

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 type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No.
1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator		8. Lease Name and Well No.
3a. Address	3b. Phone No. (include area code)	9. API Well No. 30 015 47954
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		10. Field and Pool, or Exploratory <b>BILBREY BASIN;BONE SPRING</b>
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Blk. and Survey or Area
		12. County or Parish
		13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
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)

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>1. Well plat certified by a registered surveyor.</li> <li>2. A Drilling Plan.</li> <li>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).</li> </ul> | <ul style="list-style-type: none"> <li>4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).</li> <li>5. Operator certification.</li> <li>6. Such other site specific information and/or plans as may be requested by the BLM.</li> </ul> |
|---|---|

25. Signature	Name (Printed/Typed)	Date
Title		
Approved by (Signature)	Name (Printed/Typed)	Date
Title		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.



(Continued on page 2)

\*(Instructions on page 2)

DISTRICT I  
1625 N. FRENCH DR., HOBBS, NM 88240  
Phone: (575) 395-6161 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

**BILBREY  
BASIN; BONE  
SPRING**

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-015-47954</b>	Pool Code <del>51683</del> <b>5695</b>	Pool Name <del>Red Tank, Bone Spring</del>
Property Code <b>329719</b>	Property Name TOP SPOT 12_13 FEDERAL COM	Well Number 24H
OGRID No.	Operator Name OXY USA, INC.	Elevation 3585.5'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	13	22-S	31-E		490	SOUTH	1065	EAST	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
B	12	22-S	31-E		20	NORTH	2200	EAST	EDDY

Dedicated Acres <b>640</b>	Joint or Infill <b>y</b>	Consolidation Code	Order No.
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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

LTP  
100' FNL & 2200' FEL  
Y=514509.9 N  
X=727502.3 E  
LAT.=32.413011' N  
LONG.=103.730063' W

\* ALL COORDINATES ARE NAD 83 VALUES

POINT LEGEND	
1	Y=514614.1 N X=729701.8 E
2	Y=511975.6 N X=729715.0 E
3	Y=509334.8 N X=729729.4 E
4	Y=506694.6 N X=729743.9 E
5	Y=504056.7 N X=729757.9 E
6	Y=504045.0 N X=727116.9 E
7	Y=509326.6 N X=727087.2 E
8	Y=514609.1 N X=727060.1 E

FTP  
100' FSL & 2200' FEL  
Y=504146.9 N  
X=727557.4 E  
LAT.=32.384525' N  
LONG.=103.730074' W

KOP  
50' FSL & 2200' FEL  
Y=504096.9 N  
X=727557.7 E  
LAT.=32.384388' N  
LONG.=103.730074' 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.

*Stephen Janacek* 04/03/2020  
Signature Date

**Stephen Janacek**  
Printed Name

**Stephen\_Janacek@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.

SEPTEMBER 27, 2019  
Date of Survey

Signature & Seal of Professional Surveyor



*Chad Harcrow* 10/10/19  
Certificate No. CHAD HARCROW 17777  
W.O. #19-1602 DRAWN BY: AH

PROPOSED BOTTOM HOLE LOCATION  
Y=514589.9 N  
X=727501.9 E  
LAT.=32.413231' N  
LONG.=103.730063' W

SURFACE LOCATION  
Y=504541.9 N  
X=728690.3 E  
LAT.=32.385593' N  
LONG.=103.726397' W

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>OXY USA INCORPORATED</b>
<b>LEASE NO.:</b>	<b>NMNM029233</b>
<b>WELL NAME &amp; NO.:</b>	<b>TOP SPOT 12_13 FED COM 24H</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>490'S &amp; 1065'E</b>
<b>BOTTOM HOLE FOOTAGE:</b>	<b>20'N &amp; 2200'E</b>
<b>LOCATION:</b>	<b>Section 13, T.22 S., R.31 E., NMPM</b>
<b>COUNTY:</b>	<b>Eddy County, New Mexico</b>

COA

H2S	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Potash	<input type="radio"/> None	<input checked="" type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
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 type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input checked="" 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 **891 feet** (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after

- completing the cement job.
- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **24 hours in the Potash Area** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

**Intermediate casing must be kept 2/3 fluid filled to meet BLM minimum collapse requirement.**

2. The **9-5/8** inch intermediate casing shall be set at **5470 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.**

- ❖ **In Secretary Potash 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.**

3. The minimum required fill of cement behind the Choose an item. inch production casing is:

**Option 1 (Single Stage):**

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

**C. PRESSURE CONTROL**

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

## 2. 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 **5000 (5M)** 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 **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

- a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- c. Manufacturer representative shall install the test plug for the initial BOP test.
- d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

## D. SPECIAL REQUIREMENT (S)

### Communitization Agreement

- The operator will submit a Communitization Agreement to the 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 Choose an item. 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 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

**A. CASING**

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive

strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. 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.

**RI11282020**



Project: PRD NM DIRECTIONAL PLANS (NAD 1983)  
 Site: Top Spot 12\_13 Fed Com  
 Well: Top Spot 12\_13 Federal Com 24H  
 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

