PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	DEVON ENERGY PRODUCTION
LEASE NO.:	NMNM114992
WELL NAME & NO.:	5H – FIGHTING OKRA 18-19 FEDERAL
SURFACE HOLE FOOTAGE:	375'/N & 2605'/W
BOTTOM HOLE FOOTAGE	330'/S & 2340'/E
LOCATION:	Section 18 T.26 S., R.34 E., NMP
COUNTY:	Lea County, New Mexico

Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP

A. Hydrogen Sulfide

1. Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **10 3/4** inch surface casing shall be set at approximately **864** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

    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.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

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

   - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Excess calculates to 11% - additional cement might be required.**

In case of lost circulation, operator has proposed to pump down 7 5/8" X 10 3/4" annulus. Operator must run a CBL from TD of the 7 5/8'' casing to surface. Submit results to the BLM.

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.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).

2. **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 10,000 (10M) 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. **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.**
   e. **Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.**

A 5M Annular variance sundry along with a 'well control plan' must be submitted in order for the operator to use a 5M Annular on a 10M BOP.

D. SPECIAL REQUIREMENT(S)

Waste Minimization Plan (WMP)

In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

MHH 01072018

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Chaves and Roosevelt Counties
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
During office hours call (575) 627-0272.
After office hours call (575)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

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

1. 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.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. 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 are located, this does not include the dog house or stairway area.

3. 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

1. 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.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.

3. 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.

4. 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.

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

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. 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.

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

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 RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: 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.

3. 5M or higher 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. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    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. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    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.

5. The appropriate BLM office shall be notified a minimum of 4 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).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. 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.

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

f. 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.

g. 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.

h. 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

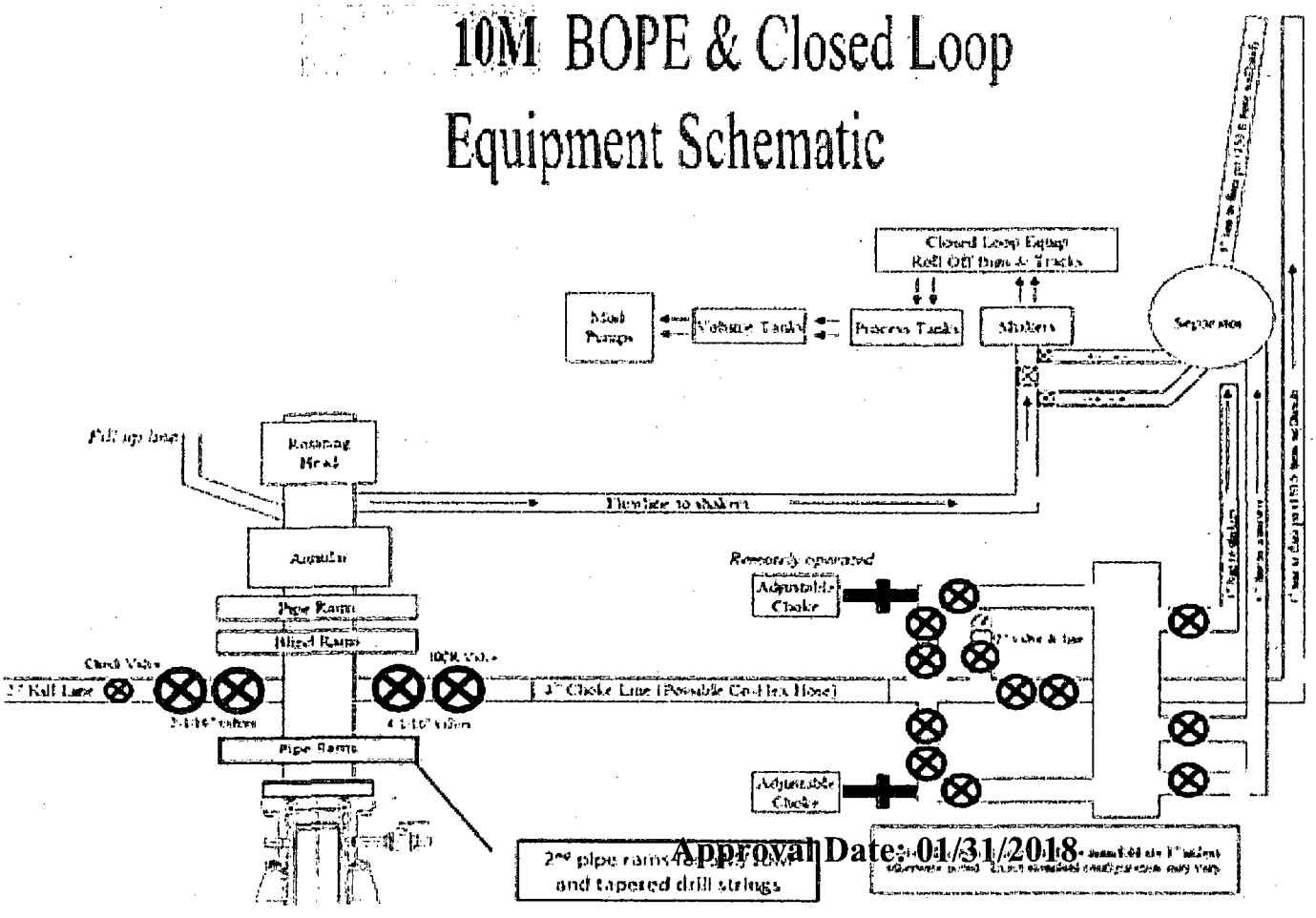
Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

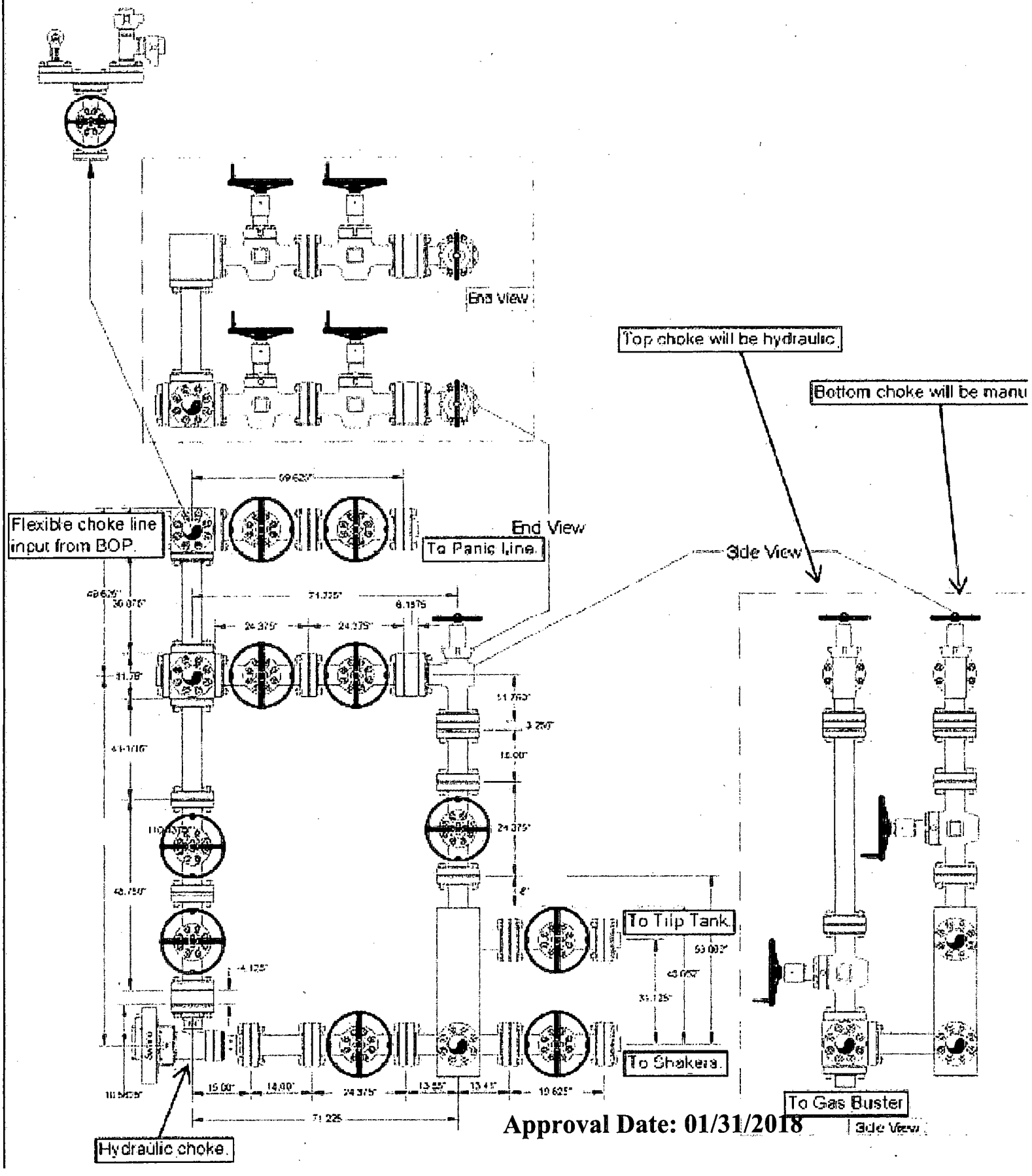
All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location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

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

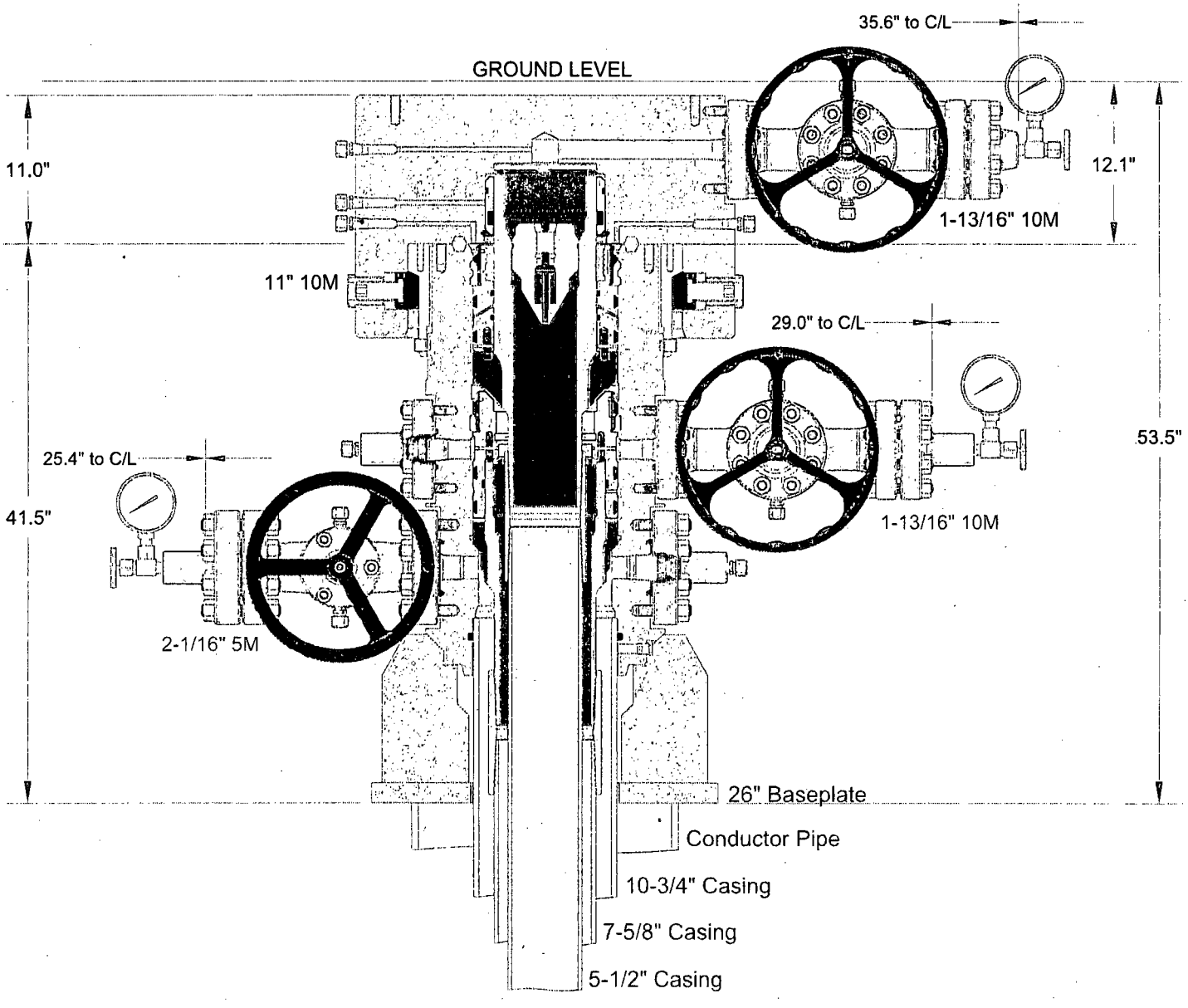
10M BOPE & Closed Loop Equipment Schematic



Approval Date: 01/31/2018



Approval Date: 01/31/2018



CACTUS WELLHEAD LLC	DEVON ENERGY CORPORATION		
16" x 11-7/8" x 7-5/8" MBU-T Wellhead Assembly With 7-5/8" & 5-1/2" Pin Bottom Mandrel Casing Hangers And 11" 10M MBU-T-HPS-F TA Cap	DRAWN	DLE	29NOV17
	APPRV		
	DRAWING NO.	OKE0001764	

Approval Date: 01/31/2018

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 ~~5000 (5M) psi.~~ 10,000 (10M) 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 5M, 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 10-3/4" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 5M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 5,000 psi high pressure test. The 5,000 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 7-5/8' intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 10M will 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 10,000 psi WP.

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

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	DEVON ENERGY PRODUCTION
LEASE NO.:	NMNM114992
WELL NAME & NO.:	5H – FIGHTING OKRA 18-19 FEDERAL
SURFACE HOLE FOOTAGE:	375'/N & 2605'/W
BOTTOM HOLE FOOTAGE	330'/S & 2340'/E
LOCATION:	Section 18 T.26 S., R.34 E., NMP
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.

Approval Date: 01/31/2018

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)

Mitigations measures required for this project include having a contract archaeologist monitor all activities within archaeology site LA 141949. A reroute was conducted to avoid this site; however, a monitor is required to ensure that the construction crew adheres to the mitigation measure.

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.

The operator will consult with the grazing permittee prior to disturbing any livestock watering or known fresh water pipelines used to provide water to livestock. Should the operator damage any livestock pipelines, known or unknown, the operator will repair lines immediately and consult with the grazing permittee about the possible relocation of the pipeline. Should pipeline relocation be necessary, the operator will provide all the clearances necessary for the relocation.

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.

Trenches-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.

Watershed and Water Quality:

Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank. Automatic shut

off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

Construction:
In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

No Blasting:
No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Pad Berming:
The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g. caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

Tank Battery Liners and Berms:
Tank battery locations and all facilities will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing, or equivalent, to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Leak Detection System:
A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

Automatic Shut-off Systems:
Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

EXHIBIT NO. 1

Date of Issue:
7/24/17

Bureau of Land Management, Carlsbad Field Office
620 E. Greene Street Carlsbad, NM 88220

Cultural and Archaeological Resources

BLM Report No.
17-0524

NOTICE OF STIPULATIONS

Historic properties in the vicinity of this project are protected by federal law. In order to ensure that they are not damaged or destroyed by construction activities, the project proponent and construction supervisors shall ensure that the following stipulations are implemented.

Project Name:	**Rattlesnake 1 Section 18 Master Development Plan**
	1). A 3-day preconstruction call-in notification. Contact BLM Inspection and Enforcement at
Required	***2. Professional archaeological monitoring***. Contact your BLM project archaeologist at (575) 234-5917 for assistance.
A. ☒	These stipulations must be given to your monitor at least **5 days** prior to the start of construction.
B. ☒	No construction, including vegetation removal or other site prep may begin prior to the arrival of the monitor.
	3. Cultural site barrier fencing. (Your monitor will assist you).
A. ☐	**A temporary site protection barrier(s)** shall be erected prior to all ground-disturbing activities. The minimum barrier(s) shall consist of upright wooden survey lath spaced no more than ten (10) feet apart and marked with blue ribbon flagging or blue paint. There shall be no construction activities or vehicular traffic past the barrier(s) at any time.
B. ☐	**A permanent, 4-strand barbed wire fence** strung on standard "T-posts" shall be erected prior to all ground-disturbing activities. No construction activities or vehicle traffic are allowed past the fence.
Required	***4. The archaeological monitor shall:***
A. ☐	
B. ☒	Observe all ground-disturbing activities within 100 feet of cultural site LA 141949.
C. ☐	Ensure that the proposed
D. ☒	Ensure the proposed reroute for LA 141949. is adhered to.
E. ☒	Submit a brief monitoring report within 30 days of completion of monitoring.
Other:	If subsurface cultural resources are encountered during the monitoring, all activities shall cease and a BLM-CFO archaeologist shall be notified immediately. **IF THE CONTRACT ARCHAEOLOGIST DOES NOT KNOW WHERE THE SITE(S) ARE LOCATED AT PLEASE COME BY THE CARLSBAD BLM AND MAPS AND OTHER DATA WILL BE PROVIDED UPON REQUEST TO THE CONTRACT ARCHAEOLOGIST**

Site Protection and Employee Education: **It is the responsibility of the project proponent and his construction supervisor to inform all employees and subcontractors that cultural and archaeological sites are to be avoided by all personnel, vehicles, and equipment; and that it is illegal to collect, damage, or disturb cultural resources on Public Lands.**

For assistance contact: Bruce Boeke (575) 234-5917

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

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

G. ON LEASE ACCESS ROADS

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

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

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

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

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

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

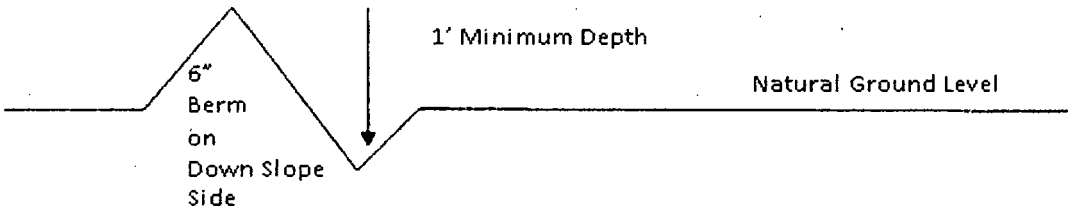
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

Cattle guards

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

Fence Requirement

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

Public Access

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

Construction Steps

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

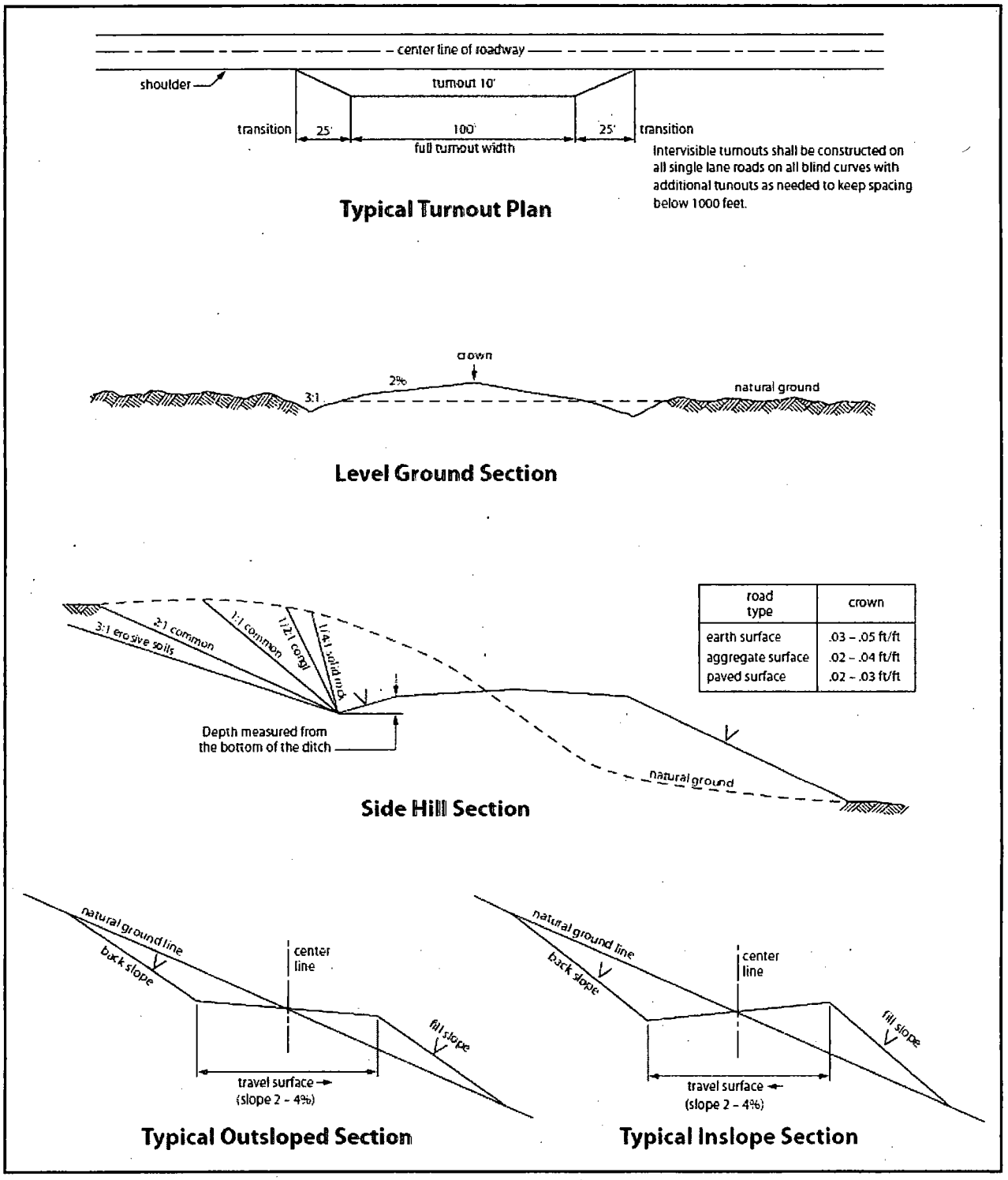


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

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

Containment Structures

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

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

B. PIPELINES

BURIED PIPELINE STIPULATIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches that are not otherwise fenced, screened, or netted to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or

other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the application (Grant, Sundry Notice, APD) 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 activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

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

a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
b. Activities of other parties including, but not limited to:
    (1) Land clearing.
    (2) Earth-disturbing and earth-moving work.
    (3) Blasting.
    (4) Vandalism and sabotage.
c. Acts of God.

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

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

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the 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 the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of **20** feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline must be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline must be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity will be confined to existing roads or right-of-ways.

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

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

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

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

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

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

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

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

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

measures will be made by the authorized officer after consulting with the holder.

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

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

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

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

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

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

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

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

whether a release is caused by the holder, its agent, or unrelated third parties.

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

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

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

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

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

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

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

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed

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

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

VIII. INTERIM RECLAMATION

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

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

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

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

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

IX. FINAL ABANDONMENT & RECLAMATION

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

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

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

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

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

Seed Mixture 2, for Sandy Sites

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

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

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

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

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

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	DEVON ENERGY PRODUCTION
LEASE NO.:	NMNM114992
WELL NAME & NO.:	5H – FIGHTING OKRA 18-19 FEDERAL
SURFACE HOLE FOOTAGE:	375'/N & 2605'/W
BOTTOM HOLE FOOTAGE	330'/S & 2340'/E
LOCATION:	Section 18 T.26 S., R.34 E., NMP
COUNTY:	Lea County, New Mexico

TABLE OF CONTENTS

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

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

Mitigations measures required for this project include having a contract archaeologist monitor all activities within archaeology site LA 141949. A reroute was conducted to avoid this site; however, a monitor is required to ensure that the construction crew adheres to the mitigation measure.

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.

The operator will consult with the grazing permittee prior to disturbing any livestock watering or known fresh water pipelines used to provide water to livestock. Should the operator damage any livestock pipelines, known or unknown, the operator will repair lines immediately and consult with the grazing permittee about the possible relocation of the pipeline. Should pipeline relocation be necessary, the operator will provide all the clearances necessary for the relocation.

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.

Trenches-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.

Watershed and Water Quality:

Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank. Automatic shut

off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

Construction:
In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

No Blasting:
No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Pad Berming:
The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g. caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

Tank Battery Liners and Berms:
Tank battery locations and all facilities will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing, or equivalent, to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Leak Detection System:
A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

Automatic Shut-off Systems:
Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

EXHIBIT NO. 1

Date of Issue:
7/24/17

Bureau of Land Management, Carlsbad Field Office
620 E. Greene Street Carlsbad, NM 88220

Cultural and Archaeological Resources

BLM Report No.
17-0524

NOTICE OF STIPULATIONS

Historic properties in the vicinity of this project are protected by federal law. In order to ensure that they are not damaged or destroyed by construction activities, the project proponent and construction supervisors shall ensure that the following stipulations are implemented.

Project Name:	**Rattlesnake 1 Section 18 Master Development Plan**
	1). A 3-day preconstruction call-in notification. Contact BLM Inspection and Enforcement at
Required	***2. Professional archaeological monitoring***. Contact your BLM project archaeologist at (575) 234-5917 for assistance.
A. ☒	These stipulations must be given to your monitor at least **5 days** prior to the start of construction.
B. ☒	No construction, including vegetation removal or other site prep may begin prior to the arrival of the monitor.
	3. Cultural site barrier fencing. (Your monitor will assist you).
A. ☐	**A temporary site protection barrier(s)** shall be erected prior to all ground-disturbing activities. The minimum barrier(s) shall consist of upright wooden survey lath spaced no more than ten (10) feet apart and marked with blue ribbon flagging or blue paint. There shall be no construction activities or vehicular traffic past the barrier(s) at any time.
B. ☐	**A permanent, 4-strand barbed wire fence** strung on standard "T-posts" shall be erected prior to all ground-disturbing activities. No construction activities or vehicle traffic are allowed past the fence.
Required	***4. The archaeological monitor shall:***
A. ☐	
B. ☒	Observe all ground-disturbing activities within 100 feet of cultural site LA 141949.
C. ☐	Ensure that the proposed
D. ☒	Ensure the proposed reroute for LA 141949. is adhered to.
E. ☒	Submit a brief monitoring report within 30 days of completion of monitoring.
Other:	If subsurface cultural resources are encountered during the monitoring, all activities shall cease and a BLM-CFO archaeologist shall be notified immediately. **IF THE CONTRACT ARCHAEOLOGIST DOES NOT KNOW WHERE THE SITE(S) ARE LOCATED AT PLEASE COME BY THE CARLSBAD BLM AND MAPS AND OTHER DATA WILL BE PROVIDED UPON REQUEST TO THE CONTRACT ARCHAEOLOGIST**

<u>Site Protection and Employee Education</u>: It is the responsibility of the project proponent and his construction supervisor to inform all employees and subcontractors that cultural and archaeological sites are to be avoided by all personnel, vehicles, and equipment; and that it is illegal to collect, damage, or disturb cultural resources on Public Lands.

For assistance contact: Bruce Boeke (575) 234-5917

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

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

G. ON LEASE ACCESS ROADS

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

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

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

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

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

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

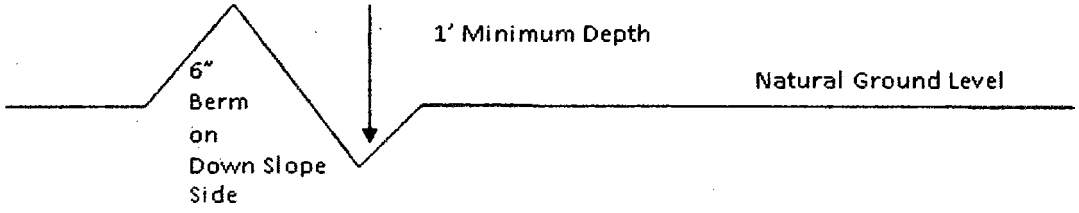
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

Cattle guards

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

Fence Requirement

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

Public Access

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

Construction Steps

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

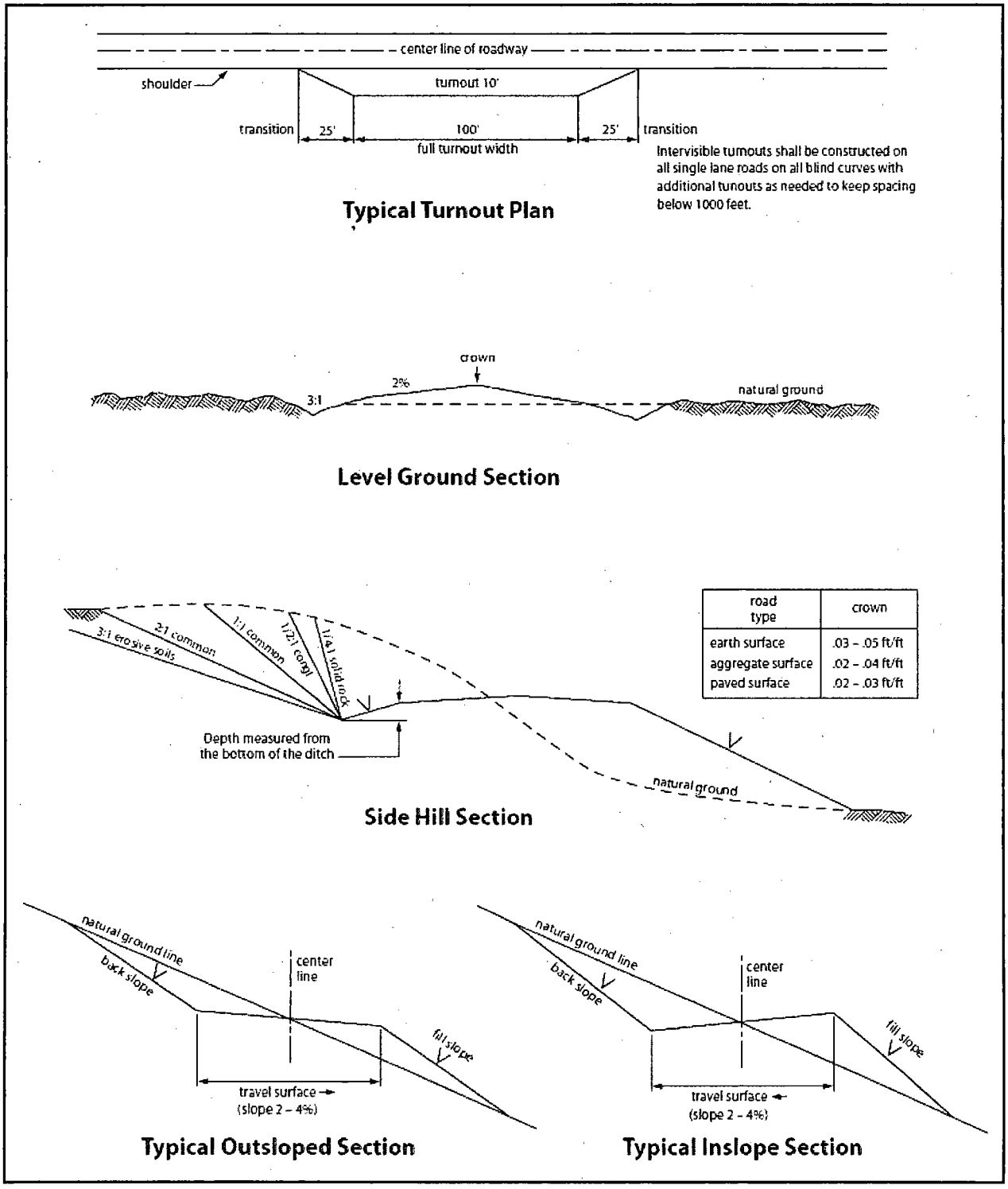


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

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

Containment Structures

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

Painting Requirement

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

B. PIPELINES

BURIED PIPELINE STIPULATIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches that are not otherwise fenced, screened, or netted to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or

other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the application (Grant, Sundry Notice, APD) 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 activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

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

a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
b. Activities of other parties including, but not limited to:
    (1) Land clearing.
    (2) Earth-disturbing and earth-moving work.
    (3) Blasting.
    (4) Vandalism and sabotage.
c. Acts of God.

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

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

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the 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 the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of **20** feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline must be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline must be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity will be confined to existing roads or right-of-ways.

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

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

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

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

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

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

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

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

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

measures will be made by the authorized officer after consulting with the holder.

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

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

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

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

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

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

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

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

whether a release is caused by the holder, its agent, or unrelated third parties.

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

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

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

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

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

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

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

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed

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

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

VIII. INTERIM RECLAMATION

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

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

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

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

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

IX. FINAL ABANDONMENT & RECLAMATION

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

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

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

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

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

Seed Mixture 2, for Sandy Sites

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

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

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

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

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

Approval Date: 01/31/2018

devon

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

Hydrogen Sulfide (H_2S) Contingency Plan

For

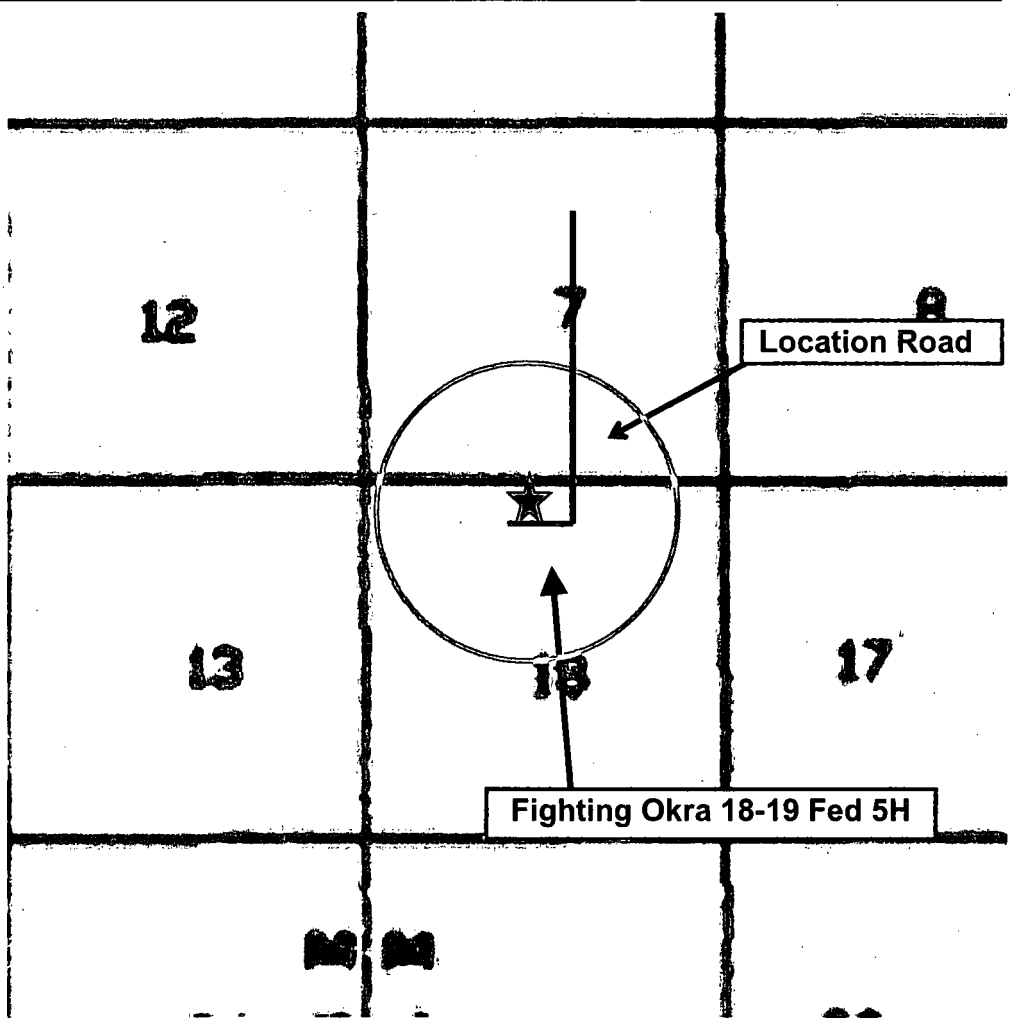
Fighting Okra 18-19 Fed 5H

Sec-18 T-26S R-34E
375 FNL & 2605' FEL
LAT. = 32.0496671' N (NAD83)
LONG = 103.5091289' W

Lea County NM

Fighting Okra 18-19 Fed 5H

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



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

Escape

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

Assumed 100 ppm ROE = 3000'
100 ppm H_2S concentration shall trigger activation of this plan.

Emergency Procedures

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

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

Ignition of Gas Source

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

Characteristics of H_2S and SO_2

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

Contacting Authorities

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

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

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE (H_2S) TRAINING

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

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

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

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

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

II. HYDROGEN SULFIDE TRAINING

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

1. **Well Control Equipment**

   A. Flare line

   B. Choke manifold – Remotely Operated

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

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

   E. Mud/Gas Separator

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

   30-minute SCBA units located at briefing areas, as indicated on well site diagram, with 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_2S detection and monitoring equipment:**

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

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

   Visual warning systems:

   A. Wind direction indicators as shown on well site diagram

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

4. **Mud program:**

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

5. **Metallurgy:**

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

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

6. **Communication:**

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

   B. Land line (telephone) communications at Office

7. **Well testing:**

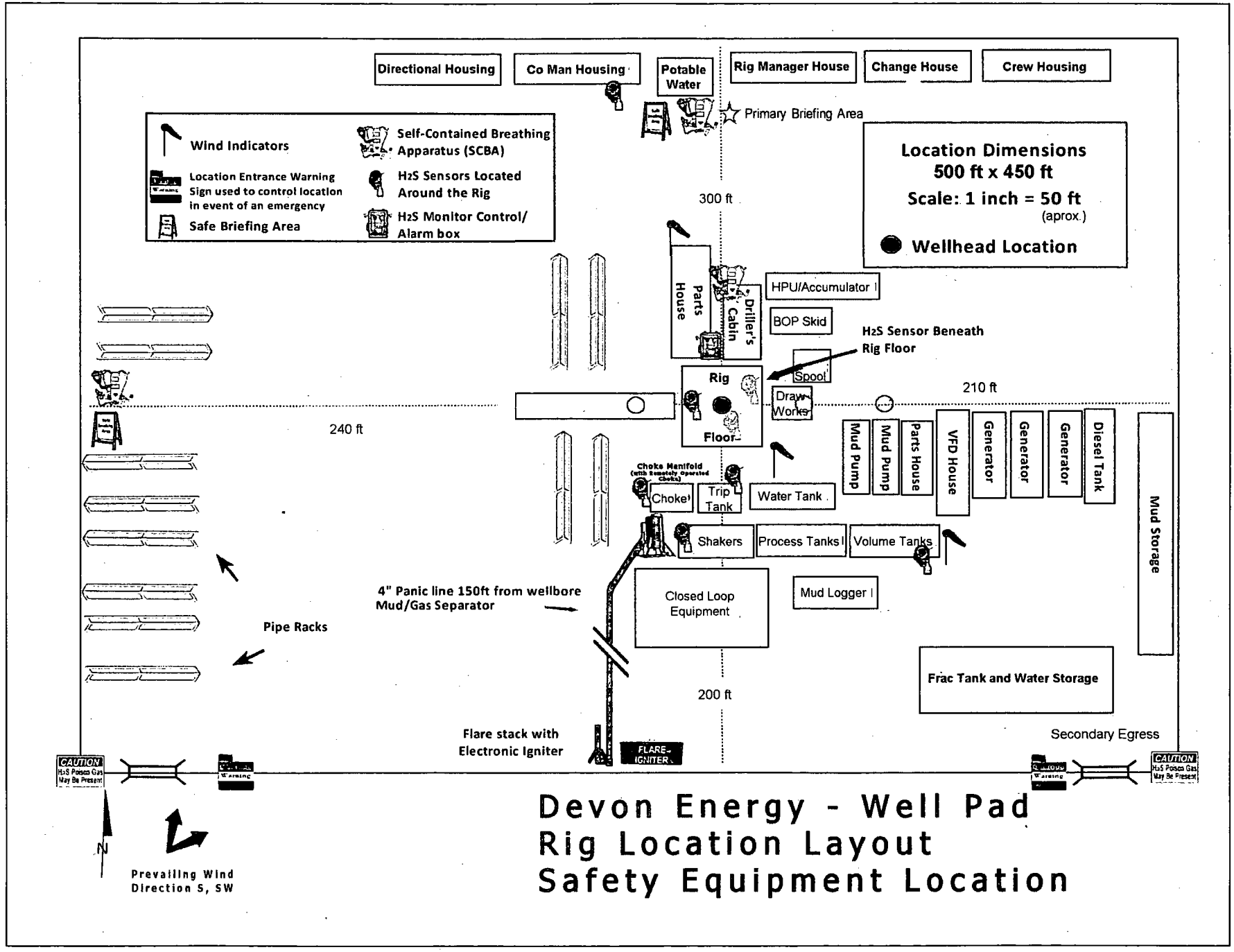
   A. There will be no drill stem testing.

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

Agency Call List

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

Prepared in conjunction with
Dave Small SHARP COMMUNICATIONS & CONSULTING, LLC


Directional Housing
Co Man Housing
Potable Water
Rig Manager House
Change House
Crew Housing
Primary Briefing Area
Wind Indicators
Location Entrance Warning Sign used to control location in event of an emergency
Safe Briefing Area
Self-Contained Breathing Apparatus (SCBA)
H2S Sensors Located Around the Rig
H2S Monitor Control/ Alarm box
Location Dimensions
500 ft x 450 ft
Scale: 1 inch = 50 ft
(aprox.)
Wellhead Location
300 ft
Parts House
Driller's Cabin
HPU/Accumulator
BOP Skid
H2S Sensor Beneath Rig Floor
Spool
Rig Floor
Draw Works
210 ft
240 ft
Mud Pump
Mud Pump
Parts House
VFD House
Generator
Generator
Generator
Diesel Tank
Mud Storage
Choke Manifold (with Remotely Operated Choke)
Choke
Trip Tank
Water Tank
Shakers
Process Tanks
Volume Tanks
4" Panic line 150ft from wellbore Mud/Gas Separator
Closed Loop Equipment
Mud Logger
Pipe Racks
Frac Tank and Water Storage
200 ft
Flare stack with Electronic Igniter
FLARE-IGNITER
Secondary Egress
CAUTION H2S Poison Gas May Be Present
N
Prevailing Wind Direction S, SW
Devon Energy - Well Pad
Rig Location Layout
Safety Equipment Location

Devon Energy

Project: Lea County, NM (NAD-83)
Site: Fighting Okra 18-19 Fed
Well: 5H
Wellbore: OH
Design: Plan #1

Azimuths to Grid North
True North: -0.44°
Magnetic North: 6.36°

Magnetic Field
Strength: 47892.8snT
Dip Angle: 59.78°
Date: 9/6/2017
Model: HDGM

PROJECT DETAILS: Lea County, NM (NAD-83)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

devon

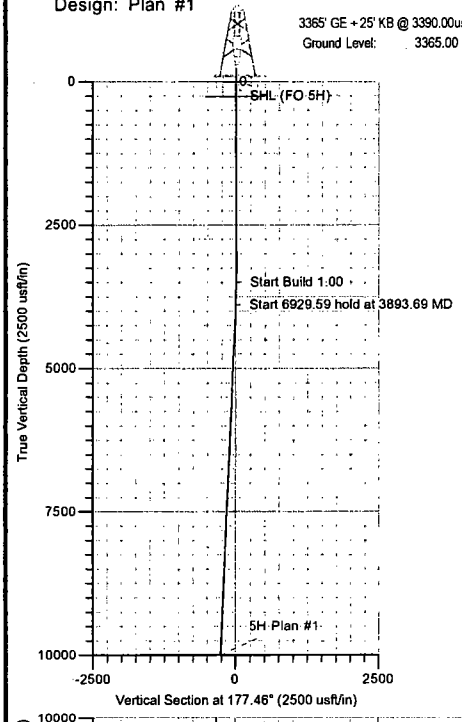
3365' GE + 25' KB @ 3390.00usft
Ground Level: 3365.00

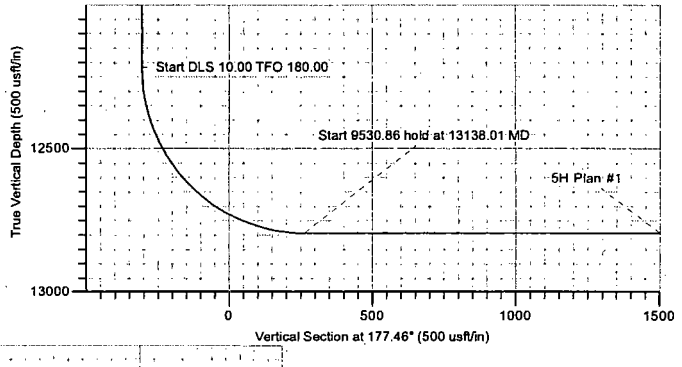
SECTION DETAILS

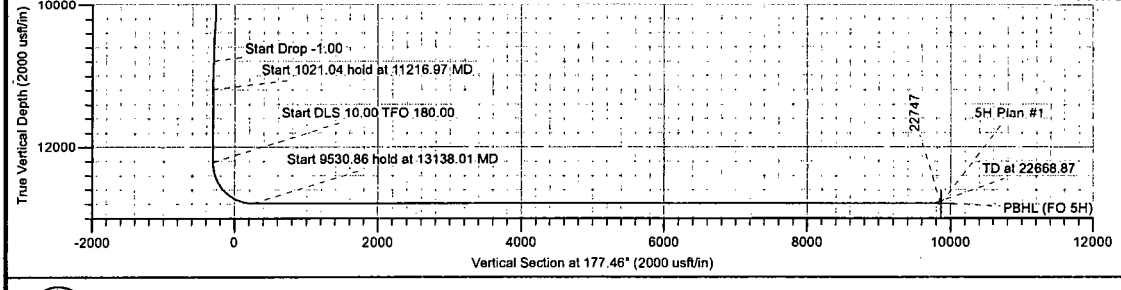
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.00
3927.83	4.28	53.32	3927.43	9.54	12.80	1.00	53.32	-8.96	
10792.09	4.28	53.32	10772.57	315.46	423.46	0.00	0.00	-296.42	
11219.92	0.00	0.00	11200.00	325.00	436.26	1.00	180.00	-305.39	
12240.96	0.00	0.00	12221.04	325.00	436.26	0.00	0.00	-305.39	
13140.96	90.00	180.00	12794.00	-247.96	436.26	10.00	180.00	267.01	
22746.82	90.00	180.00	12794.00	-9853.82	436.26	0.00	0.00	9863.47	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
PBHL (FO 5H)	12794.00	-9853.82	436.26	32° 1' 21.262 N	103° 30' 28.670 W
SHL (FO 5H)	0.00	0.00	0.00	32° 2' 58.802 N	103° 30' 32.864 W







LEAM Drilling Services

LEAM DRILLING SYSTEMS LLC
2010 East Davis, Conroe, Texas 77301
Phone: 936/756-7577, Fax: 936/756-7595

Plan: Plan #1 (5H/OH)
Fighting Okra 18-19 Fed
Created By: Dustin Ault Date: 15:39, September 06 2017
Date: _____
Approved: _____ Date: _____

Devon Energy

Project: Lea County, NM (NAD-83)
Site: Fighting Okra 18-19 Fed
Well: 5H
Wellbore: OH
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True North: -0.44°
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Magnetic Field
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devon

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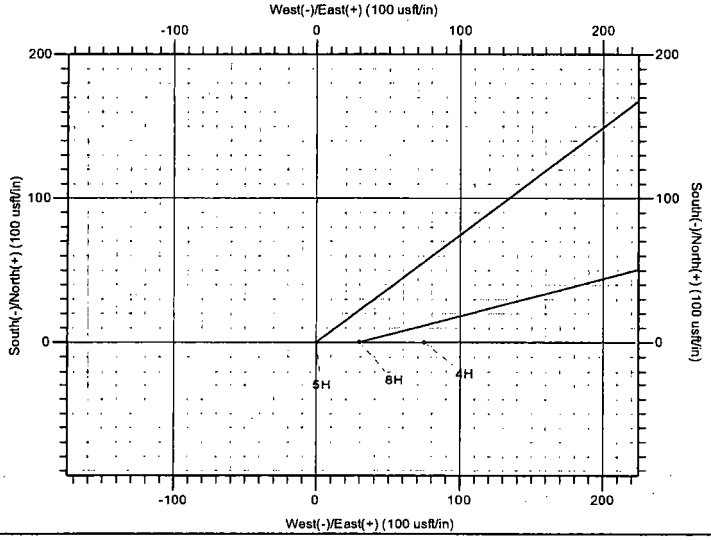
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

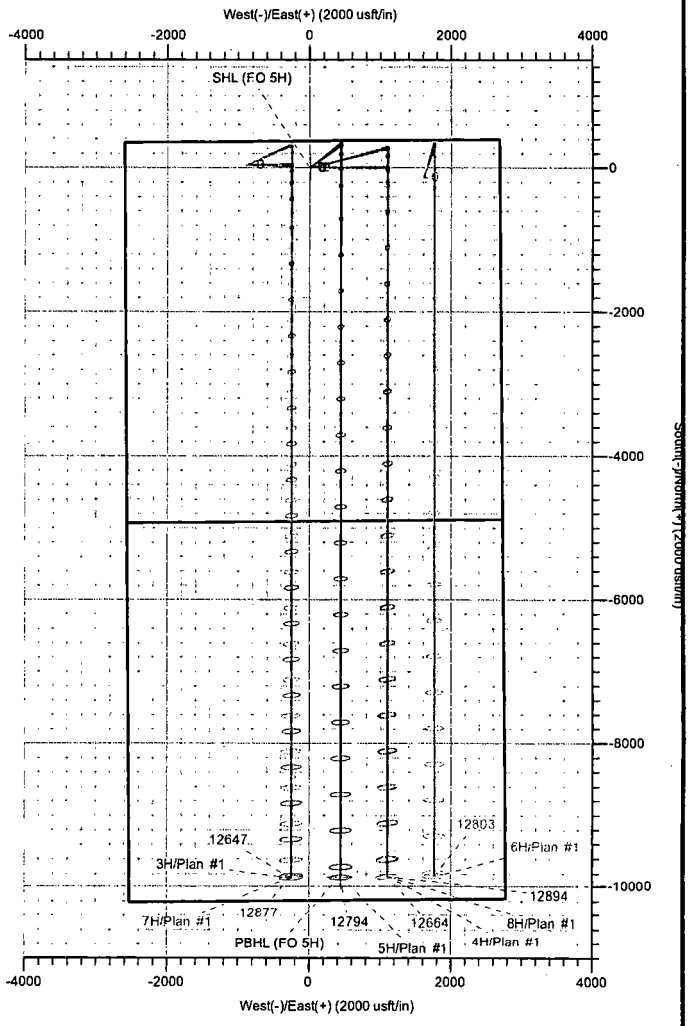
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL (FO 5H)	12794.00	-9853.82	436.26	372927.78	797133.35	32° 1' 21.262 N	103° 30' 28.670 W
SHL (FO 5H)	0.00	0.00	0.00	382781.60	796697.09	32° 2' 58.802 N	103° 30' 32.864 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.00
3927.83	4.28	53.32	3927.43	9.54	12.80	1.00	53.32	-8.96	
10792.09	4.28	53.32	10772.57	315.46	423.46	0.00	0.00	-296.42	
11219.92	0.00	0.00	11200.00	325.00	436.26	1.00	180.00	-305.39	
12240.96	0.00	0.00	12221.04	325.00	436.26	0.00	0.00	-305.39	
13140.96	90.00	180.00	12794.00	-247.96	436.26	10.00	180.00	267.01	
22746.82	90.00	180.00	12794.00	-9853.82	436.26	0.00	0.00	9863.47	





LEAM Drilling Services

LEAM DRILLING SYSTEMS LLC
2010 East Davis, Conroe, Texas 77301
Phone: 936/756-7577, Fax: 936/756-7595

Plan: Plan #1 (5H/OH)
Fighting Okra 18-19 Fed
Created By: Dustin Ault Date: 15:41, September 06 2017
Date: _____
Approved: _____ Date: _____

Devon Energy

Lea County, NM (NAD-83)
Fighting Okra 18-19 Fed
5H

OH

Plan: Plan #1

Standard Planning Report

06 September, 2017

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 5H
Company:	Devon Energy	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site:	Fighting Okra 18-19 Fed	**North Reference:**	Grid
Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project Lea County, NM (NAD-83)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Fighting Okra 18-19 Fed

Site Position:		**Northing:**	382,937.52 usft	**Latitude:**	32° 3' 0.516 N
From:	Map	**Easting:**	794,421.25 usft	**Longitude:**	103° 30' 59.292 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.43 °

Well 5H

Well Position	**+N/-S**	-155.92 usft	**Northing:**	382,781.60 usft	**Latitude:**	32° 2' 58.802 N
	+E/-W	2,275.84 usft	**Easting:**	796,697.09 usft	**Longitude:**	103° 30' 32.864 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	3,383.00 usft	**Ground Level:**	3,365.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	9/6/2017	6.80	59.78	47,893

Design Plan #1

Audit Notes:

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

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	177.46

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,927.83	4.28	53.32	3,927.43	9.54	12.80	1.00	1.00	0.00	53.32	
10,792.09	4.28	53.32	10,772.57	315.46	423.46	0.00	0.00	0.00	0.00	
11,219.92	0.00	0.00	11,200.00	325.00	436.26	1.00	-1.00	0.00	180.00	
12,240.96	0.00	0.00	12,221.04	325.00	436.26	0.00	0.00	0.00	0.00	
13,140.96	90.00	180.00	12,794.00	-247.96	436.26	10.00	10.00	20.00	180.00	
22,746.83	90.00	180.00	12,794.00	-9,853.82	436.26	0.00	0.00	0.00	0.00	PBHL (FO 5H)

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 5H
Company:	Devon Energy	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site:	Fighting Okra 18-19 Fed	**North Reference:**	Grid
Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (FO 5H)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 1.00									
3,600.00	1.00	53.32	3,600.00	0.52	0.70	-0.49	1.00	1.00	0.00
3,700.00	2.00	53.32	3,699.96	2.09	2.80	-1.96	1.00	1.00	0.00
3,800.00	3.00	53.32	3,799.86	4.69	6.30	-4.41	1.00	1.00	0.00
3,893.69	3.94	53.32	3,893.38	8.08	10.84	-7.59	1.00	1.00	0.00
Start 6929.69 hold at 3893.69 MD									
3,900.00	4.00	53.32	3,899.68	8.34	11.19	-7.83	1.00	1.00	0.00
3,927.83	4.28	53.32	3,927.43	9.54	12.80	-8.96	1.00	1.00	0.00
4,000.00	4.28	53.32	3,999.40	12.75	17.12	-11.98	0.00	0.00	0.00
4,100.00	4.28	53.32	4,099.12	17.21	23.10	-16.17	0.00	0.00	0.00
4,200.00	4.28	53.32	4,198.84	21.67	29.09	-20.36	0.00	0.00	0.00
4,300.00	4.28	53.32	4,298.57	26.12	35.07	-24.55	0.00	0.00	0.00
4,400.00	4.28	53.32	4,398.29	30.58	41.05	-28.74	0.00	0.00	0.00
4,500.00	4.28	53.32	4,498.01	35.04	47.03	-32.92	0.00	0.00	0.00
4,600.00	4.28	53.32	4,597.73	39.50	53.02	-37.11	0.00	0.00	0.00
4,700.00	4.28	53.32	4,697.45	43.95	59.00	-41.30	0.00	0.00	0.00

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 5H
Company:	Devon Energy	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site:	Fighting Okra 18-19 Fed	**North Reference:**	Grid
Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.00	4.28	53.32	4,797.17	48.41	64.98	-45.49	0.00	0.00	0.00
4,900.00	4.28	53.32	4,896.89	52.87	70.96	-49.67	0.00	0.00	0.00
5,000.00	4.28	53.32	4,996.62	57.32	76.95	-53.86	0.00	0.00	0.00
5,100.00	4.28	53.32	5,096.34	61.78	82.93	-58.05	0.00	0.00	0.00
5,200.00	4.28	53.32	5,196.06	66.24	88.91	-62.24	0.00	0.00	0.00
5,300.00	4.28	53.32	5,295.78	70.69	94.89	-66.43	0.00	0.00	0.00
5,400.00	4.28	53.32	5,395.50	75.15	100.88	-70.61	0.00	0.00	0.00
5,500.00	4.28	53.32	5,495.22	79.61	106.86	-74.80	0.00	0.00	0.00
5,600.00	4.28	53.32	5,594.94	84.06	112.84	-78.99	0.00	0.00	0.00
5,700.00	4.28	53.32	5,694.66	88.52	118.82	-83.18	0.00	0.00	0.00
5,800.00	4.28	53.32	5,794.39	92.98	124.81	-87.37	0.00	0.00	0.00
5,900.00	4.28	53.32	5,894.11	97.43	130.79	-91.55	0.00	0.00	0.00
6,000.00	4.28	53.32	5,993.83	101.89	136.77	-95.74	0.00	0.00	0.00
6,100.00	4.28	53.32	6,093.55	106.35	142.75	-99.93	0.00	0.00	0.00
6,200.00	4.28	53.32	6,193.27	110.80	148.74	-104.12	0.00	0.00	0.00
6,300.00	4.28	53.32	6,292.99	115.26	154.72	-108.30	0.00	0.00	0.00
6,400.00	4.28	53.32	6,392.71	119.72	160.70	-112.49	0.00	0.00	0.00
6,500.00	4.28	53.32	6,492.44	124.17	166.68	-116.68	0.00	0.00	0.00
6,600.00	4.28	53.32	6,592.16	128.63	172.67	-120.87	0.00	0.00	0.00
6,700.00	4.28	53.32	6,691.88	133.09	178.65	-125.06	0.00	0.00	0.00
6,800.00	4.28	53.32	6,791.60	137.54	184.63	-129.24	0.00	0.00	0.00
6,900.00	4.28	53.32	6,891.32	142.00	190.61	-133.43	0.00	0.00	0.00
7,000.00	4.28	53.32	6,991.04	146.46	196.60	-137.62	0.00	0.00	0.00
7,100.00	4.28	53.32	7,090.76	150.91	202.58	-141.81	0.00	0.00	0.00
7,200.00	4.28	53.32	7,190.48	155.37	208.56	-145.99	0.00	0.00	0.00
7,300.00	4.28	53.32	7,290.21	159.83	214.54	-150.18	0.00	0.00	0.00
7,400.00	4.28	53.32	7,389.93	164.28	220.53	-154.37	0.00	0.00	0.00
7,500.00	4.28	53.32	7,489.65	168.74	226.51	-158.56	0.00	0.00	0.00
7,600.00	4.28	53.32	7,589.37	173.20	232.49	-162.75	0.00	0.00	0.00
7,700.00	4.28	53.32	7,689.09	177.65	238.47	-166.93	0.00	0.00	0.00
7,800.00	4.28	53.32	7,788.81	182.11	244.46	-171.12	0.00	0.00	0.00
7,900.00	4.28	53.32	7,888.53	186.57	250.44	-175.31	0.00	0.00	0.00
8,000.00	4.28	53.32	7,988.26	191.03	256.42	-179.50	0.00	0.00	0.00
8,100.00	4.28	53.32	8,087.98	195.48	262.40	-183.68	0.00	0.00	0.00
8,200.00	4.28	53.32	8,187.70	199.94	268.39	-187.87	0.00	0.00	0.00
8,300.00	4.28	53.32	8,287.42	204.40	274.37	-192.06	0.00	0.00	0.00
8,400.00	4.28	53.32	8,387.14	208.85	280.35	-196.25	0.00	0.00	0.00
8,500.00	4.28	53.32	8,486.86	213.31	286.33	-200.44	0.00	0.00	0.00
8,600.00	4.28	53.32	8,586.58	217.77	292.32	-204.62	0.00	0.00	0.00
8,700.00	4.28	53.32	8,686.30	222.22	298.30	-208.81	0.00	0.00	0.00
8,800.00	4.28	53.32	8,786.03	226.68	304.28	-213.00	0.00	0.00	0.00
8,900.00	4.28	53.32	8,885.75	231.14	310.26	-217.19	0.00	0.00	0.00
9,000.00	4.28	53.32	8,985.47	235.59	316.25	-221.37	0.00	0.00	0.00
9,100.00	4.28	53.32	9,085.19	240.05	322.23	-225.56	0.00	0.00	0.00
9,200.00	4.28	53.32	9,184.91	244.51	328.21	-229.75	0.00	0.00	0.00
9,300.00	4.28	53.32	9,284.63	248.96	334.19	-233.94	0.00	0.00	0.00
9,400.00	4.28	53.32	9,384.35	253.42	340.17	-238.13	0.00	0.00	0.00
9,500.00	4.28	53.32	9,484.08	257.88	346.16	-242.31	0.00	0.00	0.00
9,600.00	4.28	53.32	9,583.80	262.33	352.14	-246.50	0.00	0.00	0.00
9,700.00	4.28	53.32	9,683.52	266.79	358.12	-250.69	0.00	0.00	0.00
9,800.00	4.28	53.32	9,783.24	271.25	364.10	-254.88	0.00	0.00	0.00
9,900.00	4.28	53.32	9,882.96	275.70	370.09	-259.06	0.00	0.00	0.00
10,000.00	4.28	53.32	9,982.68	280.16	376.07	-263.25	0.00	0.00	0.00
10,100.00	4.28	53.32	10,082.40	284.62	382.05	-267.44	0.00	0.00	0.00

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Site:	Fighting Okra 18-19 Fed	**North Reference:**	Grid
Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,200.00	4.28	53.32	10,182.13	289.07	388.03	-271.63	0.00	0.00	0.00
10,300.00	4.28	53.32	10,281.85	293.53	394.02	-275.82	0.00	0.00	0.00
10,400.00	4.28	53.32	10,381.57	297.99	400.00	-280.00	0.00	0.00	0.00
10,500.00	4.28	53.32	10,481.29	302.44	405.98	-284.19	0.00	0.00	0.00
10,600.00	4.28	53.32	10,581.01	306.90	411.96	-288.38	0.00	0.00	0.00
10,700.00	4.28	53.32	10,680.73	311.36	417.95	-292.57	0.00	0.00	0.00
10,792.09	4.28	53.32	10,772.57	315.46	423.46	-296.42	0.00	0.00	0.00
10,800.00	4.20	53.32	10,780.45	315.81	423.93	-296.75	1.00	-1.00	0.00
10,823.28	3.97	53.32	10,803.67	316.80	425.25	-297.68	1.00	-1.00	0.00
Start Drop -1.00									
10,900.00	3.20	53.32	10,880.24	319.67	429.10	-300.37	1.00	-1.00	0.00
11,000.00	2.20	53.32	10,980.13	322.48	432.88	-303.02	1.00	-1.00	0.00
11,100.00	1.20	53.32	11,080.09	324.25	435.25	-304.68	1.00	-1.00	0.00
11,200.00	0.20	53.32	11,180.08	324.98	436.23	-305.37	1.00	-1.00	0.00
11,216.97	0.03	53.32	11,197.05	325.00	436.26	-305.39	1.00	-1.00	0.00
Start 1021.04 hold at 11216.97 MD									
11,219.92	0.00	0.00	11,200.00	325.00	436.26	-305.39	1.00	-1.00	0.00
11,300.00	0.00	0.00	11,280.08	325.00	436.26	-305.39	0.00	0.00	0.00
11,400.00	0.00	0.00	11,380.08	325.00	436.26	-305.39	0.00	0.00	0.00
11,500.00	0.00	0.00	11,480.08	325.00	436.26	-305.39	0.00	0.00	0.00
11,600.00	0.00	0.00	11,580.08	325.00	436.26	-305.39	0.00	0.00	0.00
11,700.00	0.00	0.00	11,680.08	325.00	436.26	-305.39	0.00	0.00	0.00
11,800.00	0.00	0.00	11,780.08	325.00	436.26	-305.39	0.00	0.00	0.00
11,900.00	0.00	0.00	11,880.08	325.00	436.26	-305.39	0.00	0.00	0.00
12,000.00	0.00	0.00	11,980.08	325.00	436.26	-305.39	0.00	0.00	0.00
12,100.00	0.00	0.00	12,080.08	325.00	436.26	-305.39	0.00	0.00	0.00
12,200.00	0.00	0.00	12,180.08	325.00	436.26	-305.39	0.00	0.00	0.00
12,238.01	0.00	0.00	12,218.09	325.00	436.26	-305.39	0.00	0.00	0.00
Start DLS 10.00 TFO 180.00									
12,240.96	0.00	0.00	12,221.04	325.00	436.26	-305.39	0.00	0.00	0.00
12,250.00	0.90	180.00	12,230.08	324.93	436.26	-305.32	10.00	10.00	0.00
12,300.00	5.90	180.00	12,279.97	321.96	436.26	-302.35	10.00	10.00	0.00
12,350.00	10.90	180.00	12,329.42	314.66	436.26	-295.05	10.00	10.00	0.00
12,400.00	15.90	180.00	12,378.04	303.07	436.26	-283.48	10.00	10.00	0.00
12,450.00	20.90	180.00	12,425.47	287.29	436.26	-267.71	10.00	10.00	0.00
12,500.00	25.90	180.00	12,471.34	267.43	436.26	-247.88	10.00	10.00	0.00
12,550.00	30.90	180.00	12,515.31	243.66	436.26	-224.12	10.00	10.00	0.00
12,600.00	35.90	180.00	12,557.04	216.14	436.26	-196.63	10.00	10.00	0.00
12,650.00	40.90	180.00	12,596.21	185.09	436.26	-165.61	10.00	10.00	0.00
12,700.00	45.90	180.00	12,632.52	150.74	436.26	-131.30	10.00	10.00	0.00
12,750.00	50.90	180.00	12,665.71	113.36	436.26	-93.96	10.00	10.00	0.00
12,800.00	55.90	180.00	12,695.51	73.23	436.26	-53.87	10.00	10.00	0.00
12,850.00	60.90	180.00	12,721.69	30.66	436.26	-11.33	10.00	10.00	0.00
12,900.00	65.90	180.00	12,744.07	-14.04	436.26	33.32	10.00	10.00	0.00
12,950.00	70.90	180.00	12,762.47	-60.51	436.26	79.75	10.00	10.00	0.00
13,000.00	75.90	180.00	12,776.75	-108.41	436.26	127.60	10.00	10.00	0.00
13,050.00	80.90	180.00	12,786.79	-157.38	436.26	176.52	10.00	10.00	0.00
13,100.00	85.90	180.00	12,792.53	-207.03	436.26	226.12	10.00	10.00	0.00
13,138.01	89.70	180.00	12,793.99	-245.01	436.26	264.06	10.00	10.00	0.00
Start 9530.86 hold at 13138.01 MD									
13,140.96	90.00	180.00	12,794.00	-247.96	436.26	267.01	10.00	10.00	0.00
13,200.00	90.00	180.00	12,794.00	-307.00	436.26	325.99	0.00	0.00	0.00
13,300.00	90.00	180.00	12,794.00	-407.00	436.26	425.89	0.00	0.00	0.00

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 5H
Company:	Devon Energy	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site:	Fighting Okra 18-19 Fed	**North Reference:**	Grid
Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,400.00	90.00	180.00	12,794.00	-507.00	436.26	525.80	0.00	0.00	0.00
13,500.00	90.00	180.00	12,794.00	-607.00	436.26	625.70	0.00	0.00	0.00
13,600.00	90.00	180.00	12,794.00	-707.00	436.26	725.60	0.00	0.00	0.00
13,700.00	90.00	180.00	12,794.00	-807.00	436.26	825.50	0.00	0.00	0.00
13,800.00	90.00	180.00	12,794.00	-907.00	436.26	925.40	0.00	0.00	0.00
13,900.00	90.00	180.00	12,794.00	-1,007.00	436.26	1,025.31	0.00	0.00	0.00
14,000.00	90.00	180.00	12,794.00	-1,107.00	436.26	1,125.21	0.00	0.00	0.00
14,100.00	90.00	180.00	12,794.00	-1,207.00	436.26	1,225.11	0.00	0.00	0.00
14,200.00	90.00	180.00	12,794.00	-1,307.00	436.26	1,325.01	0.00	0.00	0.00
14,300.00	90.00	180.00	12,794.00	-1,407.00	436.26	1,424.91	0.00	0.00	0.00
14,400.00	90.00	180.00	12,794.00	-1,507.00	436.26	1,524.82	0.00	0.00	0.00
14,500.00	90.00	180.00	12,794.00	-1,607.00	436.26	1,624.72	0.00	0.00	0.00
14,600.00	90.00	180.00	12,794.00	-1,707.00	436.26	1,724.62	0.00	0.00	0.00
14,700.00	90.00	180.00	12,794.00	-1,807.00	436.26	1,824.52	0.00	0.00	0.00
14,800.00	90.00	180.00	12,794.00	-1,907.00	436.26	1,924.42	0.00	0.00	0.00
14,900.00	90.00	180.00	12,794.00	-2,007.00	436.26	2,024.33	0.00	0.00	0.00
15,000.00	90.00	180.00	12,794.00	-2,107.00	436.26	2,124.23	0.00	0.00	0.00
15,100.00	90.00	180.00	12,794.00	-2,207.00	436.26	2,224.13	0.00	0.00	0.00
15,200.00	90.00	180.00	12,794.00	-2,307.00	436.26	2,324.03	0.00	0.00	0.00
15,300.00	90.00	180.00	12,794.00	-2,407.00	436.26	2,423.94	0.00	0.00	0.00
15,400.00	90.00	180.00	12,794.00	-2,507.00	436.26	2,523.84	0.00	0.00	0.00
15,500.00	90.00	180.00	12,794.00	-2,607.00	436.26	2,623.74	0.00	0.00	0.00
15,600.00	90.00	180.00	12,794.00	-2,707.00	436.26	2,723.64	0.00	0.00	0.00
15,700.00	90.00	180.00	12,794.00	-2,807.00	436.26	2,823.54	0.00	0.00	0.00
15,800.00	90.00	180.00	12,794.00	-2,907.00	436.26	2,923.45	0.00	0.00	0.00
15,900.00	90.00	180.00	12,794.00	-3,007.00	436.26	3,023.35	0.00	0.00	0.00
16,000.00	90.00	180.00	12,794.00	-3,107.00	436.26	3,123.25	0.00	0.00	0.00
16,100.00	90.00	180.00	12,794.00	-3,207.00	436.26	3,223.15	0.00	0.00	0.00
16,200.00	90.00	180.00	12,794.00	-3,307.00	436.26	3,323.05	0.00	0.00	0.00
16,300.00	90.00	180.00	12,794.00	-3,407.00	436.26	3,422.96	0.00	0.00	0.00
16,400.00	90.00	180.00	12,794.00	-3,507.00	436.26	3,522.86	0.00	0.00	0.00
16,500.00	90.00	180.00	12,794.00	-3,607.00	436.26	3,622.76	0.00	0.00	0.00
16,600.00	90.00	180.00	12,794.00	-3,707.00	436.26	3,722.66	0.00	0.00	0.00
16,700.00	90.00	180.00	12,794.00	-3,807.00	436.26	3,822.57	0.00	0.00	0.00
16,800.00	90.00	180.00	12,794.00	-3,907.00	436.26	3,922.47	0.00	0.00	0.00
16,900.00	90.00	180.00	12,794.00	-4,007.00	436.26	4,022.37	0.00	0.00	0.00
17,000.00	90.00	180.00	12,794.00	-4,107.00	436.26	4,122.27	0.00	0.00	0.00
17,100.00	90.00	180.00	12,794.00	-4,207.00	436.26	4,222.17	0.00	0.00	0.00
17,200.00	90.00	180.00	12,794.00	-4,307.00	436.26	4,322.08	0.00	0.00	0.00
17,300.00	90.00	180.00	12,794.00	-4,407.00	436.26	4,421.98	0.00	0.00	0.00
17,400.00	90.00	180.00	12,794.00	-4,507.00	436.26	4,521.88	0.00	0.00	0.00
17,500.00	90.00	180.00	12,794.00	-4,607.00	436.26	4,621.78	0.00	0.00	0.00
17,600.00	90.00	180.00	12,794.00	-4,707.00	436.26	4,721.68	0.00	0.00	0.00
17,700.00	90.00	180.00	12,794.00	-4,807.00	436.26	4,821.59	0.00	0.00	0.00
17,800.00	90.00	180.00	12,794.00	-4,907.00	436.26	4,921.49	0.00	0.00	0.00
17,900.00	90.00	180.00	12,794.00	-5,007.00	436.26	5,021.39	0.00	0.00	0.00
18,000.00	90.00	180.00	12,794.00	-5,107.00	436.26	5,121.29	0.00	0.00	0.00
18,100.00	90.00	180.00	12,794.00	-5,207.00	436.26	5,221.20	0.00	0.00	0.00
18,200.00	90.00	180.00	12,794.00	-5,307.00	436.26	5,321.10	0.00	0.00	0.00
18,300.00	90.00	180.00	12,794.00	-5,407.00	436.26	5,421.00	0.00	0.00	0.00
18,400.00	90.00	180.00	12,794.00	-5,507.00	436.26	5,520.90	0.00	0.00	0.00
18,500.00	90.00	180.00	12,794.00	-5,607.00	436.26	5,620.80	0.00	0.00	0.00
18,600.00	90.00	180.00	12,794.00	-5,707.00	436.26	5,720.71	0.00	0.00	0.00
18,700.00	90.00	180.00	12,794.00	-5,807.00	436.26	5,820.61	0.00	0.00	0.00

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 5H
Company:	Devon Energy	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site:	Fighting Okra 18-19 Fed	**North Reference:**	Grid
Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,800.00	90.00	180.00	12,794.00	-5,907.00	436.26	5,920.51	0.00	0.00	0.00
18,900.00	90.00	180.00	12,794.00	-6,007.00	436.26	6,020.41	0.00	0.00	0.00
19,000.00	90.00	180.00	12,794.00	-6,107.00	436.26	6,120.31	0.00	0.00	0.00
19,100.00	90.00	180.00	12,794.00	-6,207.00	436.26	6,220.22	0.00	0.00	0.00
19,200.00	90.00	180.00	12,794.00	-6,307.00	436.26	6,320.12	0.00	0.00	0.00
19,300.00	90.00	180.00	12,794.00	-6,407.00	436.26	6,420.02	0.00	0.00	0.00
19,400.00	90.00	180.00	12,794.00	-6,507.00	436.26	6,519.92	0.00	0.00	0.00
19,500.00	90.00	180.00	12,794.00	-6,607.00	436.26	6,619.83	0.00	0.00	0.00
19,600.00	90.00	180.00	12,794.00	-6,707.00	436.26	6,719.73	0.00	0.00	0.00
19,700.00	90.00	180.00	12,794.00	-6,807.00	436.26	6,819.63	0.00	0.00	0.00
19,800.00	90.00	180.00	12,794.00	-6,907.00	436.26	6,919.53	0.00	0.00	0.00
19,900.00	90.00	180.00	12,794.00	-7,007.00	436.26	7,019.43	0.00	0.00	0.00
20,000.00	90.00	180.00	12,794.00	-7,107.00	436.26	7,119.34	0.00	0.00	0.00
20,100.00	90.00	180.00	12,794.00	-7,207.00	436.26	7,219.24	0.00	0.00	0.00
20,200.00	90.00	180.00	12,794.00	-7,307.00	436.26	7,319.14	0.00	0.00	0.00
20,300.00	90.00	180.00	12,794.00	-7,407.00	436.26	7,419.04	0.00	0.00	0.00
20,400.00	90.00	180.00	12,794.00	-7,507.00	436.26	7,518.94	0.00	0.00	0.00
20,500.00	90.00	180.00	12,794.00	-7,607.00	436.26	7,618.85	0.00	0.00	0.00
20,600.00	90.00	180.00	12,794.00	-7,707.00	436.26	7,718.75	0.00	0.00	0.00
20,700.00	90.00	180.00	12,794.00	-7,807.00	436.26	7,818.65	0.00	0.00	0.00
20,800.00	90.00	180.00	12,794.00	-7,907.00	436.26	7,918.55	0.00	0.00	0.00
20,900.00	90.00	180.00	12,794.00	-8,007.00	436.26	8,018.46	0.00	0.00	0.00
21,000.00	90.00	180.00	12,794.00	-8,107.00	436.26	8,118.36	0.00	0.00	0.00
21,100.00	90.00	180.00	12,794.00	-8,207.00	436.26	8,218.26	0.00	0.00	0.00
21,200.00	90.00	180.00	12,794.00	-8,307.00	436.26	8,318.16	0.00	0.00	0.00
21,300.00	90.00	180.00	12,794.00	-8,407.00	436.26	8,418.06	0.00	0.00	0.00
21,400.00	90.00	180.00	12,794.00	-8,507.00	436.26	8,517.97	0.00	0.00	0.00
21,500.00	90.00	180.00	12,794.00	-8,607.00	436.26	8,617.87	0.00	0.00	0.00
21,600.00	90.00	180.00	12,794.00	-8,707.00	436.26	8,717.77	0.00	0.00	0.00
21,700.00	90.00	180.00	12,794.00	-8,807.00	436.26	8,817.67	0.00	0.00	0.00
21,800.00	90.00	180.00	12,794.00	-8,907.00	436.26	8,917.57	0.00	0.00	0.00
21,900.00	90.00	180.00	12,794.00	-9,007.00	436.26	9,017.48	0.00	0.00	0.00
22,000.00	90.00	180.00	12,794.00	-9,107.00	436.26	9,117.38	0.00	0.00	0.00
22,100.00	90.00	180.00	12,794.00	-9,207.00	436.26	9,217.28	0.00	0.00	0.00
22,200.00	90.00	180.00	12,794.00	-9,307.00	436.26	9,317.18	0.00	0.00	0.00
22,300.00	90.00	180.00	12,794.00	-9,407.00	436.26	9,417.09	0.00	0.00	0.00
22,400.00	90.00	180.00	12,794.00	-9,507.00	436.26	9,516.99	0.00	0.00	0.00
22,500.00	90.00	180.00	12,794.00	-9,607.00	436.26	9,616.89	0.00	0.00	0.00
22,600.00	90.00	180.00	12,794.00	-9,707.00	436.26	9,716.79	0.00	0.00	0.00
22,668.87	90.00	180.00	12,794.00	-9,775.87	436.26	9,785.60	0.00	0.00	0.00
TD at 22668.87									
22,700.00	90.00	180.00	12,794.00	-9,807.00	436.26	9,816.69	0.00	0.00	0.00
22,746.83	90.00	180.00	12,794.00	-9,853.82	436.26	9,863.47	0.00	0.00	0.00
PBHL (FO 5H)									

Database:	EDM 5000.1 Multi User Db	**Local Co-ordinate Reference:**	Well 5H
Company:	Devon Energy	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Project:	Lea County, NM (NAD-83)	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site:	Fighting Okra 18-19 Fed	**North Reference:**	Grid
Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (FO 5H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	382,781.60	796,697.09	32° 2' 58.802 N	103° 30' 32.864 W
PBHL (FO 5H) - plan hits target center - Point	0.00	0.00	12,794.00	-9,853.82	436.26	372,927.78	797,133.35	32° 1' 21.262 N	103° 30' 28.670 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
3,500.00	3,500.00	0.00	0.00	Start Build 1.00
3,893.69	3,893.38	8.08	10.84	Start 6929.59 hold at 3893.69 MD
10,823.28	10,803.67	316.80	425.25	Start Drop -1.00
11,216.97	11,197.05	325.00	436.26	Start 1021.04 hold at 11216.97 MD
12,238.01	12,218.09	325.00	436.26	Start DLS 10.00 TFO 180.00
13,138.01	12,793.99	-245.01	436.26	Start 9530.86 hold at 13138.01 MD
22,668.87	12,794.00	-9,775.87	436.26	TD at 22668.87

Devon Energy

Lea County, NM (NAD-83)
Fighting Okra 18-19 Fed
5H

OH
Plan #1

Anticollision Report

06 September, 2017

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Plan #1

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 9,999.98 usft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 9/6/2017

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	22,746.83	Plan #1 (OH)	LEAM MWD+HDGM	MWD+HDGM

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Fighting Okra 18-19 Fed						
3H - OH - Plan #1	22,746.83	22,322.94	704.25	382.90	2.192	CC, ES, SF
4H - OH - Plan #1	2,500.00	2,500.00	74.92	63.96	6.837	CC, ES
4H - OH - Plan #1	22,746.83	22,329.57	672.57	349.03	2.079	SF
6H - OH - Plan #1	12,240.96	12,241.80	1,319.79	1,264.54	23.888	CC
6H - OH - Plan #1	22,746.83	22,751.03	1,319.86	993.34	4.042	ES, SF
7H - OH - Plan #1	10,924.50	10,972.07	688.59	639.32	13.978	CC
7H - OH - Plan #1	22,746.83	22,841.65	693.71	366.52	2.120	ES, SF
8H - OH - Plan #1	2,916.60	2,916.80	29.99	17.16	2.337	CC
8H - OH - Plan #1	3,000.00	3,000.00	29.99	16.79	2.271	ES
8H - OH - Plan #1	22,746.83	22,848.63	667.39	342.94	2.057	SF

Offset Design Fighting Okra 18-19 Fed - 3H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	7.20	7.20	0.00	0.01	-87.45	37.88	-850.16	851.00				
100.00	100.00	107.20	107.20	0.08	0.10	-87.45	37.88	-850.16	851.00	850.82	0.18	4,606.046	
200.00	200.00	207.20	207.20	0.31	0.33	-87.45	37.88	-850.16	851.00	850.37	0.63	1,341.663	
300.00	300.00	307.20	307.20	0.53	0.55	-87.45	37.88	-850.16	851.00	849.92	1.08	785.187	
400.00	400.00	407.20	407.20	0.76	0.77	-87.45	37.88	-850.16	851.00	849.47	1.53	554.995	
500.00	500.00	507.20	507.20	0.98	1.00	-87.45	37.88	-850.16	851.00	849.02	1.98	429.174	
600.00	600.00	607.20	607.20	1.21	1.22	-87.45	37.88	-850.16	851.00	848.57	2.43	349.859	
700.00	700.00	707.20	707.20	1.43	1.45	-87.45	37.88	-850.16	851.00	848.12	2.88	295.287	
800.00	800.00	807.20	807.20	1.66	1.67	-87.45	37.88	-850.16	851.00	847.67	3.33	255.443	
900.00	900.00	907.20	907.20	1.88	1.90	-87.45	37.88	-850.16	851.00	847.22	3.78	225.073	
1,000.00	1,000.00	1,007.20	1,007.20	2.11	2.12	-87.45	37.88	-850.16	851.00	846.77	4.23	201.157	
1,100.00	1,100.00	1,107.20	1,107.20	2.33	2.35	-87.45	37.88	-850.16	851.00	846.32	4.68	181.835	
1,200.00	1,200.00	1,207.20	1,207.20	2.56	2.57	-87.45	37.88	-850.16	851.00	845.87	5.13	165.900	
1,300.00	1,300.00	1,307.20	1,307.20	2.78	2.80	-87.45	37.88	-850.16	851.00	845.42	5.58	152.533	
1,400.00	1,400.00	1,407.20	1,407.20	3.01	3.02	-87.45	37.88	-850.16	851.00	844.97	6.03	141.159	
1,500.00	1,500.00	1,507.20	1,507.20	3.23	3.25	-87.45	37.88	-850.16	851.00	844.53	6.48	131.364	
1,600.00	1,600.00	1,607.20	1,607.20	3.46	3.47	-87.45	37.88	-850.16	851.00	844.08	6.93	122.840	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 3H - OH - Plan #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,700.00	1,700.00	1,707.20	1,707.20	3.68	3.70	-87.45	37.88	-850.16	851.00	843.63	7.38	115.355	
1,800.00	1,800.00	1,807.20	1,807.20	3.91	3.92	-87.45	37.88	-850.16	851.00	843.18	7.83	108.729	
1,900.00	1,900.00	1,907.20	1,907.20	4.13	4.15	-87.45	37.88	-850.16	851.00	842.73	8.28	102.824	
2,000.00	2,000.00	2,007.20	2,007.20	4.35	4.37	-87.45	37.88	-850.16	851.00	842.28	8.73	97.527	
2,100.00	2,100.00	2,107.20	2,107.20	4.58	4.60	-87.45	37.88	-850.16	851.00	841.83	9.18	92.748	
2,200.00	2,200.00	2,207.20	2,207.20	4.80	4.82	-87.45	37.88	-850.16	851.00	841.38	9.62	88.417	
2,300.00	2,300.00	2,307.20	2,307.20	5.03	5.05	-87.45	37.88	-850.16	851.00	840.93	10.07	84.471	
2,400.00	2,400.00	2,407.20	2,407.20	5.25	5.27	-87.45	37.88	-850.16	851.00	840.48	10.52	80.863	
2,500.00	2,500.00	2,507.20	2,507.20	5.48	5.49	-87.45	37.88	-850.16	851.00	840.03	10.97	77.551	
2,600.00	2,600.00	2,607.20	2,607.20	5.70	5.72	-87.45	37.88	-850.16	851.00	839.58	11.42	74.499	
2,700.00	2,700.00	2,707.20	2,707.20	5.93	5.94	-87.45	37.88	-850.16	851.00	839.13	11.87	71.678	
2,800.00	2,800.00	2,807.20	2,807.20	6.15	6.17	-87.45	37.88	-850.16	851.00	838.68	12.32	69.063	
2,900.00	2,900.00	2,907.20	2,907.20	6.38	6.39	-87.45	37.88	-850.16	851.00	838.23	12.77	66.632	
3,000.00	3,000.00	3,008.45	3,008.45	6.60	6.62	-87.45	37.88	-850.15	851.00	837.78	13.22	64.359	
3,100.00	3,100.00	3,125.86	3,125.85	6.83	6.86	-87.44	37.88	-848.78	849.83	836.14	13.69	62.086	
3,200.00	3,200.00	3,243.16	3,243.08	7.05	7.10	-87.43	37.88	-845.00	846.61	832.47	14.14	59.891	
3,300.00	3,300.00	3,360.25	3,360.01	7.28	7.34	-87.41	37.88	-838.84	841.35	826.77	14.58	57.708	
3,400.00	3,400.00	3,473.52	3,472.99	7.50	7.57	-87.39	37.88	-830.64	834.10	819.09	15.02	55.548	
3,500.00	3,500.00	3,573.21	3,572.37	7.73	7.78	-87.36	37.88	-822.77	826.22	810.77	15.44	53.504	
3,600.00	3,600.00	3,672.95	3,671.79	7.95	7.99	-140.74	37.88	-814.90	819.00	803.14	15.86	51.627	
3,700.00	3,699.96	3,772.77	3,771.30	8.16	8.21	-140.87	37.88	-807.01	813.14	796.86	16.28	49.942	
3,800.00	3,799.86	3,872.64	3,870.85	8.38	8.43	-141.07	37.88	-799.13	808.63	791.93	16.70	48.417	
3,900.00	3,899.68	3,972.52	3,970.43	8.59	8.65	-141.34	37.88	-791.24	805.49	788.37	17.12	47.041	
3,927.83	3,927.43	4,000.32	3,998.14	8.65	8.71	-141.42	37.88	-789.05	804.86	787.62	17.24	46.684	
4,000.00	3,999.40	4,072.41	4,070.00	8.81	8.87	-141.65	37.88	-783.36	803.38	785.83	17.55	45.784	
4,100.00	4,099.12	4,172.29	4,169.57	9.03	9.10	-141.96	37.88	-775.47	801.34	783.37	17.97	44.584	
4,200.00	4,198.84	4,272.17	4,269.14	9.26	9.32	-142.28	37.88	-767.58	799.33	780.93	18.40	43.436	
4,300.00	4,298.57	4,372.05	4,368.71	9.48	9.55	-142.60	37.88	-759.70	797.34	778.51	18.83	42.338	
4,400.00	4,398.29	4,471.94	4,468.28	9.70	9.78	-142.92	37.88	-751.81	795.38	776.11	19.27	41.286	
4,500.00	4,498.01	4,571.82	4,567.85	9.93	10.01	-143.24	37.88	-743.93	793.44	773.74	19.70	40.278	
4,600.00	4,597.73	4,671.70	4,667.42	10.16	10.24	-143.56	37.88	-736.04	791.53	771.39	20.13	39.312	
4,700.00	4,697.45	4,771.58	4,766.99	10.39	10.47	-143.88	37.88	-728.15	789.64	769.07	20.57	38.385	
4,800.00	4,797.17	4,871.47	4,866.57	10.62	10.71	-144.21	37.88	-720.27	787.78	766.77	21.01	37.495	
4,900.00	4,896.89	4,971.35	4,966.14	10.85	10.94	-144.53	37.88	-712.38	785.94	764.49	21.45	36.641	
5,000.00	4,996.62	5,071.23	5,065.71	11.08	11.18	-144.86	37.88	-704.49	784.13	762.24	21.89	35.821	
5,100.00	5,096.34	5,171.11	5,165.28	11.31	11.42	-145.19	37.88	-696.61	782.34	760.01	22.33	35.032	
5,200.00	5,196.06	5,270.99	5,264.85	11.55	11.66	-145.52	37.88	-688.72	780.58	757.81	22.77	34.274	
5,300.00	5,295.78	5,370.88	5,364.42	11.78	11.89	-145.85	37.88	-680.84	778.85	755.63	23.22	33.544	
5,400.00	5,395.50	5,470.76	5,463.99	12.02	12.13	-146.19	37.88	-672.95	777.14	753.48	23.66	32.841	
5,500.00	5,495.22	5,570.64	5,563.56	12.25	12.37	-146.52	37.88	-665.06	775.46	751.35	24.11	32.165	
5,600.00	5,594.94	5,670.52	5,663.13	12.49	12.62	-146.86	37.88	-657.18	773.81	749.25	24.56	31.513	
5,700.00	5,694.66	5,770.41	5,762.70	12.73	12.86	-147.20	37.88	-649.29	772.18	747.18	25.00	30.884	
5,800.00	5,794.39	5,870.29	5,862.27	12.96	13.10	-147.54	37.88	-641.41	770.58	745.13	25.45	30.277	
5,900.00	5,894.11	5,970.17	5,961.84	13.20	13.34	-147.88	37.88	-633.52	769.01	743.11	25.90	29.692	
6,000.00	5,993.83	6,070.05	6,061.41	13.44	13.59	-148.22	37.88	-625.63	767.47	741.12	26.35	29.127	
6,100.00	6,093.55	6,169.94	6,160.98	13.68	13.83	-148.56	37.88	-617.75	765.95	739.15	26.80	28.582	
6,200.00	6,193.27	6,269.82	6,260.55	13.92	14.07	-148.91	37.88	-609.86	764.46	737.21	27.25	28.055	
6,300.00	6,292.99	6,369.70	6,360.12	14.16	14.32	-149.26	37.88	-601.97	763.00	735.30	27.70	27.545	
6,400.00	6,392.71	6,469.58	6,459.69	14.40	14.56	-149.60	37.88	-594.09	761.56	733.41	28.15	27.052	
6,500.00	6,492.44	6,569.47	6,559.27	14.64	14.81	-149.95	37.88	-586.20	760.16	731.55	28.60	26.575	
6,600.00	6,592.16	6,669.35	6,658.84	14.89	15.06	-150.30	37.88	-578.32	758.78	729.72	29.06	26.114	
6,700.00	6,691.88	6,769.23	6,758.41	15.13	15.30	-150.65	37.88	-570.43	757.43	727.92	29.51	25.667	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 3H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,800.00	6,791.60	6,869.11	6,857.98	15.37	15.55	-151.01	37.88	-562.54	756.11	726.15	29.96	25.235	
6,900.00	6,891.32	6,969.00	6,957.55	15.61	15.80	-151.36	37.88	-554.66	754.82	724.40	30.42	24.816	
7,000.00	6,991.04	7,068.88	7,057.12	15.86	16.04	-151.72	37.88	-546.77	753.56	722.69	30.87	24.409	
7,100.00	7,090.76	7,168.76	7,156.69	16.10	16.29	-152.07	37.88	-538.88	752.32	721.00	31.33	24.016	
7,200.00	7,190.48	7,268.64	7,256.26	16.34	16.54	-152.43	37.88	-531.00	751.12	719.34	31.78	23.634	
7,300.00	7,290.21	7,368.53	7,355.83	16.59	16.79	-152.79	37.88	-523.11	749.95	717.71	32.24	23.263	
7,400.00	7,389.93	7,468.41	7,455.40	16.83	17.04	-153.15	37.88	-515.23	748.80	716.11	32.69	22.903	
7,500.00	7,489.65	7,568.29	7,554.97	17.07	17.29	-153.51	37.88	-507.34	747.69	714.54	33.15	22.554	
7,600.00	7,589.37	7,668.17	7,654.54	17.32	17.54	-153.87	37.88	-499.45	746.60	712.99	33.61	22.215	
7,700.00	7,689.09	7,768.05	7,754.11	17.56	17.79	-154.24	37.88	-491.57	745.55	711.48	34.06	21.886	
7,800.00	7,788.81	7,867.94	7,853.68	17.81	18.04	-154.60	37.88	-483.68	744.52	710.00	34.52	21.566	
7,900.00	7,888.53	7,967.82	7,953.25	18.05	18.29	-154.96	37.88	-475.80	743.53	708.55	34.98	21.255	
8,000.00	7,988.26	8,067.70	8,052.82	18.30	18.54	-155.33	37.88	-467.91	742.56	707.12	35.44	20.953	
8,100.00	8,087.98	8,167.58	8,152.39	18.55	18.79	-155.70	37.88	-460.02	741.63	705.73	35.90	20.659	
8,200.00	8,187.70	8,267.47	8,251.96	18.79	19.04	-156.07	37.88	-452.14	740.72	704.37	36.36	20.373	
8,300.00	8,287.42	8,367.35	8,351.54	19.04	19.29	-156.43	37.88	-444.25	739.85	703.03	36.82	20.095	
8,400.00	8,387.14	8,467.23	8,451.11	19.28	19.54	-156.80	37.88	-436.36	739.01	701.73	37.28	19.825	
8,500.00	8,486.86	8,567.11	8,550.68	19.53	19.79	-157.17	37.88	-428.48	738.20	700.46	37.74	19.561	
8,600.00	8,586.58	8,667.00	8,650.25	19.78	20.04	-157.55	37.88	-420.59	737.42	699.22	38.20	19.305	
8,700.00	8,686.30	8,766.88	8,749.82	20.02	20.29	-157.92	37.88	-412.71	736.67	698.01	38.66	19.055	
8,800.00	8,786.03	8,866.76	8,849.39	20.27	20.54	-158.29	37.88	-404.82	735.95	696.83	39.12	18.812	
8,900.00	8,885.75	8,966.64	8,948.96	20.52	20.79	-158.66	37.88	-396.93	735.26	695.68	39.58	18.575	
9,000.00	8,985.47	9,066.53	9,048.53	20.76	21.05	-159.04	37.88	-389.05	734.61	694.56	40.04	18.345	
9,100.00	9,085.19	9,166.41	9,148.10	21.01	21.30	-159.41	37.88	-381.16	733.98	693.48	40.51	18.120	
9,200.00	9,184.91	9,266.29	9,247.67	21.26	21.55	-159.79	37.88	-373.28	733.39	692.42	40.97	17.900	
9,300.00	9,284.63	9,366.17	9,347.24	21.51	21.80	-160.16	37.88	-365.39	732.83	691.40	41.43	17.687	
9,400.00	9,384.35	9,466.06	9,446.81	21.75	22.06	-160.54	37.88	-357.50	732.30	690.40	41.90	17.478	
9,500.00	9,484.08	9,565.94	9,546.38	22.00	22.31	-160.92	37.88	-349.62	731.80	689.44	42.36	17.275	
9,600.00	9,583.80	9,665.82	9,645.95	22.25	22.56	-161.30	37.88	-341.73	731.34	688.51	42.83	17.077	
9,700.00	9,683.52	9,765.70	9,745.52	22.50	22.81	-161.67	37.88	-333.84	730.90	687.61	43.29	16.883	
9,800.00	9,783.24	9,865.58	9,845.09	22.75	23.07	-162.05	37.88	-325.96	730.50	686.75	43.76	16.694	
9,900.00	9,882.96	9,965.47	9,944.66	23.00	23.32	-162.43	37.88	-318.07	730.13	685.91	44.22	16.510	
10,000.00	9,982.68	10,065.35	10,044.24	23.24	23.57	-162.81	37.88	-310.19	729.80	685.11	44.69	16.330	
10,100.00	10,082.40	10,165.23	10,143.81	23.49	23.83	-163.19	37.88	-302.30	729.49	684.33	45.16	16.155	
10,200.00	10,182.13	10,265.11	10,243.38	23.74	24.08	-163.57	37.88	-294.41	729.22	683.59	45.62	15.983	
10,300.00	10,281.85	10,365.00	10,342.95	23.99	24.33	-163.95	37.88	-286.53	728.97	682.88	46.09	15.816	
10,400.00	10,381.57	10,464.88	10,442.52	24.24	24.59	-164.33	37.88	-278.64	728.76	682.21	46.56	15.653	
10,500.00	10,481.29	10,564.76	10,542.09	24.49	24.84	-164.71	37.88	-270.75	728.59	681.56	47.03	15.493	
10,516.30	10,497.54	10,579.91	10,557.19	24.53	24.88	-164.77	37.88	-269.57	728.57	681.47	47.10	15.468	
10,600.00	10,581.01	10,654.67	10,631.76	24.74	25.03	-165.03	37.88	-264.28	729.09	681.64	47.45	15.365	
10,700.00	10,680.73	10,744.00	10,720.95	24.98	25.20	-165.32	37.88	-259.23	731.06	683.21	47.85	15.277	
10,792.09	10,772.57	10,826.25	10,803.12	25.21	25.35	-165.54	37.88	-255.81	734.17	685.95	48.22	15.226	
10,800.00	10,780.45	10,833.31	10,810.18	25.23	25.36	-165.56	37.88	-255.58	734.49	686.24	48.25	15.223	
10,900.00	10,880.24	10,922.58	10,899.42	25.42	25.52	-165.74	37.88	-253.31	738.40	689.81	48.58	15.198	
11,000.00	10,980.13	11,011.85	10,988.69	25.61	25.68	-165.86	37.88	-252.44	742.06	693.15	48.91	15.172	
11,100.00	11,080.09	11,110.45	11,087.29	25.78	25.86	-165.92	37.88	-252.43	744.93	695.65	49.28	15.117	
11,200.00	11,180.08	11,210.44	11,187.28	25.96	26.06	-165.95	37.88	-252.43	746.11	696.45	49.66	15.025	
11,219.92	11,200.00	11,230.36	11,207.20	25.99	26.10	-112.63	37.88	-252.43	746.14	696.41	49.73	15.003	
11,300.00	11,280.08	11,310.44	11,287.28	26.14	26.25	-112.63	37.88	-252.43	746.14	696.09	50.06	14.906	
11,400.00	11,380.08	11,410.44	11,387.28	26.35	26.45	-112.63	37.88	-252.43	746.14	695.67	50.48	14.782	
11,500.00	11,480.08	11,510.44	11,487.28	26.56	26.65	-112.63	37.88	-252.43	746.14	695.25	50.90	14.659	
11,600.00	11,580.08	11,610.44	11,587.28	26.77	26.85	-112.63	37.88	-252.43	746.14	694.82	51.32	14.539	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 3H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,700.00	11,680.08	11,710.44	11,687.28	26.97	27.05	-112.63	37.88	-252.43	746.14	694.40	51.74	14.420	
11,800.00	11,780.08	11,810.44	11,787.28	27.18	27.25	-112.63	37.88	-252.43	746.14	693.98	52.17	14.303	
11,900.00	11,880.08	11,910.44	11,887.28	27.39	27.45	-112.63	37.88	-252.43	746.14	693.55	52.59	14.188	
12,000.00	11,980.08	12,010.44	11,987.28	27.60	27.65	-112.63	37.88	-252.43	746.14	693.13	53.01	14.074	
12,014.45	11,994.53	12,024.89	12,001.73	27.63	27.68	-112.63	37.88	-252.43	746.14	693.07	53.08	14.058	
12,100.00	12,080.08	12,104.20	12,081.04	27.81	27.84	-112.63	37.88	-252.43	746.17	692.75	53.42	13.969	
12,200.00	12,180.08	12,174.62	12,151.28	28.02	27.97	-112.94	33.56	-252.43	748.68	694.97	53.72	13.938	
12,240.96	12,221.04	12,200.00	12,176.39	28.11	28.02	-113.20	29.89	-252.43	751.05	697.24	53.81	13.958	
12,250.00	12,230.08	12,200.00	12,176.39	28.13	28.02	66.74	29.89	-252.43	751.70	697.91	53.79	13.974	
12,300.00	12,279.97	12,239.44	12,215.03	28.20	28.09	66.06	21.99	-252.43	754.64	700.72	53.92	13.996	
12,350.00	12,329.42	12,271.60	12,246.07	28.27	28.15	65.58	13.60	-252.43	757.05	703.08	53.98	14.026	
12,400.00	12,378.04	12,300.00	12,273.05	28.33	28.20	65.24	4.75	-252.43	758.87	704.88	53.98	14.058	
12,450.00	12,425.47	12,335.71	12,306.30	28.38	28.27	65.00	-8.26	-252.43	760.01	705.97	54.03	14.065	
12,500.00	12,471.34	12,367.70	12,335.35	28.42	28.33	64.90	-21.65	-252.43	760.51	706.47	54.04	14.073	
12,550.00	12,515.31	12,400.00	12,363.87	28.45	28.39	64.93	-36.79	-252.43	760.34	706.30	54.04	14.071	
12,600.00	12,557.04	12,431.70	12,390.99	28.47	28.45	65.09	-53.20	-252.43	759.51	705.48	54.02	14.059	
12,650.00	12,596.21	12,463.75	12,417.45	28.49	28.51	65.38	-71.28	-252.43	758.02	704.01	54.01	14.034	
12,700.00	12,632.52	12,500.00	12,446.10	28.50	28.58	65.84	-93.48	-252.43	755.93	701.87	54.06	13.983	
12,750.00	12,665.71	12,528.09	12,467.30	28.52	28.64	66.35	-111.90	-252.43	753.20	699.17	54.03	13.941	
12,800.00	12,695.51	12,560.42	12,490.56	28.53	28.71	67.02	-134.36	-252.43	749.93	695.87	54.06	13.871	
12,850.00	12,721.69	12,600.00	12,517.24	28.54	28.79	67.92	-163.58	-252.43	746.20	691.99	54.21	13.764	
12,900.00	12,744.07	12,625.58	12,533.39	28.55	28.85	68.73	-183.42	-252.43	741.93	687.70	54.23	13.682	
12,950.00	12,762.47	12,658.48	12,552.82	28.58	28.93	69.77	-209.95	-252.43	737.33	682.96	54.36	13.563	
13,000.00	12,776.75	12,691.62	12,570.83	28.62	29.02	70.92	-237.78	-252.43	732.43	677.88	54.55	13.428	
13,050.00	12,786.79	12,725.07	12,587.34	28.68	29.11	72.18	-266.86	-252.43	727.31	672.54	54.77	13.278	
13,100.00	12,792.53	12,758.86	12,602.27	28.77	29.22	73.55	-297.16	-252.43	722.09	667.04	55.05	13.117	
13,140.96	12,794.00	12,786.84	12,613.26	28.87	29.31	74.74	-322.89	-252.43	717.80	662.48	55.31	12.977	
13,200.00	12,794.00	12,828.47	12,627.26	29.03	29.45	75.83	-362.08	-252.43	712.45	656.72	55.72	12.785	
13,300.00	12,794.00	12,900.00	12,644.55	29.39	29.73	77.19	-431.45	-252.43	706.70	650.27	56.43	12.523	
13,400.00	12,794.00	12,981.87	12,653.56	29.84	30.10	77.90	-512.75	-252.43	704.36	647.12	57.24	12.305	
13,446.32	12,794.00	13,022.44	12,654.00	30.09	30.30	77.94	-553.32	-252.43	704.25	646.59	57.65	12.216	
13,500.00	12,794.00	13,076.12	12,654.00	30.38	30.58	77.94	-607.00	-252.43	704.25	646.04	58.20	12.100	
13,600.00	12,794.00	13,176.12	12,654.00	30.99	31.17	77.94	-707.00	-252.43	704.25	644.88	59.37	11.862	
13,700.00	12,794.00	13,276.12	12,654.00	31.67	31.83	77.94	-807.00	-252.43	704.25	643.56	60.68	11.605	
13,800.00	12,794.00	13,376.12	12,654.00	32.42	32.56	77.94	-907.00	-252.43	704.25	642.11	62.14	11.334	
13,900.00	12,794.00	13,476.12	12,654.00	33.24	33.35	77.94	-1,007.00	-252.43	704.25	640.53	63.72	11.053	
14,000.00	12,794.00	13,576.12	12,654.00	34.11	34.20	77.94	-1,107.00	-252.43	704.25	638.83	65.42	10.765	
14,100.00	12,794.00	13,676.12	12,654.00	35.03	35.11	77.94	-1,207.00	-252.43	704.25	637.02	67.23	10.475	
14,200.00	12,794.00	13,776.12	12,654.00	36.01	36.07	77.94	-1,307.00	-252.43	704.25	635.10	69.14	10.186	
14,300.00	12,794.00	13,876.12	12,654.00	37.03	37.08	77.94	-1,407.00	-252.43	704.25	633.10	71.15	9.898	
14,400.00	12,794.00	13,976.12	12,654.00	38.10	38.13	77.94	-1,507.00	-252.43	704.25	631.01	73.24	9.616	
14,500.00	12,794.00	14,076.12	12,654.00	39.20	39.22	77.94	-1,607.00	-252.43	704.25	628.84	75.41	9.339	
14,600.00	12,794.00	14,176.12	12,654.00	40.34	40.34	77.94	-1,707.00	-252.43	704.25	626.59	77.65	9.069	
14,700.00	12,794.00	14,276.12	12,654.00	41.52	41.50	77.94	-1,807.00	-252.43	704.25	624.28	79.96	8.807	
14,800.00	12,794.00	14,376.12	12,654.00	42.72	42.69	77.94	-1,907.00	-252.43	704.25	621.91	82.33	8.554	
14,900.00	12,794.00	14,476.12	12,654.00	43.95	43.91	77.94	-2,007.00	-252.43	704.25	619.49	84.76	8.309	
15,000.00	12,794.00	14,576.12	12,654.00	45.21	45.16	77.94	-2,107.00	-252.43	704.25	617.01	87.23	8.073	
15,100.00	12,794.00	14,676.12	12,654.00	46.49	46.43	77.94	-2,207.00	-252.43	704.25	614.49	89.75	7.846	
15,200.00	12,794.00	14,776.12	12,654.00	47.79	47.72	77.94	-2,307.00	-252.43	704.25	611.93	92.32	7.628	
15,300.00	12,794.00	14,876.12	12,654.00	49.11	49.03	77.94	-2,407.00	-252.43	704.25	609.32	94.92	7.419	
15,400.00	12,794.00	14,976.12	12,654.00	50.45	50.37	77.94	-2,507.00	-252.43	704.25	606.68	97.56	7.218	
15,500.00	12,794.00	15,076.12	12,654.00	51.81	51.72	77.94	-2,607.00	-252.43	704.25	604.01	100.24	7.026	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 3H - OH - Plan #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,600.00	12,794.00	15,176.12	12,654.00	53.18	53.08	77.94	-2,707.00	-252.43	704.25	601.30	102.94	6.841	
15,700.00	12,794.00	15,276.12	12,654.00	54.57	54.46	77.94	-2,807.00	-252.43	704.25	598.57	105.68	6.664	
15,800.00	12,794.00	15,376.12	12,654.00	55.97	55.85	77.94	-2,907.00	-252.43	704.25	595.81	108.43	6.495	
15,900.00	12,794.00	15,476.12	12,654.00	57.38	57.26	77.94	-3,007.00	-252.43	704.25	593.03	111.22	6.332	
16,000.00	12,794.00	15,576.12	12,654.00	58.80	58.68	77.94	-3,107.00	-252.43	704.25	590.22	114.02	6.176	
16,100.00	12,794.00	15,676.12	12,654.00	60.24	60.11	77.94	-3,207.00	-252.43	704.25	587.40	116.85	6.027	
16,200.00	12,794.00	15,776.12	12,654.00	61.68	61.55	77.94	-3,307.00	-252.43	704.25	584.55	119.70	5.884	
16,300.00	12,794.00	15,876.12	12,654.00	63.13	62.99	77.94	-3,407.00	-252.43	704.25	581.69	122.56	5.746	
16,400.00	12,794.00	15,976.12	12,654.00	64.60	64.45	77.94	-3,507.00	-252.43	704.25	578.80	125.44	5.614	
16,500.00	12,794.00	16,076.12	12,654.00	66.07	65.92	77.94	-3,607.00	-252.43	704.25	575.91	128.34	5.487	
16,600.00	12,794.00	16,176.12	12,654.00	67.55	67.39	77.94	-3,707.00	-252.43	704.25	573.00	131.25	5.366	
16,700.00	12,794.00	16,276.12	12,654.00	69.03	68.87	77.94	-3,807.00	-252.43	704.25	570.07	134.17	5.249	
16,800.00	12,794.00	16,376.12	12,654.00	70.52	70.36	77.94	-3,907.00	-252.43	704.25	567.13	137.11	5.136	
16,900.00	12,794.00	16,476.12	12,654.00	72.02	71.85	77.94	-4,007.00	-252.43	704.25	564.18	140.06	5.028	
17,000.00	12,794.00	16,576.12	12,654.00	73.52	73.35	77.94	-4,107.00	-252.43	704.25	561.22	143.02	4.924	
17,100.00	12,794.00	16,676.12	12,654.00	75.03	74.86	77.94	-4,207.00	-252.43	704.25	558.25	145.99	4.824	
17,200.00	12,794.00	16,776.12	12,654.00	76.55	76.37	77.94	-4,307.00	-252.43	704.25	555.27	148.98	4.727	
17,300.00	12,794.00	16,876.12	12,654.00	78.06	77.89	77.94	-4,407.00	-252.43	704.25	552.28	151.97	4.634	
17,400.00	12,794.00	16,976.12	12,654.00	79.59	79.41	77.94	-4,507.00	-252.43	704.25	549.28	154.97	4.545	
17,500.00	12,794.00	17,076.12	12,654.00	81.12	80.93	77.94	-4,607.00	-252.43	704.25	546.27	157.97	4.458	
17,600.00	12,794.00	17,176.12	12,654.00	82.65	82.46	77.94	-4,707.00	-252.43	704.25	543.26	160.99	4.374	
17,700.00	12,794.00	17,276.12	12,654.00	84.18	83.99	77.94	-4,807.00	-252.43	704.25	540.23	164.01	4.294	
17,800.00	12,794.00	17,376.12	12,654.00	85.72	85.53	77.94	-4,907.00	-252.43	704.25	537.20	167.04	4.216	
17,900.00	12,794.00	17,476.12	12,654.00	87.27	87.07	77.94	-5,007.00	-252.43	704.25	534.17	170.08	4.141	
18,000.00	12,794.00	17,576.12	12,654.00	88.81	88.62	77.94	-5,107.00	-252.43	704.25	531.12	173.12	4.068	
18,100.00	12,794.00	17,676.12	12,654.00	90.36	90.16	77.94	-5,207.00	-252.43	704.25	528.07	176.17	3.998	
18,200.00	12,794.00	17,776.12	12,654.00	91.91	91.71	77.94	-5,307.00	-252.43	704.25	525.02	179.23	3.929	
18,300.00	12,794.00	17,876.12	12,654.00	93.47	93.27	77.94	-5,407.00	-252.43	704.25	521.96	182.29	3.863	
18,400.00	12,794.00	17,976.12	12,654.00	95.03	94.82	77.94	-5,507.00	-252.43	704.25	518.89	185.35	3.800	
18,500.00	12,794.00	18,076.12	12,654.00	96.59	96.38	77.94	-5,607.00	-252.43	704.25	515.82	188.42	3.738	
18,600.00	12,794.00	18,176.12	12,654.00	98.15	97.94	77.94	-5,707.00	-252.43	704.25	512.75	191.50	3.678	
18,700.00	12,794.00	18,276.12	12,654.00	99.71	99.50	77.94	-5,807.00	-252.43	704.25	509.67	194.57	3.619	
18,800.00	12,794.00	18,376.12	12,654.00	101.28	101.07	77.94	-5,907.00	-252.43	704.25	506.59	197.66	3.563	
18,900.00	12,794.00	18,476.12	12,654.00	102.85	102.64	77.94	-6,007.00	-252.43	704.25	503.50	200.75	3.508	
19,000.00	12,794.00	18,576.12	12,654.00	104.42	104.21	77.94	-6,107.00	-252.43	704.25	500.41	203.84	3.455	
19,100.00	12,794.00	18,676.12	12,654.00	105.99	105.78	77.94	-6,207.00	-252.43	704.25	497.31	206.93	3.403	
19,200.00	12,794.00	18,776.12	12,654.00	107.57	107.35	77.94	-6,307.00	-252.43	704.25	494.22	210.03	3.353	
19,300.00	12,794.00	18,876.12	12,654.00	109.15	108.93	77.94	-6,407.00	-252.43	704.25	491.12	213.13	3.304	
19,400.00	12,794.00	18,976.12	12,654.00	110.72	110.50	77.94	-6,507.00	-252.43	704.25	488.01	216.24	3.257	
19,500.00	12,794.00	19,076.12	12,654.00	112.30	112.08	77.94	-6,607.00	-252.43	704.25	484.90	219.34	3.211	
19,600.00	12,794.00	19,176.12	12,654.00	113.89	113.66	77.94	-6,707.00	-252.43	704.25	481.79	222.45	3.166	
19,700.00	12,794.00	19,276.12	12,654.00	115.47	115.24	77.94	-6,807.00	-252.43	704.25	478.68	225.57	3.122	
19,800.00	12,794.00	19,376.12	12,654.00	117.05	116.83	77.94	-6,907.00	-252.43	704.25	475.56	228.68	3.080	
19,900.00	12,794.00	19,476.12	12,654.00	118.64	118.41	77.94	-7,007.00	-252.43	704.25	472.44	231.80	3.038	
20,000.00	12,794.00	19,576.12	12,654.00	120.23	120.00	77.94	-7,107.00	-252.43	704.25	469.32	234.92	2.998	
20,100.00	12,794.00	19,676.12	12,654.00	121.81	121.58	77.94	-7,207.00	-252.43	704.25	466.20	238.05	2.958	
20,200.00	12,794.00	19,776.12	12,654.00	123.40	123.17	77.94	-7,307.00	-252.43	704.25	463.07	241.17	2.920	
20,300.00	12,794.00	19,876.12	12,654.00	124.99	124.76	77.94	-7,407.00	-252.43	704.25	459.94	244.30	2.883	
20,400.00	12,794.00	19,976.12	12,654.00	126.59	126.35	77.94	-7,507.00	-252.43	704.25	456.81	247.43	2.846	
20,500.00	12,794.00	20,076.12	12,654.00	128.18	127.94	77.94	-7,607.00	-252.43	704.25	453.68	250.56	2.811	
20,600.00	12,794.00	20,176.12	12,654.00	129.77	129.54	77.94	-7,707.00	-252.43	704.25	450.55	253.70	2.776	
20,700.00	12,794.00	20,276.12	12,654.00	131.37	131.13	77.94	-7,807.00	-252.43	704.25	447.41	256.83	2.742	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 3H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
20,800.00	12,794.00	20,376.12	12,654.00	132.96	132.73	77.94	-7,907.00	-252.43	704.25	444.27	259.97	2.709	
20,900.00	12,794.00	20,476.12	12,654.00	134.56	134.32	77.94	-8,007.00	-252.43	704.25	441.13	263.11	2.677	
21,000.00	12,794.00	20,576.12	12,654.00	136.16	135.92	77.94	-8,107.00	-252.43	704.25	437.99	266.25	2.645	
21,100.00	12,794.00	20,676.12	12,654.00	137.76	137.52	77.94	-8,207.00	-252.43	704.25	434.85	269.40	2.614	
21,200.00	12,794.00	20,776.12	12,654.00	139.35	139.12	77.94	-8,307.00	-252.43	704.25	431.70	272.54	2.584	
21,300.00	12,794.00	20,876.12	12,654.00	140.95	140.71	77.94	-8,407.00	-252.43	704.25	428.56	275.69	2.555	
21,400.00	12,794.00	20,976.12	12,654.00	142.56	142.31	77.94	-8,507.00	-252.43	704.25	425.41	278.83	2.526	
21,500.00	12,794.00	21,076.12	12,654.00	144.16	143.92	77.94	-8,607.00	-252.43	704.25	422.26	281.98	2.497	
21,600.00	12,794.00	21,176.12	12,654.00	145.76	145.52	77.94	-8,707.00	-252.43	704.25	419.11	285.13	2.470	
21,700.00	12,794.00	21,276.12	12,654.00	147.36	147.12	77.94	-8,807.00	-252.43	704.25	415.96	288.29	2.443	
21,800.00	12,794.00	21,376.12	12,654.00	148.97	148.72	77.94	-8,907.00	-252.43	704.25	412.81	291.44	2.416	
21,900.00	12,794.00	21,476.12	12,654.00	150.57	150.33	77.94	-9,007.00	-252.43	704.25	409.65	294.59	2.391	
22,000.00	12,794.00	21,576.12	12,654.00	152.18	151.93	77.94	-9,107.00	-252.43	704.25	406.50	297.75	2.365	
22,100.00	12,794.00	21,676.12	12,654.00	153.78	153.54	77.94	-9,207.00	-252.43	704.25	403.34	300.91	2.340	
22,200.00	12,794.00	21,776.12	12,654.00	155.39	155.14	77.94	-9,307.00	-252.43	704.25	400.18	304.06	2.316	
22,300.00	12,794.00	21,876.12	12,654.00	156.99	156.75	77.94	-9,407.00	-252.43	704.25	397.02	307.22	2.292	
22,400.00	12,794.00	21,976.12	12,654.00	158.60	158.35	77.94	-9,507.00	-252.43	704.25	393.86	310.38	2.269	
22,500.00	12,794.00	22,076.12	12,654.00	160.21	159.96	77.94	-9,607.00	-252.43	704.25	390.70	313.54	2.246	
22,600.00	12,794.00	22,176.12	12,654.00	161.82	161.57	77.94	-9,707.00	-252.43	704.25	387.54	316.71	2.224	
22,700.00	12,794.00	22,276.12	12,654.00	163.43	163.18	77.94	-9,807.00	-252.43	704.25	384.38	319.87	2.202	
22,746.83	12,794.00	22,322.94	12,654.00	164.18	163.93	77.94	-9,853.82	-252.43	704.25	382.90	321.35	2.192	CC, ES, SF

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 4H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	90.00	0.00	74.92	74.92				
100.00	100.00	100.00	100.00	0.08	0.08	90.00	0.00	74.92	74.92	74.75	0.17	444.432	
200.00	200.00	200.00	200.00	0.31	0.31	90.00	0.00	74.92	74.92	74.30	0.62	121.209	
300.00	300.00	300.00	300.00	0.53	0.53	90.00	0.00	74.92	74.92	73.85	1.07	70.174	
400.00	400.00	400.00	400.00	0.76	0.76	90.00	0.00	74.92	74.92	73.40	1.52	49.381	
500.00	500.00	500.00	500.00	0.98	0.98	90.00	0.00	74.92	74.92	72.95	1.97	38.094	
600.00	600.00	600.00	600.00	1.21	1.21	90.00	0.00	74.92	74.92	72.50	2.42	31.007	
700.00	700.00	700.00	700.00	1.43	1.43	90.00	0.00	74.92	74.92	72.05	2.87	26.143	
800.00	800.00	800.00	800.00	1.66	1.66	90.00	0.00	74.92	74.92	71.60	3.32	22.598	
900.00	900.00	900.00	900.00	1.88	1.88	90.00	0.00	74.92	74.92	71.16	3.76	19.900	
1,000.00	1,000.00	1,000.00	1,000.00	2.11	2.11	90.00	0.00	74.92	74.92	70.71	4.21	17.777	
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	90.00	0.00	74.92	74.92	70.26	4.66	16.064	
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	90.00	0.00	74.92	74.92	69.81	5.11	14.652	
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	90.00	0.00	74.92	74.92	69.36	5.56	13.468	
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	90.00	0.00	74.92	74.92	68.91	6.01	12.461	
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	90.00	0.00	74.92	74.92	68.46	6.46	11.594	
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	90.00	0.00	74.92	74.92	68.01	6.91	10.840	
1,700.00	1,700.00	1,700.00	1,700.00	3.68	3.68	90.00	0.00	74.92	74.92	67.56	7.36	10.178	
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	90.00	0.00	74.92	74.92	67.11	7.81	9.592	
1,900.00	1,900.00	1,900.00	1,900.00	4.13	4.13	90.00	0.00	74.92	74.92	66.66	8.26	9.070	
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	90.00	0.00	74.92	74.92	66.21	8.71	8.602	
2,100.00	2,100.00	2,100.00	2,100.00	4.58	4.58	90.00	0.00	74.92	74.92	65.76	9.16	8.180	
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	90.00	0.00	74.92	74.92	65.31	9.61	7.797	
2,300.00	2,300.00	2,300.00	2,300.00	5.03	5.03	90.00	0.00	74.92	74.92	64.86	10.06	7.449	
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	90.00	0.00	74.92	74.92	64.41	10.51	7.130	
2,500.00	2,500.00	2,500.00	2,500.00	5.48	5.48	90.00	0.00	74.92	74.92	63.96	10.96	6.837	CC, ES
2,600.00	2,600.00	2,598.70	2,598.69	5.70	5.69	90.00	0.00	75.77	75.78	64.39	11.39	6.654	
2,700.00	2,700.00	2,697.34	2,697.30	5.93	5.88	90.00	0.00	78.32	78.36	66.56	11.80	6.639	
2,800.00	2,800.00	2,795.86	2,795.73	6.15	6.08	90.00	0.00	82.56	82.67	70.45	12.22	6.767	
2,900.00	2,900.00	2,894.21	2,893.90	6.38	6.28	90.00	0.00	88.48	88.69	76.06	12.63	7.024	
3,000.00	3,000.00	2,992.33	2,991.73	6.60	6.49	90.00	0.00	96.06	96.42	83.38	13.03	7.397	
3,100.00	3,100.00	3,090.16	3,089.12	6.83	6.70	90.00	0.00	105.29	105.85	92.41	13.44	7.876	
3,200.00	3,200.00	3,187.64	3,185.99	7.05	6.92	90.00	0.00	116.13	116.98	103.14	13.84	8.451	
3,300.00	3,300.00	3,285.73	3,283.30	7.28	7.14	90.00	0.00	128.53	129.61	115.36	14.25	9.093	
3,400.00	3,400.00	3,384.90	3,381.64	7.50	7.38	90.00	0.00	141.31	142.50	127.81	14.69	9.703	
3,500.00	3,500.00	3,484.07	3,479.98	7.73	7.62	90.00	0.00	154.09	155.39	140.27	15.12	10.276	
3,600.00	3,600.00	3,583.32	3,578.40	7.95	7.86	36.79	0.00	166.88	167.58	152.03	15.55	10.777	
3,700.00	3,699.96	3,682.72	3,676.97	8.16	8.11	37.22	0.00	179.69	178.39	162.42	15.98	11.166	
3,800.00	3,799.86	3,782.24	3,775.66	8.38	8.36	37.93	0.00	192.52	187.84	171.44	16.40	11.451	
3,900.00	3,899.68	3,881.85	3,874.44	8.59	8.62	38.89	0.00	205.35	195.97	179.13	16.83	11.641	
3,927.83	3,927.43	3,909.58	3,901.95	8.65	8.69	39.20	0.00	208.93	198.00	181.05	16.95	11.678	
4,000.00	3,999.40	3,981.51	3,973.27	8.81	8.88	40.04	0.00	218.19	203.16	185.90	17.27	11.765	
4,100.00	4,099.12	4,081.17	4,072.10	9.03	9.14	41.13	0.00	231.04	210.39	192.68	17.71	11.882	
4,200.00	4,198.84	4,180.83	4,170.93	9.26	9.41	42.15	0.00	243.88	217.68	199.54	18.15	11.996	
4,300.00	4,298.57	4,280.49	4,269.76	9.48	9.67	43.11	0.00	256.72	225.04	206.45	18.59	12.107	
4,400.00	4,398.29	4,380.15	4,368.59	9.70	9.94	44.00	0.00	269.57	232.46	213.42	19.03	12.213	
4,500.00	4,498.01	4,479.81	4,467.42	9.93	10.21	44.84	0.00	282.41	239.93	220.45	19.48	12.316	
4,600.00	4,597.73	4,579.48	4,566.25	10.16	10.49	45.63	0.00	295.25	247.44	227.51	19.93	12.416	
4,700.00	4,697.45	4,679.14	4,665.08	10.39	10.76	46.37	0.00	308.09	255.01	234.62	20.38	12.511	
4,800.00	4,797.17	4,778.80	4,763.91	10.62	11.04	47.07	0.00	320.94	262.61	241.77	20.84	12.603	
4,900.00	4,896.89	4,878.46	4,862.74	10.85	11.32	47.73	0.00	333.78	270.25	248.95	21.29	12.692	
5,000.00	4,996.62	4,978.12	4,961.57	11.08	11.60	48.36	0.00	346.62	277.92	256.17	21.75	12.777	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 4H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM-MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,096.34	5,077.78	5,060.40	11.31	11.88	48.95	0.00	359.46	285.62	263.41	22.21	12.859	
5,200.00	5,196.06	5,177.44	5,159.23	11.55	12.16	49.51	0.00	372.31	293.35	270.68	22.67	12.938	
5,300.00	5,295.78	5,277.10	5,258.06	11.78	12.44	50.04	0.00	385.15	301.11	277.98	23.14	13.014	
5,400.00	5,395.50	5,376.76	5,356.89	12.02	12.73	50.54	0.00	397.99	308.90	285.29	23.60	13.088	
5,500.00	5,495.22	5,476.42	5,455.72	12.25	13.01	51.02	0.00	410.83	316.70	292.63	24.07	13.158	
5,600.00	5,594.94	5,576.08	5,554.55	12.49	13.30	51.48	0.00	423.68	324.53	299.99	24.54	13.226	
5,700.00	5,694.66	5,675.74	5,653.38	12.73	13.59	51.91	0.00	436.52	332.37	307.37	25.01	13.291	
5,800.00	5,794.39	5,775.41	5,752.21	12.96	13.87	52.32	0.00	449.36	340.24	314.76	25.48	13.354	
5,900.00	5,894.11	5,875.07	5,851.04	13.20	14.16	52.72	0.00	462.21	348.12	322.17	25.95	13.415	
6,000.00	5,993.83	5,974.73	5,949.87	13.44	14.45	53.10	0.00	475.05	356.01	329.59	26.42	13.473	
6,100.00	6,093.55	6,074.39	6,048.70	13.68	14.74	53.46	0.00	487.89	363.92	337.03	26.90	13.529	
6,200.00	6,193.27	6,174.05	6,147.53	13.92	15.03	53.81	0.00	500.73	371.85	344.47	27.38	13.584	
6,300.00	6,292.99	6,273.71	6,246.36	14.16	15.32	54.14	0.00	513.58	379.79	351.94	27.85	13.636	
6,400.00	6,392.71	6,373.37	6,345.19	14.40	15.62	54.46	0.00	526.42	387.74	359.41	28.33	13.686	
6,500.00	6,492.44	6,473.03	6,444.02	14.64	15.91	54.76	0.00	539.26	395.70	366.89	28.81	13.735	
6,600.00	6,592.16	6,572.69	6,542.85	14.89	16.20	55.05	0.00	552.10	403.67	374.38	29.29	13.782	
6,700.00	6,691.88	6,672.35	6,641.68	15.13	16.49	55.34	0.00	564.95	411.65	381.88	29.77	13.828	
6,800.00	6,791.60	6,772.01	6,740.51	15.37	16.79	55.61	0.00	577.79	419.65	389.39	30.25	13.872	
6,900.00	6,891.32	6,871.67	6,839.34	15.61	17.08	55.87	0.00	590.63	427.65	396.91	30.73	13.914	
7,000.00	6,991.04	6,971.34	6,938.17	15.86	17.38	56.12	0.00	603.47	435.66	404.44	31.22	13.955	
7,100.00	7,090.76	7,071.00	7,037.00	16.10	17.67	56.36	0.00	616.32	443.67	411.97	31.70	13.995	
7,200.00	7,190.48	7,170.66	7,135.83	16.34	17.97	56.60	0.00	629.16	451.70	419.51	32.19	14.034	
7,300.00	7,290.21	7,270.32	7,234.66	16.59	18.26	56.82	0.00	642.00	459.73	427.06	32.67	14.071	
7,400.00	7,389.93	7,369.98	7,333.49	16.83	18.56	57.04	0.00	654.85	467.77	434.61	33.16	14.107	
7,500.00	7,489.65	7,469.64	7,432.32	17.07	18.86	57.25	0.00	667.69	475.82	442.17	33.65	14.142	
7,600.00	7,589.37	7,569.30	7,531.15	17.32	19.15	57.45	0.00	680.53	483.87	449.73	34.13	14.176	
7,700.00	7,689.09	7,668.96	7,629.98	17.56	19.45	57.65	0.00	693.37	491.92	457.30	34.62	14.209	
7,800.00	7,788.81	7,768.62	7,728.81	17.81	19.75	57.84	0.00	706.22	499.99	464.88	35.11	14.241	
7,900.00	7,888.53	7,868.28	7,827.64	18.05	20.04	58.03	0.00	719.06	508.06	472.46	35.60	14.272	
8,000.00	7,988.26	7,967.94	7,926.47	18.30	20.34	58.21	0.00	731.90	516.13	480.04	36.09	14.302	
8,100.00	8,087.98	8,067.60	8,025.30	18.55	20.64	58.38	0.00	744.74	524.21	487.63	36.58	14.331	
8,200.00	8,187.70	8,167.27	8,124.13	18.79	20.94	58.55	0.00	757.59	532.29	495.22	37.07	14.359	
8,300.00	8,287.42	8,266.93	8,222.96	19.04	21.24	58.71	0.00	770.43	540.38	502.82	37.56	14.387	
8,400.00	8,387.14	8,366.59	8,321.79	19.28	21.53	58.87	0.00	783.27	548.47	510.42	38.05	14.414	
8,500.00	8,486.86	8,466.25	8,420.62	19.53	21.83	59.02	0.00	796.11	556.57	518.02	38.54	14.440	
8,600.00	8,586.58	8,565.91	8,519.45	19.78	22.13	59.17	0.00	808.96	564.67	525.63	39.04	14.465	
8,700.00	8,686.30	8,665.57	8,618.28	20.02	22.43	59.32	0.00	821.80	572.77	533.24	39.53	14.489	
8,800.00	8,786.03	8,765.23	8,717.11	20.27	22.73	59.46	0.00	834.64	580.88	540.85	40.02	14.513	
8,900.00	8,885.75	8,864.89	8,815.94	20.52	23.03	59.59	0.00	847.49	588.99	548.47	40.52	14.537	
9,000.00	8,985.47	8,964.55	8,914.77	20.76	23.33	59.73	0.00	860.33	597.10	556.09	41.01	14.559	
9,100.00	9,085.19	9,064.21	9,013.60	21.01	23.63	59.86	0.00	873.17	605.22	563.71	41.51	14.581	
9,200.00	9,184.91	9,163.87	9,112.43	21.26	23.93	59.98	0.00	886.01	613.34	571.34	42.00	14.603	
9,300.00	9,284.63	9,263.53	9,211.26	21.51	24.23	60.11	0.00	898.86	621.46	578.96	42.50	14.624	
9,400.00	9,384.35	9,363.20	9,310.09	21.75	24.53	60.23	0.00	911.70	629.58	586.59	42.99	14.644	
9,500.00	9,484.08	9,462.86	9,408.92	22.00	24.83	60.34	0.00	924.54	637.71	594.23	43.49	14.664	
9,600.00	9,583.80	9,562.52	9,507.75	22.25	25.13	60.46	0.00	937.38	645.84	601.86	43.98	14.684	
9,700.00	9,683.52	9,662.18	9,606.58	22.50	25.43	60.57	0.00	950.23	653.98	609.50	44.48	14.703	
9,800.00	9,783.24	9,761.84	9,705.41	22.75	25.73	60.68	0.00	963.07	662.11	617.14	44.98	14.721	
9,900.00	9,882.96	9,861.50	9,804.24	23.00	26.03	60.78	0.00	975.91	670.25	624.78	45.47	14.739	
10,000.00	9,982.68	9,961.16	9,903.07	23.24	26.33	60.88	0.00	988.75	678.39	632.42	45.97	14.757	
10,100.00	10,082.40	10,060.82	10,001.90	23.49	26.64	60.98	0.00	1,001.60	686.53	640.06	46.47	14.774	
10,200.00	10,182.13	10,160.48	10,100.73	23.74	26.94	61.08	0.00	1,014.44	694.67	647.71	46.97	14.791	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 4H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,300.00	10,281.85	10,260.14	10,199.56	23.99	27.24	61.18	0.00	1,027.28	702.82	655.36	47.46	14.808	
10,400.00	10,381.57	10,359.80	10,298.39	24.24	27.54	61.27	0.00	1,040.13	710.97	663.01	47.96	14.824	
10,500.00	10,481.29	10,464.07	10,401.80	24.49	27.84	61.37	0.00	1,053.42	719.00	670.53	48.48	14.832	
10,600.00	10,581.01	10,576.71	10,513.73	24.74	28.10	61.54	0.00	1,066.05	725.63	676.63	49.00	14.809	
10,700.00	10,680.73	10,689.54	10,626.07	24.98	28.34	61.77	0.00	1,076.49	730.48	680.98	49.50	14.756	
10,792.09	10,772.57	10,793.54	10,729.79	25.21	28.54	62.05	0.00	1,084.15	733.39	683.43	49.96	14.680	
10,800.00	10,780.45	10,802.47	10,738.70	25.23	28.56	62.08	0.00	1,084.72	733.57	683.57	50.00	14.673	
10,900.00	10,880.24	10,915.46	10,851.52	25.42	28.76	62.40	0.00	1,090.73	735.37	684.95	50.42	14.585	
11,000.00	10,980.13	11,028.47	10,964.48	25.61	28.96	62.64	0.00	1,094.52	736.21	685.39	50.82	14.487	
11,100.00	11,080.09	11,141.50	11,077.49	25.78	29.14	62.82	0.00	1,096.08	736.09	684.90	51.19	14.378	
11,200.00	11,180.08	11,244.09	11,180.08	25.96	29.31	62.90	0.00	1,096.12	735.57	684.01	51.56	14.265	
11,219.92	11,200.00	11,264.01	11,200.00	25.99	29.35	116.22	0.00	1,096.12	735.55	683.92	51.64	14.245	
11,300.00	11,280.08	11,344.09	11,280.08	26.14	29.49	116.22	0.00	1,096.12	735.55	683.61	51.94	14.160	
11,400.00	11,380.08	11,444.09	11,380.08	26.35	29.66	116.22	0.00	1,096.12	735.55	683.21	52.35	14.051	
11,500.00	11,480.08	11,544.09	11,480.08	26.56	29.84	116.22	0.00	1,096.12	735.55	682.80	52.75	13.943	
11,600.00	11,580.08	11,644.09	11,580.08	26.77	30.02	116.22	0.00	1,096.12	735.55	682.39	53.16	13.837	
11,700.00	11,680.08	11,744.09	11,680.08	26.97	30.20	116.22	0.00	1,096.12	735.55	681.99	53.57	13.732	
11,800.00	11,780.08	11,844.09	11,780.08	27.18	30.38	116.22	0.00	1,096.12	735.55	681.58	53.97	13.628	
11,900.00	11,880.08	11,944.09	11,880.08	27.39	30.56	116.22	0.00	1,096.12	735.55	681.17	54.38	13.526	
12,000.00	11,980.08	12,044.09	11,980.08	27.60	30.74	116.22	0.00	1,096.12	735.55	680.76	54.79	13.425	
12,100.00	12,080.08	12,144.09	12,080.08	27.81	30.92	116.22	0.00	1,096.12	735.55	680.35	55.20	13.325	
12,200.00	12,180.08	12,211.68	12,147.58	28.02	31.03	116.42	-2.80	1,096.12	737.51	681.95	55.56	13.274	
12,240.96	12,221.04	12,237.43	12,173.13	28.11	31.08	116.63	-5.91	1,096.12	739.74	684.05	55.69	13.284	
12,250.00	12,230.08	12,250.00	12,185.56	28.13	31.10	-63.19	-7.85	1,096.12	740.36	684.63	55.74	13.283	
12,300.00	12,279.97	12,274.26	12,209.39	28.20	31.14	-62.75	-12.36	1,096.12	743.08	687.27	55.81	13.315	
12,350.00	12,329.42	12,300.00	12,234.45	28.27	31.18	-62.41	-18.24	1,096.12	745.15	689.33	55.82	13.349	
12,400.00	12,378.04	12,336.45	12,269.42	28.33	31.24	-62.15	-28.48	1,096.12	746.42	690.57	55.85	13.365	
12,450.00	12,425.47	12,367.49	12,298.65	28.38	31.29	-62.06	-38.94	1,096.12	746.94	691.14	55.80	13.385	
12,500.00	12,471.34	12,400.00	12,328.60	28.42	31.35	-62.10	-51.57	1,096.12	746.70	690.96	55.74	13.397	
12,550.00	12,515.31	12,429.59	12,355.19	28.45	31.39	-62.28	-64.53	1,096.12	745.67	690.06	55.62	13.407	
12,600.00	12,557.04	12,460.69	12,382.39	28.47	31.45	-62.60	-79.60	1,096.12	743.90	688.40	55.50	13.405	
12,650.00	12,596.21	12,500.00	12,415.53	28.49	31.51	-63.13	-100.74	1,096.12	741.46	686.02	55.44	13.374	
12,700.00	12,632.52	12,523.09	12,434.29	28.50	31.55	-63.66	-114.20	1,096.12	738.18	682.93	55.25	13.362	
12,750.00	12,665.71	12,550.00	12,455.45	28.52	31.60	-64.33	-130.82	1,096.12	734.34	679.23	55.10	13.327	
12,800.00	12,695.51	12,585.94	12,482.45	28.53	31.67	-65.26	-154.53	1,096.12	729.85	674.78	55.07	13.254	
12,850.00	12,721.69	12,617.60	12,504.96	28.54	31.73	-66.26	-176.78	1,096.12	724.86	669.82	55.04	13.170	
12,900.00	12,744.07	12,650.00	12,526.69	28.55	31.79	-67.40	-200.81	1,096.12	719.41	664.35	55.06	13.065	
12,950.00	12,762.47	12,681.53	12,546.50	28.58	31.86	-68.64	-225.34	1,096.12	713.60	658.46	55.14	12.941	
13,000.00	12,776.75	12,713.88	12,565.39	28.62	31.93	-70.02	-251.60	1,096.12	707.52	652.23	55.29	12.795	
13,050.00	12,786.79	12,750.00	12,584.69	28.68	32.01	-71.62	-282.12	1,096.12	701.30	645.77	55.53	12.628	
13,100.00	12,792.53	12,779.57	12,599.04	28.77	32.09	-73.12	-307.97	1,096.12	695.01	639.20	55.81	12.453	
13,140.96	12,794.00	12,806.92	12,611.11	28.87	32.16	-74.51	-332.51	1,096.12	689.94	633.84	56.10	12.298	
13,200.00	12,794.00	12,850.00	12,627.70	29.03	32.28	-75.85	-372.26	1,096.12	683.62	627.03	56.58	12.082	
13,300.00	12,794.00	12,922.21	12,648.67	29.39	32.51	-77.58	-441.31	1,096.12	676.55	619.05	57.50	11.767	
13,400.00	12,794.00	13,000.00	12,661.36	29.84	32.80	-78.63	-517.99	1,096.12	673.15	614.62	58.53	11.502	
13,500.00	12,794.00	13,089.09	12,664.00	30.38	33.19	-78.85	-607.00	1,096.12	672.54	612.91	59.63	11.278	
13,600.00	12,794.00	13,189.09	12,664.00	30.99	33.69	-78.85	-707.00	1,096.12	672.54	611.71	60.84	11.055	
13,700.00	12,794.00	13,289.09	12,664.00	31.67	34.26	-78.85	-807.00	1,096.12	672.54	610.36	62.18	10.816	
13,800.00	12,794.00	13,389.09	12,664.00	32.42	34.91	-78.85	-907.00	1,096.12	672.54	608.88	63.66	10.564	
13,900.00	12,794.00	13,489.09	12,664.00	33.24	35.61	-78.85	-1,007.00	1,096.12	672.54	607.28	65.27	10.305	
14,000.00	12,794.00	13,589.09	12,664.00	34.11	36.38	-78.85	-1,107.00	1,096.12	672.54	605.56	66.99	10.040	
14,100.00	12,794.00	13,689.09	12,664.00	35.03	37.21	-78.85	-1,207.00	1,096.12	672.54	603.73	68.82	9.773	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 4H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,200.00	12,794.00	13,789.09	12,664.00	36.01	38.09	-78.85	-1,307.00	1,096.12	672.54	601.80	70.75	9.506	
14,300.00	12,794.00	13,889.09	12,664.00	37.03	39.01	-78.85	-1,407.00	1,096.12	672.54	599.78	72.77	9.243	
14,400.00	12,794.00	13,989.09	12,664.00	38.10	39.99	-78.85	-1,507.00	1,096.12	672.54	597.67	74.87	8.983	
14,500.00	12,794.00	14,089.09	12,664.00	39.20	41.00	-78.85	-1,607.00	1,096.12	672.54	595.49	77.05	8.729	
14,600.00	12,794.00	14,189.09	12,664.00	40.34	42.06	-78.85	-1,707.00	1,096.12	672.54	593.24	79.30	8.481	
14,700.00	12,794.00	14,289.09	12,664.00	41.52	43.15	-78.85	-1,807.00	1,096.12	672.54	590.92	81.62	8.240	
14,800.00	12,794.00	14,389.09	12,664.00	42.72	44.27	-78.85	-1,907.00	1,096.12	672.54	588.55	84.00	8.007	
14,900.00	12,794.00	14,489.09	12,664.00	43.95	45.43	-78.85	-2,007.00	1,096.12	672.54	586.12	86.43	7.782	
15,000.00	12,794.00	14,589.09	12,664.00	45.21	46.61	-78.85	-2,107.00	1,096.12	672.54	583.64	88.91	7.564	
15,100.00	12,794.00	14,689.09	12,664.00	46.49	47.83	-78.85	-2,207.00	1,096.12	672.54	581.11	91.44	7.355	
15,200.00	12,794.00	14,789.09	12,664.00	47.79	49.06	-78.85	-2,307.00	1,096.12	672.54	578.54	94.01	7.154	
15,300.00	12,794.00	14,889.09	12,664.00	49.11	50.32	-78.85	-2,407.00	1,096.12	672.54	575.93	96.61	6.961	
15,400.00	12,794.00	14,989.09	12,664.00	50.45	51.60	-78.85	-2,507.00	1,096.12	672.54	573.29	99.26	6.776	
15,500.00	12,794.00	15,089.09	12,664.00	51.81	52.90	-78.85	-2,607.00	1,096.12	672.54	570.61	101.94	6.598	
15,600.00	12,794.00	15,189.09	12,664.00	53.18	54.22	-78.85	-2,707.00	1,096.12	672.54	567.90	104.64	6.427	
15,700.00	12,794.00	15,289.09	12,664.00	54.57	55.55	-78.85	-2,807.00	1,096.12	672.54	565.16	107.38	6.263	
15,800.00	12,794.00	15,389.09	12,664.00	55.97	56.90	-78.85	-2,907.00	1,096.12	672.54	562.40	110.14	6.106	
15,900.00	12,794.00	15,489.09	12,664.00	57.38	58.27	-78.85	-3,007.00	1,096.12	672.54	559.61	112.93	5.955	
16,000.00	12,794.00	15,589.09	12,664.00	58.80	59.64	-78.85	-3,107.00	1,096.12	672.54	556.80	115.74	5.811	
16,100.00	12,794.00	15,689.09	12,664.00	60.24	61.04	-78.85	-3,207.00	1,096.12	672.54	553.97	118.57	5.672	
16,200.00	12,794.00	15,789.09	12,664.00	61.68	62.44	-78.85	-3,307.00	1,096.12	672.54	551.12	121.42	5.539	
16,300.00	12,794.00	15,889.09	12,664.00	63.13	63.85	-78.85	-3,407.00	1,096.12	672.54	548.26	124.29	5.411	
16,400.00	12,794.00	15,989.09	12,664.00	64.60	65.28	-78.85	-3,507.00	1,096.12	672.54	545.37	127.17	5.288	
16,500.00	12,794.00	16,089.09	12,664.00	66.07	66.71	-78.85	-3,607.00	1,096.12	672.54	542.47	130.07	5.171	
16,600.00	12,794.00	16,189.09	12,664.00	67.55	68.15	-78.85	-3,707.00	1,096.12	672.54	539.56	132.99	5.057	
16,700.00	12,794.00	16,289.09	12,664.00	69.03	69.60	-78.85	-3,807.00	1,096.12	672.54	536.63	135.92	4.948	
16,800.00	12,794.00	16,389.09	12,664.00	70.52	71.06	-78.85	-3,907.00	1,096.12	672.54	533.69	138.86	4.843	
16,900.00	12,794.00	16,489.09	12,664.00	72.02	72.53	-78.85	-4,007.00	1,096.12	672.54	530.73	141.81	4.743	
17,000.00	12,794.00	16,589.09	12,664.00	73.52	74.00	-78.85	-4,107.00	1,096.12	672.54	527.77	144.78	4.645	
17,100.00	12,794.00	16,689.09	12,664.00	75.03	75.48	-78.85	-4,207.00	1,096.12	672.54	524.79	147.75	4.552	
17,200.00	12,794.00	16,789.09	12,664.00	76.55	76.97	-78.85	-4,307.00	1,096.12	672.54	521.81	150.74	4.462	
17,300.00	12,794.00	16,889.09	12,664.00	78.06	78.46	-78.85	-4,407.00	1,096.12	672.54	518.81	153.73	4.375	
17,400.00	12,794.00	16,989.09	12,664.00	79.59	79.96	-78.85	-4,507.00	1,096.12	672.54	515.81	156.74	4.291	
17,500.00	12,794.00	17,089.09	12,664.00	81.12	81.46	-78.85	-4,607.00	1,096.12	672.54	512.79	159.75	4.210	
17,600.00	12,794.00	17,189.09	12,664.00	82.65	82.97	-78.85	-4,707.00	1,096.12	672.54	509.77	162.77	4.132	
17,700.00	12,794.00	17,289.09	12,664.00	84.18	84.48	-78.85	-4,807.00	1,096.12	672.54	506.75	165.80	4.056	
17,800.00	12,794.00	17,389.09	12,664.00	85.72	86.00	-78.85	-4,907.00	1,096.12	672.54	503.71	168.83	3.983	
17,900.00	12,794.00	17,489.09	12,664.00	87.27	87.52	-78.85	-5,007.00	1,096.12	672.54	500.67	171.88	3.913	
18,000.00	12,794.00	17,589.09	12,664.00	88.81	89.05	-78.85	-5,107.00	1,096.12	672.54	497.62	174.92	3.845	
18,100.00	12,794.00	17,689.09	12,664.00	90.36	90.58	-78.85	-5,207.00	1,096.12	672.54	494.57	177.98	3.779	
18,200.00	12,794.00	17,789.09	12,664.00	91.91	92.11	-78.85	-5,307.00	1,096.12	672.54	491.51	181.04	3.715	
18,300.00	12,794.00	17,889.09	12,664.00	93.47	93.65	-78.85	-5,407.00	1,096.12	672.54	488.44	184.10	3.653	
18,400.00	12,794.00	17,989.09	12,664.00	95.03	95.19	-78.85	-5,507.00	1,096.12	672.54	485.37	187.17	3.593	
18,500.00	12,794.00	18,089.09	12,664.00	96.59	96.73	-78.85	-5,607.00	1,096.12	672.54	482.29	190.25	3.535	
18,600.00	12,794.00	18,189.09	12,664.00	98.15	98.28	-78.85	-5,707.00	1,096.12	672.54	479.21	193.33	3.479	
18,700.00	12,794.00	18,289.09	12,664.00	99.71	99.82	-78.85	-5,807.00	1,096.12	672.54	476.13	196.41	3.424	
18,800.00	12,794.00	18,389.09	12,664.00	101.28	101.38	-78.85	-5,907.00	1,096.12	672.54	473.04	199.50	3.371	
18,900.00	12,794.00	18,489.09	12,664.00	102.85	102.93	-78.85	-6,007.00	1,096.12	672.54	469.95	202.60	3.320	
19,000.00	12,794.00	18,589.09	12,664.00	104.42	104.49	-78.85	-6,107.00	1,096.12	672.54	466.85	205.69	3.270	
19,100.00	12,794.00	18,689.09	12,664.00	105.99	106.04	-78.85	-6,207.00	1,096.12	672.54	463.75	208.79	3.221	
19,200.00	12,794.00	18,789.09	12,664.00	107.57	107.60	-78.85	-6,307.00	1,096.12	672.54	460.65	211.90	3.174	
19,300.00	12,794.00	18,889.09	12,664.00	109.15	109.17	-78.85	-6,407.00	1,096.12	672.54	457.54	215.01	3.128	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 4H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,400.00	12,794.00	18,989.09	12,664.00	110.72	110.73	-78.85	-6,507.00	1,096.12	672.54	454.43	218.12	3.083	
19,500.00	12,794.00	19,089.09	12,664.00	112.30	112.30	-78.85	-6,607.00	1,096.12	672.54	451.31	221.23	3.040	
19,600.00	12,794.00	19,189.09	12,664.00	113.89	113.87	-78.85	-6,707.00	1,096.12	672.54	448.20	224.35	2.998	
19,700.00	12,794.00	19,289.09	12,664.00	115.47	115.44	-78.85	-6,807.00	1,096.12	672.54	445.08	227.47	2.957	
19,800.00	12,794.00	19,389.09	12,664.00	117.05	117.01	-78.85	-6,907.00	1,096.12	672.54	441.95	230.59	2.917	
19,900.00	12,794.00	19,489.09	12,664.00	118.64	118.59	-78.85	-7,007.00	1,096.12	672.54	438.83	233.72	2.878	
20,000.00	12,794.00	19,589.09	12,664.00	120.23	120.16	-78.85	-7,107.00	1,096.12	672.54	435.70	236.84	2.840	
20,100.00	12,794.00	19,689.09	12,664.00	121.81	121.74	-78.85	-7,207.00	1,096.12	672.54	432.57	239.97	2.803	
20,200.00	12,794.00	19,789.09	12,664.00	123.40	123.32	-78.85	-7,307.00	1,096.12	672.54	429.44	243.11	2.766	
20,300.00	12,794.00	19,889.09	12,664.00	124.99	124.90	-78.85	-7,407.00	1,096.12	672.54	426.30	246.24	2.731	
20,400.00	12,794.00	19,989.09	12,664.00	126.59	126.48	-78.85	-7,507.00	1,096.12	672.54	423.17	249.38	2.697	
20,500.00	12,794.00	20,089.09	12,664.00	128.18	128.06	-78.85	-7,607.00	1,096.12	672.54	420.03	252.52	2.663	
20,600.00	12,794.00	20,189.09	12,664.00	129.77	129.65	-78.85	-7,707.00	1,096.12	672.54	416.89	255.66	2.631	
20,700.00	12,794.00	20,289.09	12,664.00	131.37	131.23	-78.85	-7,807.00	1,096.12	672.54	413.74	258.80	2.599	
20,800.00	12,794.00	20,389.09	12,664.00	132.96	132.82	-78.85	-7,907.00	1,096.12	672.54	410.60	261.95	2.567	
20,900.00	12,794.00	20,489.09	12,664.00	134.56	134.41	-78.85	-8,007.00	1,096.12	672.54	407.45	265.09	2.537	
21,000.00	12,794.00	20,589.09	12,664.00	136.16	135.99	-78.85	-8,107.00	1,096.12	672.54	404.30	268.24	2.507	
21,100.00	12,794.00	20,689.09	12,664.00	137.76	137.58	-78.85	-8,207.00	1,096.12	672.54	401.15	271.39	2.478	
21,200.00	12,794.00	20,789.09	12,664.00	139.35	139.18	-78.85	-8,307.00	1,096.12	672.54	398.00	274.54	2.450	
21,300.00	12,794.00	20,889.09	12,664.00	140.95	140.77	-78.85	-8,407.00	1,096.12	672.54	394.85	277.70	2.422	
21,400.00	12,794.00	20,989.09	12,664.00	142.56	142.36	-78.85	-8,507.00	1,096.12	672.54	391.69	280.85	2.395	
21,500.00	12,794.00	21,089.09	12,664.00	144.16	143.95	-78.85	-8,607.00	1,096.12	672.54	388.54	284.01	2.368	
21,600.00	12,794.00	21,189.09	12,664.00	145.76	145.55	-78.85	-8,707.00	1,096.12	672.54	385.38	287.17	2.342	
21,700.00	12,794.00	21,289.09	12,664.00	147.36	147.14	-78.85	-8,807.00	1,096.12	672.54	382.22	290.32	2.317	
21,800.00	12,794.00	21,389.09	12,664.00	148.97	148.74	-78.85	-8,907.00	1,096.12	672.54	379.06	293.48	2.292	
21,900.00	12,794.00	21,489.09	12,664.00	150.57	150.34	-78.85	-9,007.00	1,096.12	672.54	375.90	296.65	2.267	
22,000.00	12,794.00	21,589.09	12,664.00	152.18	151.94	-78.85	-9,107.00	1,096.12	672.54	372.73	299.81	2.243	
22,100.00	12,794.00	21,689.09	12,664.00	153.78	153.54	-78.85	-9,207.00	1,096.12	672.54	369.57	302.97	2.220	
22,200.00	12,794.00	21,789.09	12,664.00	155.39	155.13	-78.85	-9,307.00	1,096.12	672.54	366.41	306.14	2.197	
22,300.00	12,794.00	21,889.09	12,664.00	156.99	156.73	-78.85	-9,407.00	1,096.12	672.54	363.24	309.30	2.174	
22,400.00	12,794.00	21,989.09	12,664.00	158.60	158.34	-78.85	-9,507.00	1,096.12	672.54	360.07	312.47	2.152	
22,500.00	12,794.00	22,089.09	12,664.00	160.21	159.94	-78.85	-9,607.00	1,096.12	672.54	356.90	315.64	2.131	
22,600.00	12,794.00	22,189.09	12,664.00	161.82	161.54	-78.85	-9,707.00	1,096.12	672.54	353.73	318.81	2.110	
22,700.00	12,794.00	22,289.09	12,664.00	163.43	163.14	-78.85	-9,807.00	1,096.12	672.54	350.56	321.98	2.089	
22,740.48	12,794.00	22,329.57	12,664.00	164.08	163.79	-78.85	-9,847.48	1,096.12	672.54	349.28	323.26	2.080	
22,746.83	12,794.00	22,329.57	12,664.00	164.18	163.79	-78.85	-9,847.48	1,096.12	672.57	349.03	323.55	2.079 SF	

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 6H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	4.00	4.00	0.00	0.00	94.90	-137.95	1,607.57	1,613.48				
100.00	100.00	104.00	104.00	0.08	0.09	94.90	-137.95	1,607.57	1,613.48	1,613.30	0.18	9,086.670	
200.00	200.00	204.00	204.00	0.31	0.32	94.90	-137.95	1,607.57	1,613.48	1,612.85	0.63	2,572.930	
300.00	300.00	304.00	304.00	0.53	0.54	94.90	-137.95	1,607.57	1,613.48	1,612.40	1.08	1,498.638	
400.00	400.00	404.00	404.00	0.76	0.77	94.90	-137.95	1,607.57	1,613.48	1,611.95	1.53	1,057.213	
500.00	500.00	504.00	504.00	0.98	0.99	94.90	-137.95	1,607.57	1,613.48	1,611.50	1.98	816.664	
600.00	600.00	604.00	604.00	1.21	1.22	94.90	-137.95	1,607.57	1,613.48	1,611.05	2.43	665.290	
700.00	700.00	704.00	704.00	1.43	1.44	94.90	-137.95	1,607.57	1,613.48	1,610.60	2.87	561.257	
800.00	800.00	804.00	804.00	1.66	1.67	94.90	-137.95	1,607.57	1,613.48	1,610.15	3.32	485.360	
900.00	900.00	904.00	904.00	1.88	1.89	94.90	-137.95	1,607.57	1,613.48	1,609.70	3.77	427.545	
1,000.00	1,000.00	1,004.00	1,004.00	2.11	2.12	94.90	-137.95	1,607.57	1,613.48	1,609.25	4.22	382.037	
1,100.00	1,100.00	1,104.00	1,104.00	2.33	2.34	94.90	-137.95	1,607.57	1,613.48	1,608.81	4.67	345.285	
1,200.00	1,200.00	1,204.00	1,204.00	2.56	2.57	94.90	-137.95	1,607.57	1,613.48	1,608.36	5.12	314.984	
1,300.00	1,300.00	1,304.00	1,304.00	2.78	2.79	94.90	-137.95	1,607.57	1,613.48	1,607.91	5.57	289.572	
1,400.00	1,400.00	1,404.00	1,404.00	3.01	3.02	94.90	-137.95	1,607.57	1,613.48	1,607.46	6.02	267.954	
1,500.00	1,500.00	1,504.00	1,504.00	3.23	3.24	94.90	-137.95	1,607.57	1,613.48	1,607.01	6.47	249.339	
1,600.00	1,600.00	1,604.00	1,604.00	3.46	3.46	94.90	-137.95	1,607.57	1,613.48	1,606.56	6.92	233.143	
1,700.00	1,700.00	1,704.00	1,704.00	3.68	3.69	94.90	-137.95	1,607.57	1,613.48	1,606.11	7.37	218.923	
1,800.00	1,800.00	1,804.00	1,804.00	3.91	3.91	94.90	-137.95	1,607.57	1,613.48	1,605.66	7.82	206.337	
1,900.00	1,900.00	1,904.00	1,904.00	4.13	4.14	94.90	-137.95	1,607.57	1,613.48	1,605.21	8.27	195.120	
2,000.00	2,000.00	2,004.00	2,004.00	4.35	4.36	94.90	-137.95	1,607.57	1,613.48	1,604.76	8.72	185.060	
2,100.00	2,100.00	2,104.00	2,104.00	4.58	4.59	94.90	-137.95	1,607.57	1,613.48	1,604.31	9.17	175.986	
2,200.00	2,200.00	2,204.00	2,204.00	4.80	4.81	94.90	-137.95	1,607.57	1,613.48	1,603.86	9.62	167.761	
2,300.00	2,300.00	2,304.00	2,304.00	5.03	5.04	94.90	-137.95	1,607.57	1,613.48	1,603.41	10.07	160.270	
2,400.00	2,400.00	2,404.00	2,404.00	5.25	5.26	94.90	-137.95	1,607.57	1,613.48	1,602.96	10.52	153.419	
2,500.00	2,500.00	2,504.00	2,504.00	5.48	5.49	94.90	-137.95	1,607.57	1,613.48	1,602.51	10.97	147.130	
2,600.00	2,600.00	2,604.00	2,604.00	5.70	5.71	94.90	-137.95	1,607.57	1,613.48	1,602.06	11.42	141.336	
2,700.00	2,700.00	2,704.00	2,704.00	5.93	5.94	94.90	-137.95	1,607.57	1,613.48	1,601.61	11.87	135.982	
2,800.00	2,800.00	2,804.00	2,804.00	6.15	6.16	94.90	-137.95	1,607.57	1,613.48	1,601.16	12.31	131.018	
2,900.00	2,900.00	2,904.00	2,904.00	6.38	6.39	94.90	-137.95	1,607.57	1,613.48	1,600.71	12.76	126.404	
3,000.00	3,000.00	3,004.00	3,004.00	6.60	6.61	94.90	-137.95	1,607.57	1,613.48	1,600.26	13.21	122.104	
3,100.00	3,100.00	3,104.00	3,104.00	6.83	6.84	94.90	-137.95	1,607.57	1,613.48	1,599.81	13.66	118.086	
3,200.00	3,200.00	3,204.00	3,204.00	7.05	7.06	94.90	-137.95	1,607.57	1,613.48	1,599.37	14.11	114.325	
3,300.00	3,300.00	3,304.00	3,304.00	7.28	7.29	94.90	-137.95	1,607.57	1,613.48	1,598.92	14.56	110.796	
3,400.00	3,400.00	3,404.00	3,404.00	7.50	7.51	94.90	-137.95	1,607.57	1,613.48	1,598.47	15.01	107.478	
3,500.00	3,500.00	3,503.77	3,503.77	7.73	7.73	94.90	-137.95	1,607.57	1,613.48	1,598.02	15.46	104.357	
3,515.68	3,515.68	3,518.54	3,518.54	7.76	7.77	41.59	-137.92	1,607.58	1,613.47	1,597.94	15.53	103.904	
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	41.58	-137.12	1,607.83	1,613.02	1,597.13	15.89	101.480	
3,700.00	3,699.96	3,692.15	3,692.11	8.16	8.16	41.57	-134.88	1,608.54	1,611.62	1,595.30	16.31	98.796	
3,800.00	3,799.86	3,786.31	3,786.19	8.38	8.37	41.54	-131.13	1,609.72	1,609.27	1,592.53	16.73	96.165	
3,900.00	3,899.68	3,880.42	3,880.14	8.59	8.58	41.51	-125.91	1,611.37	1,605.97	1,588.82	17.16	93.606	
3,927.83	3,927.43	3,907.20	3,906.85	8.65	8.64	41.50	-124.17	1,611.92	1,604.89	1,587.61	17.28	92.897	
4,000.00	3,999.40	3,979.30	3,978.78	8.81	8.80	41.45	-119.41	1,613.43	1,601.96	1,584.36	17.59	91.061	
4,100.00	4,099.12	4,079.20	4,078.44	9.03	9.02	41.39	-112.81	1,615.51	1,597.90	1,579.86	18.03	88.614	
4,200.00	4,198.84	4,179.10	4,178.10	9.26	9.25	41.32	-106.22	1,617.59	1,593.84	1,575.36	18.47	86.274	
4,300.00	4,298.57	4,279.00	4,277.77	9.48	9.47	41.26	-99.62	1,619.68	1,589.78	1,570.86	18.92	84.033	
4,400.00	4,398.29	4,378.90	4,377.43	9.70	9.70	41.19	-93.03	1,621.76	1,585.73	1,566.36	19.36	81.887	
4,500.00	4,498.01	4,478.80	4,477.09	9.93	9.93	41.12	-86.43	1,623.84	1,581.68	1,561.86	19.81	79.831	
4,600.00	4,597.73	4,578.70	4,576.75	10.16	10.16	41.06	-79.84	1,625.93	1,577.63	1,557.37	20.26	77.859	
4,700.00	4,697.45	4,678.60	4,676.41	10.39	10.39	40.99	-73.25	1,628.01	1,573.58	1,552.87	20.71	75.967	
4,800.00	4,797.17	4,778.51	4,776.07	10.62	10.62	40.92	-66.65	1,630.09	1,569.54	1,548.37	21.17	74.150	
4,900.00	4,896.89	4,878.41	4,875.73	10.85	10.85	40.86	-60.06	1,632.17	1,565.49	1,543.87	21.62	72.406	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 6H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.00	4,996.62	4,978.31	4,975.40	11.08	11.08	40.79	-53.46	1,634.26	1,561.45	1,539.37	22.08	70.729	
5,100.00	5,096.34	5,078.21	5,075.06	11.31	11.32	40.72	-46.87	1,636.34	1,557.41	1,534.88	22.53	69.116	
5,200.00	5,196.06	5,178.11	5,174.72	11.55	11.55	40.65	-40.27	1,638.42	1,553.38	1,530.38	22.99	67.564	
5,300.00	5,295.78	5,278.01	5,274.38	11.78	11.78	40.58	-33.68	1,640.51	1,549.34	1,525.89	23.45	66.070	
5,400.00	5,395.50	5,377.91	5,374.04	12.02	12.02	40.51	-27.08	1,642.59	1,545.31	1,521.40	23.91	64.630	
5,500.00	5,495.22	5,477.81	5,473.70	12.25	12.25	40.44	-20.49	1,644.67	1,541.28	1,516.91	24.37	63.243	
5,600.00	5,594.94	5,577.71	5,573.36	12.49	12.49	40.37	-13.89	1,646.76	1,537.25	1,512.42	24.83	61.904	
5,700.00	5,694.66	5,677.61	5,673.03	12.73	12.72	40.30	-7.30	1,648.84	1,533.23	1,507.93	25.30	60.613	
5,800.00	5,794.39	5,777.52	5,772.69	12.96	12.96	40.23	-0.70	1,650.92	1,529.21	1,503.45	25.76	59.367	
5,900.00	5,894.11	5,877.42	5,872.35	13.20	13.20	40.16	5.89	1,653.01	1,525.18	1,498.96	26.22	58.163	
6,000.00	5,993.83	5,977.32	5,972.01	13.44	13.44	40.09	12.48	1,655.09	1,521.17	1,494.48	26.69	57.000	
6,100.00	6,093.55	6,077.22	6,071.67	13.68	13.67	40.01	19.08	1,657.17	1,517.15	1,490.00	27.15	55.875	
6,200.00	6,193.27	6,177.12	6,171.33	13.92	13.91	39.94	25.67	1,659.25	1,513.14	1,485.52	27.62	54.787	
6,300.00	6,292.99	6,277.02	6,270.99	14.16	14.15	39.87	32.27	1,661.34	1,509.13	1,481.04	28.09	53.734	
6,400.00	6,392.71	6,376.92	6,370.66	14.40	14.39	39.80	38.86	1,663.42	1,505.12	1,476.57	28.55	52.714	
6,500.00	6,492.44	6,476.82	6,470.32	14.64	14.63	39.72	45.46	1,665.50	1,501.11	1,472.09	29.02	51.727	
6,600.00	6,592.16	6,576.72	6,569.98	14.89	14.87	39.65	52.05	1,667.59	1,497.11	1,467.62	29.49	50.770	
6,700.00	6,691.88	6,676.63	6,669.64	15.13	15.11	39.57	58.65	1,669.67	1,493.11	1,463.15	29.96	49.842	
6,800.00	6,791.60	6,776.53	6,769.30	15.37	15.35	39.50	65.24	1,671.75	1,489.11	1,458.69	30.43	48.942	
6,900.00	6,891.32	6,876.43	6,868.96	15.61	15.59	39.42	71.84	1,673.84	1,485.12	1,454.22	30.90	48.069	
7,000.00	6,991.04	6,976.33	6,968.62	15.86	15.83	39.35	78.43	1,675.92	1,481.12	1,449.76	31.36	47.222	
7,100.00	7,090.76	7,076.23	7,068.28	16.10	16.07	39.27	85.03	1,678.00	1,477.13	1,445.30	31.84	46.399	
7,200.00	7,190.48	7,176.13	7,167.95	16.34	16.31	39.20	91.62	1,680.08	1,473.14	1,440.84	32.31	45.600	
7,300.00	7,290.21	7,276.03	7,267.61	16.59	16.55	39.12	98.22	1,682.17	1,469.16	1,436.38	32.78	44.824	
7,400.00	7,389.93	7,375.93	7,367.27	16.83	16.79	39.04	104.81	1,684.25	1,465.18	1,431.93	33.25	44.069	
7,500.00	7,489.65	7,475.83	7,466.93	17.07	17.03	38.96	111.40	1,686.33	1,461.20	1,427.48	33.72	43.334	
7,600.00	7,589.37	7,575.73	7,566.59	17.32	17.27	38.88	118.00	1,688.42	1,457.22	1,423.03	34.19	42.620	
7,700.00	7,689.09	7,675.64	7,666.25	17.56	17.51	38.81	124.59	1,690.50	1,453.24	1,418.58	34.66	41.925	
7,800.00	7,788.81	7,775.54	7,765.91	17.81	17.75	38.73	131.19	1,692.58	1,449.27	1,414.14	35.13	41.249	
7,900.00	7,888.53	7,875.44	7,865.58	18.05	18.00	38.65	137.78	1,694.67	1,445.30	1,409.70	35.61	40.590	
8,000.00	7,988.26	7,975.34	7,965.24	18.30	18.24	38.57	144.38	1,696.75	1,441.34	1,405.26	36.08	39.948	
8,100.00	8,087.98	8,075.24	8,064.90	18.55	18.48	38.49	150.97	1,698.83	1,437.37	1,400.82	36.55	39.323	
8,200.00	8,187.70	8,175.14	8,164.56	18.79	18.72	38.41	157.57	1,700.92	1,433.41	1,396.39	37.03	38.714	
8,300.00	8,287.42	8,275.04	8,264.22	19.04	18.96	38.33	164.16	1,703.00	1,429.46	1,391.96	37.50	38.120	
8,400.00	8,387.14	8,374.94	8,363.88	19.28	19.21	38.24	170.76	1,705.08	1,425.50	1,387.53	37.97	37.540	
8,500.00	8,486.86	8,474.84	8,463.54	19.53	19.45	38.16	177.35	1,707.16	1,421.55	1,383.10	38.45	36.975	
8,600.00	8,586.58	8,574.75	8,563.21	19.78	19.69	38.08	183.95	1,709.25	1,417.60	1,378.68	38.92	36.424	
8,700.00	8,686.30	8,674.65	8,662.87	20.02	19.93	38.00	190.54	1,711.33	1,413.65	1,374.26	39.39	35.885	
8,800.00	8,786.03	8,774.55	8,762.53	20.27	20.18	37.91	197.13	1,713.41	1,409.71	1,369.84	39.87	35.360	
8,900.00	8,885.75	8,874.45	8,862.19	20.52	20.42	37.83	203.73	1,715.50	1,405.77	1,365.43	40.34	34.846	
9,000.00	8,985.47	8,974.35	8,961.85	20.76	20.66	37.74	210.32	1,717.58	1,401.83	1,361.02	40.82	34.345	
9,100.00	9,085.19	9,074.25	9,061.51	21.01	20.91	37.66	216.92	1,719.66	1,397.90	1,356.61	41.29	33.855	
9,200.00	9,184.91	9,174.15	9,161.17	21.26	21.15	37.57	223.51	1,721.75	1,393.97	1,352.21	41.76	33.377	
9,300.00	9,284.63	9,274.05	9,260.84	21.51	21.39	37.49	230.11	1,723.83	1,390.04	1,347.80	42.24	32.909	
9,400.00	9,384.35	9,373.95	9,360.50	21.75	21.64	37.40	236.70	1,725.91	1,386.12	1,343.40	42.71	32.451	
9,500.00	9,484.08	9,473.85	9,460.16	22.00	21.88	37.31	243.30	1,728.00	1,382.20	1,339.01	43.19	32.004	
9,600.00	9,583.80	9,573.76	9,559.82	22.25	22.12	37.23	249.89	1,730.08	1,378.28	1,334.62	43.66	31.566	
9,700.00	9,683.52	9,673.66	9,659.48	22.50	22.37	37.14	256.49	1,732.16	1,374.36	1,330.23	44.14	31.138	
9,800.00	9,783.24	9,773.56	9,759.14	22.75	22.61	37.05	263.08	1,734.24	1,370.45	1,325.84	44.61	30.719	
9,900.00	9,882.96	9,873.46	9,858.80	23.00	22.86	36.96	269.68	1,736.33	1,366.54	1,321.46	45.09	30.308	
10,000.00	9,982.68	9,973.36	9,958.47	23.24	23.10	36.87	276.27	1,738.41	1,362.64	1,317.08	45.56	29.907	
10,100.00	10,082.40	10,073.26	10,058.13	23.49	23.34	36.78	282.86	1,740.49	1,358.74	1,312.70	46.04	29.513	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 6H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.00	10,182.13	10,173.16	10,157.79	23.74	23.59	36.69	289.46	1,742.58	1,354.84	1,308.33	46.51	29.128	
10,300.00	10,281.85	10,273.06	10,257.45	23.99	23.83	36.60	296.05	1,744.66	1,350.94	1,303.96	46.99	28.751	
10,400.00	10,381.57	10,372.96	10,357.11	24.24	24.08	36.51	302.65	1,746.74	1,347.05	1,299.59	47.46	28.381	
10,500.00	10,481.29	10,472.87	10,456.77	24.49	24.32	36.42	309.24	1,748.83	1,343.16	1,295.23	47.94	28.018	
10,600.00	10,581.01	10,572.77	10,556.43	24.74	24.57	36.32	315.84	1,750.91	1,339.28	1,290.87	48.41	27.663	
10,700.00	10,680.73	10,676.78	10,660.22	24.98	24.80	36.24	322.43	1,752.99	1,335.32	1,286.43	48.88	27.317	
10,792.09	10,772.57	10,775.93	10,759.24	25.21	24.99	36.22	327.22	1,754.51	1,331.21	1,281.93	49.28	27.011	
10,800.00	10,780.45	10,784.44	10,767.74	25.23	25.01	36.22	327.56	1,754.61	1,330.84	1,281.53	49.32	26.986	
10,900.00	10,880.24	10,892.07	10,875.32	25.42	25.20	36.24	330.76	1,755.62	1,326.60	1,276.91	49.69	26.697	
11,000.00	10,980.13	10,999.68	10,982.92	25.61	25.38	36.29	332.03	1,756.02	1,323.18	1,273.13	50.05	26.435	
11,100.00	11,080.09	11,100.85	11,084.09	25.78	25.57	36.35	332.05	1,756.03	1,320.80	1,270.38	50.42	26.195	
11,200.00	11,180.08	11,200.84	11,184.08	25.96	25.78	36.38	332.05	1,756.03	1,319.82	1,269.01	50.81	25.976	
11,219.92	11,200.00	11,220.76	11,204.00	25.99	25.82	89.69	332.05	1,756.03	1,319.79	1,268.90	50.89	25.936	
11,300.00	11,280.08	11,300.84	11,284.08	26.14	25.99	89.69	332.05	1,756.03	1,319.79	1,268.57	51.21	25.770	
11,400.00	11,380.08	11,400.84	11,384.08	26.35	26.21	89.69	332.05	1,756.03	1,319.79	1,268.15	51.64	25.557	
11,500.00	11,480.08	11,500.84	11,484.08	26.56	26.42	89.69	332.05	1,756.03	1,319.79	1,267.72	52.07	25.347	
11,600.00	11,580.08	11,600.84	11,584.08	26.77	26.63	89.69	332.05	1,756.03	1,319.79	1,267.29	52.50	25.140	
11,700.00	11,680.08	11,700.84	11,684.08	26.97	26.85	89.69	332.05	1,756.03	1,319.79	1,266.86	52.93	24.937	
11,800.00	11,780.08	11,800.84	11,784.08	27.18	27.06	89.69	332.05	1,756.03	1,319.79	1,266.43	53.35	24.736	
11,900.00	11,880.08	11,900.84	11,884.08	27.39	27.28	89.69	332.05	1,756.03	1,319.79	1,266.01	53.78	24.539	
12,000.00	11,980.08	12,000.84	11,984.08	27.60	27.49	89.69	332.05	1,756.03	1,319.79	1,265.58	54.21	24.345	
12,100.00	12,080.08	12,100.84	12,084.08	27.81	27.71	89.69	332.05	1,756.03	1,319.79	1,265.15	54.64	24.153	
12,200.00	12,180.08	12,200.84	12,184.08	28.02	27.92	89.69	332.05	1,756.03	1,319.79	1,264.72	55.07	23.965	
12,240.96	12,221.04	12,241.80	12,225.04	28.11	28.01	89.69	332.05	1,756.03	1,319.79	1,264.54	55.25	23.888	CC
12,250.00	12,230.08	12,250.84	12,234.08	28.13	28.03	-90.31	332.05	1,756.03	1,319.79	1,264.50	55.29	23.872	
12,300.00	12,279.97	12,301.50	12,284.67	28.20	28.12	-90.34	329.81	1,756.03	1,319.79	1,264.34	55.45	23.801	
12,350.00	12,329.42	12,352.22	12,334.93	28.27	28.18	-90.37	323.10	1,756.03	1,319.80	1,264.22	55.58	23.747	
12,400.00	12,378.04	12,403.01	12,384.46	28.33	28.22	-90.40	311.95	1,756.03	1,319.80	1,264.13	55.68	23.705	
12,450.00	12,425.47	12,453.85	12,432.86	28.38	28.25	-90.42	296.45	1,756.03	1,319.81	1,264.06	55.75	23.673	
12,500.00	12,471.34	12,504.73	12,479.74	28.42	28.27	-90.45	276.70	1,756.03	1,319.81	1,264.01	55.80	23.651	
12,550.00	12,515.31	12,555.66	12,524.72	28.45	28.27	-90.46	252.84	1,756.03	1,319.81	1,263.98	55.84	23.637	
12,600.00	12,557.04	12,606.62	12,567.43	28.47	28.27	-90.48	225.07	1,756.03	1,319.82	1,263.96	55.86	23.628	
12,650.00	12,596.21	12,657.61	12,607.52	28.49	28.26	-90.49	193.60	1,756.03	1,319.82	1,263.95	55.87	23.623	
12,700.00	12,632.52	12,708.62	12,644.67	28.50	28.24	-90.49	158.67	1,756.03	1,319.82	1,263.94	55.88	23.618	
12,750.00	12,665.71	12,759.63	12,678.57	28.52	28.23	-90.50	120.58	1,756.03	1,319.82	1,263.92	55.90	23.611	
12,800.00	12,695.51	12,810.65	12,708.96	28.53	28.21	-90.50	79.61	1,756.03	1,319.82	1,263.89	55.93	23.599	
12,850.00	12,721.69	12,861.66	12,735.58	28.54	28.20	-90.49	36.12	1,756.03	1,319.82	1,263.85	55.97	23.581	
12,900.00	12,744.07	12,912.66	12,758.21	28.55	28.19	-90.48	-9.56	1,756.03	1,319.82	1,263.78	56.03	23.554	
12,950.00	12,762.47	12,963.63	12,776.70	28.58	28.19	-90.47	-57.05	1,756.03	1,319.81	1,263.69	56.12	23.516	
13,000.00	12,776.75	13,014.57	12,790.88	28.62	28.21	-90.45	-105.96	1,756.03	1,319.81	1,263.57	56.24	23.466	
13,050.00	12,786.79	13,065.48	12,800.66	28.68	28.26	-90.43	-155.90	1,756.03	1,319.81	1,263.41	56.40	23.403	
13,100.00	12,792.53	13,116.34	12,805.96	28.77	28.34	-90.41	-206.46	1,756.03	1,319.80	1,263.22	56.58	23.327	
13,140.96	12,794.00	13,157.85	12,807.00	28.87	28.41	-90.39	-247.96	1,756.03	1,319.80	1,263.05	56.75	23.255	
13,200.00	12,794.00	13,216.89	12,807.00	29.03	28.54	-90.39	-307.00	1,756.03	1,319.80	1,262.74	57.06	23.132	
13,300.00	12,794.00	13,316.89	12,807.00	29.39	28.84	-90.39	-407.00	1,756.03	1,319.80	1,262.10	57.70	22.872	
13,400.00	12,794.00	13,416.89	12,807.00	29.84	29.21	-90.39	-507.00	1,756.03	1,319.80	1,261.27	58.53	22.550	
13,500.00	12,794.00	13,516.89	12,807.00	30.38	29.67	-90.39	-607.00	1,756.03	1,319.80	1,260.28	59.52	22.174	
13,600.00	12,794.00	13,616.89	12,807.00	30.99	30.21	-90.39	-707.00	1,756.03	1,319.80	1,259.13	60.67	21.753	
13,700.00	12,794.00	13,716.89	12,807.00	31.67	30.83	-90.39	-807.00	1,756.03	1,319.80	1,257.83	61.97	21.296	
13,800.00	12,794.00	13,816.89	12,807.00	32.42	31.52	-90.39	-907.00	1,756.03	1,319.80	1,256.38	63.42	20.811	
13,900.00	12,794.00	13,916.89	12,807.00	33.24	32.27	-90.39	-1,007.00	1,756.03	1,319.80	1,254.80	65.00	20.306	
14,000.00	12,794.00	14,016.89	12,807.00	34.11	33.09	-90.39	-1,107.00	1,756.03	1,319.80	1,253.10	66.70	19.788	

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

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 6H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,100.00	12,794.00	14,116.89	12,807.00	35.03	33.97	-90.39	-1,207.00	1,756.03	1,319.80	1,251.29	68.51	19.264	
14,200.00	12,794.00	14,216.89	12,807.00	36.01	34.90	-90.39	-1,307.00	1,756.03	1,319.80	1,249.37	70.43	18.739	
14,300.00	12,794.00	14,316.89	12,807.00	37.03	35.89	-90.39	-1,407.00	1,756.03	1,319.80	1,247.36	72.44	18.218	
14,400.00	12,794.00	14,416.89	12,807.00	38.10	36.91	-90.39	-1,507.00	1,756.03	1,319.80	1,245.25	74.55	17.704	
14,500.00	12,794.00	14,516.89	12,807.00	39.20	37.99	-90.39	-1,607.00	1,756.03	1,319.80	1,243.07	76.74	17.199	
14,600.00	12,794.00	14,616.89	12,807.00	40.34	39.10	-90.39	-1,707.00	1,756.03	1,319.80	1,240.80	79.00	16.707	
14,700.00	12,794.00	14,716.89	12,807.00	41.52	40.24	-90.39	-1,807.00	1,756.03	1,319.80	1,238.47	81.33	16.229	
14,800.00	12,794.00	14,816.89	12,807.00	42.72	41.42	-90.39	-1,907.00	1,756.03	1,319.80	1,236.08	83.72	15.765	
14,900.00	12,794.00	14,916.89	12,807.00	43.95	42.63	-90.39	-2,007.00	1,756.03	1,319.80	1,233.63	86.17	15.317	
15,000.00	12,794.00	15,016.89	12,807.00	45.21	43.87	-90.39	-2,107.00	1,756.03	1,319.80	1,231.13	88.67	14.884	
15,100.00	12,794.00	15,116.89	12,807.00	46.49	45.13	-90.39	-2,207.00	1,756.03	1,319.80	1,228.58	91.22	14.468	
15,200.00	12,794.00	15,216.89	12,807.00	47.79	46.41	-90.39	-2,307.00	1,756.03	1,319.80	1,225.98	93.82	14.068	
15,300.00	12,794.00	15,316.89	12,807.00	49.11	47.72	-90.39	-2,407.00	1,756.03	1,319.80	1,223.35	96.45	13.683	
15,400.00	12,794.00	15,416.89	12,807.00	50.45	49.04	-90.39	-2,507.00	1,756.03	1,319.80	1,220.67	99.13	13.314	
15,500.00	12,794.00	15,516.89	12,807.00	51.81	50.39	-90.39	-2,607.00	1,756.03	1,319.80	1,217.96	101.84	12.960	
15,600.00	12,794.00	15,616.89	12,807.00	53.18	51.75	-90.39	-2,707.00	1,756.03	1,319.80	1,215.22	104.58	12.620	
15,700.00	12,794.00	15,716.89	12,807.00	54.57	53.13	-90.39	-2,807.00	1,756.03	1,319.80	1,212.45	107.35	12.294	
15,800.00	12,794.00	15,816.89	12,807.00	55.97	54.52	-90.39	-2,907.00	1,756.03	1,319.80	1,209.65	110.15	11.982	
15,900.00	12,794.00	15,916.89	12,807.00	57.38	55.92	-90.39	-3,007.00	1,756.03	1,319.80	1,206.83	112.97	11.683	
16,000.00	12,794.00	16,016.89	12,807.00	58.80	57.34	-90.39	-3,107.00	1,756.03	1,319.80	1,203.98	115.82	11.395	
16,100.00	12,794.00	16,116.89	12,807.00	60.24	58.76	-90.39	-3,207.00	1,756.03	1,319.80	1,201.11	118.69	11.120	
16,200.00	12,794.00	16,216.89	12,807.00	61.68	60.20	-90.39	-3,307.00	1,756.03	1,319.80	1,198.23	121.58	10.856	
16,300.00	12,794.00	16,316.89	12,807.00	63.13	61.65	-90.39	-3,407.00	1,756.03	1,319.80	1,195.32	124.48	10.602	
16,400.00	12,794.00	16,416.89	12,807.00	64.60	63.10	-90.39	-3,507.00	1,756.03	1,319.80	1,192.39	127.41	10.359	
16,500.00	12,794.00	16,516.89	12,807.00	66.07	64.57	-90.39	-3,607.00	1,756.03	1,319.80	1,189.45	130.35	10.125	
16,600.00	12,794.00	16,616.89	12,807.00	67.55	66.04	-90.39	-3,707.00	1,756.03	1,319.80	1,186.49	133.31	9.901	
16,700.00	12,794.00	16,716.89	12,807.00	69.03	67.52	-90.39	-3,807.00	1,756.03	1,319.80	1,183.52	136.28	9.685	
16,800.00	12,794.00	16,816.89	12,807.00	70.52	69.01	-90.39	-3,907.00	1,756.03	1,319.80	1,180.54	139.26	9.477	
16,900.00	12,794.00	16,916.89	12,807.00	72.02	70.50	-90.39	-4,007.00	1,756.03	1,319.80	1,177.54	142.26	9.278	
17,000.00	12,794.00	17,016.89	12,807.00	73.52	72.01	-90.39	-4,107.00	1,756.03	1,319.80	1,174.53	145.27	9.085	
17,100.00	12,794.00	17,116.89	12,807.00	75.03	73.51	-90.39	-4,207.00	1,756.03	1,319.80	1,171.52	148.29	8.900	
17,200.00	12,794.00	17,216.89	12,807.00	76.55	75.02	-90.39	-4,307.00	1,756.03	1,319.80	1,168.49	151.32	8.722	
17,300.00	12,794.00	17,316.89	12,807.00	78.06	76.54	-90.39	-4,407.00	1,756.03	1,319.80	1,165.45	154.36	8.550	
17,400.00	12,794.00	17,416.89	12,807.00	79.59	78.06	-90.39	-4,507.00	1,756.03	1,319.80	1,162.40	157.40	8.385	
17,500.00	12,794.00	17,516.89	12,807.00	81.12	79.58	-90.39	-4,607.00	1,756.03	1,319.80	1,159.34	160.46	8.225	
17,600.00	12,794.00	17,616.89	12,807.00	82.65	81.11	-90.39	-4,707.00	1,756.03	1,319.80	1,156.27	163.53	8.071	
17,700.00	12,794.00	17,716.89	12,807.00	84.18	82.65	-90.39	-4,807.00	1,756.03	1,319.80	1,153.20	166.60	7.922	
17,800.00	12,794.00	17,816.89	12,807.00	85.72	84.19	-90.39	-4,907.00	1,756.03	1,319.80	1,150.12	169.68	7.778	
17,900.00	12,794.00	17,916.89	12,807.00	87.27	85.73	-90.39	-5,007.00	1,756.03	1,319.80	1,147.03	172.77	7.639	
18,000.00	12,794.00	18,016.89	12,807.00	88.81	87.27	-90.39	-5,107.00	1,756.03	1,319.80	1,143.94	175.86	7.505	
18,100.00	12,794.00	18,116.89	12,807.00	90.36	88.82	-90.39	-5,207.00	1,756.03	1,319.80	1,140.84	178.96	7.375	
18,200.00	12,794.00	18,216.89	12,807.00	91.91	90.37	-90.39	-5,307.00	1,756.03	1,319.80	1,137.73	182.07	7.249	
18,300.00	12,794.00	18,316.89	12,807.00	93.47	91.92	-90.39	-5,407.00	1,756.03	1,319.80	1,134.62	185.18	7.127	
18,400.00	12,794.00	18,416.89	12,807.00	95.03	93.48	-90.39	-5,507.00	1,756.03	1,319.80	1,131.50	188.30	7.009	
18,500.00	12,794.00	18,516.89	12,807.00	96.59	95.04	-90.39	-5,607.00	1,756.03	1,319.80	1,128.38	191.42	6.895	
18,600.00	12,794.00	18,616.89	12,807.00	98.15	96.60	-90.39	-5,707.00	1,756.03	1,319.80	1,125.25	194.55	6.784	
18,700.00	12,794.00	18,716.89	12,807.00	99.71	98.16	-90.39	-5,807.00	1,756.03	1,319.80	1,122.12	197.68	6.677	
18,800.00	12,794.00	18,816.89	12,807.00	101.28	99.73	-90.39	-5,907.00	1,756.03	1,319.80	1,118.99	200.81	6.572	
18,900.00	12,794.00	18,916.89	12,807.00	102.85	101.30	-90.39	-6,007.00	1,756.03	1,319.80	1,115.85	203.95	6.471	
19,000.00	12,794.00	19,016.89	12,807.00	104.42	102.87	-90.39	-6,107.00	1,756.03	1,319.80	1,112.70	207.10	6.373	
19,100.00	12,794.00	19,116.89	12,807.00	105.99	104.44	-90.39	-6,207.00	1,756.03	1,319.80	1,109.55	210.25	6.277	
19,200.00	12,794.00	19,216.89	12,807.00	107.57	106.02	-90.39	-6,307.00	1,756.03	1,319.80	1,106.40	213.40	6.185	

