276.12	178.93	97.19	2.841	Alert	
13,400.00	11,620.00	13,376.05	11,597.00	49.18	49.11	84.81	-1,822.60	-129.66	276.12	178.14	97.98	2.818	Alert	
13,450.00	11,620.00	13,426.05	11,597.00	49.59	49.51	84.81	-1,872.59	-129.38	276.12	177.33	98.78	2.795	Alert	
13,500.00	11,620.00	13,476.05	11,597.00	49.99	49.92	84.81	-1,922.59	-129.09	276.12	176.52	99.60	2.772	Alert	
13,550.00	11,620.00	13,526.05	11,597.00	50.41	50.34	84.81	-1,972.59	-128.81	276.12	175.68	100.43	2.749	Alert	
13,600.00	11,620.00	13,576.05	11,597.00	50.83	50.77	84.81	-2,022.59	-128.53	276.12	174.84	101.27	2.726	Alert	
13,650.00	11,620.00	13,626.05	11,597.00	51.27	51.20	84.81	-2,072.59	-128.24	276.12	173.98	102.14	2.703	Alert	
13,700.00	11,620.00	13,676.05	11,597.00	51.70	51.63	84.81	-2,122.59	-127.96	276.11	173.11	103.01	2.681	Alert	
13,750.00	11,620.00	13,726.05	11,597.00	52.15	52.08	84.81	-2,172.59	-127.68	276.11	172.22	103.90	2.658	Alert	
13,800.00	11,620.00	13,776.05	11,597.00	52.60	52.53	84.81	-2,222.59	-127.40	276.11	171.32	104.79	2.635	Alert	
13,850.00	11,620.00	13,826.05	11,597.00	53.05	52.99	84.81	-2,272.59	-127.11	276.11	170.41	105.70	2.612	Alert	
13,900.00	11,620.00	13,876.05	11,597.00	53.51	53.45	84.81	-2,322.59	-126.83	276.11	169.49	106.62	2.590	Alert	
13,950.00	11,620.00	13,926.05	11,597.00	53.99	53.92	84.81	-2,372.59	-126.55	276.11	168.55	107.56	2.567	Alert	
14,000.00	11,620.00	13,976.05	11,597.00	54.46	54.39	84.81	-2,422.59	-126.26	276.11	167.61	108.51	2.545	Alert	
14,050.00	11,620.00	14,026.05	11,597.00	54.94	54.87	84.81	-2,472.58	-125.98	276.11	166.65	109.47	2.522	Alert	
14,100.00	11,620.00	14,076.05	11,597.00	55.42	55.36	84.81	-2,522.58	-125.70	276.11	165.68	110.43	2.500	Alert	
14,150.00	11,620.00	14,126.05	11,597.00	55.92	55.85	84.81	-2,572.58	-125.41	276.11	164.70	111.41	2.478	Minor Risk	
14,200.00	11,620.00	14,176.05	11,597.00	56.41	56.35	84.81	-2,622.58	-125.13	276.11	163.71	112.40	2.457	Minor Risk	
14,250.00	11,620.00	14,226.05	11,597.00	56.91	56.85	84.81	-2,672.58	-124.85	276.11	162.71	113.40	2.435	Minor Risk	
14,300.00	11,620.00	14,276.05	11,597.00	57.42	57.35	84.81	-2,722.58	-124.56	276.11	161.70	114.41	2.413	Minor Risk	
14,350.00	11,620.00	14,326.05	11,597.00	57.93	57.86	84.81	-2,772.58	-124.28	276.11	160.68	115.43	2.392	Minor Risk	
14,400.00	11,620.00	14,376.05	11,597.00	58.44	58.38	84.81	-2,822.58	-124.00	276.11	159.66	116.45	2.371	Minor Risk	
14,450.00	11,620.00	14,426.05	11,597.00	58.96	58.90	84.81	-2,872.58	-123.72	276.11	158.62	117.49	2.350	Minor Risk	
14,500.00	11,620.00	14,476.05	11,597.00	59.48	59.42	84.81	-2,922.58	-123.43	276.11	157.58	118.53	2.329	Minor Risk	
14,550.00	11,620.00	14,526.05	11,597.00	60.01	59.95	84.81	-2,972.58	-123.15	276.11	156.52	119.59	2.309	Minor Risk	
14,600.00	11,620.00	14,576.05	11,597.00	60.54	60.49	84.81	-3,022.58	-122.87	276.11	155.46	120.65	2.289	Minor Risk	
14,650.00	11,620.00	14,626.05	11,597.00	61.08	61.02	84.81	-3,072.58	-122.58	276.11	154.39	121.72	2.268	Minor Risk	
14,700.00	11,620.00	14,676.05	11,597.00	61.62	61.56	84.81	-3,122.57	-122.30	276.11	153.31	122.80	2.248	Minor Risk	
14,750.00	11,620.00	14,726.05	11,597.00	62.17	62.11	84.81	-3,172.57	-122.02	276.11	152.22	123.88	2.229	Minor Risk	
14,800.00	11,620.00	14,776.05	11,597.00	62.71	62.66	84.81	-3,222.57	-121.73	276.11	151.13	124.98	2.209	Minor Risk	
14,850.00	11,620.00	14,826.05	11,597.00	63.27	63.21	84.81	-3,272.57	-121.45	276.11	150.03	126.08	2.190	Minor Risk	
14,900.00	11,620.00	14,876.05	11,597.00	63.82	63.76	84.81	-3,322.57	-121.17	276.10	148.92	127.18	2.171	Minor Risk	
14,950.00	11,620.00	14,926.05	11,597.00	64.38	64.32	84.81	-3,372.57	-120.88	276.10	147.80	128.30	2.152	Minor Risk	
15,000.00	11,620.00	14,976.05	11,597.00	64.94	64.88	84.81	-3,422.57	-120.60	276.10	146.69	129.42	2.133	Minor Risk	
15,050.00	11,620.00	15,026.05	11,597.00	65.51	65.45	84.80	-3,472.57	-120.32	276.10	145.56	130.55	2.115	Minor Risk	
15,100.00	11,620.00	15,076.05	11,597.00	66.07	66.02	84.80	-3,522.57	-120.04	276.10	144.42	131.68	2.097	Minor Risk	
15,150.00	11,620.00	15,126.05	11,597.00	66.65	66.59	84.80	-3,572.57	-119.75	276.10	143.28	132.82	2.079	Minor Risk	
15,200.00	11,620.00	15,176.05	11,597.00	67.22	67.17	84.80	-3,622.57	-119.47	276.10	142.13	133.97	2.061	Minor Risk	

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference:	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error: 0.00 ft	
Survey Program: O-MWD+HDGM													Offset Well Error: 0.50 ft	
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
15,250.00	11,620.00	15,226.05	11,597.00	67.80	67.74	84.80	-3,672.57	-119.19	276.10	140.98	135.12	2.043	Minor Risk	
15,300.00	11,620.00	15,276.05	11,597.00	68.38	68.32	84.80	-3,722.56	-118.90	276.10	139.82	136.28	2.026	Minor Risk	
15,350.00	11,620.00	15,326.05	11,597.00	68.96	68.91	84.80	-3,772.56	-118.62	276.10	138.66	137.44	2.009	Minor Risk	
15,400.00	11,620.00	15,376.05	11,597.00	69.55	69.49	84.80	-3,822.56	-118.34	276.10	137.49	138.61	1.992	Minor Risk	
15,450.00	11,620.00	15,426.05	11,597.00	70.14	70.08	84.80	-3,872.56	-118.05	276.10	136.31	139.79	1.975	Minor Risk	
15,500.00	11,620.00	15,476.05	11,597.00	70.73	70.68	84.80	-3,922.56	-117.77	276.10	135.14	140.96	1.959	Minor Risk	
15,550.00	11,620.00	15,526.05	11,597.00	71.32	71.27	84.80	-3,972.56	-117.49	276.10	133.95	142.15	1.942	Minor Risk	
15,600.00	11,620.00	15,576.05	11,597.00	71.92	71.87	84.80	-4,022.56	-117.20	276.10	132.76	143.34	1.926	Minor Risk	
15,650.00	11,620.00	15,626.05	11,597.00	72.52	72.47	84.80	-4,072.56	-116.92	276.10	131.56	144.53	1.910	Minor Risk	
15,700.00	11,620.00	15,676.05	11,597.00	73.12	73.07	84.80	-4,122.56	-116.64	276.10	130.37	145.73	1.895	Minor Risk	
15,750.00	11,620.00	15,726.05	11,597.00	73.72	73.67	84.80	-4,172.56	-116.36	276.10	129.16	146.94	1.879	Minor Risk	
15,800.00	11,620.00	15,776.05	11,597.00	74.33	74.28	84.80	-4,222.56	-116.07	276.10	127.95	148.14	1.864	Minor Risk	
15,850.00	11,620.00	15,826.05	11,597.00	74.94	74.88	84.80	-4,272.56	-115.79	276.10	126.74	149.36	1.849	Minor Risk	
15,900.00	11,620.00	15,876.05	11,597.00	75.55	75.50	84.80	-4,322.56	-115.51	276.10	125.52	150.57	1.834	Minor Risk	
15,950.00	11,620.00	15,926.05	11,597.00	76.16	76.11	84.80	-4,372.55	-115.22	276.10	124.30	151.80	1.819	Minor Risk	
16,000.00	11,620.00	15,976.05	11,597.00	76.77	76.72	84.80	-4,422.55	-114.94	276.10	123.08	153.02	1.804	Minor Risk	
16,050.00	11,620.00	16,026.05	11,597.00	77.39	77.34	84.80	-4,472.55	-114.66	276.09	121.85	154.25	1.790	Minor Risk	
16,100.00	11,620.00	16,076.05	11,597.00	78.01	77.96	84.80	-4,522.55	-114.37	276.09	120.61	155.48	1.776	Minor Risk	
16,150.00	11,620.00	16,126.05	11,597.00	78.63	78.58	84.80	-4,572.55	-114.09	276.09	119.37	156.72	1.762	Minor Risk	
16,200.00	11,620.00	16,176.05	11,597.00	79.25	79.20	84.80	-4,622.55	-113.81	276.09	118.13	157.96	1.748	Minor Risk	
16,250.00	11,620.00	16,226.05	11,597.00	79.87	79.82	84.80	-4,672.55	-113.52	276.09	116.89	159.20	1.734	Minor Risk	
16,300.00	11,620.00	16,276.05	11,597.00	80.50	80.45	84.80	-4,722.55	-113.24	276.09	115.64	160.45	1.721	Minor Risk	
16,350.00	11,620.00	16,326.05	11,597.00	81.13	81.08	84.80	-4,772.55	-112.96	276.09	114.39	161.70	1.707	Minor Risk	
16,400.00	11,620.00	16,376.05	11,597.00	81.75	81.71	84.80	-4,822.55	-112.68	276.09	113.14	162.96	1.694	Minor Risk	
16,450.00	11,620.00	16,426.05	11,597.00	82.39	82.34	84.80	-4,872.55	-112.39	276.09	111.88	164.21	1.681	Minor Risk	
16,500.00	11,620.00	16,476.05	11,597.00	83.02	82.97	84.80	-4,922.55	-112.11	276.09	110.62	165.47	1.668	Minor Risk	
16,550.00	11,620.00	16,526.05	11,597.00	83.65	83.60	84.80	-4,972.54	-111.83	276.09	109.35	166.74	1.656	Minor Risk	
16,600.00	11,620.00	16,576.05	11,597.00	84.29	84.24	84.80	-5,022.54	-111.54	276.09	108.08	168.01	1.643	Minor Risk	
16,650.00	11,620.00	16,626.05	11,597.00	84.92	84.88	84.80	-5,072.54	-111.26	276.09	106.81	169.28	1.631	Minor Risk	
16,700.00	11,620.00	16,676.05	11,597.00	85.56	85.51	84.80	-5,122.54	-110.98	276.09	105.54	170.55	1.619	Minor Risk	
16,750.00	11,620.00	16,726.05	11,597.00	86.20	86.15	84.80	-5,172.54	-110.69	276.09	104.26	171.82	1.607	Minor Risk	
16,800.00	11,620.00	16,776.05	11,597.00	86.84	86.79	84.80	-5,222.54	-110.41	276.09	102.99	173.10	1.595	Minor Risk	
16,850.00	11,620.00	16,826.05	11,597.00	87.48	87.44	84.80	-5,272.54	-110.13	276.09	101.70	174.38	1.583	Minor Risk	
16,900.00	11,620.00	16,876.05	11,597.00	88.13	88.08	84.80	-5,322.54	-109.84	276.09	100.42	175.67	1.572	Minor Risk	
16,950.00	11,620.00	16,926.05	11,597.00	88.77	88.73	84.80	-5,372.54	-109.56	276.09	99.13	176.96	1.560	Minor Risk	
17,000.00	11,620.00	16,976.05	11,597.00	89.42	89.37	84.80	-5,422.54	-109.28	276.09	97.84	178.24	1.549	Minor Risk	
17,050.00	11,620.00	17,026.05	11,597.00	90.07	90.02	84.80	-5,472.54	-109.00	276.09	96.55	179.54	1.538	Minor Risk	
17,100.00	11,620.00	17,076.05	11,597.00	90.72	90.67	84.80	-5,522.54	-108.71	276.09	95.26	180.83	1.527	Minor Risk	
17,150.00	11,620.00	17,126.05	11,597.00	91.37	91.32	84.80	-5,572.54	-108.43	276.09	93.96	182.13	1.516	Minor Risk	
17,200.00	11,620.00	17,176.05	11,597.00	92.02	91.97	84.80	-5,622.53	-108.15	276.08	92.66	183.43	1.505	Minor Risk	
17,250.00	11,620.00	17,226.05	11,597.00	92.67	92.62	84.80	-5,672.53	-107.86	276.08	91.36	184.73	1.495	Major Risk	
17,300.00	11,620.00	17,276.05	11,597.00	93.32	93.28	84.80	-5,722.53	-107.58	276.08	90.05	186.03	1.484	Major Risk	
17,350.00	11,620.00	17,326.05	11,597.00	93.98	93.93	84.80	-5,772.53	-107.30	276.08	88.75	187.34	1.474	Major Risk	
17,400.00	11,620.00	17,376.05	11,597.00	94.63	94.59	84.80	-5,822.53	-107.01	276.08	87.44	188.64	1.464	Major Risk	
17,450.00	11,620.00	17,426.05	11,597.00	95.29	95.25	84.80	-5,872.53	-106.73	276.08	86.13	189.95	1.453	Major Risk	
17,500.00	11,620.00	17,476.05	11,597.00	95.95	95.90	84.80	-5,922.53	-106.45	276.08	84.82	191.27	1.443	Major Risk	
17,550.00	11,620.00	17,526.05	11,597.00	96.61	96.56	84.80	-5,972.53	-106.16	276.08	83.50	192.58	1.434	Major Risk	
17,600.00	11,620.00	17,576.05	11,597.00	97.27	97.22	84.80	-6,022.53	-105.88	276.08	82.19	193.90	1.424	Major Risk	
17,650.00	11,620.00	17,626.05	11,597.00	97.93	97.88	84.80	-6,072.53	-105.60	276.08	80.87	195.21	1.414	Major Risk	
17,700.00	11,620.00	17,676.05	11,597.00	98.59	98.55	84.80	-6,122.53	-105.32	276.08	79.55	196.53	1.405	Major Risk	
17,750.00	11,620.00	17,726.05	11,597.00	99.25	99.21	84.80	-6,172.53	-105.03	276.08	78.22	197.86	1.395	Major Risk	

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 15-T23S-R31E - Maldives 15-22 Fed Com 711H - 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		
17,800.00	11,620.00	17,776.05	11,597.00	99.92	99.87	84.80	-6,222.52	-104.75	276.08	76.90	199.18	1.386	Major Risk	
17,850.00	11,620.00	17,826.05	11,597.00	100.58	100.54	84.80	-6,272.52	-104.47	276.08	75.57	200.51	1.377	Major Risk	
17,900.00	11,620.00	17,876.05	11,597.00	101.25	101.20	84.80	-6,322.52	-104.18	276.08	74.25	201.83	1.368	Major Risk	
17,950.00	11,620.00	17,926.05	11,597.00	101.91	101.87	84.80	-6,372.52	-103.90	276.08	72.92	203.16	1.359	Major Risk	
18,000.00	11,620.00	17,976.05	11,597.00	102.58	102.54	84.80	-6,422.52	-103.62	276.08	71.59	204.49	1.350	Major Risk	
18,050.00	11,620.00	18,026.05	11,597.00	103.25	103.21	84.80	-6,472.52	-103.33	276.08	70.25	205.82	1.341	Major Risk	
18,100.00	11,620.00	18,076.05	11,597.00	103.92	103.88	84.80	-6,522.52	-103.05	276.08	68.92	207.16	1.333	Major Risk	
18,150.00	11,620.00	18,126.05	11,597.00	104.59	104.54	84.80	-6,572.52	-102.77	276.08	67.58	208.49	1.324	Major Risk	
18,200.00	11,620.00	18,176.05	11,597.00	105.26	105.22	84.80	-6,622.52	-102.48	276.08	66.25	209.83	1.316	Major Risk	
18,250.00	11,620.00	18,226.05	11,597.00	105.93	105.89	84.80	-6,672.52	-102.20	276.08	64.91	211.17	1.307	Major Risk	
18,300.00	11,620.00	18,276.05	11,597.00	106.60	106.56	84.80	-6,722.52	-101.92	276.08	63.57	212.51	1.299	Major Risk	
18,350.00	11,620.00	18,326.05	11,597.00	107.27	107.23	84.80	-6,772.52	-101.64	276.08	62.22	213.85	1.291	Major Risk	
18,400.00	11,620.00	18,376.05	11,597.00	107.95	107.91	84.80	-6,822.52	-101.35	276.07	60.88	215.19	1.283	Major Risk	
18,450.00	11,620.00	18,426.05	11,597.00	108.62	108.58	84.80	-6,872.51	-101.07	276.07	59.54	216.54	1.275	Major Risk	
18,500.00	11,620.00	18,476.05	11,597.00	109.29	109.25	84.80	-6,922.51	-100.79	276.07	58.19	217.88	1.267	Major Risk	
18,550.00	11,620.00	18,526.05	11,597.00	109.97	109.93	84.80	-6,972.51	-100.50	276.07	56.84	219.23	1.259	Major Risk	
18,600.00	11,620.00	18,576.05	11,597.00	110.65	110.61	84.80	-7,022.51	-100.22	276.07	55.49	220.58	1.252	Major Risk	
18,650.00	11,620.00	18,626.05	11,597.00	111.32	111.28	84.80	-7,072.51	-99.94	276.07	54.14	221.93	1.244	Major Risk	
18,700.00	11,620.00	18,676.05	11,597.00	112.00	111.96	84.80	-7,122.51	-99.65	276.07	52.79	223.28	1.236	Major Risk	
18,750.00	11,620.00	18,726.05	11,597.00	112.68	112.64	84.80	-7,172.51	-99.37	276.07	51.44	224.63	1.229	Major Risk	
18,800.00	11,620.00	18,776.05	11,597.00	113.36	113.32	84.80	-7,222.51	-99.09	276.07	50.08	225.99	1.222	Major Risk	
18,850.00	11,620.00	18,826.05	11,597.00	114.04	114.00	84.80	-7,272.51	-98.81	276.07	48.73	227.34	1.214	Major Risk	
18,900.00	11,620.00	18,876.05	11,597.00	114.72	114.68	84.80	-7,322.51	-98.52	276.07	47.37	228.70	1.207	Major Risk	
18,950.00	11,620.00	18,926.05	11,597.00	115.40	115.36	84.80	-7,372.51	-98.24	276.07	46.01	230.06	1.200	Major Risk	
18,958.49	11,620.00	18,934.54	11,597.00	115.51	115.47	84.80	-7,380.99	-98.19	276.07	45.78	230.29	1.199	Major Risk, SF	

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 15-T23S-R31E - Todd 15 C Fed #003 (Active) - Wellbore #1 - No Surveys													Offset Site Error:	0.00 ft
Survey Program: 10-INC-ONLY													Offset Well Error:	10.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Reference Offset Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.50	10.00	101.81	-301.55	1,441.85	1,473.04					
50.00	50.00	48.65	48.65	0.50	10.02	101.81	-301.55	1,441.85	1,473.04	1,462.52	10.52	140.040		
100.00	100.00	98.71	98.71	0.52	10.09	101.81	-301.54	1,441.85	1,473.04	1,462.43	10.61	138.892		
150.00	150.00	148.78	148.78	0.59	10.21	101.81	-301.51	1,441.85	1,473.04	1,462.23	10.80	136.342		
200.00	200.00	198.84	198.84	0.70	10.39	101.81	-301.48	1,441.85	1,473.03	1,461.93	11.09	132.772		
250.00	250.00	248.90	248.90	0.84	10.62	101.81	-301.43	1,441.85	1,473.02	1,461.56	11.46	128.550		
300.00	300.00	298.97	298.97	0.99	10.90	101.81	-301.38	1,441.85	1,473.01	1,461.12	11.88	123.950		
350.00	350.00	349.03	349.03	1.15	11.22	101.80	-301.31	1,441.85	1,472.99	1,460.63	12.36	119.164		
400.00	400.00	399.09	399.09	1.31	11.57	101.80	-301.24	1,441.85	1,472.98	1,460.09	12.88	114.331		
450.00	450.00	449.16	449.16	1.48	11.97	101.80	-301.15	1,441.85	1,472.96	1,459.51	13.45	109.547		
500.00	500.00	499.22	499.22	1.65	12.40	101.79	-301.05	1,441.85	1,472.94	1,458.90	14.04	104.884		
550.00	550.00	549.28	549.28	1.82	12.86	101.79	-300.94	1,441.85	1,472.92	1,458.25	14.67	100.385		
600.00	600.00	599.35	599.35	1.99	13.34	101.78	-300.82	1,441.85	1,472.89	1,457.56	15.33	96.082		
650.00	650.00	649.41	649.41	2.16	13.85	101.78	-300.69	1,441.85	1,472.87	1,456.86	16.01	91.990		
700.00	700.00	699.47	699.47	2.34	14.38	101.77	-300.55	1,441.85	1,472.84	1,456.12	16.71	88.116		
750.00	750.00	749.54	749.54	2.51	14.92	101.77	-300.40	1,441.85	1,472.81	1,455.37	17.44	84.460		
800.00	800.00	799.60	799.60	2.69	15.49	101.76	-300.24	1,441.85	1,472.78	1,454.60	18.18	81.017		
850.00	850.00	849.66	849.66	2.87	16.07	101.76	-300.07	1,441.85	1,472.74	1,453.81	18.93	77.779		
900.00	900.00	899.73	899.72	3.04	16.66	101.75	-299.89	1,441.85	1,472.70	1,453.00	19.71	74.737		
950.00	950.00	949.79	949.79	3.22	17.27	101.74	-299.69	1,441.85	1,472.66	1,452.18	20.49	71.881		
1,000.00	1,000.00	999.85	999.85	3.40	17.88	101.73	-299.49	1,441.85	1,472.62	1,451.34	21.28	69.198		
1,050.00	1,050.00	1,049.91	1,049.91	3.58	18.51	101.73	-299.28	1,441.85	1,472.58	1,450.49	22.09	66.677		
1,100.00	1,100.00	1,099.98	1,099.97	3.75	19.15	101.72	-299.05	1,441.85	1,472.53	1,449.64	22.90	64.308		
1,150.00	1,150.00	1,150.04	1,150.03	3.93	19.79	101.71	-298.82	1,441.85	1,472.49	1,448.77	23.72	62.080		
1,200.00	1,200.00	1,200.10	1,200.10	4.11	20.44	101.70	-298.57	1,441.85	1,472.44	1,447.89	24.55	59.983		
1,250.00	1,250.00	1,250.16	1,250.16	4.29	21.10	101.69	-298.32	1,441.85	1,472.38	1,447.00	25.38	58.007		
1,300.00	1,300.00	1,300.23	1,300.22	4.46	21.76	101.68	-298.05	1,441.85	1,472.33	1,446.11	26.22	56.145		
1,350.00	1,350.00	1,350.29	1,350.28	4.64	22.43	101.67	-297.77	1,441.85	1,472.27	1,445.20	27.07	54.386		
1,400.00	1,400.00	1,400.35	1,400.34	4.82	23.10	101.66	-297.48	1,441.85	1,472.22	1,444.29	27.92	52.725		
1,450.00	1,450.00	1,450.41	1,450.40	5.00	23.78	101.65	-297.19	1,441.85	1,472.16	1,443.38	28.78	51.154		
1,500.00	1,500.00	1,500.47	1,500.46	5.18	24.46	101.63	-296.88	1,441.85	1,472.09	1,442.45	29.64	49.666		
1,550.00	1,550.00	1,550.53	1,550.52	5.36	25.15	101.62	-296.56	1,441.85	1,472.03	1,441.53	30.50	48.256		
1,600.00	1,600.00	1,600.60	1,600.58	5.53	25.84	101.61	-296.23	1,441.85	1,471.96	1,440.59	31.37	46.919		
1,650.00	1,650.00	1,650.66	1,650.64	5.71	26.53	101.60	-295.89	1,441.85	1,471.90	1,439.65	32.24	45.648		
1,700.00	1,700.00	1,700.72	1,700.70	5.89	27.23	101.58	-295.54	1,441.85	1,471.82	1,438.71	33.12	44.441		
1,750.00	1,750.00	1,750.78	1,750.76	6.07	27.93	101.57	-295.17	1,441.85	1,471.75	1,437.76	34.00	43.292		
1,800.00	1,800.00	1,800.84	1,800.82	6.25	28.63	101.56	-294.80	1,441.85	1,471.68	1,436.80	34.88	42.197		
1,850.00	1,850.00	1,850.90	1,850.88	6.43	29.33	101.54	-294.42	1,441.85	1,471.60	1,435.84	35.76	41.154		
1,900.00	1,900.00	1,900.96	1,900.94	6.61	30.04	101.53	-294.03	1,441.85	1,471.52	1,434.88	36.64	40.158		
1,950.00	1,950.00	1,951.02	1,951.00	6.78	30.75	101.51	-293.62	1,441.85	1,471.44	1,433.91	37.53	39.207		
2,000.00	2,000.00	2,001.08	2,001.06	6.96	31.46	101.49	-293.21	1,441.85	1,471.36	1,432.94	38.42	38.298		
2,050.00	2,050.00	2,051.14	2,051.12	7.14	32.17	101.48	-292.78	1,441.85	1,471.27	1,431.97	39.31	37.428		
2,100.00	2,100.00	2,101.20	2,101.17	7.32	32.88	101.46	-292.35	1,441.85	1,471.19	1,430.99	40.20	36.595		
2,150.00	2,150.00	2,151.26	2,151.23	7.50	33.60	101.44	-291.90	1,441.85	1,471.10	1,430.00	41.10	35.797		
2,200.00	2,200.00	2,201.32	2,201.29	7.68	34.31	101.43	-291.44	1,441.85	1,471.01	1,429.02	41.99	35.031		
2,250.00	2,250.00	2,251.38	2,251.35	7.86	35.03	101.41	-290.98	1,441.85	1,470.92	1,428.03	42.89	34.297		
2,300.00	2,300.00	2,301.44	2,301.40	8.04	35.75	101.39	-290.50	1,441.85	1,470.82	1,427.04	43.79	33.591		
2,350.00	2,350.00	2,351.50	2,351.46	8.22	36.47	101.37	-290.01	1,441.85	1,470.73	1,426.04	44.69	32.913		
2,400.00	2,400.00	2,401.56	2,401.52	8.39	37.19	101.35	-289.51	1,441.85	1,470.63	1,425.04	45.59	32.261		
2,450.00	2,450.00	2,451.61	2,451.57	8.57	37.92	101.33	-289.00	1,441.85	1,470.53	1,424.04	46.49	31.633		
2,500.00	2,500.00	2,501.67	2,501.63	8.75	38.64	101.31	-288.48	1,441.85	1,470.43	1,423.04	47.39	31.028		

