District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

RECEIVED
JUL 25 2019
DISTRICT II ARTESIA O.C.D.

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-45384	33840	JAMES RANCH; BONESPRING

[4] Property Code	[5] Property Name	[6] Well Number
325991	MALDIVES 15-27 FED COM	232H

[7] OGRID No.	[8] Operator Name	[9] Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3387.8

[10] Surface Location

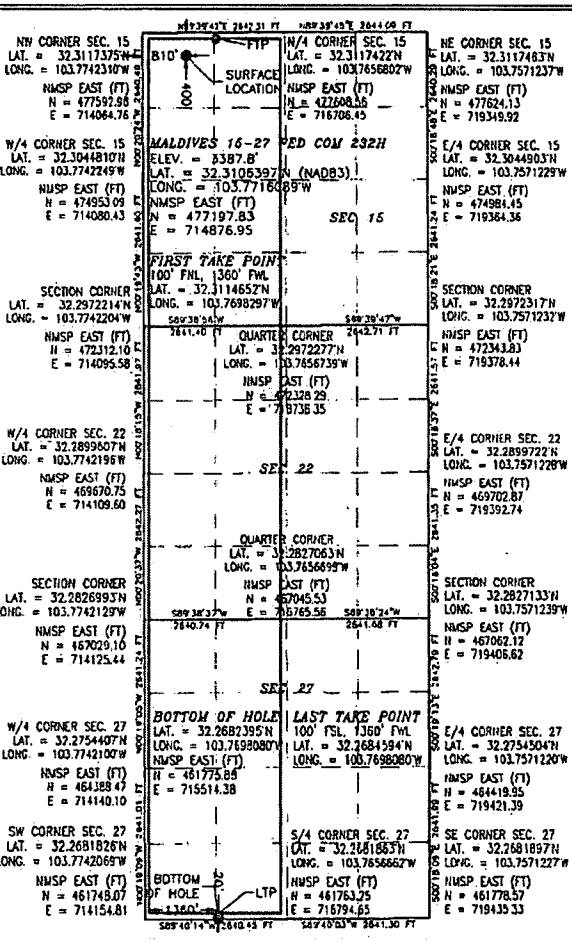
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	15	23 S	31 E		400	NORTH	810	WEST	EDDY

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	27	23 S	31 E		20	SOUTH	1360	WEST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
960			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Jenny Harms 3-18-2019
Signature Date

JENNY HARMS
Printed Name

JENNY.HARMS@DVN.COM
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

FEBRUARY 25, 2019
Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number: FILIMON F. JARAMILLO, PLS 12797

SURVEY NO. 5293A

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	DEVON ENERGY PRODUCTION COMPANY LP
LEASE NO.:	NMNM0405444
WELL NAME & NO.:	232H- MALDIVES 15-27 FED COM
SURFACE HOLE FOOTAGE:	400'/N & 540'/W
BOTTOM HOLE FOOTAGE	2350'/N & 650'/W
LOCATION:	Section.15.,T23S., R.31E., NMP
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

All Previous COAs Still Apply

A. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **608 feet** (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **24 hours in the Potash Area** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

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

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

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

Option 1 (Single Stage):

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

Option 2:

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

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.
  Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

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

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

- Cement should tie-back at least **500 feet** into previous casing string. Operator shall provide method of verification.
  Cement excess is less than 25%, more cement might be required.

B. 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.

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.

Maldives 15-27 Fed Com 232H

1. Geologic Formations

TVD of target	10330	Pilot hole depth	N/A
MD at TD:	25890	Deepest expected fresh water	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	549		
Salado	919		
Base of Salt	4021		
Delaware	4249		
Bell Canyon	4289		
Cherry Canyon	5169		
Brushy Canyon	6454		
Lower Brushy	7829		
1BSLM	8159		
BONE SPRING 2ND	9719		
BONE SPRING 3RD	10997		

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

2. Casing Program - see COA

Hole Size	Casing Interval		Csg. Size	Wt (PPF)	Grade	Conn	Min SF Collapse	Min SF Burst	Min SF Tension
	From	To							
17 1/2	0	~~574~~ 608 TVD	13 3/8	48.0	H40	BTC	1.125	1.25	1.6
12 1/4	0	6000 TVD	9 5/8	40.0	J-55	BTC	1.125	1.25	1.6
8 3/4	0	TD	5 1/2	17.0	P110	BTC	1.125	1.25	1.6
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

D=25889
)=10330

• All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 IILB.1.h Must have table for continengcy casing.
• Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.
• A variance is requested for collapse rating on intermediate casing. Operator will keep pipe full while running casing.

• Int casing shoe will be selected based on drilling data, gamma, and flows experienced while drilling. Setting depth with be revised accordingly if needed.
• A variance is requested to wave the centralizer requirement for the Intermediate casing and production casing.

	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 specficition 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 3rd 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 2nd 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?	

- In Secretary Potash

3. Cementing Program (3-String Primary Design)

Casing	# Sks	TOC	Wt. (lb/gal)	Yld (ft3/sack)	Slurry Description
Surface	454	Surf	13.2	1.4	Lead: Class C Cement + additives
Int	679	Surf	9.0	3.3	Lead: Class C Cement + additives
	154	500' above shoe	13.2	1.4	Tail: Class H / C + additives
Int 1 Two Stage w/ DV @ TVD of Delaware	174	Surf	9.0	3.3	1st stage Lead: Class C Cement + additives
	136	500' above shoe	13.2	1.4	1st stage Tail: Class H / C + additives
	446	Surf	9.0	3.3	2nd stage Lead: Class C Cement + additives
	136	500' above DV	13.2	1.4	2nd stage Tail: Class H / C + additives
Int 1 Intermediate Squeeze	As Needed	Surf	9.0	3.3	Squeeze Lead: Class C Cement + additives
	679	Surf	9.0	3.3	Lead: Class C Cement + additives
	154	500' above shoe	13.2	1.4	Tail: Class H / C + additives
Production	366	500' tieback	9.0	3.3	Lead: Class H /C + additives
	3106	KOP	13.2	1.4	Tail: Class H / C + additives

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

-Not enough cement for 500' tieback with 25% excess.

Casing String	% Excess
Surface	50%
Intermediate	30%
Production	10%

GK

4. Pressure Control Equipment (Three String Design)

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
Int 1	13-58"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
Production	13-5/8"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
			Annular (5M)		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		

5. Mud Program (Three String Design)

Section	Type	Weight (ppg)
Surface	FW Gel	8.5-9
Intermediate	Brine	10-10.5
Production	WBM	8.5-9

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

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

6. Logging and Testing Procedures

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

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

7. Drilling Conditions

Condition	Specfiy what type and where?
BH pressure at deepest TVD	4834
Abnormal temperature	No

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

Hydrogren Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S plan attached.

