OCD Received 10/20/2020

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

5. Lease Serial No.
NMNM002377

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☑ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.
BIG FISH 12-10 FEDERAL COM
313H

2. Name of Operator
OXY USA WTP LP

9. API Well No.
30 015 47597

OLD MILLMAN RANCH;BS

3a. Address
5 Greenway Plaza, Suite 110, Houston, TX 77210

3b. Phone No. *(include area code)*
(713) 366-5716

10. Field and Pool, or Exploratory
~~COTTON DRAW~~ BONE SPRING/COTTO

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SENW / 1390 FNL / 2425 FWL / LAT 32.591758 / LONG -104.131356
At proposed prod. zone SWNW / 2310 FNL / 20 FWL / LAT 32.589097 / LONG -104.173713

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 12/T20S/R28E/NMP

14. Distance in miles and direction from nearest town or post office*
13 miles

12. County or Parish
EDDY

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
20 feet

16. No of acres in lease
440

17. Spacing Unit dedicated to this well
800.0

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
35 feet

19. Proposed Depth
8712 feet / 22585 feet

20. BLM/BIA Bond No. in file
FED: ESB000226

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3271 feet

22. Approximate date work will start*
07/08/2020

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
12/02/2019

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.
- NSP Will require administrative order for non-standard spacing unit

APPROVED WITH CONDITIONS

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

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 10/09/2020

Entered -KMS NMOCD

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 RD., 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, New Mexico 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-47597	~~52805~~ 48035	~~RUSSELL~~, BONE SPRING OLD MILLMAN RANCH;BS

Property Code	Property Name	Well Number
329321	BIG FISH 12_10 FEDERAL COM	313H

OGRID No.	Operator Name	Elevation
192463	OXY USA WTP LP	3271.3'

Surface Location

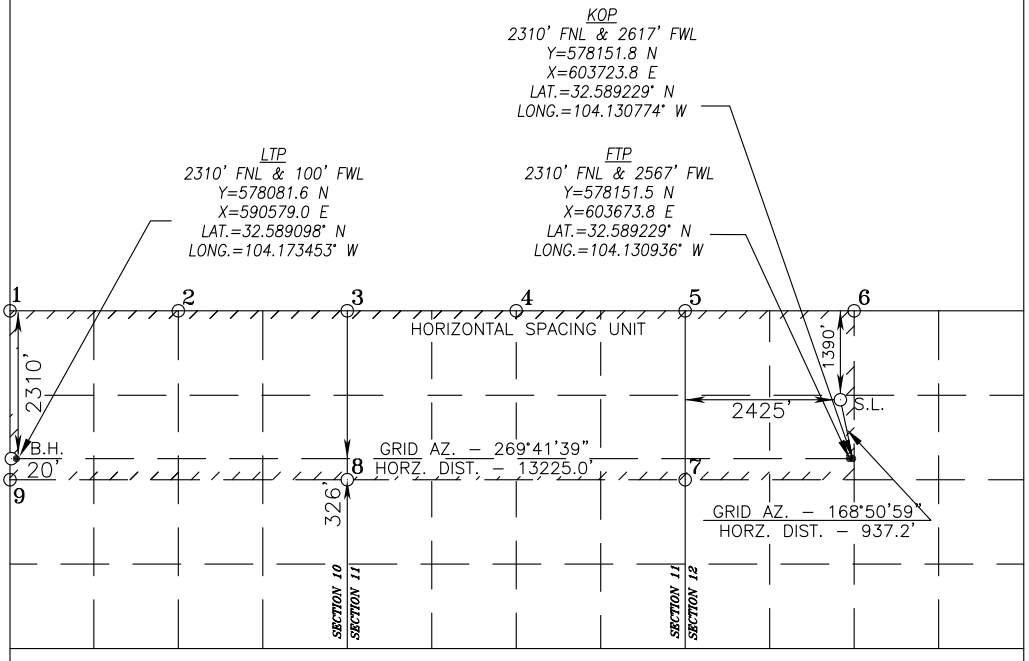
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	12	20-S	28-E		1390	NORTH	2425	WEST	EDDY

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
E	10	20-S	28-E		2310	NORTH	20	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
800			

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



PROPOSED BOTTOM HOLE LOCATION
Y=578081.2 N
X=590499.0 E
LAT.=32.589097° N
LONG.=104.173713° W

POINT LEGEND			
1	Y=580391.4 N X=590513.6 E	6	Y=580462.0 N X=603798.9 E
2	Y=580412.7 N X=593168.9 E	7	Y=577802.7 N X=601102.5 E
3	Y=580433.9 N X=595824.8 E	8	Y=577783.7 N X=595789.3 E
4	Y=580444.0 N X=598479.0 E	9	Y=577744.2 N X=590474.0 E
5	Y=580454.6 N X=601133.6 E		

* ALL COORDINATES ARE NAD 83 VALUES

SURFACE LOCATION
Y=579071.3 N
X=603542.6 E
LAT.=32.591758° N
LONG.=104.131356° 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 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 11/26/19
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 L. HARCROW
NEW MEXICO
17777
LICENSED PROFESSIONAL SURVEYOR

10/15/19

Certificate No. CHAD HARCROW 17777

W.O. #19-1733 DRAWN BY: WN

Intent [X] As Drilled [ ]

API #
30-015-

Operator Name:	Property Name:	Well Number
OXY USA WTP LP	BIG FISH 12-10 FEDERAL COM	313H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
F	12	20S	28E		2310	FNL	2617	FWL	EDDY

Latitude	Longitude	NAD
32.589229	-104.130774	NAD83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
F	12	20S	28E		2310	FNL	2567	FWL	EDDY

Latitude	Longitude	NAD
32.589229	-104.130936	NAD83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
E	10	20S	28E		2310	FNL	100	FWL	EDDY

Latitude	Longitude	NAD
32.589098	-104.173453	NAD83

Is this well the defining well for the Horizontal Spacing Unit? [ ]

Is this well an infill well? [Y]

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

API #
30-015-

Operator Name:	Property Name:	Well Number
OXY USA WTP LP		

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 313H**
SURFACE HOLE FOOTAGE:	1390'/N & 2425'/W
BOTTOM HOLE FOOTAGE	2310'/N & 20'/W
LOCATION:	Section 12, T.20 S., R.28 E., NMP
COUNTY:	Eddy County, New Mexico

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	○ Low	○ Medium	◉ High
Cave/Karst Potential	○ Critical		
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

Break Testing	◉ Yes	○ No

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 **871** 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 **3229** 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 19.9%, 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 4.9 %, 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 intergrity 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 intergrity 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: 10400051704 **Submission Date:** 12/02/2019

Operator Name: OXY USA WTP LP

Well Name: BIG FISH 12-10 FEDERAL COM **Well Number:** 313H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400051704 **Tie to previous NOS?** N **Submission Date:** 12/02/2019

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:** 313H **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:** 313H