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

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 15-T23S-R31E - Todd 15 C Fed #003 (Active) - Wellbore #1 - No Surveys													Offset Site Error:	0.00 ft
Survey Program: 10-INC-ONLY													Offset Well Error:	10.00 ft
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
2,550.00	2,550.00	2,551.73	2,551.68	8.93	39.36	101.29		-287.95	1,441.85	1,470.32	1,422.03	48.29	30.445	
2,600.00	2,600.00	2,601.79	2,601.74	9.11	40.09	101.27		-287.41	1,441.85	1,470.22	1,421.02	49.20	29.883	
2,650.00	2,650.00	2,651.85	2,651.79	9.29	40.82	101.25		-286.86	1,441.85	1,470.11	1,420.01	50.10	29.341	
2,700.00	2,700.00	2,701.90	2,701.85	9.47	41.54	101.23		-286.30	1,441.85	1,470.00	1,418.99	51.01	28.818	
2,750.00	2,750.00	2,751.96	2,751.90	9.65	42.27	101.21		-285.73	1,441.85	1,469.89	1,417.97	51.92	28.312	
2,800.00	2,800.00	2,802.02	2,801.95	9.83	43.00	101.19		-285.14	1,441.85	1,469.78	1,416.95	52.83	27.823	
2,850.00	2,850.00	2,852.07	2,852.01	10.00	43.73	101.16		-284.55	1,441.85	1,469.66	1,415.93	53.73	27.351	
2,900.00	2,900.00	2,902.13	2,902.06	10.18	44.46	101.14		-283.94	1,441.85	1,469.54	1,414.90	54.64	26.893	
2,950.00	2,950.00	2,952.19	2,952.11	10.36	45.19	101.12		-283.33	1,441.85	1,469.42	1,413.87	55.55	26.451	
3,000.00	3,000.00	3,002.24	3,002.16	10.54	45.92	101.09		-282.70	1,441.85	1,469.30	1,412.84	56.46	26.022	
3,050.00	3,050.00	3,052.30	3,052.21	10.72	46.66	101.07		-282.07	1,441.85	1,469.18	1,411.81	57.37	25.607	
3,100.00	3,100.00	3,102.35	3,102.26	10.90	47.39	101.04		-281.42	1,441.85	1,469.06	1,410.77	58.29	25.204	
3,150.00	3,150.00	3,152.41	3,152.32	11.08	48.12	101.02		-280.76	1,441.85	1,468.93	1,409.73	59.20	24.814	
3,200.00	3,200.00	3,202.46	3,202.37	11.26	48.85	100.99		-280.10	1,441.85	1,468.81	1,408.69	60.11	24.435	
3,250.00	3,250.00	3,252.52	3,252.42	11.44	49.59	100.97		-279.42	1,441.85	1,468.68	1,407.65	61.02	24.067	
3,300.00	3,300.00	3,302.57	3,302.46	11.62	50.32	100.94		-278.73	1,441.85	1,468.55	1,406.61	61.94	23.710	
3,350.00	3,350.00	3,352.62	3,352.51	11.80	51.06	100.91		-278.03	1,441.85	1,468.41	1,405.56	62.85	23.363	
3,400.00	3,400.00	3,402.68	3,402.56	11.97	51.79	100.89		-277.32	1,441.85	1,468.28	1,404.51	63.77	23.026	
3,450.00	3,450.00	3,452.73	3,452.61	12.15	52.53	100.86		-276.60	1,441.85	1,468.14	1,403.46	64.68	22.698	
3,500.00	3,500.00	3,502.78	3,502.66	12.33	53.27	100.83		-275.87	1,441.85	1,468.01	1,402.41	65.60	22.379	
3,550.00	3,550.00	3,552.84	3,552.71	12.51	54.00	67.11		-275.13	1,441.85	1,467.78	1,401.27	66.51	22.068	
3,600.00	3,600.00	3,602.89	3,602.76	12.69	54.74	67.11		-274.38	1,441.85	1,467.39	1,399.96	67.43	21.763	
3,650.00	3,649.98	3,652.95	3,652.81	12.87	55.48	67.12		-273.61	1,441.85	1,466.82	1,398.48	68.34	21.463	
3,700.00	3,699.96	3,703.00	3,702.85	13.04	56.21	67.16		-272.84	1,441.85	1,466.08	1,396.83	69.26	21.169	
3,750.00	3,749.93	3,753.04	3,752.89	13.22	56.95	67.19		-272.06	1,441.85	1,465.27	1,395.10	70.17	20.881	
3,800.00	3,799.90	3,803.09	3,802.93	13.40	57.69	67.22		-271.26	1,441.85	1,464.45	1,393.37	71.09	20.601	
3,850.00	3,849.87	3,853.13	3,852.96	13.58	58.43	67.25		-270.46	1,441.85	1,463.64	1,391.64	72.00	20.328	
3,900.00	3,899.84	3,903.18	3,903.00	13.76	59.17	67.28		-269.64	1,441.85	1,462.82	1,389.90	72.92	20.061	
3,950.00	3,949.81	3,953.22	3,953.04	13.93	59.91	67.31		-268.82	1,441.85	1,462.00	1,388.17	73.84	19.801	
4,000.00	3,999.78	4,003.27	4,003.08	14.11	60.65	67.34		-267.98	1,441.85	1,461.18	1,386.43	74.75	19.547	
4,050.00	4,049.75	4,053.32	4,053.12	14.29	61.39	67.37		-267.14	1,441.85	1,460.36	1,384.69	75.67	19.299	
4,100.00	4,099.72	4,103.36	4,103.16	14.47	62.12	67.40		-266.28	1,441.85	1,459.54	1,382.95	76.59	19.057	
4,150.00	4,149.70	4,153.41	4,153.20	14.65	62.86	67.43		-265.41	1,441.85	1,458.71	1,381.21	77.50	18.821	
4,200.00	4,199.67	4,203.46	4,203.24	14.82	63.61	67.46		-264.53	1,441.85	1,457.88	1,379.46	78.42	18.590	
4,250.00	4,249.64	4,253.51	4,253.28	15.00	64.35	67.48		-263.64	1,441.85	1,457.05	1,377.71	79.34	18.365	
4,300.00	4,299.61	4,303.55	4,303.32	15.18	65.09	67.51		-262.74	1,441.85	1,456.22	1,375.97	80.26	18.144	
4,350.00	4,349.58	4,353.60	4,353.36	15.36	65.83	67.54		-261.83	1,441.85	1,455.39	1,374.21	81.18	17.928	
4,400.00	4,399.55	4,403.65	4,403.40	15.54	66.57	67.57		-260.91	1,441.85	1,454.56	1,372.46	82.10	17.718	
4,450.00	4,449.52	4,453.70	4,453.44	15.72	67.31	67.59		-259.98	1,441.85	1,453.72	1,370.71	83.02	17.511	
4,500.00	4,499.49	4,503.75	4,503.48	15.89	68.05	67.62		-259.04	1,441.85	1,452.88	1,368.95	83.94	17.309	
4,550.00	4,549.46	4,553.80	4,553.52	16.07	68.79	67.64		-258.09	1,441.85	1,452.05	1,367.19	84.86	17.112	
4,600.00	4,599.43	4,603.84	4,603.56	16.25	69.53	67.67		-257.13	1,441.85	1,451.20	1,365.43	85.78	16.919	
4,650.00	4,649.40	4,653.89	4,653.60	16.43	70.28	67.70		-256.15	1,441.85	1,450.36	1,363.67	86.70	16.729	
4,700.00	4,699.37	4,703.94	4,703.64	16.61	71.02	67.72		-255.17	1,441.85	1,449.52	1,361.90	87.62	16.544	
4,750.00	4,749.34	4,753.99	4,753.68	16.79	71.76	67.74		-254.17	1,441.85	1,448.67	1,360.13	88.54	16.362	
4,800.00	4,799.31	4,804.04	4,803.72	16.97	72.50	67.77		-253.17	1,441.85	1,447.82	1,358.37	89.46	16.184	
4,850.00	4,849.28	4,854.09	4,853.76	17.14	73.25	67.79		-252.15	1,441.85	1,446.97	1,356.59	90.38	16.010	
4,900.00	4,899.25	4,904.14	4,903.80	17.32	73.99	67.81		-251.13	1,441.85	1,446.12	1,354.82	91.30	15.839	
4,950.00	4,949.23	4,954.19	4,953.83	17.50	74.73	67.84		-250.09	1,441.85	1,445.27	1,353.05	92.22	15.672	
5,000.00	4,999.20	5,004.24	5,003.87	17.68	75.47	67.86		-249.04	1,441.85	1,444.41	1,351.27	93.14	15.508	
5,050.00	5,049.17	5,054.29	5,053.91	17.86	76.22	67.88		-247.99	1,441.85	1,443.55	1,349.49	94.06	15.347	

Anticollision Report

Company:	WCDSC Permian-NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 10-INC-ONLY													Offset Well Error:	10.00 ft
Reference		Offset		Semi Major Axis		Distance		Warning						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.00	5,099.14	5,104.34	5,103.95	18.04	76.96	67.90	-246.92	1,441.85	1,442.69	1,347.71	94.99	15.189		
5,150.00	5,149.11	5,154.39	5,153.99	18.22	77.70	67.92	-245.84	1,441.85	1,441.83	1,345.92	95.91	15.034		
5,200.00	5,199.08	5,204.45	5,204.03	18.40	78.45	67.94	-244.75	1,441.85	1,440.97	1,344.14	96.83	14.881		
5,250.00	5,249.05	5,254.50	5,254.07	18.57	79.19	67.97	-243.65	1,441.85	1,440.10	1,342.35	97.75	14.732		
5,300.00	5,299.02	5,304.55	5,304.11	18.75	79.94	67.99	-242.54	1,441.85	1,439.24	1,340.56	98.67	14.586		
5,350.00	5,348.99	5,354.60	5,354.15	18.93	80.68	68.00	-241.42	1,441.85	1,438.37	1,338.77	99.60	14.442		
5,400.00	5,398.96	5,404.65	5,404.19	19.11	81.42	68.02	-240.29	1,441.85	1,437.50	1,336.98	100.52	14.301		
5,450.00	5,448.93	5,454.70	5,454.23	19.29	82.17	68.04	-239.14	1,441.85	1,436.62	1,335.18	101.44	14.162		
5,500.00	5,498.90	5,504.75	5,504.26	19.47	82.91	68.06	-237.99	1,441.85	1,435.75	1,333.38	102.37	14.026		
5,550.00	5,548.87	5,554.81	5,554.30	19.65	83.66	68.08	-236.83	1,441.85	1,434.87	1,331.58	103.29	13.892		
5,600.00	5,598.84	5,604.86	5,604.34	19.83	84.40	68.10	-235.65	1,441.85	1,433.99	1,329.78	104.21	13.760		
5,650.00	5,648.81	5,654.91	5,654.38	20.01	85.14	68.11	-234.47	1,441.85	1,433.11	1,327.98	105.14	13.631		
5,700.00	5,698.78	5,704.96	5,704.42	20.19	85.89	68.13	-233.28	1,441.85	1,432.23	1,326.17	106.06	13.504		
5,750.00	5,748.76	5,755.01	5,754.45	20.36	86.63	68.15	-232.07	1,441.85	1,431.34	1,324.36	106.98	13.379		
5,800.00	5,798.73	5,805.07	5,804.49	20.54	87.38	68.16	-230.85	1,441.85	1,430.45	1,322.55	107.91	13.257		
5,850.00	5,848.70	5,855.12	5,854.53	20.72	88.12	68.18	-229.63	1,441.85	1,429.57	1,320.74	108.83	13.136		
5,900.00	5,898.67	5,905.17	5,904.57	20.90	88.87	68.20	-228.39	1,441.85	1,428.67	1,318.92	109.75	13.017		
5,950.00	5,948.64	5,955.23	5,954.60	21.08	89.61	68.21	-227.14	1,441.85	1,427.78	1,317.10	110.68	12.900		
6,000.00	5,998.61	6,005.28	6,004.64	21.26	90.36	68.22	-225.88	1,441.85	1,426.88	1,315.28	111.60	12.786		
6,050.00	6,048.58	6,055.33	6,054.68	21.44	91.10	68.24	-224.62	1,441.85	1,425.99	1,313.46	112.53	12.673		
6,100.00	6,098.55	6,105.38	6,104.71	21.62	91.85	68.25	-223.34	1,441.85	1,425.09	1,311.64	113.45	12.561		
6,150.00	6,148.52	6,155.44	6,154.75	21.80	92.59	68.27	-222.05	1,441.85	1,424.19	1,309.81	114.37	12.452		
6,200.00	6,198.49	6,205.49	6,204.79	21.98	93.34	68.28	-220.75	1,441.85	1,423.28	1,307.98	115.30	12.344		
6,250.00	6,248.46	6,255.54	6,254.82	22.16	94.09	68.29	-219.44	1,441.85	1,422.38	1,306.15	116.22	12.238		
6,300.00	6,298.43	6,305.60	6,304.86	22.34	94.83	68.30	-218.11	1,441.85	1,421.47	1,304.32	117.15	12.134		
6,350.00	6,348.40	6,355.65	6,354.89	22.52	95.58	68.32	-216.78	1,441.85	1,420.56	1,302.49	118.07	12.031		
6,400.00	6,398.37	6,405.70	6,404.93	22.69	96.32	68.33	-215.44	1,441.85	1,419.64	1,300.65	119.00	11.930		
6,450.00	6,448.34	6,455.75	6,454.96	22.87	97.07	68.34	-214.09	1,441.85	1,418.73	1,298.81	119.92	11.831		
6,500.00	6,498.31	6,505.81	6,505.00	23.05	97.81	68.35	-212.72	1,441.85	1,417.81	1,296.97	120.85	11.732		
6,550.00	6,548.29	6,555.86	6,555.03	23.23	98.56	68.36	-211.35	1,441.85	1,416.89	1,295.12	121.77	11.636		
6,600.00	6,598.26	6,605.91	6,605.07	23.41	99.31	68.37	-209.96	1,441.85	1,415.97	1,293.28	122.70	11.540		
6,650.00	6,648.23	6,655.97	6,655.10	23.59	100.05	68.38	-208.57	1,441.85	1,415.05	1,291.43	123.62	11.447		
6,700.00	6,698.20	6,706.02	6,705.13	23.77	100.80	68.39	-207.16	1,441.85	1,414.13	1,289.58	124.55	11.354		
6,750.00	6,748.17	6,756.07	6,755.17	23.95	101.54	68.39	-205.75	1,441.85	1,413.20	1,287.73	125.47	11.263		
6,800.00	6,798.14	6,806.13	6,805.20	24.13	102.29	68.40	-204.32	1,441.85	1,412.27	1,285.87	126.40	11.173		
6,850.00	6,848.11	6,856.18	6,855.23	24.31	103.04	68.41	-202.88	1,441.85	1,411.34	1,284.01	127.32	11.085		
6,900.00	6,898.08	6,906.23	6,905.26	24.49	103.78	68.42	-201.43	1,441.85	1,410.40	1,282.15	128.25	10.997		
6,950.00	6,948.05	6,956.29	6,955.30	24.67	104.53	68.42	-199.98	1,441.85	1,409.47	1,280.29	129.17	10.911		
7,000.00	6,998.02	7,006.34	7,005.33	24.85	105.27	68.43	-198.51	1,441.85	1,408.53	1,278.43	130.10	10.827		
7,050.00	7,047.99	7,056.39	7,055.36	25.03	106.02	68.44	-197.03	1,441.85	1,407.59	1,276.56	131.02	10.743		
7,100.00	7,097.96	7,106.45	7,105.39	25.21	106.77	68.44	-195.54	1,441.85	1,406.64	1,274.69	131.95	10.660		
7,150.00	7,147.93	7,156.50	7,155.42	25.39	107.51	68.45	-194.04	1,441.85	1,405.70	1,272.82	132.88	10.579		
7,200.00	7,197.90	7,206.55	7,205.45	25.57	108.26	68.45	-192.53	1,441.85	1,404.75	1,270.95	133.80	10.499		
7,250.00	7,247.87	7,256.61	7,255.48	25.75	109.01	68.46	-191.00	1,441.85	1,403.80	1,269.07	134.73	10.420		
7,300.00	7,297.84	7,306.66	7,305.51	25.92	109.75	68.46	-189.47	1,441.85	1,402.85	1,267.20	135.65	10.341		
7,350.00	7,347.82	7,356.71	7,355.54	26.10	110.50	68.46	-187.93	1,441.85	1,401.90	1,265.32	136.58	10.264		
7,400.00	7,397.79	7,406.77	7,405.57	26.28	111.25	68.47	-186.38	1,441.85	1,400.94	1,263.44	137.50	10.188		
7,450.00	7,447.76	7,456.82	7,455.60	26.46	111.99	68.47	-184.81	1,441.85	1,399.98	1,261.55	138.43	10.113		
7,500.00	7,497.73	7,506.87	7,505.63	26.64	112.74	68.47	-183.24	1,441.85	1,399.02	1,259.66	139.36	10.039		
7,550.00	7,547.70	7,556.92	7,555.65	26.82	113.49	68.47	-181.65	1,441.85	1,398.06	1,257.78	140.28	9.966		
7,600.00	7,597.67	7,606.98	7,605.68	27.00	114.23	68.48	-180.06	1,441.85	1,397.09	1,255.88	141.21	9.894		

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 15-T23S-R31E - Todd 15 C Fed #003 (Active) - Wellbore #1 - No Surveys												Offset Site Error:	0.00 ft
Survey Program: 10-INC-ONLY												Offset Well Error:	10.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
7,650.00	7,647.64	7,657.03	7,655.71	27.18	114.98	68.48	-178.45	1,441.85	1,396.13	1,253.99	142.14	9.823	
7,700.00	7,697.61	7,707.08	7,705.73	27.36	115.73	68.48	-176.83	1,441.85	1,395.16	1,252.10	143.06	9.752	
7,750.00	7,747.58	7,757.13	7,755.76	27.54	116.48	68.48	-175.21	1,441.85	1,394.19	1,250.20	143.99	9.683	
7,800.00	7,797.55	7,807.19	7,805.79	27.72	117.22	68.48	-173.57	1,441.85	1,393.21	1,248.30	144.91	9.614	
7,850.00	7,847.52	7,857.24	7,855.81	27.90	117.97	68.48	-171.92	1,441.85	1,392.24	1,246.40	145.84	9.546	
7,900.00	7,897.49	7,907.29	7,905.84	28.08	118.72	68.48	-170.26	1,441.85	1,391.26	1,244.49	146.77	9.479	
7,950.00	7,947.46	7,957.34	7,955.86	28.26	119.46	68.47	-168.59	1,441.85	1,390.28	1,242.58	147.69	9.413	
8,000.00	7,997.43	8,007.40	8,005.88	28.44	120.21	68.47	-166.91	1,441.85	1,389.29	1,240.67	148.62	9.348	
8,050.00	8,047.40	8,057.45	8,055.91	28.62	120.96	68.47	-165.22	1,441.85	1,388.31	1,238.76	149.55	9.283	
8,100.00	8,097.37	8,107.50	8,105.93	28.80	121.70	68.47	-163.52	1,441.85	1,387.32	1,236.85	150.47	9.220	
8,150.00	8,147.35	8,157.55	8,155.95	28.98	122.45	68.46	-161.81	1,441.85	1,386.33	1,234.93	151.40	9.157	
8,200.00	8,197.32	8,207.60	8,205.97	29.16	123.20	68.46	-160.09	1,441.85	1,385.34	1,233.02	152.33	9.095	
8,250.00	8,247.29	8,257.65	8,256.00	29.34	123.95	68.46	-158.35	1,441.85	1,384.35	1,231.10	153.25	9.033	
8,300.00	8,297.26	8,307.71	8,306.02	29.52	124.69	68.45	-156.61	1,441.85	1,383.35	1,229.17	154.18	8.972	
8,350.00	8,347.23	8,357.76	8,356.04	29.70	125.44	68.45	-154.86	1,441.85	1,382.35	1,227.25	155.11	8.912	
8,400.00	8,397.20	8,407.81	8,406.06	29.88	126.19	68.44	-153.09	1,441.85	1,381.35	1,225.32	156.03	8.853	
8,450.00	8,447.17	8,457.86	8,456.08	30.06	126.94	68.44	-151.32	1,441.85	1,380.35	1,223.39	156.96	8.794	
8,500.00	8,497.14	8,507.91	8,506.10	30.24	127.68	68.43	-149.53	1,441.85	1,379.35	1,221.46	157.89	8.736	
8,550.00	8,547.11	8,557.96	8,556.11	30.42	128.43	68.42	-147.74	1,441.85	1,378.34	1,219.53	158.81	8.679	
8,600.00	8,597.08	8,608.01	8,606.13	30.60	129.18	68.42	-145.93	1,441.85	1,377.33	1,217.59	159.74	8.622	
8,650.00	8,647.05	8,658.06	8,656.15	30.78	129.93	68.41	-144.11	1,441.85	1,376.32	1,215.65	160.67	8.566	
8,700.00	8,697.02	8,708.11	8,706.17	30.96	130.67	68.40	-142.29	1,441.85	1,375.31	1,213.71	161.59	8.511	
8,750.00	8,746.99	8,758.16	8,756.18	31.14	131.42	68.39	-140.45	1,441.85	1,374.29	1,211.77	162.52	8.456	
8,800.00	8,796.96	8,808.21	8,806.20	31.31	132.17	68.38	-138.60	1,441.85	1,373.27	1,209.82	163.45	8.402	
8,850.00	8,846.93	8,858.26	8,856.21	31.49	132.92	68.37	-136.74	1,441.85	1,372.25	1,207.88	164.38	8.348	
8,900.00	8,896.90	8,908.31	8,906.23	31.67	133.66	68.36	-134.87	1,441.85	1,371.23	1,205.93	165.30	8.295	
8,950.00	8,946.88	8,958.36	8,956.24	31.85	134.41	68.35	-132.99	1,441.85	1,370.21	1,203.98	166.23	8.243	
9,000.00	8,996.85	9,008.41	9,006.25	32.03	135.16	68.34	-131.10	1,441.85	1,369.18	1,202.02	167.16	8.191	
9,050.00	9,046.82	9,058.46	9,056.27	32.21	135.91	68.33	-129.20	1,441.85	1,368.15	1,200.07	168.08	8.140	
9,100.00	9,096.79	9,108.50	9,106.28	32.39	136.65	68.32	-127.29	1,441.85	1,367.12	1,198.11	169.01	8.089	
9,125.29	9,122.06	9,133.82	9,131.57	32.48	137.03	68.31	-126.32	1,441.85	1,366.60	1,197.12	169.48	8.063 CC, ES, SF	

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore:	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 15-T23S-R31E - Todd 15 D Fed #004 (P&A) - Wellbore #1 - Inc Only Surveys													Offset Site Error: 0.00 ft
Survey Program: 262-INC-ONLY													Offset Well Error: 10.00 ft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.00	0.00	0.00	0.00	0.50	10.00	132.00	-407.39	452.45	608.89				
50.00	50.00	42.46	42.46	0.50	10.01	132.00	-407.35	452.45	608.80	598.29	10.51	57.926	
100.00	100.00	93.50	93.50	0.52	10.04	131.99	-407.17	452.45	608.69	598.13	10.56	57.661	
150.00	150.00	144.54	144.54	0.59	10.09	131.96	-406.87	452.45	608.49	597.81	10.68	56.964	
200.00	200.00	195.57	195.57	0.70	10.17	131.93	-406.44	452.45	608.20	597.33	10.87	55.955	
250.00	250.00	246.61	246.60	0.84	10.27	131.89	-405.87	452.45	607.84	596.73	11.10	54.747	
300.00	300.00	297.17	297.16	0.99	10.49	131.85	-405.20	452.45	607.39	595.91	11.48	52.905	
350.00	350.00	347.54	347.52	1.15	10.85	131.80	-404.49	452.45	606.92	594.93	12.00	50.596	
400.00	400.00	397.90	397.88	1.31	11.29	131.74	-403.73	452.45	606.42	593.82	12.60	48.135	
450.00	450.00	448.27	448.24	1.48	11.80	131.69	-402.92	452.45	605.89	592.61	13.28	45.630	
500.00	500.00	498.63	498.59	1.65	12.38	131.63	-402.07	452.45	605.32	591.30	14.03	43.160	
550.00	550.00	549.90	549.85	1.82	13.13	131.56	-401.10	452.45	604.70	589.75	14.94	40.463	
600.00	600.00	601.22	601.17	1.99	13.95	131.48	-399.96	452.45	603.96	588.02	15.94	37.893	
650.00	650.00	652.54	652.47	2.16	14.83	131.38	-398.65	452.45	603.11	586.12	16.99	35.502	
700.00	700.00	703.85	703.76	2.34	15.75	131.28	-397.16	452.45	602.16	584.07	18.08	33.297	
750.00	750.00	754.58	754.46	2.51	16.86	131.16	-395.56	452.45	601.12	581.74	19.37	31.029	
800.00	800.00	805.31	805.16	2.69	18.01	131.04	-393.87	452.45	600.02	579.32	20.70	28.986	
850.00	850.00	854.45	854.27	2.87	19.08	130.92	-392.20	452.45	598.91	576.96	21.94	27.292	
900.00	900.00	903.05	902.85	3.04	20.13	130.81	-390.72	452.45	597.91	574.74	23.17	25.803	
950.00	950.00	951.67	951.46	3.22	21.20	130.72	-389.40	452.45	597.02	572.61	24.42	24.449	
1,000.00	1,000.00	1,000.30	1,000.07	3.40	22.29	130.63	-388.26	452.45	596.26	570.57	25.68	23.217	
1,050.00	1,050.00	1,073.40	1,048.36	3.58	23.90	130.56	-387.28	452.45	595.60	568.13	27.47	21.681	
1,100.00	1,100.00	1,098.59	1,098.34	3.75	24.38	130.50	-386.41	452.45	595.03	566.90	28.13	21.150	
1,150.00	1,150.00	1,148.59	1,148.33	3.93	25.35	130.43	-385.54	452.45	594.47	565.18	29.28	20.301	
1,200.00	1,200.00	1,198.58	1,198.31	4.11	26.33	130.37	-384.66	452.45	593.90	563.46	30.44	19.513	
1,250.00	1,250.00	1,248.57	1,248.30	4.29	27.31	130.31	-383.79	452.45	593.34	561.74	31.60	18.778	
1,300.00	1,300.00	1,298.56	1,298.28	4.46	28.30	130.24	-382.92	452.45	592.77	560.01	32.76	18.092	
1,350.00	1,350.00	1,348.56	1,348.27	4.64	29.30	130.18	-382.05	452.45	592.21	558.27	33.94	17.451	
1,400.00	1,400.00	1,398.55	1,398.25	4.82	30.29	130.11	-381.17	452.45	591.65	556.53	35.11	16.850	
1,450.00	1,450.00	1,448.54	1,448.24	5.00	31.30	130.05	-380.30	452.45	591.08	554.79	36.29	16.286	
1,500.00	1,500.00	1,498.53	1,498.22	5.18	32.30	129.98	-379.43	452.45	590.52	553.05	37.48	15.757	
1,550.00	1,550.00	1,548.65	1,548.33	5.36	33.35	129.92	-378.55	452.45	589.96	551.26	38.70	15.244	
1,600.00	1,600.00	1,599.00	1,598.67	5.53	34.46	129.85	-377.63	452.45	589.38	549.38	39.99	14.737	
1,650.00	1,650.00	1,649.34	1,649.00	5.71	35.58	129.78	-376.67	452.45	588.76	547.47	41.29	14.260	
1,700.00	1,700.00	1,699.68	1,699.34	5.89	36.70	129.70	-375.65	452.45	588.12	545.53	42.58	13.810	
1,750.00	1,750.00	1,750.02	1,749.67	6.07	37.82	129.62	-374.59	452.45	587.45	543.56	43.89	13.386	
1,800.00	1,800.00	1,800.36	1,799.99	6.25	38.95	129.54	-373.49	452.45	586.74	541.56	45.19	12.984	
1,850.00	1,850.00	1,850.70	1,850.31	6.43	40.07	129.45	-372.33	452.45	586.02	539.52	46.49	12.604	
1,900.00	1,900.00	1,901.03	1,900.63	6.61	41.20	129.36	-371.13	452.45	585.26	537.46	47.80	12.243	
1,950.00	1,950.00	1,951.36	1,950.95	6.78	42.33	129.27	-369.88	452.45	584.47	535.36	49.11	11.901	
2,000.00	2,000.00	2,001.69	2,001.26	6.96	43.47	129.17	-368.59	452.45	583.66	533.23	50.42	11.575	
2,050.00	2,050.00	2,051.66	2,051.22	7.14	44.69	129.07	-367.28	452.45	582.83	531.00	51.83	11.245	
2,100.00	2,100.00	2,101.65	2,101.18	7.32	45.92	128.97	-365.97	452.45	582.01	528.78	53.23	10.933	
2,150.00	2,150.00	2,151.63	2,151.15	7.50	47.15	128.87	-364.66	452.45	581.19	526.55	54.64	10.637	
2,200.00	2,200.00	2,201.61	2,201.11	7.68	48.37	128.77	-363.35	452.45	580.36	524.32	56.04	10.355	
2,250.00	2,250.00	2,251.59	2,251.08	7.86	49.60	128.67	-362.04	452.45	579.55	522.09	57.45	10.087	
2,300.00	2,300.00	2,301.58	2,301.05	8.04	50.83	128.57	-360.74	452.45	578.73	519.87	58.86	9.832	
2,350.00	2,350.00	2,351.56	2,351.01	8.22	52.07	128.46	-359.43	452.45	577.91	517.64	60.27	9.588	
2,400.00	2,400.00	2,401.54	2,400.98	8.39	53.30	128.36	-358.12	452.45	577.10	515.41	61.69	9.355	
2,450.00	2,450.00	2,451.53	2,450.94	8.57	54.54	128.26	-356.81	452.45	576.29	513.19	63.10	9.133	
2,500.00	2,500.00	2,502.51	2,501.91	8.75	56.12	128.15	-355.43	452.45	575.45	510.60	64.86	8.873	

