

Well Name: DR PI FEDERAL UNIT 18_7 IPP	Well Location: T22S / R32E / SEC 18 / LOT 4 / 32.3856012 / -103.7202427	County or Parish/State: LEA / NM
Well Number: 21H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM90587	Unit or CA Name:	Unit or CA Number: NMNM105825907
US Well Number: 3002547835	Well Status: Approved Application for Permit to Drill	Operator: OXY USA INCORPORATED

Notice of Intent

Sundry ID: 2761456

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 11/14/2023

Time Sundry Submitted: 09:55

Date proposed operation will begin: 01/14/2024

Procedure Description: OXY USA INC. Respectfully requests approval to make changes to our approved APD, see the following change requests below: Update Surface Hole: from Section 18 T22S, R32E, 490' from the South and 835' from the West, to the new location of Section 18, T22S, R32E, 490' From the South and 834' From the West. **Update HSU from 640 acres to 2560 acres, see updated plat attached.** Update the Casing Hole Size from 14.75" to 17.5" Update the Casing Size from 10.75" to 13.375" See the attached updated drill plan, directional plan, casing documents reflecting the changes above.

NOI Attachments

Procedure Description

DrPiFedUnit18_7IPP21H_DirectPlan_20240110110955.pdf

DRPIFEDUNIT18_7IPP21H_DrillPlan_Jan_2024_Sundry_20240110110955.pdf

IP9779WEL01NM_DR_PI_FED_UNIT_18_7_IPP_21H_C_102_20231114094959.pdf

Well Name: DR PI FEDERAL UNIT
18_7 IPP

Well Location: T22S / R32E / SEC 18 /
LOT 4 / 32.3856012 / -103.7202427

County or Parish/State: LEA /
NM

Well Number: 21H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM90587

Unit or CA Name:

Unit or CA Number:
NMNM105825907

US Well Number: 3002547835

Well Status: Approved Application for
Permit to Drill

Operator: OXY USA
INCORPORATED

Conditions of Approval

Additional

DR_PI_FED_UNIT_17_8_IPP_21H___SUNDRY_COA_20240214102749.pdf

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: SARAH MCKINNEY

Signed on: JAN 16, 2024 08:24 AM

Name: OXY USA INCORPORATED

Title: Regulatory Analyst Sr

Street Address: 5 GREENWAY PLAZA SUITE 110

City: HOUSTON

State: TX

Phone: (713) 215-7295

Email address: SARAH_MCKINNEY@OXY.COM

Field

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: KEITH P IMMATTY

BLM POC Title: ENGINEER

BLM POC Phone: 5759884722

BLM POC Email Address: KIMMATTY@BLM.GOV

Disposition: Approved

Disposition Date: 02/14/2024

Signature: Keith Immatty

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.	NMNM90587
6. If Indian, Allottee or Tribe Name	

SUBMIT IN TRIPLICATE - Other instructions on page 2		7. If Unit of CA/Agreement, Name and/or No. NMNM105825907
1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		8. Well Name and No. DR PI FEDERAL UNIT 18_7 IPP/211
2. Name of Operator OXY USA INCORPORATED		9. API Well No. 3002547835
3a. Address 5 Greenway Plaza, Suite 110, Houston, TX 77046	3b. Phone No. (include area code) (713) 366-5716	10. Field and Pool or Exploratory Area BILBREY BASIN/BONE SPRING
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description) SEC 18/T22S/R32E/NMP		11. Country or Parish, State LEA/NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA					
TYPE OF SUBMISSION		TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off	
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity	
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other	
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon		
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal		

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

OXY USA INC. Respectfully requests approval to make changes to our approved APD, see the following change requests below:
Update Surface Hole: from Section 18 T22S, R32E, 490 from the South and 835 from the West, to the new location of Section 18, T22S, R32E, 490 From the South and 834 From the West.
Update HSU from 640 acres to 2560 acres, see updated plat attached.
Update the Casing Hole Size from 14.75 to 17.5
Update the Casing Size from 10.75 to 13.375
See the attached updated drill plan, directional plan, casing documents reflecting the changes above.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) SARAH MCKINNEY / Ph: (713) 215-7295	Title Regulatory Analyst Sr
Signature (Electronic Submission)	Date 01/16/2024

THE SPACE FOR FEDERAL OR STATE OFFICE USE		
Approved by KEITH P IMMATTY / Ph: (575) 988-4722 / Approved	Title ENGINEER	Date 02/14/2024
Conditions of approval, if any, are attached. Approval of this notice 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.	Office CARLSBAD	

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.