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:** 311H, 31H, 312H, 313H

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: 800 Acres

Well plat: BigFish12_10FdCom313H_Supplemental_20191127075714.pdf

BigFish12_10FdCom313H_SitePlan_20191127075723.pdf

BigFish12_10FdCom313H_C102_20191127075737.pdf

Well work start Date: 07/08/2020 **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	1390	FNL	2425	FWL	20S	28E	12	Aliquot SENW	32.591758	-104.131356	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 002377	3271	0	0	N
KOP Leg #1	2310	FNL	2617	FWL	20S	28E	12	Aliquot SENW	32.589229	-104.130774	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 002377	-5657	9346	8928	N

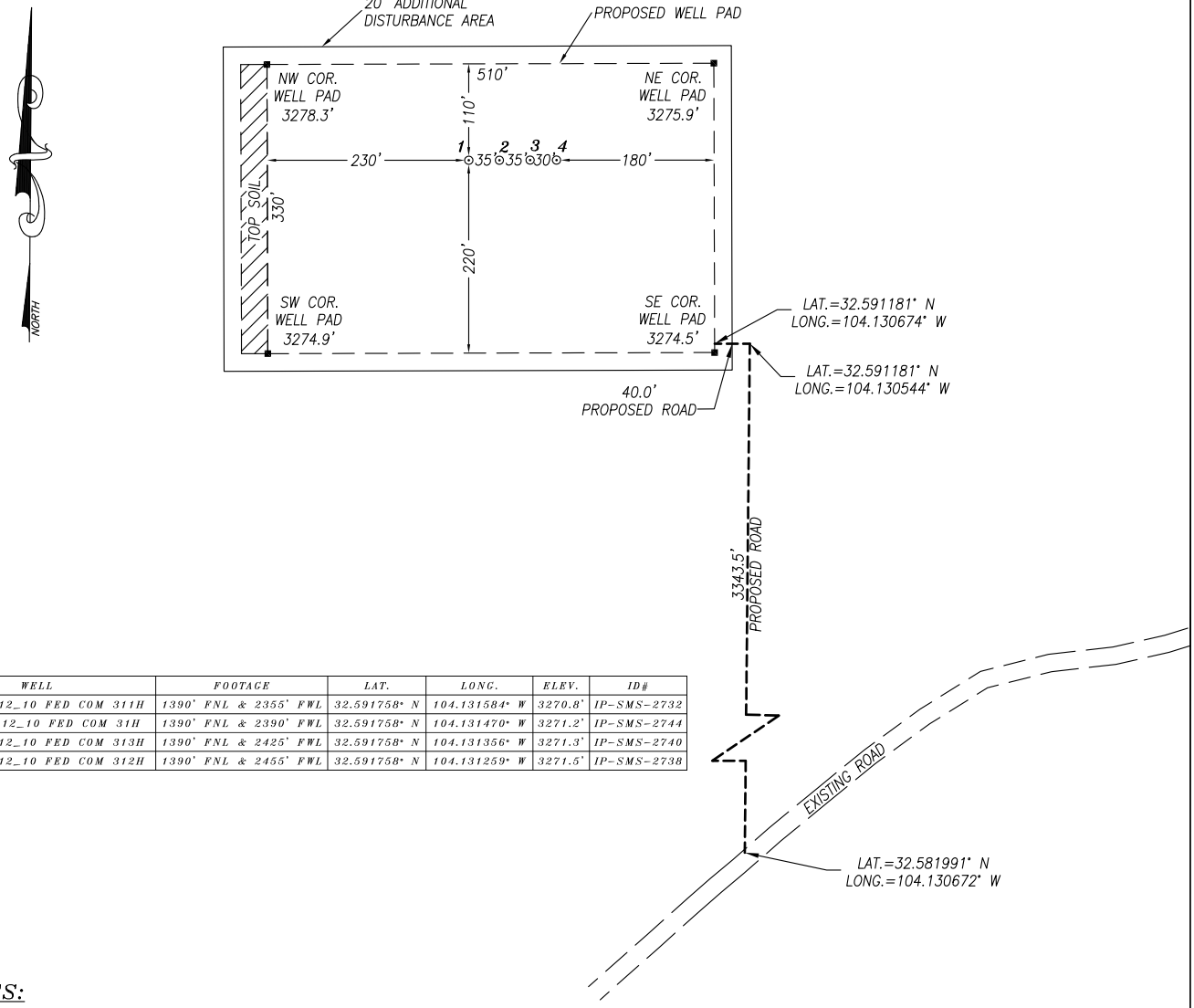
Operator Name: OXY USA WTP LP

Well Name: BIG FISH 12-10 FEDERAL COM **Well Number:** 313H

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	2310	FNL	2567	FWL	20S	28E	12	Aliquot SENW	32.589229	-104.130936	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 002377	-5661	9407	8932	Y
PPP Leg #1-2	2317	FNL	1	FEL	20S	28E	11	Aliquot SENE	32.589203	-104.139269	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 015003	-5618	11975	8889	Y
EXIT Leg #1	2310	FNL	100	FWL	20S	28E	10	Aliquot SWNW	32.589098	-104.173453	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 015003	-5441	22504	8712	Y
BHL Leg #1	2310	FNL	20	FWL	20S	28E	10	Aliquot SWNW	32.589097	-104.173713	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 015003	-5441	22585	8712	N

OXY USA INC.

SITE PLAN
BRTNFL 1202
FAA PERMIT: NO



NO.	WELL	FOOTAGE	LAT.	LONG.	ELEV.	ID#
1	BIG FISH 12_10 FED COM 311H	1390' FNL & 2355' FWL	32.591758° N	104.131584° W	3270.8'	IP-SMS-2732
2	BIG FISH 12_10 FED COM 31H	1390' FNL & 2390' FWL	32.591758° N	104.131470° W	3271.2'	IP-SMS-2744
3	BIG FISH 12_10 FED COM 313H	1390' FNL & 2425' FWL	32.591758° N	104.131356° W	3271.3'	IP-SMS-2740
4	BIG FISH 12_10 FED COM 312H	1390' FNL & 2455' FWL	32.591758° N	104.131259° W	3271.5'	IP-SMS-2738

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 NEW MEXICO 17777 LICENSED PROFESSIONAL SURVEYOR

Chad Harcrow _____ 10/15/19
CHAD HARCROW N.M.P.S. NO. 17777 DATE

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

200 0 200 400 Feet
Scale: 1"=200'

OXY USA INC.	
SURVEY DATE: SEPT. 26, 2019	SITE PLAN
DRAFTING DATE: OCT. 7, 2019	PAGE: 1 OF 1
APPROVED BY: CH / DRAWN BY: WN	FILE: 19-1731