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Sec 15-T23S-R31E - Todd 15 D Fed #004 (P&A) - Wellbore #1 - Inc Only Surveys												Offset Site Error:	0.00 ft
Survey Program: 262-INC-ONLY												Offset Well Error:	10.00 ft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
2,550.00	2,550.00	2,554.18	2,553.56	8.93	57.94	128.03	-353.81	452.45	574.48	507.63	66.85	8.593	
2,600.00	2,600.00	2,605.84	2,605.17	9.11	59.76	127.88	-351.94	452.45	573.37	504.52	68.85	8.328	
2,650.00	2,650.00	2,657.47	2,656.77	9.29	61.58	127.71	-349.83	452.45	572.12	501.27	70.85	8.076	
2,700.00	2,700.00	2,709.08	2,708.33	9.47	63.40	127.52	-347.47	452.45	570.72	497.88	72.84	7.835	
2,750.00	2,750.00	2,760.67	2,759.85	9.65	65.23	127.32	-344.87	452.45	569.19	494.35	74.84	7.606	
2,800.00	2,800.00	2,812.24	2,811.33	9.83	67.05	127.09	-342.02	452.45	567.52	490.68	76.83	7.386	
2,850.00	2,850.00	2,863.77	2,862.78	10.00	68.88	126.84	-338.93	452.45	565.71	486.88	78.83	7.176	
2,900.00	2,900.00	2,915.27	2,914.17	10.18	70.70	126.57	-335.60	452.45	563.77	482.95	80.82	6.975	
2,950.00	2,950.00	2,966.75	2,965.52	10.36	72.53	126.27	-332.02	452.45	561.71	478.89	82.82	6.783	
3,000.00	3,000.00	3,014.97	3,013.63	10.54	74.99	126.01	-328.78	452.45	559.72	474.26	85.46	6.549	
3,050.00	3,050.00	3,063.71	3,062.27	10.72	77.18	125.74	-325.58	452.45	557.80	469.96	87.84	6.350	
3,100.00	3,100.00	3,111.13	3,109.61	10.90	79.17	125.50	-322.76	452.45	556.06	466.04	90.02	6.177	
3,150.00	3,150.00	3,159.29	3,157.70	11.08	80.98	125.29	-320.23	452.45	554.54	462.52	92.02	6.026	
3,200.00	3,200.00	3,208.02	3,206.37	11.26	82.65	125.09	-317.88	452.45	553.15	459.28	93.87	5.893	
3,250.00	3,250.00	3,256.77	3,255.07	11.44	84.31	124.91	-315.71	452.45	551.87	456.15	95.72	5.765	
3,300.00	3,300.00	3,305.53	3,303.79	11.62	85.98	124.74	-313.72	452.45	550.71	453.13	97.57	5.644	
3,350.00	3,350.00	3,354.30	3,352.53	11.80	87.65	124.58	-311.92	452.45	549.66	450.23	99.43	5.528	
3,400.00	3,400.00	3,405.14	3,403.33	11.97	89.34	124.42	-310.07	452.45	548.63	447.33	101.29	5.416	
3,450.00	3,450.00	3,456.03	3,454.19	12.15	91.03	124.25	-308.07	452.45	547.52	444.36	103.16	5.308	
3,500.00	3,500.00	3,506.91	3,505.02	12.33	92.72	124.06	-305.92	452.45	546.33	441.31	105.02	5.202	
3,550.00	3,550.00	3,557.79	3,555.85	12.51	94.41	90.20	-303.61	452.45	545.06	438.18	106.88	5.100	
3,600.00	3,600.00	3,607.24	3,605.25	12.69	96.02	90.08	-301.29	452.45	543.76	435.09	108.67	5.004	
3,650.00	3,649.98	3,655.86	3,653.81	12.87	97.58	90.02	-299.21	452.45	542.57	432.15	110.41	4.914 Alert	
3,700.00	3,699.96	3,704.48	3,702.40	13.04	99.14	90.02	-297.34	452.45	541.50	429.34	112.16	4.828 Alert	
3,750.00	3,749.93	3,753.11	3,751.00	13.22	100.70	90.05	-295.70	452.45	540.56	426.66	113.90	4.746 Alert	
3,800.00	3,799.90	3,803.52	3,801.39	13.40	102.32	90.09	-294.11	452.45	539.69	423.99	115.70	4.665 Alert	
3,850.00	3,849.87	3,854.45	3,852.29	13.58	103.95	90.12	-292.35	452.45	538.73	421.22	117.51	4.585 Alert	
3,900.00	3,899.84	3,905.38	3,903.18	13.76	105.59	90.14	-290.43	452.45	537.69	418.37	119.32	4.506 Alert	
3,950.00	3,949.81	3,956.30	3,954.06	13.93	107.23	90.14	-288.35	452.45	536.55	415.43	121.13	4.430 Alert	
4,000.00	3,999.78	4,007.22	4,004.93	14.11	108.87	90.13	-286.12	452.45	535.34	412.40	122.94	4.355 Alert	
4,050.00	4,049.75	4,058.13	4,055.79	14.29	110.50	90.10	-283.72	452.45	534.03	409.29	124.74	4.281 Alert	
4,100.00	4,099.72	4,106.63	4,104.23	14.47	112.13	90.09	-281.53	452.45	532.77	406.21	126.56	4.210 Alert	
4,150.00	4,149.70	4,155.53	4,153.10	14.65	113.77	90.08	-279.48	452.45	531.61	403.24	128.38	4.141 Alert	
4,200.00	4,199.67	4,204.44	4,201.97	14.82	115.40	90.10	-277.62	452.45	530.56	400.36	130.19	4.075 Alert	
4,250.00	4,249.64	4,254.10	4,251.60	15.00	116.98	90.12	-275.87	452.45	529.58	397.62	131.96	4.013 Alert	
4,300.00	4,299.61	4,304.22	4,301.69	15.18	118.54	90.15	-274.10	452.45	528.60	394.91	133.69	3.954 Alert	
4,350.00	4,349.58	4,354.34	4,351.77	15.36	120.09	90.18	-272.30	452.45	527.61	392.18	135.42	3.896 Alert	
4,400.00	4,399.55	4,404.46	4,401.86	15.54	121.65	90.20	-270.48	452.45	526.60	389.44	137.16	3.839 Alert	
4,450.00	4,449.52	4,454.58	4,451.94	15.72	123.21	90.22	-268.64	452.45	525.58	386.69	138.89	3.784 Alert	
4,500.00	4,499.49	4,504.69	4,502.03	15.89	124.76	90.24	-266.78	452.45	524.55	383.93	140.62	3.730 Alert	
4,550.00	4,549.46	4,554.81	4,552.11	16.07	126.32	90.25	-264.90	452.45	523.51	381.16	142.35	3.678 Alert	
4,600.00	4,599.43	4,604.93	4,602.19	16.25	127.87	90.27	-262.99	452.45	522.46	378.37	144.09	3.626 Alert	
4,650.00	4,649.40	4,655.04	4,652.27	16.43	129.43	90.28	-261.07	452.45	521.39	375.57	145.82	3.576 Alert	
4,700.00	4,699.37	4,705.16	4,702.34	16.61	130.99	90.29	-259.12	452.45	520.31	372.76	147.55	3.526 Alert	
4,750.00	4,749.34	4,755.27	4,752.42	16.79	132.54	90.30	-257.15	452.45	519.22	369.93	149.29	3.478 Alert	
4,800.00	4,799.31	4,804.24	4,801.35	16.97	133.96	90.32	-255.36	452.45	518.21	367.32	150.89	3.434 Alert	
4,850.00	4,849.28	4,853.66	4,850.75	17.14	135.44	90.35	-253.63	452.45	517.24	364.69	152.55	3.391 Alert	
4,900.00	4,899.25	4,903.09	4,900.14	17.32	136.92	90.39	-251.99	452.45	516.32	362.11	154.21	3.348 Alert	
4,950.00	4,949.23	4,952.65	4,949.68	17.50	138.39	90.44	-250.45	452.45	515.46	359.60	155.86	3.307 Alert	
5,000.00	4,999.20	5,002.77	4,999.78	17.68	139.82	90.49	-248.90	452.45	514.61	357.14	157.47	3.268 Alert	
5,050.00	5,049.17	5,052.90	5,049.88	17.86	141.26	90.53	-247.33	452.45	513.74	354.66	159.09	3.229 Alert	

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference:	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design: Sec 15-T23S-R31E - Todd 15 D Fed #004 (P&A) - Wellbore #1 - Inc Only Surveys													Offset Site Error:	0.00 ft
Survey Program: 262-INC-ONLY													Offset Well Error:	10.00 ft
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	
5,100.00	5,099.14	5,103.02	5,099.98	18.04	142.70	90.58	-245.74	452.45	512.87	352.16	160.70	3.191	Alert	
5,150.00	5,149.11	5,153.15	5,150.08	18.22	144.13	90.62	-244.12	452.45	511.97	349.66	162.32	3.154	Alert	
5,200.00	5,199.08	5,203.27	5,200.18	18.40	145.57	90.66	-242.48	452.45	511.07	347.14	163.93	3.118	Alert	
5,250.00	5,249.05	5,253.40	5,250.27	18.57	147.01	90.70	-240.82	452.45	510.15	344.61	165.55	3.082	Alert	
5,300.00	5,299.02	5,303.52	5,300.37	18.75	148.45	90.74	-239.13	452.45	509.22	342.06	167.16	3.046	Alert	
5,350.00	5,348.99	5,353.64	5,350.46	18.93	149.88	90.77	-237.42	452.45	508.28	339.50	168.78	3.012	Alert	
5,400.00	5,398.96	5,403.77	5,400.56	19.11	151.32	90.80	-235.69	452.45	507.33	336.93	170.39	2.977	Alert	
5,450.00	5,448.93	5,453.89	5,450.65	19.29	152.85	90.83	-233.93	452.45	506.36	334.25	172.10	2.942	Alert	
5,500.00	5,498.90	5,504.01	5,500.74	19.47	154.41	90.86	-232.15	452.45	505.38	331.54	173.84	2.907	Alert	
5,550.00	5,548.87	5,554.14	5,550.83	19.65	155.97	90.89	-230.35	452.45	504.38	328.81	175.58	2.873	Alert	
5,600.00	5,598.84	5,604.26	5,600.92	19.83	157.53	90.91	-228.53	452.45	503.38	326.06	177.31	2.839	Alert	
5,650.00	5,648.81	5,654.38	5,651.01	20.01	159.09	90.94	-226.68	452.45	502.35	323.31	179.05	2.806	Alert	
5,700.00	5,698.78	5,704.50	5,701.09	20.19	160.65	90.96	-224.80	452.45	501.32	320.54	180.79	2.773	Alert	
5,750.00	5,748.76	5,754.62	5,751.18	20.36	162.21	90.97	-222.91	452.45	500.27	317.75	182.52	2.741	Alert	
5,800.00	5,798.73	5,804.74	5,801.26	20.54	163.76	90.99	-220.99	452.45	499.21	314.96	184.26	2.709	Alert	
5,850.00	5,848.70	5,854.86	5,851.35	20.72	165.32	91.00	-219.05	452.45	498.14	312.15	186.00	2.678	Alert	
5,900.00	5,898.67	5,904.98	5,901.43	20.90	166.88	91.02	-217.08	452.45	497.06	309.32	187.73	2.648	Alert	
5,950.00	5,948.64	5,954.92	5,951.32	21.08	168.52	91.03	-215.12	452.45	495.97	306.42	189.55	2.617	Alert	
6,000.00	5,998.61	6,004.91	6,001.27	21.26	170.14	91.04	-213.16	452.45	494.88	303.54	191.34	2.586	Alert	
6,050.00	6,048.58	6,054.89	6,051.22	21.44	171.75	91.05	-211.20	452.45	493.79	300.65	193.14	2.557	Alert	
6,100.00	6,098.55	6,104.88	6,101.17	21.62	173.37	91.06	-209.24	452.45	492.71	297.77	194.93	2.528	Alert	
6,150.00	6,148.52	6,154.87	6,151.12	21.80	174.99	91.07	-207.27	452.45	491.62	294.89	196.73	2.499	Minor Risk	
6,200.00	6,198.49	6,204.86	6,201.07	21.98	176.60	91.09	-205.31	452.45	490.53	292.01	198.52	2.471	Minor Risk	
6,250.00	6,248.46	6,254.85	6,251.02	22.16	178.22	91.10	-203.35	452.45	489.44	289.12	200.32	2.443	Minor Risk	
6,300.00	6,298.43	6,304.83	6,300.97	22.34	179.84	91.11	-201.39	452.45	488.36	286.24	202.11	2.416	Minor Risk	
6,350.00	6,348.40	6,354.82	6,350.92	22.52	181.45	91.12	-199.42	452.45	487.27	283.36	203.91	2.390	Minor Risk	
6,400.00	6,398.37	6,404.55	6,400.61	22.69	182.94	91.14	-197.50	452.45	486.19	280.62	205.58	2.365	Minor Risk	
6,450.00	6,448.34	6,454.28	6,450.31	22.87	184.43	91.15	-195.61	452.45	485.15	277.90	207.25	2.341	Minor Risk	
6,500.00	6,498.31	6,504.02	6,500.01	23.05	185.91	91.18	-193.78	452.45	484.13	275.21	208.91	2.317	Minor Risk	
6,550.00	6,548.29	6,553.75	6,549.71	23.23	187.40	91.21	-191.98	452.45	483.13	272.55	210.58	2.294	Minor Risk	
6,600.00	6,598.26	6,603.49	6,599.41	23.41	188.89	91.24	-190.24	452.45	482.16	269.91	212.25	2.272	Minor Risk	
6,650.00	6,648.23	6,653.22	6,649.12	23.59	190.38	91.28	-188.54	452.45	481.22	267.30	213.92	2.250	Minor Risk	
6,700.00	6,698.20	6,702.96	6,698.83	23.77	191.86	91.32	-186.89	452.45	480.31	264.72	215.59	2.228	Minor Risk	
6,750.00	6,748.17	6,752.69	6,748.54	23.95	193.35	91.36	-185.28	452.45	479.42	262.16	217.26	2.207	Minor Risk	
6,800.00	6,798.14	6,845.68	6,798.14	24.13	196.08	91.41	-183.72	452.45	478.56	258.38	220.17	2.174	Minor Risk	
6,850.00	6,848.11	6,852.31	6,848.11	24.31	196.26	91.47	-182.19	452.45	477.72	257.19	220.53	2.166	Minor Risk	
6,900.00	6,898.08	6,902.30	6,898.08	24.49	197.64	91.52	-180.66	452.45	476.88	254.80	222.09	2.147	Minor Risk	
6,950.00	6,948.05	6,952.29	6,948.04	24.67	199.01	91.58	-179.14	452.45	476.05	252.41	223.64	2.129	Minor Risk	
7,000.00	6,998.02	7,002.28	6,998.01	24.85	200.39	91.64	-177.61	452.45	475.22	250.02	225.19	2.110	Minor Risk	
7,050.00	7,047.99	7,052.27	7,047.98	25.03	201.76	91.69	-176.08	452.45	474.38	247.64	226.75	2.092	Minor Risk	
7,100.00	7,097.96	7,102.26	7,097.95	25.21	203.13	91.75	-174.56	452.45	473.55	245.25	228.30	2.074	Minor Risk	
7,150.00	7,147.93	7,152.26	7,147.91	25.39	204.51	91.81	-173.03	452.45	472.71	242.86	229.85	2.057	Minor Risk	
7,200.00	7,197.90	7,202.25	7,197.88	25.57	205.88	91.86	-171.50	452.45	471.88	240.48	231.41	2.039	Minor Risk	
7,250.00	7,247.87	7,252.24	7,247.85	25.75	207.26	91.92	-169.98	452.45	471.05	238.09	232.96	2.022	Minor Risk	
7,300.00	7,297.84	7,302.26	7,297.85	25.92	208.64	91.98	-168.45	452.45	470.22	235.69	234.52	2.005	Minor Risk	
7,350.00	7,347.82	7,352.44	7,348.00	26.10	210.08	92.03	-166.89	452.45	469.37	233.23	236.14	1.988	Minor Risk	
7,400.00	7,397.79	7,402.62	7,398.16	26.28	211.52	92.09	-165.30	452.45	468.51	230.75	237.76	1.971	Minor Risk	
7,450.00	7,447.76	7,452.80	7,448.31	26.46	212.96	92.14	-163.68	452.45	467.62	228.25	239.38	1.953	Minor Risk	
7,500.00	7,497.73	7,502.98	7,498.47	26.64	214.40	92.18	-162.02	452.45	466.72	225.72	241.00	1.937	Minor Risk	
7,550.00	7,547.70	7,553.16	7,548.62	26.82	215.85	92.22	-160.32	452.45	465.79	223.18	242.61	1.920	Minor Risk	
7,600.00	7,597.67	7,603.34	7,598.77	27.00	217.29	92.26	-158.59	452.45	464.85	220.62	244.23	1.903	Minor Risk	

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

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	
Survey Program: 262-INC-ONLY													Offset Well Error:	
Sec 15-T23S-R31E - Todd 15 D Fed #004 (P&A) - Wellbore #1 - Inc Only Surveys													0.00 ft	
Reference													10.00 ft	
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)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
7,650.00	7,647.64	7,652.94	7,648.33	27.18	218.55	92.30		-156.89	452.45	463.91	218.23	245.68	1.888	Minor Risk
7,700.00	7,697.61	7,702.45	7,697.83	27.36	219.79	92.35		-155.29	452.45	463.03	215.92	247.10	1.874	Minor Risk
7,750.00	7,747.58	7,751.97	7,747.32	27.54	221.03	92.41		-153.76	452.45	462.19	213.66	248.53	1.860	Minor Risk
7,800.00	7,797.55	7,801.49	7,796.82	27.72	222.27	92.48		-152.32	452.45	461.41	211.45	249.95	1.846	Minor Risk
7,850.00	7,847.52	7,851.01	7,846.32	27.90	223.52	92.55		-150.97	452.45	460.68	209.30	251.38	1.833	Minor Risk
7,900.00	7,897.49	7,900.53	7,895.82	28.08	224.76	92.64		-149.71	452.45	460.00	207.19	252.80	1.820	Minor Risk
7,950.00	7,947.46	7,950.05	7,945.33	28.26	226.00	92.73		-148.52	452.45	459.37	205.14	254.23	1.807	Minor Risk
8,000.00	7,997.43	7,999.57	7,994.83	28.44	227.24	92.83		-147.43	452.45	458.80	203.14	255.65	1.795	Minor Risk
8,050.00	8,047.40	8,049.08	8,044.34	28.62	228.48	92.94		-146.42	452.45	458.27	201.20	257.08	1.783	Minor Risk
8,100.00	8,097.37	8,098.60	8,093.84	28.80	229.72	93.06		-145.50	452.45	457.81	199.31	258.50	1.771	Minor Risk
8,150.00	8,147.35	8,149.42	8,144.66	28.98	230.90	93.18		-144.54	452.45	457.34	197.49	259.85	1.760	Minor Risk
8,200.00	8,197.32	8,200.56	8,195.78	29.16	232.06	93.28		-143.37	452.45	456.74	195.56	261.18	1.749	Minor Risk
8,225.86	8,223.16	8,227.01	8,222.22	29.25	232.66	93.33		-142.68	452.45	456.39	194.52	261.87	1.743	Minor Risk, CC, ES, SF
8,250.00	8,247.29	8,251.00	8,210.22	29.34	232.38	93.31		-143.00	452.45	457.47	196.25	261.22	1.751	Minor Risk
8,300.00	8,297.26	8,251.00	8,210.22	29.52	232.38	93.31		-143.00	452.45	463.40	205.15	258.25	1.794	Minor Risk
8,350.00	8,347.23	8,251.00	8,210.22	29.70	232.38	93.31		-143.00	452.45	474.55	221.89	252.66	1.878	Minor Risk
8,400.00	8,397.20	8,251.00	8,210.22	29.88	232.38	93.31		-143.00	452.45	490.56	245.58	244.98	2.002	Minor Risk
8,450.00	8,447.17	8,251.00	8,210.22	30.06	232.38	93.31		-143.00	452.45	510.99	275.13	235.86	2.166	Minor Risk
8,500.00	8,497.14	8,251.00	8,210.22	30.24	232.38	93.31		-143.00	452.45	535.32	309.44	225.89	2.370	Minor Risk
8,550.00	8,547.11	8,251.00	8,210.22	30.42	232.38	93.31		-143.00	452.45	563.05	347.48	215.57	2.612	Alert
8,600.00	8,597.08	8,251.00	8,210.22	30.60	232.38	93.31		-143.00	452.45	593.71	388.40	205.31	2.892	Alert
8,650.00	8,647.05	8,251.00	8,210.22	30.78	232.38	93.31		-143.00	452.45	626.85	431.49	195.37	3.209	Alert
8,700.00	8,697.02	8,251.00	8,210.22	30.96	232.38	93.31		-143.00	452.45	662.12	476.21	185.91	3.562	Alert
8,750.00	8,746.99	8,251.00	8,210.22	31.14	232.38	93.31		-143.00	452.45	699.19	522.16	177.03	3.950	Alert
8,800.00	8,796.96	8,251.00	8,210.22	31.31	232.38	93.31		-143.00	452.45	737.78	569.02	168.77	4.372	Alert
8,850.00	8,846.93	8,251.00	8,210.22	31.49	232.38	93.31		-143.00	452.45	777.68	616.55	161.12	4.827	Alert
8,900.00	8,896.90	8,251.00	8,210.22	31.67	232.38	93.31		-143.00	452.45	818.68	664.60	154.08	5.313	
8,950.00	8,946.88	8,251.00	8,210.22	31.85	232.38	93.31		-143.00	452.45	860.64	713.04	147.60	5.831	
9,000.00	8,996.85	8,251.00	8,210.22	32.03	232.38	93.31		-143.00	452.45	903.41	761.76	141.65	6.378	
9,050.00	9,046.82	8,251.00	8,210.22	32.21	232.38	93.31		-143.00	452.45	946.90	810.71	136.19	6.953	
9,100.00	9,096.79	8,251.00	8,210.22	32.39	232.38	93.31		-143.00	452.45	991.00	859.82	131.17	7.555	
9,150.00	9,146.76	8,251.00	8,210.22	32.57	232.38	93.31		-143.00	452.45	1,035.63	909.07	126.56	8.183	
9,200.00	9,196.73	8,251.00	8,210.22	32.75	232.38	93.31		-143.00	452.45	1,080.74	958.42	122.32	8.835	
9,250.00	9,246.70	8,251.00	8,210.22	32.93	232.38	93.31		-143.00	452.45	1,126.26	1,007.84	118.41	9.511	
9,300.00	9,296.67	8,251.00	8,210.22	33.11	232.38	93.31		-143.00	452.45	1,172.14	1,057.33	114.81	10.209	
9,350.00	9,346.64	8,251.00	8,210.22	33.29	232.38	93.31		-143.00	452.45	1,218.35	1,106.86	111.48	10.928	
9,400.00	9,396.61	8,251.00	8,210.22	33.47	232.38	93.31		-143.00	452.45	1,264.84	1,156.43	108.41	11.667	
9,450.00	9,446.58	8,251.00	8,210.22	33.65	232.38	93.31		-143.00	452.45	1,311.60	1,206.04	105.56	12.425	
9,500.00	9,496.55	8,251.00	8,210.22	33.83	232.38	93.31		-143.00	452.45	1,358.58	1,255.66	102.92	13.200	
9,550.00	9,546.52	8,251.00	8,210.22	34.01	232.38	93.31		-143.00	452.45	1,405.78	1,305.30	100.47	13.992	
9,600.00	9,596.49	8,251.00	8,210.22	34.19	232.38	93.31		-143.00	452.45	1,453.16	1,354.96	98.19	14.799	

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset.Datum

Reference Depths are relative to RKB @ 3411.40ft

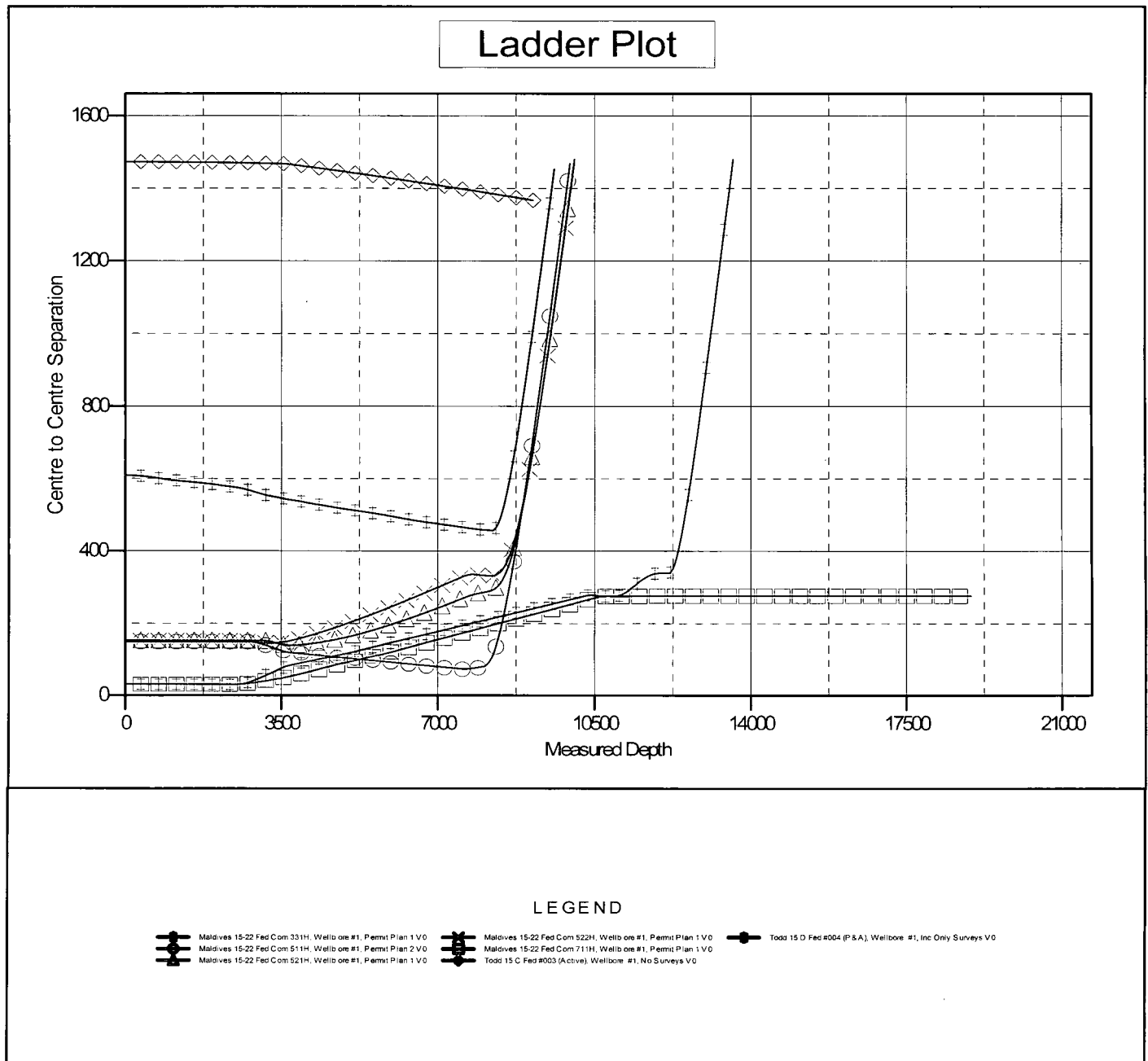
Offset Depths are relative to Offset Datum

Central Meridian is -104.333334

Coordinates are relative to: Maldives 15-22 Fed Com 621H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Grid Convergence at Surface is: 0.30°



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

Anticollision Report

Company:	WCDSC Permian NM	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Project:	Eddy County (NAD 83 NM Eastern)	TVD Reference:	RKB @ 3411.40ft
Reference Site:	Sec 15-T23S-R31E	MD Reference:	RKB @ 3411.40ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000.141_Prod US
Reference Design:	Permit Plan 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB @ 3411.40ft

Offset Depths are relative to Offset Datum

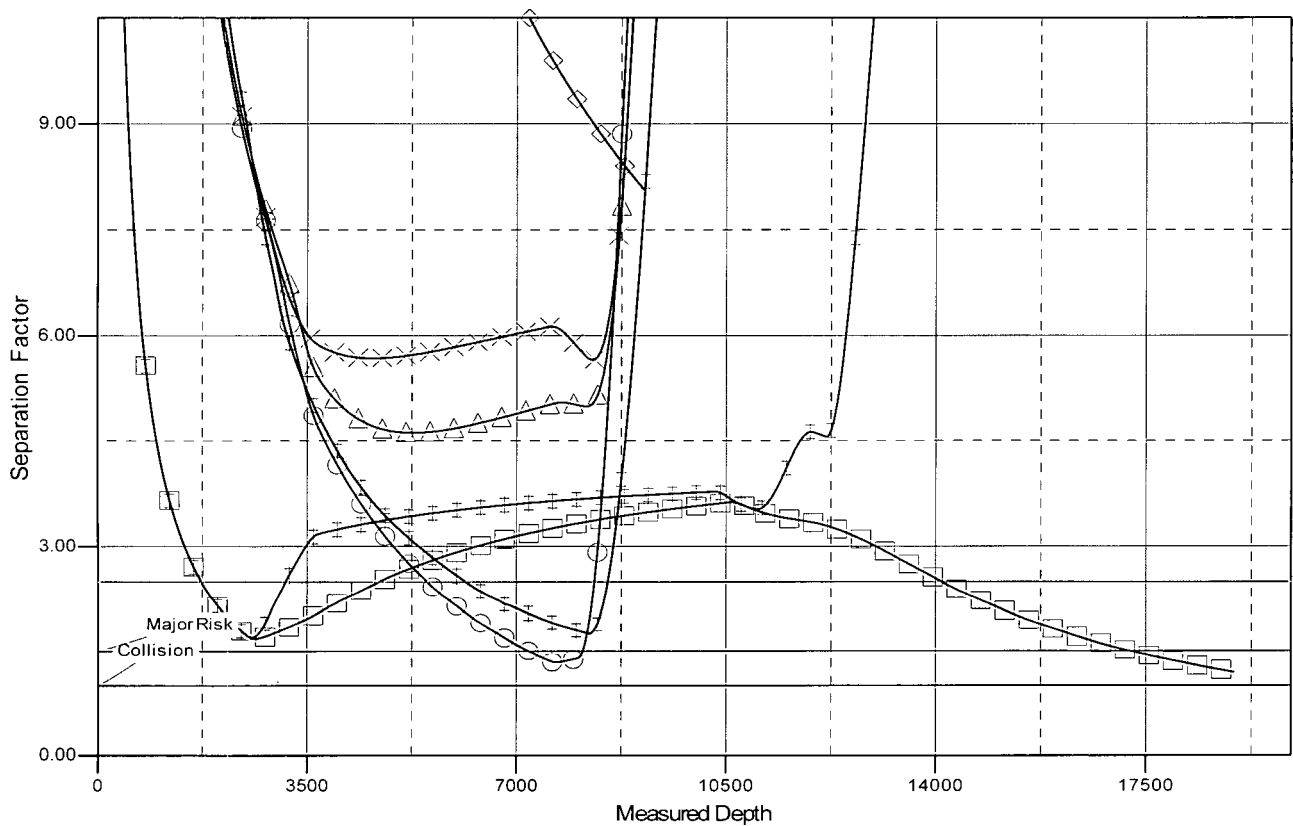
Central Meridian is -104.333334

Coordinates are relative to: Maldives 15-22 Fed Com 621H

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 331H, Wellbore #1, Permit Plan 1 V0
- Maldives 15-22 Fed Com 511H, Wellbore #1, Permit Plan 2 V0
- Maldives 15-22 Fed Com 521H, Wellbore #1, Permit Plan 1 V0
- Maldives 15-22 Fed Com 521H, Wellbore #1, Permit Plan 1 V0
- Maldives 15-22 Fed Com 711H, Wellbore #1, Permit Plan 1 V0
- Todd 15 C Fed #003 (Active), Wellbore #1, No Surveys V0
- Todd 15 D Fed #004 (P&A), Wellbore #1, Inc Only Surveys V0