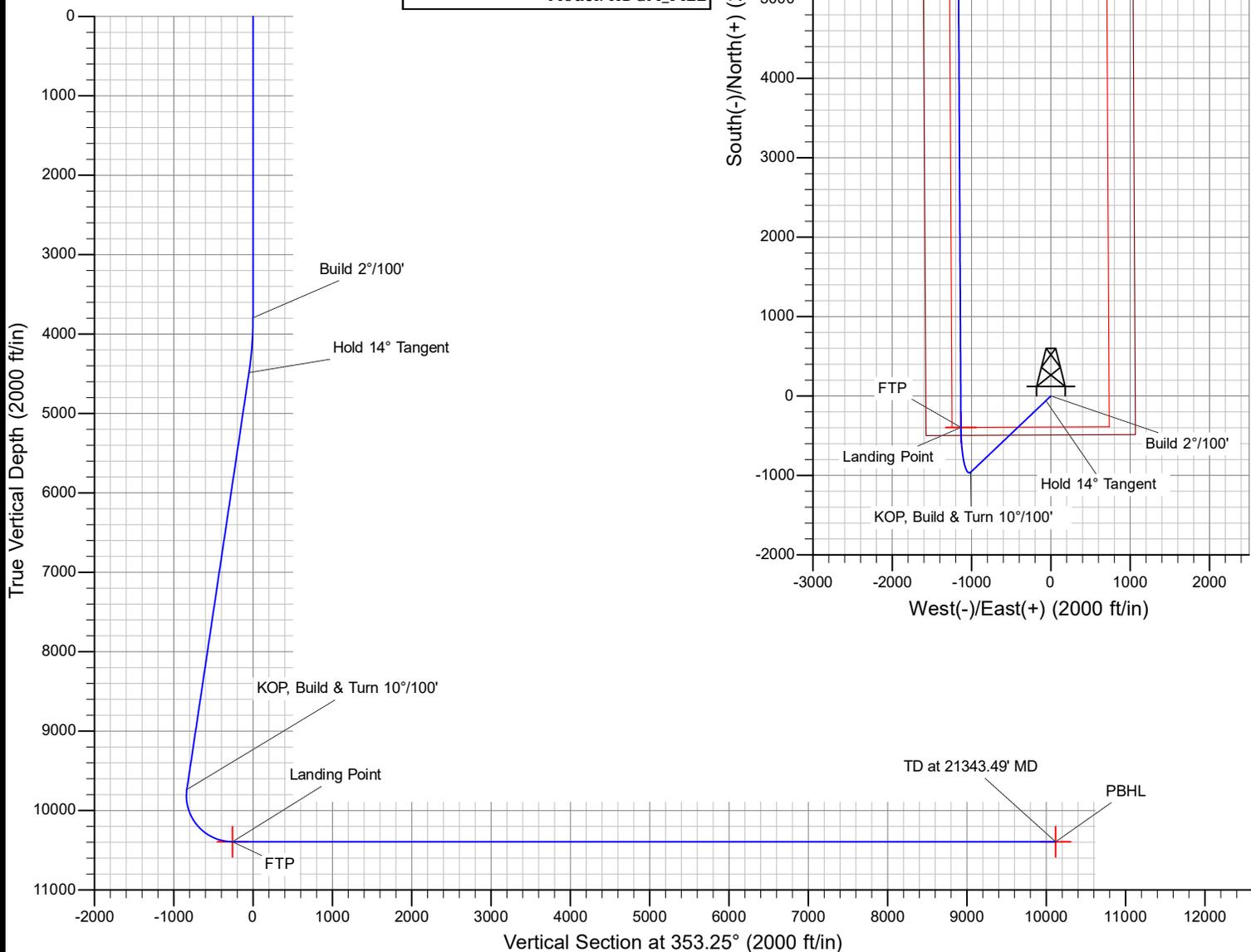
WELL DETAILS: Top Spot 12\_13 Federal Com 24H

		Ground Level: 3585.50					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
0.00	0.00	504541.90	728690.30	32° 23' 8.136375 N	103° 43' 35.030219 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	
3795.00	0.00	0.00	3795.00	0.00	0.00	0.00	0.00	0.00	Build 2°/100'
4494.84	14.00	226.49	4487.90	-58.56	-61.69	2.00	226.49	-50.91	Hold 14° Tangent
9904.48	14.00	226.49	9736.92	-959.43	-1010.58	0.00	0.00	-834.09	KOP, Build & Turn 10°/100'
10899.79	90.00	359.70	10394.00	-395.02	-1132.96	10.00	132.35	-259.22	Landing Point
21343.49	90.00	359.70	10394.00	10048.53	-1188.46	0.00	0.00	10118.57	TD at 21343.49' MD

Azimuths to Grid North  
 True North: -0.33°  
 Magnetic North: 6.42°  
 Magnetic Field  
 Strength: 48028.4nT  
 Dip Angle: 60.10°  
 Date: 11/6/2019  
 Model: HDGM\_FILE



# **OXY**

**PRD NM DIRECTIONAL PLANS (NAD 1983)**

**Top Spot 12\_13 Fed Com**

**Top Spot 12\_13 Federal Com 24H**

**Wellbore #1**

**Plan: Permitting Plan**

## **Standard Planning Report**

**06 November, 2019**

## Oxy Inc. Planning Report

<b>Database:</b>	HOPSP	<b>Local Co-ordinate Reference:</b>	Well Top Spot 12_13 Federal Com 24H
<b>Company:</b>	ENGINEERING DESIGNS	<b>TVD Reference:</b>	RKB=26.5' @ 3612.00ft
<b>Project:</b>	PRD NM DIRECTIONAL PLANS (NAD 1983)	<b>MD Reference:</b>	RKB=26.5' @ 3612.00ft
<b>Site:</b>	Top Spot 12_13 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	Top Spot 12_13 Federal Com 24H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Permitting Plan		

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

<b>Site</b>	Top Spot 12_13 Fed Com				
<b>Site Position:</b>	<b>Northing:</b>	514,494.39 usft	<b>Latitude:</b>	32° 24' 46.798486 N	
<b>From:</b> Map	<b>Easting:</b>	725,461.56 usft	<b>Longitude:</b>	103° 44' 12.035436 W	
<b>Position Uncertainty:</b>	50.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.32 °

<b>Well</b>	Top Spot 12_13 Federal Com 24H					
<b>Well Position</b>	<b>+N/-S</b>	-9,953.03 ft	<b>Northing:</b>	504,541.90 usft	<b>Latitude:</b>	32° 23' 8.136375 N
	<b>+E/-W</b>	3,228.91 ft	<b>Easting:</b>	728,690.30 usft	<b>Longitude:</b>	103° 43' 35.030219 W
<b>Position Uncertainty</b>		1.00 ft	<b>Wellhead Elevation:</b>	0.00 ft	<b>Ground Level:</b>	3,585.50 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM_FILE	11/6/2019	6.75	60.10	48,028.40000000

<b>Design</b>	Permitting Plan				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	353.25	

<b>Plan Survey Tool Program</b>	<b>Date</b>	11/6/2019			
<b>Depth From (ft)</b>	<b>Depth To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	21,343.49	Permitting Plan (Wellbore #1)	B001Mb_MWD+HRGM OWSG MWD + HRGM	

<b>Plan Sections</b>										
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	
3,795.00	0.00	0.00	3,795.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,494.84	14.00	226.49	4,487.90	-58.56	-61.69	2.00	2.00	0.00	226.49	
9,904.48	14.00	226.49	9,736.92	-959.43	-1,010.58	0.00	0.00	0.00	0.00	
10,899.79	90.00	359.70	10,394.00	-395.02	-1,132.96	10.00	7.64	13.38	132.35	FTP (Top Spot)
21,343.49	90.00	359.70	10,394.00	10,048.53	-1,188.46	0.00	0.00	0.00	0.00	PBHL (Top Spot)

