PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Devon Energy Production Company, L.P.**
LEASE NO.:	**NMNM-114991**
WELL NAME & NO.:	**Green Wave 20-17 Fed 1H**
SURFACE HOLE FOOTAGE:	**2394' FNL & 0269' FWL**
BOTTOM HOLE FOOTAGE	**0330' FNL & 0380' FWL Sec. 17, T. 26 S., R 34 E.**
LOCATION:	**Section 20, T. 26 S., R 34 E., NMPM**
COUNTY:	**County, New Mexico**

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

A. **Hydrogen Sulfide**

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, report measured amounts 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. Option – Setting surface casing with Spudder Rig

   a. Notify the BLM when removing the Spudder Rig.

   b. Notify the BLM when moving in the H&P Flex Rig. Rig to be moved in within 60 days of notification that Ashton Oilfield Services Rig has left the location. Failure to notify or have rig on location within 60 days will result in an Incident of Non-Compliance.

Approval Date: 02/27/2018

c. Once the H&P Flex Rig is on location, it shall not be removed from over the hole without prior approval unless the production casing has been run and cemented or the well has been properly plugged. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

d. BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as H&P Flex Rig is rigged up on well. CIT for the surface casing shall be performed and results recorded on subsequent sundry – pressure to be 1200 psi.

4. 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.

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

A. CASING

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 flows in the Salado and Castile.
Possibility of lost circulation in the Red Beds, Rustler, and Delaware.
Abnormal pressures may be encountered upon penetrating the 3rd Bone Spring Sandstone and all subsequent formations.

1. The **10-3/4** inch surface casing shall be set at approximately **820** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If Salt is encountered, set casing at least 25 feet above the salt.**

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

    b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Formation below the 10-3/4" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

Intermediate casing shall be kept fluid filled while running into hole to meet BLM minimum collapse requirements.

2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

☐ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Excess calculates to 11% - Additional cement may be required.** Any Cement remediation must be approved by the BLM.

Formation below the 7-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.

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 **5-1/2** inch production casing is:

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

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.

B. 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.**

Variance approved to use a 5M annular. The annular must be tested to full working pressure (5000 psi.)

10M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

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.

f. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

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 012918

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company
LEASE NO.:	NMNM114991
WELL NAME & NO.:	Green Wave 20-17 Fed 1H
SURFACE HOLE FOOTAGE:	2394'/N & 269'/W
BOTTOM HOLE FOOTAGE	330'/N & 380'/W
LOCATION:	Section 20, T.26 S., R.34 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)

Temporary Fence Crossing Requirement

Where entry is granted across a fence line, the fence must be braced and tied off on both sides of the passageway with H-braces prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. Devon shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Cattle Guard Requirement

Where entry is granted across a fence line for an access road, the fence must be braced and tied off on both sides of the passageway with H-braces prior to cutting. Once the work is completed, the fence will be restored to its prior condition with an appropriately sized cattle guard sufficient to carry out the project. Any new or existing cattle guards on the access route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. Devon shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations. Once the road is abandoned, the fence would be restored to its prior condition, or better. Devon shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

During construction, Devon shall minimize disturbance to existing fences, water lines, troughs, windmills, and other improvements on public lands. Devon 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 grazing permittee/allottee prior to disturbing any range improvement projects. 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.

Devon would adhere to the following stipulations:

- Upon abandonment, a low profile abandoned well marker will be installed to prevent raptor perching.
- Devon would need to construct and maintain escape ramps according to the following criteria:
    - Earthen escape ramps would be required to be constructed to sufficiently support livestock at no more than a 30-degree slope and spaced no more than 500 feet apart.
    - If trench is left open under an 8-hour time period, it would not be required to have an escape ramp; however, before the trench is backfilled, Lucid would inspect the trench for wildlife and remove any species that are trapped at a distance of at least 100 yards away from the trench.

- 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 power line structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. The holder without liability or expense shall make such modifications and/or additions to the United States.

- A BLM Wildlife Biologist must be contacted by Devon prior to construction activities to determine if the raptor nest is active. Raptors nest on special, natural habitat features, such as trees, large brush, cliff faces and escarpments, will be protected by not allowing surface disturbance within up to 200 meters of nests or by delaying activity for up to 90 days, or a combination of both. Exceptions to this requirement for raptor nests will be considered if the nests expected to be disturbed are inactive, the proposed activity is of short duration (e.g. habitat enhancement projects, fences, pipelines), and will not result in continuing activity in proximity to the nest.

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.

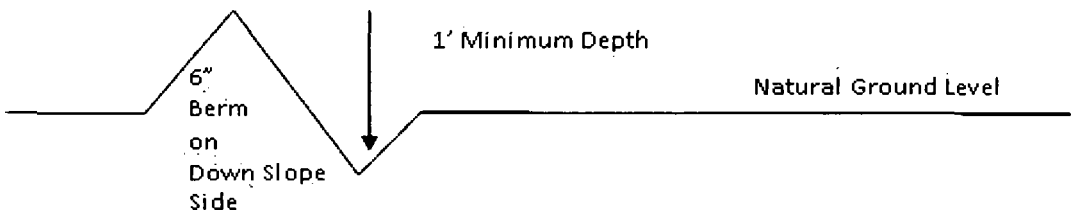
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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

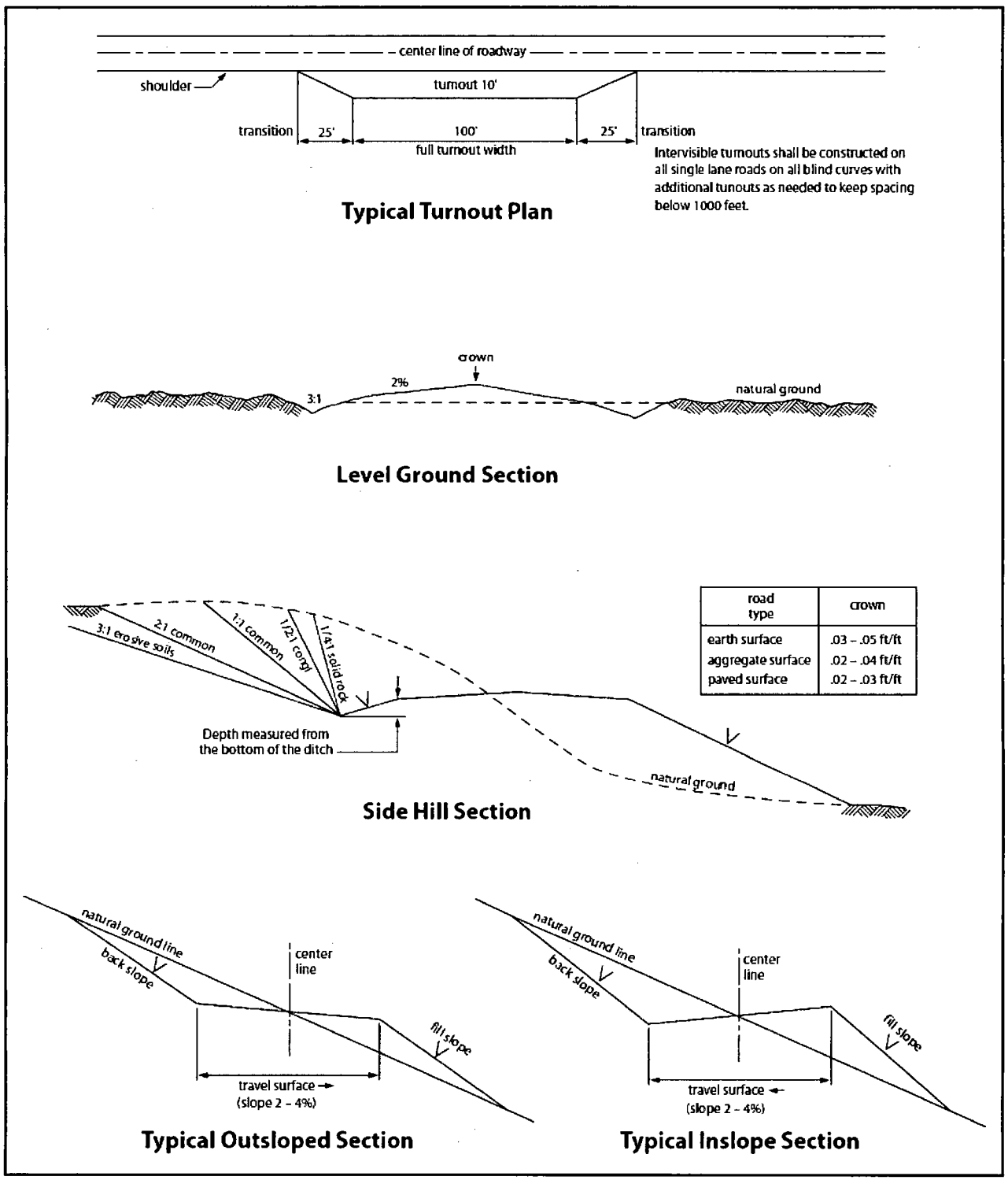


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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
(X) seed mixture 2	( ) seed mixture 4
( ) 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:

a. 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.
b. 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.

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.

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 2, for Sandy Sites

The 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 will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will 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). The 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. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will 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
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

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

Approval Date: 02/27/2018

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company
LEASE NO.:	NMNM114991
WELL NAME & NO.:	Green Wave 20-17 Fed 1H
SURFACE HOLE FOOTAGE:	2394'/N & 269'/W
BOTTOM HOLE FOOTAGE	330'/N & 380'/W
LOCATION:	Section 20, T.26 S., R.34 E., NMPM
COUNTY:	Lea County, New Mexico

TABLE OF CONTENTS

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)

Temporary Fence Crossing Requirement

Where entry is granted across a fence line, the fence must be braced and tied off on both sides of the passageway with H-braces prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. Devon shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Cattle Guard Requirement

Where entry is granted across a fence line for an access road, the fence must be braced and tied off on both sides of the passageway with H-braces prior to cutting. Once the work is completed, the fence will be restored to its prior condition with an appropriately sized cattle guard sufficient to carry out the project. Any new or existing cattle guards on the access route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. Devon shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations. Once the road is abandoned, the fence would be restored to its prior condition, or better. Devon shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

During construction, Devon shall minimize disturbance to existing fences, water lines, troughs, windmills, and other improvements on public lands. Devon 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 grazing permittee/allottee prior to disturbing any range improvement projects. 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.

Devon would adhere to the following stipulations:

- Upon abandonment, a low profile abandoned well marker will be installed to prevent raptor perching.
- Devon would need to construct and maintain escape ramps according to the following criteria:
    - Earthen escape ramps would be required to be constructed to sufficiently support livestock at no more than a 30-degree slope and spaced no more than 500 feet apart.
    - If trench is left open under an 8-hour time period, it would not be required to have an escape ramp; however, before the trench is backfilled, Lucid would inspect the trench for wildlife and remove any species that are trapped at a distance of at least 100 yards away from the trench.

- 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 power line structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. The holder without liability or expense shall make such modifications and/or additions to the United States.

- A BLM Wildlife Biologist must be contacted by Devon prior to construction activities to determine if the raptor nest is active. Raptors nest on special, natural habitat features, such as trees, large brush, cliff faces and escarpments, will be protected by not allowing surface disturbance within up to 200 meters of nests or by delaying activity for up to 90 days, or a combination of both. Exceptions to this requirement for raptor nests will be considered if the nests expected to be disturbed are inactive, the proposed activity is of short duration (e.g. habitat enhancement projects, fences, pipelines), and will not result in continuing activity in proximity to the nest.

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.

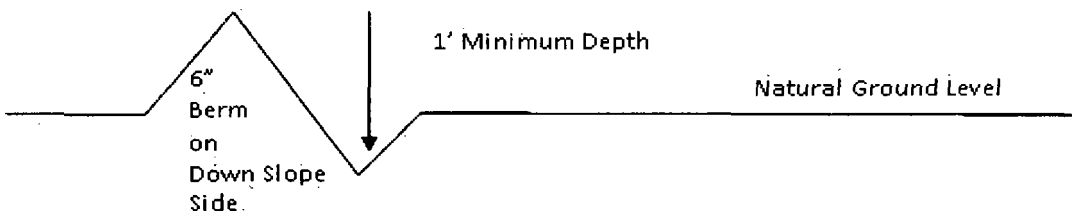
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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

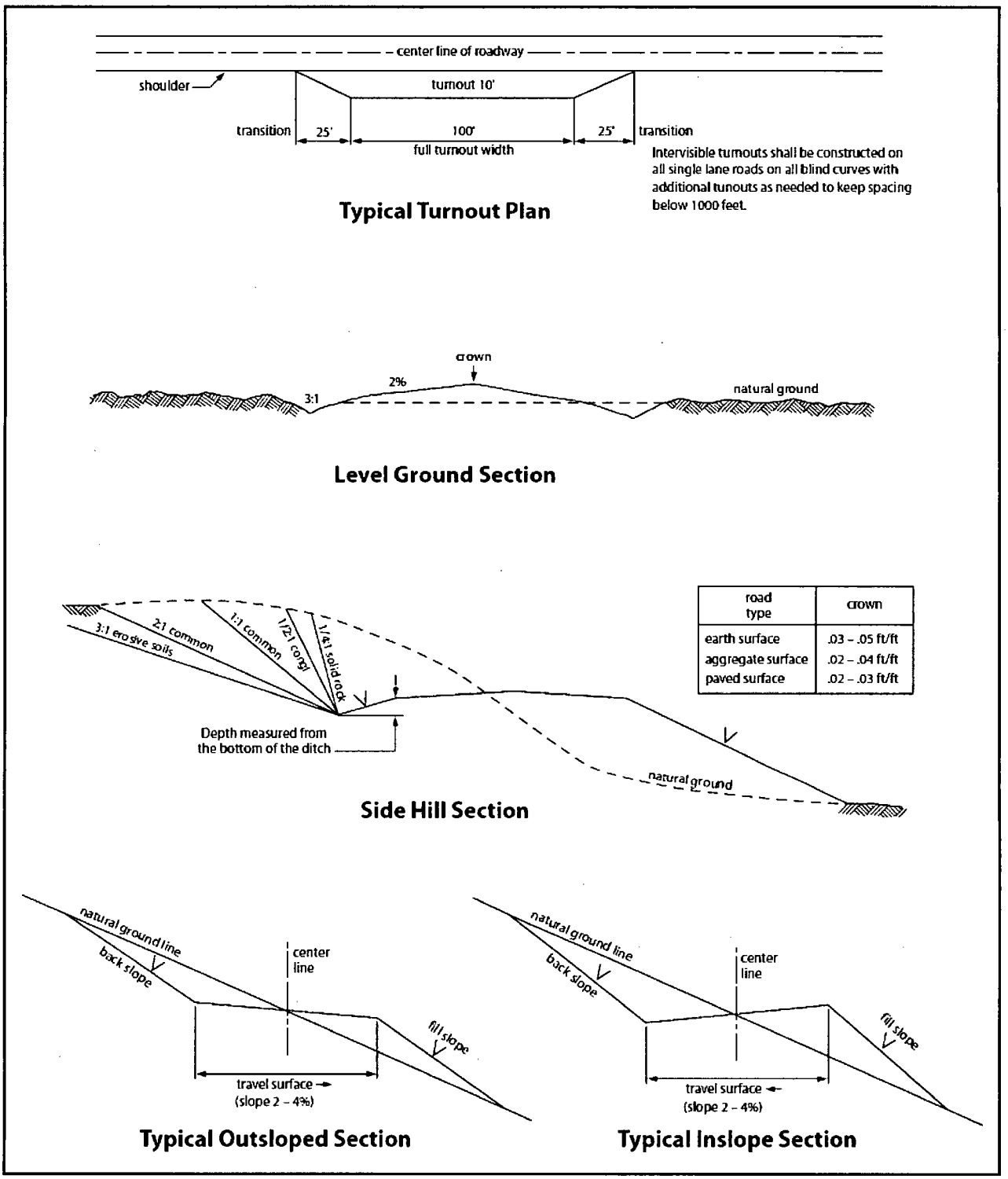


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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
(X) seed mixture 2	( ) seed mixture 4
( ) 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:

a. 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.
b. 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.