WCDSC Permian NM

Eddy County (NAD 83 NM Eastern)

Sec 15-T23S-R31E

Maldives 15-22 Fed Com 621H

Wellbore #1

Plan: Permit Plan 1

Standard Planning Report - Geographic

07 June, 2018

Planning Report - Geographic

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Company:	WCDSC Permian NM	TVD Reference:	RKB.@ 3411.40ft
Project:	Eddy County (NAD 83 NM Eastern)	MD Reference:	RKB @ 3411.40ft
Site:	Sec 15-T23S-R31E	North Reference:	Grid
Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 1		

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

Site	Sec 15-T23S-R31E		
Site Position:		Northing:	477,592.96 usft
From:	Map	Easting:	714,064.76 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	32.311738
		Longitude:	-103.774231
		Grid Convergence:	0.30 °

Well	Maldives 15-22 Fed Com 621H		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.50 ft	Wellhead Elevation:	
		Latitude:	32.311052
		Longitude:	-103.772483
		Ground Level:	3,386.40 ft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2015	5/1/2018	6.96
			Dip Angle
			(°)
			60.10
			Field Strength
			(nT)
			47,879.21554135

Design	Permit Plan 1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			Direction
			(°)
			178.63

Plan Survey Tool Program	Date 6/7/2018		
Depth From	Depth To	Survey (Wellbore)	Tool Name
(ft)	(ft)		
1	0.00	18,958.49 Permit Plan 1 (Wellbore #1)	MWD+HDGM
			OWSG MWD + HDGM

Plan Sections										
Measured			Vertical			Dogleg	Build	Turn		
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Rate	Rate	Rate	TFO	Target
(ft)	(°)	(°)	(ft)	(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	
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,696.41	1.96	33.70	3,696.37	2.80	1.87	1.00	1.00	0.00	33.70	
10,573.17	1.96	33.70	10,569.09	198.88	132.65	0.00	0.00	0.00	0.00	
10,704.10	0.00	0.00	10,700.00	200.74	133.89	1.50	-1.50	0.00	180.00	VP - Maldives 15-22 Fed C
11,051.14	0.00	0.00	11,047.04	200.74	133.89	0.00	0.00	0.00	0.00	
11,951.15	90.00	179.68	11,620.00	-372.21	137.13	10.00	10.00	0.00	179.68	Maldives 15-22 Fed C
18,958.49	90.00	179.68	11,620.00	-7,379.43	176.74	0.00	0.00	0.00	0.00	Maldives 15-22 Fed C

Planning Report - Geographic

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3411.40ft
Project:	Eddy County (NAD 83 NM Eastern)	MD Reference:	RKB @ 3411.40ft
Site:	Sec 15-T23S-R31E	North Reference:	Grid
Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	477,346.20	714,606.15	32.311052	-103.772483
100.00	0.00	0.00	100.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
200.00	0.00	0.00	200.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
300.00	0.00	0.00	300.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
400.00	0.00	0.00	400.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
500.00	0.00	0.00	500.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
600.00	0.00	0.00	600.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
700.00	0.00	0.00	700.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
800.00	0.00	0.00	800.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
900.00	0.00	0.00	900.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
1,000.00	0.00	0.00	1,000.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
1,100.00	0.00	0.00	1,100.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
1,200.00	0.00	0.00	1,200.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
1,300.00	0.00	0.00	1,300.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
1,400.00	0.00	0.00	1,400.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
1,500.00	0.00	0.00	1,500.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
1,600.00	0.00	0.00	1,600.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
1,700.00	0.00	0.00	1,700.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
1,800.00	0.00	0.00	1,800.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
1,900.00	0.00	0.00	1,900.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
2,000.00	0.00	0.00	2,000.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
2,100.00	0.00	0.00	2,100.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
2,200.00	0.00	0.00	2,200.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
2,300.00	0.00	0.00	2,300.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
2,400.00	0.00	0.00	2,400.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
2,500.00	0.00	0.00	2,500.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
2,600.00	0.00	0.00	2,600.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
2,700.00	0.00	0.00	2,700.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
2,800.00	0.00	0.00	2,800.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
2,900.00	0.00	0.00	2,900.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
3,000.00	0.00	0.00	3,000.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
3,100.00	0.00	0.00	3,100.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
3,200.00	0.00	0.00	3,200.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
3,300.00	0.00	0.00	3,300.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
3,400.00	0.00	0.00	3,400.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
3,500.00	0.00	0.00	3,500.00	0.00	0.00	477,346.20	714,606.15	32.311052	-103.772483
3,600.00	1.00	33.70	3,600.00	0.73	0.48	477,346.93	714,606.63	32.311054	-103.772482
3,696.41	1.96	33.70	3,696.37	2.80	1.87	477,349.00	714,608.01	32.311059	-103.772477
3,700.00	1.96	33.70	3,699.96	2.90	1.94	477,349.10	714,608.08	32.311059	-103.772477
3,800.00	1.96	33.70	3,799.90	5.75	3.84	477,351.95	714,609.98	32.311067	-103.772471
3,900.00	1.96	33.70	3,899.84	8.61	5.74	477,354.81	714,611.89	32.311075	-103.772464
4,000.00	1.96	33.70	3,999.78	11.46	7.64	477,357.66	714,613.79	32.311083	-103.772458
4,100.00	1.96	33.70	4,099.72	14.31	9.54	477,360.51	714,615.69	32.311091	-103.772452
4,200.00	1.96	33.70	4,199.67	17.16	11.44	477,363.36	714,617.59	32.311099	-103.772446
4,300.00	1.96	33.70	4,299.61	20.01	13.35	477,366.21	714,619.49	32.311106	-103.772440
4,400.00	1.96	33.70	4,399.55	22.86	15.25	477,369.06	714,621.39	32.311114	-103.772433
4,500.00	1.96	33.70	4,499.49	25.71	17.15	477,371.91	714,623.30	32.311122	-103.772427
4,600.00	1.96	33.70	4,599.43	28.56	19.05	477,374.76	714,625.20	32.311130	-103.772421
4,700.00	1.96	33.70	4,699.37	31.42	20.95	477,377.62	714,627.10	32.311138	-103.772415
4,800.00	1.96	33.70	4,799.31	34.27	22.86	477,380.47	714,629.00	32.311145	-103.772409
4,900.00	1.96	33.70	4,899.25	37.12	24.76	477,383.32	714,630.90	32.311153	-103.772402
5,000.00	1.96	33.70	4,999.20	39.97	26.66	477,386.17	714,632.80	32.311161	-103.772396
5,100.00	1.96	33.70	5,099.14	42.82	28.56	477,389.02	714,634.71	32.311169	-103.772390
5,200.00	1.96	33.70	5,199.08	45.67	30.46	477,391.87	714,636.61	32.311177	-103.772384

Planning Report - Geographic

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3411.40ft
Project:	Eddy County (NAD 83 NM Eastern)	MD Reference:	RKB @ 3411.40ft
Site:	Sec 15-T23S-R31E	North Reference:	Grid
Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
5,300.00	1.96	33.70	5,299.02	48.52	32.36	477,394.72	714,638.51	32.311184	-103.772378
5,400.00	1.96	33.70	5,398.96	51.37	34.27	477,397.57	714,640.41	32.311192	-103.772371
5,500.00	1.96	33.70	5,498.90	54.23	36.17	477,400.43	714,642.31	32.311200	-103.772365
5,600.00	1.96	33.70	5,598.84	57.08	38.07	477,403.28	714,644.21	32.311208	-103.772359
5,700.00	1.96	33.70	5,698.78	59.93	39.97	477,406.13	714,646.12	32.311216	-103.772353
5,800.00	1.96	33.70	5,798.73	62.78	41.87	477,408.98	714,648.02	32.311224	-103.772347
5,900.00	1.96	33.70	5,898.67	65.63	43.77	477,411.83	714,649.92	32.311231	-103.772340
6,000.00	1.96	33.70	5,998.61	68.48	45.68	477,414.68	714,651.82	32.311239	-103.772334
6,100.00	1.96	33.70	6,098.55	71.33	47.58	477,417.53	714,653.72	32.311247	-103.772328
6,200.00	1.96	33.70	6,198.49	74.18	49.48	477,420.39	714,655.63	32.311255	-103.772322
6,300.00	1.96	33.70	6,298.43	77.04	51.38	477,423.24	714,657.53	32.311263	-103.772316
6,400.00	1.96	33.70	6,398.37	79.89	53.28	477,426.09	714,659.43	32.311270	-103.772309
6,500.00	1.96	33.70	6,498.31	82.74	55.18	477,428.94	714,661.33	32.311278	-103.772303
6,600.00	1.96	33.70	6,598.26	85.59	57.09	477,431.79	714,663.23	32.311286	-103.772297
6,700.00	1.96	33.70	6,698.20	88.44	58.99	477,434.64	714,665.13	32.311294	-103.772291
6,800.00	1.96	33.70	6,798.14	91.29	60.89	477,437.49	714,667.04	32.311302	-103.772284
6,900.00	1.96	33.70	6,898.08	94.14	62.79	477,440.34	714,668.94	32.311309	-103.772278
7,000.00	1.96	33.70	6,998.02	96.99	64.69	477,443.20	714,670.84	32.311317	-103.772272
7,100.00	1.96	33.70	7,097.96	99.85	66.59	477,446.05	714,672.74	32.311325	-103.772266
7,200.00	1.96	33.70	7,197.90	102.70	68.50	477,448.90	714,674.64	32.311333	-103.772260
7,300.00	1.96	33.70	7,297.84	105.55	70.40	477,451.75	714,676.54	32.311341	-103.772253
7,400.00	1.96	33.70	7,397.79	108.40	72.30	477,454.60	714,678.45	32.311348	-103.772247
7,500.00	1.96	33.70	7,497.73	111.25	74.20	477,457.45	714,680.35	32.311356	-103.772241
7,600.00	1.96	33.70	7,597.67	114.10	76.10	477,460.30	714,682.25	32.311364	-103.772235
7,700.00	1.96	33.70	7,697.61	116.95	78.01	477,463.15	714,684.15	32.311372	-103.772229
7,800.00	1.96	33.70	7,797.55	119.80	79.91	477,466.01	714,686.05	32.311380	-103.772222
7,900.00	1.96	33.70	7,897.49	122.66	81.81	477,468.86	714,687.95	32.311388	-103.772216
8,000.00	1.96	33.70	7,997.43	125.51	83.71	477,471.71	714,689.86	32.311395	-103.772210
8,100.00	1.96	33.70	8,097.37	128.36	85.61	477,474.56	714,691.76	32.311403	-103.772204
8,200.00	1.96	33.70	8,197.32	131.21	87.51	477,477.41	714,693.66	32.311411	-103.772198
8,300.00	1.96	33.70	8,297.26	134.06	89.42	477,480.26	714,695.56	32.311419	-103.772191
8,400.00	1.96	33.70	8,397.20	136.91	91.32	477,483.11	714,697.46	32.311427	-103.772185
8,500.00	1.96	33.70	8,497.14	139.76	93.22	477,485.96	714,699.36	32.311434	-103.772179
8,600.00	1.96	33.70	8,597.08	142.61	95.12	477,488.82	714,701.27	32.311442	-103.772173
8,700.00	1.96	33.70	8,697.02	145.47	97.02	477,491.67	714,703.17	32.311450	-103.772167
8,800.00	1.96	33.70	8,796.96	148.32	98.92	477,494.52	714,705.07	32.311458	-103.772160
8,900.00	1.96	33.70	8,896.90	151.17	100.83	477,497.37	714,706.97	32.311466	-103.772154
9,000.00	1.96	33.70	8,996.85	154.02	102.73	477,500.22	714,708.87	32.311473	-103.772148
9,100.00	1.96	33.70	9,096.79	156.87	104.63	477,503.07	714,710.78	32.311481	-103.772142
9,200.00	1.96	33.70	9,196.73	159.72	106.53	477,505.92	714,712.68	32.311489	-103.772136
9,300.00	1.96	33.70	9,296.67	162.57	108.43	477,508.77	714,714.58	32.311497	-103.772129
9,400.00	1.96	33.70	9,396.61	165.43	110.33	477,511.63	714,716.48	32.311505	-103.772123
9,500.00	1.96	33.70	9,496.55	168.28	112.24	477,514.48	714,718.38	32.311512	-103.772117
9,600.00	1.96	33.70	9,596.49	171.13	114.14	477,517.33	714,720.28	32.311520	-103.772111
9,700.00	1.96	33.70	9,696.43	173.98	116.04	477,520.18	714,722.19	32.311528	-103.772105
9,800.00	1.96	33.70	9,796.38	176.83	117.94	477,523.03	714,724.09	32.311536	-103.772098
9,900.00	1.96	33.70	9,896.32	179.68	119.84	477,525.88	714,725.99	32.311544	-103.772092
10,000.00	1.96	33.70	9,996.26	182.53	121.75	477,528.73	714,727.89	32.311552	-103.772086
10,100.00	1.96	33.70	10,096.20	185.38	123.65	477,531.58	714,729.79	32.311559	-103.772080
10,200.00	1.96	33.70	10,196.14	188.24	125.55	477,534.44	714,731.69	32.311567	-103.772074
10,300.00	1.96	33.70	10,296.08	191.09	127.45	477,537.29	714,733.60	32.311575	-103.772067
10,400.00	1.96	33.70	10,396.02	193.94	129.35	477,540.14	714,735.50	32.311583	-103.772061
10,500.00	1.96	33.70	10,495.96	196.79	131.25	477,542.99	714,737.40	32.311591	-103.772055
10,573.17	1.96	33.70	10,569.09	198.88	132.65	477,545.08	714,738.79	32.311596	-103.772050

Planning Report - Geographic

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well Maldives 15-22 Fed Com 621H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3411.40ft
Project:	Eddy County (NAD 83 NM Eastern)	MD Reference:	RKB @ 3411.40ft
Site:	Sec 15-T23S-R31E	North Reference:	Grid
Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
10,600.00	1.56	33.70	10,595.91	199.56	133.10	477,545.76	714,739.25	32.311598	-103.772049
10,700.00	0.06	33.70	10,695.90	200.74	133.89	477,546.94	714,740.03	32.311601	-103.772046
10,704.10	0.00	0.00	10,700.00	200.74	133.89	477,546.94	714,740.04	32.311601	-103.772046
10,800.00	0.00	0.00	10,795.90	200.74	133.89	477,546.94	714,740.04	32.311601	-103.772046
10,900.00	0.00	0.00	10,895.90	200.74	133.89	477,546.94	714,740.04	32.311601	-103.772046
11,000.00	0.00	0.00	10,995.90	200.74	133.89	477,546.94	714,740.04	32.311601	-103.772046
11,051.14	0.00	0.00	11,047.04	200.74	133.89	477,546.94	714,740.04	32.311601	-103.772046
KOP @ 11051' MD, 50' FNL, 674' FWL									
11,100.00	4.89	179.68	11,095.84	198.66	133.90	477,544.86	714,740.05	32.311596	-103.772046
11,200.00	14.89	179.68	11,194.23	181.51	134.00	477,527.71	714,740.14	32.311549	-103.772046
11,300.00	24.89	179.68	11,288.15	147.54	134.19	477,493.74	714,740.34	32.311455	-103.772046
11,400.00	34.89	179.68	11,374.74	97.78	134.47	477,443.98	714,740.62	32.311318	-103.772046
11,500.00	44.89	179.68	11,451.37	33.74	134.83	477,379.94	714,740.98	32.311142	-103.772046
11,600.00	54.89	179.68	11,515.72	-42.64	135.27	477,303.56	714,741.41	32.310932	-103.772046
11,644.50	59.34	179.68	11,539.88	-80.00	135.48	477,266.20	714,741.62	32.310830	-103.772046
1st Take Point @ 11645' MD, 330' FNL, 675' FWL									
11,700.00	64.89	179.68	11,565.83	-129.03	135.75	477,217.17	714,741.90	32.310695	-103.772046
11,800.00	74.89	179.68	11,600.18	-222.81	136.28	477,123.39	714,742.43	32.310437	-103.772046
11,900.00	84.89	179.68	11,617.72	-321.13	136.84	477,025.07	714,742.99	32.310167	-103.772046
11,951.15	90.00	179.68	11,620.00	-372.21	137.13	476,973.99	714,743.27	32.310026	-103.772046
12,000.00	90.00	179.68	11,620.00	-421.06	137.41	476,925.14	714,743.55	32.309892	-103.772046
12,100.00	90.00	179.68	11,620.00	-521.06	137.97	476,825.14	714,744.12	32.309617	-103.772045
12,200.00	90.00	179.68	11,620.00	-621.06	138.54	476,725.14	714,744.68	32.309342	-103.772045
12,300.00	90.00	179.68	11,620.00	-721.06	139.10	476,625.15	714,745.25	32.309068	-103.772045
12,400.00	90.00	179.68	11,620.00	-821.05	139.67	476,525.15	714,745.81	32.308793	-103.772045
12,500.00	90.00	179.68	11,620.00	-921.05	140.23	476,425.15	714,746.38	32.308518	-103.772045
12,600.00	90.00	179.68	11,620.00	-1,021.05	140.80	476,325.15	714,746.94	32.308243	-103.772045
12,700.00	90.00	179.68	11,620.00	-1,121.05	141.36	476,225.15	714,747.51	32.307968	-103.772045
12,800.00	90.00	179.68	11,620.00	-1,221.05	141.93	476,125.15	714,748.07	32.307693	-103.772044
12,900.00	90.00	179.68	11,620.00	-1,321.05	142.49	476,025.16	714,748.64	32.307418	-103.772044
13,000.00	90.00	179.68	11,620.00	-1,421.04	143.06	475,925.16	714,749.20	32.307143	-103.772044
13,100.00	90.00	179.68	11,620.00	-1,521.04	143.62	475,825.16	714,749.77	32.306869	-103.772044
13,200.00	90.00	179.68	11,620.00	-1,621.04	144.19	475,725.16	714,750.33	32.306594	-103.772044
13,300.00	90.00	179.68	11,620.00	-1,721.04	144.75	475,625.16	714,750.90	32.306319	-103.772044
13,400.00	90.00	179.68	11,620.00	-1,821.04	145.32	475,525.17	714,751.46	32.306044	-103.772044
13,500.00	90.00	179.68	11,620.00	-1,921.04	145.88	475,425.17	714,752.03	32.305769	-103.772043
13,600.00	90.00	179.68	11,620.00	-2,021.04	146.45	475,325.17	714,752.60	32.305494	-103.772043
13,700.00	90.00	179.68	11,620.00	-2,121.03	147.02	475,225.17	714,753.16	32.305219	-103.772043
13,800.00	90.00	179.68	11,620.00	-2,221.03	147.58	475,125.17	714,753.73	32.304944	-103.772043
13,900.00	90.00	179.68	11,620.00	-2,321.03	148.15	475,025.17	714,754.29	32.304670	-103.772043
14,000.00	90.00	179.68	11,620.00	-2,421.03	148.71	474,925.18	714,754.86	32.304395	-103.772043
14,100.00	90.00	179.68	11,620.00	-2,521.03	149.28	474,825.18	714,755.42	32.304120	-103.772043
14,200.00	90.00	179.68	11,620.00	-2,621.03	149.84	474,725.18	714,755.99	32.303845	-103.772043
14,300.00	90.00	179.68	11,620.00	-2,721.02	150.41	474,625.18	714,756.55	32.303570	-103.772042
14,400.00	90.00	179.68	11,620.00	-2,821.02	150.97	474,525.18	714,757.12	32.303295	-103.772042
14,500.00	90.00	179.68	11,620.00	-2,921.02	151.54	474,425.19	714,757.68	32.303020	-103.772042
14,600.00	90.00	179.68	11,620.00	-3,021.02	152.10	474,325.19	714,758.25	32.302745	-103.772042
14,700.00	90.00	179.68	11,620.00	-3,121.02	152.67	474,225.19	714,758.81	32.302471	-103.772042
14,800.00	90.00	179.68	11,620.00	-3,221.02	153.23	474,125.19	714,759.38	32.302196	-103.772042
14,900.00	90.00	179.68	11,620.00	-3,321.01	153.80	474,025.19	714,759.94	32.301921	-103.772042
15,000.00	90.00	179.68	11,620.00	-3,421.01	154.36	473,925.19	714,760.51	32.301646	-103.772041
15,100.00	90.00	179.68	11,620.00	-3,521.01	154.93	473,825.20	714,761.07	32.301371	-103.772041
15,200.00	90.00	179.68	11,620.00	-3,621.01	155.49	473,725.20	714,761.64	32.301096	-103.772041

Planning Report - Geographic

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3411.40ft
Project:	Eddy County (NAD 83 NM Eastern)	MD Reference:	RKB @ 3411.40ft
Site:	Sec 15-T23S-R31E	North Reference:	Grid
Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	11,620.00	-3,721.01	156.06	473,625.20	714,762.21		32.300821	-103.772041
15,400.00	90.00	179.68	11,620.00	-3,821.01	156.62	473,525.20	714,762.77		32.300546	-103.772041
15,500.00	90.00	179.68	11,620.00	-3,921.01	157.19	473,425.20	714,763.34		32.300271	-103.772041
15,600.00	90.00	179.68	11,620.00	-4,021.00	157.76	473,325.21	714,763.90		32.299997	-103.772041
15,700.00	90.00	179.68	11,620.00	-4,121.00	158.32	473,225.21	714,764.47		32.299722	-103.772041
15,800.00	90.00	179.68	11,620.00	-4,221.00	158.89	473,125.21	714,765.03		32.299447	-103.772040
15,900.00	90.00	179.68	11,620.00	-4,321.00	159.45	473,025.21	714,765.60		32.299172	-103.772040
16,000.00	90.00	179.68	11,620.00	-4,421.00	160.02	472,925.21	714,766.16		32.298897	-103.772040
16,100.00	90.00	179.68	11,620.00	-4,521.00	160.58	472,825.21	714,766.73		32.298622	-103.772040
16,200.00	90.00	179.68	11,620.00	-4,620.99	161.15	472,725.22	714,767.29		32.298347	-103.772040
16,300.00	90.00	179.68	11,620.00	-4,720.99	161.71	472,625.22	714,767.86		32.298072	-103.772040
16,400.00	90.00	179.68	11,620.00	-4,820.99	162.28	472,525.22	714,768.42		32.297798	-103.772040
16,500.00	90.00	179.68	11,620.00	-4,920.99	162.84	472,425.22	714,768.99		32.297523	-103.772039
16,600.00	90.00	179.68	11,620.00	-5,020.99	163.41	472,325.22	714,769.55		32.297248	-103.772039
16,700.00	90.00	179.68	11,620.00	-5,120.99	163.97	472,225.22	714,770.12		32.296973	-103.772039
16,800.00	90.00	179.68	11,620.00	-5,220.98	164.54	472,125.23	714,770.68		32.296698	-103.772039
16,900.00	90.00	179.68	11,620.00	-5,320.98	165.10	472,025.23	714,771.25		32.296423	-103.772039
17,000.00	90.00	179.68	11,620.00	-5,420.98	165.67	471,925.23	714,771.82		32.296148	-103.772039
17,100.00	90.00	179.68	11,620.00	-5,520.98	166.23	471,825.23	714,772.38		32.295873	-103.772039
17,200.00	90.00	179.68	11,620.00	-5,620.98	166.80	471,725.23	714,772.95		32.295599	-103.772038
17,300.00	90.00	179.68	11,620.00	-5,720.98	167.37	471,625.24	714,773.51		32.295324	-103.772038
17,400.00	90.00	179.68	11,620.00	-5,820.97	167.93	471,525.24	714,774.08		32.295049	-103.772038
17,500.00	90.00	179.68	11,620.00	-5,920.97	168.50	471,425.24	714,774.64		32.294774	-103.772038
17,600.00	90.00	179.68	11,620.00	-6,020.97	169.06	471,325.24	714,775.21		32.294499	-103.772038
17,700.00	90.00	179.68	11,620.00	-6,120.97	169.63	471,225.24	714,775.77		32.294224	-103.772038
17,800.00	90.00	179.68	11,620.00	-6,220.97	170.19	471,125.24	714,776.34		32.293949	-103.772038
17,900.00	90.00	179.68	11,620.00	-6,320.97	170.76	471,025.25	714,776.90		32.293674	-103.772038
18,000.00	90.00	179.68	11,620.00	-6,420.97	171.32	470,925.25	714,777.47		32.293400	-103.772037
18,100.00	90.00	179.68	11,620.00	-6,520.96	171.89	470,825.25	714,778.03		32.293125	-103.772037
18,200.00	90.00	179.68	11,620.00	-6,620.96	172.45	470,725.25	714,778.60		32.292850	-103.772037
18,300.00	90.00	179.68	11,620.00	-6,720.96	173.02	470,625.25	714,779.16		32.292575	-103.772037
18,400.00	90.00	179.68	11,620.00	-6,820.96	173.58	470,525.26	714,779.73		32.292300	-103.772037
18,500.00	90.00	179.68	11,620.00	-6,920.96	174.15	470,425.26	714,780.29		32.292025	-103.772037
18,600.00	90.00	179.68	11,620.00	-7,020.96	174.71	470,325.26	714,780.86		32.291750	-103.772037
18,700.00	90.00	179.68	11,620.00	-7,120.95	175.28	470,225.26	714,781.42		32.291475	-103.772036
18,800.00	90.00	179.68	11,620.00	-7,220.95	175.84	470,125.26	714,781.99		32.291201	-103.772036
18,858.49	90.00	179.68	11,620.00	-7,279.44	176.18	470,066.77	714,782.32		32.291040	-103.772036
Last Take Point @ 18858' MD, 2350' FNL, 675' FWL										
18,900.00	90.00	179.68	11,620.00	-7,320.95	176.41	470,025.26	714,782.56		32.290926	-103.772036
18,958.49	90.00	179.68	11,620.00	-7,379.43	176.74	469,966.78	714,782.89		32.290765	-103.772036
PBHL; 2350' FNL, 675' FWL										

Planning Report - Geographic

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference	Well Maldives 15-22 Fed Com 621H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3411.40ft
Project:	Eddy County (NAD 83 NM Eastern)	MD Reference:	RKB @ 3411.40ft
Site:	Sec 15-T23S-R31E	North Reference:	Grid
Well:	Maldives 15-22 Fed Com 621H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 1		

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)		
Maldives 15-22 Fed Con	0.00	0.01	0.00	-7,379.43	176.74	469,966.78	714,782.89	32.290765	-103.772036
- plan misses target center by 7381.55ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
VP - Maldives 15-22 621	0.00	0.00	10,700.00	200.74	133.89	477,546.94	714,740.04	32.311601	-103.772046
- plan hits target center									
- Point									

Plan Annotations				
Measured	Vertical	Local Coordinates		
Depth	Depth	+N/-S	+E/-W	Comment
(ft)	(ft)	(ft)	(ft)	
11,051.14	11,047.04	200.74	133.89	KOP @ 11051' MD, 50' FNL, 674' FWL
11,644.50	11,539.88	-80.00	135.48	1st Take Point @ 11645' MD, 330' FNL, 675' FWL
18,858.49	11,620.00	-7,279.44	176.18	Last Take Point @ 18858' MD, 2350' FNL, 675' FWL
18,958.49	11,620.00	-7,379.43	176.74	PBHL, 2350' FNL, 675' FWL

