HOBBS OCD
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DRILLING
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	ConocoPhillips Company
LEASE NO.:	NMLC-058775
WELL NAME & NO.:	Peridot 8 Federal 15H
SURFACE HOLE FOOTAGE:	2634' FNL & 2047' FWL
BOTTOM HOLE FOOTAGE	2310' FNL & 0330' FWL Sec. 07, T. 17 S., R 32 E.
LOCATION:	Section 08, T. 17 S., R 32 E., NMPM
COUNTY:	County, New Mexico

I. 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) 3933612

1. A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Grayburg** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please 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 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.

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.

Possibility of water and brine flows in the Queen, Salado, and Artesia Groups. Possibility of lost circulation in the Red Beds, Artesia Group, Rustler, San Andres, and Grayburg.

1. The **13-3/8** inch surface casing shall be set at approximately **885** feet (**in a competent bed below the Magenta Dolomite, which is a Member of the Rustler, 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 **9-5/8** inch intermediate casing, which shall be set at approximately **2025** feet, is:

    ☐ Cement to surface. If cement does not circulate see B.1.a, c-d above.

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

3. The minimum required fill of cement behind the **7 X 5-1/2** inch production casing is:

Operator has proposed DV tool at the top of the Paddock Formation.

    a. First stage to DV tool: - Cement not required as operator is isolating hydrocarbon bearing zones with placement of DV tool.

    b. Second stage above DV tool:

    ☐ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

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.

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 53.

2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be psi.**
    a. **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**
    b. **If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.**
    c. **Manufacturer representative shall install the test plug for the initial BOP test.**
    d. **Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.**
    e. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**

4. The appropriate BLM office shall be notified a minimum of hours in advance for a representative to witness the tests.

    a. In a water basin, 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. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    a. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.

    b. 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.

    c. The results of the test shall be reported to the appropriate BLM office.

    d. 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.**

    e. 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.

D. DRILL STEM TEST

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

E. 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.

JAM 020718

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	ConocoPhillips Company
LEASE NO.:	NMLC029406B
WELL NAME & NO.:	15H-Peridot 8 Federal
SURFACE HOLE FOOTAGE:	2634'/N & 2047'/W
BOTTOM HOLE FOOTAGE	2310'/N & 330'/W
LOCATION:	Section 8, T.17 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

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Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

Dunes Sagebrush Lizard Trench Stipulation

- Pre-construction contact with a BLM wildlife biologist is required within 5 days before any ground disturbing activities associated with the project occurs.
- Successful completion of the BLM Trench Stipulation Workshop is required for a non-agency person to be approved as a monitor.
- Any trench left open for (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, an agency approved monitor shall walk the entire length of the open trench and remove all trapped vertebrates. The bottom surface of the trench will be disturbed a minimum of 2 inches in order to arouse any buried vertebrates. All vertebrates will be released a minimum of 100 yards from the trench.
- For trenches left open for eight (8) hours or more the following requirements apply:

    - Earthen escape ramps and/or structures (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench. Metal structures will not be authorized. Options will be discussed in detail at the required Trench Stipulation Workshop.
    - One approved monitor shall be required to survey up to three miles of trench between the hours of 11 AM-2 PM. A daily report (consolidate if there is more than one monitor) on the vertebrates found and removed from the trench shall be provided to the BLM (email/fax is acceptable) the following morning.
    - Prior to backfilling of the trench all structures used as escape ramps will be removed and the bottom surface of the trench will be disturbed a

minimum of 2 inches in order to arouse any buried vertebrates. All vertebrates will be released a minimum of 100 yards from the trench.

- This stipulation shall apply to the entire length of the project in the DSL habitat polygon regardless of land ownership or CCA/CCAA enrollment status.
- A project closeout will be required within three business days of the completion of the project.

Tank Battery:

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour producing volume, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

Pipelines:

A leak detection plan will be submitted to the BLM Carlsbad Field Office for approval prior to pipeline installation. The method could incorporate gauges to detect pressure drops, situating values and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on both sides of the road.

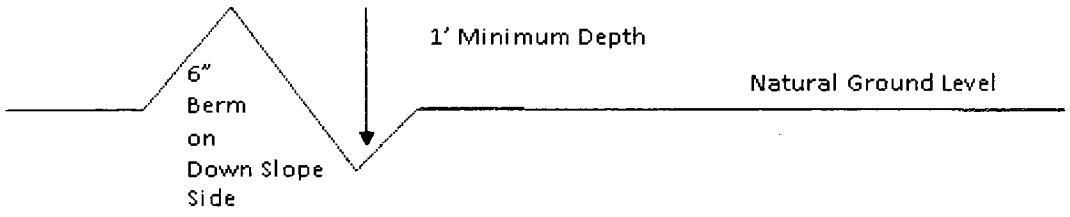
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Cattle guards

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

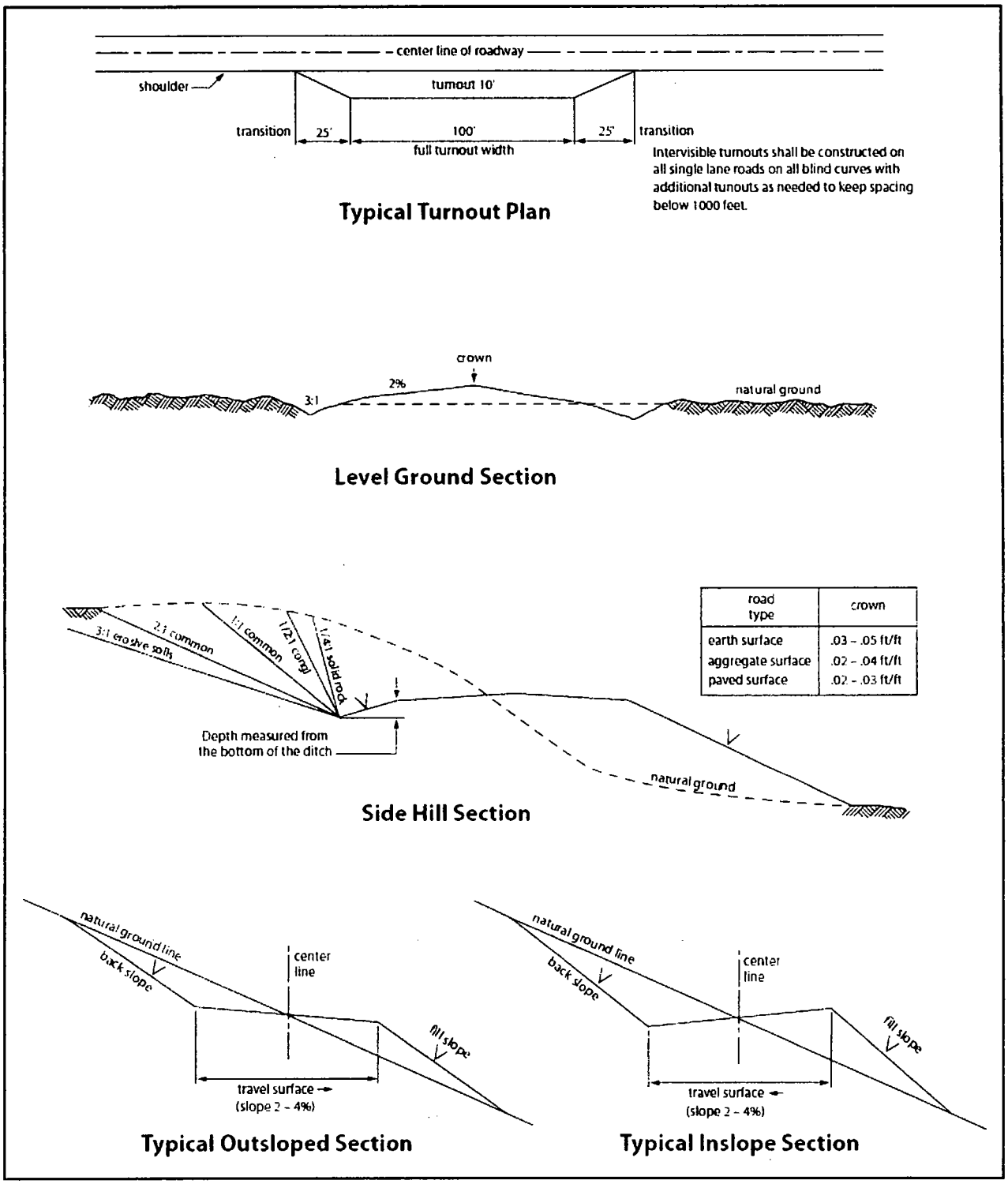


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)
Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

B. PIPELINES

BURIED PIPELINE STIPULATIONS

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of

the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of **36** inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be **30** feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed **20** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)

- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed **30** feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)

- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately ___**6**___ inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the

passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

( ) seed mixture 1	( ) seed mixture 3
( ) seed mixture 2	( ) seed mixture 4
(X) seed mixture 2/LPC	( ) Aplomado Falcon Mixture

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:
Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the Grant and attachments, including stipulations, survey plat(s) and/or map(s), shall be on location during construction. BLM personnel may request to review a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, Holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC § 2601 *et seq.* (1982) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant (*see* 40 CFR, Part 702-799 and in particular, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. Holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9601, *et seq.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq.*) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way Holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way Holder on the Right-of-Way. This provision applies without regard to whether a release is caused by Holder, its agent, or unrelated third parties.

4. Holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. Holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

a. Activities of Holder including, but not limited to: construction, operation, maintenance, and termination of the facility;

b. Activities of other parties including, but not limited to:
   (1) Land clearing
   (2) Earth-disturbing and earth-moving work
   (3) Blasting
   (4) Vandalism and sabotage;

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars ($1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of Holder, regardless of fault. Upon failure of Holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he/she deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of Holder. Such action by the Authorized Officer shall not relieve Holder of any responsibility as provided herein.

6. All construction and maintenance activity shall be confined to the authorized right-of-way width of **20** feet. If the pipeline route follows an existing road or buried pipeline

right-of-way, the surface pipeline shall be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline shall be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity shall be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation shall be allowed unless approved in writing by the Authorized Officer.

8. Holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline shall be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of **24** inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

16. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, powerline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

17. Surface pipelines shall be less than or equal to 4 inches and a working pressure below 125 psi.

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the

authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:
- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes from the poles removed.

D. FRESHWATER FRAC POND

FRAC POND CONDITIONS OF APPROVAL

A copy of the application (APD, Grant, or Sundry Notice) and attachments, including stipulations, survey plat and diagram, will be on location during construction. BLM personnel may request to see a copy of your permit during construction to ensure compliance with all conditions of approval.

Holder agrees to comply with the following conditions of approval to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this permit.

2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated.

3. Required Standard Conditions of Approval:

a. Notification
Contact the Supervisory Environmental Protection Specialist, Jim Amos, at 575-234-5909 at least 24 hours prior to starting construction.

b. Freshwater Only

The frac pond will only be authorized to contain freshwater and testing of water quality is required. Additives are not allowed without consent of the authorized officer in writing.

c. Contamination

If at any time the water in the frac pond becomes polluted with salts or other contaminants, use of the frac pond will cease and desist, and all liquids will be removed from the frac pond and disposed of properly. The operator will preclude releases of oil into open pits. The operator must remove any accumulation of oil, condensate, or contaminant in a pit within 48 hours of discovery.

d. Authorized Disturbance

Confine all construction and maintenance activity to the approved authorized area applied for in the application.

e. Facilities

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations. Grey-water, sewage, and trash shall be removed from the site and disposed of properly at a state approved facility.

f. Escape Ramps

The operator will construct and maintain frac ponds to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in frac ponds. Escape ramps must be installed at every corner of the frac pond and in the center of each side if that side exceeds 100 feet in length. Escape ramps must be in contact with the side of the frac pond, bottom of the frac pond, and the top of the frac pond berm. Escape ramps cannot be made of metal and cannot be steeper than a 3:1 slope (Horizontal Distance: Vertical Distance) or 30% slope. (*Examples of escape ramps: 12" wide wooden planks wrapped in matting, felt lining, etc.*)

g. Frac Pond Pipelines

Temporary pipelines flowing from the frac pond to the target well will be laid along existing roadways unless an exception has been granted by the authorized officer in writing.

h. Mineral Material from Excavation

Mineral materials extracted during construction of the frac pond will be stored on-location and/or used for constructing the frac pond.

i. Frac Pond Liner

The frac pond will be lined with at least a 20 mil. plastic liner.

j. Topsoil Stockpile

The operator shall strip at least the top 6 inches of soil (root zone) from the entire frac pond area and stockpile the topsoil approximately 25 feet outside the bermed perimeter of the pond in a low profile manner, reasonably protected from wind

and water erosion. Topsoil shall not be used for constructing the frac pond. The topsoil will be used for final reclamation purposes only.

k. Frac Pond Fence

The operator will install and maintain exclosure fencing on all sides of the frac pond to prevent access to public, livestock, and large forms of wildlife. The fence shall be installed at the base of the berm and never on top of the berm. Construction of the fence shall consist of steel and/or wooden posts set firmly into natural ground. Hog panel or chain-link fencing must be used as the fence and tied securely to the fence posts. Barbed-wire fencing or electric fences shall not be used. The fence height shall not be shorter than six (6) feet. The erected fence shall be maintained in adequate condition until the frac pond is reclaimed.

l. Erosion Prevention

Install earthen erosion-control structures as are suitable for the specific terrain and soil conditions.

m. Reclamation Start

I. Reclamation efforts will commence immediately after the frac pond is no longer needed for the purpose of completing wells.

II. Within 3 months of completion of frac operations on associated wells, all earthwork and final reclamation must be completed. This includes reclaiming and/or removal of:

i. Any roads approved for use with the pond
ii. Surface water lines
iii. Tanks, pumps, fencing etc.

Requirements for Operations and Final Reclamation:

4. If, during any phase of the construction, operation, maintenance, or termination of the frac pond, any pollutant should be released from the contaminated frac pond, the control and total removal, disposal, and cleaning up of such pollutant, wherever found, shall be the responsibility of holder, regardless of fault.

Upon failure of holder to control, dispose of, or clean up such discharge, or to repair all damages resulting there-from, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to

determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

6. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

7. After all disturbed areas have been satisfactorily contoured and prepared for seeding the location needs to be revegetated with the seed mixture provided. Seeding may need to be repeated until revegetation is successful. Operators shall contact Jim Amos, Supervisor, Environmental Protection – (575)234-5909, **prior** to beginning surface reclamation operations.

8. Seeding is required: Use the following seed mix.

( ) seed mixture 1	( ) seed mixture 3
( ) seed mixture 2	( ) seed mixture 4
(X) LPC mixture	( ) Aplomado Falcon mix

VIII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and

loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture for LPC Sand/Shinnery Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed shall be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. Seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Operator Certification Data Report

02/26/2018

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently 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 the company I represent, 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.

