



OCD Hobbs

30-025-42416

United States Department of the Interior

Bureau of Land Management
Carlsbad Field Office
620 E. Green St.
Carlsbad, NM 88220-6292



In reply refer to

3162.4

NMNM128367

January 26, 2016

Diamondback Resources LLC
Attn: Brian Wood
303 Veterans Airpark LN., Suite 1100
Midland, TX. 79705



Re: EL Papa Grande 29 1H, LEASE: NMNM128367
200' FSL & 1300' FWL, Sec. 29, T20S, R34E, SHL, Lea County, NM
0330' FNL & 660'FWL, Sec. 29, T20S, R34E, BHL, Lea County, NM

Your Application for Permit to Drill (APD), for the above referenced well was approved on January 28, 2015. Due to additional information which has been received after this APD was approved the Carlsbad Field Office has determined it necessary to revise the Conditions of Approval (COA) and to rescind the approval of the variance to use a diverter system on the surface casing. As per Onshore Order #2 you will be required to run a minimum 2M BOP/BOPE system on the 20" surface casing, see attached COAs. In addition to changes in the casing program, the COAs for the H2S program have also been revised to reflect the current updated information.
See updated attached COA.

If you have any questions, please contact Duncan Whitlock or Steve Caffey at (575) 234-5972.

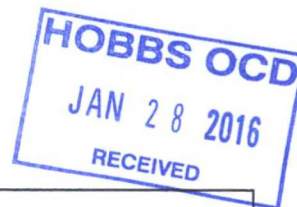
Sincerely,

Stephen J. Caffey
Assistant Field Manager
Lands and Minerals

CC: NMOCD
Operator
I&E

FEB 18 2016

**PECOS DISTRICT
CONDITIONS OF APPROVAL**



OPERATOR'S NAME:	Diamondback Resources, LLC
LEASE NO.:	NMNM-128367
WELL NAME & NO.:	El Papa Grande 29 1H
SURFACE HOLE FOOTAGE:	0200' FSL & 1300' FWL
BOTTOM HOLE FOOTAGE	0330' FNL & 0660' FWL
LOCATION:	Section 29, T. 20 S., R 34 E., NMPM
COUNTY:	Lea County, New Mexico

DRILLING

A. DRILLING OPERATIONS 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)

☒ **Lea County**

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

1. **Hydrogen Sulfide (H₂S) monitors shall be installed prior to drilling out the surface shoe and the H₂S drilling plan shall be implemented prior to drilling at a depth of 2500 feet. If H₂S is detected in concentrations greater than 100 ppm prior to implementing the H₂S drilling plan, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**
2. 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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. 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 is located, this does not include the dog house or stairway area.

4. 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.

B. CASING

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.

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

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. **DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE.**

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.

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

Risks:

R-111-P Potash

Capitan Reef

Possibility of water flows in the Artesia Group, Salado, and Capitan Reef.

Possibility of lost circulation in the Rustler, Red Beds, Artesia Group, Capitan Reef, and Delaware.

Abnormal pressures will be encountered within the 3rd Bone Spring Sandstone and the Wolfcamp formation.

1. The **20 inch** surface casing shall be set at approximately **1665 feet (a minimum of 25 feet into the Rustler Anhydrite , and if salt is encountered, set casing at least 25 feet 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 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.
2. The minimum required fill of cement behind the **13-3/8 inch 1st** intermediate casing, which shall be set at approximately **3850 feet**, is:
 - ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Potash. Excess calculates to 20% - Additional cement may be required.**

Formation below the 13-3/8 inch 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 9-5/8 inch 2nd intermediate casing, which shall be set at approximately 5600 feet, is:

Operator proposed DV Tool is no longer acceptable. Operator shall set DV Tool at 3900 feet.

DV tool option: Operator is to submit sundry if DV tool depth varies by more than 100 feet from approved depth.

- 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 B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Potash and Capitan Reef. Excess calculates to negative 3% - Additional cement shall be required.**

Formation below the 9-5/8 inch 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.

Pilot hole is required to have a plug at the bottom of the hole. As well as a plug that covers the top of Wolfcamp at approximately 11,200 feet which this plug needs to tagged and witnessed by the BLM. The BLM is to be contacted, (575) 393-3612, at least 24-hours prior to the tagged of Wolfcamp plug. All plugs shall be Class H Cement. The tagging of the plug needs to be mentioned on a Subsequent Report sundry for drilling activities.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

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

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

5. 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.
6. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. A variance is **NOT GRANTED** for the use of a diverter system with rotating head on the 20 inch surface casing. **BLOWOUT PREVENTER (BOP) AND RELATED EQUIPMENT (BOPE) SHALL COMPLY AS DESCRIBED IN ONSHORE OIL AND GAS ORDER NO. 2 AND API RP 53 SEC. 17.**
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **20 inch surface casing** shoe shall be **2000 (2M) psi.**
4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **13 3/8 inch 1st intermediate casing** shoe shall be **5000 (5M) psi. 5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
 - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer.**

- c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- d. The results of the test shall be reported to the appropriate BLM office.
- e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
- f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **3rd Bone Springs** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **3rd Bone Springs** and the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

Proposed mud weight may not be adequate for drilling through the **3rd Bone Springs** and the **Wolfcamp** formation.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

F. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

KGR 01252016