PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Matador Production Company**
LEASE NO.:	**NMLC-0063798**
WELL NAME & NO.:	**Charles Ling Fed Com 211H**
SURFACE HOLE FOOTAGE:	**0360' FNL & 0526' FWL**
BOTTOM HOLE FOOTAGE	**0240' FSL & 0330' FWL**
LOCATION:	**Section 11, T. 24 S., R 33 E., NMPM**
COUNTY:	**County, New Mexico**

Submit NMODC Gas Capture Plan via Sundry Notice.

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

A. DRILLING OPERATIONS REQUIREMENTS

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

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

☐ **Lea County**

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 3933612

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

protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

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

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) for Water Basin:
After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

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

Possibility of water flows in the Salado and Castile.
Possibility of lost circulation in the Rustler, Red Beds, Delaware.
Abnormal pressure maybe encountered when penetrating the 3rd Bone Spring and all subsequent formations.

1. The **13-3/8** inch surface casing shall be set at approximately **1340** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**

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

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

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

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

Formation below the 13-3/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

1st Intermediate casing shall be kept fluid filled while running into hole to meet BLM minimum collapse requirements.

2. The minimum required fill of cement behind the **9-5/8** inch 1st intermediate casing is:

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

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

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

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

Formation below the 7" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

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

4. The minimum required fill of cement behind the **5-1/2 X 4-1/2** inch production casing is:

☐ Cement as proposed by operator. Operator shall provide method of verification.

5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API 53.

2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored

according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be psi.

4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **7-5/8 X 7** intermediate casing shoe shall be psi. **10M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

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

If multibowl option is utilized:

5. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing.**
    a. **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**
    b. **If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.**
    c. **Manufacturer representative shall install the test plug for the initial BOP test.**
    d. **Operator shall perform the 9-5/8" and 7-5/8 X 7" casing integrity tests to 70% of the casing burst. This will test the multi-bowl seals.**
    e. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**

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

a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

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

b. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

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

d. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

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

D. 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.

E. DRILL STEM TEST

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

F. WASTE MATERIAL AND FLUIDS

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

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

JAM 062718

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Matador Production Company
LEASE NO.:	NMLC0063798
WELL NAME & NO.:	211H-Charles Ling Fed Com
SURFACE HOLE FOOTAGE:	360'/N & 526'/W
BOTTOM HOLE FOOTAGE	240'/S & 330'/W
LOCATION:	T-24S, R-33E, S-11. NMPM
COUNTY:	LEA, NM

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.

Approval Date: 07/18/2018

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)

Cattle Guard Requirement
Any new or existing cattle guards on the access route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations. Once the road is abandoned, the fence would be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Livestock Watering Requirement
Structures that provide water to livestock, such as windmills, pipelines, drinking troughs, and earthen reservoirs, will be avoided by moving the proposed action.

Any damage to fences, cattle guards, and pipelines or structures that provide water to livestock during construction, throughout the life of the project, and caused by its operation, must be immediately corrected by Matador. Matador must notify the grazing allottee or the private surface landowner and the BLM-CFO (575-234-5972) if any damage occurs to pipelines or structures that provide water to livestock.

Production facilities on the well pads would be bermed to prevent oil, salt, and other chemical contaminants from leaving the pads. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.

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. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control.

Roads will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems. Turnout ditches and drainage leadoffs will not be constructed in such a manner as to increase or decrease the natural flow of water into or out of cave or karst features. The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction and no further construction will be done until clearance has been issued by the Authorized Officer. Special restoration stipulations or realignment may be required.

All spills or leaks should be reported to the BLM immediately for their immediate and proper treatment.

To avoid or lessen the potential of subsidence or collapse of karst features, toxic or combustible gas buildup, or other possible impacts to cave and karst resources from buried pipelines or cables, alignments may be rerouted to avoid karst features. The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, passages, or voids are intersected by trenching, and no pipe will be laid in the trench at that point until clearance has been issued by the Authorized Officer. Special restoration stipulations or realignment may be required at such intersections, if any. Leak detection systems, back flow eliminators, and differential pressure shut-off valves may be required to minimize the impacts of leaking or ruptured pipelines. To eliminate these extreme possibilities, good record keeping is needed to quickly identify leaks for their immediate and proper treatment.

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

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

G. ON LEASE ACCESS ROADS

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

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

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

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

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

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

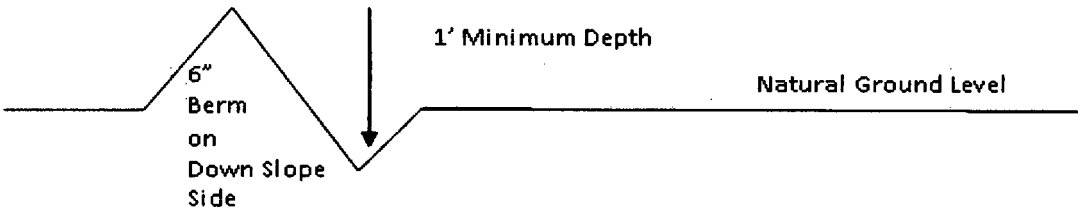
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

Cattle guards

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

Fence Requirement

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

Public Access

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

Construction Steps

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

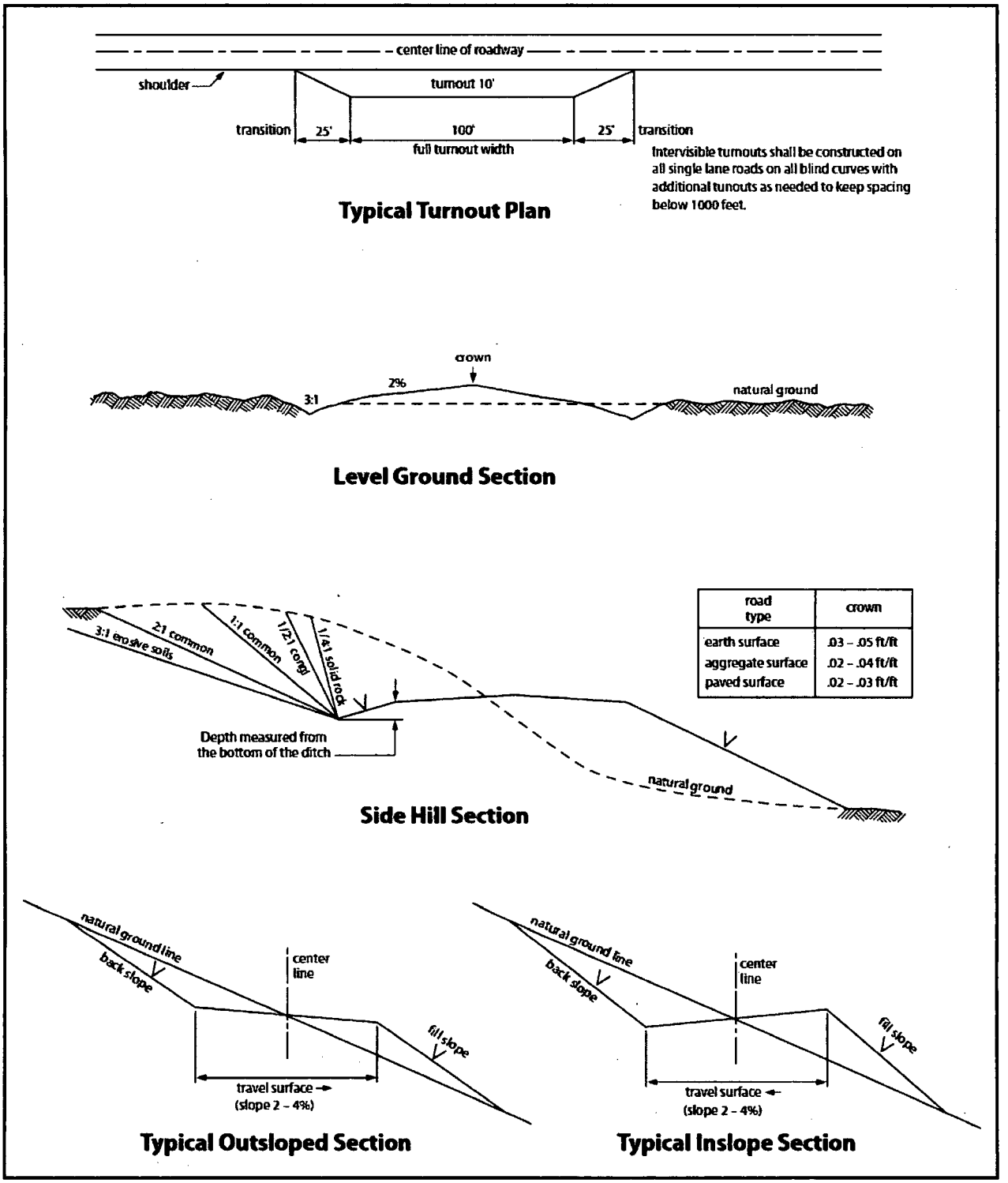


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

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

Containment Structures

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

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

B. PIPELINES

BURIED PIPELINE STIPULATIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

VIII. INTERIM RECLAMATION

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

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

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

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

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

IX. FINAL ABANDONMENT & RECLAMATION

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

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

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

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

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

Hydrogen Sulfide Drilling

Operations Plan

Matador Resources

1 H2S safety instructions to the following:

- Characteristics of H2S
- Physical effects and hazards
- Principal and operation of H2S detectors, warning system and briefing areas
- Evacuation procedures, routes and first aid
- Proper use of safety equipment & life support systems
- Essential personnel meeting medical evaluation criteria will receive additional training on the proper use of 30min pressure demand air packs

2 H2S Detection and Alarm Systems:

- H2S sensor/detectors to be located on the drilling rig floor, in the base of the sub structure / cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may be placed as deemed necessary
- An audio alarm system will be installed on the derrick floor and in the doghouse

3 Windsocks and / Wind Streamers:

- Windsocks at mud pit area should be high enough to be visible
- Windsock on the rig floor and / top of doghouse should be high enough to be visible

4 Condition Flags and Signs:

- Warning sign on access road to location
- Flags to be displayed on sign at entrance to location
    - Green Flag – Normal Safe Operation Condition
    - Yellow Flag – Potential Pressure and Danger
    - Red Flag – Danger (H2S present in dangerous concentrations) Only H2S trained personnel admitted on location

5 Well Control Equipment:

- See Exhibit E-1

6 Communication:

- While working under masks chalkboards will be used for communications
- Hand signals will be used where chalk board is inappropriate
- Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.

7 Drilling Stem Testing:

- No DST cores are planned at this time

8 Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubulars good and other mechanical equipment

9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary

11 Emergency Contacts

- See exhibit E-6

Exhibit E-6: H2S Contingency Plan Emergency Contacts
Charles Ling Fed Com Slot #1
Wells, 131, 201, & #211H
Matador Resources Company
Sec. 11, 24S, 33E
Lea County, NM

Company Office			
Matador Resources Company	(972)-371-5200		
Key Personnel			
Name	**Title**	**Office**	**Mobile**
Billy Goodwin	Vice President Drilling	972-371-5210	817-522-2928
Dee Smith	Drilling Superintendent	972-371-5447	972-822-1010
Blake Hermes	Drilling Engineer	972-371-5485	713-876-8558
	Construction Superintendent		
	Construction Superintendent		

Artesia		
Ambulance	911	
State Police	575-746-2703	
City Police	575-746-2703	
Sheriff's Office	575-746-9888	
Fire Department	575-746-2701	
Local Emergency Planning Committee	575-746-2122	
New Mexico Oil Conservation Division	575-748-1283	
Carlsbad		
Ambulance	911	
State Police	575-885-3137	
City Police	575-885-2111	
Sheriff's Office	575-887-7551	
Fire Department	575-887-3798	
Local Emergency Planning Committee	575-887-6544	
New Mexico Oil Conservation Division	575-887-6544	
Santa Fe		
New Mexico Emergency Response Comission (Santa Fe)	505-476-9600	
New Mexico Emergency Response Comission (Santa Fe) 24 hrs	505-827-9126	
New Mexico State Emergency Operations Center	505-476-9635	
National		
National Emegency Response Center (Washington, D.C.)	800-424-8802	
Medical		
Flight for Life- 4000 24th St.; Lubbock, TX	806-743-9911	
Aerocare- R3, Box 49F; Lubbock, TX	806-747-8923	
Med Flight Air Amb- 2301 Yale Blvd S.E., D3; Albuquerque, NM	505-842-4433	
SB Air Med Service- 2505 Clark Carr Loop S.E.; Albuquerque, NM	505-842-4949	
Other		
Boots & Coots IWC	800-256-9688	or 281-931-8884
Cudd Pressure Control	432-699-0139	or 432-563-3356
Haliburton	575-746-2757	
B.J. Services	575-746-3569	

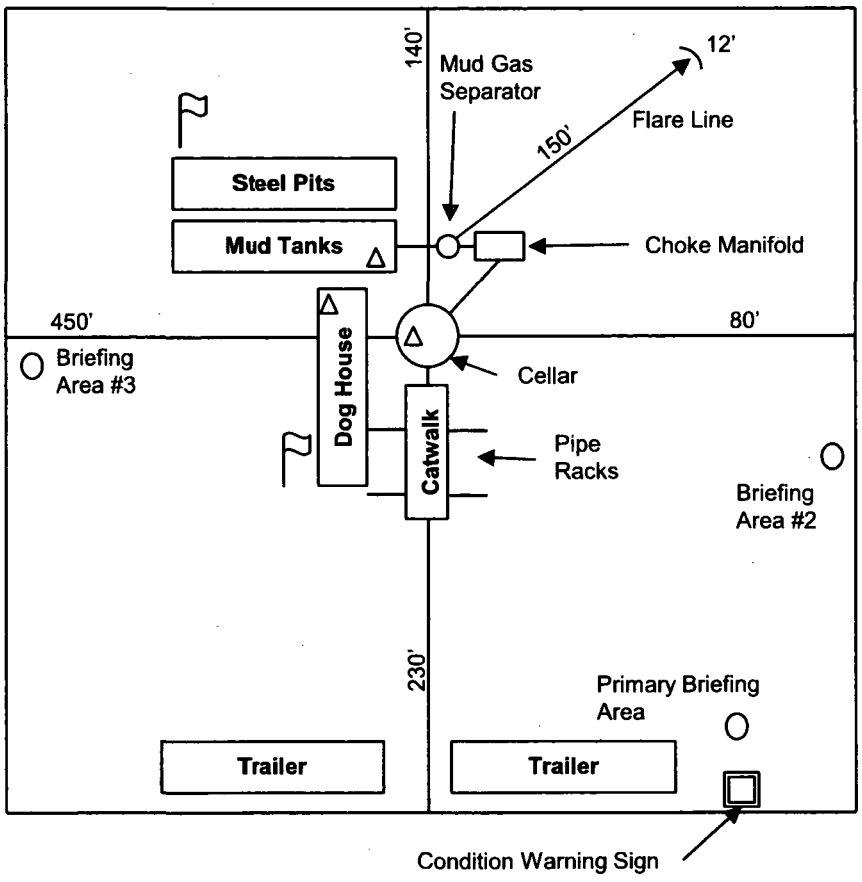
Rig Diagram

Exhibit E-3: Rig Diagram
Charles Ling Fed Com #211H
Matador Resources Company
11-24S-33E
SHL 330' FNL & 526' FWL
BHL 240' FSL & 330' FWL
Lea County, NM

Wind Direction Indicator

H2S Monitors

Briefing Areas



N

HYDROGEN SULFIDE CONTINGENCY PLAN
Drilling, Testing, & Completion

MRC ENERGY CO.

Charles Ling Fed Com #131H
Charles Ling Fed Com #201H
Charles Ling Fed Com #211H

Reviewers

---------- Operations Manager
---------- Operations Supt.
---------- Staff RES
---------- Field Supv.
Blake Hermes---Engineering

Latitude: 32.2383" N
Longitude: 103.5495" W

Charles Ling Fed Com #201H
SHL 360' FNL & 586' FWL, Sec. 11
BHL 240' FSL & 330' FWL, Sec. 11

Charles Ling Fed Com #201H
SHL 360' FNL & 556' FWL, Sec. 11
BHL 240' FSL & 989' FWL, Sec. 11

Charles Ling Fed Com #211H
SHL 360' FNL & 526' FWL, Sec. 11
BHL 240' FSL & 330' FWL, Sec. 11

H2S Contingency Plan # 0165 **Revision# 0**

This H2S Contingency Plan is subject to updating

Effective date: July 8, 2015

TABLE OF CONTENTS

INTRODUCTION

The H2S equipment will be rigged up 2 days prior to reaching a potential H2S containing zone. Drilling into any potential H2S zone shall not commence until the on-site MRC Drilling Supervisor has confirmed this plan in place.

The onsite Drilling Foreman will give Total Safety one week (7 days) notice to prepare for rig up of H2S equipment)

To be effective, the plan requires the cooperation and effort of each person participating in the drilling of an H_2S well. Each person must know his/her responsibilities and all emergency and safety procedures. He/she should thoroughly understand and be able to use with accuracy, all safety equipment while performing his/her normal duties, if the circumstance should arise. He/she should therefore familiarize himself/herself with the location of all safety equipment and check to see that it is properly stored, easily accessible at all times, and routinely maintained.

It is the intention of MRC ENERGY CO. and the Drilling Contractor to make every effort to provide adequate safeguards against harm to persons on the rig and in the immediate vicinity from the effects of hydrogen sulfide, which may be released into the atmosphere under emergency conditions. However, the initiative rests with the individual in utilizing the safeguards provided. The ideas and suggestions of the individuals involved in the drilling of this well are highly welcomed and act as a fundamental tool for providing the safest working conditions possible.

The drilling representative is required to enforce these procedures. They are set up for your safety and the safety of all others.

II. PURPOSE

It is MRC Energy Co.'s intent to provide a safe working place, not only for its employees, but also for other contractors who are aiding in the drilling of this well. The safety of the general public is of utmost concern. All precautions will be taken to keep a safe working environment and protect the public.

There is a possibility of encountering toxic hydrogen sulfide gas. Safety procedures must be adhered to in order to protect all personnel connected with the operations as well as people living within the area.

The MRC Energy Co. representative will enforce all aspects of the H2S Contingency Plan. This job will become easier by a careful study of the following pages and training and informing all personnel that will be working on the well, their duties and responsibilities.

A. OPERATING PROCEDURES

DEFINITIONS:

For purpose of this plan, on-site personnel shall be referred to as "In Scope Personnel" or "Out of Scope Personnel", per the following definitions:

In Scope Personnel – Personnel who will be working or otherwise present in potential H2S release areas, including the rig floor, cellar, pits, and shaker areas.

Out of Scope Personnel – Personnel who will not be working or Otherwise present in potential H2S areas. Such personnel include rig Site visitor, delivery and camp services personnel.

GENERAL:

Before this H_2S contingency plan becomes operational, all regularly assigned In Scope Personnel (primarily the MRC, drilling contractor, and certain service personnel,) shall be thoroughly trained in the use of breathing equipment, emergency procedures, and responsibilities. Total Safety Technician or a designee assigned by the MRC Drilling Foreman shall keep a list of all personnel who have been through the on-site H_2S training program at the drill site.

All In Scope Personnel shall be given H2S training and the steps to be taken during H2S conditions under which the well may be drilled. General information will be explained about toxic gases, as well as the physiological effects of H_2S and the various classified operating conditions. In addition, the reader will be informed his/her general responsibility concerning safety equipment and emergency procedures.

The Total Safety H_2S Safety Technician or MRC on-site RSE Technician shall make available the H2S Contingency Plan for all personnel to review.

Without exception, all personnel that arrive on location must proceed directly to and sign-in with the on-site MRC RSE Technician. In Scope Personnel will be required to complete an on-site H2S training and respirator fit testing before starting work, or produce evidence that they have received equivalent training. Out of Scope Personnel will be required to complete a site H2S awareness and general safety briefing. This briefing will consist of a H2S hazard overview, alarm review and required response to alarms.

B. PROCEDURES TO BE INITIATED PRIOR TO H2S CONTINGENCY PLAN COMPLIANCE:

A list of emergency phone numbers and contacts will be on location and posted at the following locations:

1. MRC ENERGY CO.'S Representative's Office
2. Drilling Contractor's, Toolpusher Office
3. Living Quarters Area

All safety equipment and H_2S related hardware must be set up as required by MRC Energy Co. with regard to location of briefing areas, breathing equipment, etc. All safety equipment must be inspected periodically (at least weekly) with particular attention to resuscitators and breathing equipment.

In Scope Personnel working in the well site area will be assigned breathing apparatus. Operator and drilling contractor personnel required to work in the following areas will be provided with Self Contained Breathing Apparatus:

1. Rig Floor
2. Mud Pits
3. Derrick
4. Shale Shaker
5. Cellar

The Total Safety H_2S Safety Technician will be responsible for rigging up all H_2S continuous monitoring-type detectors. The Total Safety Technician will monitor and bump test the detector units periodically (at least at least once a week to test alarm function during drilling conditions. In the event H_2S is detected, or when drilling in a zone confirmed to contain H_2S, the units shall be bump tested at least once every 24 hours. A bump test/calibration log will be kept on location. All results will be reported to the MRC on-site Drilling Foreman.

All Total Safety H2S equipment will be maintained and inspected by a Total Safety Technician on at least a Weekly basis.

C. DRILLING BELOW CONTINGENCY PLAN DEPTH

H2S response drills will be held at least once per week if possible or as often as necessary to acquaint the crews and service company personnel of their responsibilities and the proper procedures to shut-in a well. Initial drills will be performed until crews demonstrate competency donning and working under mask. After the MRC Energy Co.'s representative is satisfied with initial blowout drill procedures, a drill will be conducted weekly with each crew, as necessary. The H2S Safety Technician or designee will conduct safety talks and maintain the safety equipment, consult and carry out the instructions of the drilling supervisor. All personnel allowed in the well work area during drilling or testing operations will be instructed in the use of breathing equipment until supervisory personnel are satisfied that they are capable of using it.

After familiarization, each person must perform a drill with breathing equipment. The drill should include getting the breathing equipment, donning the breathing apparatus, and performing expected duties for a short period. A record shall be kept of all personnel drilled and the date of the drill. H2S training records will be kept on location for all personnel.

Rig crews and service company personnel shall be made aware of the location of spare air bottles, resuscitation equipment, portable fire extinguishers, H_2S monitors and detectors. Knowledge of the location of the H_2S monitors and detectors are vital in determining as our gas location and the severity of the emergency conditions.

After any device has initially detected H2S, all areas of poor ventilation shall be inspected periodically by means of a portable H_2S detector instrument. The buddy system will be utilized. (When an alarm sounds, personnel will don an SCBA, shut the well in, and proceed to SBA for roll call. The H2S Technician or designee will mask up, with a buddy and will verify source of H2S and report back to the on-site MRC Foreman.)

D. PROCEDURES PROGRAM

1. Drill Site

    a. The drilling rig will be located to allow prevailing winds to blow across the reserve pit.

    b. A Safe Briefing Area will be provided with a breathing air cascade trailer and or 30-minute SCBA's at the Primary Area. Personnel will assemble at the most up-wind station under alarm conditions, or when so ordered by the MRC Energy Co. representative, the Contractor representative, or

the Total Safety H_2S Safety Technician. Windsocks or streamers will be anchored to various strategic places on a pole about 10 feet high, so it is in easy view from the rig floor at all times.

c. Warning signs will be posted on the perimeters. "No Smoking" signs will be posted by MRC Energy Co.as well.

d. One multi-channel automatic H_2S monitor will be provided by Total Safety and the detector heads will be at the shale shaker, bell nipple, mud pits, rig floor, and quarter's area. The monitor will be located inside HSE or Company man trailer. Should the alarm be shut off to silence the sirens, the blinker light must continue to warn of H_2S presence. The Total Safety H2S Safety Technician or designee will continuously monitor the detectors and will reactivate the alarm if H_2S concentrations increase to a dangerous level.

e. A method of escape will be open at all times.

f. If available, land line telephone service will be provided or cell phones provided. (Primary communications provided)

g. A rig communication system will be provided, as needed.

h. A gas trap, choke manifold, and degasser will be installed.

i. A kill line, securely anchored and of ample strength, will be laid to the well-head from a safe location. This line is to be used only in an emergency.

General

a. The MRC Energy Co. representative and/or the Contractor's Toolpusher will be available at all times. The drilling supervisor, while on duty, will have complete charge of the rig and location operations and will take whatever action is deemed necessary to insure personnel safety, to protect the well, and to prevent damage.

b. A Mud Engineer will be on location at all times when drilling takes place at the depth H_2S may be expected. The mud engineer will be able to verify the presence or absence of H2S.

III. CONDITIONS AND EMERGENCY PROCEDURES

A. DEFINITION OF OPERATIONAL "CONDITIONS"

CONDITION I **"POSSIBLE DANGER"**

Warning Flags: Green

Alarms: No Alarm. Less than 10 ppm

Characterized By: Drilling operations in zones that may contain hydrogen sulfide. This condition remains in effect unless H_2S is detected and it becomes necessary to go to Condition II.

General Action:

a. Be alert for a condition change

b. Check all safety equipment for availability and proper functioning.

c. Perform all drills for familiarization and proficiency.

CONDITION II **"MODERATE DANGER"**

Warning Flags: Yellow

Alarms: Actuates at 10 ppm. Continuous flashing light.

Characterized By: Drilling operations in zones containing hydrogen sulfide. This condition will remain in effect until adding chemicals to the mud system neutralizes the hydrogen sulfide or it becomes necessary to go to Condition III.

General Action:

a. Be alert for a condition change

b. WHEN DRILLING AHEAD - Driller and designated crewmember will don 30 min SCBA, shut-in the well and immediately proceed to the Safe Briefing Area.

WHEN TRIPPING – Driller and two designated crewmembers will don 30 min SCBA, shut in the well and immediately proceed to the Safe Briefing Area. The Derrickman will

don a 5-minute escape pack, descend to the rig floor, don a 30-min SCBA (if necessary) and immediately proceed to the Safe Briefing Area.

c. All In Scope Personnel will proceed directly to the appropriate Safe Briefing Area.

d. Remain in safe briefing area, take roll call and wait for instructions

e. Contact the Total H2S Technician if not on location.

f. Personnel shall ensure that their breathing apparatus is properly fitted and operational before entering an H_2S contaminated area to provide assistance to anyone who may be injured or overcome by toxic gases.

g. All Out of Scope Personnel will report to the appropriate Safe Briefing Area.

CONDITION III "EXTREME DANGER"

Warning Flags — Red

Alarms — Actuate at 15 ppm. Continuous Sirens and Flashing Lights

Characterized by: — Critical well operations which pose an immediate threat of H_2S exposure to on-site personnel and a potential threat to the public.

General Action:

a. WHEN DRILLING AHEAD - Driller and designated crewmember will don 30 min SCBA, shut-in the well and immediately proceed to the Safe Briefing Area.

WHEN TRIPPING – Driller and two designated crewmembers will don 30

min SCBA, shut in the well and immediately proceed to the Safe Briefing Area. The Derrickman will don a 5-minute escape pack, descend to the rig floor, don a 30-min SCBA (if necessary) and immediately proceed to the Safe Briefing Area.

b. All In Scope Personnel should don SCBA if nearby and immediately proceed to Safe Briefing Area. If SCBA in not nearby at time of alarm, DO NOT GO TOWARDS RIG AREA, but proceed directly to the Safe Briefing Area

c. All out of Scope Personnel shall evacuate the location.

d. Remain in the Safe Briefing Area, take roll call and wait for instructions.

e. Contact the Total H2S Technician if not on location.

f. Personnel shall ensure that their breathing apparatus is properly fitted and operational before entering an H_2S contaminated area to provide assistance to anyone who may be injured or overcome by toxic gases. Use the buddy system.

g. Remain in safe briefing area, take roll call and wait for instructions.

h. A cascade breathing air systems shall be mobilized and utilized to conduct any additional on rig work required to correct the H2S release condition.

i. If well is ignited do not assume area is safe. SO2 is hazardous and not all H2S will burn.

H_2S EMERGENCY PROCEDURES; IN SCOPE PERSONNEL

A. Day To Day Drilling Operations

1. Upon discovering a release of H_2S gas in the ambient air by warning alarms or in any other way **Do Not Panic**.

2. Hold your breath donning the nearest Self Contained Breathing Apparatus and rapidly move up or across-wind away from the areas where H_2S sensing devices are in place, to the closest available safe briefing area. Continue to use breathing apparatus until it has been determined that the exposure of H_2S gas in the ambient air no longer exists. **Do Not Panic!**

3. Utilize the "Buddy System", i.e.; select and pair up each person participating in the drilling of an H_2S well prior to an emergency situation.

4. Help anyone who is overcome or affected by the H_2S gas by taking him/her up-wind out of the contaminated area. (This should be done utilizing an SCBA and with a buddy.)

5. Take necessary steps to confirm the release of the H_2S gas into the ambient air.

    - When an H2S alarm activates, two designated personnel using the buddy system, while wearing their self contained breathing apparatus, will determine by the read-out on the fixed monitor which sensing device has detected the release of the H_2S gas.

    - They will utilize the hand-held sniffer type device at the particular sensing point disclosed on the fixed monitor to corroborate the fact that H_2S gas has actually been released. This will rule out the possibility of a false alarm. This will be done with a buddy and under mask after reporting to the Safe Briefing Area for roll call and instructions by on-site MRC Foreman.

6. Refer to the Emergency Phone Numbers and call emergency personnel.

7. Take the necessary steps to suppress the release of H_2S gas into the ambient air. Comply with the MRC Energy Co. Representative to physically suppress the release of H_2S gas at the actual release point.

8. Check all of MRC Energy Co.'s monitoring devices and increase gas-monitoring activities with the portable hand-operated H_2S and gas detector units.

Do Not Panic!

The MRC Energy Co. representative will assess the situation and with assistance of the Contractor's Representative and Total Safety's H_2S Safety Technician or on site designee, will assign duties to each person to bring the situation under control.

B. RESPONSIBILITIES OF WELL-SITE PERSONNEL

In the event of a release of potentially hazardous amounts of H_2S, all personnel will immediately don their protective breathing apparatus, the well will be shut in and personnel will proceed upwind to the nearest designated safe briefing area for roll call and instructions by MRC Foreman. Consideration will be given to evacuating Out of Scope Personnel, as situation warrants.

1. MRC ENERGY CO.'S Well-site Representatives

a. If MRC Energy Co.'s well-site representative is incapacitated or not on location, this responsibility will fall to the Toolpusher/Driller.

b. Immediately upon assessing the situation, set this plan into Action by initiating the proper procedures to contain the gas and notify the appropriate people and agencies.

c. Ensure that the alarm area indicated by the fixed H_2S Monitor is checked and verified with a portable H_2S detector. (Safety Technician if on location or MRC assigned designee with a buddy utilizing SCBA's)

d. Consult Pusher/driller of remedial actions as needed.

e. Ensure that non-essential personnel proceed to the safe briefing area.

f. Ensure location entrance barricades are positioned. Keep the number of persons on location to a minimum during hazardous operations.

g. Consult each contractor, Service Company and all others allowed to enter the site, that H2S gas may be encountered and the potential hazards that may exist.

h. Authorize the evacuation of local residents if H_2S threatens Their safety.

i. Non essential personnel should be evacuated from location if Situation warrants.