NAME: Susan Maunder **Signed on:** 04/03/2017

Title: Senior Coordinator, Regulatory MCBU

Street Address: 600 N. Dairy Ashford Rd

City: Houston **State:** TX **Zip:** 77079

Phone: (281)206-5281

Email address: Susan.B.Maunder@conocophillips.com

Field Representative

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

ConocoPhillips

H_2S Contingency Plan
November 2016

H_2S Contingency Plan Holders:

Attached is an H_2S Contingency Plan for COPC Permian Drilling working in the West Texas and Southeastern New Mexico areas operated by ConocoPhillips Company.

If you have any question regarding this plan, please call Matt Oster (830) 583-1297, or Ryan Vacarella (985) 217-7594.

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ConocoPhillips

HYDROGEN SULFIDE (H_2S) OPERATIONS

Contingency Plan
For
Permian Drilling Operations

ConocoPhillips Company
Mid-Continent Business Unit
Permian Asset Area

I. PURPOSE

The purpose of this Contingency Plan is to provide an organized plan of action for alerting and protecting the public following the release of a potentially hazardous volume of hydrogen sulfide. This plan prescribes mandatory safety procedures to be followed in the event of a release of H_2S into the atmosphere from exploration and production operations included in the scope of this plan. The extent of action taken will be determined by the supervisor and will depend on the severity and extent of H_2S release. Release of H_2S must be reported to the Drilling Superintendent and documented on the IADC and in Wellview.

II. SCOPE

This Contingency plan shall cover the West Texas and Southeastern New Mexico areas, which contain H2S gas and could result in a release where the R.O.E. is greater than 100 ppm at 50' and less than 3000' and does not include a public area and 500 ppm R.O.E. does not include a public road. Radius of exposure is defined as the maximum distance from the source of release that a specified calculated average concentration of H_2S could exist under specific weather conditions.

III. PROCEDURES

First Employee on Scene

____ Assess the incident and ensure your own safety.

Note the following:

____ Location of the incident.
____ Nature of the incident.
____ Wind direction and weather conditions.
____ Other assistance that may be needed.

____ Call local supervisory personnel (refer to Section V: Emergency Call List) until personal contact is made with a person on the list.

____ Perform emergency assessment and response as needed. The response may include rescue and/or evacuation of personnel, shutting in a system and/or notification of nearby residents/public (refer to Section VII: Public Notification/Evacuation).

____ Secure the site.

____ Follow the direction of the On-scene Incident Commander (first ConocoPhillips supervisor arriving on-scene).

First Supervisor on Scene (ConocoPhillips On-scene Incident Commander)

____ Becomes ConocoPhillips' On-scene Incident Commander upon arrival to location.

____ Follow the principles of the **D.E.C.I.D.E.** process below to assess the incident. (Note wind direction and weather conditions and ensure everyone's safety).

DETECT the problem
ESTIMATE likely harm without intervention
CHOOSE response objectives
IDENTIFY action options
DO the best option
EVALUATE the progress

____ Complete the Preliminary Emergency Information Sheet (refer to Section VIII: Forms/Reports).

____ Call your supervisor (refer to Section V: Emergency Call List).

____ Perform emergency response as necessary. (This may include notification & evacuation of all personnel and/or nearby residents/public (refer to Section VII: Public Notification/Evacuation), requesting assistance from ConocoPhillips personnel or outside agencies (refer to Section V: Emergency Call List) and obtaining any safety equipment that may be required (refer to Section IV: Emergency Equipment and Maintenance).

____ Notify appropriate local emergency response agencies of the incident as needed. Also notify the appropriate regulatory agencies. (refer to Section V: Emergency Call List).

____ Ensure site security.

— Set barricades and /or warning signs at or beyond the calculated 100 ppm H_2S radius of exposure (ROE). All manned barricades must be equipped with an H_2S monitor and a 2-way radio.

— Set roadblocks and staging area as determined.

____ Establish the Incident Command Structure by designating appropriate on-scene response personnel as follows:

Recording Secretary _____
Public Information Officer _____
Safety/Medical Officer _____
Decontamination Officer _____

____ Have the "Recording Secretary" begin documenting the incident on the "Incident Log" (refer to Section VIII: Forms/Reports).

____ If needed, request radio silence on all channels that use your radio tower stating that, until further notice, the channels should be used for emergency communications only.

____ Perform a Site Characterization and designate the following:

Hot Zone -- Hazardous Area
Warm Zone -- Preparation & Decontamination Area
Cold Zone -- Safe Area

AND

On-Scene Incident Command Post	(Cold Zone)
Public Relations Briefing Area	(Cold Zone)
Staging Area	(Cold Zone)
Triage Area	(Cold Zone)
Decontamination Area	(Warm Zone)

____ Refer all media personnel to ConocoPhillips' On-Scene Public Information Officer (refer to Section VI: Public Media Relations).

____ Coordinate the attempt to stop the release of H_2S. You should consider closing upstream and downstream valves to shut-off gas supply sources, and/or plugging or clamping leaks. Igniting escaping gas to reduce the toxicity hazard should be used **ONLY AS A LAST RESORT**. (It must first be determined if the gas can be safely ignited, taking into consideration if there is a possibility of a widespread flammable atmosphere.)

____ Once the emergency is over, return the situation to normal by:

Confirming the absence of H_2S and combustible gas throughout the area,

Discontinuing the radio silence on all channels, stating that the emergency incident is over,

Removing all barricades and warning signs,

Allowing evacuees to return to the area, and

Advising all parties previously notified that the emergency has ended.

____ Ensure the proper regulatory authorities/agencies are notified of the incident (refer to Section V: Emergency Call List).

____ Clean up the site. (Be sure all contractor crews have had appropriate HAZWOPER training.)

____ Report completion of the cleanup to the Asset Environmentalist. (Environmentalist will report this to the proper State and/or Federal agencies.)

____ Fill out all required incident reports and send originals to the Safety Department. (Keep a copy for your records.)

- Company employee receiving occupational injury or illnesses.

- Company employee involved in a vehicle accident while driving a company vehicle.

- Company property that is damaged or lost.

- Accident involving the public or a contractor; includes personal injuries, vehicle accidents, and property damage. Also includes any situation, which could result in a claim against the Company.

- Hazardous Material Spill/Release Report Form

- Emergency Drill Report

____ Assist the Safety Department in the investigation of the incident. Review the factors that caused or allowed the incident to occur, and modify operating, maintenance, and/or surveillance procedures as needed. Make appropriate repairs and train or retrain employees in the use and operation of the system.

____ If this incident was simulated for practice in emergency response, complete the Emergency Drill Report found in Section VIII: Forms/Reports and submit a copy to the Drilling Manager. (Keep one copy in area files to document exercising of the plan.)

Emergency Procedures
Responsibility

In the event of a release of potentially hazardous amounts of H2S, all personnel will immediately proceed upwind/ crosswind to the nearest designated briefing area. The COPC Drilling Rep. will immediately, upon assessing the situation, set this into action by taking the proper procedures to contain the gas and notify appropriate people and agencies.

1. In an emergency situation, the Drilling Rep. on duty will have complete responsibility and will take whatever action is deemed necessary in an emergency situation to insure the personnel's safety, to protect the well and to prevent property damage.

2. The Toolpusher will assume all responsibilities of the Drilling Rep. in an emergency situation in the event the Drilling Rep. becomes incapacitated.

3. Advise each contractor, service company, and all others entering the site that H2S may be encountered and the potential hazards that may exist.

4. Authorize the evacuation of local residents if H2S threatens their safety.

5. Keep the number of persons on location to a minimum during hazardous operations.

6. Direct corrective actions to control the flow of gas.

7. Has full responsibility for igniting escaping gas to reduce the toxicity hazard.

   This should be used **ONLY AS A LAST RESORT**.

IV. EMERGENCY EQUIPMENT and MAINTENANCE

Emergency Equipment Suppliers

DXP/ Safety International – Odessa, Tx. 432.580.3770
H_2S monitors
Breathing air includes cascade systems
First aid and medical supplies
Safety equipment
H2S Specialist

Total Safety US Odessa, Tx/ Hobs, NM 432.561.5049 Odessa
H_2S monitors 575.392.2973 Hobbs
Breathing air includes cascade systems
First aid and medical supplies
Safety equipment

DXP/ Indian Fire & Safety – Hobbs, NM 575.393.3093
H_2S monitors
Breathing air including cascade systems trailer mounted
30 minute air packs
Safety Equipment

TC Safety – Odessa, Tx.
H_2S monitors 432.413.8240
Cascade systems trailer mounted
30 minute air packs
Safety Equipment
H2S Specialist

Secorp Industries – Odessa, Tx. 432.614.2565
H2S Monitor Systems
Cascade Systems
H2S Specialist
H2S, CPR, First Aid Training

Emergency Equipment and Maintenance (continued)

General Information

Materials used for repair should be suitable for use where H_2S concentrations exceed 100 ppm. In general, carbon steels having low-yield strengths and a hardness below RC-22 are suitable. The engineering staff should be consulted if any doubt exists on material specifications.

Appropriate signs should be maintained in good condition at location entrance and other locations as specified in Texas Rule 36 and NMOCD Rule 118.

All notification lists should be kept current with changes in names, telephone numbers, etc.

All shutdown devices, alarms, monitors, breathing air systems, etc., should be maintained in accordance with applicable regulations.

All personnel working in H_2S areas shall have received training on the hazards, characteristics, and properties of H_2S, and on procedures and safety equipment applicable for use in H_2S areas.

H2S Safety Equipment and Monitoring Systems

An H2S emergency response package will be maintained at locations requiring H2S monitoring. The package will contain at a minimum the following:

3 – Fixed H2S sensors located as follows:
- 1 – on the rig floor
- 1 – at the Bell Nipple
- 1 – at the Shale Shaker or Flowline

1 – Entrance Warning Sign located at the main entrance to the location, with warning signs and colored flags to determine the current status for entry into the location.

2 – Windsocks that are clearly visible.

1 – Audible warning system located on rig floor

2 – Visual warning systems (Beacon Lights)
- 1 – Located at the rig floor
- 1 – Located in the mud mixing room

Note: All alarms (audible and visual) should be set to alarm at 10 ppm.

2 - Briefing areas clearly marked
- 2 - SCBA's at each briefing area
- 1- SCBA located at the Drilling Reps office

Note:
1. **All SCBA's must be positive pressure type only!!!**
2. **All SCBA's must either be Scott or Drager brand.**
3. **All SCBA's face pieces should be size large, unless otherwise specified by the Drilling Supervisor.**

5 – Emergency Escape Paks located at Top Doghouse.
Note: Ensure provisions are included for any personnel working above rig floor in derrick.

1 – Tri or Quad gas monitor located at the Drilling Reps office. This will be used to determine if the work area if safe to re-enter prior to returning to work following any alarm.

V. EMERGENCY CALL LIST:

The following is a priority list of personnel to contact in an emergency situation.

Supervisory Personnel	Office No.	Cellphone
Drilling Supt. (Unconventional) **Scott Nicholson**	432.688.9065	432.230.8010
Field Superintendents: **Clint Case.**	432.688.6878	940.231.2839
Safety Support: **Matt Oster** **Ryan Vaccarella**	830.583.1245 985.217.7594	601.540.6988 NA
Supt Operations-SEMN/Shale Mike Neuschafer	432.688.6834	713.419.9919
MCBU Safety Coordinator **James Buzan**	432.688.6860	832.630.4320
Manger GCBU/MCBU D & C **Seth Crissman**	832.486.6191	832.513.9308

EMERGENCY CALL LIST: State Officials

Regulatory Agencies

Texas Railroad Commission (District 8) — Office: 432.684.5581
Midland, Texas

New Mexico Oil Conservation Commission — Office:575.393.6161
P. O. Box 1980
Hobbs, New Mexico 88240-1980

Bureau of Land Mngt.
Carlsbad Field Office — Office: 575.234.5972
620 E. Greene St. — Fax: 575.885.9264
Carlsbad, NM 88220

EMERGENCY CALL LIST: Local Officials

Refer to the Location Information Sheet
Note: The LIS should include any area residents (i.e. rancher's house, etc)

VI. Public Media Relations

The **Public Information Officer** becomes the ConocoPhillips on-scene contact (once designated by the Phillips On-Scene Incident Commander).

Confers with Houston Office's Human Relations Representative, who is responsible for assisting in the coordination of local public relations duties.

Answer media questions honestly and **only with facts,** do not speculate about the cause, amount of damage, or the potential impact of the incident of the community, company, employees, or environment. (This information will be formally determined in the incident investigation.)

If you are comfortable answering a question or if you are unsure of the answer, use terms such as the following:

- "I do not know. I will try to find out."
- I am not qualified to answer that question, but I will try to find someone who can."
- "It is under investigation."

Note:
Do Not Say "No Comment." (This implies a cover-up.)

Do Not Disclose Names of Injured or Dead! Confer with the Houston Office's Human Relations Representative, who is responsible for providing that information.

VII. Public Notification/Evacuation

Alert and/or Evacuate People within the Exposure Area

1. Public Notification – If the escape of gas could result in a hazard to area residents, the general public, or employees, the person **first** observing the leak should take **immediate** steps to cause notification of any nearby residents. The avoidance of injury or loss of life should be of prime consideration and given top priority in all cases. If the incident is of such magnitude, or at such location as to create a hazardous situation, local authorities will be requested to assist in the evacuation and roadblocks of the designated area until the situation can be returned to normal.

   Note: Bilingual employees may be needed to assist in notification of residents.

2. Evacuation Procedures – Evacuation will proceed upwind from the source of the release of H_2S. Extreme caution should be exercised in order to avoid any depressions or low-lying areas in the terrain. The public area within the radius of exposure should be evacuated in a southwesterly and southeasterly direction so as to avoid the prevailing southern wind direction.

   Roadblocks and the staging area should be established as necessary for current wind conditions.

Note: In all situations, consideration should be given to wind direction and weather conditions. H_2S is heavier than air and can settle in low spots. Shifts in wind direction can also change the location of possible hazardous areas.