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law 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, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. 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 the 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., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

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

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

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 Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

Additional Information

Location of Well

0. SHL: LOT 4 / 490 FSL / 835 FWL / TWSP: 22S / RANGE: 32E / SECTION: 18 / LAT: 32.3856012 / LONG: -103.7202427 (TVD: 0 feet, MD: 0 feet)

PPP: LOT 4 / 1325 FSL / 440 FWL / TWSP: 22S / RANGE: 32E / SECTION: 18 / LAT: 32.4024 / LONG: -103.721514 (TVD: 10433 feet, MD: 16747 feet)

PPP: LOT 4 / 100 FSL / 440 FWL / TWSP: 22S / RANGE: 32E / SECTION: 18 / LAT: 32.3845238 / LONG: -103.7215224 (TVD: 10433 feet, MD: 10807 feet)

PPP: LOT 4 / 2364 FNL / 440 FWL / TWSP: 22S / RANGE: 32E / SECTION: 18 / LAT: 32.391517 / LONG: -103.721519 (TVD: 10433 feet, MD: 12788 feet)

PPP: LOT 4 / 5 FSL / 420 FWL / TWSP: 22S / RANGE: 32E / SECTION: 18 / LAT: 32.398772 / LONG: -103.721516 (TVD: 10433 feet, MD: 15427 feet)

BHL: LOT 1 / 20 FNL / 440 FWL / TWSP: 22S / RANGE: 32E / SECTION: 7 / LAT: 32.4132138 / LONG: -103.7215088 (TVD: 10433 feet, MD: 20642 feet)

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	OXY USA INCORPORATED
WELL NAME & NO.:	DR PI FEDERAL UNIT 18_7 IPP/ 21H
SURFACE HOLE FOOTAGE:	490'/S & 834'/W
BOTTOM HOLE FOOTAGE:	20'/N & 440'/W
LOCATION:	Section 18, T.22 S., R.32 E.
COUNTY:	Lea County, New Mexico

COA

A. CASING

1. Summary of Changes

- Updated Surface Casing Size from 10.75in (14.75in OH) to 13.375in (17.5in OH) – Refer to Below – requires updated cement volumes for Surface Cementing and Stage 2 of Intermediate Cementing

Alternate Casing Design:

Sundry updating surface hole size and surface casing size. Set depths and other strings stay the same as previous COAs. All previous COAs still apply

1. The **13-3/8** inch surface casing shall be set at approximately **914** feet (a minimum of 25 feet (Lea 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.

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

EMAIL or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,

BLM_NM_CFO_DrillingNotifications@BLM.GOV

(575) 361-2822

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** 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 **43 CFR part 3170 Subpart 3172** and **API STD 53 Sec. 5.3**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in **43 CFR part 3170 Subpart 3172** 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 cement), 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 cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** 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 **43 CFR part 3170 Subpart 3172**.

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.

KPI 2/14/2024

OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)

I Prefer Pi 18_7 Federal Com

Dr Pi Fed Unit 18_7 IPP 21H

Wellbore #1

Plan: Permitting Plan

Standard Planning Report

13 November, 2023

OXY
Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 18_7 IPP 21H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB = 25' @ 3637.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB = 25' @ 3637.70ft
Site:	I Prefer Pi 18_7 Federal Com	North Reference:	Grid
Well:	Dr Pi Fed Unit 18_7 IPP 21H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

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

Site	I Prefer Pi 18_7 Federal Com		
Site Position:		Northing:	504,515.55 usft
From:	Map	Easting:	730,590.36 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Latitude:	32.385491
		Longitude:	-103.720243

Well	Dr Pi Fed Unit 18_7 IPP 21H		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	2.00 ft	Wellhead Elevation:	0.00 ft
Grid Convergence:	0.33 °		
		Latitude:	32.385602
		Longitude:	-103.720246
		Ground Level:	3,612.70 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	11/10/2023	6.37	59.98	47,604.50000000

Design	Permitting Plan			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	357.45

Plan Survey Tool Program	Date	11/13/2023		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	20,991.74	Permitting Plan (Wellbore #1)	B005Mc_MWD+HRGM+SA ISCWSA MWD + HRGM +

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,266.00	0.00	0.00	6,266.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,765.85	10.00	221.42	6,763.31	-32.62	-28.77	2.00	2.00	0.00	221.42	
9,676.41	10.00	221.42	9,629.69	-411.52	-363.02	0.00	0.00	0.00	0.00	
10,176.26	0.00	0.00	10,127.00	-444.14	-391.79	2.00	-2.00	0.00	180.00	
11,075.85	90.00	359.70	10,699.70	128.55	-394.79	10.00	10.00	0.00	359.70	
11,075.85	90.00	359.69	10,699.70	128.55	-394.79	0.00	0.00	0.00	0.00	
20,991.74	90.00	359.69	10,699.70	10,044.30	-447.59	0.00	0.00	0.00	0.00	
20,991.74	90.00	359.69	10,699.70	10,044.30	-447.59	0.00	0.00	0.00	0.00	PBHL (Dr Pi Fed

