

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER 1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other 1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		5. Lease Serial No. NMNM002377 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No. BIG FISH 12-10 FEDERAL COM 315H
2. Name of Operator OXY USA WTP LP 3a. Address 5 Greenway Plaza, Suite 110, Houston, TX 77210 3b. Phone No. (include area code) (713) 366-5716		9. API Well No. 3001547598 10. Field and Pool, or Exploratory COTTON DRAW BONE SPRING/COTTO 11. Sec., T. R. M. or Blk. and Survey or Area SEC 12/T20S/R28E/NMP
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NESW / 1640 FSL / 2205 FWL / LAT 32.585507 / LONG -104.13217 At proposed prod. zone SWSW / 330 FSL / 20 FWL / LAT 32.581803 / LONG -104.173851		12. County or Parish EDDY 13. State NM
14. Distance in miles and direction from nearest town or post office* 13 miles		15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 20 feet 16. No of acres in lease 440 17. Spacing Unit dedicated to this well 400.0
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 35 feet 19. Proposed Depth 8739 feet / 22674 feet 20. BLM/BIA Bond No. in file FED: ESB000226		21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3259 feet 22. Approximate date work will start* 08/01/2020 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.
2. A Drilling Plan.
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). | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM. |
|---|---|

25. Signature (Electronic Submission)	Name (Printed/Typed) LESLIE REEVES / Ph: (713) 366-5716	Date 12/03/2019
Title Advisor Regulatory		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575) 234-5959	Date 10/09/2020
Title Assistant Field Manager Lands & Minerals		
Office Carlsbad Field Office		

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.

Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.

- Will require a directional survey with the C-104
- NSL Will require an administrative order for non-standard location prior to placing the well on production.

(Continued on page 2)

APPROVED WITH CONDITIONS

Approval Date: 10/09/2020

Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string

KP 10/20/2020 GEO Review

*(Instructions on page 2)

Entered - KMS NMOC

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

☐ AMENDED REPORT

OLD MILLMAN

API Number 30-015- 3001547598		Pool Code 52805 48035	Pool Name RUSSELL; BONE SPRING RANCH;BS
Property Code 329321	Property Name BIG FISH 12_10 FEDERAL COM		Well Number 315H
OGRID No. 192463	Operator Name OXY USA WTP LP		Elevation 3259.1'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	12	20-S	28-E		1640	SOUTH	2205	WEST	EDDY

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
M	10	20-S	28-E		330	SOUTH	20	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
400			

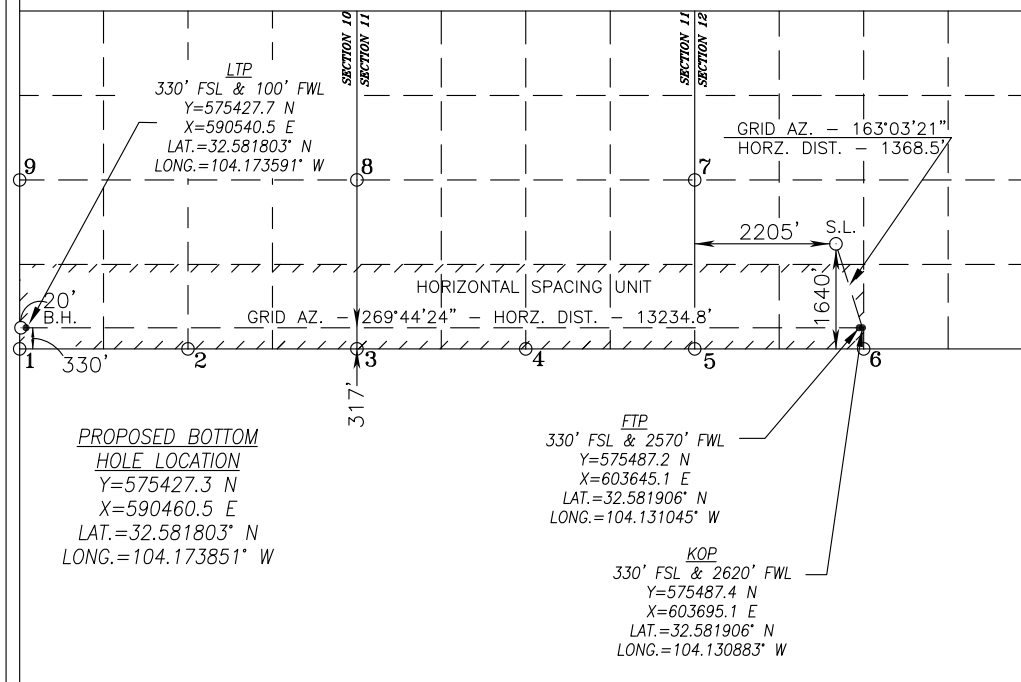
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

POINT LEGEND					
1	Y=575097.2 N X=590435.7 E	6	Y=575157.5 N X=603741.9 E		
2	Y=575115.3 N X=593094.4 E	7	Y=577802.7 N X=601102.5 E		
3	Y=575134.2 N X=595753.5 E	8	Y=577783.7 N X=595789.3 E		
4	Y=575142.7 N X=598413.0 E	9	Y=577744.2 N X=590474.0 E		
5	Y=575151.9 N X=601071.0 E				

* ALL COORDINATES ARE NAD 83 VALUES

SURFACE LOCATION

Y=576796.6 N
X=603296.3 E
LAT.=32.585507° N
LONG.=104.132170° W



OPERATOR CERTIFICATION

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

Lester Lang

12/2/19

Signature

Date _____

LESLIE REEVES

Printed Name _____

LESLIE REEVES@OXY.COM

E-mail Address

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.

SEPT. 26, 2019

Date of Survey

Signature & Seal of Professional Surveyor



Chad Harrison 10/16/19

Certificate No.	CHAD HARCROW	1777
W.O. #19-1735	DRAWN BY: WN	

Intent ☒ As Drilled ☐

API # 30-015-			
Operator Name: OXY USA WTP LP		Property Name: BIG FISH 12-10 FEDERAL COM	Well Number 315H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
N	12	20S	28E		330	FSL	2620	FWL	EDDY
Latitude 32.581906					Longitude -104.130883			NAD NAD83	

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
N	12	20S	28E		330	FSL	2570	FWL	EDDY
Latitude 32.581906					Longitude -104.131045			NAD NAD83	

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
D	10	20S	28E		1210	FNL	100	FWL	EDDY
Latitude 32.592122					Longitude -104.173394			NAD NAD83	

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

Is this well an infill well? ☐

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

API #			
Operator Name:		Property Name:	Well Number

KZ 06/29/2018

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	OXY USA WTP LP
LEASE NO.:	NMNM002377
WELL NAME & NO.:	BIG FISH 12-10 FEDERAL COM 315H
SURFACE HOLE FOOTAGE:	1640'/S & 2205'/W
BOTTOM HOLE FOOTAGE:	330'/S & 20'/W
LOCATION:	Section 12, T.20 S., R.28 E., NMP
COUNTY:	Eddy County, New Mexico

COA

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

Break Testing	<input checked="" type="radio"/> Yes	<input type="radio"/> No
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A. HYDROGEN SULFIDE

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

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **819** 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 **8 hours** 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.
2. The **9-5/8** intermediate casing shall be set at **3167** feet. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

Option 1 (Single Stage):

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

Option 2:

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

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
Excess cement calculates to 20%, additional cement might be required.
 - 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.
Excess cement calculates to 6%, additional cement might be required.
- ❖ In High Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
- ❖ In Capitan Reef Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

- ❖ **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:
(Use this for 3 string wells in the Capitan Reef, if 4 string well ensure FW based mud used across the capitan interval)

- Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
- Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

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

- Cement should tie-back at least **50 feet** on top of Capitan Reef top **or 200 feet** into the previous casing, whichever is greater. 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, potash or capitan reef.

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).

BOP Requirements.

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 **2000 (2M)** psi.
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **3000 (3M)** psi.

Option 2:

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.

- ❖ Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - a. 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.
 - b. Manufacturer representative shall install the test plug for the initial BOP test.
 - c. 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.
 - d. 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 Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, 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.

Offline Cementing

- Contact the BLM prior to the commencement of any offline cementing procedure.

BOPE Break Testing Variance (Note: For 5M BOPE or less)

- BOPE Break Testing is ONLY permitted for 5M BOPE or less.
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required.
- The BLM is to be contacted **(575-361-2822 Eddy County)** 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.

A separate sundry will be sent prior to spud that reflects the pad based break testing plan.

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)

☒ 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. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
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. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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: The flex line must meet the requirements of API 16C. 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, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
 - 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.