VIII. FORMS & REPORTS

I. Incident Log

II. Preliminary Emergency Information Sheet

III. Emergency Drill Report

IV. Onshore Hazardous Material Spill/Release Report Form

V. Immediate Report of Occupational Injury or Illness
Report of Accident-Public Contractor
Report of Loss or Damage to Company Property
Report of Automotive Incident

ConocoPhillips

Company: ConocoPhillips
Site: Peridot 8 Federal
Well: 15H
Project: Lea County, New Mexico (NAD 27)
Rig: Trinidad 417

MS Energy Services.
WWW.MSENERGYSERVICES.COM

T G M

Azimuths to Grid North
True North: -0.29°
Magnetic North: 6.83°

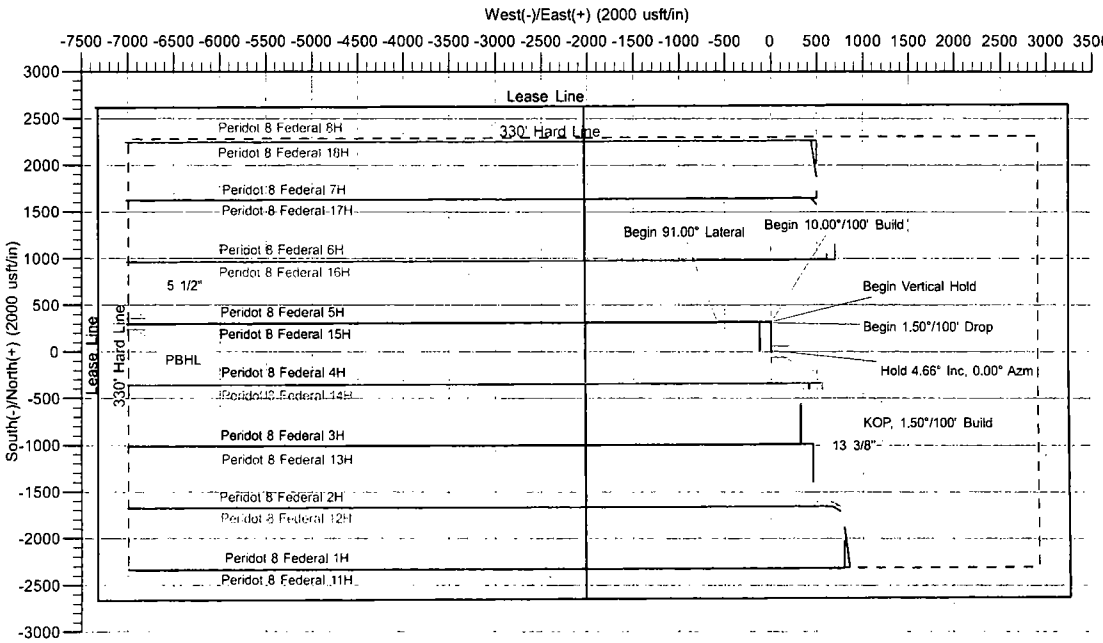
Magnetic Field
Strength: 48338.9snT
Dip Angle: 60.61°
Date: 8/2/2017
Model: BGGM2017

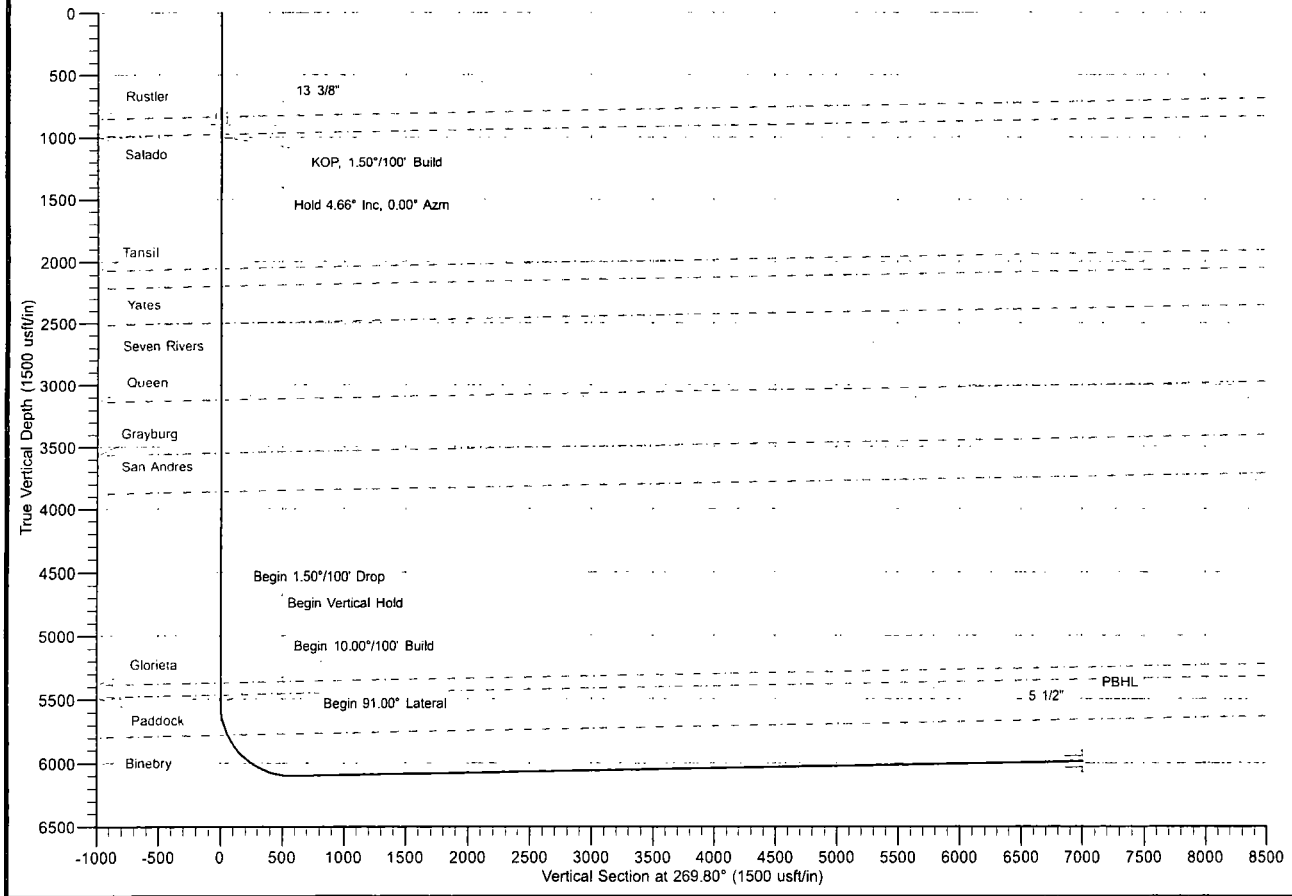
US State Plane 1927 (Exact solution)
New Mexico East 3001

Created By: MEB
Date: 10:21, August 18 2017
Plan: Design #1

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
995.00	0.00	0.00	995.00	0.00	0.00	0.00	0.00	KOP, 1.50°/100' Build
1305.97	4.66	0.00	1305.63	12.65	0.00	-0.04	12.65	Hold 4.66° Inc, 0.00° Azm
4979.01	4.66	0.00	4966.50	311.35	0.00	-1.09	311.35	Begin 1.50°/100' Drop
5289.98	0.00	0.00	5277.13	324.00	0.00	-1.13	324.00	Begin Vertical Hold
5539.98	0.00	0.00	5527.13	324.00	0.00	-1.13	324.00	Begin 10.00°/100' Build
6449.98	91.00	269.80	6100.00	321.97	-582.95	581.83	906.96	Begin 91.00° Lateral
12874.28	91.00	269.80	5987.88	299.58	-7006.24	7005.15	7330.28	PBHL





The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented.
Any decisions made or wells drilled utilizing this or any other information supplied by MS Energy are at the sole risk and responsibility of the customer. MS Energy is not responsible for the accuracy of this schematic or the information contained herein.

ConocoPhillips

Company: ConocoPhillips
Site: Peridot 8 Federal
Well: 15H
Project: Lea County, New Mexico (NAD 27)
Rig: Trinidad 417

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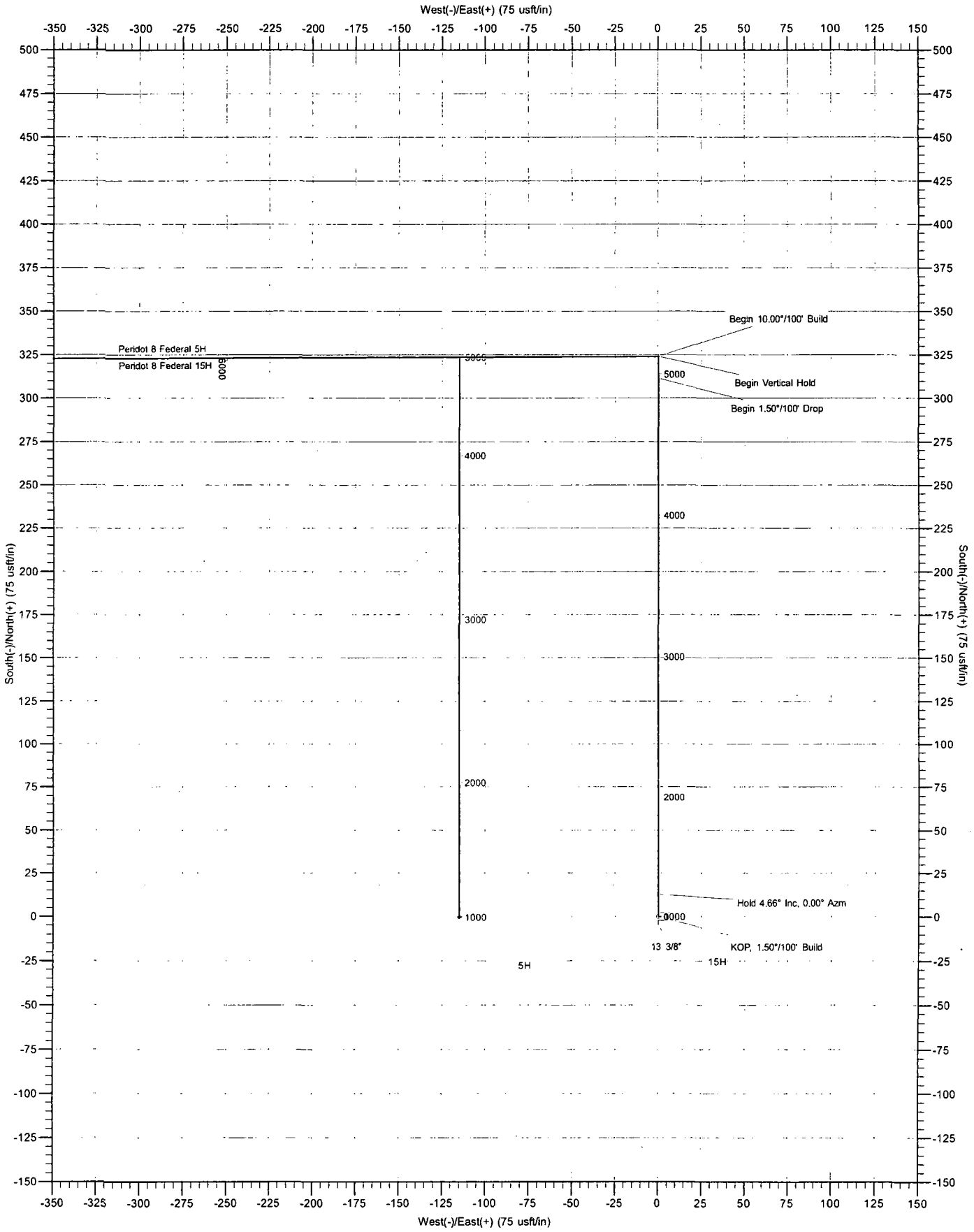

The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented.
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ConocoPhillips

ConocoPhillips

Lea County, New Mexico (NAD 27)
Peridot 8 Federal
15H

Wellbore #1

Plan: Design #1

Standard Planning Report

18 August, 2017

MS Energy Services®
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Database:	EDM 5000.14 Conroe DB	**Local Co-ordinate Reference:**	Well 15H
Company:	ConocoPhillips	**TVD Reference:**	Well @ 4061.40usft (Trinidad 417)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 4061.40usft (Trinidad 417)
Site:	Peridot 8 Federal	**North Reference:**	Grid
Well:	15H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project Lea County, New Mexico (NAD 27)

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Well 15H

Well Position	**+N/-S**	673,032.90 usft	**Northing:**	673,032.90 usft	**Latitude:**	32° 50' 56.662 N
	+E/-W	666,822.63 usft	**Easting:**	666,822.63 usft	**Longitude:**	103° 47' 24.449 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	4,043.90 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2017	8/2/2017	7.13	60.61	48,339

Design Design #1

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	269.80

Plan Survey Tool Program **Date** 8/17/2017

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	12,874.29	Design #1 (Wellbore #1)	MWD - OWSG R1	
				MWD - OWSG R1	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
995.00	0.00	0.00	995.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,305.97	4.66	0.00	1,305.63	12.65	0.00	1.50	1.50	0.00	0.00	
4,979.01	4.66	0.00	4,966.50	311.35	0.00	0.00	0.00	0.00	0.00	
5,289.98	0.00	0.00	5,277.13	324.00	0.00	1.50	-1.50	0.00	180.00	
5,539.98	0.00	0.00	5,527.13	324.00	0.00	0.00	0.00	0.00	0.00	
6,449.98	91.00	269.80	6,100.00	321.97	-582.95	10.00	10.00	0.00	269.80	
12,874.29	91.00	269.80	5,987.88	299.58	-7,006.24	0.00	0.00	0.00	0.00	PBHL - Peridot 8 Fe

Database:	EDM 5000.14 Conroe DB	**Local Co-ordinate Reference:**	Well 15H
Company:	ConocoPhillips	**TVD Reference:**	Well @ 4061.40usft (Trinidad 417)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 4061.40usft (Trinidad 417)
Site:	Peridot 8 Federal	**North Reference:**	Grid
Well:	15H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
835.00	0.00	0.00	835.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
895.00	0.00	0.00	895.00	0.00	0.00	0.00	0.00	0.00	0.00
13 3/8"									
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
975.00	0.00	0.00	975.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
995.00	0.00	0.00	995.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 1.50°/100' Build									
1,000.00	0.08	0.00	1,000.00	0.00	0.00	0.00	1.50	1.50	0.00
1,100.00	1.58	0.00	1,099.99	1.44	0.00	-0.01	1.50	1.50	0.00
1,200.00	3.08	0.00	1,199.90	5.50	0.00	-0.02	1.50	1.50	0.00
1,305.97	4.66	0.00	1,305.63	12.65	0.00	-0.04	1.50	1.50	0.00
Hold 4.66° Inc, 0.00° Azm									
1,400.00	4.66	0.00	1,399.35	20.30	0.00	-0.07	0.00	0.00	0.00
1,500.00	4.66	0.00	1,499.01	28.43	0.00	-0.10	0.00	0.00	0.00
1,600.00	4.66	0.00	1,598.68	36.56	0.00	-0.13	0.00	0.00	0.00
1,700.00	4.66	0.00	1,698.35	44.69	0.00	-0.16	0.00	0.00	0.00
1,800.00	4.66	0.00	1,798.02	52.83	0.00	-0.18	0.00	0.00	0.00
1,900.00	4.66	0.00	1,897.69	60.96	0.00	-0.21	0.00	0.00	0.00
2,000.00	4.66	0.00	1,997.36	69.09	0.00	-0.24	0.00	0.00	0.00
2,057.84	4.66	0.00	2,055.00	73.79	0.00	-0.26	0.00	0.00	0.00
Tansil									
2,100.00	4.66	0.00	2,097.03	77.22	0.00	-0.27	0.00	0.00	0.00
2,198.30	4.66	0.00	2,195.01	85.22	0.00	-0.30	0.00	0.00	0.00
Yates									
2,200.00	4.66	0.00	2,196.70	85.36	0.00	-0.30	0.00	0.00	0.00
2,300.00	4.66	0.00	2,296.36	93.49	0.00	-0.33	0.00	0.00	0.00
2,400.00	4.66	0.00	2,396.03	101.62	0.00	-0.35	0.00	0.00	0.00
2,500.00	4.66	0.00	2,495.70	109.75	0.00	-0.38	0.00	0.00	0.00
2,504.32	4.66	0.00	2,500.01	110.10	0.00	-0.38	0.00	0.00	0.00
Seven Rivers									
2,600.00	4.66	0.00	2,595.37	117.88	0.00	-0.41	0.00	0.00	0.00
2,700.00	4.66	0.00	2,695.04	126.02	0.00	-0.44	0.00	0.00	0.00
2,800.00	4.66	0.00	2,794.71	134.15	0.00	-0.47	0.00	0.00	0.00
2,900.00	4.66	0.00	2,894.38	142.28	0.00	-0.50	0.00	0.00	0.00
3,000.00	4.66	0.00	2,994.05	150.41	0.00	-0.53	0.00	0.00	0.00
3,100.00	4.66	0.00	3,093.71	158.54	0.00	-0.55	0.00	0.00	0.00
3,126.38	4.66	0.00	3,120.01	160.69	0.00	-0.56	0.00	0.00	0.00
Queen									
3,200.00	4.66	0.00	3,193.38	166.68	0.00	-0.58	0.00	0.00	0.00
3,300.00	4.66	0.00	3,293.05	174.81	0.00	-0.61	0.00	0.00	0.00
3,400.00	4.66	0.00	3,392.72	182.94	0.00	-0.64	0.00	0.00	0.00
3,500.00	4.66	0.00	3,492.39	191.07	0.00	-0.67	0.00	0.00	0.00

Database:	EDM 5000.14 Conroe DB	**Local Co-ordinate Reference:**	Well 15H
Company:	ConocoPhillips	**TVD Reference:**	Well @ 4061.40usft (Trinidad 417)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 4061.40usft (Trinidad 417)
Site:	Peridot 8 Federal	**North Reference:**	Grid
Well:	15H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,557.81	4.66	0.00	3,550.01	195.77	0.00	-0.68	0.00	0.00	0.00
Grayburg									
3,600.00	4.66	0.00	3,592.06	199.21	0.00	-0.70	0.00	0.00	0.00
3,700.00	4.66	0.00	3,691.73	207.34	0.00	-0.72	0.00	0.00	0.00
3,800.00	4.66	0.00	3,791.40	215.47	0.00	-0.75	0.00	0.00	0.00
3,868.85	4.66	0.00	3,860.01	221.07	0.00	-0.77	0.00	0.00	0.00
San Andres									
3,900.00	4.66	0.00	3,891.07	223.60	0.00	-0.78	0.00	0.00	0.00
4,000.00	4.66	0.00	3,990.73	231.73	0.00	-0.81	0.00	0.00	0.00
4,100.00	4.66	0.00	4,090.40	239.87	0.00	-0.84	0.00	0.00	0.00
4,200.00	4.66	0.00	4,190.07	248.00	0.00	-0.87	0.00	0.00	0.00
4,300.00	4.66	0.00	4,289.74	256.13	0.00	-0.89	0.00	0.00	0.00
4,400.00	4.66	0.00	4,389.41	264.26	0.00	-0.92	0.00	0.00	0.00
4,500.00	4.66	0.00	4,489.08	272.39	0.00	-0.95	0.00	0.00	0.00
4,600.00	4.66	0.00	4,588.75	280.53	0.00	-0.98	0.00	0.00	0.00
4,700.00	4.66	0.00	4,688.42	288.66	0.00	-1.01	0.00	0.00	0.00
4,800.00	4.66	0.00	4,788.08	296.79	0.00	-1.04	0.00	0.00	0.00
4,900.00	4.66	0.00	4,887.75	304.92	0.00	-1.06	0.00	0.00	0.00
4,979.01	4.66	0.00	4,966.50	311.35	0.00	-1.09	0.00	0.00	0.00
Begin 1.50°/100' Drop									
5,000.00	4.35	0.00	4,987.43	313.00	0.00	-1.09	1.50	-1.50	0.00
5,100.00	2.85	0.00	5,087.23	319.28	0.00	-1.11	1.50	-1.50	0.00
5,200.00	1.35	0.00	5,187.16	322.94	0.00	-1.13	1.50	-1.50	0.00
5,289.98	0.00	0.00	5,277.13	324.00	0.00	-1.13	1.50	-1.50	0.00
Begin Vertical Hold									
5,300.00	0.00	0.00	5,287.15	324.00	0.00	-1.13	0.00	0.00	0.00
5,382.87	0.00	0.00	5,370.02	324.00	0.00	-1.13	0.00	0.00	0.00
Glorieta									
5,400.00	0.00	0.00	5,387.15	324.00	0.00	-1.13	0.00	0.00	0.00
5,477.87	0.00	0.00	5,465.02	324.00	0.00	-1.13	0.00	0.00	0.00
Paddock									
5,500.00	0.00	0.00	5,487.15	324.00	0.00	-1.13	0.00	0.00	0.00
5,539.98	0.00	0.00	5,527.13	324.00	0.00	-1.13	0.00	0.00	0.00
Begin 10.00°/100' Build									
5,550.00	1.00	269.80	5,537.15	324.00	-0.09	-1.04	10.00	10.00	0.00
5,600.00	6.00	269.80	5,587.04	323.99	-3.14	2.01	10.00	10.00	0.00
5,650.00	11.00	269.80	5,636.47	323.96	-10.53	9.40	10.00	10.00	0.00
5,700.00	16.00	269.80	5,685.08	323.92	-22.20	21.07	10.00	10.00	0.00
5,750.00	21.00	269.80	5,732.48	323.87	-38.06	36.93	10.00	10.00	0.00
5,800.00	26.00	269.80	5,778.31	323.80	-57.99	56.86	10.00	10.00	0.00
5,800.77	26.08	269.80	5,779.00	323.80	-58.33	57.20	10.00	10.00	0.00
Binebry									
5,850.00	31.00	269.80	5,822.24	323.71	-81.85	80.72	10.00	10.00	0.00
5,900.00	36.00	269.80	5,863.92	323.62	-109.44	108.31	10.00	10.00	0.00
5,950.00	41.00	269.80	5,903.04	323.51	-140.55	139.42	10.00	10.00	0.00
6,000.00	46.00	269.80	5,939.29	323.39	-174.96	173.83	10.00	10.00	0.00
6,050.00	51.00	269.80	5,972.41	323.26	-212.40	211.27	10.00	10.00	0.00
6,100.00	56.00	269.80	6,002.14	323.12	-252.58	251.45	10.00	10.00	0.00
6,150.00	61.00	269.80	6,028.26	322.97	-295.20	294.07	10.00	10.00	0.00
6,200.00	66.00	269.80	6,050.56	322.82	-339.93	338.80	10.00	10.00	0.00
6,250.00	71.00	269.80	6,068.88	322.65	-386.44	385.31	10.00	10.00	0.00
6,300.00	76.00	269.80	6,083.07	322.49	-434.36	433.23	10.00	10.00	0.00
6,350.00	81.00	269.80	6,093.04	322.32	-483.34	482.22	10.00	10.00	0.00

Database:	EDM 5000.14 Conroe DB	**Local Co-ordinate Reference:**	Well 15H
Company:	ConocoPhillips	**TVD Reference:**	Well @ 4061.40usft (Trinidad 417)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 4061.40usft (Trinidad 417)
Site:	Peridot 8 Federal	**North Reference:**	Grid
Well:	15H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,400.00	86.00	269.80	6,098.69	322.14	-533.01	531.88	10.00	10.00	0.00
6,449.98	91.00	269.80	6,100.00	321.97	-582.95	581.83	10.00	10.00	0.00
Begin 91.00° Lateral									
6,500.00	91.00	269.80	6,099.13	321.79	-632.96	631.84	0.00	0.00	0.00
6,600.00	91.00	269.80	6,097.38	321.45	-732.95	731.82	0.00	0.00	0.00
6,700.00	91.00	269.80	6,095.64	321.10	-832.93	831.81	0.00	0.00	0.00
6,800.00	91.00	269.80	6,093.89	320.75	-932.92	931.79	0.00	0.00	0.00
6,900.00	91.00	269.80	6,092.15	320.40	-1,032.90	1,031.78	0.00	0.00	0.00
7,000.00	91.00	269.80	6,090.40	320.05	-1,132.89	1,131.76	0.00	0.00	0.00
7,100.00	91.00	269.80	6,088.66	319.70	-1,232.87	1,231.75	0.00	0.00	0.00
7,200.00	91.00	269.80	6,086.91	319.35	-1,332.85	1,331.73	0.00	0.00	0.00
7,300.00	91.00	269.80	6,085.16	319.01	-1,432.84	1,431.72	0.00	0.00	0.00
7,400.00	91.00	269.80	6,083.42	318.66	-1,532.82	1,531.70	0.00	0.00	0.00
7,500.00	91.00	269.80	6,081.67	318.31	-1,632.81	1,631.69	0.00	0.00	0.00
7,600.00	91.00	269.80	6,079.93	317.96	-1,732.79	1,731.67	0.00	0.00	0.00
7,700.00	91.00	269.80	6,078.18	317.61	-1,832.77	1,831.65	0.00	0.00	0.00
7,800.00	91.00	269.80	6,076.44	317.26	-1,932.76	1,931.64	0.00	0.00	0.00
7,900.00	91.00	269.80	6,074.69	316.91	-2,032.74	2,031.62	0.00	0.00	0.00
8,000.00	91.00	269.80	6,072.95	316.57	-2,132.73	2,131.61	0.00	0.00	0.00
8,100.00	91.00	269.80	6,071.20	316.22	-2,232.71	2,231.59	0.00	0.00	0.00
8,200.00	91.00	269.80	6,069.46	315.87	-2,332.70	2,331.58	0.00	0.00	0.00
8,300.00	91.00	269.80	6,067.71	315.52	-2,432.68	2,431.56	0.00	0.00	0.00
8,400.00	91.00	269.80	6,065.97	315.17	-2,532.66	2,531.55	0.00	0.00	0.00
8,500.00	91.00	269.80	6,064.22	314.82	-2,632.65	2,631.53	0.00	0.00	0.00
8,600.00	91.00	269.80	6,062.48	314.48	-2,732.63	2,731.52	0.00	0.00	0.00
8,700.00	91.00	269.80	6,060.73	314.13	-2,832.62	2,831.50	0.00	0.00	0.00
8,800.00	91.00	269.80	6,058.99	313.78	-2,932.60	2,931.49	0.00	0.00	0.00
8,900.00	91.00	269.80	6,057.24	313.43	-3,032.58	3,031.47	0.00	0.00	0.00
9,000.00	91.00	269.80	6,055.50	313.08	-3,132.57	3,131.46	0.00	0.00	0.00
9,100.00	91.00	269.80	6,053.75	312.73	-3,232.55	3,231.44	0.00	0.00	0.00
9,200.00	91.00	269.80	6,052.01	312.38	-3,332.54	3,331.43	0.00	0.00	0.00
9,300.00	91.00	269.80	6,050.26	312.04	-3,432.52	3,431.41	0.00	0.00	0.00
9,400.00	91.00	269.80	6,048.51	311.69	-3,532.51	3,531.40	0.00	0.00	0.00
9,500.00	91.00	269.80	6,046.77	311.34	-3,632.49	3,631.38	0.00	0.00	0.00
9,600.00	91.00	269.80	6,045.02	310.99	-3,732.47	3,731.37	0.00	0.00	0.00
9,700.00	91.00	269.80	6,043.28	310.64	-3,832.46	3,831.35	0.00	0.00	0.00
9,800.00	91.00	269.80	6,041.53	310.29	-3,932.44	3,931.33	0.00	0.00	0.00
9,900.00	91.00	269.80	6,039.79	309.95	-4,032.43	4,031.32	0.00	0.00	0.00
10,000.00	91.00	269.80	6,038.04	309.60	-4,132.41	4,131.30	0.00	0.00	0.00
10,100.00	91.00	269.80	6,036.30	309.25	-4,232.39	4,231.29	0.00	0.00	0.00
10,200.00	91.00	269.80	6,034.55	308.90	-4,332.38	4,331.27	0.00	0.00	0.00
10,300.00	91.00	269.80	6,032.81	308.55	-4,432.36	4,431.26	0.00	0.00	0.00
10,400.00	91.00	269.80	6,031.06	308.20	-4,532.35	4,531.24	0.00	0.00	0.00
10,500.00	91.00	269.80	6,029.32	307.85	-4,632.33	4,631.23	0.00	0.00	0.00
10,600.00	91.00	269.80	6,027.57	307.51	-4,732.32	4,731.21	0.00	0.00	0.00
10,700.00	91.00	269.80	6,025.83	307.16	-4,832.30	4,831.20	0.00	0.00	0.00
10,800.00	91.00	269.80	6,024.08	306.81	-4,932.28	4,931.18	0.00	0.00	0.00
10,900.00	91.00	269.80	6,022.34	306.46	-5,032.27	5,031.17	0.00	0.00	0.00
11,000.00	91.00	269.80	6,020.59	306.11	-5,132.25	5,131.15	0.00	0.00	0.00
11,100.00	91.00	269.80	6,018.85	305.76	-5,232.24	5,231.14	0.00	0.00	0.00
11,200.00	91.00	269.80	6,017.10	305.41	-5,332.22	5,331.12	0.00	0.00	0.00
11,300.00	91.00	269.80	6,015.36	305.07	-5,432.20	5,431.11	0.00	0.00	0.00
11,400.00	91.00	269.80	6,013.61	304.72	-5,532.19	5,531.09	0.00	0.00	0.00

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Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 4061.40usft (Trinidad 417)
Site:	Peridot 8 Federal	**North Reference:**	Grid
Well:	15H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,500.00	91.00	269.80	6,011.86	304.37	-5,632.17	5,631.08	0.00	0.00	0.00
11,600.00	91.00	269.80	6,010.12	304.02	-5,732.16	5,731.06	0.00	0.00	0.00
11,700.00	91.00	269.80	6,008.37	303.67	-5,832.14	5,831.05	0.00	0.00	0.00
11,800.00	91.00	269.80	6,006.63	303.32	-5,932.13	5,931.03	0.00	0.00	0.00
11,900.00	91.00	269.80	6,004.88	302.98	-6,032.11	6,031.02	0.00	0.00	0.00
12,000.00	91.00	269.80	6,003.14	302.63	-6,132.09	6,131.00	0.00	0.00	0.00
12,100.00	91.00	269.80	6,001.39	302.28	-6,232.08	6,230.98	0.00	0.00	0.00
12,200.00	91.00	269.80	5,999.65	301.93	-6,332.06	6,330.97	0.00	0.00	0.00
12,300.00	91.00	269.80	5,997.90	301.58	-6,432.05	6,430.95	0.00	0.00	0.00
12,400.00	91.00	269.80	5,996.16	301.23	-6,532.03	6,530.94	0.00	0.00	0.00
12,500.00	91.00	269.80	5,994.41	300.88	-6,632.01	6,630.92	0.00	0.00	0.00
12,600.00	91.00	269.80	5,992.67	300.54	-6,732.00	6,730.91	0.00	0.00	0.00
12,700.00	91.00	269.80	5,990.92	300.19	-6,831.98	6,830.89	0.00	0.00	0.00
12,800.00	91.00	269.80	5,989.18	299.84	-6,931.97	6,930.88	0.00	0.00	0.00
12,874.28	91.00	269.80	5,987.88	299.58	-7,006.24	7,005.15	0.00	0.00	0.00
PBHL - 5 1/2"									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL - Peridot 8 Fed - plan hits target center - Point	0.00	0.00	5,987.88	299.58	-7,006.24	673,332.48	659,816.39	32° 50' 59.976 N	103° 48' 46.559 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
895.00	895.00	13 3/8"	13-3/8	17-1/2
12,874.28	5,987.88	5 1/2"	5-1/2	6

Database:	EDM 5000.14 Conroe DB	**Local Co-ordinate Reference:**	Well 15H
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Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 4061.40usft (Trinidad 417)
Site:	Peridot 8 Federal	**North Reference:**	Grid
Well:	15H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
835.00	835.00	Rustler		-1.00	269.80
975.00	975.00	Salado		-1.00	269.80
2,057.84	2,055.00	Tansil		-1.00	269.80
2,198.30	2,195.01	Yates		-1.00	269.80
2,504.32	2,500.01	Seven Rivers		-1.00	269.80
3,126.38	3,120.01	Queen		-1.00	269.80
3,557.81	3,550.01	Grayburg		-1.00	269.80
3,868.85	3,860.01	San Andres		-1.00	269.80
5,382.87	5,370.02	Glorieta		-1.00	269.80
5,477.87	5,465.02	Paddock		-1.00	269.80
5,800.77	5,779.00	Binebry		-1.00	269.80

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
995.00	995.00	0.00	0.00	KOP, 1.50°/100' Build
1,305.97	1,305.63	12.65	0.00	Hold 4.66° Inc, 0.00° Azm
4,979.01	4,966.50	311.35	0.00	Begin 1.50°/100' Drop
5,289.98	5,277.13	324.00	0.00	Begin Vertical Hold
5,539.98	5,527.13	324.00	0.00	Begin 10.00°/100' Build
6,449.98	6,100.00	321.97	-582.95	Begin 91.00° Lateral
12,874.29	5,987.88	299.58	-7,006.24	PBHL

ConocoPhillips, Peridot 8 Federal 15H – Drill Plan

1. Geologic Formations

KB TVD of target	6100'	Pilot hole depth	NA
KB MD at TD:	12874'	Deepest expected fresh water:	835'

Basin

Formation	KB TVD (ft)	Elevation KB (ft)	Water/Mineral Bearing/Target Zone	Hazards*
Rustler	835	3226	Fresh Water	
Salado	975	3086	Brackish Water	
Tansill	2055	2006	Salt	
Yates	2195	1866	Salt Water	
Seven Rivers	2500	1561	Oil/Gas	
Queen	3120	941	Oil/Gas	
Grayburg	3550	511	Oil/Gas	
San Andres	3860	201	Oil/Gas	
Glorieta	5370	-1309	Oil/Gas	
Paddock	5465	-1404	Oil/Gas	
Blinebry	5779	-1718	Target	
Land Pt / TD	6100	-2039	Target	

2. Casing Program

3 strings casing design										
Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Pipe Tensile	SF Joint Tensile
17.5"	0	885	13.375"	54.5	J55	STC/BTC	2.89	6.98	17.7	10.7
12.25"	0	2250	9.625"	40	J55	LTC/BTC	2.20	3.38	7.00	5.78
8.75"	0	5200	7"	29	L80	LTC/BTC	2.88	3.35	4.48	3.89
8.75"	5200	12874	5.5"	20	L80	LTC/BTC	3.15	3.28	3.04	3.41
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

- Bring cement from 5-1-2" casing shoe to lap inside 9-5/8" casing shoe.
- Option to run Openhole Sliding Sleeves, cement 7" production string thru a stage tool below the XO joint and leave 5-1/2" casing string below the Glorieta formation uncemented with packers & sleeves from landing point to TD.
- Notify BLM if additional unplanned stages of Cement or Remediate with Bradenhead Squeeze becomes necessary.

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h
Must have table for contingency casing

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	YES
Does casing meet API specifications? If no, attach casing specification sheet.	YES
Is premium or uncommon casing planned? If yes attach casing specification sheet.	NO
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	YES
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	N/A
Is well located within Capitan Reef?	NO
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	NO
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	NO
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	NO
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	NO
If yes, are there three strings cemented to surface?	

2. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/sk	Vol ft3	500# Comp. Strength (hours)	Slurry Description
Surf.	500	13.5	1.68	8.94	840	7	Lead: Class C + 4.0% Bentonite + 0.2% Anti-Foam + 2.0% CaCl2 +0.125lb/sk LCM + 0.1% Dispersant
	400	14.8	1.35	6.38	540	7	Tail: Class C + 0.2% Anti-Foam + 0.1% Lost Circ Control + 2 lbs/bbl CemNET (losses Control)
Inter.	450	11.5	2.29	10.72	1031	17	Lead: Class C + 10.0% Bentonite + 0.2% Anti-Foam + 2.0% Expanding + 0.15% Viscosifier + 1.3% Retarder.
	300	13.5	1.29	4.81	387	7	Tail: Class C + 1% Extender + 3 lb/sk Extender + 0.2% Anti-Foam + 0.1% Dispersant + 13 lb/sk LCM + 0.5% Fluid Loss + 0.7% Retarder
Prod.	650	11.0	3.2	19.25	2080	17	Lead: Class C + 6% Extender + 10% Gas Migration Control + 2% Sodium Metasilicate (dry) + 1% Cement Bonding Agent + 3% Aluminum Silicate + 0.125 lb/sx Cello Flake + 3 lb/sx LCM-1
Prod – Cased Hole Option	1900	14.0	1.37	6.48	2603	7	Tail: Class C + 3lb/sk LCM + 1.5% Fluid Loss + 0.1% + 1% Sodium Metasilicate (dry) + 1.5% Fluid Loss Control

If additional unplanned stages of cementing are necessary, the contingency stage tool will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Stage tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

Lab reports with recipe and the 500 psi compressive strength time for the cement will be onsite for review.

3 strings casing cement design			
Casing String	TOC Lead	TOC Tail	% Excess
Surface	0'	585'	>100%
Intermediate	0'	1750'	>100%
Production	<1700'	5200'	>30%

Cement excess will be adjusted based on actual hole condition like losses or fluid caliper data if have.

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	**Size?**	**Min. Required WP**	**Type**	**✓**	**Tested to:**
8-3/4"	13-5/8"	3M/5M	Annular	x	50% of working pressure
			Blind Ram		3,000 psi
			Pipe Ram		
			Double Ram	x	
			Other*		

*Specify if additional ram is utilized.
Note: A 13-5/8" BOPE will be utilize in the 8-3/4" hole section depending on availability and Rig Substructure Clearance.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or 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. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.	
X	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. If yes, specs and hydrostatic test certification will be available in the company man's trailer and on the rig floor.	
	N	Are anchors required by manufacturer?
X	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. See attached schematic.	

5. Mud Program

3 strings casing mud program						
Depth		Type	Weight (ppg)	Viscosity	Water Loss	PH
From	To					
0	Surf. shoe	FW Gel	8.5-9.0	28-40	N/C	N.C.
Surf. Shoe	Inter. shoe	Saturated Brine	10.0	28-32	N/C	9-10.5
Inter. shoe	TD	Cut-Brine	8.6-10.0	28-40	N/C	9-10.5

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing.	
X	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain

Additional logs planned		Interval
	Resistivity	
	Density, GR, BHC	
	CBL	
X	Mud log	
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	2815 psi
Abnormal Temperature	No – 100°

- Mitigation measure for abnormal conditions - Loss of circulation is a possibility in the horizons below the Top of Grayburg. We expect that normal Loss of Circulation Material will be successful in healing any such loss of circulation events.

Gas detection equipment and pit level flow monitoring equipment will be on location. A flow paddle will be installed in the flow line to monitor relative amount of mud flowing in the non-pressurized return line. Mud probes will be installed in the individual tanks to monitor pit volumes of the drilling fluid with a pit volume totalizer. Gas detecting equipment and H2S monitor alarm will be installed in the mud return system and will be monitored. A mud gas separator will be installed and operable before drilling out from the Surface Casing. The gases shall be piped into the flare system. Drilling mud containing H2S shall be degassed in accordance with API RP-49, item 5.14. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
X	H2S is present
X	H2S Plan attached

8. Other facets of operation

Is this a walking operation? If yes, describe. NO.
Will be pre-setting casing? If yes, describe. NO.

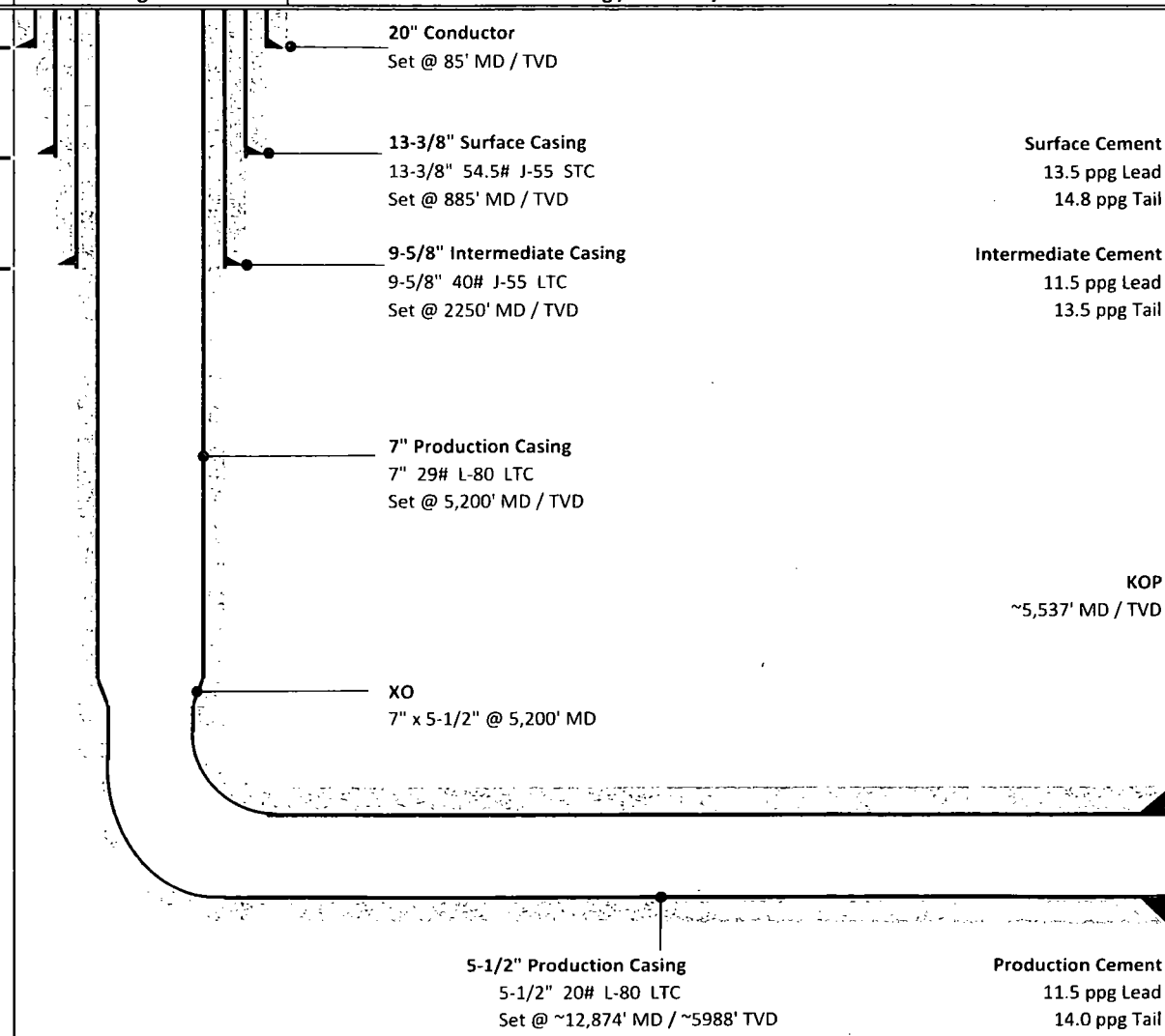
Attachments:

Attachment#1: Directional Plan
Attachment#2: Wellbore Casing & Cementing Schematic
Attachment#3: Wellhead Schematic
Attachment #4: BOP Schematics
Attachment #5: Choke Schematic
Attachment #6: Rig Layout
Attachment #7: H2S Contingency Plan

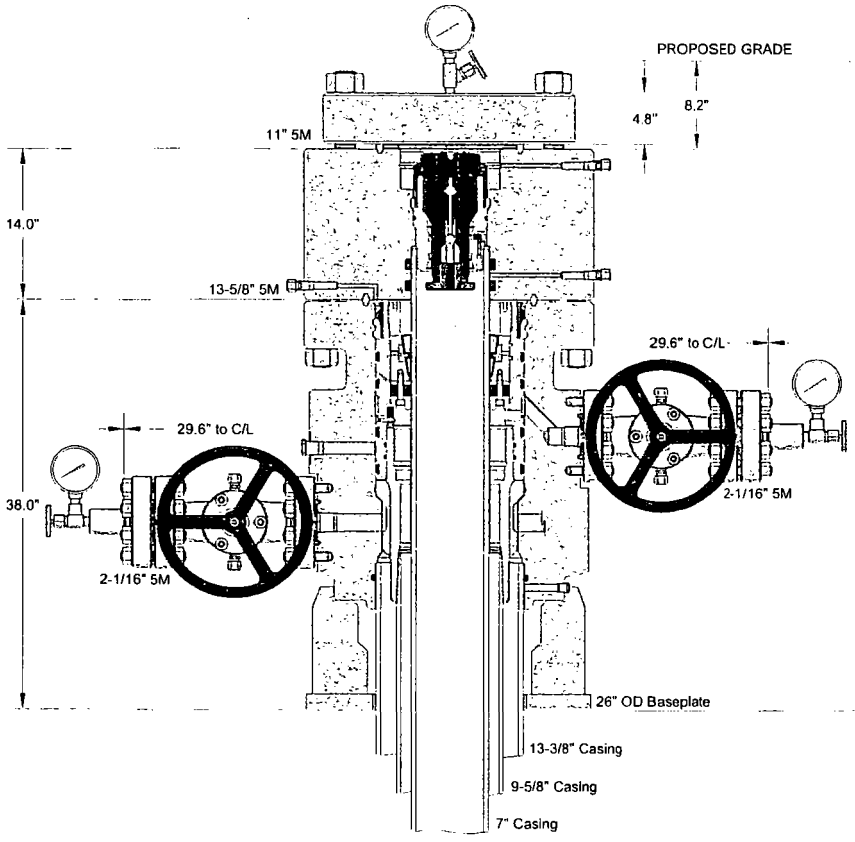
ConocoPhillips

WELLBORE CASING & CEMENTING SCHEMATIC

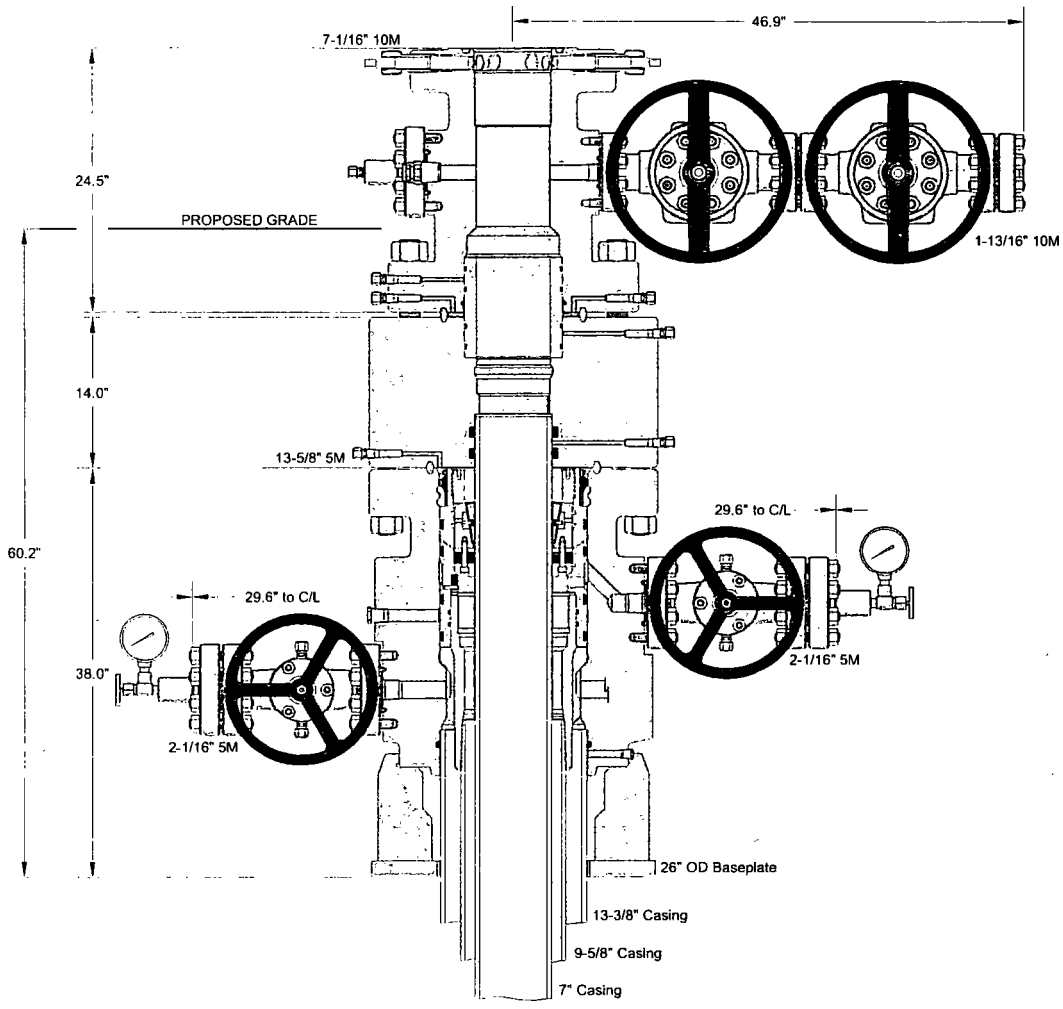
Wellbore Section	Mud Properties		Wellbore Design	
	Type	PPG	Hole Size	Casing Profile / Casing / Cement / Directional Plan Details
COND				
SURFACE	Native	8.6 PPG	17-1/2"	
INTERM	Brine	10.0 PPG	12-1/4"	
PRODUCTION	Cut Brine	8.6 PPG - 9.0 PPG	8-3/4"	



PERIDOT 8 FEDERAL 15H



DRILL AND SKID CONFIGURATION



PRODUCTION CONFIGURATION

INFORMATION CONTAINED HEREIN IS THE PROPERTY OF CACTUS WELLHEAD, LLC. REPRODUCTION, DISCLOSURE, OR USE THEREOF IS PERMISSIBLE ONLY AS PROVIDED BY CONTRACT OR AS EXPRESSLY AUTHORIZED BY CACTUS WELLHEAD, LLC.

CACTUS WELLHEAD LLC

13-3/8" x 9-5/8" x 7" 5M MBU-2LR Wellhead Assembly With
13-5/8" 5M x 11" 5M DBLHPS DSPA With 6-3/4" Type LR BPV
Profile and11" 5M x 7-1/16" 10M CTH-HPS-F Tubing Head

Permian Basin

DRAWN	THH	26JUL15
APPRV		
DRAWING NO.	ODE0000716	

ConocoPhillips, Peridot 8 Federal 15H

2. Casing Program – Openhole Sliding Sleeves Completion Option

3 strings casing design										
Hole Size	**Casing Interval**		**Csg. Size**	**Weight (lbs)**	**Grade**	**Conn.**	**SF Collapse**	**SF Burst**	**SF Pipe Tensile**	**SF Joint Tensile**
	From	**To**								
17.5"	0	885	13.375"	54.5	J55	STC/BTC	2.89	6.98	17.7	10.7
12.25"	0	2250	9.625"	40	J55	LTC/BTC	2.20	3.38	7.00	5.78
8.75"	0	5200	7"	29	L80	LTC/BTC	2.88	3.35	4.48	3.89
8.75"-8.5"	5200	12874	5.5"	20	L80	LTC/BTC	3.15	3.28	3.04	3.41
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

- Cement 7" production string thru a stage tool below the XO joint and leave 5-1/2" casing string below the Glorieta formation uncemented with packers & sleeves from landing point to TD.
- Notify BLM if additional unplanned stages of Cement or Remediate with Bradenhead Squeeze will be necessary.

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	YES
Does casing meet API specifications? If no, attach casing specification sheet.	YES
Is premium or uncommon casing planned? If yes attach casing specification sheet.	NO
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	YES
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	N/A
Is well located within Capitan Reef?	NO
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	NO
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	NO
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	NO
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	NO
If yes, are there three strings cemented to surface?	

3. Cementing Program – Openhole Sliding Sleeves Completion Option

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/sk	Vol ft3	500# Comp. Strength (hours)	Slurry Description
Surf.	500	13.5	1.68	8.94	840	7	Lead: Class C + 4.0% Bentonite + 0.2% Anti-Foam + 2.0% CaCl2 +0.125lb/sk LCM + 0.1% Dispersant
	400	14.8	1.35	6.38	540	7	Tail: Class C + 0.2% Anti-Foam + 0.1% Lost Circ Control + 2 lbs/bbl CemNET (losses Control)
Inter.	450	11.5	2.29	10.72	1031	17	Lead: Class C + 10.0% Bentonite + 0.2% Anti-Foam + 2.0% Expanding + 0.15% Viscosifier + 1.3% Retarder.
	300	13.5	1.29	4.81	387	7	Tail: Class C + 1% Extender + 3 lb/sk Extender + 0.2% Anti-Foam + 0.1% Dispersant + 13 lb/sk LCM + 0.5% Fluid Loss + 0.7% Retarder
Prod.	650	11.0	3.2	19.25	2080	17	Lead: Class C + 6% Extender + 10% Gas Migration Control + 2% Sodium Metasilicate (dry) + 1% Cement Bonding Agent + 3% Aluminum Silicate + 0.125 lb/sx Cello Flake + 3 lb/sx LCM-1

If additional unplanned stages of cementing are necessary, the contingency stage tool will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Stage tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

Lab reports with recipe and the 500 psi compressive strength time for the cement will be onsite for review.

3 strings casing cement design			
Casing String	TOC Lead	TOC Tail	% Excess
Surface	0'	585'	>100%
Intermediate	0'	1750'	>100%
Production	<1700'	N/A	>30%

Cement excess will be adjusted based on actual hole condition like losses or fluid caliper data if have.

Attachments:

Attachment#1: Wellbore Casing & Cementing Schematic

Peridot 8 Fed 15H

String Section	Depth MD	Depth TVD	Csg length ft	Wt	MIY	Col	Pipe Str	Jt Str	Drill Fluid
Surface Casing	885	885	885	54.5	2730	1130	853000	514000	8.5
Intermediate 1 Casing	2250	2250	2250	40	3950	2570	630000	520000	10
Production 1 Casing	5200	5200	5200	29	8160	7020	676000	587000	9
Production 2 Casing	12874	5988	7674	20	9190	8830	466000	524000	9

Collapse Design (Safety) Factors – BLM Criteria

Collapse Design (Safety) Factor: SFc

SFc = Pc / (MW x .052 x Ls)

Where

- Pc is the rated pipe Collapse Pressure in pounds per square inch (psi)
- MW is mud weight in pounds per gallon (ppg)
- Ls is the length of the string in feet (ft)

The Minimum Acceptable Collapse Design (Safety) Factor SFc = 1.125

Surface Casing
SFc = 1130 / 391 = **2.89**

Intermediate 1 Casing
SFc = 2570 / 1170 = **2.20**

Production 1 Casing
SFc = 7020 / 2434 = **2.88**

Production 2 Casing
SFc = 8830 / 2802 = **3.15**

Burst Design (Safety) Factors – BLM Criteria

Burst Design (Safety) Factor: SFb

SFb = Pi / BHP

Where

- Pi is the rated pipe Burst (Minimum Internal Yield) Pressure in pounds per square inch (ps
- BHP is bottom hole pressure in pounds per square inch (psi)

The Minimum Acceptable Burst Design (Safety) Factor SFb = 1.0

Surface Casing
SFb = 2730 / 391 = **6.98**

Intermediate 1 Casing
SFb = 3950 / 1170 = **3.38**

Production 1 Casing
SFb = 8160 / 2434 = **3.35**

Production 2 Casing
SFb = 9190 / 2802 = **3.28**

Pipe Strength Design (Safety) Factors – BLM Criteria

Pipe Strength Design (Safety) Factor: SFtp

SFtp = Fp / Wt:

Where

- Fp is the rated pipe Body Strength in pounds (lbs)
- Wt is the weight of the casing string in pounds (lbs)

The Minimum Acceptable Pipe Strength Design (Safety) Factor SFTp = 1.6 dry or 1.8 buoyant

Surface Casing
SFi Dry = 853000 / 48232.5 = **17.7**
SFi Bouyant = 853000 / (48232.5 x 0.870) = **20.3**

Intermediate 1 Casing
SFi Dry = 630000 / 90000 = **7.00**
SFi Bouyant = 630000 / (90000 x 0.847) = **8.26**

Production 1 Casing
SFi Dry = 676000 / 150800 = **4.48**
SFi Bouyant = 676000 / (150800 x 0.863) = **5.20**

Production 2 Casing
SFi Dry = 466000 / 153480 = **3.04**
SFi Bouyant = 466000 / (153480 x 0.863) = **3.52**

Joint Strength Design (Safety) Factors – BLM Criteria

Joint Strength Design (Safety) Factor: SFtj

SFtj = Fj / Wt:

Where

- Fj is the rated pipe Joint Strength in pounds (lbs)
- Wt is the weight of the casing string in pounds (lbs)

The Minimum Acceptable Joint Strength Design (Safety) Factor SFTj = 1.6 dry or 1.8 buoyant

Surface Casing
SFi Dry = 514000 / 48232.5 = **10.7**
SFi Bouyant = 514000 / (48232.5 x 0.870) = **12.2**

Intermediate 1 Casing
SFi Dry = 520000 / 90000 = **5.78**
SFi Bouyant = 520000 / (90000 x 0.847) = **6.82**

Production 1 Casing
SFi Dry = 587000 / 150800 = **3.89**
SFi Bouyant = 587000 / (150800 x 0.863) = **4.51**

Production 2 Casing
SFi Dry = 524000 / 153480 = **3.41**
SFi Bouyant = 524000 / (153480 x 0.863) = **3.96**

Peridot 8 Fed 15H

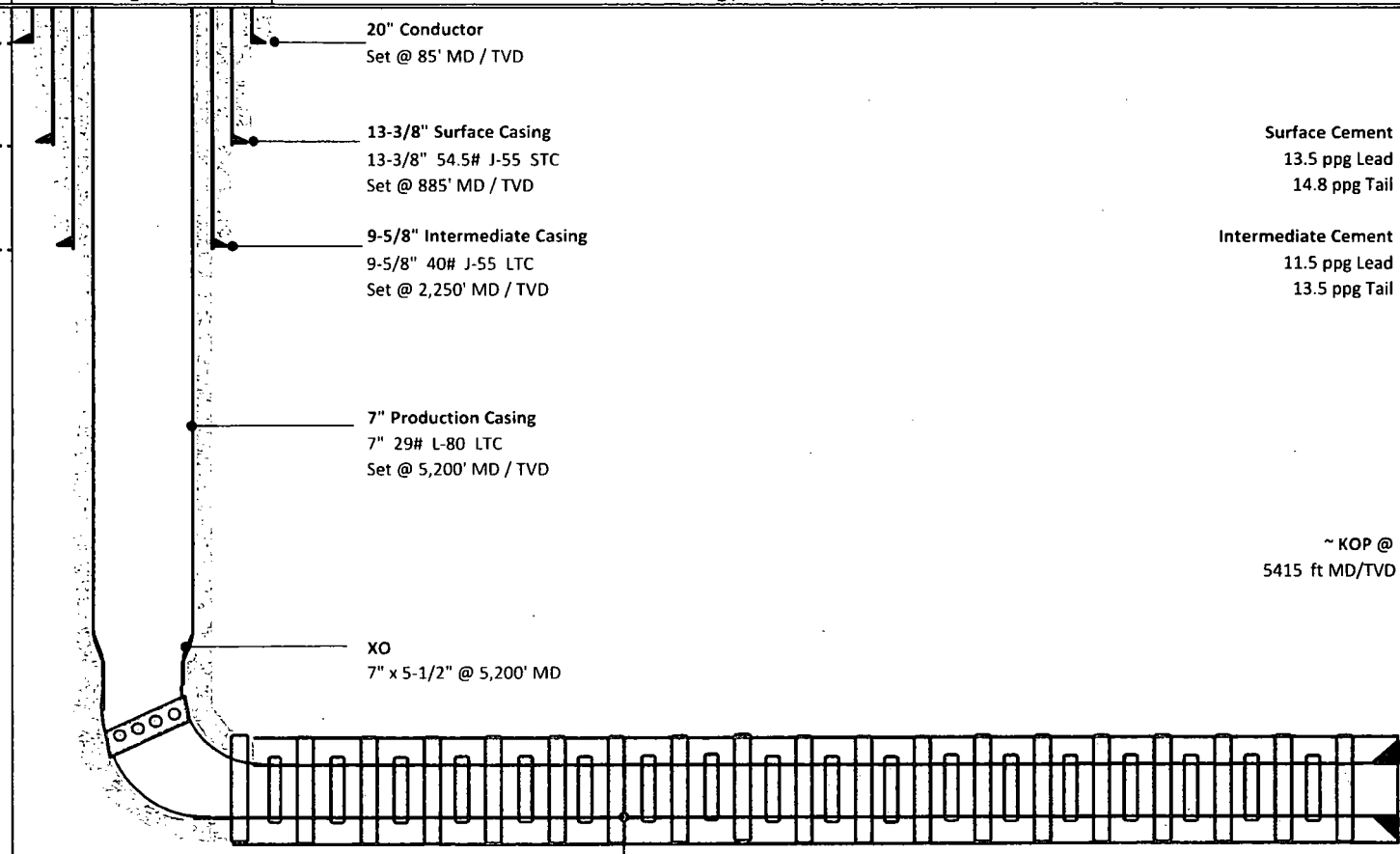
ConocoPhillips

OPEN HOLE SLIDING SLEEVE - WELLBORE CASING & CEMENTING SCHEMATIC

Wellbore Section	Mud Properties: Type	Mud Properties: PPG	Wellbore Design: Hole Size
COND			
SURFACE	Native	8.6 PPG	17-1/2"
INTERM	Brine	10.0 PPG	12-1/4"
PRODUCTION	Cut Brine	8.6 PPG - 9.0 PPG	8-3/4"