8. Other facets of operation

Is this a walking operation? Potentially

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

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

Will be pre-setting casing? Potentially

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

X Directional Plan
_____ Other, describe

Devon Internal

Devon Energy

WELL DETAILS: Maldives 15-27 Fed Com 232H

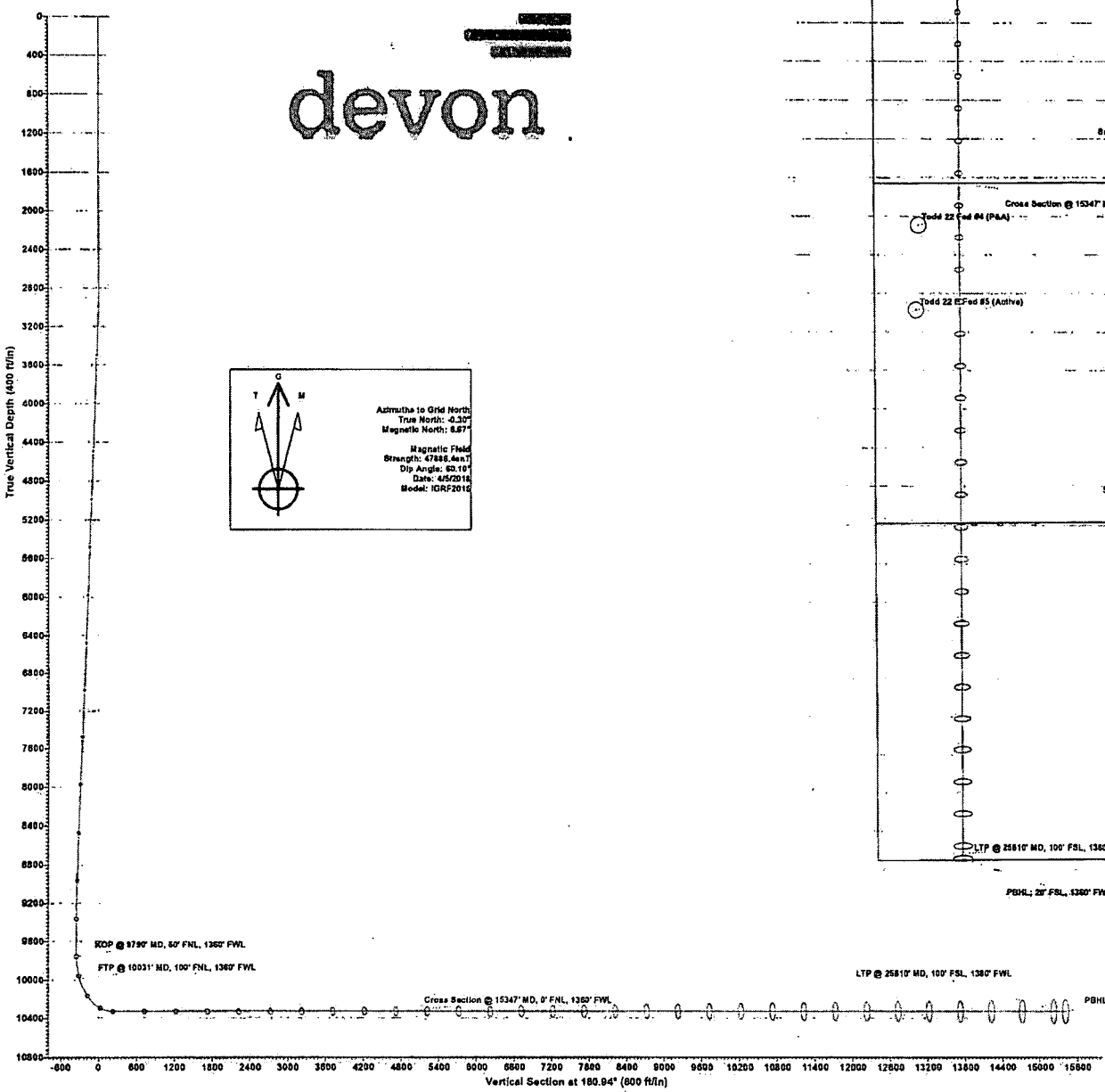
RKB @ 3412.50ft
3387.80

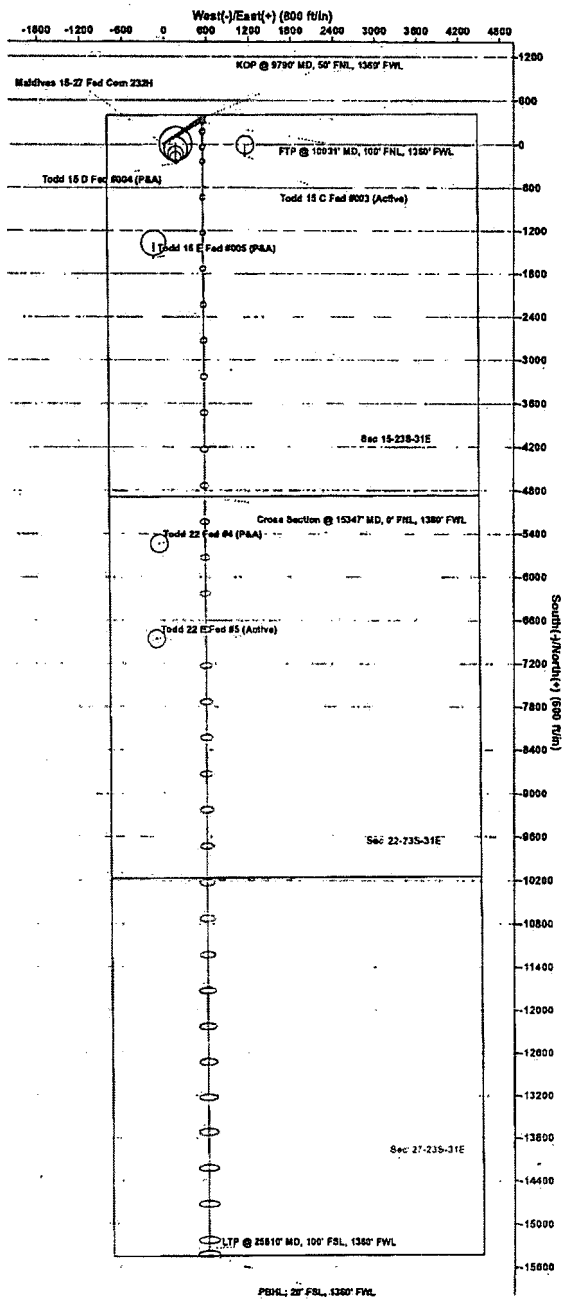
Northing	Easting	Latitude	Longitude
477197.83	714876.95	32.310640	-103.771609

SECTION DETAILS Permit Plan 2

	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	
	2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	0.00	
	3299.59	6.00	57.53	3298.50	16.83	26.44	1.00	-17.26	
	9040.50	6.00	57.53	9008.00	338.78	532.37	0.00	-347.50	
5	9440.23	0.00	0.00	9407.00	350.00	550.00	1.50	-359.01	
6	9790.27	0.00	0.00	9757.04	350.00	550.00	0.00	-359.01	KOP @ 9790' MD, 50' FNL, 1360' FWL
7	10690.27	90.00	179.68	10330.00	-222.95	553.18	10.00	213.81	
8	25889.54	90.00	179.68	10330.00	-15421.98	637.43	0.00	15409.39	PBHL; 20' FSL, 1360' FWL

devon





WCDSC Permian NM

Eddy County (NAD 83 NM Eastern)
Sec 15-T23S-R31E
Maldives 15-27 Fed Com 232H

Wellbore #1

Plan: Permit Plan 2

Standard Planning Report - Geographic

14 March, 2019

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well Maldives 15-27 Fed Com 232H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3412.50ft
Project:	Eddy County (NAD 83 NM Eastern)	MD Reference:	RKB @ 3412.50ft
Site:	Sec 15-T23S-R31E	North Reference:	Grid
Well:	Maldives 15-27 Fed Com 232H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 2		

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	Latitude:	32.311738
From:	Map	Easting:	714,064.76 usft	Longitude:	-103.774231
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.30 °

Well Maldives 15-27 Fed Com 232H

Well Position	+N/-S	0.00 ft	Northing:	477,197.83 usft	Latitude:	32.310640
	+E/-W	0.00 ft	Easting:	714,876.95 usft	Longitude:	-103.771609
Position Uncertainty		0.50 ft	Wellhead Elevation:		Ground Level:	3,387.80 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	4/5/2018	6.97	60.10	47,886.37940923

