

DEC 22 2016

Carlsbad Field Office
NMOCD Artesia

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.

Owner or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

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

1. Type of Well
 Oil Well Gas Well Other

8. Well Name and No.
CEDAR CANYON 29 FEDERAL 21H

2. Name of Operator
OXY USA INCORPORATED
Contact: DAVID STEWART
E-Mail: david_stewart@oxy.com

9. API Well No.
30-015-43601-01-X1

3a. Address
5 GREENWAY PLAZA SUITE 110
HOUSTON, TX 77046-0521
3b. Phone No. (include area code)
Ph: 432.685.5717

10. Field and Pool or Exploratory Area
PIERCE CROSSING

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Sec 29 T24S R29E SENE 1989FNL 150FEL
32.190086 N Lat, 103.998072 W Lon

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 A PD
	<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 approval for the following changes to the approved APD:

Amend casing/cementing program - Amend for surface casing setting depth and run production liner. OXY is requesting permission to have minimum fill of cement behind 4-1/2" liner to be 100' into the production casing. The reason for this is so OXY can come back and develop shallower benches from the same 7-5/8" mainbore in the future. *→ refer to the attached well bore plan*

Surface Casing
10-3/4" 40.5# J55 BTC new csg @ 0-450' 14-3/4" hole
SF Coll-7.6 SF Burst-1.54 SF Body Ten-2.89 SF Joint Ten-3.23
Production Casing - 7-5/8" new casing @ 0-8147'M, 9-7/8" hole

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #359314 verified by the BLM Well Information System
For OXY USA INCORPORATED, sent to the Carlsbad
Committed to AFMSS for processing by MUSTAFA HAQUE on 12/13/2016 (17MH0021SE)

Name (Printed/Typed) DAVID STEWART	Title REGULATORY ADVISOR
Signature (Electronic Submission)	Date 11/30/2016

*Accepted for record
NMOCD
12.13*

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>MUSTAFA HAQUE</u>	Title <u>PETROLEUM ENGINEER</u>	Date <u>12/13/2016</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 ****

Additional data for EC transaction #359314 that would not fit on the form

32. Additional remarks, continued

a. 7-5/8" 26.4# L-80 BTC new csg @ 0-7200'M
SF Coll-1.19 SF Burst-1.29 SF Body Ten-2.03 SF Joint Ten-2.03
b. 7-5/8" 29.7# L-80 BTC new csg @ 7200-8147'M
SF Coll-1.13 SF Burst-1.43 SF Body Ten-4.62 SF Joint Ten-4.7

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 at +/- 2933' in case a contingency second stage is required for cement to reach surface. If cement circulates on 1st stage, cancellation cone will be dropped.

Production Liner

4-1/2" 11.6# P-110 DQX new csg @ 8047-13492'M 6-3/4" hole
SF Coll-1.64 SF Burst-1.2 SF Body Ten-1.91 SF Joint Ten-2.05

Surface - Circulate cement w/ 296sx CI C cmt w/ accelerator, 14.8ppg 1.35 yield, 500# CS in 6.5hr, 50% Excess

Production - Circulate cement w/ 860sx CI C cmt w/ retarder, 10.2ppg 3.05 yield, 500# CS in 15.07hr, 75% Excess followed by 163sx CI H cmt w/ retarder, dispersant, salt, 13.2ppg 1.65 yield, 500# CS in 12.57hr, 20% Excess.

Contingency 2nd Stage - Circulate cement to surface w/ 460sx CI C cmt w/ accelerator, retarder, 12.9ppg 1.85 yield, 500# CS in 12.44hr, 75% Excess followed by 182sx CI C cmt, 14.8ppg 1.33 yield, 500# CS in 6.31hr, 125% Excess.

Liner - Cement w/ 532sx CI H cmt w/ retarder, dispersant, salt, 13.2ppg 1.63 yield, 500# CS in 15.15hr, 15% Excess. TOC @ 8047'

Mud program -

Depth	Mud WT	Vis Sec	Fluid Loss	Type
0 - 450'	8.4-8.6	40-60	N/C	EnerSeal (MMH)
450-2933'	9.8-10.0	35-45	N/C	Brine
2933-8147'	8.8-9.6	38-50	N/C	EnerSeal (MMH)
8147-13492'	8.8-9.6	35-50	N/C	OBM

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

DEC 22 2016

**PECOS DISTRICT
CONDITIONS OF APPROVAL**

RECEIVED

OPERATOR'S NAME:	OXY USA Inc
LEASE NO.:	NM94651
WELL NAME & NO.:	21H-Cedar Canyon 29 Federal
SURFACE HOLE FOOTAGE:	1989'/N & 150'/E
BOTTOM HOLE FOOTAGE:	1336'/N & 160'/W
LOCATION:	Section 29, T. 24 S., R. 29 E., NMPM
COUNTY:	Eddy County, New Mexico

All previous COAs still apply except for the following:

A. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. 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.).

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

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. (For surface casing the BOP can be nipped up after the cement has reached 500 psi compressive strength.)

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Medium cave/karst

Possible water flows in Castile and Salado.

Possible lost circulation in Rustler, Salado and Delaware.

1. The 10-3/4 inch surface casing shall be set at approximately 450 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.

Formation below the 10-3/4" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.

The 7-5/8 inch intermediate casing must be kept liquid filled while running into hole to meet minimum BLM requirements for collapse.

2. The minimum required fill of cement behind the 7-5/8 inch production casing, is:

Operator has proposed a contingency DV tool at 2933'. If operator circulates cement on the first stage, operator is approved to inflate the ACP and run the DV tool cancellation plug and cancel the second stage of the proposed cement plan. If cement does not circulate, operator will inflate ACP and proceed with the second stage.

a. First stage to DV tool:

- Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

b. Second stage above DV tool:

- Cement to surface. If cement does not circulate see A.1.a, c-d above.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.