RI10012020



APD ID: 10400051785

Submission Date: 12/03/2019

Highlighted data
reflects the most
recent changes

Operator Name: OXY USA WTP LP

Well Name: BIG FISH 12-10 FEDERAL COM

Well Number: 315H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - General

APD ID: 10400051785

Tie to previous NOS? N

Submission Date: 12/03/2019

BLM Office: CARLSBAD

User: Leslie Reeves

Title: Advisor Regulatory

Federal/Indian APD: FED

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

Lease number: NMNM002377

Lease Acres: 440

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? NO

Permitting Agent? NO

APD Operator: OXY USA WTP LP

Operator letter of designation:

Operator Info

Operator Organization Name: OXY USA WTP LP

Operator Address: 5 Greenway Plaza, Suite 110

Zip: 77210

Operator PO Box: PO Box 4294

Operator City: Houston

State: TX

Operator Phone: (713)366-5716

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: BIG FISH 12-10 FEDERAL COM

Well Number: 315H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: COTTON DRAW
BONE SPRING

Pool Name: COTTON DRAW
BONE SPRING

Is the proposed well in an area containing other mineral resources? USEABLE WATER,NATURAL GAS,OIL

Operator Name: OXY USA WTP LP

Well Name: BIG FISH 12-10 FEDERAL COM

Well Number: 315H

Is the proposed well in an area containing other mineral resources? USEABLE WATER,NATURAL GAS,OIL

Is the proposed well in a Helium production area? N

Use Existing Well Pad? N

New surface disturbance?

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name: BIG
FISH 12-10 FEDERAL COM

Number: 32H, 315H, 33H, 314H

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: 13 Miles

Distance to nearest well: 35 FT

Distance to lease line: 20 FT

Reservoir well spacing assigned acres Measurement: 400 Acres

Well plat: BigFish12_10FdCom315H_C102_20191202141832.pdf

BigFish12_10FdCom315H_Supplemental_20191202141839.pdf

BigFish12_10FdCom315H_SitePlan_20191202141848.pdf

Well work start Date: 08/01/2020

Duration: 45 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number:

Reference Datum: GROUND LEVEL

Wellbore	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	Will this well produce from this lease?
SHL Leg #1	1640	FSL	2205	FWL	20S	28E	12	Aliquot NESW	32.585507	-104.13217	EDD Y	NEW MEXICO	NEW MEXICO	F	NMNM 002377	3259	0	0	N
KOP Leg #1	330	FSL	2620	FWL	20S	28E	12	Aliquot SESW	32.581906	-104.130883	EDD Y	NEW MEXICO	NEW MEXICO	F	NMNM 002377	-5643	9421	8902	N

Operator Name: OXY USA WTP LP

Well Name: BIG FISH 12-10 FEDERAL COM

Well Number: 315H

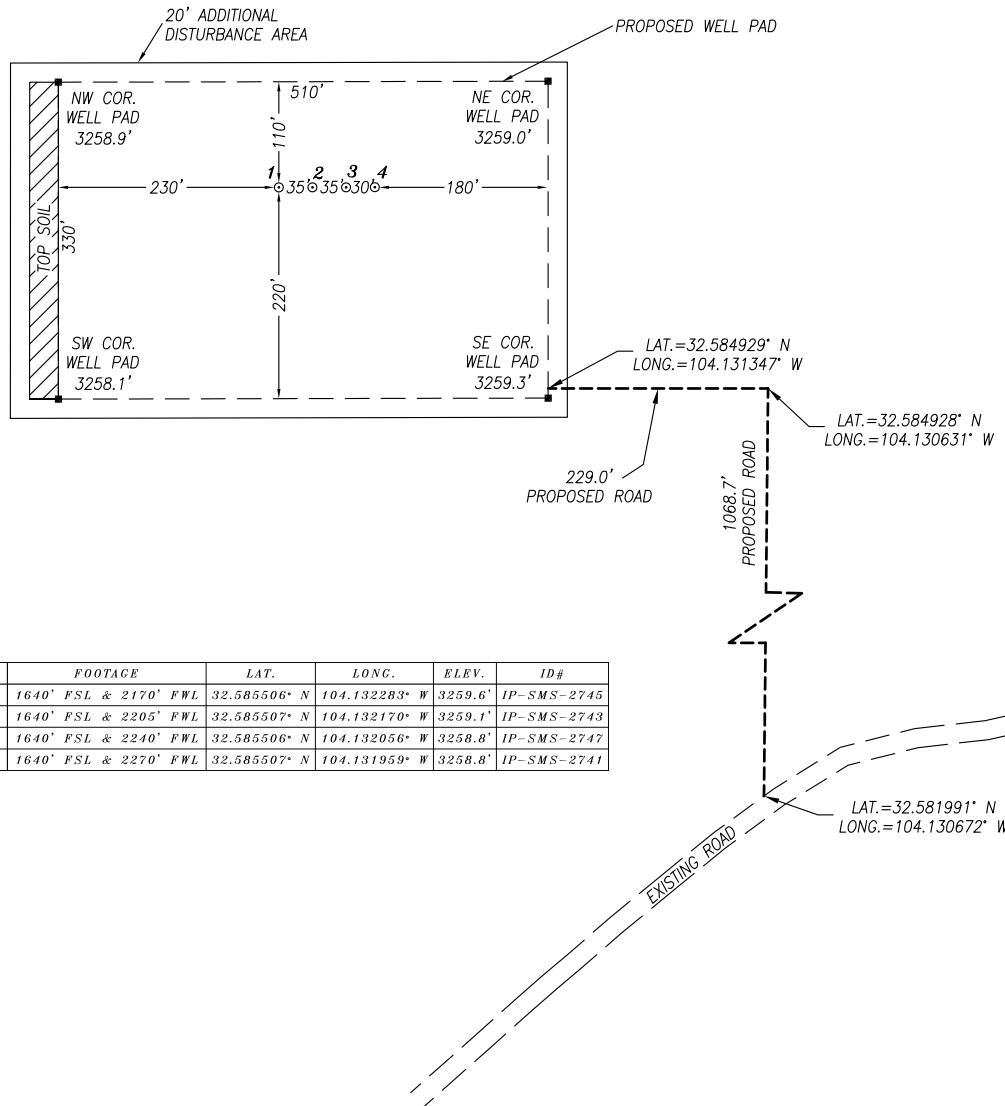
Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
PPP Leg #1-1	330	FSL	2570	FWL	20S	28E	12	Aliquot SESW	32.581906	- 104.131045	EDD Y	NEW MEXICO	NEW MEXICO	F	NMNM 002377	- 5648	9487	8907	Y
PPP Leg #1-2	320	FSL	2656	FEL	20S	28E	11	Aliquot SESW	32.581866	- 104.148013	EDD Y	NEW MEXICO	NEW MEXICO	F	NMNM 015003	- 5581	14714	8840	Y
EXIT Leg #1	330	FSL	100	FWL	20S	28E	10	Aliquot SWS W	32.581803	- 104.173591	EDD Y	NEW MEXICO	NEW MEXICO	F	NMNM 015003	- 5480	22594	8739	Y
BHL Leg #1	330	FSL	20	FWL	20S	28E	10	Aliquot SWS W	32.581803	- 104.173851	EDD Y	NEW MEXICO	NEW MEXICO	F	NMNM 015003	- 5480	22674	8739	N

OXY USA INC.

SITE PLAN

BRTNFL 1201

FAA PERMIT: NO



NO.	WELL	FOOTAGE	LAT.	LONG.	ELEV.	ID#
1	BIG FISH 12_10 FED COM 32H	1640' FSL & 2170' FWL	32.585506° N	104.132283° W	3259.6'	IP-SMS-2745
2	BIG FISH 12_10 FED COM 315H	1640' FSL & 2205' FWL	32.585507° N	104.132170° W	3259.1'	IP-SMS-2743
3	BIG FISH 12_10 FED COM 33H	1640' FSL & 2240' FWL	32.585506° N	104.132056° W	3258.8'	IP-SMS-2747
4	BIG FISH 12_10 FED COM 314H	1640' FSL & 2270' FWL	32.585507° N	104.131959° W	3258.8'	IP-SMS-2741

NOTES:

- 1) LATS & LONGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983.
- 2) DISTANCES ARE GRID VALUES.
- 3) ALL FEATURES ARE EXISTING UNLESS OTHERWISE NOTED

CERTIFICATION

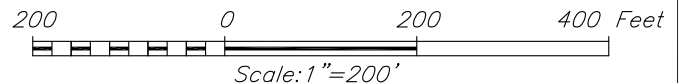
I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



Chad Harcrow
CHAD HARCROW N.M.P.S. NO. 17777

10/16/19
DATE

HARCROW SURVEYING, LLC
2316 W. MAIN ST, ARTESIA, N.M. 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com



OXY USA INC.		
SURVEY DATE: SEPT. 26, 2019	SITE PLAN	
DRAFTING DATE: OCT. 9, 2019	PAGE: 1 OF 1	
APPROVED BY: CH	DRAWN BY: AH	FILE: 19-1734

APD ID: 10400051785

Submission Date: 12/03/2019

Highlighted data
reflects the most
recent changes

Operator Name: OXY USA WTP LP

Well Name: BIG FISH 12-10 FEDERAL COM

Well Number: 315H

[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
599714	RUSTLER	3259	402	402	ANHYDRITE, DOLOMITE, SHALE	USEABLE WATER	N
599715	TANSILL	2540	719	719	ANHYDRITE, SANDSTONE, SHALE	NATURAL GAS, OIL	Y
781329	CAPITAN REEF	959	2300	2300	LIMESTONE	OTHER : SALT	N
599716	DELAWARE	141	3118	3118	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL, OTHER : BRINE	Y
599713	BONE SPRING	-2163	5422	5501	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL	Y
599712	BONE SPRING 1ST	-3493	6752	6900	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL	Y
599711	BONE SPRING 2ND	-4128	7387	7567	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL	Y
599720	BONE SPRING 3RD	-5344	8603	8850	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M

Rating Depth: 8906

Equipment: 13-5/8" 3M Annular, Blind Ram, Double Ram

Requesting Variance? YES

Variance request: Request for the use of a flexible choke line from the BOP to Choke Manifold.