Design Permit Plan 2

Audit Notes:

Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	180.94

Plan Survey Tool Program Date 3/14/2019

	Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	25,889.54	Permit Plan 2 (Wellbore #1)	MWD+IFR1	
				OWSG MWD + IFR1	

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,299.59	6.00	57.53	3,298.50	16.83	26.44	1.00	1.00	0.00	57.53	
9,040.50	6.00	57.53	9,008.00	338.78	532.37	0.00	0.00	0.00	0.00	
9,440.23	0.00	0.00	9,407.00	350.00	550.00	1.50	-1.50	0.00	180.00	
9,790.27	0.00	0.00	9,757.04	350.00	550.00	0.00	0.00	0.00	0.00	
10,690.27	90.00	179.68	10,330.00	-222.95	553.18	10.00	10.00	0.00	179.68	PBHL - Maldives 15-2
25,889.54	90.00	179.68	10,330.00	-15,421.98	637.43	0.00	0.00	0.00	0.00	PBHL - Maldives 15-2

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well Maldives 15-27 Fed Com 232H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3412.50ft
Project:	Eddy County (NAD 83 NM Eastern)	MD Reference:	RKB @ 3412.50ft
Site:	Sec 15-T23S-R31E	North Reference:	Grid
Well:	Maldives 15-27 Fed Com 232H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 2		

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	477,197.83	714,876.95	32.310640	-103.771609
100.00	0.00	0.00	100.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
200.00	0.00	0.00	200.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
300.00	0.00	0.00	300.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
400.00	0.00	0.00	400.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
500.00	0.00	0.00	500.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
600.00	0.00	0.00	600.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
700.00	0.00	0.00	700.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
800.00	0.00	0.00	800.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
900.00	0.00	0.00	900.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
1,000.00	0.00	0.00	1,000.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
1,100.00	0.00	0.00	1,100.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
1,200.00	0.00	0.00	1,200.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
1,300.00	0.00	0.00	1,300.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
1,400.00	0.00	0.00	1,400.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
1,500.00	0.00	0.00	1,500.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
1,600.00	0.00	0.00	1,600.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
1,700.00	0.00	0.00	1,700.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
1,800.00	0.00	0.00	1,800.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
1,900.00	0.00	0.00	1,900.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
2,000.00	0.00	0.00	2,000.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
2,100.00	0.00	0.00	2,100.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
2,200.00	0.00	0.00	2,200.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
2,300.00	0.00	0.00	2,300.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
2,400.00	0.00	0.00	2,400.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
2,500.00	0.00	0.00	2,500.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
2,600.00	0.00	0.00	2,600.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
2,700.00	0.00	0.00	2,700.00	0.00	0.00	477,197.83	714,876.95	32.310640	-103.771609
2,800.00	1.00	57.53	2,799.99	0.47	0.74	477,198.30	714,877.68	32.310641	-103.771607
2,900.00	2.00	57.53	2,899.96	1.87	2.94	477,199.70	714,879.89	32.310645	-103.771600
3,000.00	3.00	57.53	2,999.86	4.22	6.62	477,202.05	714,883.57	32.310651	-103.771588
3,100.00	4.00	57.53	3,099.68	7.49	11.77	477,205.32	714,888.72	32.310660	-103.771571
3,200.00	5.00	57.53	3,199.37	11.71	18.39	477,209.54	714,895.34	32.310672	-103.771549
3,299.59	6.00	57.53	3,298.50	16.83	26.44	477,214.66	714,903.39	32.310686	-103.771523
3,300.00	6.00	57.53	3,298.90	16.85	26.48	477,214.68	714,903.43	32.310686	-103.771523
3,400.00	6.00	57.53	3,398.36	22.46	35.29	477,220.29	714,912.24	32.310701	-103.771495
3,500.00	6.00	57.53	3,497.81	28.07	44.11	477,225.90	714,921.05	32.310716	-103.771466
3,600.00	6.00	57.53	3,597.26	33.68	52.92	477,231.51	714,929.86	32.310732	-103.771437
3,700.00	6.00	57.53	3,696.72	39.28	61.73	477,237.11	714,938.68	32.310747	-103.771409
3,800.00	6.00	57.53	3,796.17	44.89	70.54	477,242.72	714,947.49	32.310762	-103.771380
3,900.00	6.00	57.53	3,895.62	50.50	79.36	477,248.33	714,956.30	32.310777	-103.771351
4,000.00	6.00	57.53	3,995.07	56.11	88.17	477,253.94	714,965.11	32.310793	-103.771323
4,100.00	6.00	57.53	4,094.53	61.72	96.98	477,259.55	714,973.93	32.310808	-103.771294
4,200.00	6.00	57.53	4,193.98	67.32	105.79	477,265.15	714,982.74	32.310823	-103.771266
4,300.00	6.00	57.53	4,293.43	72.93	114.61	477,270.76	714,991.55	32.310839	-103.771237
4,400.00	6.00	57.53	4,392.89	78.54	123.42	477,276.37	715,000.37	32.310854	-103.771208
4,500.00	6.00	57.53	4,492.34	84.15	132.23	477,281.98	715,009.18	32.310869	-103.771180
4,600.00	6.00	57.53	4,591.79	89.76	141.04	477,287.59	715,017.99	32.310884	-103.771151
4,700.00	6.00	57.53	4,691.25	95.36	149.86	477,293.19	715,026.80	32.310900	-103.771122
4,800.00	6.00	57.53	4,790.70	100.97	158.67	477,298.80	715,035.62	32.310915	-103.771094
4,900.00	6.00	57.53	4,890.15	106.58	167.48	477,304.41	715,044.43	32.310930	-103.771065
5,000.00	6.00	57.53	4,989.60	112.19	176.30	477,310.02	715,053.24	32.310946	-103.771037
5,100.00	6.00	57.53	5,089.06	117.80	185.11	477,315.63	715,062.05	32.310961	-103.771008
5,200.00	6.00	57.53	5,188.51	123.40	193.92	477,321.23	715,070.87	32.310976	-103.770979
5,300.00	6.00	57.53	5,287.96	129.01	202.73	477,326.84	715,079.68	32.310992	-103.770951