### Oxy Inc. Planning Report

<b>Database:</b>	HOPSPP	<b>Local Co-ordinate Reference:</b>	Well Top Spot 12_13 Federal Com 24H
<b>Company:</b>	ENGINEERING DESIGNS	<b>TVD Reference:</b>	RKB=26.5' @ 3612.00ft
<b>Project:</b>	PRD NM DIRECTIONAL PLANS (NAD 1983)	<b>MD Reference:</b>	RKB=26.5' @ 3612.00ft
<b>Site:</b>	Top Spot 12_13 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	Top Spot 12_13 Federal Com 24H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,795.00	0.00	0.00	3,795.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.10	226.49	3,800.00	0.00	0.00	0.00	2.00	2.00	0.00
3,900.00	2.10	226.49	3,899.98	-1.32	-1.40	-1.15	2.00	2.00	0.00
4,000.00	4.10	226.49	3,999.83	-5.05	-5.32	-4.39	2.00	2.00	0.00
4,100.00	6.10	226.49	4,099.42	-11.17	-11.76	-9.71	2.00	2.00	0.00
4,200.00	8.10	226.49	4,198.65	-19.68	-20.73	-17.11	2.00	2.00	0.00
4,300.00	10.10	226.49	4,297.39	-30.57	-32.20	-26.57	2.00	2.00	0.00
4,400.00	12.10	226.49	4,395.51	-43.82	-46.16	-38.10	2.00	2.00	0.00
4,494.84	14.00	226.49	4,487.90	-58.56	-61.69	-50.91	2.00	2.00	0.00
4,500.00	14.00	226.49	4,492.91	-59.42	-62.59	-51.66	0.00	0.00	0.00
4,600.00	14.00	226.49	4,589.94	-76.08	-80.13	-66.14	0.00	0.00	0.00
4,700.00	14.00	226.49	4,686.97	-92.73	-97.67	-80.61	0.00	0.00	0.00
4,800.00	14.00	226.49	4,784.00	-109.38	-115.21	-95.09	0.00	0.00	0.00
4,900.00	14.00	226.49	4,881.03	-126.03	-132.75	-109.57	0.00	0.00	0.00
5,000.00	14.00	226.49	4,978.06	-142.69	-150.29	-124.05	0.00	0.00	0.00
5,100.00	14.00	226.49	5,075.09	-159.34	-167.84	-138.52	0.00	0.00	0.00

## Oxy Inc. Planning Report

<b>Database:</b>	HOPSPP	<b>Local Co-ordinate Reference:</b>	Well Top Spot 12_13 Federal Com 24H
<b>Company:</b>	ENGINEERING DESIGNS	<b>TVD Reference:</b>	RKB=26.5' @ 3612.00ft
<b>Project:</b>	PRD NM DIRECTIONAL PLANS (NAD 1983)	<b>MD Reference:</b>	RKB=26.5' @ 3612.00ft
<b>Site:</b>	Top Spot 12_13 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	Top Spot 12_13 Federal Com 24H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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	226.49	5,172.12	-175.99	-185.38	-153.00	0.00	0.00	0.00	
5,300.00	14.00	226.49	5,269.15	-192.65	-202.92	-167.48	0.00	0.00	0.00	
5,400.00	14.00	226.49	5,366.19	-209.30	-220.46	-181.96	0.00	0.00	0.00	
5,500.00	14.00	226.49	5,463.22	-225.95	-238.00	-196.43	0.00	0.00	0.00	
5,600.00	14.00	226.49	5,560.25	-242.60	-255.54	-210.91	0.00	0.00	0.00	
5,700.00	14.00	226.49	5,657.28	-259.26	-273.08	-225.39	0.00	0.00	0.00	
5,800.00	14.00	226.49	5,754.31	-275.91	-290.62	-239.87	0.00	0.00	0.00	
5,900.00	14.00	226.49	5,851.34	-292.56	-308.16	-254.34	0.00	0.00	0.00	
6,000.00	14.00	226.49	5,948.37	-309.22	-325.70	-268.82	0.00	0.00	0.00	
6,100.00	14.00	226.49	6,045.40	-325.87	-343.24	-283.30	0.00	0.00	0.00	
6,200.00	14.00	226.49	6,142.43	-342.52	-360.78	-297.78	0.00	0.00	0.00	
6,300.00	14.00	226.49	6,239.46	-359.18	-378.32	-312.25	0.00	0.00	0.00	
6,400.00	14.00	226.49	6,336.49	-375.83	-395.87	-326.73	0.00	0.00	0.00	
6,500.00	14.00	226.49	6,433.53	-392.48	-413.41	-341.21	0.00	0.00	0.00	
6,600.00	14.00	226.49	6,530.56	-409.13	-430.95	-355.69	0.00	0.00	0.00	
6,700.00	14.00	226.49	6,627.59	-425.79	-448.49	-370.16	0.00	0.00	0.00	
6,800.00	14.00	226.49	6,724.62	-442.44	-466.03	-384.64	0.00	0.00	0.00	
6,900.00	14.00	226.49	6,821.65	-459.09	-483.57	-399.12	0.00	0.00	0.00	
7,000.00	14.00	226.49	6,918.68	-475.75	-501.11	-413.60	0.00	0.00	0.00	
7,100.00	14.00	226.49	7,015.71	-492.40	-518.65	-428.07	0.00	0.00	0.00	
7,200.00	14.00	226.49	7,112.74	-509.05	-536.19	-442.55	0.00	0.00	0.00	
7,300.00	14.00	226.49	7,209.77	-525.70	-553.73	-457.03	0.00	0.00	0.00	
7,400.00	14.00	226.49	7,306.80	-542.36	-571.27	-471.51	0.00	0.00	0.00	
7,500.00	14.00	226.49	7,403.83	-559.01	-588.81	-485.98	0.00	0.00	0.00	
7,600.00	14.00	226.49	7,500.87	-575.66	-606.35	-500.46	0.00	0.00	0.00	
7,700.00	14.00	226.49	7,597.90	-592.32	-623.90	-514.94	0.00	0.00	0.00	
7,800.00	14.00	226.49	7,694.93	-608.97	-641.44	-529.42	0.00	0.00	0.00	
7,900.00	14.00	226.49	7,791.96	-625.62	-658.98	-543.89	0.00	0.00	0.00	
8,000.00	14.00	226.49	7,888.99	-642.28	-676.52	-558.37	0.00	0.00	0.00	
8,100.00	14.00	226.49	7,986.02	-658.93	-694.06	-572.85	0.00	0.00	0.00	
8,200.00	14.00	226.49	8,083.05	-675.58	-711.60	-587.32	0.00	0.00	0.00	
8,300.00	14.00	226.49	8,180.08	-692.23	-729.14	-601.80	0.00	0.00	0.00	
8,400.00	14.00	226.49	8,277.11	-708.89	-746.68	-616.28	0.00	0.00	0.00	
8,500.00	14.00	226.49	8,374.14	-725.54	-764.22	-630.76	0.00	0.00	0.00	
8,600.00	14.00	226.49	8,471.18	-742.19	-781.76	-645.23	0.00	0.00	0.00	
8,700.00	14.00	226.49	8,568.21	-758.85	-799.30	-659.71	0.00	0.00	0.00	
8,800.00	14.00	226.49	8,665.24	-775.50	-816.84	-674.19	0.00	0.00	0.00	
8,900.00	14.00	226.49	8,762.27	-792.15	-834.38	-688.67	0.00	0.00	0.00	
9,000.00	14.00	226.49	8,859.30	-808.80	-851.93	-703.14	0.00	0.00	0.00	
9,100.00	14.00	226.49	8,956.33	-825.46	-869.47	-717.62	0.00	0.00	0.00	
9,200.00	14.00	226.49	9,053.36	-842.11	-887.01	-732.10	0.00	0.00	0.00	
9,300.00	14.00	226.49	9,150.39	-858.76	-904.55	-746.58	0.00	0.00	0.00	
9,400.00	14.00	226.49	9,247.42	-875.42	-922.09	-761.05	0.00	0.00	0.00	
9,500.00	14.00	226.49	9,344.45	-892.07	-939.63	-775.53	0.00	0.00	0.00	
9,600.00	14.00	226.49	9,441.48	-908.72	-957.17	-790.01	0.00	0.00	0.00	
9,700.00	14.00	226.49	9,538.52	-925.37	-974.71	-804.49	0.00	0.00	0.00	
9,800.00	14.00	226.49	9,635.55	-942.03	-992.25	-818.96	0.00	0.00	0.00	
9,900.00	14.00	226.49	9,732.58	-958.68	-1,009.79	-833.44	0.00	0.00	0.00	
9,904.48	14.00	226.49	9,736.92	-959.43	-1,010.58	-834.09	0.00	0.00	0.00	
10,000.00	10.30	269.81	9,830.47	-967.43	-1,027.53	-840.04	10.00	-3.87	45.35	
10,100.00	14.33	314.36	9,928.36	-958.78	-1,045.36	-829.36	10.00	4.03	44.55	
10,200.00	22.42	333.56	10,023.27	-932.99	-1,062.74	-801.71	10.00	8.09	19.20	
10,300.00	31.58	342.51	10,112.31	-890.83	-1,079.15	-757.92	10.00	9.16	8.94	
10,400.00	41.11	347.68	10,192.78	-833.60	-1,094.07	-699.33	10.00	9.53	5.17	