APD ID: 10400051704 **Submission Date:** 12/02/2019

Operator Name: OXY USA WTP LP

Well Name: BIG FISH 12-10 FEDERAL COM **Well Number:** 313H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
598481	RUSTLER	3271	399	399	ANHYDRITE, DOLOMITE, SHALE	USEABLE WATER	N
598482	TANSILL	2500	771	771	ANHYDRITE, SANDSTONE, SHALE	NATURAL GAS, OIL	Y
781328	CAPITAN REEF	971	2300	2300	LIMESTONE	OTHER : SALT	N
598483	DELAWARE	92	3179	3179	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL, OTHER : BRINE	Y
598480	BONE SPRING	-2003	5274	5309	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL	Y
598479	BONE SPRING 1ST	-3542	6813	6895	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL	Y
598478	BONE SPRING 2ND	-4151	7422	7523	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL	Y
598487	BONE SPRING 3RD	-5331	8602	8789	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M **Rating Depth:** 8932

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

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_10FdCom313H_ChokeManifold_20191127092522.pdf

BOP Diagram Attachment:

BigFish12_10FdCom313H_BOP_20191127092611.pdf

BigFish12_10FdCom313H_FlexHoseCert_20191127092620.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	469	0	469	3271	2802	469	J-55	78.6	N/A						
2	SURFACE	17.5	13.375	NEW	API	N	0	871	0	871	3271	2400	871	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	3229	0	3229		42	3229	HCL-80	40	BUTT	1.125	1.2	BUOY	1.4	BUOY	1.4
4	PRODUCTION	8.5	5.5	NEW	API	N	0	22585	0	8932		-5661	22585	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:** 313H

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_10FdCom313H_CsgCriteria_20191127092709.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BigFish12_10FdCom313H_CsgCriteria_20191127092804.pdf

Operator Name: OXY USA WTP LP

Well Name: BIG FISH 12-10 FEDERAL COM **Well Number:** 313H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BigFish12_10FdCom313H_CsgCriteria_20191127092853.pdf

BigFish12_10FdCom313H_5.500in_x_20_20191127092858.00

BigFish12_10FdCom313H_5.500in_x_20_20191127092904.00

BigFish12_10FdCom313H_5.500in_x_20_20191127092909.00

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	469	637	1.33	14.8	847	20	Class C	Accelerator
SURFACE	Lead		0	871	789	1.33	14.8	1048	100	Class C Cement	Accelerator
INTERMEDIATE	Lead	1200	0	1200	254	1.73	12.9	440	20	Class C Cement	Accelerator
INTERMEDIATE	Lead	1200	1200	2729	332	1.73	12.9	575	20	Class C Cement	Accelerator
INTERMEDIATE	Tail		2729	3229	141	1.33	14.8	188	20	Class C Cement	Accelerator
PRODUCTION	Lead		2250	8406	1314	2.24	11.9	2627	100	Class H Cement	Retarder, Dispersant, Salt

Operator Name: OXY USA WTP LP

Well Name: BIG FISH 12-10 FEDERAL COM **Well Number:** 313H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Tail		8406	22585	2707	1.38	13.2	3735	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
469	3229	OTHER : Saturated Brine-Based Mud or Oil-Based Mud	8	10							
0	469	WATER-BASED MUD	8.6	8.8							
3229	22585	OTHER : Water-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:** 313H

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: 4459 **Anticipated Surface Pressure:** 2493

Anticipated Bottom Hole Temperature(F): 152

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

BigFish12_10FdCom313H_H2S1_20191127093834.pdf

BigFish12_10FdCom313H_H2S2_20191127093840.pdf

BigFish12_10FdCom313H_H2SEmerCont_20191127093846.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

BigFish12_10FdCom313H_DirectPlot_20191127093905.pdf

BigFish12_10FdCom313H_DirectPlan_20191127093917.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.

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_10FdCom313H_SpudRigData_20191127094023.pdf

BigFish12_10FdCom313H_DrillPlan_10DayLtr_20200708173440.pdf

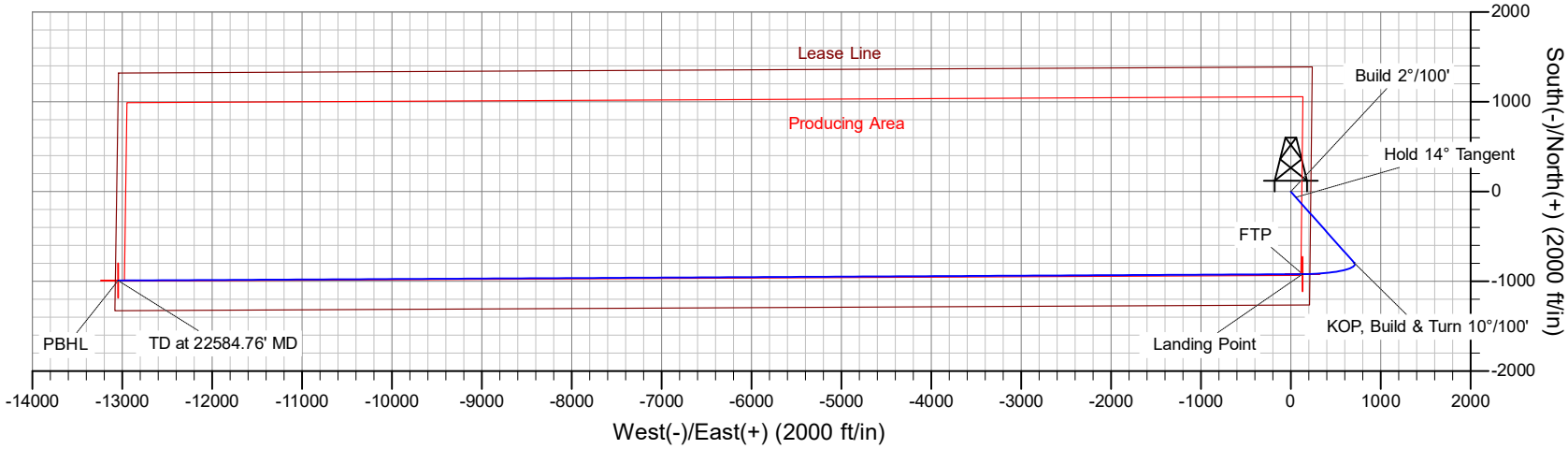
Other Variance attachment:

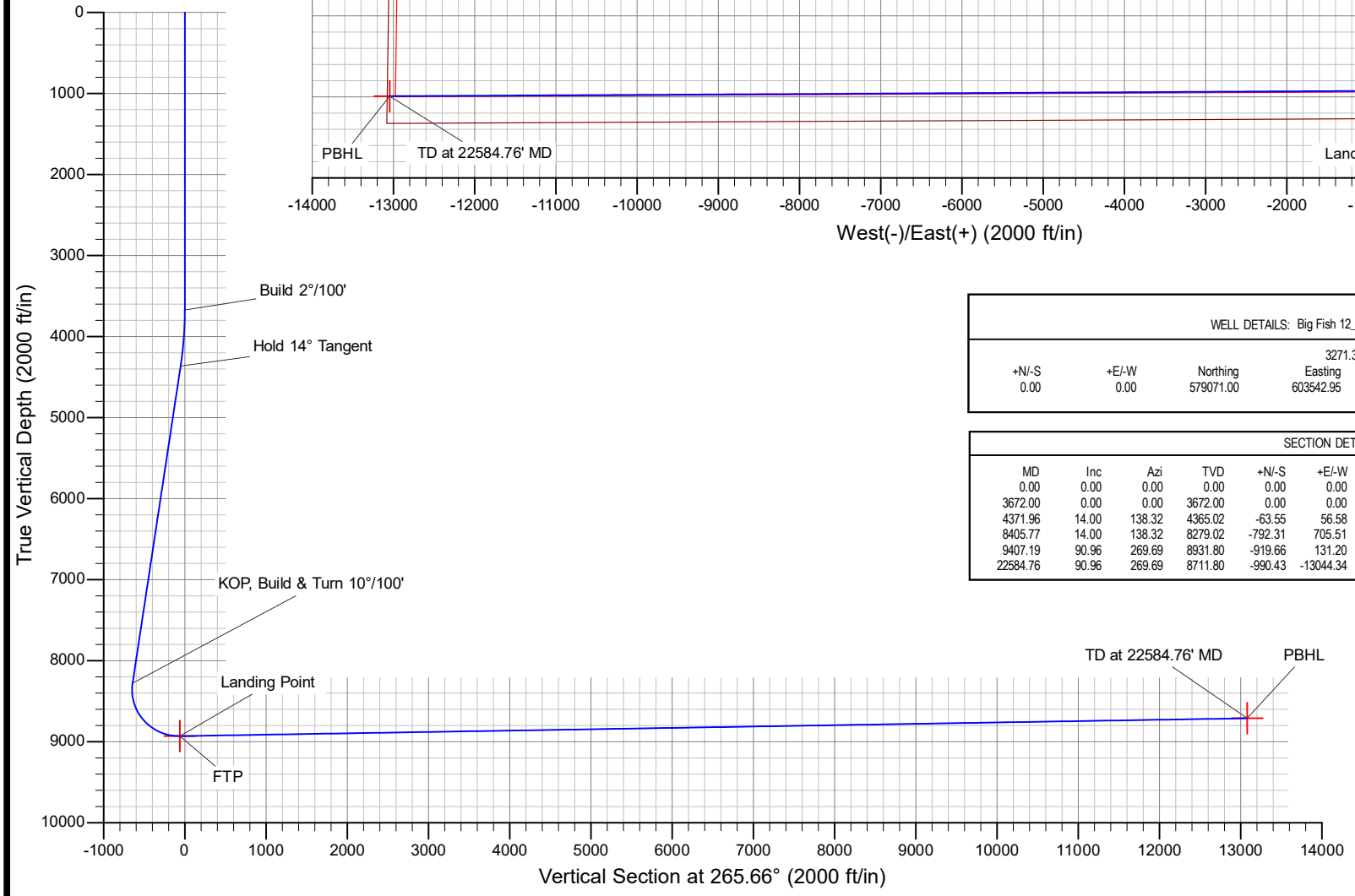
Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
Site: Big Fish 12_10
Well: Big Fish 12_10 Fed Com 313H
Wellbore: Wellbore #1
Design: Permitting Plan

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





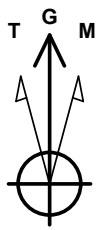
WELL DETAILS: Big Fish 12_10 Fed Com 313H

3271.30

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	579071.00	603542.95	32° 35' 30.325430 N	104° 7' 52.878216 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3672.00	0.00	0.00	3672.00	0.00	0.00	0.00	0.00	0.00	Build 2°/100'
4371.96	14.00	138.32	4365.02	-63.55	56.58	2.00	138.32	-51.61	Hold 14° Tangent
8405.77	14.00	138.32	8279.02	-792.31	705.51	0.00	0.00	-643.50	KOP, Build & Turn 10°/100'
9407.19	90.96	269.69	8931.80	-919.66	131.20	10.00	130.34	-61.20	Landing Point
22584.76	90.96	269.69	8711.80	-990.43	-13044.34	0.00	0.00	13081.89	TD at 22584.76' MD



Azimuths to Grid North
True North: -0.11°
Magnetic North: 7.12°

Magnetic Field
Strength: 47952.4nT
Dip Angle: 60.30°
Date: 10/21/2019
Model: HDGM_FILE

OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)
Big Fish 12_10
Big Fish 12_10 Fed Com 313H

Wellbore #1

Plan: Permitting Plan

Standard Planning Report

21 October, 2019

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Big Fish 12_10 Fed Com 313H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 3297.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 3297.80ft
Site:	Big Fish 12_10	**North Reference:**	Grid
Well:	Big Fish 12_10 Fed Com 313H	**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 313H

Well Position	**+N/-S**	0.06 ft	**Northing:**	579,071.00 usft	**Latitude:**	32° 35' 30.325431 N
	+E/-W	-30.00 ft	**Easting:**	603,542.95 usft	**Longitude:**	104° 7' 52.878216 W
Position Uncertainty		2.00 ft	**Wellhead Elevation:**		**Ground Level:**	3,271.30 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	10/21/2019	7.23	60.30	47,952.40000000

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	265.66

Plan Survey Tool Program **Date** 10/21/2019

	Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	22,584.76	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	
3,672.00	0.00	0.00	3,672.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,371.96	14.00	138.32	4,365.02	-63.55	56.58	2.00	2.00	0.00	138.32	
8,405.77	14.00	138.32	8,279.02	-792.31	705.51	0.00	0.00	0.00	0.00	
9,407.19	90.96	269.69	8,931.80	-919.66	131.20	10.00	7.68	13.12	130.34	FTP (Big Fish
22,584.76	90.96	269.69	8,711.80	-990.43	-13,044.34	0.00	0.00	0.00	0.00	PBHL (Big Fish

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Big Fish 12_10 Fed Com 313H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 3297.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 3297.80ft
Site:	Big Fish 12_10	**North Reference:**	Grid
Well:	Big Fish 12_10 Fed Com 313H	**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
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,672.00	0.00	0.00	3,672.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.56	138.32	3,700.00	-0.10	0.09	-0.08	2.00	2.00	0.00
3,800.00	2.56	138.32	3,799.96	-2.14	1.90	-1.73	2.00	2.00	0.00
3,900.00	4.56	138.32	3,899.76	-6.77	6.03	-5.50	2.00	2.00	0.00
4,000.00	6.56	138.32	3,999.28	-14.01	12.47	-11.38	2.00	2.00	0.00
4,100.00	8.56	138.32	4,098.41	-23.83	21.22	-19.36	2.00	2.00	0.00
4,200.00	10.56	138.32	4,197.02	-36.24	32.27	-29.43	2.00	2.00	0.00
4,300.00	12.56	138.32	4,294.98	-51.20	45.59	-41.58	2.00	2.00	0.00
4,371.96	14.00	138.32	4,365.02	-63.55	56.58	-51.61	2.00	2.00	0.00
4,400.00	14.00	138.32	4,392.22	-68.61	61.09	-55.73	0.00	0.00	0.00
4,500.00	14.00	138.32	4,489.25	-86.68	77.18	-70.40	0.00	0.00	0.00
4,600.00	14.00	138.32	4,586.28	-104.74	93.27	-85.07	0.00	0.00	0.00
4,700.00	14.00	138.32	4,683.31	-122.81	109.36	-99.74	0.00	0.00	0.00
4,800.00	14.00	138.32	4,780.34	-140.88	125.44	-114.42	0.00	0.00	0.00
4,900.00	14.00	138.32	4,877.37	-158.94	141.53	-129.09	0.00	0.00	0.00
5,000.00	14.00	138.32	4,974.40	-177.01	157.62	-143.76	0.00	0.00	0.00
5,100.00	14.00	138.32	5,071.43	-195.08	173.70	-158.44	0.00	0.00	0.00