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well Maldives 15-27 Fed Com 232H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3412.50ft
Project:	Eddy County (NAD 83 NM Eastern)	MD Reference:	RKB @ 3412.50ft
Site:	Sec 15-T23S-R31E	North Reference:	Grid
Well:	Maldives 15-27 Fed Com 232H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,400.00	6.00	57.53	5,387.42	134.62	211.55	477,332.45	715,088.49	32.311007	-103.770922
5,500.00	6.00	57.53	5,486.87	140.23	220.36	477,338.06	715,097.30	32.311022	-103.770894
5,600.00	6.00	57.53	5,586.32	145.84	229.17	477,343.67	715,106.12	32.311037	-103.770865
5,700.00	6.00	57.53	5,685.77	151.44	237.98	477,349.27	715,114.93	32.311053	-103.770836
5,800.00	6.00	57.53	5,785.23	157.05	246.80	477,354.88	715,123.74	32.311068	-103.770808
5,900.00	6.00	57.53	5,884.68	162.66	255.61	477,360.49	715,132.55	32.311083	-103.770779
6,000.00	6.00	57.53	5,984.13	168.27	264.42	477,366.10	715,141.37	32.311099	-103.770750
6,100.00	6.00	57.53	6,083.59	173.88	273.23	477,371.71	715,150.18	32.311114	-103.770722
6,200.00	6.00	57.53	6,183.04	179.48	282.05	477,377.31	715,158.99	32.311129	-103.770693
6,300.00	6.00	57.53	6,282.49	185.09	290.86	477,382.92	715,167.81	32.311144	-103.770665
6,400.00	6.00	57.53	6,381.95	190.70	299.67	477,388.53	715,176.62	32.311160	-103.770636
6,500.00	6.00	57.53	6,481.40	196.31	308.49	477,394.14	715,185.43	32.311175	-103.770607
6,600.00	6.00	57.53	6,580.85	201.92	317.30	477,399.75	715,194.24	32.311190	-103.770579
6,700.00	6.00	57.53	6,680.30	207.52	326.11	477,405.35	715,203.06	32.311206	-103.770550
6,800.00	6.00	57.53	6,779.76	213.13	334.92	477,410.96	715,211.87	32.311221	-103.770521
6,900.00	6.00	57.53	6,879.21	218.74	343.74	477,416.57	715,220.68	32.311236	-103.770493
7,000.00	6.00	57.53	6,978.66	224.35	352.55	477,422.18	715,229.49	32.311251	-103.770464
7,100.00	6.00	57.53	7,078.12	229.96	361.36	477,427.79	715,238.31	32.311267	-103.770436
7,200.00	6.00	57.53	7,177.57	235.57	370.17	477,433.40	715,247.12	32.311282	-103.770407
7,300.00	6.00	57.53	7,277.02	241.17	378.99	477,439.00	715,255.93	32.311297	-103.770378
7,400.00	6.00	57.53	7,376.47	246.78	387.80	477,444.61	715,264.74	32.311313	-103.770350
7,500.00	6.00	57.53	7,475.93	252.39	396.61	477,450.22	715,273.56	32.311328	-103.770321
7,600.00	6.00	57.53	7,575.38	258.00	405.42	477,455.83	715,282.37	32.311343	-103.770292
7,700.00	6.00	57.53	7,674.83	263.61	414.24	477,461.44	715,291.18	32.311358	-103.770264
7,800.00	6.00	57.53	7,774.29	269.21	423.05	477,467.04	715,299.99	32.311374	-103.770235
7,900.00	6.00	57.53	7,873.74	274.82	431.86	477,472.65	715,308.81	32.311389	-103.770207
8,000.00	6.00	57.53	7,973.19	280.43	440.67	477,478.26	715,317.62	32.311404	-103.770178
8,100.00	6.00	57.53	8,072.65	286.04	449.49	477,483.87	715,326.43	32.311420	-103.770149
8,200.00	6.00	57.53	8,172.10	291.65	458.30	477,489.48	715,335.25	32.311435	-103.770121
8,300.00	6.00	57.53	8,271.55	297.25	467.11	477,495.08	715,344.06	32.311450	-103.770092
8,400.00	6.00	57.53	8,371.00	302.86	475.93	477,500.69	715,352.87	32.311465	-103.770064
8,500.00	6.00	57.53	8,470.46	308.47	484.74	477,506.30	715,361.68	32.311481	-103.770035
8,600.00	6.00	57.53	8,569.91	314.08	493.55	477,511.91	715,370.50	32.311496	-103.770006
8,700.00	6.00	57.53	8,669.36	319.69	502.36	477,517.52	715,379.31	32.311511	-103.769978
8,800.00	6.00	57.53	8,768.82	325.29	511.18	477,523.12	715,388.12	32.311527	-103.769949
8,900.00	6.00	57.53	8,868.27	330.90	519.99	477,528.73	715,396.93	32.311542	-103.769920
9,000.00	6.00	57.53	8,967.72	336.51	528.80	477,534.34	715,405.75	32.311557	-103.769892
9,040.50	6.00	57.53	9,008.00	338.78	532.37	477,536.61	715,409.32	32.311563	-103.769880
9,100.00	5.10	57.53	9,067.22	341.87	537.22	477,539.70	715,414.17	32.311572	-103.769864
9,200.00	3.60	57.53	9,166.93	345.95	543.63	477,543.78	715,420.57	32.311583	-103.769844
9,300.00	2.10	57.53	9,266.80	348.62	547.83	477,546.45	715,424.77	32.311590	-103.769830
9,400.00	0.60	57.53	9,366.77	349.89	549.82	477,547.72	715,426.77	32.311594	-103.769824
9,440.23	0.00	0.00	9,407.00	350.00	550.00	477,547.83	715,426.94	32.311594	-103.769823
9,500.00	0.00	0.00	9,466.77	350.00	550.00	477,547.83	715,426.94	32.311594	-103.769823
9,600.00	0.00	0.00	9,566.77	350.00	550.00	477,547.83	715,426.94	32.311594	-103.769823
9,700.00	0.00	0.00	9,666.77	350.00	550.00	477,547.83	715,426.94	32.311594	-103.769823
9,790.27	0.00	0.00	9,757.04	350.00	550.00	477,547.83	715,426.94	32.311594	-103.769823
KOP @ 9790' MD, 50' FNL, 1360' FWL									
9,800.00	0.97	179.68	9,766.77	349.92	550.00	477,547.75	715,426.95	32.311594	-103.769823
9,900.00	10.97	179.68	9,866.10	339.52	550.06	477,537.35	715,427.00	32.311565	-103.769823
10,000.00	20.97	179.68	9,962.12	312.04	550.21	477,509.87	715,427.16	32.311490	-103.769823
10,031.42	24.12	179.68	9,991.13	300.00	550.28	477,497.83	715,427.22	32.311456	-103.769823
FTP @ 10031' MD, 100' FNL, 1360' FWL									
10,100.00	30.97	179.68	10,051.90	268.30	550.45	477,466.13	715,427.40	32.311369	-103.769823