**Oxy Inc.**  
 Planning Report

<b>Database:</b>	HOPSPP	<b>Local Co-ordinate Reference:</b>	Well Top Spot 12_13 Federal Com 24H
<b>Company:</b>	ENGINEERING DESIGNS	<b>TVD Reference:</b>	RKB=26.5' @ 3612.00ft
<b>Project:</b>	PRD NM DIRECTIONAL PLANS (NAD 1983)	<b>MD Reference:</b>	RKB=26.5' @ 3612.00ft
<b>Site:</b>	Top Spot 12_13 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	Top Spot 12_13 Federal Com 24H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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)	
10,500.00	50.79	351.17	10,262.24	-763.02	-1,107.07	-627.71	10.00	9.68	3.49	
10,600.00	60.55	353.81	10,318.58	-681.24	-1,117.74	-545.25	10.00	9.76	2.64	
10,700.00	70.36	355.98	10,360.07	-590.75	-1,125.76	-454.44	10.00	9.80	2.17	
10,800.00	80.18	357.89	10,385.47	-494.30	-1,130.88	-358.05	10.00	9.83	1.92	
10,899.79	90.00	359.70	10,394.00	-395.02	-1,132.96	-259.22	10.00	9.84	1.81	
10,900.00	90.00	359.70	10,394.00	-394.81	-1,132.96	-259.01	0.00	0.00	0.00	
11,000.00	90.00	359.70	10,394.00	-294.82	-1,133.49	-159.64	0.00	0.00	0.00	
11,100.00	90.00	359.70	10,394.00	-194.82	-1,134.02	-60.27	0.00	0.00	0.00	
11,200.00	90.00	359.70	10,394.00	-94.82	-1,134.56	39.09	0.00	0.00	0.00	
11,300.00	90.00	359.70	10,394.00	5.18	-1,135.09	138.46	0.00	0.00	0.00	
11,400.00	90.00	359.70	10,394.00	105.18	-1,135.62	237.83	0.00	0.00	0.00	
11,500.00	90.00	359.70	10,394.00	205.18	-1,136.15	337.20	0.00	0.00	0.00	
11,600.00	90.00	359.70	10,394.00	305.18	-1,136.68	436.57	0.00	0.00	0.00	
11,700.00	90.00	359.70	10,394.00	405.17	-1,137.21	535.94	0.00	0.00	0.00	
11,800.00	90.00	359.70	10,394.00	505.17	-1,137.74	635.31	0.00	0.00	0.00	
11,900.00	90.00	359.70	10,394.00	605.17	-1,138.28	734.68	0.00	0.00	0.00	
12,000.00	90.00	359.70	10,394.00	705.17	-1,138.81	834.05	0.00	0.00	0.00	
12,100.00	90.00	359.70	10,394.00	805.17	-1,139.34	933.41	0.00	0.00	0.00	
12,200.00	90.00	359.70	10,394.00	905.17	-1,139.87	1,032.78	0.00	0.00	0.00	
12,300.00	90.00	359.70	10,394.00	1,005.17	-1,140.40	1,132.15	0.00	0.00	0.00	
12,400.00	90.00	359.70	10,394.00	1,105.16	-1,140.93	1,231.52	0.00	0.00	0.00	
12,500.00	90.00	359.70	10,394.00	1,205.16	-1,141.46	1,330.89	0.00	0.00	0.00	
12,600.00	90.00	359.70	10,394.00	1,305.16	-1,142.00	1,430.26	0.00	0.00	0.00	
12,700.00	90.00	359.70	10,394.00	1,405.16	-1,142.53	1,529.63	0.00	0.00	0.00	
12,800.00	90.00	359.70	10,394.00	1,505.16	-1,143.06	1,629.00	0.00	0.00	0.00	
12,900.00	90.00	359.70	10,394.00	1,605.16	-1,143.59	1,728.37	0.00	0.00	0.00	
13,000.00	90.00	359.70	10,394.00	1,705.16	-1,144.12	1,827.73	0.00	0.00	0.00	
13,100.00	90.00	359.70	10,394.00	1,805.15	-1,144.65	1,927.10	0.00	0.00	0.00	
13,200.00	90.00	359.70	10,394.00	1,905.15	-1,145.18	2,026.47	0.00	0.00	0.00	
13,300.00	90.00	359.70	10,394.00	2,005.15	-1,145.72	2,125.84	0.00	0.00	0.00	
13,400.00	90.00	359.70	10,394.00	2,105.15	-1,146.25	2,225.21	0.00	0.00	0.00	
13,500.00	90.00	359.70	10,394.00	2,205.15	-1,146.78	2,324.58	0.00	0.00	0.00	
13,600.00	90.00	359.70	10,394.00	2,305.15	-1,147.31	2,423.95	0.00	0.00	0.00	
13,700.00	90.00	359.70	10,394.00	2,405.15	-1,147.84	2,523.32	0.00	0.00	0.00	
13,800.00	90.00	359.70	10,394.00	2,505.14	-1,148.37	2,622.69	0.00	0.00	0.00	
13,900.00	90.00	359.70	10,394.00	2,605.14	-1,148.90	2,722.05	0.00	0.00	0.00	
14,000.00	90.00	359.70	10,394.00	2,705.14	-1,149.44	2,821.42	0.00	0.00	0.00	
14,100.00	90.00	359.70	10,394.00	2,805.14	-1,149.97	2,920.79	0.00	0.00	0.00	
14,200.00	90.00	359.70	10,394.00	2,905.14	-1,150.50	3,020.16	0.00	0.00	0.00	
14,300.00	90.00	359.70	10,394.00	3,005.14	-1,151.03	3,119.53	0.00	0.00	0.00	
14,400.00	90.00	359.70	10,394.00	3,105.14	-1,151.56	3,218.90	0.00	0.00	0.00	
14,500.00	90.00	359.70	10,394.00	3,205.13	-1,152.09	3,318.27	0.00	0.00	0.00	
14,600.00	90.00	359.70	10,394.00	3,305.13	-1,152.62	3,417.64	0.00	0.00	0.00	
14,700.00	90.00	359.70	10,394.00	3,405.13	-1,153.16	3,517.00	0.00	0.00	0.00	
14,800.00	90.00	359.70	10,394.00	3,505.13	-1,153.69	3,616.37	0.00	0.00	0.00	
14,900.00	90.00	359.70	10,394.00	3,605.13	-1,154.22	3,715.74	0.00	0.00	0.00	
15,000.00	90.00	359.70	10,394.00	3,705.13	-1,154.75	3,815.11	0.00	0.00	0.00	
15,100.00	90.00	359.70	10,394.00	3,805.13	-1,155.28	3,914.48	0.00	0.00	0.00	
15,200.00	90.00	359.70	10,394.00	3,905.12	-1,155.81	4,013.85	0.00	0.00	0.00	
15,300.00	90.00	359.70	10,394.00	4,005.12	-1,156.34	4,113.22	0.00	0.00	0.00	
15,400.00	90.00	359.70	10,394.00	4,105.12	-1,156.88	4,212.59	0.00	0.00	0.00	
15,500.00	90.00	359.70	10,394.00	4,205.12	-1,157.41	4,311.96	0.00	0.00	0.00	
15,600.00	90.00	359.70	10,394.00	4,305.12	-1,157.94	4,411.32	0.00	0.00	0.00	
15,700.00	90.00	359.70	10,394.00	4,405.12	-1,158.47	4,510.69	0.00	0.00	0.00	