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Big Fish 12_10 Fed Com 313H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 3297.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 3297.80ft
Site:	Big Fish 12_10	**North Reference:**	Grid
Well:	Big Fish 12_10 Fed Com 313H	**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	14.00	138.32	5,168.46	-213.14	189.79	-173.11	0.00	0.00	0.00
5,300.00	14.00	138.32	5,265.49	-231.21	205.88	-187.78	0.00	0.00	0.00
5,400.00	14.00	138.32	5,362.52	-249.28	221.97	-202.46	0.00	0.00	0.00
5,500.00	14.00	138.32	5,459.55	-267.34	238.05	-217.13	0.00	0.00	0.00
5,600.00	14.00	138.32	5,556.58	-285.41	254.14	-231.80	0.00	0.00	0.00
5,700.00	14.00	138.32	5,653.61	-303.48	270.23	-246.48	0.00	0.00	0.00
5,800.00	14.00	138.32	5,750.64	-321.54	286.32	-261.15	0.00	0.00	0.00
5,900.00	14.00	138.32	5,847.67	-339.61	302.40	-275.82	0.00	0.00	0.00
6,000.00	14.00	138.32	5,944.70	-357.68	318.49	-290.50	0.00	0.00	0.00
6,100.00	14.00	138.32	6,041.73	-375.74	334.58	-305.17	0.00	0.00	0.00
6,200.00	14.00	138.32	6,138.76	-393.81	350.66	-319.84	0.00	0.00	0.00
6,300.00	14.00	138.32	6,235.79	-411.87	366.75	-334.52	0.00	0.00	0.00
6,400.00	14.00	138.32	6,332.82	-429.94	382.84	-349.19	0.00	0.00	0.00
6,500.00	14.00	138.32	6,429.85	-448.01	398.93	-363.86	0.00	0.00	0.00
6,600.00	14.00	138.32	6,526.88	-466.07	415.01	-378.54	0.00	0.00	0.00
6,700.00	14.00	138.32	6,623.91	-484.14	431.10	-393.21	0.00	0.00	0.00
6,800.00	14.00	138.32	6,720.94	-502.21	447.19	-407.88	0.00	0.00	0.00
6,900.00	14.00	138.32	6,817.97	-520.27	463.27	-422.56	0.00	0.00	0.00
7,000.00	14.00	138.32	6,915.00	-538.34	479.36	-437.23	0.00	0.00	0.00
7,100.00	14.00	138.32	7,012.03	-556.41	495.45	-451.90	0.00	0.00	0.00
7,200.00	14.00	138.32	7,109.06	-574.47	511.54	-466.58	0.00	0.00	0.00
7,300.00	14.00	138.32	7,206.09	-592.54	527.62	-481.25	0.00	0.00	0.00
7,400.00	14.00	138.32	7,303.12	-610.61	543.71	-495.92	0.00	0.00	0.00
7,500.00	14.00	138.32	7,400.15	-628.67	559.80	-510.60	0.00	0.00	0.00
7,600.00	14.00	138.32	7,497.18	-646.74	575.88	-525.27	0.00	0.00	0.00
7,700.00	14.00	138.32	7,594.21	-664.81	591.97	-539.94	0.00	0.00	0.00
7,800.00	14.00	138.32	7,691.24	-682.87	608.06	-554.62	0.00	0.00	0.00
7,900.00	14.00	138.32	7,788.27	-700.94	624.15	-569.29	0.00	0.00	0.00
8,000.00	14.00	138.32	7,885.30	-719.00	640.23	-583.96	0.00	0.00	0.00
8,100.00	14.00	138.32	7,982.33	-737.07	656.32	-598.64	0.00	0.00	0.00
8,200.00	14.00	138.32	8,079.36	-755.14	672.41	-613.31	0.00	0.00	0.00
8,300.00	14.00	138.32	8,176.39	-773.20	688.49	-627.98	0.00	0.00	0.00
8,400.00	14.00	138.32	8,273.42	-791.27	704.58	-642.66	0.00	0.00	0.00
8,405.77	14.00	138.32	8,279.02	-792.31	705.51	-643.50	0.00	0.00	0.00
8,500.00	10.63	180.89	8,371.25	-809.55	712.97	-649.64	10.00	-3.58	45.19
8,600.00	14.73	223.97	8,469.00	-827.97	703.98	-639.28	10.00	4.10	43.08
8,700.00	22.77	242.96	8,563.70	-845.96	677.86	-611.87	10.00	8.04	18.99
8,800.00	31.90	251.97	8,652.48	-862.97	635.39	-568.23	10.00	9.13	9.01
8,900.00	41.40	257.23	8,732.64	-878.50	577.87	-509.71	10.00	9.50	5.26
9,000.00	51.07	260.80	8,801.74	-892.06	507.05	-438.06	10.00	9.67	3.57
9,100.00	60.81	263.50	8,857.68	-903.26	425.08	-355.48	10.00	9.75	2.70
9,200.00	70.61	265.73	8,898.77	-911.74	334.44	-264.46	10.00	9.79	2.23
9,300.00	80.42	267.70	8,923.76	-917.24	237.90	-167.78	10.00	9.82	1.97
9,400.00	90.25	269.56	8,931.88	-919.61	138.39	-68.37	10.00	9.83	1.86
9,407.19	90.96	269.69	8,931.80	-919.66	131.20	-61.20	10.00	9.83	1.84
9,500.00	90.96	269.69	8,930.25	-920.16	38.40	31.37	0.00	0.00	0.00
9,600.00	90.96	269.69	8,928.58	-920.70	-61.58	131.11	0.00	0.00	0.00
9,700.00	90.96	269.69	8,926.91	-921.23	-161.57	230.85	0.00	0.00	0.00
9,800.00	90.96	269.69	8,925.24	-921.77	-261.55	330.58	0.00	0.00	0.00
9,900.00	90.96	269.69	8,923.57	-922.31	-361.54	430.32	0.00	0.00	0.00
10,000.00	90.96	269.69	8,921.90	-922.84	-461.52	530.06	0.00	0.00	0.00
10,100.00	90.96	269.69	8,920.23	-923.38	-561.50	629.80	0.00	0.00	0.00
10,200.00	90.96	269.69	8,918.56	-923.92	-661.49	729.54	0.00	0.00	0.00
10,300.00	90.96	269.69	8,916.89	-924.46	-761.47	829.28	0.00	0.00	0.00