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well Maldives 15-27 Fed Com 232H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3412.50ft
Project:	Eddy County (NAD 83 NM Eastern)	MD Reference:	RKB @ 3412.50ft
Site:	Sec 15-T23S-R31E	North Reference:	Grid
Well:	Maldives 15-27 Fed Com 232H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,200.00	40.97	179.68	10,132.73	209.64	550.78	477,407.47	715,427.72	32.311208	-103.769823
10,300.00	50.97	179.68	10,202.14	137.83	551.18	477,335.66	715,428.12	32.311011	-103.769823
10,400.00	60.97	179.68	10,258.03	55.06	551.64	477,252.89	715,428.58	32.310783	-103.769823
10,500.00	70.97	179.68	10,298.70	-36.16	552.14	477,161.67	715,429.09	32.310532	-103.769823
10,600.00	80.97	179.68	10,322.90	-133.05	552.68	477,064.78	715,429.62	32.310266	-103.769823
10,690.27	90.00	179.68	10,330.00	-222.95	553.18	476,974.88	715,430.12	32.310019	-103.769822
10,700.00	90.00	179.68	10,330.00	-232.68	553.23	476,965.15	715,430.17	32.309992	-103.769822
10,800.00	90.00	179.68	10,330.00	-332.68	553.78	476,865.15	715,430.73	32.309717	-103.769822
10,900.00	90.00	179.68	10,330.00	-432.68	554.34	476,765.16	715,431.28	32.309443	-103.769822
11,000.00	90.00	179.68	10,330.00	-532.67	554.89	476,665.16	715,431.84	32.309168	-103.769822
11,100.00	90.00	179.68	10,330.00	-632.67	555.45	476,565.16	715,432.39	32.308893	-103.769822
11,200.00	90.00	179.68	10,330.00	-732.67	556.00	476,465.16	715,432.95	32.308618	-103.769822
11,300.00	90.00	179.68	10,330.00	-832.67	556.56	476,365.16	715,433.50	32.308343	-103.769822
11,400.00	90.00	179.68	10,330.00	-932.67	557.11	476,265.16	715,434.06	32.308068	-103.769822
11,500.00	90.00	179.68	10,330.00	-1,032.67	557.66	476,165.17	715,434.61	32.307793	-103.769822
11,600.00	90.00	179.68	10,330.00	-1,132.67	558.22	476,065.17	715,435.16	32.307518	-103.769822
11,700.00	90.00	179.68	10,330.00	-1,232.66	558.77	475,965.17	715,435.72	32.307243	-103.769822
11,800.00	90.00	179.68	10,330.00	-1,332.66	559.33	475,865.17	715,436.27	32.306969	-103.769821
11,900.00	90.00	179.68	10,330.00	-1,432.66	559.88	475,765.17	715,436.83	32.306694	-103.769821
12,000.00	90.00	179.68	10,330.00	-1,532.66	560.44	475,665.17	715,437.38	32.306419	-103.769821
12,100.00	90.00	179.68	10,330.00	-1,632.66	560.99	475,565.18	715,437.94	32.306144	-103.769821
12,200.00	90.00	179.68	10,330.00	-1,732.66	561.55	475,465.18	715,438.49	32.305869	-103.769821
12,300.00	90.00	179.68	10,330.00	-1,832.65	562.10	475,365.18	715,439.04	32.305594	-103.769821
12,400.00	90.00	179.68	10,330.00	-1,932.65	562.65	475,265.18	715,439.60	32.305319	-103.769821
12,500.00	90.00	179.68	10,330.00	-2,032.65	563.21	475,165.18	715,440.15	32.305044	-103.769821
12,600.00	90.00	179.68	10,330.00	-2,132.65	563.76	475,065.19	715,440.71	32.304770	-103.769821
12,700.00	90.00	179.68	10,330.00	-2,232.65	564.32	474,965.19	715,441.26	32.304495	-103.769821
12,800.00	90.00	179.68	10,330.00	-2,332.65	564.87	474,865.19	715,441.82	32.304220	-103.769820
12,900.00	90.00	179.68	10,330.00	-2,432.65	565.43	474,765.19	715,442.37	32.303945	-103.769820
13,000.00	90.00	179.68	10,330.00	-2,532.64	565.98	474,665.19	715,442.92	32.303670	-103.769820
13,100.00	90.00	179.68	10,330.00	-2,632.64	566.53	474,565.19	715,443.48	32.303395	-103.769820
13,200.00	90.00	179.68	10,330.00	-2,732.64	567.09	474,465.20	715,444.03	32.303120	-103.769820
13,300.00	90.00	179.68	10,330.00	-2,832.64	567.64	474,365.20	715,444.59	32.302845	-103.769820
13,400.00	90.00	179.68	10,330.00	-2,932.64	568.20	474,265.20	715,445.14	32.302571	-103.769820
13,500.00	90.00	179.68	10,330.00	-3,032.64	568.75	474,165.20	715,445.70	32.302296	-103.769820
13,600.00	90.00	179.68	10,330.00	-3,132.63	569.31	474,065.20	715,446.25	32.302021	-103.769820
13,700.00	90.00	179.68	10,330.00	-3,232.63	569.86	473,965.20	715,446.81	32.301746	-103.769820
13,800.00	90.00	179.68	10,330.00	-3,332.63	570.41	473,865.21	715,447.36	32.301471	-103.769820
13,900.00	90.00	179.68	10,330.00	-3,432.63	570.97	473,765.21	715,447.91	32.301196	-103.769819
14,000.00	90.00	179.68	10,330.00	-3,532.63	571.52	473,665.21	715,448.47	32.300921	-103.769819
14,100.00	90.00	179.68	10,330.00	-3,632.63	572.08	473,565.21	715,449.02	32.300646	-103.769819
14,200.00	90.00	179.68	10,330.00	-3,732.63	572.63	473,465.21	715,449.58	32.300372	-103.769819
14,300.00	90.00	179.68	10,330.00	-3,832.62	573.19	473,365.21	715,450.13	32.300097	-103.769819
14,400.00	90.00	179.68	10,330.00	-3,932.62	573.74	473,265.22	715,450.69	32.299822	-103.769819
14,500.00	90.00	179.68	10,330.00	-4,032.62	574.29	473,165.22	715,451.24	32.299547	-103.769819
14,600.00	90.00	179.68	10,330.00	-4,132.62	574.85	473,065.22	715,451.79	32.299272	-103.769819
14,700.00	90.00	179.68	10,330.00	-4,232.62	575.40	472,965.22	715,452.35	32.298997	-103.769819
14,800.00	90.00	179.68	10,330.00	-4,332.62	575.96	472,865.22	715,452.90	32.298722	-103.769819
14,900.00	90.00	179.68	10,330.00	-4,432.61	576.51	472,765.23	715,453.46	32.298447	-103.769819
15,000.00	90.00	179.68	10,330.00	-4,532.61	577.07	472,665.23	715,454.01	32.298173	-103.769818
15,100.00	90.00	179.68	10,330.00	-4,632.61	577.62	472,565.23	715,454.57	32.297898	-103.769818
15,200.00	90.00	179.68	10,330.00	-4,732.61	578.18	472,465.23	715,455.12	32.297623	-103.769818
15,300.00	90.00	179.68	10,330.00	-4,832.61	578.73	472,365.23	715,455.67	32.297348	-103.769818