Wellbore Design

Casing Profile



Casing / Cement / Directional Plan Details

20" Conductor
Set @ 85' MD / TVD

13-3/8" Surface Casing
13-3/8" 54.5# J-55 STC
Set @ 885' MD / TVD

Surface Cement
13.5 ppg Lead
14.8 ppg Tail

9-5/8" Intermediate Casing
9-5/8" 40# J-55 LTC
Set @ 2,250' MD / TVD

Intermediate Cement
11.5 ppg Lead
13.5 ppg Tail

7" Production Casing
7" 29# L-80 LTC
Set @ 5,200' MD / TVD

~ KOP @
5415 ft MD/TVD

XO
7" x 5-1/2" @ 5,200' MD

5-1/2" Production Casing
5-1/2" 20# L-80 LTC
Set @ 12874 ft MD
5988 ft TVD

Production Cement
11.0 ppg Lead
14.0 ppg Tail

Surface Use Plan of Operations

Introduction

The following surface use plan of operations will be followed and carried out once the APD is approved. No other disturbance will be created other than what was submitted in this surface use plan. If any other surface disturbance is needed after the APD is approved, a BLM approved sundry notice or right of way application will be acquired prior to any new surface disturbance.

Before any surface disturbance is created, stakes or flagging will be installed to mark boundaries of permitted areas of disturbance, including soil storage areas. As necessary, slope, grade, and other construction control stakes will be placed to ensure construction in accordance with the surface use plan. All boundary markers will be maintained in place until final construction cleanup is completed. If disturbance boundary markers are disturbed or knocked down, they will be replaced before construction proceeds.

If terms and conditions are attached to the approved APD and amend any of the proposed actions in this surface use plan, we will adhere to the terms and conditions.

1. Existing Roads

a. The existing access road route to the proposed project is depicted on Access Road, Topo Map A. Improvements to the driving surface will be done where necessary. No new surface disturbance will be done, unless otherwise noted in the New or Reconstructed Access Roads section of this surface use plan..

b. The existing access road route to the proposed project does not cross lease or unit boundaries, so a BLM right-of-way grant will not be acquired for this proposed road route.

c. The operator will improve or maintain existing roads in a condition the same as or better than before operations begin. The operator will repair pot holes, clear ditches, repair the crown, etc. All existing structures on the entire access route such as cattleguards, other range improvement projects, culverts, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use.

d. We will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or wind events. BLM written approval will be acquired before application of surfactants, binding agents, or other dust suppression chemicals on roadways.

2. New or Reconstructed Access Roads

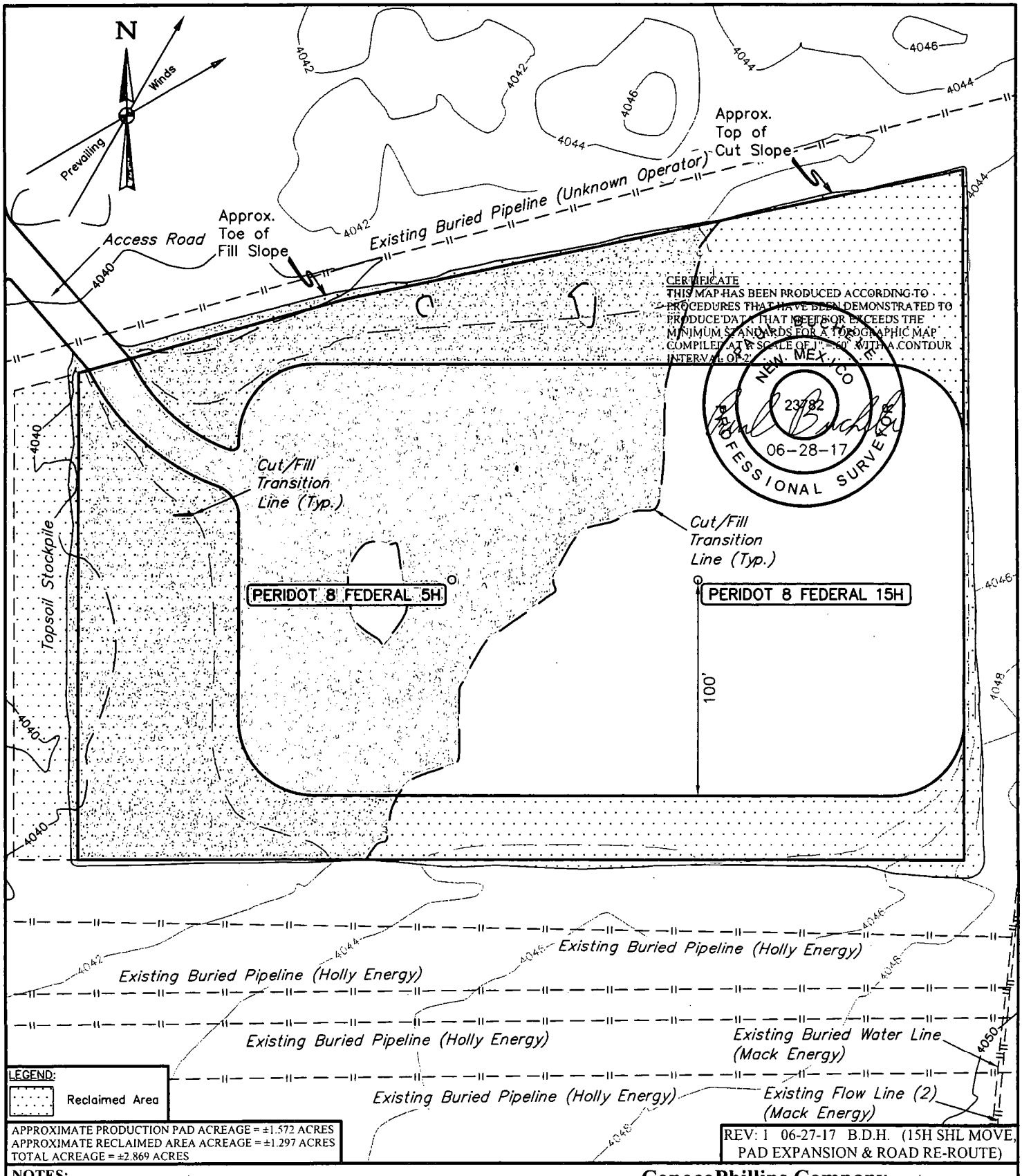
a. An access road will be needed for this proposed project. See the survey plat for the location of the access road.

b. The length of access road needed to be constructed for this proposed project is about 5236 feet.

c. The maximum driving width of the access road will be 17 feet. The maximum width of surface disturbance when constructing the access road will not exceed 25 feet. All areas outside of the driving surface will be revegetated.

d. The access road will be constructed with 6 inches of compacted clean caliche.

e. When the road travels on fairly level ground, the road will be crowned and ditched with a 2% slope from the tip of the road crown to the edge of the driving surface. The ditches will be 3 feet wide with 3:1 slopes. See Road Cross Section diagram below.



LEGEND:

Reclaimed Area

APPROXIMATE PRODUCTION PAD ACREAGE = ±1.572 ACRES
APPROXIMATE RECLAIMED AREA ACREAGE = ±1.297 ACRES
TOTAL ACREAGE = ±2.869 ACRES

REV: 1 06-27-17 B.D.H. (15H SHL MOVE, PAD EXPANSION & ROAD RE-ROUTE)

NOTES:

- Contours shown at 2' intervals.

Regulatory Note: approximate size of production pad is 315' x 200'.

ConocoPhillips Company

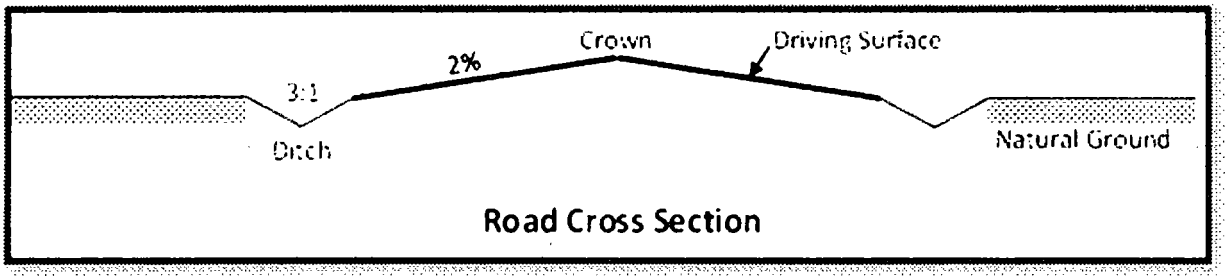
PERIDOT 8 FEDERAL 5H & 15H
SE 1/4 NW 1/4, SECTION 8, T17S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	A.V., A.R.	10-27-16	SCALE
DRAWN BY	S.F.	10-31-16	1" = 60'

RECLAMATION DIAGRAM | FIGURE #4

UINTAH ENGINEERING & LAND SURVEYING

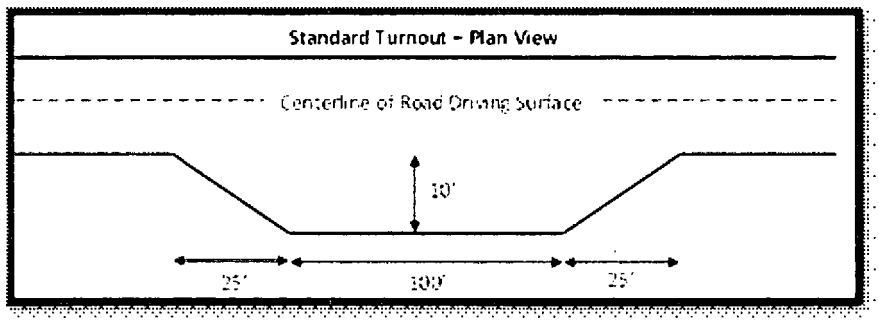
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



f. The access road will be constructed with a ditch on each side of the road.

g. The maximum grade for the access road will be 4 percent.

h. Turnouts will be constructed for the proposed access road and will be constructed to the dimensions shown in the diagram below. See survey plat or map for location of the turnouts.



i. An appropriately sized cattleguard sufficient to carry out the project will be installed and maintained at the fence crossing(s). Prior to cutting the fence, the fence will be braced and tied off on both sides of the passageway with H braces to protect the integrity of the fence line. See the survey plat for the location of the proposed cattle guard.

j. Since the proposed access road crosses lease boundaries, a right-of-way will be required for this access road. A right-of-way grant will be applied for through the BLM. The access road will not be constructed until an approved BLM right-of-way grant is acquired.

k. No culverts will be constructed for this proposed access road.

l. No low water crossings will be constructed for the access road.

m. Since the access road is on level ground, no lead-off ditches will be constructed for the proposed access road.

n. Newly constructed or reconstructed roads, on surface under the jurisdiction of the Bureau of Land Management, will be constructed as outlined in the BLM "Gold Book" and to meet the standards of the anticipated traffic flow and all anticipated weather requirements as needed. Construction will include ditching, draining, crowning and capping or sloping and dipping the roadbed as necessary to provide a well-constructed and safe road.

o. Majority of this access road to be shared by other Peridot wells. Access road length includes 15' for facility access and 382' for frac pond access. Wider travel surface is needed to accommodate larger rig wheelbase. Road is needed to reach facility near NM Highway 82. Cattle guard to be installed between facility access road and NM Highway 82. Turnouts will be installed using dimensions recommended by BLM, standard for this area. Right of ways will be obtained for highway access and lease road access to include future Peridot wells.

3. Location of Existing Wells

a. One Mile Radius map of the APD depicts all known wells within a one mile radius of the proposed well.

b. There is no other information regarding wells within a one mile radius.

4. Location of Existing and/or Proposed Production Facilities

a. All permanent, lasting more than 6 months, above ground structures including but not limited to pumpjacks, storage tanks, barrels, pipeline risers, meter housing, etc. that are not subject to safety requirements will be painted a non-reflective paint color, Shale Green, from the BLM Standard Environmental Colors chart, unless another color is required in the APD Conditions of Approval.

b. If any type of production facilities are located on the well pad, they will be strategically placed to allow for maximum interim reclamation, recontouring, and revegetation of the well location.

c. A production facility is proposed to be installed off the proposed well location. Production from the well will be processed at this production facility. Peridot 8 Federal CF1 Tank Battery, Location Layout, Figure #1 depicts the location of the production facilities.

d. The proposed production facility will have a secondary containment structure that is constructed to hold the capacity of 1-1/2 times the largest tank, plus freeboard to account for percipitation, unless more stringent protective requirements are deemed necessary.

e. Preliminary Plot Plan depicts the production facility as well.

f. A pipeline to transport production from the proposed well to the production facility will be installed.

i. We plan to install a 4 inch surface polyethylene or fiberglass pipeline from the proposed well to the production facility. The proposed length of the pipeline will be 2290 feet. The working pressure of the pipeline will be 125 psi or less. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline will be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline will be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity will be confined to existing roads or right-of-ways.

ii. Flow Line Map, Topo D and Flow Line R-O-W depicts the proposed production pipeline route from the well to the production facility.

iii. The proposed pipeline does not cross lease boundaries, so a right of way grant will not need to be acquired from the BLM.

If any plans change regarding the production facility or other infrastructure (pipeline, electric line, etc.), we will submit a sundry notice or right of way (if applicable) prior to installation or construction.

Additional Pipeline(s)

We propose to install 4 additional pipeline(s):

1. Surface produced water pipeline:

a. We plan to install a 4 inch surface polyethylene or fiberglass pipeline from Peridot 8 Fed CF1 Tank Battery to Elvis Tank Battery. The proposed length of the pipeline will be 16695 feet. The working pressure of the pipeline will be 125 psi or less. The pipeline will transport produced water. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline will be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline will be installed immediately adjacent to the outer surface pipeline. All construction and maintenance

activity will be confined to existing roads or right-of-ways.

b. Peridot CTB to Elvis Battery; SWD Flow Line ROW depicts the proposed produced water pipeline route.

c. Since the proposed pipeline crossess lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.