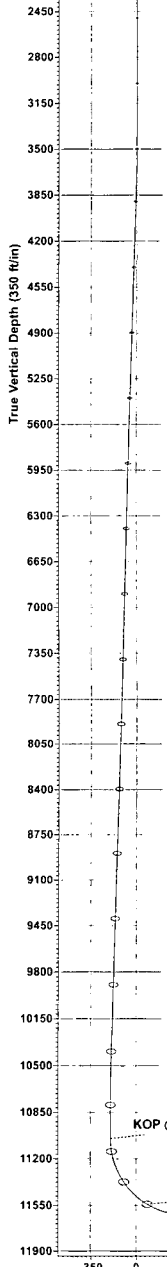
WCDSC Permian NM

WELL DETAILS: Maldives 15-22 Fed Com 621H

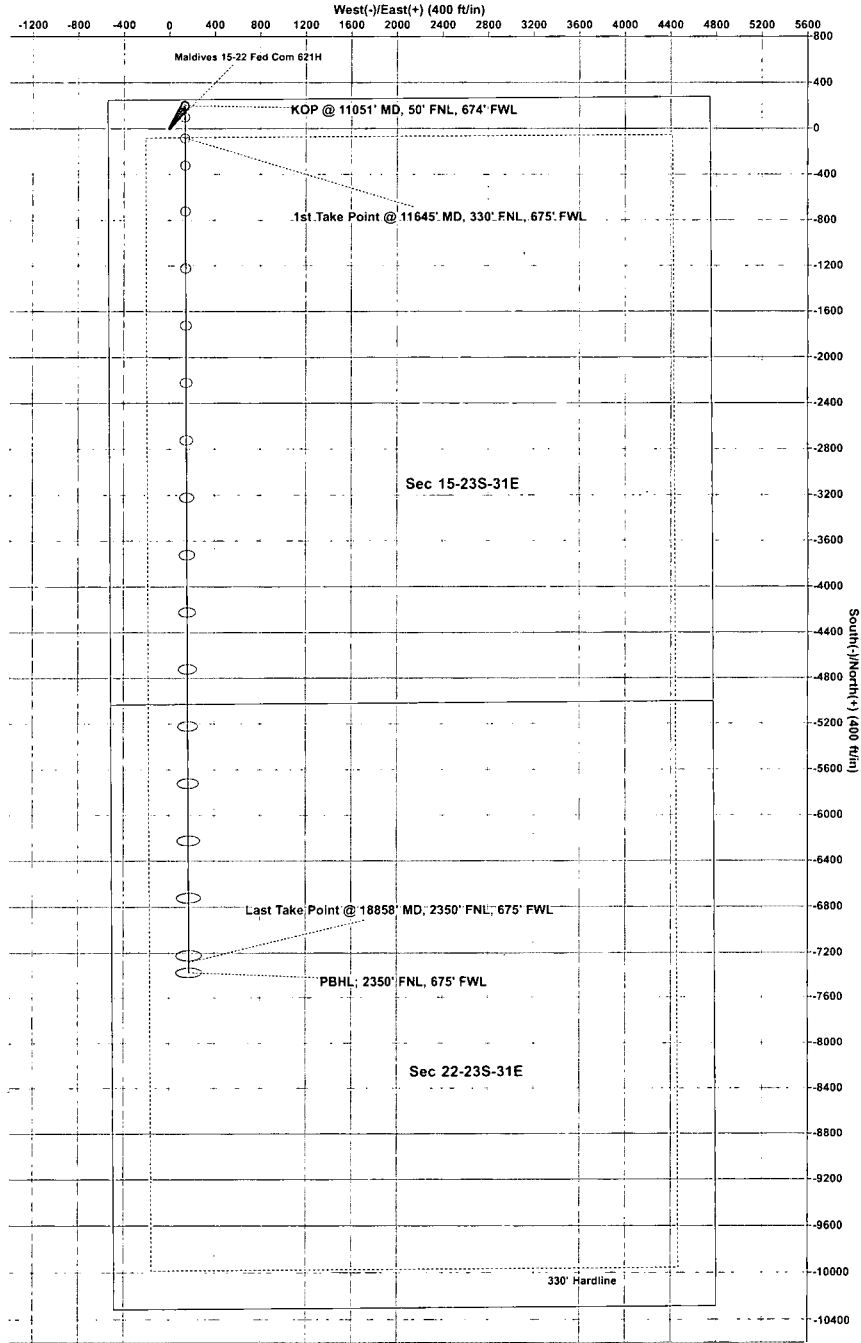
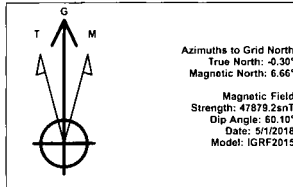
RKB @ 3411.40ft
3386.40
Northing 477346.20 Easting 714606.15 Latitude 32.311051 Longitude -103.772483

SECTION DETAILS Permit Plan 1

MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	
3696.41	1.96	33.70	3696.37	2.80	1.87	1.00	-2.75	
10573.17	1.96	33.70	10569.09	198.88	132.65	0.00	-195.64	
5 10704.10	0.00	0.00	10700.00	200.74	133.89	1.50	-197.48	
6 11051.14	0.00	0.00	11047.04	200.74	133.89	0.00	-197.48	KOP @ 11051' MD, 50' FNL, 674' FWL
7 11951.15	90.00	179.68	11620.00	-372.21	137.13	10.00	375.38	
8 18958.49	90.00	179.68	11620.00	-7379.43	176.74	0.00	7381.55	PBHL; 2350' FNL, 675' FWL



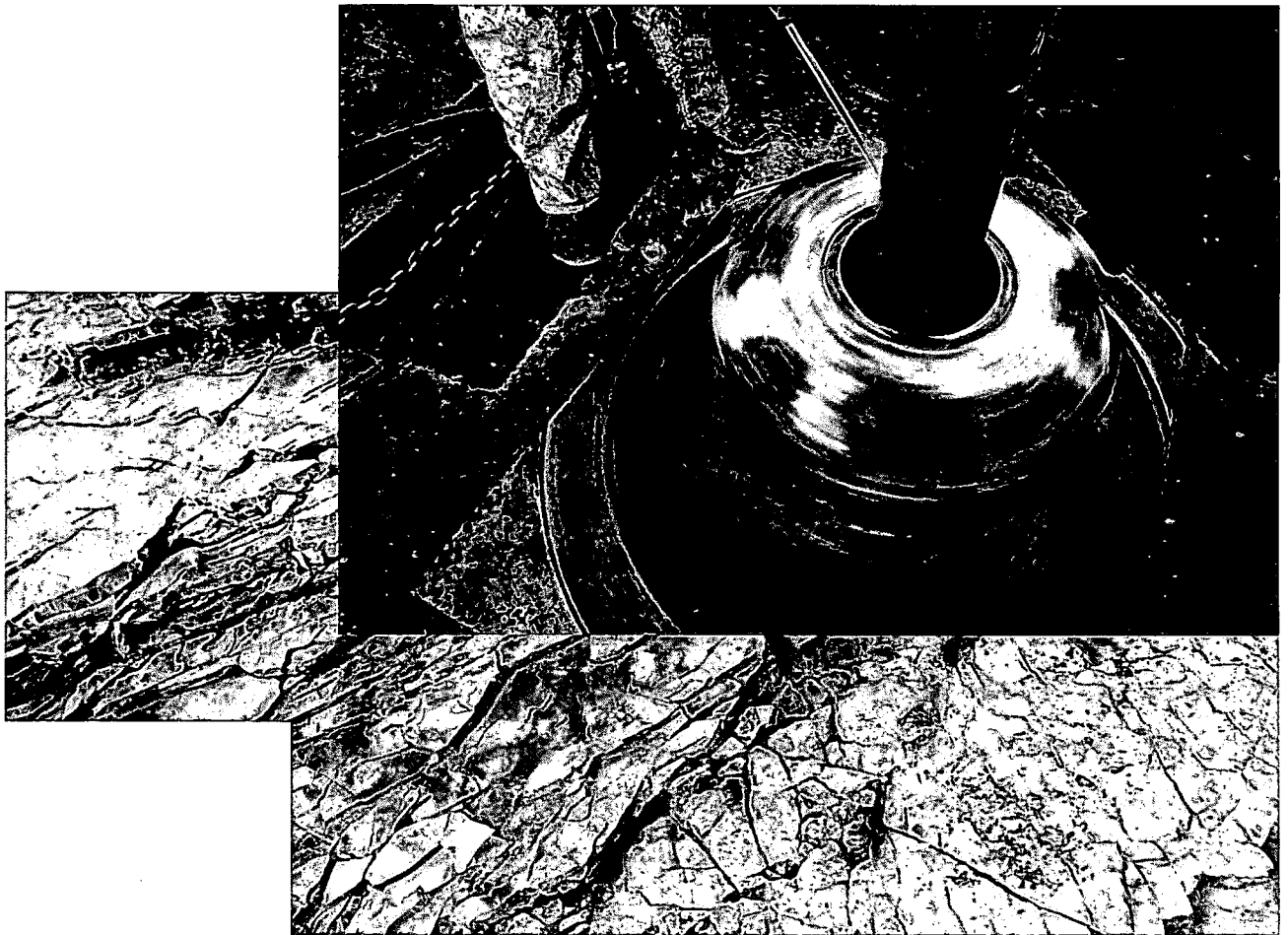
devon



Vertical Section at 178.63° (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.

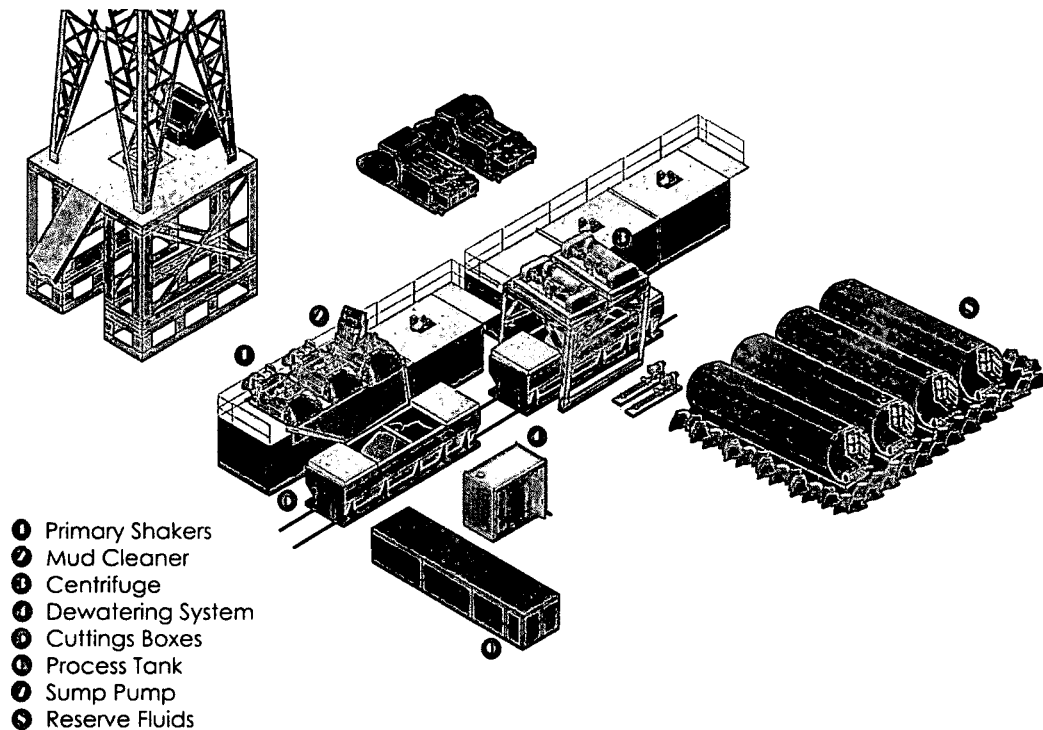
II. Operations and Maintenance Plan

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

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Geometry

Imperial

S.I.

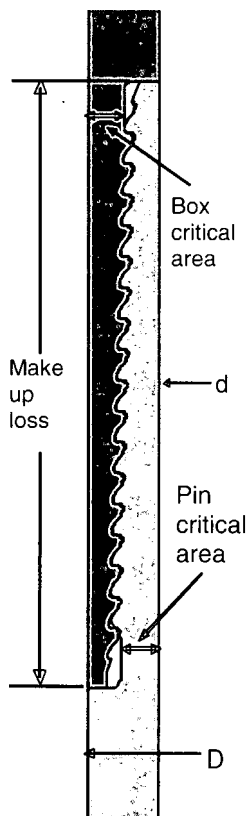
Pipe Body

Grade	P110		P110	
Pipe OD (D)	7 5/8	in	193.68	mm
Weight	29.70	lb/ft	44.20	kg/m
Actual weight	29.04		43.21	kg/m
Wall Thickness (t)	0.375	in	9.53	mm
Pipe ID (d)	6.875	in	174.63	mm
Pipe body cross section	8.537	in ²	5,508	mm ²
Drift Dia.	6.750	in	171.45	mm

Connection

Box OD (W)	7.625	in	193.68	mm
PIN ID	6.875	in	174.63	mm
Make up Loss	3.040	in	77.22	mm
Box Critical Area	4.424	in ²	2854	mm ²
Joint load efficiency	60	%	60	%
Thread Taper	1 / 16 (3/4" per ft)			
Number of Threads	5 TPI			

FLUSHMAX-III



Performance

Performance Properties for Pipe Body

S.M.Y.S.	939	kips	4,177	kN
M.I.Y.P.	9,470	psi	65.31	MPa
Collapse Strength	5,350	psi	36.90	MPa

Note S.M.Y.S.= Specified Minimum YIELD Strength of Pipe body
M.I.Y.P. = Minimum Internal Yield Pressure of Pipe body

Performance Properties for Connection

Tensile Yield load	563 kips (60% of S.M.Y.S.)
Min. Compression Yield	563 kips (60% of S.M.Y.S.)
Internal Pressure	7,580 psi (80% of M.I.Y.P.)
External Pressure	100% of Collapse Strength
Max. DLS (deg. /100ft)	25

Recommended Torque

Min.	15,500	ft-lb	21,000	N-m
Opti.	17,200	ft-lb	23,300	N-m
Max.	18,900	ft-lb	25,600	N-m
Operational Max.	23,600	ft-lb	32,000	N-m

Note : Operational Max. torque can be applied for high torque application

Legal Notice

The use of this information is at the reader/user's risk and no warranty is implied or expressed by Metal One Corporation or its parents, subsidiaries or affiliates (herein collectively referred to as "Metal One") with respect to the use of information contained herein. The information provided on this Connection Data Sheet is for informational purposes only, and was prepared by reference to engineering information that is specific to the subject products, without regard to safety-related factors, all of which are the sole responsibility of the operators and users of the subject connectors. Metal One assumes no responsibility for any errors with respect to this information.

Statements regarding the suitability of products for certain types of applications are based on Metal One's knowledge of typical requirements that are often placed on Metal One products in standard well configurations. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.

The products described in this Connection Data Sheet are not recommended for use in deep water offshore applications. For more information, please refer to http://www.mtlo.co.jp/mo-con/images/top/WebsiteTerms_Active_20333287_1.pdf the contents of which are incorporated by reference into this Connection Data Sheet.

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.

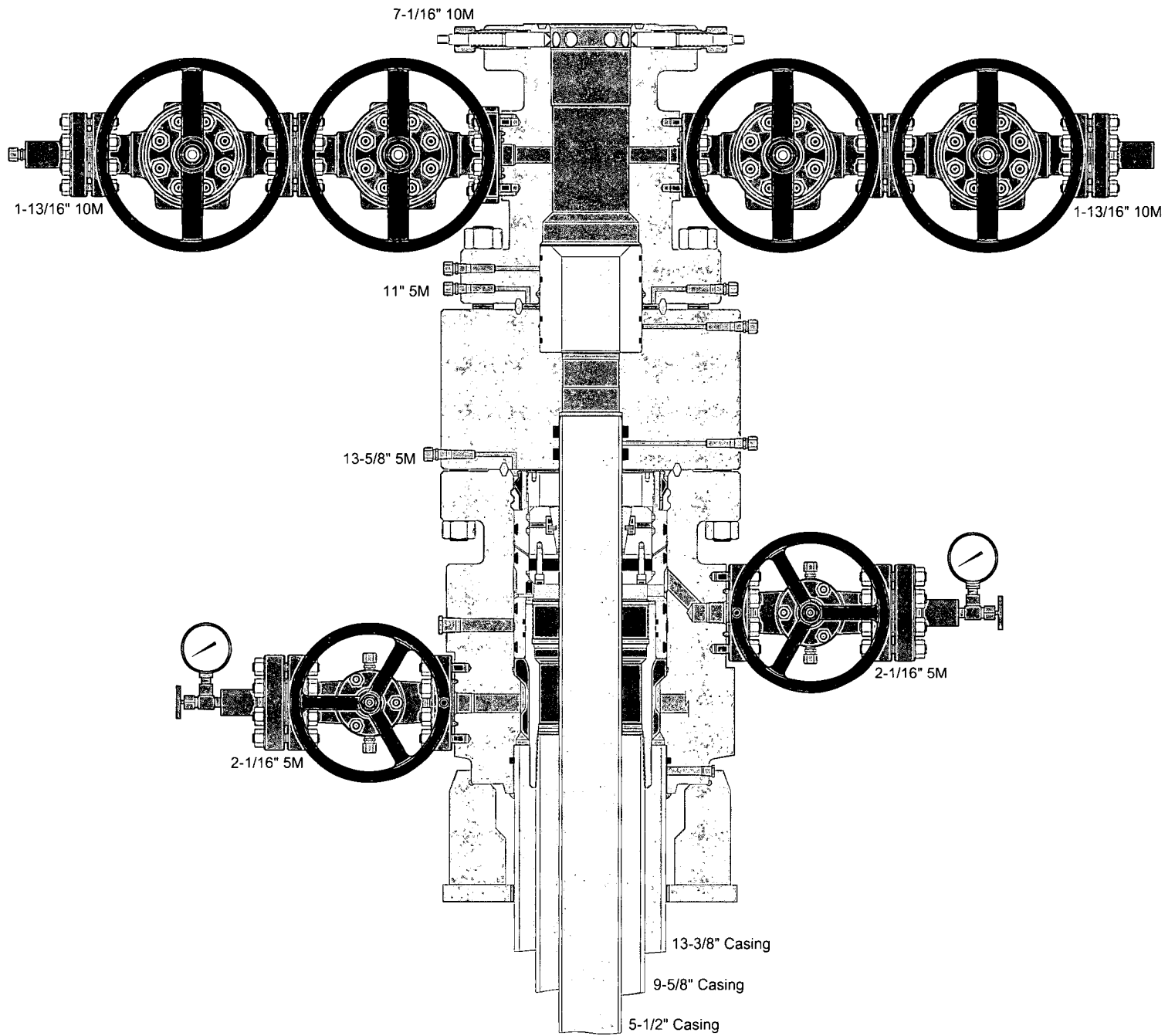
- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial 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 13-3/8" 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 9-5/8' 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 manufactures will be FMC Technologies, Cactus Wellhead, or Cameron.



Maldives 15-22 Fed Com 621H

1. Geologic Formations

TVD of target	11,620	Pilot hole depth	N/A
MD at TD:	18,958	Deepest expected fresh water:	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	550		
Salado	920		
Base of Salt	4022		
Delaware	4250		
Bell Canyon	4290		
Cherry Canyon	5170		
Brushy Canyon	6455		
Lower Brushy	7830		
1BSLM	8160		
1BSSS	9215		
2BSLM	9420		
2BSSS	9717		
3BSLM	10270		
3BSSS	10995		
WFMP X	11460		
WFMP Y	11520		

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

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2. Casing Program (3-String Primary Design)

Hole Size	Casing Interval		Csg. Size	Wt. (PPF)	Grade	Conn	Min SF Collapse	Min SF Burst	Min SF Tension
	From	To							
17.5"	0	600	13.375"	54.5	J-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
9.875"	0	11051	7.625"	29.7	P-110	BTC	1.125	1.00	1.6 Dry 1.8 Wet
8.75"	11051	11800	7.625"	29.7	P110	Flushmax III	1.125	1.00	1.6 Dry 1.8 Wet
6.75"	0	18958	5.5"	20	P-110EC	VamSG	1.125	1.00	1.6 Dry 1.8 Wet
BLM Minimum Safety Factor							1.125	1.00	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.
- A variance is requested to wave the centralizer requirement for the 7-5/8" casing and 5-1/2" SF/Flush casing.

Casing Program (4-String Contingency Design)

Hole Size	Casing Interval		Csg. Size	Wt. (PPF)	Grade	Conn	Min SF Collapse	Min SF Burst	Min SF Tension
	From	To							
17.5"	0	600	13.375"	54.5	J-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
12.25"	0	4300'	9.625"	40	J-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
	4300	6000			HCK-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
8.75"	0	11800	7.625"	29.7	P-110	Flushmax	1.125	1.00	1.6 Dry 1.8 Wet
6.75"	0	18958	5.5"	20	P110	VamSG	1.125	1.00	1.6 Dry 1.8 Wet
BLM Minimum Safety Factor							1.125	1.00	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 1 / Int 2 casing shoe will be selected based on drilling data / gamma, setting depth with be revised accordingly if needed.
- A variance is requested to wave the centralizer requirement for the 7-5/8" casing and 5-1/2" SF/Flush casing.

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	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 rd 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 nd 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?	

Maldives 15-22 Fed Com 621H

3. Cementing Program (3-String Primary Design)

Casing	# Sk	TOC	Wt. (lb/gal)	H ₂ O (gal/sk)	Yld (ft ³ /sack)	Slurry Description
13 3/8" Surface	681	Surf	13.2	6.33	1.33	Lead: Class C Cement + additives
7-5/8" Int	607	Surf	9	20.6	3.31	Lead: Class C Cement + additives
	766	4000' above shoe	13.2	5.31	1.33	Tail: Class H / C + additives
7-5/8" Int Two Stage w DV @ ~4500	1910	Surf	9	20.6	3.31	1 st stage Lead: Class C Cement + additives
	55	500' above shoe	13.2	5.31	1.33	1 st stage Tail: Class H / C + additives
	725	Surf	9	20.6	3.31	2 nd stage Lead: Class C Cement + additives
	55	500' above DV	13.2	5.31	1.33	2 nd stage Tail: Class H / C + additives
7-5/8" Intermediate Squeeze	3075	Surf	13.2	6.32	1.33	Squeeze Lead: Class C Cement + additives
	1833	Surf	9	20.6	3.31	Lead: Class C Cement + additives
	352	2000' above shoe	13.2	5.31	1.33	Tail: Class H / C + additives
5 1/2" Production	675	500' tieback	13.2	5.31	1.33	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 top job will be conducted immediately after completion of the primary job.

Casing String	TOC	% Excess.
13.375" Surface	0ft	50%
7.625" Intermediate 1	0ft	30%
7.625" Intermediate 1 (Two Stage)	1 st Stage = 4500ft / 2 nd Stage = 0ft	25%
5.5" Prod	200' tie-back into Int casing shoe	10%

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Cementing Program (4-String Contingency Design)

Casing	# Sks	TOC	Wt. (lb/gal)	H ₂ O (gal/sk)	Yld (ft ³ /sack)	Slurry Description
13 3/8" Surface	681	Surf	13.2	6.33	1.33	Lead: Class C Cement + additives
9-5/8" Int 1	1735	Surf	9	6.33	1.33	Lead: Class C Cement + additives
	166	500' above shoe	13.2	6.33	1.33	Lead: Class C Cement + additives
7-5/8" Int 2	628	500' tieback	9	20.6	3.31	Lead: Class C Cement + additives
	352	2000' above shoe	13.2	5.31	1.33	Tail: Class H / C + additives
7-5/8" Int 2 Two Stage	1910	500' tieback	9	20.6	3.31	1 st stage Lead: Class C Cement + additives
	55	500' above shoe	13.2	5.31	1.33	1 st stage Tail: Class H / C + additives
	725	500' tieback	9	20.6	3.31	2 nd stage Lead: Class C Cement + additives
	55	500' above DV	13.2	5.31	1.33	2 nd stage Tail: Class H / C + additives
7-5/8" Int 2 Squeeze	3075	Surf	13.2	6.32	1.33	Squeeze Lead: Class C Cement + additives
	1833	Surf	9	20.6	3.31	Lead: Class C Cement + additives
	352	2000' above shoe	13.2	5.31	1.33	Tail: Class H / C + additives
5 1/2" Production	403	500' tieback	13.2	5.31	1.33	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 top job will be conducted immediately after completion of the primary job.

Casing String	TOC	% Excess
13-3/8" Surface	0'	50%
9.625" Intermediate	0'	30%
7 5/8" Intermediate	500' tieback	25%
5-1/2" Production	500' tie-back into previous casing	10%

Maldives 15-22 Fed Com 621H

4. Pressure Control Equipment (Three String Design)

BOP installed and tested before drilling which hole?		Size?	Min. Required WP	Type	✓	Tested to:
Int 1	13-5/8"	5M	Annular		X	50% of rated working pressure
			Blind Ram		X	5M
			Pipe Ram		X	
			Double Ram		X	
			Other*			
Production	13-5/8"	5M	Annular (5M)		X	50% of rated working pressure
			Blind Ram		X	5M
			Pipe Ram		X	
			Double Ram		X	
			Other *			
			Annular			
			Blind Ram			
			Pipe Ram			
			Double Ram			
			Other *			
N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.					

Maldives 15-22 Fed Com 621H

Pressure Control Equipment (Four String Design)

BOP installed and tested before drilling which hole?		Size?	Min. Required WP	Type	✓	Tested to:
Int 1	13-5/8"	5M	Annular		X	50% of rated working pressure
			Blind Ram		X	5M
			Pipe Ram		X	
			Double Ram		X	
			Other*			
Int 2	13-5/8"	5M	Annular (5M)		X	50% of rated working pressure
			Blind Ram		X	5M
			Pipe Ram		X	
			Double Ram		X	
			Other *			
Production	13-5/8"	5M	Annular (5M)		X	50% of rated working pressure
			Blind Ram		X	5M
			Pipe Ram		X	
			Double Ram		X	
			Other *			
N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.					

5. Mud Program (3 String Design)

Depth		Type	Weight (ppg)	Vis	Water Loss
From	To				
0	600'	FW Gel	8.4-8.6	28-34	N/C
600'	11,951'	ODBE / Cut Brine	8.6 – 9.3	28-34	N/C
11951'	TD	OBM	9.8-11.0	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.

Mud Program (4 String Design)

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	600'	FW Gel	8.4-8.6	28-34	N/C
600'	6000'	DBE / Cut Brine	8.6 – 9.0	28-34	N/C
6000'	11951'	OBM / Cut Brine	9.0 – 9.3	28-34	N/C
11951'	TD	OBM	9.8-11.0	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	6645 psi
Abnormal Temperature	No

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

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

Maldives 15-22 Fed Com 621H

3. The drilling rig will then batch drill the production hole sections on the wells with OBM, run/cement production casing, and install TA caps or tubing heads for completions.

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

Will be pre-setting casing? Potentially

1. Spudder rig will move in and drill surface hole.
 - a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.
2. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
3. The wellhead will be installed and tested once the 13 3/8" 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



Fluid Technology

ContiTech Beattie Corp.
Website: 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.

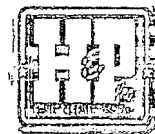
Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

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

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Houston, TX 77041
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Fax: +1 (832) 327-0148
www.contitechbeattie.com



RIG 212



QUALITY DOCUMENT

PHOENIX RUBBER

INDUSTRIAL LTD.

6728 Szeged, Budapesti út 10. Hungary • H-6701 Szeged, P. O. Box 152
Phone: (3662) 556-737 • Fax: (3662) 556-738

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.	
Pressure test with water at ambient temperature See attachment. (1 page) ↑ 10 mm = 10 Min. → 10 mm = 25 MPa					
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. Hose Inspection and VERIFIED TRUE COPY PHOENIX RUBBER G.C.		

40920-0-00015 N600C 14094-65

8	GNL +0.000 PC	14.00			
	RDL +0.000 PC	14.00			
	BL +10.44 Pa	14.00			
7	GNL +0.000 PC	13.45	40	60	80
	RDL +0.000 PC	13.45			
	BL +10.47 Pa	13.45			
6	GNL +0.000 PC	13.20			
	RDL +0.000 PC	13.20			
	BL +10.59 Pa	13.20			
5	GNL +0.000 PC	13.00			
	RDL +0.000 PC	13.00			
	BL +10.56 Pa	13.00			
4					
3	PHOENIX 34.25 12.00				
2					

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

VERIFIED TRUE CO.
 PHOENIX RUBBER CO.



APD ID: 10400032898

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: 621H

[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_621H_Ex_Access_Rd_20180810054904.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_621H_Access_Rd_20180810054925.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: 621H

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_621H_1Mile_Map_20180810055019.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: 621H

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): 375000

Source volume (acre-feet): 48.33491

Source volume (gal): 15750000

Water source and transportation map:

Maldives_15_22_Fed_Com_621H_Wtr_Xfr_Map_20180810055058.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: 621H

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_621H_Caliche_Map_20180810055121.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: 1579 barrels

Waste disposal frequency : Daily

Safe containment description: N/A

Safe containmant attachment:

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

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

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: MALDIVES 15-22 FED COM

Well Number: 621H

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: 621H

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_621H_Rig_Layout_20180810055227.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_621H_Reclamation_20180810055241.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.