### Oxy Inc. Planning Report

<b>Database:</b>	HOPSPP	<b>Local Co-ordinate Reference:</b>	Well Top Spot 12_13 Federal Com 24H
<b>Company:</b>	ENGINEERING DESIGNS	<b>TVD Reference:</b>	RKB=26.5' @ 3612.00ft
<b>Project:</b>	PRD NM DIRECTIONAL PLANS (NAD 1983)	<b>MD Reference:</b>	RKB=26.5' @ 3612.00ft
<b>Site:</b>	Top Spot 12_13 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	Top Spot 12_13 Federal Com 24H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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	90.00	359.70	10,394.00	4,505.12	-1,159.00	4,610.06	0.00	0.00	0.00	
15,900.00	90.00	359.70	10,394.00	4,605.11	-1,159.53	4,709.43	0.00	0.00	0.00	
16,000.00	90.00	359.70	10,394.00	4,705.11	-1,160.06	4,808.80	0.00	0.00	0.00	
16,100.00	90.00	359.70	10,394.00	4,805.11	-1,160.60	4,908.17	0.00	0.00	0.00	
16,200.00	90.00	359.70	10,394.00	4,905.11	-1,161.13	5,007.54	0.00	0.00	0.00	
16,300.00	90.00	359.70	10,394.00	5,005.11	-1,161.66	5,106.91	0.00	0.00	0.00	
16,400.00	90.00	359.70	10,394.00	5,105.11	-1,162.19	5,206.28	0.00	0.00	0.00	
16,500.00	90.00	359.70	10,394.00	5,205.11	-1,162.72	5,305.64	0.00	0.00	0.00	
16,600.00	90.00	359.70	10,394.00	5,305.10	-1,163.25	5,405.01	0.00	0.00	0.00	
16,700.00	90.00	359.70	10,394.00	5,405.10	-1,163.78	5,504.38	0.00	0.00	0.00	
16,800.00	90.00	359.70	10,394.00	5,505.10	-1,164.32	5,603.75	0.00	0.00	0.00	
16,900.00	90.00	359.70	10,394.00	5,605.10	-1,164.85	5,703.12	0.00	0.00	0.00	
17,000.00	90.00	359.70	10,394.00	5,705.10	-1,165.38	5,802.49	0.00	0.00	0.00	
17,100.00	90.00	359.70	10,394.00	5,805.10	-1,165.91	5,901.86	0.00	0.00	0.00	
17,200.00	90.00	359.70	10,394.00	5,905.10	-1,166.44	6,001.23	0.00	0.00	0.00	
17,300.00	90.00	359.70	10,394.00	6,005.09	-1,166.97	6,100.60	0.00	0.00	0.00	
17,400.00	90.00	359.70	10,394.00	6,105.09	-1,167.51	6,199.96	0.00	0.00	0.00	
17,500.00	90.00	359.70	10,394.00	6,205.09	-1,168.04	6,299.33	0.00	0.00	0.00	
17,600.00	90.00	359.70	10,394.00	6,305.09	-1,168.57	6,398.70	0.00	0.00	0.00	
17,700.00	90.00	359.70	10,394.00	6,405.09	-1,169.10	6,498.07	0.00	0.00	0.00	
17,800.00	90.00	359.70	10,394.00	6,505.09	-1,169.63	6,597.44	0.00	0.00	0.00	
17,900.00	90.00	359.70	10,394.00	6,605.09	-1,170.16	6,696.81	0.00	0.00	0.00	
18,000.00	90.00	359.70	10,394.00	6,705.09	-1,170.69	6,796.18	0.00	0.00	0.00	
18,100.00	90.00	359.70	10,394.00	6,805.08	-1,171.23	6,895.55	0.00	0.00	0.00	
18,200.00	90.00	359.70	10,394.00	6,905.08	-1,171.76	6,994.91	0.00	0.00	0.00	
18,300.00	90.00	359.70	10,394.00	7,005.08	-1,172.29	7,094.28	0.00	0.00	0.00	
18,400.00	90.00	359.70	10,394.00	7,105.08	-1,172.82	7,193.65	0.00	0.00	0.00	
18,500.00	90.00	359.70	10,394.00	7,205.08	-1,173.35	7,293.02	0.00	0.00	0.00	
18,600.00	90.00	359.70	10,394.00	7,305.08	-1,173.88	7,392.39	0.00	0.00	0.00	
18,700.00	90.00	359.70	10,394.00	7,405.08	-1,174.41	7,491.76	0.00	0.00	0.00	
18,800.00	90.00	359.70	10,394.00	7,505.07	-1,174.95	7,591.13	0.00	0.00	0.00	
18,900.00	90.00	359.70	10,394.00	7,605.07	-1,175.48	7,690.50	0.00	0.00	0.00	
19,000.00	90.00	359.70	10,394.00	7,705.07	-1,176.01	7,789.87	0.00	0.00	0.00	
19,100.00	90.00	359.70	10,394.00	7,805.07	-1,176.54	7,889.23	0.00	0.00	0.00	
19,200.00	90.00	359.70	10,394.00	7,905.07	-1,177.07	7,988.60	0.00	0.00	0.00	
19,300.00	90.00	359.70	10,394.00	8,005.07	-1,177.60	8,087.97	0.00	0.00	0.00	
19,400.00	90.00	359.70	10,394.00	8,105.07	-1,178.13	8,187.34	0.00	0.00	0.00	
19,500.00	90.00	359.70	10,394.00	8,205.06	-1,178.67	8,286.71	0.00	0.00	0.00	
19,600.00	90.00	359.70	10,394.00	8,305.06	-1,179.20	8,386.08	0.00	0.00	0.00	
19,700.00	90.00	359.70	10,394.00	8,405.06	-1,179.73	8,485.45	0.00	0.00	0.00	
19,800.00	90.00	359.70	10,394.00	8,505.06	-1,180.26	8,584.82	0.00	0.00	0.00	
19,900.00	90.00	359.70	10,394.00	8,605.06	-1,180.79	8,684.19	0.00	0.00	0.00	
20,000.00	90.00	359.70	10,394.00	8,705.06	-1,181.32	8,783.55	0.00	0.00	0.00	
20,100.00	90.00	359.70	10,394.00	8,805.06	-1,181.85	8,882.92	0.00	0.00	0.00	
20,200.00	90.00	359.70	10,394.00	8,905.05	-1,182.39	8,982.29	0.00	0.00	0.00	
20,300.00	90.00	359.70	10,394.00	9,005.05	-1,182.92	9,081.66	0.00	0.00	0.00	
20,400.00	90.00	359.70	10,394.00	9,105.05	-1,183.45	9,181.03	0.00	0.00	0.00	
20,500.00	90.00	359.70	10,394.00	9,205.05	-1,183.98	9,280.40	0.00	0.00	0.00	
20,600.00	90.00	359.70	10,394.00	9,305.05	-1,184.51	9,379.77	0.00	0.00	0.00	
20,700.00	90.00	359.70	10,394.00	9,405.05	-1,185.04	9,479.14	0.00	0.00	0.00	
20,800.00	90.00	359.70	10,394.00	9,505.05	-1,185.57	9,578.51	0.00	0.00	0.00	
20,900.00	90.00	359.70	10,394.00	9,605.04	-1,186.11	9,677.87	0.00	0.00	0.00	
21,000.00	90.00	359.70	10,394.00	9,705.04	-1,186.64	9,777.24	0.00	0.00	0.00	
21,100.00	90.00	359.70	10,394.00	9,805.04	-1,187.17	9,876.61	0.00	0.00	0.00	