OXY
Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 18_7 IPP 21H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB = 25' @ 3637.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB = 25' @ 3637.70ft
Site:	I Prefer Pi 18_7 Federal Com	North Reference:	Grid
Well:	Dr Pi Fed Unit 18_7 IPP 21H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	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
3,900.00	0.00	0.00	3,900.00	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
4,100.00	0.00	0.00	4,100.00	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
4,300.00	0.00	0.00	4,300.00	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
4,500.00	0.00	0.00	4,500.00	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
4,700.00	0.00	0.00	4,700.00	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
4,900.00	0.00	0.00	4,900.00	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
5,100.00	0.00	0.00	5,100.00	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
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 18_7 IPP 21H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB = 25' @ 3637.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB = 25' @ 3637.70ft
Site:	I Prefer Pi 18_7 Federal Com	North Reference:	Grid
Well:	Dr Pi Fed Unit 18_7 IPP 21H	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)
5,500.00	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
6,266.00	0.00	0.00	6,266.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.68	221.42	6,300.00	-0.15	-0.13	-0.15	2.00	2.00	0.00
6,400.00	2.68	221.42	6,399.95	-2.35	-2.07	-2.26	2.00	2.00	0.00
6,500.00	4.68	221.42	6,499.74	-7.16	-6.32	-6.87	2.00	2.00	0.00
6,600.00	6.68	221.42	6,599.24	-14.58	-12.87	-14.00	2.00	2.00	0.00
6,700.00	8.68	221.42	6,698.34	-24.61	-21.71	-23.62	2.00	2.00	0.00
6,765.85	10.00	221.42	6,763.31	-32.62	-28.77	-31.31	2.00	2.00	0.00
6,800.00	10.00	221.42	6,796.95	-37.06	-32.70	-35.57	0.00	0.00	0.00
6,900.00	10.00	221.42	6,895.43	-50.08	-44.18	-48.07	0.00	0.00	0.00
7,000.00	10.00	221.42	6,993.91	-63.10	-55.66	-60.56	0.00	0.00	0.00
7,100.00	10.00	221.42	7,092.39	-76.12	-67.15	-73.05	0.00	0.00	0.00
7,200.00	10.00	221.42	7,190.88	-89.14	-78.63	-85.55	0.00	0.00	0.00
7,300.00	10.00	221.42	7,289.36	-102.16	-90.11	-98.04	0.00	0.00	0.00
7,400.00	10.00	221.42	7,387.84	-115.17	-101.60	-110.54	0.00	0.00	0.00
7,500.00	10.00	221.42	7,486.32	-128.19	-113.08	-123.03	0.00	0.00	0.00
7,600.00	10.00	221.42	7,584.80	-141.21	-124.57	-135.53	0.00	0.00	0.00
7,700.00	10.00	221.42	7,683.28	-154.23	-136.05	-148.02	0.00	0.00	0.00
7,800.00	10.00	221.42	7,781.77	-167.25	-147.53	-160.51	0.00	0.00	0.00
7,900.00	10.00	221.42	7,880.25	-180.27	-159.02	-173.01	0.00	0.00	0.00
8,000.00	10.00	221.42	7,978.73	-193.28	-170.50	-185.50	0.00	0.00	0.00
8,100.00	10.00	221.42	8,077.21	-206.30	-181.99	-198.00	0.00	0.00	0.00
8,200.00	10.00	221.42	8,175.69	-219.32	-193.47	-210.49	0.00	0.00	0.00
8,300.00	10.00	221.42	8,274.17	-232.34	-204.95	-222.98	0.00	0.00	0.00
8,400.00	10.00	221.42	8,372.66	-245.36	-216.44	-235.48	0.00	0.00	0.00
8,500.00	10.00	221.42	8,471.14	-258.38	-227.92	-247.97	0.00	0.00	0.00
8,600.00	10.00	221.42	8,569.62	-271.39	-239.40	-260.47	0.00	0.00	0.00
8,700.00	10.00	221.42	8,668.10	-284.41	-250.89	-272.96	0.00	0.00	0.00
8,800.00	10.00	221.42	8,766.58	-297.43	-262.37	-285.46	0.00	0.00	0.00
8,900.00	10.00	221.42	8,865.07	-310.45	-273.86	-297.95	0.00	0.00	0.00
9,000.00	10.00	221.42	8,963.55	-323.47	-285.34	-310.44	0.00	0.00	0.00
9,100.00	10.00	221.42	9,062.03	-336.49	-296.82	-322.94	0.00	0.00	0.00
9,200.00	10.00	221.42	9,160.51	-349.50	-308.31	-335.43	0.00	0.00	0.00
9,300.00	10.00	221.42	9,258.99	-362.52	-319.79	-347.93	0.00	0.00	0.00
9,400.00	10.00	221.42	9,357.47	-375.54	-331.27	-360.42	0.00	0.00	0.00
9,500.00	10.00	221.42	9,455.96	-388.56	-342.76	-372.91	0.00	0.00	0.00
9,600.00	10.00	221.42	9,554.44	-401.58	-354.24	-385.41	0.00	0.00	0.00
9,676.41	10.00	221.42	9,629.69	-411.52	-363.02	-394.96	0.00	0.00	0.00
9,700.00	9.53	221.42	9,652.94	-414.52	-365.66	-397.83	2.00	-2.00	0.00
9,800.00	7.53	221.42	9,751.83	-425.64	-375.47	-408.50	2.00	-2.00	0.00
9,900.00	5.53	221.42	9,851.17	-434.16	-382.99	-416.68	2.00	-2.00	0.00
10,000.00	3.53	221.42	9,950.86	-440.08	-388.20	-422.36	2.00	-2.00	0.00
10,100.00	1.53	221.42	10,050.75	-443.38	-391.12	-425.53	2.00	-2.00	0.00
10,176.26	0.00	0.00	10,127.00	-444.14	-391.79	-426.26	2.00	-2.00	0.00
10,200.00	2.38	359.70	10,150.74	-443.65	-391.79	-425.77	10.00	10.00	0.00
10,300.00	12.38	359.70	10,249.78	-430.83	-391.86	-412.95	10.00	10.00	0.00
10,400.00	22.38	359.70	10,345.10	-400.99	-392.02	-383.14	10.00	10.00	0.00
10,500.00	32.39	359.70	10,433.78	-355.05	-392.26	-337.24	10.00	10.00	0.00