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Big Fish 12_10 Fed Com 313H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 3297.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 3297.80ft
Site:	Big Fish 12_10	**North Reference:**	Grid
Well:	Big Fish 12_10 Fed Com 313H	**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	90.96	269.69	8,915.23	-924.99	-861.46	929.01	0.00	0.00	0.00
10,500.00	90.96	269.69	8,913.56	-925.53	-961.44	1,028.75	0.00	0.00	0.00
10,600.00	90.96	269.69	8,911.89	-926.07	-1,061.43	1,128.49	0.00	0.00	0.00
10,700.00	90.96	269.69	8,910.22	-926.60	-1,161.41	1,228.23	0.00	0.00	0.00
10,800.00	90.96	269.69	8,908.55	-927.14	-1,261.40	1,327.97	0.00	0.00	0.00
10,900.00	90.96	269.69	8,906.88	-927.68	-1,361.38	1,427.71	0.00	0.00	0.00
11,000.00	90.96	269.69	8,905.21	-928.22	-1,461.37	1,527.44	0.00	0.00	0.00
11,100.00	90.96	269.69	8,903.54	-928.75	-1,561.35	1,627.18	0.00	0.00	0.00
11,200.00	90.96	269.69	8,901.87	-929.29	-1,661.34	1,726.92	0.00	0.00	0.00
11,300.00	90.96	269.69	8,900.20	-929.83	-1,761.32	1,826.66	0.00	0.00	0.00
11,400.00	90.96	269.69	8,898.53	-930.36	-1,861.30	1,926.40	0.00	0.00	0.00
11,500.00	90.96	269.69	8,896.86	-930.90	-1,961.29	2,026.14	0.00	0.00	0.00
11,600.00	90.96	269.69	8,895.19	-931.44	-2,061.27	2,125.87	0.00	0.00	0.00
11,700.00	90.96	269.69	8,893.52	-931.97	-2,161.26	2,225.61	0.00	0.00	0.00
11,800.00	90.96	269.69	8,891.85	-932.51	-2,261.24	2,325.35	0.00	0.00	0.00
11,900.00	90.96	269.69	8,890.18	-933.05	-2,361.23	2,425.09	0.00	0.00	0.00
12,000.00	90.96	269.69	8,888.51	-933.59	-2,461.21	2,524.83	0.00	0.00	0.00
12,100.00	90.96	269.69	8,886.84	-934.12	-2,561.20	2,624.57	0.00	0.00	0.00
12,200.00	90.96	269.69	8,885.17	-934.66	-2,661.18	2,724.30	0.00	0.00	0.00
12,300.00	90.96	269.69	8,883.50	-935.20	-2,761.17	2,824.04	0.00	0.00	0.00
12,400.00	90.96	269.69	8,881.84	-935.73	-2,861.15	2,923.78	0.00	0.00	0.00
12,500.00	90.96	269.69	8,880.17	-936.27	-2,961.14	3,023.52	0.00	0.00	0.00
12,600.00	90.96	269.69	8,878.50	-936.81	-3,061.12	3,123.26	0.00	0.00	0.00
12,700.00	90.96	269.69	8,876.83	-937.34	-3,161.11	3,223.00	0.00	0.00	0.00
12,800.00	90.96	269.69	8,875.16	-937.88	-3,261.09	3,322.73	0.00	0.00	0.00
12,900.00	90.96	269.69	8,873.49	-938.42	-3,361.07	3,422.47	0.00	0.00	0.00
13,000.00	90.96	269.69	8,871.82	-938.96	-3,461.06	3,522.21	0.00	0.00	0.00
13,100.00	90.96	269.69	8,870.15	-939.49	-3,561.04	3,621.95	0.00	0.00	0.00
13,200.00	90.96	269.69	8,868.48	-940.03	-3,661.03	3,721.69	0.00	0.00	0.00
13,300.00	90.96	269.69	8,866.81	-940.57	-3,761.01	3,821.43	0.00	0.00	0.00
13,400.00	90.96	269.69	8,865.14	-941.10	-3,861.00	3,921.16	0.00	0.00	0.00
13,500.00	90.96	269.69	8,863.47	-941.64	-3,960.98	4,020.90	0.00	0.00	0.00
13,600.00	90.96	269.69	8,861.80	-942.18	-4,060.97	4,120.64	0.00	0.00	0.00
13,700.00	90.96	269.69	8,860.13	-942.71	-4,160.95	4,220.38	0.00	0.00	0.00
13,800.00	90.96	269.69	8,858.46	-943.25	-4,260.94	4,320.12	0.00	0.00	0.00
13,900.00	90.96	269.69	8,856.79	-943.79	-4,360.92	4,419.86	0.00	0.00	0.00
14,000.00	90.96	269.69	8,855.12	-944.33	-4,460.91	4,519.59	0.00	0.00	0.00
14,100.00	90.96	269.69	8,853.45	-944.86	-4,560.89	4,619.33	0.00	0.00	0.00
14,200.00	90.96	269.69	8,851.78	-945.40	-4,660.87	4,719.07	0.00	0.00	0.00
14,300.00	90.96	269.69	8,850.11	-945.94	-4,760.86	4,818.81	0.00	0.00	0.00
14,400.00	90.96	269.69	8,848.45	-946.47	-4,860.84	4,918.55	0.00	0.00	0.00
14,500.00	90.96	269.69	8,846.78	-947.01	-4,960.83	5,018.29	0.00	0.00	0.00
14,600.00	90.96	269.69	8,845.11	-947.55	-5,060.81	5,118.02	0.00	0.00	0.00
14,700.00	90.96	269.69	8,843.44	-948.08	-5,160.80	5,217.76	0.00	0.00	0.00
14,800.00	90.96	269.69	8,841.77	-948.62	-5,260.78	5,317.50	0.00	0.00	0.00
14,900.00	90.96	269.69	8,840.10	-949.16	-5,360.77	5,417.24	0.00	0.00	0.00
15,000.00	90.96	269.69	8,838.43	-949.70	-5,460.75	5,516.98	0.00	0.00	0.00
15,100.00	90.96	269.69	8,836.76	-950.23	-5,560.74	5,616.72	0.00	0.00	0.00
15,200.00	90.96	269.69	8,835.09	-950.77	-5,660.72	5,716.45	0.00	0.00	0.00
15,300.00	90.96	269.69	8,833.42	-951.31	-5,760.71	5,816.19	0.00	0.00	0.00
15,400.00	90.96	269.69	8,831.75	-951.84	-5,860.69	5,915.93	0.00	0.00	0.00
15,500.00	90.96	269.69	8,830.08	-952.38	-5,960.67	6,015.67	0.00	0.00	0.00
15,600.00	90.96	269.69	8,828.41	-952.92	-6,060.66	6,115.41	0.00	0.00	0.00
15,700.00	90.96	269.69	8,826.74	-953.46	-6,160.64	6,215.15	0.00	0.00	0.00

