

RECEIVED

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  
DISTRICT 7 - ARTESIA O.C.D.  
APPLICATION FOR PERMIT TO DRILL OR REENTER

NOV 20 2019

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM0546732A
1b. Type of Well: <input checked="" 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 checked="" type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator OXY USA INCORPORATED		8. Lease Name and Well No. PRECIOUS 30-18 FEDERAL COM 175H 326187
3a. Address 5 Greenway Plaza, Suite 110 Houston TX 77046	3b. Phone No. (include area code) (713)366-5716	9. API Well No. 30-015-46457
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NENE / 520 FNL / 1065 FEL / LAT 32.266748 / LONG -103.8118 At proposed prod. zone NESE / 2625 FSL / 1310 FEL / LAT 32.304417 / LONG -103.812628		10. Field and Pool, or Exploratory WILDCAT BONE WOLFCAMP WOLFCAMP 98236
11. Sec., T. R. M. or Blk. and Survey or Area SEC 31 / T23S / R31E / NMP		
14. Distance in miles and direction from nearest town or post office* 8 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) 100 feet	16. No of acres in lease 607.8	17. Spacing Unit dedicated to this well 800
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 35 feet	19. Proposed Depth 11310 feet / 24858 feet	20. BLM/BIA Bond No. in file FED: ESB000226
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3349 feet	22. Approximate date work will start* 01/01/2020	23. Estimated duration 20 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) Sarah Chapman / Ph: (713)350-4997	Date 02/13/2019
Title Regulatory Specialist		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 11/15/2019
Title Assistant Field Manager Lands & Minerals		

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**APPROVED WITH CONDITIONS**  
Approval Date: 11/15/2019

(Continued on page 2)

\*(Instructions on page 2)

RD 12-3-19

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## INSTRUCTIONS

**GENERAL:** This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

**ITEM 1:** If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

**ITEM 4:** Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

**ITEM 14:** Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

**ITEMS 15 AND 18:** If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

**ITEM 22:** Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

**ITEM 24:** If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48( d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

**PRINCIPAL PURPOSES:** The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

**ROUTINE USE:** Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

**EFFECT OF NOT PROVIDING INFORMATION:** Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

## **Review and Appeal Rights**

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	Oxy USA Incorporated
<b>LEASE NO.:</b>	NMNM0546732A
<b>WELL NAME &amp; NO.:</b>	Precious 30-18 Federal Com 175H
<b>SURFACE HOLE FOOTAGE:</b>	520'/N & 1065'/E
<b>BOTTOM HOLE FOOTAGE:</b>	2624'/S & 1310'/E
<b>LOCATION:</b>	Section 31, T.23 S., R.31 E., NMPM
<b>COUNTY:</b>	Eddy County, New Mexico

COA

H2S	<input type="radio"/> Yes	<input type="radio"/> No	
Potash	<input type="radio"/> None	<input type="radio"/> Secretary	<input checked="" type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input type="radio"/> Multibowl	<input checked="" 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 checked="" 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 type="radio"/> Yes	<input checked="" 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

#### Primary Casing Design:

1. The 13-3/8 inch surface casing shall be set at approximately 427 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.

2. 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.
- 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.**

**2<sup>nd</sup> Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.**

3. The minimum required fill of cement behind the 7-5/8 inch 2<sup>nd</sup> 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.

- c. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- d. Second stage above DV tool:
  - Cement to surface. If cement does not circulate, contact the appropriate BLM office.  
**Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

**Operator has proposed to pump down 9-5/8" X 7-5/8" annulus. Operator must run a CBL from TD of the 7-5/8" casing to surface. Submit results to BLM. Excess calculates to 8% - additional cement might be required.**

4. The minimum required fill of cement behind the 5-1/2 inch production casing is:
  - Cement should tie-back **500 feet** into the previous casing. Operator shall provide method of verification. **Excess calculates to 20% - additional cement might be required.**

### **C. PRESSURE CONTROL**

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
- 2.

### **Option 1:**

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M) psi**.
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **5000 (5M) psi**.

## **Option 2:**

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
  - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

## **D. SPECIAL REQUIREMENT (S)**

### **Communitization Agreement**

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

### **Offline Cementing**

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

### **BOP Break Testing Variance**

- BOP break testing is not permitted on this well pending submission of break testing sundry.

## 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: 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.

**NMK11122019**

**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Oxy USA Incorporated
WELL NAME & NO.:	Arkenstone 31 Federal Com 175H
SURFACE HOLE FOOTAGE:	100'/N & 1130'/E
BOTTOM HOLE FOOTAGE:	20'/S & 1210'/E
LOCATION:	Section 31, T.23 S., R.32 E., NMPM
COUNTY:	Eddy County, New Mexico

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Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

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- Archaeology, Paleontology, and Historical Sites**
- Noxious Weeds**
- Special Requirements**
  - Lesser Prairie-Chicken Timing Stipulations
  - Ground-level Abandoned Well Marker
  - Range
  - Potash Minerals
  - Lesser Prairie Chicken exemption
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  - Notification
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- Production (Post Drilling)**
  - Well Structures & Facilities
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  - Electric Lines
  - Oil and Gas related sites
- Interim Reclamation**
- Final Abandonment & Reclamation**

Approval Date: 11/15/2019

## **I. GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

## V. SPECIAL REQUIREMENT(S)

### **Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken:**

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

**Ground-level Abandoned Well Marker to avoid raptor perching:** Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

### **Timing Limitation Exceptions:**

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

### **Cattleguards**

Where a permanent cattleguard is approved, an appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

**Fence Requirement**

Where entry granted across a fence line, the fence must be braced and tied off on both sides of the passageway prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

**Livestock Watering Requirement**

Structures that provide water to livestock, such as windmills, pipelines, drinking troughs, and earthen reservoirs, will be avoided by moving the proposed action

**Potash Minerals**

Measures to minimize impacts to potash mineral reserves have been considered during the BLM's planning process by establishment of the Twin Wells Drill Island. No additional special mitigation or requirements have been identified by the BLM.

## **VI. CONSTRUCTION**

### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

### **B. TOPSOIL**

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

### **D. FEDERAL MINERAL MATERIALS PIT**

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

### **F. EXCLOSURE FENCING (CELLARS & PITS)**

**Exclosure Fencing**

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

**G. ON LEASE ACCESS ROADS****Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

**Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

**Crowning**

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

**Ditching**

Ditching shall be required on both sides of the road.

**Turnouts**

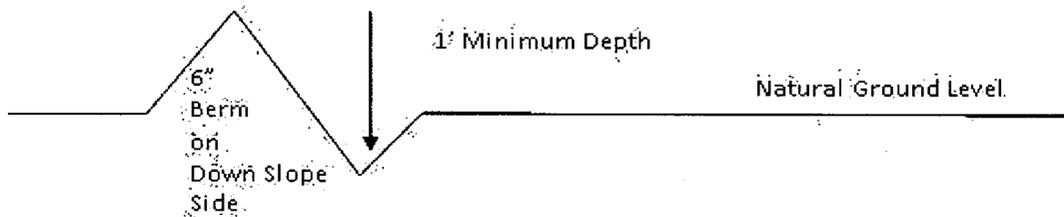
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

**Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

### Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

### Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

### Cattle guards

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

### Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

### Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

**Construction Steps**

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

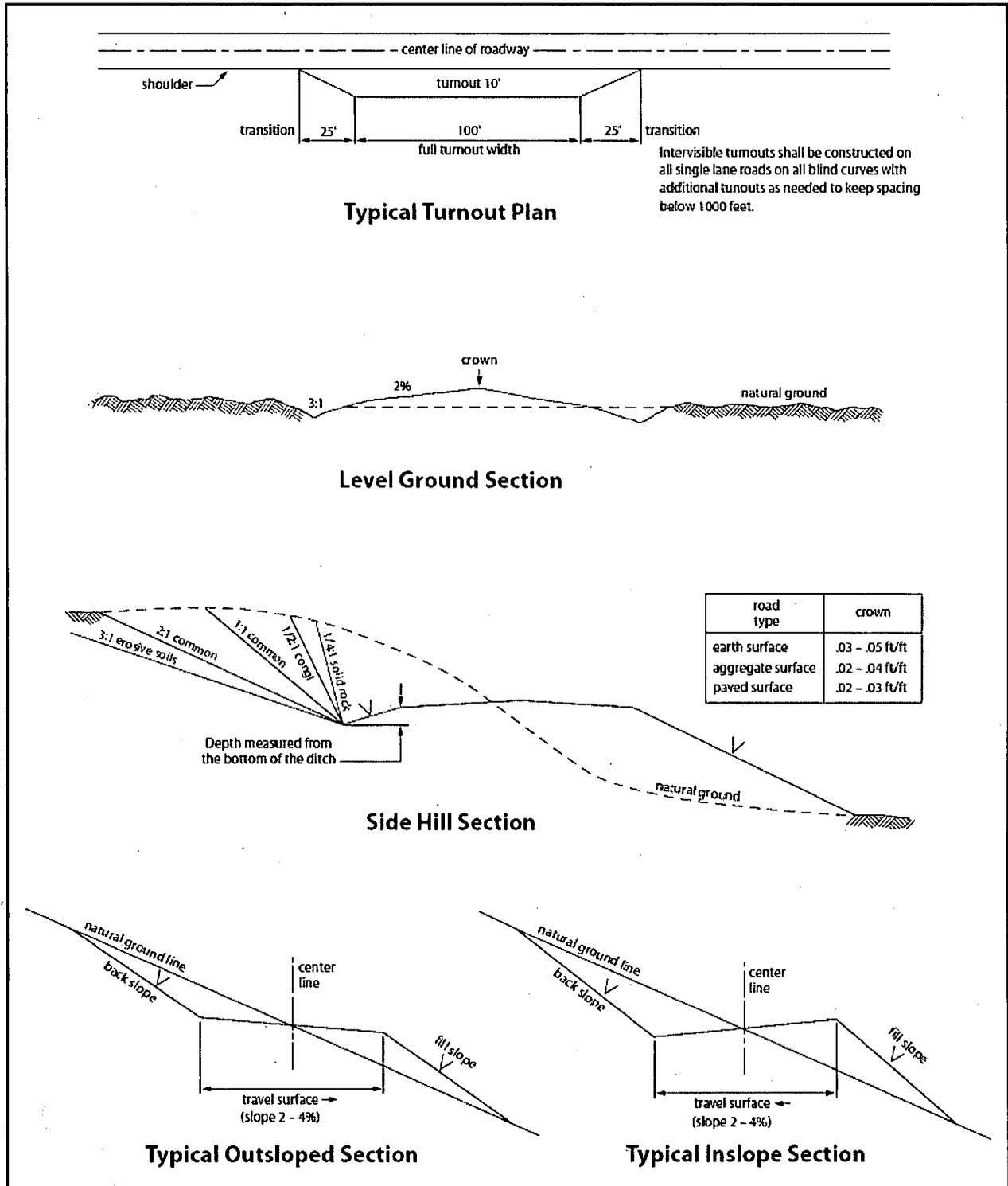


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## **VII. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Exclosure Netting (Open-top Tanks)**

