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Form 3160-3
(March 2012)

HOBBS OCD

SEP 25 2017

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM66925

6. If Indian, Allotee or Tribe Name:

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

8. Lease Name and Well No. (319616): MESA VERDE 17-8 FEDERAL CO 4H

2. Name of Operator: OXY USA INCORPORATED (16696)

9. API Well No.: 30-025-44042

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

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

10. Field and Pool, or Exploratory (96229): MESA VERDE BONE SPRING / 2ND BC

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

At surface: SWSE / 280 FSL / 2624 FEL / LAT 32.2109879 / LONG -103.696671

At proposed prod. zone: NWNE / 230 FNL / 2207 FEL / LAT 32.2386312 / LONG -103.6953407

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 17 / T24S / R32E / NMP

14. Distance in miles and direction from nearest town or post office*: 26 miles

12. County or Parish: LEA

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 100 feet

16. No. of acres in lease: 651.15

17. Spacing Unit dedicated to this well: 320

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 30 feet

19. Proposed Depth: 10582 feet / 20610 feet

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3560 feet

22. Approximate date work will start*: 07/05/2018

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	Name *(Printed/Typed)*	Date
(Electronic Submission)	David Stewart / Ph: (713)366-5716	03/09/2017

Title: Sr. Regulatory Advisor

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	09/14/2017

Title	Office
Supervisor Multiple Resources	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

KZ
09/25/17

AFMSS

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

Operator Certification Data Report

09/18/2017

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:** 03/09/2017

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

APD ID: 10400012240 **Submission Date:** 03/09/2017

Operator Name: OXY USA INCORPORATED

Well Name: MESA VERDE 17-8 FEDERAL COM **Well Number:** 4H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

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Section 1 - General

APD ID: 10400012240 **Tie to previous NOS?** **Submission Date:** 03/09/2017

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:

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 **Mater 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 17-8 FEDERAL COM **Well Number:** 4H **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

Operator Name: OXY USA INCORPORATED

Well Name: MESA VERDE 17-8 FEDERAL COM **Well Number:** 4H

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 VERDE 17-8 FEDERAL COM **Number:** 3H

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:** 100 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: MesaVerde17_8FdCom4H_C102_03-08-2017.pdf

Well work start Date: 07/05/2018 **Duration:** 25 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	280	FSL	2624	FEL	24S	32E	17	Aliquot SWSE	32.2109879	-103.696671	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 66925	3560	0	0
KOP Leg #1	100	FSL	2184	FEL	24S	32E	17	Aliquot SWSE	32.2104999	-103.6952486	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 66925	-6449	10048	10009
PPP Leg #1	340	FSL	2185	FEL	24S	32E	17	Aliquot SWSE	32.2111596	-103.6952507	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 66925	-7022	10948	10582

Operator Name: OXY USA INCORPORATED

Well Name: MESA VERDE 17-8 FEDERAL COM **Well Number:** 4H

	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	2207	FEL	24S	32E	8	Aliquot NWNE	32.2383288	-103.6953397	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 55953	-7022	20500	10582
BHL Leg #1	230	FNL	2207	FEL	24S	32E	8	Aliquot NWNE	32.2386312	-103.6953407	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 55953	-7022	20610	10582

APD ID: 10400012240 **Submission Date:** 03/09/2017

Operator Name: OXY USA INCORPORATED

Well Name: MESA VERDE 17-8 FEDERAL COM **Well Number:** 4H

Well Type: OIL WELL **Well Work Type:** Drill

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Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
17746	RUSTLER	3560	918	918	SHALE,DOLOMITE,ANHYDRITE	USEABLE WATER	No
18574	SALADO	2553	1007	1007	SHALE,DOLOMITE,HALITE,ANHYDRITE	OTHER : SALT	No
17762	CASTILE	260	3300	3300	ANHYDRITE	OTHER : salt	No
17719	LAMAR	-1110	4670	4670	LIMESTONE,SANDSTONE,SILTSTONE	NATURAL GAS,OIL,OTHER : BRINE	No
15332	BELL CANYON	-1125	4685	4685	SANDSTONE,SILTSTONE	NATURAL GAS,OIL,OTHER : BRINE	No
15316	CHERRY CANYON	-1982	5542	5542	SANDSTONE,SILTSTONE	NATURAL GAS,OIL,OTHER : BRINE	No
17713	BRUSHY CANYON	-3351	6911	6911	LIMESTONE,SANDSTONE,SILTSTONE	NATURAL GAS,OIL,OTHER : BRINE	No
17688	BONE SPRING	-4942	8503	8524	LIMESTONE,SANDSTONE,SILTSTONE	NATURAL GAS,OIL	No
15338	BONE SPRING 1ST	-6037	9597	9634	LIMESTONE,SANDSTONE,SILTSTONE	NATURAL GAS,OIL	No
17737	BONE SPRING 2ND	-6370	9930	9969	LIMESTONE,SANDSTONE,SILTSTONE	NATURAL GAS,OIL	No