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Big Fish 12_10 Fed Com 313H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 3297.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 3297.80ft
Site:	Big Fish 12_10	**North Reference:**	Grid
Well:	Big Fish 12_10 Fed Com 313H	**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)
15,800.00	90.96	269.69	8,825.07	-953.99	-6,260.63	6,314.88	0.00	0.00	0.00
15,900.00	90.96	269.69	8,823.40	-954.53	-6,360.61	6,414.62	0.00	0.00	0.00
16,000.00	90.96	269.69	8,821.73	-955.07	-6,460.60	6,514.36	0.00	0.00	0.00
16,100.00	90.96	269.69	8,820.06	-955.60	-6,560.58	6,614.10	0.00	0.00	0.00
16,200.00	90.96	269.69	8,818.39	-956.14	-6,660.57	6,713.84	0.00	0.00	0.00
16,300.00	90.96	269.69	8,816.72	-956.68	-6,760.55	6,813.58	0.00	0.00	0.00
16,400.00	90.96	269.69	8,815.05	-957.21	-6,860.54	6,913.31	0.00	0.00	0.00
16,500.00	90.96	269.69	8,813.39	-957.75	-6,960.52	7,013.05	0.00	0.00	0.00
16,600.00	90.96	269.69	8,811.72	-958.29	-7,060.51	7,112.79	0.00	0.00	0.00
16,700.00	90.96	269.69	8,810.05	-958.83	-7,160.49	7,212.53	0.00	0.00	0.00
16,800.00	90.96	269.69	8,808.38	-959.36	-7,260.47	7,312.27	0.00	0.00	0.00
16,900.00	90.96	269.69	8,806.71	-959.90	-7,360.46	7,412.01	0.00	0.00	0.00
17,000.00	90.96	269.69	8,805.04	-960.44	-7,460.44	7,511.74	0.00	0.00	0.00
17,100.00	90.96	269.69	8,803.37	-960.97	-7,560.43	7,611.48	0.00	0.00	0.00
17,200.00	90.96	269.69	8,801.70	-961.51	-7,660.41	7,711.22	0.00	0.00	0.00
17,300.00	90.96	269.69	8,800.03	-962.05	-7,760.40	7,810.96	0.00	0.00	0.00
17,400.00	90.96	269.69	8,798.36	-962.58	-7,860.38	7,910.70	0.00	0.00	0.00
17,500.00	90.96	269.69	8,796.69	-963.12	-7,960.37	8,010.44	0.00	0.00	0.00
17,600.00	90.96	269.69	8,795.02	-963.66	-8,060.35	8,110.17	0.00	0.00	0.00
17,700.00	90.96	269.69	8,793.35	-964.20	-8,160.34	8,209.91	0.00	0.00	0.00
17,800.00	90.96	269.69	8,791.68	-964.73	-8,260.32	8,309.65	0.00	0.00	0.00
17,900.00	90.96	269.69	8,790.01	-965.27	-8,360.31	8,409.39	0.00	0.00	0.00
18,000.00	90.96	269.69	8,788.34	-965.81	-8,460.29	8,509.13	0.00	0.00	0.00
18,100.00	90.96	269.69	8,786.67	-966.34	-8,560.27	8,608.87	0.00	0.00	0.00
18,200.00	90.96	269.69	8,785.00	-966.88	-8,660.26	8,708.60	0.00	0.00	0.00
18,300.00	90.96	269.69	8,783.33	-967.42	-8,760.24	8,808.34	0.00	0.00	0.00
18,400.00	90.96	269.69	8,781.66	-967.95	-8,860.23	8,908.08	0.00	0.00	0.00
18,500.00	90.96	269.69	8,780.00	-968.49	-8,960.21	9,007.82	0.00	0.00	0.00
18,600.00	90.96	269.69	8,778.33	-969.03	-9,060.20	9,107.56	0.00	0.00	0.00
18,700.00	90.96	269.69	8,776.66	-969.57	-9,160.18	9,207.30	0.00	0.00	0.00
18,800.00	90.96	269.69	8,774.99	-970.10	-9,260.17	9,307.03	0.00	0.00	0.00
18,900.00	90.96	269.69	8,773.32	-970.64	-9,360.15	9,406.77	0.00	0.00	0.00
19,000.00	90.96	269.69	8,771.65	-971.18	-9,460.14	9,506.51	0.00	0.00	0.00
19,100.00	90.96	269.69	8,769.98	-971.71	-9,560.12	9,606.25	0.00	0.00	0.00
19,200.00	90.96	269.69	8,768.31	-972.25	-9,660.11	9,705.99	0.00	0.00	0.00
19,300.00	90.96	269.69	8,766.64	-972.79	-9,760.09	9,805.73	0.00	0.00	0.00
19,400.00	90.96	269.69	8,764.97	-973.32	-9,860.07	9,905.46	0.00	0.00	0.00
19,500.00	90.96	269.69	8,763.30	-973.86	-9,960.06	10,005.20	0.00	0.00	0.00
19,600.00	90.96	269.69	8,761.63	-974.40	-10,060.04	10,104.94	0.00	0.00	0.00
19,700.00	90.96	269.69	8,759.96	-974.94	-10,160.03	10,204.68	0.00	0.00	0.00
19,800.00	90.96	269.69	8,758.29	-975.47	-10,260.01	10,304.42	0.00	0.00	0.00
19,900.00	90.96	269.69	8,756.62	-976.01	-10,360.00	10,404.16	0.00	0.00	0.00
20,000.00	90.96	269.69	8,754.95	-976.55	-10,459.98	10,503.89	0.00	0.00	0.00
20,100.00	90.96	269.69	8,753.28	-977.08	-10,559.97	10,603.63	0.00	0.00	0.00
20,200.00	90.96	269.69	8,751.61	-977.62	-10,659.95	10,703.37	0.00	0.00	0.00
20,300.00	90.96	269.69	8,749.94	-978.16	-10,759.94	10,803.11	0.00	0.00	0.00
20,400.00	90.96	269.69	8,748.27	-978.70	-10,859.92	10,902.85	0.00	0.00	0.00
20,500.00	90.96	269.69	8,746.61	-979.23	-10,959.91	11,002.59	0.00	0.00	0.00
20,600.00	90.96	269.69	8,744.94	-979.77	-11,059.89	11,102.32	0.00	0.00	0.00
20,700.00	90.96	269.69	8,743.27	-980.31	-11,159.87	11,202.06	0.00	0.00	0.00
20,800.00	90.96	269.69	8,741.60	-980.84	-11,259.86	11,301.80	0.00	0.00	0.00
20,900.00	90.96	269.69	8,739.93	-981.38	-11,359.84	11,401.54	0.00	0.00	0.00
21,000.00	90.96	269.69	8,738.26	-981.92	-11,459.83	11,501.28	0.00	0.00	0.00
21,100.00	90.96	269.69	8,736.59	-982.45	-11,559.81	11,601.02	0.00	0.00	0.00