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

#### **Chemical and Fuel Secondary Containment and Exclosure Screening**

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

#### **Open-Vent Exhaust Stack Exclosures**

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

#### **Containment Structures**

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

#### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

### **B. PIPELINES**

#### **BURIED PIPELINE STIPULATIONS**

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 *et seq.* (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et seq.* or the Resource Conservation and Recovery Act, 42 U.S.C.6901, *et seq.*) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be 30 feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed 20 feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed 30 feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)
- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

- |  |  |
|--|--|
| <input type="checkbox"/> seed mixture 1                | <input type="checkbox"/> seed mixture 3          |
| <input type="checkbox"/> seed mixture 2                | <input type="checkbox"/> seed mixture 4          |
| <input checked="" type="checkbox"/> seed mixture 2/LPC | <input type="checkbox"/> Aplomado Falcon Mixture |

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches that are not otherwise fenced, screened, or netted to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

- a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
- b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

19. Special Stipulations:

**Lesser Prairie-Chicken**

Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

**Timing Limitation Exceptions:**

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

**STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES**

**A copy of the application (Grant, Sundry Notice, APD) and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM**

personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

- a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
- b. Activities of other parties including, but not limited to:
  - (1) Land clearing.
  - (2) Earth-disturbing and earth-moving work.
  - (3) Blasting.
  - (4) Vandalism and sabotage.
- c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of 20 feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline must be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline must be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity will be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline will be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When

necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

16. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, powerline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

17. Surface pipelines must be less than or equal to 4 inches and a working pressure below 125 psi.

18. Special Stipulations:

a. **Lesser Prairie-Chicken:** Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted.

b. **Timing Limitation Exceptions:**

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

**C. ELECTRIC LINES**

**STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES**

**A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 *et seq.* (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as

a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:

- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes from the poles removed.

**Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken:**

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

**Timing Limitation Exceptions:**

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

## **D. OIL AND GAS RELATED SITES**

### **STANDARD STIPULATIONS FOR OIL AND GAS RELATED SITES**

A copy of the application (Grant/Sundry Notice) and attachments, including stipulations and map, will be on location during construction. BLM personnel may request to view a copy of your permit during construction to ensure compliance with all stipulations.

The holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer, BLM.

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant and for all response costs, penalties, damages, claims, and other costs arising from the provisions of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Chap. 82, Section 6901 et. seq., from the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. Chap. 109, Section 9601 et. seq., and from other applicable environmental statutes.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et. seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et. seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et. seq.) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
4. If, during any phase of the construction, operation, maintenance, or termination of the site or related pipeline(s), any oil or other pollutant should be discharged from site facilities, the pipeline(s) or from containers or vehicles impacting Federal lands, the control and total removal, disposal, and cleanup of such oil or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the

holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting therefrom, the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

5. Sites shall be maintained in an orderly, sanitary condition at all times. Waste materials, both liquid and solid, shall be disposed of promptly at an appropriate, authorized waste disposal facility in accordance with all applicable State and Federal laws. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, petroleum products, brines, chemicals, oil drums, ashes, and equipment.
6. The operator will notify the Bureau of Land Management (BLM) authorized officer and nearest Fish and Wildlife Service (FWS) Law Enforcement office within 24 hours, if the operator discovers a dead or injured federally protected species (i.e., migratory bird species, bald or golden eagle, or species listed by the FWS as threatened or endangered) in or adjacent to a pit, trench, tank, exhaust stack, or fence. (If the operator is unable to contact the FWS Law Enforcement office, the operator must contact the nearest FWS Ecological Services office.)
7. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" designated by the Rocky Mountain Five-State Interagency Committee. The color selected for this project is **Shale Green**, Munsell Soil Color Chart Number 5Y 4/2.
8. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.
9. A sales contract for removal of mineral material (caliche, sand, gravel, fill dirt) from an authorized pit, site, or on location must be obtained from the BLM prior to commencing construction. There are several options available for purchasing mineral material: contact the BLM office (575-234-5972).
10. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where

noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

11. Once the site is no longer in service or use, the site must undergo final abandonment. At final abandonment, the site and access roads must undergo "final" reclamation so that the character and productivity of the land are restored. Earthwork for final reclamation must be completed within six (6) months of the abandonment of the site. All pads and facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact. After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

12. The holder shall stockpile an adequate amount of topsoil where blading occurs. The topsoil to be stripped is approximately   6   inches in depth. The topsoil will be segregated from other spoil piles. The topsoil will be used for final reclamation.

13. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

- |  |  |
|--|--|
| <input type="checkbox"/> seed mixture 1                | <input type="checkbox"/> seed mixture 3          |
| <input type="checkbox"/> seed mixture 2                | <input type="checkbox"/> seed mixture 4          |
| <input checked="" type="checkbox"/> seed mixture 2/LPC | <input type="checkbox"/> Aplomado Falcon Mixture |

14. In those areas where erosion control structures are required to stabilize soil conditions, the holder shall install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound management practices. Any earth work will require prior approval by the Authorized Officer.

15. Open-topped Tanks - The operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the

location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps

16. The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an

impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock enclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

17. Open-Vent Exhaust Stack Enclosures – The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (Recommended enclosure structures on open-vent exhaust stacks are in the shape of a cone.) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

18. Containment Structures - Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

19. Special Stipulations:

- The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.
- Any water erosion that may occur due to the construction of the well pad during the life of the well will be corrected within two weeks and proper measures will be taken to prevent future erosion.

#### **Lesser Prairie-Chicken**

Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or

involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted. Exhaust noise from permanent engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

**Timing Limitation Exceptions:**

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

## **VIII. INTERIM RECLAMATION**

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

## **IX. FINAL ABANDONMENT & RECLAMATION**

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

## Seed Mixture for LPC Sand/Shinnery Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed shall be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. Seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

<u>Species</u>	<u>lb/acre</u>
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed



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

# Operator Certification Data Report

11/18/2019

## Operator Certification

*I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are*

**NAME:** Sarah Chapman

**Signed on:** 12/19/2018

**Title:** Regulatory Specialist

**Street Address:**

**City:**

**State:**

**Zip:**

**Phone:** (713)350-4997

**Email address:** sarah\_chapman@oxy.com

## Field Representative

**Representative Name:** Jim Wilson

**Street Address:** 6001 Deauville

**City:** Midland

**State:** TX

**Zip:** 79706

**Phone:** (575)631-2442

**Email address:** jim\_wilson@oxy.com



<b>APD ID:</b> 10400039124	<b>Submission Date:</b> 02/13/2019	Highlighted data reflects the most recent changes <a href="#">Show Final Text</a>
<b>Operator Name:</b> OXY USA INCORPORATED		
<b>Well Name:</b> PRECIOUS 30-18 FEDERAL COM	<b>Well Number:</b> 175H	
<b>Well Type:</b> OIL WELL	<b>Well Work Type:</b> Drill	

**Section 1 - General**

<b>APD ID:</b> 10400039124	<b>Tie to previous NOS?</b>	<b>Submission Date:</b> 02/13/2019
<b>BLM Office:</b> CARLSBAD	<b>User:</b> Sarah Chapman	<b>Title:</b> Regulatory Specialist
<b>Federal/Indian APD:</b> FED	<b>Is the first lease penetrated for production Federal or Indian?</b> FED	
<b>Lease number:</b> NMNM0546732A	<b>Lease Acres:</b> 607.8	
<b>Surface access agreement in place?</b>	<b>Allotted?</b>	<b>Reservation:</b>
<b>Agreement in place?</b> NO	<b>Federal or Indian agreement:</b>	
<b>Agreement number:</b>		
<b>Agreement name:</b>		
<b>Keep application confidential?</b> NO		
<b>Permitting Agent?</b> NO	<b>APD Operator:</b> OXY USA INCORPORATED	
<b>Operator letter of designation:</b>		

**Operator Info**

**Operator Organization Name:** OXY USA INCORPORATED  
**Operator Address:** 5 Greenway Plaza, Suite 110  
**Operator PO Box:** Zip: 77046  
**Operator City:** Houston **State:** TX  
**Operator Phone:** (713)366-5716  
**Operator Internet Address:**

**Section 2 - Well Information**

<b>Well in Master Development Plan?</b> NO	<b>Master Development Plan name:</b>	
<b>Well in Master SUPO?</b> NO	<b>Master SUPO name:</b>	
<b>Well in Master Drilling Plan?</b> NO	<b>Master Drilling Plan name:</b>	
<b>Well Name:</b> PRECIOUS 30-18 FEDERAL COM	<b>Well Number:</b> 175H	<b>Well API Number:</b>
<b>Field/Pool or Exploratory?</b> Field and Pool	<b>Field Name:</b> WILDCAT BONE	<b>Pool Name:</b> WOLFCAMP
	<b>WOLFCAMP</b>	

**Operator Name:** OXY USA INCORPORATED

**Well Name:** PRECIOUS 30-18 FEDERAL COM

**Well Number:** 175H

**Is the proposed well in an area containing other mineral resources? POTASH**

**Is the proposed well in a Helium production area? N Use Existing Well Pad? NO New surface disturbance?**

**Type of Well Pad:** MULTIPLE WELL

**Multiple Well Pad Name:** PRECIOUS 30-18 FED COM

**Number:** 5H

**Well Class:** HORIZONTAL

**Number of Legs:**

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

**Well sub-Type:** INFILL

**Describe sub-type:**

**Distance to town:** 8 Miles

**Distance to nearest well:** 35 FT

**Distance to lease line:** 100 FT

**Reservoir well spacing assigned acres Measurement:** 800 Acres

**Well plat:** Precious30\_18FdCom175H\_c\_102\_20190213120537.pdf

Precious30\_18FdCom175H\_SitePlan\_20190213120548.pdf

Precious30\_18FdCom175H\_Supplemental\_20190213120556.pdf

**Well work start Date:** 01/01/2020

**Duration:** 20 DAYS

**Section 3 - Well Location Table**

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:** 17777

**Reference Datum:**

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
SHL Leg #1	520	FNL	1065	FEL	23S	31E	31	NENE	32.266748	-103.8118	EDD Y	NEW MEXI	NEW MEXI	F	NMNM 054673	3349	0	0	
KOP Leg #1	50	FSL	1310	FEL	23S	31E	30	SESE	32.268313	-103.812596	EDD Y	NEW MEXI	NEW MEXI	F	NMNM 021640	-7597	10967	10946	

