

RECEIVED: 01/14/19	REVIEWER: LRL	TYPE: NSL	APP NO: pLEL1901531936
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Geological & Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505

**ADMINISTRATIVE APPLICATION CHECKLIST**

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Applicant: OXY USA INC. **OGRID Number:** 16696
Well Name: SUNRISE MDP1 8-5 FEDERAL COM 173H **API:** 30-015-44931
Pool: PURPLE SAGE WOLFCAMP **Pool Code:** 98220

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

1) TYPE OF APPLICATION: Check those which apply for [A]

A. Location – Spacing Unit – Simultaneous Dedication

☒ NSL ☐ NSP (PROJECT AREA) ☐ NSP (PRORATION UNIT) ☐ SD

B. Check one only for [I] or [II]

[I] Commingling – Storage – Measurement

☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery

☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

2) NOTIFICATION REQUIRED TO: Check those which apply.

- A. ☒ Offset operators or lease holders
 B. ☐ Royalty, overriding royalty owners, revenue owners
 C. ☐ Application requires published notice
 D. ☒ Notification and/or concurrent approval by SLO
 E. ☒ Notification and/or concurrent approval by BLM
 F. ☐ Surface owner
 G. ☐ For all of the above, proof of notification or publication is attached, and/or,
 H. ☐ No notice required

FOR OCD ONLY

- ☐ Notice Complete
☐ Application Content Complete

3) CERTIFICATION: I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

SARAH CHAPMAN

Print or Type Name

Sarah Chapman

Signature

01/14/2019

Date

(713) 350-4997

Phone Number

SARAH_CHAPMAN@OXY.COM

e-mail Address



OXY USA Inc

5 Greenway Plaza, Suite 110
Houston, TX 77046-0521

January 14, 2019

New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Attention: Leonard Lowe

Re: ***Application for Administrative Approval of Non-Standard Location
Sunrise MDP1 8-5 Federal Com 173H – Purple Sage Wolfcamp
Surface – 194' FNL 1614' FWL Unit C Sec 17 T24S R31E
First Take Point – 100' FSL 2200' FWL Unit N Sec 8 T24S R31E
Last Take Point – 100' FSL 2200' FWL Unit C Sec 5 T24S R31E
Bottom Hole – 20' FNL 2200' FWL Unit C Sec 5 T24S R29E
Eddy County, New Mexico***

Dear Mr. Lowe:

OXY USA Inc. respectfully requests administrative approval of a non-standard location on the Sunrise MDP1 8-5 Federal Com 173H well, API Number-30-015-44931, Property Code 318942. The 173H well is proposed to be completed in the Purple Sage Wolfcamp pool, Pool Code 98220, which has special pool rules specifying the completed interval must be located 330 feet from the exterior boundary of the applicable spacing unit. The proposed completed interval is projected as follows:

Surface – 194' FNL 1614' FWL Unit C Sec 17 T24S R31E
First Take Point – 100' FSL 2200' FWL Unit M Sec 8 T24S R31E
Last Take Point – 100' FSL 2200' FWL Unit D Sec 5 T24S R31E
Bottom Hole – 20' FNL 2200' FWL Unit D Sec 5 T24S R29E

There is an existing adjoining horizontal spacing unit in Purple Sage Wolfcamp in which OXY USA Inc is the operator to which this unorthodox location encroaches located in T24S R31E, Section 17 – Units C, D, E, F, K L, M and N.

There are no existing spacing units in Purple Sage Wolfcamp in T23S R31E Section 32 – Units K, L, M and N.

Approval of the unorthodox completed interval will allow for efficient spacing of horizontal wells and thereby prevent waste.

To support this request, the following information has been submitted for your review:

1. Application for Permit to Drill.
2. C-102 Plat for the proposed well and additional plats with offsetting well and affected spacing units.
3. List of affected offset parties in each adjoining spacing unit in the same pool or formation located closer to the unorthodox well location than the minimum distance prescribed by applicable rule or order, copies of the signed certified return receipts will be furnished upon request.
4. Proposed Directional Survey
5. Statement from Oxy Production Engineer

If you need any additional information, please call me at 713-350-4997.

Sincerely,

Sarah Chapman
Regulatory Specialist

Attachments

CC: NMOCD-Artesia, BLM-Carlsbad, Service List

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

5. Lease Serial No.
NMNM089172

6. If Indian, Allottee or Tribe Name

1a. Type of work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator
OXY USA INCORPORATED

3a. Address
5 Greenway Plaza, Suite 110 Houston TX 770

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

4. Location of Well (Report location clearly and in accordance with any State requirements.)*

At surface NENW / 194 FNL / 1614 FWL / LAT 32.2240599 / LONG -103.8031716

At proposed prod. zone LOT 3 / 180 FNL / 2200 FWL / LAT 32.2531645 / LONG -103.8012288

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

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

8. Lease Name and Well No.
SUNRISE MDP1 8-5 FEDERAL 173H

9. API Well No.

10. Field and Pool, or Exploratory
PURPLE SAGE WOLFCAMP / WOLFCA

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 17 / T24S / R31E / NMP

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)
50 feet

16. No. of acres in lease
640

17. Spacing Unit dedicated to this well
640

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

19. Proposed Depth
11646 feet / 21803 feet

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3534 feet

22. Approximate date work will start*
10/30/2018

23. Estimated duration
25 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

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 required by the BLM.

25. Signature
(Electronic Submission)

Name (Printed/Typed)
David Stewart / Ph: (713)366-5716

Date
01/31/2018

Title

Sr. Regulatory Advisor

Approved by (Signature)
(Electronic Submission)

Name (Printed/Typed)
Cody Layton / Ph: (575)234-5959

Date
04/23/2018

Title

Supervisor Multiple Resources

Office
CARLSBAD

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

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

(Continued on page 2)

*(Instructions on page 2)

APPROVED WITH CONDITIONS
Approval Date: 04/23/2018

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.

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

Additional Operator Remarks

Location of Well

1. SHL: NENW / 194 FNL / 1614 FWL / TWSP: 24S / RANGE: 31E / SECTION: 17 / LAT: 32.2240599 / LONG: -103.8031716 (TVD: 0 feet, MD: 0 feet)
PPP: SESW / 1 FSL / 2206 FWL / TWSP: 24S / RANGE: 31E / SECTION: 5 / LAT: 32.239112 / LONG: -103.801252 (TVD: 11650 feet, MD: 16715 feet)
PPP: SESW / 340 FSL / 2200 FWL / TWSP: 24S / RANGE: 31E / SECTION: 8 / LAT: 32.2255277 / LONG: -103.8012749 (TVD: 11651 feet, MD: 12031 feet)
BHL: LOT 3 / 180 FNL / 2200 FWL / TWSP: 24S / RANGE: 31E / SECTION: 5 / LAT: 32.2531645 / LONG: -103.8012288 (TVD: 11646 feet, MD: 21803 feet)

BLM Point of Contact

Name: Katrina Ponder
Title: Geologist
Phone: 5752345969
Email: kponder@blm.gov

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.

OXY USA INC.
 SUNRISE MDP1 "8-5" FEDERAL COM #173H
 SECTIONS 31 & 32, T23S, R31E,
 SECTIONS 5, 6, 7, 8, 17 & 18, T24S, R31E,
 N.M.P.M., EDDY COUNTY, NEW MEXICO



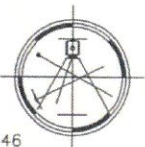
SURVEYORS CERTIFICATE

I, TERRY J. ASEL, NEW MEXICO PROFESSIONAL SURVEYOR NO. 15079, DO HEREBY CERTIFY THAT I CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND MEETS THE "MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO" AS ADOPTED BY THE NEW MEXICO STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND SURVEYORS.

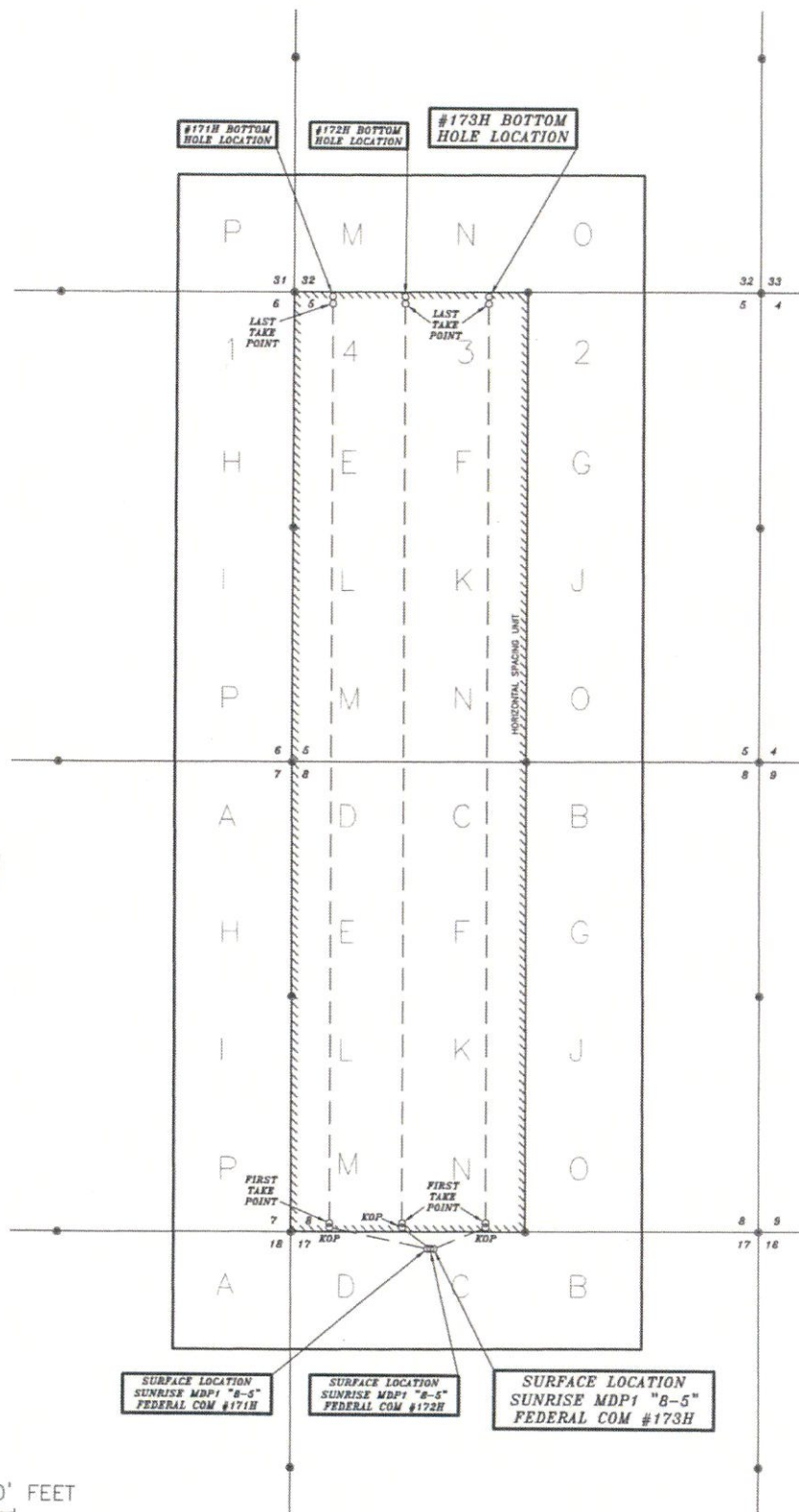
Terry J. Asel 1/10/2019
 Terry J. Asel N.M. R.P.L.S. No. 15079

Asel Surveying

P.O. BOX 393 - 310 W. TAYLOR
 HOBBS, NEW MEXICO - 575-393-9146



2000' 0 2000' 4000' FEET
 SCALE: 1"=2000'



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) 334-4178 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

API Number 30-015-44931	Pool Code 98220	Pool Name Purple Sage Wolfcamp
Property Code 318942	Property Name SUNRISE MDP1 "B-5" FEDERAL COM	Well Number 173H
OGRID No. 16696	Operator Name OXY USA INC.	Elevation 3534.0'