**Oxy Inc.**  
Planning Report

<b>Database:</b>	HOPSP	<b>Local Co-ordinate Reference:</b>	Well Top Spot 12_13 Federal Com 24H
<b>Company:</b>	ENGINEERING DESIGNS	<b>TVD Reference:</b>	RKB=26.5' @ 3612.00ft
<b>Project:</b>	PRD NM DIRECTIONAL PLANS (NAD 1983)	<b>MD Reference:</b>	RKB=26.5' @ 3612.00ft
<b>Site:</b>	Top Spot 12_13 Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	Top Spot 12_13 Federal Com 24H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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	90.00	359.70	10,394.00	9,905.04	-1,187.70	9,975.98	0.00	0.00	0.00
21,300.00	90.00	359.70	10,394.00	10,005.04	-1,188.23	10,075.35	0.00	0.00	0.00
21,343.49	90.00	359.70	10,394.00	10,048.53	-1,188.46	10,118.57	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
FTP (Top Spot 12_13 - plan hits target center - Point	0.00	0.00	10,394.00	-395.02	-1,132.96	504,146.90	727,557.40	32° 23' 4.291162 N	103° 43' 48.267816
PBHL (Top Spot - plan hits target center - Point	0.00	0.00	10,394.00	10,048.53	-1,188.46	514,589.90	727,501.90	32° 24' 47.630253 N	103° 43' 48.227967

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
3,795.00	3,795.00	0.00	0.00	Build 2°/100'	
4,494.84	4,487.90	-58.56	-61.69	Hold 14° Tangent	
9,904.48	9,736.92	-959.43	-1,010.58	KOP, Build & Turn 10°/100'	
10,899.79	10,394.00	-395.02	-1,132.96	Landing Point	
21,343.49	10,394.00	10,048.53	-1,188.46	TD at 21343.49' MD	

## Oxy USA Inc. - Top Spot 12\_13 Federal Com 24H

## 1. Geologic Formations

TVD of target	10394'	Pilot Hole Depth	N/A
MD at TD:	21343'	Deepest Expected fresh water:	841'

## Delaware Basin

Formation	TVD - RKB	Expected Fluids
Rustler	841	
Salado	1,141	Salt
Castile	2,882	Salt
Lamar/Delaware	4,490	Oil/Gas/Brine
Bell Canyon	4,541	Oil/Gas/Brine
Cherry Canyon	5,420	Oil/Gas/Brine
Brushy Canyon	6,637	Losses
Bone Spring	8,386	Oil/Gas
1st Bone Spring	9,507	Oil/Gas
<b>2nd Bone Spring</b>	<b>10,112</b>	<b>Oil/Gas</b>

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

## 2. Casing Program

Hole Size (in)	Casing Interval		Csg. Size (in)	Weight (lbs)	Grade	Conn.	SF	SF Burst	Buoyant	Buoyant
	From (ft)	To (ft)					Collapse		Body SF Tension	Joint SF Tension
17.5	0	891	13.375	54.5	J-55	BTC	1.125	1.2	1.4	1.4
12.25	0	5470	9.625	36	J-55	BTC	1.125	1.2	1.4	1.4
8.5	0	21343	5.5	20	P-110	DQX	1.125	1.2	1.4	1.4

SF Values will meet or Exceed

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

\*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 cancellation cone and not pump the second stage.