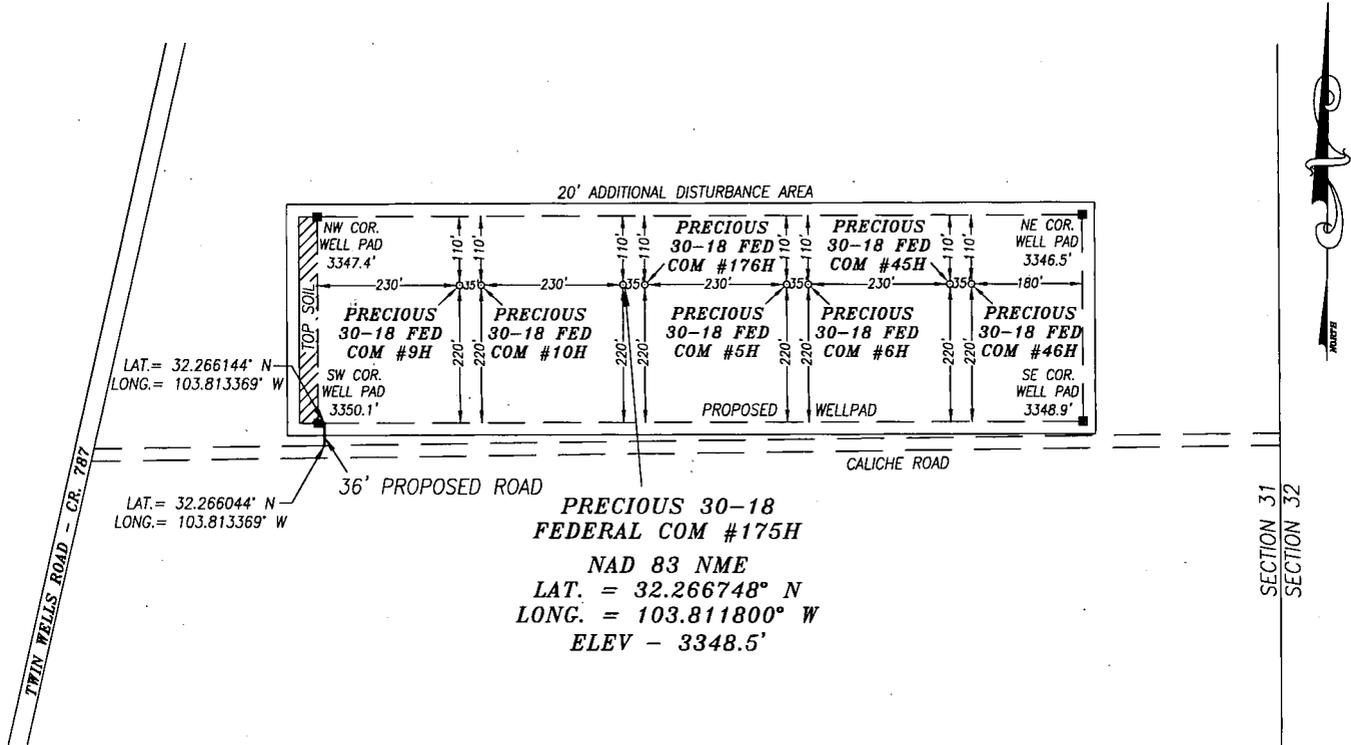
Operator Name: OXY USA INCORPORATED

Well Name: PRECIOUS 30-18 FEDERAL COM

Well Number: 175H

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
PPP Leg #1-1	9	FSL	1307	FEL	23S	31E	18	SESE 5	32.297225	-103.812621	EDD Y	NEW MEXI	NEW MEXI	F	NMNM 054623	-7983	22200	11332	
PPP Leg #1-2	9	FSL	1307	FEL	23S	31E	18	SESE 5	32.297225	-103.812621	EDD Y	NEW MEXI	NEW MEXI	F	NMNM 054623	-6464	20200	9813	
PPP Leg #1-3	1313	FNL	1308	FEL	23S	31E	19	NENE 92	32.2953592	-103.812618	EDD Y	NEW MEXI	NEW MEXI	F	NMNM 017057	-7993	20920	11342	
PPP Leg #1-4	1321	FSL	1310	FEL	23S	31E	19	NESE 7	32.286327	-103.812612	EDD Y	NEW MEXI	NEW MEXI	F	NMNM 021639	-8016	18275	11365	
PPP Leg #1-5	2640	FSL	1311	FEL	23S	31E	30	SENE 1	32.275431	-103.812602	EDD Y	NEW MEXI	NEW MEXI	F	NMNM 053317	-8048	14320	11397	
PPP Leg #1-6	100	FSL	1310	FEL	23S	31E	30	SESE	32.26845	-103.812596	EDD Y	NEW MEXI	NEW MEXI	F	NMNM 021640	-8070	11772	11419	
EXIT Leg #1	2545	FSL	1310	FEL	23S	31E	18	NESE 7	32.304197	-103.812627	EDD Y	NEW MEXI	NEW MEXI	F	NMNM 054623	-7961	24778	11310	
BHL Leg #1	2625	FSL	1310	FEL	23S	31E	18	NESE 7	32.304417	-103.812628	EDD Y	NEW MEXI	NEW MEXI	F	NMNM 054623	-7961	24858	11310	

**OXY USA INC.**  
**PRECIOUS 30-18 FEDERAL COM #175H**  
**SITE PLAN**  
**FAA PERMIT: NO**



**NOTES:**

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

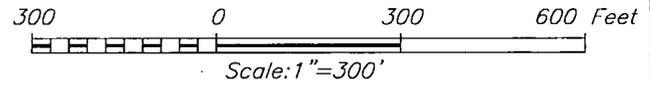
**CERTIFICATION**  
 I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



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

1/3/19  
 DATE

**HARCROW SURVEYING, LLC**  
 2314 W. MAIN ST, ARTESIA, N.M. 88210  
 PH: (575) 746-2158  
 c.harcrow@harcrowsurveying.com



<b>OXY USA INC.</b>	
PRECIOUS 30-18 FEDERAL COM #175H LOCATED 520 FEET FROM THE NORTH LINE AND 1065 FEET FROM THE EAST LINE OF SECTION 31, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO	
SURVEY DATE: SEPTEMBER 18, 2018	SITE PLAN
DRAFTING DATE: DECEMBER 27, 2018	PAGE: 1 OF 1
APPROVED BY: CH	DRAWN BY: SP
	FILE: 18-1645

Intent  As Drilled

API #  
30-015-

Operator Name: OYU USA INC	Property Name: Previous 30-18 Federal com	Well Number 175H
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Kick Off Point (KOP)

UL V	Section 30	Township 23S	Range 31E	Lot	Feet 50	From N/S South	Feet 1310	From E/W East	County EDDY
Latitude 32.268315					Longitude -103.812594				NAD NAD83

First Take Point (FTP)

UL V	Section 30	Township 23S	Range 31E	Lot	Feet 100	From N/S South	Feet 1310	From E/W East	County EDDY
Latitude 32.268452					Longitude -103.812594				NAD NAD83

Last Take Point (LTP)

UL I	Section 18	Township 23S	Range 31E	Lot	Feet 2545	From N/S South	Feet 1310	From E/W East	County EDDY
Latitude 32.304197					Longitude -103.812627				NAD NAD83

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

Is this well an infill well?

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

API #

Operator Name:	Property Name:	Well Number
----------------	----------------	-------------



APD ID: 10400039124

Submission Date: 02/13/2019

Highlighted data reflects the most recent changes

Operator Name: OXY USA INCORPORATED

Well Name: PRECIOUS 30-18 FEDERAL COM

Well Number: 175H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

**Section 1 - Geologic Formations**

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	RUSTLER	3349	377	377	ANHYDRITE, SHALE, DOLOMITE	USEABLE WATER	N
2	SALADO	2647	700	700	HALITE, ANHYDRITE, SHALE, DOLOMITE	OTHER : SALT	N
3	CASTILE	742	2607	2607	ANHYDRITE	OTHER : salt	N
4	LAMAR	-724	4071	4071	LIMESTONE, SILTSTONE, SANDSTONE	OTHER, NATURAL GAS, OIL : BRINE	N
5	BELL CANYON	-764	4111	4111	SILTSTONE, SANDSTONE	USEABLE WATER, OTHER, NATURAL GAS, OIL : BRINE	N
6	CHERRY CANYON	-1644	4993	4993	SILTSTONE, SANDSTONE	OTHER, NATURAL GAS, OIL : BRINE	N
7	BRUSHY CANYON	-2928	6277	6277	LIMESTONE, SILTSTONE, SANDSTONE	OTHER, NATURAL GAS, OIL : BRINE	N
8	BONE SPRING	-4615	7962	8000	LIMESTONE, SILTSTONE, SANDSTONE	NATURAL GAS, OIL	N
9	BONE SPRING 1ST	-5646	8995	9000	LIMESTONE, SILTSTONE, SANDSTONE	NATURAL GAS, OIL	Y
10	BONE SPRING 2ND	-6287	9636	9700	LIMESTONE, SILTSTONE, SANDSTONE	NATURAL GAS, OIL	N
11	BONE SPRING 3RD	-7476	10825	10900	LIMESTONE, SILTSTONE, SANDSTONE	NATURAL GAS, OIL	Y
12	WOLFCAMP	-7952	11301	11400	LIMESTONE, SILTSTONE, SANDSTONE	NATURAL GAS, OIL	Y

**Section 2 - Blowout Prevention**

Operator Name: OXY USA INCORPORATED

Well Name: PRECIOUS 30-18 FEDERAL COM

Well Number: 175H

Pressure Rating (PSI): 5M

Rating Depth: 9836

Equipment: 13-5/8" 5M 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: 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 wellhead 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 will be tested. We will test the flange connection of the wellhead with a test port that is directly in the flange. BOP Break Testing Request - As per the agreement reached in the OXY/BLM meeting on Feb 22, 2018, OXY requests permission to allow BOP Break Testing under the following conditions: 1. After a full BOP test is conducted on the first well on the pad. 2. When skidding to drill an intermediate section that the casing point is either shallower than the 3rd Bone Spring or 10000' TVD. 3. Full BOP test will be required prior to drilling any production section.