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 18_7 IPP 21H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB = 25' @ 3637.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB = 25' @ 3637.70ft
Site:	I Prefer Pi 18_7 Federal Com	North Reference:	Grid
Well:	Dr Pi Fed Unit 18_7 IPP 21H	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)
10,600.00	42.39	359.70	10,513.13	-294.40	-392.57	-276.63	10.00	10.00	0.00
10,700.00	52.40	359.70	10,580.73	-220.89	-392.96	-203.18	10.00	10.00	0.00
10,800.00	62.40	359.70	10,634.54	-136.75	-393.40	-119.11	10.00	10.00	0.00
10,900.00	72.41	359.70	10,672.91	-44.55	-393.88	-26.97	10.00	10.00	0.00
11,000.00	82.41	359.70	10,694.68	52.92	-394.39	70.43	10.00	10.00	0.00
11,075.85	90.00	359.69	10,699.70	128.55	-394.79	146.00	10.00	10.00	-0.01
11,100.00	90.00	359.69	10,699.70	152.70	-394.92	170.13	0.00	0.00	0.00
11,200.00	90.00	359.69	10,699.70	252.70	-395.45	270.05	0.00	0.00	0.00
11,300.00	90.00	359.69	10,699.70	352.69	-395.98	369.97	0.00	0.00	0.00
11,400.00	90.00	359.69	10,699.70	452.69	-396.52	469.90	0.00	0.00	0.00
11,500.00	90.00	359.69	10,699.70	552.69	-397.05	569.82	0.00	0.00	0.00
11,600.00	90.00	359.69	10,699.70	652.69	-397.58	669.74	0.00	0.00	0.00
11,700.00	90.00	359.69	10,699.70	752.69	-398.11	769.67	0.00	0.00	0.00
11,800.00	90.00	359.69	10,699.70	852.69	-398.65	869.59	0.00	0.00	0.00
11,900.00	90.00	359.69	10,699.70	952.69	-399.18	969.51	0.00	0.00	0.00
12,000.00	90.00	359.69	10,699.70	1,052.68	-399.71	1,069.43	0.00	0.00	0.00
12,100.00	90.00	359.69	10,699.70	1,152.68	-400.24	1,169.36	0.00	0.00	0.00
12,200.00	90.00	359.69	10,699.70	1,252.68	-400.78	1,269.28	0.00	0.00	0.00
12,300.00	90.00	359.69	10,699.70	1,352.68	-401.31	1,369.20	0.00	0.00	0.00
12,400.00	90.00	359.69	10,699.70	1,452.68	-401.84	1,469.13	0.00	0.00	0.00
12,500.00	90.00	359.69	10,699.70	1,552.68	-402.37	1,569.05	0.00	0.00	0.00
12,600.00	90.00	359.69	10,699.70	1,652.68	-402.91	1,668.97	0.00	0.00	0.00
12,700.00	90.00	359.69	10,699.70	1,752.67	-403.44	1,768.90	0.00	0.00	0.00
12,800.00	90.00	359.69	10,699.70	1,852.67	-403.97	1,868.82	0.00	0.00	0.00
12,900.00	90.00	359.69	10,699.70	1,952.67	-404.50	1,968.74	0.00	0.00	0.00
13,000.00	90.00	359.69	10,699.70	2,052.67	-405.04	2,068.67	0.00	0.00	0.00
13,100.00	90.00	359.69	10,699.70	2,152.67	-405.57	2,168.59	0.00	0.00	0.00
13,200.00	90.00	359.69	10,699.70	2,252.67	-406.10	2,268.51	0.00	0.00	0.00
13,300.00	90.00	359.69	10,699.70	2,352.67	-406.63	2,368.44	0.00	0.00	0.00
13,400.00	90.00	359.69	10,699.70	2,452.66	-407.17	2,468.36	0.00	0.00	0.00
13,500.00	90.00	359.69	10,699.70	2,552.66	-407.70	2,568.28	0.00	0.00	0.00
13,600.00	90.00	359.69	10,699.70	2,652.66	-408.23	2,668.21	0.00	0.00	0.00
13,700.00	90.00	359.69	10,699.70	2,752.66	-408.76	2,768.13	0.00	0.00	0.00
13,800.00	90.00	359.69	10,699.70	2,852.66	-409.30	2,868.05	0.00	0.00	0.00
13,900.00	90.00	359.69	10,699.70	2,952.66	-409.83	2,967.97	0.00	0.00	0.00
14,000.00	90.00	359.69	10,699.70	3,052.66	-410.36	3,067.90	0.00	0.00	0.00
14,100.00	90.00	359.69	10,699.70	3,152.65	-410.89	3,167.82	0.00	0.00	0.00
14,200.00	90.00	359.69	10,699.70	3,252.65	-411.43	3,267.74	0.00	0.00	0.00
14,300.00	90.00	359.69	10,699.70	3,352.65	-411.96	3,367.67	0.00	0.00	0.00
14,400.00	90.00	359.69	10,699.70	3,452.65	-412.49	3,467.59	0.00	0.00	0.00
14,500.00	90.00	359.69	10,699.70	3,552.65	-413.02	3,567.51	0.00	0.00	0.00
14,600.00	90.00	359.69	10,699.70	3,652.65	-413.56	3,667.44	0.00	0.00	0.00
14,700.00	90.00	359.69	10,699.70	3,752.65	-414.09	3,767.36	0.00	0.00	0.00
14,800.00	90.00	359.69	10,699.70	3,852.64	-414.62	3,867.28	0.00	0.00	0.00
14,900.00	90.00	359.69	10,699.70	3,952.64	-415.15	3,967.21	0.00	0.00	0.00
15,000.00	90.00	359.69	10,699.70	4,052.64	-415.69	4,067.13	0.00	0.00	0.00
15,100.00	90.00	359.69	10,699.70	4,152.64	-416.22	4,167.05	0.00	0.00	0.00
15,200.00	90.00	359.69	10,699.70	4,252.64	-416.75	4,266.98	0.00	0.00	0.00
15,300.00	90.00	359.69	10,699.70	4,352.64	-417.28	4,366.90	0.00	0.00	0.00
15,400.00	90.00	359.69	10,699.70	4,452.64	-417.82	4,466.82	0.00	0.00	0.00
15,500.00	90.00	359.69	10,699.70	4,552.63	-418.35	4,566.75	0.00	0.00	0.00
15,600.00	90.00	359.69	10,699.70	4,652.63	-418.88	4,666.67	0.00	0.00	0.00
15,700.00	90.00	359.69	10,699.70	4,752.63	-419.41	4,766.59	0.00	0.00	0.00
15,800.00	90.00	359.69	10,699.70	4,852.63	-419.95	4,866.51	0.00	0.00	0.00
15,900.00	90.00	359.69	10,699.70	4,952.63	-420.48	4,966.44	0.00	0.00	0.00