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

## Oxy USA Inc. - Top Spot 12\_13 Federal Com 24H

### 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
<b>Capitan Reef</b>	
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
<b>SOPA</b>	
Is well located in SOPA but not in R-111-P?	Y
If yes, are the first 2 strings cemented to surface and 3 <sup>rd</sup> string cement tied back 500' into previous casing?	Y
<b>R-111-P</b>	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 <sup>nd</sup> string set 100' to 600' below the base of salt?	
<b>Cave/Karst</b>	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
<b>Critical Cave/Karst</b>	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

## Oxy USA Inc. - Top Spot 12\_13 Federal Com 24H

## 3. Cementing Program

Casing String	# Sks	Wt. (lb/gal)	Yld (ft3/sack)	H2O (gal/sk)	500# Comp. Strength (hours)	Slurry Description
Surface (Lead)	N/A	N/A	N/A	N/A	N/A	N/A
Surface (Tail)	942	14.8	1.33	6.365	5:26	Class C Cement, Accelerator
Intermediate (Lead)	1295	12.9	1.73	8.784	15:26	Pozzolan Cement, Retarder
Intermediate (Tail)	156	14.8	1.33	6.368	7:11	Class C Cement, Accelerator
Production (Lead)	543	11.9	2.24	12.327	14:46	Class H Cement, Retarder, Dispersant, Salt
Production (Tail)	2287	13.2	1.38	6.686	3:49	Class H Cement, Retarder, Dispersant, Salt

Casing String	Top (ft)	Bottom (ft)	% Excess
Surface (Lead)	N/A	N/A	N/A
Surface (Tail)	0	891	100%
Intermediate (Lead)	0	4970	50%
Intermediate (Tail)	4970	5470	20%
Production (Lead)	4970	9404	20%
Production (Tail)	9404	21343	15%

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.

Oxy USA Inc. - Top Spot 12\_13 Federal Com 24H

**Pilot Hole Cementing specs:**

Pilot hole depth: N/A

KOP: N/A

Plug top	Plug Bottom	% Excess	No. Sacks	Wt. lb/gal	Yld ft3/sack	Water gal/sk	Slurry Description and Cement Type
N/A							
N/A							

Oxy USA Inc. - Top Spot 12\_13 Federal Com 24H

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12.25" Hole	13-5/8"	3M	Annular	✓	70% of working pressure
		3M	Blind Ram	✓	250 psi / 3000 psi
			Pipe Ram		
			Double Ram	✓	
Other*					
8.5" Hole	13-5/8"	3M	Annular	✓	70% of working pressure
		3M	Blind Ram	✓	250 psi / 3000 psi
			Pipe Ram		
			Double Ram	✓	
Other*					

\*Specify if additional ram is utilized.

Oxy will utilize a 5M annular with a 10M BOPE stack. The 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. See attached schematics.

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.
<b>Y</b> 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.

**Oxy USA Inc. - Top Spot 12\_13 Federal Com 24H**

## Oxy USA Inc. - Top Spot 12\_13 Federal Com 24H

### 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

Oxy USA Inc. - Top Spot 12\_13 Federal Com 24H

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From (ft)	To (ft)				
0	891	Water-Based Mud	8.6-8.8	40-60	N/C
891	5470	Saturated Brine- Mud	9.8-10.0	35-45	N/C
5470	21343	Saturated Brine-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
No	PEX
	ICP - TD

Oxy USA Inc. - Top Spot 12\_13 Federal Com 24H

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	5189 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	164°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. <ul style="list-style-type: none"> <li>We plan to drill the three 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.</li> </ul>	Yes
Will more than one drilling rig be used for drilling operations? If yes, describe. <ul style="list-style-type: none"> <li>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.</li> </ul>	Yes

**Total estimated cuttings volume:** 2046.7 bbls.

Attachments

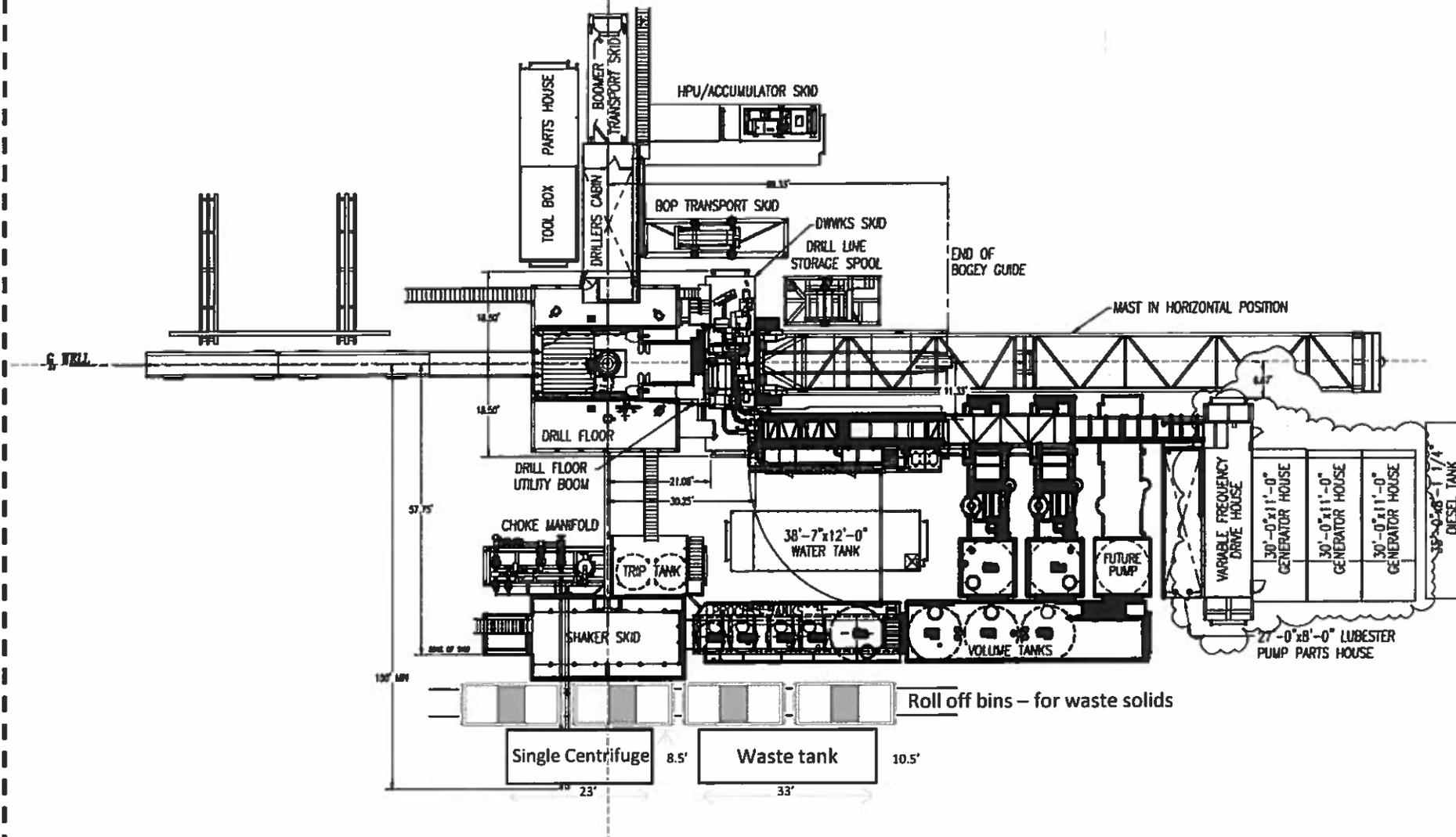
- Directional Plan
- H2S Contingency Plan
- Flex III Attachments
- Spudder Rig Attachment
- Premium Connection Specs