Choke Diagram Attachment:

Precious30\_18FdCom175H\_ChkManifold\_20190213123037.pdf

BOP Diagram Attachment:

Precious30\_18FdCom175H\_FlexHoseCert\_20190213123048.pdf

Precious30\_18FdCom175H\_BOP\_20190213123055.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	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	427	0	427			427	J-55	54.5	BUTT	1.125	1.2	BUOY	1.4	BUOY	1.4
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4121	0	4121			4121	L-80	43.5	BUTT	1.125	1.2	BUOY	1.4	BUOY	1.4
3	INTERMEDIATE	8.5	7.625	NEW	API	N	0	10867	0	10867			10867	HCL-80	26.4	OTHER - SF/FJ	1.125	1.2	BUOY	1.4	BUOY	1.4
4	PRODUCTION	6.75	5.5	NEW	API	N	0	24858	0	11310			24858	P-110	20	OTHER - DQX/SFTORQ	1.125	1.2	BUOY	1.4	BUOY	1.4

**Operator Name:** OXY USA INCORPORATED

**Well Name:** PRECIOUS 30-18 FEDERAL COM

**Well Number:** 175H

### Casing Attachments

---

**Casing ID:** 1            **String Type:** SURFACE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Precious30\_18FdCom175H\_CsgCriteria\_20190213123157.pdf

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Precious30\_18FdCom175H\_CsgCriteria\_20190213123206.pdf

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Precious30\_18FdCom175H\_7.625\_26.4\_HCL80\_TMKUPFJ\_20190213123238.pdf

Precious30\_18FdCom175H\_7.625\_26.4\_HCL80\_TMKUPSF\_20190213123245.pdf

Precious30\_18FdCom175H\_CsgCriteria\_20190213123251.pdf

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Operator Name: OXY USA INCORPORATED

Well Name: PRECIOUS 30-18 FEDERAL COM

Well Number: 175H

### Casing Attachments

Casing ID: 4 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

### Casing Design Assumptions and Worksheet(s):

Precious30\_18FdCom175H\_5.5\_20\_P110\_DQX\_20190213123319.pdf

Precious30\_18FdCom175H\_5.5\_20\_P110HC\_TMKUPSFTORQ\_20190213123325.pdf

Precious30\_18FdCom175H\_CsgCriteria\_20190213123330.pdf

Precious30\_18FdCom175H\_5.5\_20\_P110CY\_TMKUPDQWTORQ\_20190725093638.pdf

### Section 4 - Cement

String Type	Lead/Tail	Stage Tool	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	427	457	1.33	14.8	608	100	CI C	Accelerator

INTERMEDIATE	Lead		0	3621	881	1.88	12.9	1656	50	POZZOLAN	RETARDER
INTERMEDIATE	Tail		3621	4121	155	1.33	14.8	206	20	CI C	ACCELERATOR
INTERMEDIATE	Lead		7962	10867	143	1.65	13.2	236	5	CL H	RETARDER, DISPERSANT, SALT
INTERMEDIATE	Tail		0	7962	415	1.92	12.9	797	25	CI C	Accelerator
PRODUCTION	Lead		10367	24858	1060	1.38	13.2	1463	20	CI H	Retarder, Dispersant, Salt

**OXY**

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

**PRECIOUS 30\_18 FED COM**

**PRECIOUS 30\_18 FED COM 175H**

**Wellbore #1**

**Plan: Permitting Plan**

## **Standard Planning Report**

**16 November, 2018**

# Oxy Planning Report

<b>Database:</b>	HÖPSPP	<b>Local Co-ordinate Reference:</b>	Well PRECIOUS 30_18 FED COM 175H
<b>Company:</b>	ENGINEERING DESIGNS	<b>TVD Reference:</b>	RKB=26.5' @ 3375.00ft
<b>Project:</b>	PRD NM DIRECTIONAL PLANS (NAD 1983)	<b>MD Reference:</b>	RKB=26.5' @ 3375.00ft
<b>Site:</b>	PRECIOUS 30_18 FED COM	<b>North Reference:</b>	Grid
<b>Well:</b>	PRECIOUS 30_18 FED COM 175H	<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>	PRECIOUS 30_18 FED COM				
<b>Site Position:</b>	<b>Northing:</b>	461,098.38 usft	<b>Latitude:</b>	32° 15' 59.784416 N	
<b>From:</b>	Map	<b>Easting:</b>	698,809.83 usft	<b>Longitude:</b>	103° 49' 25.902124 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.27 °

<b>Well</b>	PRECIOUS 30_18 FED COM 175H					
<b>Well Position</b>	<b>+N/-S</b>	69.25 ft	<b>Northing:</b>	461,167.63 usft	<b>Latitude:</b>	32° 16' 0.292486 N
	<b>+E/-W</b>	3,728.22 ft	<b>Easting:</b>	702,537.81 usft	<b>Longitude:</b>	103° 48' 42.479531 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	0.00 ft	<b>Ground Level:</b>	3,348.50 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	11/16/2018	6.87	59.98	48,011

<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	358.65

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	
8,942.00	0.00	0.00	8,942.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,442.00	10.00	266.72	9,439.47	-2.49	-43.45	2.00	2.00	0.00	266.72	
10,244.10	10.00	266.72	10,229.38	-10.45	-182.51	0.00	0.00	0.00	0.00	
10,967.46	10.00	359.68	10,945.56	49.08	-245.90	2.00	0.00	12.85	136.04	
11,772.23	90.48	359.68	11,419.00	618.10	-249.09	10.00	10.00	0.00	0.00	FTP (Precious)
24,858.03	90.48	359.68	11,310.00	13,703.25	-322.36	0.00	0.00	0.00	0.00	PBHL (Precious)

# Oxy Planning Report

Database:	HOPSP	Local Co-ordinate Reference:	Well PRECIOUS 30_18 FED COM 175H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3375.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3375.00ft
Site:	PRECIOUS 30_18 FED COM	North Reference:	Grid
Well:	PRECIOUS 30_18 FED COM 175H	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	0.00
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	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	0.00
500.00	0.00	0.00	500.00	0.00	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	0.00
700.00	0.00	0.00	700.00	0.00	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	0.00
900.00	0.00	0.00	900.00	0.00	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	0.00
1,100.00	0.00	0.00	1,100.00	0.00	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	0.00
1,300.00	0.00	0.00	1,300.00	0.00	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	0.00
1,500.00	0.00	0.00	1,500.00	0.00	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	0.00
1,700.00	0.00	0.00	1,700.00	0.00	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	0.00
1,900.00	0.00	0.00	1,900.00	0.00	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	0.00
2,100.00	0.00	0.00	2,100.00	0.00	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	0.00
2,300.00	0.00	0.00	2,300.00	0.00	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	0.00
2,500.00	0.00	0.00	2,500.00	0.00	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	0.00
2,700.00	0.00	0.00	2,700.00	0.00	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	0.00
2,900.00	0.00	0.00	2,900.00	0.00	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	0.00
3,100.00	0.00	0.00	3,100.00	0.00	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	0.00
3,300.00	0.00	0.00	3,300.00	0.00	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	0.00
3,500.00	0.00	0.00	3,500.00	0.00	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	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

# Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well PRECIOUS 30_18 FED COM 175H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3375.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3375.00ft
Site:	PRECIOUS 30_18 FED COM	North Reference:	Grid
Well:	PRECIOUS 30_18 FED COM 175H	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)	
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,942.00	0.00	0.00	8,942.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,000.00	1.16	266.72	9,000.00	-0.03	-0.59	-0.02	2.00	2.00	0.00	
9,100.00	3.16	266.72	9,099.92	-0.25	-4.35	-0.15	2.00	2.00	0.00	
9,200.00	5.16	266.72	9,199.65	-0.66	-11.59	-0.39	2.00	2.00	0.00	
9,300.00	7.16	266.72	9,299.07	-1.28	-22.30	-0.75	2.00	2.00	0.00	
9,400.00	9.16	266.72	9,398.05	-2.09	-36.47	-1.23	2.00	2.00	0.00	
9,442.00	10.00	266.72	9,439.47	-2.49	-43.45	-1.47	2.00	2.00	0.00	
9,500.00	10.00	266.72	9,496.58	-3.06	-53.51	-1.80	0.00	0.00	0.00	
9,600.00	10.00	266.72	9,595.07	-4.06	-70.84	-2.39	0.00	0.00	0.00	
9,700.00	10.00	266.72	9,693.55	-5.05	-88.18	-2.97	0.00	0.00	0.00	
9,800.00	10.00	266.72	9,792.03	-6.04	-105.52	-3.56	0.00	0.00	0.00	
9,900.00	10.00	266.72	9,890.51	-7.03	-122.85	-4.14	0.00	0.00	0.00	
10,000.00	10.00	266.72	9,988.99	-8.03	-140.19	-4.73	0.00	0.00	0.00	
10,100.00	10.00	266.72	10,087.47	-9.02	-157.53	-5.31	0.00	0.00	0.00	
10,200.00	10.00	266.72	10,185.95	-10.01	-174.86	-5.90	0.00	0.00	0.00	
10,244.10	10.00	266.72	10,229.38	-10.45	-182.51	-6.15	0.00	0.00	0.00	
10,300.00	9.23	271.57	10,284.50	-10.60	-191.83	-6.09	2.00	-1.38	8.67	
10,400.00	8.05	282.37	10,383.37	-8.88	-206.69	-4.02	2.00	-1.18	10.80	

# Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well PRECIOUS 30_18 FED COM 175H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3375.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3375.00ft
Site:	PRECIOUS 30_18 FED COM	North Reference:	Grid
Well:	PRECIOUS 30_18 FED COM 175H	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)	
10,500.00	7.24	296.16	10,482.48	-4.61	-219.18	0.55	2.00	-0.81	13.80	
10,600.00	6.92	312.24	10,581.73	2.22	-229.30	7.62	2.00	-0.31	16.08	
10,700.00	7.17	328.47	10,680.99	11.60	-237.03	17.17	2.00	0.25	16.23	
10,800.00	7.93	342.59	10,780.13	23.51	-242.36	29.20	2.00	0.76	14.13	
10,900.00	9.08	353.73	10,879.03	37.94	-245.29	43.69	2.00	1.14	11.14	
10,967.46	10.00	359.68	10,945.56	49.08	-245.90	54.85	2.00	1.37	8.82	
11,000.00	13.25	359.68	10,977.43	55.64	-245.94	61.41	10.00	10.00	0.00	
11,100.00	23.25	359.68	11,072.27	86.92	-246.11	92.69	10.00	10.00	0.00	
11,200.00	33.25	359.68	11,160.25	134.20	-246.38	139.96	10.00	10.00	0.00	
11,300.00	43.25	359.68	11,238.68	196.04	-246.72	201.79	10.00	10.00	0.00	
11,400.00	53.25	359.68	11,305.17	270.55	-247.14	276.29	10.00	10.00	0.00	
11,500.00	63.25	359.68	11,357.72	355.48	-247.62	361.21	10.00	10.00	0.00	
11,600.00	73.25	359.68	11,394.72	448.25	-248.13	453.96	10.00	10.00	0.00	
11,700.00	83.25	359.68	11,415.05	546.03	-248.68	551.72	10.00	10.00	0.00	
11,772.23	90.48	359.68	11,419.00	618.10	-249.09	623.79	10.00	10.00	0.00	
11,800.00	90.48	359.68	11,418.77	645.87	-249.24	651.55	0.00	0.00	0.00	
11,900.00	90.48	359.68	11,417.94	745.86	-249.80	751.53	0.00	0.00	0.00	
12,000.00	90.48	359.68	11,417.10	845.86	-250.36	851.51	0.00	0.00	0.00	
12,100.00	90.48	359.68	11,416.27	945.85	-250.92	951.49	0.00	0.00	0.00	
12,200.00	90.48	359.68	11,415.44	1,045.85	-251.48	1,051.47	0.00	0.00	0.00	
12,300.00	90.48	359.68	11,414.60	1,145.84	-252.04	1,151.45	0.00	0.00	0.00	
12,400.00	90.48	359.68	11,413.77	1,245.84	-252.60	1,251.43	0.00	0.00	0.00	
12,500.00	90.48	359.68	11,412.94	1,345.83	-253.16	1,351.42	0.00	0.00	0.00	
12,600.00	90.48	359.68	11,412.11	1,445.83	-253.72	1,451.40	0.00	0.00	0.00	
12,700.00	90.48	359.68	11,411.27	1,545.82	-254.28	1,551.38	0.00	0.00	0.00	
12,800.00	90.48	359.68	11,410.44	1,645.82	-254.84	1,651.36	0.00	0.00	0.00	
12,900.00	90.48	359.68	11,409.61	1,745.81	-255.40	1,751.34	0.00	0.00	0.00	
13,000.00	90.48	359.68	11,408.77	1,845.81	-255.96	1,851.32	0.00	0.00	0.00	
13,100.00	90.48	359.68	11,407.94	1,945.80	-256.52	1,951.30	0.00	0.00	0.00	
13,200.00	90.48	359.68	11,407.11	2,045.80	-257.08	2,051.28	0.00	0.00	0.00	
13,300.00	90.48	359.68	11,406.27	2,145.79	-257.64	2,151.26	0.00	0.00	0.00	
13,400.00	90.48	359.68	11,405.44	2,245.79	-258.20	2,251.24	0.00	0.00	0.00	
13,500.00	90.48	359.68	11,404.61	2,345.78	-258.76	2,351.22	0.00	0.00	0.00	
13,600.00	90.48	359.68	11,403.78	2,445.78	-259.32	2,451.20	0.00	0.00	0.00	
13,700.00	90.48	359.68	11,402.94	2,545.77	-259.88	2,551.18	0.00	0.00	0.00	
13,800.00	90.48	359.68	11,402.11	2,645.77	-260.44	2,651.16	0.00	0.00	0.00	
13,900.00	90.48	359.68	11,401.28	2,745.76	-261.00	2,751.14	0.00	0.00	0.00	
14,000.00	90.48	359.68	11,400.44	2,845.76	-261.56	2,851.12	0.00	0.00	0.00	
14,100.00	90.48	359.68	11,399.61	2,945.75	-262.12	2,951.10	0.00	0.00	0.00	
14,200.00	90.48	359.68	11,398.78	3,045.75	-262.68	3,051.08	0.00	0.00	0.00	
14,300.00	90.48	359.68	11,397.94	3,145.74	-263.24	3,151.06	0.00	0.00	0.00	
14,400.00	90.48	359.68	11,397.11	3,245.74	-263.80	3,251.04	0.00	0.00	0.00	
14,500.00	90.48	359.68	11,396.28	3,345.73	-264.36	3,351.02	0.00	0.00	0.00	
14,600.00	90.48	359.68	11,395.45	3,445.73	-264.92	3,451.01	0.00	0.00	0.00	
14,700.00	90.48	359.68	11,394.61	3,545.72	-265.48	3,550.99	0.00	0.00	0.00	
14,800.00	90.48	359.68	11,393.78	3,645.72	-266.04	3,650.97	0.00	0.00	0.00	
14,900.00	90.48	359.68	11,392.95	3,745.71	-266.60	3,750.95	0.00	0.00	0.00	
15,000.00	90.48	359.68	11,392.11	3,845.71	-267.16	3,850.93	0.00	0.00	0.00	
15,100.00	90.48	359.68	11,391.28	3,945.70	-267.72	3,950.91	0.00	0.00	0.00	
15,200.00	90.48	359.68	11,390.45	4,045.70	-268.28	4,050.89	0.00	0.00	0.00	
15,300.00	90.48	359.68	11,389.62	4,145.69	-268.84	4,150.87	0.00	0.00	0.00	
15,400.00	90.48	359.68	11,388.78	4,245.69	-269.40	4,250.85	0.00	0.00	0.00	
15,500.00	90.48	359.68	11,387.95	4,345.68	-269.96	4,350.83	0.00	0.00	0.00	
15,600.00	90.48	359.68	11,387.12	4,445.68	-270.52	4,450.81	0.00	0.00	0.00	

# Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well PRECIOUS 30_18 FED COM 175H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3375.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3375.00ft
Site:	PRECIOUS 30_18 FED COM	North Reference:	Grid
Well:	PRECIOUS 30_18 FED COM 175H	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)
15,700.00	90.48	359.68	11,386.28	4,545.67	-271.08	4,550.79	0.00	0.00	0.00
15,800.00	90.48	359.68	11,385.45	4,645.67	-271.64	4,650.77	0.00	0.00	0.00
15,900.00	90.48	359.68	11,384.62	4,745.66	-272.20	4,750.75	0.00	0.00	0.00
16,000.00	90.48	359.68	11,383.78	4,845.66	-272.76	4,850.73	0.00	0.00	0.00
16,100.00	90.48	359.68	11,382.95	4,945.65	-273.32	4,950.71	0.00	0.00	0.00
16,200.00	90.48	359.68	11,382.12	5,045.65	-273.88	5,050.69	0.00	0.00	0.00
16,300.00	90.48	359.68	11,381.29	5,145.64	-274.44	5,150.67	0.00	0.00	0.00
16,400.00	90.48	359.68	11,380.45	5,245.64	-275.00	5,250.65	0.00	0.00	0.00
16,500.00	90.48	359.68	11,379.62	5,345.63	-275.56	5,350.63	0.00	0.00	0.00
16,600.00	90.48	359.68	11,378.79	5,445.63	-276.12	5,450.61	0.00	0.00	0.00
16,700.00	90.48	359.68	11,377.95	5,545.62	-276.68	5,550.60	0.00	0.00	0.00
16,800.00	90.48	359.68	11,377.12	5,645.62	-277.24	5,650.58	0.00	0.00	0.00
16,900.00	90.48	359.68	11,376.29	5,745.61	-277.80	5,750.56	0.00	0.00	0.00
17,000.00	90.48	359.68	11,375.45	5,845.61	-278.36	5,850.54	0.00	0.00	0.00
17,100.00	90.48	359.68	11,374.62	5,945.60	-278.92	5,950.52	0.00	0.00	0.00
17,200.00	90.48	359.68	11,373.79	6,045.60	-279.48	6,050.50	0.00	0.00	0.00
17,300.00	90.48	359.68	11,372.96	6,145.59	-280.04	6,150.48	0.00	0.00	0.00
17,400.00	90.48	359.68	11,372.12	6,245.59	-280.60	6,250.46	0.00	0.00	0.00
17,500.00	90.48	359.68	11,371.29	6,345.58	-281.16	6,350.44	0.00	0.00	0.00
17,600.00	90.48	359.68	11,370.46	6,445.58	-281.72	6,450.42	0.00	0.00	0.00
17,700.00	90.48	359.68	11,369.62	6,545.57	-282.28	6,550.40	0.00	0.00	0.00
17,800.00	90.48	359.68	11,368.79	6,645.57	-282.84	6,650.38	0.00	0.00	0.00
17,900.00	90.48	359.68	11,367.96	6,745.56	-283.40	6,750.36	0.00	0.00	0.00
18,000.00	90.48	359.68	11,367.13	6,845.56	-283.96	6,850.34	0.00	0.00	0.00
18,100.00	90.48	359.68	11,366.29	6,945.55	-284.52	6,950.32	0.00	0.00	0.00
18,200.00	90.48	359.68	11,365.46	7,045.55	-285.08	7,050.30	0.00	0.00	0.00
18,300.00	90.48	359.68	11,364.63	7,145.54	-285.64	7,150.28	0.00	0.00	0.00
18,400.00	90.48	359.68	11,363.79	7,245.54	-286.20	7,250.26	0.00	0.00	0.00
18,500.00	90.48	359.68	11,362.96	7,345.53	-286.76	7,350.24	0.00	0.00	0.00
18,600.00	90.48	359.68	11,362.13	7,445.53	-287.32	7,450.22	0.00	0.00	0.00
18,700.00	90.48	359.68	11,361.29	7,545.52	-287.88	7,550.20	0.00	0.00	0.00
18,800.00	90.48	359.68	11,360.46	7,645.52	-288.44	7,650.19	0.00	0.00	0.00
18,900.00	90.48	359.68	11,359.63	7,745.51	-289.00	7,750.17	0.00	0.00	0.00
19,000.00	90.48	359.68	11,358.80	7,845.51	-289.56	7,850.15	0.00	0.00	0.00
19,100.00	90.48	359.68	11,357.96	7,945.50	-290.12	7,950.13	0.00	0.00	0.00
19,200.00	90.48	359.68	11,357.13	8,045.50	-290.68	8,050.11	0.00	0.00	0.00
19,300.00	90.48	359.68	11,356.30	8,145.49	-291.24	8,150.09	0.00	0.00	0.00
19,400.00	90.48	359.68	11,355.46	8,245.49	-291.80	8,250.07	0.00	0.00	0.00
19,500.00	90.48	359.68	11,354.63	8,345.48	-292.36	8,350.05	0.00	0.00	0.00
19,600.00	90.48	359.68	11,353.80	8,445.48	-292.92	8,450.03	0.00	0.00	0.00
19,700.00	90.48	359.68	11,352.96	8,545.47	-293.48	8,550.01	0.00	0.00	0.00
19,800.00	90.48	359.68	11,352.13	8,645.47	-294.04	8,649.99	0.00	0.00	0.00
19,900.00	90.48	359.68	11,351.30	8,745.46	-294.60	8,749.97	0.00	0.00	0.00
20,000.00	90.48	359.68	11,350.47	8,845.46	-295.16	8,849.95	0.00	0.00	0.00
20,100.00	90.48	359.68	11,349.63	8,945.45	-295.72	8,949.93	0.00	0.00	0.00
20,200.00	90.48	359.68	11,348.80	9,045.45	-296.28	9,049.91	0.00	0.00	0.00
20,300.00	90.48	359.68	11,347.97	9,145.44	-296.84	9,149.89	0.00	0.00	0.00
20,400.00	90.48	359.68	11,347.13	9,245.44	-297.40	9,249.87	0.00	0.00	0.00
20,500.00	90.48	359.68	11,346.30	9,345.43	-297.96	9,349.85	0.00	0.00	0.00
20,600.00	90.48	359.68	11,345.47	9,445.43	-298.52	9,449.83	0.00	0.00	0.00
20,700.00	90.48	359.68	11,344.64	9,545.42	-299.08	9,549.81	0.00	0.00	0.00
20,800.00	90.48	359.68	11,343.80	9,645.42	-299.64	9,649.79	0.00	0.00	0.00
20,900.00	90.48	359.68	11,342.97	9,745.41	-300.20	9,749.78	0.00	0.00	0.00
21,000.00	90.48	359.68	11,342.14	9,845.41	-300.76	9,849.76	0.00	0.00	0.00

