

# NM OIL CONSERVATION

ARTESIA DISTRICT

NOV 08 2017

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Form 3160-3  
(March 2012)

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

*F/F*

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM66925
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator OXY USA INCORPORATED (6696)		7. If Unit or CA Agreement, Name and No.
3a. Address 5 Greenway Plaza, Suite 110 Houston TX 770		8. Lease Name and Well No. (319929) MESA VERDE 18 FEDERAL COM 2H
3b. Phone No. (include area code) (713)366-5716		9. API Well No. 30-025-44191
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface LOT 4 / 310 FSL / 1078 FWL / LAT 32.2109786 / LONG -103.7194944 At proposed prod. zone LOT 1 / 180 FNL / 1323 FWL / LAT 32.2241395 / LONG -103.7187098		10. Field and Pool, or Exploratory (96229) MESA VERDE BONE SPRING / 2ND BC
14. Distance in miles and direction from nearest town or post office* 26 miles		11. Sec., T. R. M. or Blk. and Survey or Area SEC 18 / T24S / R32E / NMP
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 651.15	12. County or Parish LEA
17. Spacing Unit dedicated to this well 160	13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, 30 feet applied for, on this lease, ft.	19. Proposed Depth 10499 feet / 15329 feet	20. BLM/BIA Bond No. on file FED: ESB000226
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3572 feet	22. Approximate date work will start* 08/20/2018	23. Estimated duration 20 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.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification   |
| 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). | 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 05/24/2017
Title Sr. Regulatory Advisor		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 10/30/2017
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**

*K*  
*11/13/17*  
*Requires NSL order from Santa Fe*

## 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.

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

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

**1. SUMMARY OF REQUEST:**

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

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

**2. Description of Operations**

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

## **Additional Operator Remarks**

### **Location of Well**

1. SHL LOT 4 / 310 FSL / 1078 FWL / TWSP: 24S / RANGE: 32E / SECTION: 18 / LAT: 32.2109786 / LONG: -103.7194944 ( TVD: 0 feet, MD: 0 feet )  
PPP: LOT 4 / 340 FSL / 1321 FWL / TWSP: 24S / RANGE: 32E / SECTION: 18 / LAT: 32.2110637 / LONG: -103.7187077 ( TVD: 10499 feet, MD: 10855 feet )  
BHL: LOT 1 / 180 FNL / 1323 FWL / TWSP: 24S / RANGE: 32E / SECTION: 18 / LAT: 32.2241395 / LONG: -103.7187098 ( TVD: 10499 feet, MD: 15329 feet )

### **BLM Point of Contact**

Name: Sipra Dahal

Title: Legal Instruments Examiner

Phone: 5752345983

Email: sdahal@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.



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

## Application Data Report

10/30/2017

APD ID: 10400014437

Submission Date: 05/24/2017

Highlighted data  
reflects the most  
recent changes

Operator Name: OXY USA INCORPORATED

Well Name: MESA VERDE 18 FEDERAL COM

Well Number: 2H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - General

APD ID: 10400014437

Tie to previous NOS?

Submission Date: 05/24/2017

BLM Office: CARLSBAD

User: David Stewart

Title: Sr. Regulatory Advisor

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMNM66925

Lease Acres: 651.15

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? NO

Permitting Agent? NO

APD Operator: OXY USA INCORPORATED

Operator letter of designation:

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### Operator Info

Operator Organization Name: OXY USA INCORPORATED

Operator Address: 5 Greenway Plaza, Suite 110

Zip: 77046

Operator PO Box:

Operator City: Houston

State: TX

Operator Phone: (713)366-5716

Operator Internet Address:

### Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: MESA VERDE 18 FEDERAL COM

Well Number: 2H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: MESA VERDE  
BONE SPRING

Pool Name: 2ND BONE  
SPRING

Is the proposed well in an area containing other mineral resources? USEABLE WATER, NATURAL GAS, OIL