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.

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 2, for Sandy Sites

The 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 will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will 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). The 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. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will 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
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

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

Approval Date: 02/27/2018

devon

Devon Energy Center
333 West Sheridan Avenue
Oklahoma City, Oklahoma 73102-5015

Hydrogen Sulfide (H_2S) Contingency Plan

For

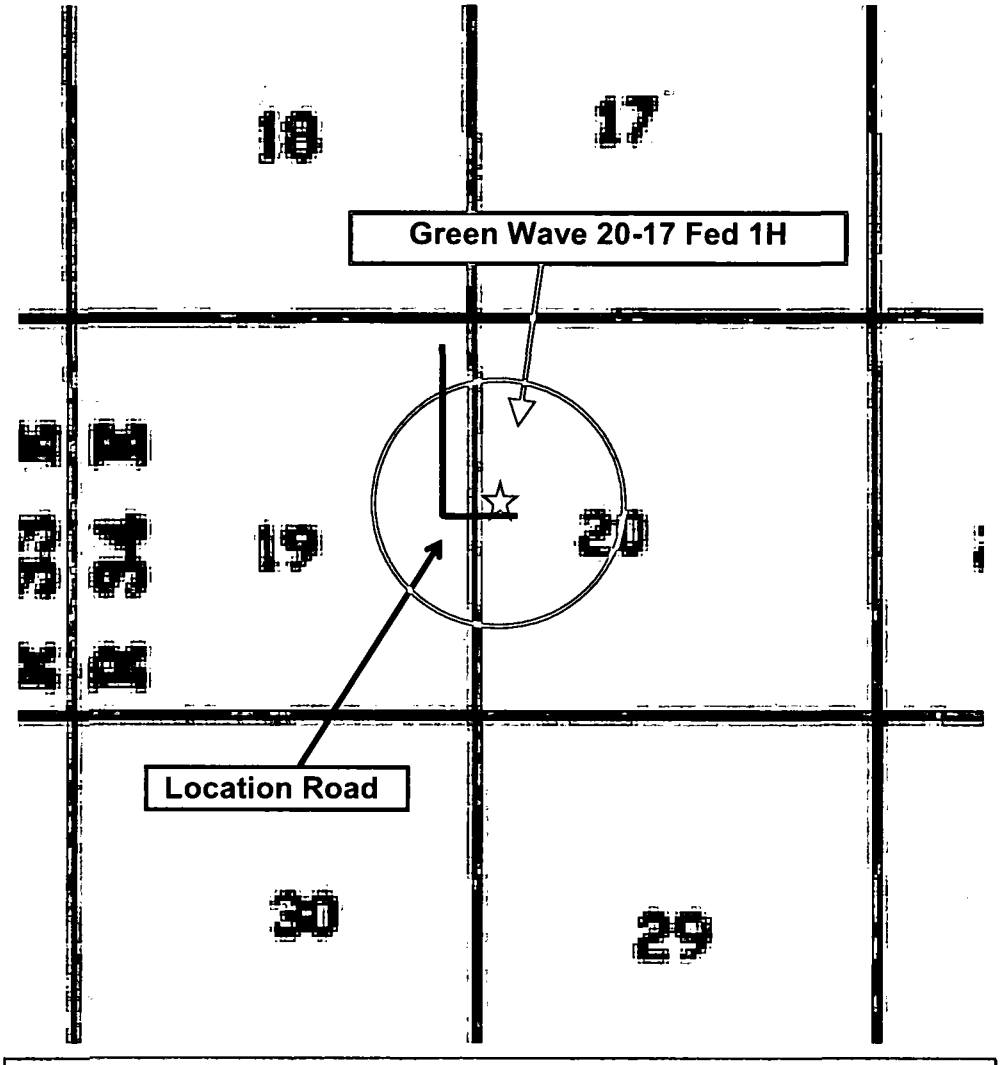
Green Wave 20-17 Fed 1H

Sec-20T-26S R-34E
2394' FNL & 269' FWL
LAT. = 32.0296198' N (NAD83)
LONG = 103.4995528' W

Lea County NM

Green Wave 20-17 Fed 1H

This is an open drilling site. H_2S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H_2S, including warning signs, wind indicators and H_2S monitor.



Assumed 100 ppm ROE = 3000' (Radius of Exposure)
100 ppm H2S concentration shall trigger activation of this plan.

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crews should then block the entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are no homes or buildings in or near the ROE.

Assumed 100 ppm ROE = 3000'

100 ppm H_2S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H_2S, the first responder(s) must

- **Isolate the area and prevent entry by other persons into the 100 ppm ROE.**
- **Evacuate any public places encompassed by the 100 ppm ROE.**
- **Be equipped with H_2S monitors and air packs in order to control the release.**
- **Use the "buddy system" to ensure no injuries occur during the response**
- **Take precautions to avoid personal injury during this operation.**
- **Contact operator and/or local officials to aid in operation. See list of phone numbers attached.**
- **Have received training in the**
  - **Detection of H_2S, and**
  - **Measures for protection against the gas,**
  - **Equipment used for protection and emergency response.**

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

Devon Energy Corp. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Devon Energy Corp. Company response must be in coordination with

the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE (H_2S) TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H_2S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H_2S metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H_2S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S Drilling Operations Plan and the Public Protection Plan.

II. HYDROGEN SULFIDE TRAINING

Note: All H_2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H_2S.

1. **Well Control Equipment**

   A. Flare line

   B. Choke manifold – Remotely Operated

   C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit

   D. Auxiliary equipment may include if applicable: annular preventer and rotating head.

   E. Mud/Gas Separator

2. **Protective equipment for essential personnel:**

   30-minute SCBA units located at briefing areas, as indicated on well site diagram, with escape units available in the top doghouse. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

3. **H_2S detection and monitoring equipment:**

   Portable H_2S monitors positioned on location for best coverage and response. These units have warning lights which activate when H_2S levels reach 10 ppm and audible sirens which activate at 15 ppm. Sensor locations:

   - Bell nipple
   - Shale shaker
   - Trip tank
   - Suction pit
   - Rig floor
   - Cellar
   - Choke manifold
   - Living Quarters (usually the company man's trailer stairs.)

   Visual warning systems:

   A. Wind direction indicators as shown on well site diagram

   B. Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

4. **Mud program:**

   The mud program has been designed to minimize the volume of H_2S circulated to surface. Proper mud weight, safe drilling practices and the use of H_2S scavengers will minimize hazards when penetrating H_2S bearing zones.

5. **Metallurgy:**

   A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H_2S trim.

   B. All elastomers used for packing and seals shall be H_2S trim.

6. **Communication:**

   A. Company personnel have/use cellular telephones in the field.

   B. Land line (telephone) communications at Office

7. **Well testing:**

   A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H_2S environment will use the closed chamber method of testing.

   B. There will be no drill stem testing.

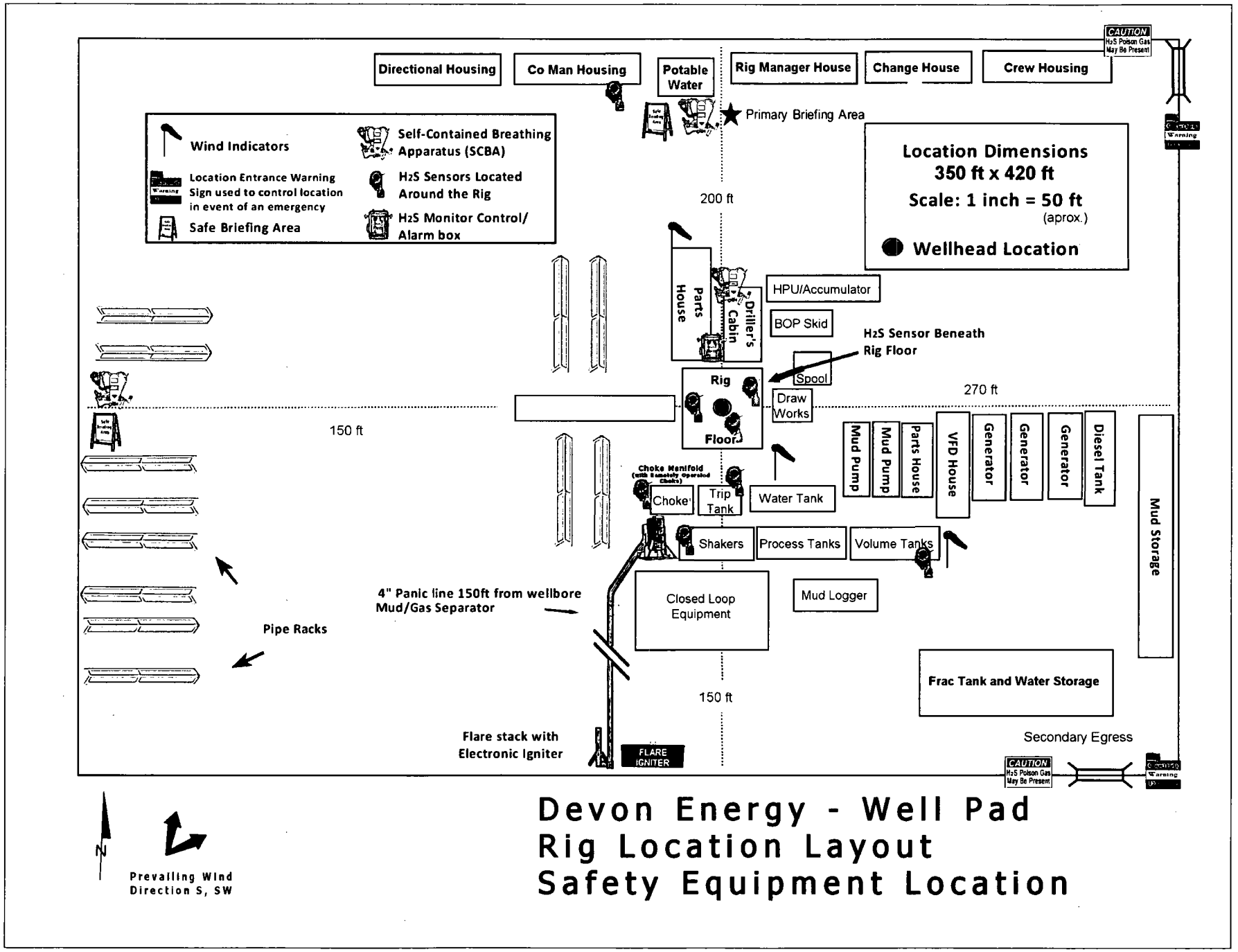
Devon Energy Corp. Company Call List		
Drilling Supervisor – Basin – Mark Kramer		405-823-4796
Jerry Matthews – Day: 575-748-0161 Cell: 575-748-5234		
EHS Professional – Jason Robison		405-541-2841

Agency Call List

Lea County (575)	**Hobbs**		
	Lea County Communication Authority		393-3981
	State Police		392-5588
	City Police		397-9265
	Sheriff's Office		393-2515
	Ambulance		**911**
	Fire Department		397-9308
	LEPC (Local Emergency Planning Committee)		393-2870
	NMOCD		393-6161
	US Bureau of Land Management		393-3612
Eddy County (575)	**Carlsbad**		
	State Police		885-3137
	City Police		885-2111
	Sheriff's Office		887-7551
	Ambulance		**911**
	Fire Department		885-3125
	LEPC (Local Emergency Planning Committee)		887-3798
	US Bureau of Land Management		887-6544
	NM Emergency Response Commission (Santa Fe)		(505) 476-9600
	24 HR		(505) 827-9126
	National Emergency Response Center		(800) 424-8802
	National Pollution Control Center: Direct		(703) 872-6000
	For Oil Spills		(800) 280-7118
	Emergency Services		
	Wild Well Control		(281) 784-4700
	Cudd Pressure Control	(915) 699-0139	(915) 563-3356
	Halliburton		(575) 746-2757
	B. J. Services		(575) 746-3569
Give GPS position:	Native Air – Emergency Helicopter – Hobbs		(575) 392-6429
	Flight For Life - Lubbock, TX		(806) 743-9911
	Aerocare - Lubbock, TX		(806) 747-8923
	Med Flight Air Amb - Albuquerque, NM		(575) 842-4433
	Lifeguard Air Med Svc. Albuquerque, NM		(800) 222-1222
	Poison Control (24/7)		(575) 272-3115
	Oil & Gas Pipeline 24 Hour Service		(800) 364-4366
	NOAA – Website - www.nhc.noaa.gov		

Prepared in conjunction with
Dave Small

SHARP COMMUNICATIONS & CONSULTING, LLC



Devon Energy - Well Pad
Rig Location Layout
Safety Equipment Location

devon

Devon Energy Corporation

Lea Co., NM
Green Wave
20-17 Fed #1H

OH

Plan: PN1

Standard Planning Report

19 September, 2017

NABORS

Database:	RyanUSA_Compass	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Company:	Devon Energy Corporation	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Project:	Lea Co., NM	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site:	Green Wave	**North Reference:**	Grid
Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PN1		

Project	Lea Co., NM		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Green Wave				
Site Position:		**Northing:**	375,511.440 usft	**Latitude:**	32° 1' 46.63147 N
From:	Map	**Easting:**	799,720.410 usft	**Longitude:**	103° 29' 58.39010 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.44 °

Well	20-17 Fed #1H					
Well Position	**+N/-S**	0.00 ft	**Northing:**	375,511.440 usft	**Latitude:**	32° 1' 46.63147 N
	+E/-W	0.00 ft	**Easting:**	799,720.410 usft	**Longitude:**	103° 29' 58.39010 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**		**Ground Level:**	3,355.90 ft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	HDGM	9/19/2017	6.78	59.75	47,873.90000000

Design	PN1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**
	0.00	0.00	0.00	0.37

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,300.00	3.00	90.00	5,299.86	0.00	7.85	1.00	1.00	0.00	90.00	
5,910.00	3.00	90.00	5,909.03	0.00	39.78	0.00	0.00	0.00	0.00	
6,210.00	0.00	0.00	6,208.89	0.00	47.63	1.00	-1.00	0.00	180.00	
12,278.15	0.00	0.00	12,277.04	0.00	47.63	0.00	0.00	0.00	0.00	
13,178.15	90.00	360.00	12,850.00	572.96	47.59	10.00	10.00	0.00	360.00	
19,944.40	90.00	360.00	12,850.00	7,339.20	47.15	0.00	0.00	0.00	0.00	20-17 1H_BHL

Database:	RyanUSA_Compass	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Company:	Devon Energy Corporation	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Project:	Lea Co., NM	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site:	Green Wave	**North Reference:**	Grid
Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PN1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	1.00	90.00	5,100.00	0.00	0.87	0.01	1.00	1.00	0.00