# Oxy Planning Report

<b>Database:</b>	HOPSP	<b>Local Co-ordinate Reference:</b>	Well PRECIOUS 30_18 FED COM 175H
<b>Company:</b>	ENGINEERING DESIGNS	<b>TVD Reference:</b>	RKB=26.5' @ 3375.00ft
<b>Project:</b>	PRD NM DIRECTIONAL PLANS (NAD 1983)	<b>MD Reference:</b>	RKB=26.5' @ 3375.00ft
<b>Site:</b>	PRECIOUS 30_18 FED COM	<b>North Reference:</b>	Grid
<b>Well:</b>	PRECIOUS 30_18 FED COM 175H	<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)
21,100.00	90.48	359.68	11,341.30	9,945.40	-301.32	9,949.74	0.00	0.00	0.00
21,200.00	90.48	359.68	11,340.47	10,045.40	-301.88	10,049.72	0.00	0.00	0.00
21,300.00	90.48	359.68	11,339.64	10,145.39	-302.44	10,149.70	0.00	0.00	0.00
21,400.00	90.48	359.68	11,338.80	10,245.39	-303.00	10,249.68	0.00	0.00	0.00
21,500.00	90.48	359.68	11,337.97	10,345.38	-303.56	10,349.66	0.00	0.00	0.00
21,600.00	90.48	359.68	11,337.14	10,445.38	-304.12	10,449.64	0.00	0.00	0.00
21,700.00	90.48	359.68	11,336.31	10,545.37	-304.68	10,549.62	0.00	0.00	0.00
21,800.00	90.48	359.68	11,335.47	10,645.37	-305.24	10,649.60	0.00	0.00	0.00
21,900.00	90.48	359.68	11,334.64	10,745.36	-305.80	10,749.58	0.00	0.00	0.00
22,000.00	90.48	359.68	11,333.81	10,845.36	-306.36	10,849.56	0.00	0.00	0.00
22,100.00	90.48	359.68	11,332.97	10,945.35	-306.92	10,949.54	0.00	0.00	0.00
22,200.00	90.48	359.68	11,332.14	11,045.35	-307.48	11,049.52	0.00	0.00	0.00
22,300.00	90.48	359.68	11,331.31	11,145.34	-308.04	11,149.50	0.00	0.00	0.00
22,400.00	90.48	359.68	11,330.47	11,245.34	-308.60	11,249.48	0.00	0.00	0.00
22,500.00	90.48	359.68	11,329.64	11,345.33	-309.16	11,349.46	0.00	0.00	0.00
22,600.00	90.48	359.68	11,328.81	11,445.33	-309.72	11,449.44	0.00	0.00	0.00
22,700.00	90.48	359.68	11,327.98	11,545.32	-310.28	11,549.42	0.00	0.00	0.00
22,800.00	90.48	359.68	11,327.14	11,645.32	-310.84	11,649.40	0.00	0.00	0.00
22,900.00	90.48	359.68	11,326.31	11,745.31	-311.40	11,749.38	0.00	0.00	0.00
23,000.00	90.48	359.68	11,325.48	11,845.31	-311.96	11,849.37	0.00	0.00	0.00
23,100.00	90.48	359.68	11,324.64	11,945.30	-312.52	11,949.35	0.00	0.00	0.00
23,200.00	90.48	359.68	11,323.81	12,045.29	-313.08	12,049.33	0.00	0.00	0.00
23,300.00	90.48	359.68	11,322.98	12,145.29	-313.64	12,149.31	0.00	0.00	0.00
23,400.00	90.48	359.68	11,322.15	12,245.28	-314.20	12,249.29	0.00	0.00	0.00
23,500.00	90.48	359.68	11,321.31	12,345.28	-314.76	12,349.27	0.00	0.00	0.00
23,600.00	90.48	359.68	11,320.48	12,445.27	-315.32	12,449.25	0.00	0.00	0.00
23,700.00	90.48	359.68	11,319.65	12,545.27	-315.88	12,549.23	0.00	0.00	0.00
23,800.00	90.48	359.68	11,318.81	12,645.26	-316.44	12,649.21	0.00	0.00	0.00
23,900.00	90.48	359.68	11,317.98	12,745.26	-317.00	12,749.19	0.00	0.00	0.00
24,000.00	90.48	359.68	11,317.15	12,845.25	-317.56	12,849.17	0.00	0.00	0.00
24,100.00	90.48	359.68	11,316.31	12,945.25	-318.12	12,949.15	0.00	0.00	0.00
24,200.00	90.48	359.68	11,315.48	13,045.24	-318.68	13,049.13	0.00	0.00	0.00
24,300.00	90.48	359.68	11,314.65	13,145.24	-319.24	13,149.11	0.00	0.00	0.00
24,400.00	90.48	359.68	11,313.82	13,245.23	-319.80	13,249.09	0.00	0.00	0.00
24,500.00	90.48	359.68	11,312.98	13,345.23	-320.36	13,349.07	0.00	0.00	0.00
24,600.00	90.48	359.68	11,312.15	13,445.22	-320.92	13,449.05	0.00	0.00	0.00
24,700.00	90.48	359.68	11,311.32	13,545.22	-321.48	13,549.03	0.00	0.00	0.00
24,800.00	90.48	359.68	11,310.48	13,645.21	-322.04	13,649.01	0.00	0.00	0.00
24,858.03	90.48	359.68	11,310.00	13,703.25	-322.36	13,707.04	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL (Precious 30_18 - plan hits target center - Point	0.00	0.00	11,310.00	13,703.25	-322.36	474,870.01	702,215.47	32° 18' 15.900677 N	103° 48' 45.459028
FTP (Precious 30_18 - plan hits target center - Point	0.00	0.00	11,419.00	618.10	-249.09	461,785.69	702,288.74	32° 16' 6.420521 N	103° 48' 45.345449

# Oxy Planning Report

<b>Database:</b>	HOPSPP	<b>Local Co-ordinate Reference:</b>	Well PRECIOUS 30_18 FED COM 175H
<b>Company:</b>	ENGINEERING DESIGNS	<b>TVD Reference:</b>	RKB=26.5' @ 3375.00ft
<b>Project:</b>	PRD NM DIRECTIONAL PLANS (NAD 1983)	<b>MD Reference:</b>	RKB=26.5' @ 3375.00ft
<b>Site:</b>	PRECIOUS 30_18 FED COM	<b>North Reference:</b>	Grid
<b>Well:</b>	PRECIOUS 30_18 FED COM 175H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Permitting Plan		

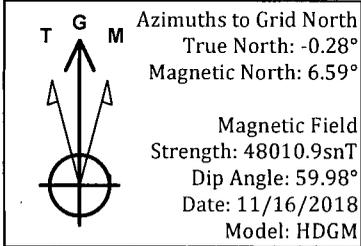
Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,942.00	8,942.00	0.00	0.00	Build 2.00°/100'
9,442.00	9,439.47	-2.49	-43.45	Hold 10.00° Tangent
10,244.10	10,229.38	-10.45	-182.51	Turn 2.00°/100'
10,967.46	10,945.56	49.08	-245.90	Build 10.00°/100'
11,772.23	11,419.00	618.10	-249.09	Landing Point
24,858.03	11,310.00	13,703.25	-322.36	TD at 24858.03' MD



Project: PRD NM DIRECTIONAL PLANS (NAD 1983)  
 Site: PRECIOUS 30\_18 FED COM  
 Well: PRECIOUS 30\_18 FED COM 175H  
 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

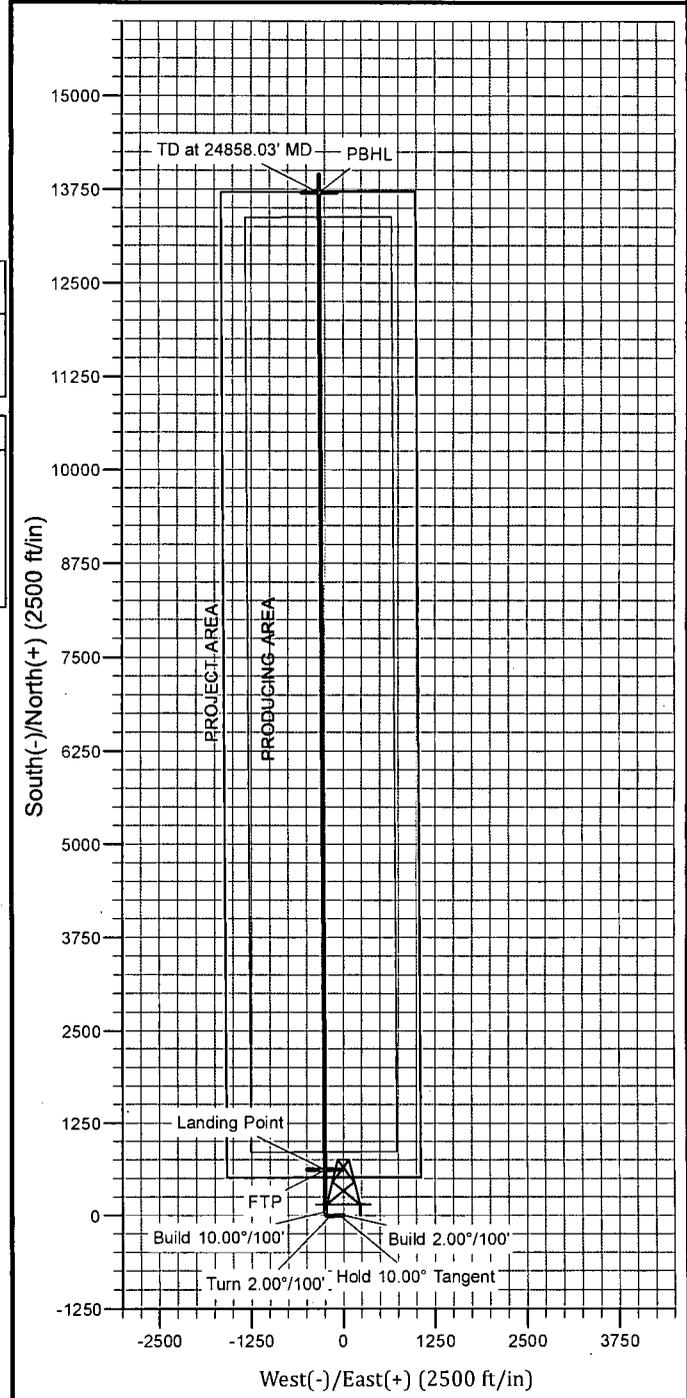
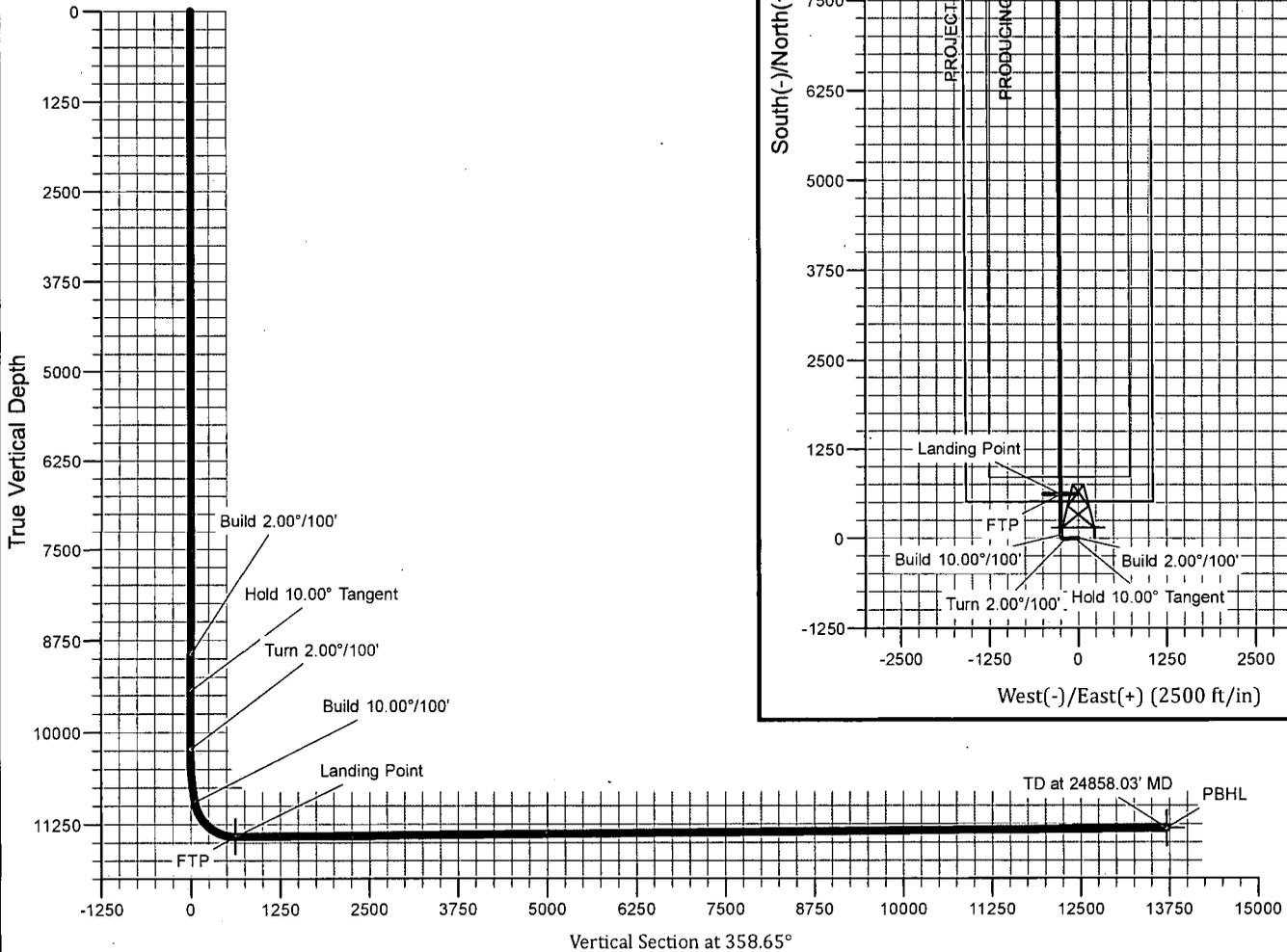