Well pad proposed disturbance (acres): 5.097	Well pad interim reclamation (acres): 2.12	Well pad long term disturbance (acres): 2.977
Road proposed disturbance (acres): 0.825	Road interim reclamation (acres): 0	Road long term disturbance (acres): 0.825
Powerline proposed disturbance (acres): 1.043	Powerline interim reclamation (acres): 0	Powerline long term disturbance (acres): 1.043
Pipeline proposed disturbance (acres): 1.213	Pipeline interim reclamation (acres): 0	Pipeline long term disturbance (acres): 1.213
Other proposed disturbance (acres): 0	Other interim reclamation (acres): 0	Other long term disturbance (acres): 0
Total proposed disturbance: 8.178	Total interim reclamation: 2.12	Total long term disturbance: 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: 621H

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 Type	Pounds/Acre
-----------	-------------

Seed reclamation attachment:

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: MALDIVES 15-22 FED COM

Well Number: 621H

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: 621H

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: 621H

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: CTB FLOWLINE ELECTRIC

Use a previously conducted onsite? NO

Previous Onsite information:

Other SUPO Attachment

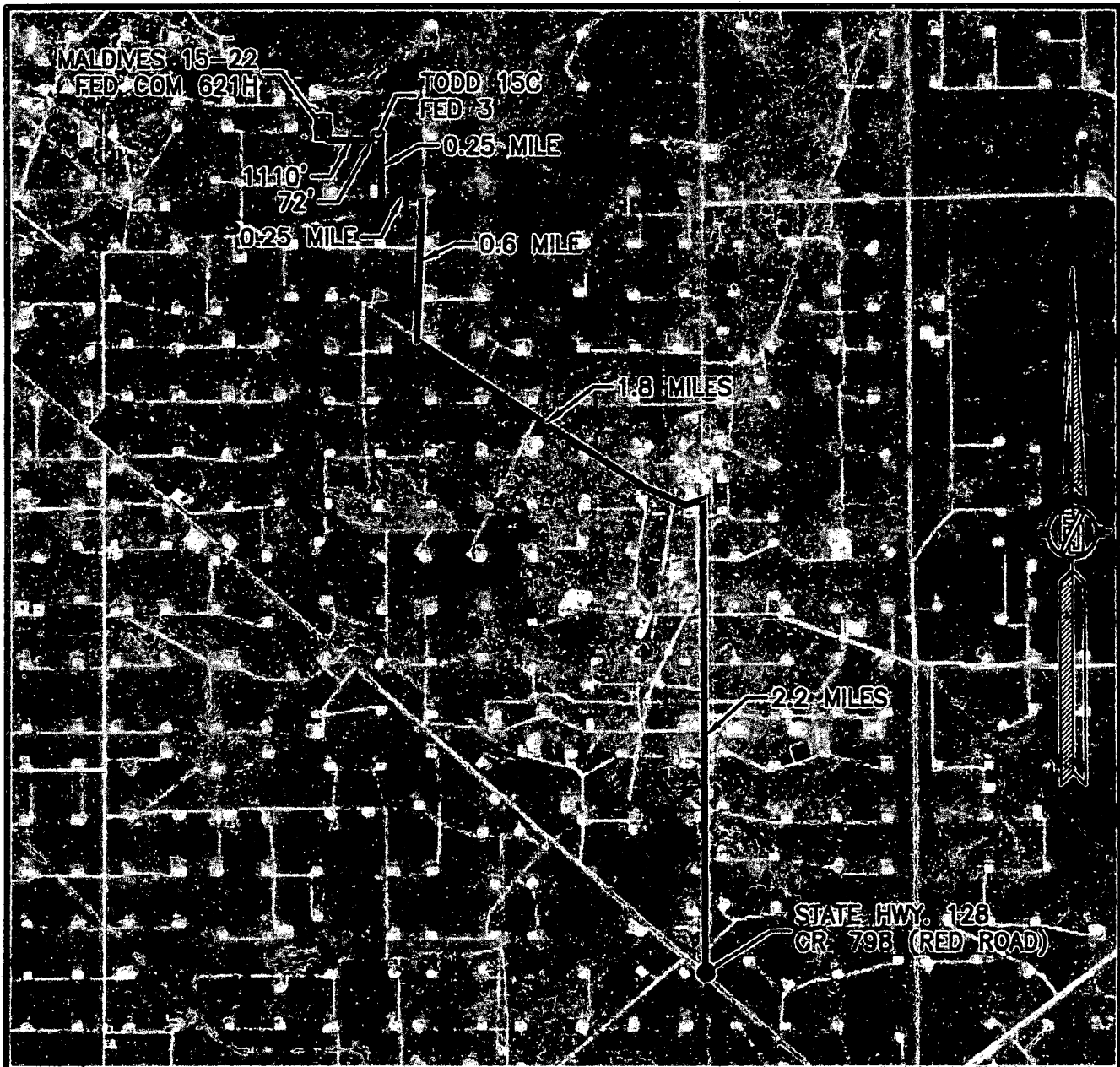
MALDIVES_MDP_15_CTB_1_PAD_P_20180808100241.pdf

Maldives_15_22_Fed_Com_621H_Flowline_20180810055335.pdf

Pay.gov__Receipt_20180810080343.pdf

Maldives_15_22_Fed_Com_621H_Electric_20181130063449.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 621H
 LOCATED 250 FT. FROM THE NORTH LINE
 AND 540 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

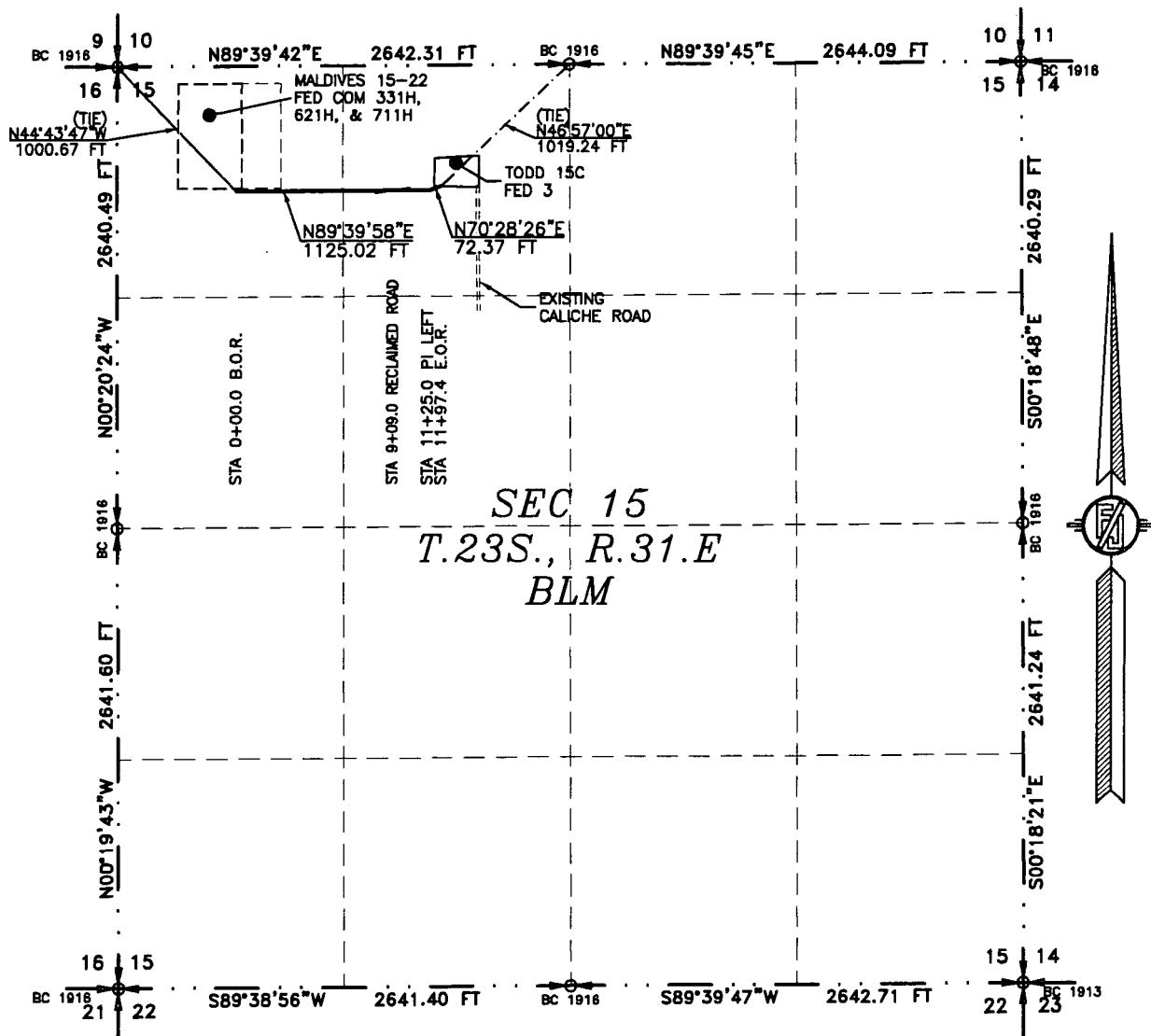
SURVEY NO. 5233

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

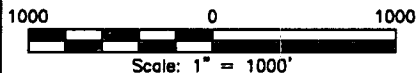
ACCESS ROAD PLAT

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



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 17 DAY OF MAY 2016

FILMON F. JARAMILLO - PLS. 12797

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

SURVEY NO. 5233

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

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. 201 SOUTH CANAL
(575) 234-3341

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 27TH DAY OF MAY, 2016

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

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

SURVEY NO. 5233

CARLSBAD, NEW MEXICO

PLAT
One Mile Radius Map



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



0 0.3 Miles 1 inch = 0.38 miles

MALDIVES 15-22 FED COM 621H
WA016886838

NORTH PURE GOLD 10 FED 1H

Nearest wellbore to SHL:

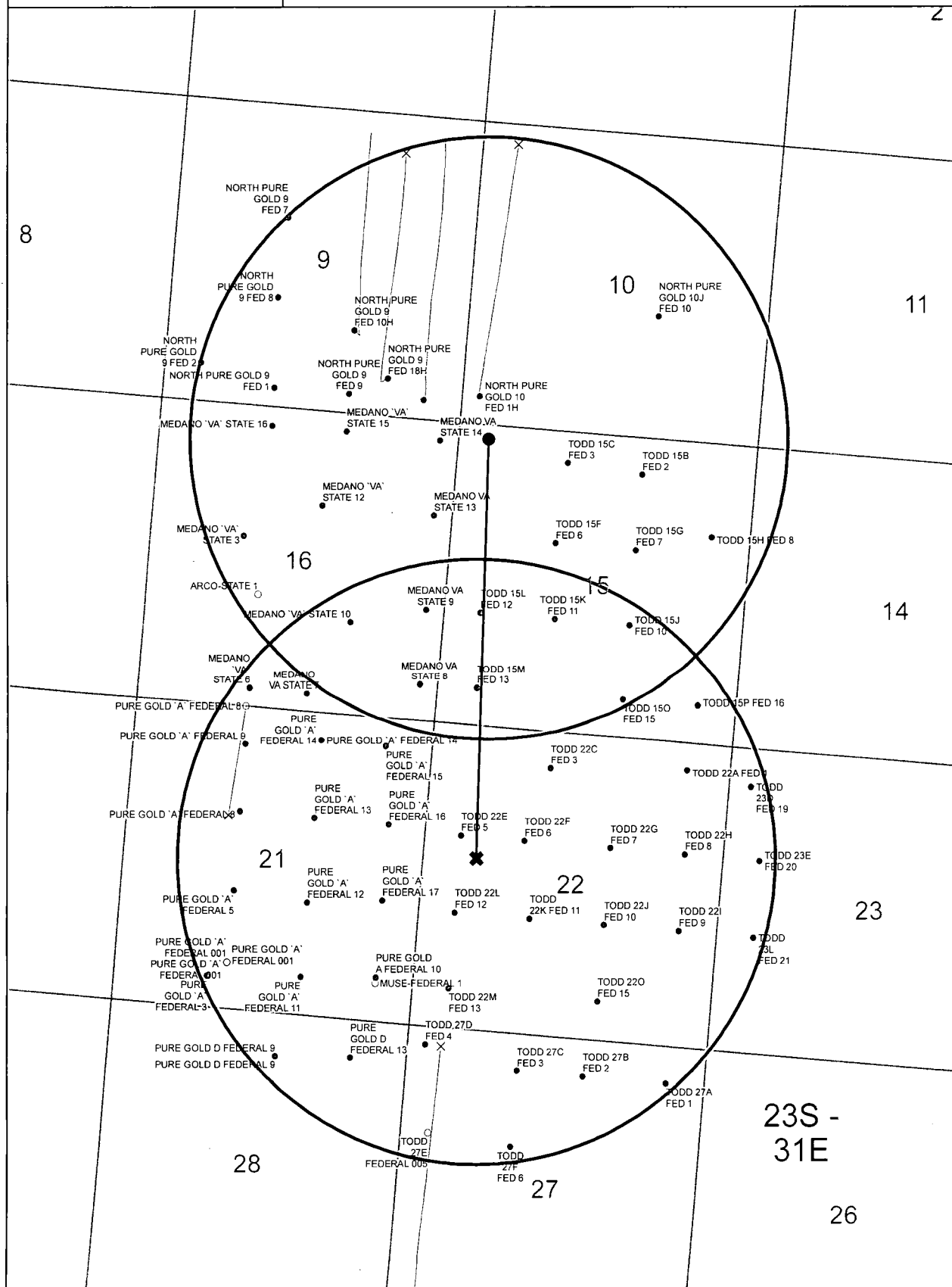
730 ft.

ALDABRA 27 FED 1H

Nearest wellbore to BHL:

3288 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

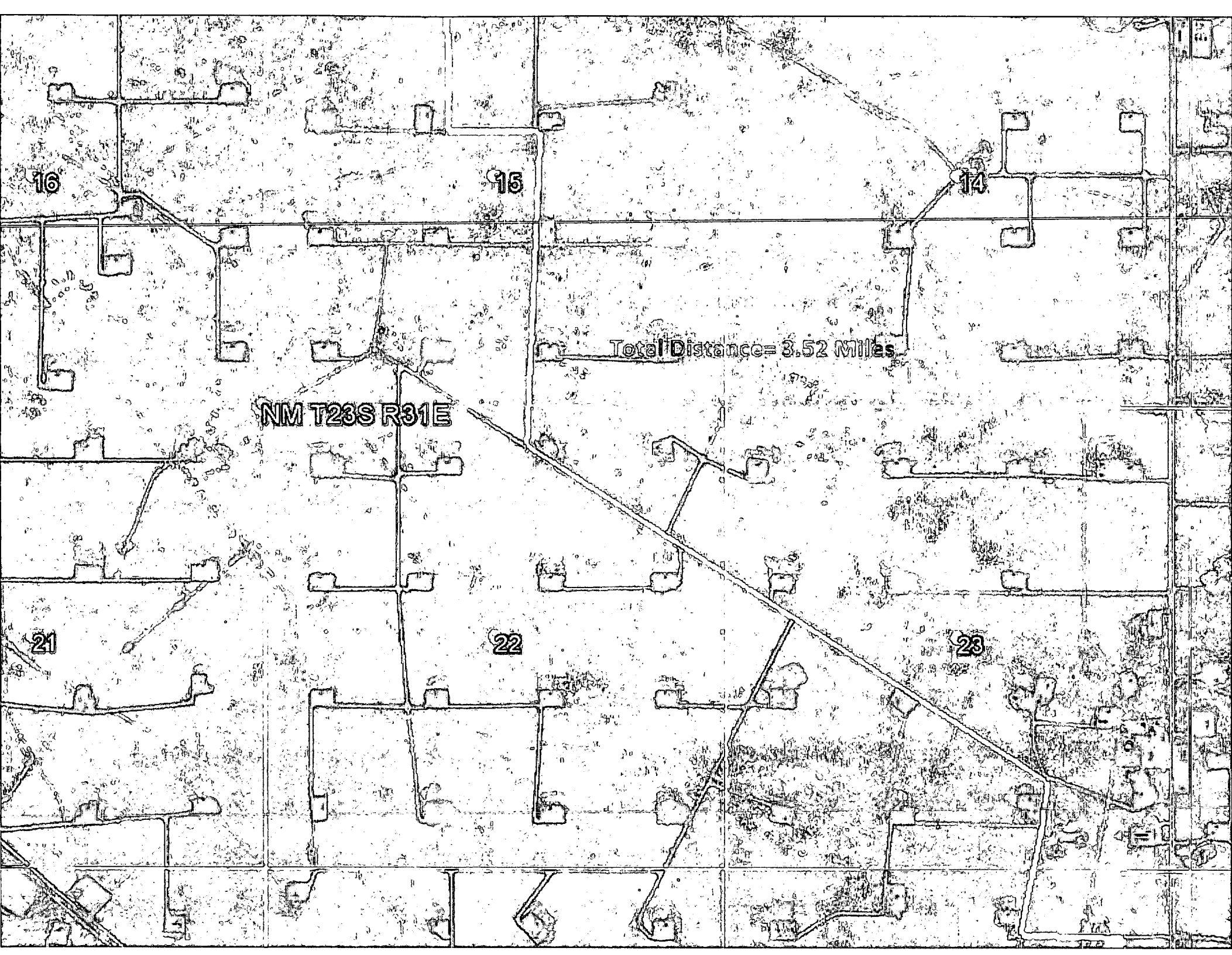
MALDIVES 15-22 FED COM 711H

MALDIVES 15-22 FED COM 521H

MALDIVES 15-22 FED COM 522H

MALDIVES 15-22 FED COM 511H

MALDIVES 15 WELLPAD 1



16

15

14

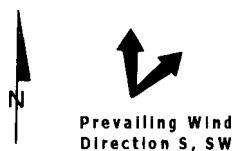
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NM T23S R31E

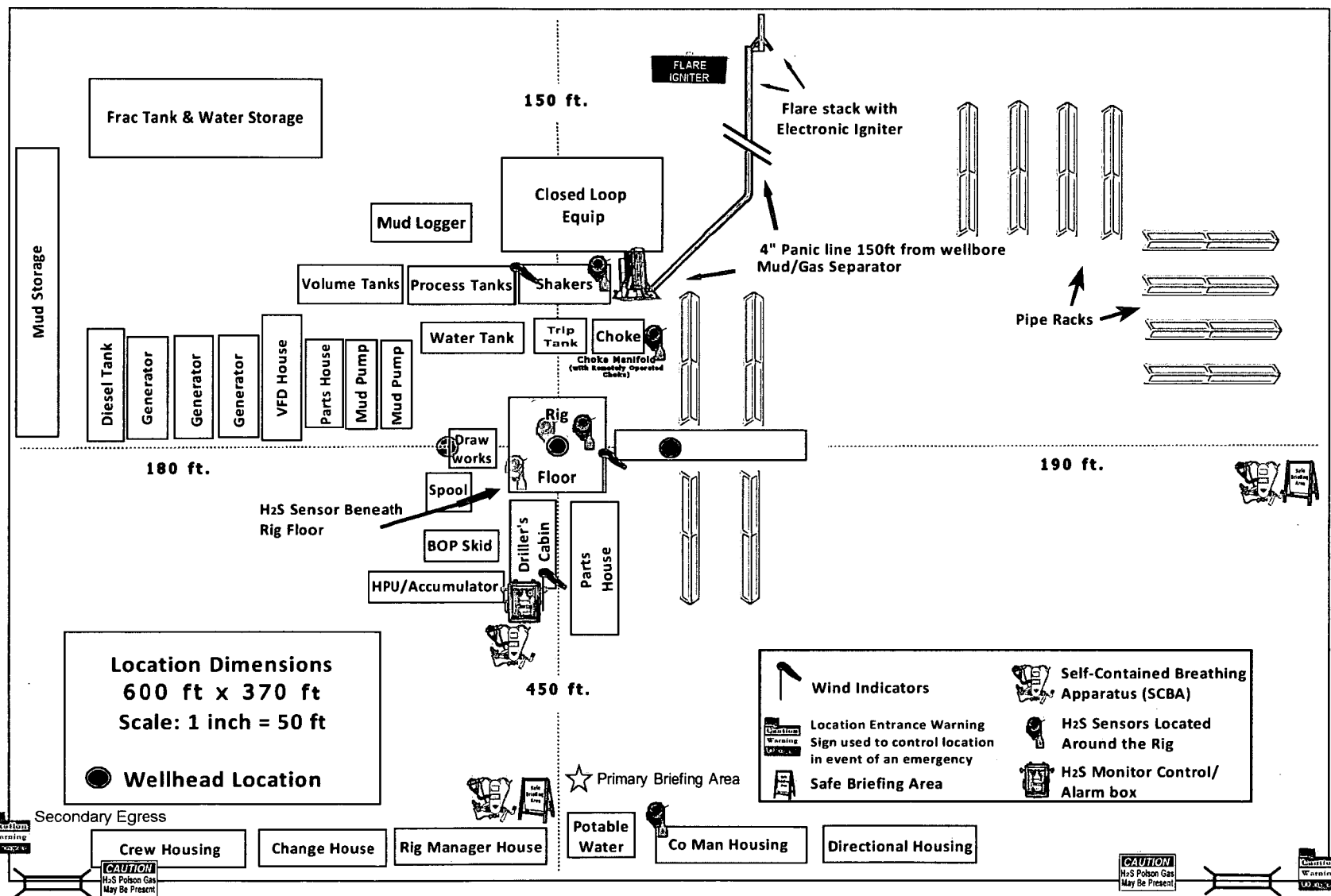
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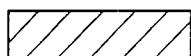
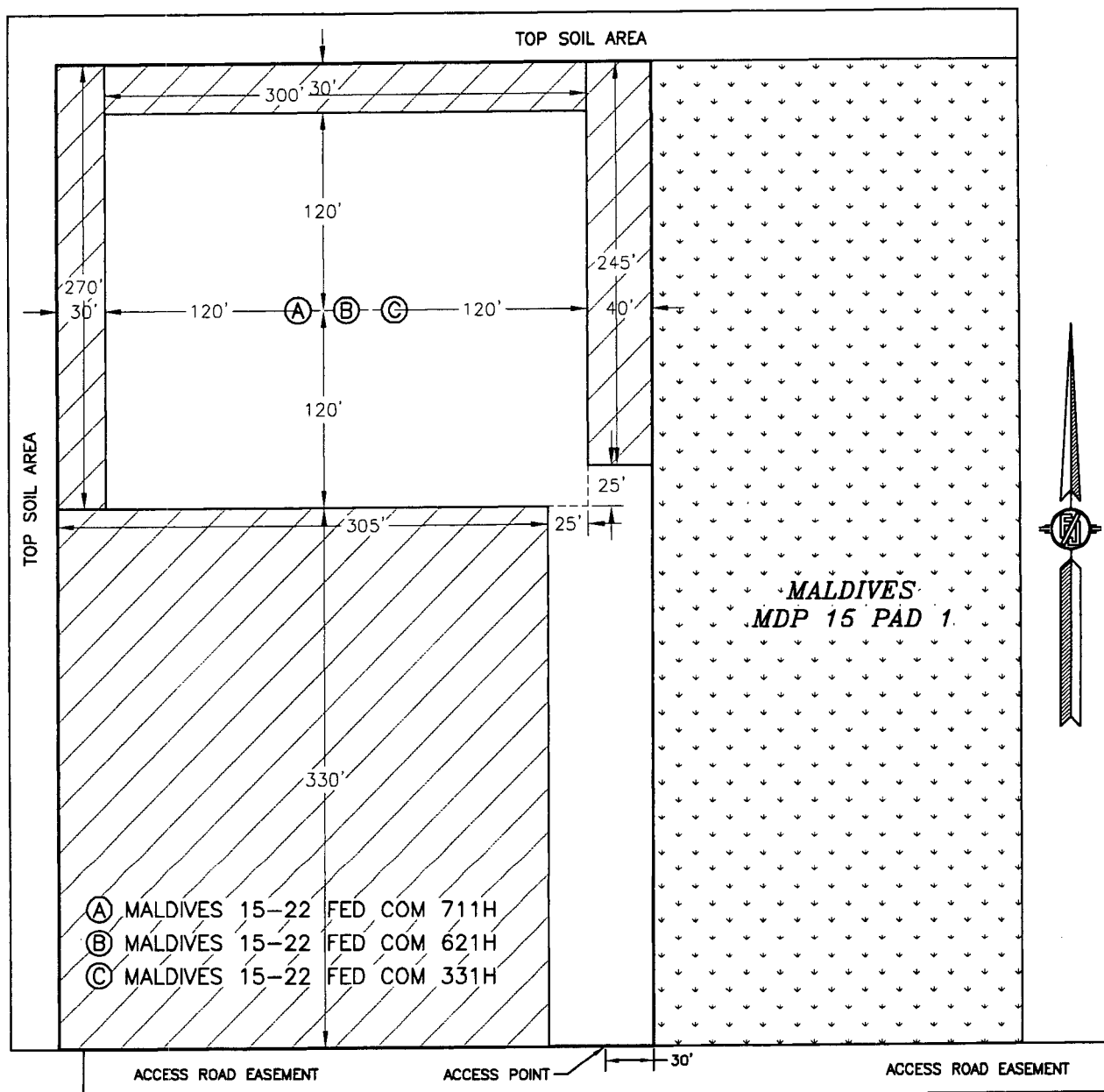
23



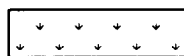
Devon Energy - Well Pad Rig Location Layout Safety Equipment Location



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



DENOTES INTERIM PAD
RECLAMATION AREA



DENOTES GRADING SITE
RECLAMATION AREA

010 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 621H
LOCATED 250 FT. FROM THE NORTH LINE
AND 540 FT. FROM THE WEST LINE OF
SECTION 15, TOWNSHIP 23 SOUTH,
RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

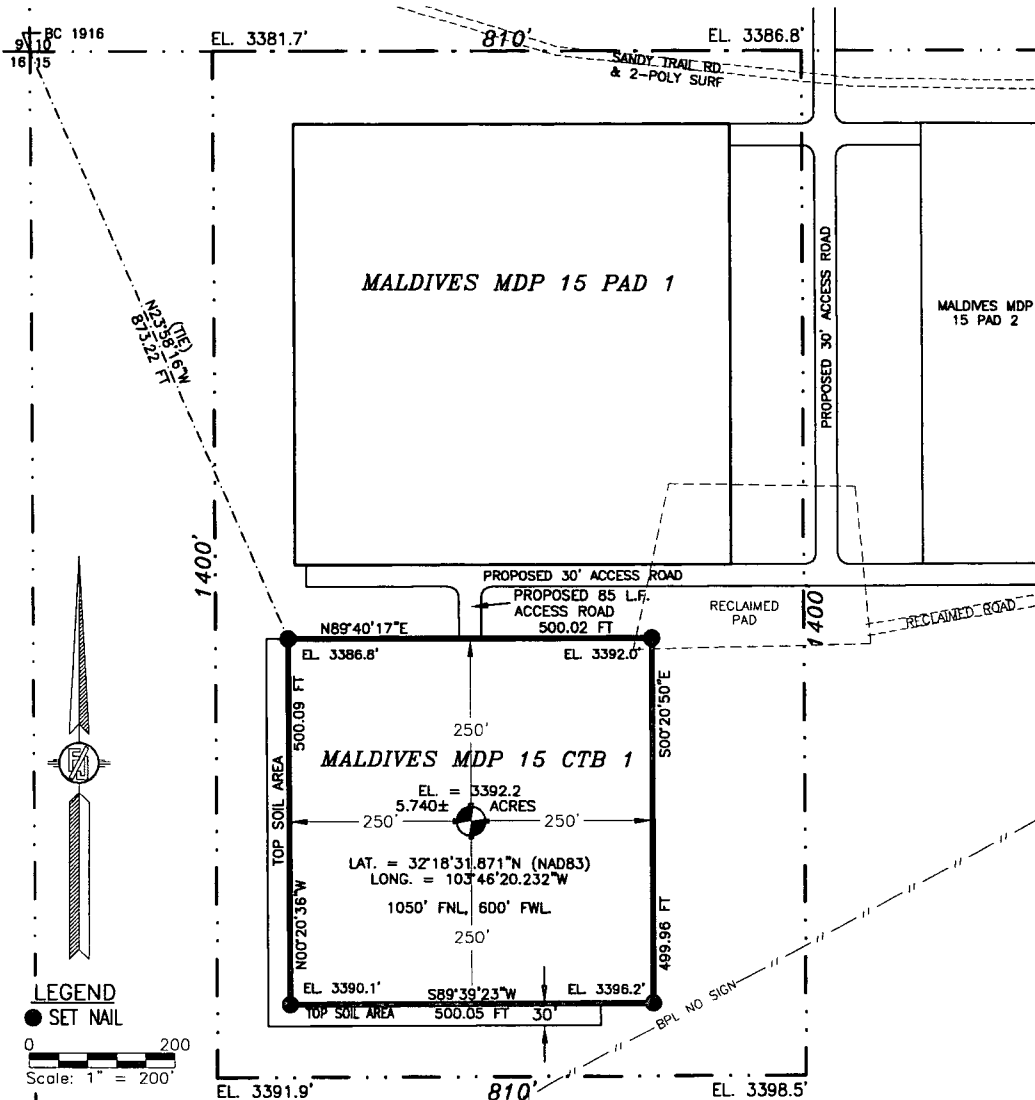
MAY 17, 2017

SURVEY NO. 5233

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

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



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. 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 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.