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Big Fish 12_10 Fed Com 313H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 3297.80ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 3297.80ft
Site:	Big Fish 12_10	**North Reference:**	Grid
Well:	Big Fish 12_10 Fed Com 313H	**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	90.96	269.69	8,734.92	-982.99	-11,659.80	11,700.75	0.00	0.00	0.00
21,300.00	90.96	269.69	8,733.25	-983.53	-11,759.78	11,800.49	0.00	0.00	0.00
21,400.00	90.96	269.69	8,731.58	-984.07	-11,859.77	11,900.23	0.00	0.00	0.00
21,500.00	90.96	269.69	8,729.91	-984.60	-11,959.75	11,999.97	0.00	0.00	0.00
21,600.00	90.96	269.69	8,728.24	-985.14	-12,059.74	12,099.71	0.00	0.00	0.00
21,700.00	90.96	269.69	8,726.57	-985.68	-12,159.72	12,199.45	0.00	0.00	0.00
21,800.00	90.96	269.69	8,724.90	-986.21	-12,259.71	12,299.18	0.00	0.00	0.00
21,900.00	90.96	269.69	8,723.23	-986.75	-12,359.69	12,398.92	0.00	0.00	0.00
22,000.00	90.96	269.69	8,721.56	-987.29	-12,459.68	12,498.66	0.00	0.00	0.00
22,100.00	90.96	269.69	8,719.89	-987.82	-12,559.66	12,598.40	0.00	0.00	0.00
22,200.00	90.96	269.69	8,718.22	-988.36	-12,659.64	12,698.14	0.00	0.00	0.00
22,300.00	90.96	269.69	8,716.55	-988.90	-12,759.63	12,797.88	0.00	0.00	0.00
22,400.00	90.96	269.69	8,714.88	-989.44	-12,859.61	12,897.61	0.00	0.00	0.00
22,500.00	90.96	269.69	8,713.22	-989.97	-12,959.60	12,997.35	0.00	0.00	0.00
22,584.76	90.96	269.69	8,711.80	-990.43	-13,044.34	13,081.89	0.00	0.00	0.00

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 (Big Fish 12_10 - plan hits target center - Point	0.00	0.00	8,711.80	-990.43	-13,044.34	578,080.66	590,499.76	32° 35' 20.744957 N	104° 10' 25.357335
FTP (Big Fish 12_10 - plan hits target center - Point	0.00	0.00	8,931.80	-919.66	131.20	578,151.42	603,674.14	32° 35' 21.223326 N	104° 7' 51.365192

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
3,672.00	3,672.00	0.00	0.00	Build 2°/100'
4,371.96	4,365.02	-63.55	56.58	Hold 14° Tangent
8,405.77	8,279.02	-792.31	705.51	KOP, Build & Turn 10°/100'
9,407.19	8,931.80	-919.66	131.20	Landing Point
22,584.76	8,711.80	-990.43	-13,044.34	TD at 22584.76' MD

Oxy USA Inc. - Big Fish 12_10 Fed Com 313H

Drill Plan

1. Geologic Formations

TVD of Target (ft):	8932	Pilot Hole Depth (ft):	
Total Measured Depth (ft):	22585	Deepest Expected Fresh Water (ft):	399

Delaware Basin

Formation	MD-RKB (ft)	TVD-RKB (ft)	Expected Fluids
Rustler	399	399	
Tansil	771	771	Salt
Capitan Reef	2300	2300	Salt
Delaware	3179	3179	Oil/Gas/Brine
Bone Spring	5309	5274	Oil/Gas/Brine
1st Bone Spring	6895	6813	Oil/Gas/Brine
2nd Bone Spring	7523	7422	Losses
3rd Bone Spring	8743	8602	Oil/Gas

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

2. Casing Program

		MD		TVD					
Section	Hole Size (in)	From (ft)	To (ft)	From (ft)	To (ft)	Csg. OD (in)	Csg Wt. (ppf)	Grade	Conn.
Conductor	26	0	469	0	469	20	78.6	J-55	Welded
Surface	17.5	0	871	0	871	13.375	54.5	J-55	BTC
Intermediate	12.25	0	3229	0	3229	9.625	40	L-80 HC	BTC
Production	8.5	0	22585	0	8932	5.5	20	P-110	DQX

All casing SF Values will meet or exceed those listed below			
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 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?	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%	469	-	637	847	Circulate
Surface	1	Conductor/Surface - Tail	OH x Csg	0.6946	100%	871	469	420	558	Circulate
Surface	1	Conductor/Surface - Tail	Csg x Csg	1.0454	0%	469	-	369	490	Circulate
Int.	1	Intermediate - Tail	OH x Csg	0.3132	20%	3,229	2,729	141	188	Circulate
Int.	1	Intermediate - Lead	OH x Csg	0.3132	20%	2,729	1,200	332	575	Circulate
Int.	2	Intermediate - Lead	OH x Csg	0.3132	20%	1,200	871	71	124	Circulate
Int.	2	Intermediate - Lead	Csg x Csg	0.3627	0%	871	-	183	316	Circulate
Prod.	1	Production - Tail	OH x Csg	0.2291	15%	22,585	8,406	2707	3735	Circulate
Prod.	1	Production - Lead	OH x Csg	0.2291	100%	8,406	3,229	1059	2372	Circulate
Prod.	1	Production - Lead	Csg x Csg	0.2608	0%	3,229	2,250	114	255	Circulate

						Additives			
Description	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)	500psi Time (hh:mm)	Cmt. Class	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 nippled 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 nippling 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	871
			Annular			
			Blind Ram			
			Pipe Ram			
			Double Ram			
			Other*			
12.25" Hole	13-5/8"	3M	Annular	✓	70% of working pressure	3229
		3M	Blind Ram	✓	250 psi / 3000 psi	
			Pipe Ram			
			Double Ram	✓		
			Other*			
8.5" Hole	13-5/8"	3M	Annular	✓	70% of working pressure	8932
		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	469	0	469	Water-Based Mud	8.6-8.8	40-60	N/C
Surface	469	871	469	871	Saturated Brine-Based or Oil-Based Mud	8.0-10.0	35-45	N/C
Intermediate	871	3229	871	3229	Saturated Brine-Based or Oil-Based Mud	8.0-10.0	35-45	N/C
Production	3229	22585	3229	8932	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

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	4459 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	H2S is present
Y	H2S 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:	2130 bbls

Attachments
_x__ Directional Plan
_x__ H2S Contingency Plan
_x__ Flex III Attachments
_x__ Spudder Rig Attachment
_x__ 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
☐ Amended - Reason for Amendment:

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

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete 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