**Operator Name:** OXY USA INCORPORATED

**Well Name:** MESA VERDE 18 FEDERAL COM

**Well Number:** 2H

**Describe other minerals:**

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

**Type of Well Pad:** MULTIPLE WELL

**Multiple Well Pad Name:** MESA **Number:** 1H

VERDE 18 FEDERAL COM

**Well Class:** HORIZONTAL

**Number of Legs:**

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

**Well sub-Type:** INFILL

**Describe sub-type:**

**Distance to town:** 26 Miles

**Distance to nearest well:** 30 FT

**Distance to lease line:** 50 FT

**Reservoir well spacing assigned acres Measurement:** 160 Acres

**Well plat:** MesaVerde18FdCom2H\_C102\_05-23-2017.pdf

**Well work start Date:** 08/20/2018

**Duration:** 20 DAYS

### Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:**

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	310	FSL	107 8	FWL	24S	32E	18	Lot 4	32.21097 86	- 103.7194 944	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 66925	357 2	0	0
KOP Leg #1	50	FSL	132 1	FWL	24S	32E	18	Lot 4	32.21026 65	- 103.7187 075	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 66925	- 635 4	995 5	992 6
PPP Leg #1	340	FSL	132 1	FWL	24S	32E	18	Lot 4	32.21106 37	- 103.7187 077	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 66925	- 692 7	108 55	104 99

**Operator Name:** OXY USA INCORPORATED

**Well Name:** MESA VERDE 18 FEDERAL COM

**Well Number:** 2H

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
EXIT Leg #1	340	FNL	132 3	FWL	24S	32E	18	Lot 1	32.22369 97	- 103.7187 097	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 113965	- 692 7	151 68	104 99
BHL Leg #1	180	FNL	132 3	FWL	24S	32E	18	Lot 1	32.22413 95	- 103.7187 098	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 113965	- 692 7	153 29	104 99





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

## Drilling Plan Data Report

10/30/2017

APD ID: 10400014437

Submission Date: 05/24/2017

Highlighted data  
reflects the most  
recent changes

Operator Name: OXY USA INCORPORATED

Well Name: MESA VERDE 18 FEDERAL COM

Well Number: 2H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	RUSTLER	3572	946	946	SHALE, DOLOMITE, ANHYDRITE	USEABLE WATER	No
2	SALADO	2511	1061	1061	SHALE, DOLOMITE, HALITE, ANHYDRITE	OTHER : SALT	No
3	CASTILE	240	3332	3332	ANHYDRITE	OTHER : salt	No
4	LAMAR	-1071	4643	4643	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL, OTHER : BRINE	No
5	BELL CANYON	-1086	4658	4658	SANDSTONE, SILTSTONE	NATURAL GAS, OIL, OTHER : BRINE	No
6	CHERRY CANYON	-1953	5525	5525	SANDSTONE, SILTSTONE	NATURAL GAS, OIL, OTHER : BRINE	No
7	BRUSHY CANYON	-3232	6804	6804	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL, OTHER : BRINE	No
8	BONE SPRING	-4872	8444	8455	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL	Yes
9	BONE SPRING 1ST	-6120	9692	9720	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL	Yes
10	BONE SPRING 2ND	-6327	9899	9928	LIMESTONE, SANDSTONE, SILTSTONE	NATURAL GAS, OIL	Yes

### Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M

Rating Depth: 10499

Equipment: 13-5/8" 5M Annular, Blind Ram, Double Ram

Requesting Variance? YES

Variance request: Request for the use of a flexible choke line from the BOP to Choke Manifold.

Testing Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the

**Operator Name:** OXY USA INCORPORATED

**Well Name:** MESA VERDE 18 FEDERAL COM

**Well Number:** 2H

working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. A multibowl wellhead or a unionized multibowl wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system will be tested. We will test the flange connection of the wellhead with a test port that is directly in the flange. 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.