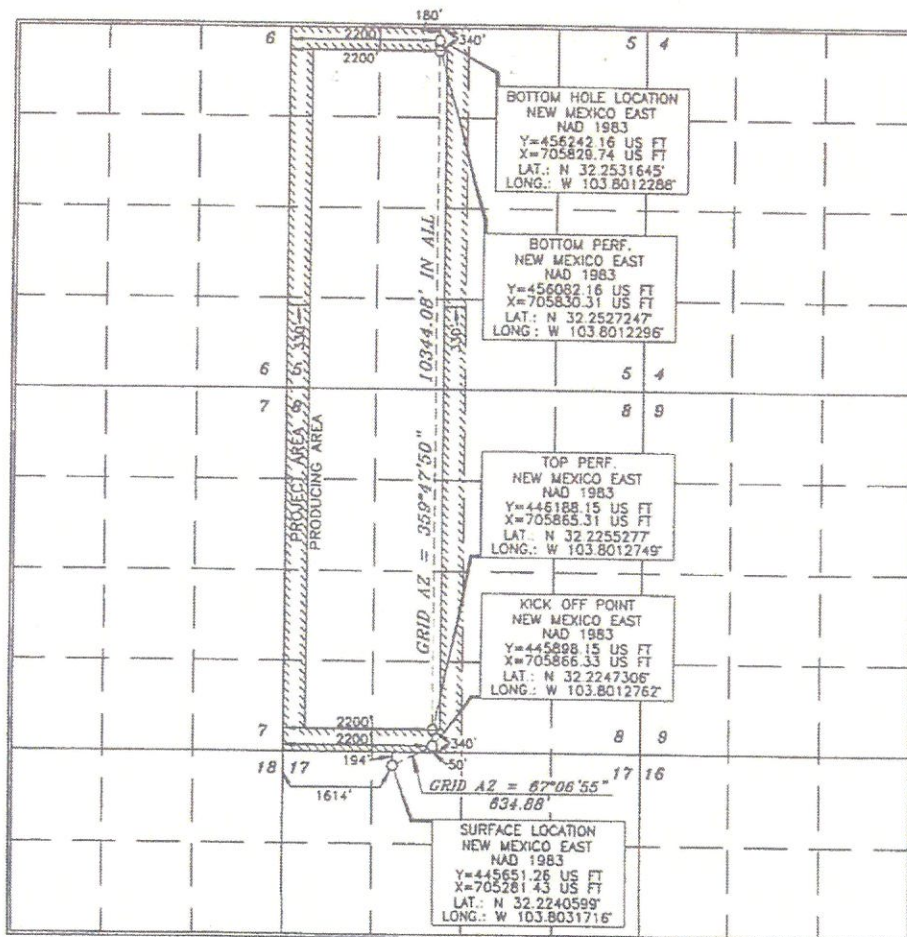
Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	17	24 SOUTH	31 EAST, N.M.P.M.		194'	NORTH	1614'	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
62	5	24 SOUTH	31 EAST, N.M.P.M.		20'	NORTH	2200'	WEST	EDDY
Dedicated Acres 6.40	Joint or Infill Y	Consolidation Code	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.



OPERATOR CERTIFICATION

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

Signature: **David Stewart** Date: **11/29/13**
Printed Name: **David Stewart**
E-mail Address: **david_stewart@oxy.com**

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from a valid and correct survey made by me or under my supervision, and that the same is true and correct to the best of my belief.

Signature: **ERRY J. AS** Date of Survey: **NOVEMBER 6, 2017**
Professional Land Surveyor
Certificate Number: **15079**

Intent ☒ As Drilled ☐

API # 30-015-44931		
Operator Name: OYJ USA Inc.	Property Name: Sunrise MIDPI F-5 Federal Com	Well Number 1754

Kick Off Point (KOP)

UL N	Section 8	Township 24S	Range 31E	Lot	Feet 50	From N/S SOUTH	Feet 1200	From E/W WEST	County EDDY
Latitude 32.2247506					Longitude -103.8012762				NAD NAD83

First Take Point (FTP)

UL N	Section 8	Township 24S	Range 31E	Lot	Feet 100	From N/S SOUTH	Feet 2200	From E/W WEST	County EDDY
Latitude 32.2255277					Longitude -103.8012749				NAD NAD83

Last Take Point (LTP)

UL C	Section 5	Township 24S	Range 31E	Lot	Feet 100	From N/S NORTH	Feet 2200	From E/W WEST	County EDDY
Latitude 32.2527247					Longitude -103.8012296				NAD NAD83

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

Is this well an infill well? ☐

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

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

Application Non-Standard Location - Service List**OXY USA Inc.****Sunrise MDP1 8-5 Federal Com 173H**

New Mexico Oil Conservation Division
811 S. First St.
Artesia, NM 88210
7018 1830 0000 8832 5741

New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505
Email to Leonard Lowe

New Mexico State Land Office
P. O. Box 1148
Santa Fe, NM 87504
7018 1830 0000 8832 5468

Bureau of Land Management Carlsbad
620 E. Green Street
Carlsbad, NM 88220-6262
7018 1830 0000 8832 5376

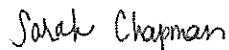
T23S-R31E**No Existing Spacing Unit: Section 32 - Units K, L, M and N****OXY USA Inc. is 100% Working Interest**

OXY USA Inc
5 Greenway Plaza, Ste 110
Houston, TX 77046

T24S-R31E**Existing Spacing Unit: Section 17 - Units C, D, E, F, K, L, M and N****OXY USA Inc. is 100% Working Interest**

OXY USA Inc
5 Greenway Plaza, Ste 110
Houston, TX 77046

Copies of this application were mailed to the following individuals, companies and organizations
on or before January 14, 2019.