Database:	RyanUSA_Compass	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Company:	Devon Energy Corporation	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Project:	Lea Co., NM	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site:	Green Wave	**North Reference:**	Grid
Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PN1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,200.00	2.00	90.00	5,199.96	0.00	3.49	0.02	1.00	1.00	0.00
5,300.00	3.00	90.00	5,299.86	0.00	7.85	0.05	1.00	1.00	0.00
5,400.00	3.00	90.00	5,399.73	0.00	13.09	0.08	0.00	0.00	0.00
5,500.00	3.00	90.00	5,499.59	0.00	18.32	0.12	0.00	0.00	0.00
5,600.00	3.00	90.00	5,599.45	0.00	23.55	0.15	0.00	0.00	0.00
5,700.00	3.00	90.00	5,699.31	0.00	28.79	0.18	0.00	0.00	0.00
5,800.00	3.00	90.00	5,799.18	0.00	34.02	0.22	0.00	0.00	0.00
5,910.00	3.00	90.00	5,909.03	0.00	39.78	0.26	0.00	0.00	0.00
6,000.00	2.10	90.00	5,998.94	0.00	43.78	0.28	1.00	-1.00	0.00
6,100.00	1.10	90.00	6,098.90	0.00	46.57	0.30	1.00	-1.00	0.00
6,210.00	0.00	0.00	6,208.89	0.00	47.63	0.31	1.00	-1.00	0.00
6,300.00	0.00	0.00	6,298.89	0.00	47.63	0.31	0.00	0.00	0.00
6,400.00	0.00	0.00	6,398.89	0.00	47.63	0.31	0.00	0.00	0.00
6,500.00	0.00	0.00	6,498.89	0.00	47.63	0.31	0.00	0.00	0.00
6,600.00	0.00	0.00	6,598.89	0.00	47.63	0.31	0.00	0.00	0.00
6,700.00	0.00	0.00	6,698.89	0.00	47.63	0.31	0.00	0.00	0.00
6,800.00	0.00	0.00	6,798.89	0.00	47.63	0.31	0.00	0.00	0.00
6,900.00	0.00	0.00	6,898.89	0.00	47.63	0.31	0.00	0.00	0.00
7,000.00	0.00	0.00	6,998.89	0.00	47.63	0.31	0.00	0.00	0.00
7,100.00	0.00	0.00	7,098.89	0.00	47.63	0.31	0.00	0.00	0.00
7,200.00	0.00	0.00	7,198.89	0.00	47.63	0.31	0.00	0.00	0.00
7,300.00	0.00	0.00	7,298.89	0.00	47.63	0.31	0.00	0.00	0.00
7,400.00	0.00	0.00	7,398.89	0.00	47.63	0.31	0.00	0.00	0.00
7,500.00	0.00	0.00	7,498.89	0.00	47.63	0.31	0.00	0.00	0.00
7,600.00	0.00	0.00	7,598.89	0.00	47.63	0.31	0.00	0.00	0.00
7,700.00	0.00	0.00	7,698.89	0.00	47.63	0.31	0.00	0.00	0.00
7,800.00	0.00	0.00	7,798.89	0.00	47.63	0.31	0.00	0.00	0.00
7,900.00	0.00	0.00	7,898.89	0.00	47.63	0.31	0.00	0.00	0.00
8,000.00	0.00	0.00	7,998.89	0.00	47.63	0.31	0.00	0.00	0.00
8,100.00	0.00	0.00	8,098.89	0.00	47.63	0.31	0.00	0.00	0.00
8,200.00	0.00	0.00	8,198.89	0.00	47.63	0.31	0.00	0.00	0.00
8,300.00	0.00	0.00	8,298.89	0.00	47.63	0.31	0.00	0.00	0.00
8,400.00	0.00	0.00	8,398.89	0.00	47.63	0.31	0.00	0.00	0.00
8,500.00	0.00	0.00	8,498.89	0.00	47.63	0.31	0.00	0.00	0.00
8,600.00	0.00	0.00	8,598.89	0.00	47.63	0.31	0.00	0.00	0.00
8,700.00	0.00	0.00	8,698.89	0.00	47.63	0.31	0.00	0.00	0.00
8,800.00	0.00	0.00	8,798.89	0.00	47.63	0.31	0.00	0.00	0.00
8,900.00	0.00	0.00	8,898.89	0.00	47.63	0.31	0.00	0.00	0.00
9,000.00	0.00	0.00	8,998.89	0.00	47.63	0.31	0.00	0.00	0.00
9,100.00	0.00	0.00	9,098.89	0.00	47.63	0.31	0.00	0.00	0.00
9,200.00	0.00	0.00	9,198.89	0.00	47.63	0.31	0.00	0.00	0.00
9,300.00	0.00	0.00	9,298.89	0.00	47.63	0.31	0.00	0.00	0.00
9,400.00	0.00	0.00	9,398.89	0.00	47.63	0.31	0.00	0.00	0.00
9,500.00	0.00	0.00	9,498.89	0.00	47.63	0.31	0.00	0.00	0.00
9,600.00	0.00	0.00	9,598.89	0.00	47.63	0.31	0.00	0.00	0.00
9,700.00	0.00	0.00	9,698.89	0.00	47.63	0.31	0.00	0.00	0.00
9,800.00	0.00	0.00	9,798.89	0.00	47.63	0.31	0.00	0.00	0.00
9,900.00	0.00	0.00	9,898.89	0.00	47.63	0.31	0.00	0.00	0.00
10,000.00	0.00	0.00	9,998.89	0.00	47.63	0.31	0.00	0.00	0.00
10,100.00	0.00	0.00	10,098.89	0.00	47.63	0.31	0.00	0.00	0.00
10,200.00	0.00	0.00	10,198.89	0.00	47.63	0.31	0.00	0.00	0.00
10,300.00	0.00	0.00	10,298.89	0.00	47.63	0.31	0.00	0.00	0.00

Database:	RyanUSA_Compass	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Company:	Devon Energy Corporation	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Project:	Lea Co., NM	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site:	Green Wave	**North Reference:**	Grid
Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PN1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,400.00	0.00	0.00	10,398.89	0.00	47.63	0.31	0.00	0.00	0.00
10,500.00	0.00	0.00	10,498.89	0.00	47.63	0.31	0.00	0.00	0.00
10,600.00	0.00	0.00	10,598.89	0.00	47.63	0.31	0.00	0.00	0.00
10,700.00	0.00	0.00	10,698.89	0.00	47.63	0.31	0.00	0.00	0.00
10,800.00	0.00	0.00	10,798.89	0.00	47.63	0.31	0.00	0.00	0.00
10,900.00	0.00	0.00	10,898.89	0.00	47.63	0.31	0.00	0.00	0.00
11,000.00	0.00	0.00	10,998.89	0.00	47.63	0.31	0.00	0.00	0.00
11,100.00	0.00	0.00	11,098.89	0.00	47.63	0.31	0.00	0.00	0.00
11,200.00	0.00	0.00	11,198.89	0.00	47.63	0.31	0.00	0.00	0.00
11,300.00	0.00	0.00	11,298.89	0.00	47.63	0.31	0.00	0.00	0.00
11,400.00	0.00	0.00	11,398.89	0.00	47.63	0.31	0.00	0.00	0.00
11,500.00	0.00	0.00	11,498.89	0.00	47.63	0.31	0.00	0.00	0.00
11,600.00	0.00	0.00	11,598.89	0.00	47.63	0.31	0.00	0.00	0.00
11,700.00	0.00	0.00	11,698.89	0.00	47.63	0.31	0.00	0.00	0.00
11,800.00	0.00	0.00	11,798.89	0.00	47.63	0.31	0.00	0.00	0.00
11,900.00	0.00	0.00	11,898.89	0.00	47.63	0.31	0.00	0.00	0.00
12,000.00	0.00	0.00	11,998.89	0.00	47.63	0.31	0.00	0.00	0.00
12,100.00	0.00	0.00	12,098.89	0.00	47.63	0.31	0.00	0.00	0.00
12,200.00	0.00	0.00	12,198.89	0.00	47.63	0.31	0.00	0.00	0.00
12,278.15	0.00	0.00	12,277.04	0.00	47.63	0.31	0.00	0.00	0.00
20-17 1H_KOP									
12,300.00	2.18	360.00	12,298.88	0.42	47.63	0.72	10.00	10.00	0.00
12,350.00	7.18	360.00	12,348.70	4.50	47.63	4.81	10.00	10.00	0.00
12,400.00	12.18	360.00	12,397.97	12.91	47.63	13.21	10.00	10.00	0.00
12,450.00	17.18	360.00	12,446.33	25.58	47.63	25.88	10.00	10.00	0.00
12,500.00	22.18	360.00	12,493.39	42.42	47.63	42.72	10.00	10.00	0.00
12,550.00	27.18	360.00	12,538.80	63.29	47.63	63.60	10.00	10.00	0.00
12,600.00	32.18	360.00	12,582.23	88.04	47.62	88.35	10.00	10.00	0.00
12,650.00	37.18	360.00	12,623.33	116.49	47.62	116.79	10.00	10.00	0.00
12,700.00	42.18	360.00	12,661.80	148.41	47.62	148.71	10.00	10.00	0.00
12,750.00	47.18	360.00	12,697.33	183.56	47.62	183.86	10.00	10.00	0.00
12,800.00	52.18	360.00	12,729.67	221.67	47.61	221.97	10.00	10.00	0.00
12,850.00	57.18	360.00	12,758.57	262.46	47.61	262.76	10.00	10.00	0.00
12,900.00	62.18	360.00	12,783.80	305.61	47.61	305.90	10.00	10.00	0.00
12,950.00	67.18	360.00	12,805.17	350.79	47.61	351.09	10.00	10.00	0.00
13,000.00	72.18	360.00	12,822.52	397.66	47.60	397.96	10.00	10.00	0.00
13,050.00	77.18	360.00	12,835.73	445.87	47.60	446.17	10.00	10.00	0.00
13,100.00	82.18	360.00	12,844.68	495.05	47.60	495.35	10.00	10.00	0.00
13,150.00	87.18	360.00	12,849.31	544.82	47.59	545.11	10.00	10.00	0.00
13,178.15	90.00	360.00	12,850.00	572.96	47.59	573.25	10.00	10.00	0.00
20-17 1H_EOC									
13,200.00	90.00	360.00	12,850.00	594.81	47.59	595.10	0.00	0.00	0.00
13,300.00	90.00	360.00	12,850.00	694.81	47.58	695.10	0.00	0.00	0.00
13,400.00	90.00	360.00	12,850.00	794.81	47.58	795.10	0.00	0.00	0.00
13,500.00	90.00	360.00	12,850.00	894.81	47.57	895.09	0.00	0.00	0.00
13,600.00	90.00	360.00	12,850.00	994.81	47.56	995.09	0.00	0.00	0.00
13,700.00	90.00	360.00	12,850.00	1,094.81	47.56	1,095.09	0.00	0.00	0.00
13,800.00	90.00	360.00	12,850.00	1,194.81	47.55	1,195.09	0.00	0.00	0.00
13,900.00	90.00	360.00	12,850.00	1,294.81	47.54	1,295.09	0.00	0.00	0.00
14,000.00	90.00	360.00	12,850.00	1,394.81	47.54	1,395.08	0.00	0.00	0.00
14,100.00	90.00	360.00	12,850.00	1,494.81	47.53	1,495.08	0.00	0.00	0.00
14,200.00	90.00	360.00	12,850.00	1,594.81	47.53	1,595.08	0.00	0.00	0.00

Database:	RyanUSA_Compass	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Company:	Devon Energy Corporation	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Project:	Lea Co., NM	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site:	Green Wave	**North Reference:**	Grid
Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PN1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
14,300.00	90.00	360.00	12,850.00	1,694.81	47.52	1,695.08	0.00	0.00	0.00
14,400.00	90.00	360.00	12,850.00	1,794.81	47.51	1,795.08	0.00	0.00	0.00
14,500.00	90.00	360.00	12,850.00	1,894.81	47.51	1,895.07	0.00	0.00	0.00
14,600.00	90.00	360.00	12,850.00	1,994.81	47.50	1,995.07	0.00	0.00	0.00
14,700.00	90.00	360.00	12,850.00	2,094.81	47.49	2,095.07	0.00	0.00	0.00
14,800.00	90.00	360.00	12,850.00	2,194.81	47.49	2,195.07	0.00	0.00	0.00
14,900.00	90.00	360.00	12,850.00	2,294.81	47.48	2,295.07	0.00	0.00	0.00
15,000.00	90.00	360.00	12,850.00	2,394.81	47.47	2,395.06	0.00	0.00	0.00
15,100.00	90.00	360.00	12,850.00	2,494.81	47.47	2,495.06	0.00	0.00	0.00
15,200.00	90.00	360.00	12,850.00	2,594.81	47.46	2,595.06	0.00	0.00	0.00
15,300.00	90.00	360.00	12,850.00	2,694.81	47.45	2,695.06	0.00	0.00	0.00
15,400.00	90.00	360.00	12,850.00	2,794.81	47.45	2,795.05	0.00	0.00	0.00
15,500.00	90.00	360.00	12,850.00	2,894.81	47.44	2,895.05	0.00	0.00	0.00
15,600.00	90.00	360.00	12,850.00	2,994.81	47.43	2,995.05	0.00	0.00	0.00
15,700.00	90.00	360.00	12,850.00	3,094.81	47.43	3,095.05	0.00	0.00	0.00
15,800.00	90.00	360.00	12,850.00	3,194.81	47.42	3,195.05	0.00	0.00	0.00
15,900.00	90.00	360.00	12,850.00	3,294.81	47.41	3,295.04	0.00	0.00	0.00
16,000.00	90.00	360.00	12,850.00	3,394.81	47.41	3,395.04	0.00	0.00	0.00
16,100.00	90.00	360.00	12,850.00	3,494.81	47.40	3,495.04	0.00	0.00	0.00
16,200.00	90.00	360.00	12,850.00	3,594.81	47.39	3,595.04	0.00	0.00	0.00
16,300.00	90.00	360.00	12,850.00	3,694.81	47.39	3,695.04	0.00	0.00	0.00
16,400.00	90.00	360.00	12,850.00	3,794.81	47.38	3,795.03	0.00	0.00	0.00
16,500.00	90.00	360.00	12,850.00	3,894.81	47.37	3,895.03	0.00	0.00	0.00
16,600.00	90.00	360.00	12,850.00	3,994.81	47.37	3,995.03	0.00	0.00	0.00
16,700.00	90.00	360.00	12,850.00	4,094.81	47.36	4,095.03	0.00	0.00	0.00
16,800.00	90.00	360.00	12,850.00	4,194.81	47.36	4,195.03	0.00	0.00	0.00
16,900.00	90.00	360.00	12,850.00	4,294.81	47.35	4,295.02	0.00	0.00	0.00
17,000.00	90.00	360.00	12,850.00	4,394.81	47.34	4,395.02	0.00	0.00	0.00
17,100.00	90.00	360.00	12,850.00	4,494.81	47.34	4,495.02	0.00	0.00	0.00
17,200.00	90.00	360.00	12,850.00	4,594.81	47.33	4,595.02	0.00	0.00	0.00
17,300.00	90.00	360.00	12,850.00	4,694.81	47.32	4,695.01	0.00	0.00	0.00
17,400.00	90.00	360.00	12,850.00	4,794.81	47.32	4,795.01	0.00	0.00	0.00
17,500.00	90.00	360.00	12,850.00	4,894.81	47.31	4,895.01	0.00	0.00	0.00
17,600.00	90.00	360.00	12,850.00	4,994.81	47.30	4,995.01	0.00	0.00	0.00
17,700.00	90.00	360.00	12,850.00	5,094.81	47.30	5,095.01	0.00	0.00	0.00
17,800.00	90.00	360.00	12,850.00	5,194.81	47.29	5,195.00	0.00	0.00	0.00
17,900.00	90.00	360.00	12,850.00	5,294.81	47.28	5,295.00	0.00	0.00	0.00
18,000.00	90.00	360.00	12,850.00	5,394.81	47.28	5,395.00	0.00	0.00	0.00
18,100.00	90.00	360.00	12,850.00	5,494.81	47.27	5,495.00	0.00	0.00	0.00
18,200.00	90.00	360.00	12,850.00	5,594.81	47.26	5,595.00	0.00	0.00	0.00
18,300.00	90.00	360.00	12,850.00	5,694.81	47.26	5,694.99	0.00	0.00	0.00
18,400.00	90.00	360.00	12,850.00	5,794.81	47.25	5,794.99	0.00	0.00	0.00
18,500.00	90.00	360.00	12,850.00	5,894.81	47.24	5,894.99	0.00	0.00	0.00
18,600.00	90.00	360.00	12,850.00	5,994.81	47.24	5,994.99	0.00	0.00	0.00
18,700.00	90.00	360.00	12,850.00	6,094.81	47.23	6,094.99	0.00	0.00	0.00
18,800.00	90.00	360.00	12,850.00	6,194.81	47.22	6,194.98	0.00	0.00	0.00
18,900.00	90.00	360.00	12,850.00	6,294.81	47.22	6,294.98	0.00	0.00	0.00
19,000.00	90.00	360.00	12,850.00	6,394.81	47.21	6,394.98	0.00	0.00	0.00
19,100.00	90.00	360.00	12,850.00	6,494.81	47.21	6,494.98	0.00	0.00	0.00
19,200.00	90.00	360.00	12,850.00	6,594.81	47.20	6,594.97	0.00	0.00	0.00
19,300.00	90.00	360.00	12,850.00	6,694.81	47.19	6,694.97	0.00	0.00	0.00
19,400.00	90.00	360.00	12,850.00	6,794.81	47.19	6,794.97	0.00	0.00	0.00