**Oxy USA Inc. - Top Spot 12\_13 Federal Com 24H**

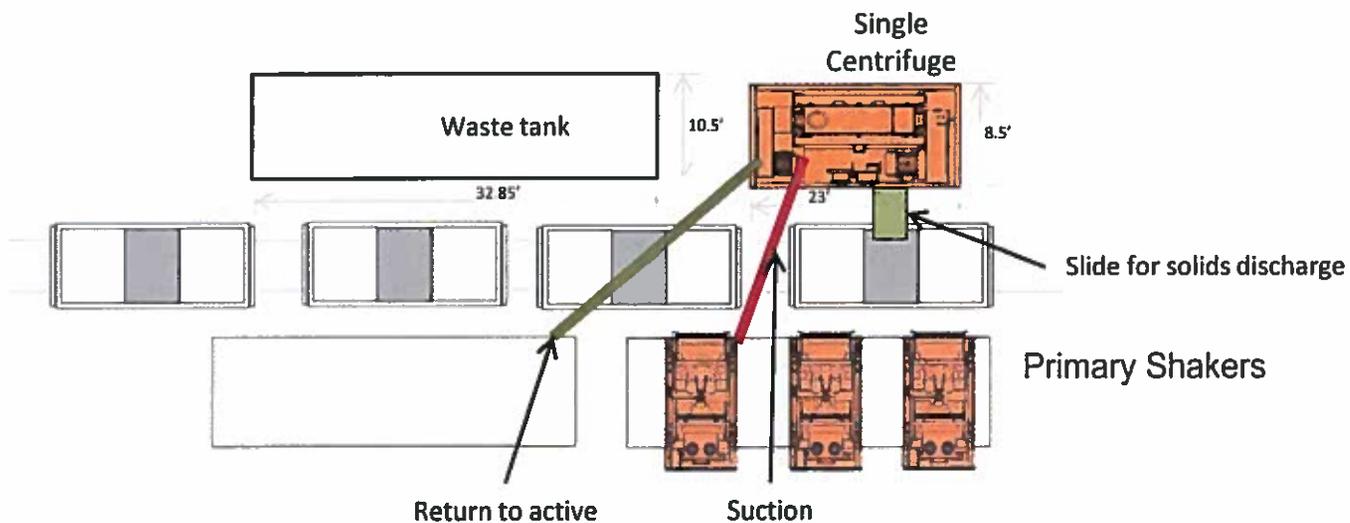
**9. Company Personnel**

<b><u>Name</u></b>	<b><u>Title</u></b>	<b><u>Office Phone</u></b>	<b><u>Mobile Phone</u></b>
Linsay Earle	Drilling Engineer	713-350-4921	832-596-5507
Margaret Giltner	Drilling Engineer Supervisor	713-366-5026	210-683-8480
Simon Benavides	Drilling Superintendent	713-522-8652	281-684-6897
Diego Tellez	Drilling Manager	713-350-4602	713-303-4932

Oxy Single Centrifuge  
Closed Loop System – New  
Mexico Flex III  
May 28, 2013



# Oxy



Well Head



Oxy Single Centrifuge  
Closed Loop System – New  
Mexico Flex III  
May 28, 2013

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

Original Operator & OGRID No.: OXY USA INC. - 16696  
 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, 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
TOP SPOT 12_13 FED COM 21H	Pending	N-13-22S-31E	653 FSL 2052 FWL	2375	0	
TOP SPOT 12_13 FED COM 22H	Pending	N-13-22S-31E	473 FSL 2362 FWL	2375	0	
TOP SPOT 12_13 FED COM 23H	Pending	N-13-22S-31E	473 FSL 2397 FWL	2375	0	
TOP SPOT 12_13 FED COM 24H	Pending	P-13-22S-31E	490 FSL 1065 FEL	2375	0	
TOP SPOT 12_13 FED COM 25H	Pending	P-13-22S-31E	490 FSL 1030 FEL	2375	0	
TOP SPOT 12_13 FED COM 26H	Pending	P-13-22S-31E	490 FSL 995 FEL	2375	0	
TOP SPOT 12_13 FED COM 31H	Pending	N-13-22S-31E	473 FSL 2022 FWL	3,418	0	
TOP SPOT 12_13 FED COM 32H	Pending	N-13-22S-31E	473 FSL 2057 FWL	3,418	0	
TOP SPOT 12_13 FED COM 33H	Pending	N-13-22S-31E	473 FSL 2122 FWL	3,418	0	
TOP SPOT 12_13 FED COM 34H	Pending	O-13-22S-31E	310 FSL 1345 FEL	3,418	0	
TOP SPOT 12_13 FED COM 35H	Pending	P-13-22S-31E	310 FSL 1275 FEL	3,418	0	
TOP SPOT 12_13 FED COM 311H	Pending	N-13-22S-31E	473 FSL 2052 FWL	3,418	0	
TOP SPOT 12_13 FED COM 312H	Pending	O-13-22S-31E	310 FSL 1375 FEL	3,418	0	
TOP SPOT 12_13 FED COM 313H	Pending	P-13-22S-31E	310 FSL 1310 FEL	3,418	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 DCP Midstream, LP (“DCP”) and will be connected to DCP’s low/high pressure gathering system located in Lea County, New Mexico. OXY USA INC. (“OXY”) provides

(periodically) to DCP a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, OXY and DCP have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at DCP's Zia Processing Plant located in Sec. 19, Twn. 19S, Rng. 32E, Lea 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 DCP's 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

**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  
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**District III**  
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 Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

COMMENTS

Action 14542

**COMMENTS**

Operator:	OXY USA INC	P.O. Box 4294	Houston, TX772104294	OGRID:	16696	Action Number:	14542	Action Type:	FORM 3160-3
Created By	Comment			Comment Date					
kpickford	KP GEO Review 1/14/2020			01/14/2021					

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**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS

Action 14542

**CONDITIONS OF APPROVAL**

Operator:	OGRID:	Action Number:	Action Type:
OXY USA INC      P.O. Box 4294      Houston, TX772104294	16696	14542	FORM 3160-3

OCD Reviewer	Condition
kpickford	Notify OCD 24 hours prior to casing & cement
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104
kpickford	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
kpickford	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