SHEET: 1-3

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

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 2017

[Signature]
 FILMON F. JARAMILLO, 12797
 111 SOUTH CANAL
 (575) 234-3341

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

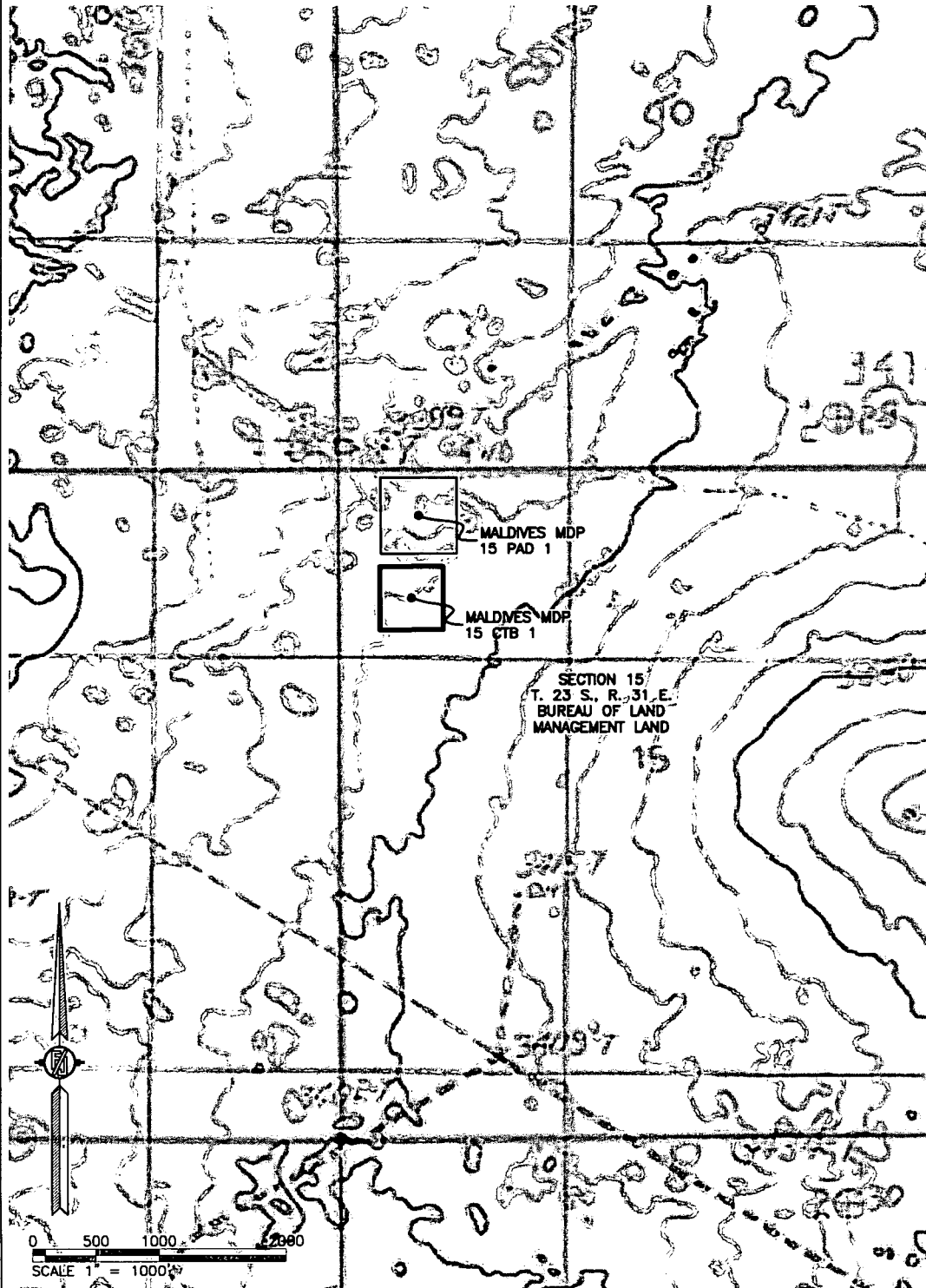
SURVEY NO. 5252

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

QUAD MAP



SHEET: 2-3

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

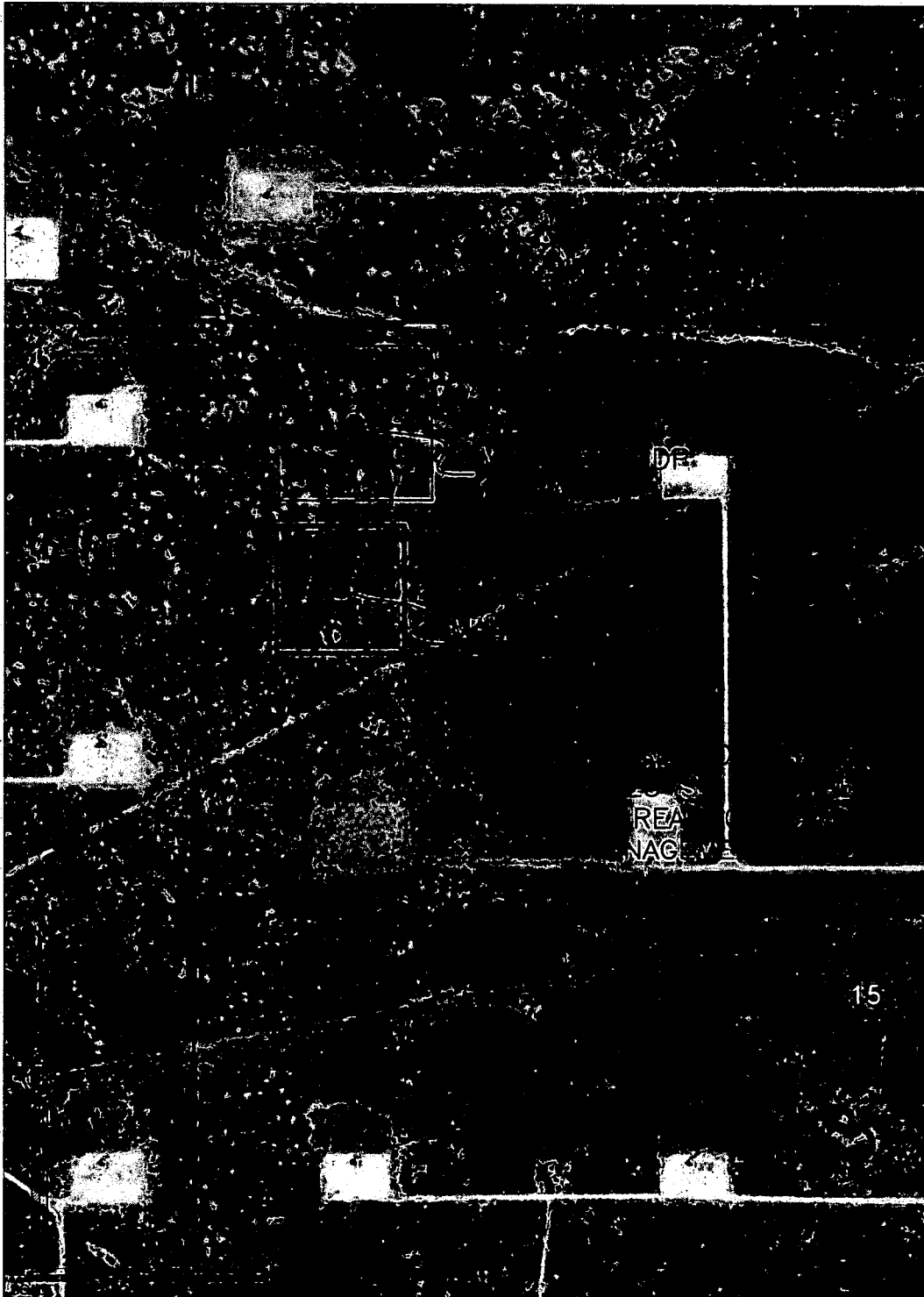
SURVEY NO. 5252

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 (575) 234-3341 CARLSBAD, NEW MEXICO

PLAN VIEW

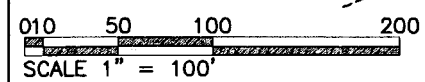
LIMITS OF
EARTHWORK
3:1 SLOPE (TYP.)

PROPOSED PAD
EL. = 3392.0'

PAD CENTER
POINT

MALDIVES MDP
15 CTB 1

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		

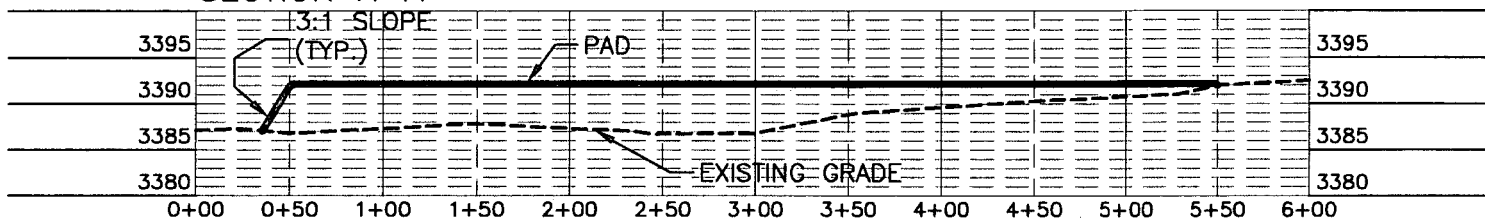
"-BPL NO SIGN-"

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

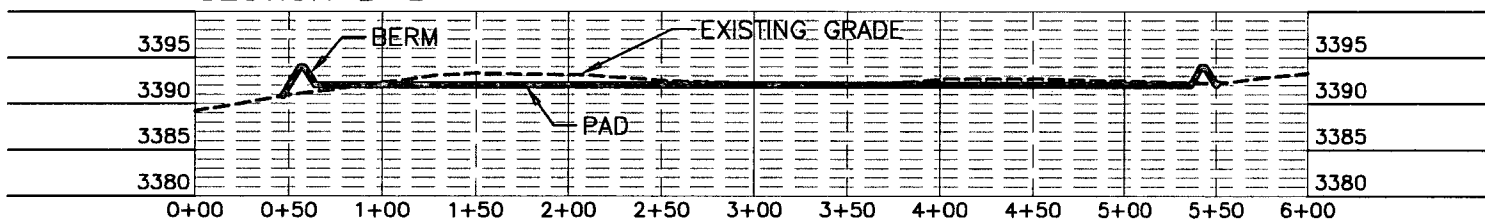
SHEET 1-2
SURVEY NO. 5252

CROSS-SECTIONS

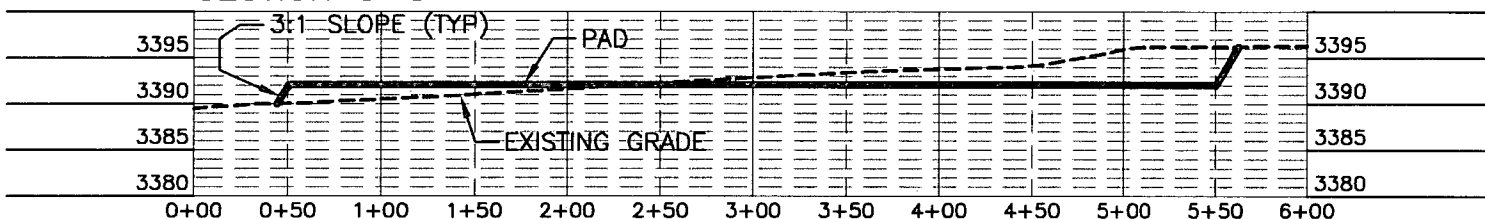
SECTION A-A'



SECTION B-B'



SECTION C-C'



010 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. 6252

ACCESS ROAD PLAT

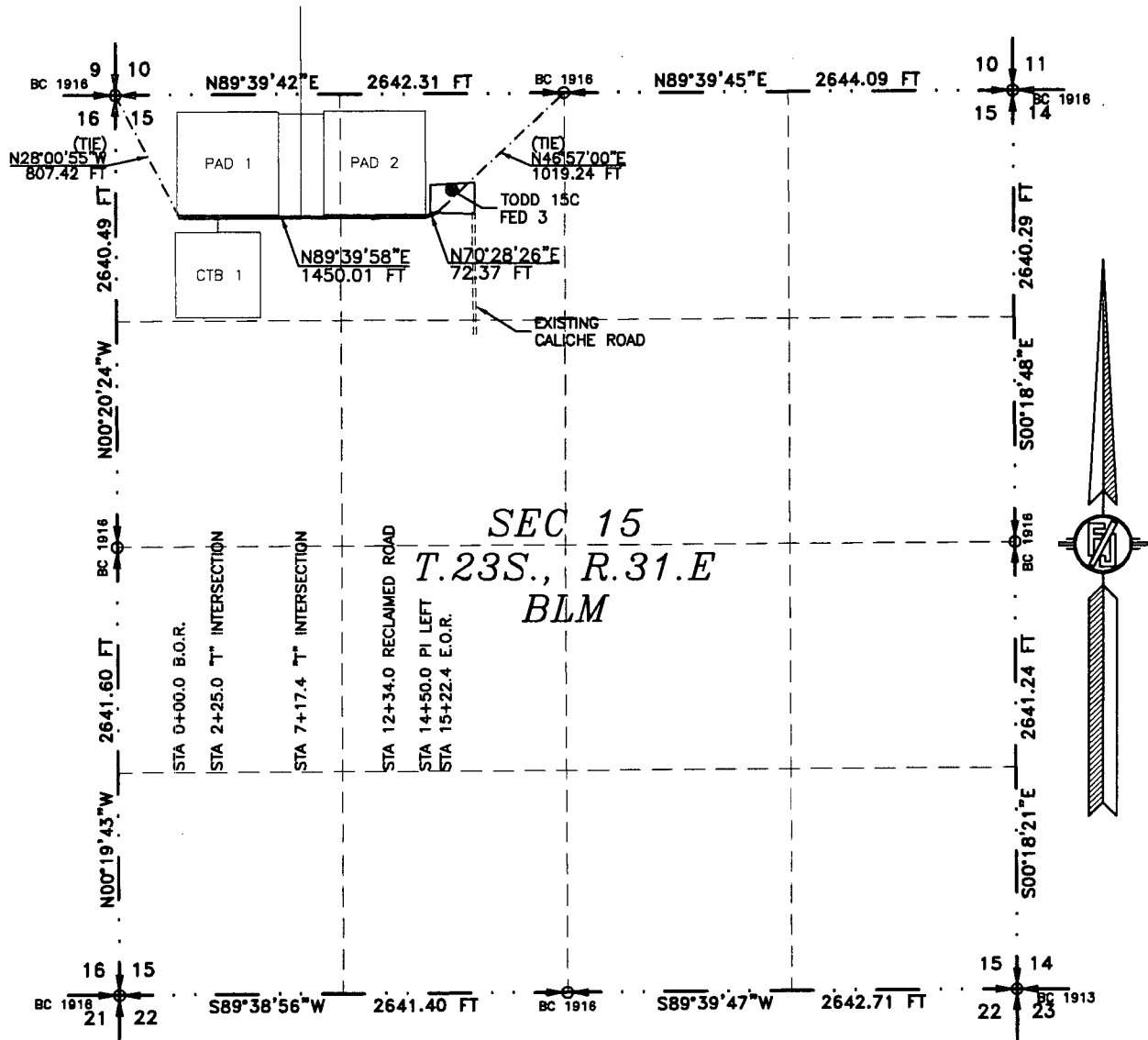
PRIMARY ACCESS ROAD FOR MALDIVES MDP 15 CTB 1 AND PADS 1 & 2

DEVON ENERGY PRODUCTION COMPANY, L.P.

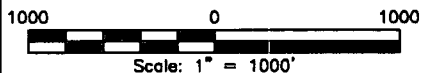
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.

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.

SHEET: 1-10

MADRON SURVEYING, INC.

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 DAY OF MAY 2016

12797
FILMON F. JARAMILLO, PLS. 12797
(575) 234-3341

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

SURVEY NO. 5261

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 5TH DAY OF MAY 2018

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.

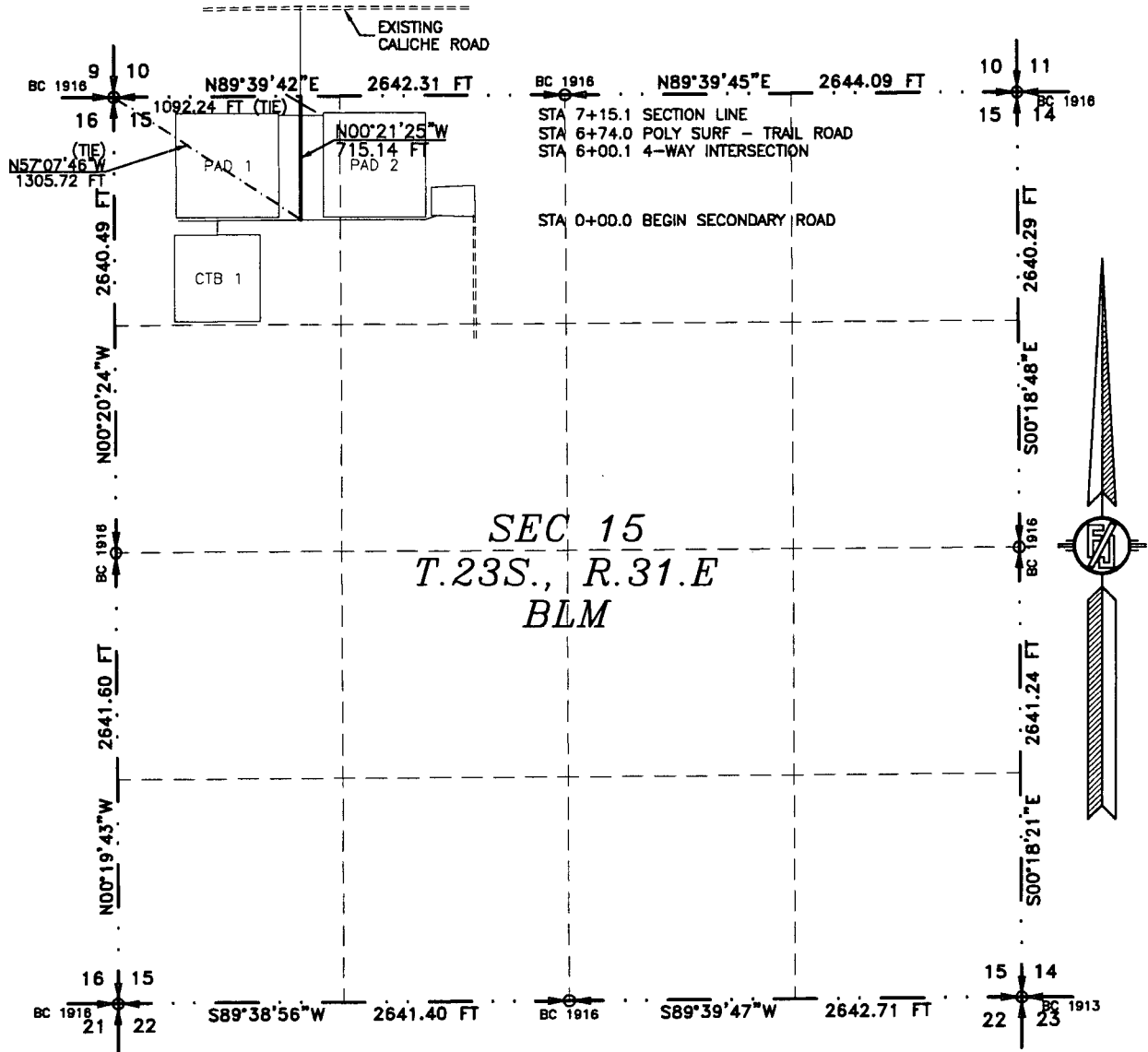
SHEET: 2-10

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

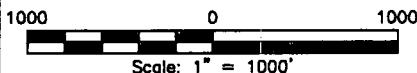
SURVEY NO. 5261

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.

SHEET: 3-10

MADRON SURVEYING, INC.

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

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

SURVEY NO. 5261

CARLSBAD, NEW MEXICO

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

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.

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
FILIMON F. JARAMILLO, P.S. 12797

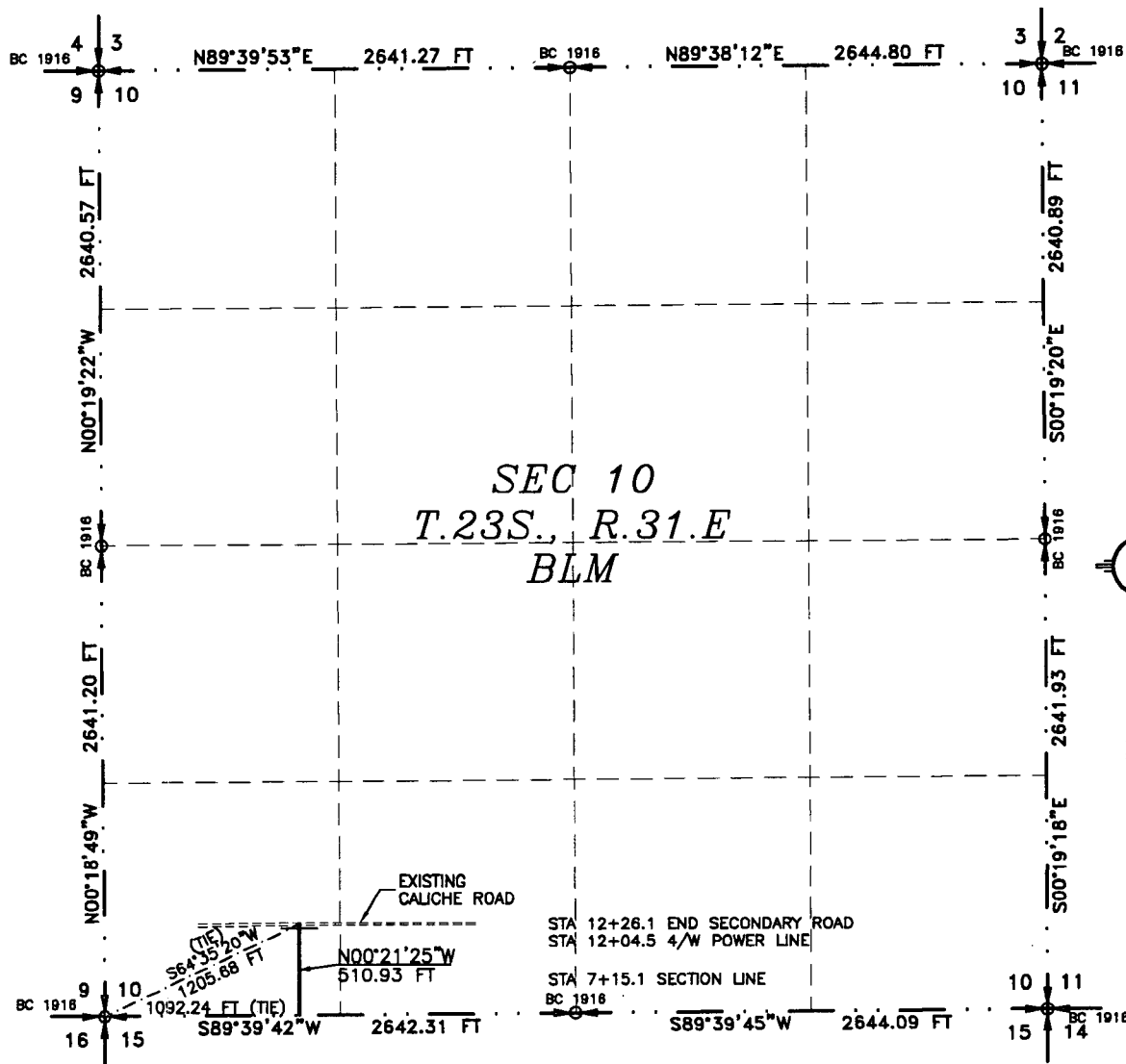
MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

SURVEY NO. 5261

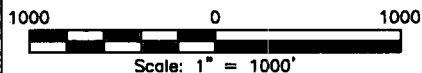
CARLSBAD, NEW MEXICO

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.

SHEET: 5-10

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

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

SURVEY NO. 5261
CARLSBAD, NEW MEXICO

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

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

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.

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

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

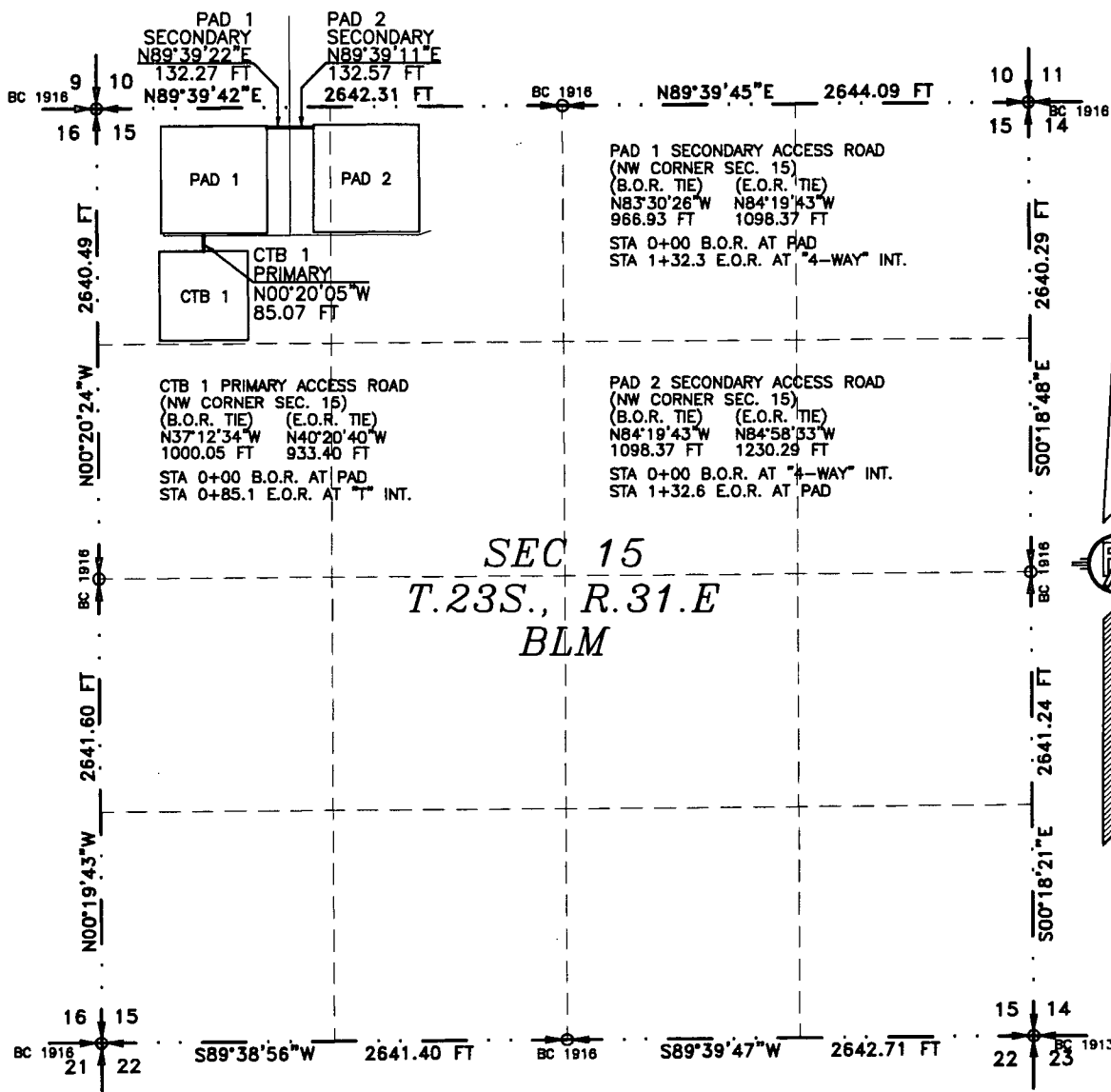
SURVEY NO. 5261

CARLSBAD, NEW MEXICO

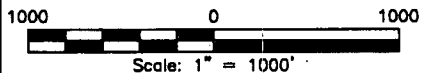
ACCESS ROAD PLAT

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



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: 7-10

MADRON SURVEYING, INC.

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 DAY OF MAY 2016

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

SURVEY NO. 5261

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

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, 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

FILMON F. JARAMILLO
MADRON SURVEYING, INC.
501 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.