WELL DETAILS: PRECIOUS 30\_18 FED COM 175H

		Ground Level: 3348.50			
+N-S	+E/W	Northing	Easting	Latitude	Longitude
0.00	0.00	461167.63	702537.81	$32^\circ 16' 0.292486 \text{ N}$	$103^\circ 48' 42.479531 \text{ W}$

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	
8942.00	0.00	0.00	8942.00	0.00	0.00	0.00	0.00	0.00	Build $2.00^\circ/100'$
9442.00	10.00	266.72	9439.47	-2.49	-43.45	2.00	266.72	-1.47	Hold $10.00^\circ$ Tangent
10244.10	10.00	266.72	10229.38	-10.45	-182.51	0.00	0.00	-6.15	Turn $2.00^\circ/100'$
10967.46	10.00	359.68	10945.56	49.08	-245.90	2.00	136.04	54.85	Build $10.00^\circ/100'$
11772.23	90.48	359.68	11419.00	618.10	-249.09	10.00	0.00	623.79	Landing Point
24858.03	90.48	359.68	11310.00	13703.25	-322.36	0.00	0.00	13707.04	TD at 24858.03' MD



**OXY USA Inc**  
**APD ATTACHMENT: SPUDDER RIG DATA**

**OPERATOR NAME / NUMBER:** OXY USA Inc

**1. SUMMARY OF REQUEST:**

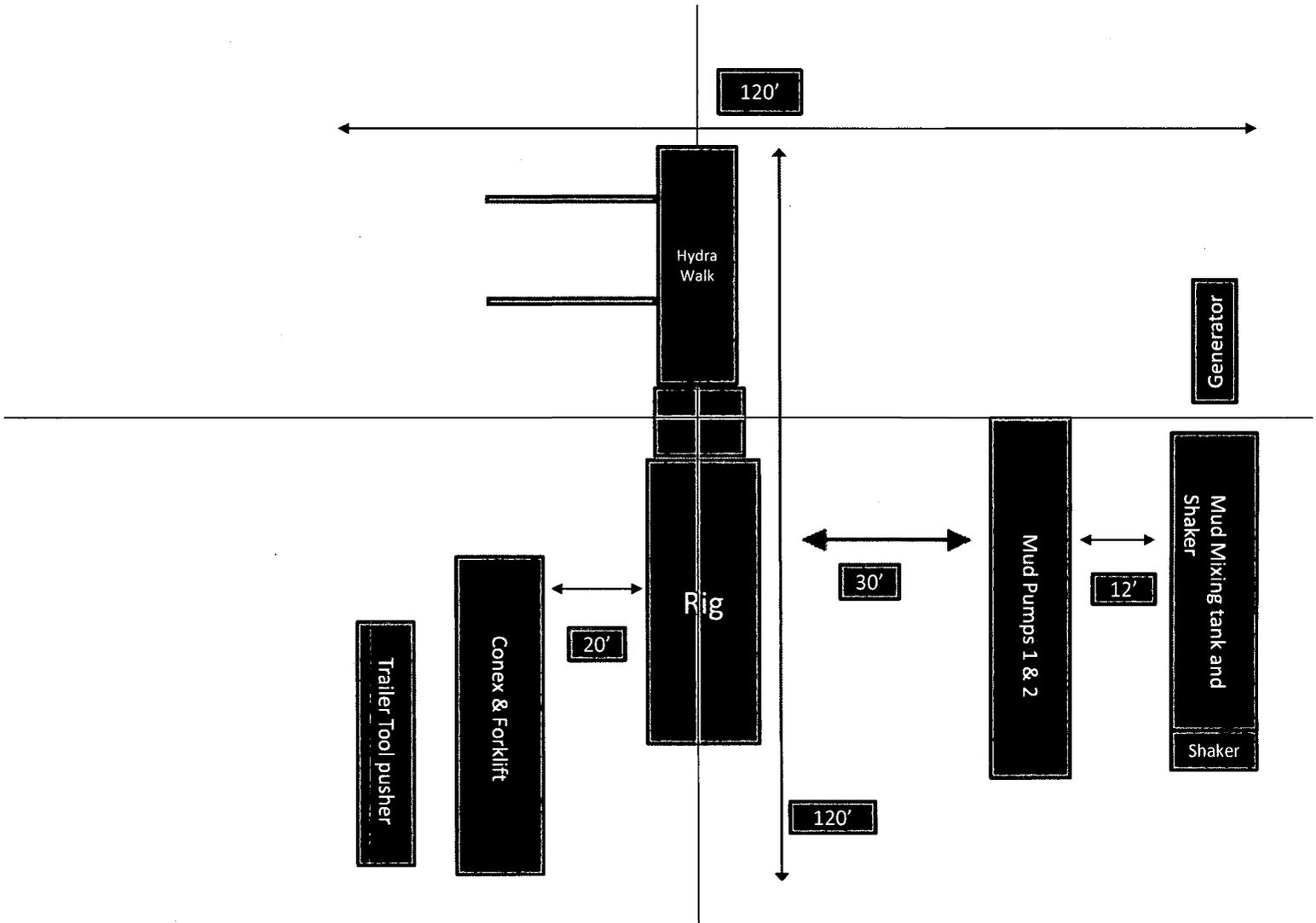
Oxy USA respectfully requests approval for the following operations for the surface hole in the drill plan:

1. Utilize a spudder rig to pre-set surface casing for time and cost savings.

**2. Description of Operations**

1. Spudder rig will move in to drill the surface hole and pre-set surface casing on the well.
  - a. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
  - b. The spudder rig will utilize fresh water-based mud to drill the surface hole to TD. Solids control will be handled entirely on a closed loop basis. No earth pits will be used.
2. The wellhead will be installed and tested as soon as the surface casing is cut off and the WOC time has been reached.
3. A blind flange at the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on two wingvalves.
  - a. A means for intervention will be maintained while the drilling rig is not over the well.
4. Spudder rig operations are expected to take 2-3 days per well on the pad.
5. The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.
6. Drilling operations will begin with a larger rig and a BOP stack equal to or greater than the pressure rating that was permitted will be nipped up and tested on the wellhead before drilling operations resume on each well.
  - a. The larger rig will move back onto the location within 90 days from the point at which the wells are secured and the spudder rig is moved off location.
  - b. The BLM will be contacted / notified 24 hours before the larger rig moves back on the pre-set locations.
7. Oxy will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
8. Once the rig is removed, Oxy will secure the wellhead area by placing a guard rail around the cellar area.

# Spudder Rig Layout



## Oxy USA Inc. - Precious 30-18 Federal Com 175H

### 1. Geologic Formations

TVD of target	11419'	Pilot Hole Depth	N/A
MD at TD:	24858'	Deepest Expected fresh water:	377'

### Delaware Basin

Formation	TVD - RKB	Expected Fluids
Rustler	377	
Salado	700	Salt
Castile	2,607	Salt
Lamar/Delaware	4,071	Oil/Gas/Brine
Bell Canyon	4,111	Oil/Gas/Brine
Cherry Canyon	4,993	Oil/Gas/Brine
Brushy Canyon	6,277	Losses
Bone Spring	7,962	Oil/Gas
1st Bone Spring	8,995	Oil/Gas
2nd Bone Spring	9,255	Oil/Gas
3rd Bone Spring	10,130	Oil/Gas
<b>Wolfcamp</b>	<b>11,301</b>	<b>Oil/Gas</b>

\*H<sub>2</sub>S, water flows, loss of circulation, abnormal pressures, etc.