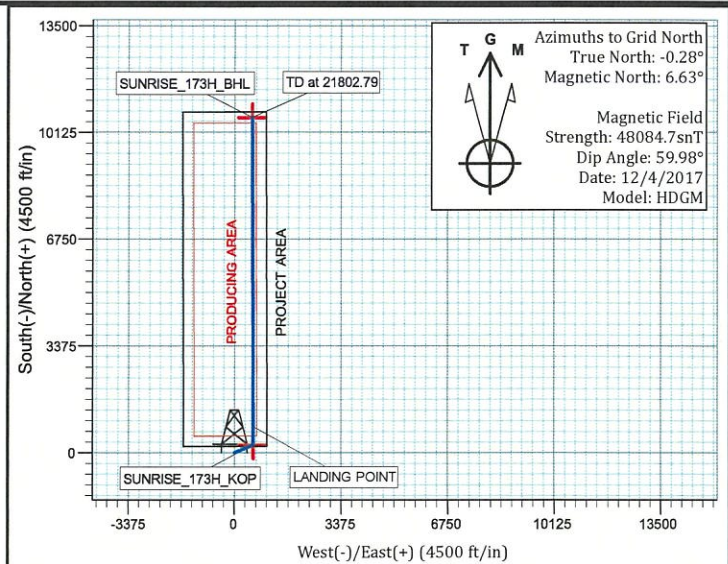
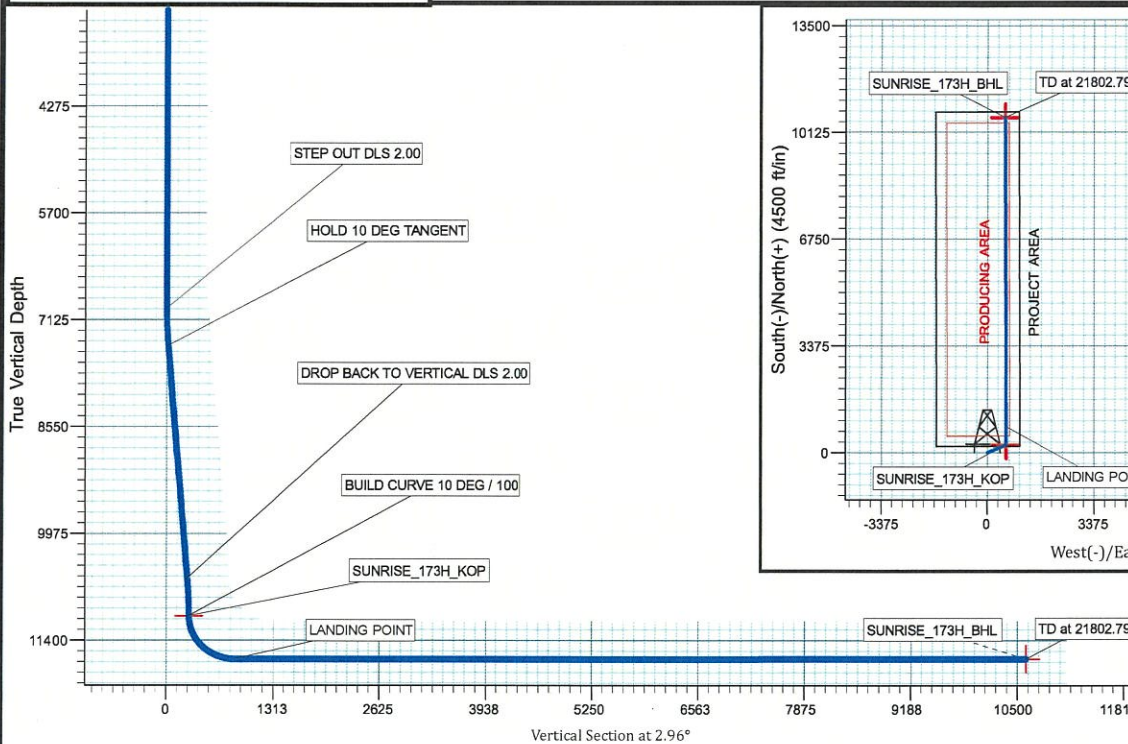
Sarah Chapman
OXY USA Inc.



Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
Site: SUNRISE MDP1 8-5 FEDERAL COM
Well: SUNRISE MDP1 8-5 FEDERAL COM 173H
Wellbore: Permitting Plan
Design: WB00

WELL DETAILS: SUNRISE MDP1 8-5 FEDERAL COM 173H

Ground Level: 3534.00
+N/-S +E/-W Northing Easting Latitude Longitude
0.00 0.00 445651.26 705281.43 32° 13' 26.615538 N 103° 48' 11.417609 W
DATUM @ 3560.50ft



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

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	6975.00	0.00	0.00	6975.00	0.00	0.00	0.00	0.00	0.00		STEP OUT DLS 2.00
3	7474.84	10.00	67.12	7472.31	16.91	40.07	2.00	67.12	18.96		HOLD 10 DEG TANGENT
4	10631.19	10.00	67.12	10580.73	229.99	544.86	0.00	0.00	257.85		DROP BACK TO VERTICAL DLS 2.00
5	11131.03	0.00	359.80	11078.04	246.91	584.94	2.00	180.00	276.82	SUNRISE_173H_KOP	BUILD CURVE 10 DEG / 100
6	12031.03	90.00	359.80	11651.00	819.86	582.91	10.00	-0.20	848.90		LANDING POINT
7	21802.79	90.06	359.80	11646.00	10591.56	548.34	0.00	0.00	10605.74	SUNRISE_173H_BHL	TD at 21802.79

OXY

**PRD NM DIRECTIONAL PLANS (NAD 1983)
SUNRISE MDP1 8-5 FEDERAL COM
SUNRISE MDP1 8_5 FEDERAL COM 173H**

WB00

Plan: Permitting Plan

Standard Planning Report

04 December, 2017

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well SUNRISE MDP1 8_5 FEDERAL COM 173H
Company:	ENGINEERING DESIGNS	TVD Reference:	DATUM @ 3560.50ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	DATUM @ 3560.50ft
Site:	SUNRISE MDP1 8-5 FEDERAL COM	North Reference:	Grid
Well:	SUNRISE MDP1 8_5 FEDERAL COM 173H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB00		
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	SUNRISE MDP1 8-5 FEDERAL COM			
Site Position:		Northing:	445,650.91 usft	Latitude: 32° 13' 26.615492 N
From:	Map	Easting:	705,211.43 usft	Longitude: 103° 48' 12.232516 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence: 0.28 °

Well	SUNRISE MDP1 8_5 FEDERAL COM 173H				
Well Position	+N/-S	0.35 ft	Northing:	445,651.26 usft	Latitude: 32° 13' 26.615538 N
	+E/-W	70.00 ft	Easting:	705,281.43 usft	Longitude: 103° 48' 11.417609 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level: 3,534.00 ft

Wellbore	WB00				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/4/2017	6.92	59.98	48,085

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	2.96

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	
6,975.00	0.00	0.00	6,975.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,474.84	10.00	67.12	7,472.31	16.91	40.07	2.00	2.00	0.00	67.12	
10,631.19	10.00	67.12	10,580.73	229.99	544.86	0.00	0.00	0.00	0.00	
11,131.03	0.00	359.80	11,078.04	246.91	584.94	2.00	-2.00	0.00	180.00	SUNRISE_173H_K
12,031.03	90.00	359.80	11,651.00	819.86	582.91	10.00	10.00	0.00	-0.20	
21,802.79	90.06	359.80	11,646.00	10,591.56	548.34	0.00	0.00	0.00	0.00	SUNRISE_173H_B

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well SUNRISE MDP1 8_5 FEDERAL COM 173H
Company:	ENGINEERING DESIGNS	TVD Reference:	DATUM @ 3560.50ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	DATUM @ 3560.50ft
Site:	SUNRISE MDP1 8-5 FEDERAL COM	North Reference:	Grid
Well:	SUNRISE MDP1 8_5 FEDERAL COM 173H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB00		
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	