OXY
Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 18_7 IPP 21H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB = 25' @ 3637.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB = 25' @ 3637.70ft
Site:	I Prefer Pi 18_7 Federal Com	North Reference:	Grid
Well:	Dr Pi Fed Unit 18_7 IPP 21H	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)
16,000.00	90.00	359.69	10,699.70	5,052.63	-421.01	5,066.36	0.00	0.00	0.00
16,100.00	90.00	359.69	10,699.70	5,152.63	-421.54	5,166.28	0.00	0.00	0.00
16,200.00	90.00	359.69	10,699.70	5,252.62	-422.08	5,266.21	0.00	0.00	0.00
16,300.00	90.00	359.69	10,699.70	5,352.62	-422.61	5,366.13	0.00	0.00	0.00
16,400.00	90.00	359.69	10,699.70	5,452.62	-423.14	5,466.05	0.00	0.00	0.00
16,500.00	90.00	359.69	10,699.70	5,552.62	-423.67	5,565.98	0.00	0.00	0.00
16,600.00	90.00	359.69	10,699.70	5,652.62	-424.21	5,665.90	0.00	0.00	0.00
16,700.00	90.00	359.69	10,699.70	5,752.62	-424.74	5,765.82	0.00	0.00	0.00
16,800.00	90.00	359.69	10,699.70	5,852.62	-425.27	5,865.75	0.00	0.00	0.00
16,900.00	90.00	359.69	10,699.70	5,952.62	-425.80	5,965.67	0.00	0.00	0.00
17,000.00	90.00	359.69	10,699.70	6,052.61	-426.34	6,065.59	0.00	0.00	0.00
17,100.00	90.00	359.69	10,699.70	6,152.61	-426.87	6,165.52	0.00	0.00	0.00
17,200.00	90.00	359.69	10,699.70	6,252.61	-427.40	6,265.44	0.00	0.00	0.00
17,300.00	90.00	359.69	10,699.70	6,352.61	-427.93	6,365.36	0.00	0.00	0.00
17,400.00	90.00	359.69	10,699.70	6,452.61	-428.47	6,465.29	0.00	0.00	0.00
17,500.00	90.00	359.69	10,699.70	6,552.61	-429.00	6,565.21	0.00	0.00	0.00
17,600.00	90.00	359.69	10,699.70	6,652.61	-429.53	6,665.13	0.00	0.00	0.00
17,700.00	90.00	359.69	10,699.70	6,752.60	-430.06	6,765.05	0.00	0.00	0.00
17,800.00	90.00	359.69	10,699.70	6,852.60	-430.60	6,864.98	0.00	0.00	0.00
17,900.00	90.00	359.69	10,699.70	6,952.60	-431.13	6,964.90	0.00	0.00	0.00
18,000.00	90.00	359.69	10,699.70	7,052.60	-431.66	7,064.82	0.00	0.00	0.00
18,100.00	90.00	359.69	10,699.70	7,152.60	-432.19	7,164.75	0.00	0.00	0.00
18,200.00	90.00	359.69	10,699.70	7,252.60	-432.73	7,264.67	0.00	0.00	0.00
18,300.00	90.00	359.69	10,699.70	7,352.60	-433.26	7,364.59	0.00	0.00	0.00
18,400.00	90.00	359.69	10,699.70	7,452.59	-433.79	7,464.52	0.00	0.00	0.00
18,500.00	90.00	359.69	10,699.70	7,552.59	-434.32	7,564.44	0.00	0.00	0.00
18,600.00	90.00	359.69	10,699.70	7,652.59	-434.86	7,664.36	0.00	0.00	0.00
18,700.00	90.00	359.69	10,699.70	7,752.59	-435.39	7,764.29	0.00	0.00	0.00
18,800.00	90.00	359.69	10,699.70	7,852.59	-435.92	7,864.21	0.00	0.00	0.00
18,900.00	90.00	359.69	10,699.70	7,952.59	-436.45	7,964.13	0.00	0.00	0.00
19,000.00	90.00	359.69	10,699.70	8,052.59	-436.99	8,064.06	0.00	0.00	0.00
19,100.00	90.00	359.69	10,699.70	8,152.58	-437.52	8,163.98	0.00	0.00	0.00
19,200.00	90.00	359.69	10,699.70	8,252.58	-438.05	8,263.90	0.00	0.00	0.00
19,300.00	90.00	359.69	10,699.70	8,352.58	-438.58	8,363.83	0.00	0.00	0.00
19,400.00	90.00	359.69	10,699.70	8,452.58	-439.12	8,463.75	0.00	0.00	0.00
19,500.00	90.00	359.69	10,699.70	8,552.58	-439.65	8,563.67	0.00	0.00	0.00
19,600.00	90.00	359.69	10,699.70	8,652.58	-440.18	8,663.59	0.00	0.00	0.00
19,700.00	90.00	359.69	10,699.70	8,752.58	-440.71	8,763.52	0.00	0.00	0.00
19,800.00	90.00	359.69	10,699.70	8,852.57	-441.25	8,863.44	0.00	0.00	0.00
19,900.00	90.00	359.69	10,699.70	8,952.57	-441.78	8,963.36	0.00	0.00	0.00
20,000.00	90.00	359.69	10,699.70	9,052.57	-442.31	9,063.29	0.00	0.00	0.00
20,100.00	90.00	359.69	10,699.70	9,152.57	-442.84	9,163.21	0.00	0.00	0.00
20,200.00	90.00	359.69	10,699.70	9,252.57	-443.38	9,263.13	0.00	0.00	0.00
20,300.00	90.00	359.69	10,699.70	9,352.57	-443.91	9,363.06	0.00	0.00	0.00
20,400.00	90.00	359.69	10,699.70	9,452.57	-444.44	9,462.98	0.00	0.00	0.00
20,500.00	90.00	359.69	10,699.70	9,552.56	-444.97	9,562.90	0.00	0.00	0.00
20,600.00	90.00	359.69	10,699.70	9,652.56	-445.51	9,662.83	0.00	0.00	0.00
20,700.00	90.00	359.69	10,699.70	9,752.56	-446.04	9,762.75	0.00	0.00	0.00
20,800.00	90.00	359.69	10,699.70	9,852.56	-446.57	9,862.67	0.00	0.00	0.00
20,900.00	90.00	359.69	10,699.70	9,952.56	-447.10	9,962.60	0.00	0.00	0.00
20,991.74	90.00	359.69	10,699.70	10,044.30	-447.59	10,054.27	0.01	0.00	-0.01