2. Toolpusher

a. Toolpusher/Driller will assume responsibilities of MRC Energy Co.'s well-site representative if that person is incapacitated or not on location.

b. Ensure that the alarm area indicated by the fixed H_2S monitor is checked and verified with a portable H_2S gas detector. (Alarm area indicated by the monitor will be Checked by the H2S Technician and a buddy, under mask.) This will be done after checking in and roll call at the Upwind Safe Briefing Area.

c. Confer with MRC Energy Co.'s well-site representative or superintendent and direct remedial action to suppress the H_2S and control the well.

d. Ensure that personnel at the safe briefing area are instructed on emergency actions required.

e. Ensure that personnel at the drill floor area are instructed on emergency actions required.

f. Ensure that all personnel observe the appropriate safety and emergency procedures.

g. Ensure that all persons are accounted for and provided emergency assistance as necessary.

3. Mud Engineer

a. Run a sulfide check on the flowline mud.

b. Take steps to determine the source of the H_2S and suppress it. Lime and H_2S scavenger shall be added to the mud as necessary.

4. Total H_2S Safety Technician, if on location, or MRC Designee

a. H2S Safety Technician or designee don nearest SCBA and report to Safe Briefing Area for roll call, take a buddy masked up and check monitor and verify with a portable H_2S detector the alarm area indicated by the fixed H_2S monitor. Advise the Toolpusher/Driller and MRC Energy Co.'s well-site representative of findings. Record all findings.

b. If H_2S is flared, check for sulfur dioxide (SO_2) near the flare as necessary. Take hourly readings at different perimeters, log readings and record on location.

c. Ensure that personnel at the safe briefing area are instructed on emergency actions required.

d. Ensure that the appropriate warning flags are displayed.

e. Ensure that all personnel are in S.C.B.A. as necessary.

f. Ensure that all persons are accounted for and provide emergency assistance as necessary.

g. Be prepared to evacuate rig if order is issued.

5. General Personnel & Visitors

a. All In Scope Personnel, if not specifically designated to shut the well in or control the well, shall proceed to the (upwind) safe briefing area. All Out of Scope Personnel shall immediately proceed to the appropriate (upwind) safe briefing area or evacuate the site as conditions warrant.

b. During any emergency, use the "buddy" system to prevent anyone from entering or being left in a gas area alone, even wearing breathing apparatus.

c. Provide assistance to anyone who may be injured or overcome by toxic gases. Personnel shall ensure that their breathing apparatus is properly fitted and operational before entering a potentially H_2S contaminated area.

d. Remain in safe briefing area and wait for instructions.

C. INSTRUCTIONS FOR IGNITING THE WELL

1. The Toolpusher/Driller will confer with MRC Energy Co.'s well-site representative who will secure the approval of the "Texas Wells Delivery Manager, prior to igniting the well, if at all possible.

   The Toolpusher/Driller will be responsible for igniting the well in the event of severe well control problems. This decision should be made only as a last resort in situations where it is clear that:

   a. Human life and property are endangered, or

   b. There is no hope of controlling the well under current conditions.

2. Once the decision has been made, the following procedures should be followed:

   a. Two people wearing self-contained breathing apparatus will be needed for the actual lighting of the well. They must first establish the flammable perimeter by using an explosimeter. This should be established at 30% to 40% of the lower flammable limits.

   b. After the flammable perimeter has been established and everyone removed from the area, the ignition team should select a site upwind of the well from which to ignite the well. This site should offer the maximum protection and have a clear path for retreat from the area.

c. The ignition team should have safety belts and lifeline attached and manned before attempting ignition. If the leak is not ignited on the first attempt, move in 20 to 30 feet and fire again. Continue to monitor with the explosimeter and NEVER fire from an area with over 75% of the Lower Explosive Limit (LEL). If having trouble igniting the well, try firing 40 degrees to 90 degrees on either side of the well.

d. If ignition is not possible due to the makeup of the gas, the toxic perimeter must be established and evacuation continued until the well is contained.

e. All personnel must act only as directed by the person in charge of the operations.

NOTE: After the well is ignited, burning hydrogen sulfide (H_2S) will convert to sulfur dioxide (SO_2), which is also a highly toxic gas.

DO NOT ASSUME THE AREA IS SAFE AFTER THE WELL IS IGNITED

D. CORING PROCEDURES

Only essential personnel shall be on the rig floor. Ten (10) stands prior to retrieving core barrel; all personnel on drill floor and in derrick shall confirm self-Contained breathing apparatus available and ready for use.

A Total H2S Technician will don a SCBA with a buddy assigned from the rig crew, and continuously monitor for H2S at each connection. Any levels detected will require operations to be shut down and all involved personnel to don SCBAs. Precautions will remain in place until barrel is laid down.

All involved personnel will don SCBAs when removing the inner barrel from the outer barrel. SCBAs can be removed once the absence of H2S in confirmed by the Total H2S Technician.

Cores will be appropriately marked and sealed for transportation.

Normal Operations

1. Responsibilities of well-site personnel

a. Well-site Representative

1. Notify H_2S Technician of expected date to reach Contingency Plan implementation depth (Two (2) days prior to reaching suspected H_2S bearing zone) or prior to starting well work.

2. Ensure H_2S Safety Technician completes rig-up procedures prior to reaching Contingency Plan effective depth.

3. Restrict the number of personnel at the drilling rig or well site to a minimum while drilling, starting well work, testing or coring.

4. Ensure weekly H_2S drills/training are performed, if possible.

B. Toolpusher

1. Ensure that necessary H_2S safety equipment is provided on the rig, and that it is properly inspected and maintained.

2. Ensure that all personnel that work in the well area, are thoroughly trained in the use of H_2S safety equipment and periodic drills are held to maintain an adequate level of proficiency.

C. In Scope Personnel

1. Remain clean-shaven. Beards and long sideburns do not allow a proper facepiece seal.

2. Receive H_2S safety training on location, or confirm prior training by certification that is one year within date.

3. Familiarize yourself with the rig's Contingency Plan.

4. Inspect and practice putting on your breathing apparatus.

5. Know the location of the "safe briefing areas".

6. Keep yourself "wind conscious". Be prepared to quickly move upwind and away in the event of any emergency involving release of H_2S.

D. Total Safety H_2S Safety Technician or MRC Designee

1. Conduct training as necessary to ensure all personnel working in well area are familiar with the contingency procedures and the operation of emergency equipment.

2. Check all H_2S safety equipment to ensure that it is ready for emergency use:

   - Check pressure weekly for each shift on breathing apparatus (both 30-minute and hip-packs) to make sure they are charged to full volume.

   - Check pressure on cascade air bottles, if on location, to see that they are capable of recharging breathing apparatus.

   - Check oxygen resuscitator, if on location, to ensure that it is charged to full volume.

   - Check H_2S detectors weekly for each shift (fixed and portable), and explosimeter, to ensure they are working properly.

3. Provide a weekly report to MRC Energy Co.'s well-site representative documenting:

   - Calibrations performed on H_2S detectors.

   - Proper location and working order of H_2S safety equipment.

   - Attendance of all personnel, trained or retrained, and their company.

   - Weekly drills, if held and a list of personnel participating and summary of actions.

OUT OF SCOPE PERSONNEL

MRC Energy Co. policy will not require Out of Scope Personnel to be clean shaven, have processed medical questionnaires, fit testing, or have certified H2S Training.

SAFETY EQUIPMENT

All respirators will be designed, selected, used and maintained in conformance with ANSI Z88.2, American National Standard for respiratory protection.

Personal protective equipment must be provided and used. Those who are expected to use respiratory equipment in case of an emergency will be carefully instructed in the proper use and told why the equipment is being used. Careful attention will be given to the minute details in order to avoid possible misuse of the equipment during periods of extreme stress.

Self-contained breathing apparatus provides complete respiratory and eye protection in any concentration of toxic gases and under any condition of oxygen deficiency. The wearer is independent of the surrounding atmosphere because he/she is breathing with a system admitting no outside air. It consists of a full face mask, breathing tube, pressure demand regulator, air supply cylinder, and harness. Pure breathing air from the supply cylinder flows to the mask automatically through the pressure demand regulator which reduces the pressure to a breathing level. Upon inhalation, air flows into the mask at a rate precisely regulated to the user's demand. Upon exhalation, the flow to the mask stops and the exhaled breath passes through a valve in the face piece to the surrounding atmosphere. The apparatus includes an alarm & gauge which warns the wearer to leave the contaminated area for a new cylinder of air or cylinder refill.

The derrickman is provided with a full face piece unit attached to a 5– minute escape cylinder. He will also have his own self-contained 30-minute unit breathing apparatus located on the drilling floor. He will use the 5-minute unit to exit the derrick to the floor, donning the 30-minute unit located on the floor, if needed.

All respiratory protective equipment, when not in use, should be stored in a clean, cool, dry place, and out of direct sunlight to retard the deterioration of rubber parts. After each use, the mask assembly will be scrubbed with soap and water, rinsed thoroughly, and dried. Air cylinders can be recharged to a full condition from a cascade system.

Personnel in each crew will be trained in the proper techniques of bottle filling.

The primary piece of equipment to be utilized, should anyone be overcome by hydrogen sulfide, is the oxygen resuscitator, if on location.

When asphyxiation occurs, the victim must be moved to fresh air and immediately given artificial respiration. In order to assure readiness, the bottles of oxygen will be checked at regular intervals and an extra tank kept on hand.

Hand-operated pump-type detectors incorporating detector tubes will give more accurate readings of hydrogen sulfide. The pump-type draws air to be tested through the detector tube containing lead acetate-silica gel granules. Presence of hydrogen sulfide in the air sample is shown by the development of a dark brown stain on the granules, which is the

scale reading of the concentration of hydrogen sulfide. By changing the type of detector tube used, this detector may also be used for sulfur dioxide (SO_2) detection when hydrogen sulfide (H_2S) is being burned in the flare area.

Provisions must be made for the storage of all safety equipment as is evident from the foregoing discussion. All equipment must be stored in an available location so that anyone engaged in normal work situations is no more than "one breath away' from a mask.

V – TOXICITY OF VARIOUS GASES

Common Name	Chemical Formula	Specific Gravity[1]	PEL (OSHA)[2]	STEL[3]	Lethal ppm[4]
Hydrogen Cyanide	HCN	0.94	10	150	300
Hydrogen Sulfide	H_2S	1.18	20	Peak- 50ppm	600
Note: The ACGIH(7) recommends a TWA(6) value of 10ppm as the TLV(5) for H2S and an STEL of 15ppm.					
Sulfur Dioxide	SO_2	2.21	2	5 ppm	1000
Chlorine	CL_2	2.45	1		
Carbon Monoxide	CO	0.97	35	200/1 Hour	1000
Carbon Dioxide	CO_2	1.52	5000	5%	10%
Methane	CH_4	0.55	90000		

[1] **Air = 1.0**

[2] **Permissible** - Concentration at which is believed that all workers may repeatedly be exposed, day after day, without adverse effect.

[3] **STEL** - Short Term Exposure Limit. A 15-minute time weighted average.

[4] **Lethal** - Concentration that will cause death with short-term exposure.

TLV – Threshold Limit Value; a concentration recommended by the American Conference of Governmental Industrial Hygienists (ACGIH)

TWA – Time Weighted Average; the average concentration of contaminant one can be exposed to over a given eight-hour period.

ACGIH – (American Conference of Governmental Industrial Hygienists) is an organization comprised of Occupational Health Professionals believed by many to be the top experts in the field of Industrial Hygiene. They are recognized as an expert rexource by OSHA. The ACGIH releases a bi-annual publication "Threshold Limit Values and Biological Indices" that many safety professionals consider to be the authoritative document on airborne contaminants.
Reference: API RP-49, September 1974 - Reissued August 1978

VI. PROPERTIES OF GASES

A. CARBON DIOXIDE

1. Carbon Dioxide (CO_2) is usually considered inert and is commonly used to extinguish fires. It is 1.52 times heavier than air and will concentrate in low areas of still air. Humans cannot breathe air containing more than 10% CO_2 without losing conscience or becoming disorientation in a few minutes. Continued exposure to CO_2 after being affected will cause convulsions, coma, and respiratory failure.

2. The threshold limit of CO_2 is 5000 ppm. Short-term exposure to 50,000 ppm (5%) is reasonable. This gas is colorless, odorless, and can be tolerated in relatively high concentrations.

B. HYDROGEN SULFIDE

1. Hydrogen Sulfide (H_2S) is a colorless, transparent, flammable gas. It is heavier than air and, hence, may accumulate in low places.

2. Although the slightest presence of H_2S in the air is normally detectable by its characteristic "rotten egg" odor, it is dangerous to rely on the odor as a means of detecting excessive concentrations because the sense of smell is rapidly lost, allowing lethal concentrations to be accumulated without warning. The following table indicates the poisonous nature of H_2S.

CONCENTRATION			EFFECTS
% H_2S	PPM	GR/100 SCF[1]	
0.001	10	.65	Safe for 8 hours without respirator. Obvious and unpleasant odor.
0.0015	15	0.975	Safe for 15 minutes of exposure without respirator.
0.01	100	6.48	Kills smell in 3-15 minutes; may sting eyes and throat.
0.02	200	12.96	Kills smell quickly; stings eyes and throat.
0.05	500	32.96	Dizziness; breathing ceases in a few minutes; need prompt artificial respiration.
0.07	700	45.92	Rapid Unconsciousness; death will result if not rescued promptly.
0.1	1000	64.80	Instant unconsciousness, followed by death within minutes.

[1] Grains per 100 Cubic Feet

VII. Treatment Procedures for Hydrogen Sulfide Poisoning

A. Remove the victim to fresh air.

B. If breathing has ceased or is labored, begin resuscitation immediately.
Note: This is the quickest and preferred method of clearing victim's lungs of contaminated air; however, under disaster conditions, it may not be practical to move the victim to fresh air. In such instances, where those rendering first aid must continue to wear masks, a resuscitator should be used.

C. Apply resuscitator to help purge H_2S from the blood stream.

D. Keep the victim at rest and prevent chilling.

E. Get victim under physician's care as soon as possible.

C. SULPHUR DIOXIDE

1. Sulfur Dioxide (SO_2) is a colorless, non-flammable, transparent gas.

2. SO_2 is produced during the burning of H_2S. Although SO_2 is heavier than air, it can be picked up by a breeze and carried downwind at elevated temperatures. Since SO_2 is extremely irritating to the eyes and mucous membranes of the upper respiratory tract, it has exceptionally good warning powers in this respect. The following table indicates the toxic nature of SO_2:

CONCENTRATION		EFFECTS
% SO_2	PPM	
0.0005	3 to 5	Pungent odor, normally a person can detect SO_2 in this range.
0.0012	12	Throat irritation, coughing, constriction of the chest, tearing and smarting of eyes.
0.015	150	So irritating that it can only be endured for a few minutes.
.05	500	Causes a sense of suffocation, event with the

		first breath.

VIII. BREATHING AIR EQUIPMENT DRILLS FOR ON & OFF DUTY PERSONNEL

An H_2S Drill and Training Session must be given once a week to ALL on-duty personnel with off duty personnel. On-duty and Off-duty personnel will reverse roles on alternate drills.
An H2S drill and training session must be given once a week to all off-duty personnel in coincidence with on-duty personnel reversing roles on alternate drills.

The purpose of this drill is to instruct the crews in the operation and use of breathing air and H_2S related emergency equipment and to allow the personnel to become acquainted with using the equipment under working conditions. The crews should be trained to put on the breathing air equipment within one minute when required or requested to do so.

The following procedure should be used for weekly drills. The MRC supervisor must be satisfied that the crews are proficient with the equipment.

1. All personnel should be informed that a drill will be held.

2. The Total H2S Safety Technician or a designee assigned by the MRC Drilling Foreman should initiate the drill by signaling as he/she would if H2S was detected.

3. Personnel should don their breathing apparatus.

4. Once the breathing air equipment is on, the H2S Technician should check all personnel to insure proper operation.

A training and information session will be conducted after each drill to answer any H_2S related questions and to cover any gaps identified from one of the following topics:

- Condition II, and III alerts and steps to be taken by all personnel.
- The importance of wind direction when dealing with H_2S.
- Proper use and storage of all types of breathing equipment.
- Proper use and storage of oxygen resuscitators.
- Proper use and storage of H_2S detectors (Mini Checks or equivalent).
- The "buddy system" and the procedure for rescuing a person overcome by H_2S.
- Responsibilities and duties.
- Location of H_2S safety equipment.
- Other parts of the "H_2S Contingency Plan" that should be reviewed.

NOTE: A record of attendance must be kept for weekly drills and training sessions.

IX. HYDROGEN SULFIDE TRAINING CURRICULUM

(FOR EMPLOYERS, VISITORS, AND CONTRACTORS)

EACH PERSON WILL BE INFORMED ON THE RESTRICTIONS OF HAVING BEARDS AND CONTACT LENS. THEY WILL ALSO BE INFORMED OF THE AVAILABILITY OF SPECTACLE KITS.

AFTER THE H2S EQUIPMENT IS RIGGED UP, ALL IN SCOPE PERSONNEL WILL BE H2S TRAINED AND PUT THROUGH A DRILL. ANY DEFICIENCIES WILL BE CORRECTED.

Training Completion cards are good for one year and will indicate date of completion or expiration. Personnel previously trained on another facility and visiting, must attend a "supplemental briefing" on H2S equipment and procedures before beginning duty. Visitors who remain on the location more than 24 hours must receive full H2S training given all crew members. A "supplemental briefing" will include but not be limited to: Location of respirators, familiarization with safe briefing areas, alarms with instruction on responsibilities in the event of a release and hazards of H2S and (SO2, if applicable). A training and drill log will be kept.

Topics for full H2S training shall include the following equipment if on location, but not be limited to the following:

1. **Brief Introduction on H2S**
   - A. Slide or Computer presentation (If Available)
   - B. H2S material will be distributed
   - C. Re-emphasize the properties, toxicity, and hazards of H2S
   - D. Source of SO2 (if applicable)

2. **H2S Detection**
   - A. Description of H2S sensors
   - B. Description of warning system (how it works & it's location)
   - C. Actual location of H2S sensors
   - D. Instruction on use of pump type detector (Gastec)
   - E. Use of card detectors, ampoules, or dosimeters
   - F. Use of combustible gas detector
   - G. Other personnel detectors used
   - H. Alarm conditions I & II,
   - I. SO2 alarms (if applicable)

3. **H2S Protection**
   - A. Types of breathing apparatus provided (30-minute SCBA & 5-minute SCBA (with voice diaphragms for communication if supplied)
   - B. Principle of how breathing apparatus works
   - C. Demonstration on how to use breathing apparatus
   - D. Location of breathing apparatus

4. **Cascade System**
   - A. Description of cascade system
   - B. How system works
   - C. Cascade location of rig with reference to briefing areas
   - D. How to use cascade system (with 5-minute hose work line units & refill, if supplied)
   - E. Importance of wind direction and actual location of Windsocks
   - F. Purpose of compressor/function (if one is on site)

5. **H2S Rescue and First Aid**
   - A. Importance of wind direction
   - B. Safe briefing area
   - C. Buddy system
   - D. H2S symptoms
   - E. Methods of rescue

6. **Hands on Training**
   - A. Donning/familiarization of SCBA 30-minue unit
   - B. Donning/familiarization of SKADA 5- MIN. Packs
   - C. Familiarization of cascades
   - D. Use of O2 resuscitator
   - E. Alarm conditions - upwind briefing areas, etc...
   - F. Duties and responsibilities of all personnel
   - G. Procedures for evacuation
   - H. Search and Rescue teams

7. **Certification**
   - A. Testing on material covered

TOTAL SAFETY US INC., FIT TEST

X. EMPLOYEE INFORMATION

Employee Name: _____ Date: _____

Date of Employee Medical Evaluation: _____

Medical Status (circle): Unrestricted Limitations on Use Use Not Authorized

RESPIRATOR INFORMATIOIN

Respirator Type (Dustmask, SCBA, etc):_____

Brand:_____

Size: (circle): XS S M L XL

FIT TEST INFORMATION

Type of Fit Test Performed:

Quantitative

Porta Count	Fit Factor:_____
Fittester 3000	Fit Factor:_____

Qualitative

Irritant Smoke	Passed / Failed
Isoamyl Acetate (Banana Oil)	Passed / Failed
Saccharin	Passed / Failed
Bitrex	Passed / Failed

I hereby certify that this fittest was conducted in accordance with the OSHA Fit Testing Protocols found in Appendix A of 1910.134.

Fit Tester Name (Print):_____

Signature:_____ Date:_____

XI. H_2S SAFETY SERVICES

HYDROGEN SULFIDE SAFETY PACKAGE – Contained on location in Total Safety H2S Equipment Trailer, unless otherwise noted:

RESPIRATORY SAFETY SYSTEMS

QTY	DESCRIPTION
12	30-Minute Pressure Demand SCBA (4-Primary Safe Briefing Area, 4-Secondary Safe Briefing Area, 4-floor with one of these for derrick man)
9	Hose Line 5-minute Work Unit w/Escape Cylinder (1 in derrick, 6 on drill floor, 1 in mud pit wt area, 1 in shaker area)

The following shall be part of the package if requested by the MRC Foremen (at least one trailer with cascade system is required to be located in the MRC Magnolia asset for use as needed)

1	Breathing air cascade of 10 bottles w/regulator
2	Refill lines to refill 30-minute units on location
1	6-Man manifold that can be rigged up to work area on floor, if needed
6	25 foot hose lines
2	50 foot hose lines
100	Feet of hose line to rig cascade up to 12 man manifold on floor
12	30-minute Self Contained Breathing apparatus

DETECTION AND ALARM SAFETY SYSTEM

1	H2S Fixed Monitor w/8Channels (Loc determined at rig up) suggested. (Mud pit area, shaker area, bell nipple area, floor/driller area, & outside quarters)
5	H2S Sensors
3	Explosion Proof Alarms (Light and Siren) (1 on floor, 1 in work area, 1 in trailer area where quarters are located)
2	Personal H2S monitors
1	Portable Tri-Gas Hand Held Meter (O2, LEL, H2S)
1	Sensidyne/Gastech Manual Pump Type Detector
8	Boxes H2S Tubes Various Ranges
2	Boxes SO2 Tubes Various Ranges
1	Calibration Gas
1	Set Paper Work for Records: Training, Cal, Inspection, other

ADDITIONAL SAFETY RELATED EQUIPMENT

QTY	DESCRIPTION
2	Windsocks with Pole and Bracket
1	Set Well Condition Sign w/Green, Yellow, Red Flags
1	Primary Safe Briefing Area Sign
1	Secondary Safe Briefing Area Sign
6	Operating Condition Signs for Work Areas & Living Quarters

TRAILER WITH BREATHING AIR CASCADE WILL ALSO INCLUDE THE FOLLOWING:

This equipment will be part of the H2S equipment stored in the trailer, when on location

1	First aid kit
1	Fire Blanket
1	Eye wash station
2	Safety Harness w/150' safety line

XII. EMERGENCY PHONE NUMBERS (Updated March 18, 2009)

EMERGENCY PHONE NUMBERS

MRC Energy Co. Emergency Phone #
MRC Energy Co. Permian Operations Phone----------
MRC Energy Co. Production
113 Daw Rd
Mansfield LA 71052

Title	Names	Phone	Cell
Operations Manager			
Operation Supt.			
Operations Supervisor			
Operations Supervisor			
Office Supervisor			
HSE			
Scheduler Planner			

Hydrogen Sulfide Safety Consultants

Total Safety W. Bender Blvd. Hobbs, NM	575-392-2973	After Hours 24 Hour Call Center Through Office Number
Tommy Throckmorton Operations Manager	575-392-2973	940-268-9614
Rodney Jourdan Sales Contact	575-392-2973	432-349-3928

MRC Energy Co. MEDICAL RESPONSE PLAN AND IT'S MEDICAL PROTOCOLS WILL BE FOLLOWED

MEDICAL COORDINATOR # ----------

Emergency Numbers & Directions

Hospitals (911)

Artesia General Hospital 702 N. 13th St. Artesia, NM 88210	**Main Phone Number**	**575-748-3333**
Nor-Lea General Hospital 1600 N. Main Ave. Lovington, NM 88260	**Main Phone Number**	**575-396-6611**
Lea Regional Medical Center 5419 N. Lovington Hwy Hobbs, NM 88240	**Main Phone Number**	**575-492-5260**
Carlsbad General Hospital 2430 W. Pierce St. Carlsbad, NM	**Main Phone Number**	**575-887-4100**
Lovelace Regional Hospital 117 E. 19th St Roswell, NM 88201	**Main Phone Number**	**575-627-7000**
Winkler Co. Memorial Hospital 821 Jeffee Dr. Kermit, Texas 79745	**Main Phone Number**	**432-586-8299**
Reeves County Hospital 2323 Texas St. Pecos, Texas 79772	**Main Phone Number**	**432-447-3551**

State Police (911)

Texas DPS Loving co. 225 N.Pecos Mentone, Texas 79754	**Office Number**	**432-377-2411**
Texas DPS Winkler Co. 100 E Winkler Kermit, Texas 79745	**Office Number**	**432-586-3465**
Texas DPS Pecos Co. 148 N I-20 Frontage RD Pecos, Texas 79772	**Office Number**	**432-447-3532**
New Mexico State Police 3300 W. Main St Artesia, NM	**Office Number**	**575-748-9718**
New Mexico State Police 304 N. Canyon St Carlsbad, NM 88220	**Office Number**	**575-885-3137**
New Mexico State Police 5100 Jack Gomez Blvd. Hobbs, NM 88240	**Office Number**	**575-392-5588**

Local Law Enforcement (911) (Sheriff)

Reeves Co. Sheriff 500 N. Oak ST Pecos, Texas 79722	**Office Number**	**432-445-4901**
Winkler Co. Sheriff 1300 Bellaire St. Kermit, Texas 79745	**Office Number**	**432-586-3461**
Loving Co. Sheriff Courthouse Mentone, Texas	**Office Number**	**432-377-2411**
Lea Co. Sheriff 1417 S. Commercial St. Lovington, NM 88260	**Office Number**	
Eddy Co. Sheriff 305 N 7th St. Artesia, NM 88210	**Office Number**	**575-766-9888**
Eddy Co. Sheriff 305 N 7th St. Carlsbad, NM 88220	**Office Number**	**575-746-9888**

Federal & State Agencies

OSHA Lubbock Area Office 1205 Texas Av. Room 806 Lubbock, Texas 79401	**Main Number**	**806-472-7681 EXT 7685**
New Mexico Environment Department 400 N Pennsylvania Roswell, NM 88201	**Joe Fresquez**	**575-623-3935**
Texas Railroad Commission Midland, Texas	**Main Number**	**844-773-0305**
BLM Carlsbad, NM Field Office 620 E. Green ST Carlsbad, NM 88220	**Main Number**	**575-234-5972**
BLM Hobbs Field Station 414 W. Taylor Rd. Hobbs, NM 88240	**Main Number**	**575-393-3612**
BLM Roswell District Office 2909 W. Second St. Roswell, NM 88201	**Main Number**	**575-627-0272**
TECQ Texas Commission on Environmental Quality	**Main Number**	**800-832-8224**
New Mexico OCD		
U.S. Environmental Protection Agency Region 6 Texas/New Mexico	**Main Number**	**214-655-2222**
National Response Center Toxic Chemicals & Oil Spills	**Main Number**	**800-424-8802**

Rig Company

XIII. EVACUATION OF THE GENERAL PUBLIC

The procedure to be used in alerting nearby persons in the event of any occurrence that could pose a threat to life or property will be arranged and completed with public officials in detail, prior to drilling into the hydrogen sulfide formations.

In the event of an actual emergency, the following steps will be immediately taken:

1. The MRC Energy Co.'s representative will dispatch sufficient personnel to immediately warn each resident and transients down-wind within radius of exposure from the well site. Then warn all residence in the radius of exposure. Additional evacuation zones may be necessary as the situation warrants.

2. The MRC Energy Co.'s representative will immediately notify proper authorities, including the Sheriff's Office, Highway Patrol, and any other public officials as described above and will enlist their assistance in warning residents and transients in the calculated radius of exposure.

3. The MRC Energy Co.'s representative will dispatch sufficient personnel to divert traffic in the vicinity away from the potentially dangerous area. A guard to the entrance of the well site will be posted to monitor essential and non essential traffic.

4. General:

    A. The area included within the radius of exposure is considered to be the zone of maximum potential hazard from a hydrogen sulfide gas escape. Immediate evacuation of public areas, in accordance with the provisions of this contingency plan, is imperative. When it is determined that conditions exist which create an additional area (beyond the initial zone of maximum potential hazard) vulnerable to possible hazard, public areas in the additional hazardous area will be evacuated in accordance with the contingency plan.

    B. In the event of a disaster, after the public areas have been evacuated and traffic stopped, it is expected that local civil authorities will have arrived and within a few hours will have assumed direction of and control of the public, including all public areas. MRC Energy Co. will cooperate with these authorities to the fullest extent and will exert every effort by careful advice to such authorities to prevent panic or rumors.

    C. MRC Energy Co. will dispatch appropriate management personnel at the disaster site as soon as possible. The company's personnel

will cooperate with and provide such information to civil authorities as they might require.

D. One of the products of the combustion of hydrogen sulfide is sulfur dioxide (SO_2). Under certain conditions this gas may be equally as dangerous as H_2S. A pump type detector device, which determines the percent of SO_2 in air through concentrations in ppm, will be available. Although normal air movement is sufficient to dissipate this material to safe levels, the SO_2 detector should be utilized to check concentrations in the proximity of the well once every hour, or as necessary and the situation warrants. Also, if any low areas are suspected of having high concentrations, personnel should be made aware of these areas, and steps should be taken to determine whether or not these low areas are hazardous.

Company: Matador Resources
Site: Charles Ling Fed Com
Well: Charles Ling Fed Com #211H
Project: Lea County, New Mexico (NAD 27)
Rig: Patterson 282

ANNOTATIONS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	KOP, 1.00°/100' Build
1000.22	4.00	327.36	999.89	11.77	-7.54	-11.82	13.97	Begin 4.00° Tangent
5905.69	4.00	327.36	5893.40	300.08	-192.19	-301.38	356.35	Begin 1.50°/100' Drop
6172.50	0.00	0.00	6160.00	307.92	-197.21	-309.26	365.66	Begin Vertical Hold
11944.74	0.00	0.00	11932.24	307.92	-197.21	-309.26	365.66	Begin 10.00°/100' Build
12744.74	80.00	179.61	12496.49	-165.53	-193.98	164.21	839.13	Begin 6.00°/100' Build
12911.41	90.00	179.61	12511.00	-331.35	-192.85	330.03	1004.95	Begin 90.00° Lateral
17260.91	90.00	179.61	12511.00	-4680.75	-163.14	4679.53	5354.45	PBHL

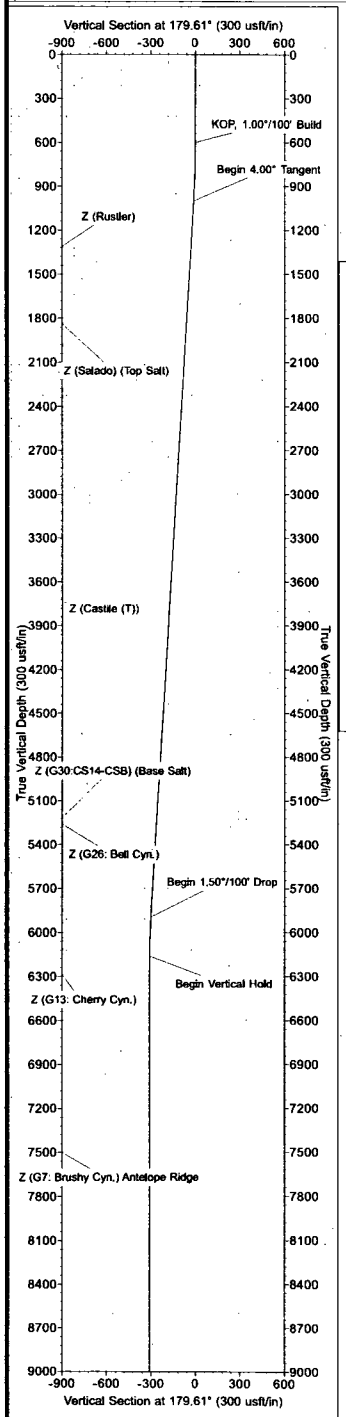
WELL DETAILS: Charles Ling Fed Com #211H					
3611.00					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	451281.83	742364.81	32° 14' 17.734 N	103° 32' 58.110 W

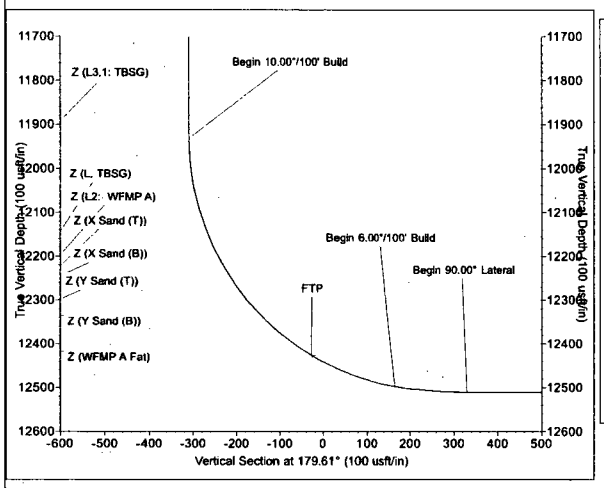
Azimuths to Grid North
True North: -0.42°
Magnetic North: 6.50°

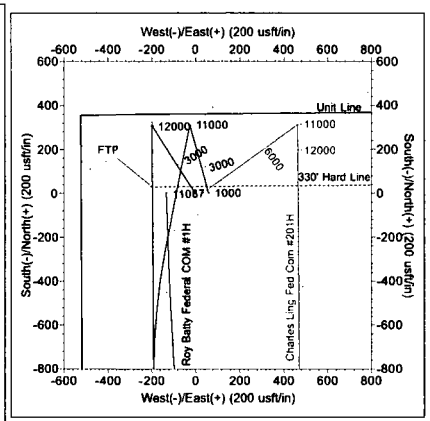
Magnetic Field
Strength: 47899.3snT
Dip Angle: 60.03°
Date: 5/1/2018
Model: BGGM2018

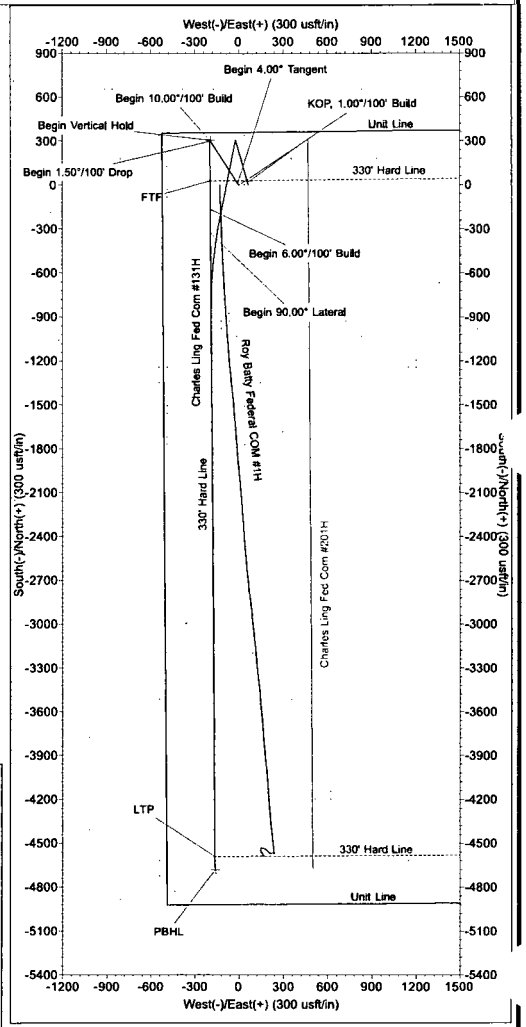
US State Plane 1927 (Exact solution)
New Mexico East 3001

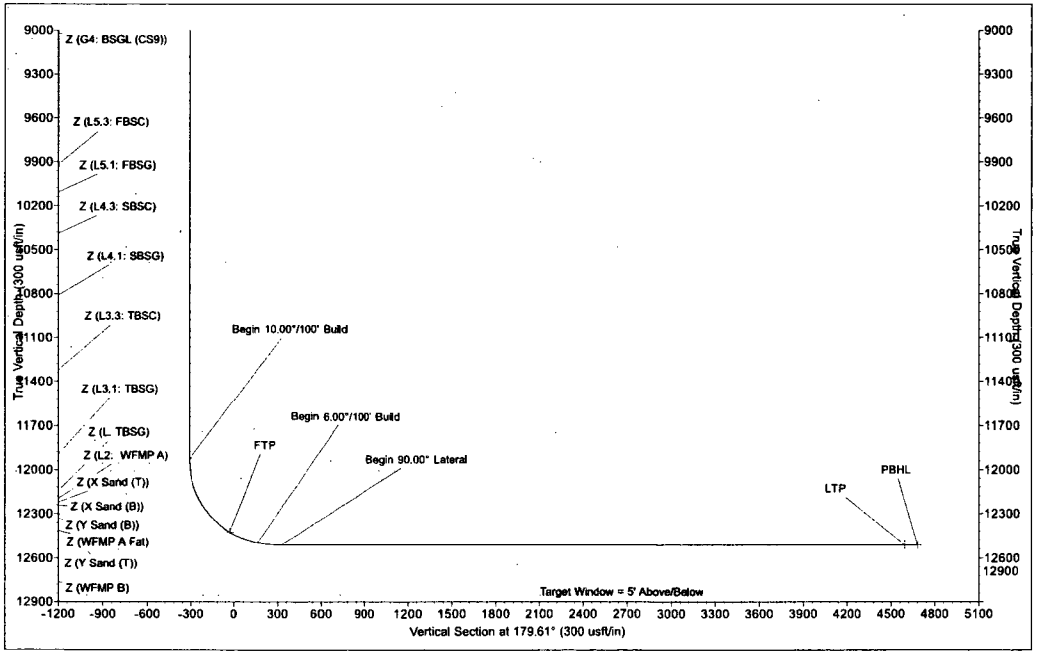
Created By: HLH
Date: 14:54, April 24 2018
Plan: Design #1











Matador Resources

Lea County, New Mexico (NAD 27)
Charles Ling Fed Com
Charles Ling Fed Com #211H

Wellbore #1

Plan: Design #1

Standard Planning Report

24 April, 2018

Database:	5000.1 Conroe DB	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Company:	Matador Resources	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site:	Charles Ling Fed Com	**North Reference:**	Grid
Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Lea County, New Mexico (NAD 27)		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Well	Charles Ling Fed Com #211H				
Well Position	**+N/-S**	-0.43 usft	**Northing:**	451,281.83 usft	**Latitude:**	32° 14' 17.734 N
	+E/-W	-60.25 usft	**Easting:**	742,364.81 usft	**Longitude:**	103° 32' 58.110 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,611.00 usft

Wellbore	Wellbore #1

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	BGGM2018	5/1/2018	6.92	60.03	47,899

Design	Design #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	179.61

Plan Survey Tool Program **Date** 4/24/2018

	Depth From (usft)	**Depth To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Remarks**
1	0.00	17,260.91	Design #1 (Wellbore #1)	MWD	
				OWSG MWD - Standard	

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	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.22	4.00	327.36	999.89	11.77	-7.54	1.00	1.00	0.00	327.36	
5,905.69	4.00	327.36	5,893.40	300.08	-192.19	0.00	0.00	0.00	0.00	
6,172.50	0.00	0.00	6,160.00	307.92	-197.21	1.50	-1.50	0.00	180.00	vert - Charles Ling I
11,944.75	0.00	0.00	11,932.24	307.92	-197.21	0.00	0.00	0.00	0.00	
12,744.75	80.00	179.61	12,496.49	-165.53	-193.98	10.00	10.00	0.00	179.61	PBHL - Charles Lin
12,911.41	90.00	179.61	12,511.00	-331.35	-192.85	6.00	6.00	0.00	0.00	
17,260.91	90.00	179.61	12,511.00	-4,680.75	-163.14	0.00	0.00	0.00	0.00	PBHL - Charles Lin

Database:	5000.1 Conroe DB	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Company:	Matador Resources	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site:	Charles Ling Fed Com	**North Reference:**	Grid
Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 1.00°/100' Build									
700.00	1.00	327.36	699.99	0.73	-0.47	-0.74	1.00	1.00	0.00
800.00	2.00	327.36	799.96	2.94	-1.88	-2.95	1.00	1.00	0.00
900.00	3.00	327.36	899.86	6.61	-4.23	-6.64	1.00	1.00	0.00
1,000.22	4.00	327.36	999.89	11.77	-7.54	-11.82	1.00	1.00	0.00
Begin 4.00° Tangent									
1,100.00	4.00	327.36	1,099.43	17.63	-11.29	-17.71	0.00	0.00	0.00
1,200.00	4.00	327.36	1,199.19	23.51	-15.06	-23.61	0.00	0.00	0.00
1,300.00	4.00	327.36	1,298.94	29.39	-18.82	-29.51	0.00	0.00	0.00
1,313.09	4.00	327.36	1,312.00	30.15	-19.31	-30.29	0.00	0.00	0.00
Z (Rustler)									
1,350.00	4.00	327.36	1,348.82	32.32	-20.70	-32.46	0.00	0.00	0.00
13 3/8"									
1,400.00	4.00	327.36	1,398.70	35.26	-22.58	-35.42	0.00	0.00	0.00
1,500.00	4.00	327.36	1,498.46	41.14	-26.35	-41.32	0.00	0.00	0.00
1,600.00	4.00	327.36	1,598.21	47.02	-30.11	-47.22	0.00	0.00	0.00
1,700.00	4.00	327.36	1,697.97	52.89	-33.88	-53.12	0.00	0.00	0.00
1,800.00	4.00	327.36	1,797.72	58.77	-37.64	-59.03	0.00	0.00	0.00
1,841.38	4.00	327.36	1,839.00	61.20	-39.20	-61.47	0.00	0.00	0.00
Z (Salado) (Top Salt)									
1,900.00	4.00	327.36	1,897.48	64.65	-41.41	-64.93	0.00	0.00	0.00
2,000.00	4.00	327.36	1,997.24	70.53	-45.17	-70.83	0.00	0.00	0.00
2,100.00	4.00	327.36	2,096.99	76.40	-48.93	-76.74	0.00	0.00	0.00
2,200.00	4.00	327.36	2,196.75	82.28	-52.70	-82.64	0.00	0.00	0.00
2,300.00	4.00	327.36	2,296.51	88.16	-56.46	-88.54	0.00	0.00	0.00
2,400.00	4.00	327.36	2,396.26	94.04	-60.23	-94.44	0.00	0.00	0.00
2,500.00	4.00	327.36	2,496.02	99.91	-63.99	-100.35	0.00	0.00	0.00
2,600.00	4.00	327.36	2,595.77	105.79	-67.76	-106.25	0.00	0.00	0.00
2,700.00	4.00	327.36	2,695.53	111.67	-71.52	-112.15	0.00	0.00	0.00
2,800.00	4.00	327.36	2,795.29	117.55	-75.28	-118.05	0.00	0.00	0.00
2,900.00	4.00	327.36	2,895.04	123.42	-79.05	-123.96	0.00	0.00	0.00
3,000.00	4.00	327.36	2,994.80	129.30	-82.81	-129.86	0.00	0.00	0.00
3,100.00	4.00	327.36	3,094.55	135.18	-86.58	-135.76	0.00	0.00	0.00
3,200.00	4.00	327.36	3,194.31	141.05	-90.34	-141.67	0.00	0.00	0.00
3,300.00	4.00	327.36	3,294.07	146.93	-94.11	-147.57	0.00	0.00	0.00
3,400.00	4.00	327.36	3,393.82	152.81	-97.87	-153.47	0.00	0.00	0.00
3,500.00	4.00	327.36	3,493.58	158.69	-101.63	-159.37	0.00	0.00	0.00
3,600.00	4.00	327.36	3,593.33	164.56	-105.40	-165.28	0.00	0.00	0.00
3,700.00	4.00	327.36	3,693.09	170.44	-109.16	-171.18	0.00	0.00	0.00
3,746.02	4.00	327.36	3,739.00	173.15	-110.89	-173.90	0.00	0.00	0.00
Z (Castile (T))									
3,800.00	4.00	327.36	3,792.85	176.32	-112.93	-177.08	0.00	0.00	0.00
3,900.00	4.00	327.36	3,892.60	182.20	-116.69	-182.99	0.00	0.00	0.00
4,000.00	4.00	327.36	3,992.36	188.07	-120.46	-188.89	0.00	0.00	0.00
4,100.00	4.00	327.36	4,092.12	193.95	-124.22	-194.79	0.00	0.00	0.00
4,200.00	4.00	327.36	4,191.87	199.83	-127.98	-200.69	0.00	0.00	0.00

Database:	5000.1 Conroe DB	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Company:	Matador Resources	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site:	Charles Ling Fed Com	**North Reference:**	Grid
Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,300.00	4.00	327.36	4,291.63	205.71	-131.75	-206.60	0.00	0.00	0.00
4,400.00	4.00	327.36	4,391.38	211.58	-135.51	-212.50	0.00	0.00	0.00
4,500.00	4.00	327.36	4,491.14	217.46	-139.28	-218.40	0.00	0.00	0.00
4,600.00	4.00	327.36	4,590.90	223.34	-143.04	-224.31	0.00	0.00	0.00
4,700.00	4.00	327.36	4,690.65	229.21	-146.80	-230.21	0.00	0.00	0.00
4,800.00	4.00	327.36	4,790.41	235.09	-150.57	-236.11	0.00	0.00	0.00
4,900.00	4.00	327.36	4,890.16	240.97	-154.33	-242.01	0.00	0.00	0.00
5,000.00	4.00	327.36	4,989.92	246.85	-158.10	-247.92	0.00	0.00	0.00
5,100.00	4.00	327.36	5,089.68	252.72	-161.86	-253.82	0.00	0.00	0.00
5,200.00	4.00	327.36	5,189.43	258.60	-165.63	-259.72	0.00	0.00	0.00
5,228.64	4.00	327.36	5,218.00	260.28	-166.70	-261.41	0.00	0.00	0.00
Z (G30:CS14-CSB) (Base Salt)									
5,269.74	4.00	327.36	5,259.00	262.70	-168.25	-263.84	0.00	0.00	0.00
Z (G26: Bell Cyn.)									
5,300.00	4.00	327.36	5,289.19	264.48	-169.39	-265.63	0.00	0.00	0.00
9 5/8"									
5,400.00	4.00	327.36	5,388.95	270.36	-173.15	-271.53	0.00	0.00	0.00
5,500.00	4.00	327.36	5,488.70	276.23	-176.92	-277.43	0.00	0.00	0.00
5,600.00	4.00	327.36	5,588.46	282.11	-180.68	-283.33	0.00	0.00	0.00
5,700.00	4.00	327.36	5,688.21	287.99	-184.45	-289.24	0.00	0.00	0.00
5,800.00	4.00	327.36	5,787.97	293.87	-188.21	-295.14	0.00	0.00	0.00
5,905.69	4.00	327.36	5,893.40	300.08	-192.19	-301.38	0.00	0.00	0.00
Begin 1.50°/100' Drop									
6,000.00	2.59	327.36	5,987.55	304.64	-195.11	-305.96	1.50	-1.50	0.00
6,100.00	1.09	327.36	6,087.50	307.34	-196.84	-308.67	1.50	-1.50	0.00
6,172.50	0.00	0.00	6,160.00	307.92	-197.21	-309.26	1.50	-1.50	0.00
Begin Vertical Hold									
6,200.00	0.00	0.00	6,187.50	307.92	-197.21	-309.26	0.00	0.00	0.00
6,296.50	0.00	0.00	6,284.00	307.92	-197.21	-309.26	0.00	0.00	0.00
Z (G13: Cherry Cyn.)									
6,300.00	0.00	0.00	6,287.50	307.92	-197.21	-309.26	0.00	0.00	0.00
6,400.00	0.00	0.00	6,387.50	307.92	-197.21	-309.26	0.00	0.00	0.00
6,500.00	0.00	0.00	6,487.50	307.92	-197.21	-309.26	0.00	0.00	0.00
6,600.00	0.00	0.00	6,587.50	307.92	-197.21	-309.26	0.00	0.00	0.00
6,700.00	0.00	0.00	6,687.50	307.92	-197.21	-309.26	0.00	0.00	0.00
6,800.00	0.00	0.00	6,787.50	307.92	-197.21	-309.26	0.00	0.00	0.00
6,900.00	0.00	0.00	6,887.50	307.92	-197.21	-309.26	0.00	0.00	0.00
7,000.00	0.00	0.00	6,987.50	307.92	-197.21	-309.26	0.00	0.00	0.00
7,100.00	0.00	0.00	7,087.50	307.92	-197.21	-309.26	0.00	0.00	0.00
7,200.00	0.00	0.00	7,187.50	307.92	-197.21	-309.26	0.00	0.00	0.00
7,300.00	0.00	0.00	7,287.50	307.92	-197.21	-309.26	0.00	0.00	0.00
7,400.00	0.00	0.00	7,387.50	307.92	-197.21	-309.26	0.00	0.00	0.00
7,500.00	0.00	0.00	7,487.50	307.92	-197.21	-309.26	0.00	0.00	0.00
7,513.50	0.00	0.00	7,501.00	307.92	-197.21	-309.26	0.00	0.00	0.00
Z (G7: Brushy Cyn.) Antelope Ridge									
7,600.00	0.00	0.00	7,587.50	307.92	-197.21	-309.26	0.00	0.00	0.00
7,700.00	0.00	0.00	7,687.50	307.92	-197.21	-309.26	0.00	0.00	0.00
7,800.00	0.00	0.00	7,787.50	307.92	-197.21	-309.26	0.00	0.00	0.00
7,900.00	0.00	0.00	7,887.50	307.92	-197.21	-309.26	0.00	0.00	0.00
8,000.00	0.00	0.00	7,987.50	307.92	-197.21	-309.26	0.00	0.00	0.00
8,100.00	0.00	0.00	8,087.50	307.92	-197.21	-309.26	0.00	0.00	0.00
8,200.00	0.00	0.00	8,187.50	307.92	-197.21	-309.26	0.00	0.00	0.00
8,300.00	0.00	0.00	8,287.50	307.92	-197.21	-309.26	0.00	0.00	0.00

Database:	5000.1 Conroe DB	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Company:	Matador Resources	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site:	Charles Ling Fed Com	**North Reference:**	Grid
Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,400.00	0.00	0.00	8,387.50	307.92	-197.21	-309.26	0.00	0.00	0.00
8,500.00	0.00	0.00	8,487.50	307.92	-197.21	-309.26	0.00	0.00	0.00
8,600.00	0.00	0.00	8,587.50	307.92	-197.21	-309.26	0.00	0.00	0.00
8,700.00	0.00	0.00	8,687.50	307.92	-197.21	-309.26	0.00	0.00	0.00
8,800.00	0.00	0.00	8,787.50	307.92	-197.21	-309.26	0.00	0.00	0.00
8,900.00	0.00	0.00	8,887.50	307.92	-197.21	-309.26	0.00	0.00	0.00
9,000.00	0.00	0.00	8,987.50	307.92	-197.21	-309.26	0.00	0.00	0.00
9,032.51	0.00	0.00	9,020.00	307.92	-197.21	-309.26	0.00	0.00	0.00
Z (G4: BSGL (CS9))									
9,100.00	0.00	0.00	9,087.50	307.92	-197.21	-309.26	0.00	0.00	0.00
9,200.00	0.00	0.00	9,187.50	307.92	-197.21	-309.26	0.00	0.00	0.00
9,300.00	0.00	0.00	9,287.50	307.92	-197.21	-309.26	0.00	0.00	0.00
9,400.00	0.00	0.00	9,387.50	307.92	-197.21	-309.26	0.00	0.00	0.00
9,500.00	0.00	0.00	9,487.50	307.92	-197.21	-309.26	0.00	0.00	0.00
9,600.00	0.00	0.00	9,587.50	307.92	-197.21	-309.26	0.00	0.00	0.00
9,700.00	0.00	0.00	9,687.50	307.92	-197.21	-309.26	0.00	0.00	0.00
9,800.00	0.00	0.00	9,787.50	307.92	-197.21	-309.26	0.00	0.00	0.00
9,900.00	0.00	0.00	9,887.50	307.92	-197.21	-309.26	0.00	0.00	0.00
9,930.51	0.00	0.00	9,918.00	307.92	-197.21	-309.26	0.00	0.00	0.00
Z (L5.3: FBSC)									
10,000.00	0.00	0.00	9,987.50	307.92	-197.21	-309.26	0.00	0.00	0.00
10,100.00	0.00	0.00	10,087.50	307.92	-197.21	-309.26	0.00	0.00	0.00
10,121.51	0.00	0.00	10,109.00	307.92	-197.21	-309.26	0.00	0.00	0.00
Z (L5.1: FBSG)									
10,200.00	0.00	0.00	10,187.50	307.92	-197.21	-309.26	0.00	0.00	0.00
10,300.00	0.00	0.00	10,287.50	307.92	-197.21	-309.26	0.00	0.00	0.00
10,400.00	0.00	0.00	10,387.50	307.92	-197.21	-309.26	0.00	0.00	0.00
10,401.51	0.00	0.00	10,389.00	307.92	-197.21	-309.26	0.00	0.00	0.00
Z (L4.3: SBSC)									
10,500.00	0.00	0.00	10,487.50	307.92	-197.21	-309.26	0.00	0.00	0.00
10,600.00	0.00	0.00	10,587.50	307.92	-197.21	-309.26	0.00	0.00	0.00
10,700.00	0.00	0.00	10,687.50	307.92	-197.21	-309.26	0.00	0.00	0.00
10,800.00	0.00	0.00	10,787.50	307.92	-197.21	-309.26	0.00	0.00	0.00
10,825.51	0.00	0.00	10,813.00	307.92	-197.21	-309.26	0.00	0.00	0.00
Z (L4.1: SBSG)									
10,900.00	0.00	0.00	10,887.50	307.92	-197.21	-309.26	0.00	0.00	0.00
11,000.00	0.00	0.00	10,987.50	307.92	-197.21	-309.26	0.00	0.00	0.00
11,100.00	0.00	0.00	11,087.50	307.92	-197.21	-309.26	0.00	0.00	0.00
11,200.00	0.00	0.00	11,187.50	307.92	-197.21	-309.26	0.00	0.00	0.00
11,300.00	0.00	0.00	11,287.50	307.92	-197.21	-309.26	0.00	0.00	0.00
11,332.51	0.00	0.00	11,320.00	307.92	-197.21	-309.26	0.00	0.00	0.00
Z (L3.3: TBSC)									
11,400.00	0.00	0.00	11,387.50	307.92	-197.21	-309.26	0.00	0.00	0.00
11,500.00	0.00	0.00	11,487.50	307.92	-197.21	-309.26	0.00	0.00	0.00
11,600.00	0.00	0.00	11,587.50	307.92	-197.21	-309.26	0.00	0.00	0.00
11,700.00	0.00	0.00	11,687.50	307.92	-197.21	-309.26	0.00	0.00	0.00
11,800.00	0.00	0.00	11,787.50	307.92	-197.21	-309.26	0.00	0.00	0.00
11,900.00	0.00	0.00	11,887.50	307.92	-197.21	-309.26	0.00	0.00	0.00
11,904.51	0.00	0.00	11,892.00	307.92	-197.21	-309.26	0.00	0.00	0.00
Z (L3.1: TBSG)									
11,944.75	0.00	0.00	11,932.24	307.92	-197.21	-309.26	0.00	0.00	0.00
Begin 10.00°/100' Build									
11,950.00	0.53	179.61	11,937.50	307.90	-197.21	-309.23	10.00	10.00	0.00

Database:	5000.1 Conroe DB	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Company:	Matador Resources	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site:	Charles Ling Fed Com	**North Reference:**	Grid
Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,000.00	5.53	179.61	11,987.41	305.26	-197.20	-306.59	10.00	10.00	0.00
12,050.00	10.53	179.61	12,036.90	298.28	-197.15	-299.62	10.00	10.00	0.00
12,100.00	15.53	179.61	12,085.60	287.01	-197.07	-288.35	10.00	10.00	0.00
12,150.00	20.53	179.61	12,133.13	271.55	-196.97	-272.88	10.00	10.00	0.00
12,161.65	21.69	179.61	12,144.00	267.35	-196.94	-268.69	10.00	10.00	0.00
Z (L. TBSG)									
12,200.00	25.53	179.61	12,179.14	252.00	-196.83	-253.33	10.00	10.00	0.00
12,219.97	27.52	179.61	12,197.00	243.08	-196.77	-244.42	10.00	10.00	0.00
Z (L2: WFMP A)									
12,248.54	30.38	179.61	12,222.00	229.25	-196.68	-230.59	10.00	10.00	0.00
Z (X Sand (T))									
12,250.00	30.53	179.61	12,223.26	228.51	-196.67	-229.85	10.00	10.00	0.00
12,275.59	33.08	179.61	12,245.00	215.03	-196.58	-216.36	10.00	10.00	0.00
Z (X Sand (B))									
12,300.00	35.53	179.61	12,265.17	201.27	-196.49	-202.60	10.00	10.00	0.00
12,341.45	39.67	179.61	12,298.00	175.99	-196.31	-177.32	10.00	10.00	0.00
Z (Y Sand (T))									
12,350.00	40.53	179.61	12,304.54	170.48	-196.28	-171.81	10.00	10.00	0.00
12,389.98	44.52	179.61	12,334.00	143.46	-196.09	-144.80	10.00	10.00	0.00
Z (Y Sand (B))									
12,400.00	45.53	179.61	12,341.08	136.38	-196.04	-137.71	10.00	10.00	0.00
12,450.00	50.53	179.61	12,374.51	99.22	-195.79	-100.55	10.00	10.00	0.00
12,500.00	55.53	179.61	12,404.57	59.29	-195.52	-60.61	10.00	10.00	0.00
12,520.74	57.60	179.61	12,416.00	41.98	-195.40	-43.31	10.00	10.00	0.00
Z (WFMP A Fat)									
12,550.00	60.53	179.61	12,431.04	16.89	-195.23	-18.21	10.00	10.00	0.00
12,600.00	65.53	179.61	12,453.72	-27.66	-194.92	26.33	10.00	10.00	0.00
12,650.00	70.53	179.61	12,472.42	-74.01	-194.61	72.68	10.00	10.00	0.00
12,700.00	75.53	179.61	12,487.01	-121.82	-194.28	120.49	10.00	10.00	0.00
12,744.74	80.00	179.61	12,496.49	-165.53	-193.98	164.20	10.00	10.00	0.00
Begin 6.00°/100' Build - 7 5/8"									
12,750.00	80.32	179.61	12,497.39	-170.71	-193.95	169.39	6.00	6.00	0.00
12,800.00	83.32	179.61	12,504.51	-220.19	-193.61	218.87	6.00	6.00	0.00
12,850.00	86.32	179.61	12,509.03	-269.98	-193.27	268.66	6.00	6.00	0.00
12,900.00	89.32	179.61	12,510.93	-319.94	-192.93	318.62	6.00	6.00	0.00
12,911.41	90.00	179.61	12,511.00	-331.35	-192.85	330.03	6.00	6.00	0.00
Begin 90.00° Lateral									
13,000.00	90.00	179.61	12,511.00	-419.94	-192.24	418.62	0.00	0.00	0.00
13,100.00	90.00	179.61	12,511.00	-519.93	-191.56	518.62	0.00	0.00	0.00
13,200.00	90.00	179.61	12,511.00	-619.93	-190.88	618.62	0.00	0.00	0.00
13,300.00	90.00	179.61	12,511.00	-719.93	-190.19	718.62	0.00	0.00	0.00
13,400.00	90.00	179.61	12,511.00	-819.93	-189.51	818.62	0.00	0.00	0.00
13,500.00	90.00	179.61	12,511.00	-919.93	-188.83	918.62	0.00	0.00	0.00
13,600.00	90.00	179.61	12,511.00	-1,019.92	-188.15	1,018.62	0.00	0.00	0.00
13,700.00	90.00	179.61	12,511.00	-1,119.92	-187.46	1,118.62	0.00	0.00	0.00
13,800.00	90.00	179.61	12,511.00	-1,219.92	-186.78	1,218.62	0.00	0.00	0.00
13,900.00	90.00	179.61	12,511.00	-1,319.92	-186.10	1,318.62	0.00	0.00	0.00
14,000.00	90.00	179.61	12,511.00	-1,419.91	-185.41	1,418.62	0.00	0.00	0.00
14,100.00	90.00	179.61	12,511.00	-1,519.91	-184.73	1,518.62	0.00	0.00	0.00
14,200.00	90.00	179.61	12,511.00	-1,619.91	-184.05	1,618.62	0.00	0.00	0.00
14,300.00	90.00	179.61	12,511.00	-1,719.91	-183.36	1,718.62	0.00	0.00	0.00
14,400.00	90.00	179.61	12,511.00	-1,819.90	-182.68	1,818.62	0.00	0.00	0.00
14,500.00	90.00	179.61	12,511.00	-1,919.90	-182.00	1,918.62	0.00	0.00	0.00

Database:	5000.1 Conroe DB	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Company:	Matador Resources	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site:	Charles Ling Fed Com	**North Reference:**	Grid
Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,600.00	90.00	179.61	12,511.00	-2,019.90	-181.32	2,018.62	0.00	0.00	0.00
14,700.00	90.00	179.61	12,511.00	-2,119.90	-180.63	2,118.62	0.00	0.00	0.00
14,800.00	90.00	179.61	12,511.00	-2,219.90	-179.95	2,218.62	0.00	0.00	0.00
14,900.00	90.00	179.61	12,511.00	-2,319.89	-179.27	2,318.62	0.00	0.00	0.00
15,000.00	90.00	179.61	12,511.00	-2,419.89	-178.58	2,418.62	0.00	0.00	0.00
15,100.00	90.00	179.61	12,511.00	-2,519.89	-177.90	2,518.62	0.00	0.00	0.00
15,200.00	90.00	179.61	12,511.00	-2,619.89	-177.22	2,618.62	0.00	0.00	0.00
15,300.00	90.00	179.61	12,511.00	-2,719.88	-176.54	2,718.62	0.00	0.00	0.00
15,400.00	90.00	179.61	12,511.00	-2,819.88	-175.85	2,818.62	0.00	0.00	0.00
15,500.00	90.00	179.61	12,511.00	-2,919.88	-175.17	2,918.62	0.00	0.00	0.00
15,600.00	90.00	179.61	12,511.00	-3,019.88	-174.49	3,018.62	0.00	0.00	0.00
15,700.00	90.00	179.61	12,511.00	-3,119.87	-173.80	3,118.62	0.00	0.00	0.00
15,800.00	90.00	179.61	12,511.00	-3,219.87	-173.12	3,218.62	0.00	0.00	0.00
15,900.00	90.00	179.61	12,511.00	-3,319.87	-172.44	3,318.62	0.00	0.00	0.00
16,000.00	90.00	179.61	12,511.00	-3,419.87	-171.75	3,418.62	0.00	0.00	0.00
16,100.00	90.00	179.61	12,511.00	-3,519.86	-171.07	3,518.62	0.00	0.00	0.00
16,200.00	90.00	179.61	12,511.00	-3,619.86	-170.39	3,618.62	0.00	0.00	0.00
16,300.00	90.00	179.61	12,511.00	-3,719.86	-169.71	3,718.62	0.00	0.00	0.00
16,400.00	90.00	179.61	12,511.00	-3,819.86	-169.02	3,818.62	0.00	0.00	0.00
16,500.00	90.00	179.61	12,511.00	-3,919.86	-168.34	3,918.62	0.00	0.00	0.00
16,600.00	90.00	179.61	12,511.00	-4,019.85	-167.66	4,018.62	0.00	0.00	0.00
16,700.00	90.00	179.61	12,511.00	-4,119.85	-166.97	4,118.62	0.00	0.00	0.00
16,800.00	90.00	179.61	12,511.00	-4,219.85	-166.29	4,218.62	0.00	0.00	0.00
16,900.00	90.00	179.61	12,511.00	-4,319.85	-165.61	4,318.62	0.00	0.00	0.00
17,000.00	90.00	179.61	12,511.00	-4,419.84	-164.92	4,418.62	0.00	0.00	0.00
17,100.00	90.00	179.61	12,511.00	-4,519.84	-164.24	4,518.62	0.00	0.00	0.00
17,200.00	90.00	179.61	12,511.00	-4,619.84	-163.56	4,618.62	0.00	0.00	0.00
17,260.91	90.00	179.61	12,511.00	-4,680.75	-163.14	4,679.53	0.00	0.00	0.00
PBHL - 5 1/2"									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
vert - Charles Ling Fe - plan hits target center - Point	0.00	0.00	6,160.00	307.92	-197.21	451,589.75	742,167.59	32° 14' 20.796 N	103° 33' 0.379 W
FTP - Charles Ling Fe - plan hits target center - Point	0.00	0.00	12,424.63	27.94	-195.30	451,309.77	742,169.51	32° 14' 18.025 N	103° 33' 0.381 W
LTP - Charles Ling Fe - plan hits target center - Point	0.00	0.00	12,511.00	-4,590.76	-163.76	446,691.07	742,201.05	32° 13' 32.319 N	103° 33' 0.406 W
PBHL - Charles Ling F - plan hits target center - Point	0.00	0.00	12,511.00	-4,680.75	-163.14	446,601.08	742,201.66	32° 13' 31.428 N	103° 33' 0.406 W

Database:	5000.1 Conroe DB	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Company:	Matador Resources	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site:	Charles Ling Fed Com	**North Reference:**	Grid
Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,350.00	1,348.82	13 3/8"	13-3/8	20
5,300.00	5,289.19	9 5/8"	9-5/8	12-1/4
12,744.74	12,496.49	7 5/8"	7-5/8	8-3/4
17,260.91	12,511.00	5 1/2"	5-1/2	6-1/8

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,313.09	1,312.00	Z (Rustler)			
1,841.38	1,839.00	Z (Salado) (Top Salt)			
3,746.02	3,739.00	Z (Castile (T))			
5,228.64	5,218.00	Z (G30:CS14-CSB) (Base Salt)			
5,269.74	5,259.00	Z (G26: Bell Cyn.)			
6,296.50	6,284.00	Z (G13: Cherry Cyn.)			
7,513.50	7,501.00	Z (G7: Brushy Cyn.) Antelope Ridge			
9,032.51	9,020.00	Z (G4: BSGL (CS9))			
9,930.51	9,918.00	Z (L5.3: FBSC)			
10,121.51	10,109.00	Z (L5.1: FBSG)			
10,401.51	10,389.00	Z (L4.3: SBSC)			
10,825.51	10,813.00	Z (L4.1: SBSG)			
11,332.51	11,320.00	Z (L3.3: TBSC)			
11,904.51	11,892.00	Z (L3.1: TBSG)			
12,161.65	12,144.00	Z (L: TBSG)			
12,219.97	12,197.00	Z (L2: WFMP A)			
12,248.54	12,222.00	Z (X Sand (T))			
12,275.59	12,245.00	Z (X Sand (B))			
12,341.45	12,298.00	Z (Y Sand (T))			
12,389.98	12,334.00	Z (Y Sand (B))			
12,520.74	12,416.00	Z (WFMP A Fat)			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
600.00	600.00	0.00	0.00	KOP, 1.00°/100' Build
1,000.22	999.89	11.77	-7.54	Begin 4.00° Tangent
5,905.69	5,893.40	300.08	-192.19	Begin 1.50°/100' Drop
6,172.50	6,160.00	307.92	-197.21	Begin Vertical Hold
11,944.75	11,932.24	307.92	-197.21	Begin 10.00°/100' Build
12,744.75	12,496.49	-165.53	-193.98	Begin 6.00°/100' Build
12,911.41	12,511.00	-331.35	-192.85	Begin 90.00° Lateral
17,260.91	12,511.00	-4,680.75	-163.14	PBHL

Matador Resources

Lea County, New Mexico (NAD 27)
Charles Ling Fed Com
Charles Ling Fed Com #211H

Wellbore #1
Design #1

Anticollision Report

24 April, 2018

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Reference	Design #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00usft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00 u	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 4/24/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	17,260.67	Design #1 (Wellbore #1)	MWD	OWSG MWD - Standard

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
Charles Ling Fed Com						
Charles Ling Fed Com #131H - Wellbore #1 - Design #1	600.00	600.00	60.00	56.16	15.621	CC
Charles Ling Fed Com #131H - Wellbore #1 - Design #1	700.00	700.01	60.47	55.91	13.271	ES
Charles Ling Fed Com #131H - Wellbore #1 - Design #1	11,677.73	11,680.14	167.53	84.23	2.011	SF
Charles Ling Fed Com #201H - Wellbore #1 - Design #1	600.00	601.00	30.00	26.15	7.803	CC, ES
Charles Ling Fed Com #201H - Wellbore #1 - Design #1	17,260.91	16,991.41	714.87	545.29	4.216	SF
Roy Batty Federal COM						
Roy Batty Federal COM #1H - Wellbore #1 - Surveys	11,099.31	15,477.00	312.57	233.88	3.972	CC
Roy Batty Federal COM #1H - Wellbore #1 - Surveys	11,100.00	15,477.00	312.57	233.87	3.972	ES, SF
Stevens "11"						
Stevens 11 1 - Wellbore #1 - Surveys	15,516.82	12,521.26	1,640.32	1,295.91	4.763	CC, ES
Stevens 11 1 - Wellbore #1 - Surveys	15,600.00	12,521.47	1,642.42	1,297.12	4.756	SF

Offset Design Charles Ling Fed Com - Charles Ling Fed Com #131H - Wellbore #1 - Design #1 **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD **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)	Azimuth from North (°)	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	89.58	0.45	60.00	60.00				
100.00	100.00	100.00	100.00	0.13	0.13	89.58	0.45	60.00	60.00	59.74	0.26	234.092	
200.00	200.00	200.00	200.00	0.49	0.49	89.58	0.45	60.00	60.00	59.03	0.97	61.649	
300.00	300.00	300.00	300.00	0.85	0.85	89.58	0.45	60.00	60.00	58.31	1.69	35.499	
400.00	400.00	400.00	400.00	1.20	1.20	89.58	0.45	60.00	60.00	57.59	2.41	24.926	
500.00	500.00	500.00	500.00	1.56	1.56	89.58	0.45	60.00	60.00	56.88	3.12	19.206	
600.00	600.00	600.00	600.00	1.92	1.92	89.58	0.45	60.00	60.00	56.16	3.84	15.621	CC
700.00	699.99	700.01	699.99	2.28	2.28	90.27	0.45	60.00	60.47	55.91	4.56	13.271	ES
800.00	799.96	800.04	799.96	2.64	2.64	92.31	0.45	60.00	61.93	56.66	5.27	11.748	
900.00	899.86	900.14	899.86	2.99	3.00	95.48	0.45	60.00	64.53	58.54	5.99	10.777	
1,000.00	999.68	1,000.32	999.68	3.35	3.36	99.51	0.45	60.00	68.47	61.76	6.71	10.210	
1,000.22	999.89	1,000.11	999.89	3.35	3.35	99.52	0.45	60.00	68.48	61.77	6.71	10.212	
1,100.00	1,099.43	1,099.43	1,099.43	3.72	3.71	103.55	0.45	60.00	73.33	65.91	7.42	9.882	
1,200.00	1,199.19	1,199.92	1,199.91	4.08	4.07	106.54	1.28	59.76	78.05	69.91	8.14	9.589	
1,300.00	1,298.94	1,300.58	1,300.54	4.45	4.43	108.17	3.83	59.05	81.98	73.12	8.86	9.253	
1,400.00	1,398.70	1,401.36	1,401.22	4.82	4.79	108.67	8.08	57.87	84.96	75.38	9.58	8.868	

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

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Charles Ling Fed Com - Charles Ling Fed Com #131H - Wellbore #1 - Design #1

Offset Site Error: 0.00 usft
Offset Well Error: 0.00 usft

Survey Program: 0-MWD

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)	Azimuth from North (°)	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
1,500.00	1,498.46	1,502.18	1,501.85	5.18	5.15	108.18	14.04	56.21	86.96	76.65	10.30	8.440	
1,600.00	1,598.21	1,602.14	1,601.57	5.55	5.51	107.28	20.75	54.33	88.50	77.48	11.03	8.027	
1,700.00	1,697.97	1,702.12	1,701.30	5.92	5.88	106.42	27.46	52.46	90.07	78.32	11.75	7.665	
1,800.00	1,797.72	1,802.10	1,801.04	6.29	6.24	105.58	34.17	50.59	91.66	79.18	12.48	7.345	
1,900.00	1,897.48	1,902.07	1,900.77	6.66	6.61	104.78	40.88	48.72	93.26	80.05	13.21	7.062	
2,000.00	1,997.24	2,002.05	2,000.51	7.03	6.97	104.00	47.59	46.84	94.89	80.95	13.94	6.808	
2,100.00	2,096.99	2,102.03	2,100.24	7.41	7.34	103.24	54.30	44.97	96.53	81.86	14.67	6.581	
2,200.00	2,196.75	2,202.01	2,199.98	7.78	7.70	102.52	61.01	43.10	98.18	82.78	15.40	6.376	
2,300.00	2,296.51	2,301.99	2,299.71	8.15	8.07	101.81	67.73	41.23	99.85	83.72	16.13	6.189	
2,400.00	2,396.26	2,401.97	2,399.45	8.52	8.44	101.13	74.44	39.35	101.54	84.67	16.87	6.020	
2,500.00	2,496.02	2,501.95	2,499.19	8.89	8.81	100.48	81.15	37.48	103.24	85.64	17.60	5.865	
2,600.00	2,595.77	2,601.92	2,598.92	9.26	9.18	99.84	87.86	35.61	104.95	86.62	18.34	5.724	
2,700.00	2,695.53	2,701.90	2,698.66	9.64	9.55	99.23	94.57	33.74	106.68	87.61	19.07	5.593	
2,800.00	2,795.29	2,801.88	2,798.39	10.01	9.91	98.63	101.28	31.86	108.42	88.61	19.81	5.473	
2,900.00	2,895.04	2,901.86	2,898.13	10.38	10.28	98.05	108.00	29.99	110.17	89.62	20.55	5.362	
3,000.00	2,994.80	3,001.84	2,997.86	10.75	10.65	97.49	114.71	28.12	111.93	90.64	21.28	5.259	
3,100.00	3,094.55	3,101.82	3,097.60	11.12	11.02	96.95	121.42	26.24	113.70	91.68	22.02	5.163	
3,200.00	3,194.31	3,201.80	3,197.33	11.50	11.39	96.43	128.13	24.37	115.48	92.72	22.76	5.073	
3,300.00	3,294.07	3,301.78	3,297.07	11.87	11.76	95.92	134.84	22.50	117.27	93.77	23.50	4.990	
3,400.00	3,393.82	3,401.75	3,396.80	12.24	12.14	95.43	141.55	20.63	119.07	94.83	24.24	4.912	
3,500.00	3,493.58	3,501.73	3,496.54	12.61	12.51	94.95	148.26	18.75	120.87	95.89	24.98	4.839	
3,600.00	3,593.33	3,601.71	3,596.28	12.99	12.88	94.48	154.98	16.88	122.69	96.97	25.72	4.770	
3,700.00	3,693.09	3,701.69	3,696.01	13.36	13.25	94.03	161.69	15.01	124.51	98.05	26.46	4.706	
3,800.00	3,792.85	3,801.67	3,795.75	13.73	13.62	93.59	168.40	13.14	126.35	99.14	27.20	4.645	
3,900.00	3,892.60	3,901.65	3,895.48	14.11	13.99	93.17	175.11	11.26	128.18	100.24	27.94	4.587	
4,000.00	3,992.36	4,001.63	3,995.22	14.48	14.36	92.76	181.82	9.39	130.03	101.34	28.68	4.533	
4,100.00	4,092.12	4,101.60	4,094.95	14.85	14.73	92.35	188.53	7.52	131.88	102.45	29.43	4.482	
4,200.00	4,191.87	4,201.58	4,194.69	15.22	15.10	91.96	195.25	5.65	133.74	103.57	30.17	4.433	
4,300.00	4,291.63	4,301.56	4,294.42	15.60	15.48	91.58	201.96	3.77	135.60	104.69	30.91	4.387	
4,400.00	4,391.38	4,401.54	4,394.16	15.97	15.85	91.21	208.67	1.90	137.47	105.82	31.65	4.343	
4,500.00	4,491.14	4,501.52	4,493.90	16.34	16.22	90.86	215.38	0.03	139.35	106.95	32.40	4.301	
4,600.00	4,590.90	4,601.50	4,593.63	16.72	16.59	90.51	222.09	-1.84	141.23	108.09	33.14	4.262	
4,700.00	4,690.65	4,701.48	4,693.37	17.09	16.96	90.16	228.80	-3.72	143.11	109.23	33.88	4.224	
4,800.00	4,790.41	4,801.45	4,793.10	17.46	17.33	89.83	235.52	-5.59	145.01	110.38	34.62	4.188	
4,900.00	4,890.16	4,901.43	4,892.84	17.84	17.71	89.51	242.23	-7.46	146.90	111.53	35.37	4.154	
5,000.00	4,989.92	5,001.41	4,992.57	18.21	18.08	89.19	248.94	-9.33	148.80	112.69	36.11	4.121	
5,100.00	5,089.68	5,101.39	5,092.31	18.58	18.45	88.89	255.65	-11.21	150.71	113.85	36.85	4.089	
5,200.00	5,189.43	5,201.37	5,192.04	18.95	18.82	88.59	262.36	-13.08	152.61	115.02	37.60	4.059	
5,300.00	5,289.19	5,301.35	5,291.78	19.33	19.19	88.30	269.07	-14.95	154.53	116.19	38.34	4.030	
5,400.00	5,388.95	5,401.33	5,391.52	19.70	19.57	88.01	275.78	-16.83	156.44	117.36	39.08	4.003	
5,500.00	5,488.70	5,501.31	5,491.25	20.07	19.94	87.73	282.50	-18.70	158.37	118.54	39.83	3.976	
5,600.00	5,588.46	5,601.28	5,590.99	20.45	20.31	87.46	289.21	-20.57	160.29	119.72	40.57	3.951	
5,700.00	5,688.21	5,701.26	5,690.72	20.82	20.68	87.20	295.92	-22.44	162.22	120.90	41.32	3.926	
5,800.00	5,787.97	5,800.95	5,790.17	21.19	21.05	86.99	302.49	-24.28	164.18	122.12	42.06	3.904	
5,900.00	5,887.73	5,899.96	5,889.07	21.57	21.41	87.46	307.12	-25.57	166.58	123.80	42.78	3.894	
5,905.69	5,893.40	5,905.59	5,894.70	21.59	21.43	87.52	307.30	-25.62	166.73	123.91	42.82	3.894	
6,000.00	5,987.55	5,998.87	5,987.95	21.94	21.77	88.43	309.27	-26.17	169.01	125.52	43.48	3.887	
6,100.00	6,087.50	6,101.58	6,087.50	22.29	22.12	89.29	309.45	-26.22	170.64	126.45	44.19	3.862	
6,172.50	6,160.00	6,170.92	6,160.00	22.55	22.37	89.49	309.45	-26.22	171.00	126.32	44.68	3.827	
6,200.00	6,187.50	6,201.58	6,187.50	22.64	22.47	89.49	309.45	-26.22	171.00	126.12	44.88	3.810	
6,300.00	6,287.50	6,301.58	6,287.50	22.99	22.82	89.49	309.45	-26.22	171.00	125.43	45.58	3.752	
6,400.00	6,387.50	6,401.58	6,387.50	23.33	23.17	89.49	309.45	-26.22	171.00	124.73	46.27	3.695	

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Charles Ling Fed Com - Charles Ling Fed Com #131H - Wellbore #1 - Design #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **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)	Azimuth from North (°)	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
6,500.00	6,487.50	6,501.58	6,487.50	23.68	23.52	89.49	309.45	-26.22	171.00	124.03	46.97	3.641	
6,600.00	6,587.50	6,601.58	6,587.50	24.02	23.87	89.49	309.45	-26.22	171.00	123.33	47.67	3.587	
6,700.00	6,687.50	6,701.58	6,687.50	24.37	24.22	89.49	309.45	-26.22	171.00	122.64	48.37	3.536	
6,800.00	6,787.50	6,801.58	6,787.50	24.72	24.57	89.49	309.45	-26.22	171.00	121.94	49.07	3.485	
6,900.00	6,887.50	6,901.58	6,887.50	25.06	24.92	89.49	309.45	-26.22	171.00	121.24	49.77	3.436	
7,000.00	6,987.50	7,001.58	6,987.50	25.41	25.27	89.49	309.45	-26.22	171.00	120.54	50.47	3.389	
7,100.00	7,087.50	7,101.58	7,087.50	25.76	25.62	89.49	309.45	-26.22	171.00	119.84	51.17	3.342	
7,200.00	7,187.50	7,201.58	7,187.50	26.11	25.97	89.49	309.45	-26.22	171.00	119.14	51.87	3.297	
7,300.00	7,287.50	7,301.58	7,287.50	26.45	26.32	89.49	309.45	-26.22	171.00	118.44	52.57	3.253	
7,400.00	7,387.50	7,401.58	7,387.50	26.80	26.67	89.49	309.45	-26.22	171.00	117.74	53.27	3.210	
7,500.00	7,487.50	7,501.58	7,487.50	27.15	27.03	89.49	309.45	-26.22	171.00	117.03	53.97	3.168	
7,600.00	7,587.50	7,601.58	7,587.50	27.50	27.38	89.49	309.45	-26.22	171.00	116.33	54.67	3.128	
7,700.00	7,687.50	7,701.58	7,687.50	27.85	27.73	89.49	309.45	-26.22	171.00	115.63	55.38	3.088	
7,800.00	7,787.50	7,801.58	7,787.50	28.20	28.08	89.49	309.45	-26.22	171.00	114.93	56.08	3.049	
7,900.00	7,887.50	7,901.58	7,887.50	28.55	28.43	89.49	309.45	-26.22	171.00	114.22	56.78	3.012	
8,000.00	7,987.50	8,001.58	7,987.50	28.90	28.79	89.49	309.45	-26.22	171.00	113.52	57.49	2.975	
8,100.00	8,087.50	8,101.58	8,087.50	29.25	29.14	89.49	309.45	-26.22	171.00	112.81	58.19	2.939	
8,200.00	8,187.50	8,201.58	8,187.50	29.60	29.49	89.49	309.45	-26.22	171.00	112.11	58.89	2.904	
8,300.00	8,287.50	8,301.58	8,287.50	29.95	29.84	89.49	309.45	-26.22	171.00	111.41	59.60	2.869	
8,400.00	8,387.50	8,401.58	8,387.50	30.30	30.20	89.49	309.45	-26.22	171.00	110.70	60.30	2.836	
8,500.00	8,487.50	8,501.58	8,487.50	30.65	30.55	89.49	309.45	-26.22	171.00	109.99	61.01	2.803	
8,600.00	8,587.50	8,601.58	8,587.50	31.00	30.90	89.49	309.45	-26.22	171.00	109.29	61.71	2.771	
8,700.00	8,687.50	8,701.58	8,687.50	31.35	31.26	89.49	309.45	-26.22	171.00	108.58	62.42	2.740	
8,800.00	8,787.50	8,801.58	8,787.50	31.70	31.61	89.49	309.45	-26.22	171.00	107.88	63.13	2.709	
8,900.00	8,887.50	8,901.58	8,887.50	32.06	31.96	89.49	309.45	-26.22	171.00	107.17	63.83	2.679	
9,000.00	8,987.50	9,001.58	8,987.50	32.41	32.32	89.49	309.45	-26.22	171.00	106.46	64.54	2.650	
9,100.00	9,087.50	9,101.58	9,087.50	32.76	32.67	89.49	309.45	-26.22	171.00	105.76	65.25	2.621	
9,200.00	9,187.50	9,201.58	9,187.50	33.11	33.02	89.49	309.45	-26.22	171.00	105.05	65.95	2.593	
9,300.00	9,287.50	9,301.58	9,287.50	33.46	33.38	89.49	309.45	-26.22	171.00	104.34	66.66	2.565	
9,400.00	9,387.50	9,401.58	9,387.50	33.82	33.73	89.49	309.45	-26.22	171.00	103.64	67.37	2.538	
9,500.00	9,487.50	9,501.58	9,487.50	34.17	34.09	89.49	309.45	-26.22	171.00	102.93	68.07	2.512	
9,600.00	9,587.50	9,601.58	9,587.50	34.52	34.44	89.49	309.45	-26.22	171.00	102.22	68.78	2.486	
9,700.00	9,687.50	9,701.58	9,687.50	34.87	34.80	89.49	309.45	-26.22	171.00	101.51	69.49	2.461	
9,800.00	9,787.50	9,801.58	9,787.50	35.23	35.15	89.49	309.45	-26.22	171.00	100.81	70.20	2.436	
9,900.00	9,887.50	9,901.58	9,887.50	35.58	35.50	89.49	309.45	-26.22	171.00	100.10	70.91	2.412	
10,000.00	9,987.50	10,001.58	9,987.50	35.93	35.86	89.49	309.45	-26.22	171.00	99.39	71.62	2.388	
10,100.00	10,087.50	10,101.58	10,087.50	36.28	36.21	89.49	309.45	-26.22	171.00	98.68	72.32	2.364	
10,200.00	10,187.50	10,201.58	10,187.50	36.64	36.57	89.49	309.45	-26.22	171.00	97.97	73.03	2.341	
10,300.00	10,287.50	10,301.58	10,287.50	36.99	36.92	89.49	309.45	-26.22	171.00	97.26	73.74	2.319	
10,400.00	10,387.50	10,401.58	10,387.50	37.34	37.28	89.49	309.45	-26.22	171.00	96.55	74.45	2.297	
10,500.00	10,487.50	10,501.58	10,487.50	37.70	37.63	89.49	309.45	-26.22	171.00	95.84	75.16	2.275	
10,600.00	10,587.50	10,601.58	10,587.50	38.05	37.99	89.49	309.45	-26.22	171.00	95.13	75.87	2.254	
10,700.00	10,687.50	10,701.58	10,687.50	38.41	38.34	89.49	309.45	-26.22	171.00	94.42	76.58	2.233	
10,800.00	10,787.50	10,801.58	10,787.50	38.76	38.70	89.49	309.45	-26.22	171.00	93.72	77.29	2.213	
10,900.00	10,887.50	10,901.58	10,887.50	39.11	39.05	89.49	309.45	-26.22	171.00	93.01	78.00	2.192	
11,000.00	10,987.50	11,001.58	10,987.50	39.47	39.41	89.49	309.45	-26.22	171.00	92.30	78.71	2.173	
11,100.00	11,087.50	11,101.58	11,087.50	39.82	39.76	89.49	309.45	-26.22	171.00	91.59	79.42	2.153	
11,200.00	11,187.50	11,201.58	11,187.50	40.18	40.12	89.49	309.45	-26.22	171.00	90.88	80.13	2.134	
11,300.00	11,287.50	11,301.58	11,287.50	40.53	40.48	89.49	309.45	-26.22	171.00	90.16	80.84	2.115	
11,400.00	11,387.50	11,401.58	11,387.50	40.88	40.83	89.49	309.45	-26.22	171.00	89.45	81.55	2.097	
11,500.00	11,487.50	11,499.52	11,488.60	41.24	41.18	89.59	309.15	-26.27	170.95	88.70	82.25	2.078	
11,600.00	11,587.50	11,603.97	11,592.10	41.59	41.49	93.87	296.54	-28.74	168.92	86.04	82.88	2.038	

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

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Charles Ling Fed Com - Charles Ling Fed Com #131H - Wellbore #1 - Design #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **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)	Azimuth from North (°)	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
11,677.73	11,665.23	11,680.14	11,665.23	41.87	41.69	101.05	275.81	-32.79	167.53	84.23	83.30	2.011	SF
11,700.00	11,687.50	11,700.79	11,684.51	41.95	41.75	103.57	268.56	-34.20	167.72	84.34	83.38	2.011	
11,800.00	11,787.50	11,786.08	11,760.94	42.30	41.94	116.11	231.58	-41.42	175.51	92.46	83.05	2.113	
11,900.00	11,887.50	11,858.70	11,821.00	42.66	42.09	128.17	191.60	-49.23	199.63	118.86	80.76	2.472	
11,944.75	11,932.24	11,887.26	11,843.13	42.81	42.14	132.84	173.88	-52.69	216.32	137.15	79.17	2.732	
11,950.00	11,937.50	11,890.48	11,845.57	42.83	42.14	133.36	171.82	-53.09	218.49	139.52	78.97	2.767	
12,000.00	11,987.41	11,920.79	11,867.93	42.99	42.19	137.60	151.74	-57.01	239.78	162.80	76.98	3.115	
12,050.00	12,036.90	11,950.00	11,888.42	43.14	42.24	140.81	131.31	-61.00	261.65	186.77	74.89	3.494	
12,100.00	12,085.60	11,980.05	11,908.36	43.28	42.29	143.45	109.26	-65.31	283.50	210.59	72.91	3.889	
12,150.00	12,133.13	12,009.12	11,926.51	43.41	42.34	145.40	86.98	-69.66	304.90	234.01	70.89	4.301	
12,200.00	12,179.14	12,037.87	11,943.31	43.53	42.39	146.86	64.07	-74.13	325.55	256.64	68.92	4.724	
12,250.00	12,223.26	12,066.36	11,958.77	43.64	42.44	147.88	40.60	-78.72	345.22	278.23	66.99	5.153	
12,300.00	12,265.17	12,100.00	11,975.48	43.74	42.50	149.35	11.94	-84.31	363.79	298.24	65.55	5.550	
12,350.00	12,304.54	12,122.65	11,985.75	43.83	42.54	148.78	-7.87	-88.18	380.95	317.57	63.37	6.011	
12,400.00	12,341.08	12,150.00	11,997.07	43.91	42.60	148.57	-32.30	-92.95	396.76	335.09	61.67	6.433	
12,450.00	12,374.51	12,178.21	12,007.50	43.98	42.65	148.12	-58.03	-97.98	411.08	350.93	60.15	6.834	
12,500.00	12,404.57	12,200.00	12,014.66	44.04	42.69	145.76	-78.22	-101.92	423.91	365.45	58.46	7.251	
12,550.00	12,431.04	12,233.23	12,024.06	44.10	42.76	145.40	-109.50	-108.03	434.99	377.51	57.48	7.568	
12,600.00	12,453.72	12,260.58	12,030.40	44.18	42.81	142.85	-135.61	-113.13	444.45	388.06	56.39	7.881	
12,650.00	12,472.42	12,287.86	12,035.45	44.26	42.87	139.03	-161.91	-118.27	452.21	396.71	55.50	8.148	
12,700.00	12,487.01	12,315.07	12,039.21	44.35	42.92	133.20	-188.36	-123.43	458.23	403.40	54.82	8.358	
12,744.75	12,496.49	12,339.38	12,041.49	44.43	42.98	125.25	-212.11	-128.07	462.11	407.70	54.41	8.493	
12,750.00	12,497.39	12,350.00	12,042.16	44.44	43.00	129.06	-222.52	-130.10	462.60	408.15	54.45	8.497	
12,800.00	12,504.51	12,369.30	12,042.88	44.54	43.04	109.56	-241.45	-133.80	465.97	411.82	54.15	8.605	
12,850.00	12,509.03	12,408.21	12,043.00	44.65	43.12	100.51	-279.65	-141.13	469.04	414.94	54.10	8.670	
12,900.00	12,510.93	12,456.52	12,043.00	44.76	43.25	99.54	-327.23	-149.54	470.00	415.92	54.08	8.690	
12,911.41	12,511.00	12,467.60	12,043.00	44.79	43.27	99.32	-338.16	-151.35	469.89	415.80	54.09	8.688	
13,000.00	12,511.00	12,554.08	12,043.00	45.03	43.52	97.59	-423.69	-164.06	468.87	414.67	54.19	8.652	
13,100.00	12,511.00	12,652.57	12,043.00	45.34	43.86	95.62	-521.53	-175.39	468.29	413.84	54.44	8.601	
13,200.00	12,511.00	12,751.78	12,043.00	45.72	44.24	93.63	-620.41	-183.39	468.06	413.27	54.79	8.542	
13,300.00	12,511.00	12,851.47	12,043.00	46.15	44.68	91.65	-719.99	-187.97	468.01	412.80	55.20	8.478	
13,400.00	12,511.00	12,954.01	12,043.00	46.63	45.18	89.65	-819.93	-189.09	468.00	412.35	55.65	8.409	
13,437.78	12,511.00	12,989.20	12,043.00	46.84	45.36	89.65	-857.70	-188.84	468.00	412.18	55.82	8.383	
13,500.00	12,511.00	13,051.42	12,043.00	47.17	45.71	89.65	-919.92	-188.42	468.00	411.88	56.13	8.338	
13,600.00	12,511.00	13,151.42	12,043.00	47.76	46.30	89.65	-1,019.92	-187.75	468.00	411.36	56.65	8.262	
13,700.00	12,511.00	13,251.42	12,043.00	48.39	46.94	89.65	-1,119.92	-187.07	468.00	410.80	57.20	8.181	
13,800.00	12,511.00	13,351.42	12,043.00	49.08	47.63	89.65	-1,219.92	-186.40	468.00	410.21	57.80	8.097	
13,900.00	12,511.00	13,451.42	12,043.00	49.81	48.37	89.65	-1,319.91	-185.73	468.00	409.57	58.43	8.010	
14,000.00	12,511.00	13,551.42	12,043.00	50.58	49.15	89.65	-1,419.91	-185.06	468.00	408.91	59.09	7.920	
14,100.00	12,511.00	13,651.42	12,043.00	51.39	49.97	89.66	-1,519.91	-184.39	468.00	408.21	59.79	7.827	
14,200.00	12,511.00	13,751.42	12,043.00	52.24	50.84	89.66	-1,619.91	-183.71	468.00	407.48	60.52	7.732	
14,300.00	12,511.00	13,851.42	12,043.00	53.13	51.74	89.66	-1,719.90	-183.04	468.00	406.71	61.29	7.636	
14,400.00	12,511.00	13,951.42	12,043.00	54.06	52.68	89.66	-1,819.90	-182.37	468.00	405.92	62.08	7.539	
14,500.00	12,511.00	14,051.42	12,043.00	55.02	53.65	89.66	-1,919.90	-181.70	468.00	405.10	62.90	7.440	
14,600.00	12,511.00	14,151.42	12,043.00	56.01	54.66	89.66	-2,019.90	-181.03	468.00	404.25	63.75	7.341	
14,700.00	12,511.00	14,251.42	12,043.00	57.04	55.69	89.67	-2,119.90	-180.35	468.00	403.37	64.63	7.241	
14,800.00	12,511.00	14,351.42	12,043.00	58.09	56.76	89.67	-2,219.89	-179.68	468.00	402.47	65.54	7.141	
14,900.00	12,511.00	14,451.42	12,043.00	59.17	57.85	89.67	-2,319.89	-179.01	468.00	401.54	66.46	7.041	
15,000.00	12,511.00	14,551.42	12,043.00	60.27	58.97	89.67	-2,419.89	-178.34	468.00	400.59	67.42	6.942	
15,100.00	12,511.00	14,651.42	12,043.00	61.40	60.11	89.68	-2,519.89	-177.67	468.00	399.61	68.39	6.843	
15,200.00	12,511.00	14,751.42	12,043.00	62.56	61.28	89.68	-2,619.88	-176.99	468.00	398.61	69.39	6.745	
15,300.00	12,511.00	14,851.42	12,043.00	63.73	62.47	89.68	-2,719.88	-176.32	468.00	397.60	70.41	6.647	

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Charles Ling Fed Com - Charles Ling Fed Com #131H - Wellbore #1 - Design #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **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)	Azimuth from North (°)	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
15,400.00	12,511.00	14,951.42	12,043.00	64.93	63.68	89.69	-2,819.88	-175.65	468.00	396.56	71.44	6.551	
15,500.00	12,511.00	15,051.42	12,043.00	66.14	64.91	89.69	-2,919.88	-174.98	468.00	395.50	72.50	6.455	
15,600.00	12,511.00	15,151.42	12,043.00	67.38	66.16	89.69	-3,019.88	-174.30	468.00	394.43	73.57	6.361	
15,700.00	12,511.00	15,251.42	12,043.00	68.63	67.42	89.70	-3,119.87	-173.63	468.00	393.33	74.67	6.268	
15,800.00	12,511.00	15,351.42	12,043.00	69.90	68.70	89.70	-3,219.87	-172.96	468.00	392.22	75.78	6.176	
15,900.00	12,511.00	15,451.42	12,043.00	71.18	70.00	89.71	-3,319.87	-172.29	468.00	391.10	76.90	6.086	
16,000.00	12,511.00	15,551.42	12,043.00	72.48	71.31	89.72	-3,419.87	-171.62	468.00	389.96	78.04	5.997	
16,100.00	12,511.00	15,651.42	12,043.00	73.79	72.64	89.73	-3,519.86	-170.94	468.00	388.80	79.20	5.909	
16,200.00	12,511.00	15,751.42	12,043.00	75.12	73.98	89.74	-3,619.86	-170.27	468.00	387.63	80.37	5.823	
16,300.00	12,511.00	15,851.42	12,043.00	76.46	75.33	89.75	-3,719.86	-169.60	468.00	386.45	81.55	5.739	
16,400.00	12,511.00	15,951.42	12,043.00	77.81	76.69	89.77	-3,819.86	-168.93	468.00	385.26	82.75	5.656	
16,500.00	12,511.00	16,051.42	12,043.00	79.17	78.07	89.79	-3,919.86	-168.26	468.00	384.05	83.95	5.575	
16,600.00	12,511.00	16,151.42	12,043.00	80.55	79.45	89.81	-4,019.85	-167.58	468.00	382.83	85.17	5.495	
16,700.00	12,511.00	16,251.42	12,043.00	81.93	80.85	89.85	-4,119.85	-166.91	468.00	381.60	86.40	5.416	
16,800.00	12,511.00	16,351.42	12,043.00	83.32	82.25	89.90	-4,219.85	-166.24	468.00	380.35	87.65	5.340	
16,900.00	12,511.00	16,451.42	12,043.00	84.73	83.66	89.98	-4,319.85	-165.57	468.00	379.10	88.90	5.264	
17,000.00	12,511.00	16,551.42	12,043.00	86.14	85.09	90.12	-4,419.84	-164.90	468.00	377.84	90.16	5.191	
17,100.00	12,511.00	16,651.42	12,043.00	87.56	86.52	90.43	-4,519.84	-164.22	468.00	376.57	91.43	5.119	
17,200.00	12,511.00	16,751.42	12,043.00	88.99	87.96	91.76	-4,619.84	-163.55	468.00	375.29	92.71	5.048	
17,260.91	12,511.00	16,812.33	12,043.00	89.86	88.83	0.00	-4,680.75	-163.14	468.00	374.50	93.50	5.006	

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Charles Ling Fed Com - Charles Ling Fed Com #201H - Wellbore #1 - Design #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **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)	Azimuth from North (°)	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	1.00	0.00	0.00	0.00	89.57	0.22	30.00	30.00				
100.00	100.00	101.00	100.00	0.13	0.13	89.57	0.22	30.00	30.00	29.74	0.26	115.428	
200.00	200.00	201.00	200.00	0.49	0.49	89.57	0.22	30.00	30.00	29.02	0.98	30.710	
300.00	300.00	301.00	300.00	0.85	0.85	89.57	0.22	30.00	30.00	28.31	1.69	17.711	
400.00	400.00	401.00	400.00	1.20	1.21	89.57	0.22	30.00	30.00	27.59	2.41	12.444	
500.00	500.00	501.00	500.00	1.56	1.57	89.57	0.22	30.00	30.00	26.87	3.13	9.591	
600.00	600.00	601.00	600.00	1.92	1.92	89.57	0.22	30.00	30.00	26.15	3.84	7.803	CC, ES
700.00	699.99	700.33	699.32	2.28	2.28	89.52	1.00	31.06	31.54	26.99	4.55	6.927	
800.00	799.96	799.51	798.42	2.64	2.63	89.46	3.28	34.22	36.13	30.87	5.26	6.870	
900.00	899.86	901.33	897.38	2.99	2.99	89.50	7.00	39.34	43.65	37.67	5.98	7.304	
1,000.00	999.68	1,001.74	996.73	3.35	3.36	90.74	11.08	44.97	52.59	45.89	6.69	7.857	
1,000.22	999.89	1,001.52	996.94	3.35	3.36	90.74	11.09	44.99	52.61	45.91	6.69	7.860	
1,100.00	1,099.43	1,097.81	1,096.02	3.72	3.71	92.29	15.16	50.60	62.04	54.64	7.40	8.386	
1,200.00	1,199.19	1,202.65	1,195.32	4.08	4.09	93.43	19.24	56.23	71.52	63.38	8.14	8.790	
1,300.00	1,298.94	1,303.11	1,294.62	4.45	4.46	94.30	23.32	61.86	81.02	72.16	8.86	9.144	
1,400.00	1,398.70	1,403.57	1,393.92	4.82	4.83	94.99	27.40	67.49	90.54	80.95	9.59	9.445	
1,500.00	1,498.46	1,495.97	1,493.21	5.18	5.17	95.55	31.48	73.12	100.07	89.79	10.28	9.730	
1,600.00	1,598.21	1,604.49	1,592.51	5.55	5.57	96.01	35.56	78.74	109.61	98.57	11.04	9.926	
1,700.00	1,697.97	1,704.95	1,691.81	5.92	5.94	96.40	39.64	84.37	119.15	107.38	11.77	10.122	
1,800.00	1,797.72	1,805.41	1,791.11	6.29	6.31	96.73	43.72	90.00	128.70	116.20	12.50	10.295	
1,900.00	1,897.48	1,905.87	1,890.41	6.66	6.69	97.01	47.80	95.63	138.25	125.02	13.23	10.449	
2,000.00	1,997.24	2,006.33	1,989.70	7.03	7.06	97.26	51.88	101.26	147.80	133.84	13.96	10.586	
2,100.00	2,096.99	2,106.79	2,089.00	7.41	7.43	97.48	55.96	106.89	157.36	142.67	14.69	10.710	
2,200.00	2,196.75	2,207.25	2,188.30	7.78	7.81	97.67	60.04	112.52	166.92	151.49	15.42	10.822	
2,300.00	2,296.51	2,292.29	2,287.60	8.15	8.12	97.84	64.12	118.14	176.48	160.38	16.10	10.961	
2,400.00	2,396.26	2,408.17	2,386.89	8.52	8.55	97.99	68.20	123.77	186.04	169.15	16.89	11.016	
2,500.00	2,496.02	2,508.63	2,486.19	8.89	8.93	98.13	72.28	129.40	195.60	177.98	17.62	11.101	
2,600.00	2,595.77	2,609.09	2,585.49	9.26	9.30	98.26	76.36	135.03	205.17	186.82	18.35	11.179	
2,700.00	2,695.53	2,709.54	2,684.79	9.64	9.67	98.37	80.44	140.66	214.73	195.65	19.09	11.251	
2,800.00	2,795.29	2,790.00	2,784.08	10.01	9.97	98.48	84.52	146.29	224.30	204.55	19.75	11.359	
2,900.00	2,895.04	2,889.54	2,883.38	10.38	10.35	98.58	88.60	151.92	233.87	213.39	20.48	11.422	
3,000.00	2,994.80	2,989.08	2,982.68	10.75	10.72	98.66	92.68	157.54	243.43	222.23	21.21	11.480	
3,100.00	3,094.55	3,088.62	3,081.98	11.12	11.09	98.75	96.75	163.17	253.00	231.07	21.94	11.534	
3,200.00	3,194.31	3,188.16	3,181.27	11.50	11.46	98.82	100.83	168.80	262.57	239.90	22.67	11.584	
3,300.00	3,294.07	3,287.70	3,280.57	11.87	11.83	98.89	104.91	174.43	272.14	248.74	23.40	11.632	
3,400.00	3,393.82	3,387.24	3,379.87	12.24	12.20	98.96	108.99	180.06	281.71	257.58	24.13	11.676	
3,500.00	3,493.58	3,486.78	3,479.17	12.61	12.57	99.02	113.07	185.69	291.28	266.42	24.86	11.718	
3,600.00	3,593.33	3,586.32	3,578.46	12.99	12.94	99.08	117.15	191.32	300.85	275.26	25.59	11.758	
3,700.00	3,693.09	3,685.86	3,677.76	13.36	13.31	99.13	121.23	196.94	310.42	284.10	26.32	11.795	
3,800.00	3,792.85	3,785.40	3,777.06	13.73	13.69	99.18	125.31	202.57	319.99	292.94	27.05	11.830	
3,900.00	3,892.60	3,884.94	3,876.36	14.11	14.06	99.23	129.39	208.20	329.56	301.78	27.78	11.864	
4,000.00	3,992.36	3,984.48	3,975.65	14.48	14.43	99.28	133.47	213.83	339.13	310.62	28.51	11.895	
4,100.00	4,092.12	4,084.02	4,074.95	14.85	14.80	99.32	137.55	219.46	348.70	319.46	29.24	11.925	
4,200.00	4,191.87	4,183.56	4,174.25	15.22	15.17	99.36	141.63	225.09	358.27	328.30	29.97	11.954	
4,300.00	4,291.63	4,283.11	4,273.55	15.60	15.54	99.40	145.71	230.72	367.84	337.14	30.70	11.981	
4,400.00	4,391.38	4,382.65	4,372.84	15.97	15.91	99.43	149.79	236.34	377.41	345.98	31.43	12.007	
4,500.00	4,491.14	4,482.19	4,472.14	16.34	16.29	99.47	153.87	241.97	386.98	354.82	32.16	12.032	
4,600.00	4,590.90	4,581.73	4,571.44	16.72	16.66	99.50	157.95	247.60	396.55	363.66	32.89	12.055	
4,700.00	4,690.65	4,681.27	4,670.74	17.09	17.03	99.53	162.03	253.23	406.13	372.50	33.63	12.078	
4,800.00	4,790.41	4,780.81	4,770.03	17.46	17.40	99.56	166.11	258.86	415.70	381.34	34.36	12.100	
4,900.00	4,890.16	4,880.35	4,869.33	17.84	17.77	99.59	170.19	264.49	425.27	390.18	35.09	12.120	
5,000.00	4,989.92	4,979.89	4,968.63	18.21	18.14	99.62	174.27	270.12	434.84	399.02	35.82	12.140	

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

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Charles Ling Fed Com - Charles Ling Fed Com #201H - Wellbore #1 - Design #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **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)	Azimuth from North (°)	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	5,089.68	5,079.43	5,067.93	18.58	18.52	99.65	178.35	275.74	444.41	407.86	36.55	12.159	
5,200.00	5,189.43	5,178.97	5,167.23	18.95	18.89	99.67	182.43	281.37	453.99	416.71	37.28	12.178	
5,300.00	5,289.19	5,278.51	5,266.52	19.33	19.26	99.69	186.51	287.00	463.56	425.55	38.01	12.195	
5,400.00	5,388.95	5,378.05	5,365.82	19.70	19.63	99.72	190.59	292.63	473.13	434.39	38.74	12.212	
5,500.00	5,488.70	5,477.59	5,465.12	20.07	20.00	99.74	194.67	298.26	482.70	443.23	39.47	12.228	
5,600.00	5,588.46	5,577.13	5,564.42	20.45	20.37	99.76	198.75	303.89	492.28	452.07	40.21	12.244	
5,700.00	5,688.21	5,676.67	5,663.71	20.82	20.75	99.78	202.83	309.52	501.85	460.91	40.94	12.259	
5,800.00	5,787.97	5,776.21	5,763.01	21.19	21.12	99.80	206.91	315.14	511.42	469.75	41.67	12.274	
5,900.00	5,887.73	5,875.75	5,862.31	21.57	21.49	99.82	210.99	320.77	520.99	478.59	42.40	12.288	
5,905.69	5,893.40	5,881.42	5,867.96	21.59	21.51	99.82	211.22	321.09	521.54	479.10	42.44	12.289	
6,000.00	5,987.55	5,975.36	5,961.67	21.94	21.86	99.75	215.07	326.41	529.79	486.66	43.13	12.284	
6,100.00	6,087.50	6,075.08	6,061.14	22.29	22.23	99.47	219.16	332.04	536.84	492.98	43.85	12.242	
6,172.50	6,160.00	6,147.40	6,133.29	22.55	22.50	99.14	222.13	336.13	540.86	496.49	44.37	12.190	
6,200.00	6,187.50	6,174.83	6,160.65	22.64	22.61	98.99	223.25	337.68	542.22	497.66	44.57	12.167	
6,300.00	6,287.50	6,274.59	6,260.17	22.99	22.98	98.48	227.34	343.33	547.20	501.92	45.28	12.085	
6,400.00	6,387.50	6,374.34	6,359.68	23.33	23.35	97.97	231.43	348.97	552.21	506.22	45.99	12.007	
6,500.00	6,487.50	6,474.10	6,459.19	23.68	23.72	97.48	235.52	354.61	557.27	510.57	46.70	11.932	
6,600.00	6,587.50	6,573.85	6,558.70	24.02	24.10	96.99	239.60	360.25	562.37	514.95	47.42	11.860	
6,700.00	6,687.50	6,673.61	6,658.22	24.37	24.47	96.51	243.69	365.89	567.51	519.38	48.13	11.791	
6,800.00	6,787.50	6,773.37	6,757.73	24.72	24.84	96.04	247.78	371.53	572.69	523.84	48.84	11.725	
6,900.00	6,887.50	6,873.12	6,857.24	25.06	25.21	95.57	251.87	377.17	577.90	528.35	49.56	11.662	
7,000.00	6,987.50	6,972.88	6,956.75	25.41	25.59	95.12	255.96	382.81	583.16	532.89	50.27	11.601	
7,100.00	7,087.50	7,072.63	7,056.26	25.76	25.96	94.67	260.05	388.45	588.45	537.47	50.98	11.542	
7,200.00	7,187.50	7,172.39	7,155.78	26.11	26.33	94.23	264.14	394.09	593.77	542.08	51.70	11.486	
7,300.00	7,287.50	7,272.15	7,255.29	26.45	26.70	93.80	268.23	399.73	599.13	546.72	52.41	11.432	
7,400.00	7,387.50	7,371.90	7,354.80	26.80	27.08	93.38	272.31	405.37	604.52	551.40	53.12	11.380	
7,500.00	7,487.50	7,471.66	7,454.31	27.15	27.45	92.97	276.40	411.01	609.95	556.11	53.83	11.330	
7,600.00	7,587.50	7,571.41	7,553.83	27.50	27.82	92.56	280.49	416.66	615.40	560.86	54.55	11.282	
7,700.00	7,687.50	7,671.17	7,653.34	27.85	28.19	92.16	284.58	422.30	620.89	565.63	55.26	11.236	
7,800.00	7,787.50	7,770.92	7,752.85	28.20	28.57	91.76	288.67	427.94	626.41	570.43	55.97	11.191	
7,900.00	7,887.50	7,870.68	7,852.36	28.55	28.94	91.38	292.76	433.58	631.95	575.26	56.69	11.148	
8,000.00	7,987.50	7,970.44	7,951.87	28.90	29.31	91.00	296.85	439.22	637.52	580.12	57.40	11.106	
8,100.00	8,087.50	8,070.19	8,051.39	29.25	29.69	90.62	300.93	444.86	643.13	585.01	58.11	11.067	
8,200.00	8,187.50	8,169.95	8,150.90	29.60	30.06	90.26	305.02	450.50	648.75	589.93	58.83	11.028	
8,300.00	8,287.50	8,272.81	8,253.51	29.95	30.44	89.89	309.20	456.26	654.36	594.80	59.56	10.986	
8,400.00	8,387.50	8,388.90	8,369.46	30.30	30.87	89.60	312.53	460.85	658.33	597.97	60.36	10.907	
8,500.00	8,487.50	8,505.24	8,485.77	30.65	31.28	89.49	313.79	462.59	659.83	598.71	61.13	10.795	
8,600.00	8,587.50	8,606.96	8,587.50	31.00	31.62	89.49	313.80	462.61	659.85	598.02	61.83	10.672	
8,700.00	8,687.50	8,706.96	8,687.50	31.35	31.96	89.49	313.80	462.61	659.85	597.32	62.53	10.553	
8,800.00	8,787.50	8,806.96	8,787.50	31.70	32.30	89.49	313.80	462.61	659.85	596.62	63.22	10.437	
8,900.00	8,887.50	8,906.96	8,887.50	32.06	32.64	89.49	313.80	462.61	659.85	595.92	63.92	10.323	
9,000.00	8,987.50	9,006.96	8,987.50	32.41	32.98	89.49	313.80	462.61	659.85	595.22	64.62	10.211	
9,100.00	9,087.50	9,106.96	9,087.50	32.76	33.33	89.49	313.80	462.61	659.85	594.52	65.32	10.102	
9,200.00	9,187.50	9,206.96	9,187.50	33.11	33.67	89.49	313.80	462.61	659.85	593.82	66.02	9.995	
9,300.00	9,287.50	9,306.96	9,287.50	33.46	34.01	89.49	313.80	462.61	659.85	593.12	66.72	9.890	
9,400.00	9,387.50	9,406.96	9,387.50	33.82	34.35	89.49	313.80	462.61	659.85	592.42	67.42	9.787	
9,500.00	9,487.50	9,506.96	9,487.50	34.17	34.70	89.49	313.80	462.61	659.85	591.72	68.12	9.686	
9,600.00	9,587.50	9,606.96	9,587.50	34.52	35.04	89.49	313.80	462.61	659.85	591.02	68.82	9.588	
9,700.00	9,687.50	9,706.96	9,687.50	34.87	35.38	89.49	313.80	462.61	659.85	590.32	69.52	9.491	
9,800.00	9,787.50	9,806.96	9,787.50	35.23	35.73	89.49	313.80	462.61	659.85	589.62	70.23	9.396	
9,900.00	9,887.50	9,906.96	9,887.50	35.58	36.07	89.49	313.80	462.61	659.85	588.92	70.93	9.303	
10,000.00	9,987.50	10,006.96	9,987.50	35.93	36.42	89.49	313.80	462.61	659.85	588.21	71.63	9.212	

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

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Charles Ling Fed Com - Charles Ling Fed Com #201H - Wellbore #1 - Design #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **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)	Azimuth from North (°)	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
10,100.00	10,087.50	10,106.96	10,087.50	36.28	36.76	89.49	313.80	462.61	659.85	587.51	72.33	9.122	
10,200.00	10,187.50	10,206.96	10,187.50	36.64	37.11	89.49	313.80	462.61	659.85	586.81	73.04	9.034	
10,300.00	10,287.50	10,306.96	10,287.50	36.99	37.45	89.49	313.80	462.61	659.85	586.11	73.74	8.948	
10,400.00	10,387.50	10,406.96	10,387.50	37.34	37.80	89.49	313.80	462.61	659.85	585.40	74.44	8.864	
10,500.00	10,487.50	10,506.96	10,487.50	37.70	38.14	89.49	313.80	462.61	659.85	584.70	75.15	8.781	
10,600.00	10,587.50	10,606.96	10,587.50	38.05	38.49	89.49	313.80	462.61	659.85	583.99	75.85	8.699	
10,700.00	10,687.50	10,706.96	10,687.50	38.41	38.84	89.49	313.80	462.61	659.85	583.29	76.55	8.619	
10,800.00	10,787.50	10,806.96	10,787.50	38.76	39.18	89.49	313.80	462.61	659.85	582.59	77.26	8.541	
10,900.00	10,887.50	10,906.96	10,887.50	39.11	39.53	89.49	313.80	462.61	659.85	581.88	77.96	8.463	
11,000.00	10,987.50	11,006.96	10,987.50	39.47	39.88	89.49	313.80	462.61	659.85	581.18	78.67	8.388	
11,100.00	11,087.50	11,106.96	11,087.50	39.82	40.22	89.49	313.80	462.61	659.85	580.47	79.37	8.313	
11,200.00	11,187.50	11,206.96	11,187.50	40.18	40.57	89.49	313.80	462.61	659.85	579.77	80.08	8.240	
11,300.00	11,287.50	11,306.96	11,287.50	40.53	40.92	89.49	313.80	462.61	659.85	579.06	80.78	8.168	
11,400.00	11,387.50	11,406.96	11,387.50	40.88	41.27	89.49	313.80	462.61	659.85	578.35	81.49	8.097	
11,500.00	11,487.50	11,506.96	11,487.50	41.24	41.61	89.49	313.80	462.61	659.85	577.65	82.20	8.028	
11,600.00	11,587.50	11,606.96	11,587.50	41.59	41.96	89.49	313.80	462.61	659.85	576.94	82.90	7.959	
11,700.00	11,687.50	11,707.01	11,687.53	41.95	42.30	89.57	312.83	462.61	659.84	576.24	83.60	7.893	
11,708.67	11,696.16	11,715.66	11,696.16	41.98	42.33	89.62	312.26	462.62	659.84	576.18	83.66	7.887	
11,800.00	11,787.50	11,804.97	11,784.36	42.30	42.59	90.79	298.83	462.70	659.99	575.73	84.26	7.833	
11,900.00	11,887.50	11,895.76	11,870.78	42.66	42.83	93.17	271.31	462.88	661.32	576.47	84.86	7.794	
11,944.75	11,932.24	11,933.13	11,904.90	42.81	42.92	94.49	256.06	462.98	662.80	577.71	85.09	7.790	
11,950.00	11,937.50	11,937.39	11,908.72	42.83	42.93	94.65	254.19	463.00	663.02	577.91	85.11	7.790	
12,000.00	11,987.41	11,977.31	11,943.84	42.99	43.01	96.05	235.22	463.12	665.45	580.15	85.30	7.801	
12,050.00	12,036.90	12,016.31	11,976.80	43.14	43.08	97.24	214.38	463.26	668.42	582.98	85.44	7.823	
12,100.00	12,085.60	12,054.51	12,007.63	43.28	43.15	98.20	191.84	463.41	671.84	586.32	85.52	7.856	
12,150.00	12,133.13	12,092.00	12,036.36	43.41	43.21	98.93	167.77	463.57	675.60	590.06	85.54	7.898	
12,200.00	12,179.14	12,128.88	12,063.03	43.53	43.25	99.43	142.31	463.73	679.60	594.10	85.50	7.948	
12,250.00	12,223.26	12,165.21	12,087.65	43.64	43.30	99.70	115.60	463.91	683.75	598.33	85.41	8.005	
12,300.00	12,265.17	12,200.00	12,109.59	43.74	43.33	99.68	88.61	464.09	687.93	602.67	85.27	8.068	
12,350.00	12,304.54	12,236.53	12,130.82	43.83	43.36	99.59	58.89	464.28	692.07	606.96	85.11	8.131	
12,400.00	12,341.08	12,271.63	12,149.39	43.91	43.39	99.22	29.12	464.48	696.09	611.16	84.93	8.196	
12,450.00	12,374.51	12,306.41	12,165.97	43.98	43.41	98.67	-1.45	464.68	699.89	615.15	84.73	8.260	
12,500.00	12,404.57	12,340.94	12,180.56	44.04	43.43	97.93	-32.74	464.89	703.40	618.86	84.55	8.320	
12,550.00	12,431.04	12,375.24	12,193.17	44.10	43.46	97.04	-64.63	465.09	706.58	622.20	84.37	8.374	
12,600.00	12,453.72	12,409.35	12,203.79	44.18	43.50	96.00	-97.04	465.31	709.35	625.12	84.24	8.421	
12,650.00	12,472.42	12,443.31	12,212.42	44.26	43.56	94.84	-129.88	465.52	711.68	627.54	84.14	8.458	
12,700.00	12,487.01	12,477.66	12,219.17	44.35	43.62	93.62	-163.56	465.75	713.52	629.42	84.10	8.484	
12,744.75	12,496.49	12,512.38	12,224.44	44.43	43.69	92.81	-197.87	465.97	714.56	630.42	84.14	8.492	
12,750.00	12,497.39	12,516.46	12,224.97	44.44	43.70	92.71	-201.92	466.00	714.64	630.49	84.15	8.492	
12,800.00	12,504.51	12,555.24	12,229.21	44.54	43.79	91.76	-240.46	466.25	715.27	631.01	84.26	8.489	
12,850.00	12,509.03	12,593.99	12,231.87	44.65	43.89	90.79	-279.11	466.51	715.68	631.27	84.41	8.479	
12,900.00	12,510.93	12,632.72	12,232.97	44.76	43.99	89.82	-317.83	466.76	715.86	631.27	84.59	8.462	
12,911.41	12,511.00	12,641.91	12,233.00	44.79	44.01	89.62	-327.01	466.82	715.87	631.23	84.64	8.458	
13,000.00	12,511.00	12,730.49	12,233.00	45.03	44.28	89.62	-415.60	467.40	715.85	630.75	85.09	8.413	
13,100.00	12,511.00	12,830.49	12,233.00	45.34	44.62	89.62	-515.59	468.06	715.82	630.12	85.70	8.353	
13,200.00	12,511.00	12,930.49	12,233.00	45.72	45.01	89.62	-615.59	468.72	715.80	629.39	86.41	8.283	
13,300.00	12,511.00	13,030.49	12,233.00	46.15	45.46	89.62	-715.59	469.38	715.78	628.55	87.23	8.205	
13,400.00	12,511.00	13,130.49	12,233.00	46.63	45.97	89.62	-815.59	470.04	715.75	627.60	88.15	8.119	
13,500.00	12,511.00	13,230.49	12,233.00	47.17	46.52	89.62	-915.59	470.69	715.73	626.56	89.17	8.026	
13,600.00	12,511.00	13,330.49	12,233.00	47.76	47.12	89.62	-1,015.58	471.35	715.71	625.42	90.29	7.927	
13,700.00	12,511.00	13,430.49	12,233.00	48.39	47.77	89.62	-1,115.58	472.01	715.69	624.19	91.50	7.822	
13,800.00	12,511.00	13,530.49	12,233.00	49.08	48.47	89.62	-1,215.58	472.67	715.66	622.87	92.79	7.713	

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

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Charles Ling Fed Com - Charles Ling Fed Com #201H - Wellbore #1 - Design #1

Offset Site Error: 0.00 usft

Survey Program: 0-MWD

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)	Azimuth from North (°)	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
13,900.00	12,511.00	13,630.49	12,233.00	49.81	49.22	89.62	-1,315.58	473.33	715.64	621.47	94.17	7.599	
14,000.00	12,511.00	13,730.49	12,233.00	50.58	50.00	89.62	-1,415.58	473.98	715.62	619.99	95.63	7.483	
14,100.00	12,511.00	13,830.49	12,233.00	51.39	50.83	89.62	-1,515.57	474.64	715.59	618.42	97.17	7.364	
14,200.00	12,511.00	13,930.49	12,233.00	52.24	51.70	89.62	-1,615.57	475.30	715.57	616.79	98.78	7.244	
14,300.00	12,511.00	14,030.49	12,233.00	53.13	52.60	89.62	-1,715.57	475.96	715.55	615.08	100.46	7.123	
14,400.00	12,511.00	14,130.49	12,233.00	54.06	53.54	89.62	-1,815.57	476.62	715.52	613.31	102.21	7.000	
14,500.00	12,511.00	14,230.49	12,233.00	55.02	54.51	89.62	-1,915.56	477.27	715.50	611.48	104.02	6.878	
14,600.00	12,511.00	14,330.49	12,233.00	56.01	55.52	89.62	-2,015.56	477.93	715.48	609.58	105.90	6.756	
14,700.00	12,511.00	14,430.49	12,233.00	57.04	56.55	89.62	-2,115.56	478.59	715.46	607.63	107.82	6.635	
14,800.00	12,511.00	14,530.49	12,233.00	58.09	57.62	89.62	-2,215.56	479.25	715.43	605.62	109.81	6.515	
14,900.00	12,511.00	14,630.49	12,233.00	59.17	58.71	89.62	-2,315.56	479.90	715.41	603.57	111.84	6.397	
15,000.00	12,511.00	14,730.49	12,233.00	60.27	59.83	89.62	-2,415.55	480.56	715.39	601.46	113.92	6.279	
15,100.00	12,511.00	14,830.49	12,233.00	61.40	60.97	89.62	-2,515.55	481.22	715.36	599.31	116.05	6.164	
15,200.00	12,511.00	14,930.49	12,233.00	62.56	62.13	89.62	-2,615.55	481.88	715.34	597.12	118.22	6.051	
15,300.00	12,511.00	15,030.49	12,233.00	63.73	63.32	89.62	-2,715.55	482.54	715.32	594.88	120.44	5.939	
15,400.00	12,511.00	15,130.49	12,233.00	64.93	64.52	89.62	-2,815.54	483.19	715.29	592.61	122.69	5.830	
15,500.00	12,511.00	15,230.49	12,233.00	66.14	65.75	89.62	-2,915.54	483.85	715.27	590.30	124.98	5.723	
15,600.00	12,511.00	15,330.49	12,233.00	67.38	66.99	89.62	-3,015.54	484.51	715.25	587.95	127.30	5.619	
15,700.00	12,511.00	15,430.49	12,233.00	68.63	68.25	89.62	-3,115.54	485.17	715.22	585.57	129.65	5.516	
15,800.00	12,511.00	15,530.49	12,233.00	69.90	69.53	89.62	-3,215.54	485.83	715.20	583.16	132.04	5.417	
15,900.00	12,511.00	15,630.49	12,233.00	71.18	70.82	89.62	-3,315.53	486.48	715.18	580.72	134.45	5.319	
16,000.00	12,511.00	15,730.49	12,233.00	72.48	72.13	89.62	-3,415.53	487.14	715.16	578.26	136.90	5.224	
16,100.00	12,511.00	15,830.49	12,233.00	73.79	73.45	89.62	-3,515.53	487.80	715.13	575.77	139.37	5.131	
16,200.00	12,511.00	15,930.49	12,233.00	75.12	74.79	89.62	-3,615.53	488.46	715.11	573.25	141.86	5.041	
16,300.00	12,511.00	16,030.49	12,233.00	76.46	76.13	89.62	-3,715.53	489.12	715.09	570.71	144.38	4.953	
16,400.00	12,511.00	16,130.49	12,233.00	77.81	77.49	89.62	-3,815.52	489.77	715.06	568.14	146.92	4.867	
16,500.00	12,511.00	16,230.49	12,233.00	79.17	78.86	89.62	-3,915.52	490.43	715.04	565.56	149.48	4.783	
16,600.00	12,511.00	16,330.49	12,233.00	80.55	80.24	89.62	-4,015.52	491.09	715.02	562.95	152.07	4.702	
16,700.00	12,511.00	16,430.49	12,233.00	81.93	81.63	89.62	-4,115.52	491.75	714.99	560.33	154.67	4.623	
16,800.00	12,511.00	16,530.49	12,233.00	83.32	83.03	89.62	-4,215.51	492.41	714.97	557.68	157.29	4.546	
16,900.00	12,511.00	16,630.49	12,233.00	84.73	84.44	89.62	-4,315.51	493.06	714.95	555.02	159.92	4.471	
17,000.00	12,511.00	16,730.49	12,233.00	86.14	85.86	89.62	-4,415.51	493.72	714.93	552.35	162.58	4.397	
17,100.00	12,511.00	16,830.49	12,233.00	87.56	87.29	89.62	-4,515.51	494.38	714.90	549.66	165.25	4.326	
17,200.00	12,511.00	16,930.49	12,233.00	88.99	88.72	89.62	-4,615.51	495.04	714.88	546.95	167.93	4.257	
17,260.91	12,511.00	16,991.41	12,233.00	89.86	89.60	89.62	-4,676.42	495.44	714.87	545.29	169.57	4.216 SF	

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Roy Batty Federal COM - Roy Batty Federal COM #1H - Wellbore #1 - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 100-GYRO-NS, 10598-MWD — **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)	Azimuth from North (°)	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	18.50	0.00	0.00	178.03	-4,588.35	157.70	4,591.10				
100.00	100.00	82.04	100.54	0.13	0.12	178.03	-4,588.35	157.77	4,591.06	4,590.81	0.25	N/A	
128.17	128.17	110.40	128.90	0.23	0.16	178.03	-4,588.34	157.83	4,591.05	4,590.67	0.39	N/A	
200.00	200.00	177.35	195.85	0.49	0.41	178.03	-4,588.36	158.16	4,591.09	4,590.19	0.90	5,096.847	
300.00	300.00	281.41	299.91	0.85	0.78	178.02	-4,588.41	158.86	4,591.16	4,589.54	1.62	2,828.711	
400.00	400.00	370.38	388.88	1.20	1.09	178.01	-4,588.47	159.26	4,591.25	4,588.96	2.29	2,003.005	
500.00	500.00	472.21	490.71	1.56	1.45	178.00	-4,588.74	159.90	4,591.53	4,588.53	3.01	1,527.310	
600.00	600.00	571.27	589.77	1.92	1.80	178.00	-4,588.90	160.41	4,591.71	4,588.00	3.71	1,237.431	
700.00	699.99	671.34	689.83	2.28	2.15	177.99	-4,589.12	160.96	4,592.70	4,588.29	4.42	1,039.652	
800.00	799.96	771.82	790.31	2.64	2.50	177.96	-4,589.31	161.64	4,595.17	4,590.04	5.13	896.474	
900.00	899.86	893.40	911.88	2.99	2.92	177.93	-4,589.32	162.15	4,598.96	4,593.05	5.91	778.386	
1,000.00	999.68	999.32	1,017.81	3.35	3.30	177.88	-4,588.95	162.58	4,603.88	4,597.24	6.64	693.648	
1,000.22	999.89	999.55	1,018.03	3.35	3.30	177.88	-4,588.95	162.58	4,603.89	4,597.25	6.64	693.485	
1,100.00	1,099.43	1,121.53	1,140.01	3.72	3.72	177.83	-4,588.09	162.85	4,609.19	4,601.77	7.42	620.899	
1,200.00	1,199.19	1,216.10	1,234.58	4.08	4.05	177.79	-4,587.32	162.70	4,614.38	4,606.27	8.11	568.680	
1,300.00	1,298.94	1,313.51	1,331.98	4.45	4.39	177.75	-4,586.65	162.29	4,619.71	4,610.89	8.82	524.026	
1,400.00	1,398.70	1,441.11	1,459.57	4.82	4.83	177.72	-4,585.32	161.58	4,624.65	4,615.03	9.62	480.553	
1,500.00	1,498.46	1,539.40	1,557.85	5.18	5.18	177.68	-4,584.00	160.77	4,629.30	4,618.97	10.33	448.151	
1,600.00	1,598.21	1,635.81	1,654.26	5.55	5.51	177.65	-4,582.92	160.18	4,634.19	4,623.16	11.03	420.152	
1,700.00	1,697.97	1,770.22	1,788.64	5.92	5.98	177.62	-4,580.86	159.00	4,638.65	4,626.79	11.86	391.015	
1,800.00	1,797.72	1,860.43	1,878.83	6.29	6.30	177.58	-4,579.11	158.24	4,642.72	4,630.18	12.54	370.165	
1,900.00	1,897.48	1,972.93	1,991.31	6.66	6.69	177.55	-4,577.23	157.12	4,647.07	4,633.77	13.30	349.411	
2,000.00	1,997.24	2,071.00	2,089.35	7.03	7.04	177.52	-4,575.22	155.94	4,651.01	4,637.00	14.01	332.049	
2,100.00	2,096.99	2,215.57	2,233.88	7.41	7.54	177.49	-4,571.93	154.54	4,654.79	4,639.92	14.88	312.890	
2,200.00	2,196.75	2,298.25	2,316.53	7.78	7.83	177.46	-4,569.78	153.41	4,658.17	4,642.64	15.53	299.927	
2,300.00	2,296.51	2,372.22	2,390.47	8.15	8.09	177.43	-4,568.13	152.36	4,661.91	4,645.76	16.15	288.585	
2,400.00	2,396.26	2,400.00	2,504.97	8.52	8.19	177.41	-4,565.64	150.94	4,665.72	4,649.11	16.62	280.797	
2,500.00	2,496.02	2,601.79	2,619.95	8.89	8.90	177.38	-4,562.60	149.26	4,669.03	4,651.34	17.69	263.972	
2,600.00	2,595.77	2,686.41	2,704.53	9.26	9.19	177.36	-4,560.56	147.81	4,672.59	4,654.24	18.35	254.655	
2,700.00	2,695.53	2,788.52	2,806.61	9.64	9.55	177.33	-4,558.26	146.21	4,676.32	4,657.25	19.07	245.204	
2,800.00	2,795.29	2,890.44	2,908.49	10.01	9.91	177.30	-4,555.86	145.17	4,679.97	4,660.17	19.79	236.448	
2,900.00	2,895.04	2,978.57	2,996.59	10.38	10.22	177.27	-4,553.86	144.29	4,683.71	4,663.25	20.47	228.855	
3,000.00	2,994.80	3,088.80	3,106.79	10.75	10.60	177.24	-4,551.48	142.82	4,687.55	4,666.34	21.22	220.934	
3,100.00	3,094.55	3,184.73	3,202.69	11.12	10.94	177.21	-4,549.24	142.11	4,691.24	4,669.32	21.92	214.040	
3,200.00	3,194.31	3,291.99	3,309.92	11.50	11.31	177.16	-4,546.71	141.88	4,694.94	4,672.28	22.66	207.207	
3,300.00	3,294.07	3,388.90	3,406.79	11.87	11.65	177.12	-4,544.35	141.78	4,698.56	4,675.20	23.36	201.117	
3,400.00	3,393.82	3,458.54	3,476.43	12.24	11.90	177.08	-4,542.87	141.74	4,702.51	4,678.54	23.97	196.185	
3,500.00	3,493.58	3,536.60	3,554.48	12.61	12.17	177.04	-4,541.76	141.68	4,707.13	4,682.53	24.61	191.297	
3,600.00	3,593.33	3,668.82	3,686.68	12.99	12.63	176.99	-4,539.82	141.78	4,711.80	4,686.36	25.44	185.240	
3,700.00	3,693.09	3,763.35	3,781.19	13.36	12.96	176.95	-4,537.81	142.09	4,715.78	4,689.64	26.13	180.461	
3,800.00	3,792.85	3,866.85	3,884.67	13.73	13.33	176.90	-4,535.96	142.53	4,720.09	4,693.23	26.86	175.734	
3,900.00	3,892.60	3,949.25	3,967.05	14.11	13.62	176.85	-4,534.38	142.51	4,724.28	4,696.77	27.51	171.721	
4,000.00	3,992.36	4,025.46	4,043.26	14.48	13.88	176.82	-4,533.46	142.25	4,729.11	4,700.97	28.14	168.052	
4,100.00	4,092.12	4,122.67	4,140.46	14.85	14.22	176.78	-4,532.37	141.90	4,734.05	4,705.21	28.85	164.118	
4,200.00	4,191.87	4,200.00	4,217.79	15.22	14.49	176.74	-4,531.85	141.83	4,739.43	4,709.95	29.48	160.779	
4,300.00	4,291.63	4,298.80	4,316.59	15.60	14.84	176.69	-4,531.41	141.98	4,745.08	4,714.90	30.19	157.184	
4,400.00	4,391.38	4,394.37	4,412.16	15.97	15.17	176.65	-4,530.94	142.18	4,750.69	4,719.80	30.89	153.812	
4,500.00	4,491.14	4,513.04	4,530.82	16.34	15.59	176.60	-4,530.14	143.18	4,756.16	4,724.49	31.67	150.186	
4,600.00	4,590.90	4,572.48	4,590.25	16.72	15.80	176.54	-4,529.90	144.25	4,761.91	4,729.67	32.23	147.732	
4,700.00	4,690.65	4,651.75	4,669.50	17.09	16.07	176.48	-4,530.03	146.02	4,768.29	4,735.42	32.87	145.066	
4,800.00	4,790.41	4,730.56	4,748.29	17.46	16.35	176.42	-4,530.39	147.79	4,774.99	4,741.49	33.50	142.524	
4,900.00	4,890.16	4,800.00	4,817.70	17.84	16.59	176.36	-4,531.15	149.51	4,782.33	4,748.23	34.10	140.242	

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Roy Batty Federal COM - Roy Batty Federal COM #1H - Wellbore #1 - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 100-GYRO-NS, 10598-MWD — **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)	Azimuth from North (°)	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	4,989.92	4,878.17	4,895.83	18.21	16.86	176.29	-4,532.39	151.96	4,790.21	4,755.48	34.73	137.929	
5,100.00	5,089.68	4,962.58	4,980.16	18.58	17.16	176.21	-4,533.97	155.29	4,798.44	4,763.06	35.38	135.618	
5,200.00	5,189.43	5,063.85	5,081.33	18.95	17.51	176.12	-4,536.07	159.32	4,806.89	4,770.79	36.10	133.160	
5,300.00	5,289.19	5,181.42	5,198.80	19.33	17.92	176.03	-4,538.23	163.54	4,815.08	4,778.20	36.88	130.570	
5,400.00	5,388.95	5,316.13	5,333.43	19.70	18.40	175.95	-4,540.00	167.73	4,822.74	4,785.02	37.72	127.855	
5,500.00	5,488.70	5,418.93	5,436.20	20.07	18.75	175.88	-4,540.98	170.32	4,830.00	4,791.56	38.44	125.641	
5,600.00	5,588.46	5,514.75	5,531.99	20.45	19.09	175.82	-4,541.95	172.10	4,837.27	4,798.13	39.14	123.593	
5,700.00	5,688.21	5,613.37	5,630.59	20.82	19.43	175.76	-4,542.93	173.99	4,844.53	4,804.69	39.84	121.585	
5,800.00	5,787.97	5,685.71	5,702.90	21.19	19.69	175.70	-4,543.88	175.55	4,852.14	4,811.69	40.45	119.949	
5,900.00	5,887.73	5,817.26	5,834.43	21.57	20.14	175.64	-4,545.72	177.57	4,859.83	4,818.55	41.28	117.722	
5,905.69	5,893.40	5,818.04	5,835.21	21.59	20.15	175.64	-4,545.74	177.60	4,860.25	4,818.95	41.30	117.669	
6,000.00	5,987.55	5,911.15	5,928.30	21.94	20.47	175.60	-4,546.77	178.45	4,866.13	4,824.16	41.97	115.947	
6,100.00	6,087.50	5,985.87	6,003.01	22.29	20.73	175.57	-4,547.80	179.41	4,870.43	4,827.85	42.58	114.389	
6,172.50	6,160.00	6,092.14	6,109.25	22.55	21.10	175.55	-4,549.24	181.19	4,872.14	4,828.93	43.21	112.743	
6,200.00	6,187.50	6,117.35	6,134.46	22.64	21.19	175.54	-4,549.47	181.61	4,872.43	4,829.03	43.40	112.273	
6,300.00	6,287.50	15,477.00	11,086.81	22.99	85.41	168.34	1.80	-134.05	4,809.48	4,758.18	51.30	93.759	
6,400.00	6,387.50	15,477.00	11,086.81	23.33	85.41	168.34	1.80	-134.05	4,709.69	4,658.19	51.50	91.449	
6,500.00	6,487.50	15,477.00	11,086.81	23.68	85.41	168.34	1.80	-134.05	4,609.92	4,558.21	51.71	89.153	
6,600.00	6,587.50	15,477.00	11,086.81	24.02	85.41	168.34	1.80	-134.05	4,510.15	4,458.24	51.92	86.870	
6,700.00	6,687.50	15,477.00	11,086.81	24.37	85.41	168.34	1.80	-134.05	4,410.40	4,358.27	52.13	84.601	
6,800.00	6,787.50	15,477.00	11,086.81	24.72	85.41	168.34	1.80	-134.05	4,310.66	4,258.31	52.35	82.346	
6,900.00	6,887.50	15,477.00	11,086.81	25.06	85.41	168.34	1.80	-134.05	4,210.93	4,158.36	52.57	80.105	
7,000.00	6,987.50	15,477.00	11,086.81	25.41	85.41	168.34	1.80	-134.05	4,111.21	4,058.42	52.79	77.878	
7,100.00	7,087.50	15,477.00	11,086.81	25.76	85.41	168.34	1.80	-134.05	4,011.51	3,958.49	53.02	75.666	
7,200.00	7,187.50	15,477.00	11,086.81	26.11	85.41	168.34	1.80	-134.05	3,911.82	3,858.57	53.24	73.469	
7,300.00	7,287.50	15,477.00	11,086.81	26.45	85.41	168.34	1.80	-134.05	3,812.15	3,758.67	53.48	71.287	
7,400.00	7,387.50	15,477.00	11,086.81	26.80	85.41	168.34	1.80	-134.05	3,712.49	3,658.78	53.71	69.119	
7,500.00	7,487.50	15,477.00	11,086.81	27.15	85.41	168.34	1.80	-134.05	3,612.86	3,558.91	53.95	66.967	
7,600.00	7,587.50	15,477.00	11,086.81	27.50	85.41	168.34	1.80	-134.05	3,513.24	3,459.05	54.19	64.830	
7,700.00	7,687.50	15,477.00	11,086.81	27.85	85.41	168.34	1.80	-134.05	3,413.65	3,359.21	54.44	62.709	
7,800.00	7,787.50	15,477.00	11,086.81	28.20	85.41	168.34	1.80	-134.05	3,314.08	3,259.40	54.68	60.603	
7,900.00	7,887.50	15,477.00	11,086.81	28.55	85.41	168.34	1.80	-134.05	3,214.54	3,159.61	54.94	58.513	
8,000.00	7,987.50	15,477.00	11,086.81	28.90	85.41	168.34	1.80	-134.05	3,115.03	3,059.84	55.19	56.439	
8,100.00	8,087.50	15,477.00	11,086.81	29.25	85.41	168.34	1.80	-134.05	3,015.55	2,960.10	55.45	54.381	
8,200.00	8,187.50	15,477.00	11,086.81	29.60	85.41	168.34	1.80	-134.05	2,916.11	2,860.39	55.72	52.339	
8,300.00	8,287.50	15,477.00	11,086.81	29.95	85.41	168.34	1.80	-134.05	2,816.71	2,760.72	55.98	50.314	
8,400.00	8,387.50	15,477.00	11,086.81	30.30	85.41	168.34	1.80	-134.05	2,717.35	2,661.09	56.25	48.305	
8,500.00	8,487.50	15,477.00	11,086.81	30.65	85.41	168.34	1.80	-134.05	2,618.04	2,561.51	56.53	46.312	
8,600.00	8,587.50	15,477.00	11,086.81	31.00	85.41	168.34	1.80	-134.05	2,518.78	2,461.97	56.81	44.336	
8,700.00	8,687.50	15,477.00	11,086.81	31.35	85.41	168.34	1.80	-134.05	2,419.58	2,362.49	57.10	42.377	
8,800.00	8,787.50	15,477.00	11,086.81	31.70	85.41	168.34	1.80	-134.05	2,320.46	2,263.07	57.39	40.434	
8,900.00	8,887.50	15,477.00	11,086.81	32.06	85.41	168.34	1.80	-134.05	2,221.41	2,163.72	57.69	38.509	
9,000.00	8,987.50	15,477.00	11,086.81	32.41	85.41	168.34	1.80	-134.05	2,122.45	2,064.46	57.99	36.601	
9,100.00	9,087.50	15,477.00	11,086.81	32.76	85.41	168.34	1.80	-134.05	2,023.60	1,965.30	58.30	34.710	
9,200.00	9,187.50	15,477.00	11,086.81	33.11	85.41	168.34	1.80	-134.05	1,924.86	1,866.24	58.62	32.836	
9,300.00	9,287.50	15,477.00	11,086.81	33.46	85.41	168.34	1.80	-134.05	1,826.26	1,767.31	58.95	30.981	
9,400.00	9,387.50	15,477.00	11,086.81	33.82	85.41	168.34	1.80	-134.05	1,727.82	1,668.53	59.29	29.143	
9,500.00	9,487.50	15,477.00	11,086.81	34.17	85.41	168.34	1.80	-134.05	1,629.57	1,569.93	59.64	27.323	
9,600.00	9,587.50	15,477.00	11,086.81	34.52	85.41	168.34	1.80	-134.05	1,531.54	1,471.54	60.01	25.522	
9,700.00	9,687.50	15,477.00	11,086.81	34.87	85.41	168.34	1.80	-134.05	1,433.79	1,373.40	60.39	23.740	
9,800.00	9,787.50	15,477.00	11,086.81	35.23	85.41	168.34	1.80	-134.05	1,336.38	1,275.57	60.80	21.978	
9,900.00	9,887.50	15,477.00	11,086.81	35.58	85.41	168.34	1.80	-134.05	1,239.37	1,178.13	61.24	20.236	

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

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Roy Batty Federal COM - Roy Batty Federal COM #1H - Wellbore #1 - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 100-GYRO-NS, 10598-MWD — **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)	Azimuth from North (°)	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
10,000.00	9,987.50	15,477.00	11,086.81	35.93	85.41	168.34	1.80	-134.05	1,142.88	1,081.16	61.72	18.516	
10,100.00	10,087.50	15,477.00	11,086.81	36.28	85.41	168.34	1.80	-134.05	1,047.05	984.80	62.25	16.819	
10,200.00	10,187.50	15,477.00	11,086.81	36.64	85.41	168.34	1.80	-134.05	952.08	889.23	62.85	15.148	
10,300.00	10,287.50	15,477.00	11,086.81	36.99	85.41	168.34	1.80	-134.05	858.25	794.71	63.55	13.506	
10,400.00	10,387.50	15,477.00	11,086.81	37.34	85.41	168.34	1.80	-134.05	765.98	701.61	64.37	11.899	
10,500.00	10,487.50	15,477.00	11,086.81	37.70	85.41	168.34	1.80	-134.05	675.92	610.53	65.40	10.336	
10,600.00	10,587.50	15,477.00	11,086.81	38.05	85.41	168.34	1.80	-134.05	589.07	522.38	66.70	8.832	
10,700.00	10,687.50	15,477.00	11,086.81	38.41	85.41	168.34	1.80	-134.05	507.10	438.70	68.39	7.414	
10,800.00	10,787.50	15,477.00	11,086.81	38.76	85.41	168.34	1.80	-134.05	432.76	362.13	70.63	6.127	
10,900.00	10,887.50	15,477.00	11,086.81	39.11	85.41	168.34	1.80	-134.05	370.71	297.25	73.46	5.047	
11,000.00	10,987.50	15,477.00	11,086.81	39.47	85.41	168.34	1.80	-134.05	327.96	251.45	76.52	4.286	
11,099.31	11,086.81	15,477.00	11,086.81	39.82	85.41	168.34	1.80	-134.05	312.57	233.88	78.69	3.972	CC
11,100.00	11,087.50	15,477.00	11,086.81	39.82	85.41	168.34	1.80	-134.05	312.57	233.87	78.69	3.972	ES, SF
11,200.00	11,187.50	15,477.00	11,086.81	40.18	85.41	168.34	1.80	-134.05	328.39	249.58	78.81	4.167	
11,300.00	11,287.50	15,477.00	11,086.81	40.53	85.41	168.34	1.80	-134.05	371.45	294.24	77.21	4.811	
11,400.00	11,387.50	15,477.00	11,086.81	40.88	85.41	168.34	1.80	-134.05	433.72	358.57	75.15	5.772	
11,500.00	11,487.50	15,477.00	11,086.81	41.24	85.41	168.34	1.80	-134.05	508.18	434.80	73.38	6.925	
11,600.00	11,587.50	15,477.00	11,086.81	41.59	85.41	168.34	1.80	-134.05	590.24	518.16	72.09	8.188	
11,700.00	11,687.50	15,477.00	11,086.81	41.95	85.41	168.34	1.80	-134.05	677.15	605.93	71.22	9.508	
11,800.00	11,787.50	15,477.00	11,086.81	42.30	85.41	168.34	1.80	-134.05	767.24	696.58	70.66	10.858	
11,900.00	11,887.50	15,477.00	11,086.81	42.66	85.41	168.34	1.80	-134.05	859.54	789.19	70.34	12.219	
11,944.75	11,932.24	15,477.00	11,086.81	42.81	85.41	168.34	1.80	-134.05	901.36	831.11	70.26	12.830	
11,950.00	11,937.50	15,477.00	11,086.81	42.83	85.41	168.34	1.80	-134.05	906.29	836.04	70.25	12.902	
12,000.00	11,987.41	15,477.00	11,086.81	42.99	85.41	168.24	1.80	-134.05	952.45	882.30	70.15	13.577	
12,050.00	12,036.90	15,477.00	11,086.81	43.14	85.41	167.98	1.80	-134.05	997.28	927.24	70.04	14.239	
12,100.00	12,085.60	15,477.00	11,086.81	43.28	85.41	167.54	1.80	-134.05	1,040.63	970.71	69.92	14.883	
12,150.00	12,133.13	15,477.00	11,086.81	43.41	85.41	166.87	1.80	-134.05	1,082.37	1,012.57	69.80	15.507	
12,200.00	12,179.14	15,477.00	11,086.81	43.53	85.41	165.91	1.80	-134.05	1,122.37	1,052.69	69.68	16.108	
12,250.00	12,223.26	15,477.00	11,086.81	43.64	85.41	164.56	1.80	-134.05	1,160.54	1,090.97	69.56	16.683	
12,300.00	12,265.17	15,477.00	11,086.81	43.74	85.41	162.62	1.80	-134.05	1,196.75	1,127.30	69.46	17.230	
12,350.00	12,304.54	15,477.00	11,086.81	43.83	85.41	159.75	1.80	-134.05	1,230.94	1,161.58	69.36	17.747	
12,400.00	12,341.08	15,477.00	11,086.81	43.91	85.41	155.27	1.80	-134.05	1,263.00	1,193.72	69.28	18.230	
12,450.00	12,374.51	15,477.00	11,086.81	43.98	85.41	147.63	1.80	-134.05	1,292.86	1,223.64	69.22	18.677	
12,500.00	12,404.57	15,477.00	11,086.81	44.04	85.41	133.08	1.80	-134.05	1,320.45	1,251.27	69.19	19.085	
12,550.00	12,431.04	15,477.00	11,086.81	44.10	85.41	103.85	1.80	-134.05	1,345.71	1,276.53	69.18	19.452	
12,600.00	12,453.72	15,449.68	11,086.87	44.18	85.00	88.00	-25.50	-133.09	1,368.24	1,299.19	69.05	19.815	
12,650.00	12,472.42	15,393.05	11,087.08	44.26	84.16	97.25	-82.09	-131.08	1,386.81	1,318.05	68.77	20.167	
12,700.00	12,487.01	15,334.40	11,087.76	44.35	83.28	106.09	-140.70	-128.79	1,400.91	1,332.45	68.47	20.461	
12,744.75	12,496.49	15,293.73	11,088.34	44.43	82.67	103.31	-181.33	-127.21	1,409.82	1,341.57	68.25	20.656	
12,750.00	12,497.39	15,289.00	11,088.40	44.44	82.60	102.92	-186.06	-127.03	1,410.66	1,342.43	68.23	20.676	
12,800.00	12,504.51	15,243.74	11,088.90	44.54	81.92	99.25	-231.29	-125.47	1,417.29	1,349.30	67.99	20.846	
12,850.00	12,509.03	15,202.16	11,089.18	44.65	81.31	92.37	-272.85	-124.17	1,421.53	1,353.76	67.77	20.975	
12,900.00	12,510.93	15,161.16	11,089.19	44.76	80.70	85.01	-313.83	-122.91	1,423.47	1,355.91	67.56	21.070	
12,911.41	12,511.00	12,911.41	11,089.24	44.79	47.54	100.37	-344.33	-121.89	1,423.59	1,370.54	53.05	26.833	
13,000.00	12,511.00	15,020.58	11,090.90	45.03	78.62	114.61	-454.27	-117.28	1,422.49	1,355.64	66.85	21.280	
13,100.00	12,511.00	14,928.29	11,093.19	45.34	77.26	108.46	-546.39	-112.29	1,420.27	1,353.86	66.42	21.384	
13,200.00	12,511.00	14,837.21	11,094.80	45.72	75.92	101.77	-637.33	-107.36	1,418.77	1,352.75	66.02	21.489	
13,300.00	12,511.00	14,737.74	11,096.43	46.15	74.47	100.64	-736.61	-101.45	1,417.45	1,351.83	65.62	21.602	
13,400.00	12,511.00	14,641.89	11,097.67	46.63	73.08	97.51	-832.28	-95.78	1,416.49	1,351.23	65.26	21.707	
13,500.00	12,511.00	14,543.87	11,099.09	47.17	71.66	95.84	-930.09	-89.49	1,415.43	1,350.52	64.92	21.804	
13,559.23	12,511.00	14,495.41	11,099.47	47.52	70.96	89.61	-978.46	-86.47	1,415.21	1,350.42	64.79	21.844	
13,600.00	12,511.00	14,458.91	11,099.54	47.76	70.44	87.23	-1,014.89	-84.27	1,415.29	1,350.61	64.68	21.881	

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

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Roy Batty Federal COM - Roy Batty Federal COM #1H - Wellbore #1 - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 100-GYRO-NS, 10598-MWD — **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)	Azimuth from North (°)	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
13,700.00	12,511.00	14,363.84	11,099.58	48.39	69.08	84.70	-1,109.73	-77.60	1,415.73	1,351.31	64.42	21.977	
13,800.00	12,511.00	14,269.78	11,099.19	49.08	67.74	81.99	-1,203.44	-69.66	1,416.75	1,352.55	64.20	22.066	
13,900.00	12,511.00	14,159.06	11,099.41	49.81	66.18	87.17	-1,313.61	-58.59	1,417.36	1,353.42	63.93	22.170	
14,000.00	12,511.00	14,062.11	11,099.79	50.58	64.82	85.88	-1,410.10	-49.19	1,417.81	1,354.04	63.77	22.234	
14,100.00	12,511.00	13,971.14	11,099.71	51.39	63.56	82.38	-1,500.70	-41.07	1,418.71	1,355.05	63.66	22.284	
14,200.00	12,511.00	13,870.28	11,098.90	52.24	62.18	82.96	-1,601.22	-32.76	1,420.30	1,356.78	63.52	22.360	
14,300.00	12,511.00	13,757.58	11,099.07	53.13	60.66	87.73	-1,713.62	-24.57	1,420.85	1,357.53	63.32	22.440	
14,400.00	12,511.00	13,654.60	11,099.56	54.06	59.29	88.76	-1,816.31	-16.88	1,421.15	1,357.94	63.21	22.483	
14,500.00	12,511.00	13,565.08	11,100.08	55.02	58.11	85.23	-1,905.47	-8.93	1,421.57	1,358.34	63.23	22.482	
14,600.00	12,511.00	13,431.90	11,101.20	56.01	56.39	95.65	-2,038.12	2.94	1,421.91	1,358.89	63.02	22.563	
14,700.00	12,511.00	13,343.68	11,102.93	57.04	55.26	91.83	-2,126.01	10.30	1,420.97	1,357.87	63.10	22.520	
14,774.20	12,511.00	13,276.73	11,103.76	57.82	54.43	89.61	-2,192.76	15.49	1,420.77	1,357.61	63.17	22.493	
14,800.00	12,511.00	13,253.43	11,103.96	58.09	54.14	88.86	-2,215.98	17.24	1,420.80	1,357.61	63.19	22.485	
14,900.00	12,511.00	13,164.54	11,104.29	59.17	53.05	85.70	-2,304.63	23.80	1,421.37	1,358.06	63.31	22.451	
15,000.00	12,511.00	13,070.96	11,104.15	60.27	51.92	84.02	-2,397.97	30.53	1,422.48	1,359.05	63.43	22.427	
15,100.00	12,511.00	12,934.60	11,105.54	61.40	50.33	93.66	-2,533.90	41.18	1,422.50	1,359.16	63.34	22.459	
15,200.00	12,511.00	12,832.34	11,108.48	62.56	49.16	93.96	-2,635.66	50.80	1,421.02	1,357.52	63.51	22.376	
15,293.39	12,511.00	12,755.96	11,110.08	63.65	48.31	89.61	-2,711.67	58.11	1,420.44	1,356.65	63.79	22.267	
15,300.00	12,511.00	12,750.68	11,110.16	63.73	48.26	89.28	-2,716.93	58.64	1,420.44	1,356.63	63.81	22.259	
15,400.00	12,511.00	12,671.99	11,110.93	64.93	47.40	84.19	-2,795.12	67.42	1,421.27	1,357.08	64.19	22.143	
15,500.00	12,511.00	12,602.08	11,110.41	66.14	46.66	77.56	-2,864.53	75.73	1,423.96	1,359.31	64.65	22.026	
15,600.00	12,511.00	12,469.55	11,109.09	67.38	45.31	84.90	-2,996.27	90.02	1,426.84	1,362.06	64.79	22.024	
15,700.00	12,511.00	12,369.98	11,109.28	68.63	44.35	84.88	-3,095.36	99.87	1,428.40	1,363.26	65.14	21.929	
15,800.00	12,511.00	12,272.18	11,109.44	69.90	43.43	84.50	-3,192.68	109.53	1,430.03	1,364.52	65.52	21.826	
15,900.00	12,511.00	12,159.56	11,109.47	71.18	42.44	87.05	-3,304.79	120.20	1,431.83	1,365.97	65.87	21.738	
16,000.00	12,511.00	12,049.73	11,111.44	72.48	41.54	88.90	-3,414.08	130.84	1,431.91	1,365.63	66.29	21.602	
16,100.00	12,511.00	11,959.73	11,112.52	73.79	40.85	87.02	-3,503.70	139.07	1,432.55	1,365.73	66.81	21.441	
16,200.00	12,511.00	11,858.13	11,113.26	75.12	40.13	87.31	-3,604.90	148.07	1,433.64	1,366.32	67.32	21.295	
16,300.00	12,511.00	11,761.73	11,114.09	76.46	39.50	86.68	-3,700.96	156.17	1,434.54	1,366.66	67.89	21.132	
16,400.00	12,511.00	11,638.35	11,115.50	77.81	38.78	90.69	-3,823.90	166.42	1,435.25	1,366.86	68.39	20.986	
16,433.62	12,511.00	11,610.84	11,116.06	78.27	38.64	89.63	-3,851.31	168.66	1,435.18	1,366.55	68.62	20.914	
16,500.00	12,511.00	11,564.39	11,116.79	79.17	38.38	86.26	-3,897.61	172.40	1,435.42	1,366.31	69.10	20.772	
16,600.00	12,511.00	11,434.54	11,118.78	80.55	37.82	91.16	-4,026.98	183.23	1,435.77	1,366.07	69.70	20.599	
16,639.10	12,511.00	11,407.98	11,119.54	81.09	37.70	89.10	-4,053.42	185.70	1,435.57	1,365.56	70.02	20.504	
16,700.00	12,511.00	11,386.00	11,119.62	81.93	37.62	82.84	-4,075.31	187.60	1,436.54	1,365.98	70.57	20.357	
16,800.00	12,511.00	11,354.00	11,118.34	83.32	37.51	72.46	-4,107.18	190.15	1,441.96	1,370.43	71.53	20.159	
16,900.00	12,511.00	11,323.00	11,115.38	84.73	37.41	63.07	-4,137.94	192.52	1,452.27	1,379.72	72.54	20.019	
17,000.00	12,511.00	11,303.52	11,112.59	86.14	37.35	53.80	-4,157.16	194.03	1,467.45	1,393.78	73.67	19.920	
17,100.00	12,511.00	11,289.00	11,109.99	87.56	37.30	45.89	-4,171.40	195.22	1,487.77	1,412.92	74.86	19.875	
17,200.00	12,511.00	11,257.00	11,102.66	88.99	37.21	40.87	-4,202.45	197.64	1,512.65	1,436.72	75.92	19.923	
17,260.91	12,511.00	11,241.20	11,098.25	89.86	37.17	38.00	-4,217.58	198.68	1,530.13	1,453.54	76.59	19.978	

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Stevens "11" - Stevens 11 1 - Wellbore #1 - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 170-INC-ONLY — **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)	Azimuth from North (°)	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	7.50	0.00	0.00	0.06	153.41	-2,927.30	1,465.22	3,273.52				
100.00	100.00	107.50	100.00	0.13	0.90	153.41	-2,927.30	1,465.22	3,273.52	3,272.50	1.03	3,192.953	
200.00	200.00	207.50	200.00	0.49	2.13	153.41	-2,927.30	1,465.22	3,273.52	3,270.90	2.62	1,249.944	
280.31	280.31	287.56	280.05	0.77	3.66	153.41	-2,926.92	1,465.22	3,273.18	3,268.75	4.43	738.837	
300.00	300.00	304.46	296.95	0.85	3.98	153.41	-2,926.93	1,465.22	3,273.19	3,268.37	4.82	678.761	
400.00	400.00	390.29	382.78	1.20	5.61	153.41	-2,927.22	1,465.22	3,273.50	3,266.69	6.81	480.396	
499.47	499.47	506.99	499.47	1.56	7.83	153.41	-2,927.07	1,465.22	3,273.32	3,263.92	9.39	348.503	
500.00	500.00	507.46	499.94	1.56	7.84	153.41	-2,927.07	1,465.22	3,273.32	3,263.91	9.40	348.103	
600.00	600.00	596.62	589.10	1.92	9.54	153.41	-2,927.23	1,465.22	3,273.48	3,262.02	11.46	285.661	
700.00	699.99	707.09	699.56	2.28	11.77	153.41	-2,926.99	1,465.22	3,274.12	3,260.07	14.04	233.152	
800.00	799.96	807.51	799.96	2.64	13.81	153.40	-2,927.30	1,465.22	3,276.99	3,260.55	16.44	199.302	
900.00	899.86	907.42	899.86	2.99	15.85	153.40	-2,927.30	1,465.22	3,281.33	3,262.49	18.84	174.185	
1,000.00	999.68	1,007.23	999.68	3.35	17.88	153.38	-2,927.30	1,465.22	3,287.40	3,266.17	21.23	154.826	
1,000.22	999.89	1,007.45	999.89	3.35	17.89	153.38	-2,927.30	1,465.22	3,287.42	3,266.18	21.24	154.789	
1,100.00	1,099.43	1,097.18	1,089.62	3.72	19.72	153.37	-2,926.49	1,465.22	3,293.64	3,270.21	23.43	140.596	
1,200.00	1,199.19	1,186.34	1,178.77	4.08	21.53	153.36	-2,926.95	1,465.22	3,301.03	3,275.43	25.60	128.934	
1,300.00	1,298.94	1,306.55	1,298.94	4.45	23.93	153.35	-2,927.30	1,465.22	3,308.22	3,279.86	28.36	116.648	
1,400.00	1,398.70	1,406.30	1,398.70	4.82	25.90	153.33	-2,927.30	1,465.22	3,315.17	3,284.48	30.68	108.039	
1,500.00	1,498.46	1,504.29	1,496.68	5.18	27.83	153.32	-2,926.48	1,465.22	3,321.38	3,288.41	32.97	100.726	
1,600.00	1,598.21	1,596.86	1,589.25	5.55	29.65	153.30	-2,926.65	1,465.22	3,328.48	3,293.33	35.16	94.674	
1,700.00	1,697.97	1,689.41	1,681.79	5.92	31.48	153.29	-2,927.04	1,465.22	3,335.80	3,298.46	37.34	89.337	
1,800.00	1,797.72	1,805.37	1,797.72	6.29	33.71	153.28	-2,927.30	1,465.22	3,342.93	3,303.00	39.93	83.713	
1,900.00	1,897.48	1,905.13	1,897.48	6.66	35.60	153.27	-2,927.30	1,465.22	3,349.88	3,307.69	42.19	79.403	
2,000.00	1,997.24	2,002.90	1,995.25	7.03	37.46	153.25	-2,926.50	1,465.22	3,356.11	3,311.70	44.41	75.578	
2,100.00	2,096.99	2,095.28	2,087.62	7.41	39.22	153.24	-2,926.67	1,465.22	3,363.22	3,316.70	46.52	72.295	
2,200.00	2,196.75	2,187.64	2,179.98	7.78	40.97	153.23	-2,927.08	1,465.22	3,370.55	3,321.91	48.63	69.304	
2,300.00	2,296.51	2,304.18	2,296.51	8.15	43.19	153.22	-2,927.30	1,465.22	3,377.65	3,326.43	51.21	65.954	
2,400.00	2,396.26	2,403.94	2,396.26	8.52	45.08	153.21	-2,927.30	1,465.22	3,384.59	3,331.12	53.47	63.300	
2,500.00	2,496.02	2,502.15	2,494.47	8.89	46.95	153.19	-2,926.76	1,465.22	3,391.05	3,335.36	55.70	60.884	
2,600.00	2,595.77	2,596.87	2,589.19	9.26	48.75	153.18	-2,926.89	1,465.22	3,398.12	3,340.26	57.86	58.732	
2,700.00	2,695.53	2,691.58	2,683.90	9.64	50.55	153.17	-2,927.17	1,465.22	3,405.33	3,345.31	60.02	56.738	
2,800.00	2,795.29	2,802.99	2,795.29	10.01	52.84	153.16	-2,927.30	1,465.22	3,412.36	3,349.70	62.67	54.452	
2,900.00	2,895.04	2,902.75	2,895.04	10.38	54.94	153.15	-2,927.30	1,465.22	3,419.31	3,354.17	65.13	52.498	
3,000.00	2,994.80	3,000.12	2,992.41	10.75	56.99	153.13	-2,926.49	1,465.22	3,425.54	3,357.99	67.55	50.714	
3,100.00	3,094.55	3,092.44	3,084.72	11.12	58.94	153.12	-2,926.68	1,465.22	3,432.66	3,362.81	69.85	49.141	
3,200.00	3,194.31	3,184.73	3,177.01	11.50	60.89	153.11	-2,927.09	1,465.22	3,440.00	3,367.84	72.16	47.673	
3,300.00	3,294.07	3,300.23	3,292.44	11.87	63.33	153.10	-2,926.87	1,465.22	3,446.71	3,371.75	74.96	45.980	
3,400.00	3,393.82	3,401.63	3,393.82	12.24	65.43	153.09	-2,927.30	1,465.22	3,454.03	3,376.60	77.43	44.611	
3,500.00	3,493.58	3,501.39	3,493.58	12.61	67.39	153.08	-2,927.30	1,465.22	3,460.97	3,381.22	79.75	43.397	
3,600.00	3,593.33	3,597.34	3,589.53	12.99	69.29	153.07	-2,926.70	1,465.22	3,467.39	3,385.39	82.00	42.284	
3,700.00	3,693.09	3,687.39	3,679.57	13.36	71.06	153.06	-2,926.95	1,465.22	3,474.58	3,390.45	84.14	41.297	
3,800.00	3,792.85	3,800.69	3,792.85	13.73	73.29	153.05	-2,927.30	1,465.22	3,481.81	3,395.08	86.73	40.145	
3,900.00	3,892.60	3,893.72	3,885.87	14.11	75.12	153.03	-2,926.98	1,465.22	3,488.48	3,399.55	88.92	39.230	
4,000.00	3,992.36	4,000.22	3,992.36	14.48	77.25	153.02	-2,927.30	1,465.22	3,495.70	3,404.29	91.41	38.242	
4,100.00	4,092.12	4,099.97	4,092.12	14.85	79.28	153.01	-2,927.30	1,465.22	3,502.64	3,408.84	93.81	37.339	
4,200.00	4,191.87	4,190.89	4,183.02	15.22	81.14	153.00	-2,926.88	1,465.22	3,509.23	3,413.21	96.02	36.546	
4,300.00	4,291.63	4,299.52	4,291.63	15.60	83.43	152.99	-2,927.30	1,465.22	3,516.53	3,417.86	98.68	35.636	
4,400.00	4,391.38	4,399.28	4,391.38	15.97	85.85	152.98	-2,927.30	1,465.22	3,523.48	3,422.02	101.46	34.728	
4,500.00	4,491.14	4,499.04	4,491.14	16.34	88.27	152.97	-2,927.30	1,465.22	3,530.43	3,426.19	104.24	33.869	
4,600.00	4,590.90	4,598.79	4,590.90	16.72	90.69	152.96	-2,927.30	1,465.22	3,537.37	3,430.35	107.02	33.054	
4,700.00	4,690.65	4,692.80	4,684.89	17.09	92.97	152.94	-2,925.87	1,465.22	3,543.05	3,433.40	109.66	32.310	
4,800.00	4,790.41	4,785.10	4,777.19	17.46	95.21	152.93	-2,926.15	1,465.22	3,550.27	3,438.01	112.25	31.627	

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Stevens "11" - Stevens 11 1 - Wellbore #1 - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 170-INC-ONLY — **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)	Azimuth from North (°)	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
4,900.00	4,890.16	4,877.39	4,869.47	17.84	97.44	152.92	-2,926.64	1,465.22	3,557.69	3,442.84	114.85	30.977	
5,000.00	4,989.92	4,998.06	4,989.92	18.21	100.32	152.91	-2,927.30	1,465.22	3,565.16	3,447.06	118.09	30.189	
5,100.00	5,089.68	5,097.82	5,089.68	18.58	102.60	152.90	-2,927.30	1,465.22	3,572.10	3,451.37	120.74	29.586	
5,200.00	5,189.43	5,171.76	5,163.59	18.95	104.29	152.89	-2,926.32	1,465.22	3,578.28	3,455.50	122.78	29.145	
5,300.00	5,289.19	5,297.40	5,289.19	19.33	106.96	152.88	-2,927.30	1,465.22	3,586.00	3,460.18	125.82	28.501	
5,400.00	5,388.95	5,397.16	5,388.95	19.70	108.84	152.87	-2,927.30	1,465.22	3,592.95	3,464.88	128.06	28.056	
5,500.00	5,488.70	5,491.90	5,483.69	20.07	110.63	152.86	-2,926.95	1,465.22	3,599.59	3,469.39	130.21	27.645	
5,600.00	5,588.46	5,584.44	5,576.22	20.45	112.37	152.85	-2,927.20	1,465.22	3,606.78	3,474.47	132.31	27.260	
5,700.00	5,688.21	5,696.45	5,688.21	20.82	114.55	152.84	-2,927.30	1,465.22	3,613.79	3,478.93	134.86	26.797	
5,800.00	5,787.97	5,796.21	5,787.97	21.19	116.52	152.83	-2,927.30	1,465.22	3,620.74	3,483.55	137.18	26.394	
5,900.00	5,887.73	5,887.47	5,879.23	21.57	118.31	152.81	-2,926.75	1,465.22	3,627.21	3,487.87	139.33	26.033	
5,905.69	5,893.40	5,892.61	5,884.36	21.59	118.41	152.81	-2,926.76	1,465.22	3,627.61	3,488.16	139.45	26.013	
6,000.00	5,987.55	5,977.75	5,969.51	21.94	120.08	152.81	-2,927.12	1,465.22	3,633.36	3,491.90	141.46	25.684	
6,100.00	6,087.50	6,095.77	6,087.50	22.29	122.34	152.80	-2,927.30	1,465.22	3,636.67	3,492.59	144.08	25.240	
6,172.50	6,160.00	6,168.27	6,160.00	22.55	123.71	152.80	-2,927.30	1,465.22	3,637.35	3,491.64	145.71	24.963	
6,200.00	6,187.50	6,195.77	6,187.50	22.64	124.23	152.80	-2,927.30	1,465.22	3,637.35	3,491.03	146.33	24.858	
6,300.00	6,287.50	6,295.77	6,287.50	22.99	126.12	152.80	-2,927.30	1,465.22	3,637.35	3,488.78	148.57	24.483	
6,400.00	6,387.50	6,395.77	6,387.50	23.33	128.00	152.80	-2,927.30	1,465.22	3,637.35	3,486.54	150.81	24.119	
6,500.00	6,487.50	6,495.77	6,487.50	23.68	129.89	152.80	-2,927.30	1,465.22	3,637.35	3,484.30	153.05	23.765	
6,584.27	6,571.77	6,579.98	6,571.70	23.97	131.49	152.79	-2,925.43	1,465.22	3,635.69	3,480.75	154.94	23.465	
6,600.00	6,587.50	6,595.15	6,586.87	24.02	131.77	152.79	-2,925.43	1,465.22	3,635.69	3,480.41	155.28	23.413	
6,700.00	6,687.50	6,691.59	6,683.30	24.37	133.59	152.79	-2,925.50	1,465.22	3,635.76	3,478.30	157.46	23.090	
6,800.00	6,787.50	6,788.02	6,779.74	24.72	135.42	152.79	-2,925.68	1,465.22	3,635.92	3,476.29	159.63	22.777	
6,900.00	6,887.50	6,884.47	6,876.17	25.06	137.24	152.79	-2,925.96	1,465.22	3,636.18	3,474.37	161.81	22.472	
7,000.00	6,987.50	6,980.91	6,972.61	25.41	139.06	152.80	-2,926.35	1,465.22	3,636.54	3,472.56	163.98	22.176	
7,100.00	7,087.50	7,077.35	7,069.05	25.76	140.88	152.80	-2,926.85	1,465.22	3,637.00	3,470.84	166.16	21.889	
7,200.00	7,187.50	7,195.83	7,187.50	26.11	143.12	152.80	-2,927.30	1,465.22	3,637.35	3,468.59	168.76	21.553	
7,300.00	7,287.50	7,295.83	7,287.50	26.45	145.02	152.80	-2,927.30	1,465.22	3,637.35	3,466.34	171.01	21.270	
7,374.87	7,362.36	7,370.69	7,362.35	26.71	146.43	152.80	-2,926.81	1,465.22	3,636.92	3,464.23	172.69	21.061	
7,400.00	7,387.50	7,394.31	7,385.97	26.80	146.88	152.80	-2,926.82	1,465.22	3,636.93	3,463.70	173.22	20.995	
7,500.00	7,487.50	7,488.30	7,479.96	27.15	148.66	152.80	-2,926.95	1,465.22	3,637.05	3,461.70	175.36	20.741	
7,600.00	7,587.50	7,582.29	7,573.94	27.50	150.44	152.80	-2,927.26	1,465.22	3,637.34	3,459.86	177.49	20.494	
7,700.00	7,687.50	7,695.86	7,687.50	27.85	152.99	152.80	-2,927.30	1,465.22	3,637.35	3,456.96	180.40	20.163	
7,800.00	7,787.50	7,795.86	7,787.50	28.20	155.26	152.80	-2,927.30	1,465.22	3,637.35	3,454.33	183.03	19.873	
7,887.08	7,874.57	7,882.94	7,874.56	28.50	157.24	152.80	-2,926.34	1,465.22	3,636.50	3,451.19	185.31	19.623	
7,900.00	7,887.50	7,894.99	7,886.62	28.55	157.52	152.80	-2,926.34	1,465.22	3,636.50	3,450.87	185.63	19.590	
8,000.00	7,987.50	7,988.23	7,979.86	28.90	159.64	152.80	-2,926.46	1,465.22	3,636.62	3,448.51	188.11	19.333	
8,100.00	8,087.50	8,081.49	8,073.11	29.25	161.76	152.80	-2,926.78	1,465.22	3,636.92	3,446.34	190.58	19.083	
8,200.00	8,187.50	8,196.01	8,187.50	29.60	164.40	152.80	-2,927.30	1,465.22	3,637.35	3,443.77	193.58	18.790	
8,264.35	8,251.84	8,258.89	8,250.37	29.82	165.93	152.80	-2,926.67	1,465.22	3,636.80	3,441.46	195.34	18.618	
8,300.00	8,287.50	8,281.10	8,272.57	29.95	166.47	152.80	-2,926.73	1,465.22	3,636.88	3,440.88	196.00	18.555	
8,400.00	8,387.50	8,396.06	8,387.50	30.30	169.22	152.80	-2,927.30	1,465.22	3,637.35	3,438.23	199.12	18.267	
8,455.76	8,443.26	8,450.89	8,442.32	30.50	170.52	152.80	-2,926.70	1,465.22	3,636.82	3,436.21	200.61	18.129	
8,500.00	8,487.50	8,484.39	8,475.81	30.65	171.31	152.80	-2,926.76	1,465.22	3,636.90	3,435.34	201.56	18.044	
8,600.00	8,587.50	8,596.13	8,587.50	31.00	173.98	152.80	-2,927.30	1,465.22	3,637.35	3,432.77	204.59	17.779	
8,700.00	8,687.50	8,696.13	8,687.50	31.35	176.43	152.80	-2,927.30	1,465.22	3,637.35	3,429.96	207.39	17.539	
8,737.70	8,725.19	8,731.60	8,722.96	31.49	177.29	152.80	-2,926.22	1,465.22	3,636.39	3,428.01	208.39	17.450	
8,800.00	8,787.50	8,781.20	8,772.55	31.70	178.51	152.80	-2,926.35	1,465.22	3,636.54	3,426.72	209.82	17.332	
8,900.00	8,887.50	8,860.82	8,852.15	32.06	180.45	152.80	-2,926.97	1,465.22	3,637.23	3,425.13	212.11	17.148	
8,958.27	8,945.76	8,954.50	8,945.75	32.26	182.69	152.80	-2,926.86	1,465.22	3,636.96	3,422.39	214.57	16.950	
9,000.00	8,987.50	8,980.00	8,971.25	32.41	183.30	152.80	-2,926.92	1,465.22	3,637.06	3,421.74	215.32	16.891	
9,100.00	9,087.50	9,096.28	9,087.50	32.76	185.99	152.80	-2,927.30	1,465.22	3,637.35	3,418.97	218.38	16.656	

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Stevens "11" - Stevens 11 1 - Wellbore #1 - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 170-INC-ONLY — **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)	Azimuth from North (°)	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
9,200.00	9,187.50	9,196.32	9,187.50	33.11	188.27	152.80	-2,927.30	1,465.22	3,637.35	3,416.34	221.01	16.458	
9,300.00	9,287.50	9,296.32	9,287.50	33.46	190.48	152.80	-2,927.30	1,465.22	3,637.35	3,413.78	223.57	16.269	
9,400.00	9,387.50	9,396.32	9,387.50	33.82	192.68	152.80	-2,927.30	1,465.22	3,637.35	3,411.22	226.14	16.085	
9,440.69	9,428.18	9,434.65	9,425.81	33.96	193.53	152.79	-2,925.98	1,465.22	3,636.18	3,409.05	227.13	16.009	
9,500.00	9,487.50	9,486.44	9,477.60	34.17	194.67	152.79	-2,926.08	1,465.22	3,636.28	3,407.80	228.48	15.915	
9,600.00	9,587.50	9,573.77	9,564.92	34.52	196.60	152.80	-2,926.52	1,465.22	3,636.73	3,405.97	230.76	15.760	
9,700.00	9,687.50	9,696.41	9,687.50	34.87	199.37	152.80	-2,927.30	1,465.22	3,637.35	3,403.46	233.89	15.551	
9,800.00	9,787.50	9,796.41	9,787.50	35.23	201.75	152.80	-2,927.30	1,465.22	3,637.35	3,400.73	236.63	15.372	
9,893.84	9,881.33	9,889.77	9,880.84	35.56	203.97	152.80	-2,926.31	1,465.22	3,636.48	3,397.30	239.18	15.204	
9,900.00	9,887.50	9,895.24	9,886.32	35.58	204.10	152.80	-2,926.32	1,465.22	3,636.48	3,397.15	239.33	15.194	
10,000.00	9,987.50	9,984.11	9,975.18	35.93	206.21	152.80	-2,926.50	1,465.22	3,636.67	3,394.87	241.79	15.040	
10,100.00	10,087.50	10,072.98	10,064.05	36.28	208.32	152.80	-2,926.99	1,465.22	3,637.16	3,392.90	244.26	14.891	
10,191.97	10,179.46	10,188.49	10,179.43	36.61	211.33	152.80	-2,926.70	1,465.22	3,636.83	3,389.22	247.60	14.688	
10,200.00	10,187.50	10,193.40	10,184.34	36.64	211.46	152.80	-2,926.71	1,465.22	3,636.83	3,389.07	247.76	14.679	
10,300.00	10,287.50	10,296.63	10,287.50	36.99	214.24	152.80	-2,927.30	1,465.22	3,637.35	3,386.45	250.90	14.497	
10,352.29	10,339.79	10,348.12	10,338.97	37.18	215.60	152.80	-2,926.59	1,465.22	3,636.72	3,384.28	252.45	14.406	
10,400.00	10,387.50	10,376.24	10,367.09	37.34	216.34	152.80	-2,926.68	1,465.22	3,636.86	3,383.51	253.35	14.355	
10,500.00	10,487.50	10,496.70	10,487.50	37.70	219.46	152.80	-2,927.30	1,465.22	3,637.35	3,380.52	256.84	14.162	
10,526.35	10,513.85	10,522.08	10,512.86	37.79	220.11	152.80	-2,926.69	1,465.22	3,636.82	3,379.24	257.58	14.119	
10,600.00	10,587.50	10,572.53	10,563.31	38.05	221.40	152.80	-2,926.89	1,465.22	3,637.07	3,377.95	259.12	14.036	
10,700.00	10,687.50	10,696.78	10,687.50	38.41	224.73	152.80	-2,927.30	1,465.22	3,637.35	3,374.54	262.81	13.840	
10,724.63	10,712.12	10,716.83	10,707.54	38.49	225.28	152.80	-2,926.57	1,465.22	3,636.71	3,373.26	263.45	13.804	
10,800.00	10,787.50	10,766.62	10,757.32	38.76	226.64	152.80	-2,926.84	1,465.22	3,637.07	3,372.01	265.06	13.721	
10,884.95	10,872.45	10,881.67	10,872.28	39.06	229.86	152.80	-2,926.62	1,465.22	3,636.75	3,368.15	268.60	13.540	
10,900.00	10,887.50	10,890.38	10,880.98	39.11	230.10	152.80	-2,926.63	1,465.22	3,636.76	3,367.87	268.90	13.525	
11,000.00	10,987.50	10,996.97	10,987.50	39.47	233.15	152.80	-2,927.30	1,465.22	3,637.35	3,365.04	272.31	13.357	
11,100.00	11,087.50	11,096.97	11,087.50	39.82	236.08	152.80	-2,927.30	1,465.22	3,637.35	3,361.76	275.59	13.198	
11,136.91	11,124.41	11,129.42	11,119.91	39.95	237.03	152.79	-2,925.93	1,465.22	3,636.14	3,359.47	276.67	13.142	
11,200.00	11,187.50	11,175.92	11,166.41	40.18	238.39	152.79	-2,926.11	1,465.22	3,636.36	3,358.11	278.25	13.069	
11,300.00	11,287.50	11,249.66	11,240.12	40.53	240.55	152.80	-2,926.89	1,465.22	3,637.30	3,356.56	280.74	12.956	
11,341.46	11,328.96	11,338.05	11,328.35	40.68	243.03	152.80	-2,926.68	1,465.22	3,636.81	3,353.41	283.40	12.833	
11,400.00	11,387.50	11,367.10	11,357.39	40.88	243.83	152.80	-2,926.82	1,465.22	3,637.05	3,352.66	284.39	12.789	
11,500.00	11,487.50	11,497.26	11,487.50	41.24	247.33	152.80	-2,927.30	1,465.22	3,637.35	3,349.08	288.27	12.618	
11,600.00	11,587.50	11,597.26	11,587.50	41.59	250.00	152.80	-2,927.30	1,465.22	3,637.35	3,346.05	291.30	12.487	
11,638.19	11,625.69	11,629.84	11,620.06	41.73	250.88	152.79	-2,925.99	1,465.22	3,636.20	3,343.89	292.31	12.440	
11,700.00	11,687.50	11,681.00	11,671.21	41.95	252.24	152.80	-2,926.16	1,465.22	3,636.38	3,342.49	293.89	12.373	
11,800.00	11,787.50	11,763.78	11,753.98	42.30	254.45	152.80	-2,926.80	1,465.22	3,637.07	3,340.62	296.44	12.269	
11,900.00	11,887.50	11,897.45	11,887.50	42.66	258.37	152.80	-2,927.30	1,465.22	3,637.35	3,336.62	300.73	12.095	
11,944.75	11,932.24	11,926.34	11,916.37	42.81	259.25	152.80	-2,926.54	1,465.22	3,636.72	3,334.95	301.77	12.051	
11,950.00	11,937.50	11,929.63	11,919.65	42.83	259.35	152.80	-2,926.56	1,465.22	3,636.72	3,334.83	301.88	12.047	
11,960.88	11,948.38	11,936.43	11,926.45	42.87	259.55	152.80	-2,926.60	1,465.22	3,636.60	3,334.47	302.12	12.037	
12,000.00	11,987.41	11,960.85	11,950.87	42.99	260.30	152.78	-2,926.82	1,465.22	3,634.74	3,331.76	302.98	11.997	
12,050.00	12,036.90	12,047.00	12,036.90	43.14	262.83	152.73	-2,927.30	1,465.22	3,628.75	3,323.06	305.69	11.871	
12,100.00	12,085.60	12,091.94	12,081.82	43.28	264.12	152.65	-2,926.28	1,465.22	3,617.81	3,310.68	307.13	11.780	
12,150.00	12,133.13	12,119.13	12,109.00	43.41	264.90	152.54	-2,926.40	1,465.22	3,604.21	3,296.17	308.04	11.701	
12,200.00	12,179.14	12,145.59	12,135.45	43.53	265.66	152.40	-2,926.69	1,465.22	3,587.25	3,278.34	308.91	11.612	
12,250.00	12,223.26	12,233.47	12,223.26	43.64	268.44	152.23	-2,927.30	1,465.22	3,566.65	3,254.80	311.85	11.437	
12,300.00	12,265.17	12,275.38	12,265.17	43.74	269.84	152.03	-2,927.30	1,465.22	3,542.49	3,229.11	313.38	11.304	
12,350.00	12,304.54	12,314.76	12,304.54	43.83	271.17	151.79	-2,927.30	1,465.22	3,515.22	3,200.42	314.81	11.166	
12,400.00	12,341.08	12,351.30	12,341.08	43.91	272.39	151.53	-2,927.30	1,465.22	3,485.10	3,168.96	316.13	11.024	
12,450.00	12,374.51	12,384.73	12,374.51	43.98	273.52	151.24	-2,927.30	1,465.22	3,452.35	3,135.01	317.34	10.879	
12,500.00	12,404.57	12,414.79	12,404.57	44.04	274.52	150.92	-2,927.30	1,465.22	3,417.27	3,098.84	318.43	10.732	

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

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Stevens "11" - Stevens 11 1 - Wellbore #1 - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 170-INC-ONLY — **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)	Azimuth from North (°)	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
12,550.00	12,431.04	12,441.26	12,431.04	44.10	275.41	150.58	-2,927.30	1,465.22	3,380.13	3,060.74	319.39	10.583	
12,600.00	12,453.72	12,463.93	12,453.72	44.18	276.17	150.21	-2,927.30	1,465.22	3,341.25	3,021.04	320.22	10.434	
12,650.00	12,472.42	12,480.74	12,470.50	44.26	276.74	149.80	-2,925.43	1,465.22	3,299.34	2,978.49	320.84	10.283	
12,700.00	12,487.01	12,493.71	12,483.46	44.35	277.17	149.38	-2,925.44	1,465.22	3,257.95	2,936.62	321.33	10.139	
12,744.75	12,496.49	12,502.18	12,491.93	44.43	277.46	148.99	-2,925.45	1,465.22	3,220.27	2,898.61	321.66	10.011	
12,750.00	12,497.39	12,502.98	12,492.74	44.44	277.48	148.94	-2,925.45	1,465.22	3,215.82	2,894.12	321.70	9.996	
12,800.00	12,504.51	12,509.39	12,499.15	44.54	277.70	148.48	-2,925.47	1,465.22	3,173.36	2,851.40	321.96	9.856	
12,850.00	12,509.03	12,513.51	12,503.27	44.65	277.84	148.01	-2,925.47	1,465.22	3,130.86	2,808.70	322.16	9.718	
12,900.00	12,510.93	12,515.31	12,505.07	44.76	277.90	147.53	-2,925.48	1,465.22	3,088.42	2,766.14	322.28	9.583	
12,911.41	12,511.00	12,515.39	12,505.15	44.79	277.90	147.41	-2,925.48	1,465.22	3,078.76	2,756.46	322.29	9.553	
13,000.00	12,511.00	12,515.57	12,505.33	45.03	277.91	146.51	-2,925.48	1,465.22	3,004.16	2,681.74	322.42	9.318	
13,100.00	12,511.00	12,515.78	12,505.53	45.34	277.91	145.44	-2,925.48	1,465.22	2,920.89	2,598.30	322.59	9.054	
13,200.00	12,511.00	12,515.98	12,505.74	45.72	277.92	144.31	-2,925.48	1,465.22	2,838.71	2,515.91	322.80	8.794	
13,300.00	12,511.00	12,516.19	12,505.94	46.15	277.93	143.11	-2,925.48	1,465.22	2,757.70	2,434.65	323.04	8.537	
13,400.00	12,511.00	12,516.40	12,506.15	46.63	277.94	141.84	-2,925.48	1,465.22	2,677.97	2,354.64	323.33	8.282	
13,500.00	12,511.00	12,516.61	12,506.36	47.17	277.94	140.49	-2,925.48	1,465.22	2,599.65	2,275.98	323.67	8.032	
13,600.00	12,511.00	12,516.82	12,506.57	47.76	277.95	139.05	-2,925.48	1,465.22	2,522.86	2,198.80	324.06	7.785	
13,700.00	12,511.00	12,517.03	12,506.79	48.39	277.96	137.53	-2,925.48	1,465.22	2,447.74	2,123.24	324.50	7.543	
13,800.00	12,511.00	12,517.25	12,507.00	49.08	277.96	135.91	-2,925.48	1,465.22	2,374.46	2,049.44	325.02	7.306	
13,900.00	12,511.00	12,517.47	12,507.22	49.81	277.97	134.20	-2,925.48	1,465.22	2,303.20	1,977.59	325.61	7.074	
14,000.00	12,511.00	12,517.69	12,507.44	50.58	277.98	132.37	-2,925.48	1,465.22	2,234.13	1,907.87	326.27	6.848	
14,100.00	12,511.00	12,517.91	12,507.66	51.39	277.99	130.43	-2,925.48	1,465.22	2,167.49	1,840.47	327.01	6.628	
14,200.00	12,511.00	12,518.13	12,507.89	52.24	277.99	128.37	-2,925.48	1,465.22	2,103.48	1,775.64	327.85	6.416	
14,300.00	12,511.00	12,518.36	12,508.11	53.13	278.00	126.18	-2,925.48	1,465.22	2,042.37	1,713.60	328.77	6.212	
14,400.00	12,511.00	12,518.58	12,508.34	54.06	278.01	123.86	-2,925.49	1,465.22	1,984.42	1,654.64	329.78	6.017	
14,500.00	12,511.00	12,518.81	12,508.57	55.02	278.02	121.40	-2,925.49	1,465.22	1,929.91	1,599.02	330.89	5.833	
14,600.00	12,511.00	12,519.04	12,508.80	56.01	278.02	118.81	-2,925.49	1,465.22	1,879.15	1,547.07	332.08	5.659	
14,700.00	12,511.00	12,519.28	12,509.03	57.04	278.03	116.08	-2,925.49	1,465.22	1,832.44	1,499.09	333.34	5.497	
14,800.00	12,511.00	12,519.51	12,509.27	58.09	278.04	113.21	-2,925.49	1,465.22	1,790.10	1,455.42	334.68	5.349	
14,900.00	12,511.00	12,519.75	12,509.50	59.17	278.05	110.22	-2,925.49	1,465.22	1,752.46	1,416.39	336.07	5.215	
15,000.00	12,511.00	12,519.99	12,509.74	60.27	278.06	107.10	-2,925.49	1,465.22	1,719.81	1,382.32	337.49	5.096	
15,100.00	12,511.00	12,520.23	12,509.99	61.40	278.06	103.87	-2,925.49	1,465.22	1,692.45	1,353.53	338.92	4.994	
15,200.00	12,511.00	12,520.47	12,510.23	62.56	278.07	100.54	-2,925.49	1,465.22	1,670.63	1,330.30	340.33	4.909	
15,300.00	12,511.00	12,520.72	12,510.48	63.73	278.08	97.14	-2,925.49	1,465.22	1,654.58	1,312.88	341.70	4.842	
15,400.00	12,511.00	12,520.97	12,510.72	64.93	278.09	93.68	-2,925.49	1,465.22	1,644.47	1,301.47	343.01	4.794	
15,500.00	12,511.00	12,521.22	12,510.97	66.14	278.10	90.20	-2,925.49	1,465.22	1,640.40	1,296.19	344.21	4.766	
15,516.82	12,511.00	12,521.26	12,511.02	66.35	278.10	89.61	-2,925.49	1,465.22	1,640.32	1,295.91	344.41	4.763	CC, ES
15,600.00	12,511.00	12,521.47	12,511.23	67.38	278.11	86.71	-2,925.49	1,465.22	1,642.42	1,297.12	345.30	4.756	SF
15,700.00	12,511.00	12,521.73	12,511.48	68.63	278.11	83.24	-2,925.49	1,465.22	1,650.51	1,304.25	346.26	4.767	
15,800.00	12,511.00	12,521.98	12,511.74	69.90	278.12	79.81	-2,925.49	1,465.22	1,664.58	1,317.51	347.07	4.796	
15,900.00	12,511.00	12,522.24	12,512.00	71.18	278.13	76.46	-2,925.49	1,465.22	1,684.48	1,336.74	347.74	4.844	
16,000.00	12,511.00	12,522.51	12,512.26	72.48	278.14	73.20	-2,925.50	1,465.22	1,710.00	1,361.75	348.26	4.910	
16,100.00	12,511.00	12,522.77	12,512.53	73.79	278.15	70.04	-2,925.50	1,465.22	1,740.90	1,392.27	348.63	4.994	
16,200.00	12,511.00	12,523.04	12,512.79	75.12	278.16	67.00	-2,925.50	1,465.22	1,776.90	1,428.03	348.88	5.093	
16,300.00	12,511.00	12,523.31	12,513.06	76.46	278.17	64.09	-2,925.50	1,465.22	1,817.69	1,468.69	349.00	5.208	
16,400.00	12,511.00	12,523.58	12,513.34	77.81	278.18	61.31	-2,925.50	1,465.22	1,862.97	1,513.95	349.02	5.338	
16,500.00	12,511.00	12,523.86	12,513.61	79.17	278.19	58.67	-2,925.50	1,465.22	1,912.40	1,563.45	348.95	5.480	
16,600.00	12,511.00	12,524.13	12,513.89	80.55	278.20	56.17	-2,925.50	1,465.22	1,965.69	1,616.88	348.80	5.636	
16,700.00	12,511.00	12,524.41	12,514.17	81.93	278.20	53.81	-2,925.50	1,465.22	2,022.51	1,673.92	348.59	5.802	
16,800.00	12,511.00	12,524.70	12,514.45	83.32	278.21	51.57	-2,925.50	1,465.22	2,082.59	1,734.26	348.33	5.979	
16,900.00	12,511.00	12,524.98	12,514.74	84.73	278.22	49.47	-2,925.50	1,465.22	2,145.65	1,797.61	348.04	6.165	
17,000.00	12,511.00	12,525.27	12,515.03	86.14	278.23	47.49	-2,925.50	1,465.22	2,211.44	1,863.72	347.71	6.360	

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

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Stevens "11" - Stevens 11 1 - Wellbore #1 - Surveys — **Offset Site Error:** 0.00 usft

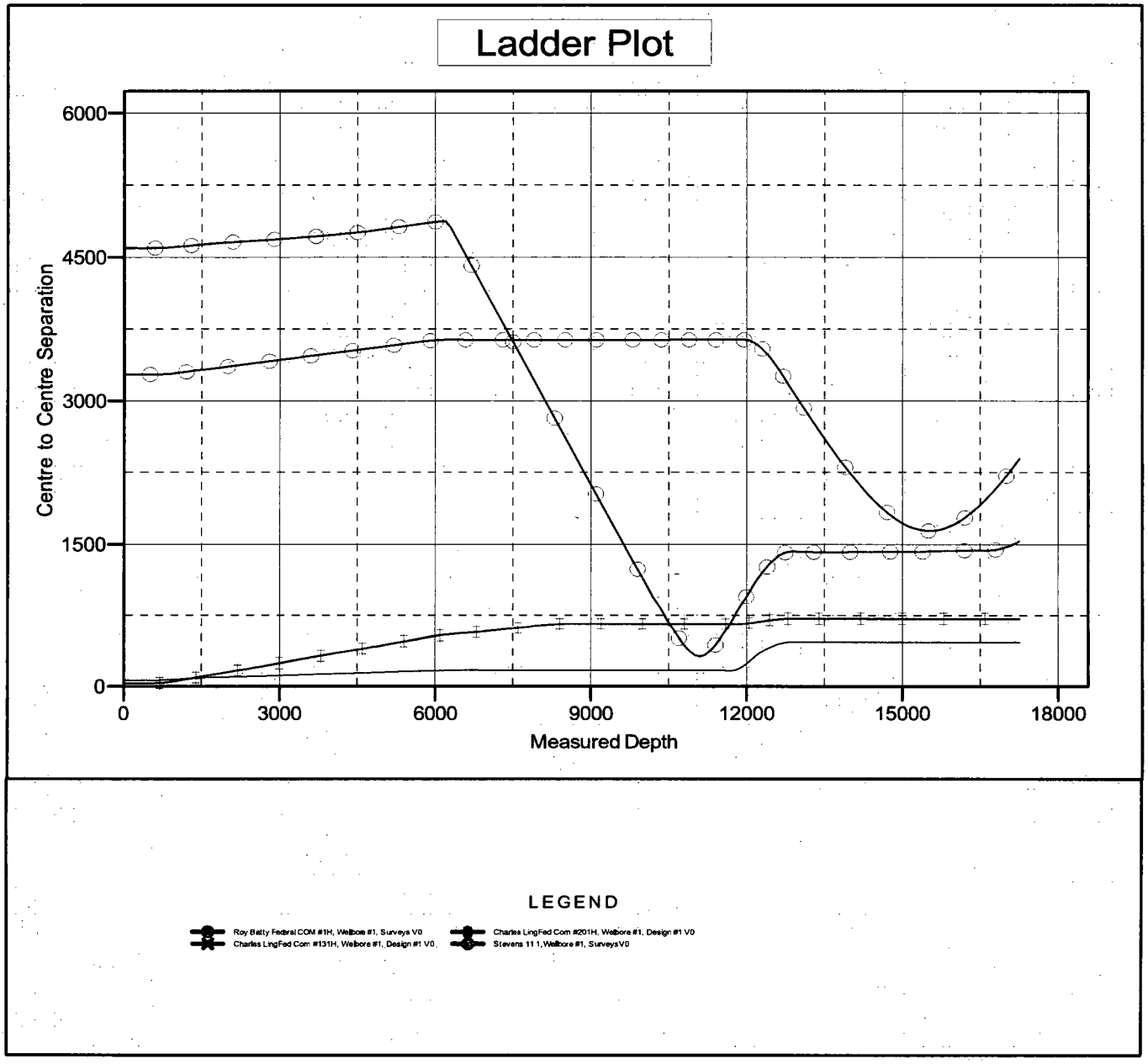
Survey Program: 170-INC-ONLY — **Offset Well Error:** 0.00 usft

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)	Azimuth from North (°)	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
17,100.00	12,511.00	12,525.56	12,515.32	87.56	278.24	45.62	-2,925.50	1,465.22	2,279.71	1,932.34	347.37	6.563	
17,200.00	12,511.00	12,525.86	12,515.61	88.99	278.25	43.87	-2,925.50	1,465.22	2,350.26	2,003.25	347.02	6.773	
17,260.91	12,511.00	12,526.04	12,515.79	89.86	278.26	42.85	-2,925.50	1,465.22	2,394.26	2,047.47	346.79	6.904	

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Reference Depths are relative to Well @ 3639.50usft (Patterson 282)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

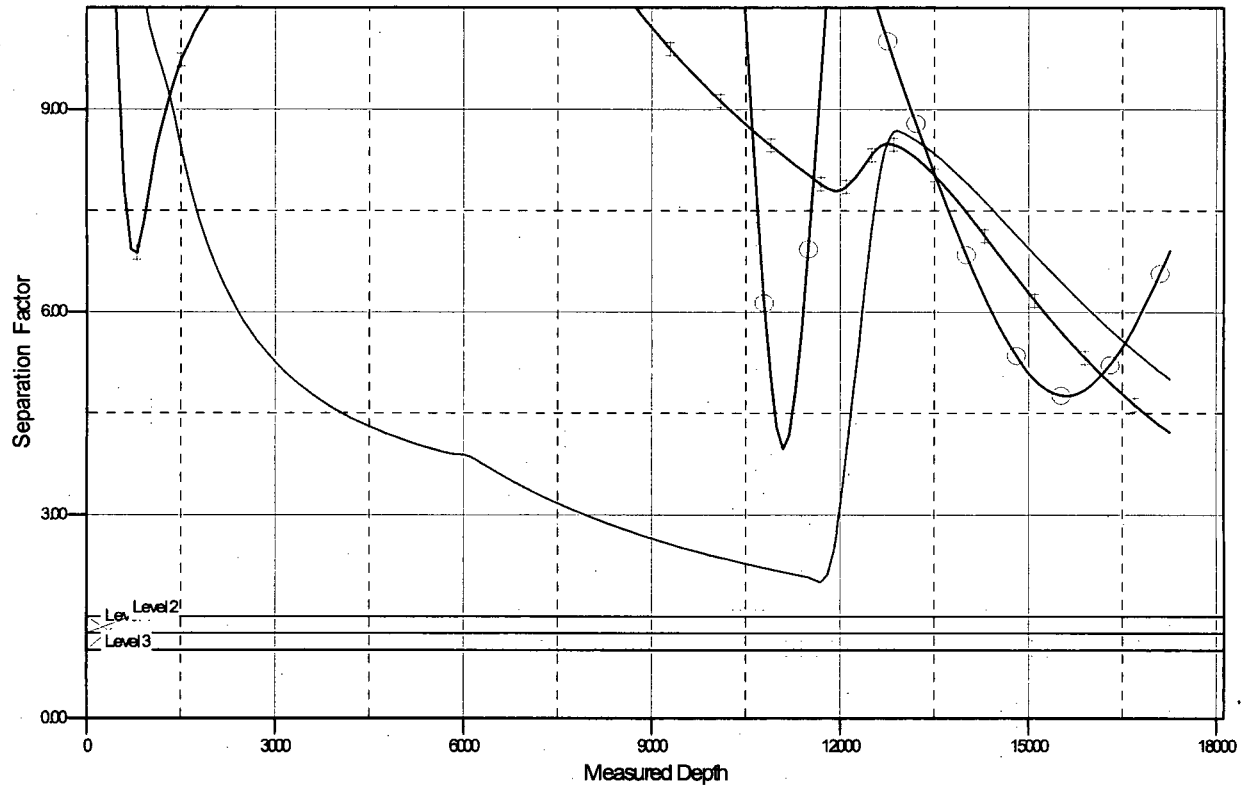
Coordinates are relative to: Charles Ling Fed Com #211H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.42°



Company:	Matador Resources	**Local Co-ordinate Reference:**	Well Charles Ling Fed Com #211H
Project:	Lea County, New Mexico (NAD 27)	**TVD Reference:**	Well @ 3639.50usft (Patterson 282)
Reference Site:	Charles Ling Fed Com	**MD Reference:**	Well @ 3639.50usft (Patterson 282)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Charles Ling Fed Com #211H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	5000.1 Conroe DB
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

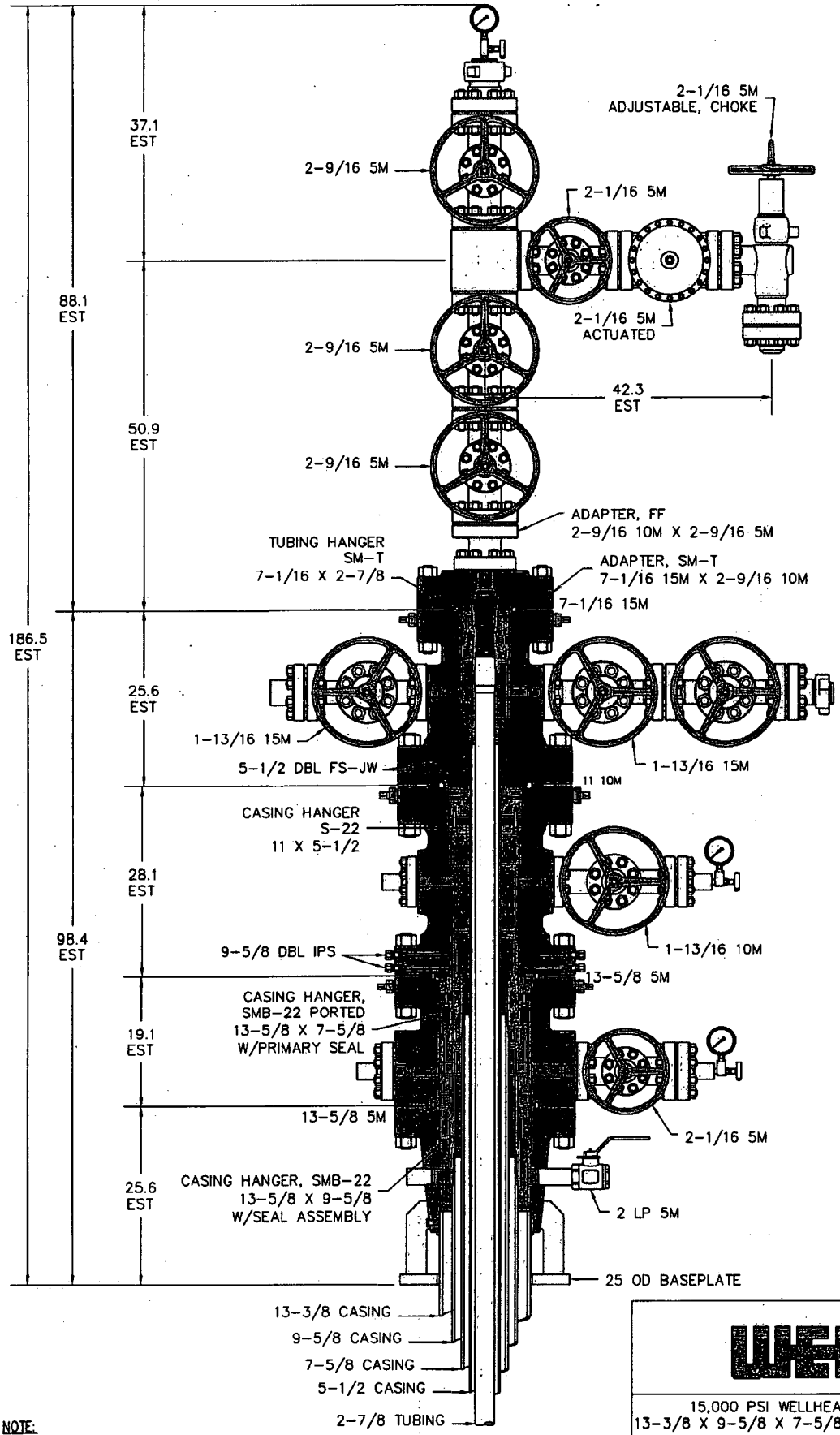
Reference Depths are relative to Well @ 3639.50usft (Patterson 282)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W
Coordinates are relative to: Charles Ling Fed Com #211H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.42°

Separation Factor Plot



LEGEND

Roy Batty Federal COM #1H, Wellbore #1, Survey: V0
Charles LingFed Com #131H, Wellbore #1, Design #1 V0
Charles LingFed Com #201H, Wellbore #1, Design #1 V0
Stevens 11 1, Wellbore #1, Survey: V0



NOTE:
DIMENSIONS SHOWN ON THIS DRAWING ARE ESTIMATES ONLY AND CAN VARY SIGNIFICANTLY DEPENDING ON RAW MATERIAL LENGTHS.
NO GUARANTEE OF STACKUP HEIGHT IS IMPLIED.
DIMENSIONS SHOWN SHOULD BE CONSIDERED FOR REFERENCE PURPOSES ONLY.

WEIR

15,000 PSI WELLHEAD ASSEMBLY
13-3/8 X 9-5/8 X 7-5/8 X 5-1/2 X 2-7/8

DRAWN BY:	SCALE	DATE	REV
RPL	1-11	06OCT17	
CHECKED BY:	DRAWING NO.		
APPROVED BY:	P-22401		

Drilling Program

1. ESTIMATED TOPS

Formation Name	MD	TVD	Bearing
Quaternary	000	000	water
Rustler anhydrite	1313	1312	N/A
Salado salt	1841	1839	N/A
Castile	3746	3739	N/A
Base salt	5218	5218	N/A
Bell Canyon	5270	5259	hydrocarbons
Cherry Canyon	6297	6284	hydrocarbons
Brushy Canyon	7514	7501	hydrocarbons
Bone Spring Limestone	9032	9020	hydrocarbons
1st Bone Spring carbonate	9931	9918	hydrocarbons
1st Bone Spring sandstone	10122	10109	hydrocarbons
2nd Bone Spring carbonate	10402	10389	hydrocarbons
2nd Bone Spring sandstone	11333	11320	hydrocarbons
3rd Bone Spring carbonate	11905	11892	hydrocarbon
(KOP	**11945**	**11932**	**hydrocarbons)**
3rd Bone Spring sandstone	12162	12144	hydrocarbons
Wolfcamp A carbonate **(Goal)**	12220	12197	hydrocarbons
TD	**17261**	**12511**	-

2. NOTABLE ZONES

Wolfcamp A carbonate is the goal. Hole will extend south of the last perforation point to allow for pump installation. All perforations will be ≥330' from the dedication perimeter. Closest water well (C 02308) is 5800' southwest. Water bearing strata depth was reported in the 40' deep well. NMOSE estimated depth to groundwater is 175'.

3. PRESSURE CONTROL

Equipment

Testing Procedure

Pressure tests will be conducted before drilling out from under all casing strings. BOP will be inspected and operated as required in Onshore Order 2. Kelly cock and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position.

A third party company will test the BOPs.

After setting surface casing, a minimum 5M BOPE system will be installed. Test pressures will be 250 psi low and 5000 psi high with the annular being tested to 250 psi low and 2500 psi high before drilling below surface shoe. In the event that the rig drills multiple wells on the pad and the BOPs are removed after setting Intermediate 2 casing, a full BOP test will be performed when the rig returns and the 5M BOPE system is re-installed. After setting 7-5/8" x 7" Casing, pressure tests will be made to 250 psi low and 10,000 psi high. Annular will tested to 250 psi low and 5000 psi high.

Variance Request

Matador requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. Manufacturer does not require the hose to be anchored. If the specific hose is not available, then one of equal or higher rating will be used.

Matador is requesting a variance to use a speed head for setting the intermediate (9-5/8") casing. In the case of running a speed head with landing mandrel for 9-5/8" casing, BOP test pressures after setting surface casing will be 250 psi low and 5000 psi high. Annular will be tested to 250 psi low and 2500 psi high before drilling below the surface shoe. The BOPs will not be tested again until after setting 7-5/8" x 7" casing unless any flanges are separated. A diagram of the speed head is attached and does not require the hose to be anchored. If the specific hose is not available, then one of equal or higher rating will be used.

4. CASING & CEMENT

All casing will be API and new. See attached casing assumption worksheet.

Hole O. D.	Set MD	Set TVD	Casing O. D.	Weight (lb/ft)	Grade	Joint	Collapse	Burst	Tension
17.5"	0' - 1340'	0' - 1340'	13.375" surface	54.5	J-55	BTC	1.125	1.125	1.8
12.25"	0' - 5220'	0' - 5214'	9.625" inter. 1	40	J-55	BTC	1.125	1.125	1.8
8.75"	0' - 4920'	0' – 4890'	7.625" inter. 2 top	29.7	P-110	BTC	1.125	1.125	1.8
8.75"	4921' – 11800'	4891' – 11471'	7.625" inter. 2 middle	29.7	P-110	VAM HTF-NR	1.125	1.125	1.8
8.75"	11801' – 12744'	11788' – 12496'	7.000" inter. 2 bottom	29	P-110	VAM HTF-NR	1.125	1.125	1.8
6.125"	0' – 11700'	0' – 11688'	5.5" product. top	20	P-110	BTC	1.125	1.125	1.8
6.125"	11701' – 17261'	11689' – 12511'	4.5" product. Bottom	13.5	P-110	VAM DWC/C-IS MS	1.125	1.125	1.8

Variance Request

Matador requests a variance to run 7-5/8" BTC casing inside 9-5/8" BTC casing which will be less than the 0.422" stand-off regulation. Matador has met with Christopher Walls and Mustafa Haque as well as other BLM representatives and determined that this would be acceptable as long as the 7-5/8" Flush casing was run throughout the entire 300' cement tie back section between 9-5/8" and 7-5/8" casing.

Name	Type	Sacks	Yield	Cu. Ft.	Weight	Blend
Surface	Lead	800	1.82	1456	13.5	Class C + Bentonite + 2% $CaCl_2$ + 3% NaCl + LCM
	Tail	340	1.38	469.2	14.8	Class C + 5% NaCl + LCM
TOC = GL		100% Excess			Centralizers per Onshore Order 2.III.B.1f	
Intermediate 1	Lead	1290	1.82	2348	12.8	Class C + Bentonite + 2% $CaCl_2$ + 3% NaCl + LCM
	Tail	500	1.38	690	14.8	Class C + 5% NaCl + LCM
TOC = GL		100% Excess			2 on btm jt, 1 on 2nd jt, 1 every 4th jt to surface	
Intermediate 2	Lead	520	2.36	1227	11.5	TXI + Fluid Loss + Dispersant + Retarder + LCM
	Tail	320	1.38	442	14.8	TXI + Fluid Loss + Dispersant + Retarder + LCM
TOC = 4300'		75% Excess			2 on btm jt, 1 on 2nd jt, 1 every other jt to top of tail cement (500' above TOC)	
Production	Tail	500	1.17	585	15.8	Class H + Fluid Loss + Dispersant + Retarder + LCM
TOC = 11700'		10% Excess			2 on btm jt, 1 on 2nd jt, 1 every third jt to top of curve	

5. MUD PROGRAM

An electronic Pason mud monitoring system complying with Onshore Order 1 will be used. All necessary mud products (barite, bentonite, LCM) for weight addition and fluid loss control will be on location at all times. Mud program is subject to change due to hole conditions. A closed loop system will be used.

Type	Interval (MD)	lb/gal	Viscosity	Fluid Loss
fresh water spud	0' - 1340'	8.3	28	NC
brine water	1340' - 5220'	10.0	30-32	NC
fresh water & cut brine	5220' - 12744'	9.0	30-31	NC
OBM	12744' - 17261'	12.5	50-60	<10

6. CORES, TESTS, & LOGS

No core or drill stem test is planned.

A 2-person mud logging program will be used from ≈5,220' to TD.

No electric logs are planned at this time. GR will be collected through the MWD tools from intermediate casing to TD. CBL with CCL will be run as far as gravity will let it fall to TOC.

7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈8760 psi. Expected bottom hole temperature is ≈178° F.

In accordance with Onshore Order 6, Matador does not anticipate that there will be enough H_2S from the surface to the Bone Spring to meet the BLM's minimum requirements for the submission of an "H_2S Drilling Operation Plan" or "Public Protection Plan" for drilling and completing this well. Since Matador has an H_2S safety package on all wells, an "H_2S Drilling Operations Plan" is attached. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

8. OTHER INFORMATION

Anticipated spud date is upon approval. It is expected it will take ≈3 months to drill and complete the well.

Well Control Plan For 10M MASP Section of Wellbore

Component and Preventer Compatibility Table:

The table below covers the drilling and casing of the 10M MASP portion of the well and outlines the tubulars and the compatible preventers in use. This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

Component	OD	Preventer	RWP
Drill pipe	4"	Lower 3.5-5.5" VBR Upper 3.5-5.5" VBR	10M
HWDP	4"		
Jars/Agitator	4.75-5"		
Drill collars and MWD tools	4.75-5.25"		
Mud Motor	4.75-5.25"		
Production casing	4.5-5.5"		
ALL	0-13.625"	Annular	5M
Open-hole	-	Blind Rams	10M

VBR = Variable Bore Ram with compatible range listed in chart
HWDP = Heavy Weight Drill Pipe
MWD = Measurement While Drilling

Well Control Procedures

Well control procedures are specific to the rig equipment and the operation at the time the kick occurs. Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the Bottom Hole Assembly (BHA) through the Blowout Preventers (BOP). The maximum pressure at which well control is transferred from the annular to another compatible ram is 3,000 psi.

General Procedure While Drilling

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps and stop rotary
4. Shut-in well with the annular preventer (The Hydraulic Control Remote (HCR) valve and choke will already be in the closed position)
5. Confirm shut-in
6. Notify tool pusher and company representative
7. Read and record the following:
    - SIDPP and SICP
    - Pit gain
    - Time of shut in
8. Regroup and identify forward plan
9. If pressure has increased or is anticipated to increase above 3,000 psi, confirm spacing and close the upper pipe rams

General Procedure While Tripping

1. Sound alarm (alert crew)
2. Stab full opening safety valve and close

3. Space out drill string
4. Shut-in well with annular preventer (The HCR valve and choke will already be in the closed position)
5. Confirm shut-in
6. Notify tool pusher and company representative
7. Read and record the following:
    - SIDPP and SICP
    - Pit gain
    - Time of shut in
8. Regroup and identify forward plan
9. If pressure has increased or is anticipated to increase above 3,000 psi, confirm spacing and close the upper pipe rams

General Procedure While Running Casing

1. Sound alarm (alert crew)
2. Stab crossover and full opening safety valve and close
3. Space out string
4. Shut-in well with annular preventer (The HCR valve and choke will already be in the closed position)
5. Confirm shut-in
6. Notify tool pusher and company representative
7. Read and record the following:
    - SIDPP and SICP
    - Pit gain
    - Time of shut in
8. Regroup and identify forward plan
9. If pressure has increased or is anticipated to increase above 3,000 psi, confirm spacing and close the upper pipe rams

General Procedure with No Pipe In Hole

1. At any point when the BOP stack is clear of pipe or BHA, the well will be shut in with blind rams, the HCR valve will be open, and choke will be closed. If pressure increase is observed:
2. Sound alarm (alert crew)
3. Confirm shut-in
4. Notify tool pusher and company representative
5. Read and record the following:
    - SICP
    - Time of shut in
6. Regroup and identify forward plan

General Procedure While Pulling BHA through Stack

1. Prior to pulling last joint/stand of drill pipe through the stack, perform flow check. If flowing:
    a. Sound alarm (alert crew)
    b. Stab full opening safety valve and close
    c. Space out drill string
    d. Shut-in well with annular preventer (The HCR valve and choke will already be in the closed position)
    e. Confirm shut-in

f. Notify tool pusher and company representative
g. Read and record the following:
    - SIDPP and SICP
    - Pit gain
    - Time of shut in
h. Regroup and identify forward plan

2. With BHA in the stack and compatible ram preventer and pipe combo immediately available:
    a. Sound alarm (alert crew)
    b. Stab crossover and full opening safety valve and close
    c. Space out drill string with the upset just beneath the compatible pipe ram
    d. Shut-in well using compatible pipe rams (The HCR valve and choke will already be in the closed position)
    e. Confirm shut-in
    f. Notify tool pusher and company representative
    g. Read and record the following:
        - SIDPP and SICP
        - Pit gain
        - Time of shut in
    h. Regroup and identify forward plan

3. With BHA in the stack and no compatible ram preventer and pipe combo immediately available:
    a. Sound alarm (alert crew)
    b. If possible to pick up high enough, pull BHA clear of the stack
        i. Follow "No Pipe in Hole" procedure above
    c. If impossible to pick up high enough to pull string clear of the stack:
        i. Stab crossover, make up one joint/stand of drill pipe, and full opening safety valve and close
        ii. Space out drill string with the upset just beneath the compatible pipe ram
        iii. Shut-in well using compatible pipe rams (The HCR valve and choke will already be in the closed position)
        iv. Confirm shut-in
        v. Notify tool pusher and company representative
        vi. Read and record the following:
            - SIDPP and SICP
            - Pit gain
            - Time of shut in
        vii. Regroup and identify forward plan

Well Control Drills

Well control drills are specific to the rig equipment, personnel, and operations. Each crew will execute one drill weekly relevant to ongoing operations, but will make a reasonable attempt to vary the type of drills. The drills will be recorded in the daily drilling log.

Casing Variance

Matador requests a variance to run 7-5/8" BTC casing inside 9-5/8" BTC casing which will be less than the 0.422" stand-off regulation. Matador has met with Christopher Walls and Mustafa Haque as well as other BLM representatives and determined that this would be acceptable as long as the 7-5/8" Flush casing was run throughout the entire 300' cement tie back section between 9-5/8" and 7-5/8" casing.