2. Buried produced water pipeline:

a. We plan to install a 8 inch buried polyethylene or fiberglass pipeline from Peridot 8 Fed CF1 Tank Battery to Elvis Tank Battery. The proposed length of the pipeline will be 15676 feet. The working pressure of the pipeline will be about 150 psi. A 40 feet wide work area will be needed to install the buried pipeline. We will need an extra 10 foot wide area near corners to safely install the pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.

b. SWD Pipeline ROW depicts the proposed produced water pipeline route.

c. Since the proposed pipeline crossess lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.

3. Buried natural gas pipeline:

a. We plan to install a 8 inch buried steel pipeline from Peridot 8 Fed CF1 Tank Battery to the east ending at NENE, Sec. 8, 17S, 32E.. The proposed length of the pipeline will be 1397 feet. The working pressure of the pipeline will be about 150 psi. A 40 feet wide work area will be needed to install the buried pipeline. We will need an extra 10 foot wide area near corners to safely install the pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.

b. Peridot Gas Pipeline depicts the proposed natural gas pipeline route.

c. Since the proposed pipeline crossess lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.

4. Buried natural gas pipeline:

a. We plan to install a 10 inch buried polyethylene or fiberglass pipeline from Peridot 8 Fed CF1 Tank Battery to heading east, then south, then east to NW1/4 of SW 1/4 of Sec 9, 17S, 32E. The proposed length of the pipeline will be 6138 feet. The working pressure of the pipeline will be about 125 psi. A 40 feet wide work area will be needed to install the buried pipeline. We will need an extra 10 foot wide area near corners to safely install the pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.

b. Peridot Gas Pipeline-DCP Connection depicts the proposed natural gas pipeline route.

c. Since the proposed pipeline crossess lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.

Electric Line(s)

a. We plan to install an overhead electric line for the proposed well. The proposed length of the electric line will be 5766 feet. Peridot 8 Fed 1H Power Line plat depicts the location of the proposed electric line route. The electric line will be construction to provide protection from raptor electrocution.

b. Since the proposed electric line crossess lease boundaries, a right of way grant will be acquired prior to installation of the proposed electric line.

5. Location and Types of Water

a. The location of the water well is as follows: Current water sources include: 1) Rockhouse Ranch; Section 13_ T17S_ R33E; and 2) Morewest Corporation_ New Mexico; Section 16 & 26_ T16S_ R32E Water sources specified within this application are current options for purchase However_ additional source(s) in the vicinity may be used depending on availability at the time water is needed We intend to use different source(s) if necessary.

b. The operator will use established or constructed oil and gas roads to transport water to the well site. The operator will try to utilize the identified access route in the surface use plan.

6. Construction Material

a. Caliche from a BLM source in Maljamar area or third-party commercial provider will be used. Current plans include: 1) Maljamar, New Mexico; Section 9, T17S, R32E; off Maljamar Road; 2) Hwy 529, New Mexico; Section 25, T17S, R31E; 3) Olane Caswell Ranch; Section 3, T17S, R32E. Caliche sources specified within this application are current options for mineral purchase. However, additional source(s) in the vicinity may be used depending on availability at the time of location construction. We intend to use different source(s) if necessary.

7. Methods for Handling Waste

a. Drilling fluids and produced oil and water from the well during drilling and completion operations will be stored safely and disposed of properly in an NMOCD approved disposal facility.

b. Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around the well site will be collected for disposal.

c. Human waste and grey water will be properly contained and disposed of properly at a state approved disposal facility.

d. After drilling and completion operations, trash, chemicals, salts, frac sand and other waste material will be removed and disposed of properly at a state approved disposal facility.

e. The well will be drilled utilizing a closed loop system. Drill cutting will be properly disposed of into steel tanks and taken to an NMOCD approved disposal facility.

8. Ancillary Facilities

a. The location of the proposed ancillary facilities is depicted on Peridot 8 Fed Frac Pond Surface Use Area.

b. The type of ancillary facility needed is ConocoPhillips Company proposes to build a 600' x 600' frac pond to support our horizontal well completions in the area It is to be located in the NENW of Section 8_ T17S_ R32E Frac pond will contain fresh water A 382' road will provide access and is included in the length of access road needed Plats are attached Area will be reclaimed upon completion of unit development.

9. Well Site Layout

a. The following information is presented in the well site survey plat or diagram:

i. reasonable scale (near 1":50')

ii. well pad dimensions

iii. well pad orientation

iv. drilling rig components

v. proposed access road

vi. elevations of all points

vii. topsoil stockpile

viii. reserve pit location/dimensions if applicable

ix. other disturbances needed (flare pit, stinger, frac farm pad, etc.)

x. existing structures within the 600' x 600' archaeoligical surveyed area (pipelines, electric lines, well pads, etc.

b. The proposed drilling pad was staked and surveyed by a professional surveyor. The attached survey plat of the well site depicts the drilling pad layout as staked.

c. A title of a well site diagram is Typical Rig Layout, Figure #3. This diagram depicts the Rig layout with estimated building locations, primary and secondary H2S muster points, and wind indicator location.

d. Topsoil Salvaging

i. Grass, forbs, and small woody vegetation, such as mesquite will be excavated as the topsoil is removed. Large woody vegetation will be stripped and stored separately and respread evenly on the site following topsoil respreading. Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on 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 should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils. Contaminated soil will not be stockpiled, but properly treated and handled prior to topsoil salvaging.

10. Plans for Surface Reclamation

Reclamation Objectives

i. The objective of interim reclamation is to restore vegetative cover and a portion of the landform sufficient to maintain healthy, biologically active topsoil; control erosion; and minimize habitat and forage loss, visual impact, and weed infestation, during the life of the well or facilities.

ii. The long-term objective of final reclamation is to return the land to a condition similar to what existed prior to disturbance. This includes restoration of the landform and natural vegetative community, hydrologic systems, visual resources, and wildlife habitats. To ensure that the long-term objective will be reached through human and natural processes, actions will be taken to ensure standards are met for site stability, visual quality, hydrological functioning, and vegetative productivity.

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

iv. If circumstances allow, interim reclamation and/or final reclamation actions will be completed no later than 6 months from when the final well on the location has been completed or plugged. We will gain written permission from the BLM if more time is needed.

v. Interim reclamation will be performed on the well site after the well is drilled and completed. Reclamation Diagram; Figure #4 depicts the location and dimensions of the planned interim reclamation for the well site.

Interim Reclamation Procedures (If performed)

1. Within 30 days of well completion, the well location and surrounding areas will be cleared of, and maintained free of, all materials, trash, and equipment not required for production.

2. In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.

3. The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.

4. Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts & fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used. 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.

5. Proper erosion control methods will be used on the area to control erosion, runoff and siltation of the surrounding area.

6. The interim reclamation will be monitored periodically to ensure that vegetation has reestablished and that erosion is controlled.

Final Reclamation (well pad, buried pipelines, etc.)

1. Prior to final reclamation procedures, the well pad, road, and surrounding area will be cleared of material, trash, and equipment.

2. All surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.

3. All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be recontoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.

4. After all the disturbed areas have been properly prepared, the areas will be seeded with the proper BLM seed mixture, free of noxious weeds. 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.

5. Proper erosion control methods will be used on the entire area to control erosion, runoff and siltation of the surrounding area.

6. All unused equipment and structures including pipelines, electric line poles, tanks, etc. that serviced the well will be removed.

7. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion is controlled.

11. Surface Ownership

a. The surface ownership of the proposed project is Federal.

12. Other Information

a. Onsite for this well pad was occurred 10/18/16 and 6/20/17. Please review this application with other Peridot 8 Federal
well applications. Archaeological survey requirements have been met by block survey. Saltwater Disposal Lines- we request the option to install up to four side by side surface flow lines from Peridot 8 CF 1 Tank Battery to the Elvis Battery. These lines will remain in place until a buried 8" pipeline is approved and installed (plats included). Gas sales line to Frontier is planned. We are requesting an additional option for gas sales line to DCP, depending on agreement reached. Gas Sales Line ROW may be used by third-party gas processor, depending on agreements reached. The Peridot 8 Federal Frac Pond will be used to support completion operations for wells drilled in this area. Three key mitigation strategies are to be used for Peridot development; horizontal wells, interim reclamation and participation in conservation agreement. Development of these minerals could have been via vertical wells; approximately 12 wells. After reevaluation of options, two key actions are planned horizontal wells and multi-well pads where possible. This minimizes surface use, while improving project economics and results in significant surface use reduction. Interim reclamation is a component of our surface use mitigation. COPC intends to maximize interim reclamation to the greatest extent feasible for each location drilled. Current interim reclamation plans are included in survey plat packages for individual wells. Lastly, COPC is a participant in the Candidate Conservation Agreement. Among mitigation measures re observing timing stipulations for Lesser-Prairie Chickens, as indicated by BLM, at the beginning of each breeding season. Also, well locations have been moved, in consultation with BLM biologists to avoid habitat of interest.For multi-well pad we request deferral of interim reclamation requirements until wells have been drilled.

13. Maps and Diagrams

Access Road, Topo Map A - Existing Road
One Mile Radius map - Wells Within One Mile
Peridot 8 Federal CF1 Tank Battery, Location Layout, Figure #1 - Production Facilities Diagram
Preliminary Plot Plan - Additional Production Facilities Diagram
Flow Line Map, Topo D and Flow Line R-O-W - Production Pipeline
Peridot CTB to Elvis Battery; SWD Flow Line ROW - produced water Pipeline
SWD Pipeline ROW - produced water Pipeline
Peridot Gas Pipeline - natural gas Pipeline
Peridot Gas Pipeline-DCP Connection - natural gas Pipeline
Peridot 8 Fed 1H Power Line plat - Electric Line
Peridot 8 Fed Frac Pond Surface Use Area - Ancillary Facilities
Typical Rig Layout, Figure #3 - Well Site Diagram
Reclamation Diagram; Figure #4 - Interim Reclamation

Surface Disturbance Summary and Comments

Summary Table of Surface Disturbance

Disturbance Description	Disturbance (Feet)	Permanent Disturbance (Acres)	Temporary Disturbance (Acres)	Total Acres
Well Site Disturbance	NA	1.57	1.30 acres	2.87
30' wide new access road ROW*	5236'	3.61	none	3.61
10' wide flow line ROW	2290'	0.53	none	0.53
Power Line ROW*	5766'	1.32	none	1.32
Peridot 8 CF1 Tank Battery	400'x250'	2.52	none	2.52
Gas Sales Line ROW to Frontier*	1397'	0.96	0.32	1.28
Gas Sales Line ROW to DCP*	6138'	4.23	1.4	5.63
Saltwater Disposal Lines (surface)*	16695'	7.67	none	7.67
Saltwater Disposal Line (buried)*	15,676'	10.75	none	10.75
Freshwater Frac Pond*	600'x600'	8.52	none	8.52

*Note: majority of new access road, power line, tank battery, gas sales line, and salt water disposal line are shared with other Peridot wells. Total amount of road to be built is about 5236' and includes 15' road for facility access and 382' road to frac pond for access.

Disturbance Comments:

Please review this APD with other Peridot 8 Federal wells; 1H, 2H, 3H, 4H, 5H, 7H, 11H, 12H, 13H, 14H, 15H, and 17H. Peridot 8 Federal CF1 Tank Battery will be constructed concurrent with the first well(s) drilled for this development. Long term disturbance for the facility pad will use 2.52 acres. 5766' of electric line to be installed adjacent to access road and utilize 1.32 acres. 1397' of buried gas sales line to be installed to Frontier connection will utilize 0.321 temporary acres and 0.962 permanent acres. If a gas sales line connection to DCP is installed, it will be about 6138', utilize 4.23 permanent acres and 1.4 temporary acres. Gas Sales Line ROW may be used by third-party gas processor, depending on agreements reached. Up to four side by side produced water surface lines will be installed from Peridot 8 Federal CF1 Tank Battery to Elvis SWD well (16695'). These lines will be installed in 2 side by side ROWs requiring 7.67 (3.833 acres each). These lines will remain in place until a buried 8" pipeline is approved and installed. The buried SWD line will be 15676' and utilize about 10.8 permanent acres. Please see attached Summary of Surface Use and Surface Use Plan of Operations.

ConocoPhillips anticipates needing a freshwater frac pond to aid in completion operations. We plan on reclaiming the frac pond surface upon completion of the full Peridot Unit development. Reclamation activities will be conducted in accordance to BLM standards at the time of reclamation.

Additional wording; Mitigation:

Three key mitigation strategies are to be used for Peridot development; horizontal wells, interim reclamation and participation in conservation agreement. Development of these minerals could have been via vertical wells; approximately 12 wells. After re-evaluation of options, two key actions are planned horizontal wells and multi-well pads where possible. This minimizes surface use, while improving project economics and results in significant surface use reduction.

Interim reclamation is a component of our surface use mitigation. COPC intends to maximize interim reclamation to the greatest extent feasible for each location drilled. Current interim reclamation plans are included in survey plat packages for individual wells.

COPC is a participant in the Candidate Conservation Agreement. Among mitigation measures re observing timing stipulations for Lesser-Prairie Chickens, as indicated by BLM, at the beginning of each breeding season. Also, well locations have been moved, in consultation with BLM biologists to avoid habitat of interest.

Gas Capture Plan
Peridot 8 Federal Wells

	Peridot 8 Federal Wells-Located in Sec. 8, T17S, R32E															
Well Name:	1H	2H	3H	4H	5H	6H	7H	8H	11H	12H	13H	14H	15H	16H	17H	18H
Well Location:	615' FSL	936' FSL	2080' FSL	2237' FSL	2634' FNL	1586' FNL	1065' FNL	775' FNL	755' FSL	1035' FSL	1240' FSL	2237' FSL	2634' FNL	1485' FNL	915' FNL	635' FNL
	2460' FEL	2501' FEL	2350 FWL	2440' FWL	1907' FWL	2635' FEL	2540' FWL	2543' FWL	2460' FEL	2600' FEL	2480' FWL	2580' FWL	2022' FWL	2538' FEL	2540' FWL	2542' FWL
Production Facility Name:	Peridot 8 Federal CF1 Tank Battery															
Production Facility Location:	NWNE, Section 8, T17S, R32E															
Anticipated Completion Date:	60-120 days after drilling completed; dependent upon completion crew availability															
Initial Production Volumes:																
Oil (bopd)	570	570	570	570	570	570	570	570	480	480	480	480	480	480	480	480
Gas (mcfd)	620	620	620	620	620	620	620	620	530	530	530	530	530	530	530	530
Water (bwpd)	2300	2300	2300	2300	2300	2300	2300	2300	1900	1900	1900	1900	1900	1900	1900	1900
Date of First Production:	<45 days following completion operations															
Expected Well Life Expectancy:	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years