OXY
Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 18_7 IPP 21H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB = 25' @ 3637.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB = 25' @ 3637.70ft
Site:	I Prefer Pi 18_7 Federal Com	North Reference:	Grid
Well:	Dr Pi Fed Unit 18_7 IPP 21H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
KOP (Dr Pi Fed Unit	0.00	0.00	0.00	-444.14	-391.79	504,111.57	730,197.56	32.384387	-103.721523
- plan misses target center by 592.25ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
FTP (Dr Pi Fed Unit	0.00	0.00	10,699.70	-394.15	-392.07	504,161.56	730,197.28	32.384524	-103.721523
- plan misses target center by 202.68ft at 10652.95ft MD (10550.52 TVD, -256.95 N, -392.77 E)									
- Point									
PBHL (Dr Pi Fed Unit	0.00	0.00	10,699.70	10,044.30	-447.59	514,599.47	730,141.76	32.413216	-103.721509
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
853.70	853.70	RUSTLER				
1,147.70	1,147.70	SALADO				
2,870.70	2,870.70	CASTILE				
4,567.70	4,567.70	DELAWARE				
4,654.70	4,654.70	BELL CANYON				
5,474.70	5,474.70	CHERRY CANYON				
6,722.63	6,720.70	BRUSHY CANYON				
8,496.51	8,467.70	BONE SPRING				
9,607.38	9,561.70	BONE SPRING 1ST				
10,239.08	10,189.70	BONE SPRING 2ND				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	Comment	
6,266.00	6,266.00	0.00	0.00	Build 2°/100'	
6,765.85	6,763.31	-32.62	-28.77	Hold 10° Tangent	
9,676.41	9,629.69	-411.52	-363.02	Drop 2°/100'	
10,176.26	10,127.00	-444.14	-391.79	KOP, Build 10°/100'	
11,075.85	10,699.70	128.55	-394.79	Landing Point	
20,991.74	10,699.70	10,044.30	-447.59	TD at 20991.74' MD	

Oxy USA Inc. - DR PI FED UNIT 18_7 IPP 21H

Drill Plan

1. Geologic Formations

TVD of Target (ft):	10700	Pilot Hole Depth (ft):	
Total Measured Depth (ft):	20992	Deepest Expected Fresh Water (ft):	854

