

SURFACE USE PLAN
SHACKELFORD OIL COMPANY
Lusk Federal #9-A (RE-ENTRY of the Lusk Deep Unit A #20)
2310 FSL & 660 FEL
Section 20, T. 19 S., R. 32 E
Lea County, New Mexico

This plan is submitted with form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

1. EXISTING ROADS:

- A. DIRECTIONS: Go east of Carlsbad, NM, on Highway 62/180, for 24.3 miles. Turn northeast onto County Road 243 for 3.8 miles. Turn north on County Road 126A for 4.6 miles. Turn east on lease road to for 0.7 miles, turn north 0.75 miles. The new road will begin at this point. All existing roads are either paved or a caliche lease road.
- B. See attached plats and maps provided by Basin Surveys.
- C. The access routes from County Road 126A to the well location is depicted on **Exhibit A**. The route highlighted in red is all within the Lusk West Delaware Unit (**Exhibit G**) and on lease therefore, no ROW is required.
- D. Existing roads on the access route will be improved and maintained to the standard set forth in Section 2 of this Surface Use Plan of Operations.

2. NEW OR RECONSTRUCTED ACCESS ROADS:

- A. There will be 592 ft. of the old abandoned and reclaimed access road to be upgraded. The access road will begin at the southwest corner, running west for 592' to the existing north/south lease road. (**SEE EXHIBIT E & E1**)
- B. The maximum width of the driving surface will be 14 feet. The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1 foot deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.



Level Ground Section

- C. Surface material will be native caliche. The average grade of the entire road will be approximately 3%.
- D. Fence Cuts: No
- E. Cattle guards: No
- F. Turnouts: No
- G. Culverts: No
- H. Cuts and Fills: Not significant

- I. Approximately 6 inches of topsoil (root zone) will be stripped from the proposed access road prior to any further construction activity. The topsoil that was stripped will be spread along the edge of the road and within the ditch. The topsoil will be seeded with the proper seed mix designated by the BLM.
- J. The access road will be constructed and maintained as necessary to prevent soil erosion and accommodate all-weather traffic. The road will be crowned and ditched with water turnouts installed as necessary to provide for proper drainage along the access road route.
- K. The access road and associated drainage structures will be constructed and maintained in accordance with road guidelines contained in the joint BLM/USFS publication: Surface Operating Standards for Oil and Gas Exploration and Development, The Gold Book, Fourth Edition and/or BLM Manual Section 9113 concerning road construction standards on projects subject to federal jurisdiction.

3. LOCATION OF EXISTING WELLS:

See attached map (**Exhibit B**) showing all wells within a one-mile radius.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES: (ALL ON LEASE LC-065710A)

- A. In the event the well is found productive a 3", SDR 7 poly, flowline (90 psi) of 592 ft. will be run, along side the proposed, upgraded, access road and tie-in to an existing flowline (just east of existing north/south lease road) all in the NW/4SE/4 of section 20, T. 19 S., R. 32 E. The existing flowline runs to the battery at the #10 well in the NW/4SE/4 of section 20 (**SEE EXHIBIT E**). A 12.5 KV overhead electric line will be installed from the southwest corner of the well, west for 569 ft. (2 poles), following the proposed access road (north side) to the existing electrical line, 30 ft. east of the north/south lease road all in the NE/4SE/4 of section 20, T. 19 S., R. 32 E. (**SEE EXHIBIT F**).
- B. All permanent (on site six months or longer) aboveground structures constructed or installed on location and not subject to safety requirements will be painted to BLM specifications.
- C. Containment berms will be constructed completely around production facilities designed to hold fluids. The containment berms will be constructed or compacted subsoil, be sufficiently impervious, hold 1 ½ times the capacity of the largest tank and away from cut or fill areas.

5. LOCATION AND TYPE OF WATER SUPPLY: **363 BBLs OF WATER WILL BE REQUIRED FOR THIS WELL.**

The well will be drilled using a combination of water mud systems as outlined in the Drilling Program. Fresh water will be obtained from **Slash X** commercial water station, SW/4SW/4 section 28, T. 19S., R. 32E. or **Mesquite Services** water station, NE/4SE/4 section 26, T. 21S., R. 27E. Brine water will be obtained from **Shackelford Oil Co.'s Lusk West Delaware Unit (North Battery)**, NE/4SE/4 section 20, T. 19S., R. 32E. or **Big Horn Aqua Solutions**, SE/4NW/4 section 27, T. 20S., R. 32E.

6. SOURCE OF CONSTRUCTION MATERIALS: **585 CUBIC YARDS OF CALICHE WILL BE REQUIRED (494 CU. YDS. FOR PAD AND 91 CU. YDS. FOR ROAD) TO SURFACE PAD AND ROAD.**

Any construction material that may be required for surfacing of the drill pad and access road will be from a contractor having a permitted source of materials within the general area. The material will come from one of the following 3 pit areas: SW/4NW/4 section 3, NE/4SE/4 section 15 or NE/4NE/4 section 18, all three pits are in T. 19S., R. 32E.

7. METHODS OF HANDLING WASTE DISPOSAL:

- A. The well will be a re-entry utilizing a workover rig to drill out cement and plugs. Drill cuttings will be held in roll-off style mud boxes and taken to an NMOCD approved disposal site.
- B. Drilling fluids will be contained in steel mud pits.
- C. Water produced from the well during completion will be held temporarily in steel tanks and then taken to an NMOCD approved commercial disposal facility.
- D. Oil produced during operations will be stored in tanks until sold.
- E. Portable, self-contained chemical toilets will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents thereof disposed of in an approved sewage disposal facility. All state and local laws and regulations pertaining to disposal of human and solid waste will be complied with. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- F. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Immediately after drilling all debris and other waste materials on and around the well location, not contained in the trash cage will be cleaned up and removed from the location. No potentially adverse materials or substances will be left on the location.

8. ANCILLARY FACILITIES:

No campsite, airstrip, or other facilities will be built as a result of the operation of this well. No staging areas are needed.

9. WELL SITE LAYOUT: **(NOTE! This re-entry involves reconstruction of the pad and access road which has been reclaimed).**

- A. **Exhibit D** shows the dimensions of the proposed well pad.
- B. The proposed well pad size will be 130' x 275' (**See Exhibit D**). There will be no reserve pit due to the well being a re-entry utilizing a workover rig and all cuttings contained and hauled off.
- C. **Exhibit D**, shows how the well will be turned to a V-Door East. The truck mounted rig will rig up to the south.
- D. Access road and Electrical line has been staked and flagged. Existing pad has not been flagged.
- E. All equipment and vehicles will be confined to the approved disturbed areas of this APD (i.e., access road, well pad, and topsoil storage areas)

10. PLANS FOR SURFACE RECLAMATION: **INTERIM RECLAMATION WILL BEGIN 6 MONTHS AFTER DRILLING AND COMPLETION. FINAL RECLAMATION WILL BEGIN IMMEDIATELY AFTER PLUGGING WELLBORE.**

- A. After concluding the drilling and/or completion operations, if the well is found non-commercial, all the equipment will be removed, the surface material, caliche, will be removed from the well pad and road and transported to the original caliche pit or used for other roads. The original stock piled top soil will be returned to the pad and contoured, as close as possible, to the original topography. The access road will have the caliche removed and the road ripped, barricaded and seeded as directed by the BLM.
- B. If the well is a producer, the portions of the location not essential to production facilities or space required for workover operations, will be reclaimed and seeded as per BLM requirements.
(SEE EXHIBIT C FOR INTERIM RECLAMATION PLAT FOR THIS WELL)
- C. Reclamation Performance Standards
The following reclamation performance standards will be met:

Interim Reclamation – Includes disturbed areas that may be redisturbed during operations and will be redisturbed at final reclamation to achieve restoration of the original landform and a natural vegetative community.

- Disturbed areas not needed for active, long-term production operations or vehicle travel will be recontoured, protected from erosion, and revegetated with a self-sustaining, vigorous, diverse, native (or as otherwise approved) plant community sufficient to minimize visual impacts, provide forage, stabilize soils, and impede the invasion of noxious, invasive, and non-native weeds.

Final Reclamation – Includes disturbed areas where the original landform and a natural vegetative community will be restored and it is anticipated the site will not be redisturbed for future development.

- The original landform will be restored for all disturbed areas including well pads, production facilities, roads, pipelines, and utility corridors.
- A self-sustaining, vigorous, diverse, native (or otherwise approved) plant community will be established on the site, with a density sufficient to control erosion and invasion by non-native plants and to re-establish wildlife habitat or forage production. At a minimum, the established plant community will consist of species included in the seed mix and/or desirable species occurring in the surrounding natural vegetation.
- Erosion features are equal to or less than surrounding area and erosion control is sufficient so that water naturally infiltrates into the soil and gully, headcutting, slumping, and deep or excessive rills (greater than 3 inches) are not observed.
- The site will be free of State- or county-listed noxious weeds, oil field debris and equipment, and contaminated soil. Invasive and non-native weeds are controlled.

D. Reclamation Actions

Earthwork for interim and final reclamation will be completed within 6 months of well completion or plugging unless a delay is approved in writing by the BLM authorized officer.

The following minimum reclamation actions will be taken to ensure that the reclamation objectives and standards are met. It may be necessary to take additional reclamation actions beyond the minimum in order to achieve the Reclamation Standards.

Reclamation – General

Notification:

- The BLM will be notified at least 3 days prior to commencement of any reclamation operations.

Housekeeping:

- Within 30 days of well completion, the well location and surrounding areas(s) will be cleared of, and maintained free of, all debris, materials, trash, and equipment not required for production.
- No hazardous substances, trash, or litter will be buried or placed in pits.

Topsoil Management:

- Operations will disturb the minimum amount of surface area necessary to conduct safe and efficient operations.
- Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the topsoil will be stripped and stockpiled around the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil will include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils.
- Salvaging and spreading topsoil will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment or so dry that dust clouds greater than 30 feet tall are created. If such equipment creates ruts in excess of four (4) inches deep, the soil will be deemed too wet.
- No major depressions will be left that would trap water and cause ponding unless the intended purpose is to trap runoff and sediment.

Seeding:

- Seedbed Preparation. Initial seedbed preparation will consist of recontouring to the appropriate interim or final reclamation standard. All compacted areas to be seeded will be ripped to a minimum depth of 18 inches with a minimum furrow spacing of 2 feet, followed by recontouring the surface and then evenly spreading the stockpiled topsoil. Prior to seeding, the seedbed will be scarified to a depth of no less than 4 – 6 inches. If the site is to be broadcast seeded, the surface will be left rough enough to trap seed and snow, control erosion, and increase water infiltration.
- If broadcast seeding is to be used and is delayed, final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.
- Seed Application. Seeding will be conducted no more than two weeks following completion of final seedbed preparation. A certified weed-free seed mix designed by the BLM to meet reclamation standards will be used.
- If the site is harrowed or dragged, seed will be covered by no more than 0.25 inch of soil.

11. SURFACE OWNERSHIP:

- A. The surface is owned by the U. S. Government and administered by the Bureau of Land Management. The surface is multiple use with the primary uses of the region for the grazing of livestock and the production of oil and gas.

12. OTHER INFORMATION:

- A. The area surrounding the well site is in a very flat, dunal sands, type area. The vegetation consists of Shinnery Oak, Mesquite, Yucca, Sand Sage with three-awns and some dropseed species.
- B. There is no permanent or live water in the immediate area.
- C. There are no dwellings within 2 miles of this location.
- D. A class III survey was conducted by Dr. Loring Haskell with New Mexico Archaeological Services, Inc. on October 7, 1988, for Phillips Petroleum Company under the name Lusk Deep Unit A #20. This will be a re-entry of the existing well bore and the reclaimed pad will be re-surfaced and utilized.

13. BOND COVERAGE:

Bond Coverage is Nationwide; Bond Number NM-2156.

OPERATORS REPRESENTATIVE:

The Shackelford Oil Company representatives responsible for ensuring compliance of the surface use plan are listed below:

Surface:

Barry W. Hunt – Permitting Agent
1403 Springs Farm Place
Carlsbad, NM 88220
(575) 885-1417 (Home)
(575) 361-4078 (Cell)

Drilling & Production:

Bob Shackelford – Shackelford Oil Company
203 W. Wall, Suite 200
Midland, Texas 79701
(432) 682-9784 (Office)
(432) 813-7090 (Cell)

ON-SITE PERFORMED ON 4/29/14 AND A SECOND TIME ON 1/20/16 RESULTED IN PROPOSED LOCATION BEING OK FOR RE-ENTRY AT PRESENT LOCATION. IT WAS AGREED TO PLACE TOP SOIL TO THE EAST. INTERIM RECLAMATION WOULD BE THE EAST (50') AND WEST (25') PORTIONS OF THE PAD. ACCESS ROAD, FLOWLINE AND E-LINE WOULD ALL RUN FROM SOUTHWEST CORNER, WEST, UPGRADING OLD ACCESS ROAD.

PRESENT AT ON-SITE ON 4/29/14:

**BARRY HUNT – PERMIT AGENT FOR SHACKELFORD OIL COMPANY
AMANDA LYNCH – BLM
BOB BALLARD - BLM
SMITH ENGINEERING - SURVEYORS
BOB SHACKELFORD - SHACKELFORD OIL COMPANY**

PRESENT AT ON-SITE ON 1/20/16:

**BARRY HUNT - PERMIT AGENT FOR SHACKELFORD OIL COMPANY
BOB BALLARD - BLM
BOB SHACKELFORD - SHACKELFORD OIL COMPANY**

POWER OF ATTORNEY

DESIGNATION OF AGENT

SHACKELFORD OIL COMPANY, hereby names the following person as its agent

Name of Agent: Barry W. Hunt

Agent's Address: 1403 Spring Farm Place, Carlsbad, NM 88220

Agent's Telephone Number: (575) 361-4078

GRANT OF SPECIAL AUTHORITY

SHACKELFORD OIL COMPANY, grants its agent the authority to act for it with respect to the following only:

1. Executing forms require to be filed with the Bureau of Land Management of the Department of Interior of the United States of America.
2. Executing forms required to be filed with the Oil Conservation Division of the New Mexico Energy, Minerals and Natural Resources Department.

EFFECTIVE DATE


This power of attorney is effective immediately.

RELIANCE ON THE POWER OF ATTORNEY

Any person, including the agent, may rely upon the validity of this power of attorney or a copy of it unless that person knows it has terminated or is invalid.

ACKNOWLEDGEMENT

SHACKELFORD OIL COMPANY:



By: Don Shackelford

This instrument was acknowledged before me on this 8 day of April 2014 by Don Shackelford President of Shackelford Oil Company.

Kathleen Ann Kane

Notary Public

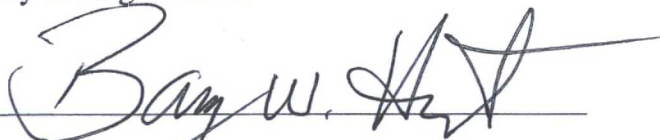


My Commission Expires 9, 2015

CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct, and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or Shackelford Oil Company am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U. S. C. 1001 for the filing of false statements. Executed this 16th. day of August 2016.

Signed: _____

A handwritten signature in black ink, appearing to read "Barry W. Hunt", written over a horizontal line.

Printed Name: Barry Hunt

Position: Agent for Shackelford Oil Company

Address: 1403 Springs Farm Place, Carlsbad, NM 88220

Telephone: (575) 361-4078

E-mail: specialtpermitting@gmail.com