Database:	RyanUSA_Compass	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Company:	Devon Energy Corporation	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Project:	Lea Co., NM	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site:	Green Wave	**North Reference:**	Grid
Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PN1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
19,500.00	90.00	360.00	12,850.00	6,894.81	47.18	6,894.97	0.00	0.00	0.00
19,600.00	90.00	360.00	12,850.00	6,994.81	47.17	6,994.97	0.00	0.00	0.00
19,700.00	90.00	360.00	12,850.00	7,094.81	47.17	7,094.96	0.00	0.00	0.00
19,800.00	90.00	360.00	12,850.00	7,194.81	47.16	7,194.96	0.00	0.00	0.00
19,900.00	90.00	360.00	12,850.00	7,294.81	47.15	7,294.96	0.00	0.00	0.00
19,944.40	90.00	360.00	12,850.00	7,339.20	47.15	7,339.36	0.00	0.00	0.00
20-17 1H_BHL									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
20-17 1H_KOP - plan hits target center - Point	0.00	0.00	12,277.04	0.00	47.63	375,511.440	799,768.039	32° 1' 46.62783 N	103° 29' 57.83685 W
20-17 1H_EOC - plan hits target center - Point	0.00	0.00	12,850.00	572.96	47.59	376,084.397	799,768.002	32° 1' 52.29742 N	103° 29' 57.78590 W
20-17 1H_BHL - plan hits target center - Point	0.00	0.00	12,850.00	7,339.20	47.15	382,850.630	799,767.560	32° 2' 59.25136 N	103° 29' 57.18396 W

devon

Devon Energy Corporation

Lea Co., NM
Green Wave
20-17 Fed #1H

OH
PN1

Anticollision Report

19 September, 2017

NABORS

Company:	Devon Energy Corporation	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Project:	Lea Co., NM	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Reference Site:	Green Wave	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	RyanUSA_Compass
Reference Design:	PN1	**Offset TVD Reference:**	Offset Datum

Reference PN1

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00 ft	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 9/19/2017

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	19,944.40	PN1 (OH)	MWD+HRGM	OWSG MWD + HRGM

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Green Wave						
20-17 Fed #2H - OH - PN1	5,910.00	5,861.82	897.67	856.25	21.670	CC, ES
20-17 Fed #2H - OH - PN1	9,500.00	9,441.17	959.34	892.48	14.350	SF
20-32 Fed State Com #2H - OH - PN1	5,301.30	5,300.00	433.54	396.09	11.578	CC
20-32 Fed State Com #2H - OH - PN1	12,278.15	12,285.24	460.27	373.14	5.283	ES
20-32 Fed State Com #2H - OH - PN1	12,300.00	12,300.00	460.87	373.62	5.282	SF

Offset Design Green Wave - 20-17 Fed #2H - OH - PN1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	4.00	-4.00	0.00	0.00	69.90	308.97	844.19	898.96				
100.00	100.00	104.00	96.00	0.12	0.14	69.90	308.97	844.19	898.96	898.70	0.26	3,482.979	
200.00	200.00	204.00	196.00	0.48	0.49	69.90	308.97	844.19	898.96	897.98	0.98	921.966	
300.00	300.00	304.00	296.00	0.84	0.85	69.90	308.97	844.19	898.96	897.26	1.69	531.302	
400.00	400.00	404.00	396.00	1.20	1.21	69.90	308.97	844.19	898.96	896.55	2.41	373.177	
500.00	500.00	504.00	496.00	1.56	1.57	69.90	308.97	844.19	898.96	895.83	3.13	287.586	
600.00	600.00	604.00	596.00	1.91	1.93	69.90	308.97	844.19	898.96	895.11	3.84	233.932	
700.00	700.00	704.00	696.00	2.27	2.29	69.90	308.97	844.19	898.96	894.40	4.56	197.150	
800.00	800.00	804.00	796.00	2.63	2.65	69.90	308.97	844.19	898.96	893.68	5.28	170.363	
900.00	900.00	904.00	896.00	2.99	3.00	69.90	308.97	844.19	898.96	892.96	5.99	149.985	
1,000.00	1,000.00	1,004.00	996.00	3.35	3.36	69.90	308.97	844.19	898.96	892.25	6.71	133.961	
1,100.00	1,100.00	1,104.00	1,096.00	3.71	3.72	69.90	308.97	844.19	898.96	891.53	7.43	121.030	
1,200.00	1,200.00	1,204.00	1,196.00	4.07	4.08	69.90	308.97	844.19	898.96	890.81	8.14	110.376	
1,300.00	1,300.00	1,304.00	1,296.00	4.42	4.44	69.90	308.97	844.19	898.96	890.09	8.86	101.446	
1,400.00	1,400.00	1,404.00	1,396.00	4.78	4.80	69.90	308.97	844.19	898.96	889.38	9.58	93.853	
1,500.00	1,500.00	1,504.00	1,496.00	5.14	5.15	69.90	308.97	844.19	898.96	888.66	10.30	87.317	
1,600.00	1,600.00	1,604.00	1,596.00	5.50	5.51	69.90	308.97	844.19	898.96	887.94	11.01	81.632	
1,700.00	1,700.00	1,704.00	1,696.00	5.86	5.87	69.90	308.97	844.19	898.96	887.23	11.73	76.643	
1,800.00	1,800.00	1,804.00	1,796.00	6.22	6.23	69.90	308.97	844.19	898.96	886.51	12.45	72.228	
1,900.00	1,900.00	1,904.00	1,896.00	6.57	6.59	69.90	308.97	844.19	898.96	885.79	13.16	68.294	
2,000.00	2,000.00	2,004.00	1,996.00	6.93	6.95	69.90	308.97	844.19	898.96	885.08	13.88	64.766	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Devon Energy Corporation	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Project:	Lea Co., NM	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Reference Site:	Green Wave	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	RyanUSA_Compass
Reference Design:	PN1	**Offset TVD Reference:**	Offset Datum

Offset Design Green Wave - 20-17 Fed #2H - OH - PN1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
2,100.00	2,100.00	2,104.00	2,096.00	7.29	7.31	69.90	308.97	844.19	898.96	884.36	14.60	61.585	
2,200.00	2,200.00	2,204.00	2,196.00	7.65	7.66	69.90	308.97	844.19	898.96	883.64	15.31	58.702	
2,300.00	2,300.00	2,304.00	2,296.00	8.01	8.02	69.90	308.97	844.19	898.96	882.93	16.03	56.077	
2,400.00	2,400.00	2,404.00	2,396.00	8.37	8.38	69.90	308.97	844.19	898.96	882.21	16.75	53.676	
2,500.00	2,500.00	2,504.00	2,496.00	8.73	8.74	69.90	308.97	844.19	898.96	881.49	17.46	51.473	
2,600.00	2,600.00	2,604.00	2,596.00	9.08	9.10	69.90	308.97	844.19	898.96	880.77	18.18	49.443	
2,700.00	2,700.00	2,704.00	2,696.00	9.44	9.46	69.90	308.97	844.19	898.96	880.06	18.90	47.567	
2,800.00	2,800.00	2,804.00	2,796.00	9.80	9.81	69.90	308.97	844.19	898.96	879.34	19.62	45.829	
2,900.00	2,900.00	2,904.00	2,896.00	10.16	10.17	69.90	308.97	844.19	898.96	878.62	20.33	44.213	
3,000.00	3,000.00	3,004.00	2,996.00	10.52	10.53	69.90	308.97	844.19	898.96	877.91	21.05	42.707	
3,100.00	3,100.00	3,104.00	3,096.00	10.88	10.89	69.90	308.97	844.19	898.96	877.19	21.77	41.300	
3,200.00	3,200.00	3,204.00	3,196.00	11.23	11.25	69.90	308.97	844.19	898.96	876.47	22.48	39.983	
3,300.00	3,300.00	3,304.00	3,296.00	11.59	11.61	69.90	308.97	844.19	898.96	875.76	23.20	38.748	
3,400.00	3,400.00	3,404.00	3,396.00	11.95	11.97	69.90	308.97	844.19	898.96	875.04	23.92	37.586	
3,500.00	3,500.00	3,504.00	3,496.00	12.31	12.32	69.90	308.97	844.19	898.96	874.32	24.63	36.492	
3,600.00	3,600.00	3,604.00	3,596.00	12.67	12.68	69.90	308.97	844.19	898.96	873.61	25.35	35.460	
3,700.00	3,700.00	3,704.00	3,696.00	13.03	13.04	69.90	308.97	844.19	898.96	872.89	26.07	34.485	
3,800.00	3,800.00	3,804.00	3,796.00	13.39	13.40	69.90	308.97	844.19	898.96	872.17	26.78	33.562	
3,900.00	3,900.00	3,904.00	3,896.00	13.74	13.76	69.90	308.97	844.19	898.96	871.45	27.50	32.687	
4,000.00	4,000.00	4,004.00	3,996.00	14.10	14.12	69.90	308.97	844.19	898.96	870.74	28.22	31.857	
4,100.00	4,100.00	4,104.00	4,096.00	14.46	14.48	69.90	308.97	844.19	898.96	870.02	28.94	31.067	
4,200.00	4,200.00	4,204.00	4,196.00	14.82	14.83	69.90	308.97	844.19	898.96	869.30	29.65	30.316	
4,300.00	4,300.00	4,304.00	4,296.00	15.18	15.19	69.90	308.97	844.19	898.96	868.59	30.37	29.600	
4,400.00	4,400.00	4,404.00	4,396.00	15.54	15.55	69.90	308.97	844.19	898.96	867.87	31.09	28.918	
4,500.00	4,500.00	4,504.00	4,496.00	15.89	15.91	69.90	308.97	844.19	898.96	867.15	31.80	28.266	
4,600.00	4,600.00	4,604.00	4,596.00	16.25	16.27	69.90	308.97	844.19	898.96	866.44	32.52	27.643	
4,700.00	4,700.00	4,704.00	4,696.00	16.61	16.63	69.90	308.97	844.19	898.96	865.72	33.24	27.046	
4,800.00	4,800.00	4,804.00	4,796.00	16.97	16.98	69.90	308.97	844.19	898.96	865.00	33.95	26.475	
4,900.00	4,900.00	4,904.00	4,896.00	17.33	17.34	69.90	308.97	844.19	898.96	864.28	34.67	25.928	
5,000.00	5,000.00	4,996.00	4,996.00	17.69	17.67	69.90	308.97	844.19	898.96	863.60	35.36	25.423	
5,100.00	5,100.00	5,083.67	5,083.67	18.04	17.98	-20.11	308.97	844.80	898.80	862.78	36.01	24.958	
5,200.00	5,199.96	5,170.83	5,170.81	18.38	18.28	-20.12	308.97	846.74	898.42	861.78	36.64	24.519	
5,300.00	5,299.86	5,258.00	5,257.92	18.72	18.58	-20.13	308.97	850.00	897.84	860.57	37.27	24.093	
5,364.32	5,364.09	5,316.14	5,315.98	18.94	18.78	-20.13	308.97	852.89	897.67	860.00	37.67	23.827	
5,400.00	5,399.73	5,351.82	5,351.62	19.06	18.90	-20.13	308.97	854.76	897.67	859.75	37.92	23.674	
5,500.00	5,499.59	5,451.82	5,451.48	19.41	19.24	-20.13	308.97	859.99	897.67	859.07	38.60	23.254	
5,600.00	5,599.45	5,551.82	5,551.34	19.75	19.59	-20.13	308.97	865.22	897.67	858.38	39.29	22.848	
5,700.00	5,699.31	5,651.82	5,651.20	20.10	19.93	-20.13	308.97	870.46	897.67	857.70	39.98	22.455	
5,800.00	5,799.18	5,751.82	5,751.07	20.45	20.28	-20.13	308.97	875.69	897.67	857.01	40.67	22.074	
5,910.00	5,909.03	5,861.82	5,860.92	20.83	20.66	-20.13	308.97	881.45	897.67	856.25	41.42	21.670	CC, ES
6,000.00	5,998.94	5,951.82	5,950.79	21.14	20.97	-20.12	308.97	886.16	898.34	856.29	42.05	21.365	
6,100.00	6,098.90	6,051.79	6,050.62	21.49	21.32	-20.07	308.97	891.39	900.63	857.89	42.74	21.073	
6,210.00	6,208.89	6,161.69	6,160.37	21.87	21.70	70.01	308.97	897.14	905.05	861.54	43.51	20.803	
6,300.00	6,298.89	6,251.56	6,250.12	22.20	22.02	70.11	308.97	901.84	909.48	865.34	44.14	20.604	
6,400.00	6,398.89	6,351.43	6,349.85	22.55	22.37	70.23	308.97	907.07	914.40	869.56	44.84	20.391	
6,500.00	6,498.89	6,451.29	6,449.57	22.91	22.72	70.34	308.97	912.30	919.33	873.78	45.55	20.183	
6,600.00	6,598.89	6,551.15	6,549.30	23.27	23.07	70.45	308.97	917.52	924.26	878.01	46.25	19.982	
6,700.00	6,698.89	6,651.02	6,649.03	23.63	23.42	70.55	308.97	922.75	929.20	882.24	46.96	19.787	
6,800.00	6,798.89	6,750.88	6,748.75	23.99	23.77	70.66	308.97	927.98	934.13	886.47	47.67	19.598	
6,900.00	6,898.89	6,850.74	6,848.48	24.34	24.12	70.77	308.97	933.20	939.07	890.70	48.37	19.414	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Devon Energy Corporation	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Project:	Lea Co., NM	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Reference Site:	Green Wave	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	RyanUSA_Compass
Reference Design:	PN1	**Offset TVD Reference:**	Offset Datum