Formation below the 7-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

3. The minimum required fill of cement behind the 4-1/2 inch production liner is:

- Cement as proposed by operator. Operator shall provide method of verification.
Excess calculates to 15% - Additional cement might be required.

4. 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.

MHH 12132016

OXY USA WTP LP

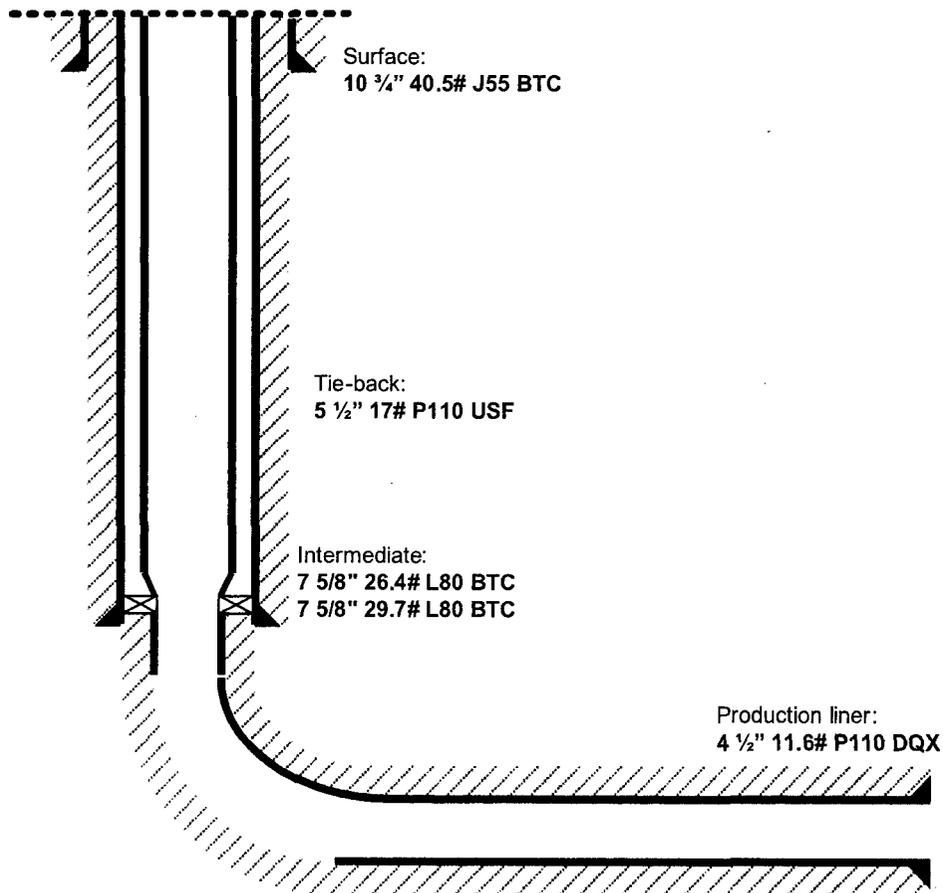
Cedar Canyon 29 Fed Com 2H

Below is a summary that describes the general operational steps to drill and complete well Cedar Canyon 29 Fed Com 2H:

- Drill 14 3/4" hole x 10 3/4" casing for surface section. Cement to surface.
- Drill 9 7/8" hole x 7 5/8" casing for intermediate section. Cement to surface.
- Drill 6 3/4" hole x 4 1/2" liner for production section. Cement to top of liner, 100' inside 7 5/8" shoe.
- Release drilling rig from location.
- Move in workover rig and run a 5 1/2" 17# P110 USF tie-back frack string and seal assembly (see connection specs below). Tie into liner hanger Polished Bore Receptacle (PBR) with seal assembly.
- Pump hydraulic fracture job.
- Flowback and produce well.

When a decision is made to develop a secondary bench from this wellbore, a workover rig will be moved to location. The workover rig will then retrieve the tie-back frack string and seal assembly before temporarily abandoning the initial lateral.

General well schematic:



- As discussed with operator regarding similar casing change in ECH 351594

PERFORMANCE DATA

TMK UP ULTRA™ DQX
Technical Data Sheet

4.500 in

11.60 lbs/ft

P-110

Tubular Parameters

Size	4.500	in	Minimum Yield	110,000	psi
Nominal Weight	11.60	lbs/ft	Minimum Tensile	125,000	psi
Grade	P-110		Yield Load	367,000	lbs
PE Weight	11.35	lbs/ft	Tensile Load	417,000	lbs
Wall Thickness	0.250	in	Min. Internal Yield Pressure	10,700	psi
Nominal ID	4.000	in	Collapse Pressure	7,580	psi
Drift Diameter	3.875	in			
Nom. Pipe Body Area	3.338	in ²			

Connection Parameters

Connection OD	5.000	in
Connection ID	4.000	in
Make-Up Loss	3.772	in
Critical Section Area	3.338	in ²
Tension Efficiency	100.0	%
Compression Efficiency	100.0	%
Yield Load In Tension	367,000	lbs
Min. Internal Yield Pressure	10,700	psi
Collapse Pressure	7,580	psi
Uniaxial Bending	112	° 100 ft

Make-Up Torques

Min. Make-Up Torque	4,800	ft-lbs
Opt. Make-Up Torque	5,400	ft-lbs
Max. Make-Up Torque	5,900	ft-lbs
Yield Torque	8,600	ft-lbs



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NOTE:

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