Form 3160-5
(June 2015)

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.

HOBBS OCD

SUBMIT IN TRIPLICATE - Other instructions on page 2

JUL 03 2019

RECEIVED

5. Lease Serial No.
NMLC062269A

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
GHOST RIDER 22-15 FEDERAL COM 203H

2. Name of Operator
APACHE CORPORATION
Contact: SORINA L FLORES
E-Mail: sorina.flores@apachecorp.com

9. API Well No.
30-025-45770-00-X1

3a. Address
303 VETERANS AIRPARK LANE SUITE 3000
MIDLAND, TX 79705

3b. Phone No. (include area code)
Ph: 432.818.1167
Fx: 432.818.1167

10. Field and Pool or Exploratory Area
WILDCAT BONE SPRING

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 22 T24S R32E SWSE 431FSL 2151FEL
32.196991 N Lat, 103.660927 W Lon

11. County or Parish, State
LEA COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ 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.

NMB000736

Apache request the following changes to csg:

OLD: Surf csg- 13-3/8" J55 48# STC, Collapse: 2.82, Burst: 1.49,
Body tensile safety factor: 4.05, Joint tensile safety factor: 2.36
NEW: Surf csg - 13-3/8" J55 54.5# BTC, Collapse: 4.51, Burst: 1.72, - see
Body tensile safety factor: 4.37, Joint tensile safety factor: 4.66

Carlsbad Field Office
OCD Hobbs

OLD: Interm csg - 0-4880' TVD/MD, Collapse: 1.83, Burst: 1.91,
Body tensile safety factor: 2.17, Joint tensile safety factor: 1.8
NEW: Interm csg - 0-4800' TVD/MD, Collapse: 1.99, Burst: 1.93,
4880

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

Electronic Submission #467385 verified by the BLM Well Information System
For APACHE CORPORATION, sent to the Hobbs
Committed to AFMSS for processing by CHRISTOPHER WALLS on 06/04/2019 (19CRW0009SE)

Name *(Printed/Typed)* SORINA L FLORES — Title SUPV DRLG SERVICES

Signature (Electronic Submission) — Date 06/03/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By LONG VO — Title PETROLEUM ENGINEER — Date 06/04/2019

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 Hobbs

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 ****

KZ

Additional data for EC transaction #467385 that would not fit on the form

32. Additional remarks, continued

Body tensile safety factor: 2.18, Joint tensile safety factor: 1.81

Apache request the following changes to cmt:

OLD: Interm single stage: Lead: 0-3904', Cl C w/10% CaCl2, 6% Gel, 1% MgOx-M, 0.125#/sk durafiber, 0.7% Retarder; Tail: 3904-4880', 285sx Cl C w/10% CaCl2, 1% MgOx-M, 0.4% dispersant, 0.4% retarder(1.42yld,14.8ppg,404.7cu/ft)

Interm 2 stage cmt job 1st stage: Lead: 2280-3904' 325sx Cl C w/10% CaCl2, 6% gel, 1% Mgox-M, 0.125#/sk durafiber, 0.7% retarder(754 cu/ft) Tail: 3904-4880' w/285 Cl C w/10% caCl2, 1% MgOx-M, 0.4% dispersant, 0.4% retarder(1.42yld,404.7cu/ft), Stage tool/ECP 2280', 2nd Stage Lead: 0-1754', 285sx Cl C (661.2 cu/ft) Tail: 1754-2280', 145sx Cl C w/10% CaCl2, 1% MgOx-M, 0.4% dispersant, 0.1% retarder(1.42yld,205.9cu/ft)

NEW: Interm csg - 0-3840' w/Cl C w/10% CaCl2, 6% gel, 1% MgOx-M, 0.55% retarder; Tail: 3840-4800 w/300sx Cl C w/0.3% retarder (1.33yld,14.8ppg,399cu/ft)

Interm 2 stage cmt job 1st stage: Lead: 2280-3840' w/315sx Cl C w/10% CaCl2, 6% gel, 1% MgOx-M, 0.55% retarder (730.8cu/ft) Tail: 3840-4800' w/300sx Cl C w/0.3% retarder (1.33yld,399cu/ft), Stage tool/ECP: 2280', 2nd Stage Lead: 0-1600', 265sx Cl C (614.8cu/ft); Tail: 1600-2280' w/200sx Cl C w/0.3% retarder (1.33yld,266cu/ft)

OLD: Prod Lead: 4680-7500' w/230sx TXI lite (853.3cu/ft)
NEW: Prod Lead: 4600-7500' w/235sx TXI lite (871.85cu/ft)
(Lead 2 & tail of production cmt will remain as approved on original APD, see attachment for complete cmt detail)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Apache Corporation**
LEASE NO.:	**NMLC0062269A**
WELL NAME & NO.:	203H-Ghost Rider 22-15 Federal Com
SURFACE HOLE FOOTAGE:	431'/S & 2151'/E
BOTTOM HOLE FOOTAGE	2589'/S & 1650'/E
LOCATION:	Section 22, T.24 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

COA

H2S	☐ Yes	◉ No	
Potash	◉ None	☐ Secretary	☐ R-111-P
Cave/Karst Potential	◉ Low	☐ Medium	☐ High
Variance	☐ None	◉ Flex Hose	☐ Other
Wellhead	◉ Conventional	☐ Multibowl	☐ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☑ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit

All Previous COAs Still Apply

A. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1070 feet** (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.

    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 will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
    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.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing shall be set at approximately **4880 feet** is:

Option 1 (Single Stage):

- Cement to surface. If cement does not circulate see B.1.a, c-d above.
  Cement excess is less than 25%, more cement might be required.

Option 2:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.
  Cement excess is less than 25%, more cement might be required.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.
  Cement excess is less than 25%, more cement might be required.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Chaves and Roosevelt Counties
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
During office hours call (575) 627-0272.
After office hours call (575)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

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.

GHOST RIDER 22-15 FED COM 203H - CMT PLAN - REVISED 5.13.19
(New changes in yellow; Old in gray)

CEMENT: SURFACE

Stage Tool Depth: N/A

Single Stage

Lead:

Top MD of Segment:	0	Btm MD of Segment:	785
Cmt Type:	C	Cmt Additives:	4% Bentonite + 1% CaCl2
Quantity (sks):	402		
Yield (cu/ft/sk):	1.75	Volume (cu/ft):	703.5
Density (lbs/gal):	13.5	Percent OH Excess:	25%

Tail:

Top MD of Segment:	785	Btm MD of Segment:	1085
Cmt Type:	C	Cmt Additives:	1% CaCl2
Quantity (sks):	226		
Yield (cu/ft/sk):	1.33	Volume (cu/ft):	300.58
Density (lbs/gal):	14.8	Percent OH Excess:	25%

CEMENT: INTERMEDIATE

Single Stage

Lead:

Top MD of Segment:	~~0~~ 0	Btm MD of Segment:	~~3940~~ [redacted]
Cmt Type:	C	Cmt Additives:	~~10% CaCl2 + 6% Gel + 1% MgOx-M + 0.125#/sk durafiber, 0.7% Retarder~~ [redacted]
Quantity (sks):	645		
Yield (cu/ft/sk):	2.32	Volume (cu/ft):	1496.4
Density (lbs/gal):	12.7	Percent OH Excess:	25%

Tail:

Top MD of Segment: ~~3904~~ [redacted]

Btm MD of Segment: ~~4880~~ [redacted]

Cmt Type: C

Cmt Additives: ~~10% CaCl, 1% MgOx-M, 0.4% dispersant, 0.4% retarder~~ [redacted]

Quantity (sks): ~~285~~ [redacted]

Yield (cu/ft/sk): ~~1.42~~ [redacted]

Density (lbs/gal): [redacted]

Volume (cu/ft): ~~404.7~~ [redacted]

Percent OH Excess: 25%

2 Stage Cement Job

*** DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with 500psi comp strength time for cmt will be onsite for review.**

***If lost circulation is encountered, Apache may 2-stage Interm csg. A DVT may be used in the 9-5/8" csg & ECP may be placed below DVT.**

1st Stage

Lead:

Top MD of Segment: ~~2280~~ 2280

Btm MD of Segment: ~~3904~~ [redacted]

Cmt Type: C

Cmt Additives: ~~10% CaCl2, 6% gel, 1% MgOx-M, 0.125#/sk durafiber, 0.7% retarder~~ [redacted]

Quantity (sks): ~~325~~ [redacted]

Yield (cu/ft/sk): 2.32

Density (lbs/gal): 12.7

Volume (cu/ft): ~~754~~ [redacted]

Percent OH Excess: 25%

Tail:

Top MD of Segment: ~~3904~~ [redacted]

Btm MD of Segment: ~~4880~~ [redacted]

Cmt Type: C

Cmt Additives: ~~10% CaCl2, 1% MgOx-M, 0.4% dispersant, 0.4% retarder~~ [redacted]

Quantity (sks): ~~285~~ [redacted]

Yield (cu/ft/sk): ~~1.42~~ [redacted] Volume (cu/ft): ~~404.7~~ [redacted]

Density (lbs/gal): 14.8 Percent OH Excess: 25%

Stage Tool / ECP Depth: ± 2280'

2nd Stage

Lead:

Top MD of Segment: 0

Btm MD of Segment: ~~1754~~ [redacted]

Cmt Type: C

Cmt Additives: 10% CaCl2 + 6% Gel + 1% MgOx-M + 0.55% Retarder

Quantity (sks): ~~285~~ [redacted]

Yield (cu/ft/sk): 2.32 Volume (cu/ft): ~~661.2~~ [redacted]

Density (lbs/gal): 12.7 Percent OH Excess: 25%

Tail:

Top MD of Segment: ~~1754~~ [redacted]

Btm MD of Segment: ~~2280~~ [redacted]

Cmt Type: C

Cmt Additives: 10% CaCl2, 1% MgOx-M + 0.4% Dispersant, 0.1% Retarder [redacted]

Quantity (sks): ~~145~~ [redacted]

Yield (cu/ft/sk): ~~1.42~~ [redacted] Volume (cu/ft): ~~205.9~~ [redacted]