Testing Procedure: OXY will utilize a 5M annular with a 10M BOPE stack. BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. A multibowl or a unionized multibowl wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. 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. We will test the flange connection of the wellhead with a test port that is directly in the flange. We are proposing that we will run the wellhead through the rotary prior to cementing surface casing as discussed with the BLM on October 8, 2015. BOP Break Testing Request Oxy requests permission to adjust the BOP break testing requirements as per the agreement reached in the OXY/BLM meeting on September 5, 2019. A separate sundry will be sent prior to spud that reflects the pad

Operator Name: OXY USA WTP LP

Well Name: BIG FISH 12-10 FEDERAL COM

Well Number: 315H

based break testing plan. BOP break test under the following conditions: After a full BOP test is conducted - When skidding to drill an intermediate section where ICP is set into the third Bone Spring or shallower. - When skidding to drill a production section that does not penetrate into the third Bone Spring or deeper. If the kill line is broken prior to skid, two tests will be performed. 1) Wellhead flange, co-flex hose, kill line connections and upper pipe rams 2) Wellhead flange, HCR valve, check valve, upper pipe rams If the kill line is not broken prior to skid, only one test will be performed. 1) Wellhead flange, co-flex hose, check valve, upper pipe rams

Choke Diagram Attachment:

BigFish12_10FdCom315H_ChokeManifold_20191203090109.pdf

BOP Diagram Attachment:

BigFish12_10FdCom315H_BOP_20191203090118.pdf

BigFish12_10FdCom315H_FlexHoseCert_20191203090125.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	CONDUCTOR	26	20.0	NEW	API	N	0	472	0	472	3259	2787	472	J-55	78.6	N/A						
2	SURFACE	17.5	13.375	NEW	API	N	0	819	0	819	3259	2440	819	J-55	54.5	BUTT	1.125	1.2	BUOY	1.4	BUOY	1.4
3	INTERMEDIATE	12.25	9.625	NEW	API	N	0	3168	0	3168		91	3168	HCL-80	40	BUTT	1.125	1.2	BUOY	1.4	BUOY	1.4
4	PRODUCTION	8.5	5.5	NEW	API	N	0	22672	0	8906		-5647	22672	P-110	20	OTHER - DQX/DQW/SFTORQ	1.125	1.2	BUOY	1.4	BUOY	1.4

Casing Attachments

Operator Name: OXY USA WTP LP

Well Name: BIG FISH 12-10 FEDERAL COM

Well Number: 315H

Casing Attachments

Casing ID: 1 **String Type:** CONDUCTOR

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing ID: 2 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BigFish12_10FdCom315H_CsgCriteria_20191203090201.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BigFish12_10FdCom315H_CsgCriteria_20191203090244.pdf

Operator Name: OXY USA WTP LP

Well Name: BIG FISH 12-10 FEDERAL COM

Well Number: 315H

Casing Attachments

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BigFish12_10FdCom315H_CsgCriteria_20191203090334.pdf

BigFish12_10FdCom315H_5.500in_x_20_20191203090340.00

BigFish12_10FdCom315H_5.500in_x_20_20191203090346.00

BigFish12_10FdCom315H_5.500in_x_20_20191203090352.00

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
CONDUCTOR	Lead		0	472	641	1.33	14.8	853	20	Class C	Accelerator

SURFACE	Lead		0	819	733	1.33	14.8	975	100	Class C Cement	Accelerator
---------	------	--	---	-----	-----	------	------	-----	-----	----------------	-------------

INTERMEDIATE	Lead	1200	0	1200	255	1.73	12.9	440	20	Class C Cement	Accelerator
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INTERMEDIATE	Lead	1200	1200	2668	319	1.73	12.9	552	20	Class C Cement	Accelerator
INTERMEDIATE	Tail		2668	3168	141	1.33	14.8	188	20	Class C Cement	Accelerator
PRODUCTION	Lead		2250	8466	1191	2.24	11.9	2666	100	Class H Cement	Retarder, Dispersant, Salt

Operator Name: OXY USA WTP LP

Well Name: BIG FISH 12-10 FEDERAL COM

Well Number: 315H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Tail		8466	2267 2	2712	1.38	13.2	3742	15	Class H Cement	Retarder, Dispersant, Salt

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. The following is a general list of products: Barite, Bentonite, Gypsum, Lime, Soda Ash, Caustic Soda, Nut Plug, Cedar Fiber, Cotton Seed Hulls, Drilling Paper, Salt Water Clay, CaCl₂.

Describe the mud monitoring system utilized: PVT/MD Totco/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
472	3168	OTHER : Saturated Brine-Based Mud or Oil-Based Mud	8	10							
0	472	WATER-BASED MUD	8.6	8.8							
3168	2267 2	OTHER : Saturated Brine-Based Mud and/or Oil-Based Mud	8	9.6							

Operator Name: OXY USA WTP LP

Well Name: BIG FISH 12-10 FEDERAL COM

Well Number: 315H

Section 6 - Test, Logging, Coring

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

GR from TD to surface (horizontal well vertical portion of hole). Mud Log from Intermediate casing shoe to TD.

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

GAMMA RAY LOG,MUD LOG/GEOLOGIC LITHOLOGY LOG,MUD LOG/GEOLOGICAL LITHOLOGY LOG,

Coring operation description for the well:

No coring is planned at this time.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4446

Anticipated Surface Pressure: 2486

Anticipated Bottom Hole Temperature(F): 152

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:

BigFish12_10FdCom315H_H2S1_20191203091040.pdf

BigFish12_10FdCom315H_H2S2_20191203091045.pdf

BigFish12_10FdCom315H_H2SEmerCont_20191203091052.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

BigFish12_10FdCom315H_DirectPlan_20191203091107.pdf

BigFish12_10FdCom315H_DirectPlot_20191203091113.pdf

Other proposed operations facets description:

OXY requests the option to set casing shallower yet still below the salts if losses or hole conditions require this. Cement volumes may be adjusted if casing is set shallower and a DV tool may be run in case hole conditions merit pumping a second stage cement job to comply with permitted top of cement. If cement circulated to surface during first stage we will drop a cancelation cone and not pump the second stage.

OXY requests the option to contract a Surface Rig to drill, set surface casing, and cement for this well. If the timing between rigs is such that OXY would not be able to preset surface, the Primary Rig will MIRU and drill the well in its entirety per the APD. See attached for additional spudder rig information.

Annular Clearance Variance Request As per the agreement reached in the Oxy/BLM face-to-face meeting on Feb 22, 2018, Oxy requests permission to allow deviation from the 0.422 annular clearance requirement from Onshore Order #2 under the following conditions: 1. Annular clearance to meet or exceed 0.422 between intermediate casing ID and production casing coupling only on the first 500 overlap between both casings. 2.

Operator Name: OXY USA WTP LP

Well Name: BIG FISH 12-10 FEDERAL COM

Well Number: 315H

Annular clearance less than 0.422 is acceptable for the curve and lateral portions of the production open hole section.

Oxy requests permission to adjust the CBL requirement after bradenhead cement jobs, on 7-5/8 contingency intermediate casings, as per the agreement reached in the OXY/BLM meeting on September 5, 2019.

Four string wells:

- CBL is not required
- If the pumped volume of cement is less than permitted in the APD, BLM will be notified and a CBL may be run
- Echometer will be used after bradenhead cement job to determine TOC before pumping top-out cement

OXY requests the option to run the 7.625 Intermediate II as a contingency casing string to be run only if severe hole conditions dictate an additional casing string. The Intermediate II cement job will only occur if OXY elects to run a second intermediate casing string. See attached drill plan for the three string primary casing/cementing plan.