### 2. Casing Program

Hole Size (in)	Casing Interval		Csg. Size (in)	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	Buoyant	Buoyant
	From (ft)	To (ft)							Body SF Tension	Joint SF Tension
17.5	0	427	13.375	54.5	J-55	BTC	1.125	1.2	1.4	1.4
12.25	0	4121	9.625	40	L-80	BTC	1.125	1.2	1.4	1.4
8.75	0	10867	7.625	26.4	L-80 HC	SF (0 ft to 6000 ft) FJ (6000 ft to 10867 ft)	1.125	1.2	1.4	1.4
6.75	0	24858	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. - Precious 30-18 Federal Com 175H**

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

## Oxy USA Inc. - Precious 30-18 Federal Com 175H

### 3. Cementing Program

Casing String	# Skcs	Wt. (lb/gal)	Yld (ft <sup>3</sup> /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)	457	14.8	1.33	6.365	5:26	Class C Cement, Accelerator
Intermediate (Lead)	881	12.9	1.88	10.130	14:22	Pozzolan Cement, Retarder
Intermediate (Tail)	155	14.8	1.33	6.370	12:45	Class C Cement, Accelerator
Intermediate II 1st Stage (Lead)	N/A	N/A	N/A	N/A	N/A	N/A
Intermediate II 1st Stage (Tail)	278	13.2	1.65	8.640	11:54	Class H Cement, Retarder, Dispersant, Salt
Intermediate II 2nd Stage (Tail Slurry) to be pumped as Bradenhead Squeeze from surface, down the Intermediate annulus						
Intermediate II 2nd Stage (Lead)	N/A	N/A	N/A	N/A	N/A	N/A
Intermediate II 2nd Stage (Tail)	397	12.9	1.92	10.410	23:10	Class C Cement, Accelerator
Production (Lead)	N/A	N/A	N/A	N/A	N/A	N/A
Production (Tail)	1060	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	427	100%
Intermediate (Lead)	0	3621	50%
Intermediate (Tail)	3621	4121	20%
Intermediate II 1st Stage (Lead)	N/A	N/A	N/A
Intermediate II 1st Stage (Tail)	6527	10867	5%
Intermediate II 2nd Stage (Lead)	N/A	N/A	N/A
Intermediate II 2nd Stage (Tail)	0	6527	25%
Production (Lead)	N/A	N/A	N/A
Production (Tail)	10367	24858	20%

### 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
			Blind Ram	✓	
		3M	Pipe Ram		250 psi / 3000 psi
			Double Ram	✓	
Other*					
8.75" Hole	13-5/8"	5M	Annular	✓	70% of working pressure
			Blind Ram	✓	
		5M	Pipe Ram		250 psi / 5000 psi
			Double Ram	✓	
Other*					
6.75" Hole	13-5/8"	5M	Annular	✓	70% of working pressure
			Blind Ram	✓	
		5M	Pipe Ram		250 psi / 5000 psi
			Double Ram	✓	
Other*					

**Oxy USA Inc. - Precious 30-18 Federal Com 175H**

\*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.
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**

As per the agreement reached in the Oxy/BLM face-to-face meeting on Feb 22, 2018, Oxy requests permission to allow BOP Break Testing under the following conditions:

- After a full BOP test is conducted on the first well on the pad.
- When skidding to drill an intermediate section that casing point is either shallower than the 3<sup>rd</sup> Bone Spring or 10,000 TVD.
- Full BOP test will be required prior to drilling any production hole.

**Oxy USA Inc. - Precious 30-18 Federal Com 175H**

**5. Mud Program**

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From (ft)	To (ft)				
0	427	Water-Based Mud	8.6-8.8	40-60	N/C
427	4121	Saturated Brine-Based Mud	9.8-10.0	35-45	N/C
4121	10867	Water-Based or Oil-Based Mud	8.0-9.6	38-50	N/C
10867	24858	Water-Based or Oil-Based Mud	9.5-12.0	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**

<b>Logging, Coring and Testing.</b>	
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

<b>Additional logs planned</b>	<b>Interval</b>
No	Resistivity
No	Density
No	CBL
Yes	Mud log
No	PEX

**7. Drilling Conditions**

<b>Condition</b>	<b>Specify what type and where?</b>
BH Pressure at deepest TVD	7126 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	172°F

**Oxy USA Inc. - Precious 30-18 Federal Com 175H**

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**

	<b>Yes/No</b>
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 two 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: 1786.5 bbls.**

**Attachments**

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

**9. Company Personnel**

<u>Name</u>	<u>Title</u>	<u>Office Phone</u>	<u>Mobile Phone</u>
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 USA Inc.**  
**APD Attachment**  
**Offline Cementing**

OXY respectfully requests a variance to cement the 9-5/8" and/or 7-5/8" intermediate casing strings offline.

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.



APD ID: 10400039124

Submission Date: 02/13/2019

Highlighted data  
reflects the most  
recent changes  
[Show Final Text](#)

Operator Name: OXY USA INCORPORATED

Well Name: PRECIOUS 30-18 FEDERAL COM

Well Number: 175H

Well Type: OIL WELL

Well Work Type: Drill

**Section 1 - Existing Roads**

Will existing roads be used? YES

Existing Road Map:

Precious30\_18FdCom175H\_ExistRoads\_20190213123912.pdf

Existing Road Purpose: FLUID TRANSPORT

Row(s) Exist? NO

**ROW ID(s)**

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

**Section 2 - New or Reconstructed Access Roads**

Will new roads be needed? YES

New Road Map:

Precious30\_18FdCom175H\_NewRoad\_20190213123933.pdf

New road type: LOCAL

Length: 36

Feet

Width (ft.): 25

Max slope (%): 0

Max grade (%): 0

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Watershed Diversion every 200' if needed.

New road access plan or profile prepared? YES

New road access plan attachment:

Precious30\_18FdCom175H\_NewRoad\_20190213123946.pdf

Access road engineering design? NO

**Operator Name:** OXY USA INCORPORATED

**Well Name:** PRECIOUS 30-18 FEDERAL COM

**Well Number:** 175H

**Access road engineering design attachment:**

**Turnout?** N

**Access surfacing type:** OTHER

**Access topsoil source:** ONSITE

**Access surfacing type description:** Caliche

**Access onsite topsoil source depth:** 0

**Offsite topsoil source description:**

**Onsite topsoil removal process:** If available

**Access other construction information:** None

**Access miscellaneous information:** The access road will run from Caliche Road and run north for 36' into the southwest corner of the pad.

**Number of access turnouts:**

**Access turnout map:**

### Drainage Control

**New road drainage crossing:** CULVERT

**Drainage Control comments:** Watershed Diversion every 200' if needed.

**Road Drainage Control Structures (DCS) description:** Watershed Diversion every 200' if needed.

**Road Drainage Control Structures (DCS) attachment:**

### Access Additional Attachments

### Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Attach Well map:**

Precious30\_18FdCom175H\_ExistWells\_20190213123957.pdf

### Section 4 - Location of Existing and/or Proposed Production Facilities

**Submit or defer a Proposed Production Facilities plan?** SUBMIT

**Production Facilities description:** a. In the event the well is found productive, the Precious Central Tank Battery and the Little Precious Central Tank Battery will be utilized and the necessary production equipment will be installed at the well site. See proposed facilities layout diagram. b. All flow lines will adhere to API standards. They will consist of three – 4" composite flowlines operating 75% MAWP, surface to follow surveyed route. Survey nine strips of land 30' wide and 13877.1' in length crossing USA land in Sections 30 & 31 T23S R31E, Eddy County, NM and being 15' left and 15' right of the centerline surveys. Two–20" steel gas lift lines operating 75% MAWP from Precious CTB to Little Precious CTB. Two-8" steel gas suction lines operating at 75% MAWP to Compressor Pad. All well pads have two-6" buried steel gas injection lines operating at 75% MAWP from the two-8" gas injection trunk lines to the wells. Survey eight strips of land 30' wide and 16863.3' in

**Operator Name:** OXY USA INCORPORATED

**Well Name:** PRECIOUS 30-18 FEDERAL COM

**Well Number:** 175H

length crossing Sections 30 & 31 T23S R31E, Eddy County, NM and being 15' left and 15' right of the centerline survey and a survey of a strip of land 50' wide and 3830.1' in length crossing USA Land in Sections 29 & 30 T23S R31E, NMPM, Eddy County, NM and being 15' left and 15' right of the centerline survey. see attached. c. Electric line will follow a route approved by the BLM. Survey of a strip of land 30' wide and 11040.6 in length crossing USA land in Sections 30 & 31 T23S R31E NMPM, Eddy County, NM and being 15' left and 15' right of the centerline survey, see attached. d. See attached for additional information on the Sand Dunes Precious/Arkenstone

**Production Facilities map:**

Precious30\_18FdCom175H\_FacilityPLEL\_20190213124009.pdf

Precious30\_18FdCom175H\_LeaseFacilityInfo\_20190725093750.pdf

**Section 5 - Location and Types of Water Supply**

**Water Source Table**

**Water source type:** GW WELL

**Water source use type:** SURFACE CASING  
INTERMEDIATE/PRODUCTION CASING  
OTHER

**Describe use type:** Drilling

**Source latitude:**

**Source longitude:**

**Source datum:**

**Water source permit type:** WATER WELL

**Water source transport method:** PIPELINE  
TRUCKING

**Source land ownership:** COMMERCIAL

**Source transportation land ownership:** COMMERCIAL

**Water source volume (barrels):** 2000

**Source volume (acre-feet):** 0.25778618

**Source volume (gal):** 84000

**Water source and transportation map:**

Precious30\_18FdCom175H\_GRRWtrSrc\_20190213124102.pdf

Precious30\_18FdCom175H\_MesqWtrSrc\_20190213124108.pdf

**Water source comments:** This well will be drilled using a combination of water mud systems. It will be obtained from commercial water stations (Gregory Rockhouse, Mesquite) in the area and will be hauled to location by transport truck using existing and proposed roads.

**New water well?** NO

**New Water Well Info**

**Operator Name:** OXY USA INCORPORATED

**Well Name:** PRECIOUS 30-18 FEDERAL COM

**Well Number:** 175H

**Well latitude:**

**Well Longitude:**

**Well datum:**

**Well target aquifer:**

**Est. depth to top of aquifer(ft):**

**Est thickness of aquifer:**

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft):**

**Well casing type:**

**Well casing outside diameter (in.):**

**Well casing inside diameter (in.):**

**New water well casing?**

**Used casing source:**

**Drilling method:**

**Drill material:**

**Grout material:**

**Grout depth:**

**Casing length (ft.):**

**Casing top depth (ft.):**

**Well Production type:**

**Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

## Section 6 - Construction Materials

**Using any construction materials:** YES

**Construction Materials description:** Primary - All caliche utilized for the drilling pad and proposed access road will be obtained from an existing BLM/State/Fee approved pit or from prevailing deposits found on the location. Will use BLM recommended extra caliche from other locations close by for roads, if available. Secondary - The secondary way of obtaining caliche to build locations and roads will be by "turning over" the location. This means, caliche will be obtained from the actual well site. A caliche permit will be obtained from BLM prior to pushing up any caliche. 2400 cubic yards is max amount of caliche needed for pad and roads. Amount will vary for each pad. The procedure below has been approved by BLM personnel: a. The top 6" of topsoil is pushed off and stockpiled along the side of the location. b. An approximate 120' X 120' area is used within the proposed well site to remove caliche. c. Subsoil is removed and piled alongside the 120' X 120' within the pad site. d. When caliche is found, material will be stockpiled within the pad site to build the location and road. e. Then subsoil is pushed back in the hole and caliche is spread accordingly across entire location and road. f. Once the well is drilled the stockpiled top soil will be used for interim reclamation and spread along areas where caliche is picked up and the location size is reduced. Neither caliche nor subsoil will be stockpiled outside of the well pad. Topsoil will be stockpiled along the edge of the pad. Caliche will be provided from a pit located in Section 7 T24S R31E. Water will be provided from a frac pond located in Sections 7 T24S R31E.

**Construction Materials source location attachment:**