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well SUNRISE MDP1 8_5 FEDERAL COM 173H
Company:	ENGINEERING DESIGNS	TVD Reference:	DATUM @ 3560.50ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	DATUM @ 3560.50ft
Site:	SUNRISE MDP1 8-5 FEDERAL COM	North Reference:	Grid
Well:	SUNRISE MDP1 8_5 FEDERAL COM 173H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB00		
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)
5,300.00	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
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
6,975.00	0.00	0.00	6,975.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.50	67.12	7,000.00	0.04	0.10	0.05	2.00	2.00	0.00
7,100.00	2.50	67.12	7,099.96	1.06	2.51	1.19	2.00	2.00	0.00
7,200.00	4.50	67.12	7,199.77	3.43	8.14	3.85	2.00	2.00	0.00
7,300.00	6.50	67.12	7,299.30	7.16	16.97	8.03	2.00	2.00	0.00
7,400.00	8.50	67.12	7,398.44	12.24	28.99	13.72	2.00	2.00	0.00
7,474.84	10.00	67.12	7,472.31	16.91	40.07	18.96	2.00	2.00	0.00
7,500.00	10.00	67.12	7,497.09	18.61	44.10	20.87	0.00	0.00	0.00
7,600.00	10.00	67.12	7,595.57	25.36	60.09	28.44	0.00	0.00	0.00
7,700.00	10.00	67.12	7,694.05	32.11	76.08	36.00	0.00	0.00	0.00
7,800.00	10.00	67.12	7,792.53	38.87	92.07	43.57	0.00	0.00	0.00
7,900.00	10.00	67.12	7,891.01	45.62	108.07	51.14	0.00	0.00	0.00
8,000.00	10.00	67.12	7,989.49	52.37	124.06	58.71	0.00	0.00	0.00
8,100.00	10.00	67.12	8,087.98	59.12	140.05	66.28	0.00	0.00	0.00
8,200.00	10.00	67.12	8,186.46	65.87	156.05	73.85	0.00	0.00	0.00
8,300.00	10.00	67.12	8,284.94	72.62	172.04	81.42	0.00	0.00	0.00
8,400.00	10.00	67.12	8,383.42	79.37	188.03	88.98	0.00	0.00	0.00
8,500.00	10.00	67.12	8,481.90	86.12	204.02	96.55	0.00	0.00	0.00
8,600.00	10.00	67.12	8,580.39	92.87	220.02	104.12	0.00	0.00	0.00
8,700.00	10.00	67.12	8,678.87	99.62	236.01	111.69	0.00	0.00	0.00
8,800.00	10.00	67.12	8,777.35	106.37	252.00	119.26	0.00	0.00	0.00
8,900.00	10.00	67.12	8,875.83	113.12	268.00	126.83	0.00	0.00	0.00
9,000.00	10.00	67.12	8,974.31	119.87	283.99	134.40	0.00	0.00	0.00
9,100.00	10.00	67.12	9,072.79	126.62	299.98	141.97	0.00	0.00	0.00
9,200.00	10.00	67.12	9,171.28	133.38	315.98	149.53	0.00	0.00	0.00
9,300.00	10.00	67.12	9,269.76	140.13	331.97	157.10	0.00	0.00	0.00
9,400.00	10.00	67.12	9,368.24	146.88	347.96	164.67	0.00	0.00	0.00
9,500.00	10.00	67.12	9,466.72	153.63	363.95	172.24	0.00	0.00	0.00
9,600.00	10.00	67.12	9,565.20	160.38	379.95	179.81	0.00	0.00	0.00
9,700.00	10.00	67.12	9,663.68	167.13	395.94	187.38	0.00	0.00	0.00
9,800.00	10.00	67.12	9,762.17	173.88	411.93	194.95	0.00	0.00	0.00
9,900.00	10.00	67.12	9,860.65	180.63	427.93	202.51	0.00	0.00	0.00
10,000.00	10.00	67.12	9,959.13	187.38	443.92	210.08	0.00	0.00	0.00
10,100.00	10.00	67.12	10,057.61	194.13	459.91	217.65	0.00	0.00	0.00
10,200.00	10.00	67.12	10,156.09	200.88	475.91	225.22	0.00	0.00	0.00
10,300.00	10.00	67.12	10,254.57	207.63	491.90	232.79	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSP	Local Co-ordinate Reference:	Well SUNRISE MDP1 8_5 FEDERAL COM 173H
Company:	ENGINEERING DESIGNS	TVD Reference:	DATUM @ 3560.50ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	DATUM @ 3560.50ft
Site:	SUNRISE MDP1 8-5 FEDERAL COM	North Reference:	Grid
Well:	SUNRISE MDP1 8_5 FEDERAL COM 173H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB00		
Design:	Permitting Plan		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
10,400.00	10.00	67.12	10,353.06	214.38	507.89	240.36	0.00	0.00	0.00	
10,500.00	10.00	67.12	10,451.54	221.13	523.88	247.93	0.00	0.00	0.00	
10,600.00	10.00	67.12	10,550.02	227.89	539.88	255.49	0.00	0.00	0.00	
10,631.19	10.00	67.12	10,580.73	229.99	544.86	257.85	0.00	0.00	0.00	