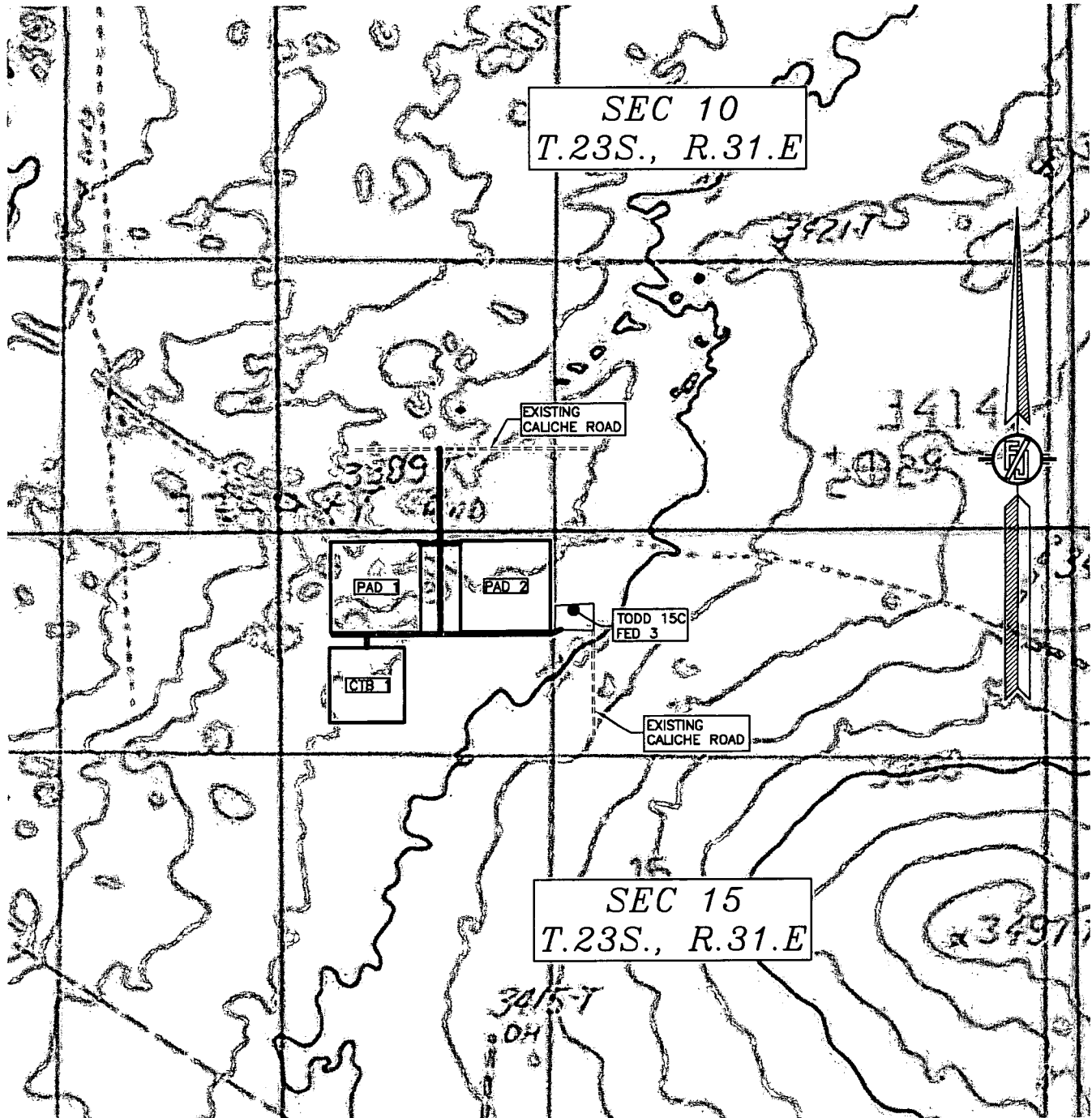
SHEET: 8-10

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

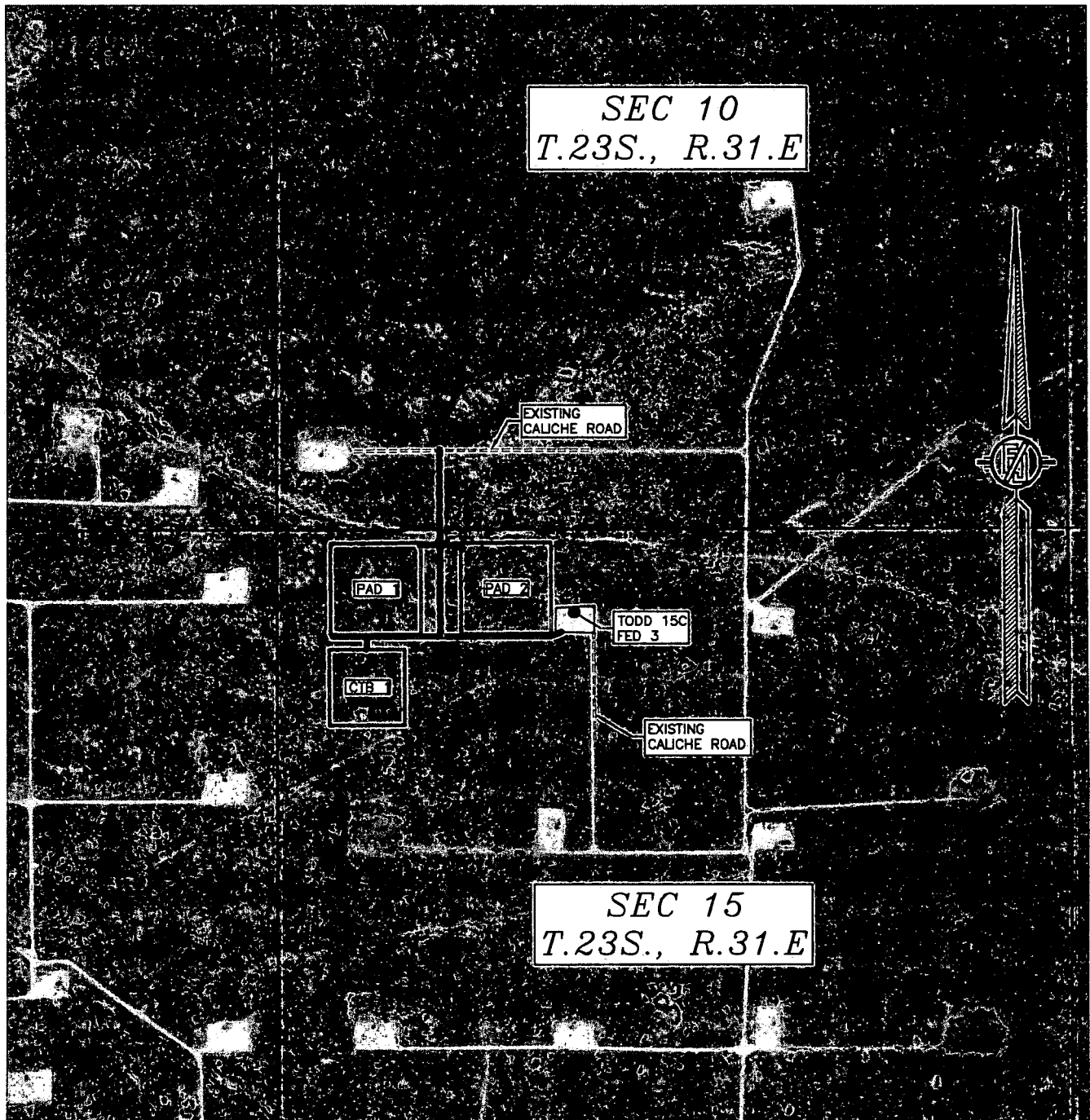
SHEET: 9-10

SURVEY NO. 5261

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

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

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

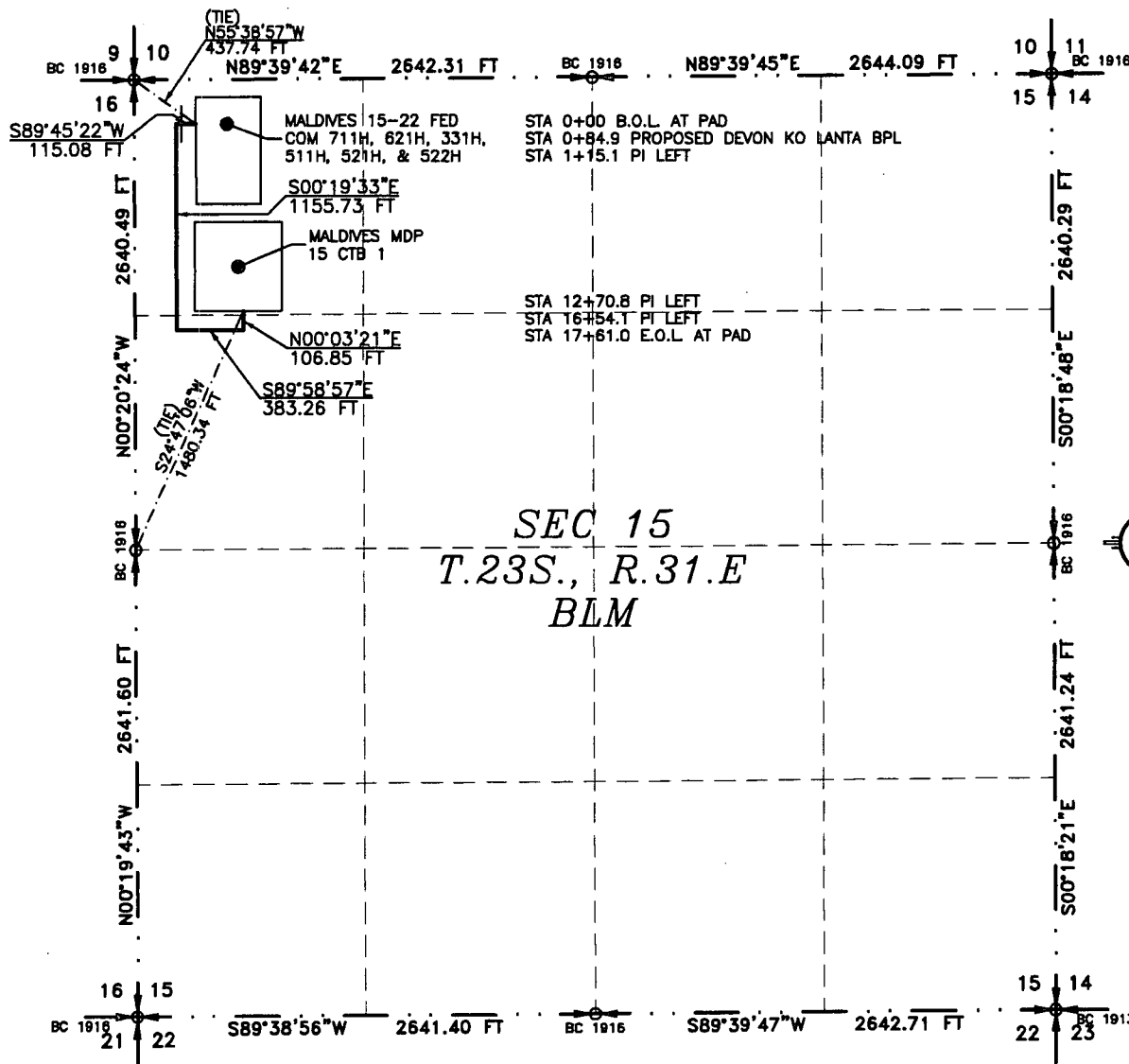
SURVEY NO. 5261

CARLSBAD, NEW MEXICO

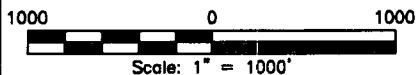
FLOWLINE PLAT

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



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 20 DAY OF JUNE 2017

FILIMON F. JARAMILLO, PLS. 12797
 (575) 234-3341

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

SHEET: 1-4

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

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

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.

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, P.S. 12797
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
(575) 234-3341

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

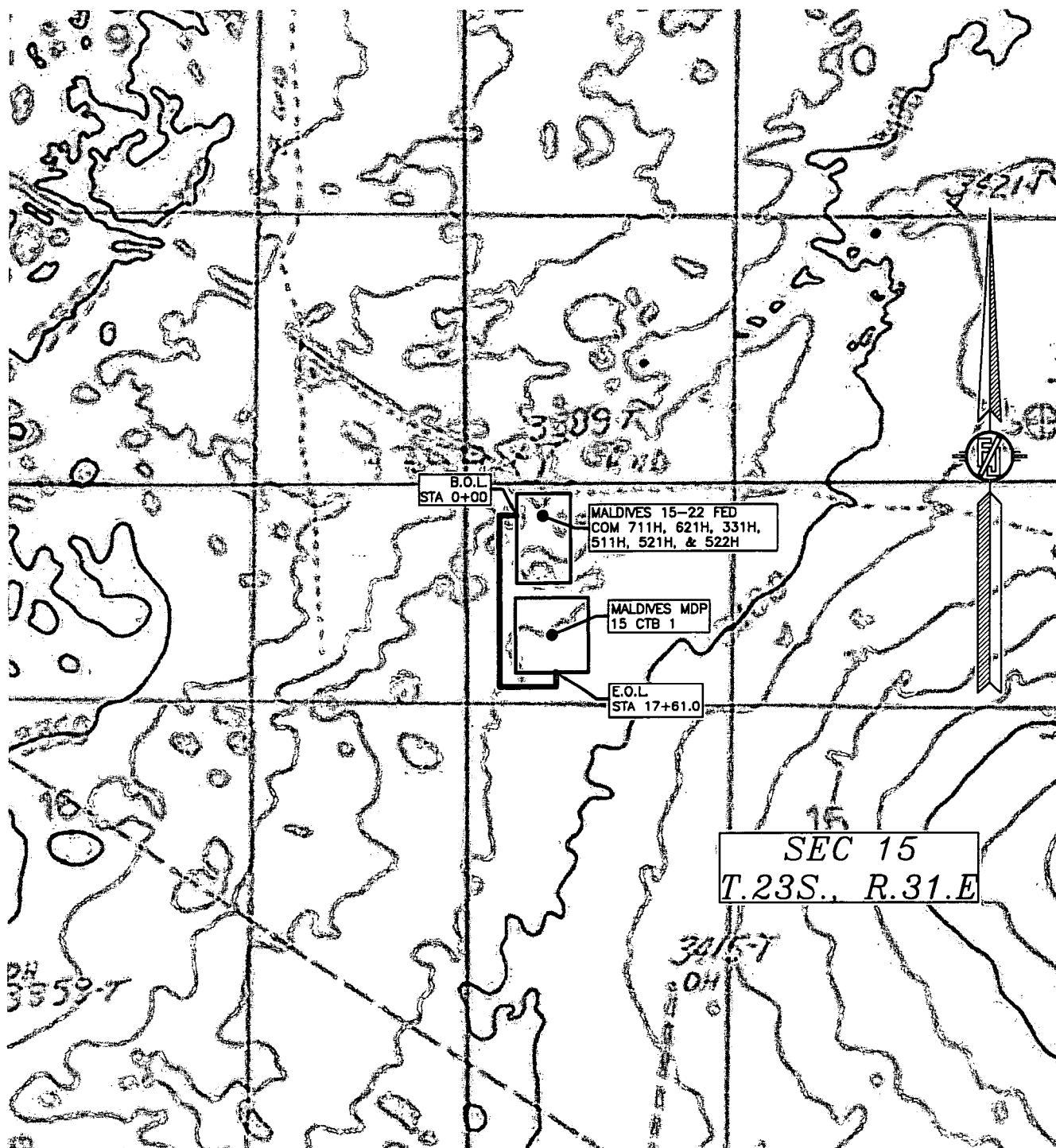
SURVEY NO. 5290

CARLSBAD, NEW MEXICO

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

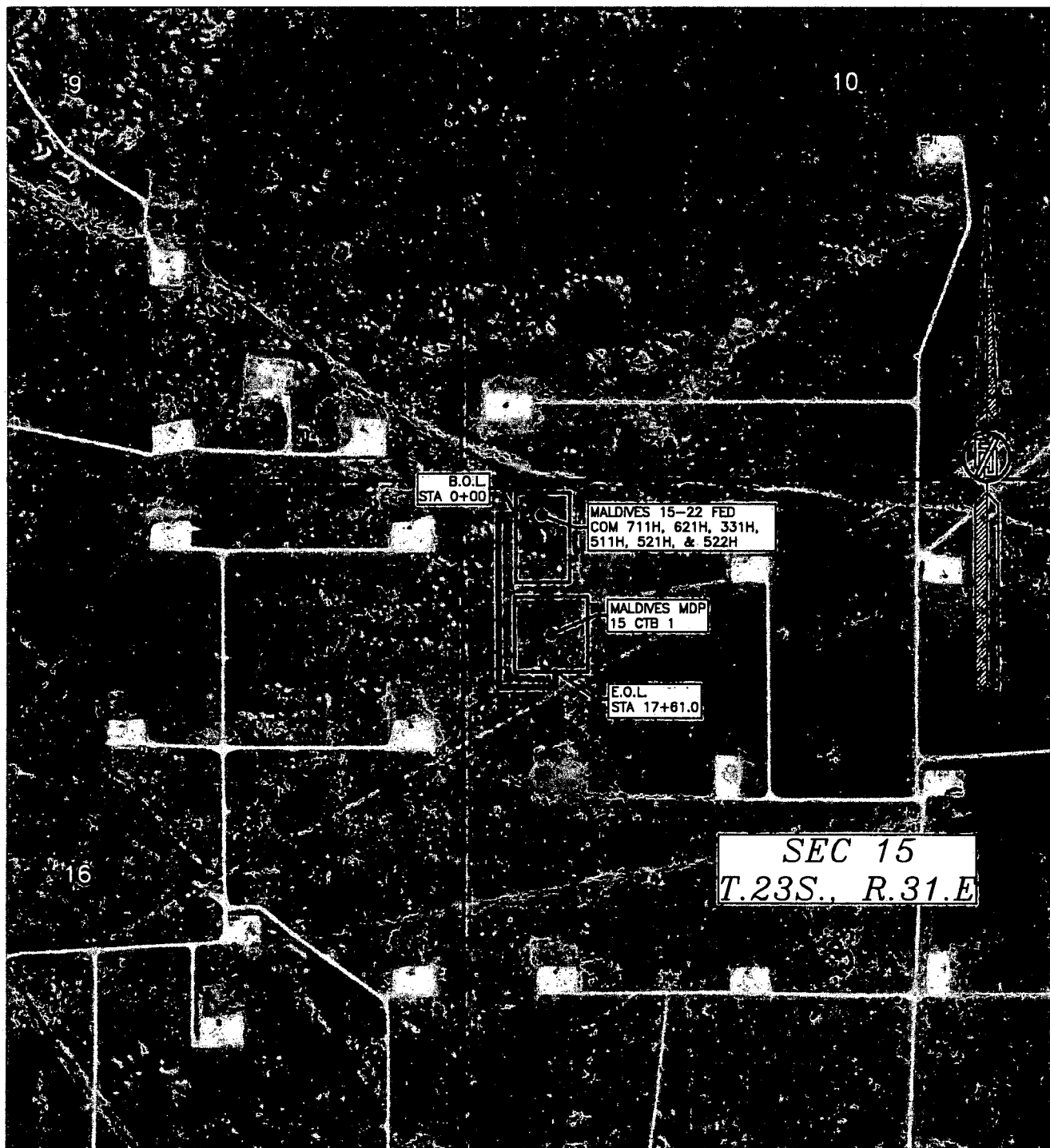
DEVON ENERGY PRODUCTION COMPANY, L.P.
CENTERLINE SURVEY OF A PIPELINE CROSSING
SECTION 15, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
JUNE 12, 2017



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



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



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

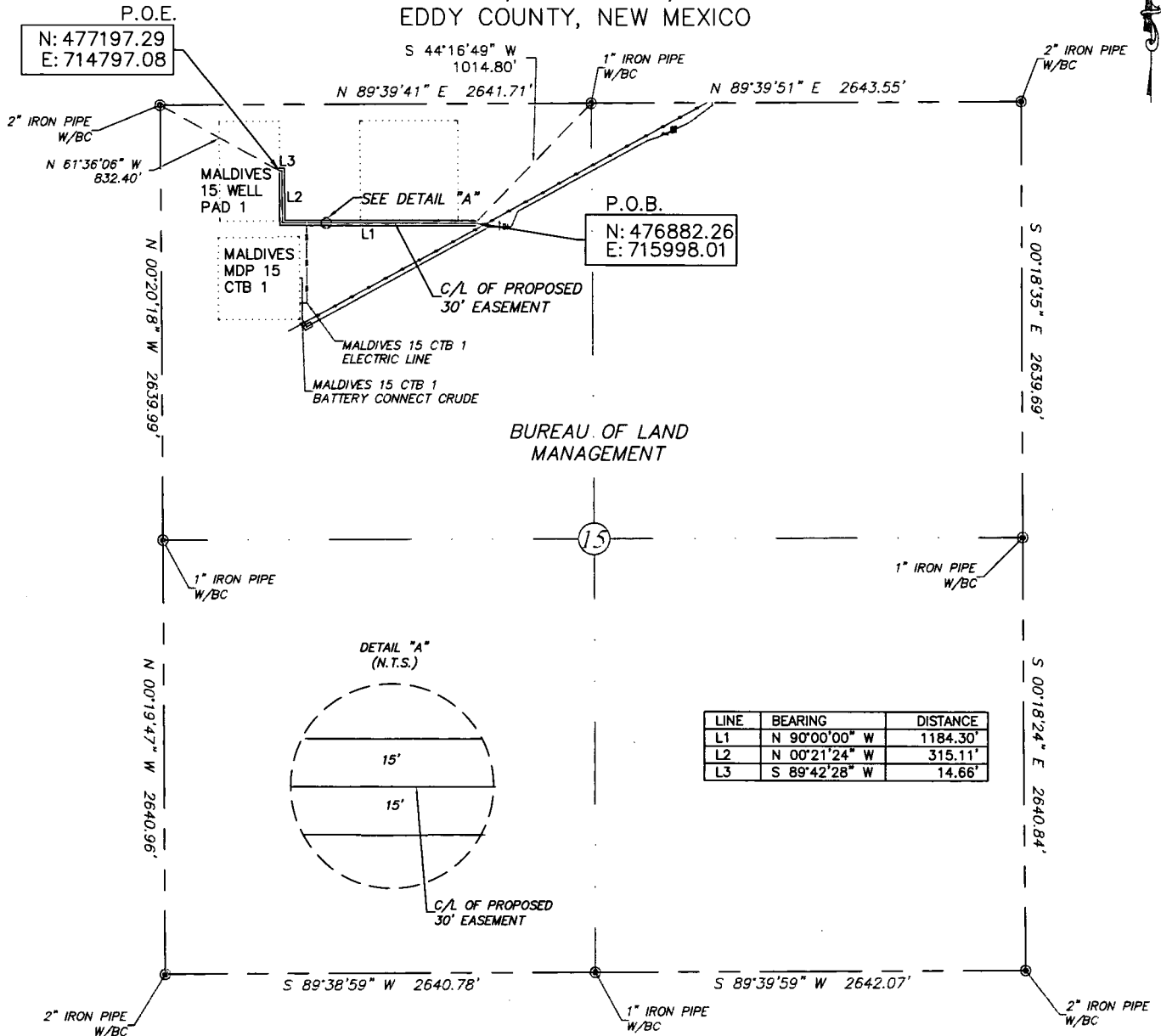
Confirmation Receipts have been emailed to:

JENNY.HARMS@DVN.COM

jeff.walla@dvn.com

lisa.othon@dvn.com

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'

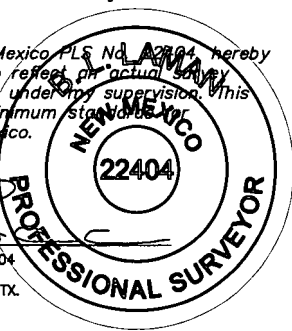
30' EASEMENT AREA = 1.043 ACRE(S)
1514.07 FEET OR 91.76 RODS

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.

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



- 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



HORIZON ROW LLC

Drawn for:

devon

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-123117.18.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;

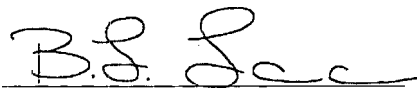
Thence N 00°21'24" W, a distance of 315.11' to an angle point;

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

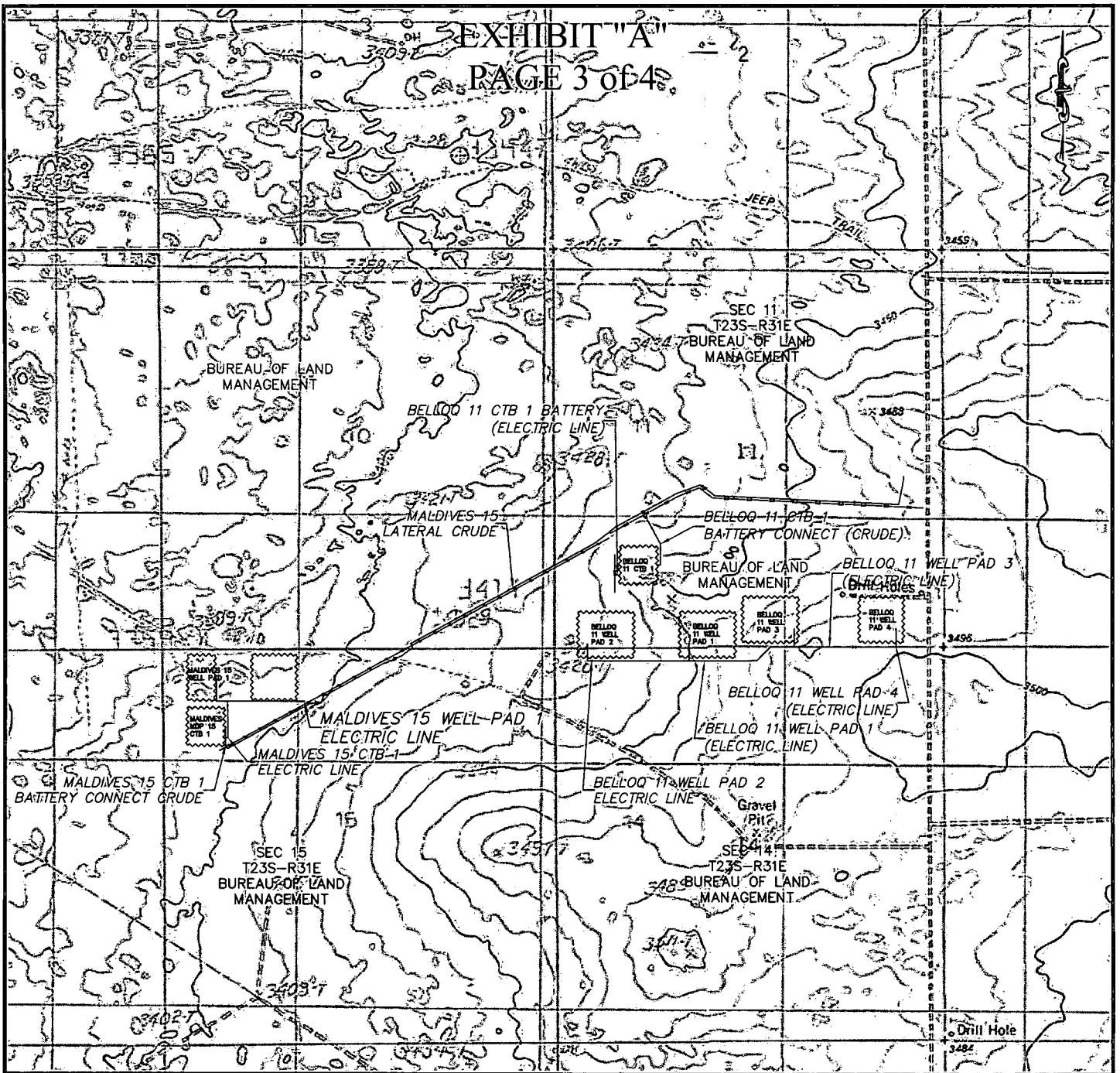
(903) 388-3045 75951

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

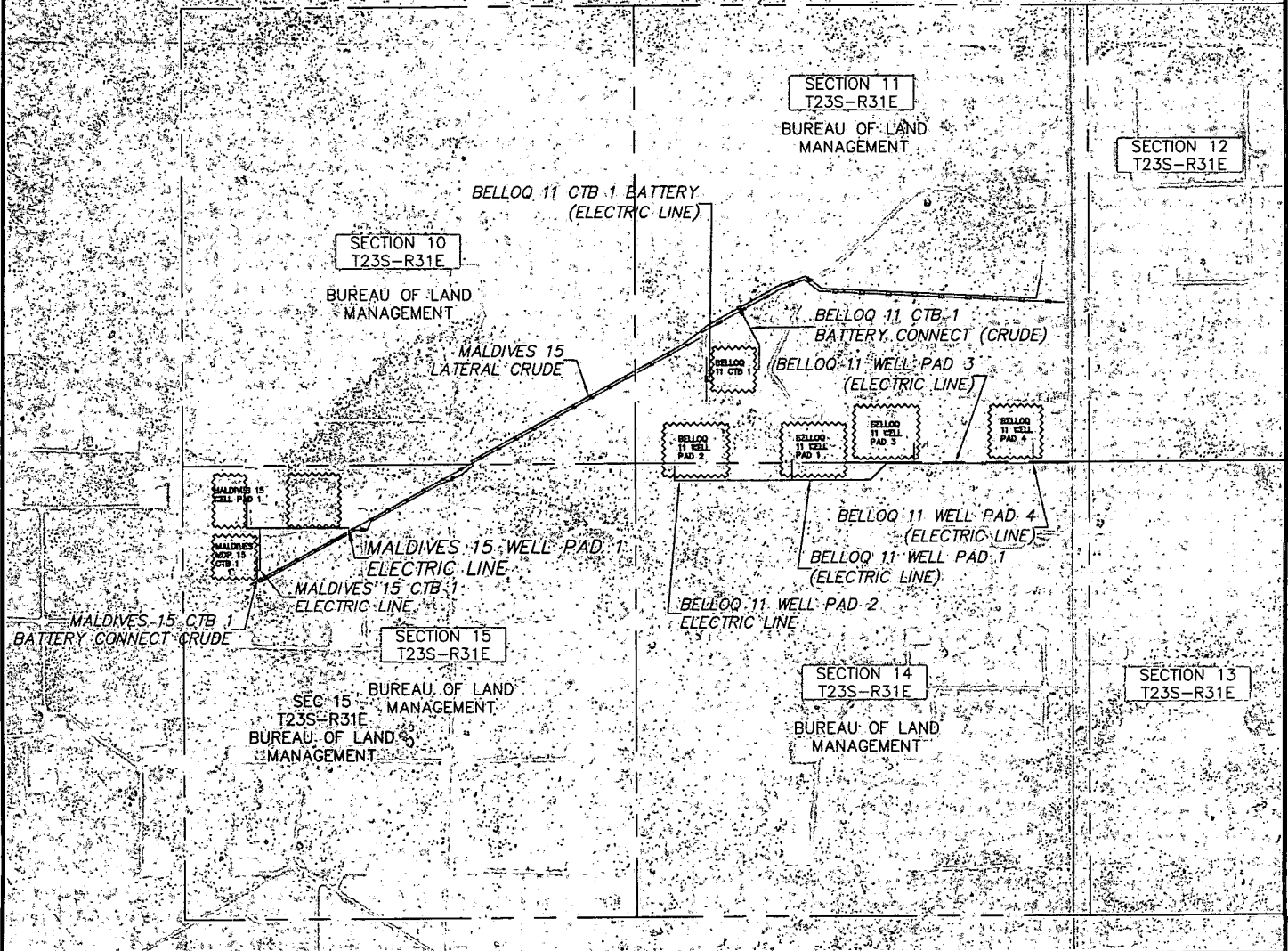
SCALE:
1" = 2000'

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



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 Info Data Report

05/16/2019

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: