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## PECOS DISTRICT DRILLING OPERATIONS CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	Devon Energy Production Company, LP
<b>LEASE NO.:</b>	NMNM-100568
<b>WELL NAME &amp; NO.:</b>	Mean Green 23-35 Fed Com 3H
<b>SURFACE HOLE FOOTAGE:</b>	2449' FSL & 0830' FEL
<b>BOTTOM HOLE FOOTAGE</b>	0200' FSL & 0380' FEL Sec. 35, T. 26 S., R 34 E.
<b>LOCATION:</b>	Section 23, T. 26 S., R 34 E., NMPM
<b>COUNTY:</b>	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

**An anti-collision report will need to be run due to the Madera 35 Federal 1H (API# 30-025-41083) and submitted to the BLM.**

#### **Communityization Agreement**

The operator will submit a Communityization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communityization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communityization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.

If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.

In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communityization Agreement number is known, it shall also be on the sign.

#### **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.
  - 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 and brine flows in the Salado and Castile.

Possibility of lost circulation in the Rustler, Red Beds, and Delaware.

Abnormal pressure may be encountered upon penetrating the 3<sup>rd</sup> Bone Spring Sandstone and all subsequent formations.

1. The 10-3/4 inch surface casing shall be set at approximately 1050 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 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 12% - Additional cement may be required. Any cement remediation will need prior approval by 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 (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.**

**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 012618**

# PECOS DISTRICT SURFACE USE CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company
LEASE NO.:	NMMN100568
WELL NAME & NO.:	Mean Green 23-35 Fed Com 3H
SURFACE HOLE FOOTAGE:	2449' S & 830' E
BOTTOM HOLE FOOTAGE	200' S & 380' E
LOCATION:	Section 23, 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.

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## **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)**

**Build as you go pad not full grade.**

**Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken:**

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period.

Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted.

Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

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

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

**Escape Ramps**

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.

**Electric Lines**

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.

**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.

## **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 berthing 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**

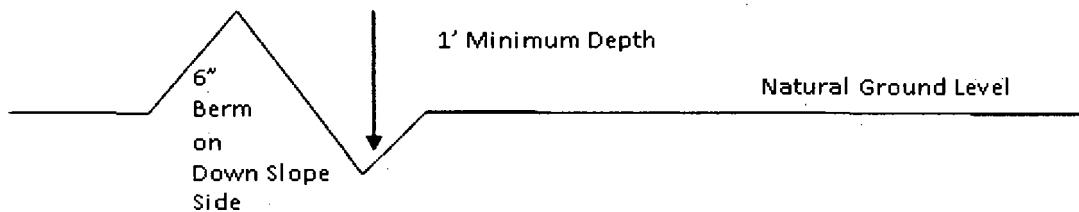
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

### **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:

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

#### 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.

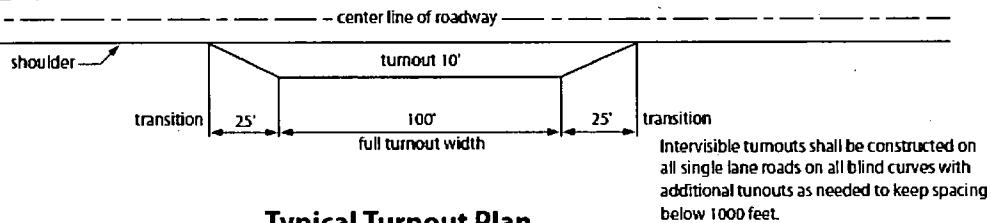
#### Public Access

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

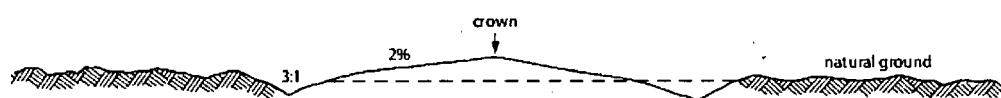
## Construction Steps

1. Salvage topsoil
2. Construct road

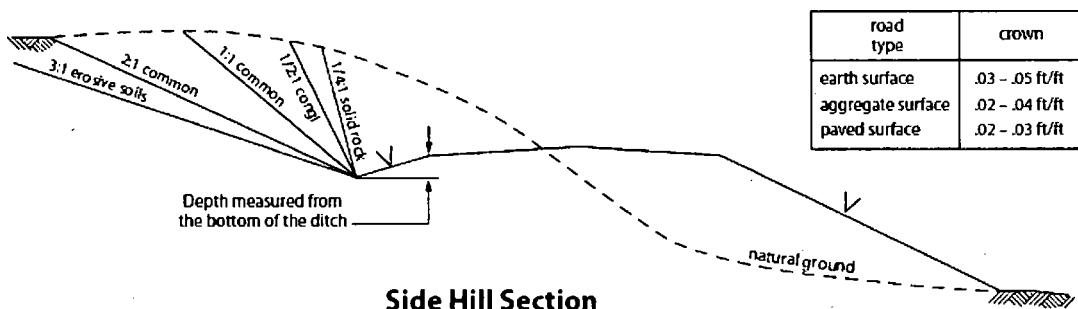
3. Redistribute topsoil
4. Revegetate slopes



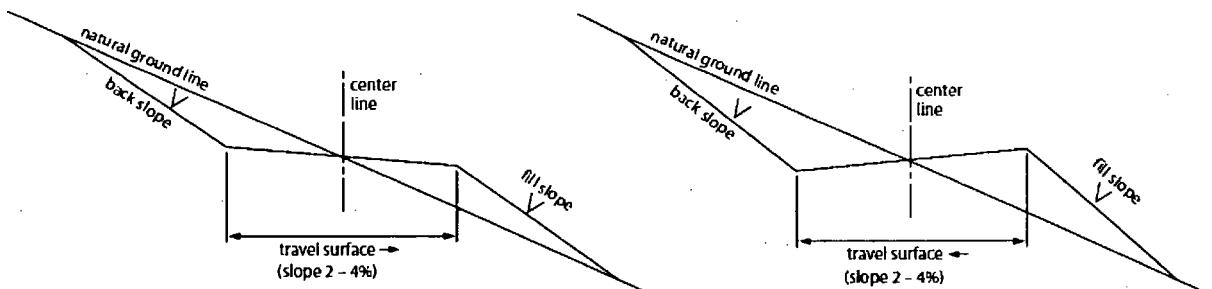
Typical Turnout Plan



Level Ground Section



Side Hill Section



Typical Outsloped Section

Typical Inslope Section

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

## **VII. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

#### **Placement of Production Facilities**

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

#### **Exclosure Netting (Open-top Tanks)**

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

#### **Chemical and Fuel Secondary Containment and Exclosure Screening**

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

#### **Open-Vent Exhaust Stack Exclosures**

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

#### **Containment Structures**

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

### **Painting Requirement**

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

## **B. PIPELINES**

### **BURIED PIPELINE STIPULATIONS**

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

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

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

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

5. All construction and maintenance activity will be confined to the authorized right-of-way.
6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.
7. The maximum allowable disturbance for construction in this right-of-way will be 30 feet:
  - Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed 20 feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
  - Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed 30 feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)
  - The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)
8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.
9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.
10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.
11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

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

( ) seed mixture 1

( ) seed mixture 3

( ) seed mixture 2

( ) seed mixture 4

(X) seed mixture 2/LPC

( ) Apolomado 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.

19. Special Stipulations:

**Lesser Prairie-Chicken**

Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

**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.

**Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken:**

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

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials

Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

## **VIII. INTERIM RECLAMATION**

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

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

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

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

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

## **IX. FINAL ABANDONMENT & RECLAMATION**

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

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

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

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

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

## Seed Mixture for LPC Sand/Shinnery Sites

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

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

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

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

\*Pounds of pure live seed:

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

**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Devon Energy Production Company
LEASE NO.:	NMNM100568
WELL NAME & NO.:	Mean Green 23-35 Fed Com 3H
SURFACE HOLE FOOTAGE:	2449'/S & 830'/E
BOTTOM HOLE FOOTAGE	200'/S & 380'/E
LOCATION:	Section 23, 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.

- General Provisions**
- Permit Expiration**
- Archaeology, Paleontology, and Historical Sites**
- Noxious Weeds**
- Special Requirements**
  - Lesser Prairie-Chicken Timing Stipulations
  - Ground-level Abandoned Well Marker
  - Escape Ramps
  - Electric Lines
  - Range
- Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- Road Section Diagram**
- Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
  - Electric Lines
- Interim Reclamation**
- Final Abandonment & Reclamation**

## **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)

**Build as you go pad not full grade.**

**Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken:**

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

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

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

**Escape Ramps**

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.

**Electric Lines**

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.

***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.

## **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 berthing 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**

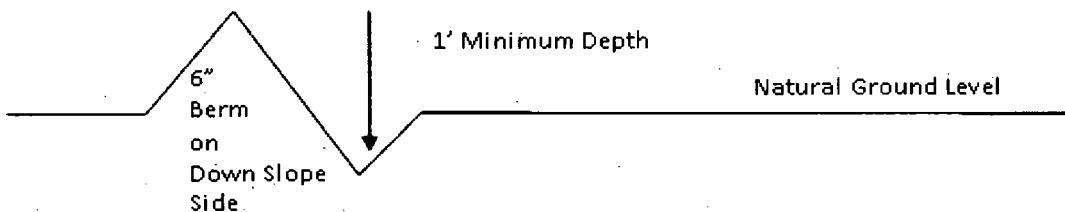
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

### **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:

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

#### 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.

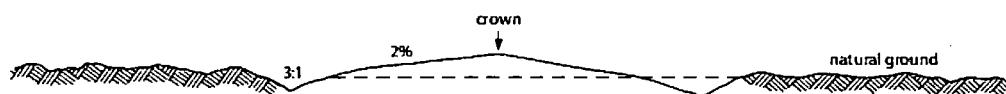
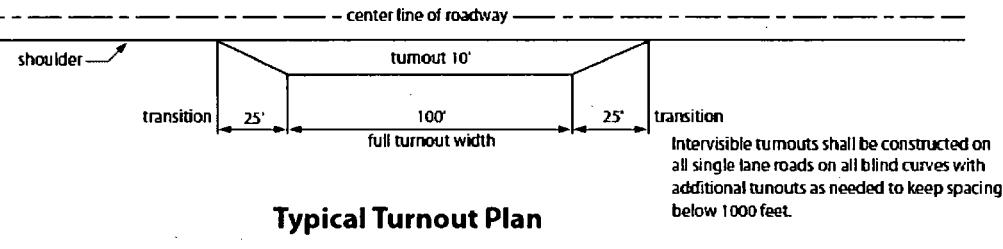
#### Public Access

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

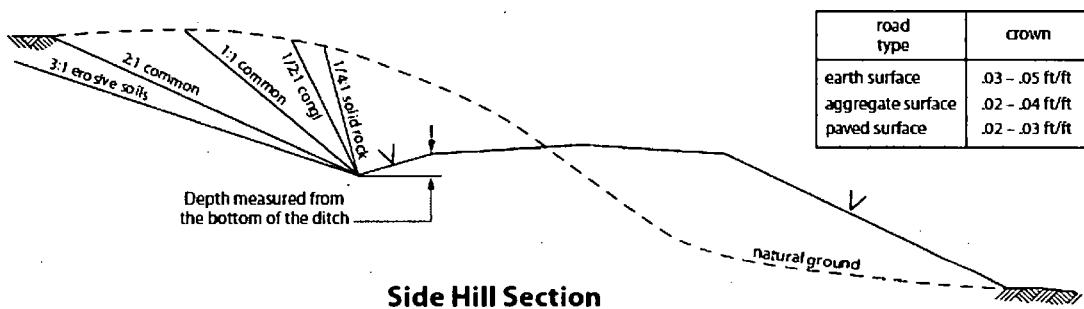
## Construction Steps

1. Salvage topsoil
2. Construct road

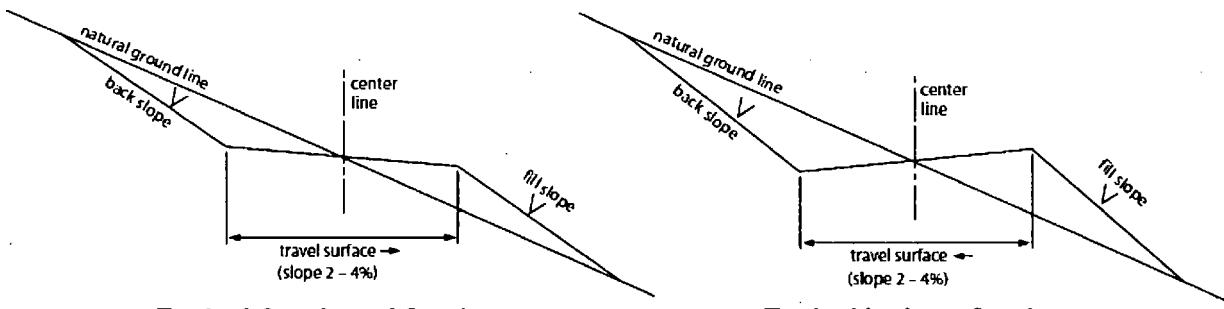
3. Redistribute topsoil
4. Revegetate slopes



**Level Ground Section**



**Side Hill Section**



**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 2  
(X) seed mixture 2/LPC

( ) seed mixture 3  
( ) seed mixture 4  
( ) Apolomado 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.

19. Special Stipulations:

**Lesser Prairie-Chicken**

Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

**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.

**Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken:**

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

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials

Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

## **VIII. INTERIM RECLAMATION**

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

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

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

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

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

## **IX. FINAL ABANDONMENT & RECLAMATION**

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

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

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

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

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

## Seed Mixture for LPC Sand/Shinnery Sites

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

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

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

Species lb/acre

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

\*Pounds of pure live seed:

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



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

# **Hydrogen Sulfide (H<sub>2</sub>S) Contingency Plan**

**For**

**Mean Green 23-35 Fed Com 3H**

**Sec-23 T-26S R-34E  
2449' FSL & 830 FEL  
LAT. = 32.0283368' N (NAD83)  
LONG = 103.4348352 W**

**Lea County NM**

## Casing Assumptions and Load Cases

### Production

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

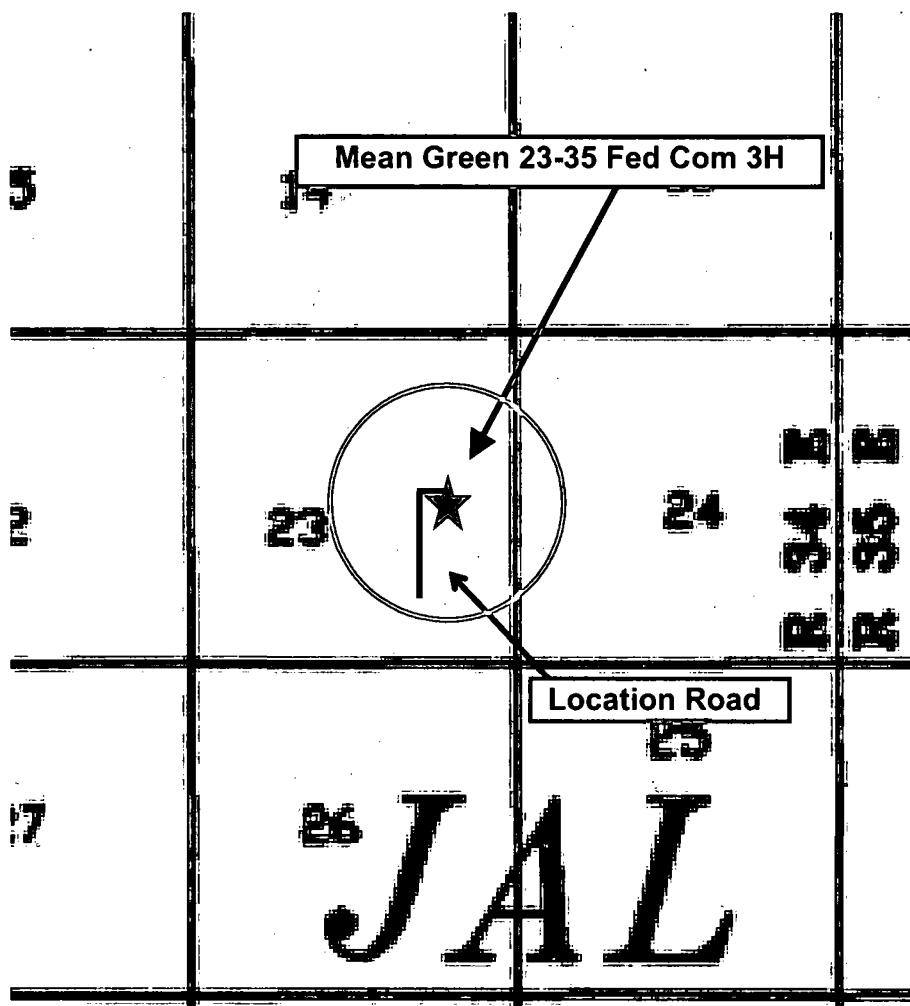
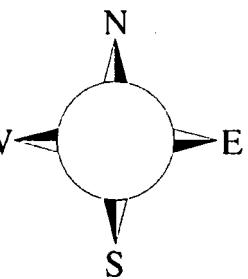
Production Casing Burst Design		
Load Case	External Pressure	Internal Pressure
Pressure Test	Formation Pore Pressure	Fluid in hole (water or produced water) + test psi
Tubing Leak	Formation Pore Pressure	Packer @ KOP, leak below surface 8.6 ppg packer fluid
Stimulation	Formation Pore Pressure	Max frac pressure with heaviest frac fluid

Production Casing Collapse Design		
Load Case	External Pressure	Internal Pressure
Full Evacuation	Water gradient in cement, mud above TOC.	None
Cementing	Wet cement weight	Water (8.33ppg)

Production Casing Tension Design	
Load Case	Assumptions
Overpull	100kips
Runing in hole	2 ft/s
Service Loads	N/A

## Mean Green 23-35 Fed Com 3H

This is an open drilling site. H<sub>2</sub>S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H<sub>2</sub>S, including warning signs, wind indicators and H<sub>2</sub>S monitor.



**Assumed 100 ppm ROE = 3000' (Radius of Exposure)**  
**100 ppm H<sub>2</sub>S 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<sub>2</sub>S concentration shall trigger activation of this plan.**

### **Emergency Procedures**

**In the event of a release of gas containing H<sub>2</sub>S, 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<sub>2</sub>S 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<sub>2</sub>S, 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<sub>2</sub>). 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<sub>2</sub>S and SO<sub>2</sub>**

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H <sub>2</sub> S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO <sub>2</sub>	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<sub>2</sub>S) 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<sub>2</sub>S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H<sub>2</sub>S 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<sub>2</sub>S 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<sub>2</sub>S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan.

### **II. HYDROGEN SULFIDE TRAINING**

Note: All H<sub>2</sub>S 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<sub>2</sub>S.

## **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 one escape unit available in the top doghouse. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

## **3. H<sub>2</sub>S detection and monitoring equipment:**

Portable H<sub>2</sub>S monitors positioned on location for best coverage and response. These units have warning lights which activate when H<sub>2</sub>S levels reach 10 ppm and audible sirens which activate at 10 ppm. Sensor locations:

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

## **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<sub>2</sub>S circulated to surface. Proper mud weight, safe drilling practices and the use of H<sub>2</sub>S scavengers will minimize hazards when penetrating H<sub>2</sub>S 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<sub>2</sub>S trim.
- B. All elastomers used for packing and seals shall be H<sub>2</sub>S trim.

**6. Communication:**

- A. Company personnel have/use cellular telephones in the field.
- B. Land line (telephone) communications at Office

**7. Well testing:**

- A. 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

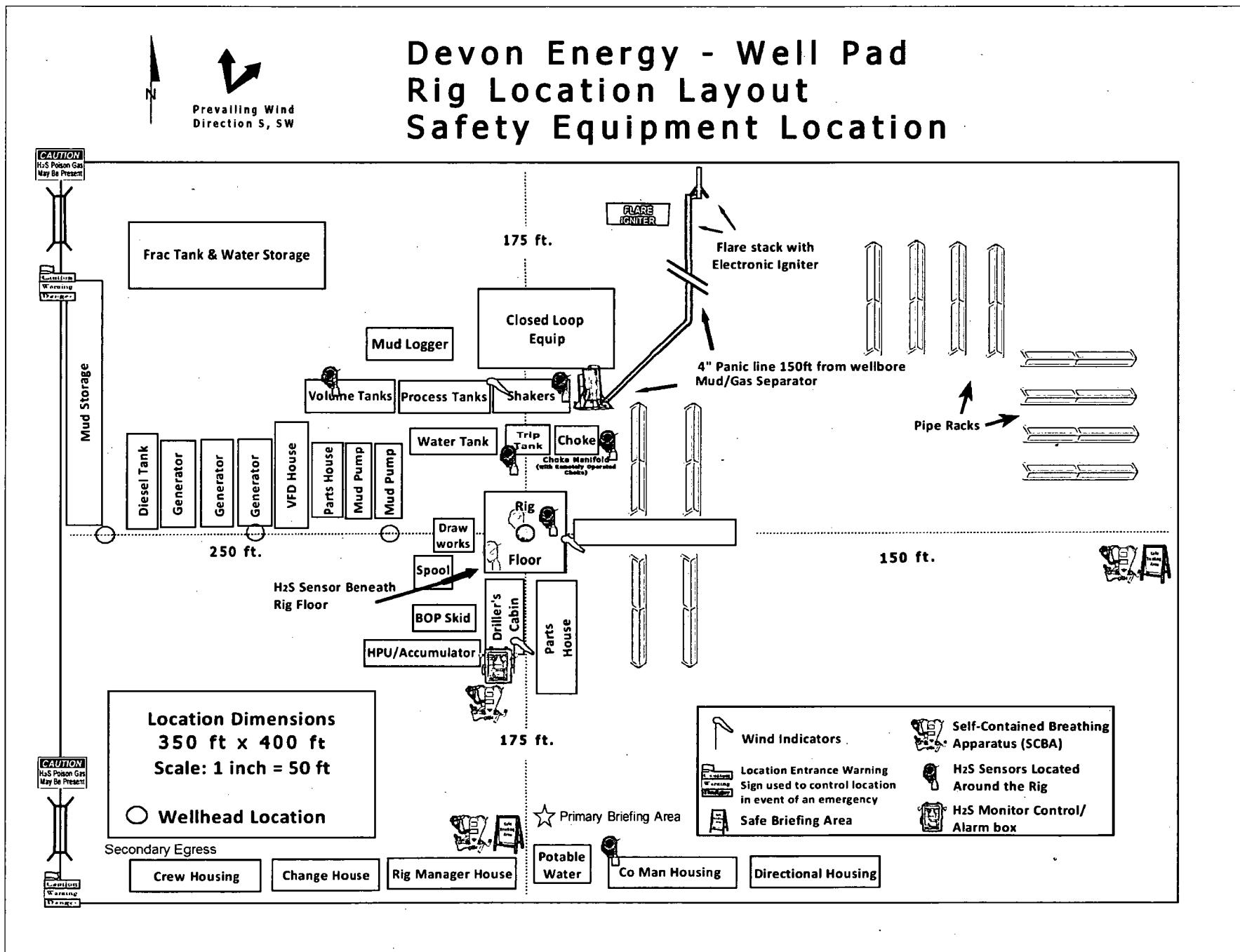
### **Agency Call List**

<b><u>Lea County (575)</u></b>	<b>Hobbs</b>	
	Lea County Communication Authority	393-3981
	State Police	392-5588
	City Police	397-9265
	Sheriff's Office	393-2515
	<b>Ambulance</b>	<b>911</b>
	Fire Department	397-9308
	LEPC (Local Emergency Planning Committee)	393-2870
	NMOCD	393-6161
	US Bureau of Land Management	393-3612
<b><u>Eddy County (575)</u></b>	<b>Carlsbad</b>	
	State Police	885-3137
	City Police	885-2111
	Sheriff's Office	887-7551
	<b>Ambulance</b>	<b>911</b>
	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
	<b>Emergency Services</b>	
	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
<b><u>Give GPS position:</u></b>	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 - <a href="http://www.nhc.noaa.gov">www.nhc.noaa.gov</a>	

Prepared in conjunction with  
Dave Small



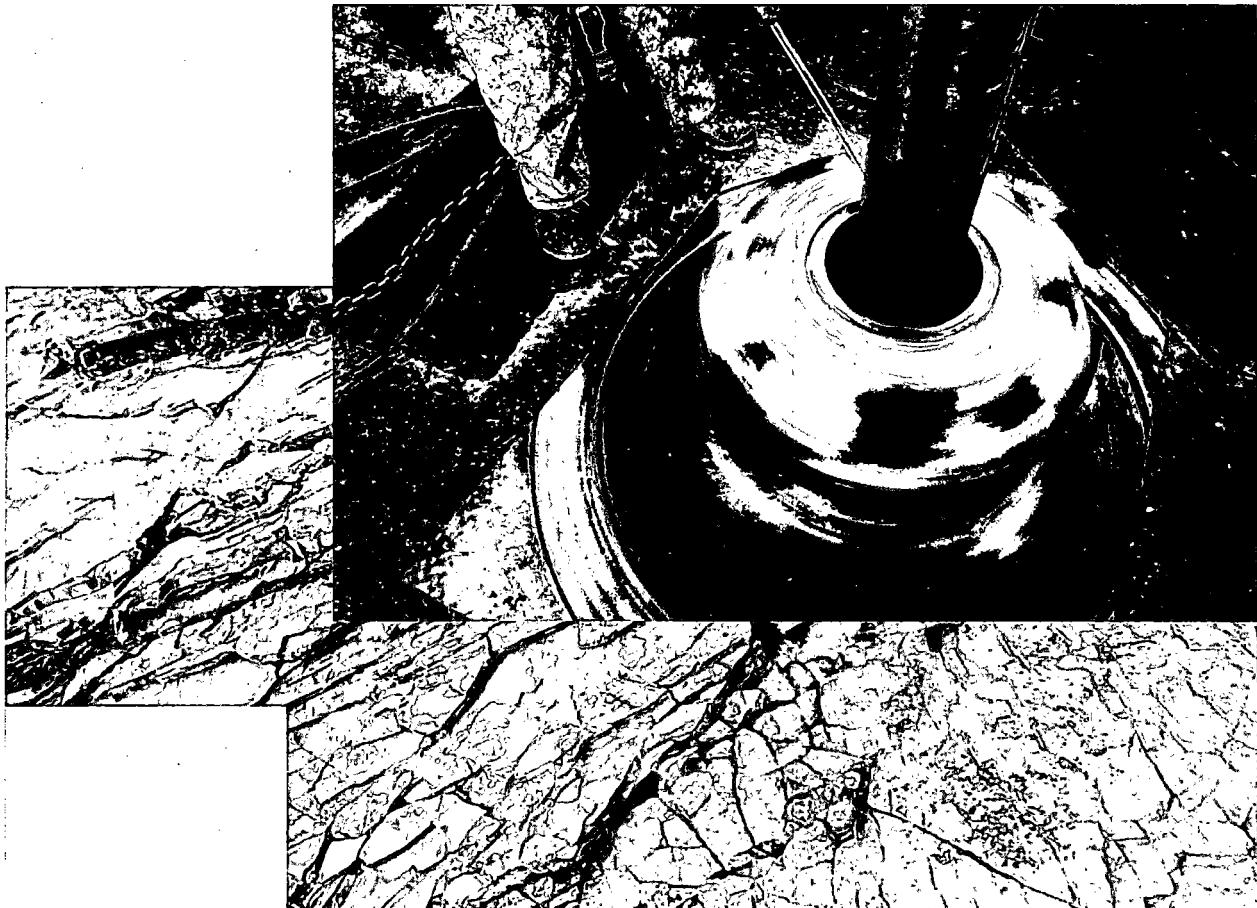
# Devon Energy - Well Pad Rig Location Layout Safety Equipment Location







Commitment Runs Deep



Design Plan  
Operation and Maintenance Plan  
Closure Plan

SENM - Closed Loop Systems  
June 2010



**5D Plan Report**

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**Devon Energy**

**Field Name:** Lea Co, NM Nad 83 NMEZ  
**Site Name:** Mean Green 23-35 Fed Com Pad  
**Well Name:** Mean Green 23-35 Fed Com 3H  
**Plan:** P1:V2

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14 August 2017



**Weatherford®**



## Mean Green 23-35 Fed Com 3H

	<b>Map Units:</b> US ft	<b>Company Name:</b> Devon Energy		
<b>Field Name:</b>	<b>Vertical Reference Datum (VRD):</b> Mean Sea Level			
Lea Co, NM Nad 83 NMEZ	<b>Projected Coordinate System:</b> NAD83 / New Mexico East (ftUS)			
<b>Comment:</b>				
	<b>Units:</b> US ft	<b>North Reference:</b> Grid	<b>Convergence Angle:</b> 0.48	
<b>Site:</b>	<b>Position:</b>	<b>Northing:</b> 375205.44 US ft	<b>Latitude:</b> 32° 1' 42.02"	
Mean Green 23- 35 Fed Com Pad		<b>Easting:</b> 819720.56 US ft	<b>Longitude:</b> -103° 26' 6.10"	
	<b>Elevation above MSL:</b> 3193.60 US ft			
<b>Comment:</b>				
	<b>Position (Relative to Site Centre)</b>			
<b>Slot:</b>	<b>+N/-S:</b> 0.05 US ft	<b>Northing:</b> 375205.49 US ft	<b>Latitude:</b> 32° 1' 42.01"	
Mean Green 23- 35 Fed Com 3H	<b>+E/-W:</b> 59.97 US ft	<b>Easting:</b> 819780.53 US ft	<b>Longitude:</b> -103° 26' 5.41"	
	<b>Slot TVD Reference:</b> Ground Elevation			
	<b>Elevation above MSL:</b> 3192.70 US ft			
<b>Comment:</b>				
	<b>Type:</b> Main well	<b>UWI:</b>	<b>Plan:</b> P1:V2	
<b>Well:</b>	<b>File Number:</b>	<b>Comment:</b>		
Mean Green 23- 35 Fed Com 3H	<b>Closure Distance:</b> 10012.5 US ft		<b>Closure Azimuth:</b> 176.92°	
	<b>Vertical Section: Position of Origin (Relative to Slot centre)</b>			
	<b>+N/-S:</b> -0.00 US ft	<b>+E/-W:</b> -0.00 US ft	<b>Az:</b> 180.00°	
	<b>Magnetic Parameters:</b>			
	<b>Model:</b> bggm2017	<b>Field Strength:</b> 47860.8nT	<b>Declination:</b> 6.93°	<b>Dip:</b> 59.88° <b>Date:</b> 01/Nov/2017

**Drill floor: Plan: P1:V2**

**Rig Height (Drill Floor):** 46.30us ft    **Elevation above MSL:** 3239.00us ft    **Inclination:** 0.00°    **Azimuth:** 0.00°

<b>Target set: MG 23-35 FC 3H Tgts Comment:</b>							
Target Name:	Shape:	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (USft)	Easting (USft)	Comment
PBHL 3H	Point	12789.00	-9998.10	537.38	365207.39	820317.91	
MP	Point	12914.00	-3450.00	537.38	371755.49	820317.91	
VP	Point	12316.06	0.00	537.38	375205.49	820317.91	

Wellpath created using minimum curvature.









## SD Plan Report

Interpolated Points: (Relative to Slot centre)(TVD relative to Drill Floor)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100US ft)	Northing (US ft)	Easting (US ft)	Comment
20400.00	91.11	180.00	12832.95	-7736.83	537.38	7736.83	0.00	367468.66	820317.91	
20500.00	91.11	180.00	12831.01	-7836.81	537.38	7836.81	0.00	367368.68	820317.91	
20600.00	91.11	180.00	12829.06	-7936.79	537.38	7936.79	0.00	367268.70	820317.91	
20700.00	91.11	180.00	12827.12	-8036.77	537.38	8036.77	0.00	367168.72	820317.91	
20800.00	91.11	180.00	12825.18	-8136.75	537.38	8136.75	0.00	367068.74	820317.91	
20900.00	91.11	180.00	12823.23	-8236.74	537.38	8236.74	0.00	366968.75	820317.91	
21000.00	91.11	180.00	12821.29	-8336.72	537.38	8336.72	0.00	366868.77	820317.91	
21100.00	91.11	180.00	12819.35	-8436.70	537.38	8436.70	0.00	366768.79	820317.91	
21200.00	91.11	180.00	12817.40	-8536.68	537.38	8536.68	0.00	366668.81	820317.91	
21300.00	91.11	180.00	12815.46	-8636.66	537.38	8636.66	0.00	366568.83	820317.91	
21400.00	91.11	180.00	12813.52	-8736.64	537.38	8736.64	0.00	366468.85	820317.91	
21500.00	91.11	180.00	12811.57	-8836.62	537.38	8836.62	0.00	366368.87	820317.91	
21600.00	91.11	180.00	12809.63	-8936.60	537.38	8936.60	0.00	366268.89	820317.91	
21700.00	91.11	180.00	12807.69	-9036.58	537.38	9036.58	0.00	366168.91	820317.91	
21800.00	91.11	180.00	12805.74	-9136.57	537.38	9136.57	0.00	366068.92	820317.91	
21900.00	91.11	180.00	12803.80	-9236.55	537.38	9236.55	0.00	365968.94	820317.91	
22000.00	91.11	180.00	12801.86	-9336.53	537.38	9336.53	0.00	365868.96	820317.91	
22100.00	91.11	180.00	12799.91	-9436.51	537.38	9436.51	0.00	365768.98	820317.91	
22200.00	91.11	180.00	12797.97	-9536.49	537.38	9536.49	0.00	365669.00	820317.91	
22300.00	91.11	180.00	12796.03	-9636.47	537.38	9636.47	0.00	365569.02	820317.91	
22400.00	91.11	180.00	12794.09	-9736.45	537.38	9736.45	0.00	365469.04	820317.91	
22500.00	91.11	180.00	12792.14	-9836.43	537.38	9836.43	0.00	365369.06	820317.91	
22600.00	91.11	180.00	12790.20	-9936.41	537.38	9936.41	0.00	365269.08	820317.91	
22661.70	91.11	180.00	12789.00	-9998.10	537.38	9998.10	0.00	365207.39	820317.91	PBHL 3H

Formation Points: (Relative to Slot centre)(TVD relative to Drill Floor)								
Name	MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)
Wolfcamp 130	N/A	0.39	180.00	12940.00	-0.13	-0.00	375205.36	819780.53
Rustler	993.00	0.00	0.00	993.00	-0.00	-0.00	375205.49	819780.53
Top of Salt	1408.00	0.00	0.00	1408.00	-0.00	-0.00	375205.49	819780.53
Base of Salt	5053.60	3.94	85.15	5051.00	-41.12	52.63	375164.37	819833.16
Delaware	5337.27	3.94	85.15	5334.00	-39.47	72.03	375166.02	819852.56
Bone Spring	9358.77	3.94	85.15	9346.00	-16.13	347.19	375189.36	820127.72
Wolfcamp	12663.90	32.87	180.00	12627.00	-91.71	537.38	375113.78	820317.91
Wolfcamp 110	12851.10	51.59	180.00	12765.00	-216.96	537.38	374988.53	820317.91
Wolfcamp 120	13048.94	71.37	180.00	12859.00	-389.93	537.38	374815.56	820317.91

**5D Anti-Collision Report****Devon Energy**

**Field Name:** Lea Co, NM Nad 83 NMEZ  
**Site Name:** Mean Green 23-35 Fed Com Pad  
**Well Name:** Mean Green 23-35 Fed Com 3H

14 August 2017

**Weatherford®**



## Mean Green 23-35 Fed Com 3H

<b>Field Name:</b>	<b>Map Units:</b> US ft <b>Company Name:</b> Devon Energy					
<b>Vertical Reference Datum (VRD):</b> Mean Sea Level						
<b>Projected Coordinate System:</b> NAD83 / New Mexico East (ftUS)						
<b>Comment:</b>						
<b>Site:</b>	<b>Units:</b> US ft	<b>North Reference:</b> Grid	<b>Convergence Angle:</b> 0.48			
	<b>Position:</b>	<b>Northing:</b> 375205.44 US ft	<b>Latitude:</b> 32° 1' 42.02"			
		<b>Easting:</b> 819720.56 US ft	<b>Longitude:</b> -103° 26' 6.10"			
<b>Elevation above MSL:</b> 3193.60 US ft						
<b>Comment:</b>						
<b>Slot:</b>	<b>Position (Relative to Site Centre)</b>					
	<b>+N/-S:</b> 0.05 US ft	<b>Northing:</b> 375205.49 US ft	<b>Latitude:</b> 32° 1' 42.01"			
	<b>+E/-W:</b> 59.97 US ft	<b>Easting:</b> 819780.53 US ft	<b>Longitude:</b> -103° 26' 5.41"			
<b>Slot TVD Reference:</b> Ground Elevation						
<b>Elevation above MSL:</b> 3192.70 US ft						
<b>Comment:</b>						
<b>Well:</b>	<b>Type:</b> Main well	<b>UWI:</b>	<b>Plan:</b> Working Plan			
<b>File Number:</b> Comment:						
	<b>Closure Distance:</b> 10012.5 US ft	<b>Closure Azimuth:</b> 176.92°				
<b>Vertical Section: Position of Origin (Relative to Slot centre)</b>						
	<b>+N/-S:</b> -0.00 US ft	<b>+E/-W:</b> -0.00 US ft	<b>Az:</b> 180.00°			
<b>Magnetic Parameters:</b>						
	<b>Model:</b> bgm2017	<b>Field Strength:</b> 47860.8nT	<b>Declination:</b> 6.93°			
			<b>Dip:</b> 59.88°			
			<b>Date:</b> 01/Nov/2017			

**Drill floor: Plan: Working Plan**

<b>Rig Height (Drill Floor):</b> 46.30us ft	<b>Elevation above MSL:</b> 3239.00us ft	<b>Inclination:</b> 0.00°	<b>Azimuth:</b> 0.00°
--	---	---------------------------	-----------------------

**Collision / Uncertainty Analysis**

<b>Primary Well</b>	<b>Start MD (USFt)</b>	<b>End MD (USFt)</b>	<b>Collision Risk Interval</b>	<b>No. of Std. Deviations in Error Computation</b>
Mean Green 23-35 Fed Com 3H (p)	0.00	30000.00	100.00	2

**Secondary Well Names:**

Mean Green 23 Fed 1H (p)  
 Mean Green 23 Fed 1H (s)  
 Mean Green 26 Fed 1H (p)  
 Mean Green 26 Fed 1H (s)  
 Mean Green 23-14 Fed Com 13H (p)  
 Mean Green 23-26 Fed 13H (p)  
 Rattlesnake Fed Unit 1 (s)  
 Mean Green 23-35 Fed Com 4H (p)

## 5D Anti-Collision Report

### Secondary Well Names:

Mean Green 23-35 Fed Com 1H (p)  
Mean Green 23-35 Fed Com 2H (p)

### Anti-Collision Report Terminology

**S.Minor, S.Major:** Radii of the ellipse of uncertainty at the current location as seen in the along hole direction.

**PHI:** Angle between high-side vector and semi-minor axis

**TVD Spread:** Total TVD range of the ellipsoid of uncertainty at the current location.

**ES:** Distance between the extremities of the primary and secondary uncertainty ellipsoids in the direction Cr-Cr.

**T.Face to Sec:** Angle between the Hi-Side vector of the primary well at the current location and line of closest approach between the two wells.

### AC Filter Info: Applied filter(s): Depth Range.

### Default Survey Tool: MWD

Separation factors calculated using Pedal Curve (Independent Uncertainty). Surface Uncertainty (S.U.) Not Applied. Wellpath created using minimum curvature.

### Anti-Collision Summary (TVD relative to Drill Floor)

SF	Pri MD (US ft)	TVD (US ft)	Secondary Well Name	Sec MD (US ft)	CC (US ft)	ES (US ft)	SF	Risk
	22657.12	12789.09	Mean Green 23-35 Fed Com 2H (p)	22980.82	219.96	64.58	1.42	SF(Med)
	9141.99	9129.74	Mean Green 23 Fed 1H (p)	11477.76	118.47	49.81	1.73	SF(Lo)
	22661.70	12789.00	Mean Green 23-35 Fed Com 4H (p)	22566.20	650.29	283.93	1.78	SF(Lo)
	9142.19	9129.93	Mean Green 23 Fed 1H (s)	11472.32	137.85	71.04	2.06	SF(Lo)
	17368.95	12891.85	Rattlesnake Fed Unit 1 (s)	12880.27	1814.72	1168.29	2.81	
	12340.04	12320.87	Mean Green 23-35 Fed Com 1H (p)	12341.94	195.16	137.24	3.37	
	20489.45	12831.21	Mean Green 23-26 Fed 13H (p)	16758.18	3931.71	3785.25	26.84	
	20731.84	12826.50	Mean Green 26 Fed 1H (p)	13806.44	3792.80	3692.17	37.69	
	20528.52	12830.45	Mean Green 26 Fed 1H (s)	13663.00	3784.82	3686.42	38.46	
	8776.76	8765.37	Mean Green 23-14 Fed Com 13H (p)	8692.17	1545.35	1506.47	39.74	

CC	Pri MD (US ft)	TVD (US ft)	Secondary Well Name	Sec MD (US ft)	CC (US ft)	ES (US ft)	SF	Risk
	3679.49	3679.11	Mean Green 23-35 Fed Com 2H (p)	3680.18	29.64	12.03	1.68	SF(Lo); CC (Lo)
	50.00	50.00	Mean Green 23-35 Fed Com 1H (p)	50.00	59.97	59.13	71.08	
	50.00	50.00	Mean Green 23-35 Fed Com 4H (p)	50.00	89.98	89.14	106.66	
	9144.73	9132.47	Mean Green 23 Fed 1H (p)	11477.76	118.44	49.83	1.73	SF(Lo)
	9146.09	9133.83	Mean Green 23 Fed 1H (s)	11472.35	137.80	71.07	2.06	SF(Lo)
	7253.91	7246.11	Mean Green 23-26 Fed 13H (p)	7320.22	1108.19	1076.17	34.61	
	50.00	50.00	Mean Green 23-14 Fed Com 13H (p)	41.00	1247.93	1247.18	1663.27	
	16211.72	12914.00	Rattlesnake Fed Unit 1 (s)	12902.42	1397.95	1066.66	4.22	
	6216.02	6210.67	Mean Green 26 Fed 1H (p)	6205.06	2441.79	2414.78	90.40	
	6216.02	6210.67	Mean Green 26 Fed 1H (s)	6205.06	2441.79	2416.77	97.58	

Primary Well: Mean Green 23-35 Fed Com 3H (p) (TVD relative to Drill Floor) (All Azimuth Relative to GRID NORTH)											
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	Nearest Well	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
0.00	0.00	269.90	0.00	0.00	0.00	Mean Green 23-35 Fed Com 2H (p)	28.36	29.98	18.52	MWD	CC (Lo)
100.00	100.00	269.90	0.11	0.11	4.60		28.14	29.98	16.30	MWD	CC (Lo)

## 5D Anti-Collision Report

Primary Well: Mean Green 23-35 Fed Com 3H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	Nearest Well	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
200.00	200.00	269.90	0.34	0.34	4.62	Mean Green 23-35 Fed Com 2H (p)	27.69	29.98	13.10	MWD	CC (Lo)
300.00	300.00	269.90	0.56	0.56	4.65	Mean Green 23-35 Fed Com 2H (p)	27.24	29.98	10.95	MWD	CC (Lo)
400.00	400.00	269.90	0.79	0.79	4.69	Mean Green 23-35 Fed Com 2H (p)	26.79	29.98	9.40	MWD	CC (Lo)
500.00	500.00	269.90	1.01	1.01	4.75	Mean Green 23-35 Fed Com 2H (p)	26.34	29.98	8.24	MWD	CC (Lo)
600.00	600.00	269.90	1.24	1.24	4.81	Mean Green 23-35 Fed Com 2H (p)	25.89	29.98	7.33	MWD	CC (Lo)
700.00	700.00	269.90	1.46	1.46	4.88	Mean Green 23-35 Fed Com 2H (p)	25.44	29.98	6.61	MWD	CC (Lo)
800.00	800.00	269.90	1.69	1.69	4.97	Mean Green 23-35 Fed Com 2H (p)	24.99	29.98	6.01	MWD	CC (Lo)
900.00	900.00	269.90	1.91	1.91	5.06	Mean Green 23-35 Fed Com 2H (p)	24.54	29.98	5.51	MWD	CC (Lo)
1000.00	1000.00	269.90	2.14	2.14	5.16	Mean Green 23-35 Fed Com 2H (p)	24.09	29.98	5.09	MWD	CC (Lo)
1100.00	1100.00	269.90	2.36	2.36	5.26	Mean Green 23-35 Fed Com 2H (p)	23.64	29.98	4.73	MWD	CC (Lo)
1200.00	1200.00	269.90	2.59	2.59	5.37	Mean Green 23-35 Fed Com 2H (p)	23.19	29.98	4.42	MWD	CC (Lo)
1300.00	1300.00	269.90	2.81	2.81	5.49	Mean Green 23-35 Fed Com 2H (p)	22.75	29.98	4.14	MWD	CC (Lo)
1400.00	1400.00	269.90	3.04	3.04	5.62	Mean Green 23-35 Fed Com 2H (p)	22.30	29.98	3.90	MWD	CC (Lo)
1500.00	1500.00	269.90	3.26	3.26	5.75	Mean Green 23-35 Fed Com 2H (p)	21.85	29.98	3.69	MWD	CC (Lo)
1600.00	1600.00	269.90	3.48	3.48	5.88	Mean Green 23-35 Fed Com 2H (p)	21.40	29.98	3.49	MWD	CC (Lo)
1700.00	1700.00	269.90	3.71	3.71	6.02	Mean Green 23-35 Fed Com 2H (p)	20.95	29.98	3.32	MWD	CC (Lo)
1800.00	1800.00	269.90	3.93	3.93	6.16	Mean Green 23-35 Fed Com 2H (p)	20.50	29.98	3.16	MWD	CC (Lo)
1900.00	1900.00	269.90	4.16	4.16	6.31	Mean Green 23-35 Fed Com 2H (p)	20.05	29.98	3.02	MWD	CC (Lo)
2000.00	2000.00	269.90	4.38	4.38	6.46	Mean Green 23-35 Fed Com 2H (p)	19.60	29.98	2.89	MWD	CC (Lo)
2100.00	2100.00	269.90	4.61	4.61	6.61	Mean Green 23-35 Fed Com 2H (p)	19.15	29.98	2.77	MWD	CC (Lo)
2200.00	2200.00	269.90	4.83	4.83	6.77	Mean Green 23-35 Fed Com 2H (p)	18.70	29.98	2.66	MWD	CC (Lo)
2300.00	2300.00	269.90	5.06	5.06	6.93	Mean Green 23-35 Fed Com 2H (p)	18.25	29.98	2.56	MWD	CC (Lo)
2400.00	2400.00	269.90	5.28	5.28	7.10	Mean Green 23-35 Fed Com 2H (p)	17.80	29.98	2.46	MWD	SF(Lo); CC (Lo)
2500.00	2500.00	269.90	5.51	5.51	7.26	Mean Green 23-35 Fed Com 2H (p)	17.35	29.98	2.37	MWD	SF(Lo); CC (Lo)
2600.00	2600.00	269.90	5.73	5.73	7.43		16.90	29.98	2.29	MWD	SF(Lo); CC (Lo)

## 5D Anti-Collision Report

Primary Well: Mean Green 23-35 Fed Com 3H (p) (TVD relative to Drill Floor) (All Azimuth Relative to GRID NORTH)											
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	Nearest Well	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
2700.00	2700.00	269.90	5.96	5.96	7.61	Mean Green 23-35 Fed Com 2H (p)	16.45	29.98	2.22	MWD	SF(Lo); CC (Lo)
2800.00	2800.00	269.90	6.18	6.18	7.78	Mean Green 23-35 Fed Com 2H (p)	16.00	29.98	2.14	MWD	SF(Lo); CC (Lo)
2900.00	2900.00	269.90	6.41	6.41	7.96	Mean Green 23-35 Fed Com 2H (p)	15.55	29.98	2.08	MWD	SF(Lo); CC (Lo)
3000.00	3000.00	269.90	6.63	6.63	8.14	Mean Green 23-35 Fed Com 2H (p)	15.10	29.98	2.01	MWD	SF(Lo); CC (Lo)
3100.00	3100.00	269.90	6.86	6.86	8.33	Mean Green 23-35 Fed Com 2H (p)	14.65	29.98	1.96	MWD	SF(Lo); CC (Lo)
3200.00	3200.00	269.90	7.08	7.08	8.51	Mean Green 23-35 Fed Com 2H (p)	14.20	29.98	1.90	MWD	SF(Lo); CC (Lo)
3300.00	3299.99	91.57	7.28	7.28	8.70	Mean Green 23-35 Fed Com 2H (p)	13.80	29.99	1.85	MWD	SF(Lo); CC (Lo)
3400.00	3399.96	96.54	7.44	7.44	8.89	Mean Green 23-35 Fed Com 2H (p)	13.62	30.18	1.82	MWD	SF(Lo)
3500.00	3499.86	105.31	7.61	7.61	9.09	Mean Green 23-35 Fed Com 2H (p)	13.22	30.19	1.78	MWD	SF(Lo)
3600.00	3599.73	117.27	7.79	7.78	9.29	Mean Green 23-35 Fed Com 2H (p)	12.51	29.84	1.72	MWD	SF(Lo); CC (Lo)
3700.00	3699.59	131.52	7.97	7.96	9.49	Mean Green 23-35 Fed Com 2H (p)	11.95	29.66	1.67	MWD	SF(Lo); CC (Lo)
3800.00	3799.45	147.92	8.15	8.14	9.69	Mean Green 23-35 Fed Com 2H (p)	12.53	30.60	1.69	MWD	SF(Lo)
3900.00	3899.31	163.08	8.33	8.32	9.90	Mean Green 23-35 Fed Com 2H (p)	15.25	33.75	1.82	MWD	SF(Lo)
4000.00	3999.18	175.00	8.52	8.51	10.11	Mean Green 23-35 Fed Com 2H (p)	19.92	38.81	2.05	MWD	SF(Lo)
4100.00	4099.07	199.87	8.73	8.71	10.32	Mean Green 23-35 Fed Com 2H (p)	25.17	44.46	2.30	MWD	SF(Lo)
4200.00	4199.00	229.94	8.95	8.93	10.54	Mean Green 23-35 Fed Com 2H (p)	29.61	49.36	2.50	MWD	SF(Lo)
4300.00	4298.93	260.36	9.17	9.15	10.76	Mean Green 23-35 Fed Com 2H (p)	32.93	53.09	2.63	MWD	
4400.00	4398.84	282.46	9.39	9.37	10.98	Mean Green 23-35 Fed Com 2H (p)	34.83	55.43	2.69	MWD	
4500.00	4498.69	289.31	9.60	9.58	11.21	Mean Green 23-35 Fed Com 2H (p)	35.41	56.45	2.68	MWD	
4600.00	4598.47	288.91	9.81	9.79	11.44	Mean Green 23-35 Fed Com 2H (p)	35.45	56.93	2.65	MWD	
4700.00	4698.23	288.40	10.03	9.99	11.67	Mean Green 23-35 Fed Com 2H (p)	35.44	57.38	2.62	MWD	
4800.00	4797.99	287.91	10.25	10.20	11.91	Mean Green 23-35 Fed Com 2H (p)	35.49	57.84	2.59	MWD	
4900.00	4897.76	287.42	10.46	10.41	12.15	Mean Green 23-35 Fed Com 2H (p)	35.48	58.30	2.56	MWD	
5000.00	4997.52	286.94	10.69	10.62	12.39	Mean Green 23-35 Fed Com 2H (p)	35.50	58.76	2.53	MWD	
5100.00	5097.29	286.47	10.91	10.83	12.64		35.54	59.23	2.50	MWD	

## 5D Anti-Collision Report

Primary Well: Mean Green 23-35 Fed Com 3H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	Nearest Well	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
5200.00	5197.05	286.00	11.13	11.04	12.89	Mean Green 23-35 Fed Com 2H (p)	35.59	59.70	2.48	MWD	SF(Lo)
5300.00	5296.81	285.54	11.36	11.25	13.15	Mean Green 23-35 Fed Com 2H (p)	35.59	60.18	2.45	MWD	SF(Lo)
5400.00	5396.58	285.09	11.58	11.47	13.41	Mean Green 23-35 Fed Com 2H (p)	35.59	60.66	2.42	MWD	SF(Lo)
5500.00	5496.34	284.65	11.81	11.68	13.68	Mean Green 23-35 Fed Com 2H (p)	35.61	61.15	2.39	MWD	SF(Lo)
5600.00	5596.11	284.21	12.04	11.89	13.95	Mean Green 23-35 Fed Com 2H (p)	35.62	61.63	2.37	MWD	SF(Lo)
5700.00	5695.87	283.78	12.27	12.11	14.22	Mean Green 23-35 Fed Com 2H (p)	35.65	62.12	2.35	MWD	SF(Lo)
5800.00	5795.63	283.36	12.50	12.33	14.50	Mean Green 23-35 Fed Com 2H (p)	35.67	62.62	2.32	MWD	SF(Lo)
5900.00	5895.40	282.95	12.73	12.54	14.78	Mean Green 23-35 Fed Com 2H (p)	35.70	63.12	2.30	MWD	SF(Lo)
6000.00	5995.16	282.54	12.96	12.76	15.07	Mean Green 23-35 Fed Com 2H (p)	35.73	63.62	2.28	MWD	SF(Lo)
6100.00	6094.93	282.13	13.19	12.98	15.36	Mean Green 23-35 Fed Com 2H (p)	35.77	64.12	2.26	MWD	SF(Lo)
6200.00	6194.69	281.74	13.43	13.19	15.65	Mean Green 23-35 Fed Com 2H (p)	35.81	64.63	2.24	MWD	SF(Lo)
6300.00	6294.45	281.35	13.66	13.41	15.95	Mean Green 23-35 Fed Com 2H (p)	35.84	65.14	2.22	MWD	SF(Lo)
6400.00	6394.22	280.96	13.90	13.63	16.26	Mean Green 23-35 Fed Com 2H (p)	35.88	65.65	2.21	MWD	SF(Lo)
6500.00	6493.98	280.58	14.13	13.85	16.57	Mean Green 23-35 Fed Com 2H (p)	35.93	66.17	2.19	MWD	SF(Lo)
6600.00	6593.75	280.21	14.37	14.07	16.88	Mean Green 23-35 Fed Com 2H (p)	35.97	66.69	2.17	MWD	SF(Lo)
6700.00	6693.51	279.84	14.61	14.29	17.20	Mean Green 23-35 Fed Com 2H (p)	36.02	67.21	2.15	MWD	SF(Lo)
6800.00	6793.27	279.48	14.85	14.51	17.53	Mean Green 23-35 Fed Com 2H (p)	36.07	67.74	2.14	MWD	SF(Lo)
6900.00	6893.04	279.13	15.09	14.73	17.86	Mean Green 23-35 Fed Com 2H (p)	36.12	68.27	2.12	MWD	SF(Lo)
7000.00	6992.80	278.78	15.32	14.95	18.19	Mean Green 23-35 Fed Com 2H (p)	36.17	68.80	2.11	MWD	SF(Lo)
7100.00	7092.56	278.43	15.56	15.17	18.53	Mean Green 23-35 Fed Com 2H (p)	36.22	69.33	2.09	MWD	SF(Lo)
7200.00	7192.33	278.09	15.80	15.39	18.88	Mean Green 23-35 Fed Com 2H (p)	36.28	69.86	2.08	MWD	SF(Lo)
7300.00	7292.09	277.76	16.05	15.61	19.23	Mean Green 23-35 Fed Com 2H (p)	36.33	70.40	2.07	MWD	SF(Lo)
7400.00	7391.86	277.43	16.29	15.83	19.58	Mean Green 23-35 Fed Com 2H (p)	36.39	70.94	2.05	MWD	SF(Lo)
7500.00	7491.62	277.11	16.53	16.05	19.94	Mean Green 23-35 Fed Com 2H (p)	36.45	71.48	2.04	MWD	SF(Lo)
7600.00	7591.38	276.79	16.77	16.28	20.31		36.52	72.03	2.03	MWD	SF(Lo)

## SD Anti-Collision Report

Primary Well: Mean Green 23-35 Fed Com 3H (p) (TVD relative to Drill Floor) (All Azimuth Relative to GRID NORTH)											
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	Nearest Well	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
7700.00	7691.15	276.47	17.01	16.50	20.68	Mean Green 23-35 Fed Com 2H (p)	36.58	72.57	2.02	MWD	SF(Lo)
7800.00	7790.91	276.16	17.26	16.72	21.06	Mean Green 23-35 Fed Com 2H (p)	36.65	73.12	2.00	MWD	SF(Lo)
7900.00	7890.68	275.86	17.50	16.94	21.44	Mean Green 23-35 Fed Com 2H (p)	36.72	73.67	1.99	MWD	SF(Lo)
8000.00	7990.44	275.56	17.74	17.17	21.83	Mean Green 23-35 Fed Com 2H (p)	36.79	74.23	1.98	MWD	SF(Lo)
8100.00	8090.20	275.26	17.99	17.39	22.22	Mean Green 23-35 Fed Com 2H (p)	36.86	74.78	1.97	MWD	SF(Lo)
8200.00	8189.97	274.97	18.23	17.61	22.62	Mean Green 23-35 Fed Com 2H (p)	36.93	75.34	1.96	MWD	SF(Lo)
8300.00	8289.73	274.68	18.48	17.84	23.02	Mean Green 23-35 Fed Com 2H (p)	37.01	75.90	1.95	MWD	SF(Lo)
8400.00	8389.50	274.40	18.72	18.06	23.43	Mean Green 23-35 Fed Com 2H (p)	37.08	76.46	1.94	MWD	SF(Lo)
8500.00	8489.26	274.12	18.97	18.28	23.85	Mean Green 23-35 Fed Com 2H (p)	37.14	77.02	1.93	MWD	SF(Lo)
8600.00	8589.02	273.84	19.21	18.51	24.27	Mean Green 23-35 Fed Com 2H (p)	37.21	77.58	1.92	MWD	SF(Lo)
8700.00	8688.79	273.57	19.46	18.73	24.69	Mean Green 23-35 Fed Com 2H (p)	37.27	78.15	1.91	MWD	SF(Lo)
8800.00	8788.55	273.30	19.70	18.95	25.12	Mean Green 23-35 Fed Com 2H (p)	37.34	78.72	1.90	MWD	SF(Lo)
8900.00	8888.32	273.04	19.95	19.18	25.56	Mean Green 23-35 Fed Com 2H (p)	37.41	79.29	1.89	MWD	SF(Lo)
9000.00	8988.08	272.78	20.20	19.40	26.00	Mean Green 23-35 Fed Com 2H (p)	37.49	79.86	1.88	MWD	SF(Lo)
9100.00	9087.84	272.52	20.44	19.63	26.45	Mean Green 23-35 Fed Com 2H (p)	37.56	80.43	1.88	MWD	SF(Lo)
9200.00	9187.61	272.27	20.69	19.85	26.91	Mean Green 23-35 Fed Com 2H (p)	37.64	81.01	1.87	MWD	SF(Lo)
9300.00	9287.37	272.02	20.94	20.08	27.37	Mean Green 23-35 Fed Com 2H (p)	37.71	81.58	1.86	MWD	SF(Lo)
9400.00	9387.14	271.78	21.18	20.30	27.83	Mean Green 23-35 Fed Com 2H (p)	37.79	82.16	1.85	MWD	SF(Lo)
9500.00	9486.90	271.54	21.43	20.53	28.31	Mean Green 23-35 Fed Com 2H (p)	37.87	82.74	1.84	MWD	SF(Lo)
9600.00	9586.66	271.30	21.68	20.75	28.78	Mean Green 23-35 Fed Com 2H (p)	37.95	83.32	1.84	MWD	SF(Lo)
9700.00	9686.43	271.06	21.93	20.98	29.27	Mean Green 23-35 Fed Com 2H (p)	38.04	83.90	1.83	MWD	SF(Lo)
9800.00	9786.19	270.83	22.18	21.20	29.76	Mean Green 23-35 Fed Com 2H (p)	38.12	84.48	1.82	MWD	SF(Lo)
9900.00	9885.96	270.60	22.42	21.43	30.25	Mean Green 23-35 Fed Com 2H (p)	38.21	85.07	1.82	MWD	SF(Lo)
10000.00	9985.72	270.38	22.67	21.65	30.75	Mean Green 23-35 Fed Com 2H (p)	38.29	85.65	1.81	MWD	SF(Lo)
10100.00	10085.48	270.15	22.92	21.88	31.26		38.38	86.24	1.80	MWD	SF(Lo)

## 5D Anti-Collision Report

Primary Well: Mean Green 23-35 Fed Com 3H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)												
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	Nearest Well	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk	
10200.00	10185.25	269.93	23.17	22.11	31.77	Mean Green 23-35 Fed Com 2H (p)	38.47	86.83	1.80	MWD	SF(Lo)	
10300.00	10285.01	269.72	23.42	22.33	32.29	Mean Green 23-35 Fed Com 2H (p)	38.57	87.42	1.79	MWD	SF(Lo)	
10400.00	10384.78	269.50	23.67	22.56	32.81	Mean Green 23-35 Fed Com 2H (p)	38.66	88.01	1.78	MWD	SF(Lo)	
10500.00	10484.54	269.29	23.92	22.78	33.34	Mean Green 23-35 Fed Com 2H (p)	38.75	88.60	1.78	MWD	SF(Lo)	
10600.00	10584.30	269.09	24.17	23.01	33.88	Mean Green 23-35 Fed Com 2H (p)	38.85	89.20	1.77	MWD	SF(Lo)	
10700.00	10684.07	268.88	24.42	23.24	34.42	Mean Green 23-35 Fed Com 2H (p)	38.95	89.79	1.77	MWD	SF(Lo)	
10800.00	10783.83	268.68	24.67	23.46	34.97	Mean Green 23-35 Fed Com 2H (p)	39.05	90.39	1.76	MWD	SF(Lo)	
10900.00	10883.60	268.48	24.92	23.69	35.52	Mean Green 23-35 Fed Com 2H (p)	39.15	90.98	1.76	MWD	SF(Lo)	
11000.00	10983.36	268.28	25.17	23.91	36.08	Mean Green 23-35 Fed Com 2H (p)	39.25	91.58	1.75	MWD	SF(Lo)	
11100.00	11083.12	268.09	25.42	24.14	36.65	Mean Green 23-35 Fed Com 2H (p)	39.35	92.18	1.74	MWD	SF(Lo)	
11200.00	11182.89	267.89	25.67	24.37	37.22	Mean Green 23-35 Fed Com 2H (p)	39.46	92.78	1.74	MWD	SF(Lo)	
11300.00	11282.65	267.70	25.92	24.59	37.80	Mean Green 23-35 Fed Com 2H (p)	39.56	93.38	1.74	MWD	SF(Lo)	
11400.00	11382.42	267.52	26.17	24.82	38.38	Mean Green 23-35 Fed Com 2H (p)	39.67	93.98	1.73	MWD	SF(Lo)	
11500.00	11482.18	267.33	26.42	25.05	38.97	Mean Green 23-35 Fed Com 2H (p)	39.78	94.59	1.73	MWD	SF(Lo)	
11600.00	11581.94	267.15	26.67	25.27	39.57	Mean Green 23-35 Fed Com 2H (p)	39.88	95.19	1.72	MWD	SF(Lo)	
11700.00	11681.71	266.97	26.92	25.50	40.17	Mean Green 23-35 Fed Com 2H (p)	40.00	95.80	1.72	MWD	SF(Lo)	
11800.00	11781.47	266.79	27.17	25.73	40.78	Mean Green 23-35 Fed Com 2H (p)	40.11	96.40	1.71	MWD	SF(Lo)	
11900.00	11881.24	266.61	27.42	25.95	41.39	Mean Green 23-35 Fed Com 2H (p)	40.22	97.01	1.71	MWD	SF(Lo)	
12000.00	11981.02	266.61	27.66	26.17	42.01	Mean Green 23-35 Fed Com 2H (p)	40.32	97.60	1.70	MWD	SF(Lo)	
12100.00	12080.89	267.54	27.85	26.36	42.64	Mean Green 23-35 Fed Com 2H (p)	40.36	98.11	1.70	MWD	SF(Lo)	
12200.00	12180.84	269.45	28.04	26.55	43.27	Mean Green 23-35 Fed Com 2H (p)	40.42	98.61	1.69	MWD	SF(Lo)	
12300.00	12280.83	271.66	28.22	26.73	43.91	Mean Green 23-35 Fed Com 2H (p)	40.65	99.12	1.70	MWD	SF(Lo)	
12400.00	12380.69	178.83	28.32	26.91	44.55	Mean Green 23-35 Fed Com 2H (p)	44.48	103.26	1.76	MWD	SF(Lo)	
12500.00	12478.57	179.86	28.12	27.10	45.17	Mean Green 23-35 Fed Com 2H (p)	64.32	123.43	2.09	MWD	SF(Lo)	
12600.00	12571.50	180.00	27.68	27.25	45.75		99.25	158.53	2.67	MWD		

## 5D Anti-Collision Report

Primary Well: Mean Green 23-35 Fed Com 3H (p) (TVD relative to Drill Floor) (All Azimuth Relative to GRID NORTH)											
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	Nearest Well	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
12700.00	12656.68	180.00	27.58	26.85	46.25	Mean Green 23-35 Fed Com 2H (p)	133.96	192.56	3.29	MWD	
12800.00	12731.51	180.00	27.81	26.03	46.69	Mean Green 23-35 Fed Com 2H (p)	162.59	219.41	3.86	MWD	
12900.00	12793.71	37.64	28.11	25.20	47.05	Rattlesnake Fed Unit 1 (s)	2759.25	3577.47	4.37	MWD	
12900.00	12793.71	180.00	28.11	25.20	47.05	Mean Green 23-35 Fed Com 2H (p)	182.70	236.43	4.40	MWD	
13000.00	12841.40	47.67	28.49	24.49	47.35	Rattlesnake Fed Unit 1 (s)	2680.17	3496.78	4.28	MWD	
13000.00	12841.40	180.00	28.49	24.49	47.35	Mean Green 23-35 Fed Com 2H (p)	190.52	241.59	4.73	MWD	
13100.00	12873.13	62.71	28.96	24.03	47.60	Rattlesnake Fed Unit 1 (s)	2596.00	3410.14	4.19	MWD	
13100.00	12873.13	180.00	28.96	24.03	47.60	Mean Green 23-35 Fed Com 2H (p)	184.25	234.17	4.69	MWD	
13200.00	12887.93	82.70	29.54	23.89	47.83	Rattlesnake Fed Unit 1 (s)	2509.20	3320.27	4.09	MWD	
13200.00	12887.93	180.00	29.54	23.89	47.83	Mean Green 23-35 Fed Com 2H (p)	171.49	221.64	4.42	MWD	
13300.00	12889.60	89.21	30.20	24.00	48.06	Rattlesnake Fed Unit 1 (s)	2422.62	3229.86	4.00	MWD	
13300.00	12889.60	180.00	30.20	24.00	48.06	Mean Green 23-35 Fed Com 2H (p)	170.41	220.81	4.38	MWD	
13400.00	12890.47	89.25	30.94	24.13	48.33	Rattlesnake Fed Unit 1 (s)	2336.85	3140.02	3.91	MWD	
13400.00	12890.47	180.00	30.94	24.13	48.33	Mean Green 23-35 Fed Com 2H (p)	170.09	220.78	4.36	MWD	
13500.00	12891.34	89.29	31.77	24.28	48.65	Rattlesnake Fed Unit 1 (s)	2252.09	3050.80	3.82	MWD	
13500.00	12891.34	180.00	31.77	24.28	48.65	Mean Green 23-35 Fed Com 2H (p)	169.73	220.75	4.33	MWD	
13600.00	12892.20	89.32	32.69	24.46	49.01	Rattlesnake Fed Unit 1 (s)	2168.47	2962.27	3.73	MWD	
13600.00	12892.20	180.00	32.69	24.46	49.01	Mean Green 23-35 Fed Com 2H (p)	169.31	220.72	4.29	MWD	
13700.00	12893.07	89.36	33.67	24.65	49.40	Rattlesnake Fed Unit 1 (s)	2086.09	2874.50	3.65	MWD	
13700.00	12893.07	180.00	33.67	24.65	49.40	Mean Green 23-35 Fed Com 2H (p)	168.84	220.69	4.26	MWD	
13800.00	12893.94	89.39	34.72	24.87	49.84	Rattlesnake Fed Unit 1 (s)	2005.08	2787.55	3.56	MWD	
13800.00	12893.94	180.00	34.72	24.87	49.84	Mean Green 23-35 Fed Com 2H (p)	168.34	220.66	4.22	MWD	
13900.00	12894.81	89.43	35.84	25.11	50.32	Rattlesnake Fed Unit 1 (s)	1925.59	2701.50	3.48	MWD	
13900.00	12894.81	180.00	35.84	25.11	50.32	Mean Green 23-35 Fed Com 2H (p)	167.81	220.64	4.18	MWD	
14000.00	12895.67	89.46	37.01	25.36	50.83		1847.77	2616.45	3.40	MWD	

## 5D Anti-Collision Report

Primary Well: Mean Green 23-35 Fed Com 3H (p) (TVD relative to Drill Floor) (All Azimuth Relative to GRID NORTH)											
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	Nearest Well	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
14000.00	12895.67	180.00	37.01	25.36	50.83	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	167.28	220.61	4.14	MWD	
14100.00	12896.54	89.50	38.23	25.64	51.39	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	1771.78	2532.48	3.33	MWD	
14100.00	12896.54	180.00	38.23	25.64	51.39	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	166.71	220.58	4.10	MWD	
14200.00	12897.41	89.53	39.50	25.93	51.97	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	1697.87	2449.73	3.26	MWD	
14200.00	12897.41	180.00	39.50	25.93	51.97	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	166.04	220.55	4.05	MWD	
14300.00	12898.28	89.57	40.81	26.24	52.60	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	1626.30	2368.30	3.19	MWD	
14300.00	12898.28	180.00	40.81	26.24	52.60	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	165.46	220.52	4.00	MWD	
14400.00	12899.14	89.61	42.16	26.56	53.25	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	1557.33	2288.34	3.13	MWD	
14400.00	12899.14	180.00	42.16	26.56	53.25	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	164.77	220.49	3.96	MWD	
14500.00	12900.01	89.64	43.55	26.91	53.94	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	1491.16	2210.02	3.07	MWD	
14500.00	12900.01	180.00	43.55	26.91	53.94	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	163.96	220.46	3.90	MWD	
14600.00	12900.88	89.68	44.96	27.26	54.65	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	1428.29	2133.51	3.03	MWD	
14600.00	12900.88	180.00	44.96	27.26	54.65	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	163.30	220.43	3.86	MWD	
14700.00	12901.75	89.71	46.40	27.64	55.40	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	1367.74	2059.01	2.98	MWD	
14700.00	12901.75	180.00	46.40	27.64	55.40	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	162.49	220.40	3.81	MWD	
14800.00	12902.61	89.75	47.87	28.02	56.18	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	1310.84	1986.75	2.94	MWD	
14800.00	12902.61	180.00	47.87	28.02	56.18	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	161.69	220.37	3.76	MWD	
14900.00	12903.48	89.78	49.37	28.43	56.98	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	1258.13	1916.99	2.91	MWD	
14900.00	12903.48	180.00	49.37	28.43	56.98	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	160.87	220.34	3.70	MWD	
15000.00	12904.35	89.82	50.88	28.84	57.81	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	1210.44	1850.00	2.89	MWD	
15000.00	12904.35	180.00	50.88	28.84	57.81	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	160.19	220.32	3.66	MWD	
15100.00	12905.22	89.85	52.42	29.27	58.66	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	1168.34	1786.11	2.89	MWD	
15100.00	12905.22	180.00	52.42	29.27	58.66	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	159.18	220.29	3.60	MWD	
15200.00	12906.08	89.89	53.97	29.71	59.54	Rattlesnake Fed Unit 1 (s) Mean Green 23-35 Fed Com 2H (p)	1132.43	1725.64	2.91	MWD	
15200.00	12906.08	180.00	53.97	29.71	59.54		158.44	220.26	3.56	MWD	

## SD Anti-Collision Report

Primary Well: Mean Green 23-35 Fed Com 3H (p) (TVD relative to Drill Floor) (All Azimuth Relative to GRID NORTH)											
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	Nearest Well	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
						Mean Green 23-35 Fed Com 2H (p)					
15300.00	12906.95	89.93	55.54	30.16	60.44	Rattlesnake Fed Unit 1 (s)	1103.17	1668.98	2.95	MWD	
15300.00	12906.95	180.00	55.54	30.16	60.44	Mean Green 23-35 Fed Com 2H (p)	157.45	220.23	3.51	MWD	
15400.00	12907.82	89.96	57.12	30.62	61.36	Rattlesnake Fed Unit 1 (s)	1077.52	1616.53	3.00	MWD	
15400.00	12907.82	180.00	57.12	30.62	61.36	Mean Green 23-35 Fed Com 2H (p)	156.43	220.20	3.45	MWD	
15500.00	12908.69	90.00	58.72	31.09	62.30	Rattlesnake Fed Unit 1 (s)	1059.79	1568.70	3.08	MWD	
15500.00	12908.69	180.00	58.72	31.09	62.30	Mean Green 23-35 Fed Com 2H (p)	155.48	220.17	3.40	MWD	
15600.00	12909.55	90.03	60.33	31.57	63.27	Rattlesnake Fed Unit 1 (s)	1050.59	1525.93	3.21	MWD	
15600.00	12909.55	180.00	60.33	31.57	63.27	Mean Green 23-35 Fed Com 2H (p)	154.56	220.14	3.36	MWD	
15700.00	12910.42	180.00	61.96	32.06	64.25	Mean Green 23-35 Fed Com 2H (p)	153.57	220.11	3.31	MWD	
15800.00	12911.29	180.00	63.59	32.56	65.25	Mean Green 23-35 Fed Com 2H (p)	152.55	220.08	3.26	MWD	
15900.00	12912.16	180.00	65.23	33.07	66.27	Mean Green 23-35 Fed Com 2H (p)	151.45	220.05	3.21	MWD	
16000.00	12913.03	180.00	66.89	33.59	67.30	Mean Green 23-35 Fed Com 2H (p)	150.34	220.02	3.16	MWD	
16100.00	12913.89	180.00	68.55	34.11	68.35	Mean Green 23-35 Fed Com 2H (p)	149.23	220.00	3.11	MWD	
16200.00	12914.09	180.00	70.22	34.68	69.42	Mean Green 23-35 Fed Com 2H (p)	148.02	219.97	3.06	MWD	
16300.00	12912.62	180.00	71.90	35.24	70.49	Mean Green 23-35 Fed Com 2H (p)	146.83	219.91	3.01	MWD	
16400.00	12910.67	180.00	73.59	35.79	71.58	Mean Green 23-35 Fed Com 2H (p)	145.76	219.91	2.97	MWD	
16500.00	12908.73	180.00	75.28	36.34	72.68	Mean Green 23-35 Fed Com 2H (p)	144.68	219.91	2.92	MWD	
16600.00	12906.79	180.00	76.98	36.90	73.79	Mean Green 23-35 Fed Com 2H (p)	143.59	219.92	2.88	MWD	
16700.00	12904.84	180.00	78.68	37.46	74.91	Mean Green 23-35 Fed Com 2H (p)	142.48	219.92	2.84	MWD	
16800.00	12902.90	180.00	80.39	38.03	76.05	Mean Green 23-35 Fed Com 2H (p)	141.37	219.92	2.80	MWD	
16900.00	12900.96	180.00	82.10	38.60	77.20	Mean Green 23-35 Fed Com 2H (p)	140.25	219.92	2.76	MWD	
17000.00	12899.02	180.00	83.82	39.18	78.35	Mean Green 23-35 Fed Com 2H (p)	139.12	219.92	2.72	MWD	
17100.00	12897.07	180.00	85.54	39.77	79.52	Mean Green 23-35 Fed Com 2H (p)	137.98	219.92	2.68	MWD	
17200.00	12895.13	180.00	87.27	40.36	80.70	Mean Green 23-35 Fed Com 2H (p)	136.80	219.92	2.65	MWD	
17300.00	12893.19	180.00	89.00	40.95	81.89		135.62	219.92	2.61	MWD	

## SD Anti-Collision Report

Primary Well: Mean Green 23-35 Fed Com 3H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	Nearest Well	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
						Mean Green 23-35 Fed Com 2H (p)					
17400.00	12891.24	180.00	90.74	41.55	83.08	Mean Green 23-35 Fed Com 2H (p)	134.43	219.92	2.57	MWD	
17500.00	12889.30	180.00	92.47	42.16	84.29	Mean Green 23-35 Fed Com 2H (p)	133.23	219.92	2.54	MWD	
17600.00	12887.36	180.00	94.22	42.76	85.50	Mean Green 23-35 Fed Com 2H (p)	132.02	219.92	2.50	MWD	
17700.00	12885.41	180.00	95.96	43.37	86.72	Mean Green 23-35 Fed Com 2H (p)	130.81	219.92	2.47	MWD	SF(Lo)
17800.00	12883.47	180.00	97.71	43.99	87.95	Mean Green 23-35 Fed Com 2H (p)	129.57	219.92	2.43	MWD	SF(Lo)
17900.00	12881.53	180.00	99.46	44.61	89.19	Mean Green 23-35 Fed Com 2H (p)	128.32	219.92	2.40	MWD	SF(Lo)
18000.00	12879.58	180.00	101.21	45.23	90.43	Mean Green 23-35 Fed Com 2H (p)	127.06	219.93	2.37	MWD	SF(Lo)
18100.00	12877.64	180.00	102.96	45.86	91.68	Mean Green 23-35 Fed Com 2H (p)	125.80	219.93	2.34	MWD	SF(Lo)
18200.00	12875.70	180.00	104.72	46.48	92.93	Mean Green 23-35 Fed Com 2H (p)	124.54	219.93	2.31	MWD	SF(Lo)
18300.00	12873.75	180.00	106.48	47.12	94.19	Mean Green 23-35 Fed Com 2H (p)	123.26	219.93	2.28	MWD	SF(Lo)
18400.00	12871.81	180.00	108.24	47.75	95.46	Mean Green 23-35 Fed Com 2H (p)	121.99	219.93	2.25	MWD	SF(Lo)
18500.00	12869.87	180.00	110.01	48.39	96.73	Mean Green 23-35 Fed Com 2H (p)	120.71	219.93	2.22	MWD	SF(Lo)
18600.00	12867.93	180.00	111.77	49.03	98.01	Mean Green 23-35 Fed Com 2H (p)	119.42	219.93	2.19	MWD	SF(Lo)
18700.00	12865.98	180.00	113.54	49.67	99.30	Mean Green 23-35 Fed Com 2H (p)	118.13	219.93	2.16	MWD	SF(Lo)
18800.00	12864.04	180.00	115.31	50.31	100.58	Mean Green 23-35 Fed Com 2H (p)	116.83	219.93	2.13	MWD	SF(Lo)
18900.00	12862.10	180.00	117.08	50.96	101.88	Mean Green 23-35 Fed Com 2H (p)	115.53	219.93	2.11	MWD	SF(Lo)
19000.00	12860.15	180.00	118.85	51.61	103.17	Mean Green 23-35 Fed Com 2H (p)	114.23	219.93	2.08	MWD	SF(Lo)
19100.00	12858.21	180.00	120.63	52.26	104.48	Mean Green 23-35 Fed Com 2H (p)	112.92	219.93	2.06	MWD	SF(Lo)
19200.00	12856.27	180.00	122.40	52.92	105.78	Mean Green 23-35 Fed Com 2H (p)	111.61	219.93	2.03	MWD	SF(Lo)
19300.00	12854.32	180.00	124.18	53.57	107.09	Mean Green 23-35 Fed Com 2H (p)	110.30	219.93	2.01	MWD	SF(Lo)
19400.00	12852.38	180.00	125.96	54.23	108.41	Mean Green 23-35 Fed Com 2H (p)	108.98	219.94	1.98	MWD	SF(Lo)
19500.00	12850.44	180.00	127.74	54.89	109.73	Mean Green 23-35 Fed Com 2H (p)	107.65	219.94	1.96	MWD	SF(Lo)
19600.00	12848.49	180.00	129.52	55.55	111.05	Mean Green 23-35 Fed Com 2H (p)	106.33	219.94	1.94	MWD	SF(Lo)
19700.00	12846.55	180.00	131.30	56.22	112.38	Mean Green 23-35 Fed Com 2H (p)	105.00	219.94	1.91	MWD	SF(Lo)
19800.00	12844.61	180.00	133.09	56.88	113.71		103.67	219.94	1.89	MWD	SF(Lo)

## 5D Anti-Collision Report

Primary Well: Mean Green 23-35 Fed Com 3H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	Nearest Well	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
19900.00	12842.66	180.00	134.87	57.55	115.04	Mean Green 23-35 Fed Com 2H (p)	102.33	219.94	1.87	MWD	SF(Lo)
20000.00	12840.72	180.00	136.66	58.22	116.37	Mean Green 23-35 Fed Com 2H (p)	100.99	219.94	1.85	MWD	SF(Lo)
20100.00	12838.78	180.00	138.44	58.89	117.71	Mean Green 23-35 Fed Com 2H (p)	99.65	219.94	1.83	MWD	SF(Lo)
20200.00	12836.83	180.00	140.23	59.56	119.06	Mean Green 23-35 Fed Com 2H (p)	98.31	219.94	1.81	MWD	SF(Lo)
20300.00	12834.89	180.00	142.02	60.23	120.40	Mean Green 23-35 Fed Com 2H (p)	96.96	219.94	1.79	MWD	SF(Lo)
20400.00	12832.95	180.00	143.81	60.91	121.75	Mean Green 23-35 Fed Com 2H (p)	95.61	219.94	1.77	MWD	SF(Lo)
20500.00	12831.01	180.00	145.60	61.58	123.10	Mean Green 23-35 Fed Com 2H (p)	94.26	219.94	1.75	MWD	SF(Lo)
20600.00	12829.06	180.00	147.39	62.26	124.45	Mean Green 23-35 Fed Com 2H (p)	92.90	219.94	1.73	MWD	SF(Lo)
20700.00	12827.12	180.00	149.18	62.94	125.81	Mean Green 23-35 Fed Com 2H (p)	91.55	219.94	1.71	MWD	SF(Lo)
20800.00	12825.18	180.00	150.97	63.62	127.17	Mean Green 23-35 Fed Com 2H (p)	90.19	219.95	1.70	MWD	SF(Lo)
20900.00	12823.23	180.00	152.77	64.30	128.53	Mean Green 23-35 Fed Com 2H (p)	88.83	219.95	1.68	MWD	SF(Lo)
21000.00	12821.29	180.00	154.56	64.98	129.89	Mean Green 23-35 Fed Com 2H (p)	87.46	219.95	1.66	MWD	SF(Lo)
21100.00	12819.35	180.00	156.36	65.66	131.25	Mean Green 23-35 Fed Com 2H (p)	86.10	219.95	1.64	MWD	SF(Lo)
21200.00	12817.40	180.00	158.15	66.35	132.62	Mean Green 23-35 Fed Com 2H (p)	84.73	219.95	1.63	MWD	SF(Lo)
21300.00	12815.46	180.00	159.95	67.03	133.99	Mean Green 23-35 Fed Com 2H (p)	83.36	219.95	1.61	MWD	SF(Lo)
21400.00	12813.52	180.00	161.74	67.72	135.36	Mean Green 23-35 Fed Com 2H (p)	81.99	219.95	1.59	MWD	SF(Lo)
21500.00	12811.57	180.00	163.54	68.41	136.73	Mean Green 23-35 Fed Com 2H (p)	80.61	219.95	1.58	MWD	SF(Lo)
21600.00	12809.63	180.00	165.34	69.09	138.11	Mean Green 23-35 Fed Com 2H (p)	79.24	219.95	1.56	MWD	SF(Lo)
21700.00	12807.69	180.00	167.14	69.78	139.49	Mean Green 23-35 Fed Com 2H (p)	77.86	219.95	1.55	MWD	SF(Lo)
21800.00	12805.74	180.00	168.94	70.47	140.87	Mean Green 23-35 Fed Com 2H (p)	76.48	219.95	1.53	MWD	SF(Lo)
21900.00	12803.80	180.00	170.74	71.16	142.25	Mean Green 23-35 Fed Com 2H (p)	75.10	219.95	1.52	MWD	SF(Lo)
22000.00	12801.86	180.00	172.54	71.85	143.63	Mean Green 23-35 Fed Com 2H (p)	73.72	219.95	1.50	MWD	SF(Lo)
22100.00	12799.91	180.00	174.34	72.55	145.01	Mean Green 23-35 Fed Com 2H (p)	72.33	219.95	1.49	MWD	SF(Med)
22200.00	12797.97	180.00	176.14	73.24	146.40	Mean Green 23-35 Fed Com 2H (p)	70.95	219.96	1.48	MWD	SF(Med)
22300.00	12796.03	180.00	177.94	73.93	147.79		69.56	219.96	1.46	MWD	SF(Med)

## 5D Anti-Collision Report

Primary Well: Mean Green 23-35 Fed Com 3H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
MD (US ft)	TVD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	Nearest Well	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
22400.00	12794.09	180.00	179.74	74.63	149.17	Mean Green 23-35 Fed Com 2H (p)	68.17	219.96	1.45	MWD	SF(Med)
22500.00	12792.14	180.00	181.55	75.32	150.56	Mean Green 23-35 Fed Com 2H (p)	66.78	219.96	1.44	MWD	SF(Med)
22600.00	12790.20	180.00	183.35	76.02	151.96	Mean Green 23-35 Fed Com 2H (p)	65.39	219.96	1.42	MWD	SF(Med)
22661.70	12789.00	180.00	184.46	76.45	152.81	Mean Green 23-35 Fed Com 2H (p)	64.78	220.00	1.42	MWD	SF(Med)
Secondary Well: Mean Green 23 Fed 1H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
0.00	-0.97	8.03	167.83	0.01	0.01	0.25	2473.01	2473.94	2646.02	MWD	
100.00	88.24	97.24	167.83	0.11	0.11	3.01	2473.06	2474.20	2161.21	MWD	
200.00	180.83	189.84	167.84	0.26	0.26	4.62	2473.35	2474.87	1629.87	MWD	
300.00	294.14	303.15	167.86	0.50	0.50	4.65	2473.57	2475.55	1247.77	MWD	
400.00	399.64	408.65	167.88	0.72	0.72	4.70	2473.11	2475.53	1021.24	MWD	
500.00	520.60	529.62	167.90	0.97	0.97	4.76	2472.33	2475.24	852.78	MWD	
600.00	621.34	630.36	167.92	1.19	1.18	4.83	2471.05	2474.39	740.21	MWD	
700.00	719.65	728.68	167.95	1.40	1.40	4.91	2469.71	2473.49	653.98	MWD	
800.00	796.80	805.84	167.97	1.56	1.56	4.97	2468.99	2473.16	593.43	MWD	
900.00	891.15	900.20	168.00	1.76	1.76	5.06	2468.84	2473.43	539.04	MWD	
1000.00	1016.36	1025.42	168.03	2.02	2.01	5.18	2468.03	2473.10	487.53	MWD	
1100.00	1103.32	1112.38	168.06	2.20	2.20	5.28	2467.33	2472.65	464.17	MWD	
1200.00	1179.69	1188.77	168.08	2.37	2.36	5.36	2467.29	2473.00	432.90	MWD	
1300.00	1284.20	1293.28	168.11	2.59	2.58	5.48	2467.63	2473.78	401.89	MWD	
1400.00	1413.32	1422.42	168.15	2.86	2.85	5.65	2467.03	2473.68	371.97	MWD	
1500.00	1515.62	1524.73	168.19	3.07	3.06	5.78	2465.93	2473.02	348.64	MWD	
1600.00	1598.26	1607.38	168.22	3.24	3.23	5.89	2465.13	2472.62	329.98	MWD	
1700.00	1679.43	1688.56	168.24	3.41	3.40	6.00	2465.32	2473.21	313.62	MWD	
1800.00	1780.96	1790.10	168.26	3.63	3.62	6.15	2465.63	2473.95	297.44	MWD	
1900.00	1892.11	1901.25	168.29	3.86	3.85	6.31	2465.95	2474.71	282.29	MWD	
2000.00	1999.89	2009.04	168.30	4.08	4.07	6.48	2465.46	2474.67	268.61	MWD	
2100.00	2098.36	2107.52	168.32	4.29	4.27	6.63	2465.10	2474.74	256.64	MWD	
2200.00	2183.54	2192.69	168.33	4.46	4.45	6.76	2464.98	2475.02	246.33	MWD	
2300.00	2269.43	2278.59	168.33	4.64	4.63	6.90	2465.57	2476.03	236.70	MWD	
2400.00	2360.07	2369.24	168.32	4.83	4.82	7.05	2466.58	2477.45	227.89	MWD	
2500.00	2485.46	2494.66	168.28	5.09	5.08	7.26	2467.57	2478.92	218.38	MWD	
2600.00	2605.44	2614.66	168.22	5.33	5.32	7.46	2467.19	2479.02	209.66	MWD	
2700.00	2717.04	2726.30	168.16	5.56	5.55	7.65	2466.19	2478.47	201.91	MWD	
2800.00	2811.68	2820.98	168.10	5.76	5.75	7.82	2465.20	2477.90	195.14	MWD	
2900.00	2908.03	2917.38	168.02	5.96	5.95	7.99	2464.38	2477.49	188.86	MWD	
3000.00	3002.60	3012.01	167.94	6.15	6.15	8.16	2463.72	2477.27	182.90	MWD	
3100.00	3097.34	3106.85	167.85	6.35	6.35	8.34	2463.33	2477.30	177.31	MWD	
3200.00	3210.57	3220.23	167.71	6.59	6.59	8.55	2462.88	2477.32	171.62	MWD	
3300.00	3330.63	3340.51	347.54	6.85	6.84	8.77	2460.64	2475.50	166.54	MWD	
3400.00	3459.71	3469.89	347.31	7.13	7.11	9.02	2455.88	2471.19	161.42	MWD	
3500.00	3572.97	3583.43	347.10	7.37	7.35	9.25	2448.31	2464.04	156.63	MWD	
3600.00	3658.07	3668.71	346.96	7.55	7.53	9.42	2440.18	2456.26	152.76	MWD	
3700.00	3743.12	3753.86	346.85	7.73	7.71	9.59	2432.68	2449.13	148.89	MWD	
3800.00	3842.87	3853.72	346.72	7.95	7.92	9.80	2425.44	2442.29	144.94	MWD	
3900.00	3950.17	3961.18	346.56	8.19	8.14	10.02	2418.01	2435.26	141.20	MWD	
4000.00	4046.30	4057.52	346.39	8.40	8.35	10.23	2410.37	2428.04	137.40	MWD	
4100.00	4130.27	4141.61	2.97	8.58	8.53	10.41	2403.80	2421.85	134.18	MWD	

## 5D Anti-Collision Report

Secondary Well: Mean Green 23 Fed 1H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
4200.00	4220.86	4232.27	27.83	8.78	8.72	10.61	2398.70	2417.14	131.07	MWD	
4300.00	4318.95	4330.42	54.98	8.98	8.92	10.82	2394.76	2413.64	127.84	MWD	
4400.00	4421.66	4433.23	75.11	9.21	9.14	11.05	2391.69	2411.02	124.74	MWD	
4500.00	4514.63	4526.35	81.11	9.41	9.33	11.27	2389.47	2409.22	122.01	MWD	
4600.00	4599.93	4611.78	81.14	9.60	9.52	11.46	2387.68	2407.81	119.61	MWD	
4700.00	4683.21	4695.21	81.15	9.79	9.69	11.66	2386.45	2407.00	117.14	MWD	
4800.00	4755.80	4768.01	81.14	9.95	9.84	11.83	2386.20	2407.13	115.00	MWD	
4900.00	4845.26	4857.82	81.10	10.16	10.03	12.04	2386.75	2408.10	112.79	MWD	
5000.00	4933.66	4946.58	81.06	10.36	10.22	12.26	2387.72	2409.44	110.92	MWD	
5100.00	5042.84	5056.05	81.06	10.61	10.46	12.53	2388.73	2410.94	108.54	MWD	
5200.00	5157.62	5170.97	81.13	10.86	10.70	12.82	2389.06	2411.77	106.23	MWD	
5300.00	5250.33	5263.75	81.20	11.06	10.90	13.06	2389.34	2412.47	104.33	MWD	
5400.00	5334.15	5347.66	81.25	11.24	11.08	13.27	2390.21	2413.68	102.84	MWD	
5500.00	5421.49	5435.12	81.30	11.43	11.26	13.50	2391.60	2415.49	101.12	MWD	
5600.00	5511.73	5525.48	81.36	11.63	11.46	13.74	2393.43	2417.76	99.38	MWD	
5700.00	5622.47	5636.38	81.43	11.88	11.69	14.04	2395.24	2420.05	97.57	MWD	
5800.00	5737.82	5751.86	81.51	12.13	11.93	14.36	2396.44	2421.72	95.80	MWD	
5900.00	5836.70	5850.83	81.59	12.34	12.14	14.64	2397.25	2422.97	94.23	MWD	
6000.00	5922.06	5936.29	81.64	12.53	12.32	14.88	2398.66	2424.77	92.86	MWD	
6100.00	6025.43	6039.81	81.70	12.76	12.54	15.18	2400.14	2426.72	91.32	MWD	
6200.00	6138.39	6152.91	81.77	13.01	12.78	15.51	2401.39	2428.45	89.74	MWD	
6300.00	6251.50	6266.13	81.84	13.26	13.02	15.85	2401.87	2429.41	88.21	MWD	
6400.00	6358.63	6373.36	81.92	13.49	13.24	16.18	2402.06	2430.07	86.78	MWD	
6500.00	6438.23	6453.03	81.97	13.67	13.41	16.42	2402.52	2430.92	85.59	MWD	
6600.00	6522.00	6536.91	82.02	13.85	13.59	16.68	2403.81	2432.65	84.37	MWD	
6700.00	6615.45	6630.48	82.08	14.06	13.79	16.98	2405.54	2434.83	83.14	MWD	
6800.00	9124.40	11473.31	6.50	48.21	22.23	44.48	2315.54	2347.74	72.92	MWD	
6900.00	9124.40	11473.50	6.41	48.22	22.23	44.48	2215.50	2247.87	69.42	MWD	
7000.00	9124.40	11473.69	6.32	48.22	22.24	44.48	2115.45	2148.02	65.96	MWD	
7100.00	9124.40	11473.88	6.23	48.22	22.24	44.48	2015.42	2048.18	62.53	MWD	
7200.00	9124.40	11474.07	6.14	48.23	22.24	44.48	1915.41	1948.36	59.13	MWD	
7300.00	9124.40	11474.26	6.05	48.23	22.24	44.49	1815.40	1848.55	55.76	MWD	
7400.00	9124.40	11474.45	5.95	48.23	22.24	44.49	1715.40	1748.77	52.40	MWD	
7500.00	9124.40	11474.64	5.86	48.24	22.24	44.49	1615.40	1649.01	49.06	MWD	
7600.00	9124.40	11474.83	5.77	48.24	22.24	44.49	1515.42	1549.29	45.75	MWD	
7700.00	9124.39	11475.02	5.68	48.24	22.24	44.50	1415.47	1449.60	42.47	MWD	
7800.00	9124.39	11475.21	5.59	48.24	22.24	44.50	1315.55	1349.96	39.23	MWD	
7900.00	9124.39	11475.40	5.49	48.25	22.25	44.50	1215.67	1250.38	36.03	MWD	
8000.00	9124.39	11475.59	5.40	48.25	22.25	44.50	1115.85	1150.87	32.87	MWD	
8100.00	9124.39	11475.78	5.31	48.25	22.25	44.51	1016.10	1051.45	29.74	MWD	
8200.00	9124.39	11475.97	5.22	48.26	22.25	44.51	916.44	952.15	26.66	MWD	
8300.00	9124.39	11476.16	5.13	48.26	22.25	44.51	816.89	853.02	23.61	MWD	
8400.00	9124.39	11476.35	5.04	48.26	22.25	44.51	717.46	754.11	20.57	MWD	
8500.00	9124.39	11476.54	4.94	48.27	22.25	44.51	618.14	655.54	17.53	MWD	
8600.00	9124.39	11476.73	4.85	48.27	22.25	44.52	519.17	557.48	14.55	MWD	
8700.00	9124.39	11476.92	4.76	48.27	22.25	44.52	420.73	460.26	11.65	MWD	
8800.00	9124.39	11477.11	4.67	48.28	22.26	44.52	322.81	364.53	8.74	MWD	
8900.00	9124.39	11477.30	4.58	48.28	22.26	44.52	226.38	271.91	5.97	MWD	
9000.00	9124.39	11477.49	4.48	48.28	22.26	44.53	133.94	187.04	3.52	MWD	
9100.00	9124.39	11477.68	4.39	48.29	22.26	44.53	60.41	126.62	1.91	MWD	SF(Lo)
9200.00	9124.39	11477.87	4.30	48.29	22.26	44.53	67.56	130.69	2.07	MWD	SF(Lo)
9300.00	9124.38	11478.06	4.21	48.29	22.26	44.53	145.89	195.27	3.95	MWD	
9400.00	9124.38	11478.25	4.12	48.30	22.26	44.53	238.36	281.38	6.54	MWD	
9500.00	9124.38	11478.44	4.03	48.30	22.26	44.54	334.09	374.47	9.27	MWD	
9600.00	9124.38	11478.63	3.93	48.30	22.26	44.54	431.19	470.40	12.00	MWD	
9700.00	9124.38	11478.82	3.84	48.30	22.27	44.54	528.98	567.73	14.65	MWD	
9800.00	9124.38	11479.01	3.75	48.31	22.27	44.54	627.32	665.86	17.28	MWD	
9900.00	9124.38	11479.20	3.66	48.31	22.27	44.55	725.88	764.47	19.81	MWD	





## 5D Anti-Collision Report

Secondary Well: Mean Green 23 Feb 1H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
21600.00	8930.60	8967.95	357.16	18.76	16.82	25.63	7545.66	7612.87	113.26	MWD	
21700.00	8927.94	8964.65	357.14	18.75	16.85	25.62	7630.70	7698.04	114.31	MWD	
21800.00	8925.32	8961.42	357.13	18.75	16.89	25.61	7716.07	7783.54	115.36	MWD	
21900.00	8922.73	8958.24	357.12	18.75	16.92	25.60	7801.77	7869.36	116.43	MWD	
22000.00	8920.18	8955.11	357.10	18.75	16.95	25.59	7887.79	7955.50	117.50	MWD	
22100.00	8917.66	8952.04	357.09	18.74	16.98	25.58	7974.11	8041.93	118.58	MWD	
22200.00	8915.18	8949.03	357.08	18.74	17.01	25.57	8060.73	8128.66	119.66	MWD	
22300.00	8912.73	8946.07	357.07	18.74	17.04	25.56	8147.64	8215.68	120.75	MWD	
22400.00	8910.31	8943.17	357.05	18.74	17.07	25.56	8234.82	8302.96	121.85	MWD	
22500.00	8907.92	8940.31	357.04	18.73	17.10	25.55	8322.27	8390.52	122.93	MWD	
22600.00	8905.57	8937.51	357.03	18.73	17.13	25.54	8409.97	8478.34	124.01	MWD	
22661.70	8904.13	8935.80	357.03	18.73	17.14	25.53	8464.21	8532.65	124.68	MWD	
Secondary Well: Mean Green 23 Feb 1H (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
0.00	-0.97	8.03	167.83	0.01	0.01	0.15	2473.21	2473.94	3373.08	NSG Cont (Gyro)	
100.00	88.24	97.24	167.83	0.13	0.13	1.72	2473.24	2474.20	2574.60	NSG Cont (Gyro)	
200.00	180.83	189.84	167.84	0.31	0.31	2.63	2473.50	2474.87	1817.41	NSG Cont (Gyro)	
300.00	294.14	303.15	167.86	0.59	0.59	2.63	2473.68	2475.55	1325.67	NSG Cont (Gyro)	
400.00	399.64	408.65	167.88	0.84	0.84	2.64	2473.19	2475.53	1058.25	NSG Cont (Gyro)	
500.00	520.60	529.62	167.90	1.10	1.10	2.64	2472.41	2475.24	874.89	NSG Cont (Gyro)	
600.00	621.34	630.36	167.92	1.31	1.31	2.65	2471.13	2474.39	757.95	NSG Cont (Gyro)	
700.00	719.65	728.68	167.95	1.54	1.54	2.66	2469.78	2473.49	666.00	NSG Cont (Gyro)	
800.00	796.80	805.84	167.97	1.73	1.73	2.66	2469.03	2473.16	598.32	NSG Cont (Gyro)	
900.00	891.15	900.20	168.00	1.98	1.97	2.67	2468.83	2473.43	537.96	NSG Cont (Gyro)	
1000.00	1016.36	1025.42	168.03	2.29	2.29	2.68	2467.97	2473.10	481.35	NSG Cont (Gyro)	
1100.00	1103.32	1112.38	168.06	2.51	2.51	2.69	2467.07	2472.65	442.85	NSG Cont (Gyro)	
1200.00	1179.69	1188.77	168.08	2.70	2.70	2.70	2467.01	2473.00	412.64	NSG Cont (Gyro)	
1300.00	1284.20	1293.28	168.11	2.95	2.95	2.71	2467.31	2473.78	382.04	NSG Cont (Gyro)	
1400.00	1413.32	1422.42	168.15	3.28	3.28	2.72	2466.65	2473.68	351.98	NSG Cont (Gyro)	
1500.00	1515.62	1524.73	168.19	3.54	3.54	2.73	2465.51	2473.02	329.37	NSG Cont (Gyro)	
1600.00	1598.26	1607.38	168.22	3.74	3.74	2.74	2464.69	2472.62	311.56	NSG Cont (Gyro)	
1700.00	1679.43	1688.56	168.24	3.94	3.94	2.75	2464.84	2473.21	295.81	NSG Cont (Gyro)	
1800.00	1780.96	1790.10	168.26	4.18	4.18	2.76	2465.12	2473.95	280.11	NSG Cont (Gyro)	
1900.00	1892.11	1901.25	168.29	4.45	4.45	2.78	2465.39	2474.71	265.43	NSG Cont (Gyro)	
2000.00	1999.89	2009.04	168.30	4.72	4.72	2.79	2464.85	2474.67	251.97	NSG Cont (Gyro)	
2100.00	2098.36	2107.52	168.32	4.98	4.98	2.80	2464.44	2474.74	240.16	NSG Cont (Gyro)	
2200.00	2183.54	2192.69	168.33	5.19	5.18	2.82	2464.30	2475.02	230.71	NSG Cont (Gyro)	
2300.00	2269.43	2278.59	168.33	5.34	5.34	2.83	2464.93	2476.03	223.03	NSG Cont (Gyro)	
2400.00	2360.07	2369.24	168.32	5.45	5.45	2.84	2466.00	2477.45	216.35	NSG Cont (Gyro)	

## 5D Anti-Collision Report

Secondary Well: Mean Green 23 Feb 1H (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
2500.00	2485.46	2494.66	168.28	5.53	5.52	2.86	2467.19	2478.92	211.23	NSG Cont (Gyro)	
2600.00	2605.44	2614.66	168.22	5.55	5.55	2.88	2467.02	2479.02	206.69	NSG Cont (Gyro)	
2700.00	2717.04	2726.30	168.16	5.58	5.58	2.90	2466.22	2478.47	202.42	NSG Cont (Gyro)	
2800.00	2811.68	2820.98	168.10	5.62	5.61	2.91	2465.40	2477.90	198.21	NSG Cont (Gyro)	
2900.00	2908.03	2917.38	168.02	5.67	5.66	2.93	2464.72	2477.49	193.90	NSG Cont (Gyro)	
3000.00	3002.60	3012.01	167.94	5.73	5.72	2.95	2464.21	2477.27	189.71	NSG Cont (Gyro)	
3100.00	3097.34	3106.85	167.85	5.80	5.79	2.96	2463.94	2477.30	185.41	NSG Cont (Gyro)	
3200.00	3210.57	3220.23	167.71	5.90	5.88	2.99	2463.63	2477.32	180.95	NSG Cont (Gyro)	
3300.00	3330.63	3340.51	347.54	6.01	6.00	3.01	2461.52	2475.50	177.04	NSG Cont (Gyro)	
3400.00	3459.71	3469.89	347.31	6.15	6.14	3.05	2456.90	2471.19	172.90	NSG Cont (Gyro)	
3500.00	3572.97	3583.43	347.10	6.29	6.27	3.08	2449.45	2464.04	168.92	NSG Cont (Gyro)	
3600.00	3658.07	3668.71	346.96	6.41	6.39	3.10	2441.35	2456.26	164.79	NSG Cont (Gyro)	
3700.00	3743.12	3753.86	346.85	6.52	6.51	3.13	2433.93	2449.13	161.19	NSG Cont (Gyro)	
3800.00	3842.87	3853.72	346.72	6.67	6.65	3.16	2426.77	2442.29	157.36	NSG Cont (Gyro)	
3900.00	3950.17	3961.18	346.56	6.83	6.81	3.20	2419.42	2435.26	153.71	NSG Cont (Gyro)	
4000.00	4046.30	4057.52	346.39	6.99	6.96	3.23	2411.83	2428.04	149.81	NSG Cont (Gyro)	
4100.00	4130.27	4141.61	2.97	7.13	7.10	3.27	2405.31	2421.85	146.38	NSG Cont (Gyro)	
4200.00	4220.86	4232.27	27.83	7.28	7.25	3.30	2400.24	2417.14	143.01	NSG Cont (Gyro)	
4300.00	4318.95	4330.42	54.98	7.46	7.42	3.34	2396.34	2413.64	139.47	NSG Cont (Gyro)	
4400.00	4421.66	4433.23	75.11	7.64	7.61	3.39	2393.30	2411.02	136.08	NSG Cont (Gyro)	
4500.00	4514.63	4526.35	81.11	7.82	7.77	3.43	2391.12	2409.22	133.08	NSG Cont (Gyro)	
4600.00	4599.93	4611.78	81.14	7.98	7.94	3.47	2389.35	2407.81	130.41	NSG Cont (Gyro)	
4700.00	4683.21	4695.21	81.15	8.14	8.09	3.51	2388.14	2407.00	127.63	NSG Cont (Gyro)	
4800.00	4755.80	4768.01	81.14	8.29	8.23	3.55	2387.91	2407.13	125.22	NSG Cont (Gyro)	
4900.00	4845.26	4857.82	81.10	8.47	8.40	3.60	2388.48	2408.10	122.73	NSG Cont (Gyro)	
5000.00	4933.66	4946.58	81.06	8.65	8.58	3.66	2389.46	2409.44	120.59	NSG Cont (Gyro)	
5100.00	5042.84	5056.05	81.06	8.88	8.81	3.73	2390.50	2410.94	117.94	NSG Cont (Gyro)	
5200.00	5157.62	5170.97	81.13	9.12	9.05	3.80	2390.84	2411.77	115.25	NSG Cont (Gyro)	
5300.00	5250.33	5263.75	81.20	9.32	9.24	3.86	2391.13	2412.47	113.05	NSG Cont (Gyro)	
5400.00	5334.15	5347.66	81.25	9.50	9.42	3.92	2391.96	2413.68	111.10	NSG Cont (Gyro)	
5500.00	5421.49	5435.12	81.30	9.68	9.60	3.98	2393.35	2415.49	109.11	NSG Cont (Gyro)	
5600.00	5511.73	5525.48	81.36	9.88	9.79	4.05	2395.18	2417.76	107.10	NSG Cont (Gyro)	
5700.00	5622.47	5636.38	81.43	10.12	10.03	4.13	2397.00	2420.05	104.99	NSG Cont (Gyro)	
5800.00	5737.82	5751.86	81.51	10.37	10.28	4.23	2398.19	2421.72	102.91	NSG Cont (Gyro)	
5900.00	5836.70	5850.83	81.59	10.60	10.50	4.31	2398.99	2422.97	101.07	NSG Cont (Gyro)	

## 5D Anti-Collision Report

Secondary Well: Mean Green 23 Feb 1H (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											Survey Tool	Risk
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF			
6000.00	5922.06	5936.29	81.64	10.79	10.69	4.38	2400.39	2424.77	99.46	NSG Cont (Gyro)		
6100.00	6025.43	6039.81	81.70	11.02	10.92	4.47	2401.87	2426.72	97.67	NSG Cont (Gyro)		
6200.00	6138.39	6152.91	81.77	11.29	11.18	4.58	2403.11	2428.45	95.82	NSG Cont (Gyro)		
6300.00	6251.50	6266.13	81.84	11.55	11.44	4.69	2403.57	2429.41	94.02	NSG Cont (Gyro)		
6400.00	6358.63	6373.36	81.92	11.80	11.68	4.80	2403.75	2430.07	92.34	NSG Cont (Gyro)		
6500.00	6438.23	6453.03	81.97	11.99	11.87	4.88	2404.19	2430.92	90.94	NSG Cont (Gyro)		
6600.00	6522.00	6536.91	82.02	12.19	12.06	4.97	2405.47	2432.65	89.52	NSG Cont (Gyro)		
6700.00	6615.45	6630.48	82.08	12.41	12.28	5.07	2407.18	2434.83	88.08	NSG Cont (Gyro)		
6800.00	9124.21	11449.25	13.38	46.10	21.94	43.88	2318.00	2349.96	73.54	MWD (Wft MWD Svy)		
6900.00	9124.21	11450.50	12.88	46.13	21.94	43.89	2217.98	2250.14	69.95	MWD (Wft MWD Svy)		
7000.00	9124.22	11451.72	12.38	46.14	21.95	43.91	2117.96	2150.35	66.41	MWD (Wft MWD Svy)		
7100.00	9124.23	11452.91	11.89	46.16	21.96	43.92	2017.96	2050.57	62.90	MWD (Wft MWD Svy)		
7200.00	9124.23	11454.08	11.42	46.18	21.96	43.94	1917.98	1950.81	59.42	MWD (Wft MWD Svy)		
7300.00	9124.24	11455.22	10.95	46.20	21.97	43.95	1818.01	1851.08	55.98	MWD (Wft MWD Svy)		
7400.00	9124.24	11456.33	10.50	46.22	21.98	43.96	1718.06	1751.37	52.58	MWD (Wft MWD Svy)		
7500.00	9124.25	11457.42	10.05	46.24	21.98	43.98	1618.14	1651.71	49.21	MWD (Wft MWD Svy)		
7600.00	9124.25	11458.48	9.61	46.25	21.99	43.99	1518.25	1552.08	45.88	MWD (Wft MWD Svy)		
7700.00	9124.25	11459.52	9.19	46.27	22.00	44.00	1418.40	1452.51	42.59	MWD (Wft MWD Svy)		
7800.00	9124.26	11460.54	8.77	46.29	22.00	44.01	1318.60	1353.00	39.34	MWD (Wft MWD Svy)		
7900.00	9124.26	11461.53	8.36	46.30	22.01	44.02	1218.86	1253.56	36.13	MWD (Wft MWD Svy)		
8000.00	9124.27	11462.51	7.95	46.32	22.01	44.04	1119.20	1154.22	32.96	MWD (Wft MWD Svy)		
8100.00	9124.27	11463.46	7.56	46.33	22.02	44.05	1019.64	1055.01	29.83	MWD (Wft MWD Svy)		
8200.00	9124.27	11464.39	7.17	46.35	22.03	44.06	920.18	955.96	26.72	MWD (Wft MWD Svy)		
8300.00	9124.28	11465.31	6.79	46.36	22.03	44.07	820.79	857.13	23.59	MWD (Wft MWD Svy)		
8400.00	9124.28	11466.20	6.42	46.38	22.04	44.08	721.60	758.60	20.50	MWD (Wft MWD Svy)		
8500.00	9124.28	11467.08	6.06	46.39	22.04	44.09	622.74	660.52	17.48	MWD (Wft MWD Svy)		
8600.00	9124.29	11467.94	5.70	46.41	22.05	44.10	524.40	563.11	14.55	MWD (Wft MWD Svy)		
8700.00	9124.29	11468.78	5.35	46.42	22.05	44.11	426.46	466.79	11.57	MWD (Wft MWD Svy)		
8800.00	9124.29	11469.61	5.01	46.43	22.06	44.12	329.82	372.43	8.74	MWD (Wft MWD Svy)		
8900.00	9124.29	11470.42	4.67	46.45	22.06	44.13	235.25	281.96	6.04	MWD (Wft MWD Svy)		
9000.00	9124.30	11471.21	4.34	46.46	22.07	44.14	146.40	200.76	3.69	MWD (Wft MWD Svy)		
9100.00	9124.30	11471.99	4.02	46.47	22.07	44.15	80.19	145.28	2.23	MWD (Wft MWD Svy)	SF(Lo)	
9200.00	9124.30	11472.76	3.70	46.48	22.08	44.16	85.37	148.00	2.36	MWD (Wft MWD Svy)	SF(Lo)	
9300.00	9124.30	11473.51	3.39	46.50	22.08	44.16	155.92	206.64	4.07	MWD (Wft MWD Svy)		
9400.00	9124.30	11474.24	3.08	46.51	22.08	44.17	245.11	288.96	6.59	MWD (Wft MWD Svy)		

## 5D Anti-Collision Report

Secondary Well: Mean Green 23 Feb 1H (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
9500.00	9124.31	11474.97	2.78	46.52	22.09	44.18	339.05	379.86	9.31	MWD (Wft MWD Svy)	
9600.00	9124.31	11475.67	2.48	46.53	22.09	44.19	435.03	474.44	12.04	MWD (Wft MWD Svy)	
9700.00	9124.31	11476.37	2.19	46.54	22.10	44.20	532.05	570.86	14.71	MWD (Wft MWD Svy)	
9800.00	9124.31	11477.06	1.91	46.55	22.10	44.21	629.85	668.34	17.37	MWD (Wft MWD Svy)	
9900.00	9124.31	11477.73	1.63	46.56	22.11	44.21	728.00	766.46	19.93	MWD (Wft MWD Svy)	
10000.00	9124.32	11478.39	1.36	46.57	22.11	44.22	826.46	865.02	22.44	MWD (Wft MWD Svy)	
10100.00	9124.32	11479.04	1.09	46.58	22.11	44.23	925.20	963.87	24.93	MWD (Wft MWD Svy)	
10200.00	9124.32	11479.68	0.82	46.60	22.12	44.24	1024.13	1062.94	27.39	MWD (Wft MWD Svy)	
10300.00	9124.32	11480.30	0.56	46.61	22.12	44.25	1123.21	1162.16	29.83	MWD (Wft MWD Svy)	
10400.00	9124.32	11480.92	0.31	46.62	22.12	44.25	1222.36	1261.51	32.22	MWD (Wft MWD Svy)	
10500.00	9124.32	11481.52	0.06	46.63	22.13	44.26	1321.56	1360.96	34.54	MWD (Wft MWD Svy)	
10600.00	9124.32	11482.12	359.81	46.63	22.13	44.27	1420.80	1460.47	36.81	MWD (Wft MWD Svy)	
10700.00	9124.32	11482.71	359.57	46.64	22.14	44.27	1520.10	1560.05	39.04	MWD (Wft MWD Svy)	
10800.00	9124.33	11483.28	359.33	46.65	22.14	44.28	1619.44	1659.68	41.24	MWD (Wft MWD Svy)	
10900.00	9124.33	11483.85	359.10	46.66	22.14	44.29	1718.83	1759.36	43.41	MWD (Wft MWD Svy)	
11000.00	9124.33	11484.41	358.87	46.67	22.15	44.29	1818.25	1859.06	45.55	MWD (Wft MWD Svy)	
11100.00	9124.33	11484.95	358.64	46.68	22.15	44.30	1917.70	1958.80	47.66	MWD (Wft MWD Svy)	
11200.00	9124.33	11485.49	358.42	46.69	22.15	44.31	2017.17	2058.56	49.74	MWD (Wft MWD Svy)	
11300.00	9124.33	11486.03	358.20	46.70	22.15	44.31	2116.67	2158.35	51.78	MWD (Wft MWD Svy)	
11400.00	9124.33	11486.55	357.98	46.71	22.16	44.32	2216.17	2258.15	53.79	MWD (Wft MWD Svy)	
11500.00	9124.33	11487.06	357.77	46.71	22.16	44.32	2315.69	2357.97	55.78	MWD (Wft MWD Svy)	
11600.00	9124.33	11487.57	357.56	46.72	22.16	44.33	2415.23	2457.80	57.73	MWD (Wft MWD Svy)	
11700.00	9124.33	11488.07	357.36	46.73	22.17	44.34	2514.77	2557.65	59.65	MWD (Wft MWD Svy)	
11800.00	9124.34	11488.56	357.16	46.74	22.17	44.34	2614.32	2657.51	61.54	MWD (Wft MWD Svy)	
11900.00	9124.34	11489.05	356.96	46.75	22.17	44.35	2713.88	2757.38	63.39	MWD (Wft MWD Svy)	
12000.00	9124.34	11489.51	355.92	46.75	22.18	44.35	2813.46	2857.27	65.22	MWD (Wft MWD Svy)	
12100.00	9124.34	11489.88	352.10	46.76	22.18	44.36	2913.10	2957.22	67.02	MWD (Wft MWD Svy)	
12200.00	9124.34	11490.15	308.03	46.76	22.18	44.36	3012.78	3057.22	68.79	MWD (Wft MWD Svy)	
12300.00	9124.34	11490.34	190.31	46.77	22.18	44.36	3112.45	3157.21	70.53	MWD (Wft MWD Svy)	
12400.00	9124.33	11487.62	10.53	46.72	22.16	44.33	3211.99	3257.06	72.27	MWD (Wft MWD Svy)	
12500.00	9124.30	11472.53	4.08	46.48	22.07	44.15	3309.67	3354.95	74.09	MWD (Wft MWD Svy)	
12600.00	9124.18	11444.93	2.52	46.04	21.91	43.83	3402.60	3448.01	75.92	MWD (Wft MWD Svy)	
12700.00	9123.87	11401.03	1.83	45.32	21.65	43.31	3488.11	3533.53	77.81	MWD (Wft MWD Svy)	
12800.00	9123.68	11302.66	1.46	43.63	21.09	42.17	3563.38	3608.46	80.05	MWD (Wft MWD Svy)	
12900.00	9123.76	11231.57	1.28	42.51	20.68	41.36	3625.73	3670.59	81.82	MWD (Wft MWD Svy)	

## SD Anti-Collision Report

Secondary Well: Mean Green 23 Fed 1H (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											Survey Tool	Risk
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF			
13000.00	9123.58	11176.84	1.18	41.64	20.36	40.74	3673.94	3718.64	83.20	MWD (Wft MWD Svy)		
13100.00	9122.71	11115.37	1.14	40.67	20.01	40.05	3707.25	3751.72	84.37	MWD (Wft MWD Svy)		
13200.00	9121.28	10953.30	1.18	38.20	19.14	38.28	3723.76	3767.45	86.23	MWD (Wft MWD Svy)		
13300.00	9122.36	10796.40	1.23	35.90	18.33	36.63	3725.46	3768.48	87.61	MWD (Wft MWD Svy)		
13400.00	9125.29	10654.34	1.26	33.83	17.62	35.21	3724.86	3767.29	88.78	MWD (Wft MWD Svy)		
13500.00	9128.15	10548.22	1.29	32.30	17.11	34.19	3723.43	3765.50	89.51	MWD (Wft MWD Svy)		
13600.00	9129.85	10475.13	1.29	31.32	16.77	33.52	3722.15	3764.04	89.87	MWD (Wft MWD Svy)		
13700.00	9130.95	10404.62	1.28	30.36	16.45	32.88	3721.58	3763.32	90.16	MWD (Wft MWD Svy)		
13800.00	9131.89	10304.61	1.25	28.98	16.01	32.02	3721.68	3763.20	90.63	MWD (Wft MWD Svy)		
13900.00	9132.72	10227.11	1.22	27.92	15.69	31.38	3721.51	3763.01	90.67	MWD (Wft MWD Svy)		
14000.00	9132.74	10163.04	1.21	27.06	15.43	30.87	3722.27	3763.80	90.63	MWD (Wft MWD Svy)		
14100.00	9132.20	10089.20	1.20	26.06	15.14	30.30	3723.87	3765.38	90.71	MWD (Wft MWD Svy)		
14200.00	9131.13	9977.68	1.20	24.72	14.75	29.51	3725.86	3767.21	91.09	MWD (Wft MWD Svy)		
14300.00	9131.03	9823.35	1.20	23.03	14.26	28.53	3727.05	3768.16	91.66	MWD (Wft MWD Svy)		
14400.00	9131.31	9748.09	1.14	22.43	14.04	28.11	3727.28	3768.57	91.26	MWD (Wft MWD Svy)		
14500.00	9131.60	9636.24	0.92	21.53	13.77	27.55	3727.56	3768.92	91.13	MWD (Wft MWD Svy)		
14600.00	9131.30	9606.10	0.81	21.29	13.69	27.42	3728.71	3770.41	90.42	MWD (Wft MWD Svy)		
14700.00	9130.38	9571.70	0.67	20.92	13.61	27.27	3731.74	3773.72	89.89	MWD (Wft MWD Svy)		
14800.00	9125.57	9432.02	359.96	19.65	13.35	26.75	3736.09	3778.23	89.68	MWD (Wft MWD Svy)		
14900.00	9124.32	9383.92	359.64	19.16	13.28	26.60	3739.69	3782.25	88.86	MWD (Wft MWD Svy)		
15000.00	9123.66	9367.53	359.54	19.01	13.25	26.56	3745.14	3788.18	88.02	MWD (Wft MWD Svy)		
15100.00	9123.01	9357.23	359.47	18.91	13.24	26.53	3753.00	3796.47	87.34	MWD (Wft MWD Svy)		
15200.00	9122.15	9347.01	359.40	18.82	13.23	26.50	3763.06	3807.12	86.41	MWD (Wft MWD Svy)		
15300.00	9121.24	9338.27	359.35	18.75	13.23	26.48	3775.63	3820.14	85.83	MWD (Wft MWD Svy)		
15400.00	9120.27	9330.51	359.30	18.68	13.23	26.46	3790.40	3835.53	84.99	MWD (Wft MWD Svy)		
15500.00	9119.14	9322.82	359.24	18.62	13.24	26.45	3807.65	3853.28	84.44	MWD (Wft MWD Svy)		
15600.00	9117.87	9315.21	359.19	18.55	13.25	26.43	3827.25	3873.36	84.01	MWD (Wft MWD Svy)		
15700.00	9116.48	9307.74	359.14	18.49	13.27	26.41	3848.95	3895.73	83.28	MWD (Wft MWD Svy)		
15800.00	9114.96	9300.40	359.09	18.43	13.29	26.39	3872.97	3920.36	82.73	MWD (Wft MWD Svy)		
15900.00	9113.33	9293.15	359.05	18.38	13.31	26.38	3899.26	3947.21	82.33	MWD (Wft MWD Svy)		
16000.00	9111.58	9286.02	359.00	18.32	13.33	26.36	3927.78	3976.24	82.06	MWD (Wft MWD Svy)		
16100.00	9109.59	9278.48	358.95	18.27	13.36	26.34	3958.47	4007.40	81.90	MWD (Wft MWD Svy)		
16200.00	9106.65	9268.02	358.88	18.19	13.38	26.32	3990.45	4039.98	81.58	MWD (Wft MWD Svy)		
16300.00	9103.56	9257.67	358.82	18.12	13.41	26.29	4022.84	4072.96	81.25	MWD (Wft MWD Svy)		
16400.00	9100.42	9247.69	358.75	18.05	13.44	26.27	4056.77	4107.47	81.00	MWD (Wft MWD Svy)		

## 5D Anti-Collision Report

Secondary Well: Mean Green 23 Feb 1H (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
16500.00	9097.62	9239.23	358.69	18.00	13.47	26.25	4092.67	4143.93	80.85	MWD (Wft MWD Svy)	
16600.00	9094.73	9230.92	358.64	17.94	13.51	26.24	4130.51	4182.29	80.78	MWD (Wft MWD Svy)	
16700.00	9091.77	9222.77	358.58	17.89	13.54	26.22	4170.24	4222.51	80.79	MWD (Wft MWD Svy)	
16800.00	9088.99	9215.42	358.53	17.85	13.58	26.21	4211.81	4264.54	80.88	MWD (Wft MWD Svy)	
16900.00	9086.80	9209.86	358.50	17.82	13.62	26.20	4255.21	4308.37	81.05	MWD (Wft MWD Svy)	
17000.00	9084.56	9204.39	358.46	17.79	13.67	26.19	4300.36	4353.95	81.25	MWD (Wft MWD Svy)	
17100.00	9082.27	9199.02	358.42	17.76	13.72	26.18	4347.13	4401.24	81.33	MWD (Wft MWD Svy)	
17200.00	9079.95	9193.75	358.39	17.73	13.76	26.17	4395.56	4450.18	81.48	MWD (Wft MWD Svy)	
17300.00	9077.60	9188.58	358.35	17.70	13.81	26.16	4445.62	4500.72	81.69	MWD (Wft MWD Svy)	
17400.00	9074.79	9182.60	358.32	17.67	13.86	26.14	4497.25	4552.80	81.96	MWD (Wft MWD Svy)	
17500.00	9071.53	9175.81	358.27	17.64	13.90	26.13	4550.38	4606.36	82.29	MWD (Wft MWD Svy)	
17600.00	9068.25	9169.17	358.23	17.61	13.94	26.12	4604.95	4661.34	82.67	MWD (Wft MWD Svy)	
17700.00	9064.96	9162.67	358.19	17.58	13.99	26.10	4660.92	4717.69	83.10	MWD (Wft MWD Svy)	
17800.00	9061.67	9156.31	358.14	17.55	14.03	26.09	4718.24	4775.38	83.58	MWD (Wft MWD Svy)	
17900.00	9058.55	9150.42	358.11	17.52	14.07	26.08	4776.85	4834.35	84.08	MWD (Wft MWD Svy)	
18000.00	9055.54	9144.84	358.07	17.50	14.12	26.07	4836.71	4894.57	84.59	MWD (Wft MWD Svy)	
18100.00	9052.54	9139.39	358.03	17.48	14.16	26.06	4897.79	4955.99	85.14	MWD (Wft MWD Svy)	
18200.00	9049.55	9134.06	358.00	17.46	14.20	26.05	4960.03	5018.59	85.71	MWD (Wft MWD Svy)	
18300.00	9046.57	9128.84	357.97	17.44	14.25	26.04	5023.42	5082.30	86.32	MWD (Wft MWD Svy)	
18400.00	9043.60	9123.74	357.93	17.42	14.29	26.03	5087.91	5147.10	86.96	MWD (Wft MWD Svy)	
18500.00	9040.52	9118.52	357.90	17.40	14.33	26.02	5153.47	5212.95	87.64	MWD (Wft MWD Svy)	
18600.00	9037.37	9113.29	357.87	17.38	14.38	26.00	5220.04	5279.80	88.35	MWD (Wft MWD Svy)	
18700.00	9034.22	9108.14	357.84	17.37	14.43	25.99	5287.60	5347.62	89.10	MWD (Wft MWD Svy)	
18800.00	9031.08	9103.09	357.81	17.35	14.48	25.98	5356.10	5416.38	89.85	MWD (Wft MWD Svy)	
18900.00	9027.95	9098.13	357.78	17.33	14.53	25.97	5425.48	5486.04	90.58	MWD (Wft MWD Svy)	
19000.00	9024.83	9093.27	357.75	17.32	14.58	25.96	5495.73	5556.57	91.34	MWD (Wft MWD Svy)	
19100.00	9021.23	9087.75	357.71	17.30	14.62	25.95	5566.82	5627.93	92.09	MWD (Wft MWD Svy)	
19200.00	9017.23	9081.67	357.68	17.28	14.66	25.94	5638.70	5700.09	92.86	MWD (Wft MWD Svy)	
19300.00	9013.27	9075.72	357.65	17.27	14.70	25.92	5711.34	5773.01	93.61	MWD (Wft MWD Svy)	
19400.00	9009.34	9069.89	357.61	17.25	14.74	25.91	5784.73	5846.66	94.40	MWD (Wft MWD Svy)	
19500.00	9005.44	9064.18	357.58	17.24	14.77	25.90	5858.85	5921.04	95.21	MWD (Wft MWD Svy)	
19600.00	9001.62	9058.62	357.55	17.23	14.81	25.88	5933.67	5996.09	96.05	MWD (Wft MWD Svy)	
19700.00	8998.18	9053.69	357.52	17.21	14.86	25.87	6009.17	6071.82	96.91	MWD (Wft MWD Svy)	
19800.00	8994.77	9048.84	357.50	17.20	14.91	25.86	6085.32	6148.19	97.80	MWD (Wft MWD Svy)	
19900.00	8991.37	9044.07	357.47	17.19	14.95	25.85	6162.11	6225.18	98.70	MWD (Wft MWD Svy)	

## 5D Anti-Collision Report

Secondary Well: Mean Green 23 Fed 1H (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
20000.00	8987.99	9039.39	357.45	17.18	15.00	25.84	6239.52	6302.78	99.63	MWD (Wft MWD Svy)	
20100.00	8984.64	9034.78	357.42	17.17	15.04	25.83	6317.50	6380.96	100.55	MWD (Wft MWD Svy)	
20200.00	8981.31	9030.26	357.40	17.16	15.09	25.82	6396.04	6459.69	101.47	MWD (Wft MWD Svy)	
20300.00	8977.95	9025.74	357.38	17.15	15.13	25.81	6475.13	6538.97	102.41	MWD (Wft MWD Svy)	
20400.00	8974.57	9021.22	357.36	17.15	15.17	25.80	6554.75	6618.77	103.37	MWD (Wft MWD Svy)	
20500.00	8971.21	9016.79	357.34	17.14	15.21	25.79	6634.88	6699.08	104.34	MWD (Wft MWD Svy)	
20600.00	8967.88	9012.43	357.32	17.13	15.26	25.77	6715.50	6779.87	105.33	MWD (Wft MWD Svy)	
20700.00	8964.58	9008.14	357.30	17.12	15.30	25.76	6796.61	6861.14	106.33	MWD (Wft MWD Svy)	
20800.00	8961.31	9003.93	357.28	17.12	15.34	25.75	6878.17	6942.86	107.34	MWD (Wft MWD Svy)	
20900.00	8958.08	8999.79	357.27	17.11	15.38	25.74	6960.19	7025.02	108.36	MWD (Wft MWD Svy)	
21000.00	8954.84	8995.69	357.25	17.10	15.41	25.73	7042.63	7107.60	109.40	MWD (Wft MWD Svy)	
21100.00	8951.28	8991.19	357.23	17.10	15.45	25.72	7125.49	7190.60	110.44	MWD (Wft MWD Svy)	
21200.00	8947.75	8986.78	357.21	17.09	15.48	25.71	7208.74	7273.99	111.49	MWD (Wft MWD Svy)	
21300.00	8944.27	8982.44	357.20	17.08	15.51	25.70	7292.39	7357.76	112.55	MWD (Wft MWD Svy)	
21400.00	8940.83	8978.19	357.18	17.08	15.54	25.68	7376.39	7441.90	113.59	MWD (Wft MWD Svy)	
21500.00	8937.43	8974.01	357.17	17.07	15.57	25.67	7460.75	7526.40	114.64	MWD (Wft MWD Svy)	
21600.00	8934.07	8969.90	357.15	17.07	15.60	25.66	7545.47	7611.25	115.70	MWD (Wft MWD Svy)	
21700.00	8930.76	8965.87	357.14	17.06	15.63	25.65	7630.53	7696.44	116.77	MWD (Wft MWD Svy)	
21800.00	8927.88	8962.39	357.13	17.06	15.66	25.64	7715.92	7781.96	117.84	MWD (Wft MWD Svy)	
21900.00	8925.16	8959.11	357.11	17.06	15.68	25.63	7801.63	7867.79	118.93	MWD (Wft MWD Svy)	
22000.00	8922.48	8955.90	357.10	17.06	15.71	25.62	7887.66	7953.94	120.02	MWD (Wft MWD Svy)	
22100.00	8919.83	8952.74	357.09	17.05	15.73	25.61	7974.00	8040.38	121.11	MWD (Wft MWD Svy)	
22200.00	8917.22	8949.64	357.08	17.05	15.76	25.60	8060.62	8127.12	122.22	MWD (Wft MWD Svy)	
22300.00	8914.65	8946.60	357.07	17.05	15.78	25.60	8147.54	8214.14	123.33	MWD (Wft MWD Svy)	
22400.00	8912.12	8943.61	357.06	17.05	15.80	25.59	8234.73	8301.44	124.44	MWD (Wft MWD Svy)	
22500.00	8909.62	8940.68	357.05	17.04	15.82	25.58	8322.19	8389.01	125.56	MWD (Wft MWD Svy)	
22600.00	8907.16	8937.80	357.05	17.04	15.84	25.57	8409.92	8476.83	126.68	MWD (Wft MWD Svy)	
22661.70	8905.66	8936.05	357.04	17.04	15.86	25.57	8464.17	8531.14	127.38	MWD (Wft MWD Svy)	

Secondary Well: Mean Green 26 Fed 1H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
0.00	2.85	11.85	168.06	0.02	0.02	0.38	2522.02	2522.96	2686.15	MWD	
100.00	134.50	143.51	168.04	0.17	0.16	4.56	2521.01	2522.22	2095.94	MWD	
200.00	234.65	243.67	168.01	0.37	0.37	4.63	2519.35	2520.98	1549.01	MWD	
300.00	329.59	338.63	167.98	0.57	0.57	4.66	2517.68	2519.73	1227.34	MWD	
400.00	420.24	429.30	167.95	0.76	0.75	4.71	2516.31	2518.77	1022.79	MWD	
500.00	519.08	528.14	167.92	0.96	0.96	4.76	2514.95	2517.84	870.28	MWD	
600.00	616.81	625.88	167.91	1.17	1.16	4.83	2513.75	2517.08	757.59	MWD	
700.00	717.01	726.08	167.90	1.38	1.37	4.90	2512.74	2516.50	669.92	MWD	









## 5D Anti-Collision Report

Secondary Well: Mean Green 26 Fed 1H (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
400.00	420.24	429.30	167.95	0.76	0.75	4.71	2516.51	2518.77	1114.73	MWD (Extreme Svy)	
500.00	519.08	528.14	167.92	0.96	0.96	4.76	2515.15	2517.84	935.99	MWD (Extreme Svy)	
600.00	616.81	625.88	167.91	1.17	1.16	4.83	2513.96	2517.08	806.92	MWD (Extreme Svy)	
700.00	717.01	726.08	167.90	1.38	1.37	4.90	2512.95	2516.50	708.22	MWD (Extreme Svy)	
800.00	807.81	816.89	167.90	1.57	1.56	4.98	2512.05	2516.01	634.42	MWD (Extreme Svy)	
900.00	908.06	917.13	167.90	1.79	1.78	5.07	2511.30	2515.71	570.80	MWD (Extreme Svy)	
1000.00	1005.50	1014.57	167.91	1.99	1.98	5.17	2510.48	2515.32	519.98	MWD (Extreme Svy)	
1100.00	1095.70	1104.77	167.91	2.17	2.17	5.27	2510.22	2515.47	479.28	MWD (Extreme Svy)	
1200.00	1203.44	1212.52	167.90	2.40	2.39	5.39	2509.60	2515.29	441.46	MWD (Extreme Svy)	
1300.00	1301.31	1310.39	167.91	2.60	2.60	5.51	2509.16	2515.28	410.56	MWD (Extreme Svy)	
1400.00	1406.50	1415.58	167.90	2.82	2.82	5.64	2508.55	2515.12	382.94	MWD (Extreme Svy)	
1500.00	1500.88	1509.96	167.91	3.02	3.02	5.76	2507.92	2514.92	359.59	MWD (Extreme Svy)	
1600.00	1602.84	1611.92	167.90	3.23	3.23	5.90	2507.48	2514.91	338.38	MWD (Extreme Svy)	
1700.00	1704.29	1713.37	167.91	3.45	3.44	6.04	2506.88	2514.75	319.45	MWD (Extreme Svy)	
1800.00	1792.89	1801.97	167.91	3.63	3.63	6.17	2506.51	2514.79	303.62	MWD (Extreme Svy)	
1900.00	1890.44	1899.52	167.91	3.84	3.84	6.31	2506.43	2515.14	288.75	MWD (Extreme Svy)	
2000.00	1977.40	1986.49	167.90	4.02	4.02	6.44	2506.66	2515.77	276.24	MWD (Extreme Svy)	
2100.00	2080.45	2089.54	167.89	4.24	4.23	6.60	2507.10	2516.66	263.28	MWD (Extreme Svy)	
2200.00	2175.71	2184.80	167.88	4.43	4.43	6.75	2507.55	2517.52	252.47	MWD (Extreme Svy)	
2300.00	2276.63	2285.73	167.86	4.64	4.64	6.91	2508.06	2518.47	241.82	MWD (Extreme Svy)	
2400.00	2375.73	2384.85	167.82	4.85	4.85	7.07	2508.57	2519.42	232.33	MWD (Extreme Svy)	
2500.00	2474.46	2483.61	167.78	5.06	5.05	7.24	2509.14	2520.40	223.81	MWD (Extreme Svy)	
2600.00	2571.46	2580.64	167.73	5.26	5.26	7.40	2509.81	2521.51	215.53	MWD (Extreme Svy)	
2700.00	2683.03	2692.25	167.66	5.50	5.49	7.59	2510.22	2522.39	207.30	MWD (Extreme Svy)	

## 5D Anti-Collision Report

Secondary Well: Mean Green 26 Fed 1H (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
2800.00	2786.05	2795.32	167.59	5.72	5.71	7.77	2510.35	2522.95	200.17	MWD (Extreme Svy)	
2900.00	2895.39	2904.73	167.50	5.95	5.94	7.97	2510.41	2523.46	193.35	MWD (Extreme Svy)	
3000.00	3009.33	3018.75	167.41	6.20	6.18	8.18	2509.77	2523.29	186.62	MWD (Extreme Svy)	
3100.00	3110.19	3119.70	167.31	6.42	6.39	8.36	2508.90	2522.87	180.60	MWD (Extreme Svy)	
3200.00	3229.02	3238.69	167.17	6.68	6.65	8.58	2507.64	2522.10	174.39	MWD (Extreme Svy)	
3300.00	3336.40	3346.23	347.03	6.92	6.88	8.79	2505.00	2519.89	169.22	MWD (Extreme Svy)	
3400.00	3420.39	3430.37	346.90	7.10	7.06	8.95	2500.82	2516.07	165.02	MWD (Extreme Svy)	
3500.00	3472.49	3482.48	346.86	7.21	7.17	9.05	2496.43	2511.96	161.75	MWD (Extreme Svy)	
3600.00	3635.03	3645.17	346.80	7.55	7.50	9.38	2491.43	2507.48	156.16	MWD (Extreme Svy)	
3700.00	3739.85	3750.15	346.65	7.78	7.73	9.59	2484.30	2500.75	152.03	MWD (Extreme Svy)	
3800.00	3836.75	3847.16	346.51	7.99	7.93	9.79	2477.33	2494.16	148.15	MWD (Extreme Svy)	
3900.00	3932.17	3942.67	346.40	8.19	8.13	9.99	2470.42	2487.61	144.71	MWD (Extreme Svy)	
4000.00	4031.94	4042.52	346.28	8.40	8.33	10.20	2463.68	2481.29	140.96	MWD (Extreme Svy)	
4100.00	4141.21	4151.88	2.86	8.64	8.56	10.43	2457.15	2475.19	137.18	MWD (Extreme Svy)	
4200.00	4237.39	4248.13	27.74	8.85	8.77	10.65	2451.41	2469.87	133.79	MWD (Extreme Svy)	
4300.00	4334.00	4344.79	54.90	9.05	8.97	10.86	2446.82	2465.73	130.42	MWD (Extreme Svy)	
4400.00	4429.57	4440.40	75.07	9.26	9.17	11.07	2443.35	2462.68	127.36	MWD (Extreme Svy)	
4500.00	4512.45	4523.31	81.13	9.43	9.34	11.26	2441.06	2460.79	124.76	MWD (Extreme Svy)	
4600.00	4609.51	4620.42	81.22	9.64	9.54	11.49	2439.25	2459.38	122.19	MWD (Extreme Svy)	
4700.00	4708.98	4719.96	81.28	9.86	9.75	11.72	2437.27	2457.84	119.48	MWD (Extreme Svy)	
4800.00	4805.91	4816.98	81.35	10.07	9.96	11.95	2435.42	2456.43	116.96	MWD (Extreme Svy)	
4900.00	4897.05	4908.20	81.40	10.27	10.15	12.17	2433.80	2455.22	114.64	MWD (Extreme Svy)	
5000.00	4987.57	4998.84	81.43	10.47	10.34	12.39	2432.61	2454.42	112.54	MWD (Extreme Svy)	
5100.00	5086.37	5097.79	81.46	10.69	10.55	12.64	2431.60	2453.87	110.18	MWD (Extreme Svy)	
5200.00	5183.40	5194.93	81.51	10.74	10.60	12.88	2430.88	2453.44	108.80	MWD (Wft MWD Svy)	
5300.00	5287.60	5299.24	81.56	10.76	10.60	13.15	2430.12	2452.89	107.71	MWD (Wft MWD Svy)	







## 5D Anti-Collision Report

Secondary Well: Mean Green 26 Fed 1H (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
15900.00	9130.97	9634.91	0.38	19.32	13.83	27.67	3733.69	3781.31	79.40	MWD (Wft MWD Svy)	
16000.00	9130.63	9657.75	0.40	19.62	13.89	27.78	3735.46	3783.69	78.45	MWD (Wft MWD Svy)	
16100.00	9129.57	9686.54	0.41	19.99	13.96	27.93	3739.28	3788.09	77.61	MWD (Wft MWD Svy)	
16200.00	9124.09	10086.43	0.50	25.08	15.25	30.51	3741.96	3792.47	75.08	MWD (Wft MWD Svy)	
16300.00	9128.12	10197.18	0.48	26.63	15.69	31.40	3735.86	3787.35	73.56	MWD (Wft MWD Svy)	
16400.00	9131.09	10276.57	0.47	27.80	16.03	32.07	3729.32	3781.71	72.19	MWD (Wft MWD Svy)	
16500.00	9132.53	10331.26	0.47	28.63	16.27	32.54	3723.92	3777.12	71.00	MWD (Wft MWD Svy)	
16600.00	9133.19	10378.78	0.46	29.37	16.48	32.96	3719.81	3773.80	69.91	MWD (Wft MWD Svy)	
16700.00	9133.16	10424.77	0.45	30.09	16.69	33.38	3717.15	3771.91	68.89	MWD (Wft MWD Svy)	
16800.00	9132.22	10526.33	0.41	31.68	17.16	34.32	3715.09	3770.87	67.60	MWD (Wft MWD Svy)	
16900.00	9131.57	10635.18	0.36	33.40	17.69	35.38	3712.64	3769.51	66.28	MWD (Wft MWD Svy)	
17000.00	9130.99	10726.17	0.31	34.87	18.15	36.30	3710.29	3768.18	65.09	MWD (Wft MWD Svy)	
17100.00	9130.19	10817.68	0.25	36.35	18.62	37.24	3708.15	3767.09	63.92	MWD (Wft MWD Svy)	
17200.00	9129.23	10916.40	0.19	37.98	19.14	38.28	3706.08	3766.11	62.73	MWD (Wft MWD Svy)	
17300.00	9128.19	11004.20	0.13	39.44	19.61	39.23	3704.22	3765.33	61.61	MWD (Wft MWD Svy)	
17400.00	9127.28	11114.37	0.05	41.24	20.23	40.45	3701.86	3764.17	60.40	MWD (Wft MWD Svy)	
17500.00	9126.54	11154.32	0.03	41.91	20.45	40.90	3700.87	3764.08	59.54	MWD (Wft MWD Svy)	
17600.00	9125.05	11196.98	0.00	42.62	20.68	41.38	3701.47	3765.59	58.73	MWD (Wft MWD Svy)	
17700.00	9121.26	11284.20	359.95	44.08	21.18	42.38	3702.75	3767.99	57.76	MWD (Wft MWD Svy)	
17800.00	9116.06	11414.46	359.89	46.20	21.94	43.89	3703.42	3770.02	56.61	MWD (Wft MWD Svy)	
17900.00	9112.20	11517.79	359.87	47.84	22.55	45.11	3703.98	3771.81	55.61	MWD (Wft MWD Svy)	
18000.00	9107.61	11666.35	359.87	50.22	23.45	46.90	3703.71	3773.02	54.44	MWD (Wft MWD Svy)	
18100.00	9105.70	11735.96	359.86	51.38	23.87	47.75	3703.43	3773.82	53.61	MWD (Wft MWD Svy)	
18200.00	9102.96	11814.77	359.86	52.70	24.35	48.72	3703.82	3775.34	52.79	MWD (Wft MWD Svy)	
18300.00	9098.75	11928.95	359.88	54.57	25.06	50.13	3704.25	3777.10	51.84	MWD (Wft MWD Svy)	
18400.00	9094.78	12072.11	359.90	56.92	25.97	51.93	3703.58	3777.94	50.81	MWD (Wft MWD Svy)	
18500.00	9092.51	12218.17	359.92	59.32	26.90	53.80	3701.65	3777.54	49.78	MWD (Wft MWD Svy)	
18600.00	9094.38	12432.31	359.98	62.84	28.27	56.57	3696.59	3774.34	48.55	MWD (Wft MWD Svy)	
18700.00	9095.42	12497.45	0.00	63.93	28.70	57.42	3691.93	3770.81	47.80	MWD (Wft MWD Svy)	
18800.00	9095.80	12557.32	0.03	64.94	29.10	58.20	3688.26	3768.24	47.11	MWD (Wft MWD Svy)	
18900.00	9095.43	12624.27	0.05	66.07	29.54	59.08	3685.67	3766.79	46.44	MWD (Wft MWD Svy)	
19000.00	9095.26	12754.38	0.12	68.23	30.40	60.80	3682.31	3764.90	45.59	MWD (Wft MWD Svy)	
19100.00	9095.10	12845.42	0.16	69.79	31.01	62.01	3679.28	3763.14	44.87	MWD (Wft MWD Svy)	
19200.00	9095.05	12972.01	0.17	71.93	31.85	63.70	3675.94	3761.27	44.08	MWD (Wft MWD Svy)	
19300.00	9095.25	13045.77	0.13	73.17	32.35	64.69	3672.58	3759.09	43.45	MWD (Wft MWD Svy)	

## 5D Anti-Collision Report

Secondary Well: Mean Green 26 Fed 1H (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T. Face to Sec (°)	S. Major (US ft)	S. Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
19400.00	9094.69	13142.63	0.08	74.84	33.00	66.00	3669.88	3757.71	42.78	MWD (Wft MWD Svy)	
19500.00	9095.47	13291.66	0.02	77.37	34.00	68.01	3665.71	3755.14	41.99	MWD (Wft MWD Svy)	
19600.00	9095.69	13347.79	0.00	78.33	34.39	68.77	3662.27	3752.81	41.45	MWD (Wft MWD Svy)	
19700.00	9095.33	13452.34	359.98	80.10	35.10	70.20	3659.32	3751.22	40.82	MWD (Wft MWD Svy)	
19800.00	9096.12	13591.53	359.95	82.47	36.04	72.10	3655.20	3748.67	40.11	MWD (Wft MWD Svy)	
19900.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3651.19	3745.86	39.57	MWD (Wft MWD Svy)	
20000.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3649.59	3745.04	39.24	MWD (Wft MWD Svy)	
20100.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3650.73	3746.88	38.97	MWD (Wft MWD Svy)	
20200.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3654.61	3751.39	38.76	MWD (Wft MWD Svy)	
20300.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3661.20	3758.56	38.61	MWD (Wft MWD Svy)	
20400.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3670.51	3768.37	38.51	MWD (Wft MWD Svy)	
20500.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3682.51	3780.80	38.47	MWD (Wft MWD Svy)	
20600.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3697.17	3795.82	38.48	MWD (Wft MWD Svy)	
20700.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3714.47	3813.41	38.54	MWD (Wft MWD Svy)	
20800.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3734.29	3833.52	38.63	MWD (Wft MWD Svy)	
20900.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3756.61	3856.13	38.75	MWD (Wft MWD Svy)	
21000.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3781.36	3881.18	38.88	MWD (Wft MWD Svy)	
21100.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3808.57	3908.63	39.06	MWD (Wft MWD Svy)	
21200.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3838.19	3938.43	39.29	MWD (Wft MWD Svy)	
21300.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3870.17	3970.52	39.56	MWD (Wft MWD Svy)	
21400.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3904.44	4004.86	39.88	MWD (Wft MWD Svy)	
21500.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3940.95	4041.37	40.24	MWD (Wft MWD Svy)	
21600.00	9096.81	13663.00	359.94	83.68	36.53	73.08	3979.61	4080.01	40.63	MWD (Wft MWD Svy)	
21700.00	9096.81	13663.00	359.94	83.68	36.53	73.08	4020.38	4120.72	41.07	MWD (Wft MWD Svy)	
21800.00	9096.81	13663.00	359.94	83.68	36.53	73.08	4063.20	4163.43	41.54	MWD (Wft MWD Svy)	
21900.00	9096.81	13663.00	359.94	83.68	36.53	73.08	4108.00	4208.09	42.05	MWD (Wft MWD Svy)	
22000.00	9096.81	13663.00	359.94	83.68	36.53	73.08	4154.73	4254.62	42.59	MWD (Wft MWD Svy)	
22100.00	9096.81	13663.00	359.94	83.68	36.53	73.08	4203.32	4302.98	43.17	MWD (Wft MWD Svy)	
22200.00	9096.81	13663.00	359.94	83.68	36.53	73.08	4253.70	4353.10	43.79	MWD (Wft MWD Svy)	
22300.00	9096.81	13663.00	359.94	83.68	36.53	73.08	4305.79	4404.92	44.44	MWD (Wft MWD Svy)	
22400.00	9096.81	13663.00	359.94	83.68	36.53	73.08	4359.51	4458.38	45.10	MWD (Wft MWD Svy)	
22500.00	9096.81	13663.00	359.94	83.68	36.53	73.08	4414.84	4513.42	45.79	MWD (Wft MWD Svy)	
22600.00	9096.81	13663.00	359.94	83.68	36.53	73.08	4471.64	4569.99	46.47	MWD (Wft MWD Svy)	
22661.70	9096.81	13663.00	359.94	83.68	36.53	73.08	4507.42	4605.62	46.90	MWD (Wft MWD Svy)	

## SD Anti-Collision Report

Secondary Well: Mean Green 23-14 Fed Com 13H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
0.00	9.00	0.00	292.44	0.00	0.00	0.00	1247.31	1247.96	1920.01	MWD	
100.00	100.00	91.00	292.44	0.10	0.10	4.19	1247.07	1247.93	1450.20	MWD	
200.00	200.00	191.00	292.44	0.32	0.32	4.62	1246.63	1247.93	960.35	MWD	
300.00	300.00	291.00	292.44	0.54	0.54	4.65	1246.18	1247.93	713.64	MWD	
400.00	400.00	391.00	292.44	0.77	0.77	4.69	1245.73	1247.93	567.78	MWD	
500.00	500.00	491.00	292.44	0.99	0.99	4.74	1245.29	1247.93	471.43	MWD	
600.00	600.00	591.00	292.44	1.22	1.22	4.80	1244.84	1247.93	403.03	MWD	
700.00	700.00	691.00	292.44	1.44	1.44	4.88	1244.39	1247.93	351.97	MWD	
800.00	800.00	791.00	292.44	1.67	1.67	4.96	1243.94	1247.93	312.39	MWD	
900.00	900.00	891.00	292.44	1.89	1.89	5.05	1243.49	1247.93	280.81	MWD	
1000.00	1000.00	991.00	292.44	2.12	2.12	5.15	1243.04	1247.93	255.03	MWD	
1100.00	1100.00	1091.00	292.44	2.34	2.34	5.25	1242.59	1247.93	233.59	MWD	
1200.00	1200.00	1191.00	292.44	2.57	2.57	5.36	1242.14	1247.93	215.47	MWD	
1300.00	1300.00	1291.00	292.44	2.79	2.79	5.48	1241.69	1247.93	199.96	MWD	
1400.00	1400.00	1391.00	292.44	3.01	3.01	5.61	1241.24	1247.93	186.53	MWD	
1500.00	1500.00	1491.00	292.44	3.24	3.24	5.73	1240.79	1247.93	174.80	MWD	
1600.00	1600.00	1591.00	292.44	3.46	3.46	5.87	1240.34	1247.93	164.45	MWD	
1700.00	1700.00	1691.00	292.44	3.69	3.69	6.01	1239.89	1247.93	155.26	MWD	
1800.00	1800.00	1791.00	292.44	3.91	3.91	6.15	1239.45	1247.93	147.04	MWD	
1900.00	1900.00	1891.00	292.44	4.14	4.14	6.30	1239.00	1247.93	139.65	MWD	
2000.00	2000.00	1991.00	292.44	4.36	4.36	6.45	1238.55	1247.93	132.96	MWD	
2100.00	2100.00	2091.00	292.44	4.59	4.59	6.60	1238.10	1247.93	126.89	MWD	
2200.00	2200.00	2191.00	292.44	4.81	4.81	6.76	1237.65	1247.93	121.35	MWD	
2300.00	2300.00	2291.00	292.44	5.04	5.04	6.92	1237.20	1247.93	116.27	MWD	
2400.00	2400.00	2391.00	292.44	5.26	5.26	7.08	1236.75	1247.93	111.60	MWD	
2500.00	2500.00	2491.00	292.44	5.49	5.49	7.25	1236.30	1247.93	107.29	MWD	
2600.00	2600.00	2591.00	292.44	5.71	5.71	7.42	1235.85	1247.93	103.30	MWD	
2700.00	2700.00	2691.00	292.44	5.94	5.94	7.59	1235.40	1247.93	99.60	MWD	
2800.00	2800.00	2791.00	292.44	6.16	6.16	7.77	1234.95	1247.93	96.15	MWD	
2900.00	2900.00	2891.00	292.44	6.39	6.39	7.95	1234.50	1247.93	92.93	MWD	
3000.00	3000.00	2991.00	292.44	6.61	6.61	8.13	1234.05	1247.93	89.92	MWD	
3100.00	3100.00	3091.00	292.44	6.84	6.84	8.31	1233.61	1247.93	87.10	MWD	
3200.00	3200.00	3191.00	292.44	7.06	7.06	8.50	1233.16	1247.93	84.46	MWD	
3300.00	3299.99	3290.99	112.48	7.29	7.29	8.69	1233.06	1248.27	82.11	MWD	
3400.00	3399.96	3390.96	112.58	7.51	7.51	8.88	1233.68	1249.27	80.11	MWD	
3500.00	3499.86	3490.86	112.75	7.74	7.74	9.07	1234.96	1250.95	78.25	MWD	
3600.00	3599.73	3590.73	112.97	7.96	7.96	9.27	1236.61	1252.99	76.50	MWD	
3700.00	3699.59	3690.59	113.19	8.18	8.18	9.47	1238.27	1255.04	74.82	MWD	
3800.00	3799.45	3790.45	113.41	8.41	8.41	9.68	1239.92	1257.11	73.14	MWD	
3900.00	3899.31	3890.31	113.62	8.63	8.63	9.88	1241.61	1259.20	71.59	MWD	
4000.00	3999.18	3990.18	113.84	8.86	8.86	10.09	1243.31	1261.31	70.08	MWD	
4100.00	4099.07	4090.07	130.68	9.08	9.08	10.30	1245.29	1263.72	68.57	MWD	
4200.00	4199.00	4190.00	155.70	9.31	9.31	10.52	1247.83	1266.68	67.19	MWD	
4300.00	4298.93	4289.93	182.90	9.53	9.53	10.74	1250.89	1270.21	65.76	MWD	
4400.00	4398.84	4389.84	203.02	9.76	9.76	10.96	1254.53	1274.28	64.53	MWD	
4500.00	4498.69	4489.69	208.92	9.98	9.98	11.19	1258.91	1279.07	63.43	MWD	
4600.00	4598.47	4589.47	208.78	10.21	10.21	11.42	1264.38	1284.99	62.35	MWD	
4700.00	4698.23	4689.23	208.64	10.43	10.43	11.65	1269.96	1291.02	61.31	MWD	
4800.00	4797.99	4788.99	208.49	10.65	10.65	11.89	1275.60	1297.05	60.46	MWD	
4900.00	4897.76	4888.76	208.35	10.88	10.88	12.13	1281.17	1303.10	59.44	MWD	
5000.00	4997.52	4988.52	208.21	11.10	11.10	12.37	1286.80	1309.15	58.57	MWD	
5100.00	5097.29	5088.29	208.06	11.33	11.33	12.62	1292.45	1315.20	57.79	MWD	
5200.00	5197.05	5188.05	207.92	11.55	11.55	12.87	1298.06	1321.27	56.92	MWD	
5300.00	5296.81	5287.81	207.79	11.78	11.78	13.13	1303.68	1327.35	56.09	MWD	
5400.00	5396.58	5387.58	207.65	12.00	12.00	13.39	1309.32	1333.43	55.31	MWD	
5500.00	5496.34	5487.34	207.51	12.22	12.22	13.65	1314.98	1339.52	54.58	MWD	
5600.00	5596.11	5587.11	207.38	12.45	12.45	13.92	1320.64	1345.61	53.89	MWD	
5700.00	5695.87	5686.87	207.24	12.67	12.67	14.20	1326.32	1351.72	53.22	MWD	



## SD Anti-Collision Report

Secondary Well: Mean Green 23-14 Fed Com 13H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T. Face to Sec (°)	S. Major (US ft)	S. Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
11600.00	9128.59	9272.48	214.49	21.20	14.19	26.39	3035.88	3074.87	78.85	MWD	
11700.00	9130.31	9277.84	214.63	21.23	14.15	26.40	3119.38	3158.47	80.82	MWD	
11800.00	9131.88	9282.88	214.77	21.25	14.10	26.41	3203.77	3242.93	82.80	MWD	
11900.00	9133.32	9287.65	214.90	21.28	14.06	26.42	3288.96	3328.22	84.78	MWD	
12000.00	9134.64	9292.15	214.46	21.30	14.03	26.43	3374.79	3414.13	86.77	MWD	
12100.00	9135.86	9296.40	213.63	21.32	13.99	26.44	3460.68	3500.11	88.79	MWD	
12200.00	9136.98	9300.42	212.82	21.34	13.96	26.45	3546.55	3586.05	90.80	MWD	
12300.00	9138.01	9304.22	212.02	21.37	13.93	26.47	3632.34	3671.94	92.73	MWD	
12400.00	9138.83	9307.33	106.24	21.39	13.91	26.47	3718.87	3758.64	94.52	MWD	
12500.00	9139.05	9308.17	86.68	21.39	13.90	26.48	3807.95	3847.89	96.33	MWD	
12600.00	9138.68	9306.76	67.36	21.38	13.91	26.47	3897.10	3937.22	98.13	MWD	
12700.00	9137.75	9303.27	52.23	21.36	13.94	26.46	3983.69	4023.98	99.87	MWD	
12800.00	9136.29	9297.95	41.76	21.33	13.98	26.45	4065.31	4105.73	101.58	MWD	
12900.00	9134.32	9291.04	34.75	21.29	14.04	26.43	4139.74	4180.29	103.08	MWD	
13000.00	9131.85	9282.79	30.04	21.25	14.10	26.41	4205.11	4245.78	104.39	MWD	
13100.00	9128.90	9273.44	26.86	21.20	14.19	26.39	4259.75	4300.59	105.31	MWD	
13200.00	9125.50	9263.24	24.76	21.15	14.28	26.36	4302.45	4343.43	105.99	MWD	
13300.00	9121.75	9252.58	24.28	21.10	14.38	26.34	4335.86	4377.00	106.38	MWD	
13400.00	9117.84	9242.06	24.25	21.04	14.48	26.31	4370.36	4411.69	106.74	MWD	
13500.00	9113.81	9231.71	24.23	20.99	14.59	26.29	4406.56	4448.14	106.97	MWD	
13600.00	9109.67	9221.55	24.20	20.94	14.70	26.26	4444.41	4486.32	107.05	MWD	
13700.00	9105.43	9211.57	24.18	20.89	14.80	26.24	4483.92	4526.18	107.11	MWD	
13800.00	9101.09	9201.77	24.15	20.84	14.91	26.22	4525.09	4567.69	107.23	MWD	
13900.00	9096.68	9192.16	24.13	20.79	15.02	26.19	4567.86	4610.81	107.37	MWD	
14000.00	9092.21	9182.73	24.10	20.76	15.13	26.17	4612.22	4655.49	107.59	MWD	
14100.00	9087.67	9173.50	24.07	20.72	15.24	26.15	4658.04	4701.71	107.68	MWD	
14200.00	9083.10	9164.45	24.05	20.68	15.34	26.13	4705.31	4749.41	107.70	MWD	
14300.00	9078.48	9155.59	24.02	20.65	15.45	26.11	4754.08	4798.57	107.85	MWD	
14400.00	9073.84	9146.92	23.99	20.61	15.55	26.09	4804.30	4849.14	108.15	MWD	
14500.00	9069.18	9138.43	23.96	20.58	15.66	26.07	4855.74	4901.08	108.10	MWD	
14600.00	9064.52	9130.13	23.94	20.55	15.76	26.05	4908.69	4954.35	108.50	MWD	
14700.00	9059.84	9122.01	23.91	20.51	15.86	26.03	4962.79	5008.92	108.57	MWD	
14800.00	9055.18	9114.07	23.88	20.48	15.96	26.02	5018.18	5064.75	108.76	MWD	
14900.00	9050.52	9106.31	23.86	20.45	16.05	26.00	5074.85	5121.80	109.09	MWD	
15000.00	9045.88	9098.72	23.83	20.42	16.14	25.98	5132.70	5180.04	109.42	MWD	
15100.00	9041.26	9091.31	23.80	20.40	16.24	25.96	5191.60	5239.42	109.55	MWD	
15200.00	9036.67	9084.06	23.78	20.38	16.32	25.94	5251.71	5299.92	109.92	MWD	
15300.00	9032.11	9076.98	23.75	20.35	16.41	25.93	5312.85	5361.50	110.20	MWD	
15400.00	9027.58	9070.07	23.73	20.33	16.49	25.91	5374.99	5424.13	110.39	MWD	
15500.00	9023.09	9063.31	23.70	20.31	16.58	25.89	5438.21	5487.77	110.72	MWD	
15600.00	9018.64	9056.72	23.67	20.29	16.66	25.88	5502.45	5552.40	111.16	MWD	
15700.00	9014.24	9050.27	23.65	20.27	16.73	25.86	5567.67	5617.98	111.68	MWD	
15800.00	9009.89	9043.98	23.63	20.25	16.81	25.85	5633.75	5684.48	112.06	MWD	
15900.00	9005.58	9037.83	23.60	20.23	16.88	25.83	5700.71	5751.87	112.44	MWD	
16000.00	9001.32	9031.83	23.58	20.22	16.95	25.82	5768.56	5820.13	112.87	MWD	
16100.00	8997.12	9025.96	23.55	20.20	17.02	25.80	5837.27	5889.22	113.36	MWD	
16200.00	8992.94	9020.20	23.20	20.18	17.09	25.79	5906.36	5958.69	113.88	MWD	
16300.00	8988.74	9014.46	22.90	20.16	17.16	25.77	5975.17	6027.85	114.42	MWD	
16400.00	8984.57	9008.83	22.88	20.14	17.22	25.76	6044.47	6097.50	114.99	MWD	
16500.00	8980.46	9003.32	22.86	20.13	17.29	25.75	6114.56	6167.92	115.60	MWD	
16600.00	8976.40	8997.94	22.84	20.11	17.35	25.73	6185.41	6239.09	116.23	MWD	
16700.00	8972.40	8992.68	22.82	20.10	17.40	25.72	6256.99	6310.98	116.89	MWD	
16800.00	8968.46	8987.53	22.80	20.09	17.46	25.70	6329.29	6383.58	117.58	MWD	
16900.00	8964.57	8982.51	22.78	20.07	17.52	25.69	6402.24	6456.86	118.21	MWD	
17000.00	8960.74	8977.59	22.76	20.06	17.57	25.67	6475.85	6530.80	118.85	MWD	
17100.00	8956.97	8972.78	22.74	20.05	17.62	25.66	6550.11	6605.38	119.52	MWD	
17200.00	8953.25	8968.08	22.72	20.04	17.67	25.65	6625.00	6680.58	120.21	MWD	
17300.00	8949.59	8963.49	22.70	20.03	17.72	25.63	6700.49	6756.38	120.90	MWD	

## SD Anti-Collision Report

Secondary Well: Mean Green 23-14 Fed Com 13H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
17400.00	8945.99	8958.99	22.68	20.02	17.77	25.62	6776.56	6832.76	121.59	MWD	
17500.00	8942.45	8954.60	22.66	20.01	17.81	25.61	6853.20	6909.70	122.30	MWD	
17600.00	8938.96	8950.30	22.65	20.00	17.86	25.60	6930.40	6987.19	123.04	MWD	
17700.00	8935.53	8946.09	22.63	19.98	17.90	25.58	7008.14	7065.21	123.80	MWD	
17800.00	8932.15	8941.98	22.61	19.97	17.94	25.57	7086.40	7143.74	124.58	MWD	
17900.00	8928.83	8937.95	22.60	19.96	17.98	25.56	7165.18	7222.77	125.40	MWD	
18000.00	8925.56	8934.01	22.58	19.96	18.02	25.55	7244.45	7302.29	126.26	MWD	
18100.00	8922.34	8930.15	22.56	19.95	18.05	25.54	7324.14	7382.27	127.01	MWD	
18200.00	8919.18	8926.37	22.55	19.94	18.09	25.53	7404.29	7462.70	127.76	MWD	
18300.00	8916.07	8922.68	22.53	19.93	18.13	25.52	7484.91	7543.58	128.59	MWD	
18400.00	8913.01	8919.06	22.52	19.92	18.16	25.51	7565.95	7624.88	129.40	MWD	
18500.00	8910.00	8915.51	22.50	19.91	18.19	25.50	7647.45	7706.60	130.30	MWD	
18600.00	8907.04	8912.04	22.49	19.90	18.22	25.49	7729.30	7788.72	131.08	MWD	
18700.00	8904.13	8908.64	22.47	19.89	18.26	25.48	7811.54	7871.23	131.87	MWD	
18800.00	8901.27	8905.31	22.46	19.88	18.29	25.47	7894.19	7954.11	132.73	MWD	
18900.00	8898.46	8902.05	22.44	19.88	18.31	25.46	7977.23	8037.37	133.64	MWD	
19000.00	8895.69	8898.85	22.43	19.87	18.34	25.45	8060.60	8120.98	134.48	MWD	
19100.00	8892.97	8895.72	22.42	19.86	18.37	25.44	8144.34	8204.94	135.38	MWD	
19200.00	8890.29	8892.65	22.40	19.86	18.40	25.43	8228.42	8289.24	136.29	MWD	
19300.00	8887.66	8889.64	22.39	19.85	18.42	25.42	8312.84	8373.86	137.22	MWD	
19400.00	8885.07	8886.68	22.38	19.84	18.44	25.41	8397.58	8458.81	138.15	MWD	
19500.00	8882.53	8883.79	22.37	19.84	18.47	25.40	8482.64	8544.06	139.11	MWD	
19600.00	8880.03	8880.95	22.35	19.83	18.49	25.39	8568.00	8629.61	140.07	MWD	
19700.00	8877.56	8878.17	22.34	19.82	18.51	25.38	8653.63	8715.45	140.98	MWD	
19800.00	8875.14	8875.44	22.33	19.82	18.54	25.37	8739.55	8801.58	141.89	MWD	
19900.00	8872.76	8872.76	22.32	19.81	18.56	25.36	8825.75	8887.98	142.82	MWD	
20000.00	8870.42	8870.14	22.31	19.81	18.58	25.35	8912.22	8974.66	143.75	MWD	
20100.00	8868.11	8867.56	22.30	19.80	18.60	25.34	8998.96	9061.59	144.69	MWD	
20200.00	8865.84	8865.03	22.28	19.80	18.62	25.33	9085.96	9148.78	145.65	MWD	
20300.00	8863.61	8862.54	22.27	19.79	18.63	25.32	9173.21	9236.21	146.61	MWD	
20400.00	8861.42	8860.11	22.26	19.79	18.65	25.32	9260.70	9323.89	147.57	MWD	
20500.00	8859.26	8857.71	22.25	19.78	18.67	25.31	9348.44	9411.79	148.55	MWD	
20600.00	8857.13	8855.36	22.24	19.78	18.69	25.30	9436.40	9499.93	149.53	MWD	
20700.00	8855.04	8853.06	22.23	19.77	18.70	25.29	9524.59	9588.29	150.52	MWD	
20800.00	8852.98	8850.79	22.22	19.77	18.72	25.28	9613.00	9676.87	151.51	MWD	
20900.00	8850.95	8848.56	22.21	19.76	18.73	25.28	9701.62	9765.65	152.51	MWD	
21000.00	8848.96	8846.38	22.20	19.76	18.75	25.27	9790.45	9854.64	153.52	MWD	
21100.00	8847.00	8844.23	22.19	19.75	18.76	25.26	9879.49	9943.84	154.53	MWD	
21200.00	8845.06	8842.12	22.18	19.75	18.78	25.25	9968.72	10033.22	155.54	MWD	
21300.00	8843.16	8840.04	22.17	19.74	18.79	25.25	10058.14	10122.80	156.56	MWD	
21400.00	8841.29	8838.00	22.17	19.74	18.81	25.24	10147.75	10212.56	157.58	MWD	
21500.00	8839.45	8836.00	22.16	19.73	18.82	25.23	10237.54	10302.50	158.61	MWD	
21600.00	8837.63	8834.03	22.15	19.73	18.83	25.23	10327.51	10392.62	159.63	MWD	
21700.00	8835.84	8832.09	22.14	19.72	18.84	25.22	10417.65	10482.91	160.64	MWD	
21800.00	8834.08	8830.18	22.13	19.72	18.86	25.21	10507.96	10573.36	161.66	MWD	
21900.00	8832.35	8828.31	22.12	19.72	18.87	25.21	10598.43	10663.99	162.67	MWD	
22000.00	8830.64	8826.47	22.11	19.71	18.88	25.20	10689.06	10754.76	163.69	MWD	
22100.00	8828.96	8824.66	22.11	19.71	18.89	25.19	10779.86	10845.70	164.72	MWD	
22200.00	8827.30	8822.87	22.10	19.71	18.90	25.19	10870.79	10936.79	165.72	MWD	
22300.00	8825.67	8821.12	22.09	19.70	18.91	25.18	10961.87	11028.02	166.71	MWD	
22400.00	8824.06	8819.39	22.08	19.70	18.92	25.18	11053.10	11119.40	167.71	MWD	
22500.00	8822.47	8817.69	22.07	19.69	18.93	25.17	11144.47	11210.92	168.71	MWD	
22600.00	8820.91	8816.02	22.07	19.69	18.94	25.17	11235.98	11302.58	169.71	MWD	
22661.70	8819.96	8815.00	22.06	19.69	18.95	25.16	11292.51	11359.20	170.32	MWD	

## 5D Anti-Collision Report

Secondary Well: Mean Green 23-26 Fed 13H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
0.00	14.00	0.00	290.30	0.00	0.00	0.00	1228.69	1229.34	1891.34	MWD	
100.00	100.00	86.00	290.30	0.10	0.10	3.96	1228.40	1229.26	1437.40	MWD	
200.00	200.00	186.00	290.30	0.31	0.31	4.62	1227.97	1229.26	953.80	MWD	
300.00	300.00	286.00	290.30	0.53	0.53	4.65	1227.52	1229.26	707.11	MWD	
400.00	400.00	386.00	290.30	0.76	0.76	4.69	1227.07	1229.26	561.81	MWD	
500.00	500.00	486.00	290.30	0.98	0.98	4.74	1226.62	1229.26	466.04	MWD	
600.00	600.00	586.00	290.30	1.21	1.21	4.80	1226.17	1229.26	398.17	MWD	
700.00	700.00	686.00	290.30	1.43	1.43	4.87	1225.72	1229.26	347.55	MWD	
800.00	800.00	786.00	290.30	1.65	1.65	4.95	1225.27	1229.26	308.35	MWD	
900.00	900.00	886.00	290.30	1.88	1.88	5.04	1224.82	1229.26	277.10	MWD	
1000.00	1000.00	986.00	290.30	2.10	2.10	5.14	1224.37	1229.26	251.60	MWD	
1100.00	1100.00	1086.00	290.30	2.33	2.33	5.25	1223.92	1229.26	230.40	MWD	
1200.00	1200.00	1186.00	290.30	2.55	2.55	5.36	1223.47	1229.26	212.49	MWD	
1300.00	1300.00	1286.00	290.30	2.78	2.78	5.48	1223.02	1229.26	197.16	MWD	
1400.00	1400.00	1386.00	290.30	3.00	3.00	5.60	1222.58	1229.26	183.90	MWD	
1500.00	1500.00	1486.00	290.30	3.23	3.23	5.73	1222.13	1229.26	172.31	MWD	
1600.00	1600.00	1586.00	290.30	3.45	3.45	5.86	1221.68	1229.26	162.10	MWD	
1700.00	1700.00	1686.00	290.30	3.68	3.68	6.00	1221.23	1229.26	153.02	MWD	
1800.00	1800.00	1786.00	290.30	3.90	3.90	6.14	1220.78	1229.26	144.91	MWD	
1900.00	1900.00	1886.00	290.30	4.13	4.13	6.29	1220.33	1229.26	137.62	MWD	
2000.00	2000.00	1986.00	290.30	4.35	4.35	6.44	1219.88	1229.26	131.02	MWD	
2100.00	2100.00	2086.00	290.30	4.58	4.58	6.59	1219.43	1229.26	125.03	MWD	
2200.00	2200.00	2186.00	290.30	4.80	4.80	6.75	1218.98	1229.26	119.56	MWD	
2300.00	2300.00	2286.00	290.30	5.03	5.03	6.91	1218.53	1229.26	114.55	MWD	
2400.00	2400.00	2386.00	290.30	5.25	5.25	7.07	1218.08	1229.26	109.95	MWD	
2500.00	2500.00	2486.00	290.30	5.48	5.48	7.24	1217.63	1229.26	105.70	MWD	
2600.00	2600.00	2586.00	290.30	5.70	5.70	7.41	1217.18	1229.26	101.76	MWD	
2700.00	2700.00	2686.00	290.30	5.93	5.93	7.58	1216.73	1229.26	98.11	MWD	
2800.00	2800.00	2786.00	290.30	6.15	6.15	7.76	1216.28	1229.26	94.71	MWD	
2900.00	2900.00	2886.00	290.30	6.38	6.38	7.94	1215.83	1229.26	91.54	MWD	
3000.00	3000.00	2986.00	290.30	6.60	6.60	8.12	1215.38	1229.26	88.57	MWD	
3100.00	3100.00	3086.00	290.30	6.83	6.83	8.30	1214.93	1229.26	85.79	MWD	
3200.00	3200.00	3186.00	290.30	7.05	7.05	8.49	1214.48	1229.26	83.18	MWD	
3300.00	3299.99	3285.99	110.33	7.28	7.28	8.68	1214.37	1229.56	80.94	MWD	
3400.00	3399.96	3385.96	110.44	7.50	7.50	8.87	1214.89	1230.47	78.96	MWD	
3500.00	3499.86	3485.86	110.61	7.72	7.72	9.06	1216.03	1232.01	77.11	MWD	
3600.00	3599.73	3585.73	110.84	7.95	7.95	9.26	1217.50	1233.86	75.40	MWD	
3700.00	3699.59	3685.59	111.07	8.17	8.17	9.46	1218.95	1235.73	73.63	MWD	
3800.00	3799.45	3785.45	111.29	8.40	8.40	9.67	1220.45	1237.63	72.04	MWD	
3900.00	3899.31	3885.31	111.52	8.62	8.62	9.87	1221.94	1239.54	70.44	MWD	
4000.00	3999.18	3985.18	111.74	8.85	8.85	10.08	1223.48	1241.47	69.02	MWD	
4100.00	4099.07	4085.07	128.58	9.07	9.07	10.29	1225.30	1243.73	67.49	MWD	
4200.00	4199.00	4185.00	153.61	9.30	9.30	10.51	1227.74	1246.61	66.04	MWD	
4300.00	4320.43	4306.44	180.84	9.55	9.55	10.78	1230.03	1249.38	64.56	MWD	
4400.00	4445.70	4431.76	200.98	9.80	9.79	11.06	1230.98	1250.75	63.25	MWD	
4500.00	4570.88	4557.11	206.94	10.05	10.03	11.34	1230.64	1250.87	61.83	MWD	
4600.00	4695.89	4682.46	206.93	10.31	10.27	11.63	1229.43	1250.11	60.47	MWD	
4700.00	4820.58	4807.72	206.95	10.58	10.51	11.92	1226.32	1247.42	59.12	MWD	
4800.00	4944.77	4932.77	207.03	10.85	10.74	12.22	1221.21	1242.71	57.80	MWD	
4900.00	5056.98	5046.02	207.13	11.11	10.96	12.50	1214.27	1236.20	56.37	MWD	
5000.00	5155.75	5145.77	207.23	11.34	11.17	12.75	1207.05	1229.40	55.00	MWD	
5100.00	5254.52	5245.51	207.34	11.58	11.37	13.00	1199.86	1222.61	53.74	MWD	
5200.00	5353.30	5345.26	207.44	11.82	11.58	13.26	1192.64	1215.82	52.44	MWD	
5300.00	5452.07	5445.00	207.54	12.07	11.79	13.52	1185.41	1209.04	51.17	MWD	
5400.00	5550.85	5544.75	207.65	12.32	12.00	13.79	1178.20	1202.26	49.97	MWD	
5500.00	5649.62	5644.49	207.75	12.58	12.22	14.06	1171.00	1195.48	48.83	MWD	
5600.00	5748.40	5744.24	207.86	12.84	12.43	14.33	1163.80	1188.71	47.73	MWD	
5700.00	5847.17	5843.98	207.97	13.10	12.64	14.61	1156.62	1181.94	46.68	MWD	





## 5D Anti-Collision Report

Secondary Well: Mean Green 23-26 Fed 13H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
17400.00	9152.00	14100.41	19.41	95.91	39.59	79.21	3867.27	3964.60	40.73	MWD	
17500.00	9152.00	14200.39	19.42	97.70	40.28	80.60	3863.73	3962.77	40.01	MWD	
17600.00	9152.00	14300.37	19.43	99.48	40.97	81.99	3860.18	3960.94	39.31	MWD	
17700.00	9152.00	14400.35	19.44	101.27	41.67	83.38	3856.63	3959.10	38.63	MWD	
17800.00	9152.00	14500.33	19.45	103.06	42.37	84.77	3853.07	3957.27	37.98	MWD	
17900.00	9152.00	14600.31	19.46	104.86	43.07	86.17	3849.51	3955.44	37.34	MWD	
18000.00	9152.00	14700.29	19.47	106.65	43.76	87.57	3845.94	3953.60	36.72	MWD	
18100.00	9152.00	14800.27	19.48	108.44	44.47	88.97	3842.37	3951.77	36.12	MWD	
18200.00	9152.00	14900.26	19.49	110.24	45.17	90.37	3838.80	3949.94	35.54	MWD	
18300.00	9152.00	15000.24	19.50	112.03	45.87	91.77	3835.22	3948.11	34.97	MWD	
18400.00	9152.00	15100.22	19.51	113.83	46.57	93.18	3831.64	3946.27	34.42	MWD	
18500.00	9152.00	15200.20	19.52	115.63	47.28	94.59	3828.05	3944.44	33.89	MWD	
18600.00	9152.00	15300.18	19.53	117.43	47.98	96.00	3824.46	3942.61	33.37	MWD	
18700.00	9152.00	15400.16	19.54	119.23	48.69	97.41	3820.87	3940.78	32.87	MWD	
18800.00	9152.00	15500.14	19.55	121.03	49.40	98.82	3817.27	3938.94	32.37	MWD	
18900.00	9152.00	15600.12	19.56	122.83	50.10	100.24	3813.67	3937.11	31.90	MWD	
19000.00	9152.00	15700.10	19.56	124.63	50.81	101.66	3810.07	3935.28	31.43	MWD	
19100.00	9152.00	15800.09	19.57	126.43	51.52	103.07	3806.47	3933.45	30.98	MWD	
19200.00	9152.00	15900.07	19.58	128.23	52.23	104.49	3802.86	3931.62	30.53	MWD	
19300.00	9152.00	16000.05	19.59	130.04	52.94	105.91	3799.25	3929.79	30.10	MWD	
19400.00	9152.00	16100.03	19.60	131.84	53.65	107.33	3795.63	3927.95	29.69	MWD	
19500.00	9152.00	16200.01	19.61	133.64	54.36	108.76	3792.02	3926.12	29.28	MWD	
19600.00	9152.00	16299.99	19.62	135.45	55.08	110.18	3788.40	3924.29	28.88	MWD	
19700.00	9152.00	16399.97	19.63	137.25	55.79	111.61	3784.78	3922.46	28.49	MWD	
19800.00	9152.00	16499.95	19.64	139.06	56.50	113.03	3781.15	3920.63	28.11	MWD	
19900.00	9152.00	16599.93	19.65	140.87	57.22	114.46	3777.53	3918.80	27.74	MWD	
20000.00	9152.00	16699.92	19.66	142.67	57.93	115.89	3773.90	3916.97	27.38	MWD	
20100.00	9152.00	16758.18	19.67	143.73	58.35	116.72	3770.94	3915.36	27.11	MWD	
20200.00	9152.00	16758.18	19.67	143.73	58.35	116.72	3770.79	3915.87	26.99	MWD	
20300.00	9152.00	16758.18	19.67	143.73	58.35	116.72	3773.29	3918.93	26.91	MWD	
20400.00	9152.00	16758.18	19.67	143.73	58.35	116.72	3778.42	3924.55	26.86	MWD	
20500.00	9152.00	16758.18	19.67	143.73	58.35	116.72	3786.19	3932.69	26.84	MWD	
20600.00	9152.00	16758.18	19.67	143.73	58.35	116.72	3796.58	3943.36	26.87	MWD	
20700.00	9152.00	16758.18	19.67	143.73	58.35	116.72	3809.55	3956.52	26.92	MWD	
20800.00	9152.00	16758.18	19.67	143.73	58.35	116.72	3825.09	3972.16	27.01	MWD	
20900.00	9152.00	16758.18	19.67	143.73	58.35	116.72	3843.17	3990.25	27.13	MWD	
21000.00	9152.00	16758.18	19.67	143.73	58.35	116.72	3863.75	4010.75	27.28	MWD	
21100.00	9152.00	16758.18	19.67	143.73	58.35	116.72	3886.78	4033.62	27.47	MWD	
21200.00	9152.00	16758.18	19.67	143.73	58.35	116.72	3912.03	4058.83	27.65	MWD	
21300.00	9152.00	16758.18	19.67	143.73	58.35	116.72	3939.63	4086.33	27.85	MWD	
21400.00	9152.00	16758.18	19.67	143.73	58.35	116.72	3969.55	4116.08	28.09	MWD	
21500.00	9152.00	16758.18	19.67	143.73	58.35	116.72	4001.75	4148.03	28.36	MWD	
21600.00	9152.00	16758.18	19.67	143.73	58.35	116.72	4036.16	4182.12	28.65	MWD	
21700.00	9152.00	16758.18	19.67	143.73	58.35	116.72	4072.73	4218.31	28.98	MWD	
21800.00	9152.00	16758.18	19.67	143.73	58.35	116.72	4111.41	4256.54	29.33	MWD	
21900.00	9152.00	16758.18	19.67	143.73	58.35	116.72	4152.13	4296.76	29.71	MWD	
22000.00	9152.00	16758.18	19.67	143.73	58.35	116.72	4194.83	4338.91	30.11	MWD	
22100.00	9152.00	16758.18	19.67	143.73	58.35	116.72	4239.46	4382.94	30.55	MWD	
22200.00	9152.00	16758.18	19.67	143.73	58.35	116.72	4285.96	4428.79	31.01	MWD	
22300.00	9152.00	16758.18	19.67	143.73	58.35	116.72	4334.27	4476.41	31.49	MWD	
22400.00	9152.00	16758.18	19.67	143.73	58.35	116.72	4384.32	4525.73	32.00	MWD	
22500.00	9152.00	16758.18	19.67	143.73	58.35	116.72	4436.05	4576.70	32.54	MWD	
22600.00	9152.00	16758.18	19.67	143.73	58.35	116.72	4489.42	4629.28	33.10	MWD	
22661.70	9152.00	16758.18	19.67	143.73	58.35	116.72	4523.13	4662.49	33.46	MWD	

## 5D Anti-Collision Report

Secondary Well: Rattlesnake Fed Unit 1 (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											Survey Tool	Risk
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF			
0.00	21.00	0.00	197.49	0.00	0.00	0.00	3719.90	3721.52	2299.04	MWD		
100.00	103.21	82.21	197.49	1.23	1.10	3.03	3718.48	3721.42	1264.32	Inc Only (Inc Only Svys)		
200.00	207.27	186.27	197.49	3.72	3.05	4.62	3715.68	3721.28	663.59	Inc Only (Inc Only Svys)		
300.00	310.54	289.54	197.47	7.07	5.31	4.65	3711.94	3721.04	408.95	Inc Only (Inc Only Svys)		
400.00	412.56	391.57	197.46	10.86	7.42	4.69	3707.74	3720.73	286.37	Inc Only (Inc Only Svys)		
500.00	514.57	493.59	197.44	15.13	9.50	4.74	3703.03	3720.36	214.68	Inc Only (Inc Only Svys)		
600.00	614.58	593.60	197.42	19.63	11.53	4.81	3698.08	3719.97	169.92	Inc Only (Inc Only Svys)		
700.00	714.56	693.60	197.40	24.16	13.56	4.89	3693.10	3719.58	140.47	Inc Only (Inc Only Svys)		
800.00	815.47	794.52	197.38	28.86	15.60	4.97	3687.95	3719.18	119.07	Inc Only (Inc Only Svys)		
900.00	917.73	896.79	197.36	34.02	17.66	5.07	3682.32	3718.74	102.11	Inc Only (Inc Only Svys)		
1000.00	1018.35	997.42	197.33	39.37	19.68	5.17	3676.46	3718.24	89.00	Inc Only (Inc Only Svys)		
1100.00	1114.84	1093.92	197.31	44.18	21.64	5.28	3671.16	3717.79	79.73	Inc Only (Inc Only Svys)		
1200.00	1211.35	1190.43	197.30	48.30	23.60	5.39	3666.60	3717.44	73.13	Inc Only (Inc Only Svys)		
1300.00	1307.86	1286.95	197.28	51.60	25.58	5.51	3662.92	3717.18	68.50	Inc Only (Inc Only Svys)		
1400.00	1404.39	1383.48	197.28	53.97	27.54	5.63	3660.20	3717.01	65.42	Inc Only (Inc Only Svys)		
1500.00	1500.91	1480.00	197.27	55.78	29.51	5.75	3658.10	3716.94	63.17	Inc Only (Inc Only Svys)		
1600.00	1600.99	1580.08	197.27	57.23	31.54	5.89	3656.39	3716.93	61.40	Inc Only (Inc Only Svys)		
1700.00	1701.98	1681.08	197.27	58.69	33.58	6.03	3654.64	3716.89	59.72	Inc Only (Inc Only Svys)		
1800.00	1802.98	1782.08	197.27	60.46	35.62	6.17	3652.58	3716.82	57.86	Inc Only (Inc Only Svys)		
1900.00	1903.98	1883.08	197.26	62.51	37.66	6.32	3650.23	3716.73	55.90	Inc Only (Inc Only Svys)		
2000.00	2004.81	1983.90	197.26	64.69	39.70	6.47	3647.73	3716.61	53.96	Inc Only (Inc Only Svys)		
2100.00	2104.81	2083.90	197.25	67.02	41.72	6.63	3645.08	3716.48	52.05	Inc Only (Inc Only Svys)		
2200.00	2204.81	2183.90	197.24	69.35	43.74	6.78	3642.42	3716.35	50.27	Inc Only (Inc Only Svys)		
2300.00	2304.80	2283.90	197.24	71.70	45.76	6.95	3639.76	3716.22	48.61	Inc Only (Inc Only Svys)		
2400.00	2404.80	2383.90	197.23	74.04	47.78	7.11	3637.09	3716.09	47.04	Inc Only (Inc Only Svys)		
2500.00	2504.80	2483.90	197.22	76.40	49.80	7.28	3634.42	3715.96	45.57	Inc Only (Inc Only Svys)		

## 5D Anti-Collision Report

Secondary Well: Rattlesnake Fed Unit 1 (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T. Face to Sec (°)	S. Major (US ft)	S. Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
2600.00	2607.27	2586.37	197.22	79.26	51.87	7.45	3631.24	3715.80	43.94	Inc Only (Inc Only Svys)	
2700.00	2710.20	2689.30	197.20	82.44	53.95	7.63	3627.68	3715.57	42.27	Inc Only (Inc Only Svys)	
2800.00	2813.12	2792.23	197.19	86.47	56.02	7.82	3623.24	3715.25	40.38	Inc Only (Inc Only Svys)	
2900.00	2916.04	2895.16	197.17	91.13	58.10	8.01	3618.12	3714.86	38.40	Inc Only (Inc Only Svys)	
3000.00	3018.94	2998.07	197.14	96.27	60.17	8.20	3612.48	3714.39	36.45	Inc Only (Inc Only Svys)	
3100.00	3126.77	3105.93	197.11	103.73	62.34	8.41	3604.50	3713.78	33.98	Inc Only (Inc Only Svys)	
3200.00	3234.85	3214.04	197.06	112.67	64.51	8.63	3594.91	3712.95	31.45	Inc Only (Inc Only Svys)	
3300.00	3342.84	3322.10	17.02	123.70	66.67	8.85	3582.32	3711.07	28.82	Inc Only (Inc Only Svys)	
3400.00	3450.70	3430.07	16.97	137.80	68.83	9.09	3564.98	3707.30	26.05	Inc Only (Inc Only Svys)	
3500.00	3551.36	3530.85	16.93	151.55	70.86	9.32	3546.10	3701.68	23.79	Inc Only (Inc Only Svys)	
3600.00	3639.46	3619.03	16.90	162.49	72.64	9.52	3529.29	3695.49	22.24	Inc Only (Inc Only Svys)	
3700.00	3736.92	3716.55	16.87	173.24	74.60	9.74	3512.85	3689.46	20.89	Inc Only (Inc Only Svys)	
3800.00	3836.66	3816.35	16.85	183.99	76.59	9.97	3496.39	3683.44	19.69	Inc Only (Inc Only Svys)	
3900.00	3936.39	3916.14	16.82	194.78	78.60	10.20	3479.92	3677.42	18.62	Inc Only (Inc Only Svys)	
4000.00	4035.23	4015.04	16.79	205.32	80.59	10.44	3463.64	3671.41	17.67	Inc Only (Inc Only Svys)	
4100.00	4134.12	4113.99	33.43	215.75	82.58	10.68	3448.30	3666.22	16.82	Inc Only (Inc Only Svys)	
4200.00	4233.10	4213.02	58.32	225.93	84.58	10.92	3434.78	3662.62	16.08	Inc Only (Inc Only Svys)	
4300.00	4332.12	4312.09	85.48	235.87	86.57	11.16	3423.08	3660.61	15.41	Inc Only (Inc Only Svys)	
4400.00	4431.16	4411.18	105.62	245.66	88.57	11.41	3413.13	3660.20	14.81	Inc Only (Inc Only Svys)	
4500.00	4532.70	4512.77	111.63	255.91	90.61	11.67	3404.18	3661.20	14.24	Inc Only (Inc Only Svys)	
4600.00	4634.45	4614.58	111.67	266.44	92.66	11.93	3395.54	3662.74	13.71	Inc Only (Inc Only Svys)	
4700.00	4736.21	4716.39	111.72	277.63	94.71	12.20	3386.26	3664.28	13.18	Inc Only (Inc Only Svys)	
4800.00	4837.97	4818.22	111.77	289.36	96.76	12.48	3376.40	3665.76	12.67	Inc Only (Inc Only Svys)	
4900.00	4939.73	4920.06	111.81	301.45	98.80	12.76	3366.19	3667.20	12.18	Inc Only (Inc Only Svys)	
5000.00	5035.96	5016.35	111.85	312.30	100.75	13.03	3357.18	3668.65	11.78	Inc Only (Inc Only Svys)	

## 5D Anti-Collision Report

Secondary Well: Rattlesnake Fed Unit 1 (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
5100.00	5131.95	5112.39	111.90	323.10	102.69	13.29	3348.29	3670.22	11.40	Inc Only (Inc Only Svys)	
5200.00	5227.92	5208.41	111.95	331.93	104.63	13.56	3341.41	3671.89	11.11	Inc Only (Inc Only Svys)	
5300.00	5323.88	5304.41	112.01	340.66	106.57	13.83	3334.75	3673.68	10.84	Inc Only (Inc Only Svys)	
5400.00	5419.82	5400.37	112.07	347.42	108.51	14.10	3330.08	3675.58	10.64	Inc Only (Inc Only Svys)	
5500.00	5515.73	5496.30	112.14	354.06	110.44	14.36	3325.60	3677.58	10.45	Inc Only (Inc Only Svys)	
5600.00	5617.12	5597.71	112.21	360.47	112.48	14.65	3321.40	3679.64	10.27	Inc Only (Inc Only Svys)	
5700.00	5718.93	5699.54	112.28	367.11	114.53	14.94	3316.92	3681.64	10.09	Inc Only (Inc Only Svys)	
5800.00	5820.76	5801.40	112.35	374.38	116.58	15.23	3311.82	3683.60	9.91	Inc Only (Inc Only Svys)	
5900.00	5922.60	5903.27	112.42	382.23	118.63	15.54	3306.12	3685.51	9.71	Inc Only (Inc Only Svys)	
6000.00	6024.40	6005.10	112.48	390.38	120.68	15.85	3300.10	3687.37	9.52	Inc Only (Inc Only Svys)	
6100.00	6121.42	6102.15	112.54	397.94	122.64	16.15	3294.66	3689.25	9.35	Inc Only (Inc Only Svys)	
6200.00	6218.43	6199.18	112.60	405.13	124.59	16.45	3289.66	3691.20	9.19	Inc Only (Inc Only Svys)	
6300.00	6315.41	6296.18	112.67	411.42	126.54	16.75	3285.60	3693.25	9.06	Inc Only (Inc Only Svys)	
6400.00	6412.38	6393.16	112.74	416.98	128.49	17.05	3282.33	3695.37	8.95	Inc Only (Inc Only Svys)	
6500.00	6509.32	6490.12	112.81	422.00	130.44	17.36	3279.63	3697.58	8.85	Inc Only (Inc Only Svys)	
6600.00	6608.77	6589.57	112.89	426.60	132.44	17.67	3277.39	3699.85	8.76	Inc Only (Inc Only Svys)	
6700.00	6708.61	6689.42	112.97	431.12	134.45	17.99	3275.22	3702.12	8.67	Inc Only (Inc Only Svys)	
6800.00	6808.45	6789.26	113.05	435.65	136.46	18.32	3273.06	3704.40	8.59	Inc Only (Inc Only Svys)	
6900.00	6908.28	6889.11	113.13	440.18	138.47	18.65	3270.92	3706.69	8.51	Inc Only (Inc Only Svys)	
7000.00	7008.12	6988.95	113.21	444.71	140.48	18.98	3268.78	3708.98	8.43	Inc Only (Inc Only Svys)	
7100.00	7107.96	7088.80	113.28	449.24	142.49	19.33	3266.65	3711.28	8.35	Inc Only (Inc Only Svys)	
7200.00	7207.79	7188.64	113.36	453.77	144.49	19.67	3264.54	3713.59	8.27	Inc Only (Inc Only Svys)	
7300.00	7307.63	7288.49	113.44	458.30	146.50	20.02	3262.43	3715.90	8.19	Inc Only (Inc Only Svys)	
7400.00	7407.47	7388.33	113.52	462.84	148.51	20.38	3260.34	3718.23	8.12	Inc Only (Inc Only Svys)	
7500.00	7507.30	7488.18	113.60	467.37	150.52	20.74	3258.25	3720.55	8.05	Inc Only (Inc Only Svys)	

## 5D Anti-Collision Report

Secondary Well: Rattlesnake Fed Unit 1 (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Facet to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	FS (US ft)	CC (US ft)	SF	Survey Tool	Risk
7600.00	7607.96	7588.85	113.67	472.11	152.55	21.11	3255.97	3722.88	7.97	Inc Only (Inc Only Svys)	
7700.00	7708.86	7689.75	113.75	476.97	154.58	21.48	3253.57	3725.19	7.90	Inc Only (Inc Only Svys)	
7800.00	7809.76	7790.67	113.83	482.20	156.61	21.87	3250.79	3727.47	7.82	Inc Only (Inc Only Svys)	
7900.00	7910.68	7891.60	113.90	487.64	158.64	22.25	3247.80	3729.73	7.74	Inc Only (Inc Only Svys)	
8000.00	8011.60	7992.53	113.97	493.32	160.67	22.65	3244.56	3731.97	7.66	Inc Only (Inc Only Svys)	
8100.00	8112.98	8093.93	114.04	499.46	162.71	23.05	3240.87	3734.18	7.57	Inc Only (Inc Only Svys)	
8200.00	8214.49	8195.46	114.11	505.83	164.75	23.46	3236.93	3736.36	7.48	Inc Only (Inc Only Svys)	
8300.00	8316.01	8297.00	114.18	512.74	166.79	23.88	3232.44	3738.49	7.39	Inc Only (Inc Only Svys)	
8400.00	8417.54	8398.56	114.25	520.02	168.84	24.31	3227.58	3740.58	7.29	Inc Only (Inc Only Svys)	
8500.00	8519.08	8500.12	114.31	527.59	170.88	24.74	3222.40	3742.64	7.19	Inc Only (Inc Only Svys)	
8600.00	8620.63	8601.70	114.37	535.77	172.92	25.18	3216.62	3744.65	7.09	Inc Only (Inc Only Svys)	
8700.00	8722.02	8703.13	114.43	544.15	174.96	25.63	3210.61	3746.63	6.99	Inc Only (Inc Only Svys)	
8800.00	8823.02	8804.16	114.49	552.89	176.99	26.08	3204.24	3748.57	6.89	Inc Only (Inc Only Svys)	
8900.00	8924.02	8905.20	114.54	561.92	179.02	26.54	3197.58	3750.49	6.78	Inc Only (Inc Only Svys)	
9000.00	9025.02	9006.25	114.60	571.11	181.05	27.00	3190.75	3752.38	6.68	Inc Only (Inc Only Svys)	
9100.00	9126.03	9107.30	114.65	580.73	183.08	27.47	3183.49	3754.24	6.58	Inc Only (Inc Only Svys)	
9200.00	9226.61	9207.93	114.70	590.40	185.11	27.95	3176.16	3756.08	6.48	Inc Only (Inc Only Svys)	
9300.00	9326.49	9307.85	114.76	600.13	187.12	28.42	3168.78	3757.92	6.38	Inc Only (Inc Only Svys)	
9400.00	9426.37	9407.78	114.81	609.87	189.13	28.91	3161.40	3759.76	6.28	Inc Only (Inc Only Svys)	
9500.00	9526.25	9507.71	114.86	619.61	191.14	29.40	3154.03	3761.60	6.19	Inc Only (Inc Only Svys)	
9600.00	9626.90	9608.41	114.91	629.56	193.16	29.90	3146.46	3763.44	6.10	Inc Only (Inc Only Svys)	
9700.00	9728.02	9709.57	114.96	639.69	195.20	30.40	3138.70	3765.25	6.01	Inc Only (Inc Only Svys)	
9800.00	9829.14	9810.75	115.01	650.21	197.23	30.92	3130.55	3767.04	5.92	Inc Only (Inc Only Svys)	
9900.00	9930.26	9911.93	115.06	661.00	199.26	31.44	3122.12	3768.79	5.83	Inc Only (Inc Only Svys)	
10000.00	10031.11	10012.83	115.10	671.92	201.29	31.96	3113.55	3770.51	5.74	Inc Only (Inc Only Svys)	

## 5D Anti-Collision Report

Secondary Well: Rattlesnake Fed Unit 1 (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
10100.00	10127.50	10109.27	115.15	681.96	203.23	32.47	3105.84	3772.27	5.66	Inc Only (Inc Only Svys)	
10200.00	10223.88	10205.70	115.20	691.46	205.18	32.98	3098.73	3774.12	5.59	Inc Only (Inc Only Svys)	
10300.00	10320.25	10302.11	115.25	700.24	207.12	33.49	3092.41	3776.08	5.52	Inc Only (Inc Only Svys)	
10400.00	10416.60	10398.49	115.30	708.01	209.06	34.01	3087.12	3778.12	5.47	Inc Only (Inc Only Svys)	
10500.00	10513.48	10495.40	115.36	715.47	211.01	34.53	3082.25	3780.27	5.42	Inc Only (Inc Only Svys)	
10600.00	10613.35	10595.29	115.43	722.60	213.02	35.07	3077.72	3782.45	5.37	Inc Only (Inc Only Svys)	
10700.00	10713.21	10695.18	115.49	729.74	215.03	35.62	3073.20	3784.64	5.32	Inc Only (Inc Only Svys)	
10800.00	10813.08	10795.07	115.55	736.87	217.04	36.18	3068.69	3786.83	5.27	Inc Only (Inc Only Svys)	
10900.00	10912.94	10894.96	115.62	744.00	219.05	36.74	3064.19	3789.03	5.23	Inc Only (Inc Only Svys)	
11000.00	11012.81	10994.85	115.68	751.14	221.06	37.30	3059.70	3791.23	5.18	Inc Only (Inc Only Svys)	
11100.00	11112.68	11094.74	115.74	758.27	223.07	37.87	3055.22	3793.43	5.14	Inc Only (Inc Only Svys)	
11200.00	11212.54	11194.63	115.80	765.41	225.07	38.45	3050.74	3795.64	5.10	Inc Only (Inc Only Svys)	
11300.00	11312.41	11294.51	115.87	772.54	227.08	39.03	3046.28	3797.86	5.05	Inc Only (Inc Only Svys)	
11400.00	11412.27	11394.40	115.93	779.67	229.09	39.62	3041.83	3800.08	5.01	Inc Only (Inc Only Svys)	
11500.00	11512.14	11494.29	115.99	786.81	231.10	40.22	3037.39	3802.30	4.97	Inc Only (Inc Only Svys)	
11600.00	11612.00	11594.18	116.05	793.94	233.11	40.82	3032.96	3804.53	4.93	Inc Only (Inc Only Svys)	
11700.00	11711.87	11694.07	116.12	801.07	235.12	41.42	3028.54	3806.76	4.89	Inc Only (Inc Only Svys)	
11800.00	11811.74	11793.96	116.18	808.21	237.13	42.03	3024.12	3809.00	4.85	Inc Only (Inc Only Svys)	
11900.00	11911.60	11893.85	116.24	815.34	239.14	42.65	3019.72	3811.24	4.82	Inc Only (Inc Only Svys)	
12000.00	12010.15	11992.43	116.31	822.14	241.12	43.27	3015.51	3813.36	4.78	Inc Only (Inc Only Svys)	
12100.00	12105.47	12087.76	116.36	828.12	243.04	43.87	3011.40	3814.86	4.75	Inc Only (Inc Only Svys)	
12200.00	12200.82	12183.13	116.39	833.22	244.95	44.47	3007.37	3815.72	4.72	Inc Only (Inc Only Svys)	
12300.00	12296.19	12278.50	116.39	837.53	246.86	45.08	3003.33	3815.91	4.70	Inc Only (Inc Only Svys)	
12400.00	12391.42	12373.74	21.68	840.57	248.77	45.68	2996.59	3812.22	4.67	Inc Only (Inc Only Svys)	
12500.00	12484.77	12467.08	22.50	843.17	250.63	46.28	2975.71	3793.53	4.64	Inc Only (Inc Only Svys)	

## 5D Anti-Collision Report

Secondary Well: Rattlesnake Fed Unit 1 (s) (TVD relative to Drill Floor) (All Azimuth Relative to GRID NORTH)											Survey Tool	Risk
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T. Face to Sec (°)	S. Major (US ft)	S. Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF			
12600.00	12577.61	12559.93	24.15	844.95	252.50	46.88	2940.51	3759.41	4.59	Inc Only (Inc Only Svys)		
12700.00	12662.79	12645.10	26.88	846.58	254.21	47.43	2891.55	3710.92	4.53	Inc Only (Inc Only Svys)		
12800.00	12737.61	12719.93	31.12	848.01	255.72	47.92	2830.48	3649.62	4.46	Inc Only (Inc Only Svys)		
12900.00	12799.81	12782.13	37.64	849.20	256.97	48.33	2759.25	3577.47	4.37	Inc Only (Inc Only Svys)		
13000.00	12847.50	12829.83	47.67	850.12	257.93	48.65	2680.17	3496.78	4.28	Inc Only (Inc Only Svys)		
13100.00	12879.23	12861.55	62.71	850.73	258.57	48.86	2596.00	3410.14	4.19	Inc Only (Inc Only Svys)		
13200.00	12894.04	12876.36	82.70	851.01	258.86	48.96	2509.20	3320.27	4.09	Inc Only (Inc Only Svys)		
13300.00	12895.70	12878.02	89.21	851.04	258.90	48.97	2422.62	3229.86	4.00	Inc Only (Inc Only Svys)		
13400.00	12896.57	12878.89	89.25	851.06	258.91	48.98	2336.85	3140.02	3.91	Inc Only (Inc Only Svys)		
13500.00	12897.44	12879.76	89.29	851.07	258.93	48.98	2252.09	3050.80	3.82	Inc Only (Inc Only Svys)		
13600.00	12898.30	12880.62	89.32	851.09	258.95	48.99	2168.47	2962.27	3.73	Inc Only (Inc Only Svys)		
13700.00	12899.17	12881.49	89.36	851.11	258.97	48.99	2086.09	2874.50	3.65	Inc Only (Inc Only Svys)		
13800.00	12900.04	12882.36	89.39	851.12	258.98	49.00	2005.08	2787.55	3.56	Inc Only (Inc Only Svys)		
13900.00	12900.91	12883.23	89.43	851.14	259.00	49.00	1925.59	2701.50	3.48	Inc Only (Inc Only Svys)		
14000.00	12901.77	12884.10	89.46	851.16	259.02	49.01	1847.77	2616.45	3.40	Inc Only (Inc Only Svys)		
14100.00	12902.64	12884.96	89.50	851.17	259.04	49.02	1771.78	2532.48	3.33	Inc Only (Inc Only Svys)		
14200.00	12903.51	12885.83	89.53	851.19	259.05	49.02	1697.87	2449.73	3.26	Inc Only (Inc Only Svys)		
14300.00	12904.38	12886.70	89.57	851.21	259.07	49.03	1626.30	2368.30	3.19	Inc Only (Inc Only Svys)		
14400.00	12905.24	12887.57	89.61	851.22	259.09	49.03	1557.33	2288.34	3.13	Inc Only (Inc Only Svys)		
14500.00	12906.11	12888.43	89.64	851.24	259.11	49.04	1491.16	2210.02	3.07	Inc Only (Inc Only Svys)		
14600.00	12906.98	12889.30	89.68	851.26	259.12	49.04	1428.29	2133.51	3.03	Inc Only (Inc Only Svys)		
14700.00	12907.85	12890.17	89.71	851.27	259.14	49.05	1367.74	2059.01	2.98	Inc Only (Inc Only Svys)		
14800.00	12908.71	12891.04	89.75	851.29	259.16	49.06	1310.84	1986.75	2.94	Inc Only (Inc Only Svys)		
14900.00	12909.58	12891.90	89.78	851.31	259.18	49.06	1258.13	1916.99	2.91	Inc Only (Inc Only Svys)		
15000.00	12910.45	12892.77	89.82	851.32	259.19	49.07	1210.44	1850.00	2.89	Inc Only (Inc Only Svys)		

## 5D Anti-Collision Report

Secondary Well: Rattlesnake Fed Unit 1 (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
15100.00	12911.32	12893.64	89.85	851.34	259.21	49.07	1168.34	1786.11	2.89	Inc Only (Inc Only Svys)	
15200.00	12912.18	12894.51	89.89	851.36	259.23	49.08	1132.43	1725.64	2.91	Inc Only (Inc Only Svys)	
15300.00	12913.05	12895.37	89.93	851.37	259.25	49.09	1103.17	1668.98	2.95	Inc Only (Inc Only Svys)	
15400.00	12913.92	12896.24	89.96	851.39	259.26	49.09	1077.52	1616.53	3.00	Inc Only (Inc Only Svys)	
15500.00	12914.79	12897.11	90.00	851.41	259.28	49.10	1059.79	1568.70	3.08	Inc Only (Inc Only Svys)	
15600.00	12915.65	12897.98	90.03	851.42	259.30	49.10	1050.59	1525.93	3.21	Inc Only (Inc Only Svys)	
15700.00	12916.52	12898.84	90.07	851.44	259.32	49.11	1044.92	1488.67	3.35	Inc Only (Inc Only Svys)	
15800.00	12917.39	12899.71	90.10	851.46	259.33	49.11	1046.91	1457.32	3.55	Inc Only (Inc Only Svys)	
15900.00	12918.26	12900.58	90.14	851.47	259.35	49.12	1052.00	1432.28	3.77	Inc Only (Inc Only Svys)	
16000.00	12919.12	12901.45	90.17	851.49	259.37	49.13	1059.00	1413.89	3.98	Inc Only (Inc Only Svys)	
16100.00	12919.99	12902.31	90.21	851.51	259.39	49.13	1065.41	1402.40	4.16	Inc Only (Inc Only Svys)	
16200.00	12920.19	12902.51	90.25	851.51	259.39	49.13	1066.83	1397.99	4.22	Inc Only (Inc Only Svys)	
16300.00	12918.72	12901.04	90.18	851.48	259.36	49.12	1063.87	1400.74	4.16	Inc Only (Inc Only Svys)	
16400.00	12916.77	12899.10	90.10	851.45	259.32	49.11	1056.90	1410.58	3.99	Inc Only (Inc Only Svys)	
16500.00	12914.83	12897.15	90.02	851.41	259.28	49.10	1047.71	1427.37	3.76	Inc Only (Inc Only Svys)	
16600.00	12912.89	12895.21	89.94	851.37	259.24	49.08	1039.18	1450.88	3.52	Inc Only (Inc Only Svys)	
16700.00	12910.94	12893.27	89.86	851.33	259.20	49.07	1034.72	1480.78	3.32	Inc Only (Inc Only Svys)	
16800.00	12909.00	12891.32	89.78	851.30	259.16	49.06	1036.93	1516.69	3.16	Inc Only (Inc Only Svys)	
16900.00	12907.06	12889.38	89.70	851.26	259.13	49.05	1043.73	1558.20	3.03	Inc Only (Inc Only Svys)	
17000.00	12905.12	12887.44	89.62	851.22	259.09	49.03	1058.20	1604.87	2.94	Inc Only (Inc Only Svys)	
17100.00	12903.17	12885.49	89.54	851.18	259.05	49.02	1080.87	1656.27	2.88	Inc Only (Inc Only Svys)	
17200.00	12901.23	12883.55	89.46	851.15	259.01	49.01	1108.07	1711.97	2.83	Inc Only (Inc Only Svys)	
17300.00	12899.29	12881.61	89.38	851.11	258.97	48.99	1141.46	1771.56	2.81	Inc Only (Inc Only Svys)	
17400.00	12897.34	12879.66	89.30	851.07	258.93	48.98	1181.33	1834.67	2.81	Inc Only (Inc Only Svys)	
17500.00	12895.40	12877.72	89.22	851.04	258.89	48.97	1227.02	1900.95	2.82	Inc Only (Inc Only Svys)	

## 5D Anti-Collision Report

Secondary Well: Rattlesnake Fed Unit 1 (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											Survey Tool	Risk
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T. Face to Sec (°)	S. Major (US ft)	S. Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF			
17600.00	12893.46	12875.78	89.14	851.00	258.85	48.95	1277.95	1970.08	2.85	Inc Only (Inc Only Svsys)		
17700.00	12891.51	12873.83	89.07	850.96	258.81	48.94	1333.55	2041.76	2.88	Inc Only (Inc Only Svsys)		
17800.00	12889.57	12871.89	88.99	850.92	258.77	48.93	1393.30	2115.74	2.93	Inc Only (Inc Only Svsys)		
17900.00	12887.63	12869.95	88.91	850.89	258.74	48.92	1455.03	2191.78	2.97	Inc Only (Inc Only Svsys)		
18000.00	12885.68	12868.01	88.83	850.85	258.70	48.90	1520.19	2269.68	3.03	Inc Only (Inc Only Svsys)		
18100.00	12883.74	12866.06	88.75	850.81	258.66	48.89	1588.41	2349.25	3.09	Inc Only (Inc Only Svsys)		
18200.00	12881.80	12864.12	88.67	850.77	258.62	48.88	1659.21	2430.33	3.15	Inc Only (Inc Only Svsys)		
18300.00	12879.85	12862.18	88.59	850.74	258.58	48.86	1732.44	2512.78	3.22	Inc Only (Inc Only Svsys)		
18400.00	12877.91	12860.23	88.51	850.70	258.54	48.85	1807.86	2596.45	3.29	Inc Only (Inc Only Svsys)		
18500.00	12875.97	12858.29	88.43	850.66	258.50	48.84	1885.24	2681.25	3.37	Inc Only (Inc Only Svsys)		
18600.00	12874.03	12856.35	88.35	850.63	258.46	48.82	1964.38	2767.05	3.45	Inc Only (Inc Only Svsys)		
18700.00	12872.08	12854.40	88.27	850.59	258.42	48.81	2045.11	2853.79	3.53	Inc Only (Inc Only Svsys)		
18800.00	12870.14	12852.46	88.19	850.55	258.38	48.80	2127.26	2941.36	3.61	Inc Only (Inc Only Svsys)		
18900.00	12868.20	12850.52	88.11	850.51	258.34	48.79	2210.70	3029.70	3.70	Inc Only (Inc Only Svsys)		
19000.00	12866.25	12848.57	88.03	850.48	258.31	48.77	2295.31	3118.74	3.79	Inc Only (Inc Only Svsys)		
19100.00	12864.31	12846.63	87.95	850.44	258.27	48.76	2380.97	3208.43	3.88	Inc Only (Inc Only Svsys)		
19200.00	12862.37	12844.69	87.87	850.40	258.23	48.75	2467.58	3298.71	3.97	Inc Only (Inc Only Svsys)		
19300.00	12860.42	12842.74	87.79	850.36	258.19	48.73	2555.07	3389.53	4.06	Inc Only (Inc Only Svsys)		
19400.00	12858.48	12840.80	87.71	850.33	258.15	48.72	2643.36	3480.86	4.16	Inc Only (Inc Only Svsys)		
19500.00	12856.54	12838.86	87.63	850.29	258.11	48.71	2732.37	3572.65	4.25	Inc Only (Inc Only Svsys)		
19600.00	12854.59	12836.91	87.55	850.25	258.07	48.70	2822.04	3664.86	4.35	Inc Only (Inc Only Svsys)		
19700.00	12852.65	12834.97	87.47	850.22	258.03	48.68	2912.25	3757.48	4.45	Inc Only (Inc Only Svsys)		
19800.00	12850.71	12833.03	87.40	850.18	257.99	48.67	3003.02	3850.46	4.54	Inc Only (Inc Only Svsys)		
19900.00	12848.77	12831.09	87.32	850.14	257.95	48.66	3094.31	3943.79	4.64	Inc Only (Inc Only Svsys)		
20000.00	12846.82	12829.14	87.24	850.10	257.91	48.64	3186.08	4037.43	4.74	Inc Only (Inc Only Svsys)		

## 5D Anti-Collision Report

Secondary Well: Rattlesnake Fed Unit 1 (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
20100.00	12844.88	12827.20	87.16	850.07	257.88	48.63	3278.29	4131.38	4.84	Inc Only (Inc Only Svys)	
20200.00	12842.94	12825.26	87.08	850.03	257.84	48.62	3370.91	4225.59	4.94	Inc Only (Inc Only Svys)	
20300.00	12840.99	12823.31	87.00	849.99	257.80	48.60	3463.90	4320.07	5.05	Inc Only (Inc Only Svys)	
20400.00	12839.05	12821.37	86.92	849.95	257.76	48.59	3557.25	4414.79	5.15	Inc Only (Inc Only Svys)	
20500.00	12837.11	12819.43	86.84	849.92	257.72	48.58	3650.92	4509.74	5.25	Inc Only (Inc Only Svys)	
20600.00	12835.16	12817.48	86.76	849.88	257.68	48.57	3744.90	4604.90	5.35	Inc Only (Inc Only Svys)	
20700.00	12833.22	12815.54	86.68	849.84	257.64	48.55	3839.16	4700.26	5.46	Inc Only (Inc Only Svys)	
20800.00	12831.28	12813.60	86.60	849.81	257.60	48.54	3933.68	4795.81	5.56	Inc Only (Inc Only Svys)	
20900.00	12829.33	12811.65	86.52	849.77	257.56	48.53	4028.46	4891.54	5.67	Inc Only (Inc Only Svys)	
21000.00	12827.39	12809.71	86.44	849.73	257.52	48.51	4123.46	4987.43	5.77	Inc Only (Inc Only Svys)	
21100.00	12825.45	12807.77	86.36	849.69	257.48	48.50	4218.57	5083.48	5.88	Inc Only (Inc Only Svys)	
21200.00	12823.50	12805.82	86.28	849.66	257.45	48.49	4313.74	5179.68	5.98	Inc Only (Inc Only Svys)	
21300.00	12821.56	12803.88	86.21	849.62	257.41	48.47	4409.11	5276.02	6.09	Inc Only (Inc Only Svys)	
21400.00	12819.62	12801.94	86.13	849.58	257.37	48.46	4504.67	5372.49	6.19	Inc Only (Inc Only Svys)	
21500.00	12817.68	12800.00	86.05	849.54	257.33	48.45	4600.41	5469.09	6.30	Inc Only (Inc Only Svys)	
21600.00	12815.73	12798.05	85.97	849.51	257.29	48.44	4696.32	5565.81	6.40	Inc Only (Inc Only Svys)	
21700.00	12813.79	12796.11	85.89	849.47	257.25	48.42	4792.38	5662.64	6.51	Inc Only (Inc Only Svys)	
21800.00	12811.85	12794.17	85.81	849.43	257.21	48.41	4888.59	5759.58	6.61	Inc Only (Inc Only Svys)	
21900.00	12809.90	12792.22	85.73	849.40	257.17	48.40	4984.94	5856.62	6.72	Inc Only (Inc Only Svys)	
22000.00	12807.96	12790.28	85.65	849.36	257.13	48.39	5081.42	5953.76	6.83	Inc Only (Inc Only Svys)	
22100.00	12806.02	12788.34	85.57	849.32	257.09	48.37	5178.01	6050.99	6.93	Inc Only (Inc Only Svys)	
22200.00	12804.07	12786.39	85.49	849.28	257.05	48.36	5274.69	6148.31	7.04	Inc Only (Inc Only Svys)	
22300.00	12802.13	12784.45	85.41	849.25	257.02	48.35	5371.49	6245.72	7.14	Inc Only (Inc Only Svys)	
22400.00	12800.19	12782.51	85.33	849.21	256.98	48.33	5468.40	6343.20	7.25	Inc Only (Inc Only Svys)	
22500.00	12798.24	12780.56	85.26	849.17	256.94	48.32	5565.41	6440.76	7.36	Inc Only (Inc Only Svys)	

## 5D Anti-Collision Report

Secondary Well: Rattlesnake Fed Unit 1 (s)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
22600.00	12796.30	12778.62	85.18	849.14	256.90	48.31	5662.51	6538.40	7.46	Inc Only (Inc Only Svys)	
22661.70	12795.10	12777.42	85.13	849.11	256.87	48.30	5722.47	6598.67	7.53	Inc Only (Inc Only Svys)	
Secondary Well: Mean Green 23-35 Fed Com 4H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
0.00	0.00	0.00	269.98	0.00	0.00	0.00	89.25	89.98	122.70	MWD	
100.00	100.00	100.00	269.98	0.11	0.11	4.60	89.03	89.98	94.32	MWD	
200.00	200.00	200.00	269.98	0.34	0.34	4.62	88.58	89.98	64.11	MWD	
300.00	300.00	300.00	269.98	0.56	0.56	4.65	88.13	89.98	48.55	MWD	
400.00	400.00	400.00	269.98	0.79	0.79	4.69	87.68	89.98	39.07	MWD	
500.00	500.00	500.00	269.98	1.01	1.01	4.75	87.23	89.98	32.69	MWD	
600.00	600.00	600.00	269.98	1.24	1.24	4.81	86.78	89.98	28.10	MWD	
700.00	700.00	700.00	269.98	1.46	1.46	4.88	86.33	89.98	24.64	MWD	
800.00	800.00	800.00	269.98	1.69	1.69	4.97	85.88	89.98	21.94	MWD	
900.00	900.00	900.00	269.98	1.91	1.91	5.06	85.43	89.98	19.77	MWD	
1000.00	1000.00	1000.00	269.98	2.14	2.14	5.16	84.98	89.98	17.99	MWD	
1100.00	1100.00	1100.00	269.98	2.36	2.36	5.26	84.53	89.98	16.51	MWD	
1200.00	1200.00	1200.00	269.98	2.59	2.59	5.37	84.08	89.98	15.25	MWD	
1300.00	1300.00	1300.00	269.98	2.81	2.81	5.49	83.63	89.98	14.17	MWD	
1400.00	1400.00	1400.00	269.98	3.04	3.04	5.62	83.18	89.98	13.23	MWD	
1500.00	1500.00	1500.00	269.98	3.26	3.26	5.75	82.73	89.98	12.41	MWD	
1600.00	1600.00	1600.00	269.98	3.48	3.48	5.88	82.28	89.98	11.69	MWD	
1700.00	1700.00	1700.00	269.98	3.71	3.71	6.02	81.83	89.98	11.04	MWD	
1800.00	1800.00	1800.00	269.98	3.93	3.93	6.16	81.38	89.98	10.47	MWD	
1900.00	1900.00	1900.00	269.98	4.16	4.16	6.31	80.93	89.98	9.95	MWD	
2000.00	2000.00	2000.00	269.98	4.38	4.38	6.46	80.48	89.98	9.47	MWD	
2100.00	2100.00	2100.00	269.98	4.61	4.61	6.61	80.03	89.98	9.05	MWD	
2200.00	2200.00	2200.00	269.98	4.83	4.83	6.77	79.58	89.98	8.66	MWD	
2300.00	2300.00	2300.00	269.98	5.06	5.06	6.93	79.13	89.98	8.30	MWD	
2400.00	2400.00	2400.00	269.98	5.28	5.28	7.10	78.68	89.98	7.97	MWD	
2500.00	2500.00	2500.00	269.98	5.51	5.51	7.26	78.23	89.98	7.66	MWD	
2600.00	2600.00	2600.00	269.98	5.73	5.73	7.43	77.79	89.98	7.38	MWD	
2700.00	2700.00	2700.00	269.98	5.96	5.96	7.61	77.34	89.98	7.12	MWD	
2800.00	2800.00	2800.00	269.98	6.18	6.18	7.78	76.89	89.98	6.87	MWD	
2900.00	2900.00	2900.00	269.98	6.41	6.41	7.96	76.44	89.98	6.64	MWD	
3000.00	3000.00	3000.00	269.98	6.63	6.63	8.14	75.99	89.98	6.43	MWD	
3100.00	3100.00	3100.00	269.98	6.86	6.86	8.33	75.54	89.98	6.23	MWD	
3200.00	3200.00	3200.00	269.98	7.08	7.08	8.51	75.09	89.98	6.04	MWD	
3300.00	3299.99	3299.99	90.54	7.31	7.31	8.70	74.68	89.98	5.88	MWD	
3400.00	3399.96	3399.96	92.20	7.53	7.53	8.90	74.35	90.05	5.74	MWD	
3500.00	3499.86	3499.86	94.96	7.76	7.76	9.09	74.25	90.32	5.62	MWD	
3600.00	3599.73	3599.73	98.24	7.98	7.98	9.29	74.44	90.92	5.52	MWD	
3700.00	3699.59	3699.59	101.47	8.20	8.20	9.49	74.92	91.82	5.43	MWD	
3800.00	3799.45	3799.45	104.63	8.43	8.43	9.69	75.73	93.00	5.38	MWD	
3900.00	3899.31	3899.31	107.70	8.65	8.65	9.90	76.78	94.46	5.34	MWD	
4000.00	3999.18	3999.18	110.67	8.88	8.88	10.11	78.09	96.19	5.32	MWD	
4100.00	4099.07	4099.07	129.70	9.10	9.10	10.32	79.91	98.45	5.31	MWD	
4200.00	4199.00	4199.00	155.94	9.33	9.33	10.54	82.45	101.40	5.35	MWD	
4300.00	4298.93	4298.93	183.46	9.55	9.55	10.76	85.52	104.93	5.41	MWD	
4400.00	4398.84	4398.84	203.06	9.78	9.78	10.98	89.15	109.00	5.49	MWD	
4500.00	4498.69	4498.69	207.80	10.00	10.00	11.21	93.53	113.81	5.61	MWD	
4600.00	4598.47	4598.47	206.30	10.23	10.23	11.44	99.08	119.83	5.78	MWD	
4700.00	4698.23	4698.23	204.92	10.45	10.45	11.67	104.86	126.03	5.96	MWD	
4800.00	4797.99	4797.99	203.67	10.67	10.67	11.91	110.67	132.29	6.12	MWD	

## SD Anti-Collision Report

Secondary Well: Mean Green 23-35 Fed Com 4H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
4900.00	4897.76	4897.76	202.53	10.90	10.90	12.15	116.58	138.61	6.29	MWD	
5000.00	4997.52	4997.52	201.49	11.12	11.12	12.39	122.55	144.98	6.46	MWD	
5100.00	5097.29	5097.29	200.54	11.35	11.35	12.64	128.52	151.39	6.62	MWD	
5200.00	5197.05	5197.05	199.66	11.57	11.57	12.89	134.53	157.84	6.77	MWD	
5300.00	5296.81	5296.81	198.86	11.80	11.80	13.15	140.56	164.32	6.92	MWD	
5400.00	5396.58	5396.58	198.11	12.02	12.02	13.41	146.63	170.84	7.06	MWD	
5500.00	5496.34	5496.34	197.42	12.24	12.24	13.67	152.73	177.38	7.20	MWD	
5600.00	5596.11	5596.11	196.78	12.47	12.47	13.94	158.85	183.94	7.33	MWD	
5700.00	5695.87	5695.87	196.19	12.69	12.69	14.22	165.00	190.53	7.46	MWD	
5800.00	5795.63	5795.63	195.63	12.92	12.92	14.49	171.17	197.13	7.59	MWD	
5900.00	5895.40	5895.40	195.11	13.14	13.14	14.77	177.36	203.76	7.72	MWD	
6000.00	5995.16	5995.16	194.62	13.37	13.37	15.06	183.56	210.39	7.84	MWD	
6100.00	6094.93	6094.93	194.17	13.59	13.59	15.35	189.78	217.05	7.96	MWD	
6200.00	6194.69	6194.69	193.74	13.81	13.81	15.65	196.01	223.71	8.08	MWD	
6300.00	6294.45	6294.45	193.33	14.04	14.04	15.95	202.25	230.39	8.19	MWD	
6400.00	6394.22	6394.22	192.95	14.26	14.26	16.25	208.50	237.08	8.30	MWD	
6500.00	6493.98	6493.98	192.59	14.49	14.49	16.56	214.76	243.77	8.40	MWD	
6600.00	6593.75	6593.75	192.24	14.71	14.71	16.87	221.03	250.48	8.50	MWD	
6700.00	6693.51	6693.51	191.92	14.94	14.94	17.19	227.30	257.20	8.60	MWD	
6800.00	6793.27	6793.27	191.61	15.16	15.16	17.52	233.58	263.92	8.70	MWD	
6900.00	6893.04	6893.04	191.32	15.38	15.38	17.85	239.87	270.65	8.79	MWD	
7000.00	6992.80	6992.80	191.04	15.61	15.61	18.18	246.17	277.39	8.89	MWD	
7100.00	7092.56	7092.56	190.78	15.83	15.83	18.52	252.47	284.13	8.98	MWD	
7200.00	7192.33	7192.33	190.52	16.06	16.06	18.86	258.78	290.88	9.06	MWD	
7300.00	7292.09	7292.09	190.28	16.28	16.28	19.21	265.10	297.63	9.15	MWD	
7400.00	7391.86	7391.86	190.05	16.51	16.51	19.57	271.42	304.39	9.23	MWD	
7500.00	7491.62	7491.62	189.83	16.73	16.73	19.93	277.74	311.16	9.31	MWD	
7600.00	7591.38	7591.38	189.62	16.95	16.95	20.29	284.06	317.92	9.39	MWD	
7700.00	7691.15	7691.15	189.42	17.18	17.18	20.66	290.38	324.70	9.46	MWD	
7800.00	7790.91	7790.91	189.22	17.40	17.40	21.04	296.70	331.47	9.53	MWD	
7900.00	7890.68	7890.68	189.04	17.63	17.63	21.42	303.03	338.25	9.60	MWD	
8000.00	7990.44	7990.44	188.86	17.85	17.85	21.80	309.37	345.04	9.67	MWD	
8100.00	8090.20	8090.20	188.68	18.08	18.08	22.20	315.70	351.82	9.74	MWD	
8200.00	8189.97	8189.97	188.52	18.30	18.30	22.59	322.04	358.61	9.81	MWD	
8300.00	8289.73	8289.73	188.36	18.52	18.52	23.00	328.38	365.41	9.87	MWD	
8400.00	8389.50	8389.50	188.21	18.75	18.75	23.40	334.73	372.20	9.93	MWD	
8500.00	8489.26	8489.26	188.06	18.97	18.97	23.82	341.08	379.00	9.99	MWD	
8600.00	8589.02	8589.02	187.91	19.20	19.20	24.24	347.43	385.80	10.05	MWD	
8700.00	8688.79	8688.79	187.78	19.42	19.42	24.66	353.78	392.60	10.11	MWD	
8800.00	8788.55	8788.55	187.64	19.65	19.65	25.09	360.13	399.41	10.17	MWD	
8900.00	8888.32	8888.32	187.51	19.87	19.87	25.53	366.49	406.22	10.23	MWD	
9000.00	8988.08	8988.08	187.39	20.09	20.09	25.97	372.85	413.02	10.28	MWD	
9100.00	9087.84	9087.84	187.27	20.32	20.32	26.42	379.21	419.84	10.33	MWD	
9200.00	9187.61	9187.61	187.15	20.54	20.54	26.87	385.57	426.65	10.39	MWD	
9300.00	9287.37	9287.37	187.04	20.77	20.77	27.33	391.94	433.46	10.44	MWD	
9400.00	9387.14	9387.14	186.93	20.99	20.99	27.80	398.30	440.28	10.49	MWD	
9500.00	9486.90	9486.90	186.82	21.22	21.22	28.27	404.67	447.10	10.54	MWD	
9600.00	9586.66	9586.66	186.72	21.44	21.44	28.75	411.04	453.91	10.59	MWD	
9700.00	9686.43	9686.43	186.62	21.66	21.66	29.23	417.41	460.74	10.63	MWD	
9800.00	9786.19	9786.19	186.52	21.89	21.89	29.72	423.78	467.56	10.68	MWD	
9900.00	9885.96	9885.96	186.43	22.11	22.11	30.21	430.15	474.38	10.73	MWD	
10000.00	9985.72	9985.72	186.34	22.34	22.34	30.71	436.53	481.20	10.77	MWD	
10100.00	10085.48	10085.48	186.25	22.56	22.56	31.22	442.90	488.03	10.81	MWD	
10200.00	10185.25	10185.25	186.16	22.79	22.79	31.73	449.28	494.86	10.86	MWD	
10300.00	10285.01	10285.01	186.08	23.01	23.01	32.25	455.66	501.68	10.90	MWD	
10400.00	10384.78	10384.78	186.00	23.23	23.23	32.77	462.03	508.51	10.94	MWD	
10500.00	10484.54	10484.54	185.92	23.46	23.46	33.30	468.41	515.34	10.98	MWD	
10600.00	10584.30	10584.30	185.84	23.68	23.68	33.83	474.79	522.17	11.02	MWD	

## 5D Anti-Collision Report

Secondary Well: Mean Green 23-35 Fed Com 4H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Facet to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
10700.00	10684.07	10684.07	185.76	23.91	23.91	34.38	481.17	529.01	11.06	MWD	
10800.00	10783.83	10783.83	185.69	24.13	24.13	34.92	487.56	535.84	11.10	MWD	
10900.00	10883.60	10883.60	185.62	24.36	24.36	35.48	493.94	542.67	11.14	MWD	
11000.00	10983.36	10983.36	185.55	24.58	24.58	36.04	500.32	549.51	11.17	MWD	
11100.00	11082.40	11082.40	185.48	24.80	24.80	36.60	506.74	556.35	11.21	MWD	
11200.00	11173.22	11173.22	185.42	24.98	24.98	37.12	514.10	564.10	11.28	MWD	
11300.00	11272.66	11272.68	185.35	25.18	25.17	37.69	522.25	572.68	11.36	MWD	
11400.00	11372.27	11372.31	185.29	25.37	25.37	38.27	530.41	581.26	11.43	MWD	
11500.00	11471.88	11471.93	185.22	25.57	25.57	38.86	538.56	589.83	11.50	MWD	
11600.00	11571.50	11571.56	185.16	25.77	25.76	39.45	546.71	598.41	11.57	MWD	
11700.00	11671.11	11671.19	185.10	25.97	25.96	40.05	554.87	606.99	11.64	MWD	
11800.00	11770.73	11770.82	185.05	26.17	26.16	40.66	563.02	615.57	11.71	MWD	
11900.00	11870.34	11870.45	184.99	26.37	26.36	41.27	571.17	624.15	11.78	MWD	
12000.00	11969.98	11970.11	184.93	26.56	26.55	41.89	579.04	632.44	11.84	MWD	
12100.00	12069.74	12069.88	184.89	26.76	26.75	42.51	585.36	639.14	11.88	MWD	
12200.00	12173.21	12173.37	184.86	26.97	26.96	43.17	589.84	644.02	11.89	MWD	
12300.00	12280.73	12280.92	184.72	27.17	27.15	43.85	591.28	645.86	11.83	MWD	
12400.00	12377.53	12379.02	88.83	27.33	27.07	44.46	591.25	646.11	11.78	MWD	
12500.00	12468.39	12474.98	87.74	27.48	26.74	45.02	591.24	646.48	11.70	MWD	
12600.00	12551.37	12569.14	86.73	27.64	26.23	45.51	591.41	647.04	11.63	MWD	
12700.00	12624.83	12661.74	85.81	27.83	25.60	45.93	591.83	647.72	11.59	MWD	
12800.00	12687.47	12753.03	85.02	28.05	24.95	46.28	592.10	648.44	11.51	MWD	
12900.00	12738.27	12843.25	84.36	28.32	24.35	46.57	592.20	649.12	11.40	MWD	
13000.00	12776.48	12932.67	83.87	28.66	23.89	46.81	592.15	649.70	11.29	MWD	
13100.00	12801.56	13021.51	83.54	29.07	23.62	47.02	591.74	650.10	11.14	MWD	
13200.00	12813.17	13110.03	83.39	29.54	23.59	47.21	590.83	650.30	10.94	MWD	
13300.00	12814.61	13206.61	83.38	30.13	23.70	47.42	589.73	650.31	10.73	MWD	
13400.00	12815.47	13306.61	83.38	30.84	23.83	47.68	588.21	650.31	10.47	MWD	
13500.00	12816.34	13406.61	83.38	31.64	23.98	47.98	586.67	650.31	10.22	MWD	
13600.00	12817.21	13506.61	83.38	32.52	24.15	48.32	584.92	650.31	9.95	MWD	
13700.00	12818.08	13606.61	83.38	33.48	24.35	48.71	582.96	650.31	9.66	MWD	
13800.00	12818.94	13706.61	83.38	34.51	24.56	49.14	580.91	650.31	9.37	MWD	
13900.00	12819.81	13806.61	83.38	35.60	24.79	49.61	578.77	650.31	9.09	MWD	
14000.00	12820.68	13906.61	83.38	36.75	25.04	50.11	576.55	650.31	8.82	MWD	
14100.00	12821.55	14006.61	83.38	37.96	25.32	50.66	574.20	650.31	8.54	MWD	
14200.00	12822.41	14106.61	83.38	39.21	25.60	51.24	571.63	650.31	8.26	MWD	
14300.00	12823.28	14206.61	83.38	40.50	25.91	51.85	568.99	650.31	8.00	MWD	
14400.00	12824.15	14306.61	83.38	41.84	26.24	52.50	566.28	650.31	7.74	MWD	
14500.00	12825.02	14406.61	83.38	43.21	26.58	53.18	563.51	650.31	7.49	MWD	
14600.00	12825.88	14506.61	83.38	44.61	26.93	53.89	560.68	650.31	7.26	MWD	
14700.00	12826.75	14606.61	83.38	46.04	27.30	54.64	557.81	650.31	7.03	MWD	
14800.00	12827.62	14706.61	83.38	47.50	27.69	55.41	554.91	650.31	6.82	MWD	
14900.00	12828.49	14806.61	83.38	48.99	28.09	56.21	551.97	650.31	6.61	MWD	
15000.00	12829.35	14906.61	83.38	50.49	28.50	57.03	549.01	650.31	6.42	MWD	
15100.00	12830.22	15006.61	83.38	52.02	28.92	57.88	546.00	650.31	6.23	MWD	
15200.00	12831.09	15106.61	83.38	53.56	29.36	58.76	542.96	650.31	6.06	MWD	
15300.00	12831.96	15206.61	83.38	55.13	29.81	59.66	539.88	650.31	5.89	MWD	
15400.00	12832.83	15306.61	83.38	56.70	30.27	60.58	536.77	650.31	5.73	MWD	
15500.00	12833.69	15406.61	83.38	58.30	30.74	61.52	533.63	650.31	5.57	MWD	
15600.00	12834.56	15506.61	83.38	59.90	31.22	62.48	530.45	650.31	5.43	MWD	
15700.00	12835.43	15606.61	83.38	61.52	31.71	63.46	527.25	650.31	5.28	MWD	
15800.00	12836.30	15706.61	83.38	63.15	32.21	64.46	524.03	650.31	5.15	MWD	
15900.00	12837.16	15806.61	83.38	64.79	32.72	65.48	520.79	650.31	5.02	MWD	
16000.00	12838.03	15906.61	83.38	66.44	33.24	66.52	517.52	650.31	4.90	MWD	
16100.00	12838.90	16006.61	83.38	68.10	33.76	67.57	514.24	650.31	4.78	MWD	
16200.00	12839.09	16105.47	83.38	69.75	34.33	68.62	510.95	650.31	4.67	MWD	
16300.00	12837.65	16204.50	83.38	71.40	34.89	69.68	507.63	650.31	4.56	MWD	
16400.00	12835.71	16304.50	83.38	73.09	35.44	70.77	504.28	650.31	4.45	MWD	

## SD Anti-Collision Report

Secondary Well: Mean Green 23-35 Fed Com 4H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
16500.00	12833.76	16404.50	83.38	74.77	35.99	71.87	500.91	650.31	4.35	MWD	
16600.00	12831.82	16504.50	83.38	76.47	36.54	72.98	497.54	650.31	4.26	MWD	
16700.00	12829.88	16604.50	83.38	78.17	37.11	74.11	494.15	650.31	4.16	MWD	
16800.00	12827.94	16704.50	83.38	79.88	37.68	75.24	490.75	650.31	4.08	MWD	
16900.00	12826.00	16804.50	83.38	81.59	38.25	76.39	487.34	650.31	3.99	MWD	
17000.00	12824.06	16904.50	83.38	83.30	38.83	77.55	483.92	650.31	3.91	MWD	
17100.00	12822.12	17004.50	83.38	85.03	39.42	78.72	480.50	650.31	3.83	MWD	
17200.00	12820.17	17104.50	83.38	86.75	40.01	79.90	477.07	650.31	3.75	MWD	
17300.00	12818.23	17204.50	83.38	88.48	40.60	81.09	473.62	650.31	3.68	MWD	
17400.00	12816.29	17304.50	83.38	90.21	41.20	82.29	470.18	650.31	3.61	MWD	
17500.00	12814.35	17404.50	83.38	91.95	41.80	83.49	466.72	650.31	3.54	MWD	
17600.00	12812.41	17504.50	83.38	93.69	42.41	84.71	463.26	650.30	3.48	MWD	
17700.00	12810.47	17604.50	83.38	95.43	43.02	85.93	459.79	650.30	3.41	MWD	
17800.00	12808.53	17704.50	83.38	97.18	43.64	87.16	456.32	650.30	3.35	MWD	
17900.00	12806.59	17804.50	83.38	98.93	44.26	88.40	452.84	650.30	3.29	MWD	
18000.00	12804.64	17904.50	83.38	100.68	44.88	89.64	449.36	650.30	3.24	MWD	
18100.00	12802.70	18004.50	83.38	102.43	45.50	90.89	445.87	650.30	3.18	MWD	
18200.00	12800.76	18104.50	83.38	104.19	46.13	92.15	442.38	650.30	3.13	MWD	
18300.00	12798.82	18204.50	83.38	105.95	46.76	93.41	438.88	650.30	3.08	MWD	
18400.00	12796.88	18304.50	83.38	107.71	47.40	94.68	435.38	650.30	3.03	MWD	
18500.00	12794.94	18404.50	83.38	109.47	48.04	95.95	431.87	650.30	2.98	MWD	
18600.00	12793.00	18504.50	83.38	111.23	48.68	97.23	428.36	650.30	2.93	MWD	
18700.00	12791.05	18604.50	83.38	113.00	49.32	98.52	424.85	650.30	2.88	MWD	
18800.00	12789.11	18704.50	83.38	114.77	49.96	99.81	421.33	650.30	2.84	MWD	
18900.00	12787.17	18804.50	83.38	116.54	50.61	101.10	417.82	650.30	2.80	MWD	
19000.00	12785.23	18904.50	83.38	118.31	51.26	102.40	414.29	650.30	2.76	MWD	
19100.00	12783.29	19004.50	83.38	120.08	51.91	103.71	410.77	650.30	2.71	MWD	
19200.00	12781.35	19104.50	83.38	121.86	52.57	105.02	407.24	650.30	2.68	MWD	
19300.00	12779.41	19204.50	83.38	123.64	53.23	106.33	403.71	650.30	2.64	MWD	
19400.00	12777.47	19304.50	83.38	125.41	53.88	107.64	400.17	650.30	2.60	MWD	
19500.00	12775.52	19404.50	83.38	127.19	54.54	108.96	396.64	650.30	2.56	MWD	
19600.00	12773.58	19504.50	83.38	128.97	55.21	110.29	393.10	650.30	2.53	MWD	
19700.00	12771.64	19604.50	83.38	130.76	55.87	111.62	389.56	650.30	2.49	MWD	SF(Lo)
19800.00	12769.70	19704.50	83.38	132.54	56.54	112.95	386.01	650.30	2.46	MWD	SF(Lo)
19900.00	12767.76	19804.50	83.38	134.32	57.20	114.28	382.47	650.30	2.43	MWD	SF(Lo)
20000.00	12765.82	19904.50	83.38	136.11	57.87	115.62	378.92	650.30	2.40	MWD	SF(Lo)
20100.00	12763.88	20004.50	83.38	137.89	58.54	116.96	375.37	650.30	2.37	MWD	SF(Lo)
20200.00	12761.93	20104.50	83.38	139.68	59.21	118.30	371.82	650.30	2.34	MWD	SF(Lo)
20300.00	12759.99	20204.50	83.39	141.47	59.89	119.65	368.26	650.30	2.31	MWD	SF(Lo)
20400.00	12758.05	20304.50	83.39	143.26	60.56	121.00	364.71	650.30	2.28	MWD	SF(Lo)
20500.00	12756.11	20404.50	83.39	145.05	61.24	122.35	361.15	650.30	2.25	MWD	SF(Lo)
20600.00	12754.17	20504.50	83.39	146.84	61.92	123.70	357.59	650.30	2.22	MWD	SF(Lo)
20700.00	12752.23	20604.50	83.39	148.63	62.59	125.06	354.03	650.30	2.19	MWD	SF(Lo)
20800.00	12750.29	20704.50	83.39	150.42	63.27	126.42	350.47	650.30	2.17	MWD	SF(Lo)
20900.00	12748.35	20804.50	83.39	152.21	63.96	127.78	346.91	650.30	2.14	MWD	SF(Lo)
21000.00	12746.40	20904.50	83.39	154.01	64.64	129.15	343.34	650.30	2.12	MWD	SF(Lo)
21100.00	12744.46	21004.50	83.39	155.80	65.32	130.51	339.77	650.30	2.09	MWD	SF(Lo)
21200.00	12742.52	21104.50	83.39	157.60	66.01	131.88	336.21	650.30	2.07	MWD	SF(Lo)
21300.00	12740.58	21204.50	83.39	159.39	66.69	133.25	332.64	650.30	2.05	MWD	SF(Lo)
21400.00	12738.64	21304.50	83.39	161.19	67.38	134.62	329.07	650.30	2.02	MWD	SF(Lo)
21500.00	12736.70	21404.50	83.39	162.99	68.06	136.00	325.50	650.30	2.00	MWD	SF(Lo)
21600.00	12734.76	21504.50	83.39	164.78	68.75	137.37	321.92	650.30	1.98	MWD	SF(Lo)
21700.00	12732.81	21604.50	83.39	166.58	69.44	138.75	318.35	650.30	1.96	MWD	SF(Lo)
21800.00	12730.87	21704.50	83.39	168.38	70.13	140.13	314.78	650.30	1.94	MWD	SF(Lo)
21900.00	12728.93	21804.50	83.39	170.18	70.82	141.52	311.20	650.30	1.92	MWD	SF(Lo)
22000.00	12726.99	21904.50	83.39	171.98	71.52	142.90	307.62	650.30	1.90	MWD	SF(Lo)
22100.00	12725.05	22004.50	83.39	173.78	72.21	144.28	304.05	650.30	1.88	MWD	SF(Lo)
22200.00	12723.11	22104.50	83.39	175.58	72.90	145.67	300.47	650.30	1.86	MWD	SF(Lo)

## 5D Anti-Collision Report

Secondary Well: Mean Green 23-35 Fed Com 4H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
22300.00	12721.17	22204.50	83.39	177.38	73.60	147.06	296.89	650.30	1.84	MWD	SF(Lo)
22400.00	12719.22	22304.50	83.39	179.19	74.29	148.45	293.31	650.29	1.82	MWD	SF(Lo)
22500.00	12717.28	22404.50	83.39	180.99	74.99	149.84	289.72	650.29	1.80	MWD	SF(Lo)
22600.00	12715.34	22504.50	83.39	182.79	75.68	151.23	286.14	650.29	1.79	MWD	SF(Lo)
22661.70	12714.14	22566.20	83.39	183.90	76.11	152.09	283.93	650.29	1.78	MWD	SF(Lo)
Secondary Well: Mean Green 23-35 Fed Com 1H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
0.00	0.00	0.00	269.95	0.00	0.00	0.00	59.24	59.97	81.78	MWD	
100.00	100.00	100.00	269.95	0.11	0.11	4.60	59.02	59.97	62.86	MWD	
200.00	200.00	200.00	269.95	0.34	0.34	4.62	58.57	59.97	42.73	MWD	
300.00	300.00	300.00	269.95	0.56	0.56	4.65	58.12	59.97	32.36	MWD	
400.00	400.00	400.00	269.95	0.79	0.79	4.69	57.67	59.97	26.04	MWD	
500.00	500.00	500.00	269.95	1.01	1.01	4.75	57.22	59.97	21.79	MWD	
600.00	600.00	600.00	269.95	1.24	1.24	4.81	56.77	59.97	18.73	MWD	
700.00	700.00	700.00	269.95	1.46	1.46	4.88	56.32	59.97	16.42	MWD	
800.00	800.00	800.00	269.95	1.69	1.69	4.97	55.87	59.97	14.62	MWD	
900.00	900.00	900.00	269.95	1.91	1.91	5.06	55.42	59.97	13.18	MWD	
1000.00	1000.00	1000.00	269.95	2.14	2.14	5.16	54.97	59.97	11.99	MWD	
1100.00	1100.00	1100.00	269.95	2.36	2.36	5.26	54.52	59.97	11.00	MWD	
1200.00	1200.00	1200.00	269.95	2.59	2.59	5.37	54.07	59.97	10.16	MWD	
1300.00	1300.00	1300.00	269.95	2.81	2.81	5.49	53.62	59.97	9.44	MWD	
1400.00	1400.00	1400.00	269.95	3.04	3.04	5.62	53.17	59.97	8.82	MWD	
1500.00	1500.00	1500.00	269.95	3.26	3.26	5.75	52.72	59.97	8.27	MWD	
1600.00	1600.00	1600.00	269.95	3.48	3.48	5.88	52.27	59.97	7.79	MWD	
1700.00	1700.00	1700.00	269.95	3.71	3.71	6.02	51.82	59.97	7.36	MWD	
1800.00	1800.00	1800.00	269.95	3.93	3.93	6.16	51.37	59.97	6.98	MWD	
1900.00	1900.00	1900.00	269.95	4.16	4.16	6.31	50.92	59.97	6.63	MWD	
2000.00	2000.00	2000.00	269.95	4.38	4.38	6.46	50.47	59.97	6.31	MWD	
2100.00	2100.00	2100.00	269.95	4.61	4.61	6.61	50.02	59.97	6.03	MWD	
2200.00	2200.00	2200.00	269.95	4.83	4.83	6.77	49.57	59.97	5.77	MWD	
2300.00	2300.00	2300.00	269.95	5.06	5.06	6.93	49.12	59.97	5.53	MWD	
2400.00	2400.00	2400.00	269.95	5.28	5.28	7.10	48.67	59.97	5.31	MWD	
2500.00	2500.00	2500.00	269.95	5.51	5.51	7.26	48.22	59.97	5.11	MWD	
2600.00	2600.00	2600.00	269.95	5.73	5.73	7.43	47.78	59.97	4.92	MWD	
2700.00	2700.00	2700.00	269.95	5.96	5.96	7.61	47.33	59.97	4.74	MWD	
2800.00	2800.00	2800.00	269.95	6.18	6.18	7.78	46.88	59.97	4.58	MWD	
2900.00	2900.00	2900.00	269.95	6.41	6.41	7.96	46.43	59.97	4.43	MWD	
3000.00	3000.00	3000.00	269.95	6.63	6.63	8.14	45.98	59.97	4.29	MWD	
3100.00	3100.00	3100.00	269.95	6.86	6.86	8.33	45.53	59.97	4.15	MWD	
3200.00	3200.00	3200.00	269.95	7.08	7.08	8.51	45.08	59.97	4.03	MWD	
3300.00	3299.97	3299.97	91.62	7.31	7.31	8.70	44.69	59.99	3.92	MWD	
3400.00	3399.72	3399.76	96.57	7.53	7.53	8.89	44.70	60.37	3.85	MWD	
3500.00	3499.05	3499.18	104.53	7.75	7.75	9.09	45.88	61.97	3.85	MWD	
3600.00	3598.36	3598.63	113.39	7.97	7.97	9.28	48.91	65.40	3.97	MWD	
3700.00	3697.68	3698.09	121.21	8.20	8.19	9.48	53.36	70.22	4.16	MWD	
3800.00	3796.99	3797.54	127.93	8.42	8.42	9.69	58.93	76.19	4.42	MWD	
3900.00	3896.31	3896.99	133.61	8.65	8.64	9.89	65.35	83.04	4.69	MWD	
4000.00	3995.62	3996.44	138.39	8.87	8.87	10.10	72.49	90.59	5.01	MWD	
4100.00	4095.00	4095.96	158.63	9.10	9.09	10.31	80.02	98.52	5.32	MWD	
4200.00	4196.23	4197.30	185.82	9.31	9.30	10.53	86.70	105.63	5.58	MWD	
4300.00	4297.81	4298.97	214.37	9.50	9.48	10.76	91.43	110.80	5.72	MWD	
4400.00	4399.56	4400.81	235.18	9.68	9.67	10.98	94.14	113.91	5.76	MWD	
4500.00	4500.92	4502.31	241.28	9.88	9.86	11.21	95.03	115.21	5.71	MWD	
4600.00	4601.29	4602.90	241.48	10.09	10.06	11.44	95.67	116.24	5.65	MWD	
4700.00	4701.01	4702.89	241.94	10.31	10.27	11.68	96.11	117.10	5.58	MWD	
4800.00	4800.73	4802.89	242.39	10.52	10.48	11.91	96.50	117.96	5.50	MWD	

## 5D Anti-Collision Report

Secondary Well: Mean Green 23-35 Fed Com 1H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
4900.00	4900.44	4902.88	242.84	10.75	10.69	12.15	96.97	118.83	5.44	MWD	
5000.00	5000.16	5002.87	243.28	10.97	10.90	12.40	97.43	119.71	5.37	MWD	
5100.00	5099.88	5102.86	243.71	11.19	11.11	12.65	97.84	120.60	5.30	MWD	
5200.00	5199.60	5202.85	244.14	11.42	11.32	12.90	98.30	121.49	5.24	MWD	
5300.00	5299.32	5302.85	244.56	11.64	11.53	13.16	98.76	122.39	5.18	MWD	
5400.00	5399.04	5402.84	244.98	11.87	11.74	13.42	99.19	123.30	5.12	MWD	
5500.00	5498.76	5502.83	245.38	12.10	11.96	13.68	99.65	124.21	5.06	MWD	
5600.00	5598.48	5602.82	245.79	12.33	12.17	13.95	100.12	125.13	5.00	MWD	
5700.00	5698.20	5702.81	246.18	12.56	12.39	14.23	100.61	126.05	4.95	MWD	
5800.00	5797.92	5802.81	246.57	12.79	12.61	14.51	101.11	126.98	4.91	MWD	
5900.00	5897.64	5902.80	246.96	13.03	12.82	14.79	101.58	127.92	4.86	MWD	
6000.00	5997.36	6002.79	247.34	13.26	13.04	15.08	102.05	128.86	4.81	MWD	
6100.00	6097.07	6102.78	247.71	13.50	13.26	15.37	102.53	129.81	4.76	MWD	
6200.00	6196.79	6202.77	248.08	13.73	13.47	15.66	103.01	130.76	4.71	MWD	
6300.00	6296.51	6302.77	248.45	13.97	13.69	15.96	103.50	131.72	4.67	MWD	
6400.00	6396.23	6402.76	248.80	14.21	13.91	16.27	104.00	132.69	4.63	MWD	
6500.00	6495.95	6502.75	249.16	14.45	14.13	16.58	104.51	133.66	4.59	MWD	
6600.00	6595.67	6602.74	249.51	14.69	14.35	16.89	105.02	134.63	4.55	MWD	
6700.00	6695.39	6702.73	249.85	14.93	14.57	17.21	105.54	135.61	4.51	MWD	
6800.00	6795.11	6802.73	250.19	15.17	14.79	17.54	106.06	136.59	4.47	MWD	
6900.00	6894.83	6902.72	250.52	15.41	15.01	17.87	106.56	137.58	4.44	MWD	
7000.00	6994.55	7002.71	250.85	15.65	15.23	18.20	107.06	138.57	4.40	MWD	
7100.00	7094.27	7102.70	251.17	15.90	15.45	18.54	107.57	139.57	4.36	MWD	
7200.00	7193.99	7202.69	251.49	16.14	15.67	18.89	108.08	140.57	4.33	MWD	
7300.00	7293.70	7302.69	251.81	16.38	15.90	19.24	108.60	141.58	4.29	MWD	
7400.00	7393.42	7402.68	252.12	16.63	16.12	19.60	109.12	142.59	4.26	MWD	
7500.00	7493.14	7502.67	252.42	16.87	16.34	19.96	109.64	143.60	4.23	MWD	
7600.00	7592.86	7602.66	252.72	17.12	16.56	20.32	110.17	144.62	4.20	MWD	
7700.00	7692.58	7702.65	253.02	17.36	16.78	20.69	110.71	145.65	4.17	MWD	
7800.00	7792.30	7802.64	253.31	17.61	17.01	21.07	111.25	146.67	4.14	MWD	
7900.00	7892.02	7902.64	253.60	17.86	17.23	21.45	111.79	147.70	4.11	MWD	
8000.00	7991.74	8002.63	253.89	18.10	17.45	21.84	112.34	148.74	4.09	MWD	
8100.00	8091.46	8102.62	254.17	18.35	17.68	22.23	112.89	149.77	4.06	MWD	
8200.00	8191.18	8202.61	254.45	18.60	17.90	22.63	113.45	150.81	4.04	MWD	
8300.00	8290.90	8302.60	254.72	18.85	18.12	23.03	114.01	151.86	4.01	MWD	
8400.00	8390.61	8402.60	254.99	19.09	18.35	23.44	114.57	152.91	3.99	MWD	
8500.00	8490.33	8502.59	255.25	19.34	18.57	23.86	115.14	153.96	3.97	MWD	
8600.00	8590.05	8602.58	255.52	19.59	18.80	24.28	115.70	155.01	3.94	MWD	
8700.00	8689.77	8702.57	255.78	19.84	19.02	24.70	116.25	156.07	3.92	MWD	
8800.00	8789.49	8802.56	256.03	20.09	19.25	25.14	116.81	157.13	3.90	MWD	
8900.00	8889.21	8902.56	256.28	20.34	19.47	25.57	117.36	158.19	3.87	MWD	
9000.00	8988.93	9002.55	256.53	20.59	19.70	26.02	117.92	159.26	3.85	MWD	
9100.00	9088.65	9102.54	256.78	20.84	19.92	26.47	118.49	160.33	3.83	MWD	
9200.00	9188.37	9202.53	257.02	21.09	20.15	26.92	119.06	161.40	3.81	MWD	
9300.00	9288.09	9302.52	257.26	21.34	20.37	27.38	119.63	162.48	3.79	MWD	
9400.00	9387.81	9402.52	257.49	21.59	20.60	27.85	120.20	163.56	3.77	MWD	
9500.00	9487.53	9502.51	257.73	21.84	20.82	28.32	120.78	164.64	3.75	MWD	
9600.00	9587.24	9602.50	257.96	22.09	21.05	28.79	121.36	165.72	3.74	MWD	
9700.00	9686.96	9702.49	258.18	22.35	21.27	29.28	121.94	166.81	3.72	MWD	
9800.00	9786.68	9802.48	258.41	22.60	21.50	29.77	122.53	167.90	3.70	MWD	
9900.00	9886.40	9902.48	258.63	22.85	21.73	30.26	123.11	168.99	3.68	MWD	
10000.00	9986.12	10002.47	258.84	23.10	21.95	30.76	123.71	170.08	3.67	MWD	
10100.00	10085.84	10102.46	259.06	23.35	22.18	31.27	124.30	171.18	3.65	MWD	
10200.00	10185.56	10202.45	259.27	23.61	22.40	31.78	124.90	172.28	3.64	MWD	
10300.00	10285.28	10302.44	259.48	23.86	22.63	32.30	125.50	173.38	3.62	MWD	
10400.00	10385.00	10402.44	259.69	24.11	22.86	32.82	126.10	174.48	3.61	MWD	
10500.00	10484.72	10502.43	259.89	24.36	23.08	33.35	126.71	175.59	3.59	MWD	
10600.00	10584.44	10602.42	260.09	24.62	23.31	33.89	127.32	176.70	3.58	MWD	

## 5D Anti-Collision Report

Secondary Well: Mean Green 23-35 Fed Com 1H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											Survey Tool	Risk
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF			
10700.00	10684.16	10702.41	260.29	24.87	23.54	34.43	127.93	177.81	3.56		MWD	
10800.00	10783.87	10802.40	260.49	25.12	23.76	34.98	128.54	178.92	3.55		MWD	
10900.00	10883.59	10902.40	260.68	25.38	23.99	35.53	129.16	180.03	3.54		MWD	
11000.00	10983.31	11002.39	260.88	25.63	24.22	36.09	129.77	181.15	3.53		MWD	
11100.00	11083.03	11102.38	261.07	25.89	24.44	36.66	130.39	182.27	3.51		MWD	
11200.00	11182.75	11202.37	261.25	26.14	24.67	37.23	131.02	183.39	3.50		MWD	
11300.00	11282.47	11302.36	261.44	26.39	24.90	37.81	131.64	184.51	3.49		MWD	
11400.00	11382.19	11402.35	261.62	26.65	25.13	38.39	132.27	185.63	3.48		MWD	
11500.00	11481.91	11502.35	261.80	26.90	25.35	38.98	132.90	186.76	3.47		MWD	
11600.00	11581.63	11602.34	261.98	27.16	25.58	39.58	133.53	187.89	3.46		MWD	
11700.00	11681.35	11702.33	262.16	27.41	25.81	40.18	134.17	189.02	3.45		MWD	
11800.00	11781.07	11802.32	262.33	27.67	26.04	40.79	134.80	190.15	3.44		MWD	
11900.00	11880.78	11902.31	262.50	27.92	26.26	41.40	135.43	191.28	3.42		MWD	
12000.00	11980.50	12002.30	262.75	28.18	26.49	42.02	136.02	192.38	3.41		MWD	
12100.00	12080.19	12102.27	263.47	28.43	26.72	42.65	136.46	193.29	3.40		MWD	
12200.00	12179.83	12202.18	264.69	28.68	26.95	43.28	136.79	194.07	3.39		MWD	
12300.00	12279.38	12302.00	266.41	28.94	27.17	43.91	137.10	194.81	3.38		MWD	
12400.00	12378.64	12401.53	173.74	29.19	27.40	44.55	141.12	199.33	3.42		MWD	
12500.00	12475.68	12498.83	176.02	29.44	27.62	45.19	161.64	220.29	3.76		MWD	
12600.00	12568.42	12591.77	177.80	29.63	27.80	45.80	199.00	257.98	4.37		MWD	
12700.00	12653.71	12677.16	178.90	29.79	27.95	46.36	251.81	311.04	5.25		MWD	
12800.00	12728.95	12752.45	179.51	29.93	28.09	46.86	318.27	377.79	6.35		MWD	
12900.00	12791.79	12815.30	179.81	30.04	28.20	47.28	396.63	456.27	7.65		MWD	
13000.00	12840.22	12863.74	179.94	30.13	28.29	47.61	484.30	544.17	9.09		MWD	
13100.00	13464.53	13875.76	180.00	30.51	25.96	52.01	540.99	591.42	11.73		MWD	
13200.00	13465.34	13974.64	180.00	31.05	26.08	52.26	526.75	577.42	11.40		MWD	
13300.00	13466.15	14074.63	180.00	31.69	26.22	52.55	525.63	576.56	11.32		MWD	
13400.00	13466.96	14174.63	180.00	32.41	26.38	52.89	525.27	576.51	11.25		MWD	
13500.00	13467.77	14274.63	180.00	33.22	26.56	53.26	524.88	576.45	11.18		MWD	
13600.00	13468.58	14374.63	180.00	34.11	26.76	53.67	524.45	576.40	11.10		MWD	
13700.00	13469.39	14474.63	180.00	35.07	26.98	54.11	524.01	576.34	11.01		MWD	
13800.00	13470.20	14574.63	180.00	36.10	27.22	54.59	523.47	576.28	10.91		MWD	
13900.00	13471.01	14674.63	180.00	37.19	27.47	55.11	522.85	576.23	10.80		MWD	
14000.00	13471.83	14774.63	180.00	38.33	27.75	55.66	522.25	576.17	10.69		MWD	
14100.00	13472.64	14874.63	180.00	39.52	28.04	56.24	521.70	576.11	10.59		MWD	
14200.00	13473.45	14974.63	180.00	40.77	28.34	56.85	520.99	576.06	10.46		MWD	
14300.00	13474.26	15074.63	180.00	42.05	28.66	57.50	520.41	576.00	10.36		MWD	
14400.00	13475.07	15174.63	180.00	43.37	29.00	58.17	519.58	575.94	10.22		MWD	
14500.00	13475.88	15274.63	180.00	44.73	29.35	58.88	518.84	575.89	10.10		MWD	
14600.00	13476.69	15374.63	180.00	46.12	29.72	59.61	518.09	575.83	9.97		MWD	
14700.00	13477.50	15474.63	180.00	47.54	30.10	60.37	517.29	575.78	9.84		MWD	
14800.00	13478.32	15574.63	180.00	48.98	30.49	61.15	516.51	575.72	9.72		MWD	
14900.00	13479.13	15674.63	180.00	50.46	30.89	61.96	515.62	575.66	9.59		MWD	
15000.00	13479.94	15774.63	180.00	51.95	31.31	62.79	514.84	575.61	9.47		MWD	
15100.00	13480.75	15874.63	180.00	53.46	31.74	63.65	513.90	575.55	9.34		MWD	
15200.00	13481.56	15974.63	180.00	55.00	32.18	64.53	513.16	575.49	9.23		MWD	
15300.00	13482.37	16074.63	180.00	56.55	32.62	65.43	512.05	575.44	9.08		MWD	
15400.00	13483.18	16174.63	180.00	58.11	33.08	66.35	511.03	575.38	8.94		MWD	
15500.00	13483.99	16274.63	180.00	59.69	33.55	67.28	510.08	575.33	8.82		MWD	
15600.00	13484.81	16374.63	180.00	61.29	34.03	68.24	509.14	575.27	8.70		MWD	
15700.00	13485.62	16474.63	180.00	62.89	34.52	69.22	508.11	575.21	8.57		MWD	
15800.00	13486.43	16574.63	180.00	64.51	35.02	70.21	507.05	575.16	8.44		MWD	
15900.00	13487.24	16674.63	180.00	66.14	35.52	71.22	505.99	575.10	8.32		MWD	
16000.00	13488.05	16774.63	180.00	67.78	36.03	72.24	504.89	575.04	8.20		MWD	
16100.00	13488.86	16874.63	180.00	69.43	36.55	73.28	503.74	574.99	8.07		MWD	
16200.00	13489.01	16983.87	180.00	71.24	37.19	74.43	502.45	574.93	7.93		MWD	
16300.00	13487.31	17090.46	180.00	73.02	37.80	75.56	501.14	574.80	7.80		MWD	
16400.00	13485.37	17190.46	180.00	74.70	38.34	76.64	500.07	574.80	7.69		MWD	

## 5D Anti-Collision Report

Secondary Well: Mean Green 23-35 Fed Com 1H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T. Face to Sec (°)	S. Major (US ft)	S. Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
16500.00	13483.43	17290.46	180.00	76.38	38.88	77.73	498.98	574.81	7.58	MWD	
16600.00	13481.49	17390.46	180.00	78.06	39.44	78.83	497.89	574.81	7.47	MWD	
16700.00	13479.55	17490.46	180.00	79.76	39.99	79.94	496.78	574.81	7.37	MWD	
16800.00	13477.60	17590.46	180.00	81.46	40.56	81.06	495.67	574.81	7.26	MWD	
16900.00	13475.66	17690.46	180.00	83.16	41.13	82.20	494.55	574.81	7.16	MWD	
17000.00	13473.72	17790.46	180.00	84.87	41.70	83.34	493.42	574.81	7.06	MWD	
17100.00	13471.78	17890.46	180.00	86.59	42.28	84.50	492.28	574.81	6.96	MWD	
17200.00	13469.84	17990.46	180.00	88.30	42.86	85.66	491.11	574.82	6.87	MWD	
17300.00	13467.89	18090.46	180.00	90.03	43.45	86.83	489.92	574.82	6.77	MWD	
17400.00	13465.95	18190.46	180.00	91.75	44.04	88.01	488.73	574.82	6.68	MWD	
17500.00	13464.01	18290.46	180.00	93.48	44.64	89.21	487.54	574.82	6.59	MWD	
17600.00	13462.07	18390.46	180.00	95.22	45.24	90.40	486.33	574.82	6.50	MWD	
17700.00	13460.13	18490.46	180.00	96.95	45.85	91.61	485.12	574.82	6.41	MWD	
17800.00	13458.19	18590.46	180.00	98.69	46.45	92.82	483.91	574.82	6.32	MWD	
17900.00	13456.24	18690.46	180.00	100.44	47.07	94.05	482.69	574.83	6.24	MWD	
18000.00	13454.30	18790.46	180.00	102.18	47.68	95.27	481.46	574.83	6.16	MWD	
18100.00	13452.36	18890.46	180.00	103.93	48.30	96.51	480.22	574.83	6.08	MWD	
18200.00	13450.42	18990.46	180.00	105.68	48.92	97.75	478.98	574.83	6.00	MWD	
18300.00	13448.48	19090.46	180.00	107.44	49.55	99.00	477.74	574.83	5.92	MWD	
18400.00	13446.54	19190.46	180.00	109.19	50.17	100.25	476.47	574.83	5.84	MWD	
18500.00	13444.59	19290.46	180.00	110.95	50.80	101.51	475.19	574.83	5.77	MWD	
18600.00	13442.65	19390.46	180.00	112.71	51.44	102.77	473.90	574.84	5.70	MWD	
18700.00	13440.71	19490.46	180.00	114.48	52.07	104.04	472.62	574.84	5.62	MWD	
18800.00	13438.77	19590.46	180.00	116.24	52.71	105.32	471.32	574.84	5.55	MWD	
18900.00	13436.83	19690.46	180.00	118.01	53.35	106.60	470.03	574.84	5.48	MWD	
19000.00	13434.88	19790.46	180.00	119.77	53.99	107.88	468.73	574.84	5.42	MWD	
19100.00	13432.94	19890.46	180.00	121.54	54.64	109.17	467.42	574.84	5.35	MWD	
19200.00	13431.00	19990.46	180.00	123.32	55.29	110.46	466.11	574.84	5.29	MWD	
19300.00	13429.06	20090.46	180.00	125.09	55.94	111.76	464.80	574.84	5.22	MWD	
19400.00	13427.12	20190.46	180.00	126.86	56.59	113.06	463.49	574.85	5.16	MWD	
19500.00	13425.18	20290.46	180.00	128.64	57.24	114.37	462.17	574.85	5.10	MWD	
19600.00	13423.23	20390.46	180.00	130.41	57.90	115.68	460.84	574.85	5.04	MWD	
19700.00	13421.29	20490.46	180.00	132.19	58.56	116.99	459.52	574.85	4.98	MWD	
19800.00	13419.35	20590.46	180.00	133.97	59.22	118.31	458.19	574.85	4.93	MWD	
19900.00	13417.41	20690.46	180.00	135.75	59.88	119.63	456.86	574.85	4.87	MWD	
20000.00	13415.47	20790.46	180.00	137.53	60.54	120.95	455.52	574.85	4.82	MWD	
20100.00	13413.53	20890.46	180.00	139.32	61.20	122.28	454.18	574.86	4.76	MWD	
20200.00	13411.58	20990.46	180.00	141.10	61.87	123.61	452.84	574.86	4.71	MWD	
20300.00	13409.64	21090.46	180.00	142.89	62.54	124.95	451.50	574.86	4.66	MWD	
20400.00	13407.70	21190.46	180.00	144.67	63.21	126.28	450.15	574.86	4.61	MWD	
20500.00	13405.76	21290.46	180.00	146.46	63.88	127.62	448.80	574.86	4.56	MWD	
20600.00	13403.82	21390.46	180.00	148.25	64.55	128.96	447.45	574.86	4.51	MWD	
20700.00	13401.87	21490.46	180.00	150.04	65.22	130.31	446.10	574.86	4.46	MWD	
20800.00	13399.93	21590.46	180.00	151.83	65.89	131.65	444.74	574.87	4.42	MWD	
20900.00	13397.99	21690.46	180.00	153.62	66.57	133.00	443.39	574.87	4.37	MWD	
21000.00	13396.05	21790.46	180.00	155.41	67.25	134.36	442.03	574.87	4.33	MWD	
21100.00	13394.11	21890.46	180.00	157.20	67.92	135.71	440.66	574.87	4.28	MWD	
21200.00	13392.17	21990.46	180.00	158.99	68.60	137.07	439.30	574.87	4.24	MWD	
21300.00	13390.22	22090.46	180.00	160.79	69.28	138.43	437.93	574.87	4.20	MWD	
21400.00	13388.28	22190.46	180.00	162.58	69.97	139.79	436.56	574.87	4.16	MWD	
21500.00	13386.34	22290.46	180.00	164.37	70.65	141.15	435.19	574.88	4.12	MWD	
21600.00	13384.40	22390.46	180.00	166.17	71.33	142.52	433.82	574.88	4.08	MWD	
21700.00	13382.46	22490.46	180.00	167.97	72.01	143.88	432.45	574.88	4.04	MWD	
21800.00	13380.52	22590.46	180.00	169.76	72.70	145.25	431.07	574.88	4.00	MWD	
21900.00	13378.57	22690.46	180.00	171.56	73.39	146.62	429.69	574.88	3.96	MWD	
22000.00	13376.63	22790.46	180.00	173.36	74.07	148.00	428.31	574.88	3.92	MWD	
22100.00	13374.69	22890.46	180.00	175.16	74.76	149.37	426.93	574.88	3.89	MWD	
22200.00	13372.75	22990.46	180.00	176.96	75.45	150.75	425.55	574.89	3.85	MWD	

## SD Anti-Collision Report

Secondary Well: Mean Green 23-35 Fed Com 1H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
22300.00	13370.81	23090.46	180.00	178.75	76.14	152.13	424.17	574.89	3.81	MWD	
22400.00	13368.86	23190.46	180.00	180.55	76.83	153.51	422.78	574.89	3.78	MWD	
22500.00	13366.92	23290.46	180.00	182.36	77.52	154.89	421.39	574.89	3.75	MWD	
22600.00	13364.98	23390.46	180.00	184.16	78.21	156.27	420.00	574.89	3.71	MWD	
22661.70	13364.00	23440.99	180.00	185.07	78.56	156.97	419.54	575.00	3.70	MWD	
Secondary Well: Mean Green 23-35 Fed Com 2H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
0.00	0.00	0.00	269.90	0.00	0.00	0.00	28.36	29.98	18.52	MWD	CC (Lo)
100.00	100.00	100.00	269.90	0.11	0.11	4.60	28.14	29.98	16.30	MWD	CC (Lo)
200.00	200.00	200.00	269.90	0.34	0.34	4.62	27.69	29.98	13.10	MWD	CC (Lo)
300.00	300.00	300.00	269.90	0.56	0.56	4.65	27.24	29.98	10.95	MWD	CC (Lo)
400.00	400.00	400.00	269.90	0.79	0.79	4.69	26.79	29.98	9.40	MWD	CC (Lo)
500.00	500.00	500.00	269.90	1.01	1.01	4.75	26.34	29.98	8.24	MWD	CC (Lo)
600.00	600.00	600.00	269.90	1.24	1.24	4.81	25.89	29.98	7.33	MWD	CC (Lo)
700.00	700.00	700.00	269.90	1.46	1.46	4.88	25.44	29.98	6.61	MWD	CC (Lo)
800.00	800.00	800.00	269.90	1.69	1.69	4.97	24.99	29.98	6.01	MWD	CC (Lo)
900.00	900.00	900.00	269.90	1.91	1.91	5.06	24.54	29.98	5.51	MWD	CC (Lo)
1000.00	1000.00	1000.00	269.90	2.14	2.14	5.16	24.09	29.98	5.09	MWD	CC (Lo)
1100.00	1100.00	1100.00	269.90	2.36	2.36	5.26	23.64	29.98	4.73	MWD	CC (Lo)
1200.00	1200.00	1200.00	269.90	2.59	2.59	5.37	23.19	29.98	4.42	MWD	CC (Lo)
1300.00	1300.00	1300.00	269.90	2.81	2.81	5.49	22.75	29.98	4.14	MWD	CC (Lo)
1400.00	1400.00	1400.00	269.90	3.04	3.04	5.62	22.30	29.98	3.90	MWD	CC (Lo)
1500.00	1500.00	1500.00	269.90	3.26	3.26	5.75	21.85	29.98	3.69	MWD	CC (Lo)
1600.00	1600.00	1600.00	269.90	3.48	3.48	5.88	21.40	29.98	3.49	MWD	CC (Lo)
1700.00	1700.00	1700.00	269.90	3.71	3.71	6.02	20.95	29.98	3.32	MWD	CC (Lo)
1800.00	1800.00	1800.00	269.90	3.93	3.93	6.16	20.50	29.98	3.16	MWD	CC (Lo)
1900.00	1900.00	1900.00	269.90	4.16	4.16	6.31	20.05	29.98	3.02	MWD	CC (Lo)
2000.00	2000.00	2000.00	269.90	4.38	4.38	6.46	19.60	29.98	2.89	MWD	CC (Lo)
2100.00	2100.00	2100.00	269.90	4.61	4.61	6.61	19.15	29.98	2.77	MWD	CC (Lo)
2200.00	2200.00	2200.00	269.90	4.83	4.83	6.77	18.70	29.98	2.66	MWD	CC (Lo)
2300.00	2300.00	2300.00	269.90	5.06	5.06	6.93	18.25	29.98	2.56	MWD	CC (Lo)
2400.00	2400.00	2400.00	269.90	5.28	5.28	7.10	17.80	29.98	2.46	MWD	SF(Lo); CC (Lo)
2500.00	2500.00	2500.00	269.90	5.51	5.51	7.26	17.35	29.98	2.37	MWD	SF(Lo); CC (Lo)
2600.00	2600.00	2600.00	269.90	5.73	5.73	7.43	16.90	29.98	2.29	MWD	SF(Lo); CC (Lo)
2700.00	2700.00	2700.00	269.90	5.96	5.96	7.61	16.45	29.98	2.22	MWD	SF(Lo); CC (Lo)
2800.00	2800.00	2800.00	269.90	6.18	6.18	7.78	16.00	29.98	2.14	MWD	SF(Lo); CC (Lo)
2900.00	2900.00	2900.00	269.90	6.41	6.41	7.96	15.55	29.98	2.08	MWD	SF(Lo); CC (Lo)
3000.00	3000.00	3000.00	269.90	6.63	6.63	8.14	15.10	29.98	2.01	MWD	SF(Lo); CC (Lo)
3100.00	3100.00	3100.00	269.90	6.86	6.86	8.33	14.65	29.98	1.96	MWD	SF(Lo); CC (Lo)
3200.00	3200.00	3200.00	269.90	7.08	7.08	8.51	14.20	29.98	1.90	MWD	SF(Lo); CC (Lo)
3300.00	3299.99	3299.99	91.57	7.31	7.31	8.70	13.80	29.99	1.85	MWD	SF(Lo); CC (Lo)
3400.00	3399.96	3399.96	96.54	7.53	7.53	8.90	13.62	30.18	1.82	MWD	SF(Lo)
3500.00	3500.34	3500.35	105.31	7.75	7.74	9.09	13.22	30.19	1.78	MWD	SF(Lo)
3600.00	3600.56	3600.60	117.27	7.95	7.94	9.29	12.51	29.84	1.72	MWD	SF(Lo); CC (Lo)
3700.00	3700.56	3700.70	131.52	8.15	8.14	9.49	11.95	29.66	1.67	MWD	SF(Lo); CC (Lo)
3800.00	3800.21	3800.53	147.92	8.36	8.34	9.69	12.53	30.60	1.69	MWD	SF(Lo)
3900.00	3899.58	3900.12	163.08	8.57	8.54	9.90	15.25	33.75	1.82	MWD	SF(Lo)
4000.00	3998.96	3999.71	175.00	8.78	8.75	10.11	19.92	38.81	2.05	MWD	SF(Lo)

## 5D Anti-Collision Report

Secondary Well: Mean Green 23-35 Fed Com 2H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)												
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T. Face to Sec (°)	S. Major (US ft)	S. Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk	
4100.00	4098.40	4099.37	199.87	9.00	8.96	10.32	25.17	44.46	2.30	MWD	SF(Lo)	
4200.00	4197.98	4199.16	229.94	9.22	9.16	10.53	29.61	49.36	2.50	MWD	SF(Lo)	
4300.00	4297.65	4299.05	260.36	9.43	9.37	10.75	32.93	53.09	2.63	MWD		
4400.00	4397.39	4399.00	282.46	9.66	9.58	10.98	34.83	55.43	2.69	MWD		
4500.00	4497.16	4498.99	289.31	9.88	9.79	11.20	35.41	56.45	2.68	MWD		
4600.00	4596.94	4598.99	288.91	10.10	10.01	11.43	35.45	56.93	2.65	MWD		
4700.00	4696.73	4698.99	288.40	10.33	10.22	11.67	35.44	57.38	2.62	MWD		
4800.00	4796.51	4798.98	287.91	10.55	10.43	11.91	35.49	57.84	2.59	MWD		
4900.00	4896.29	4898.98	287.42	10.78	10.65	12.15	35.48	58.30	2.56	MWD		
5000.00	4996.07	4998.98	286.94	11.01	10.86	12.39	35.50	58.76	2.53	MWD		
5100.00	5095.85	5098.98	286.47	11.24	11.08	12.64	35.54	59.23	2.50	MWD		
5200.00	5195.64	5198.97	286.00	11.47	11.29	12.89	35.59	59.70	2.48	MWD	SF(Lo)	
5300.00	5295.42	5298.97	285.54	11.70	11.51	13.15	35.59	60.18	2.45	MWD	SF(Lo)	
5400.00	5395.20	5398.97	285.09	11.93	11.72	13.41	35.59	60.66	2.42	MWD	SF(Lo)	
5500.00	5494.98	5498.97	284.65	12.17	11.94	13.68	35.61	61.15	2.39	MWD	SF(Lo)	
5600.00	5594.77	5598.97	284.21	12.40	12.16	13.95	35.62	61.63	2.37	MWD	SF(Lo)	
5700.00	5694.55	5698.96	283.78	12.64	12.38	14.22	35.65	62.12	2.35	MWD	SF(Lo)	
5800.00	5794.33	5798.96	283.36	12.87	12.60	14.50	35.67	62.62	2.32	MWD	SF(Lo)	
5900.00	5894.11	5898.96	282.95	13.11	12.82	14.78	35.70	63.12	2.30	MWD	SF(Lo)	
6000.00	5993.89	5998.96	282.54	13.35	13.03	15.07	35.73	63.62	2.28	MWD	SF(Lo)	
6100.00	6093.68	6098.95	282.13	13.58	13.25	15.36	35.77	64.12	2.26	MWD	SF(Lo)	
6200.00	6193.46	6198.95	281.74	13.82	13.47	15.66	35.81	64.63	2.24	MWD	SF(Lo)	
6300.00	6293.24	6298.95	281.35	14.06	13.69	15.96	35.84	65.14	2.22	MWD	SF(Lo)	
6400.00	6393.02	6398.95	280.96	14.30	13.92	16.26	35.88	65.65	2.21	MWD	SF(Lo)	
6500.00	6492.80	6498.94	280.58	14.54	14.14	16.57	35.93	66.17	2.19	MWD	SF(Lo)	
6600.00	6592.59	6598.94	280.21	14.78	14.36	16.89	35.97	66.69	2.17	MWD	SF(Lo)	
6700.00	6692.37	6698.94	279.84	15.02	14.58	17.21	36.02	67.21	2.15	MWD	SF(Lo)	
6800.00	6792.15	6798.94	279.48	15.26	14.80	17.53	36.07	67.74	2.14	MWD	SF(Lo)	
6900.00	6891.93	6898.94	279.13	15.50	15.02	17.86	36.12	68.27	2.12	MWD	SF(Lo)	
7000.00	6991.72	6998.93	278.78	15.74	15.24	18.20	36.17	68.80	2.11	MWD	SF(Lo)	
7100.00	7091.50	7098.93	278.43	15.98	15.47	18.54	36.22	69.33	2.09	MWD	SF(Lo)	
7200.00	7191.28	7198.93	278.09	16.23	15.69	18.88	36.28	69.86	2.08	MWD	SF(Lo)	
7300.00	7291.06	7298.93	277.76	16.47	15.91	19.23	36.33	70.40	2.07	MWD	SF(Lo)	
7400.00	7390.84	7398.92	277.43	16.71	16.14	19.59	36.39	70.94	2.05	MWD	SF(Lo)	
7500.00	7490.63	7498.92	277.11	16.96	16.36	19.95	36.45	71.48	2.04	MWD	SF(Lo)	
7600.00	7590.41	7598.92	276.79	17.20	16.58	20.32	36.52	72.03	2.03	MWD	SF(Lo)	
7700.00	7690.19	7698.92	276.47	17.44	16.80	20.69	36.58	72.57	2.02	MWD	SF(Lo)	
7800.00	7789.97	7798.91	276.16	17.69	17.03	21.06	36.65	73.12	2.00	MWD	SF(Lo)	
7900.00	7889.75	7898.91	275.86	17.93	17.25	21.44	36.72	73.67	1.99	MWD	SF(Lo)	
8000.00	7989.54	7998.91	275.56	18.18	17.48	21.83	36.79	74.23	1.98	MWD	SF(Lo)	
8100.00	8089.32	8098.91	275.26	18.42	17.70	22.23	36.86	74.78	1.97	MWD	SF(Lo)	
8200.00	8189.10	8198.91	274.97	18.67	17.92	22.62	36.93	75.34	1.96	MWD	SF(Lo)	
8300.00	8288.88	8298.90	274.68	18.91	18.15	23.03	37.01	75.90	1.95	MWD	SF(Lo)	
8400.00	8388.67	8398.90	274.40	19.16	18.37	23.44	37.08	76.46	1.94	MWD	SF(Lo)	
8500.00	8488.45	8498.90	274.12	19.40	18.60	23.85	37.14	77.02	1.93	MWD	SF(Lo)	
8600.00	8588.23	8598.90	273.84	19.65	18.82	24.27	37.21	77.58	1.92	MWD	SF(Lo)	
8700.00	8688.01	8698.89	273.57	19.90	19.05	24.70	37.27	78.15	1.91	MWD	SF(Lo)	
8800.00	8787.79	8798.89	273.30	20.14	19.27	25.13	37.34	78.72	1.90	MWD	SF(Lo)	
8900.00	8887.58	8898.89	273.04	20.39	19.50	25.57	37.41	79.29	1.89	MWD	SF(Lo)	
9000.00	8987.36	8998.89	272.78	20.63	19.72	26.01	37.49	79.86	1.88	MWD	SF(Lo)	
9100.00	9087.14	9098.89	272.52	20.88	19.95	26.46	37.56	80.43	1.88	MWD	SF(Lo)	
9200.00	9186.92	9198.88	272.27	21.13	20.17	26.91	37.64	81.01	1.87	MWD	SF(Lo)	
9300.00	9286.70	9298.88	272.02	21.38	20.40	27.37	37.71	81.58	1.86	MWD	SF(Lo)	
9400.00	9386.49	9398.88	271.78	21.62	20.62	27.84	37.79	82.16	1.85	MWD	SF(Lo)	
9500.00	9486.27	9498.88	271.54	21.87	20.85	28.31	37.87	82.74	1.84	MWD	SF(Lo)	
9600.00	9586.05	9598.87	271.30	22.12	21.08	28.79	37.95	83.32	1.84	MWD	SF(Lo)	
9700.00	9685.83	9698.87	271.06	22.36	21.30	29.27	38.04	83.90	1.83	MWD	SF(Lo)	
9800.00	9785.62	9798.87	270.83	22.61	21.53	29.76	38.12	84.48	1.82	MWD	SF(Lo)	

## 5D Anti-Collision Report

Secondary Well: Mean Green 23-35 Fed Com 2H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
9900.00	9885.40	9898.87	270.60	22.86	21.75	30.26	38.21	85.07	1.82	MWD	SF(Lo)
10000.00	9985.18	9998.86	270.38	23.11	21.98	30.76	38.29	85.65	1.81	MWD	SF(Lo)
10100.00	10084.96	10098.86	270.15	23.36	22.21	31.26	38.38	86.24	1.80	MWD	SF(Lo)
10200.00	10184.74	10198.86	269.93	23.60	22.43	31.78	38.47	86.83	1.80	MWD	SF(Lo)
10300.00	10284.53	10298.86	269.72	23.85	22.66	32.29	38.57	87.42	1.79	MWD	SF(Lo)
10400.00	10384.31	10398.86	269.50	24.10	22.88	32.82	38.66	88.01	1.78	MWD	SF(Lo)
10500.00	10484.09	10498.85	269.29	24.35	23.11	33.35	38.75	88.60	1.78	MWD	SF(Lo)
10600.00	10583.87	10598.85	269.09	24.60	23.34	33.88	38.85	89.20	1.77	MWD	SF(Lo)
10700.00	10683.66	10698.85	268.88	24.85	23.56	34.43	38.95	89.79	1.77	MWD	SF(Lo)
10800.00	10783.44	10798.85	268.68	25.10	23.79	34.97	39.05	90.39	1.76	MWD	SF(Lo)
10900.00	10883.22	10898.84	268.48	25.35	24.02	35.53	39.15	90.98	1.76	MWD	SF(Lo)
11000.00	10983.00	10998.84	268.28	25.59	24.24	36.09	39.25	91.58	1.75	MWD	SF(Lo)
11100.00	11082.78	11098.84	268.09	25.84	24.47	36.65	39.35	92.18	1.74	MWD	SF(Lo)
11200.00	11182.57	11198.84	267.89	26.09	24.70	37.23	39.46	92.78	1.74	MWD	SF(Lo)
11300.00	11282.35	11298.83	267.70	26.34	24.92	37.80	39.56	93.38	1.74	MWD	SF(Lo)
11400.00	11382.13	11398.83	267.52	26.59	25.15	38.39	39.67	93.98	1.73	MWD	SF(Lo)
11500.00	11481.91	11498.83	267.33	26.84	25.38	38.98	39.78	94.59	1.73	MWD	SF(Lo)
11600.00	11581.69	11598.83	267.15	27.09	25.60	39.57	39.88	95.19	1.72	MWD	SF(Lo)
11700.00	11681.48	11698.83	266.97	27.34	25.83	40.18	40.00	95.80	1.72	MWD	SF(Lo)
11800.00	11781.26	11798.82	266.79	27.59	26.06	40.78	40.11	96.40	1.71	MWD	SF(Lo)
11900.00	11881.04	11898.82	266.61	27.84	26.28	41.40	40.22	97.01	1.71	MWD	SF(Lo)
12000.00	11980.82	11998.82	266.61	28.09	26.51	42.02	40.32	97.60	1.70	MWD	SF(Lo)
12100.00	12080.59	12098.80	267.54	28.34	26.74	42.64	40.36	98.11	1.70	MWD	SF(Lo)
12200.00	12180.35	12198.77	269.45	28.58	26.96	43.28	40.42	98.61	1.69	MWD	SF(Lo)
12300.00	12280.30	12298.87	271.66	28.77	27.15	43.91	40.65	99.12	1.70	MWD	SF(Lo)
12400.00	12380.26	12398.89	178.83	28.96	27.33	44.56	44.48	103.26	1.76	MWD	SF(Lo)
12500.00	12478.35	12497.01	179.86	29.13	27.50	45.20	64.32	123.43	2.09	MWD	SF(Lo)
12600.00	12585.06	12603.78	180.00	29.26	27.69	45.90	99.25	158.53	2.67	MWD	
12700.00	12717.74	12739.59	180.00	28.93	27.91	46.75	133.96	192.56	3.29	MWD	
12800.00	12852.80	12890.32	180.00	28.16	27.94	47.59	162.59	219.41	3.86	MWD	
12900.00	12974.73	13054.34	180.00	28.46	26.50	48.30	182.70	236.43	4.40	MWD	
13000.00	13064.02	13226.12	180.00	28.92	25.16	48.85	190.52	241.59	4.73	MWD	
13100.00	13106.12	13397.06	180.00	29.62	24.61	49.27	184.25	234.17	4.69	MWD	
13200.00	13109.57	13517.60	180.00	30.28	24.73	49.54	171.49	221.64	4.42	MWD	
13300.00	13110.40	13617.58	180.00	30.92	24.85	49.80	170.41	220.81	4.38	MWD	
13400.00	13111.24	13717.58	180.00	31.65	25.00	50.11	170.09	220.78	4.36	MWD	
13500.00	13112.08	13817.58	180.00	32.47	25.17	50.45	169.73	220.75	4.33	MWD	
13600.00	13112.92	13917.58	180.00	33.37	25.36	50.84	169.31	220.72	4.29	MWD	
13700.00	13113.76	14017.58	180.00	34.34	25.57	51.26	168.84	220.69	4.26	MWD	
13800.00	13114.60	14117.58	180.00	35.37	25.80	51.72	168.34	220.66	4.22	MWD	
13900.00	13115.43	14217.58	180.00	36.47	26.04	52.22	167.81	220.64	4.18	MWD	
14000.00	13116.27	14317.58	180.00	37.62	26.31	52.76	167.28	220.61	4.14	MWD	
14100.00	13117.11	14417.58	180.00	38.83	26.59	53.33	166.71	220.58	4.10	MWD	
14200.00	13117.95	14517.58	180.00	40.08	26.89	53.94	166.04	220.55	4.05	MWD	
14300.00	13118.79	14617.58	180.00	41.38	27.21	54.57	165.46	220.52	4.00	MWD	
14400.00	13119.63	14717.58	180.00	42.71	27.55	55.24	164.77	220.49	3.96	MWD	
14500.00	13120.46	14817.58	180.00	44.08	27.89	55.94	163.96	220.46	3.90	MWD	
14600.00	13121.30	14917.58	180.00	45.48	28.26	56.67	163.30	220.43	3.86	MWD	
14700.00	13122.14	15017.58	180.00	46.91	28.64	57.43	162.49	220.40	3.81	MWD	
14800.00	13122.98	15117.58	180.00	48.37	29.03	58.21	161.69	220.37	3.76	MWD	
14900.00	13123.82	15217.58	180.00	49.85	29.43	59.02	160.87	220.34	3.70	MWD	
15000.00	13124.66	15317.58	180.00	51.35	29.85	59.86	160.19	220.32	3.66	MWD	
15100.00	13125.50	15417.58	180.00	52.88	30.28	60.72	159.18	220.29	3.60	MWD	
15200.00	13126.33	15517.58	180.00	54.42	30.72	61.60	158.44	220.26	3.56	MWD	
15300.00	13127.17	15617.58	180.00	55.98	31.17	62.50	157.45	220.23	3.51	MWD	
15400.00	13128.01	15717.58	180.00	57.55	31.64	63.43	156.43	220.20	3.45	MWD	
15500.00	13128.85	15817.58	180.00	59.14	32.11	64.37	155.48	220.17	3.40	MWD	
15600.00	13129.69	15917.58	180.00	60.74	32.59	65.34	154.56	220.14	3.36	MWD	

## 5D Anti-Collision Report

Secondary Well: Mean Green 23-35 Fed Com'2H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)											Survey Tool	Risk
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF			
15700.00	13130.53	16017.58	180.00	62.36	33.08	66.32	153.57	220.11	3.31	MWD		
15800.00	13131.36	16117.58	180.00	63.98	33.58	67.32	152.55	220.08	3.26	MWD		
15900.00	13132.20	16217.58	180.00	65.62	34.09	68.34	151.45	220.05	3.21	MWD		
16000.00	13133.04	16317.58	180.00	67.26	34.61	69.37	150.34	220.02	3.16	MWD		
16100.00	13133.88	16417.58	180.00	68.92	35.13	70.42	149.23	220.00	3.11	MWD		
16200.00	13134.05	16521.01	180.00	70.64	35.73	71.52	148.02	219.97	3.06	MWD		
16300.00	13132.49	16623.70	180.00	72.36	36.32	72.62	146.83	219.91	3.01	MWD		
16400.00	13130.55	16723.70	180.00	74.04	36.86	73.71	145.76	219.91	2.97	MWD		
16500.00	13128.60	16823.70	180.00	75.73	37.41	74.80	144.68	219.91	2.92	MWD		
16600.00	13126.66	16923.70	180.00	77.42	37.97	75.91	143.59	219.92	2.88	MWD		
16700.00	13124.72	17023.70	180.00	79.12	38.53	77.04	142.48	219.92	2.84	MWD		
16800.00	13122.78	17123.70	180.00	80.82	39.10	78.17	141.37	219.92	2.80	MWD		
16900.00	13120.83	17223.70	180.00	82.53	39.67	79.31	140.25	219.92	2.76	MWD		
17000.00	13118.89	17323.70	180.00	84.24	40.25	80.47	139.12	219.92	2.72	MWD		
17100.00	13116.95	17423.70	180.00	85.96	40.83	81.63	137.98	219.92	2.68	MWD		
17200.00	13115.01	17523.70	180.00	87.68	41.42	82.81	136.80	219.92	2.65	MWD		
17300.00	13113.06	17623.70	180.00	89.41	42.02	83.99	135.62	219.92	2.61	MWD		
17400.00	13111.12	17723.70	180.00	91.14	42.61	85.18	134.43	219.92	2.57	MWD		
17500.00	13109.18	17823.70	180.00	92.87	43.21	86.38	133.23	219.92	2.54	MWD		
17600.00	13107.24	17923.70	180.00	94.61	43.82	87.59	132.02	219.92	2.50	MWD		
17700.00	13105.29	18023.70	180.00	96.35	44.43	88.81	130.81	219.92	2.47	MWD	SF(Lo)	
17800.00	13103.35	18123.70	180.00	98.09	45.04	90.03	129.57	219.92	2.43	MWD	SF(Lo)	
17900.00	13101.41	18223.70	180.00	99.84	45.66	91.27	128.32	219.92	2.40	MWD	SF(Lo)	
18000.00	13099.47	18323.70	180.00	101.59	46.28	92.50	127.06	219.93	2.37	MWD	SF(Lo)	
18100.00	13097.53	18423.70	180.00	103.34	46.90	93.75	125.80	219.93	2.34	MWD	SF(Lo)	
18200.00	13095.58	18523.70	180.00	105.10	47.53	95.00	124.54	219.93	2.31	MWD	SF(Lo)	
18300.00	13093.64	18623.70	180.00	106.85	48.16	96.26	123.26	219.93	2.28	MWD	SF(Lo)	
18400.00	13091.70	18723.70	180.00	108.61	48.79	97.52	121.99	219.93	2.25	MWD	SF(Lo)	
18500.00	13089.76	18823.70	180.00	110.37	49.43	98.79	120.71	219.93	2.22	MWD	SF(Lo)	
18600.00	13087.81	18923.70	180.00	112.14	50.06	100.06	119.42	219.93	2.19	MWD	SF(Lo)	
18700.00	13085.87	19023.70	180.00	113.90	50.71	101.34	118.13	219.93	2.16	MWD	SF(Lo)	
18800.00	13083.93	19123.70	180.00	115.67	51.35	102.63	116.83	219.93	2.13	MWD	SF(Lo)	
18900.00	13081.99	19223.70	180.00	117.44	51.99	103.91	115.53	219.93	2.11	MWD	SF(Lo)	
19000.00	13080.04	19323.70	180.00	119.21	52.64	105.21	114.23	219.93	2.08	MWD	SF(Lo)	
19100.00	13078.10	19423.70	180.00	120.98	53.29	106.51	112.92	219.93	2.06	MWD	SF(Lo)	
19200.00	13076.16	19523.70	180.00	122.75	53.94	107.81	111.61	219.93	2.03	MWD	SF(Lo)	
19300.00	13074.22	19623.70	180.00	124.53	54.60	109.12	110.30	219.93	2.01	MWD	SF(Lo)	
19400.00	13072.27	19723.70	180.00	126.30	55.25	110.43	108.98	219.94	1.98	MWD	SF(Lo)	
19500.00	13070.33	19823.70	180.00	128.08	55.91	111.74	107.65	219.94	1.96	MWD	SF(Lo)	
19600.00	13068.39	19923.70	180.00	129.86	56.57	113.06	106.33	219.94	1.94	MWD	SF(Lo)	
19700.00	13066.45	20023.70	180.00	131.64	57.23	114.38	105.00	219.94	1.91	MWD	SF(Lo)	
19800.00	13064.50	20123.70	180.00	133.42	57.90	115.71	103.67	219.94	1.89	MWD	SF(Lo)	
19900.00	13062.56	20223.70	180.00	135.20	58.56	117.04	102.33	219.94	1.87	MWD	SF(Lo)	
20000.00	13060.62	20323.70	180.00	136.99	59.23	118.37	100.99	219.94	1.85	MWD	SF(Lo)	
20100.00	13058.68	20423.70	180.00	138.77	59.90	119.70	99.65	219.94	1.83	MWD	SF(Lo)	
20200.00	13056.73	20523.70	180.00	140.56	60.57	121.04	98.31	219.94	1.81	MWD	SF(Lo)	
20300.00	13054.79	20623.70	180.00	142.34	61.24	122.38	96.96	219.94	1.79	MWD	SF(Lo)	
20400.00	13052.85	20723.70	180.00	144.13	61.91	123.73	95.61	219.94	1.77	MWD	SF(Lo)	
20500.00	13050.91	20823.70	180.00	145.92	62.58	125.07	94.26	219.94	1.75	MWD	SF(Lo)	
20600.00	13048.96	20923.70	180.00	147.71	63.26	126.42	92.90	219.94	1.73	MWD	SF(Lo)	
20700.00	13047.02	21023.70	180.00	149.50	63.94	127.77	91.55	219.94	1.71	MWD	SF(Lo)	
20800.00	13045.08	21123.70	180.00	151.29	64.61	129.13	90.19	219.95	1.70	MWD	SF(Lo)	
20900.00	13043.14	21223.70	180.00	153.08	65.29	130.49	88.83	219.95	1.68	MWD	SF(Lo)	
21000.00	13041.19	21323.70	180.00	154.87	65.97	131.84	87.46	219.95	1.66	MWD	SF(Lo)	
21100.00	13039.25	21423.70	180.00	156.67	66.65	133.21	86.10	219.95	1.64	MWD	SF(Lo)	
21200.00	13037.31	21523.70	180.00	158.46	67.34	134.57	84.73	219.95	1.63	MWD	SF(Lo)	
21300.00	13035.37	21623.70	180.00	160.26	68.02	135.94	83.36	219.95	1.61	MWD	SF(Lo)	
21400.00	13033.42	21723.70	180.00	162.05	68.70	137.30	81.99	219.95	1.59	MWD	SF(Lo)	

## 5D Anti-Collision Report

<b>Secondary Well: Mean Green 23-35 Fed Com 2H (p)(TVD relative to Drill Floor)(All Azimuth Relative to GRID NORTH)</b>											
Pri MD (US ft)	TVD (US ft)	Sec MD (US ft)	T.Face to Sec (°)	S.Major (US ft)	S.Minor (US ft)	TVD Spread (US ft)	ES (US ft)	CC (US ft)	SF	Survey Tool	Risk
21500.00	13031.48	21823.70	180.00	163.85	69.39	138.67	80.61	219.95	1.58	MWD	SF(Lo)
21600.00	13029.54	21923.70	180.00	165.65	70.08	140.04	79.24	219.95	1.56	MWD	SF(Lo)
21700.00	13027.60	22023.70	180.00	167.44	70.76	141.42	77.86	219.95	1.55	MWD	SF(Lo)
21800.00	13025.65	22123.70	180.00	169.24	71.45	142.79	76.48	219.95	1.53	MWD	SF(Lo)
21900.00	13023.71	22223.70	180.00	171.04	72.14	144.17	75.10	219.95	1.52	MWD	SF(Lo)
22000.00	13021.77	22323.70	180.00	172.84	72.83	145.55	73.72	219.95	1.50	MWD	SF(Lo)
22100.00	13019.83	22423.70	180.00	174.64	73.52	146.93	72.33	219.95	1.49	MWD	SF(Med)
22200.00	13017.89	22523.70	180.00	176.44	74.21	148.31	70.95	219.96	1.48	MWD	SF(Med)
22300.00	13015.94	22623.70	180.00	178.24	74.91	149.70	69.56	219.96	1.46	MWD	SF(Med)
22400.00	13014.00	22723.70	180.00	180.04	75.60	151.08	68.17	219.96	1.45	MWD	SF(Med)
22500.00	13012.06	22823.70	180.00	181.84	76.29	152.47	66.78	219.96	1.44	MWD	SF(Med)
22600.00	13010.12	22923.70	180.00	183.64	76.99	153.86	65.39	219.96	1.42	MWD	SF(Med)
22661.70	13009.00	22981.12	180.00	184.68	77.39	154.66	64.78	220.00	1.42	MWD	SF(Med)

## **I. Design Plan**

Devon uses MI SWACO closed loop system (CLS). The MI SWACO CLS is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This insures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

Signs will be posted on the fence surrounding the closed-loop system unless the closed-loop system is located on a site where there is an existing well, that is operated by Devon.

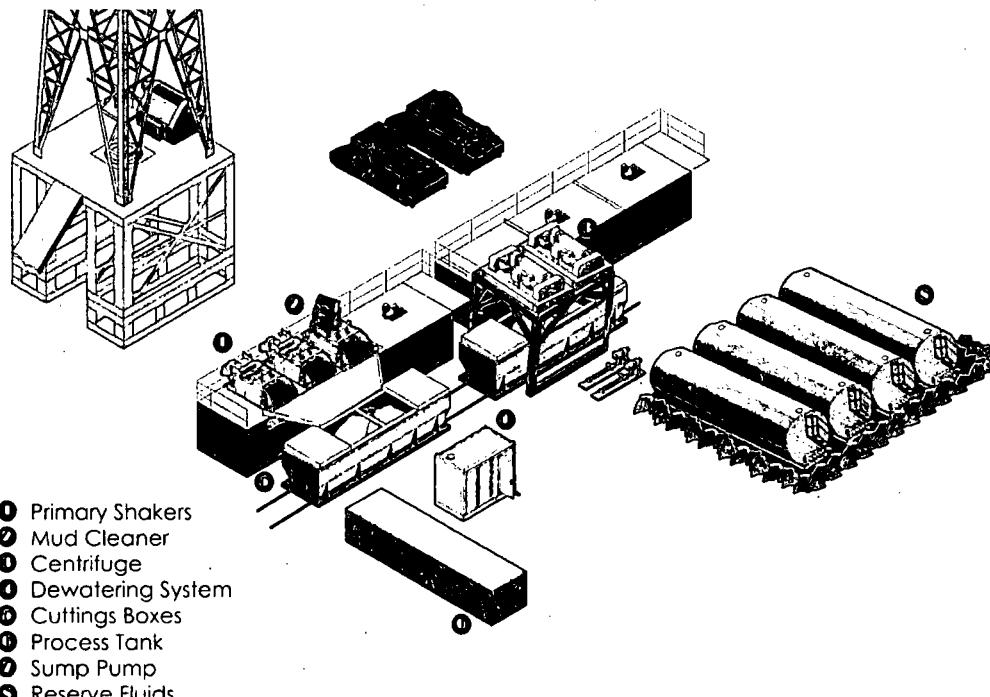
## **II. Operations and Maintenance Plan**

**Primary Shakers:** The primary shakers make the first removal of drill solids from the drilling mud as it leaves the well bore. The shakers are sized to handle maximum drilling rate at optimal screen size. The shakers normally remove solids down to 74 microns.

**Mud Cleaner:** The Mud Cleaner cleans the fluid after it leaves the shakers. A set of hydrocyclones are sized to handle 1.25 to 1.5 times the maximum circulating rate. This ensures all the fluid is being processed to an average cut point of 25 microns. The wet discharged is dewatered on a shaker equipped with ultra fine mesh screens and generally cut at 40 microns.



Closed Loop Schematic



**Mi SWACO**

**Centrifuges:** The centrifuges can be one or two in number depending on the well geometry or depth of well. The centrifuges are sized to maintain low gravity solids at 5% or below. They may or may not need a dewatering system to enhance the removal rates. The centrifuges can make a cut point of 8-10 microns depending on bowl speed, feed rate, solids loading and other factors.

The centrifuge system is designed to work on the active system and be flexible to process incoming fluids from other locations. This set-up is also dependant on well factors.

**Dewatering System:** The dewatering system is a chemical mixing and dosing system designed to enhance the solids removal of the centrifuge. Not commonly used in shallow wells. It may contain pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing. Chemical flocculation binds ultra fine solids into a mass that is within the centrifuge operating design. The

dewatering system improves the centrifuge cut point to infinity or allows for the return of clear water or brine fluid. This ability allows for the ultimate control of low gravity solids.

*Cuttings Boxes:* Cuttings boxes are utilized to capture drill solids that are discarded from the solids control equipment. These boxes are set upon a rail system that allows for the removal and replacement of a full box of cuttings with an empty one. They are equipped with a cover that insures no product is spilled into the environment during the transportation phase.

*Process Tank:* (Optional) The process tank allows for the holding and process of fluids that are being transferred into the mud system. Additionally, during times of lost circulation the process tank may hold active fluids that are removed for additional treatment. It can further be used as a mixing tank during well control conditions.

*Sump and Sump Pump:* The sump is used to collect storm water and the pump is used to transfer this fluid to the active system or to the tank for to hold in reserve. It can also be used to collect fluids that may escape during spills. The location contains drainage ditches that allow the location fluids to drain to the sump.

*Reserve Fluids (Tank Farm):* A series of frac tanks are used to replace the reserve pit. These are steel tanks that are equipped with a manifold system and a transfer pump. These tanks can contain any number of fluids used during the drilling process. These can include fresh water, cut brine, and saturated salt fluid. The fluid can be from the active well or reclaimed fluid from other locations. A 20 ml liner and berm system is employed to ensure the fluids do not migrate to the environment during a spill.

If a leak develops, the appropriate division district office will be notified within 48 hours of the discovery and the leak will be addressed. Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and testing will be performed to determine if a release has occurred.

All trash is kept in a wire mesh enclosure and removed to an approved landfill when full. All spent motor oils are kept in separate containers and they are removed and sent to an approved recycling center. Any spilled lubricants, pipe

dope, or regulated chemicals are removed from soil and sent to landfills approved for these products.

These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

### **III. Closure Plan**

A maximum 340' X 340' caliche pad is built per well. All of the trucks and steel tanks fit on this pad. All fluid cuttings go to the steel tanks to be hauled by various trucking companies to an agency approved disposal.

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.