10,700.00	8.62	67.12	10,648.64	234.32	555.12	262.71	2.00	-2.00	0.00	
10,800.00	6.62	67.12	10,747.75	239.48	567.34	268.49	2.00	-2.00	0.00	
10,900.00	4.62	67.12	10,847.26	243.28	576.36	272.76	2.00	-2.00	0.00	
11,000.00	2.62	67.12	10,947.06	245.74	582.18	275.51	2.00	-2.00	0.00	
11,100.00	0.62	67.12	11,047.01	246.84	584.78	276.74	2.00	-2.00	0.00	
11,131.03	0.00	359.80	11,078.04	246.91	584.94	276.82	2.00	-2.00	0.00	
11,200.00	6.90	359.80	11,146.85	251.05	584.92	280.96	10.00	10.00	0.00	
11,300.00	16.90	359.80	11,244.58	271.64	584.85	301.52	10.00	10.00	0.00	
11,400.00	26.90	359.80	11,337.24	308.89	584.72	338.71	10.00	10.00	0.00	
11,500.00	36.90	359.80	11,422.04	361.66	584.53	391.40	10.00	10.00	0.00	
11,600.00	46.90	359.80	11,496.38	428.35	584.29	457.99	10.00	10.00	0.00	
11,700.00	56.90	359.80	11,558.00	506.94	584.02	536.46	10.00	10.00	0.00	
11,800.00	66.90	359.80	11,605.05	595.04	583.70	624.43	10.00	10.00	0.00	
11,900.00	76.90	359.80	11,636.08	689.97	583.37	719.21	10.00	10.00	0.00	
12,000.00	86.90	359.80	11,650.16	788.85	583.02	817.94	10.00	10.00	0.00	
12,031.03	90.00	359.80	11,651.00	819.86	582.91	848.90	10.00	10.00	0.00	
12,100.00	90.00	359.80	11,651.00	888.83	582.67	917.77	0.00	0.00	0.00	
12,200.00	90.00	359.80	11,651.00	988.83	582.31	1,017.61	0.00	0.00	0.00	
12,300.00	90.00	359.80	11,651.00	1,088.83	581.96	1,117.46	0.00	0.00	0.00	
12,400.00	90.00	359.80	11,650.99	1,188.83	581.60	1,217.31	0.00	0.00	0.00	
12,500.00	90.00	359.80	11,650.99	1,288.83	581.25	1,317.16	0.00	0.00	0.00	
12,600.00	90.00	359.80	11,650.98	1,388.83	580.90	1,417.00	0.00	0.00	0.00	
12,700.00	90.00	359.80	11,650.98	1,488.83	580.54	1,516.85	0.00	0.00	0.00	
12,800.00	90.00	359.80	11,650.97	1,588.83	580.19	1,616.70	0.00	0.00	0.00	
12,900.00	90.01	359.80	11,650.96	1,688.83	579.84	1,716.55	0.00	0.00	0.00	
13,000.00	90.01	359.80	11,650.95	1,788.83	579.48	1,816.39	0.00	0.00	0.00	
13,100.00	90.01	359.80	11,650.94	1,888.82	579.13	1,916.24	0.00	0.00	0.00	
13,200.00	90.01	359.80	11,650.93	1,988.82	578.77	2,016.09	0.00	0.00	0.00	
13,300.00	90.01	359.80	11,650.92	2,088.82	578.42	2,115.94	0.00	0.00	0.00	
13,400.00	90.01	359.80	11,650.90	2,188.82	578.07	2,215.78	0.00	0.00	0.00	
13,500.00	90.01	359.80	11,650.89	2,288.82	577.71	2,315.63	0.00	0.00	0.00	
13,600.00	90.01	359.80	11,650.87	2,388.82	577.36	2,415.48	0.00	0.00	0.00	
13,700.00	90.01	359.80	11,650.85	2,488.82	577.01	2,515.33	0.00	0.00	0.00	
13,800.00	90.01	359.80	11,650.84	2,588.82	576.65	2,615.17	0.00	0.00	0.00	
13,900.00	90.01	359.80	11,650.82	2,688.82	576.30	2,715.02	0.00	0.00	0.00	
14,000.00	90.01	359.80	11,650.80	2,788.82	575.94	2,814.87	0.00	0.00	0.00	
14,100.00	90.01	359.80	11,650.78	2,888.82	575.59	2,914.71	0.00	0.00	0.00	
14,200.00	90.01	359.80	11,650.75	2,988.82	575.24	3,014.56	0.00	0.00	0.00	
14,300.00	90.01	359.80	11,650.73	3,088.82	574.88	3,114.41	0.00	0.00	0.00	
14,400.00	90.01	359.80	11,650.71	3,188.82	574.53	3,214.26	0.00	0.00	0.00	
14,500.00	90.01	359.80	11,650.68	3,288.82	574.18	3,314.10	0.00	0.00	0.00	
14,600.00	90.02	359.80	11,650.65	3,388.82	573.82	3,413.95	0.00	0.00	0.00	
14,700.00	90.02	359.80	11,650.63	3,488.81	573.47	3,513.80	0.00	0.00	0.00	
14,800.00	90.02	359.80	11,650.60	3,588.81	573.11	3,613.65	0.00	0.00	0.00	
14,900.00	90.02	359.80	11,650.57	3,688.81	572.76	3,713.49	0.00	0.00	0.00	
15,000.00	90.02	359.80	11,650.54	3,788.81	572.41	3,813.34	0.00	0.00	0.00	
15,100.00	90.02	359.80	11,650.51	3,888.81	572.05	3,913.19	0.00	0.00	0.00	
15,200.00	90.02	359.80	11,650.47	3,988.81	571.70	4,013.04	0.00	0.00	0.00	
15,300.00	90.02	359.80	11,650.44	4,088.81	571.35	4,112.88	0.00	0.00	0.00	