Delaware Basin

Formation	MD-RKB (ft)	TVD-RKB (ft)	Expected Fluids
Rustler	854	854	
Salado	1148	1148	Salt
Castile	2871	2871	Salt
Delaware	4568	4568	Oil/Gas/Brine
Bell Canyon	4655	4655	Oil/Gas/Brine
Cherry Canyon	5475	5475	Oil/Gas/Brine
Brushy Canyon	6723	6721	Losses
Bone Spring	8497	8468	Oil/Gas
Bone Spring 1st	9607	9562	Oil/Gas
Bone Spring 2nd	10239	10190	Oil/Gas
Bone Spring 3rd			Oil/Gas
Wolfcamp			Oil/Gas
Penn			Oil/Gas
Strawn			Oil/Gas

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

2. Casing Program

Section	Hole Size (in)	MD		TVD		Csg. OD (in)	Csg Wt. (ppf)	Grade	Conn.
		From (ft)	To (ft)	From (ft)	To (ft)				
Surface	17.5	0	914	0	914	13.375	54.5	J-55	BTC
Intermediate	9.875	0	10076	0	10027	7.625	29.7	L-80 HC	BTC
Production	6.75	0	20992	0	10700	5.5	20	P-110	Wedge 461

All casing strings will be tested in accordance with 43 CFR part 3170 Subpart 3172

All Casing SF Values will meet or exceed those below

SF Collapse	SF Burst	Body SF Tension	Joint SF Tension
1.00	1.100	1.4	1.4

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. Please see Annular Clearance Variance attachment for further details.

	Y or N
Is casing new? If used, attach certification as required in 43 CFR 3160	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 rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	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?	

3. Cementing Program

Section	Stage	Slurry:	Sacks	Yield (ft ³ /ft)	Density (lb/gal)	Excess:	TOC	Placement	Description
Surface	1	Surface - Tail	955	1.33	14.8	100%	-	Circulate	Class C+Accel.
Int.	1	Intermediate 1S - Tail	424	1.65	13.2	5%	6,973	Circulate	Class H+Accel., Disper., Salt
Int.	2	Intermediate 2S - Tail BH	1246	1.71	13.3	25%	-	Bradenhead	Class C+Accel.
Prod.	1	Production - Tail	859	1.38	13.2	25%	9,576	Circulate	Class H+Ret., Disper., Salt

Offline Cementing Request

Oxy requests a variance to cement the 9.625" and/or 7.625" intermediate casing strings offline in accordance to the approved variance, EC Tran 461365. Please see Offline Cementing Variance attachment for further details.

Bradenhead CBL Request

Oxy requests permission to adjust the CBL requirement after bradenhead cement jobs, on 7-5/8" intermediate casings, as per the agreement reached in the OXY/BLM meeting on September 5, 2019. Please see Bradenhead CBL Variance attachment for further details.

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type		✓	Tested to:	Deepest TVD Depth (ft) per Section:
9.875" Hole	13-5/8"	5M	Annular		✓	70% of working pressure	10027
		5M	Blind Ram		✓	250 psi / 5000 psi	
			Pipe Ram				
			Double Ram		✓		
			Other*				
6.75" Hole	13-5/8"	5M	Annular		✓	70% of working pressure	10700
		5M	Blind Ram		✓	250 psi / 5000 psi	
			Pipe Ram				
			Double Ram		✓		
			Other*				

*Specify if additional ram is utilized

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR part 3170 Subpart 3172 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

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

	Formation integrity test will be performed per 43 CFR part 3170 Subpart 3172. 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 43 CFR part 3170 Subpart 3172.
	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 43 CFR part 3170 Subpart 3172 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. We will test the flange connection of the wellhead with a test port that is directly in the flange. We are proposing that we will run the wellhead through the rotary prior to cementing surface casing as discussed with the BLM on October 8, 2015. See attached schematics.

BOP Break Testing Request

Oxy requests permission to adjust the BOP break testing requirements as per the agreement reached in the OXY/BLM meeting on September 5, 2019. Please see BOP Break Testing Variance attachment for further details.

Oxy will use Cameron ADAPT wellhead system that uses an OEC top flange connection. This connection has been fully vetted and verified by API to Spec 6A and carries an API monogram.

5. Mud Program

Section	Depth - MD		Depth - TVD		Type	Weight (ppg)	Viscosity	Water Loss
	From (ft)	To (ft)	From (ft)	To (ft)				
Surface	0	914	0	914	Water-Based Mud	8.6 - 8.8	40-60	N/C
Intermediate	914	10076	914	10027	Saturated Brine-Based or Oil-Based Mud	8.0 - 10.0	35-45	N/C
Production	10076	20992	10027	10700	Water-Based or Oil-Based Mud	8.0 - 9.6	38-50	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. The following is a general list of products: Barite, Bentonite, Gypsum, Lime, Soda Ash, Caustic Soda, Nut Plug, Cedar Fiber, Cotton Seed Hulls, Drilling Paper, Salt Water Clay, CACL2. Oxy will use a closed mud system.

