

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0137  
Expires: January 31, 2018

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

Carlsbad Field Office  
Serial No. 51  
Indian, Allottee or Tribe Name

**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		7. If Unit or CA/Agreement, Name and/or No.
2. Name of Operator OXY USA INCORPORATED Contact: DAVID STEWART E-Mail: david_stewart@oxy.com		8. Well Name and No. SALT RIDGE CC 20-17 FED COM 23H
3a. Address 5 GREENWAY PLAZA SUITE 110 HOUSTON, TX 77046-0521	3b. Phone No. (include area code) Ph: 432.685.5717	9. API Well No. 30-015-44947-00-X1
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 17 T24S R29E SENW 2409FNL 1352FWL 32.218319 N Lat, 104.010765 W Lon		10. Field and Pool or Exploratory Area CORRAL DRAW-BONE SPRING
		11. County or Parish, State EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Change to Original APD
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

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

OXY USA Inc. respectfully requests to amend the APD for the following wells.

GC 6-14-18  
Accepted for record - NMOC

The purpose of this sundry is to amend the surface casing setting depth to be deeper than originally permitted. After consulting with BLM geologists, the set depth chosen for the surface casing is 530'. Please see attached for the information that is relevant to changing the surface casing set depth.

RECEIVED

JUN 13 2018

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

DISTRICT II, ARTESIA O.C.D.

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #421437 verified by the BLM Well Information System  
For OXY USA INCORPORATED, sent to the Carlsbad  
Committed to AFMSS for processing by PRISCILLA PEREZ on 05/25/2018 (18PP1821SE)

Name (Printed/Typed) DAVID STEWART	Title REGULATORY ADVISOR
Signature (Electronic Submission)	Date 05/24/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>MUSTAFA HAQUE</u>	Title <u>PETROLEUM ENGINEER</u>	Date <u>06/05/2018</u>
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Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Carlsbad

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

(Instructions on page 2)

**\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\***

**OXY USA Inc. - Salt Ridge CC 20-17 Federal Com #23H – Amended Drill Plan**

**Sundry Purpose**

The purpose of this sundry is to change the surface casing setting depth to be deeper. After consulting with Oxy and BLM geologists, the set depth chosen for the surface casing is 530'. The information included in this sundry contains information that is relevant to changing the surface casing set depth.

**1. Geologic Formations**

TVD of target	8579'	Pilot Hole Depth	N/A
MD at TD:	16144'	Deepest Expected fresh water:	67'

**Delaware Basin**

Formation	TVD - RKB	Expected Fluids
Rustler	10	Brine
Salado	600	Losses
Castile	1408	
Lamar/Delaware	2766	
Bell Canyon	2798	Water
Cherry Canyon	3704	Oil/Gas
Brushy Canyon	4940	Oil/Gas/Losses
Bone Spring	6524	Oil/Gas
1st Bone Spring	7290	Oil/Gas
<b>2nd Bone Spring</b>	<b>7711</b>	<b>Oil/Gas</b>

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

**2. Casing Program**

Hole Size (in)	Casing Interval		Csg. Size (in)	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	Bouyant	Bouyant
	From (ft)	To (ft)							Body SF Tension	Joint SF Tension
14.75	0	530	10.75	40.5	J55	BTC	1.125	1.2	1.4	1.4
9.875	0	7982	7.625	26.4	L80	BTC	1.125	1.2	1.4	1.4
6.75	0	8532	5.5	20	P-110	DQX	1.125	1.2	1.4	1.4
6.75	8532	16144	4.5	13.5	P-110	DQX	1.125	1.2	1.4	1.4
SF Values will meet or exceed										

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

\*Oxy requests the option to set casing shallower yet still below the salts if losses or hole conditions require this. Cement volumes may be adjusted if casing is set shallower and a DV tool may be run in case hole conditions merit pumping a second stage cement job to comply with permitted top of cement. If cement circulated to surface during first stage we will drop a cancellation cone and not pump the second stage.

**OXY USA Inc. - Salt Ridge CC 20-17 Federal Com #23H – Amended Drill Plan**

**Annular Clearance Variance Request**

As per the agreement reached in the Oxy/BLM face-to-face meeting on Feb 22, 2018, Oxy requests permission to allow deviation from the 0.422” annular clearance requirement from Onshore Order #2 under the following conditions:

1. Annular clearance to meet or exceed 0.422” between intermediate casing ID and production casing coupling only on the first 500’ overlap between both casings.
2. Annular clearance less than 0.422” is acceptable for the curve and lateral portions of the production open hole section.

**3. Cementing Program**

Casing	Slurry	#Sks	Wt. (Lb/gal)	Yld ft <sup>3</sup> /sack	H2O gal/sk	500# Comp. Strength	Slurry Description
Surface	Tail	417	14.8	1.33	6.365	5:26	Accelerator
1st Stage Intermediate	Lead	425	10.2	2.58	11.57	6:59	Retarder, Extender, Dispersant
	Tail	160	13.2	1.61	7.8	7:11	Retarder, Dispersant, Salt
DV/ECP Tool @ 2831 ft							
2nd Stage Intermediate	Tail	666	13.6	1.67	8.765	7:32	Extender, Accelerator, Dispersant
Production	Tail	990	13.2	1.38	6.686	3:49	Retarder, Dispersant, Fluid Loss Control, Extender

Casing String	Top of Lead (ft)	Bottom of Lead (ft)	Top of Tail (ft)	Bottom of Tail (ft)	% Excess Lead	% Excess Tail
Surface	N/A	N/A	0	530	N/A	100%
1st Stage Intermediate	2731	6982	6982	7982	20%	20%
2nd Stage Intermediate	N/A	N/A	0	2831	N/A	100%
Production	N/A	N/A	7482	16144	N/A	20%