Oxy Planning Report

Database:	HOPSP	Local Co-ordinate Reference:	Well SUNRISE MDP1 8_5 FEDERAL COM 173H
Company:	ENGINEERING DESIGNS	TVD Reference:	DATUM @ 3560.50ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	DATUM @ 3560.50ft
Site:	SUNRISE MDP1 8-5 FEDERAL COM	North Reference:	Grid
Well:	SUNRISE MDP1 8_5 FEDERAL COM 173H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB00		
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)
15,400.00	90.02	359.80	11,650.41	4,188.81	570.99	4,212.73	0.00	0.00	0.00
15,500.00	90.02	359.80	11,650.37	4,288.81	570.64	4,312.58	0.00	0.00	0.00
15,600.00	90.02	359.80	11,650.33	4,388.81	570.29	4,412.42	0.00	0.00	0.00
15,700.00	90.02	359.80	11,650.30	4,488.81	569.93	4,512.27	0.00	0.00	0.00
15,800.00	90.02	359.80	11,650.26	4,588.81	569.58	4,612.12	0.00	0.00	0.00
15,900.00	90.02	359.80	11,650.22	4,688.81	569.22	4,711.97	0.00	0.00	0.00
16,000.00	90.02	359.80	11,650.18	4,788.81	568.87	4,811.81	0.00	0.00	0.00
16,100.00	90.02	359.80	11,650.13	4,888.81	568.52	4,911.66	0.00	0.00	0.00
16,200.00	90.03	359.80	11,650.09	4,988.81	568.16	5,011.51	0.00	0.00	0.00
16,300.00	90.03	359.80	11,650.05	5,088.80	567.81	5,111.36	0.00	0.00	0.00
16,400.00	90.03	359.80	11,650.00	5,188.80	567.46	5,211.20	0.00	0.00	0.00
16,500.00	90.03	359.80	11,649.95	5,288.80	567.10	5,311.05	0.00	0.00	0.00
16,600.00	90.03	359.80	11,649.91	5,388.80	566.75	5,410.90	0.00	0.00	0.00
16,700.00	90.03	359.80	11,649.86	5,488.80	566.39	5,510.75	0.00	0.00	0.00
16,800.00	90.03	359.80	11,649.81	5,588.80	566.04	5,610.59	0.00	0.00	0.00
16,900.00	90.03	359.80	11,649.76	5,688.80	565.69	5,710.44	0.00	0.00	0.00
17,000.00	90.03	359.80	11,649.71	5,788.80	565.33	5,810.29	0.00	0.00	0.00
17,100.00	90.03	359.80	11,649.65	5,888.80	564.98	5,910.13	0.00	0.00	0.00
17,200.00	90.03	359.80	11,649.60	5,988.80	564.63	6,009.98	0.00	0.00	0.00
17,300.00	90.03	359.80	11,649.55	6,088.80	564.27	6,109.83	0.00	0.00	0.00
17,400.00	90.03	359.80	11,649.49	6,188.80	563.92	6,209.68	0.00	0.00	0.00
17,500.00	90.03	359.80	11,649.43	6,288.80	563.56	6,309.52	0.00	0.00	0.00
17,600.00	90.03	359.80	11,649.38	6,388.80	563.21	6,409.37	0.00	0.00	0.00
17,700.00	90.03	359.80	11,649.32	6,488.80	562.86	6,509.22	0.00	0.00	0.00
17,800.00	90.03	359.80	11,649.26	6,588.80	562.50	6,609.07	0.00	0.00	0.00
17,900.00	90.04	359.80	11,649.20	6,688.79	562.15	6,708.91	0.00	0.00	0.00
18,000.00	90.04	359.80	11,649.13	6,788.79	561.80	6,808.76	0.00	0.00	0.00
18,100.00	90.04	359.80	11,649.07	6,888.79	561.44	6,908.61	0.00	0.00	0.00
18,200.00	90.04	359.80	11,649.01	6,988.79	561.09	7,008.45	0.00	0.00	0.00
18,300.00	90.04	359.80	11,648.94	7,088.79	560.73	7,108.30	0.00	0.00	0.00
18,400.00	90.04	359.80	11,648.88	7,188.79	560.38	7,208.15	0.00	0.00	0.00
18,500.00	90.04	359.80	11,648.81	7,288.79	560.03	7,308.00	0.00	0.00	0.00
18,600.00	90.04	359.80	11,648.74	7,388.79	559.67	7,407.84	0.00	0.00	0.00
18,700.00	90.04	359.80	11,648.67	7,488.79	559.32	7,507.69	0.00	0.00	0.00
18,800.00	90.04	359.80	11,648.60	7,588.79	558.97	7,607.54	0.00	0.00	0.00
18,900.00	90.04	359.80	11,648.53	7,688.79	558.61	7,707.39	0.00	0.00	0.00
19,000.00	90.04	359.80	11,648.46	7,788.79	558.26	7,807.23	0.00	0.00	0.00
19,100.00	90.04	359.80	11,648.38	7,888.79	557.90	7,907.08	0.00	0.00	0.00
19,200.00	90.04	359.80	11,648.31	7,988.79	557.55	8,006.93	0.00	0.00	0.00
19,300.00	90.04	359.80	11,648.23	8,088.79	557.20	8,106.78	0.00	0.00	0.00
19,400.00	90.04	359.80	11,648.16	8,188.78	556.84	8,206.62	0.00	0.00	0.00
19,500.00	90.04	359.80	11,648.08	8,288.78	556.49	8,306.47	0.00	0.00	0.00
19,600.00	90.05	359.80	11,648.00	8,388.78	556.14	8,406.32	0.00	0.00	0.00
19,700.00	90.05	359.80	11,647.92	8,488.78	555.78	8,506.16	0.00	0.00	0.00
19,800.00	90.05	359.80	11,647.84	8,588.78	555.43	8,606.01	0.00	0.00	0.00
19,900.00	90.05	359.80	11,647.76	8,688.78	555.07	8,705.86	0.00	0.00	0.00
20,000.00	90.05	359.80	11,647.67	8,788.78	554.72	8,805.71	0.00	0.00	0.00
20,100.00	90.05	359.80	11,647.59	8,888.78	554.37	8,905.55	0.00	0.00	0.00
20,200.00	90.05	359.80	11,647.51	8,988.78	554.01	9,005.40	0.00	0.00	0.00
20,300.00	90.05	359.80	11,647.42	9,088.78	553.66	9,105.25	0.00	0.00	0.00
20,400.00	90.05	359.80	11,647.33	9,188.78	553.31	9,205.10	0.00	0.00	0.00
20,500.00	90.05	359.80	11,647.24	9,288.78	552.95	9,304.94	0.00	0.00	0.00
20,600.00	90.05	359.80	11,647.16	9,388.78	552.60	9,404.79	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well SUNRISE MDP1 8_5 FEDERAL COM 173H
Company:	ENGINEERING DESIGNS	TVD Reference:	DATUM @ 3560.50ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	DATUM @ 3560.50ft
Site:	SUNRISE MDP1 8-5 FEDERAL COM	North Reference:	Grid
Well:	SUNRISE MDP1 8_5 FEDERAL COM 173H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB00		
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)	
20,700.00	90.05	359.80	11,647.07	9,488.78	552.24	9,504.64	0.00	0.00	0.00	
20,800.00	90.05	359.80	11,646.97	9,588.78	551.89	9,604.49	0.00	0.00	0.00	
20,900.00	90.05	359.80	11,646.88	9,688.77	551.54	9,704.33	0.00	0.00	0.00	
21,000.00	90.05	359.80	11,646.79	9,788.77	551.18	9,804.18	0.00	0.00	0.00	
21,100.00	90.05	359.80	11,646.69	9,888.77	550.83	9,904.03	0.00	0.00	0.00	
21,200.00	90.06	359.80	11,646.60	9,988.77	550.48	10,003.87	0.00	0.00	0.00	
21,300.00	90.06	359.80	11,646.50	10,088.77	550.12	10,103.72	0.00	0.00	0.00	
21,400.00	90.06	359.80	11,646.40	10,188.77	549.77	10,203.57	0.00	0.00	0.00	
21,500.00	90.06	359.80	11,646.31	10,288.77	549.42	10,303.42	0.00	0.00	0.00	
21,600.00	90.06	359.80	11,646.21	10,388.77	549.06	10,403.26	0.00	0.00	0.00	
21,700.00	90.06	359.80	11,646.10	10,488.77	548.71	10,503.11	0.00	0.00	0.00	
21,800.00	90.06	359.80	11,646.00	10,588.77	548.35	10,602.96	0.00	0.00	0.00	
21,802.79	90.06	359.80	11,646.00	10,591.56	548.34	10,605.74	0.02	0.02	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SUNRISE_173H_KOP - hit/miss target - Shape - Point	0.00	0.00	11,078.04	246.91	584.94	445,898.15	705,866.33	32° 13' 29.030062 N	103° 48' 4.594411	
SUNRISE_173H_BHL - plan hits target center - Point	0.00	0.00	11,646.00	10,591.56	548.34	456,242.16	705,829.74	32° 15' 11.392181 N	103° 48' 4.423781	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
6,975.00	6,975.00	0.00	0.00	STEP OUT DLS 2.00	
7,474.84	7,472.31	16.91	40.07	HOLD 10 DEG TANGENT	
10,631.19	10,580.73	229.99	544.86	DROP BACK TO VERTICAL DLS 2.00	
11,131.03	11,078.04	246.91	584.94	BUILD CURVE 10 DEG / 100	
12,031.03	11,651.00	819.86	582.91	LANDING POINT	
21,802.79	11,646.00	10,591.56	548.34	TD at 21802.79	



Occidental Oil and Gas Corporation
ATTN: Amjad Abdelrahman
5 Greenway Plaza, Suite 110
Houston, TX 77046
713-366-5198
amjad_abdelrahman@oxy.com

January 10, 2019

Mr. Leonard Lowe
New Mexico Oil Conservation Division
1220 South Francis Drive
Santa Fe, New Mexico 87505

RE: *Application for Nonstandard Location—Engineering Justification*
OXY USA Inc.
Sunrise MDP1 8-5 Federal Com 173H
T24S R31E, Section 17 – Units C, D, E, F, K L, M and N, Eddy County
T23S R31E Section 32 – Units K, L, M and N, Eddy County

Dear Mr. Lowe:

Oxy USA Inc. respectfully seeks approval for a non-standard location, decreasing the first and last take point for Sunrise MDP1 8-5 Federal Com 173H in the Wolfcamp formation of the Purple Sage Pool from 330 feet to 100 feet. It is Oxy's responsibility as a prudent operator to maximize lateral length and minimize reserves left in the ground. Decreasing the first and last take point will increase this wells effective lateral length by 460 feet, and increase the estimated ultimate recovery of the well by approximately 5%. Any increase in first and last take point would result in untapped reserves left in the reservoir, and waste of a resource that would not be developed otherwise.

Sincerely,

A handwritten signature in black ink, appearing to read "Amjad", followed by a stylized flourish or checkmark.

Amjad Abdelrahman, P.E.
Sr. Reservoir Engineer



OXY USA INC.

A subsidiary of Occidental Petroleum Corporation

5 Greenway Plaza, Suite 110, Houston, Texas
77046
P.O. Box 4294, Houston, Texas 77210-4294

January 31, 2019

Re: **Sunrise MDP1 8-5 Federal Com #171H-176H**

Section 32, T23S R31E, Eddy County

Section 17, T24S, R31E, Eddy County

To Whom It May Concern:

OXY USA INC., is the sole Working Interest Owner of Section 32, T23S, R31E and Section 17, T24S, R31E in Eddy County, New Mexico as to depths below the Bone Spring Formation. If you have any questions please contact at the number listed below.

Best Regards,

OXY USA INC.

A handwritten signature in black ink, appearing to read "Matthew Cole", written over a light blue horizontal line.

Matthew Cole
Land Negotiator
713-366-5928

Lowe, Leonard, EMNRD

From: Chapman, Sarah E <Sarah_Chapman@oxy.com>
Sent: Thursday, January 31, 2019 1:10 PM
To: Lowe, Leonard, EMNRD
Subject: [EXT] RE: Sunrise Wells No. 173H 172H 171H
Attachments: Sunrise Landman Letter.pdf

Leonard,
The new BHL for all 6 wells will be 20' from the lease line.
Please find the attached letter from our land man.

Let me know if you have any more questions.
Thank you,

Sarah Chapman

Regulatory Specialist | Permian Resources – New Mexico
Office: (713) 350-4997 | 29.097 | Cell: (281) 642-5503
Email: Sarah_Chapman@oxy.com

From: Lowe, Leonard, EMNRD <Leonard.Lowe@state.nm.us>
Sent: Thursday, January 31, 2019 1:37 PM
To: Chapman, Sarah E <Sarah_Chapman@oxy.com>
Subject: [EXTERNAL] RE: Sunrise Wells No. 173H 172H 171H

So what is it? 20 feet? or 120 feet?

I shall wait your letter and continue writing up these NSLs for Director review.

Leonard Lowe

Engineering Bureau
Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St. Frances
Santa Fe, New Mexico 87004
Office: 505-476-3492
Cell: 505-930-6717
Fax: 505-476-3462
E-mail: leonard.lowe@state.nm.us
Website: <http://www.emnrd.state.nm.us/ocd/>

From: Chapman, Sarah E <Sarah_Chapman@oxy.com>
Sent: Thursday, January 31, 2019 12:34 PM
To: Lowe, Leonard, EMNRD <Leonard.Lowe@state.nm.us>
Subject: [EXT] RE: Sunrise Wells No. 173H 172H 171H

I see what you are saying and I apologize for any confusion.
I will get the letter to you as soon as I receive from our land man.

Lowe, Leonard, EMNRD

From: Lowe, Leonard, EMNRD
Sent: Friday, February 1, 2019 2:14 PM
To: 'Chapman, Sarah E'
Cc: Mike Bratcher (mike.bratcher@state.nm.us); Cordero, Gilbert, EMNRD; 'lisa@rwbyram.com'; Jones, William V, EMNRD; Dawson, Scott, EMNRD; Murphy, Kathleen A, EMNRD; McMillan, Michael, EMNRD; Goetze, Phillip, EMNRD; 'jglover@blm.gov'
Subject: APPROVED 6 NSLs_OXY USA INC._SUNRISE MDP1 8-5 FED COM WELLS No. (171-176)H_SEC 05 24S 31E
Importance: High

Ms. Sarah Chapman,

The following administrative orders have been issued and will soon be available on the Division's web site:
<http://ocdimage.emnrd.state.nm.us/Imaging/Default.aspx>

OXY USA INC.

POOL: Purple Sage; Wolfcamp [# 98220]

NSL-7811

API #: 30-015-45153

WELL: Sunrise MDP1 8 5 Federal Com Well No. 171H

NSL-7812

API #: 30-015-44977

WELL: Sunrise MDP1 8 5 Federal Com Well No. 172H

NSL-7813

API #: 30-015-44931

WELL: Sunrise MDP1 8 5 Federal Com Well No. 173H

NSL-7814

API #: 30-015-45112

WELL: Sunrise MDP1 8 5 Federal Com Well No. 174H

NSL-7815

API #: 30-015-45152

WELL: Sunrise MDP1 8 5 Federal Com Well No. 175H

NSL-7816

API #: 30-015-45153

WELL: Sunrise MDP1 8 5 Federal Com Well No. 176H

Leonard Lowe

Engineering Bureau

Oil Conservation Division

Energy Minerals and Natural Resources Department

1220 South St. Frances

Santa Fe, New Mexico 87004

Office: 505-476-3492

Cell: 505-930-6717

Fax: 505-476-3462

E-mail: leonard.lowe@state.nm.us

Website: <http://www.emnrd.state.nm.us/ocd/>