Other proposed operations facets attachment:

BigFish12_10FdCom315H_SpudRigData_20191203091146.pdf

BigFish12_10FdCom315H_DrillPlan_10DayLtr_20200708180039.pdf

Other Variance attachment:

OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)

Big Fish 12_10

Big Fish 12_10 Fed Com 315H

Wellbore #1

Plan: Permitting Plan

Standard Planning Report

21 October, 2019

Oxy Inc.
Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Big Fish 12_10 Fed Com 315H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3285.60ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3285.60ft
Site:	Big Fish 12_10	North Reference:	Grid
Well:	Big Fish 12_10 Fed Com 315H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Project	PRD NM DIRECTIONAL PLANS (NAD 1983)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site		Big Fish 12_10				
Site Position:		Northing:	579,070.94 usft	Latitude:	32° 35' 30.324273 N	
From:	Map	Easting:	603,572.95 usft	Longitude:	104° 7' 52.527548 W	
Position Uncertainty:		1.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.11 °

Well	Big Fish 12_10 Fed Com 315H					
Well Position	+N/-S	-2,274.73 ft	Northing:	576,796.41 usft	Latitude:	32° 35' 7.822007 N
	+E/-W	-276.62 ft	Easting:	603,296.35 usft	Longitude:	104° 7' 55.810995 W
Position Uncertainty		2.00 ft	Wellhead Elevation:		Ground Level:	3,259.10 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	10/21/2019	7.23	60.30	47,950.70000000

Design	Permitting Plan			
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	263.91

Plan Survey Tool Program	Date	10/21/2019		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	22,673.85	Permitting Plan (Wellbore #1)	B001Mb_MWD+HRGM OWSG MWD + HRGM

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,295.00	0.00	0.00	3,295.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,194.79	18.00	141.08	4,180.07	-109.03	88.05	2.00	2.00	0.00	141.08	
8,468.41	18.00	141.08	8,244.62	-1,136.21	917.61	0.00	0.00	0.00	0.00	
9,486.77	90.73	269.74	8,906.60	-1,308.97	349.13	10.00	7.14	12.63	127.09	FTP (Big Fish)
22,673.85	90.73	269.74	8,738.60	-1,368.64	-12,836.74	0.00	0.00	0.00	0.00	PBHL (Big Fish)

Oxy Inc.

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Big Fish 12_10 Fed Com 315H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3285.60ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3285.60ft
Site:	Big Fish 12_10	North Reference:	Grid
Well:	Big Fish 12_10 Fed Com 315H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	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
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,295.00	0.00	0.00	3,295.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.10	141.08	3,300.00	0.00	0.00	0.00	2.00	2.00	0.00
3,400.00	2.10	141.08	3,399.98	-1.50	1.21	-1.04	2.00	2.00	0.00
3,500.00	4.10	141.08	3,499.83	-5.70	4.61	-3.98	2.00	2.00	0.00
3,600.00	6.10	141.08	3,599.42	-12.62	10.19	-8.80	2.00	2.00	0.00
3,700.00	8.10	141.08	3,698.65	-22.23	17.96	-15.50	2.00	2.00	0.00
3,800.00	10.10	141.08	3,797.39	-34.54	27.89	-24.07	2.00	2.00	0.00
3,900.00	12.10	141.08	3,895.51	-49.52	39.99	-34.51	2.00	2.00	0.00
4,000.00	14.10	141.08	3,992.91	-67.15	54.23	-46.80	2.00	2.00	0.00
4,100.00	16.10	141.08	4,089.45	-87.41	70.60	-60.93	2.00	2.00	0.00
4,194.79	18.00	141.08	4,180.07	-109.03	88.05	-76.00	2.00	2.00	0.00
4,200.00	18.00	141.08	4,185.02	-110.28	89.07	-76.87	0.00	0.00	0.00
4,300.00	18.00	141.08	4,280.13	-134.32	108.48	-93.63	0.00	0.00	0.00
4,400.00	18.00	141.08	4,375.24	-158.35	127.89	-110.38	0.00	0.00	0.00
4,500.00	18.00	141.08	4,470.35	-182.39	147.30	-127.13	0.00	0.00	0.00
4,600.00	18.00	141.08	4,565.46	-206.42	166.71	-143.89	0.00	0.00	0.00
4,700.00	18.00	141.08	4,660.56	-230.46	186.12	-160.64	0.00	0.00	0.00
4,800.00	18.00	141.08	4,755.67	-254.50	205.53	-177.39	0.00	0.00	0.00
4,900.00	18.00	141.08	4,850.78	-278.53	224.94	-194.15	0.00	0.00	0.00
5,000.00	18.00	141.08	4,945.89	-302.57	244.35	-210.90	0.00	0.00	0.00
5,100.00	18.00	141.08	5,041.00	-326.60	263.77	-227.65	0.00	0.00	0.00

Oxy Inc.
Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Big Fish 12_10 Fed Com 315H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3285.60ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3285.60ft
Site:	Big Fish 12_10	North Reference:	Grid
Well:	Big Fish 12_10 Fed Com 315H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,200.00	18.00	141.08	5,136.10	-350.64	283.18	-244.41	0.00	0.00	0.00
5,300.00	18.00	141.08	5,231.21	-374.67	302.59	-261.16	0.00	0.00	0.00
5,400.00	18.00	141.08	5,326.32	-398.71	322.00	-277.91	0.00	0.00	0.00
5,500.00	18.00	141.08	5,421.43	-422.74	341.41	-294.67	0.00	0.00	0.00
5,600.00	18.00	141.08	5,516.53	-446.78	360.82	-311.42	0.00	0.00	0.00
5,700.00	18.00	141.08	5,611.64	-470.81	380.23	-328.17	0.00	0.00	0.00
5,800.00	18.00	141.08	5,706.75	-494.85	399.64	-344.93	0.00	0.00	0.00
5,900.00	18.00	141.08	5,801.86	-518.88	419.05	-361.68	0.00	0.00	0.00
6,000.00	18.00	141.08	5,896.97	-542.92	438.47	-378.43	0.00	0.00	0.00
6,100.00	18.00	141.08	5,992.07	-566.95	457.88	-395.19	0.00	0.00	0.00
6,200.00	18.00	141.08	6,087.18	-590.99	477.29	-411.94	0.00	0.00	0.00
6,300.00	18.00	141.08	6,182.29	-615.02	496.70	-428.70	0.00	0.00	0.00
6,400.00	18.00	141.08	6,277.40	-639.06	516.11	-445.45	0.00	0.00	0.00
6,500.00	18.00	141.08	6,372.51	-663.10	535.52	-462.20	0.00	0.00	0.00
6,600.00	18.00	141.08	6,467.61	-687.13	554.93	-478.96	0.00	0.00	0.00
6,700.00	18.00	141.08	6,562.72	-711.17	574.34	-495.71	0.00	0.00	0.00
6,800.00	18.00	141.08	6,657.83	-735.20	593.75	-512.46	0.00	0.00	0.00
6,900.00	18.00	141.08	6,752.94	-759.24	613.16	-529.22	0.00	0.00	0.00
7,000.00	18.00	141.08	6,848.05	-783.27	632.58	-545.97	0.00	0.00	0.00
7,100.00	18.00	141.08	6,943.15	-807.31	651.99	-562.72	0.00	0.00	0.00
7,200.00	18.00	141.08	7,038.26	-831.34	671.40	-579.48	0.00	0.00	0.00
7,300.00	18.00	141.08	7,133.37	-855.38	690.81	-596.23	0.00	0.00	0.00
7,400.00	18.00	141.08	7,228.48	-879.41	710.22	-612.98	0.00	0.00	0.00
7,500.00	18.00	141.08	7,323.59	-903.45	729.63	-629.74	0.00	0.00	0.00
7,600.00	18.00	141.08	7,418.69	-927.48	749.04	-646.49	0.00	0.00	0.00
7,700.00	18.00	141.08	7,513.80	-951.52	768.45	-663.24	0.00	0.00	0.00
7,800.00	18.00	141.08	7,608.91	-975.55	787.86	-680.00	0.00	0.00	0.00
7,900.00	18.00	141.08	7,704.02	-999.59	807.28	-696.75	0.00	0.00	0.00
8,000.00	18.00	141.08	7,799.12	-1,023.63	826.69	-713.50	0.00	0.00	0.00
8,100.00	18.00	141.08	7,894.23	-1,047.66	846.10	-730.26	0.00	0.00	0.00
8,200.00	18.00	141.08	7,989.34	-1,071.70	865.51	-747.01	0.00	0.00	0.00
8,300.00	18.00	141.08	8,084.45	-1,095.73	884.92	-763.77	0.00	0.00	0.00
8,400.00	18.00	141.08	8,179.56	-1,119.77	904.33	-780.52	0.00	0.00	0.00
8,468.41	18.00	141.08	8,244.62	-1,136.21	917.61	-791.98	0.00	0.00	0.00
8,500.00	16.28	150.10	8,274.81	-1,143.85	922.88	-796.41	10.00	-5.43	28.56
8,600.00	14.41	187.92	8,371.48	-1,168.39	928.17	-799.07	10.00	-1.87	37.82
8,700.00	18.61	220.52	8,467.53	-1,192.91	916.06	-784.42	10.00	4.20	32.59
8,800.00	26.09	238.27	8,560.06	-1,216.66	886.91	-752.93	10.00	7.48	17.75
8,900.00	34.79	248.09	8,646.24	-1,238.93	841.63	-705.53	10.00	8.70	9.82
9,000.00	44.00	254.29	8,723.47	-1,259.04	781.57	-643.68	10.00	9.20	6.20
9,100.00	53.44	258.69	8,789.39	-1,276.37	708.57	-569.26	10.00	9.44	4.40
9,200.00	63.01	262.11	8,842.00	-1,290.40	624.84	-484.52	10.00	9.57	3.43
9,300.00	72.65	265.00	8,879.70	-1,300.70	532.94	-392.03	10.00	9.64	2.88
9,400.00	82.32	267.59	8,901.35	-1,306.96	435.64	-294.62	10.00	9.68	2.59
9,486.77	90.73	269.74	8,906.60	-1,308.97	349.13	-208.39	10.00	9.69	2.48
9,500.00	90.73	269.74	8,906.43	-1,309.03	335.90	-195.23	0.00	0.00	0.00
9,600.00	90.73	269.74	8,905.16	-1,309.48	235.91	-95.76	0.00	0.00	0.00
9,700.00	90.73	269.74	8,903.88	-1,309.93	135.92	3.72	0.00	0.00	0.00
9,800.00	90.73	269.74	8,902.61	-1,310.38	35.93	103.20	0.00	0.00	0.00
9,900.00	90.73	269.74	8,901.34	-1,310.84	-64.06	202.67	0.00	0.00	0.00
10,000.00	90.73	269.74	8,900.06	-1,311.29	-164.05	302.15	0.00	0.00	0.00
10,100.00	90.73	269.74	8,898.79	-1,311.74	-264.04	401.62	0.00	0.00	0.00
10,200.00	90.73	269.74	8,897.51	-1,312.19	-364.03	501.10	0.00	0.00	0.00
10,300.00	90.73	269.74	8,896.24	-1,312.65	-464.02	600.57	0.00	0.00	0.00

Oxy Inc.
Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Big Fish 12_10 Fed Com 315H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3285.60ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3285.60ft
Site:	Big Fish 12_10	North Reference:	Grid
Well:	Big Fish 12_10 Fed Com 315H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,400.00	90.73	269.74	8,894.97	-1,313.10	-564.01	700.05	0.00	0.00	0.00
10,500.00	90.73	269.74	8,893.69	-1,313.55	-664.00	799.52	0.00	0.00	0.00
10,600.00	90.73	269.74	8,892.42	-1,314.00	-763.99	899.00	0.00	0.00	0.00
10,700.00	90.73	269.74	8,891.14	-1,314.46	-863.99	998.47	0.00	0.00	0.00
10,800.00	90.73	269.74	8,889.87	-1,314.91	-963.98	1,097.95	0.00	0.00	0.00
10,900.00	90.73	269.74	8,888.60	-1,315.36	-1,063.97	1,197.42	0.00	0.00	0.00
11,000.00	90.73	269.74	8,887.32	-1,315.81	-1,163.96	1,296.90	0.00	0.00	0.00
11,100.00	90.73	269.74	8,886.05	-1,316.27	-1,263.95	1,396.37	0.00	0.00	0.00
11,200.00	90.73	269.74	8,884.77	-1,316.72	-1,363.94	1,495.85	0.00	0.00	0.00
11,300.00	90.73	269.74	8,883.50	-1,317.17	-1,463.93	1,595.32	0.00	0.00	0.00
11,400.00	90.73	269.74	8,882.23	-1,317.62	-1,563.92	1,694.80	0.00	0.00	0.00
11,500.00	90.73	269.74	8,880.95	-1,318.08	-1,663.91	1,794.28	0.00	0.00	0.00
11,600.00	90.73	269.74	8,879.68	-1,318.53	-1,763.90	1,893.75	0.00	0.00	0.00
11,700.00	90.73	269.74	8,878.40	-1,318.98	-1,863.89	1,993.23	0.00	0.00	0.00
11,800.00	90.73	269.74	8,877.13	-1,319.43	-1,963.89	2,092.70	0.00	0.00	0.00
11,900.00	90.73	269.74	8,875.86	-1,319.89	-2,063.88	2,192.18	0.00	0.00	0.00
12,000.00	90.73	269.74	8,874.58	-1,320.34	-2,163.87	2,291.65	0.00	0.00	0.00
12,100.00	90.73	269.74	8,873.31	-1,320.79	-2,263.86	2,391.13	0.00	0.00	0.00
12,200.00	90.73	269.74	8,872.03	-1,321.24	-2,363.85	2,490.60	0.00	0.00	0.00
12,300.00	90.73	269.74	8,870.76	-1,321.70	-2,463.84	2,590.08	0.00	0.00	0.00
12,400.00	90.73	269.74	8,869.49	-1,322.15	-2,563.83	2,689.55	0.00	0.00	0.00
12,500.00	90.73	269.74	8,868.21	-1,322.60	-2,663.82	2,789.03	0.00	0.00	0.00
12,600.00	90.73	269.74	8,866.94	-1,323.05	-2,763.81	2,888.50	0.00	0.00	0.00
12,700.00	90.73	269.74	8,865.66	-1,323.51	-2,863.80	2,987.98	0.00	0.00	0.00
12,800.00	90.73	269.74	8,864.39	-1,323.96	-2,963.79	3,087.45	0.00	0.00	0.00
12,900.00	90.73	269.74	8,863.12	-1,324.41	-3,063.78	3,186.93	0.00	0.00	0.00
13,000.00	90.73	269.74	8,861.84	-1,324.86	-3,163.78	3,286.40	0.00	0.00	0.00
13,100.00	90.73	269.74	8,860.57	-1,325.32	-3,263.77	3,385.88	0.00	0.00	0.00
13,200.00	90.73	269.74	8,859.29	-1,325.77	-3,363.76	3,485.36	0.00	0.00	0.00
13,300.00	90.73	269.74	8,858.02	-1,326.22	-3,463.75	3,584.83	0.00	0.00	0.00
13,400.00	90.73	269.74	8,856.75	-1,326.67	-3,563.74	3,684.31	0.00	0.00	0.00
13,500.00	90.73	269.74	8,855.47	-1,327.13	-3,663.73	3,783.78	0.00	0.00	0.00
13,600.00	90.73	269.74	8,854.20	-1,327.58	-3,763.72	3,883.26	0.00	0.00	0.00
13,700.00	90.73	269.74	8,852.92	-1,328.03	-3,863.71	3,982.73	0.00	0.00	0.00
13,800.00	90.73	269.74	8,851.65	-1,328.48	-3,963.70	4,082.21	0.00	0.00	0.00
13,900.00	90.73	269.74	8,850.38	-1,328.94	-4,063.69	4,181.68	0.00	0.00	0.00
14,000.00	90.73	269.74	8,849.10	-1,329.39	-4,163.68	4,281.16	0.00	0.00	0.00
14,100.00	90.73	269.74	8,847.83	-1,329.84	-4,263.68	4,380.63	0.00	0.00	0.00
14,200.00	90.73	269.74	8,846.55	-1,330.29	-4,363.67	4,480.11	0.00	0.00	0.00
14,300.00	90.73	269.74	8,845.28	-1,330.75	-4,463.66	4,579.58	0.00	0.00	0.00
14,400.00	90.73	269.74	8,844.01	-1,331.20	-4,563.65	4,679.06	0.00	0.00	0.00
14,500.00	90.73	269.74	8,842.73	-1,331.65	-4,663.64	4,778.53	0.00	0.00	0.00
14,600.00	90.73	269.74	8,841.46	-1,332.10	-4,763.63	4,878.01	0.00	0.00	0.00
14,700.00	90.73	269.74	8,840.18	-1,332.56	-4,863.62	4,977.49	0.00	0.00	0.00
14,800.00	90.73	269.74	8,838.91	-1,333.01	-4,963.61	5,076.96	0.00	0.00	0.00
14,900.00	90.73	269.74	8,837.64	-1,333.46	-5,063.60	5,176.44	0.00	0.00	0.00
15,000.00	90.73	269.74	8,836.36	-1,333.91	-5,163.59	5,275.91	0.00	0.00	0.00
15,100.00	90.73	269.74	8,835.09	-1,334.37	-5,263.58	5,375.39	0.00	0.00	0.00
15,200.00	90.73	269.74	8,833.82	-1,334.82	-5,363.57	5,474.86	0.00	0.00	0.00
15,300.00	90.73	269.74	8,832.54	-1,335.27	-5,463.57	5,574.34	0.00	0.00	0.00
15,400.00	90.73	269.74	8,831.27	-1,335.72	-5,563.56	5,673.81	0.00	0.00	0.00
15,500.00	90.73	269.74	8,829.99	-1,336.18	-5,663.55	5,773.29	0.00	0.00	0.00
15,600.00	90.73	269.74	8,828.72	-1,336.63	-5,763.54	5,872.76	0.00	0.00	0.00
15,700.00	90.73	269.74	8,827.45	-1,337.08	-5,863.53	5,972.24	0.00	0.00	0.00

Oxy Inc.
Planning Report

Database: HOPSPP
Company: ENGINEERING DESIGNS
Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
Site: Big Fish 12_10
Well: Big Fish 12_10 Fed Com 315H
Wellbore: Wellbore #1
Design: Permitting Plan