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 6H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,300.00	12,794.00	19,316.89	12,807.00	109.15	107.59	-90.39	-6,407.00	1,756.03	1,319.80	1,103.25	216.55	6.095	
19,400.00	12,794.00	19,416.89	12,807.00	110.72	109.17	-90.39	-6,507.00	1,756.03	1,319.80	1,100.09	219.71	6.007	
19,500.00	12,794.00	19,516.89	12,807.00	112.30	110.75	-90.39	-6,607.00	1,756.03	1,319.80	1,096.93	222.87	5.922	
19,600.00	12,794.00	19,616.89	12,807.00	113.89	112.33	-90.39	-6,707.00	1,756.03	1,319.80	1,093.76	226.04	5.839	
19,700.00	12,794.00	19,716.89	12,807.00	115.47	113.91	-90.39	-6,807.00	1,756.03	1,319.80	1,090.60	229.20	5.758	
19,800.00	12,794.00	19,816.89	12,807.00	117.05	115.50	-90.39	-6,907.00	1,756.03	1,319.80	1,087.43	232.37	5.680	
19,900.00	12,794.00	19,916.89	12,807.00	118.64	117.08	-90.39	-7,007.00	1,756.03	1,319.80	1,084.25	235.55	5.603	
20,000.00	12,794.00	20,016.89	12,807.00	120.23	118.67	-90.39	-7,107.00	1,756.03	1,319.80	1,081.08	238.72	5.529	
20,100.00	12,794.00	20,116.89	12,807.00	121.81	120.26	-90.39	-7,207.00	1,756.03	1,319.80	1,077.90	241.90	5.456	
20,200.00	12,794.00	20,216.89	12,807.00	123.40	121.85	-90.39	-7,307.00	1,756.03	1,319.80	1,074.72	245.08	5.385	
20,300.00	12,794.00	20,316.89	12,807.00	124.99	123.44	-90.39	-7,407.00	1,756.03	1,319.80	1,071.54	248.26	5.316	
20,400.00	12,794.00	20,416.89	12,807.00	126.59	125.03	-90.39	-7,507.00	1,756.03	1,319.80	1,068.35	251.45	5.249	
20,500.00	12,794.00	20,516.89	12,807.00	128.18	126.62	-90.39	-7,607.00	1,756.03	1,319.80	1,065.16	254.64	5.183	
20,600.00	12,794.00	20,616.89	12,807.00	129.77	128.21	-90.39	-7,707.00	1,756.03	1,319.80	1,061.98	257.83	5.119	
20,700.00	12,794.00	20,716.89	12,807.00	131.37	129.81	-90.39	-7,807.00	1,756.03	1,319.80	1,058.78	261.02	5.056	
20,800.00	12,794.00	20,816.89	12,807.00	132.96	131.40	-90.39	-7,907.00	1,756.03	1,319.80	1,055.59	264.21	4.995	
20,900.00	12,794.00	20,916.89	12,807.00	134.56	133.00	-90.39	-8,007.00	1,756.03	1,319.80	1,052.40	267.40	4.936	
21,000.00	12,794.00	21,016.89	12,807.00	136.16	134.60	-90.39	-8,107.00	1,756.03	1,319.80	1,049.20	270.60	4.877	
21,100.00	12,794.00	21,116.89	12,807.00	137.76	136.20	-90.39	-8,207.00	1,756.03	1,319.80	1,046.00	273.80	4.820	
21,200.00	12,794.00	21,216.89	12,807.00	139.35	137.79	-90.39	-8,307.00	1,756.03	1,319.80	1,042.80	277.00	4.765	
21,300.00	12,794.00	21,316.89	12,807.00	140.95	139.39	-90.39	-8,407.00	1,756.03	1,319.80	1,039.60	280.20	4.710	
21,400.00	12,794.00	21,416.89	12,807.00	142.56	141.00	-90.39	-8,507.00	1,756.03	1,319.80	1,036.40	283.40	4.657	
21,500.00	12,794.00	21,516.89	12,807.00	144.16	142.60	-90.39	-8,607.00	1,756.03	1,319.80	1,033.19	286.61	4.605	
21,600.00	12,794.00	21,616.89	12,807.00	145.76	144.20	-90.39	-8,707.00	1,756.03	1,319.80	1,029.99	289.81	4.554	
21,700.00	12,794.00	21,716.89	12,807.00	147.36	145.80	-90.39	-8,807.00	1,756.03	1,319.80	1,026.78	293.02	4.504	
21,800.00	12,794.00	21,816.89	12,807.00	148.97	147.41	-90.39	-8,907.00	1,756.03	1,319.80	1,023.57	296.23	4.455	
21,900.00	12,794.00	21,916.89	12,807.00	150.57	149.01	-90.39	-9,007.00	1,756.03	1,319.80	1,020.36	299.44	4.408	
22,000.00	12,794.00	22,016.89	12,807.00	152.18	150.62	-90.39	-9,107.00	1,756.03	1,319.80	1,017.15	302.65	4.361	
22,100.00	12,794.00	22,116.89	12,807.00	153.78	152.22	-90.39	-9,207.00	1,756.03	1,319.80	1,013.94	305.86	4.315	
22,200.00	12,794.00	22,216.89	12,807.00	155.39	153.83	-90.39	-9,307.00	1,756.03	1,319.80	1,010.72	309.08	4.270	
22,300.00	12,794.00	22,316.89	12,807.00	156.99	155.43	-90.39	-9,407.00	1,756.03	1,319.80	1,007.51	312.29	4.226	
22,400.00	12,794.00	22,416.89	12,807.00	158.60	157.04	-90.39	-9,507.00	1,756.03	1,319.80	1,004.29	315.51	4.183	
22,500.00	12,794.00	22,516.89	12,807.00	160.21	158.65	-90.39	-9,607.00	1,756.03	1,319.80	1,001.08	318.72	4.141	
22,600.00	12,794.00	22,616.89	12,807.00	161.82	160.26	-90.39	-9,707.00	1,756.03	1,319.80	997.86	321.94	4.099	
22,700.00	12,794.00	22,716.89	12,807.00	163.43	161.87	-90.39	-9,807.00	1,756.03	1,319.80	994.64	325.16	4.059	
22,700.13	12,794.00	22,717.02	12,807.00	163.43	161.87	-90.39	-9,807.12	1,756.03	1,319.80	994.64	325.17	4.059	
22,746.83	12,794.00	22,751.03	12,807.00	164.18	162.42	-90.39	-9,841.13	1,756.03	1,319.86	993.34	326.52	4.042	ES, SF

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

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 7H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	6.70	6.70	0.00	0.01	-87.55	37.63	-880.15	880.95				
100.00	100.00	106.70	106.70	0.08	0.10	-87.55	37.63	-880.15	880.95	880.77	0.18	4,797.334	
200.00	200.00	206.70	206.70	0.31	0.32	-87.55	37.63	-880.15	880.95	880.32	0.63	1,391.347	
300.00	300.00	306.70	306.70	0.53	0.55	-87.55	37.63	-880.15	880.95	879.87	1.08	813.665	
400.00	400.00	406.70	406.70	0.76	0.77	-87.55	37.63	-880.15	880.95	879.42	1.53	574.949	
500.00	500.00	506.70	506.70	0.98	1.00	-87.55	37.63	-880.15	880.95	878.97	1.98	444.531	
600.00	600.00	606.70	606.70	1.21	1.22	-87.55	37.63	-880.15	880.95	878.52	2.43	362.340	
700.00	700.00	706.70	706.70	1.43	1.45	-87.55	37.63	-880.15	880.95	878.07	2.88	305.799	
800.00	800.00	806.70	806.70	1.66	1.67	-87.55	37.63	-880.15	880.95	877.62	3.33	264.522	
900.00	900.00	906.70	906.70	1.88	1.90	-87.55	37.63	-880.15	880.95	877.17	3.78	233.063	
1,000.00	1,000.00	1,006.70	1,006.70	2.11	2.12	-87.55	37.63	-880.15	880.95	876.72	4.23	208.292	
1,100.00	1,100.00	1,106.70	1,106.70	2.33	2.35	-87.55	37.63	-880.15	880.95	876.28	4.68	188.280	
1,200.00	1,200.00	1,206.70	1,206.70	2.56	2.57	-87.55	37.63	-880.15	880.95	875.83	5.13	171.777	
1,300.00	1,300.00	1,306.70	1,306.70	2.78	2.80	-87.55	37.63	-880.15	880.95	875.38	5.58	157.933	
1,400.00	1,400.00	1,406.70	1,406.70	3.01	3.02	-87.55	37.63	-880.15	880.95	874.93	6.03	146.155	
1,500.00	1,500.00	1,506.70	1,506.70	3.23	3.25	-87.55	37.63	-880.15	880.95	874.48	6.48	136.011	
1,600.00	1,600.00	1,606.70	1,606.70	3.46	3.47	-87.55	37.63	-880.15	880.95	874.03	6.93	127.184	
1,700.00	1,700.00	1,706.70	1,706.70	3.68	3.70	-87.55	37.63	-880.15	880.95	873.58	7.38	119.433	
1,800.00	1,800.00	1,806.70	1,806.70	3.91	3.92	-87.55	37.63	-880.15	880.95	873.13	7.83	112.572	
1,900.00	1,900.00	1,906.70	1,906.70	4.13	4.15	-87.55	37.63	-880.15	880.95	872.68	8.28	106.457	
2,000.00	2,000.00	2,006.70	2,006.70	4.35	4.37	-87.55	37.63	-880.15	880.95	872.23	8.72	100.972	
2,100.00	2,100.00	2,106.70	2,106.70	4.58	4.59	-87.55	37.63	-880.15	880.95	871.78	9.17	96.024	
2,200.00	2,200.00	2,206.70	2,206.70	4.80	4.82	-87.55	37.63	-880.15	880.95	871.33	9.62	91.539	
2,300.00	2,300.00	2,306.70	2,306.70	5.03	5.04	-87.55	37.63	-880.15	880.95	870.88	10.07	87.454	
2,400.00	2,400.00	2,406.70	2,406.70	5.25	5.27	-87.55	37.63	-880.15	880.95	870.43	10.52	83.718	
2,500.00	2,500.00	2,506.70	2,506.70	5.48	5.49	-87.55	37.63	-880.15	880.95	869.98	10.97	80.288	
2,600.00	2,600.00	2,606.70	2,606.70	5.70	5.72	-87.55	37.63	-880.15	880.95	869.53	11.42	77.128	
2,700.00	2,700.00	2,706.70	2,706.70	5.93	5.94	-87.55	37.63	-880.15	880.95	869.08	11.87	74.208	
2,800.00	2,800.00	2,806.70	2,806.70	6.15	6.17	-87.55	37.63	-880.15	880.95	868.63	12.32	71.500	
2,900.00	2,900.00	2,906.70	2,906.70	6.38	6.39	-87.55	37.63	-880.15	880.95	868.18	12.77	68.983	
3,000.00	3,000.00	3,006.70	3,006.70	6.60	6.62	-87.55	37.63	-880.15	880.95	867.73	13.22	66.638	
3,100.00	3,100.00	3,106.70	3,106.70	6.83	6.84	-87.55	37.63	-880.15	880.95	867.28	13.67	64.446	
3,200.00	3,200.00	3,206.70	3,206.70	7.05	7.07	-87.55	37.63	-880.15	880.95	866.83	14.12	62.394	
3,300.00	3,300.00	3,306.70	3,306.70	7.28	7.29	-87.55	37.63	-880.15	880.95	866.39	14.57	60.469	
3,400.00	3,400.00	3,406.70	3,406.70	7.50	7.52	-87.55	37.63	-880.15	880.95	865.94	15.02	58.659	
3,500.00	3,500.00	3,507.77	3,507.77	7.73	7.74	-87.55	37.63	-880.15	880.95	865.48	15.47	56.948	
3,600.00	3,600.00	3,623.72	3,623.71	7.95	7.99	-140.87	38.17	-878.93	880.60	864.67	15.93	55.266	
3,700.00	3,699.96	3,739.66	3,739.59	8.16	8.24	-140.89	39.67	-875.57	879.79	863.41	16.38	53.711	
3,800.00	3,799.86	3,855.58	3,855.35	8.38	8.48	-140.94	42.12	-870.08	878.53	861.71	16.82	52.224	
3,900.00	3,899.68	3,971.46	3,970.93	8.59	8.73	-141.00	45.53	-862.45	876.81	859.55	17.26	50.799	
3,927.83	3,927.43	4,003.70	4,003.05	8.65	8.80	-141.01	46.64	-859.94	876.25	858.87	17.38	50.412	
4,000.00	3,999.40	4,082.06	4,081.07	8.81	8.97	-141.04	49.63	-853.26	874.38	856.69	17.69	49.420	
4,100.00	4,099.12	4,182.02	4,180.57	9.03	9.19	-141.07	53.52	-844.52	871.60	853.48	18.12	48.097	
4,200.00	4,198.84	4,281.98	4,280.07	9.26	9.42	-141.10	57.42	-835.79	868.82	850.26	18.55	46.829	
4,300.00	4,298.57	4,381.94	4,379.57	9.48	9.65	-141.13	61.31	-827.05	866.03	847.05	18.99	45.614	
4,400.00	4,398.29	4,481.90	4,479.07	9.70	9.87	-141.16	65.21	-818.32	863.25	843.83	19.42	44.448	
4,500.00	4,498.01	4,581.86	4,578.57	9.93	10.11	-141.19	69.11	-809.58	860.47	840.61	19.86	43.328	
4,600.00	4,597.73	4,681.82	4,678.08	10.16	10.34	-141.22	73.00	-800.85	857.69	837.39	20.30	42.254	
4,700.00	4,697.45	4,781.78	4,777.58	10.39	10.57	-141.25	76.90	-792.11	854.91	834.17	20.74	41.221	
4,800.00	4,797.17	4,881.74	4,877.08	10.62	10.81	-141.28	80.80	-783.38	852.13	830.95	21.18	40.228	
4,900.00	4,896.89	4,981.70	4,976.58	10.85	11.05	-141.31	84.69	-774.64	849.35	827.72	21.63	39.273	
5,000.00	4,996.62	5,081.66	5,076.08	11.08	11.29	-141.34	88.59	-765.91	846.57	824.50	22.07	38.354	

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 7H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,096.34	5,181.62	5,175.58	11.31	11.53	-141.37	92.48	-757.17	843.79	821.27	22.52	37.469	
5,200.00	5,196.06	5,281.58	5,275.09	11.55	11.77	-141.41	96.38	-748.44	841.01	818.04	22.97	36.617	
5,300.00	5,295.78	5,381.54	5,374.59	11.78	12.01	-141.44	100.28	-739.70	838.23	814.81	23.42	35.795	
5,400.00	5,395.50	5,481.50	5,474.09	12.02	12.26	-141.47	104.17	-730.97	835.45	811.58	23.87	35.003	
5,500.00	5,495.22	5,581.46	5,573.59	12.25	12.50	-141.50	108.07	-722.24	832.67	808.35	24.32	34.239	
5,600.00	5,594.94	5,681.42	5,673.09	12.49	12.75	-141.53	111.97	-713.50	829.89	805.12	24.77	33.501	
5,700.00	5,694.66	5,781.38	5,772.59	12.73	13.00	-141.57	115.86	-704.77	827.11	801.89	25.23	32.789	
5,800.00	5,794.39	5,881.34	5,872.10	12.96	13.25	-141.60	119.76	-696.03	824.34	798.66	25.68	32.100	
5,900.00	5,894.11	5,981.30	5,971.60	13.20	13.50	-141.63	123.65	-687.30	821.56	795.42	26.14	31.435	
6,000.00	5,993.83	6,081.26	6,071.10	13.44	13.75	-141.66	127.55	-678.56	818.78	792.19	26.59	30.791	
6,100.00	6,093.55	6,181.22	6,170.60	13.68	14.00	-141.70	131.45	-669.83	816.00	788.96	27.05	30.169	
6,200.00	6,193.27	6,281.18	6,270.10	13.92	14.25	-141.73	135.34	-661.09	813.23	785.72	27.51	29.566	
6,300.00	6,292.99	6,381.14	6,369.60	14.16	14.50	-141.76	139.24	-652.36	810.45	782.49	27.96	28.982	
6,400.00	6,392.71	6,481.10	6,469.11	14.40	14.76	-141.80	143.14	-643.62	807.67	779.25	28.42	28.417	
6,500.00	6,492.44	6,581.06	6,568.61	14.64	15.01	-141.83	147.03	-634.89	804.90	776.02	28.88	27.869	
6,600.00	6,592.16	6,681.02	6,668.11	14.89	15.26	-141.87	150.93	-626.15	802.12	772.78	29.34	27.338	
6,700.00	6,691.88	6,780.99	6,767.61	15.13	15.52	-141.90	154.82	-617.42	799.35	769.55	29.80	26.822	
6,800.00	6,791.60	6,880.95	6,867.11	15.37	15.77	-141.94	158.72	-608.68	796.57	766.31	30.26	26.322	
6,900.00	6,891.32	6,980.91	6,966.61	15.61	16.03	-141.97	162.62	-599.95	793.80	763.07	30.72	25.836	
7,000.00	6,991.04	7,080.87	7,066.12	15.86	16.29	-142.01	166.51	-591.21	791.02	759.84	31.19	25.365	
7,100.00	7,090.76	7,180.83	7,165.62	16.10	16.54	-142.04	170.41	-582.48	788.25	756.60	31.65	24.906	
7,200.00	7,190.48	7,280.79	7,265.12	16.34	16.80	-142.08	174.31	-573.74	785.47	753.36	32.11	24.461	
7,300.00	7,290.21	7,380.75	7,364.62	16.59	17.06	-142.12	178.20	-565.01	782.70	750.13	32.57	24.028	
7,400.00	7,389.93	7,480.71	7,464.12	16.83	17.32	-142.15	182.10	-556.27	779.93	746.89	33.04	23.607	
7,500.00	7,489.65	7,580.67	7,563.62	17.07	17.58	-142.19	186.00	-547.54	777.15	743.65	33.50	23.198	
7,600.00	7,589.37	7,680.63	7,663.13	17.32	17.83	-142.23	189.89	-538.80	774.38	740.42	33.97	22.799	
7,700.00	7,689.09	7,780.59	7,762.63	17.56	18.09	-142.26	193.79	-530.07	771.61	737.18	34.43	22.411	
7,800.00	7,788.81	7,880.55	7,862.13	17.81	18.35	-142.30	197.68	-521.33	768.84	733.94	34.89	22.033	
7,900.00	7,888.53	7,980.51	7,961.63	18.05	18.61	-142.34	201.58	-512.60	766.07	730.71	35.36	21.665	
8,000.00	7,988.26	8,080.47	8,061.13	18.30	18.87	-142.38	205.48	-503.86	763.29	727.47	35.83	21.306	
8,100.00	8,087.98	8,180.43	8,160.63	18.55	19.13	-142.41	209.37	-495.13	760.52	724.23	36.29	20.956	
8,200.00	8,187.70	8,280.39	8,260.14	18.79	19.40	-142.45	213.27	-486.39	757.75	721.00	36.76	20.615	
8,300.00	8,287.42	8,380.35	8,359.64	19.04	19.66	-142.49	217.17	-477.66	754.98	717.76	37.22	20.283	
8,400.00	8,387.14	8,480.31	8,459.14	19.28	19.92	-142.53	221.06	-468.92	752.21	714.52	37.69	19.959	
8,500.00	8,486.86	8,580.27	8,558.64	19.53	20.18	-142.57	224.96	-460.19	749.44	711.29	38.16	19.642	
8,600.00	8,586.58	8,680.23	8,658.14	19.78	20.44	-142.61	228.85	-451.45	746.67	708.05	38.62	19.333	
8,700.00	8,686.30	8,780.19	8,757.64	20.02	20.70	-142.65	232.75	-442.72	743.90	704.81	39.09	19.031	
8,800.00	8,786.03	8,880.15	8,857.15	20.27	20.97	-142.69	236.65	-433.98	741.14	701.58	39.56	18.736	
8,900.00	8,885.75	8,980.11	8,956.65	20.52	21.23	-142.73	240.54	-425.25	738.37	698.34	40.02	18.449	
9,000.00	8,985.47	9,080.07	9,056.15	20.76	21.49	-142.77	244.44	-416.51	735.60	695.11	40.49	18.167	
9,100.00	9,085.19	9,180.03	9,155.65	21.01	21.75	-142.81	248.34	-407.78	732.83	691.87	40.96	17.892	
9,200.00	9,184.91	9,279.99	9,255.15	21.26	22.02	-142.86	252.23	-399.04	730.06	688.64	41.43	17.623	
9,300.00	9,284.63	9,379.95	9,354.65	21.51	22.28	-142.90	256.13	-390.31	727.30	685.40	41.89	17.361	
9,400.00	9,384.35	9,479.91	9,454.16	21.75	22.54	-142.94	260.02	-381.57	724.53	682.17	42.36	17.104	
9,500.00	9,484.08	9,579.87	9,553.66	22.00	22.81	-142.98	263.92	-372.84	721.77	678.94	42.83	16.852	
9,600.00	9,583.80	9,679.83	9,653.16	22.25	23.07	-143.02	267.82	-364.10	719.00	675.70	43.30	16.606	
9,700.00	9,683.52	9,779.79	9,752.66	22.50	23.34	-143.07	271.71	-355.37	716.23	672.47	43.77	16.365	
9,800.00	9,783.24	9,879.75	9,852.16	22.75	23.60	-143.11	275.61	-346.63	713.47	669.24	44.23	16.129	
9,900.00	9,882.96	9,979.71	9,951.66	23.00	23.86	-143.16	279.51	-337.90	710.71	666.00	44.70	15.898	
10,000.00	9,982.68	10,079.68	10,051.17	23.24	24.13	-143.20	283.40	-329.16	707.94	662.77	45.17	15.672	
10,100.00	10,082.40	10,179.64	10,150.67	23.49	24.39	-143.24	287.30	-320.43	705.18	659.54	45.64	15.451	
10,200.00	10,182.13	10,279.60	10,250.17	23.74	24.66	-143.29	291.19	-311.69	702.42	656.31	46.11	15.234	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 7H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,300.00	10,281.85	10,379.56	10,349.67	23.99	24.92	-143.33	295.09	-302.96	699.65	653.08	46.58	15.021	
10,400.00	10,381.57	10,479.52	10,449.17	24.24	25.19	-143.38	298.99	-294.22	696.89	649.84	47.05	14.813	
10,500.00	10,481.29	10,579.48	10,548.67	24.49	25.45	-143.43	302.88	-285.49	694.13	646.61	47.52	14.609	
10,600.00	10,581.01	10,679.44	10,648.18	24.74	25.72	-143.47	306.78	-276.75	691.37	643.38	47.98	14.408	
10,700.00	10,680.73	10,769.85	10,738.24	24.98	25.91	-143.54	310.04	-269.45	689.27	640.86	48.41	14.237	
10,792.09	10,772.57	10,852.81	10,820.97	25.21	26.07	-143.64	312.52	-263.89	688.62	639.83	48.79	14.113	
10,800.00	10,780.45	10,859.93	10,828.07	25.23	26.09	-143.65	312.71	-263.47	688.62	639.79	48.82	14.104	
10,900.00	10,880.24	10,950.00	10,918.00	25.42	26.26	-143.76	314.80	-258.77	688.59	639.41	49.18	14.002	
10,924.50	10,904.71	10,972.07	10,940.04	25.47	26.30	-143.79	315.23	-257.82	688.59	639.32	49.26	13.978	CC
11,000.00	10,980.13	11,040.07	11,007.99	25.61	26.42	-143.85	316.32	-255.37	688.60	639.08	49.52	13.905	
11,100.00	11,080.09	11,130.14	11,098.03	25.78	26.58	-143.90	317.26	-253.26	688.64	638.79	49.85	13.813	
11,200.00	11,180.08	11,220.21	11,188.09	25.96	26.73	-143.93	317.62	-252.44	688.71	638.54	50.18	13.726	
11,219.92	11,200.00	11,238.82	11,206.70	25.99	26.77	-90.61	317.63	-252.43	688.73	638.49	50.24	13.708	
11,300.00	11,280.08	11,318.90	11,286.78	26.14	26.92	-90.61	317.63	-252.43	688.73	638.17	50.56	13.623	
11,400.00	11,380.08	11,418.90	11,386.78	26.35	27.12	-90.61	317.63	-252.43	688.73	637.75	50.98	13.509	
11,500.00	11,480.08	11,518.90	11,486.78	26.56	27.32	-90.61	317.63	-252.43	688.73	637.32	51.41	13.398	
11,600.00	11,580.08	11,618.90	11,586.78	26.77	27.52	-90.61	317.63	-252.43	688.73	636.90	51.83	13.288	
11,700.00	11,680.08	11,718.90	11,686.78	26.97	27.72	-90.61	317.63	-252.43	688.73	636.47	52.25	13.180	
11,800.00	11,780.08	11,818.90	11,786.78	27.18	27.92	-90.61	317.63	-252.43	688.73	636.05	52.68	13.074	
11,900.00	11,880.08	11,918.90	11,886.78	27.39	28.12	-90.61	317.63	-252.43	688.73	635.62	53.11	12.969	
12,000.00	11,980.08	12,018.90	11,986.78	27.60	28.32	-90.61	317.63	-252.43	688.73	635.20	53.53	12.866	
12,100.00	12,080.08	12,118.90	12,086.78	27.81	28.53	-90.61	317.63	-252.43	688.73	634.77	53.96	12.764	
12,200.00	12,180.08	12,218.90	12,186.78	28.02	28.73	-90.61	317.63	-252.43	688.73	634.34	54.38	12.664	
12,240.96	12,221.04	12,259.86	12,227.74	28.11	28.81	-90.61	317.63	-252.43	688.73	634.17	54.56	12.623	
12,250.00	12,230.08	12,268.90	12,236.78	28.13	28.83	89.39	317.63	-252.43	688.73	634.13	54.60	12.615	
12,300.00	12,279.97	12,318.79	12,286.67	28.20	28.93	89.64	317.63	-252.43	688.70	633.91	54.79	12.570	
12,333.37	12,313.05	12,351.87	12,319.75	28.25	29.00	90.00	317.56	-252.43	688.69	633.77	54.92	12.540	
12,350.00	12,329.42	12,368.35	12,336.23	28.27	29.02	90.20	317.08	-252.43	688.69	633.72	54.97	12.528	
12,400.00	12,378.04	12,418.35	12,386.02	28.33	29.10	90.80	312.70	-252.43	688.76	633.63	55.13	12.493	
12,450.00	12,425.47	12,469.00	12,435.87	28.38	29.17	91.40	303.87	-252.43	688.90	633.63	55.27	12.465	
12,500.00	12,471.34	12,520.33	12,485.40	28.42	29.23	91.99	290.46	-252.43	689.11	633.73	55.38	12.443	
12,550.00	12,515.31	12,572.34	12,534.16	28.45	29.28	92.57	272.40	-252.43	689.40	633.92	55.48	12.427	
12,600.00	12,557.04	12,625.06	12,581.71	28.47	29.33	93.13	249.67	-252.43	689.74	634.19	55.55	12.416	
12,650.00	12,596.21	12,678.48	12,627.55	28.49	29.36	93.68	222.27	-252.43	690.13	634.52	55.61	12.409	
12,700.00	12,632.52	12,732.61	12,671.18	28.50	29.39	94.19	190.29	-252.43	690.56	634.90	55.67	12.405	
12,750.00	12,665.71	12,787.41	12,712.10	28.52	29.42	94.68	153.86	-252.43	691.02	635.30	55.72	12.402	
12,800.00	12,695.51	12,842.87	12,749.77	28.53	29.45	95.13	113.18	-252.43	691.49	635.71	55.77	12.398	
12,850.00	12,721.69	12,898.95	12,783.68	28.54	29.47	95.53	68.54	-252.43	691.94	636.10	55.85	12.390	
12,900.00	12,744.07	12,955.61	12,813.34	28.55	29.50	95.90	20.30	-252.43	692.38	636.44	55.94	12.377	
12,950.00	12,762.47	13,012.78	12,838.30	28.58	29.54	96.21	-31.11	-252.43	692.78	636.70	56.07	12.355	
13,000.00	12,776.75	13,070.40	12,858.15	28.62	29.59	96.47	-85.18	-252.43	693.12	636.87	56.25	12.323	
13,050.00	12,786.79	13,128.39	12,872.54	28.68	29.67	96.67	-141.33	-252.43	693.40	636.93	56.47	12.280	
13,100.00	12,792.53	13,186.66	12,881.21	28.77	29.77	96.82	-198.92	-252.43	693.60	636.86	56.74	12.224	
13,140.96	12,794.00	13,234.53	12,883.93	28.87	29.87	96.89	-246.70	-252.43	693.70	636.70	57.00	12.170	
13,200.00	12,794.00	13,294.83	12,884.00	29.03	30.04	96.90	-307.00	-252.43	693.71	636.33	57.38	12.090	
13,300.00	12,794.00	13,394.83	12,884.00	29.39	30.39	96.90	-407.00	-252.43	693.71	635.56	58.15	11.929	
13,400.00	12,794.00	13,494.83	12,884.00	29.84	30.83	96.90	-507.00	-252.43	693.71	634.62	59.09	11.740	
13,500.00	12,794.00	13,594.83	12,884.00	30.38	31.35	96.90	-607.00	-252.43	693.71	633.52	60.19	11.525	
13,600.00	12,794.00	13,694.83	12,884.00	30.99	31.95	96.90	-707.00	-252.43	693.71	632.26	61.45	11.290	
13,700.00	12,794.00	13,794.83	12,884.00	31.67	32.63	96.90	-807.00	-252.43	693.71	630.87	62.84	11.039	
13,800.00	12,794.00	13,894.83	12,884.00	32.42	33.37	96.90	-907.00	-252.43	693.71	629.34	64.37	10.777	
13,900.00	12,794.00	13,994.83	12,884.00	33.24	34.18	96.90	-1,007.00	-252.43	693.71	627.68	66.03	10.507	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 7H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,000.00	12,794.00	14,094.83	12,884.00	34.11	35.05	96.90	-1,107.00	-252.43	693.71	625.91	67.80	10.232	
14,100.00	12,794.00	14,194.83	12,884.00	35.03	35.97	96.90	-1,207.00	-252.43	693.71	624.04	69.67	9.957	
14,200.00	12,794.00	14,294.83	12,884.00	36.01	36.93	96.90	-1,307.00	-252.43	693.71	622.06	71.65	9.682	
14,300.00	12,794.00	14,394.83	12,884.00	37.03	37.95	96.90	-1,407.00	-252.43	693.71	619.99	73.71	9.411	
14,400.00	12,794.00	14,494.83	12,884.00	38.10	39.01	96.90	-1,507.00	-252.43	693.71	617.85	75.86	9.144	
14,500.00	12,794.00	14,594.83	12,884.00	39.20	40.10	96.90	-1,607.00	-252.43	693.71	615.62	78.09	8.884	
14,600.00	12,794.00	14,694.83	12,884.00	40.34	41.23	96.90	-1,707.00	-252.43	693.71	613.33	80.38	8.630	
14,700.00	12,794.00	14,794.83	12,884.00	41.52	42.40	96.90	-1,807.00	-252.43	693.71	610.97	82.74	8.384	
14,800.00	12,794.00	14,894.83	12,884.00	42.72	43.59	96.90	-1,907.00	-252.43	693.71	608.55	85.16	8.146	
14,900.00	12,794.00	14,994.83	12,884.00	43.95	44.81	96.90	-2,007.00	-252.43	693.71	606.08	87.63	7.916	
15,000.00	12,794.00	15,094.83	12,884.00	45.21	46.06	96.90	-2,107.00	-252.43	693.71	603.56	90.15	7.695	
15,100.00	12,794.00	15,194.83	12,884.00	46.49	47.33	96.90	-2,207.00	-252.43	693.71	600.99	92.72	7.482	
15,200.00	12,794.00	15,294.83	12,884.00	47.79	48.62	96.90	-2,307.00	-252.43	693.71	598.38	95.33	7.277	
15,300.00	12,794.00	15,394.83	12,884.00	49.11	49.94	96.90	-2,407.00	-252.43	693.71	595.74	97.97	7.081	
15,400.00	12,794.00	15,494.83	12,884.00	50.45	51.27	96.90	-2,507.00	-252.43	693.71	593.05	100.65	6.892	
15,500.00	12,794.00	15,594.83	12,884.00	51.81	52.62	96.90	-2,607.00	-252.43	693.71	590.34	103.37	6.711	
15,600.00	12,794.00	15,694.83	12,884.00	53.18	53.98	96.90	-2,707.00	-252.43	693.71	587.60	106.11	6.537	
15,700.00	12,794.00	15,794.83	12,884.00	54.57	55.36	96.90	-2,807.00	-252.43	693.71	584.82	108.89	6.371	
15,800.00	12,794.00	15,894.83	12,884.00	55.97	56.75	96.90	-2,907.00	-252.43	693.71	582.03	111.68	6.211	
15,900.00	12,794.00	15,994.83	12,884.00	57.38	58.15	96.90	-3,007.00	-252.43	693.71	579.20	114.51	6.058	
16,000.00	12,794.00	16,094.83	12,884.00	58.80	59.57	96.90	-3,107.00	-252.43	693.71	576.36	117.35	5.911	
16,100.00	12,794.00	16,194.83	12,884.00	60.24	61.00	96.90	-3,207.00	-252.43	693.71	573.49	120.22	5.771	
16,200.00	12,794.00	16,294.83	12,884.00	61.68	62.44	96.90	-3,307.00	-252.43	693.71	570.61	123.10	5.635	
16,300.00	12,794.00	16,394.83	12,884.00	63.13	63.88	96.90	-3,407.00	-252.43	693.71	567.71	126.00	5.506	
16,400.00	12,794.00	16,494.83	12,884.00	64.60	65.34	96.90	-3,507.00	-252.43	693.71	564.79	128.92	5.381	
16,500.00	12,794.00	16,594.83	12,884.00	66.07	66.80	96.90	-3,607.00	-252.43	693.71	561.86	131.85	5.261	
16,600.00	12,794.00	16,694.83	12,884.00	67.55	68.27	96.90	-3,707.00	-252.43	693.71	558.91	134.80	5.146	
16,700.00	12,794.00	16,794.83	12,884.00	69.03	69.75	96.90	-3,807.00	-252.43	693.71	555.95	137.76	5.036	
16,800.00	12,794.00	16,894.83	12,884.00	70.52	71.24	96.90	-3,907.00	-252.43	693.71	552.97	140.74	4.929	
16,900.00	12,794.00	16,994.83	12,884.00	72.02	72.73	96.90	-4,007.00	-252.43	693.71	549.99	143.72	4.827	
17,000.00	12,794.00	17,094.83	12,884.00	73.52	74.23	96.90	-4,107.00	-252.43	693.71	546.99	146.72	4.728	
17,100.00	12,794.00	17,194.83	12,884.00	75.03	75.73	96.90	-4,207.00	-252.43	693.71	543.98	149.73	4.633	
17,200.00	12,794.00	17,294.83	12,884.00	76.55	77.24	96.90	-4,307.00	-252.43	693.71	540.96	152.75	4.542	
17,300.00	12,794.00	17,394.83	12,884.00	78.06	78.76	96.90	-4,407.00	-252.43	693.71	537.93	155.78	4.453	
17,400.00	12,794.00	17,494.83	12,884.00	79.59	80.27	96.90	-4,507.00	-252.43	693.71	534.90	158.81	4.368	
17,500.00	12,794.00	17,594.83	12,884.00	81.12	81.80	96.90	-4,607.00	-252.43	693.71	531.85	161.86	4.286	
17,600.00	12,794.00	17,694.83	12,884.00	82.65	83.32	96.90	-4,707.00	-252.43	693.71	528.80	164.91	4.207	
17,700.00	12,794.00	17,794.83	12,884.00	84.18	84.86	96.90	-4,807.00	-252.43	693.71	525.74	167.97	4.130	
17,800.00	12,794.00	17,894.83	12,884.00	85.72	86.39	96.90	-4,907.00	-252.43	693.71	522.67	171.04	4.056	
17,900.00	12,794.00	17,994.83	12,884.00	87.27	87.93	96.90	-5,007.00	-252.43	693.71	519.60	174.11	3.984	
18,000.00	12,794.00	18,094.83	12,884.00	88.81	89.47	96.90	-5,107.00	-252.43	693.71	516.52	177.19	3.915	
18,100.00	12,794.00	18,194.83	12,884.00	90.36	91.02	96.90	-5,207.00	-252.43	693.71	513.43	180.28	3.848	
18,200.00	12,794.00	18,294.83	12,884.00	91.91	92.57	96.90	-5,307.00	-252.43	693.71	510.34	183.37	3.783	
18,300.00	12,794.00	18,394.83	12,884.00	93.47	94.12	96.90	-5,407.00	-252.43	693.71	507.25	186.46	3.720	
18,400.00	12,794.00	18,494.83	12,884.00	95.03	95.67	96.90	-5,507.00	-252.43	693.71	504.14	189.57	3.659	
18,500.00	12,794.00	18,594.83	12,884.00	96.59	97.23	96.90	-5,607.00	-252.43	693.71	501.04	192.67	3.600	
18,600.00	12,794.00	18,694.83	12,884.00	98.15	98.79	96.90	-5,707.00	-252.43	693.71	497.93	195.78	3.543	
18,700.00	12,794.00	18,794.83	12,884.00	99.71	100.35	96.90	-5,807.00	-252.43	693.71	494.81	198.90	3.488	
18,800.00	12,794.00	18,894.83	12,884.00	101.28	101.91	96.90	-5,907.00	-252.43	693.71	491.69	202.02	3.434	
18,900.00	12,794.00	18,994.83	12,884.00	102.85	103.48	96.90	-6,007.00	-252.43	693.71	488.57	205.14	3.382	
19,000.00	12,794.00	19,094.83	12,884.00	104.42	105.05	96.90	-6,107.00	-252.43	693.71	485.44	208.27	3.331	
19,100.00	12,794.00	19,194.83	12,884.00	105.99	106.62	96.90	-6,207.00	-252.43	693.71	482.31	211.40	3.281	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 7H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,200.00	12,794.00	19,294.83	12,884.00	107.57	108.19	96.90	-6,307.00	-252.43	693.71	479.17	214.54	3.233	
19,300.00	12,794.00	19,394.83	12,884.00	109.15	109.76	96.90	-6,407.00	-252.43	693.71	476.03	217.68	3.187	
19,400.00	12,794.00	19,494.83	12,884.00	110.72	111.34	96.90	-6,507.00	-252.43	693.71	472.89	220.82	3.142	
19,500.00	12,794.00	19,594.83	12,884.00	112.30	112.91	96.90	-6,607.00	-252.43	693.71	469.74	223.96	3.097	
19,600.00	12,794.00	19,694.83	12,884.00	113.89	114.49	96.90	-6,707.00	-252.43	693.71	466.60	227.11	3.054	
19,700.00	12,794.00	19,794.83	12,884.00	115.47	116.07	96.90	-6,807.00	-252.43	693.71	463.45	230.26	3.013	
19,800.00	12,794.00	19,894.83	12,884.00	117.05	117.66	96.90	-6,907.00	-252.43	693.71	460.29	233.42	2.972	
19,900.00	12,794.00	19,994.83	12,884.00	118.64	119.24	96.90	-7,007.00	-252.43	693.71	457.14	236.57	2.932	
20,000.00	12,794.00	20,094.83	12,884.00	120.23	120.82	96.90	-7,107.00	-252.43	693.71	453.98	239.73	2.894	
20,100.00	12,794.00	20,194.83	12,884.00	121.81	122.41	96.90	-7,207.00	-252.43	693.71	450.82	242.89	2.856	
20,200.00	12,794.00	20,294.83	12,884.00	123.40	124.00	96.90	-7,307.00	-252.43	693.71	447.65	246.06	2.819	
20,300.00	12,794.00	20,394.83	12,884.00	124.99	125.58	96.90	-7,407.00	-252.43	693.71	444.49	249.22	2.784	
20,400.00	12,794.00	20,494.83	12,884.00	126.59	127.17	96.90	-7,507.00	-252.43	693.71	441.32	252.39	2.749	
20,500.00	12,794.00	20,594.83	12,884.00	128.18	128.76	96.90	-7,607.00	-252.43	693.71	438.15	255.56	2.714	
20,600.00	12,794.00	20,694.83	12,884.00	129.77	130.36	96.90	-7,707.00	-252.43	693.71	434.98	258.73	2.681	
20,700.00	12,794.00	20,794.83	12,884.00	131.37	131.95	96.90	-7,807.00	-252.43	693.71	431.81	261.90	2.649	
20,800.00	12,794.00	20,894.83	12,884.00	132.96	133.54	96.90	-7,907.00	-252.43	693.71	428.63	265.08	2.617	
20,900.00	12,794.00	20,994.83	12,884.00	134.56	135.14	96.90	-8,007.00	-252.43	693.71	425.45	268.26	2.586	
21,000.00	12,794.00	21,094.83	12,884.00	136.16	136.73	96.90	-8,107.00	-252.43	693.71	422.27	271.44	2.556	
21,100.00	12,794.00	21,194.83	12,884.00	137.76	138.33	96.90	-8,207.00	-252.43	693.71	419.09	274.62	2.526	
21,200.00	12,794.00	21,294.83	12,884.00	139.35	139.93	96.90	-8,307.00	-252.43	693.71	415.91	277.80	2.497	
21,300.00	12,794.00	21,394.83	12,884.00	140.95	141.53	96.90	-8,407.00	-252.43	693.71	412.73	280.98	2.469	
21,400.00	12,794.00	21,494.83	12,884.00	142.56	143.13	96.90	-8,507.00	-252.43	693.71	409.54	284.17	2.441	
21,500.00	12,794.00	21,594.83	12,884.00	144.16	144.73	96.90	-8,607.00	-252.43	693.71	406.35	287.35	2.414	
21,600.00	12,794.00	21,694.83	12,884.00	145.76	146.33	96.90	-8,707.00	-252.43	693.71	403.17	290.54	2.388	
21,700.00	12,794.00	21,794.83	12,884.00	147.36	147.93	96.90	-8,807.00	-252.43	693.71	399.98	293.73	2.362	
21,800.00	12,794.00	21,894.83	12,884.00	148.97	149.53	96.90	-8,907.00	-252.43	693.71	396.79	296.92	2.336	
21,900.00	12,794.00	21,994.83	12,884.00	150.57	151.13	96.90	-9,007.00	-252.43	693.71	393.59	300.12	2.311	
22,000.00	12,794.00	22,094.83	12,884.00	152.18	152.74	96.90	-9,107.00	-252.43	693.71	390.40	303.31	2.287	
22,100.00	12,794.00	22,194.83	12,884.00	153.78	154.34	96.90	-9,207.00	-252.43	693.71	387.21	306.50	2.263	
22,200.00	12,794.00	22,294.83	12,884.00	155.39	155.94	96.90	-9,307.00	-252.43	693.71	384.01	309.70	2.240	
22,300.00	12,794.00	22,394.83	12,884.00	156.99	157.55	96.90	-9,407.00	-252.43	693.71	380.81	312.90	2.217	
22,400.00	12,794.00	22,494.83	12,884.00	158.60	159.16	96.90	-9,507.00	-252.43	693.71	377.62	316.09	2.195	
22,500.00	12,794.00	22,594.83	12,884.00	160.21	160.76	96.90	-9,607.00	-252.43	693.71	374.42	319.29	2.173	
22,600.00	12,794.00	22,694.83	12,884.00	161.82	162.37	96.90	-9,707.00	-252.43	693.71	371.22	322.49	2.151	
22,700.00	12,794.00	22,794.83	12,884.00	163.43	163.98	96.90	-9,807.00	-252.43	693.71	368.02	325.69	2.130	
22,746.83	12,794.00	22,841.65	12,884.00	164.18	164.73	96.90	-9,853.82	-252.43	693.71	366.52	327.19	2.120	ES, SF

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 8H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.20	0.20	0.00	0.00	89.52	0.25	29.99	29.99				
100.00	100.00	100.20	100.20	0.08	0.08	89.52	0.25	29.99	29.99	29.82	0.17	177.436	
200.00	200.00	200.20	200.20	0.31	0.31	89.52	0.25	29.99	29.99	29.37	0.62	48.486	
300.00	300.00	300.20	300.20	0.53	0.53	89.52	0.25	29.99	29.99	28.92	1.07	28.079	
400.00	400.00	400.20	400.20	0.76	0.76	89.52	0.25	29.99	29.99	28.47	1.52	19.762	
500.00	500.00	500.20	500.20	0.98	0.98	89.52	0.25	29.99	29.99	28.02	1.97	15.246	
600.00	600.00	600.20	600.20	1.21	1.21	89.52	0.25	29.99	29.99	27.57	2.42	12.410	
700.00	700.00	700.20	700.20	1.43	1.43	89.52	0.25	29.99	29.99	27.12	2.87	10.464	
800.00	800.00	800.20	800.20	1.66	1.66	89.52	0.25	29.99	29.99	26.68	3.32	9.045	
900.00	900.00	900.20	900.20	1.88	1.88	89.52	0.25	29.99	29.99	26.23	3.77	7.965	
1,000.00	1,000.00	1,000.20	1,000.20	2.11	2.11	89.52	0.25	29.99	29.99	25.78	4.21	7.116	
1,100.00	1,100.00	1,100.20	1,100.20	2.33	2.33	89.52	0.25	29.99	29.99	25.33	4.66	6.430	
1,200.00	1,200.00	1,200.20	1,200.20	2.56	2.56	89.52	0.25	29.99	29.99	24.88	5.11	5.865	
1,300.00	1,300.00	1,300.20	1,300.20	2.78	2.78	89.52	0.25	29.99	29.99	24.43	5.56	5.391	
1,400.00	1,400.00	1,400.20	1,400.20	3.01	3.01	89.52	0.25	29.99	29.99	23.98	6.01	4.988	
1,500.00	1,500.00	1,500.20	1,500.20	3.23	3.23	89.52	0.25	29.99	29.99	23.53	6.46	4.641	
1,600.00	1,600.00	1,600.20	1,600.20	3.46	3.46	89.52	0.25	29.99	29.99	23.08	6.91	4.339	
1,700.00	1,700.00	1,700.20	1,700.20	3.68	3.68	89.52	0.25	29.99	29.99	22.63	7.36	4.074	
1,800.00	1,800.00	1,800.20	1,800.20	3.91	3.91	89.52	0.25	29.99	29.99	22.18	7.81	3.840	
1,900.00	1,900.00	1,900.20	1,900.20	4.13	4.13	89.52	0.25	29.99	29.99	21.73	8.26	3.631	
2,000.00	2,000.00	2,000.20	2,000.20	4.35	4.36	89.52	0.25	29.99	29.99	21.28	8.71	3.443	
2,100.00	2,100.00	2,100.20	2,100.20	4.58	4.58	89.52	0.25	29.99	29.99	20.83	9.16	3.274	
2,200.00	2,200.00	2,200.20	2,200.20	4.80	4.80	89.52	0.25	29.99	29.99	20.38	9.61	3.121	
2,300.00	2,300.00	2,300.20	2,300.20	5.03	5.03	89.52	0.25	29.99	29.99	19.93	10.06	2.982	
2,400.00	2,400.00	2,400.20	2,400.20	5.25	5.25	89.52	0.25	29.99	29.99	19.48	10.51	2.854	
2,500.00	2,500.00	2,500.20	2,500.20	5.48	5.48	89.52	0.25	29.99	29.99	19.03	10.96	2.737	
2,600.00	2,600.00	2,600.20	2,600.20	5.70	5.70	89.52	0.25	29.99	29.99	18.58	11.41	2.629	
2,700.00	2,700.00	2,700.20	2,700.20	5.93	5.93	89.52	0.25	29.99	29.99	18.13	11.86	2.529	
2,800.00	2,800.00	2,800.20	2,800.20	6.15	6.15	89.52	0.25	29.99	29.99	17.68	12.31	2.437	
2,900.00	2,900.00	2,900.20	2,900.20	6.38	6.38	89.52	0.25	29.99	29.99	17.24	12.76	2.351	
2,916.60	2,916.60	2,916.80	2,916.80	6.42	6.42	89.52	0.25	29.99	29.99	17.16	12.83	2.337 CC	
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	89.52	0.25	29.99	29.99	16.79	13.20	2.271 ES	
3,100.00	3,100.00	3,099.68	3,099.68	6.83	6.82	89.13	0.47	30.83	30.84	17.20	13.64	2.261	
3,200.00	3,200.00	3,199.11	3,199.07	7.05	7.02	88.09	1.11	33.34	33.38	19.31	14.06	2.373	
3,300.00	3,300.00	3,298.41	3,298.28	7.28	7.23	86.66	2.19	37.51	37.63	23.14	14.48	2.598	
3,400.00	3,400.00	3,397.54	3,397.22	7.50	7.43	85.13	3.69	43.34	43.60	28.70	14.90	2.927	
3,500.00	3,500.00	3,496.43	3,495.81	7.73	7.65	83.69	5.62	50.80	51.30	35.99	15.31	3.351	
3,600.00	3,600.00	3,595.10	3,594.03	7.95	7.86	29.47	7.96	59.89	59.97	44.27	15.71	3.818	
3,700.00	3,699.96	3,693.60	3,691.91	8.16	8.08	29.32	10.72	70.59	68.84	52.74	16.10	4.276	
3,800.00	3,799.86	3,791.94	3,789.42	8.38	8.31	29.66	13.90	82.90	77.89	61.40	16.48	4.725	
3,900.00	3,899.68	3,890.87	3,887.32	8.59	8.55	30.36	17.46	96.70	86.90	70.01	16.89	5.145	
3,927.83	3,927.43	3,918.60	3,914.75	8.65	8.61	30.63	18.47	100.62	89.21	72.20	17.01	5.244	
4,000.00	3,999.40	3,990.52	3,985.91	8.81	8.79	31.35	21.09	110.79	95.03	77.71	17.32	5.487	
4,100.00	4,099.12	4,090.19	4,084.50	9.03	9.04	32.20	24.73	124.88	103.13	85.38	17.75	5.809	
4,200.00	4,198.84	4,189.85	4,183.09	9.26	9.29	32.93	28.36	138.98	111.24	93.06	18.19	6.116	
4,300.00	4,298.57	4,289.51	4,281.68	9.48	9.55	33.57	32.00	153.07	119.38	100.75	18.63	6.409	
4,400.00	4,398.29	4,389.17	4,380.27	9.70	9.81	34.12	35.63	167.16	127.52	108.45	19.07	6.688	
4,500.00	4,498.01	4,488.83	4,478.87	9.93	10.08	34.61	39.27	181.25	135.67	116.16	19.51	6.954	
4,600.00	4,597.73	4,588.49	4,577.46	10.16	10.35	35.04	42.90	195.35	143.84	123.88	19.96	7.207	
4,700.00	4,697.45	4,688.15	4,676.05	10.39	10.62	35.42	46.54	209.44	152.00	131.60	20.40	7.450	
4,800.00	4,797.17	4,787.81	4,774.64	10.62	10.89	35.76	50.17	223.53	160.18	139.33	20.85	7.681	
4,900.00	4,896.89	4,887.47	4,873.24	10.85	11.17	36.08	53.81	237.62	168.36	147.06	21.31	7.902	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 8H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.00	4,996.62	4,987.13	4,971.83	11.08	11.45	36.36	57.44	251.72	176.55	154.79	21.76	8.114	
5,100.00	5,096.34	5,086.79	5,070.42	11.31	11.74	36.62	61.08	265.81	184.74	162.52	22.21	8.316	
5,200.00	5,196.06	5,186.45	5,169.01	11.55	12.02	36.85	64.71	279.90	192.93	170.26	22.67	8.510	
5,300.00	5,295.78	5,286.12	5,267.61	11.78	12.31	37.07	68.35	293.99	201.12	178.00	23.13	8.695	
5,400.00	5,395.50	5,385.78	5,366.20	12.02	12.59	37.27	71.98	308.09	209.32	185.73	23.59	8.874	
5,500.00	5,495.22	5,485.44	5,464.79	12.25	12.88	37.45	75.62	322.18	217.52	193.47	24.05	9.044	
5,600.00	5,594.94	5,585.10	5,563.38	12.49	13.18	37.62	79.25	336.27	225.73	201.21	24.51	9.208	
5,700.00	5,694.66	5,684.76	5,661.98	12.73	13.47	37.78	82.89	350.36	233.93	208.95	24.98	9.366	
5,800.00	5,794.39	5,784.42	5,760.57	12.96	13.76	37.93	86.52	364.46	242.14	216.70	25.44	9.517	
5,900.00	5,894.11	5,884.08	5,859.16	13.20	14.06	38.07	90.16	378.55	250.35	224.44	25.91	9.663	
6,000.00	5,993.83	5,983.74	5,957.75	13.44	14.36	38.20	93.79	392.64	258.55	232.18	26.37	9.803	
6,100.00	6,093.55	6,083.40	6,056.35	13.68	14.66	38.32	97.43	406.73	266.77	239.92	26.84	9.938	
6,200.00	6,193.27	6,183.06	6,154.94	13.92	14.96	38.44	101.06	420.82	274.98	247.67	27.31	10.068	
6,300.00	6,292.99	6,282.72	6,253.53	14.16	15.26	38.54	104.70	434.92	283.19	255.41	27.78	10.194	
6,400.00	6,392.71	6,382.38	6,352.12	14.40	15.56	38.65	108.33	449.01	291.40	263.15	28.25	10.315	
6,500.00	6,492.44	6,482.05	6,450.72	14.64	15.86	38.74	111.97	463.10	299.62	270.89	28.72	10.431	
6,600.00	6,592.16	6,581.71	6,549.31	14.89	16.16	38.83	115.60	477.19	307.83	278.64	29.19	10.544	
6,700.00	6,691.88	6,681.37	6,647.90	15.13	16.47	38.92	119.24	491.29	316.05	286.38	29.67	10.653	
6,800.00	6,791.60	6,781.03	6,746.49	15.37	16.77	39.00	122.87	505.38	324.26	294.12	30.14	10.758	
6,900.00	6,891.32	6,880.69	6,845.09	15.61	17.08	39.08	126.51	519.47	332.48	301.87	30.62	10.860	
7,000.00	6,991.04	6,980.35	6,943.68	15.86	17.39	39.15	130.14	533.56	340.70	309.61	31.09	10.959	
7,100.00	7,090.76	7,080.01	7,042.27	16.10	17.69	39.22	133.78	547.66	348.92	317.35	31.57	11.054	
7,200.00	7,190.48	7,179.67	7,140.86	16.34	18.00	39.29	137.41	561.75	357.14	325.10	32.04	11.146	
7,300.00	7,290.21	7,279.33	7,239.46	16.59	18.31	39.36	141.05	575.84	365.36	332.84	32.52	11.236	
7,400.00	7,389.93	7,378.99	7,338.05	16.83	18.62	39.42	144.68	589.93	373.58	340.58	33.00	11.322	
7,500.00	7,489.65	7,478.65	7,436.64	17.07	18.93	39.48	148.32	604.03	381.80	348.32	33.47	11.406	
7,600.00	7,589.37	7,578.31	7,535.23	17.32	19.24	39.53	151.95	618.12	390.02	356.07	33.95	11.488	
7,700.00	7,689.09	7,677.98	7,633.83	17.56	19.55	39.59	155.59	632.21	398.24	363.81	34.43	11.567	
7,800.00	7,788.81	7,777.64	7,732.42	17.81	19.86	39.64	159.22	646.30	406.46	371.55	34.91	11.644	
7,900.00	7,888.53	7,877.30	7,831.01	18.05	20.17	39.69	162.86	660.40	414.68	379.29	35.39	11.718	
8,000.00	7,988.26	7,976.96	7,929.60	18.30	20.48	39.74	166.49	674.49	422.90	387.03	35.87	11.791	
8,100.00	8,087.98	8,076.62	8,028.20	18.55	20.79	39.78	170.13	688.58	431.12	394.78	36.35	11.861	
8,200.00	8,187.70	8,176.28	8,126.79	18.79	21.11	39.83	173.76	702.67	439.35	402.52	36.83	11.929	
8,300.00	8,287.42	8,275.94	8,225.38	19.04	21.42	39.87	177.40	716.77	447.57	410.26	37.31	11.996	
8,400.00	8,387.14	8,375.60	8,323.97	19.28	21.73	39.91	181.03	730.86	455.79	418.00	37.79	12.061	
8,500.00	8,486.86	8,475.26	8,422.57	19.53	22.04	39.95	184.67	744.95	464.02	425.74	38.27	12.124	
8,600.00	8,586.58	8,574.92	8,521.16	19.78	22.36	39.99	188.30	759.04	472.24	433.48	38.76	12.185	
8,700.00	8,686.30	8,674.58	8,619.75	20.02	22.67	40.03	191.94	773.14	480.46	441.22	39.24	12.245	
8,800.00	8,786.03	8,774.24	8,718.34	20.27	22.99	40.06	195.57	787.23	488.69	448.97	39.72	12.303	
8,900.00	8,885.75	8,873.91	8,816.93	20.52	23.30	40.10	199.21	801.32	496.91	456.71	40.20	12.360	
9,000.00	8,985.47	8,973.57	8,915.53	20.76	23.62	40.13	202.84	815.41	505.13	464.45	40.69	12.415	
9,100.00	9,085.19	9,073.23	9,014.12	21.01	23.93	40.16	206.48	829.50	513.36	472.19	41.17	12.469	
9,200.00	9,184.91	9,172.89	9,112.71	21.26	24.25	40.19	210.11	843.60	521.58	479.93	41.65	12.522	
9,300.00	9,284.63	9,272.55	9,211.30	21.51	24.56	40.22	213.75	857.69	529.81	487.67	42.14	12.573	
9,400.00	9,384.35	9,372.21	9,309.90	21.75	24.88	40.25	217.38	871.78	538.03	495.41	42.62	12.623	
9,500.00	9,484.08	9,471.87	9,408.49	22.00	25.20	40.28	221.02	885.87	546.26	503.15	43.11	12.672	
9,600.00	9,583.80	9,571.53	9,507.08	22.25	25.51	40.31	224.65	899.97	554.48	510.89	43.59	12.720	
9,700.00	9,683.52	9,671.19	9,605.67	22.50	25.83	40.34	228.29	914.06	562.71	518.63	44.08	12.766	
9,800.00	9,783.24	9,770.85	9,704.27	22.75	26.15	40.36	231.92	928.15	570.93	526.37	44.56	12.812	
9,900.00	9,882.96	9,870.51	9,802.86	23.00	26.46	40.39	235.56	942.24	579.16	534.11	45.05	12.856	
10,000.00	9,982.68	9,970.17	9,901.45	23.24	26.78	40.41	239.19	956.34	587.38	541.85	45.53	12.900	
10,100.00	10,082.40	10,069.83	10,000.04	23.49	27.10	40.44	242.83	970.43	595.61	549.59	46.02	12.942	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 8H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.00	10,182.13	10,169.50	10,098.64	23.74	27.41	40.46	246.46	984.52	603.83	557.33	46.51	12.984	
10,300.00	10,281.85	10,269.16	10,197.23	23.99	27.73	40.48	250.10	998.61	612.06	565.07	46.99	13.024	
10,400.00	10,381.57	10,368.82	10,295.82	24.24	28.05	40.51	253.73	1,012.71	620.29	572.81	47.48	13.064	
10,500.00	10,481.29	10,468.48	10,394.41	24.49	28.37	40.53	257.37	1,026.80	628.51	580.55	47.97	13.103	
10,600.00	10,581.01	10,571.68	10,496.52	24.74	28.68	40.55	261.11	1,041.30	636.65	588.18	48.47	13.135	
10,700.00	10,680.73	10,683.27	10,607.16	24.98	28.96	40.62	264.75	1,055.41	643.41	594.42	48.99	13.135	
10,792.09	10,772.57	10,786.24	10,709.48	25.21	29.19	40.74	267.63	1,066.57	647.99	598.55	49.44	13.105	
10,800.00	10,780.45	10,795.09	10,718.28	25.23	29.21	40.76	267.86	1,067.45	648.32	598.84	49.48	13.102	
10,900.00	10,880.24	10,907.05	10,829.76	25.42	29.44	40.91	270.42	1,077.40	652.14	602.23	49.91	13.065	
11,000.00	10,980.13	11,019.09	10,941.51	25.61	29.66	41.01	272.45	1,085.25	655.44	605.12	50.32	13.025	
11,100.00	11,080.09	11,131.22	11,053.48	25.78	29.87	41.05	273.92	1,090.98	658.20	607.49	50.71	12.980	
11,200.00	11,180.08	11,243.42	11,165.62	25.96	30.06	41.04	274.86	1,094.59	660.43	609.36	51.07	12.931	
11,219.92	11,200.00	11,265.78	11,187.97	25.99	30.10	94.34	274.98	1,095.06	660.81	609.67	51.14	12.921	
11,300.00	11,280.08	11,355.67	11,277.86	26.14	30.24	94.31	275.24	1,096.08	661.70	610.26	51.44	12.864	
11,400.00	11,380.08	11,458.09	11,380.28	26.35	30.41	94.31	275.25	1,096.12	661.73	609.89	51.84	12.765	
11,500.00	11,480.08	11,558.09	11,480.28	26.56	30.59	94.31	275.25	1,096.12	661.73	609.48	52.25	12.664	
11,600.00	11,580.08	11,658.09	11,580.28	26.77	30.76	94.31	275.25	1,096.12	661.73	609.07	52.67	12.565	
11,700.00	11,680.08	11,758.09	11,680.28	26.97	30.94	94.31	275.25	1,096.12	661.73	608.65	53.08	12.467	
11,800.00	11,780.08	11,858.09	11,780.28	27.18	31.12	94.31	275.25	1,096.12	661.73	608.24	53.49	12.370	
11,900.00	11,880.08	11,958.09	11,880.28	27.39	31.30	94.31	275.25	1,096.12	661.73	607.82	53.91	12.275	
12,000.00	11,980.08	12,058.09	11,980.28	27.60	31.48	94.31	275.25	1,096.12	661.73	607.41	54.32	12.181	
12,100.00	12,080.08	12,158.09	12,080.28	27.81	31.66	94.31	275.25	1,096.12	661.73	606.99	54.74	12.089	
12,200.00	12,180.08	12,258.09	12,180.28	28.02	31.84	94.31	275.25	1,096.12	661.73	606.58	55.16	11.997	
12,240.96	12,221.04	12,299.05	12,221.24	28.11	31.92	94.31	275.25	1,096.12	661.73	606.41	55.33	11.960	
12,250.00	12,230.08	12,308.09	12,230.28	28.13	31.93	-85.70	275.25	1,096.12	661.73	606.36	55.36	11.953	
12,300.00	12,279.97	12,357.99	12,280.17	28.20	32.02	-85.97	275.25	1,096.12	661.51	605.98	55.53	11.913	
12,350.00	12,329.42	12,406.88	12,329.07	28.27	32.11	-86.63	275.19	1,096.12	661.04	605.39	55.65	11.878	
12,400.00	12,378.04	12,453.24	12,375.35	28.33	32.18	-87.39	272.67	1,096.12	660.57	604.82	55.74	11.851	
12,450.00	12,425.47	12,500.00	12,421.66	28.38	32.24	-88.18	266.35	1,096.12	660.20	604.40	55.81	11.830	
12,500.00	12,471.34	12,547.98	12,468.49	28.42	32.29	-88.99	255.95	1,096.12	659.97	604.11	55.86	11.815	
12,550.00	12,515.31	12,596.45	12,514.74	28.45	32.34	-89.81	241.51	1,096.12	659.86	603.96	55.90	11.804	
12,561.77	12,525.34	12,607.97	12,525.54	28.45	32.35	-90.00	237.51	1,096.12	659.86	603.95	55.91	11.803	
12,600.00	12,557.04	12,645.72	12,560.34	28.47	32.39	-90.63	222.89	1,096.12	659.90	603.97	55.93	11.798	
12,650.00	12,596.21	12,695.84	12,604.91	28.49	32.42	-91.46	199.99	1,096.12	660.08	604.12	55.96	11.795	
12,700.00	12,632.52	12,746.85	12,648.04	28.50	32.45	-92.28	172.78	1,096.12	660.41	604.41	55.99	11.794	
12,750.00	12,665.71	12,798.80	12,689.29	28.52	32.48	-93.10	141.24	1,096.12	660.86	604.83	56.03	11.795	
12,800.00	12,695.51	12,851.71	12,728.20	28.53	32.50	-93.90	105.41	1,096.12	661.44	605.37	56.07	11.796	
12,850.00	12,721.69	12,905.62	12,764.27	28.54	32.52	-94.67	65.37	1,096.12	662.13	606.00	56.13	11.797	
12,900.00	12,744.07	12,960.53	12,796.98	28.55	32.55	-95.41	21.29	1,096.12	662.90	606.71	56.20	11.796	
12,950.00	12,762.47	13,016.45	12,825.80	28.58	32.58	-96.12	-26.60	1,096.12	663.74	607.46	56.28	11.794	
13,000.00	12,776.75	13,073.37	12,850.20	28.62	32.61	-96.78	-78.00	1,096.12	664.61	608.23	56.38	11.788	
13,050.00	12,786.79	13,131.25	12,869.66	28.68	32.67	-97.39	-132.48	1,096.12	665.48	608.98	56.51	11.777	
13,100.00	12,792.53	13,190.04	12,883.70	28.77	32.74	-97.94	-189.54	1,096.12	666.33	609.68	56.65	11.761	
13,140.96	12,794.00	13,238.83	12,890.86	28.87	32.81	-98.33	-237.79	1,096.12	666.98	610.18	56.80	11.743	
13,200.00	12,794.00	13,308.14	12,894.00	29.03	32.95	-98.60	-307.00	1,096.12	667.36	610.29	57.08	11.693	
13,300.00	12,794.00	13,408.14	12,894.00	29.39	33.21	-98.60	-407.00	1,096.12	667.36	609.62	57.75	11.557	
13,400.00	12,794.00	13,508.14	12,894.00	29.84	33.55	-98.60	-507.00	1,096.12	667.36	608.78	58.59	11.391	
13,500.00	12,794.00	13,608.14	12,894.00	30.38	33.97	-98.60	-607.00	1,096.12	667.36	607.77	59.59	11.198	
13,600.00	12,794.00	13,708.14	12,894.00	30.99	34.47	-98.60	-707.00	1,096.12	667.36	606.61	60.76	10.984	
13,700.00	12,794.00	13,808.14	12,894.00	31.67	35.05	-98.60	-807.00	1,096.12	667.36	605.30	62.07	10.752	
13,800.00	12,794.00	13,908.14	12,894.00	32.42	35.69	-98.60	-907.00	1,096.12	667.36	603.85	63.52	10.507	
13,900.00	12,794.00	14,008.14	12,894.00	33.24	36.40	-98.60	-1,007.00	1,096.12	667.36	602.27	65.09	10.253	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 8H - OH - Plan #1 — Offset Site Error: 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,000.00	12,794.00	14,108.14	12,894.00	34.11	37.17	-98.60	-1,107.00	1,096.12	667.36	600.57	66.79	9.992	
14,100.00	12,794.00	14,208.14	12,894.00	35.03	38.00	-98.60	-1,207.00	1,096.12	667.36	598.77	68.60	9.729	
14,200.00	12,794.00	14,308.14	12,894.00	36.01	38.88	-98.60	-1,307.00	1,096.12	667.36	596.86	70.51	9.465	
14,300.00	12,794.00	14,408.14	12,894.00	37.03	39.81	-98.60	-1,407.00	1,096.12	667.36	594.85	72.51	9.203	
14,400.00	12,794.00	14,508.14	12,894.00	38.10	40.79	-98.60	-1,507.00	1,096.12	667.36	592.76	74.61	8.945	
14,500.00	12,794.00	14,608.14	12,894.00	39.20	41.80	-98.60	-1,607.00	1,096.12	667.36	590.59	76.78	8.692	
14,600.00	12,794.00	14,708.14	12,894.00	40.34	42.86	-98.60	-1,707.00	1,096.12	667.36	588.34	79.02	8.445	
14,700.00	12,794.00	14,808.14	12,894.00	41.52	43.96	-98.60	-1,807.00	1,096.12	667.36	586.03	81.33	8.205	
14,800.00	12,794.00	14,908.14	12,894.00	42.72	45.08	-98.60	-1,907.00	1,096.12	667.36	583.66	83.71	7.972	
14,900.00	12,794.00	15,008.14	12,894.00	43.95	46.24	-98.60	-2,007.00	1,096.12	667.36	581.23	86.14	7.748	
15,000.00	12,794.00	15,108.14	12,894.00	45.21	47.43	-98.60	-2,107.00	1,096.12	667.36	578.74	88.62	7.531	
15,100.00	12,794.00	15,208.14	12,894.00	46.49	48.64	-98.60	-2,207.00	1,096.12	667.36	576.22	91.15	7.322	
15,200.00	12,794.00	15,308.14	12,894.00	47.79	49.87	-98.60	-2,307.00	1,096.12	667.36	573.64	93.72	7.121	
15,300.00	12,794.00	15,408.14	12,894.00	49.11	51.13	-98.60	-2,407.00	1,096.12	667.36	571.03	96.33	6.928	
15,400.00	12,794.00	15,508.14	12,894.00	50.45	52.41	-98.60	-2,507.00	1,096.12	667.36	568.38	98.99	6.742	
15,500.00	12,794.00	15,608.14	12,894.00	51.81	53.71	-98.60	-2,607.00	1,096.12	667.36	565.70	101.67	6.564	
15,600.00	12,794.00	15,708.14	12,894.00	53.18	55.03	-98.60	-2,707.00	1,096.12	667.36	562.98	104.38	6.393	
15,700.00	12,794.00	15,808.14	12,894.00	54.57	56.36	-98.60	-2,807.00	1,096.12	667.36	560.23	107.13	6.229	
15,800.00	12,794.00	15,908.14	12,894.00	55.97	57.71	-98.60	-2,907.00	1,096.12	667.36	557.46	109.90	6.072	
15,900.00	12,794.00	16,008.14	12,894.00	57.38	59.08	-98.60	-3,007.00	1,096.12	667.36	554.67	112.70	5.922	
16,000.00	12,794.00	16,108.14	12,894.00	58.80	60.45	-98.60	-3,107.00	1,096.12	667.36	551.85	115.52	5.777	
16,100.00	12,794.00	16,208.14	12,894.00	60.24	61.84	-98.60	-3,207.00	1,096.12	667.36	549.01	118.36	5.638	
16,200.00	12,794.00	16,308.14	12,894.00	61.68	63.24	-98.60	-3,307.00	1,096.12	667.36	546.14	121.22	5.505	
16,300.00	12,794.00	16,408.14	12,894.00	63.13	64.66	-98.60	-3,407.00	1,096.12	667.36	543.26	124.10	5.378	
16,400.00	12,794.00	16,508.14	12,894.00	64.60	66.08	-98.60	-3,507.00	1,096.12	667.36	540.37	127.00	5.255	
16,500.00	12,794.00	16,608.14	12,894.00	66.07	67.51	-98.60	-3,607.00	1,096.12	667.36	537.45	129.91	5.137	
16,600.00	12,794.00	16,708.14	12,894.00	67.55	68.95	-98.60	-3,707.00	1,096.12	667.36	534.53	132.84	5.024	
16,700.00	12,794.00	16,808.14	12,894.00	69.03	70.40	-98.60	-3,807.00	1,096.12	667.36	531.58	135.78	4.915	
16,800.00	12,794.00	16,908.14	12,894.00	70.52	71.86	-98.60	-3,907.00	1,096.12	667.36	528.63	138.74	4.810	
16,900.00	12,794.00	17,008.14	12,894.00	72.02	73.33	-98.60	-4,007.00	1,096.12	667.36	525.66	141.71	4.710	
17,000.00	12,794.00	17,108.14	12,894.00	73.52	74.80	-98.60	-4,107.00	1,096.12	667.36	522.68	144.69	4.613	
17,100.00	12,794.00	17,208.14	12,894.00	75.03	76.28	-98.60	-4,207.00	1,096.12	667.36	519.69	147.68	4.519	
17,200.00	12,794.00	17,308.14	12,894.00	76.55	77.76	-98.60	-4,307.00	1,096.12	667.36	516.69	150.68	4.429	
17,300.00	12,794.00	17,408.14	12,894.00	78.06	79.25	-98.60	-4,407.00	1,096.12	667.36	513.68	153.69	4.342	
17,400.00	12,794.00	17,508.14	12,894.00	79.59	80.75	-98.60	-4,507.00	1,096.12	667.36	510.66	156.71	4.259	
17,500.00	12,794.00	17,608.14	12,894.00	81.12	82.25	-98.60	-4,607.00	1,096.12	667.36	507.63	159.74	4.178	
17,600.00	12,794.00	17,708.14	12,894.00	82.65	83.76	-98.60	-4,707.00	1,096.12	667.36	504.59	162.77	4.100	
17,700.00	12,794.00	17,808.14	12,894.00	84.18	85.27	-98.60	-4,807.00	1,096.12	667.36	501.55	165.82	4.025	
17,800.00	12,794.00	17,908.14	12,894.00	85.72	86.78	-98.60	-4,907.00	1,096.12	667.36	498.50	168.87	3.952	
17,900.00	12,794.00	18,008.14	12,894.00	87.27	88.30	-98.60	-5,007.00	1,096.12	667.36	495.44	171.93	3.882	
18,000.00	12,794.00	18,108.14	12,894.00	88.81	89.83	-98.60	-5,107.00	1,096.12	667.36	492.37	174.99	3.814	
18,100.00	12,794.00	18,208.14	12,894.00	90.36	91.35	-98.60	-5,207.00	1,096.12	667.36	489.30	178.06	3.748	
18,200.00	12,794.00	18,308.14	12,894.00	91.91	92.89	-98.60	-5,307.00	1,096.12	667.36	486.23	181.14	3.684	
18,300.00	12,794.00	18,408.14	12,894.00	93.47	94.42	-98.60	-5,407.00	1,096.12	667.36	483.14	184.22	3.623	
18,400.00	12,794.00	18,508.14	12,894.00	95.03	95.96	-98.60	-5,507.00	1,096.12	667.36	480.06	187.31	3.563	
18,500.00	12,794.00	18,608.14	12,894.00	96.59	97.50	-98.60	-5,607.00	1,096.12	667.36	476.96	190.40	3.505	
18,600.00	12,794.00	18,708.14	12,894.00	98.15	99.04	-98.60	-5,707.00	1,096.12	667.36	473.87	193.50	3.449	
18,700.00	12,794.00	18,808.14	12,894.00	99.71	100.59	-98.60	-5,807.00	1,096.12	667.36	470.76	196.60	3.395	
18,800.00	12,794.00	18,908.14	12,894.00	101.28	102.14	-98.60	-5,907.00	1,096.12	667.36	467.66	199.71	3.342	
18,900.00	12,794.00	19,008.14	12,894.00	102.85	103.69	-98.60	-6,007.00	1,096.12	667.36	464.55	202.82	3.290	
19,000.00	12,794.00	19,108.14	12,894.00	104.42	105.25	-98.60	-6,107.00	1,096.12	667.36	461.43	205.93	3.241	
19,100.00	12,794.00	19,208.14	12,894.00	105.99	106.81	-98.60	-6,207.00	1,096.12	667.36	458.31	209.05	3.192	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Fighting Okra 18-19 Fed - 8H - OH - Plan #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-LEAM MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,200.00	12,794.00	19,308.14	12,894.00	107.57	108.37	-98.60	-6,307.00	1,096.12	667.36	455.19	212.17	3.145	
19,300.00	12,794.00	19,408.14	12,894.00	109.15	109.93	-98.60	-6,407.00	1,096.12	667.36	452.07	215.30	3.100	
19,400.00	12,794.00	19,508.14	12,894.00	110.72	111.49	-98.60	-6,507.00	1,096.12	667.36	448.94	218.43	3.055	
19,500.00	12,794.00	19,608.14	12,894.00	112.30	113.06	-98.60	-6,607.00	1,096.12	667.36	445.81	221.56	3.012	
19,600.00	12,794.00	19,708.14	12,894.00	113.89	114.62	-98.60	-6,707.00	1,096.12	667.36	442.67	224.69	2.970	
19,700.00	12,794.00	19,808.14	12,894.00	115.47	116.19	-98.60	-6,807.00	1,096.12	667.36	439.53	227.83	2.929	
19,800.00	12,794.00	19,908.14	12,894.00	117.05	117.77	-98.60	-6,907.00	1,096.12	667.36	436.39	230.97	2.889	
19,900.00	12,794.00	20,008.14	12,894.00	118.64	119.34	-98.60	-7,007.00	1,096.12	667.36	433.25	234.11	2.851	
20,000.00	12,794.00	20,108.14	12,894.00	120.23	120.91	-98.60	-7,107.00	1,096.12	667.36	430.10	237.26	2.813	
20,100.00	12,794.00	20,208.14	12,894.00	121.81	122.49	-98.60	-7,207.00	1,096.12	667.36	426.96	240.41	2.776	
20,200.00	12,794.00	20,308.14	12,894.00	123.40	124.07	-98.60	-7,307.00	1,096.12	667.36	423.80	243.56	2.740	
20,300.00	12,794.00	20,408.14	12,894.00	124.99	125.65	-98.60	-7,407.00	1,096.12	667.36	420.65	246.71	2.705	
20,400.00	12,794.00	20,508.14	12,894.00	126.59	127.23	-98.60	-7,507.00	1,096.12	667.36	417.50	249.87	2.671	
20,500.00	12,794.00	20,608.14	12,894.00	128.18	128.81	-98.60	-7,607.00	1,096.12	667.36	414.34	253.03	2.638	
20,600.00	12,794.00	20,708.14	12,894.00	129.77	130.39	-98.60	-7,707.00	1,096.12	667.36	411.18	256.18	2.605	
20,700.00	12,794.00	20,808.14	12,894.00	131.37	131.98	-98.60	-7,807.00	1,096.12	667.36	408.02	259.35	2.573	
20,800.00	12,794.00	20,908.14	12,894.00	132.96	133.56	-98.60	-7,907.00	1,096.12	667.36	404.85	262.51	2.542	
20,900.00	12,794.00	21,008.14	12,894.00	134.56	135.15	-98.60	-8,007.00	1,096.12	667.36	401.69	265.67	2.512	
21,000.00	12,794.00	21,108.14	12,894.00	136.16	136.74	-98.60	-8,107.00	1,096.12	667.36	398.52	268.84	2.482	
21,100.00	12,794.00	21,208.14	12,894.00	137.76	138.32	-98.60	-8,207.00	1,096.12	667.36	395.35	272.01	2.453	
21,200.00	12,794.00	21,308.14	12,894.00	139.35	139.91	-98.60	-8,307.00	1,096.12	667.36	392.18	275.18	2.425	
21,300.00	12,794.00	21,408.14	12,894.00	140.95	141.51	-98.60	-8,407.00	1,096.12	667.36	389.01	278.35	2.398	
21,400.00	12,794.00	21,508.14	12,894.00	142.56	143.10	-98.60	-8,507.00	1,096.12	667.36	385.84	281.53	2.371	
21,500.00	12,794.00	21,608.14	12,894.00	144.16	144.69	-98.60	-8,607.00	1,096.12	667.36	382.66	284.70	2.344	
21,600.00	12,794.00	21,708.14	12,894.00	145.76	146.28	-98.60	-8,707.00	1,096.12	667.36	379.49	287.88	2.318	
21,700.00	12,794.00	21,808.14	12,894.00	147.36	147.88	-98.60	-8,807.00	1,096.12	667.36	376.31	291.05	2.293	
21,800.00	12,794.00	21,908.14	12,894.00	148.97	149.47	-98.60	-8,907.00	1,096.12	667.36	373.13	294.23	2.268	
21,900.00	12,794.00	22,008.14	12,894.00	150.57	151.07	-98.60	-9,007.00	1,096.12	667.36	369.95	297.41	2.244	
22,000.00	12,794.00	22,108.14	12,894.00	152.18	152.67	-98.60	-9,107.00	1,096.12	667.36	366.77	300.60	2.220	
22,100.00	12,794.00	22,208.14	12,894.00	153.78	154.27	-98.60	-9,207.00	1,096.12	667.36	363.59	303.78	2.197	
22,200.00	12,794.00	22,308.14	12,894.00	155.39	155.86	-98.60	-9,307.00	1,096.12	667.36	360.40	306.96	2.174	
22,300.00	12,794.00	22,408.14	12,894.00	156.99	157.46	-98.60	-9,407.00	1,096.12	667.36	357.22	310.15	2.152	
22,400.00	12,794.00	22,508.14	12,894.00	158.60	159.06	-98.60	-9,507.00	1,096.12	667.36	354.03	313.33	2.130	
22,500.00	12,794.00	22,608.14	12,894.00	160.21	160.67	-98.60	-9,607.00	1,096.12	667.36	350.84	316.52	2.108	
22,600.00	12,794.00	22,708.14	12,894.00	161.82	162.27	-98.60	-9,707.00	1,096.12	667.36	347.66	319.71	2.087	
22,700.00	12,794.00	22,808.14	12,894.00	163.43	163.87	-98.60	-9,807.00	1,096.12	667.36	344.47	322.90	2.067	
22,702.76	12,794.00	22,810.90	12,894.00	163.47	163.91	-98.60	-9,809.75	1,096.12	667.36	344.38	322.99	2.066	
22,746.83	12,794.00	22,848.63	12,894.00	164.18	164.52	-98.60	-9,847.48	1,096.12	667.39	342.94	324.46	2.057 SF	

Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
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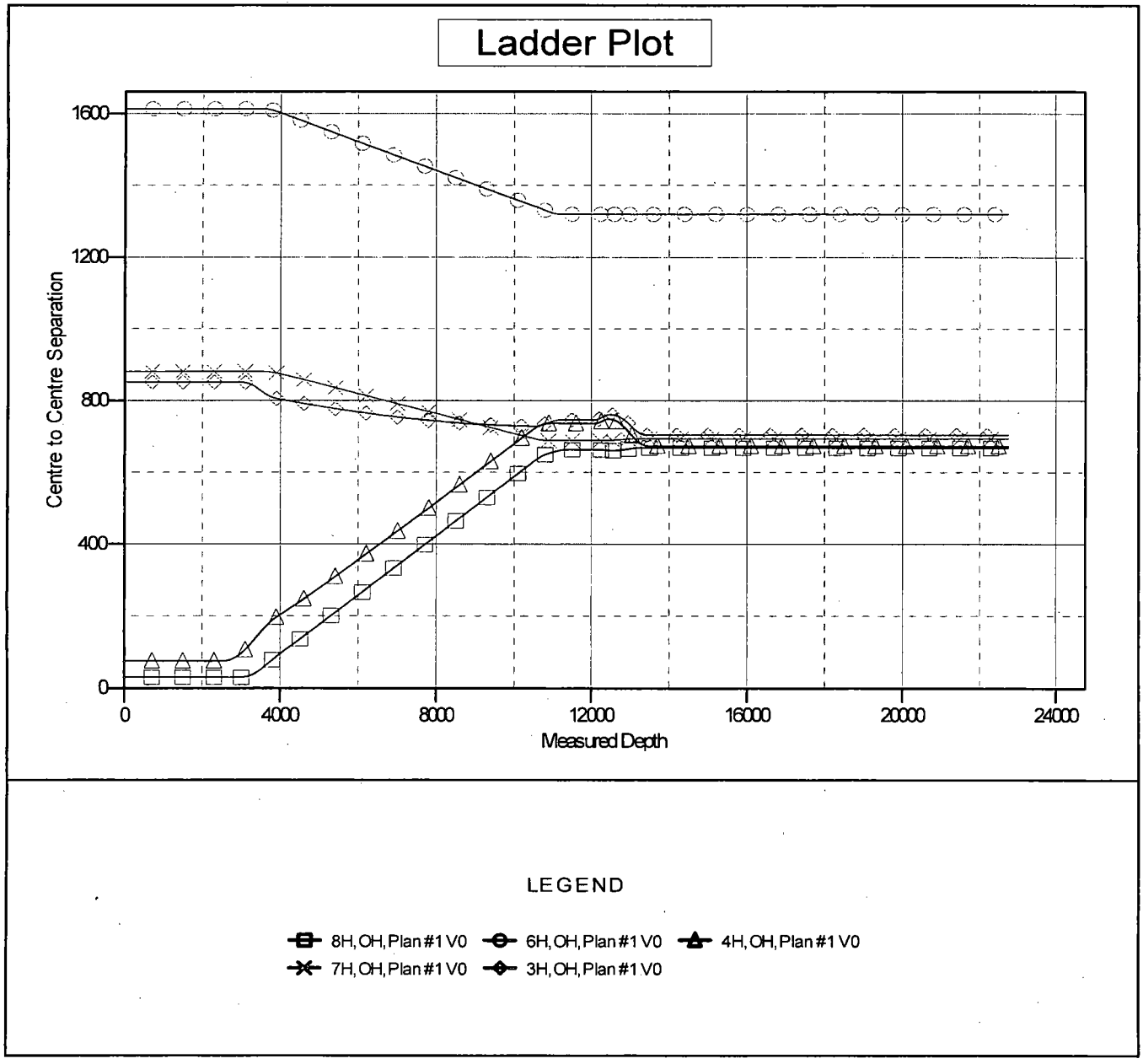
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to 3365' GE + 25' KB @ 3390.00usft	Coordinates are relative to: 5H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Central Meridian is 104° 20' 0.000 W	Grid Convergence at Surface is: 0.44°



Company:	Devon Energy	**Local Co-ordinate Reference:**	Well 5H
Project:	Lea County, NM (NAD-83)	**TVD Reference:**	3365' GE + 25' KB @ 3390.00usft
Reference Site:	Fighting Okra 18-19 Fed	**MD Reference:**	3365' GE + 25' KB @ 3390.00usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.1 Multi User Db
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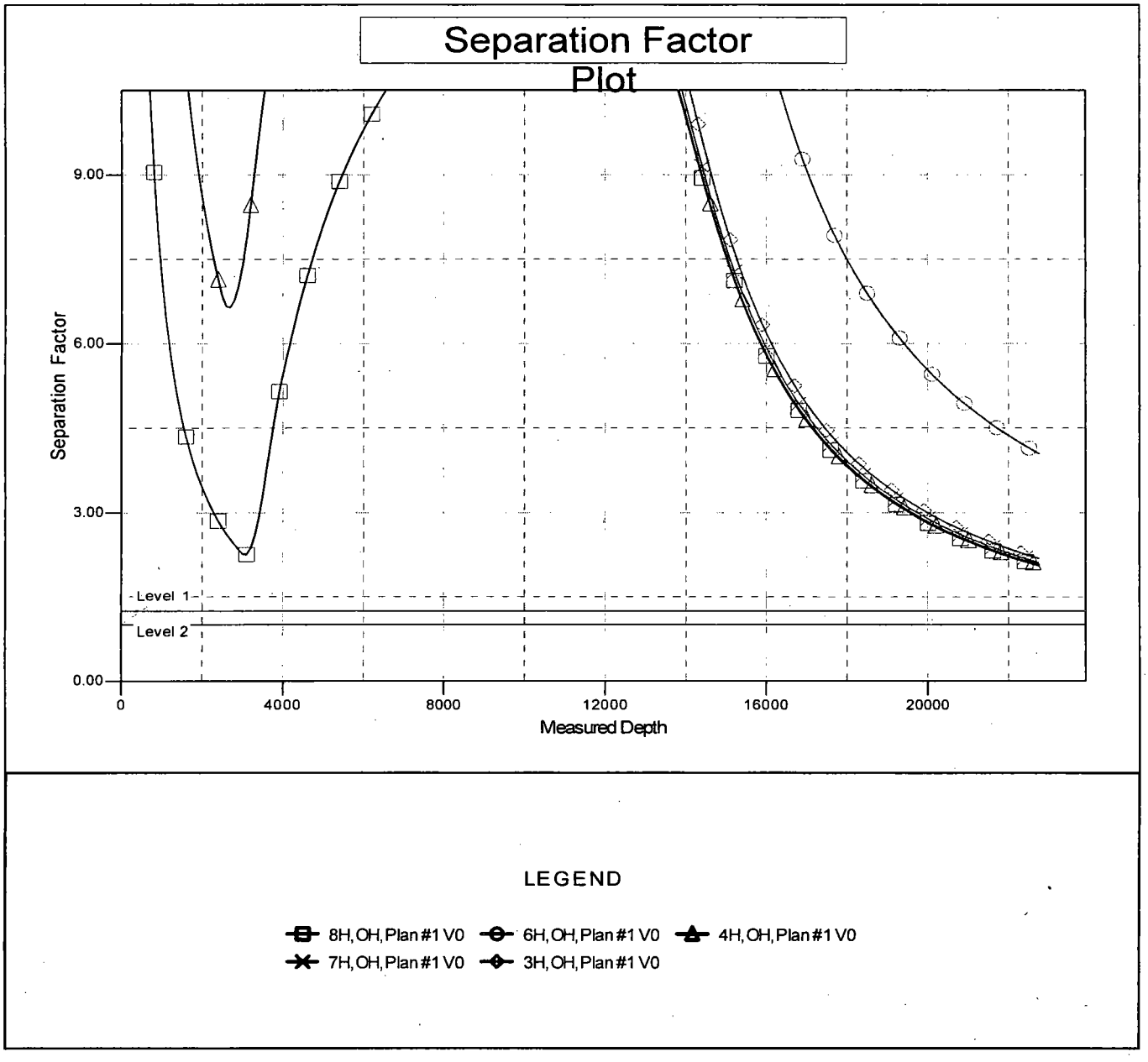
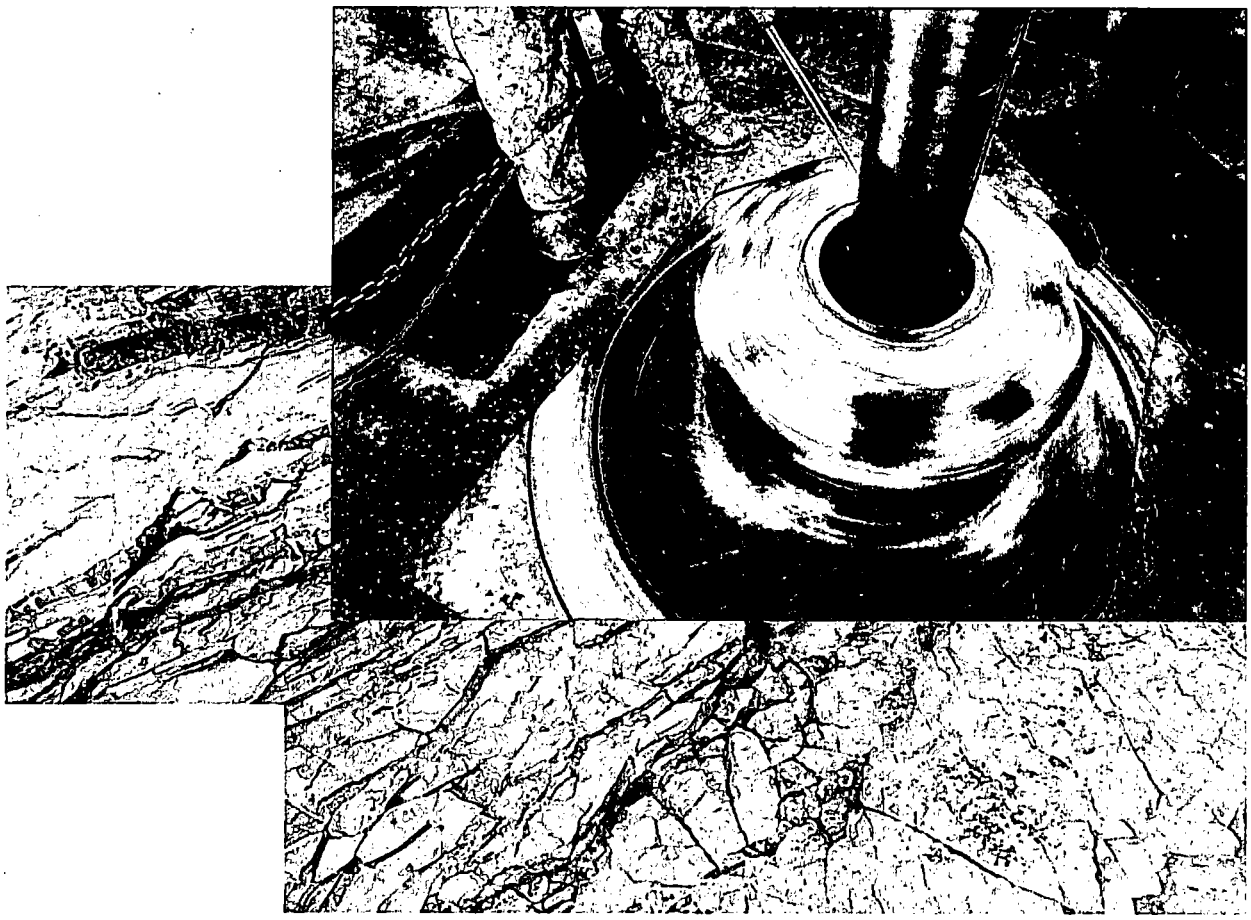
Central Meridian is 104° 20' 0.000 W	Grid Convergence at Surface is: 0.44°



devon

Commitment Runs Deep



Design Plan
Operation and Maintenance Plan
Closure Plan

SENM - Closed Loop Systems
June 2010

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.

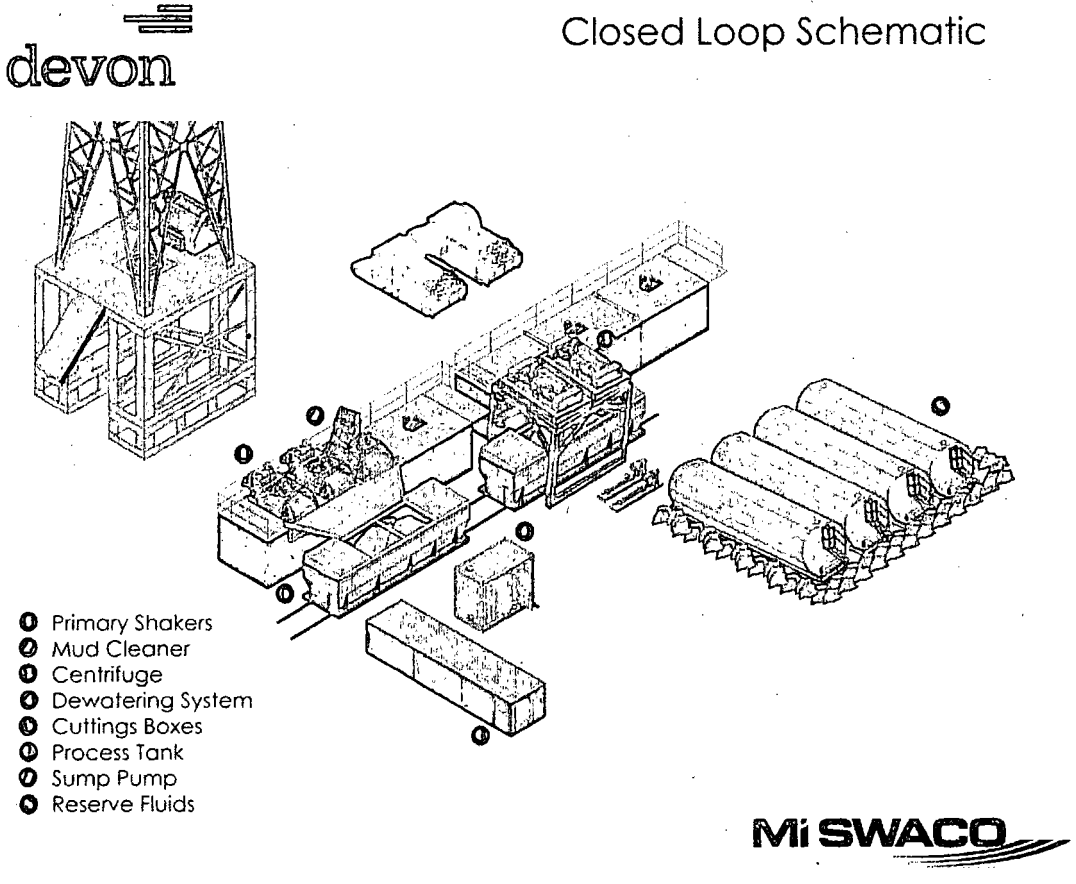
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

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.



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.

Contingency Intermediate Cement

Additional Info for String	3	Additional String Description	Intermediate squeeze cement
Stage Tool Depth			

Lead

Top MD of Segment	0	Btm MD of Segment	7000	Cement Type	Class C
Additives	0.125 lbs/sack Poly-E-Flake	Quanity (sks)	1155	Yield (cu.ft./sk)	1.3
Density (lbs/gal)	14.5	Volume (cu.ft.)	1502	Percent Excess	0

Tail

Top MD of Segment		Top MD of Segment		Cement Type	
Additives		Quanity (sks)		Yield (cu.ft./sk)	
Density (lbs/gal)		Volume (cu.ft.)		Percent Excess	

Contingency Production Cement

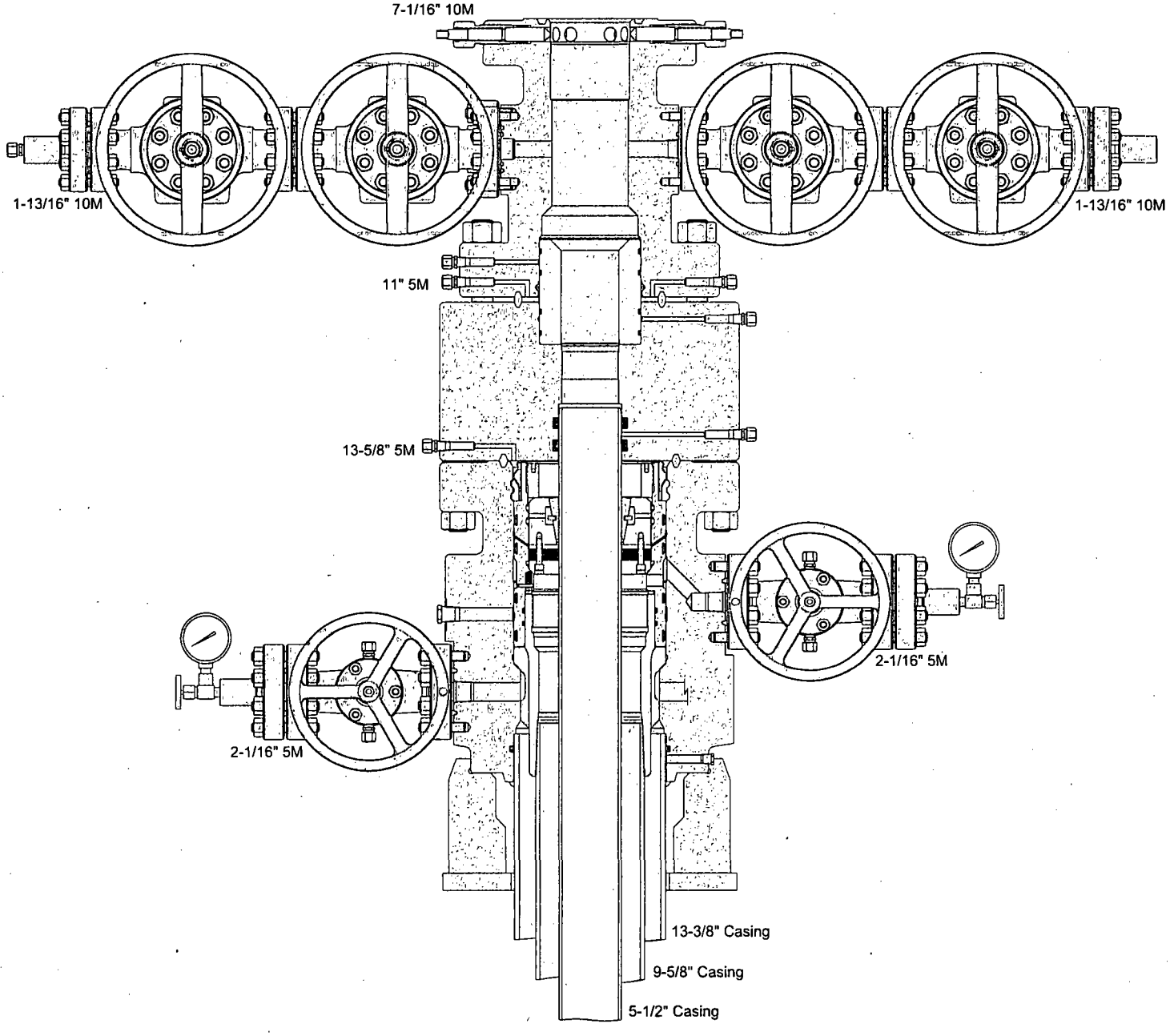
Additional Info for String		Additional String Description	
Stage Tool Depth			

Lead

Top MD of Segment		Btm MD of Segment		Cement Type	
Additives		Quanity (sks)		Yield (cu.ft./sk)	
Density (lbs/gal)		Volume (cu.ft.)		Percent Excess	

Tail

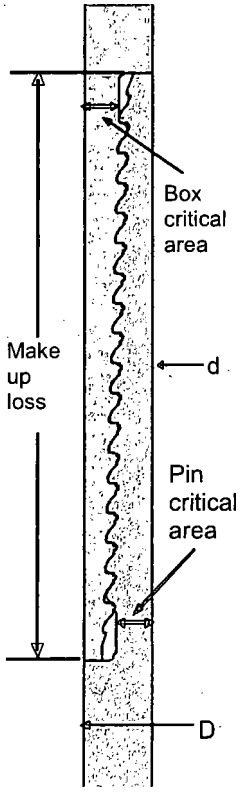
Top MD of Segment		Top MD of Segment		Cement Type	
Additives		Quanity (sks)		Yield (cu.ft./sk)	
Density (lbs/gal)		Volume (cu.ft.)		Percent Excess	


7-1/16" 10M
1-13/16" 10M
1-13/16" 10M
11" 5M
13-5/8" 5M
2-1/16" 5M
2-1/16" 5M
13-3/8" Casing
9-5/8" Casing
5-1/2" Casing

Metal One Corp.	FLUSHMAX-III	Page	44-O
Metal One	**Connection Data Sheet**	Date	25-Jan-17
		Rev.	N - 1

Geometry

FLUSHMAX-III



Pipe Body

	Imperial		S.I.	
Grade	P110		P110	
Pipe OD (D)	7 5/8	in	193.68	mm
Weight	29.70	lb/ft	44.20	kg/m
Actual weight	29.04		43.21	kg/m
Wall Thickness (t)	0.375	in	9.53	mm
Pipe ID (d)	6.875	in	174.63	mm
Pipe body cross section	8.537	in^2	5,508	mm^2
Drift Dia.	6.750	in	171.45	mm

Connection

Box OD (W)	7.625	in	193.68	mm
PIN ID	6.875	in	174.63	mm
Make up Loss	3.040	in	77.22	mm
Box Critical Area	4.424	in^2	2854	mm^2
Joint load efficiency	60	%	60	%
Thread Taper	1 / 16 (3/4" per ft)			
Number of Threads	5 TPI			

Performance

Performance Properties for Pipe Body

S.M.Y.S.	939	kips	4,177	kN
M.I.Y.P.	9,470	psi	65.31	MPa
Collapse Strength	5,350	psi	36.90	MPa

Note S.M.Y.S.= Specified Minimum YIELD Strength of Pipe body
M.I.Y.P. = Minimum Internal Yield Pressure of Pipe body

Performance Properties for Connection

Tensile Yield load	563 kips (60% of S.M.Y.S.)
Min. Compression Yield	563 kips (60% of S.M.Y.S.)
Internal Pressure	7,580 psi (80% of M.I.Y.P.)
External Pressure	100% of Collapse Strength
Max. DLS (deg. /100ft)	25

Recommended Torque

Min.	15,500	ft-lb	21,000	N-m
Opti.	17,200	ft-lb	23,300	N-m
Max.	18,900	ft-lb	25,600	N-m
Operational Max.	23,600	ft-lb	32,000	N-m

Note : Operational Max. torque can be applied for high torque application

Continental CONTITECH

Fluid Technology

ContiTech Beattie Corp.
Website: www.contitechbeattie.com

Monday, June 14, 2010

RE: Drilling & Production Hoses
Lifting & Safety Equipment

To Helmerich & Payne,

A Continental ContiTech hose assembly can perform as intended and suitable for the application regardless of whether the hose is secured or unsecured in its configuration. As a manufacturer of High Pressure Hose Assemblies for use in Drilling & Production, we do offer the corresponding lifting and safety equipment, this has the added benefit of easing the lifting and handling of each hose assembly whilst affording hose longevity by ensuring correct handling methods and procedures as well as securing the hose in the unlikely event of a failure; but in no way does the lifting and safety equipment affect the performance of the hoses providing the hoses have been handled and installed correctly It is good practice to use lifting & safety equipment but not mandatory

Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

ContiTech Beattie is part of the Continental AG Corporation and can offer the full support resources associated with a global organization.

Best regards,

Robin Hodgson
Sales Manager
ContiTech Beattie Corp

ContiTech Beattie Corp,
11535 Brittmoore Park Drive,
Houston, TX 77041
Phone: +1 (832) 327-0141
Fax: +1 (832) 327-0148
www.contitechbeattie.com

RIG 212

PHOENIX

QUALITY DOCUMENT

PHOENIX RUBBER INDUSTRIAL LTD.

6728 Szeged, Budapesti út 10. Hungary • H-6701 Szeged, P. O. Box 152
Phone: (3662) 556-737 • Fax: (3662) 568-738

SALES & MARKETING: H-1092 Budapest, Ráday u. 42-44. Hungary • H-1440 Budapest, P. O. Box 26
Phone: (361) 456-4200 • Fax: (361) 217-2972, 456-4273 • www.taurusemerge.hu

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 552
PURCHASER: Phoenix Beattie Co.				P.O. N°: 1519FA-871
PHOENIX RUBBER order N°: 170466		HOSE TYPE: 3" ID		Choke and Kill Hose
HOSE SERIAL N°: 34128		NOMINAL / ACTUAL LENGTH:		11,43 m
W.P. 68,96 MPa	10000 psi	T.P. 103,4 MPa	15000 psi	Duration: 60 min.

Pressure test with water at ambient temperature

See attachment. (1 page)

↑ 10 mm = 10 Min.

→ 10 mm = 25 MPa

COUPLINGS

Type	Serial N°	Quality	Heat N°
3" coupling with	720 719	AISI 4130	C7626
4 1/16" Flange end		AISI 4130	47357

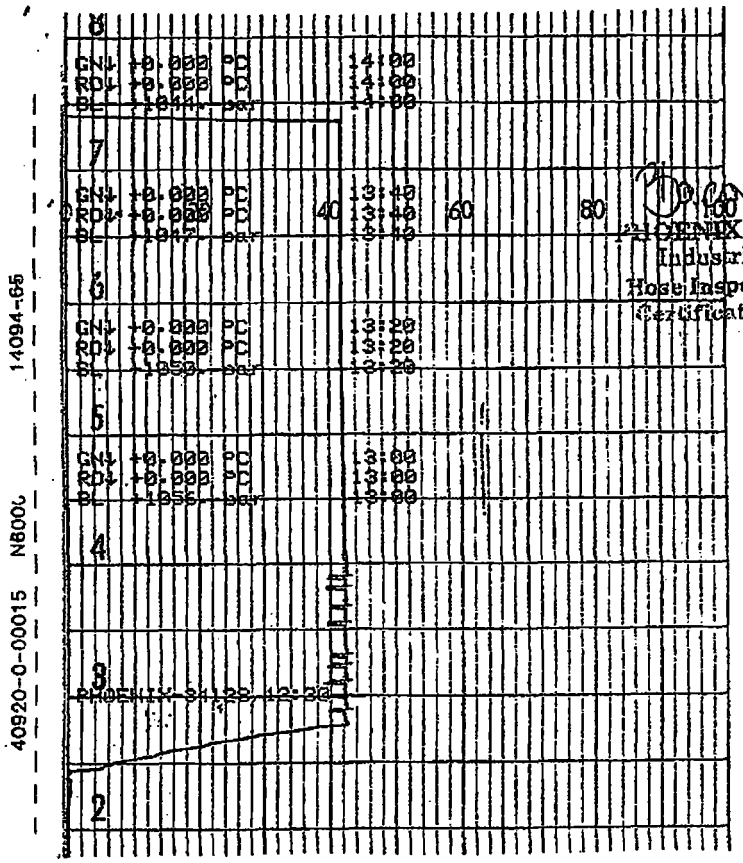
API Spec 16 C
Temperature rate:"B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

Date:	Inspector	Quality Control
29. April. 2002.		PHOENIX RUBBER Industrial Ltd. Hose Inspection and Certification Dept.

VERIFIED TRUE COPY
PHOENIX RUBBER Q.C.



PHOENIX RUBBER
Industrial Ltd.
Hose Inspection and
Certification Dept.

VERIFIED TRUE COPY
PHOENIX RUBBER Q.C.