Offset Design Green Wave - 20-17 Fed #2H - OH - PN1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
7,000.00	6,998.89	6,950.60	6,948.21	24.70	24.47	70.87	308.97	938.43	944.02	894.94	49.08	19.235	
7,100.00	7,098.89	7,052.41	7,049.87	25.06	24.83	70.98	308.97	943.74	948.95	899.16	49.80	19.057	
7,200.00	7,198.89	7,170.94	7,168.30	25.42	25.25	71.07	308.97	948.47	952.72	902.13	50.59	18.832	
7,300.00	7,298.89	7,289.60	7,286.95	25.78	25.66	71.11	308.97	950.74	954.53	903.16	51.37	18.581	
7,400.00	7,398.89	7,402.45	7,394.89	26.13	26.06	71.12	308.97	950.96	954.71	902.58	52.13	18.315	
7,500.00	7,498.89	7,502.45	7,494.89	26.49	26.42	71.12	308.97	950.96	954.71	901.87	52.84	18.067	
7,600.00	7,598.89	7,602.45	7,594.89	26.85	26.78	71.12	308.97	950.96	954.71	901.15	53.56	17.826	
7,700.00	7,698.89	7,702.45	7,694.89	27.21	27.13	71.12	308.97	950.96	954.71	900.44	54.27	17.592	
7,800.00	7,798.89	7,802.45	7,794.89	27.57	27.49	71.12	308.97	950.96	954.71	899.72	54.99	17.363	
7,900.00	7,898.89	7,902.45	7,894.89	27.92	27.85	71.12	308.97	950.96	954.71	899.01	55.70	17.140	
8,000.00	7,998.89	8,002.45	7,994.89	28.28	28.20	71.12	308.97	950.96	954.71	898.29	56.42	16.923	
8,100.00	8,098.89	8,102.45	8,094.89	28.64	28.56	71.12	308.97	950.96	954.71	897.58	57.13	16.711	
8,200.00	8,198.89	8,202.45	8,194.89	29.00	28.92	71.12	308.97	950.96	954.71	896.86	57.84	16.505	
8,300.00	8,298.89	8,302.45	8,294.89	29.36	29.27	71.12	308.97	950.96	954.71	896.15	58.56	16.303	
8,400.00	8,398.89	8,402.45	8,394.89	29.71	29.63	71.12	308.97	950.96	954.71	895.43	59.27	16.107	
8,500.00	8,498.89	8,502.45	8,494.89	30.07	29.99	71.12	308.97	950.96	954.71	894.72	59.99	15.915	
8,600.00	8,598.89	8,602.45	8,594.89	30.43	30.34	71.12	308.97	950.96	954.71	894.00	60.70	15.727	
8,700.00	8,698.89	8,702.45	8,694.89	30.79	30.70	71.12	308.97	950.96	954.71	893.29	61.42	15.544	
8,800.00	8,798.89	8,802.45	8,794.89	31.15	31.06	71.12	308.97	950.96	954.71	892.57	62.13	15.365	
8,900.00	8,898.89	8,902.45	8,894.89	31.50	31.41	71.12	308.97	950.96	954.71	891.86	62.85	15.190	
9,000.00	8,998.89	9,002.45	8,994.89	31.86	31.77	71.12	308.97	950.96	954.71	891.14	63.57	15.019	
9,100.00	9,098.89	9,102.45	9,094.89	32.22	32.13	71.12	308.97	950.96	954.71	890.43	64.28	14.852	
9,200.00	9,198.89	9,202.45	9,194.89	32.58	32.48	71.12	308.97	950.96	954.71	889.71	65.00	14.689	
9,300.00	9,298.89	9,302.45	9,294.89	32.94	32.84	71.12	308.97	950.96	954.71	889.00	65.71	14.529	
9,301.11	9,300.00	9,301.35	9,296.00	32.94	32.84	71.12	308.97	950.96	954.71	889.00	65.71	14.529	
9,400.00	9,398.89	9,377.23	9,374.54	33.29	33.11	71.05	310.20	950.96	955.32	888.99	66.33	14.402	
9,500.00	9,498.89	9,441.17	9,437.99	33.65	33.33	70.61	317.93	950.96	959.34	892.48	66.85	14.350 SF	
9,600.00	9,598.89	9,500.00	9,495.26	34.01	33.54	69.86	331.25	950.96	967.30	900.04	67.26	14.382	
9,700.00	9,698.89	9,560.55	9,552.46	34.37	33.74	68.77	351.01	950.96	979.54	911.97	67.57	14.496	
9,800.00	9,798.89	9,614.06	9,601.03	34.73	33.90	67.54	373.41	950.96	996.51	928.80	67.70	14.719	
9,900.00	9,898.89	9,662.85	9,643.33	35.09	34.04	66.24	397.71	950.96	1,018.56	950.91	67.65	15.057	
10,000.00	9,998.89	9,700.00	9,674.06	35.44	34.14	65.14	418.57	950.96	1,046.01	978.72	67.29	15.544	
10,100.00	10,098.89	9,750.00	9,713.16	35.80	34.29	63.53	449.71	950.96	1,078.87	1,011.87	67.00	16.102	
10,200.00	10,198.89	9,781.77	9,736.54	36.16	34.38	62.45	471.22	950.96	1,117.20	1,050.88	66.32	16.845	
10,300.00	10,298.89	9,813.33	9,758.54	36.52	34.48	61.34	493.83	950.96	1,160.84	1,095.28	65.56	17.707	
10,400.00	10,398.89	9,850.00	9,782.50	36.88	34.59	60.00	521.59	950.96	1,209.58	1,144.74	64.83	18.656	
10,500.00	10,498.89	9,866.74	9,792.83	37.23	34.64	59.38	534.75	950.96	1,262.87	1,199.12	63.75	19.810	
10,600.00	10,598.89	9,900.00	9,812.21	37.59	34.74	58.12	561.78	950.96	1,320.68	1,257.71	62.97	20.974	
10,700.00	10,698.89	9,900.00	9,812.21	37.95	34.74	58.12	561.78	950.96	1,382.29	1,320.65	61.64	22.424	
10,800.00	10,798.89	9,927.98	9,827.27	38.31	34.82	57.06	585.36	950.96	1,447.39	1,386.52	60.87	23.780	
10,900.00	10,898.89	9,950.00	9,838.31	38.67	34.89	56.21	604.42	950.96	1,515.82	1,455.76	60.05	25.242	
11,000.00	10,998.89	9,950.00	9,838.31	39.03	34.89	56.21	604.42	950.96	1,587.14	1,528.18	58.96	26.920	
11,100.00	11,098.89	9,973.27	9,849.16	39.38	34.96	55.32	624.99	950.96	1,660.87	1,602.54	58.32	28.477	
11,200.00	11,198.89	10,000.00	9,860.59	39.74	35.04	54.30	649.16	950.96	1,737.18	1,679.36	57.81	30.047	
11,300.00	11,298.89	10,000.00	9,860.59	40.10	35.04	54.30	649.16	950.96	1,815.12	1,758.12	56.99	31.849	
11,400.00	11,398.89	10,000.00	9,860.59	40.46	35.04	54.30	649.16	950.96	1,895.13	1,838.86	56.26	33.684	
11,500.00	11,498.89	10,000.00	9,860.59	40.82	35.04	54.30	649.16	950.96	1,976.96	1,921.34	55.62	35.542	
11,600.00	11,598.89	10,026.34	9,870.73	41.18	35.12	53.29	673.47	950.96	2,059.68	2,004.28	55.40	37.179	
11,700.00	11,698.89	10,050.00	9,878.88	41.53	35.19	52.40	695.68	950.96	2,144.26	2,089.07	55.19	38.850	
11,800.00	11,798.89	10,050.00	9,878.88	41.89	35.19	52.40	695.68	950.96	2,229.59	2,174.82	54.76	40.712	
11,900.00	11,898.89	10,050.00	9,878.88	42.25	35.19	52.40	695.68	950.96	2,316.09	2,261.69	54.40	42.573	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Devon Energy Corporation	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Project:	Lea Co., NM	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Reference Site:	Green Wave	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	RyanUSA_Compass
Reference Design:	PN1	**Offset TVD Reference:**	Offset Datum

Offset Design Green Wave - 20-17 Fed #2H - OH - PN1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
12,000.00	11,998.89	10,050.00	9,878.88	42.61	35.19	52.40	695.68	950.96	2,403.64	2,349.53	54.10	44.427	
12,100.00	12,098.89	10,050.00	9,878.88	42.97	35.19	52.40	695.68	950.96	2,492.12	2,438.26	53.86	46.270	
12,200.00	12,198.89	10,050.00	9,878.88	43.33	35.19	52.40	695.68	950.96	2,581.45	2,527.78	53.67	48.099	
12,278.15	12,277.04	10,072.50	9,885.78	43.61	35.26	51.56	717.10	950.96	2,651.28	2,597.51	53.77	49.312	
12,300.00	12,298.88	10,073.74	9,886.13	43.68	35.26	48.15	718.29	950.96	2,670.85	2,617.10	53.74	49.695	
12,350.00	12,348.70	10,077.06	9,887.07	43.86	35.27	41.57	721.47	950.96	2,714.78	2,661.09	53.69	50.565	
12,400.00	12,397.97	10,100.00	9,893.05	44.04	35.34	36.03	743.61	950.96	2,757.63	2,703.84	53.79	51.265	
12,450.00	12,446.33	10,100.00	9,893.05	44.21	35.34	32.12	743.61	950.96	2,798.28	2,744.61	53.67	52.136	
12,500.00	12,493.39	10,100.00	9,893.05	44.37	35.34	29.00	743.61	950.96	2,837.01	2,783.47	53.54	52.987	
12,550.00	12,538.80	10,100.00	9,893.05	44.52	35.34	26.50	743.61	950.96	2,873.62	2,820.22	53.40	53.811	
12,600.00	12,582.23	10,100.00	9,893.05	44.67	35.34	24.47	743.61	950.96	2,907.91	2,854.66	53.25	54.605	
12,650.00	12,623.33	10,100.00	9,893.05	44.82	35.34	22.82	743.61	950.96	2,939.71	2,886.61	53.10	55.361	
12,700.00	12,661.80	10,100.00	9,893.05	44.97	35.34	21.46	743.61	950.96	2,968.86	2,915.91	52.95	56.074	
12,750.00	12,697.33	10,122.16	9,897.98	45.11	35.41	20.27	765.21	950.96	2,994.72	2,941.78	52.94	56.566	
12,800.00	12,729.67	10,129.44	9,899.42	45.25	35.43	19.36	772.35	950.96	3,017.78	2,964.95	52.83	57.123	
12,850.00	12,758.57	10,150.00	9,902.99	45.38	35.49	18.60	792.60	950.96	3,037.86	2,985.06	52.80	57.534	
12,900.00	12,783.80	10,150.00	9,902.99	45.52	35.49	18.05	792.60	950.96	3,054.38	3,001.73	52.64	58.019	
12,950.00	12,805.17	10,150.00	9,902.99	45.64	35.49	17.63	792.60	950.96	3,067.68	3,015.19	52.50	58.433	
13,000.00	12,822.52	10,150.00	9,902.99	45.77	35.49	17.32	792.60	950.96	3,077.72	3,025.35	52.37	58.772	
13,050.00	12,835.73	10,150.00	9,902.99	45.89	35.49	17.12	792.60	950.96	3,084.44	3,032.19	52.25	59.029	
13,100.00	12,844.68	10,176.69	9,906.54	46.01	35.57	17.02	819.04	950.96	3,087.10	3,034.82	52.28	59.046	
13,150.00	12,849.31	10,200.00	9,908.62	46.12	35.64	17.04	842.26	950.96	3,086.85	3,034.55	52.30	59.019	
13,178.15	12,850.00	10,200.00	9,908.62	46.19	35.64	17.10	842.26	950.96	3,084.93	3,032.66	52.26	59.026	
13,200.00	12,850.00	10,200.00	9,908.62	46.24	35.64	17.10	842.26	950.96	3,083.10	3,030.86	52.24	59.020	
13,300.00	12,850.00	10,200.00	9,908.62	46.49	35.64	17.10	842.26	950.96	3,076.69	3,024.50	52.19	58.956	
13,400.00	12,850.00	10,239.70	9,910.00	46.79	35.76	17.10	881.93	950.96	3,073.07	3,020.73	52.34	58.713	
13,484.33	12,850.00	10,242.49	9,910.00	47.07	35.77	17.10	879.14	950.96	3,071.84	3,019.39	52.45	58.565	
13,500.00	12,850.00	10,252.58	9,910.00	47.13	35.80	17.10	894.81	950.96	3,071.84	3,019.34	52.50	58.514	
13,600.00	12,850.00	10,352.58	9,910.00	47.50	36.14	17.10	994.81	950.96	3,071.84	3,018.95	52.90	58.073	
13,700.00	12,850.00	10,452.58	9,910.00	47.92	36.53	17.10	1,094.81	950.96	3,071.85	3,018.50	53.35	57.584	
13,800.00	12,850.00	10,552.58	9,910.00	48.38	36.97	17.10	1,194.81	950.96	3,071.85	3,018.00	53.85	57.046	
13,900.00	12,850.00	10,652.58	9,910.00	48.88	37.46	17.10	1,294.81	950.96	3,071.85	3,017.45	54.40	56.464	
14,000.00	12,850.00	10,752.58	9,910.00	49.41	38.00	17.10	1,394.81	950.96	3,071.85	3,016.84	55.01	55.844	
14,100.00	12,850.00	10,852.58	9,910.00	49.98	38.58	17.10	1,494.81	950.96	3,071.85	3,016.19	55.66	55.189	
14,200.00	12,850.00	10,952.58	9,910.00	50.58	39.21	17.10	1,594.81	950.96	3,071.86	3,015.50	56.36	54.504	
14,300.00	12,850.00	11,052.58	9,910.00	51.22	39.88	17.10	1,694.81	950.96	3,071.86	3,014.75	57.10	53.795	
14,400.00	12,850.00	11,152.58	9,910.00	51.88	40.59	17.10	1,794.81	950.96	3,071.86	3,013.97	57.89	53.064	
14,500.00	12,850.00	11,252.58	9,910.00	52.58	41.33	17.10	1,894.81	950.96	3,071.86	3,013.14	58.72	52.317	
14,600.00	12,850.00	11,352.58	9,910.00	53.31	42.12	17.10	1,994.81	950.96	3,071.86	3,012.28	59.58	51.556	
14,700.00	12,850.00	11,452.58	9,910.00	54.06	42.93	17.10	2,094.81	950.96	3,071.87	3,011.38	60.49	50.787	
14,800.00	12,850.00	11,552.58	9,910.00	54.85	43.78	17.10	2,194.81	950.96	3,071.87	3,010.44	61.42	50.010	
14,900.00	12,850.00	11,652.58	9,910.00	55.65	44.65	17.10	2,294.81	950.96	3,071.87	3,009.47	62.40	49.231	
15,000.00	12,850.00	11,752.58	9,910.00	56.49	45.56	17.10	2,394.81	950.96	3,071.87	3,008.47	63.40	48.451	
15,100.00	12,850.00	11,852.58	9,910.00	57.34	46.49	17.10	2,494.81	950.96	3,071.87	3,007.44	64.44	47.673	
15,200.00	12,850.00	11,952.58	9,910.00	58.22	47.45	17.10	2,594.81	950.96	3,071.88	3,006.38	65.50	46.899	
15,300.00	12,850.00	12,052.58	9,910.00	59.13	48.43	17.10	2,694.81	950.96	3,071.88	3,005.29	66.59	46.130	
15,400.00	12,850.00	12,152.58	9,910.00	60.05	49.43	17.11	2,794.81	950.96	3,071.88	3,004.17	67.71	45.369	
15,500.00	12,850.00	12,252.58	9,910.00	60.99	50.45	17.11	2,894.81	950.96	3,071.88	3,003.03	68.85	44.616	
15,600.00	12,850.00	12,352.58	9,910.00	61.95	51.50	17.11	2,994.81	950.96	3,071.88	3,001.87	70.02	43.873	
15,700.00	12,850.00	12,452.58	9,910.00	62.93	52.56	17.11	3,094.81	950.97	3,071.89	3,000.68	71.21	43.141	

Company:	Devon Energy Corporation	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Project:	Lea Co., NM	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Reference Site:	Green Wave	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	RyanUSA_Compass
Reference Design:	PN1	**Offset TVD Reference:**	Offset Datum