Local Co-ordinate Reference: Well Big Fish 12_10 Fed Com 315H
TVD Reference: RKB=26.5' @ 3285.60ft
MD Reference: RKB=26.5' @ 3285.60ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
15,800.00	90.73	269.74	8,826.17	-1,337.54	-5,963.52	6,071.71	0.00	0.00	0.00
15,900.00	90.73	269.74	8,824.90	-1,337.99	-6,063.51	6,171.19	0.00	0.00	0.00
16,000.00	90.73	269.74	8,823.62	-1,338.44	-6,163.50	6,270.66	0.00	0.00	0.00
16,100.00	90.73	269.74	8,822.35	-1,338.89	-6,263.49	6,370.14	0.00	0.00	0.00
16,200.00	90.73	269.74	8,821.08	-1,339.35	-6,363.48	6,469.61	0.00	0.00	0.00
16,300.00	90.73	269.74	8,819.80	-1,339.80	-6,463.47	6,569.09	0.00	0.00	0.00
16,400.00	90.73	269.74	8,818.53	-1,340.25	-6,563.47	6,668.57	0.00	0.00	0.00
16,500.00	90.73	269.74	8,817.25	-1,340.70	-6,663.46	6,768.04	0.00	0.00	0.00
16,600.00	90.73	269.74	8,815.98	-1,341.16	-6,763.45	6,867.52	0.00	0.00	0.00
16,700.00	90.73	269.74	8,814.71	-1,341.61	-6,863.44	6,966.99	0.00	0.00	0.00
16,800.00	90.73	269.74	8,813.43	-1,342.06	-6,963.43	7,066.47	0.00	0.00	0.00
16,900.00	90.73	269.74	8,812.16	-1,342.51	-7,063.42	7,165.94	0.00	0.00	0.00
17,000.00	90.73	269.74	8,810.88	-1,342.97	-7,163.41	7,265.42	0.00	0.00	0.00
17,100.00	90.73	269.74	8,809.61	-1,343.42	-7,263.40	7,364.89	0.00	0.00	0.00
17,200.00	90.73	269.74	8,808.34	-1,343.87	-7,363.39	7,464.37	0.00	0.00	0.00
17,300.00	90.73	269.74	8,807.06	-1,344.32	-7,463.38	7,563.84	0.00	0.00	0.00
17,400.00	90.73	269.74	8,805.79	-1,344.78	-7,563.37	7,663.32	0.00	0.00	0.00
17,500.00	90.73	269.74	8,804.51	-1,345.23	-7,663.36	7,762.79	0.00	0.00	0.00
17,600.00	90.73	269.74	8,803.24	-1,345.68	-7,763.36	7,862.27	0.00	0.00	0.00
17,700.00	90.73	269.74	8,801.97	-1,346.13	-7,863.35	7,961.74	0.00	0.00	0.00
17,800.00	90.73	269.74	8,800.69	-1,346.59	-7,963.34	8,061.22	0.00	0.00	0.00
17,900.00	90.73	269.74	8,799.42	-1,347.04	-8,063.33	8,160.70	0.00	0.00	0.00
18,000.00	90.73	269.74	8,798.14	-1,347.49	-8,163.32	8,260.17	0.00	0.00	0.00
18,100.00	90.73	269.74	8,796.87	-1,347.94	-8,263.31	8,359.65	0.00	0.00	0.00
18,200.00	90.73	269.74	8,795.60	-1,348.40	-8,363.30	8,459.12	0.00	0.00	0.00
18,300.00	90.73	269.74	8,794.32	-1,348.85	-8,463.29	8,558.60	0.00	0.00	0.00
18,400.00	90.73	269.74	8,793.05	-1,349.30	-8,563.28	8,658.07	0.00	0.00	0.00
18,500.00	90.73	269.74	8,791.77	-1,349.75	-8,663.27	8,757.55	0.00	0.00	0.00
18,600.00	90.73	269.74	8,790.50	-1,350.21	-8,763.26	8,857.02	0.00	0.00	0.00
18,700.00	90.73	269.74	8,789.23	-1,350.66	-8,863.25	8,956.50	0.00	0.00	0.00
18,800.00	90.73	269.74	8,787.95	-1,351.11	-8,963.25	9,055.97	0.00	0.00	0.00
18,900.00	90.73	269.74	8,786.68	-1,351.56	-9,063.24	9,155.45	0.00	0.00	0.00
19,000.00	90.73	269.74	8,785.40	-1,352.02	-9,163.23	9,254.92	0.00	0.00	0.00
19,100.00	90.73	269.74	8,784.13	-1,352.47	-9,263.22	9,354.40	0.00	0.00	0.00
19,200.00	90.73	269.74	8,782.86	-1,352.92	-9,363.21	9,453.87	0.00	0.00	0.00
19,300.00	90.73	269.74	8,781.58	-1,353.37	-9,463.20	9,553.35	0.00	0.00	0.00
19,400.00	90.73	269.74	8,780.31	-1,353.83	-9,563.19	9,652.82	0.00	0.00	0.00
19,500.00	90.73	269.74	8,779.03	-1,354.28	-9,663.18	9,752.30	0.00	0.00	0.00
19,600.00	90.73	269.74	8,777.76	-1,354.73	-9,763.17	9,851.78	0.00	0.00	0.00
19,700.00	90.73	269.74	8,776.49	-1,355.18	-9,863.16	9,951.25	0.00	0.00	0.00
19,800.00	90.73	269.74	8,775.21	-1,355.64	-9,963.15	10,050.73	0.00	0.00	0.00
19,900.00	90.73	269.74	8,773.94	-1,356.09	-10,063.15	10,150.20	0.00	0.00	0.00
20,000.00	90.73	269.74	8,772.66	-1,356.54	-10,163.14	10,249.68	0.00	0.00	0.00
20,100.00	90.73	269.74	8,771.39	-1,356.99	-10,263.13	10,349.15	0.00	0.00	0.00
20,200.00	90.73	269.74	8,770.12	-1,357.45	-10,363.12	10,448.63	0.00	0.00	0.00
20,300.00	90.73	269.74	8,768.84	-1,357.90	-10,463.11	10,548.10	0.00	0.00	0.00
20,400.00	90.73	269.74	8,767.57	-1,358.35	-10,563.10	10,647.58	0.00	0.00	0.00
20,500.00	90.73	269.74	8,766.29	-1,358.80	-10,663.09	10,747.05	0.00	0.00	0.00
20,600.00	90.73	269.74	8,765.02	-1,359.26	-10,763.08	10,846.53	0.00	0.00	0.00
20,700.00	90.73	269.74	8,763.75	-1,359.71	-10,863.07	10,946.00	0.00	0.00	0.00
20,800.00	90.73	269.74	8,762.47	-1,360.16	-10,963.06	11,045.48	0.00	0.00	0.00
20,900.00	90.73	269.74	8,761.20	-1,360.61	-11,063.05	11,144.95	0.00	0.00	0.00
21,000.00	90.73	269.74	8,759.92	-1,361.07	-11,163.04	11,244.43	0.00	0.00	0.00
21,100.00	90.73	269.74	8,758.65	-1,361.52	-11,263.04	11,343.91	0.00	0.00	0.00

Oxy Inc.
Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Big Fish 12_10 Fed Com 315H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3285.60ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3285.60ft
Site:	Big Fish 12_10	North Reference:	Grid
Well:	Big Fish 12_10 Fed Com 315H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
21,200.00	90.73	269.74	8,757.38	-1,361.97	-11,363.03	11,443.38	0.00	0.00	0.00
21,300.00	90.73	269.74	8,756.10	-1,362.42	-11,463.02	11,542.86	0.00	0.00	0.00
21,400.00	90.73	269.74	8,754.83	-1,362.88	-11,563.01	11,642.33	0.00	0.00	0.00
21,500.00	90.73	269.74	8,753.55	-1,363.33	-11,663.00	11,741.81	0.00	0.00	0.00
21,600.00	90.73	269.74	8,752.28	-1,363.78	-11,762.99	11,841.28	0.00	0.00	0.00
21,700.00	90.73	269.74	8,751.01	-1,364.23	-11,862.98	11,940.76	0.00	0.00	0.00
21,800.00	90.73	269.74	8,749.73	-1,364.69	-11,962.97	12,040.23	0.00	0.00	0.00
21,900.00	90.73	269.74	8,748.46	-1,365.14	-12,062.96	12,139.71	0.00	0.00	0.00
22,000.00	90.73	269.74	8,747.18	-1,365.59	-12,162.95	12,239.18	0.00	0.00	0.00
22,100.00	90.73	269.74	8,745.91	-1,366.04	-12,262.94	12,338.66	0.00	0.00	0.00
22,200.00	90.73	269.74	8,744.64	-1,366.50	-12,362.94	12,438.13	0.00	0.00	0.00
22,300.00	90.73	269.74	8,743.36	-1,366.95	-12,462.93	12,537.61	0.00	0.00	0.00
22,400.00	90.73	269.74	8,742.09	-1,367.40	-12,562.92	12,637.08	0.00	0.00	0.00
22,500.00	90.73	269.74	8,740.81	-1,367.85	-12,662.91	12,736.56	0.00	0.00	0.00
22,600.00	90.73	269.74	8,739.54	-1,368.31	-12,762.90	12,836.03	0.00	0.00	0.00
22,673.85	90.73	269.74	8,738.60	-1,368.64	-12,836.74	12,909.49	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL (Big Fish 12_10 - plan hits target center - Point	0.00	0.00	8,738.60	-1,368.64	-12,836.74	575,427.89	590,460.75	32° 34' 54.495161 N	104° 10' 25.859792
FTP (Big Fish 12_10 - plan hits target center - Point	0.00	0.00	8,906.60	-1,308.97	349.13	575,487.56	603,645.45	32° 34' 54.863814 N	104° 7' 51.759744