**Choke Diagram Attachment:**

MesaVerde18FdCom2H\_ChkManifold\_5M\_\_05-19-2017.pdf

**BOP Diagram Attachment:**

MesaVerde18FdCom2H\_FlexHoseCert\_05-19-2017.pdf

MesaVerde17\_8FdCom2H\_BOP\_5M13\_58\_Amd\_20170918141932.pdf

**Section 3 - Casing**

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	14.75	10.75	NEW	API	N	0	996	0	996			996	J-55	45.5	BUTT	8.91	1.75	BUOY	3.56	BUOY	3.51
2	PRODUCTI ON	9.875	7.625	NEW	API	N	0	7500	0	7500			7500	L-80	29.7	BUTT	1.22	1.84	BUOY	2.16	BUOY	4.65
3	PRODUCTI ON	9.875	7.625	NEW	API	N	7500	9826	7500	9798			2326	HCL-80	29.7	BUTT	1.46	1.95	BUOY	2.15	BUOY	2.13
4	LINER	6.75	4.5	NEW	API	N	9726	15329	9698	10499			5603	P-110	11.6	OTHER - DQX	1.68	1.2	BUOY	2.28	BUOY	2.25

**Casing Attachments**

**Operator Name:** OXY USA INCORPORATED

**Well Name:** MESA VERDE 18 FEDERAL COM

**Well Number:** 2H

#### Casing Attachments

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

MesaVerde18FdCom2H\_CsgCriteria\_05-19-2017.pdf

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**Casing ID:** 2      **String Type:** PRODUCTION

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

MesaVerde18FdCom2H\_CsgCriteria\_05-19-2017.pdf

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**Casing ID:** 3      **String Type:** PRODUCTION

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

MesaVerde18FdCom2H\_CsgCriteria\_05-19-2017.pdf

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Operator Name: OXY USA INCORPORATED

Well Name: MESA VERDE 18 FEDERAL COM

Well Number: 2H

#### Casing Attachments

Casing ID: 4

String Type: LINER

Inspection Document:

Spec Document:

Tapered String Spec:

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

MesaVerde18FdCom2H\_CsgCriteria\_05-19-2017.pdf

MesaVerde18FdCom2H\_4.5\_11.6\_P110\_DQX\_05-19-2017.pdf

#### Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	996	509	1.68	14.2	855	50	Class C Cement	Accelerator

PRODUCTION	Lead	4693	0	4193	770	1.85	12.9	1425	75	Class C Cement	Accelerator, Retarder
PRODUCTION	Tail		4193	4693	142	1.33	14.8	189	75	Class C Cement	none
PRODUCTION	Lead		4593	8826	358	3.05	10.2	1092	20	Pozzolan/CI C	Retarder
PRODUCTION	Tail		8826	9826	163	1.65	13.2	269	20	Class H Cement	Retarder, Dispersant, Salt
LINER	Lead		9726	15329	548	1.63	13.2	893	15	Class H Cement	Retarder, Dispersant, Salt

**Operator Name:** OXY USA INCORPORATED

**Well Name:** MESA VERDE 18 FEDERAL COM

**Well Number:** 2H

### Section 5 - Circulating Medium

**Mud System Type:** Closed

**Will an air or gas system be Used?** NO

**Description of the equipment for the circulating system in accordance with Onshore Order #2:**

**Diagram of the equipment for the circulating system in accordance with Onshore Order #2:**

**Describe what will be on location to control well or mitigate other conditions:** Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements. The following is a general list of products: Barite, Bentonite, Gypsum, Lime, Soda Ash, Caustic Soda, Nut Plug, Cedar Fiber, Cotton Seed Hulls, Drilling Paper, Salt Water Clay, CaCl<sub>2</sub>. OXY proposes to drill out the 10-3/4" surface casing shoe with a saturated brine system from 996-4693', which is the base of the salt system. At this point we will swap fluid systems to a high viscosity mixed metal hydroxide system. We will drill with this system to the Intermediate Casing TD @ 9855'.

**Describe the mud monitoring system utilized:** PVT/MD Totco/Visual Monitoring

**Circulating Medium Table**

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	996	WATER-BASED MUD	8.4	8.6							
996	4693	OTHER : Brine	9.8	10							
4693	9826	WATER-BASED MUD	8.8	9.6							
9826	15329	OIL-BASED MUD	8.8	9.6							

**Operator Name:** OXY USA INCORPORATED

**Well Name:** MESA VERDE 18 FEDERAL COM

**Well Number:** 2H

## Section 6 - Test, Logging, Coring

**List of production tests including testing procedures, equipment and safety measures:**

GR from TD to surface (horizontal well – vertical portion of hole). Mud Log from production csg Shoe to TD.

**List of open and cased hole logs run in the well:**

GR,MUDLOG

**Coring operation description for the well:**

No coring is planned at this time.

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 5241

**Anticipated Surface Pressure:** 2931.22

**Anticipated Bottom Hole Temperature(F):** 176

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

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations plan:**

MesaVerde18FdCom2H\_H2S1\_05-19-2017.pdf

MesaVerde18FdCom2H\_H2S2\_05-19-2017.pdf

## Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**

MesaVerde18FdCom2H\_DirectPlan\_05-19-2017.pdf

MesaVerde18FdCom2H\_DirectPlot\_05-19-2017.pdf

**Other proposed operations facets description:**

Well will be drilled with a walking/skidding operation. Plan to drill the two well pad in batch by section: all surface sections, intermediate sections and production sections. The wellhead will be secured with a night cap whenever the rig is not over the well.

OXY requests the option to set casing shallower yet still below the salts if losses or hole conditions require this. Cement volumes may be adjusted if casing is set shallower and a DV tool will be run in case a contingency second stage is required for cement to reach surface. If cement circulated to surface during first stage we will drop a cancellation cone and not pump the second stage.

OXY requests the option to 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.

**Cement Top and Liner Overlap**

1. OXY is requesting permission to have minimum fill of cement behind the 4-1/2" production liner to be 100

**Operator Name:** OXY USA INCORPORATED

**Well Name:** MESA VERDE 18 FEDERAL COM

**Well Number:** 2H

ft into previous casing string. The reason for this is so that we can come back and develop shallower benches from the same 7-5/8" mainbore in the future.

2. Our plan is to use a whipstock for our exit through the mainbore. Based on our lateral target, we are planning a whipstock cased/hole exit so that kick-off point will allow for roughly 10deg/100' doglegs needed for the curve

3. Cement will be brought to the top of this liner hanger

**Other proposed operations facets attachment:**

MesaVerde18FdCom2H\_SpudRigData\_05-19-2017.pdf

MesaVerde18FdCom2H\_DrillPlanAmd\_20170918144410.pdf

MesaVerde18FdCom2H\_CsgTieBackDetail\_20170918144428.pdf

**Other Variance attachment:**



## Section 1 - General

Would you like to address long-term produced water disposal? NO

## Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:



### **Section 3 - Unlined Pits**

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

### **Section 4 - Injection**

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number:

Injection well name:

Assigned injection well API number?

Injection well API number:

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

### Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

### Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:



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

## Bond Info Data Report

10/30/2017

### Bond Information

Federal/Indian APD: FED

BLM Bond number: ESB000226

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:



APD ID: 10400014437

Submission Date: 05/24/2017

Highlighted data  
reflects the most  
recent changes

Operator Name: OXY USA INCORPORATED

Well Name: MESA VERDE 18 FEDERAL COM

Well Number: 2H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

MesaVerde18FdCom2H\_ExistRoads\_05-19-2017.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

### Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

MesaVerde18FdCom2H\_NewRoad\_05-19-2017.pdf

New road type: LOCAL

Length: 110.2 Feet

Width (ft.): 30

Max slope (%): 0

Max grade (%): 0

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

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

New road access plan or profile prepared? YES

New road access plan attachment:

MesaVerde18FdCom2H\_NewRoad\_05-19-2017.pdf

Access road engineering design? NO

**Operator Name:** OXY USA INCORPORATED  
**Well Name:** MESA VERDE 18 FEDERAL COM

**Well Number:** 2H

**Access road engineering design attachment:**

**Access surfacing type:** OTHER

**Access topsoil source:** ONSITE

**Access surfacing type description:** Caliche

**Access onsite topsoil source depth:** 0

**Offsite topsoil source description:**

**Onsite topsoil removal process:** If available

**Access other construction information:** None

**Access miscellaneous information:** Proposed road will run approximately 110.2' north through pasture to the southwest corner of the pad.

**Number of access turnouts:**

**Access turnout map:**

### Drainage Control

**New road drainage crossing:** CULVERT

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

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

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

### Access Additional Attachments

**Additional Attachment(s):**

### Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Attach Well map:**

MesaVerde18FdCom2H\_ExistWells\_05-23-2017.pdf

**Existing Wells description:**

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

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

**Estimated Production Facilities description:**

**Production Facilities description:** a. In the event the well is found productive, the Mesa Verde Federal central tank battery would be utilized and the necessary production equipment will be installed at the well site. b. All flow lines will adhere to API standards. They will consist of 2 – 4" composite flowlines operating 75% MAWP on surface. Survey of a strip of land 30' wide and 4412.3' in length crossing USA Land in Section 18 T24S R32E NMPM, Lea County, NM and being 15' left and 15' right of the centerline survey. c. Electric line will follow a route approved by the BLM. Survey of a strip of land 30' wide and 229.7' in length crossing USA Land in Section 18 T24S R32E NMPM, Lea County, NM and being 15' left and 15' right of the centerline survey. d. See attached for additional information on the Mesa Verde Development Surface Production Facilities

**Operator Name:** OXY USA INCORPORATED

**Well Name:** MESA VERDE 18 FEDERAL COM

**Well Number:** 2H

and the Fresh Water Station.

**Production Facilities map:**

MesaVerde18FdCom2H\_FacilityPLEL\_05-19-2017.pdf

MesaVerde18FdCom2H\_MVSurfFac\_05-19-2017.pdf

MesaVerde18FdCom2H\_MVFWPond\_05-19-2017.pdf

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

**Water Source Table**

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

**Water source type:** GW WELL

**Describe type:**

**Source latitude:**

**Source longitude:**

**Source datum:**

**Water source permit type:** WATER WELL

**Source land ownership:** COMMERCIAL

**Water source transport method:** PIPELINE,TRUCKING

**Source transportation land ownership:** COMMERCIAL

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

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

**Source volume (gal):** 84000

**Water source and transportation map:**

MesaVerde18FdCom2H\_GRRWtrSource\_05-19-2017.pdf

MesaVerde18FdCom2H\_MesqWtrSrc\_05-19-2017.pdf

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

**New water well?** NO

**New Water Well Info**

**Well latitude:**

**Well Longitude:**

**Well datum:**

**Well target aquifer:**

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

**Est thickness of aquifer:**

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft):**

**Well casing type:**

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

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

**New water well casing?**

**Used casing source:**

**Operator Name:** OXY USA INCORPORATED

**Well Name:** MESA VERDE 18 FEDERAL COM

**Well Number:** 2H

**Drilling method:**

**Drill material:**

**Grout material:**

**Grout depth:**

**Casing length (ft.):**

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

**Well Production type:**

**Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

## Section 6 - Construction Materials

**Construction Materials description:** Primary - All caliche utilized for the drilling pad and proposed access road will be obtained from an existing BLM/State/Fee approved pit or from prevailing deposits found on the location. Will use BLM recommended extra caliche from other locations close by for roads, if available. Secondary - The secondary way of obtaining caliche to build locations and roads will be by "turning over" the location. This means, caliche will be obtained from the actual well site. A caliche permit will be obtained from BLM prior to pushing up any caliche. 2400 cubic yards is max amount of caliche needed for pad and roads. Amount will vary for each pad. The procedure below has been approved by BLM personnel: a. The top 6" of topsoil is pushed off and stockpiled along the side of the location. b. An approximate 120' X 120' area is used within the proposed well site to remove caliche. c. Subsoil is removed and piled alongside the 120' X 120' within the pad site. d. When caliche is found, material will be stockpiled within the pad site to build the location and road. e. Then subsoil is pushed back in the hole and caliche is spread accordingly across entire location and road. f. Once the well is drilled the stockpiled top soil will be used for interim reclamation and spread along areas where caliche is picked up and the location size is reduced. Neither caliche nor subsoil will be stockpiled outside of the well pad. Topsoil will be stockpiled along the edge of the pad. Caliche will be provided from the following pit located in Sections 6, T24S R32E. Water will be provided from the proposed frac pond to be located in Section 18, T24S R32E.

**Construction Materials source location attachment:**

## Section 7 - Methods for Handling Waste

**Waste type:** DRILLING

**Waste content description:** Water-Based Cuttings, Water-Based Mud, Oil-Based Cuttings, Oil-Based Mud, Produced Water

**Amount of waste:** 2526.6 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** Haul-Off Bins

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

**Disposal type description:**

**Disposal location description:** An approved facility that can process drill cuttings, drill fluids, flowback water, produced water, contaminated soils, and other non-hazardous wastes.

## Reserve Pit

**Reserve Pit being used?** NO

**Temporary disposal of produced water into reserve pit?**

**Operator Name:** OXY USA INCORPORATED

**Well Name:** MESA VERDE 18 FEDERAL COM

**Well Number:** 2H

**Reserve pit length (ft.)**

**Reserve pit width (ft.)**

**Reserve pit depth (ft.)**

**Reserve pit volume (cu. yd.)**

**Is at least 50% of the reserve pit in cut?**

**Reserve pit liner**

**Reserve pit liner specifications and installation description**

### Cuttings Area

**Cuttings Area being used?** NO

**Are you storing cuttings on location?** YES

**Description of cuttings location** A closed loop system will be utilized consisting of above ground steel tanks and haul-off bins. Disposal of liquids, drilling fluids and cuttings will be disposed of at an approved facility.

**Cuttings area length (ft.)**

**Cuttings area width (ft.)**

**Cuttings area depth (ft.)**

**Cuttings area volume (cu. yd.)**

**Is at least 50% of the cuttings area in cut?**

**WCuttings area liner**

**Cuttings area liner specifications and installation description**

### Section 8 - Ancillary Facilities

**Are you requesting any Ancillary Facilities?:** NO

**Ancillary Facilities attachment:**

**Comments:**

### Section 9 - Well Site Layout

**Well Site Layout Diagram:**

MesaVerde18FdCom2H\_WellSiteCL\_05-19-2017.pdf

**Comments:** V-Door-South - CL Tanks-East - 330' X 440' – Two Well Pad



**Operator Name:** OXY USA INCORPORATED

**Well Name:** MESA VERDE 18 FEDERAL COM

**Well Number:** 2H

## Section 10 - Plans for Surface Reclamation

**Type of disturbance:** NEW

**Recontouring attachment:**

**Drainage/Erosion control construction:** Reclamation to be wind rowed as needed to control erosion

**Drainage/Erosion control reclamation:** Reclamation to be wind rowed as needed to control erosion

**Wellpad long term disturbance (acres):** 2.12

**Wellpad short term disturbance (acres):** 3.33

**Access road long term disturbance (acres):** 0.04

**Access road short term disturbance (acres):** 0.08

**Pipeline long term disturbance (acres):** 1.0129247

**Pipeline short term disturbance (acres):** 3.038774

**Other long term disturbance (acres):** 0

**Other short term disturbance (acres):** 0.16

**Total long term disturbance:** 3.1729248

**Total short term disturbance:** 6.608774

**Reconstruction method:** If the well is deemed commercially productive, caliche from the areas of the pad site not required for operations will be reclaimed. The original topsoil will be returned to the area of the drill pad not necessary to operate the well. These unused areas of the drill pad will be contoured, as close as possible, to match the original topography, and the area will be seeded with an approved BLM mixture to re-establish vegetation. After concluding the drilling and/or completion operations, if the well is found non-commercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM. The original topsoil will again be returned to the pad and contoured, as close as possible, to the original topography, and the area will be seeded with an approved BLM mixture to re-establish vegetation.

**Topsoil redistribution:** The original topsoil will be returned to the area of the drill pad not necessary to operate the well.