Offset Design Green Wave - 20-17 Fed #2H - OH - PN1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
15,800.00	12,850.00	12,552.58	9,910.00	63.92	53.64	17.11	3,194.81	950.97	3,071.89	2,999.47	72.42	42.420	
15,900.00	12,850.00	12,652.58	9,910.00	64.94	54.73	17.11	3,294.81	950.97	3,071.89	2,998.24	73.65	41.711	
16,000.00	12,850.00	12,752.58	9,910.00	65.96	55.84	17.11	3,394.81	950.97	3,071.89	2,997.00	74.90	41.016	
16,100.00	12,850.00	12,852.58	9,910.00	67.01	56.97	17.11	3,494.81	950.97	3,071.89	2,995.73	76.16	40.333	
16,200.00	12,850.00	12,952.58	9,910.00	68.06	58.10	17.11	3,594.81	950.97	3,071.89	2,994.45	77.45	39.664	
16,300.00	12,850.00	13,052.58	9,910.00	69.13	59.26	17.11	3,694.81	950.97	3,071.90	2,993.15	78.75	39.009	
16,400.00	12,850.00	13,152.58	9,910.00	70.22	60.42	17.11	3,794.81	950.97	3,071.90	2,991.83	80.07	38.367	
16,500.00	12,850.00	13,252.58	9,910.00	71.31	61.59	17.11	3,894.81	950.97	3,071.90	2,990.50	81.40	37.739	
16,600.00	12,850.00	13,352.58	9,910.00	72.42	62.78	17.11	3,994.81	950.97	3,071.90	2,989.16	82.74	37.126	
16,700.00	12,850.00	13,452.58	9,910.00	73.54	63.97	17.11	4,094.81	950.97	3,071.90	2,987.80	84.10	36.525	
16,800.00	12,850.00	13,552.58	9,910.00	74.67	65.18	17.11	4,194.81	950.97	3,071.91	2,986.43	85.48	35.939	
16,900.00	12,850.00	13,652.58	9,910.00	75.81	66.39	17.11	4,294.81	950.97	3,071.91	2,985.05	86.86	35.366	
17,000.00	12,850.00	13,752.58	9,910.00	76.96	67.62	17.11	4,394.81	950.97	3,071.91	2,983.65	88.26	34.807	
17,100.00	12,850.00	13,852.58	9,910.00	78.12	68.85	17.11	4,494.81	950.97	3,071.91	2,982.25	89.66	34.260	
17,200.00	12,850.00	13,952.58	9,910.00	79.28	70.08	17.11	4,594.81	950.97	3,071.91	2,980.83	91.08	33.727	
17,300.00	12,850.00	14,052.58	9,910.00	80.46	71.33	17.11	4,694.81	950.97	3,071.92	2,979.41	92.51	33.206	
17,400.00	12,850.00	14,152.58	9,910.00	81.65	72.58	17.11	4,794.81	950.97	3,071.92	2,977.97	93.95	32.698	
17,500.00	12,850.00	14,252.58	9,910.00	82.84	73.84	17.11	4,894.81	950.97	3,071.92	2,976.53	95.39	32.202	
17,600.00	12,850.00	14,352.58	9,910.00	84.04	75.11	17.11	4,994.81	950.97	3,071.92	2,975.07	96.85	31.718	
17,700.00	12,850.00	14,452.58	9,910.00	85.25	76.38	17.11	5,094.81	950.97	3,071.92	2,973.61	98.32	31.246	
17,800.00	12,850.00	14,552.58	9,910.00	86.46	77.66	17.11	5,194.81	950.97	3,071.93	2,972.14	99.79	30.785	
17,900.00	12,850.00	14,652.58	9,910.00	87.68	78.94	17.11	5,294.81	950.97	3,071.93	2,970.66	101.27	30.335	
18,000.00	12,850.00	14,752.58	9,910.00	88.91	80.23	17.11	5,394.81	950.97	3,071.93	2,969.17	102.76	29.896	
18,100.00	12,850.00	14,852.58	9,910.00	90.14	81.52	17.11	5,494.81	950.97	3,071.93	2,967.68	104.25	29.467	
18,200.00	12,850.00	14,952.58	9,910.00	91.38	82.82	17.11	5,594.81	950.97	3,071.93	2,966.18	105.75	29.049	
18,300.00	12,850.00	15,052.58	9,910.00	92.62	84.12	17.11	5,694.81	950.97	3,071.94	2,964.68	107.26	28.640	
18,400.00	12,850.00	15,152.58	9,910.00	93.87	85.42	17.11	5,794.81	950.97	3,071.94	2,963.16	108.77	28.241	
18,500.00	12,850.00	15,252.58	9,910.00	95.13	86.73	17.11	5,894.81	950.97	3,071.94	2,961.65	110.29	27.852	
18,600.00	12,850.00	15,352.58	9,910.00	96.39	88.05	17.11	5,994.81	950.97	3,071.94	2,960.12	111.82	27.472	
18,700.00	12,850.00	15,452.58	9,910.00	97.66	89.36	17.11	6,094.81	950.97	3,071.94	2,958.59	113.35	27.101	
18,800.00	12,850.00	15,552.58	9,910.00	98.93	90.69	17.11	6,194.81	950.97	3,071.95	2,957.06	114.89	26.739	
18,900.00	12,850.00	15,652.58	9,910.00	100.20	92.01	17.11	6,294.81	950.97	3,071.95	2,955.52	116.43	26.384	
19,000.00	12,850.00	15,752.58	9,910.00	101.48	93.34	17.11	6,394.81	950.97	3,071.95	2,953.97	117.98	26.039	
19,100.00	12,850.00	15,852.58	9,910.00	102.76	94.67	17.11	6,494.81	950.97	3,071.95	2,952.42	119.53	25.701	
19,200.00	12,850.00	15,952.58	9,910.00	104.05	96.00	17.11	6,594.81	950.97	3,071.95	2,950.87	121.08	25.370	
19,300.00	12,850.00	16,052.58	9,910.00	105.34	97.34	17.11	6,694.81	950.97	3,071.96	2,949.31	122.64	25.048	
19,400.00	12,850.00	16,152.58	9,910.00	106.63	98.68	17.11	6,794.81	950.97	3,071.96	2,947.75	124.21	24.732	
19,500.00	12,850.00	16,252.58	9,910.00	107.93	100.02	17.11	6,894.81	950.97	3,071.96	2,946.18	125.78	24.424	
19,600.00	12,850.00	16,352.58	9,910.00	109.23	101.36	17.11	6,994.81	950.97	3,071.96	2,944.61	127.35	24.122	
19,700.00	12,850.00	16,452.58	9,910.00	110.53	102.71	17.11	7,094.81	950.97	3,071.96	2,943.04	128.93	23.827	
19,800.00	12,850.00	16,552.58	9,910.00	111.84	104.06	17.11	7,194.81	950.97	3,071.97	2,941.46	130.51	23.539	
19,900.00	12,850.00	16,652.58	9,910.00	113.15	105.31	17.11	7,294.81	950.97	3,071.97	2,940.05	131.91	23.288	
19,944.40	12,850.00	16,696.97	9,910.00	113.73	105.82	17.11	7,339.20	950.97	3,071.97	2,939.50	132.47	23.190	

Company:	Devon Energy Corporation	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Project:	Lea Co., NM	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Reference Site:	Green Wave	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	RyanUSA_Compass
Reference Design:	PN1	**Offset TVD Reference:**	Offset Datum

Offset Design Green Wave - 20-32 Fed State Com #2H - OH - PN1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	1.00	-1.00	0.00	0.00	179.24	-433.50	5.74	433.54				
100.00	100.00	101.00	99.00	0.12	0.13	179.24	-433.50	5.74	433.54	433.29	0.25	1,752.765	
200.00	200.00	201.00	199.00	0.48	0.48	179.24	-433.50	5.74	433.54	432.57	0.96	449.594	
300.00	300.00	301.00	299.00	0.84	0.84	179.24	-433.50	5.74	433.54	431.86	1.68	257.870	
400.00	400.00	401.00	399.00	1.20	1.20	179.24	-433.50	5.74	433.54	431.14	2.40	180.779	
500.00	500.00	501.00	499.00	1.56	1.56	179.24	-433.50	5.74	433.54	430.42	3.12	139.173	
600.00	600.00	601.00	599.00	1.91	1.92	179.24	-433.50	5.74	433.54	429.71	3.83	113.135	
700.00	700.00	701.00	699.00	2.27	2.28	179.24	-433.50	5.74	433.54	428.99	4.55	95.304	
800.00	800.00	801.00	799.00	2.63	2.63	179.24	-433.50	5.74	433.54	428.27	5.27	82.329	
900.00	900.00	901.00	899.00	2.99	2.99	179.24	-433.50	5.74	433.54	427.56	5.98	72.463	
1,000.00	1,000.00	1,001.00	999.00	3.35	3.35	179.24	-433.50	5.74	433.54	426.84	6.70	64.709	
1,100.00	1,100.00	1,101.00	1,099.00	3.71	3.71	179.24	-433.50	5.74	433.54	426.12	7.42	58.454	
1,200.00	1,200.00	1,201.00	1,199.00	4.07	4.07	179.24	-433.50	5.74	433.54	425.41	8.13	53.301	
1,300.00	1,300.00	1,301.00	1,299.00	4.42	4.43	179.24	-433.50	5.74	433.54	424.69	8.85	48.984	
1,400.00	1,400.00	1,401.00	1,399.00	4.78	4.79	179.24	-433.50	5.74	433.54	423.97	9.57	45.313	
1,500.00	1,500.00	1,501.00	1,499.00	5.14	5.14	179.24	-433.50	5.74	433.54	423.25	10.28	42.154	
1,600.00	1,600.00	1,601.00	1,599.00	5.50	5.50	179.24	-433.50	5.74	433.54	422.54	11.00	39.407	
1,700.00	1,700.00	1,701.00	1,699.00	5.86	5.86	179.24	-433.50	5.74	433.54	421.82	11.72	36.996	
1,800.00	1,800.00	1,801.00	1,799.00	6.22	6.22	179.24	-433.50	5.74	433.54	421.10	12.44	34.863	
1,900.00	1,900.00	1,901.00	1,899.00	6.57	6.58	179.24	-433.50	5.74	433.54	420.39	13.15	32.963	
2,000.00	2,000.00	2,001.00	1,999.00	6.93	6.94	179.24	-433.50	5.74	433.54	419.67	13.87	31.259	
2,100.00	2,100.00	2,101.00	2,099.00	7.29	7.29	179.24	-433.50	5.74	433.54	418.95	14.59	29.723	
2,200.00	2,200.00	2,201.00	2,199.00	7.65	7.65	179.24	-433.50	5.74	433.54	418.24	15.30	28.330	
2,300.00	2,300.00	2,301.00	2,299.00	8.01	8.01	179.24	-433.50	5.74	433.54	417.52	16.02	27.062	
2,400.00	2,400.00	2,401.00	2,399.00	8.37	8.37	179.24	-433.50	5.74	433.54	416.80	16.74	25.903	
2,500.00	2,500.00	2,501.00	2,499.00	8.73	8.73	179.24	-433.50	5.74	433.54	416.08	17.45	24.839	
2,600.00	2,600.00	2,601.00	2,599.00	9.08	9.09	179.24	-433.50	5.74	433.54	415.37	18.17	23.859	
2,700.00	2,700.00	2,701.00	2,699.00	9.44	9.45	179.24	-433.50	5.74	433.54	414.65	18.89	22.953	
2,800.00	2,800.00	2,801.00	2,799.00	9.80	9.80	179.24	-433.50	5.74	433.54	413.93	19.60	22.114	
2,900.00	2,900.00	2,901.00	2,899.00	10.16	10.16	179.24	-433.50	5.74	433.54	413.22	20.32	21.334	
3,000.00	3,000.00	3,001.00	2,999.00	10.52	10.52	179.24	-433.50	5.74	433.54	412.50	21.04	20.607	
3,100.00	3,100.00	3,101.00	3,099.00	10.88	10.88	179.24	-433.50	5.74	433.54	411.78	21.76	19.928	
3,200.00	3,200.00	3,201.00	3,199.00	11.23	11.24	179.24	-433.50	5.74	433.54	411.07	22.47	19.292	
3,300.00	3,300.00	3,301.00	3,299.00	11.59	11.60	179.24	-433.50	5.74	433.54	410.35	23.19	18.695	
3,400.00	3,400.00	3,401.00	3,399.00	11.95	11.96	179.24	-433.50	5.74	433.54	409.63	23.91	18.135	
3,500.00	3,500.00	3,501.00	3,499.00	12.31	12.31	179.24	-433.50	5.74	433.54	408.92	24.62	17.607	
3,600.00	3,600.00	3,601.00	3,599.00	12.67	12.67	179.24	-433.50	5.74	433.54	408.20	25.34	17.109	
3,700.00	3,700.00	3,701.00	3,699.00	13.03	13.03	179.24	-433.50	5.74	433.54	407.48	26.06	16.638	
3,800.00	3,800.00	3,801.00	3,799.00	13.39	13.39	179.24	-433.50	5.74	433.54	406.76	26.77	16.192	
3,900.00	3,900.00	3,901.00	3,899.00	13.74	13.75	179.24	-433.50	5.74	433.54	406.05	27.49	15.770	
4,000.00	4,000.00	4,001.00	3,999.00	14.10	14.11	179.24	-433.50	5.74	433.54	405.33	28.21	15.369	
4,100.00	4,100.00	4,101.00	4,099.00	14.46	14.46	179.24	-433.50	5.74	433.54	404.61	28.93	14.988	
4,200.00	4,200.00	4,201.00	4,199.00	14.82	14.82	179.24	-433.50	5.74	433.54	403.90	29.64	14.626	
4,300.00	4,300.00	4,301.00	4,299.00	15.18	15.18	179.24	-433.50	5.74	433.54	403.18	30.36	14.280	
4,400.00	4,400.00	4,401.00	4,399.00	15.54	15.54	179.24	-433.50	5.74	433.54	402.46	31.08	13.951	
4,500.00	4,500.00	4,501.00	4,499.00	15.89	15.90	179.24	-433.50	5.74	433.54	401.75	31.79	13.636	
4,600.00	4,600.00	4,601.00	4,599.00	16.25	16.26	179.24	-433.50	5.74	433.54	401.03	32.51	13.336	
4,700.00	4,700.00	4,701.00	4,699.00	16.61	16.62	179.24	-433.50	5.74	433.54	400.31	33.23	13.048	
4,800.00	4,800.00	4,801.00	4,799.00	16.97	16.97	179.24	-433.50	5.74	433.54	399.60	33.94	12.772	
4,900.00	4,900.00	4,901.00	4,899.00	17.33	17.33	179.24	-433.50	5.74	433.54	398.88	34.66	12.508	
5,000.00	5,000.00	4,999.00	4,999.00	17.69	17.68	179.24	-433.50	5.74	433.54	398.17	35.37	12.257	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Devon Energy Corporation	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Project:	Lea Co., NM	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Reference Site:	Green Wave	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	RyanUSA_Compass
Reference Design:	PN1	**Offset TVD Reference:**	Offset Datum

Offset Design Green Wave - 20-32 Fed State Com #2H - OH - PN1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.00	5,100.00	5,098.90	5,098.90	18.04	18.03	89.24	-433.50	6.59	433.54	397.47	36.07	12.020	
5,200.00	5,199.96	5,198.80	5,198.76	18.38	18.37	89.25	-433.50	9.19	433.54	396.79	36.75	11.796	
5,300.00	5,299.86	5,298.70	5,298.57	18.72	18.72	89.25	-433.50	13.52	433.54	396.10	37.44	11.581	
5,301.30	5,301.16	5,300.00	5,299.86	18.72	18.72	89.25	-433.50	13.59	433.54	396.09	37.45	11.578	CC
5,400.00	5,399.73	5,398.59	5,398.27	19.06	19.06	89.14	-433.50	19.60	433.55	395.43	38.12	11.372	
5,500.00	5,499.59	5,498.42	5,497.80	19.41	19.40	88.80	-433.50	27.41	433.60	394.79	38.81	11.172	
5,600.00	5,599.45	5,601.87	5,597.05	19.75	19.76	88.22	-433.50	36.93	433.71	394.19	39.52	10.976	
5,700.00	5,699.31	5,702.01	5,696.36	20.10	20.11	87.54	-433.50	47.37	433.90	393.69	40.21	10.791	
5,800.00	5,799.18	5,802.14	5,795.68	20.45	20.46	86.85	-433.50	57.81	434.16	393.25	40.91	10.614	
5,910.00	5,909.03	5,907.71	5,904.93	20.83	20.83	86.09	-433.50	69.29	434.52	392.86	41.66	10.431	
6,000.00	5,998.94	6,002.46	5,994.27	21.14	21.17	85.38	-433.50	78.68	434.92	392.62	42.30	10.281	
6,100.00	6,098.90	6,102.75	6,093.43	21.49	21.52	84.39	-433.50	89.10	435.61	392.60	43.00	10.130	
6,210.00	6,208.89	6,206.75	6,202.33	21.87	21.89	173.04	-433.50	100.55	436.75	393.00	43.76	9.981	
6,300.00	6,298.89	6,303.75	6,291.34	22.20	22.23	171.82	-433.50	109.91	438.00	393.58	44.42	9.860	
6,400.00	6,398.89	6,404.29	6,390.25	22.55	22.59	170.48	-433.50	120.30	439.62	394.48	45.13	9.740	
6,500.00	6,498.89	6,504.84	6,489.16	22.91	22.95	169.15	-433.50	130.70	441.47	395.63	45.85	9.629	
6,600.00	6,598.89	6,605.39	6,588.07	23.27	23.31	167.83	-433.50	141.09	443.57	397.01	46.56	9.526	
6,700.00	6,698.89	6,705.94	6,686.97	23.63	23.67	166.53	-433.50	151.49	445.90	398.62	47.28	9.432	
6,800.00	6,798.89	6,806.48	6,785.88	23.99	24.03	165.23	-433.50	161.88	448.47	400.47	47.99	9.344	
6,900.00	6,898.89	6,893.26	6,885.08	24.34	24.35	163.96	-433.50	172.29	451.25	402.59	48.66	9.274	
7,000.00	6,998.89	6,995.13	6,986.51	24.70	24.71	162.80	-433.50	181.81	453.93	404.55	49.38	9.192	
7,100.00	7,098.89	7,097.32	7,088.40	25.06	25.08	161.87	-433.50	189.54	456.24	406.13	50.11	9.105	
7,200.00	7,198.89	7,199.75	7,190.65	25.42	25.44	161.17	-433.50	195.46	458.07	407.24	50.83	9.012	
7,300.00	7,298.89	7,302.35	7,293.18	25.78	25.81	160.69	-433.50	199.56	459.38	407.83	51.55	8.911	
7,400.00	7,398.89	7,405.08	7,395.87	26.13	26.17	160.42	-433.50	201.82	460.11	407.84	52.27	8.803	
7,500.00	7,498.89	7,507.09	7,497.89	26.49	26.53	160.36	-433.50	202.31	460.27	407.28	52.99	8.687	
7,600.00	7,598.89	7,607.09	7,597.89	26.85	26.88	160.36	-433.50	202.31	460.27	406.57	53.70	8.571	
7,700.00	7,698.89	7,707.09	7,697.89	27.21	27.24	160.36	-433.50	202.31	460.27	405.86	54.41	8.459	
7,800.00	7,798.89	7,807.09	7,797.89	27.57	27.59	160.36	-433.50	202.31	460.27	405.14	55.13	8.349	
7,900.00	7,898.89	7,907.09	7,897.89	27.92	27.95	160.36	-433.50	202.31	460.27	404.43	55.84	8.243	
8,000.00	7,998.89	8,007.09	7,997.89	28.28	28.30	160.36	-433.50	202.31	460.27	403.72	56.55	8.139	
8,100.00	8,098.89	8,107.09	8,097.89	28.64	28.66	160.36	-433.50	202.31	460.27	403.00	57.27	8.037	
8,200.00	8,198.89	8,207.09	8,197.89	29.00	29.01	160.36	-433.50	202.31	460.27	402.29	57.98	7.938	
8,300.00	8,298.89	8,307.09	8,297.89	29.36	29.37	160.36	-433.50	202.31	460.27	401.58	58.69	7.842	
8,400.00	8,398.89	8,407.09	8,397.89	29.71	29.72	160.36	-433.50	202.31	460.27	400.86	59.41	7.748	
8,500.00	8,498.89	8,507.09	8,497.89	30.07	30.08	160.36	-433.50	202.31	460.27	400.15	60.12	7.656	
8,600.00	8,598.89	8,607.09	8,597.89	30.43	30.44	160.36	-433.50	202.31	460.27	399.44	60.84	7.566	
8,700.00	8,698.89	8,707.09	8,697.89	30.79	30.79	160.36	-433.50	202.31	460.27	398.72	61.55	7.478	
8,800.00	8,798.89	8,807.09	8,797.89	31.15	31.15	160.36	-433.50	202.31	460.27	398.01	62.26	7.392	
8,900.00	8,898.89	8,907.09	8,897.89	31.50	31.50	160.36	-433.50	202.31	460.27	397.29	62.98	7.308	
9,000.00	8,998.89	9,007.09	8,997.89	31.86	31.86	160.36	-433.50	202.31	460.27	396.58	63.69	7.226	
9,100.00	9,098.89	9,107.09	9,097.89	32.22	32.21	160.36	-433.50	202.31	460.27	395.86	64.41	7.146	
9,200.00	9,198.89	9,207.09	9,197.89	32.58	32.57	160.36	-433.50	202.31	460.27	395.15	65.12	7.068	
9,300.00	9,298.89	9,307.09	9,297.89	32.94	32.93	160.36	-433.50	202.31	460.27	394.44	65.84	6.991	
9,400.00	9,398.89	9,407.09	9,397.89	33.29	33.28	160.36	-433.50	202.31	460.27	393.72	66.55	6.916	
9,500.00	9,498.89	9,507.09	9,497.89	33.65	33.64	160.36	-433.50	202.31	460.27	393.01	67.26	6.843	
9,600.00	9,598.89	9,607.09	9,597.89	34.01	34.00	160.36	-433.50	202.31	460.27	392.29	67.98	6.771	
9,700.00	9,698.89	9,707.09	9,697.89	34.37	34.35	160.36	-433.50	202.31	460.27	391.58	68.69	6.700	
9,800.00	9,798.89	9,807.09	9,797.89	34.73	34.71	160.36	-433.50	202.31	460.27	390.86	69.41	6.631	
9,900.00	9,898.89	9,907.09	9,897.89	35.09	35.06	160.36	-433.50	202.31	460.27	390.15	70.12	6.564	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Devon Energy Corporation	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Project:	Lea Co., NM	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Reference Site:	Green Wave	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	RyanUSA_Compass
Reference Design:	PN1	**Offset TVD Reference:**	Offset Datum

Offset Design Green Wave - 20-32 Fed State Com #2H - OH - PN1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,000.00	9,998.89	10,007.09	9,997.89	35.44	35.42	160.36	-433.50	202.31	460.27	389.43	70.84	6.498	
10,100.00	10,098.89	10,107.09	10,097.89	35.80	35.78	160.36	-433.50	202.31	460.27	388.72	71.55	6.433	
10,200.00	10,198.89	10,207.09	10,197.89	36.16	36.13	160.36	-433.50	202.31	460.27	388.00	72.27	6.369	
10,300.00	10,298.89	10,307.09	10,297.89	36.52	36.49	160.36	-433.50	202.31	460.27	387.29	72.98	6.307	
10,400.00	10,398.89	10,407.09	10,397.89	36.88	36.85	160.36	-433.50	202.31	460.27	386.57	73.70	6.245	
10,500.00	10,498.89	10,507.09	10,497.89	37.23	37.20	160.36	-433.50	202.31	460.27	385.86	74.41	6.185	
10,600.00	10,598.89	10,607.09	10,597.89	37.59	37.56	160.36	-433.50	202.31	460.27	385.14	75.13	6.127	
10,700.00	10,698.89	10,707.09	10,697.89	37.95	37.92	160.36	-433.50	202.31	460.27	384.43	75.84	6.069	
10,800.00	10,798.89	10,807.09	10,797.89	38.31	38.27	160.36	-433.50	202.31	460.27	383.71	76.56	6.012	
10,900.00	10,898.89	10,907.09	10,897.89	38.67	38.63	160.36	-433.50	202.31	460.27	383.00	77.27	5.956	
11,000.00	10,998.89	11,007.09	10,997.89	39.03	38.99	160.36	-433.50	202.31	460.27	382.28	77.99	5.902	
11,100.00	11,098.89	11,107.09	11,097.89	39.38	39.34	160.36	-433.50	202.31	460.27	381.57	78.70	5.848	
11,200.00	11,198.89	11,207.09	11,197.89	39.74	39.70	160.36	-433.50	202.31	460.27	380.85	79.42	5.796	
11,300.00	11,298.89	11,307.09	11,297.89	40.10	40.06	160.36	-433.50	202.31	460.27	380.14	80.13	5.744	
11,400.00	11,398.89	11,407.09	11,397.89	40.46	40.42	160.36	-433.50	202.31	460.27	379.42	80.85	5.693	
11,500.00	11,498.89	11,507.09	11,497.89	40.82	40.77	160.36	-433.50	202.31	460.27	378.71	81.56	5.643	
11,600.00	11,598.89	11,607.09	11,597.89	41.18	41.13	160.36	-433.50	202.31	460.27	377.99	82.28	5.594	
11,700.00	11,698.89	11,707.09	11,697.89	41.53	41.49	160.36	-433.50	202.31	460.27	377.28	82.99	5.546	
11,800.00	11,798.89	11,807.09	11,797.89	41.89	41.84	160.36	-433.50	202.31	460.27	376.56	83.71	5.498	
11,900.00	11,898.89	11,907.09	11,897.89	42.25	42.20	160.36	-433.50	202.31	460.27	375.85	84.43	5.452	
12,000.00	11,998.89	12,007.09	11,997.89	42.61	42.56	160.36	-433.50	202.31	460.27	375.13	85.14	5.406	
12,100.00	12,098.89	12,107.09	12,097.89	42.97	42.91	160.36	-433.50	202.31	460.27	374.41	85.86	5.361	
12,200.00	12,198.89	12,207.09	12,197.89	43.33	43.27	160.36	-433.50	202.31	460.27	373.70	86.57	5.317	
12,278.15	12,277.04	12,285.24	12,276.04	43.61	43.55	160.36	-433.50	202.31	460.27	373.14	87.13	5.283	ES
12,300.00	12,298.88	12,300.00	12,290.79	43.68	43.60	160.37	-433.67	202.31	460.87	373.62	87.26	5.282	SF
12,350.00	12,348.70	12,326.23	12,316.99	43.86	43.69	160.31	-434.90	202.31	466.84	379.42	87.42	5.340	
12,400.00	12,397.97	12,350.00	12,340.66	44.04	43.76	160.13	-437.04	202.31	479.12	391.70	87.42	5.481	
12,450.00	12,446.33	12,378.86	12,369.25	44.21	43.86	159.93	-440.97	202.31	497.38	409.95	87.42	5.689	
12,500.00	12,493.39	12,400.00	12,390.05	44.37	43.92	159.45	-444.76	202.31	521.28	434.04	87.25	5.975	
12,550.00	12,538.80	12,423.24	12,412.73	44.52	44.00	158.83	-449.80	202.31	550.30	463.19	87.11	6.317	
12,600.00	12,582.23	12,450.00	12,438.58	44.67	44.08	158.12	-456.74	202.31	584.01	496.90	87.12	6.704	
12,650.00	12,623.33	12,450.00	12,438.58	44.82	44.08	155.89	-456.74	202.31	621.52	535.04	86.48	7.187	
12,700.00	12,661.80	12,470.06	12,457.72	44.97	44.14	153.96	-462.73	202.31	662.32	575.85	86.47	7.660	
12,750.00	12,697.33	12,480.34	12,467.45	45.11	44.17	150.52	-466.06	202.31	705.92	619.64	86.29	8.181	
12,800.00	12,729.67	12,500.00	12,485.87	45.25	44.23	146.55	-472.91	202.31	751.88	665.43	86.45	8.697	
12,850.00	12,758.57	12,500.00	12,485.87	45.38	44.23	137.74	-472.91	202.31	799.07	712.87	86.21	9.269	
12,900.00	12,783.80	12,500.00	12,485.87	45.52	44.23	123.06	-472.91	202.31	847.46	761.40	86.06	9.847	
12,950.00	12,805.17	12,500.00	12,485.87	45.64	44.23	99.55	-472.91	202.31	896.51	810.49	86.02	10.422	
13,000.00	12,822.52	12,500.00	12,485.87	45.77	44.23	71.01	-472.91	202.31	945.78	859.72	86.06	10.990	
13,050.00	12,835.73	12,500.00	12,485.87	45.89	44.23	48.59	-472.91	202.31	994.89	908.71	86.17	11.545	
13,100.00	12,844.68	12,500.00	12,485.87	46.01	44.23	34.76	-472.91	202.31	1,043.51	957.16	86.35	12.084	
13,150.00	12,849.31	12,500.00	12,485.87	46.12	44.23	26.37	-472.91	202.31	1,091.36	1,004.79	86.58	12.606	
13,178.15	12,850.00	12,500.00	12,485.87	46.19	44.23	23.07	-472.91	202.31	1,117.88	1,031.15	86.72	12.890	
13,200.00	12,850.00	12,482.81	12,469.77	46.24	44.18	22.19	-466.89	202.31	1,137.96	1,051.43	86.53	13.152	
13,300.00	12,850.00	12,472.07	12,459.62	46.49	44.15	21.66	-463.37	202.31	1,231.64	1,144.78	86.85	14.181	
13,400.00	12,850.00	12,450.00	12,438.58	46.79	44.08	20.65	-456.74	202.31	1,326.19	1,239.23	86.95	15.252	
13,500.00	12,850.00	12,450.00	12,438.58	47.13	44.08	20.65	-456.74	202.31	1,420.94	1,333.61	87.34	16.269	
13,600.00	12,850.00	12,450.00	12,438.58	47.50	44.08	20.65	-456.74	202.31	1,516.38	1,428.71	87.66	17.298	
13,700.00	12,850.00	12,450.00	12,438.58	47.92	44.08	20.65	-456.74	202.31	1,612.36	1,524.43	87.93	18.336	
13,800.00	12,850.00	12,431.90	12,421.13	48.38	44.02	19.87	-451.91	202.31	1,708.43	1,620.44	87.98	19.418	
13,900.00	12,850.00	12,425.82	12,415.24	48.88	44.01	19.62	-450.42	202.31	1,804.97	1,716.83	88.14	20.478	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Devon Energy Corporation	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Project:	Lea Co., NM	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Reference Site:	Green Wave	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	RyanUSA_Compass
Reference Design:	PN1	**Offset TVD Reference:**	Offset Datum

Offset Design Green Wave - 20-32 Fed State Com #2H - OH - PN1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
14,000.00	12,850.00	12,420.22	12,409.80	49.41	43.99	19.40	-449.09	202.31	1,901.79	1,813.51	88.28	21.542	
14,100.00	12,850.00	12,400.00	12,390.05	49.98	43.92	18.62	-444.76	202.31	1,999.12	1,910.84	88.29	22.643	
14,200.00	12,850.00	12,400.00	12,390.05	50.58	43.92	18.62	-444.76	202.31	2,096.29	2,007.83	88.46	23.699	
14,300.00	12,850.00	12,400.00	12,390.05	51.22	43.92	18.62	-444.76	202.31	2,193.70	2,105.10	88.61	24.758	
14,400.00	12,850.00	12,400.00	12,390.05	51.88	43.92	18.62	-444.76	202.31	2,291.34	2,202.60	88.74	25.820	
14,500.00	12,850.00	12,400.00	12,390.05	52.58	43.92	18.62	-444.76	202.31	2,389.18	2,300.31	88.87	26.885	
14,600.00	12,850.00	12,400.00	12,390.05	53.31	43.92	18.62	-444.76	202.31	2,487.18	2,398.20	88.98	27.952	
14,700.00	12,850.00	12,400.00	12,390.05	54.06	43.92	18.62	-444.76	202.31	2,585.34	2,496.25	89.09	29.020	
14,800.00	12,850.00	12,400.00	12,390.05	54.85	43.92	18.62	-444.76	202.31	2,683.64	2,594.45	89.19	30.090	
14,900.00	12,850.00	12,400.00	12,390.05	55.65	43.92	18.62	-444.76	202.31	2,782.05	2,692.77	89.28	31.162	
15,000.00	12,850.00	12,400.00	12,390.05	56.49	43.92	18.62	-444.76	202.31	2,880.58	2,791.21	89.37	32.234	
15,100.00	12,850.00	12,379.02	12,369.41	57.34	43.86	17.87	-441.00	202.31	2,978.75	2,889.40	89.34	33.341	
15,200.00	12,850.00	12,376.49	12,366.91	58.22	43.85	17.79	-440.59	202.31	3,077.34	2,987.93	89.41	34.417	
15,300.00	12,850.00	12,374.09	12,364.54	59.13	43.84	17.70	-440.22	202.31	3,176.02	3,086.54	89.48	35.493	
15,400.00	12,850.00	12,371.81	12,362.29	60.05	43.83	17.63	-439.88	202.31	3,274.76	3,185.21	89.55	36.569	
15,500.00	12,850.00	12,350.00	12,340.66	60.99	43.76	16.92	-437.04	202.31	3,373.96	3,284.44	89.53	37.687	
15,600.00	12,850.00	12,350.00	12,340.66	61.95	43.76	16.92	-437.04	202.31	3,472.75	3,383.15	89.60	38.757	
15,700.00	12,850.00	12,350.00	12,340.66	62.93	43.76	16.92	-437.04	202.31	3,571.61	3,481.93	89.68	39.827	
15,800.00	12,850.00	12,350.00	12,340.66	63.92	43.76	16.92	-437.04	202.31	3,670.52	3,580.77	89.75	40.897	
15,900.00	12,850.00	12,350.00	12,340.66	64.94	43.76	16.92	-437.04	202.31	3,769.50	3,679.68	89.82	41.967	
16,000.00	12,850.00	12,350.00	12,340.66	65.96	43.76	16.92	-437.04	202.31	3,868.53	3,778.64	89.89	43.036	
16,100.00	12,850.00	12,350.00	12,340.66	67.01	43.76	16.92	-437.04	202.31	3,967.60	3,877.64	89.96	44.105	
16,200.00	12,850.00	12,350.00	12,340.66	68.06	43.76	16.92	-437.04	202.31	4,066.72	3,976.70	90.03	45.173	
16,300.00	12,850.00	12,350.00	12,340.66	69.13	43.76	16.92	-437.04	202.31	4,165.89	4,075.79	90.09	46.240	
16,400.00	12,850.00	12,350.00	12,340.66	70.22	43.76	16.92	-437.04	202.31	4,265.09	4,174.93	90.16	47.306	
16,500.00	12,850.00	12,350.00	12,340.66	71.31	43.76	16.92	-437.04	202.31	4,364.33	4,274.10	90.23	48.371	
16,600.00	12,850.00	12,350.00	12,340.66	72.42	43.76	16.92	-437.04	202.31	4,463.60	4,373.31	90.29	49.436	
16,700.00	12,850.00	12,350.00	12,340.66	73.54	43.76	16.92	-437.04	202.31	4,562.90	4,472.55	90.36	50.499	
16,800.00	12,850.00	12,350.00	12,340.66	74.67	43.76	16.92	-437.04	202.31	4,662.24	4,571.82	90.42	51.561	
16,900.00	12,850.00	12,350.00	12,340.66	75.81	43.76	16.92	-437.04	202.31	4,761.60	4,671.11	90.49	52.622	
17,000.00	12,850.00	12,350.00	12,340.66	76.96	43.76	16.92	-437.04	202.31	4,860.99	4,770.44	90.55	53.682	
17,100.00	12,850.00	12,350.00	12,340.66	78.12	43.76	16.92	-437.04	202.31	4,960.40	4,869.78	90.62	54.740	
17,200.00	12,850.00	12,350.00	12,340.66	79.28	43.76	16.92	-437.04	202.31	5,059.84	4,969.15	90.68	55.797	
17,300.00	12,850.00	12,350.00	12,340.66	80.46	43.76	16.92	-437.04	202.31	5,159.30	5,068.55	90.75	56.852	
17,400.00	12,850.00	12,350.00	12,340.66	81.65	43.76	16.92	-437.04	202.31	5,258.77	5,167.96	90.82	57.906	
17,500.00	12,850.00	12,350.00	12,340.66	82.84	43.76	16.92	-437.04	202.31	5,358.27	5,267.39	90.88	58.958	
17,600.00	12,850.00	12,350.00	12,340.66	84.04	43.76	16.92	-437.04	202.31	5,457.79	5,366.84	90.95	60.009	
17,700.00	12,850.00	12,350.00	12,340.66	85.25	43.76	16.92	-437.04	202.31	5,557.32	5,466.30	91.02	61.058	
17,800.00	12,850.00	12,350.00	12,340.66	86.46	43.76	16.92	-437.04	202.31	5,656.87	5,565.79	91.08	62.106	
17,900.00	12,850.00	12,350.00	12,340.66	87.68	43.76	16.92	-437.04	202.31	5,756.44	5,665.28	91.15	63.151	
18,000.00	12,850.00	12,350.00	12,340.66	88.91	43.76	16.92	-437.04	202.31	5,856.02	5,764.80	91.22	64.195	
18,100.00	12,850.00	12,350.00	12,340.66	90.14	43.76	16.92	-437.04	202.31	5,955.61	5,864.32	91.29	65.238	
18,200.00	12,850.00	12,350.00	12,340.66	91.38	43.76	16.92	-437.04	202.31	6,055.22	5,963.86	91.36	66.278	
18,300.00	12,850.00	12,350.00	12,340.66	92.62	43.76	16.92	-437.04	202.31	6,154.84	6,063.41	91.43	67.316	
18,400.00	12,850.00	12,350.00	12,340.66	93.87	43.76	16.92	-437.04	202.31	6,254.47	6,162.97	91.50	68.353	
18,500.00	12,850.00	12,350.00	12,340.66	95.13	43.76	16.92	-437.04	202.31	6,354.12	6,262.54	91.57	69.387	
18,600.00	12,850.00	12,350.00	12,340.66	96.39	43.76	16.92	-437.04	202.31	6,453.77	6,362.12	91.65	70.420	
18,700.00	12,850.00	12,350.00	12,340.66	97.66	43.76	16.92	-437.04	202.31	6,553.44	6,461.72	91.72	71.450	
18,800.00	12,850.00	12,350.00	12,340.66	98.93	43.76	16.92	-437.04	202.31	6,653.11	6,561.32	91.79	72.478	
18,900.00	12,850.00	12,350.00	12,340.66	100.20	43.76	16.92	-437.04	202.31	6,752.80	6,660.93	91.87	73.505	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Devon Energy Corporation	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Project:	Lea Co., NM	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Reference Site:	Green Wave	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	RyanUSA_Compass
Reference Design:	PN1	**Offset TVD Reference:**	Offset Datum

Offset Design Green Wave - 20-32 Fed State Com #2H - OH - PN1 — **Offset Site Error:** 0.00 ft

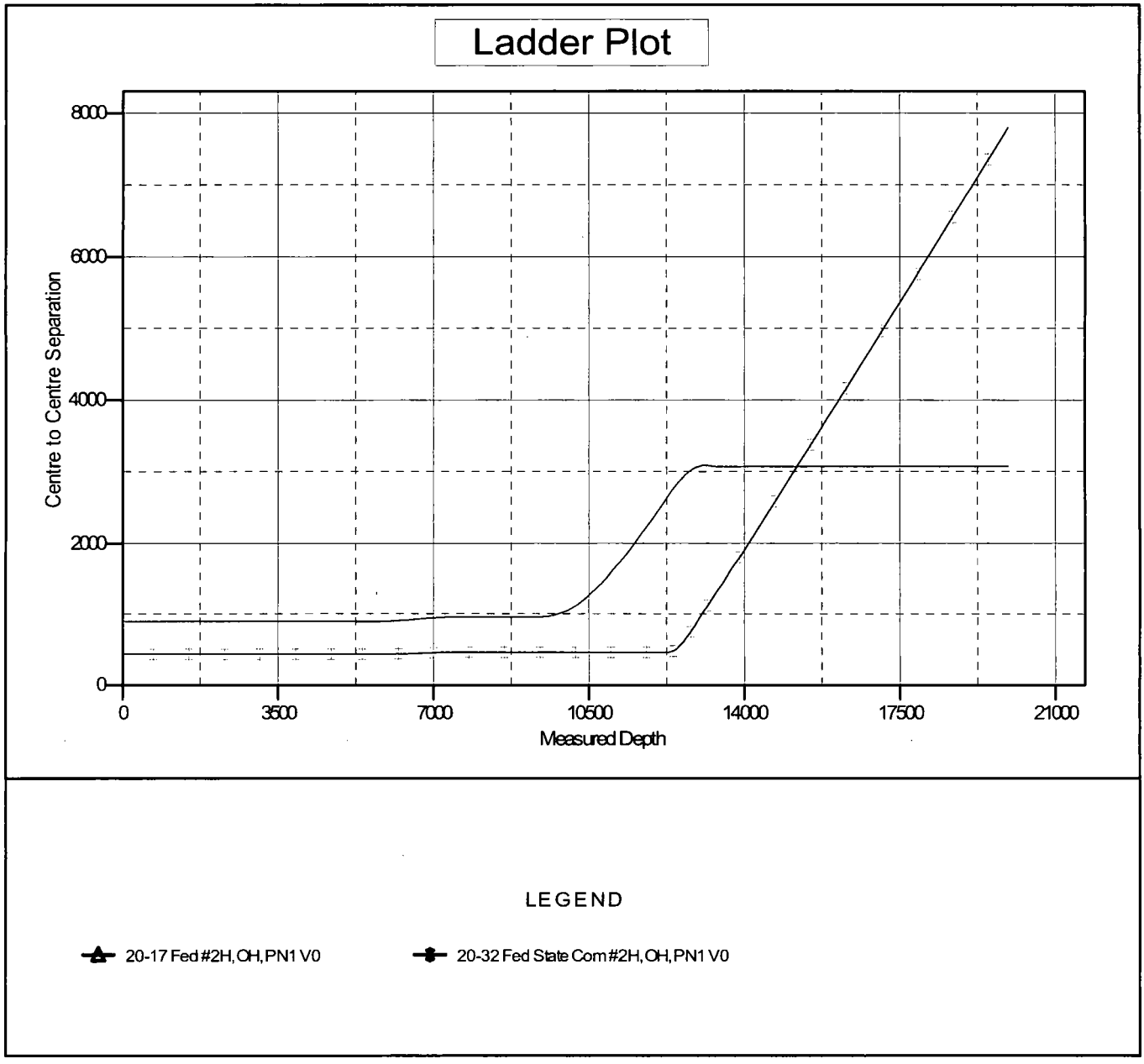
Survey Program: 0-MWD+HRGM — **Offset Well Error:** 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
19,000.00	12,850.00	12,350.00	12,340.66	101.48	43.76	16.92	-437.04	202.31	6,852.49	6,760.55	91.94	74.529	
19,100.00	12,850.00	12,350.00	12,340.66	102.76	43.76	16.92	-437.04	202.31	6,952.20	6,860.18	92.02	75.551	
19,200.00	12,850.00	12,350.00	12,340.66	104.05	43.76	16.92	-437.04	202.31	7,051.91	6,959.81	92.10	76.570	
19,300.00	12,850.00	12,350.00	12,340.66	105.34	43.76	16.92	-437.04	202.31	7,151.63	7,059.45	92.17	77.588	
19,400.00	12,850.00	12,350.00	12,340.66	106.63	43.76	16.92	-437.04	202.31	7,251.36	7,159.10	92.25	78.603	
19,500.00	12,850.00	12,350.00	12,340.66	107.93	43.76	16.92	-437.04	202.31	7,351.09	7,258.76	92.33	79.616	
19,600.00	12,850.00	12,327.13	12,317.89	109.23	43.69	16.24	-434.96	202.31	7,450.34	7,357.99	92.36	80.670	
19,700.00	12,850.00	12,326.63	12,317.39	110.53	43.69	16.22	-434.92	202.31	7,550.07	7,457.63	92.44	81.679	
19,800.00	12,850.00	12,326.14	12,316.90	111.84	43.69	16.21	-434.89	202.31	7,649.80	7,557.29	92.52	82.687	
19,900.00	12,850.00	12,325.66	12,316.42	113.15	43.68	16.19	-434.86	202.31	7,749.54	7,656.95	92.60	83.691	
19,944.40	12,850.00	12,325.45	12,316.22	113.73	43.68	16.19	-434.84	202.31	7,793.83	7,701.19	92.63	84.137	

Company:	Devon Energy Corporation	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Project:	Lea Co., NM	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Reference Site:	Green Wave	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	RyanUSA_Compass
Reference Design:	PN1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB=32' (Nabors X04) @ 3387.90ft (Na
Offset Depths are relative to Offset Datum
Central Meridian is 104° 19' 60.00000 W

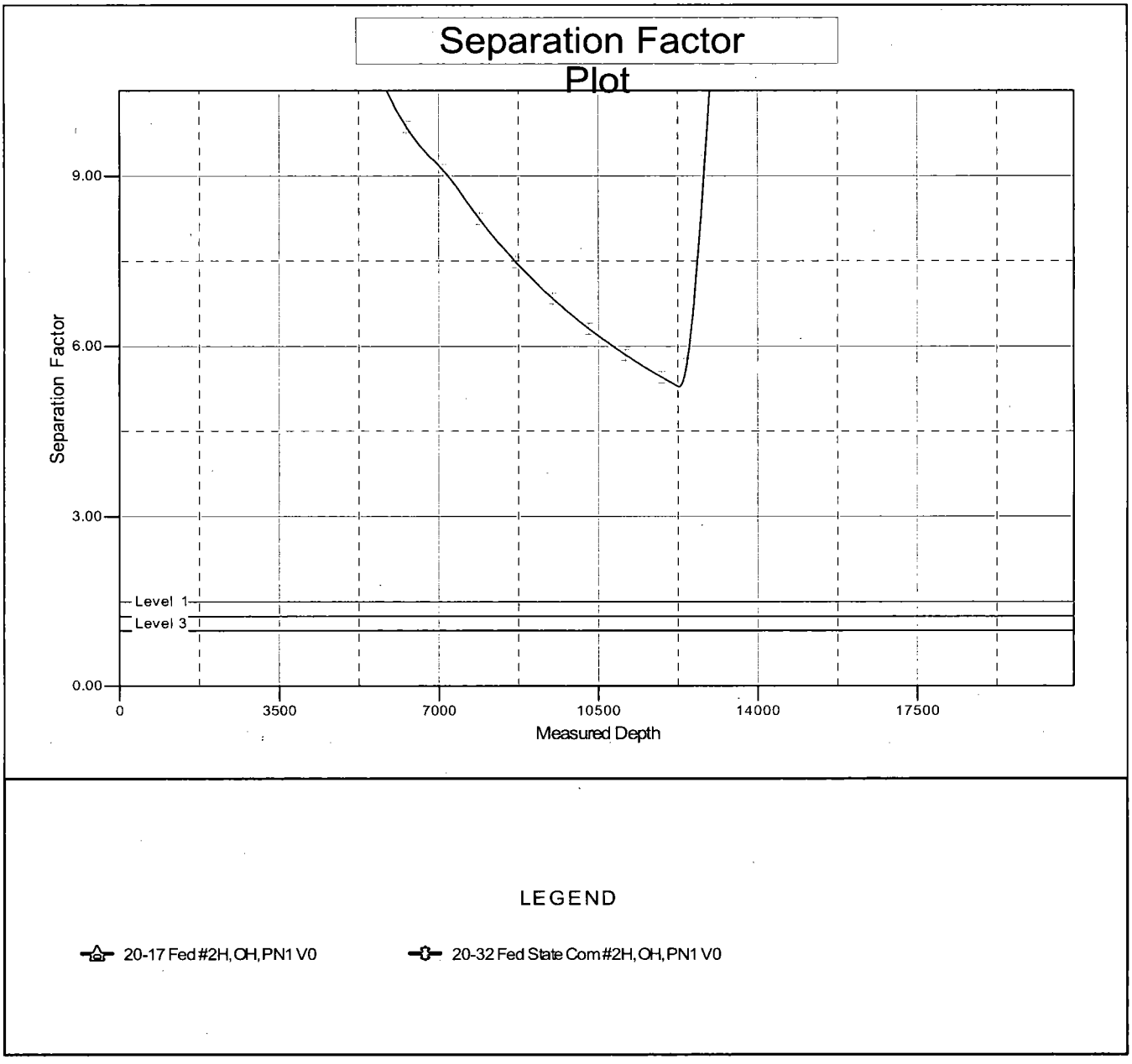
Coordinates are relative to: 20-17 Fed #1H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.44°



Company:	Devon Energy Corporation	**Local Co-ordinate Reference:**	Well 20-17 Fed #1H
Project:	Lea Co., NM	**TVD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Reference Site:	Green Wave	**MD Reference:**	KB=32' (Nabors X04) @ 3387.90ft (Nabors X04)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	20-17 Fed #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	RyanUSA_Compass
Reference Design:	PN1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB=32' (Nabors X04) @ 3387.90ft (Na
Offset Depths are relative to Offset Datum
Central Meridian is 104° 19' 60.00000 W

Coordinates are relative to: 20-17 Fed #1H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.44°



A multibowl wellhead may be 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.

Devon proposes using 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 3000 (3M) psi.

- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial BOP test.
- Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 3M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time.
- If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted.
- Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating.
- Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.

After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 3,000 psi high pressure test. The 3,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2.
After running the 9-5/8' intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 3M will already be installed on the wellhead.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Devon's proposed wellhead manufactures will be FMC Technologies, Cactus Wellhead, or Cameron.

This item is addressed in the Rattlesnake 2 Master Development Plan. This page is used only to satisfy the AFMSSII attachment requirements.