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
3,295.00	3,295.00	0.00	0.00	Build 2°/100'
4,194.79	4,180.07	-109.03	88.05	Hold 18° Tangent
8,468.41	8,244.62	-1,136.21	917.61	KOP, Build & Turn 10°/100'
9,486.77	8,906.60	-1,308.97	349.13	Landing Point
22,673.85	8,738.60	-1,368.64	-12,836.74	TD at 22673.84' MD

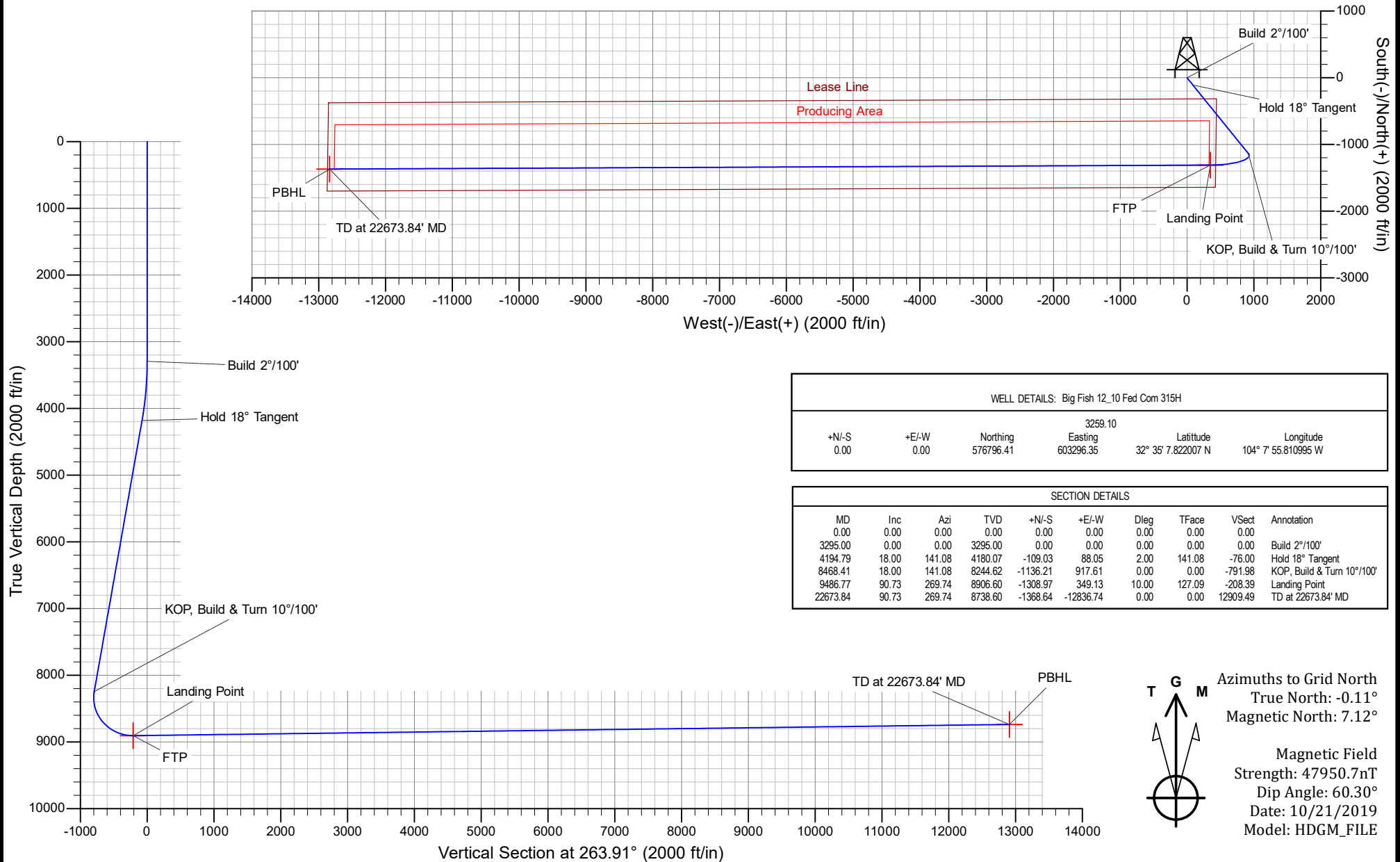


Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
Site: Big Fish 12_10
Well: Big Fish 12_10 Fed Com 315H
Wellbore: Wellbore #1
Design: Permitting Plan

PROJECT DETAILS: NM DIRECTIONAL PLANS (NAD 1983)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level



Oxy USA Inc. - Big Fish 12_10 Fed Com 315H

Drill Plan

1. Geologic Formations

TVD of Target (ft):	8906	Pilot Hole Depth (ft):	
Total Measured Depth (ft):	22672	Deepest Expected Fresh Water (ft):	402

Delaware Basin

Formation	MD-RKB (ft)	TVD-RKB (ft)	Expected Fluids
Rustler	402	402	
Tansil	719	719	Salt
Capitan Reef	2300	2300	Salt
Delaware	3118	3118	Oil/Gas/Brine
Bone Spring	5499	5422	Oil/Gas/Brine
1st Bone Spring	6898	6752	Oil/Gas/Brine
2nd Bone Spring	7565	7387	Losses
3rd Bone Spring	8848	8603	Oil/Gas

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

2. Casing Program

Section	Hole Size (in)	MD		TVD		Csg. OD (in)	Csg Wt. (ppf)	Grade	Conn.
		From (ft)	To (ft)	From (ft)	To (ft)				
Conductor	26	0	472	0	472	20	78.6	J-55	Welded
Surface	17.5	0	819	0	819	13.375	54.5	J-55	BTC
Intermediate	12.25	0	3168	0	3167	9.625	40	L-80 HC	BTC
Production	8.5	0	22672	0	8906	5.5	20	P-110	DQX

<i>All casing SF Values will meet or exceed those listed below</i>			
SF Collapse	SF Burst	Body SF Tension	Joint SF Tension
1.125	1.2	1.4	1.4

As per the agreement reached by Oxy/BLM on July 23, 2019, Oxy requests permission to deepen conductor to meet the 4 string casing design requirement of this area. Conductor and Surface casing will be set as follows:

1. Conductor casing will be set 70ft into Rustler formation where present.
2. Surface casing will be set 100ft into Tansil formation to isolate the Capitan Reef groundwater from salt bearing formations above.

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

*Oxy requests the option to run the 7.625" Intermediate II as a contingency string to be run only if severe hole conditions dictate an additional casing string necessary.

*Oxy requests the option to run production casing with DQX, TORQ DQW and/or TORQ SFW connections to accommodate hole conditions or drilling operations.

Annular Clearance Variance Request

As per the agreement reached in the Oxy/BLM face-to-face meeting on Feb 22, 2018, Oxy requests permission to allow deviation from the 0.422" annular clearance requirement from Onshore Order #2 under the following conditions:

1. Annular clearance to meet or exceed 0.422" between intermediate casing ID and production casing coupling only on the first 500' overlap between both casings.
2. Annular clearance less than 0.422" is acceptable for the curve and lateral portions of the production open hole section.

	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.	Y
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?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	Y
Is well within the designated 4 string boundary.	Y
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?	Y
If yes, are there two strings cemented to surface?	Y
(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?	

3. Cementing Program

Section	Stage	Slurry:	Capacities	ft ³ /ft	Excess:	From	To	Sacks	Volume (ft ³)	Placement
Conductor	1	Conductor/Surface - Tail	OH x Csg	1.5054	20%	472	-	641	853	Circulate
Surface	1	Conductor/Surface - Tail	OH x Csg	0.6946	100%	819	472	362	482	Circulate
Surface	1	Conductor/Surface - Tail	Csg x Csg	1.0454	0%	472	-	371	493	Circulate
Int.	1	Intermediate - Tail	OH x Csg	0.3132	20%	3,168	2,668	141	188	Circulate
Int.	1	Intermediate - Lead	OH x Csg	0.3132	20%	2,668	1,200	319	552	Circulate
Int.	2	Intermediate - Lead	OH x Csg	0.3132	20%	1,200	819	83	143	Circulate
Int.	2	Intermediate - Lead	Csg x Csg	0.3627	0%	819	-	172	297	Circulate
Prod.	1	Production - Tail	OH x Csg	0.2291	15%	22,672	8,466	2712	3742	Circulate
Prod.	1	Production - Lead	OH x Csg	0.2291	100%	8,466	3,168	1084	2427	Circulate
Prod.	1	Production - Lead	Csg x Csg	0.2608	0%	3,168	2,250	107	239	Circulate

Description	Density (lb/gal)	Yield (ft ³ /sk)	Water (gal/sk)	500psi Time (hh:mm)	Cmt. Class	Additives			
						Accelerator	Retarder	Dispersant	Salt
Conductor/Surface - Tail	14.8	1.33	6.365	5:26	C	x			
Intermediate - Lead	12.9	1.73	8.784	15:26	Pozz		x		
Intermediate - Tail	14.8	1.33	6.368	7:11	C	x			
Production - Lead	11.9	2.24	12.327	14:46	H		x	x	x
Production - Tail	13.2	1.38	6.686	3:39	H		x	x	x

Offline Cementing

Oxy requests a variance to cement the 9.625" and/or 7.625" intermediate casing strings offline in accordance to the approved variance, EC Tran 461365.