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well Maldives 15-27 Fed Com 232H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3412.50ft
Project:	Eddy County (NAD 83 NM Eastern)	MD Reference:	RKB @ 3412.50ft
Site:	Sec 15-T23S-R31E	North Reference:	Grid
Well:	Maldives 15-27 Fed Com 232H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,347.00	90.00	179.68	10,330.00	-4,879.61	578.99	472,318.23	715,455.93	32.297219	-103.769818
Cross Section @ 15347' MD, 0' FNL, 1360' FWL									
15,400.00	90.00	179.68	10,330.00	-4,932.61	579.28	472,265.23	715,456.23	32.297073	-103.769818
15,500.00	90.00	179.68	10,330.00	-5,032.61	579.84	472,165.24	715,456.78	32.296798	-103.769818
15,600.00	90.00	179.68	10,330.00	-5,132.60	580.39	472,065.24	715,457.34	32.296523	-103.769818
15,700.00	90.00	179.68	10,330.00	-5,232.60	580.95	471,965.24	715,457.89	32.296248	-103.769818
15,800.00	90.00	179.68	10,330.00	-5,332.60	581.50	471,865.24	715,458.45	32.295974	-103.769818
15,900.00	90.00	179.68	10,330.00	-5,432.60	582.06	471,765.24	715,459.00	32.295699	-103.769818
16,000.00	90.00	179.68	10,330.00	-5,532.60	582.61	471,665.24	715,459.55	32.295424	-103.769818
16,100.00	90.00	179.68	10,330.00	-5,632.60	583.16	471,565.25	715,460.11	32.295149	-103.769817
16,200.00	90.00	179.68	10,330.00	-5,732.59	583.72	471,465.25	715,460.66	32.294874	-103.769817
16,300.00	90.00	179.68	10,330.00	-5,832.59	584.27	471,365.25	715,461.22	32.294599	-103.769817
16,400.00	90.00	179.68	10,330.00	-5,932.59	584.83	471,265.25	715,461.77	32.294324	-103.769817
16,500.00	90.00	179.68	10,330.00	-6,032.59	585.38	471,165.25	715,462.33	32.294049	-103.769817
16,600.00	90.00	179.68	10,330.00	-6,132.59	585.94	471,065.25	715,462.88	32.293775	-103.769817
16,700.00	90.00	179.68	10,330.00	-6,232.59	586.49	470,965.26	715,463.44	32.293500	-103.769817
16,800.00	90.00	179.68	10,330.00	-6,332.59	587.04	470,865.26	715,463.99	32.293225	-103.769817
16,900.00	90.00	179.68	10,330.00	-6,432.58	587.60	470,765.26	715,464.54	32.292950	-103.769817
17,000.00	90.00	179.68	10,330.00	-6,532.58	588.15	470,665.26	715,465.10	32.292675	-103.769817
17,100.00	90.00	179.68	10,330.00	-6,632.58	588.71	470,565.26	715,465.65	32.292400	-103.769816
17,200.00	90.00	179.68	10,330.00	-6,732.58	589.26	470,465.26	715,466.21	32.292125	-103.769816
17,300.00	90.00	179.68	10,330.00	-6,832.58	589.82	470,365.27	715,466.76	32.291850	-103.769816
17,400.00	90.00	179.68	10,330.00	-6,932.58	590.37	470,265.27	715,467.32	32.291575	-103.769816
17,500.00	90.00	179.68	10,330.00	-7,032.57	590.92	470,165.27	715,467.87	32.291301	-103.769816
17,600.00	90.00	179.68	10,330.00	-7,132.57	591.48	470,065.27	715,468.42	32.291026	-103.769816
17,700.00	90.00	179.68	10,330.00	-7,232.57	592.03	469,965.27	715,468.98	32.290751	-103.769816
17,800.00	90.00	179.68	10,330.00	-7,332.57	592.59	469,865.28	715,469.53	32.290476	-103.769816
17,900.00	90.00	179.68	10,330.00	-7,432.57	593.14	469,765.28	715,470.09	32.290201	-103.769816
18,000.00	90.00	179.68	10,330.00	-7,532.57	593.70	469,665.28	715,470.64	32.289926	-103.769816
18,100.00	90.00	179.68	10,330.00	-7,632.57	594.25	469,565.28	715,471.20	32.289651	-103.769816
18,200.00	90.00	179.68	10,330.00	-7,732.56	594.81	469,465.28	715,471.75	32.289376	-103.769815
18,300.00	90.00	179.68	10,330.00	-7,832.56	595.36	469,365.28	715,472.30	32.289102	-103.769815
18,400.00	90.00	179.68	10,330.00	-7,932.56	595.91	469,265.29	715,472.86	32.288827	-103.769815
18,500.00	90.00	179.68	10,330.00	-8,032.56	596.47	469,165.29	715,473.41	32.288552	-103.769815
18,600.00	90.00	179.68	10,330.00	-8,132.56	597.02	469,065.29	715,473.97	32.288277	-103.769815
18,700.00	90.00	179.68	10,330.00	-8,232.56	597.58	468,965.29	715,474.52	32.288002	-103.769815
18,800.00	90.00	179.68	10,330.00	-8,332.55	598.13	468,865.29	715,475.08	32.287727	-103.769815
18,900.00	90.00	179.68	10,330.00	-8,432.55	598.69	468,765.29	715,475.63	32.287452	-103.769815
19,000.00	90.00	179.68	10,330.00	-8,532.55	599.24	468,665.30	715,476.18	32.287177	-103.769815
19,100.00	90.00	179.68	10,330.00	-8,632.55	599.79	468,565.30	715,476.74	32.286903	-103.769815
19,200.00	90.00	179.68	10,330.00	-8,732.55	600.35	468,465.30	715,477.29	32.286628	-103.769815
19,300.00	90.00	179.68	10,330.00	-8,832.55	600.90	468,365.30	715,477.85	32.286353	-103.769814
19,400.00	90.00	179.68	10,330.00	-8,932.55	601.46	468,265.30	715,478.40	32.286078	-103.769814
19,500.00	90.00	179.68	10,330.00	-9,032.54	602.01	468,165.30	715,478.96	32.285803	-103.769814
19,600.00	90.00	179.68	10,330.00	-9,132.54	602.57	468,065.31	715,479.51	32.285528	-103.769814
19,700.00	90.00	179.68	10,330.00	-9,232.54	603.12	467,965.31	715,480.07	32.285253	-103.769814
19,800.00	90.00	179.68	10,330.00	-9,332.54	603.67	467,865.31	715,480.62	32.284978	-103.769814
19,900.00	90.00	179.68	10,330.00	-9,432.54	604.23	467,765.31	715,481.17	32.284704	-103.769814
20,000.00	90.00	179.68	10,330.00	-9,532.54	604.78	467,665.31	715,481.73	32.284429	-103.769814
20,100.00	90.00	179.68	10,330.00	-9,632.53	605.34	467,565.32	715,482.28	32.284154	-103.769814
20,200.00	90.00	179.68	10,330.00	-9,732.53	605.89	467,465.32	715,482.84	32.283879	-103.769814
20,300.00	90.00	179.68	10,330.00	-9,832.53	606.45	467,365.32	715,483.39	32.283604	-103.769813
20,400.00	90.00	179.68	10,330.00	-9,932.53	607.00	467,265.32	715,483.95	32.283329	-103.769813
20,500.00	90.00	179.68	10,330.00	-10,032.53	607.56	467,165.32	715,484.50	32.283054	-103.769813

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well Maldives 15-27 Fed Com 232H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3412.50ft
Project:	Eddy County (NAD 83 NM Eastern)	MD Reference:	RKB @ 3412.50ft
Site:	Sec 15-T23S-R31E	North Reference:	Grid
Well:	Maldives 15-27 Fed Com 232H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
20,600.00	90.00	179.68	10,330.00	-10,132.53	608.11	467,065.32	715,485.05	32.282779	-103.769813
20,700.00	90.00	179.68	10,330.00	-10,232.53	608.66	466,965.33	715,485.61	32.282505	-103.769813
20,800.00	90.00	179.68	10,330.00	-10,332.52	609.22	466,865.33	715,486.16	32.282230	-103.769813
20,900.00	90.00	179.68	10,330.00	-10,432.52	609.77	466,765.33	715,486.72	32.281955	-103.769813
21,000.00	90.00	179.68	10,330.00	-10,532.52	610.33	466,665.33	715,487.27	32.281680	-103.769813
21,100.00	90.00	179.68	10,330.00	-10,632.52	610.88	466,565.33	715,487.83	32.281405	-103.769813
21,200.00	90.00	179.68	10,330.00	-10,732.52	611.44	466,465.33	715,488.38	32.281130	-103.769813
21,300.00	90.00	179.68	10,330.00	-10,832.52	611.99	466,365.34	715,488.93	32.280855	-103.769813
21,400.00	90.00	179.68	10,330.00	-10,932.51	612.54	466,265.34	715,489.49	32.280580	-103.769812
21,500.00	90.00	179.68	10,330.00	-11,032.51	613.10	466,165.34	715,490.04	32.280305	-103.769812
21,600.00	90.00	179.68	10,330.00	-11,132.51	613.65	466,065.34	715,490.60	32.280031	-103.769812
21,700.00	90.00	179.68	10,330.00	-11,232.51	614.21	465,965.34	715,491.15	32.279756	-103.769812
21,800.00	90.00	179.68	10,330.00	-11,332.51	614.76	465,865.34	715,491.71	32.279481	-103.769812
21,900.00	90.00	179.68	10,330.00	-11,432.51	615.32	465,765.35	715,492.26	32.279206	-103.769812
22,000.00	90.00	179.68	10,330.00	-11,532.51	615.87	465,665.35	715,492.81	32.278931	-103.769812
22,100.00	90.00	179.68	10,330.00	-11,632.50	616.42	465,565.35	715,493.37	32.278656	-103.769812
22,200.00	90.00	179.68	10,330.00	-11,732.50	616.98	465,465.35	715,493.92	32.278381	-103.769812
22,300.00	90.00	179.68	10,330.00	-11,832.50	617.53	465,365.35	715,494.48	32.278106	-103.769812
22,400.00	90.00	179.68	10,330.00	-11,932.50	618.09	465,265.36	715,495.03	32.277832	-103.769812
22,500.00	90.00	179.68	10,330.00	-12,032.50	618.64	465,165.36	715,495.59	32.277557	-103.769811
22,600.00	90.00	179.68	10,330.00	-12,132.50	619.20	465,065.36	715,496.14	32.277282	-103.769811
22,700.00	90.00	179.68	10,330.00	-12,232.49	619.75	464,965.36	715,496.70	32.277007	-103.769811
22,800.00	90.00	179.68	10,330.00	-12,332.49	620.30	464,865.36	715,497.25	32.276732	-103.769811
22,900.00	90.00	179.68	10,330.00	-12,432.49	620.86	464,765.36	715,497.80	32.276457	-103.769811
23,000.00	90.00	179.68	10,330.00	-12,532.49	621.41	464,665.37	715,498.36	32.276182	-103.769811
23,100.00	90.00	179.68	10,330.00	-12,632.49	621.97	464,565.37	715,498.91	32.275907	-103.769811
23,200.00	90.00	179.68	10,330.00	-12,732.49	622.52	464,465.37	715,499.47	32.275633	-103.769811
23,300.00	90.00	179.68	10,330.00	-12,832.49	623.08	464,365.37	715,500.02	32.275358	-103.769811
23,400.00	90.00	179.68	10,330.00	-12,932.48	623.63	464,265.37	715,500.58	32.275083	-103.769811
23,500.00	90.00	179.68	10,330.00	-13,032.48	624.19	464,165.37	715,501.13	32.274808	-103.769810
23,600.00	90.00	179.68	10,330.00	-13,132.48	624.74	464,065.38	715,501.68	32.274533	-103.769810
23,700.00	90.00	179.68	10,330.00	-13,232.48	625.29	463,965.38	715,502.24	32.274258	-103.769810
23,800.00	90.00	179.68	10,330.00	-13,332.48	625.85	463,865.38	715,502.79	32.273983	-103.769810
23,900.00	90.00	179.68	10,330.00	-13,432.48	626.40	463,765.38	715,503.35	32.273708	-103.769810
24,000.00	90.00	179.68	10,330.00	-13,532.47	626.96	463,665.38	715,503.90	32.273434	-103.769810
24,100.00	90.00	179.68	10,330.00	-13,632.47	627.51	463,565.38	715,504.46	32.273159	-103.769810
24,200.00	90.00	179.68	10,330.00	-13,732.47	628.07	463,465.39	715,505.01	32.272884	-103.769810
24,300.00	90.00	179.68	10,330.00	-13,832.47	628.62	463,365.39	715,505.56	32.272609	-103.769810
24,400.00	90.00	179.68	10,330.00	-13,932.47	629.17	463,265.39	715,506.12	32.272334	-103.769810
24,500.00	90.00	179.68	10,330.00	-14,032.47	629.73	463,165.39	715,506.67	32.272059	-103.769810
24,600.00	90.00	179.68	10,330.00	-14,132.47	630.28	463,065.39	715,507.23	32.271784	-103.769809
24,700.00	90.00	179.68	10,330.00	-14,232.46	630.84	462,965.40	715,507.78	32.271509	-103.769809
24,800.00	90.00	179.68	10,330.00	-14,332.46	631.39	462,865.40	715,508.34	32.271235	-103.769809
24,900.00	90.00	179.68	10,330.00	-14,432.46	631.95	462,765.40	715,508.89	32.270960	-103.769809
25,000.00	90.00	179.68	10,330.00	-14,532.46	632.50	462,665.40	715,509.44	32.270685	-103.769809
25,100.00	90.00	179.68	10,330.00	-14,632.46	633.05	462,565.40	715,510.00	32.270410	-103.769809
25,200.00	90.00	179.68	10,330.00	-14,732.46	633.61	462,465.40	715,510.55	32.270135	-103.769809
25,300.00	90.00	179.68	10,330.00	-14,832.45	634.16	462,365.41	715,511.11	32.269860	-103.769809
25,400.00	90.00	179.68	10,330.00	-14,932.45	634.72	462,265.41	715,511.66	32.269585	-103.769809
25,500.00	90.00	179.68	10,330.00	-15,032.45	635.27	462,165.41	715,512.22	32.269310	-103.769809
25,600.00	90.00	179.68	10,330.00	-15,132.45	635.83	462,065.41	715,512.77	32.269035	-103.769808
25,700.00	90.00	179.68	10,330.00	-15,232.45	636.38	461,965.41	715,513.33	32.268761	-103.769808
25,800.00	90.00	179.68	10,330.00	-15,332.45	636.93	461,865.41	715,513.88	32.268486	-103.769808

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well Maldives 15-27 Fed Com 232H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3412.50ft
Project:	Eddy County (NAD 83 NM Eastern)	MD Reference:	RKB @ 3412.50ft
Site:	Sec 15-T23S-R31E	North Reference:	Grid
Well:	Maldives 15-27 Fed Com 232H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
25,809.53	90.00	179.68	10,330.00	-15,341.98	636.99	461,855.88	715,513.93	32.268460	-103.769808
LTP @ 25810' MD, 100' FSL, 1360' FWL									
25,889.53	90.00	179.68	10,330.00	-15,421.98	637.43	461,775.89	715,514.38	32.268240	-103.769808
PBHL; 20' FSL, 1360' FWL									
25,889.54	90.00	179.68	10,330.00	-15,421.98	637.43	461,775.88	715,514.38	32.268240	-103.769808

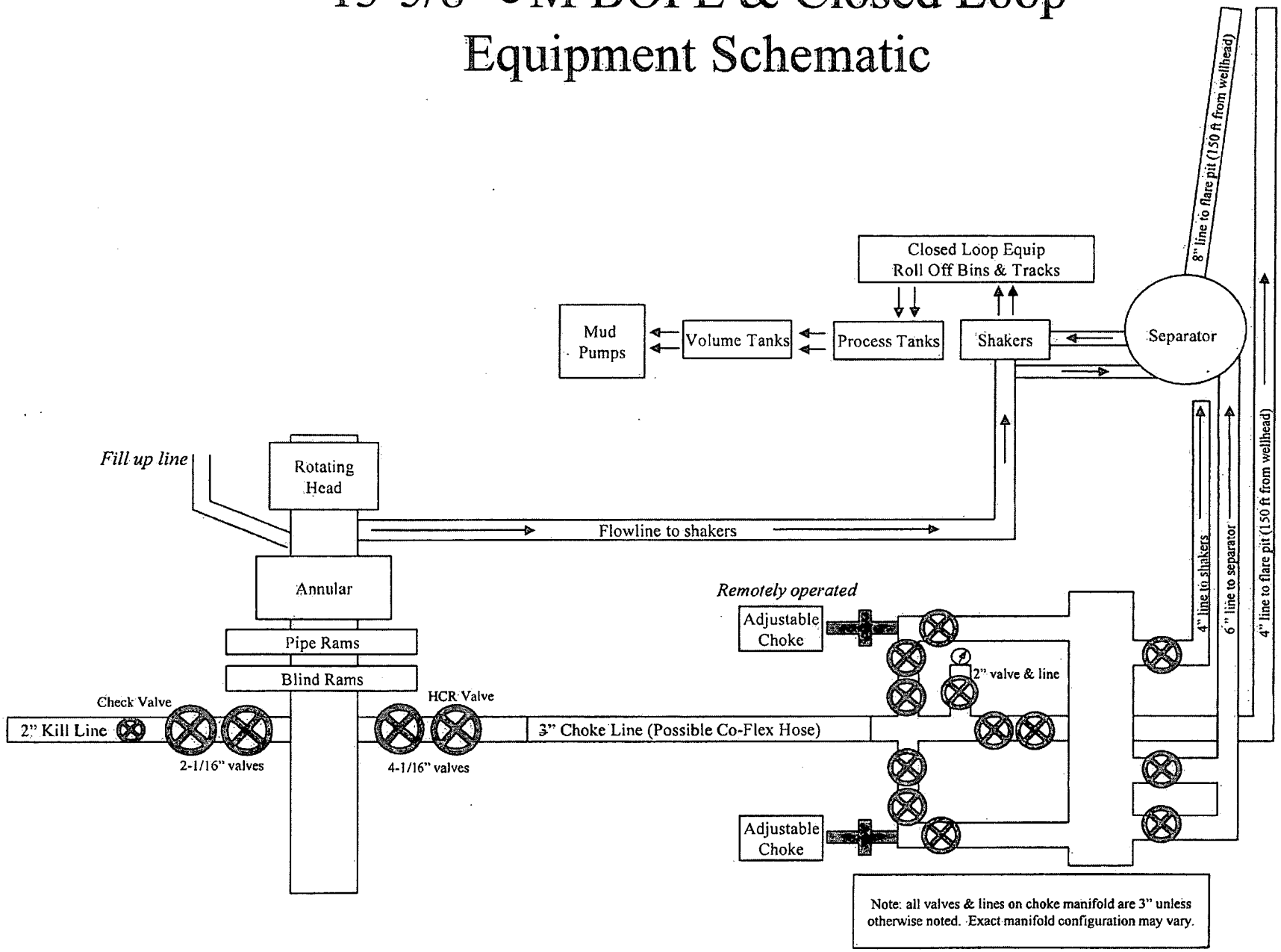
Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL - Maldives 511H	0.00	0.01	0.00	-7,231.22	-119.05	469,966.62	714,757.90	32.290765	-103.772117
- plan misses target center by 7232.20ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
PBHL - Maldives 15-27 I	0.00	0.00	0.00	-15,421.98	637.43	461,775.88	715,514.38	32.268240	-103.769808
- plan misses target center by 10330.00ft at 25889.54ft MD (10330.00 TVD, -15421.98 N, 637.43 E)									
- Point									
Vertical Point - Maldives	0.00	0.00	7,730.00	348.97	-161.91	477,546.79	714,715.04	32.311601	-103.772127
- plan misses target center by 584.98ft at 7708.88ft MD (7683.66 TVD, 264.10 N, 415.02 E)									
- Point									

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
9,790.27	9,757.04	350.00	550.00	KOP @ 9790' MD, 50' FNL, 1360' FWL
10,031.42	9,991.13	300.00	550.28	FTP @ 10031' MD, 100' FNL, 1360' FWL
15,347.00	10,330.00	-4,879.61	578.99	Cross Section @ 15347' MD, 0' FNL, 1360' FWL
25,809.53	10,330.00	-15,341.98	636.99	LTP @ 25810' MD, 100' FSL, 1360' FWL
25,889.53	10,330.00	-15,421.98	637.43	PBHL; 20' FSL, 1360' FWL

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



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.

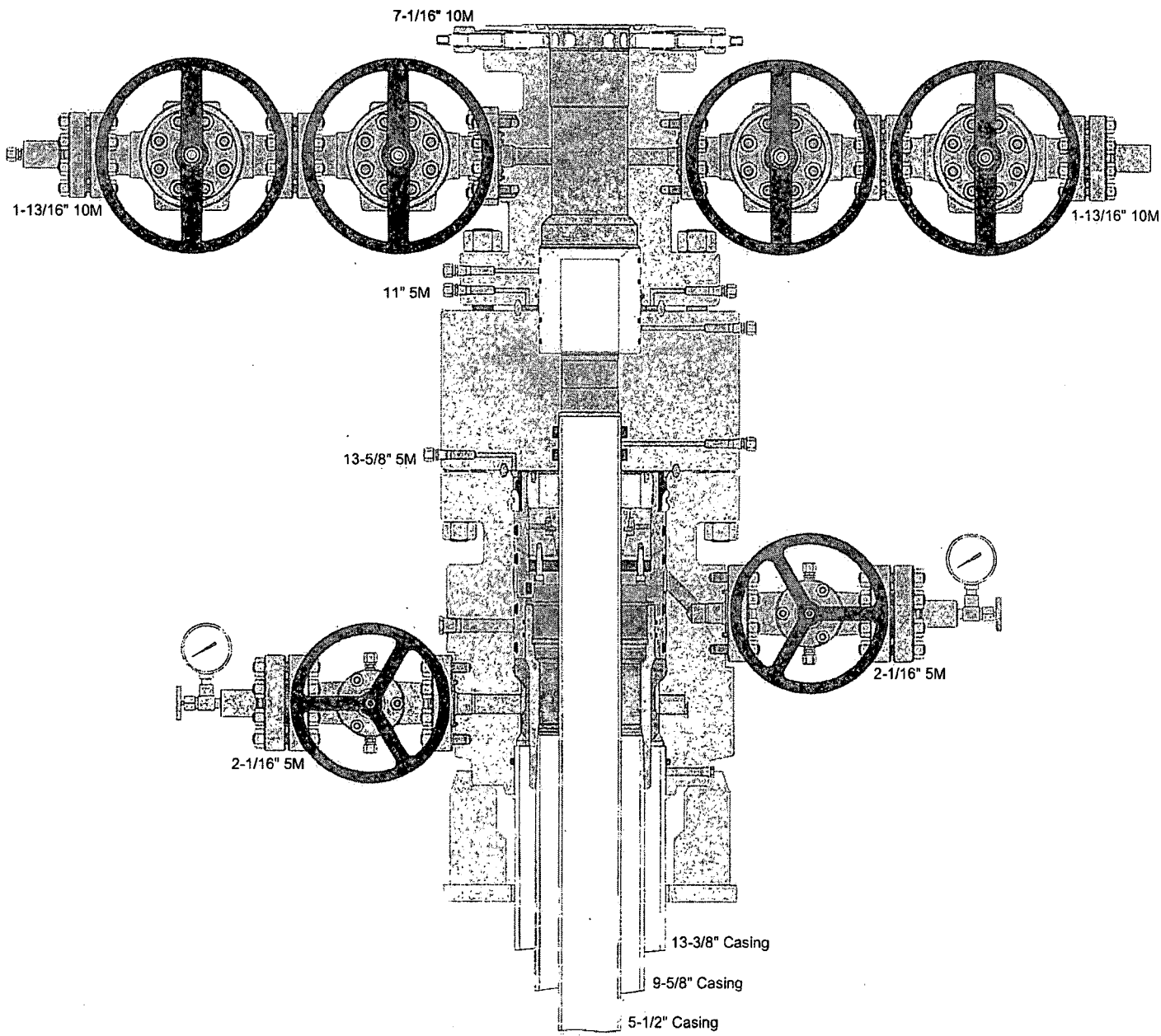
- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial 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.


7-1/16" 10M
1-13/16" 10M
1-13/16" 10M
11" 5M
13-5/8" 5M
2-1/16" 5M
2-1/16" 5M
13-3/8" Casing
9-5/8" Casing
5-1/2" Casing