**Soil treatment:** To be determined by the BLM.

**Existing Vegetation at the well pad:** To be determined by the BLM at Onsite.

**Existing Vegetation at the well pad attachment:**

**Existing Vegetation Community at the road:** To be determined by the BLM at Onsite.

**Existing Vegetation Community at the road attachment:**

**Existing Vegetation Community at the pipeline:** To be determined by the BLM at Onsite.

**Existing Vegetation Community at the pipeline attachment:**

**Existing Vegetation Community at other disturbances:** To be determined by the BLM at Onsite.

**Existing Vegetation Community at other disturbances attachment:**

**Non native seed used?** NO

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** NO

**Seedling transplant description attachment:**

**Will seed be harvested for use in site reclamation?** NO

**Seed harvest description:**

**Seed harvest description attachment:**

**Operator Name:** OXY USA INCORPORATED

**Well Name:** MESA VERDE 18 FEDERAL COM.

**Well Number:** 2H

## Seed Management

### Seed Table

**Seed type:**

**Seed source:**

**Seed name:**

**Source name:**

**Source address:**

**Source phone:**

**Seed cultivar:**

**Seed use location:**

**PLS pounds per acre:**

**Proposed seeding season:**

### Seed Summary

**Total pounds/Acre:**

Seed Type	Pounds/Acre
-----------	-------------

**Seed reclamation attachment:**

### Operator Contact/Responsible Official Contact Info

**First Name:** JIM

**Last Name:** WILSON

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

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

**Seedbed prep:**

**Seed BMP:**

**Seed method:**

**Existing invasive species?** NO

**Existing invasive species treatment description:**

**Existing invasive species treatment attachment:**

**Weed treatment plan description:** To be determined by the BLM.

**Weed treatment plan attachment:**

**Monitoring plan description:** To be determined by the BLM.

**Monitoring plan attachment:**

**Success standards:** To be determined by the BLM.

**Pit closure description:** NA

**Pit closure attachment:**

## Section 11 - Surface Ownership

**Operator Name:** OXY USA INCORPORATED  
**Well Name:** MESA VERDE 18 FEDERAL COM

**Well Number:** 2H

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** PIPELINE

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Operator Name:** OXY USA INCORPORATED

**Well Name:** MESA VERDE 18 FEDERAL COM

**Well Number:** 2H

**Disturbance type:** OTHER

**Describe:** Electric Line

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Disturbance type:** NEW ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Operator Name:** OXY USA INCORPORATED  
**Well Name:** MESA VERDE 18 FEDERAL COM

**Well Number:** 2H

## Section 12 - Other Information

**Right of Way needed?** YES

**Use APD as ROW?** YES

**ROW Type(s):** 281001 ROW - ROADS, 285003 ROW - POWER TRANS, 288100 ROW - O&G Pipeline, 289001 ROW - O&G Well Pad

## ROW Applications

**SUPO Additional Information:** Permian Basin MOA - see attached SUPO and to be determined by BLM. GIS Shapefiles furnished upon request

**Use a previously conducted onsite?** NO

**Previous Onsite information:**

## Other SUPO Attachment

MesaVerde18FdCom2H\_StakeNotice\_05-19-2017.pdf  
MesaVerde18FdCom2H\_GasCapPlan\_05-19-2017.pdf  
MesaVerde18FdCom2H\_MiscSvyPlats\_05-19-2017.pdf  
MesaVerde18FdCom2H\_SUPO\_05-23-2017.pdf



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

## Operator Certification Data Report

10/30/2017

### Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

**NAME:** David Stewart

**Signed on:** 05/24/2017

**Title:** Sr. Regulatory Advisor

**Street Address:** 5 Greenway Plaza, Suite 110

**City:** Houston

**State:** TX

**Zip:** 77046

**Phone:** (713)366-5716

**Email address:** David\_stewart@oxy.com

### Field Representative

**Representative Name:** Jim Wilson

**Street Address:** P.O. Box 50250

**City:** Midland

**State:** TX

**Zip:** 79710

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

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