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

6. Logging and Testing Procedures

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

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	5342 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	166°F

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

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 43 CFR part 3170 Subpart 3172. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

N	H2S is present
Y	H2S Plan attached

8. Other facets of operation

	Yes/No
Will the well be drilled with a walking/skidding operation? If yes, describe. We plan to drill the 4 well pad in batch by section: all surface sections, intermediate sections and production sections. The wellhead will be secured with a night cap whenever the rig is not over the well.	Yes
Will more than one drilling rig be used for drilling operations? If yes, describe. Oxy requests the option to contract a Surface Rig to drill, set surface casing, and cement for this well. If the timing between rigs is such that Oxy would not be able to preset surface, the Primary Rig will MIRU and drill the well in its entirety per the APD. Please see the attached document for information on the spudder rig.	Yes
Total Estimated Cuttings Volume: 1623 bbls	

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

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

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

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

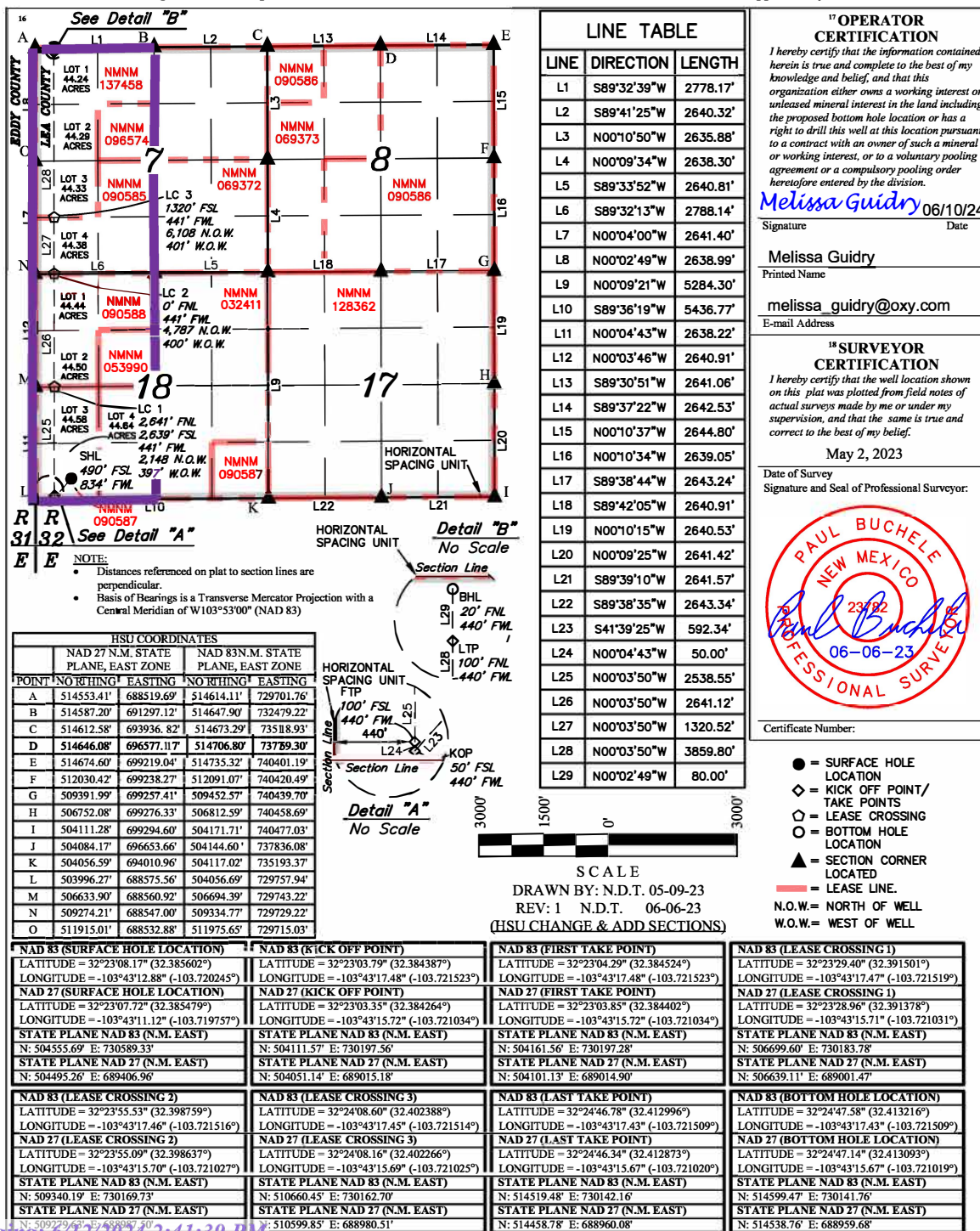
¹ API Number 30-025-47835	² Pool Code 5695	³ Pool Name Bilbrey Basin; Bone Spring
⁴ Property Code 332928	⁵ Property Name DR PI FED UNIT 18 7 IPP	⁶ Well Number 21H
⁷ OGRIDNo. 16696	⁸ Operator Name OXY USA INC.	⁹ Elevation 3612.7'

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	18	22S	32E		490	SOUTH	834	WEST	LEA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	7	22S	32E		20	NORTH	440	WEST	LEA
¹² Dedicated Acres 675.4	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.						

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



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

CONDITIONS

Action 352712

CONDITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 352712
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	6/12/2024