

DEC 22 2016

Carlsbad Field Office
NMOC D 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.

SUBMIT IN TRIPLICATE - Other instructions on page 2		7. If Unit or CA/Agreement, Name and/or No.
1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> 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 recompleat 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 recompleat 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:

Surface casing/cementing program - Amend for surface casing setting depth to 690'. It will be set at least 25' above the salt and a minimum of 25' into the Rustler Anhydrite.

10-3/4" 40.5# J55 BTC new csg @ 0-690' 14-3/4" hole
SF Coll-4.40 SF Burst-1.52 SF Body Ten-2.84 SF Joint Ten-3.18

Circulate cement w/ 470sx Cl C cmt w/ accelerator, 14.8ppg 1.68 yield, 500# ACS in 100' hole
Excess.

Chris Walls verbally approved 12/5/16 in discussion with Ryan Farrell.

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

14. I hereby certify that the foregoing is true and correct.		Electronic Submission #360008 verified by the BLM Well Information System For OXY USA INCORPORATED, sent to the Carlsbad Committed to AFMSS for processing by JENNIFER SANCHEZ on 12/13/2016 (17JAS/MS)	
Name (Printed/Typed)	DAVID STEWART	Title	REGULATORY ADVISOR
Signature	(Electronic Submission)	Date	12/06/2016

Accepted for record
NMOC D
A.L.B.

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>MUSTAFA HAQUE</u>	Title <u>PETROLEUM ENGINEER</u>	Date <u>12/14/2016</u>
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 ****

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 690 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 12142016



Haque, Mustafa <mhaque@blm.gov>

Re: Surface Casing Deepening

1 message

Salaz, Robert <rsalaz@blm.gov>

Mon, Dec 5, 2016 at 11:26 AM

To: Ryan_Farrell@oxy.com

Cc: "Walls, Christopher" <cwalls@blm.gov>, Indra Dahal <idahal@blm.gov>, Mark Lewis <melewis@blm.gov>, James Rutley <jrutley@blm.gov>, Teungku Muchlis Krueng <tkrueng@blm.gov>, Mustafa Haque <mhaque@blm.gov>, Charles Nimmer <cnimmer@blm.gov>, Jennifer Mason <j1sanchez@blm.gov>

That sounds very reasonable to me. I'll forward this to our other geologists so they know of this issue as well.

Thanks,
Zeke

Robert Zeke Salaz
Geologist
Bureau of Land Management
Carlsbad Field Office
(575) 234-5918

On Fri, Dec 2, 2016 at 3:38 PM, Walls, Christopher <cwalls@blm.gov> wrote:

Ryan,

I am gonna let our geologist Zeke look at this but we will get back with you next week.

On Fri, Dec 2, 2016 at 3:28 PM, <Ryan_Farrell@oxy.com> wrote:

Chris,

We have an upcoming 3 (possibly 4) well pad coming up in less than 2 weeks' time. It is a nearby offset (Cedar Canyon 29 Federal 2H) where we experienced terrible loss circulation directly under our surface casing shoe which required multiple squeezes (cement and LCM) to heal took more than 5 days.

Cedar Canyon 29 Federal 21H
Cedar Canyon 29 Federal 3H
Cedar Canyon 28-27 Fed Com 5H
Cedar Canyon 28 Fed Com 9H

One issue I noticed is that we set casing at 418' even though the Salado on the Geo Prog was at ~ 750' (or close to). Somehow we missed this when filling for permits because I always tell the team that we need to set our surface casing as close to the salts as permit-able.

Our next pad here has the same issue and I would like to talk to you about setting our casing 50' from the Salado. Our geoprogram is as follows.

Cedar Canyon 29 Federal 21H

Formation Tops	Depth (KB)	TVDSS (ft)
Top Rustler	320	2655
Top Salado (salt)	740	2235
Top Castile (anhydrite)	1336	1639
Top Lamar / Delaware	2910	65

I would like to set surface casing at ~690' if you agree. If we hit salt early we can pull up 25' above and set casing there.

We're still working on a loss circulation plan to manage losses and try to heal before cementing. We're also looking to plan to cement with Thixotropic cement from the beginning to give us the best chance of getting cement to surface. We're also planning to have significant XS cement on location and essentially pump until we see cement returns to surface before dropping the plug unless losses are too extreme. I think in this case the Thixo should provide a good base where we can easily top fill from.

Please let me know when you might have time to talk early next week. I will send you a meeting invite. Please reply with accept or recommend a different time that works best for you.

Thanks for all your help.

Ryan Farrell
Drilling Engineering Supervisor
Oxy USA - Permian Primary
O: (713) 366-5058

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Thank you,

Chris Walls
Bureau of Land Management
Carlsbad Field Office
575-234-2234