The summarized operational sequence will be as follows:

Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment (float collar and shoe).

Land casing.

Fill pipe with kill weight fluid, and confirm well is static.

If well Oxy requests a variance to cement the 9.625" and/or 7.625" intermediate casing strings offline in accordance to the approved variance, EC Tran 461365.

The summarized operational sequence will be as follows:

1. Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment (float collar and shoe).
2. Land casing.
3. Fill pipe with kill weight fluid, and confirm well is static.
 - a. If well is not static notify BLM and kill well.
 - b. Once well is static notify BLM with intent to proceed with nipple down and offline cementing.
4. Set and pressure test annular packoff.
5. After confirmation of both annular barriers and internal barriers, nipple down BOP and install cap flange. If any barrier fails to test, the BOP stack will not be nipped down until after the cement job is completed.
6. Skid rig to next well on pad.
7. Confirm well is static before removing cap flange.
8. If well is not static notify BLM and kill well prior to cementing or nipping up for further remediation.
9. Install offline cement tool.
10. Rig up cement equipment.
 - a. Notify BLM prior to cement job.
11. Perform cement job.
12. Confirm well is static and floats are holding after cement job.
13. Remove cement equipment, offline cement tools and install night cap with pressure gauge for monitoring.

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:	Deepest TVD Depth (ft) per Section:
17.5" Hole	13-5/8"		Diverter - 500 psi Rotating Head	✓	N/A	819
			Annular			
			Blind Ram			
			Pipe Ram			
			Double Ram			
			Other*			
12.25" Hole	13-5/8"	3M	Annular	✓	70% of working pressure	3167
		3M	Blind Ram	✓	250 psi / 3000 psi	
			Pipe Ram			
			Double Ram	✓		
			Other*			
8.5" Hole	13-5/8"	3M	Annular	✓	70% of working pressure	8906
		3M	Blind Ram	✓	250 psi / 3000 psi	
			Pipe Ram			
			Double Ram	✓		
			Other*			

*Specify if additional ram is utilized

Oxy requests a variance from Onshore Order No. 2 to drill the 17.5" surface hole with a diverter system in place of the required BOP system outlined in Section III.A.2.a.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

	Formation integrity test will be performed per Onshore Order #2.
	On Exploratory wells or 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. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
	Y Are anchors required by manufacturer?
	A multibowl or a unionized multibowl wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. 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. We will test the flange connection of the wellhead with a test port that is directly in the flange. We are proposing that we will run the wellhead through the rotary prior to cementing surface casing as discussed with the BLM on October 8, 2015.
	See attached schematics.

BOP Break Testing Request

Oxy requests permission to adjust the BOP break testing requirements as per the agreement reached in the OXY/BLM meeting on September 5, 2019. A separate sundry will be sent prior to spud that reflects the pad based break testing plan.

BOP break test under the following conditions:

- After a full BOP test is conducted
- When skidding to drill an intermediate section where ICP is set into the third Bone Spring or shallower.
- When skidding to drill a production section that does not penetrate into the third Bone Spring or deeper.

If the kill line is broken prior to skid, two tests will be performed.

- 1) Wellhead flange, co-flex hose, kill line connections and upper pipe rams
- 2) Wellhead flange, HCR valve, check valve, upper pipe rams

If the kill line is not broken prior to skid, only one test will be performed.

- 1) Wellhead flange, co-flex hose, check valve, upper pipe rams

5. Mud Program

Section	Depth - MD		Depth - TVD		Type	Weight (ppg)	Viscosity	Water Loss
	From (ft)	To (ft)	From (ft)	To (ft)				
Conductor	0	472	0	472	Water-Based Mud	8.6-8.8	40-60	N/C
Surface	472	819	472	819	Saturated Brine-Based or Oil-Based Mud	8.0-10.0	35-45	N/C
Intermediate	819	3168	819	3167	Saturated Brine-Based or Oil-Based Mud	8.0-10.0	35-45	N/C
Production	3168	22672	3167	8906	Water-Based or Oil-Based Mud	8.0-9.6	38-50	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. The following is a general list of products: Barite, Bentonite, Gypsum, Lime, Soda Ash, Caustic Soda, Nut Plug, Cedar Fiber, Cotton Seed Hulls, Drilling Paper, Salt Water Clay, CACL2. Oxy will use a closed mud system.

What will be used to monitor the loss or gain of fluid?	PVT/MD Totco/Visual Monitoring
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6. Logging and Testing Procedures

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

Additional logs planned		Interval
No	Resistivity	
No	Density	
No	CBL	
Yes	Mud log	Bone Spring – TD
No	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4446 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	152°F

Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal isolation.

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

N	H ₂ S is present
Y	H ₂ S Plan attached

8. Other facets of operation

	Yes/No
Will the well be drilled with a walking/skidding operation? If yes, describe. We plan to drill the 4 well pad in batch by section: all surface sections, intermediate sections and production sections. The wellhead will be secured with a night cap whenever the rig is not over the well.	Yes
Will more than one drilling rig be used for drilling operations? If yes, describe. Oxy requests the option to contract a Surface Rig to drill, set surface casing, and cement for this well. If the timing between rigs is such that Oxy would not be able to preset surface, the Primary Rig will MIRU and drill the well in its entirety per the APD. Please see the attached document for information on the spudder rig.	Yes

Total Estimated Cuttings Volume: 2125 bbls

Attachments

- ☒ Directional Plan
- ☒ H₂S Contingency Plan
- ☒ Flex III Attachments
- ☒ Spudder Rig Attachment
- ☒ Premium Connection Specs

9. Company Personnel

Name	Title	Office Phone	Mobile Phone
Garrett Granier	Drilling Engineer	713-513-6633	832-265-0581
William Turner	Drilling Engineer Supervisor	713-350-4951	661-817-4586
Simon Benavides	Drilling Superintendent	713-522-8652	281-684-6897
Diego Tellez	Drilling Manager	713-350-4602	713-303-4932

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

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

Submit Original
to Appropriate
District Office

GAS CAPTURE PLAN

Date: 11-26-2019

☒ Original

Operator & OGRID No.: OXY USA WTP LP - 192463

☐ Amended - Reason for Amendment: _____

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

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

Well(s)/Production Facility – Name of facility

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

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
BIG FISH 12-11 FED COM 21H	Pending	C-12-T20S-R28E	980'FNL 2420'FWL	1,200	0	
BIG FISH 12-11 FED COM 22H	Pending	C-12-T20S-R28E	980'FNL 2455'FWL	1,200	0	
BIG FISH 12-11 FED COM 23H	Pending	N-12-T20S-R28E	720'FSL 2425'FWL	1,200	0	
BIG FISH 12-11 FED COM 24H	Pending	N-12-T20S-R28E	720'FSL 2460'FWL	1,200	0	
BIG FISH 12-10 FED COM 31H	Pending	F-12-T20S-R28E	1390'FNL 2390'FWL	3,100	0	
BIG FISH 12-10 FED COM 32H	Pending	K-12-T20S-R28E	1640'FSL 2170'FWL	3,100	0	
BIG FISH 12-10 FED COM 33H	Pending	K-12-T20S-R28E	1640'FSL 2240'FWL	3,100	0	
BIG FISH 12-10 FED COM 311H	Pending	F-12-T20S-R28E	1390'FNL 2355'FWL	3,200	0	
BIG FISH 12-10 FED COM 312H	Pending	F-12-T20S-R28E	1390'FNL 2455'FWL	3,200	0	
BIG FISH 12-10 FED COM 313H	Pending	F-12-T20S-R28E	1390'FNL 2425'FWL	3,200	0	
BIG FISH 12-10 FED COM 314H	Pending	K-12-T20S-R28E	1640'FSL 2270'FWL	3,200	0	
BIG FISH 12-10 FED COM 315H	Pending	K-12-T20S-R28E	1640'FSL 2205'FWL	3,200	0	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, where a gas transporter system is in place. The gas produced from production facility is dedicated to Enterprise Field Services, LLC ("Enterprise") and is connected to Enterprise low/high pressure gathering system located in Eddy County, New Mexico. OXY USA INC. ("OXY") provides (periodically) to Enterprise a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, OXY and Enterprise have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Enterprise's Processing Plant located in Sec. 36, Twn. 24S, Rng. 30E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

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

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

Alternatives to Reduce Flaring

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

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