Density (lbs/gal): 14.8 Percent OH Excess: 25%

CEMENT: PRODUCTION 200' of tieback into intermediate string

Single Stage

Lead 1:

Top MD of Segment: ~~4680~~ [redacted]

Btm MD of Segment: ~~7500~~ [redacted]

Cmt Type: TXI Lite

Cmt Additives: 5% Sodium Chloride + 12% HGS-4K28 (3M Beads) + 22% B-52 (3M Beads) + 0.2% Fluid Loss + 0.1% Suspension Aid + 0.4% Retarder

Quantity (sks):	~~230~~ [redacted]		~~853.3~~
Yield (cu/ft/sk):	3.71	Volume (cu/ft):	[redacted]
Density (lbs/gal):	9	Percent OH Excess:	20%

Lead 2:

Top MD of Segment:	7500	Btm MD of Segment:	10175

Cmt Type: TXI Lite

Cmt Additives: 3% Sodium Chloride + 1% MgOx-M + 0.15% Fluid Loss + 0.15% Suspension Aid + 0.4% Retarder

Quantity (sks):	320		
Yield (cu/ft/sk):	2.54	Volume (cu/ft):	812.8
Density (lbs/gal):	11	Percent OH Excess:	20%

Tail:

Top MD of Segment:	10175	Btm MD of Segment:	18168

Cmt Type: TXI Lite

Cmt Additives: 1.3% CaCl2 + 5% MgOx-H + 0.5% Fluid Loss + 0.1% Anti-Settling Agent + 0.3% Retarder + 0.2% Dispersant + 0.4% Defoamer

Quantity (sks):	1525		
Yield (cu/ft/sk):	1.46	Volume (cu/ft):	2226.5
Density (lbs/gal):	13.2	Percent OH Excess:	20%

GHOST RIDER 22-15 FED COM 203H - CSG PLAN - REVISED 5.13.19 changes in yellow

String: **SURFACE**

Hole Size: 17.5

Top Setting Depth (MD):	0	Top Setting Depth (TVD):	0	Btm setting depth (MD):	~~1085~~ 1070	Btm setting depth (TVD):	~~1085~~ 1070
Size:	13-3/8"	Grade:	J-55	Weight (lbs/ft):	[redacted]	Joint (Butt,FJ, LTC,STC, SLH, N/A, Other):	[redacted]

Condition (New/Used): New Standard (API/Non-API): API

Tapered String (Y/N)?: N
If yes, need spec attachment

Safety Factors

Collapse Design Safety Factor: [redacted] Burst Design Safety Factor: [redacted]

Body Tensile Design Safety Factor type?: Dry/Buoyant **Buoyant**
Body Tensile Design Safety Factor: [redacted]

Joint Tensile Design Safety Factor type?: Dry/Buoyant **Buoyant**
Joint Tensile Design Safety Factor: [redacted]

String: **INTERMEDIATE**

Hole Size: 12.25

Top Setting Depth (MD):	0	Top Setting Depth (TVD):	0	Btm setting depth (MD):	[redacted]	Btm setting depth (TVD):	[redacted]
Size:	9-5/8"	Grade:	J-55	Weight (lbs/ft):	40	Joint (Butt,FJ, LTC,STC, SLH, N/A, Other):	LTC

Condition (New/Used): New Standard (API/Non-API): API

Tapered String (Y/N)?: N
If yes, need spec attachment

Safety Factors

Collapse Design Safety Factor: [redacted] Burst Design Safety Factor: [redacted]

Body Tensile Design Safety Factor type?: Dry/Buoyant Buoyant
Body Tensile Design Safety Factor: [redacted]

Joint Tensile Design Safety Factor type?: Dry/Buoyant Buoyant
Joint Tensile Design Safety Factor: [redacted]

String: PRODUCTION

Hole Size: 8.75

Top Setting Depth (MD):	0	Top Setting Depth (TVD):	0	Btm setting depth (MD):	10928	Btm setting depth (TVD):	10617
Size:	5-1/2"	Grade:	P-110	Weight (lbs/ft):	17	Joint (Butt,FJ, LTC,STC, SLH, N/A, Other):	BTC

Condition (New/Used): New Standard (API/Non-API): API

Hole Size: 8.5

Top Setting Depth (MD):	10928	Top Setting Depth (TVD):	10617	Btm setting depth (MD):	18168	Btm setting depth (TVD):	10603
Size:	5-1/2"	Grade:	P-110	Weight (lbs/ft):	17	Joint (Butt,FJ, LTC,STC, SLH, N/A, Other):	BTC

Condition (New/Used): New Standard (API/Non-API): API

Safety Factors

Collapse Design Safety Factor: 1.45 Burst Design Safety Factor: 1.25

Body Tensile Design Safety Factor type?: Dry/Buoyant Buoyant
Body Tensile Design Safety Factor: 2.07

Joint Tensile Design Safety Factor type?: Dry/Buoyant Buoyant
Joint Tensile Design Safety Factor: 2.17

Tapered String (Y/N)?: N
If yes, need spec attachment