**OXY USA Inc. - Salt Ridge CC 20-17 Federal Com #23H – Amended Drill Plan**

**4. Mud Program**

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From (ft)	To (ft)				
0	530	Water-Based Mud	8.4-8.8	40-60	N/C
530	7982	Saturated Brine-Based Mud	9.0-9.6	35-45	N/C
7982	16144	Water-Based Mud or Oil-Based Mud	8.8-9.6	35-50	N/C

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

What will be used to monitor the loss or gain of fluid?	PVT/MD Totco/Visual Monitoring
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## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	OXY USA INC.
LEASE NO.:	NMNM94651
WELL NAME & NO.:	23H -SALT RIDGE CC 20 17 FED COM
SURFACE HOLE FOOTAGE:	2409'/N & 1352'/W
BOTTOM HOLE FOOTAGE:	180'/S & 2200'/W
LOCATION:	Section 17., T24S., R.29E., NMP
COUNTY:	EDDY County, New Mexico

Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input type="radio"/> Low	<input checked="" type="radio"/> Medium	<input type="radio"/> High
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP

**All previous COAs still apply except for the following:**

### A. CASING

1. The 10-3/4 inch surface casing shall be set at approximately 530 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

**MHH 06052018**

# GENERAL REQUIREMENTS

## A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

# PERFORMANCE DATA

**TMK UP DQX**  
**Technical Data Sheet**

**5.500 in**

**20.00 lbs/ft**

**P-110**

## Tubular Parameters

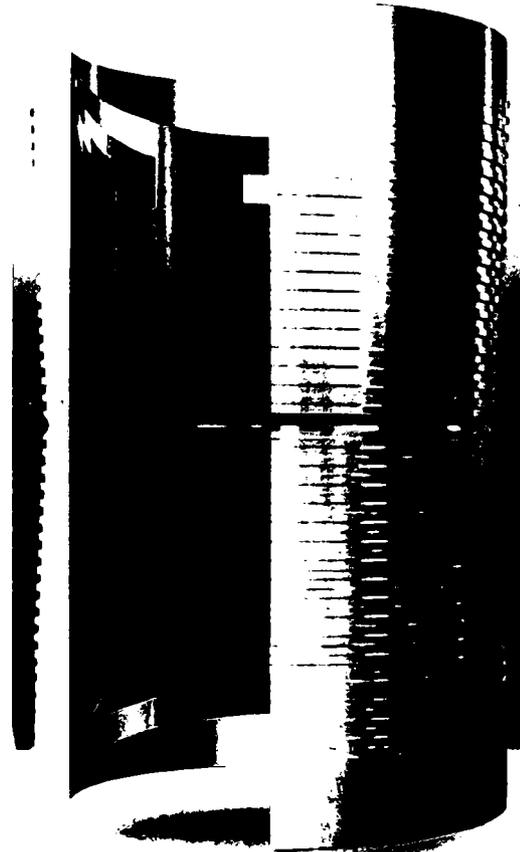
Size	5.500	in	Minimum Yield	110,000	psi
Nominal Weight	20.00	lbs/ft	Minimum Tensile	125,000	psi
Grade	P-110		Yield Load	641,000	lbs
PE Weight	19.81	lbs/ft	Tensile Load	729,000	lbs
Wall Thickness	0.361	in	Min. Internal Yield Pressure	12,600	psi
Nominal ID	4.778	in	Collapse Pressure	11,100	psi
Drift Diameter	4.653	in			
Nom. Pipe Body Area	5.828	in <sup>2</sup>			

## Connection Parameters

Connection OD	6.050	in
Connection ID	4.778	in
Make-Up Loss	4.122	in
Critical Section Area	5.828	in <sup>2</sup>
Tension Efficiency	100.0	%
Compression Efficiency	100.0	%
Yield Load In Tension	641,000	lbs
Min. Internal Yield Pressure	12,600	psi
Collapse Pressure	11,100	psi

## Make-Up Torques

Min. Make-Up Torque	11,600	ft-lbs
Opt. Make-Up Torque	12,900	ft-lbs
Max. Make-Up Torque	14,100	ft-lbs
Yield Torque	20,600	ft-lbs



Printed on: July-29-2014

**NOTE:**

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# PERFORMANCE DATA

TMK UP ULTRA™ DQX  
Technical Data Sheet

4.500 in

13.50 lbs/ft

P-110

## Tubular Parameters

Size	4.500	in	Minimum Yield	110,000	psi
Nominal Weight	13.50	lbs/ft	Minimum Tensile	125,000	psi
Grade	P-110		Yield Load	422,000	lbs
PE Weight	13.04	lbs/ft	Tensile Load	479,000	lbs
Wall Thickness	0.290	in	Min. Internal Yield Pressure	12,400	psi
Nominal ID	3.920	in	Collapse Pressure	10,700	psi
Drift Diameter	3.795	in			
Nom. Pipe Body Area	3.836	in <sup>2</sup>			

## Connection Parameters

Connection OD	5.000	in
Connection ID	3.920	in
Make-Up Loss	3.772	in
Critical Section Area	3.836	in <sup>2</sup>
Tension Efficiency	100.0	%
Compression Efficiency	100.0	%
Yield Load In Tension	422,000	lbs
Min. Internal Yield Pressure	12,400	psi
Collapse Pressure	10,700	psi
Uniaxial Bending	112	1/100 ft

## Make-Up Torques

Min. Make-Up Torque	6,000	ft-lbs
Opt. Make-Up Torque	6,700	ft-lbs
Max. Make-Up Torque	7,300	ft-lbs
Yield Torque	10,800	ft-lbs



Printed on: October-22-2014

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