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M **Rating Depth:** 10582

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

Requesting Variance? YES

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

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

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

MesaVerde17_8FdCom4H_ChkManifold_5M__03-09-2017.pdf

BOP Diagram Attachment:

MesaVerde17_8FdCom4H_FlexHoseCert_03-09-2017.pdf

MesaVerde17_8FdCom4H_BOP_5M13_58__03-09-2017.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	17.5	13.375	NEW	API	N	0	969	0	969			969	J-55	54.5	BUTT	2.19	1.31	BUOY	2.59	BUOY	2.41
2	PRODUCTION	12.25	9.625	NEW	API	N	0	7500	0	7495			7500	L-80	47	BUTT	1.21	1.43	BUOY	1.93	BUOY	1.84
3	PRODUCTION	12.25	9.625	NEW	API	N	7500	9948	7495	9909			2448	HCL-80	47	BUTT	1.19	1.48	BUOY	4.39	BUOY	3.54
4	LINER	8.5	5.5	NEW	API	N	9848	20610	9809	10582			10762	P-110	20	OTHER - DQX	1.98	1.2	BUOY	2.54	BUOY	2.31

Casing Attachments

Operator Name: OXY USA INCORPORATED

Well Name: MESA VERDE 17-8 FEDERAL COM **Well Number:** 4H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

MesaVerde17_8FdCom4H_CsgCriteria_03-09-2017.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

MesaVerde17_8FdCom4H_CsgCriteria_03-09-2017.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

MesaVerde17_8FdCom4H_CsgCriteria_03-09-2017.pdf

Operator Name: OXY USA INCORPORATED

Well Name: MESA VERDE 17-8 FEDERAL COM **Well Number:** 4H

Casing Attachments

Casing ID: 4 **String Type:** LINER

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

MesaVerde17_8FdCom4H_5.5_20_P110_DQX_03-09-2017.pdf

MesaVerde17_8FdCom4H_CsgCriteria_03-09-2017.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	969	775	1.35	14.8	1046	50	Class C Cement	Accelerator
PRODUCTION	Lead	4721	0	4221	1154	1.85	12.9	2135	75	Class C Cement	Accelerator, Retarder
PRODUCTION	Tail		4221	4721	265	1.33	14.8	352	125	Class C Cement	none
PRODUCTION	Lead		0	8948	1550	3.05	10.2	4728	75	Class C Cement	Retarder
PRODUCTION	Tail		8948	9948	239	1.65	13.2	394	20	Class H Cement	Retarder, Dispersant, Salt
LINER	Lead		9848	20610	1740	1.63	13.2	2836	15	Class H Cement	Retarder, Low Fluid Loss Control, Dispersant, Salt

Operator Name: OXY USA INCORPORATED

Well Name: MESA VERDE 17-8 FEDERAL COM **Well Number:** 4H

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, CaCl2. OXY proposes to drill out the 13-3/8" surface casing shoe with a saturated brine system from 969' - 4721', which is the base of the salt system. At this point we will swap fluid systems to a high viscosity mixed metal hydroxide system or a fully saturated direct emulsion system. We will drill with this system to the Production Casing TD @ 9948'. This fluid will also be used in the production section. However, OXY proposed both OBM and brine as contingency options.
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	969	WATER-BASED MUD	8.4	8.6							
969	4721	OTHER : Brine	9.8	10							
4721	9948	WATER-BASED MUD	8.8	9.6							
9948	20610	OIL-BASED MUD	8.8	9.6							

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 Surface 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: 5283 **Anticipated Surface Pressure:** 2954.96

Anticipated Bottom Hole Temperature(F): 165

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

MesaVerde17_8FdCom4H_H2S1_03-09-2017.pdf
MesaVerde17_8FdCom4H_H2S2_03-09-2017.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

MesaVerde17_8FdCom4H_DirectPlan_03-09-2017.pdf
MesaVerde17_8FdCom4H_DirectPlot_03-09-2017.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 cancelation cone and not pump the second stage.

Cement Top and Liner Overlap -
a. Oxy is requesting permission to have minimum fill of cement behind the 5-1/2" production liner to be 100 ft into previous casing string. The reason for this is so that we can come back and develop shallower benches from the same 9-5/8" mainbore in the future.
b. 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.
c. Cement will be brought to the top of this liner hanger

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. See attached for additional spudder rig information.

Other proposed operations facets attachment:

MesaVerde17_8FdCom4H_CsgTieBackDetail_03-09-2017.pdf

MesaVerde17_8FdCom4H_DrillPlan_03-09-2017.pdf

MesaVerde17_8FdCom4H_SpudRigData_08-16-2017.pdf

Other Variance attachment:

APD ID: 10400012240 **Submission Date:** 03/09/2017

Operator Name: OXY USA INCORPORATED

Well Name: MESA VERDE 17-8 FEDERAL COM **Well Number:** 4H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

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Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

MesaVerde17_8FdCom4H_ExistRoads_03-09-2017.pdf

Existing Road Purpose: FLUID TRANSPORT **Row(s) Exist?** NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

MesaVerde17_8FdCom4H_NewRoad_03-09-2017.pdf

New road type: LOCAL

Length: 2138.7 Feet **Width (ft.):** 25

Max slope (%): 0 **Max grade (%):** 0

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

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

New road access plan or profile prepared? YES

New road access plan attachment:

MesaVerde17_8FdCom4H_NewRoad_03-09-2017.pdf

Access road engineering design? NO

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 go approximately 2061.5' east and then 77.2' 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:

MesaVerde17_8FdCom4H_ExistWells_03-09-2017.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. See proposed facilities layout diagram. b. All flow lines will adhere to API standards. They will consist of 2 – 4" composite flowlines operating 75% MAWP, surface, lines to follow surveyed route. Survey of a strip of land 30' wide and 5498.9' in length crossing USA Land in Sections 17 & 18 T24S R32E NMPM, Lea County, NM and being 15' left and 15' right of the centerline survey, see attached. c. Electric line will follow a route approved by the BLM. Survey of a strip of land 30' wide and 231.4' in length crossing USA Land in Sections 17 T24S R32E NMPM, Lea County, NM and being 15' left and 15' right of the centerline survey, see attached. d.

See attached for additional information on the Mesa Verde Development Surface Production Facilities and the Fresh Water Station.

Production Facilities map:

MesaVerde17_8FdCom4H_FacilityPLEL_03-09-2017.pdf

MesaVerde17_8FdCom4H_MVFWPond_03-09-2017.pdf

MesaVerde17_8FdCom4H_MVSurfFac_03-09-2017.pdf

MesaVerde17_8FdCom4H_MVSurfFacDetail_08-16-2017.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:

MesaVerde17_8FdCom4H_GRRWtrSource_03-09-2017.pdf

MesaVerde17_8FdCom4H_MesqWtrSrc_03-09-2017.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.):**

Operator Name: OXY USA INCORPORATED

Well Name: MESA VERDE 17-8 FEDERAL COM **Well Number:** 4H

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

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

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

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: 2345.5 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?

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:

MesaVerde17_8FdCom4H_WellSiteCL_03-09-2017.pdf

Comments: V-Door-East - CL Tanks-North - 330' X 440' – 2 Well Pad

Operator Name: OXY USA INCORPORATED

Well Name: MESA VERDE 17-8 FEDERAL COM **Well Number:** 4H

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): 0.69

Access road short term disturbance (acres): 1.23

Pipeline long term disturbance (acres): 1.2623737

Pipeline short term disturbance (acres): 3.7871213

Other long term disturbance (acres): 0

Other short term disturbance (acres): 0.16

Total long term disturbance: 4.072374

Total short term disturbance: 8.507121

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:

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 17-8 FEDERAL COM **Well Number:** 4H

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 17-8 FEDERAL COM **Well Number:** 4H

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:**

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 requested.
Use a previously conducted onsite? NO

Previous Onsite information:

Other SUPO Attachment

MesaVerde17_8FdCom4H_GasCapPlan_03-09-2017.pdf
MesaVerde17_8FdCom4H_MiscSvyPlats_03-09-2017.pdf
MesaVerde17_8FdCom4H_StakeNotice_03-09-2017.pdf
MesaVerde17_8FdCom4H_SUPO_03-09-2017.pdf

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:

Decribe 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:

AFMSS

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

Bond Info Data Report

09/18/2017

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:

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:

Decribe 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: