PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Centennial Resources Production, LLC**
LEASE NO.:	**NMNM-131588**
WELL NAME & NO.:	**Cheddar 2BS Federal Com 1H**
SURFACE HOLE FOOTAGE:	**0274' FSL & 0370' FWL**
BOTTOM HOLE FOOTAGE	**0330' FNL & 0330' FWL Sec. 32, T. 21 S., R 32 E.**
LOCATION:	**Section 05, T. 22 S., R 32 E., NMPM**
COUNTY:	**County, New Mexico**

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.

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

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

☐ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 3933612

A. **Hydrogen Sulfide**

Approval Date: 04/13/2018

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.**

A. CASING

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

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

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

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.

Secretary's Potash
Possibility of water flows in the Salado and Castile.
Possibility of lost circulation in the Rustler, Red Beds, and Delaware.

1. The **740** inch surface casing shall be set at approximately **13-3/8** 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 and the mud weight for the bottom of the hole. Report results to BLM office.

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

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

    ☐ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash. Excess calculates to negative 25% - Additional cement will be required.**

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.

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

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

   ☐ Top of cement to reach at least 500 feet above the top of the uppermost hydrocarbon productive interval.

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

B. PRESSURE CONTROL

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

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

   a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

5M 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.

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

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

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

c. 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.

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

e. 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.**

f. 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.

C. DRILL STEM TEST

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

D. WASTE MATERIAL AND FLUIDS

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

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

JAM 040918

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Centennial Resource
LEASE NO.:	NMNM131588
WELL NAME & NO.:	Cheddar 2BS Federal Com 1H
SURFACE HOLE FOOTAGE:	480'/S & 330'/W
BOTTOM HOLE FOOTAGE	330'/N & 330'/W
LOCATION:	Section 5, T.22 S, R.32 E., NMPM
COUNTY:	Lea

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

Approval Date: 04/13/2018

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)

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

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

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

Watershed:

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

Potash Minerals:

Lessees must comply with the 2012 Secretarial Potash Order. The Order is designed to manage the efficient development of oil, gas, and potash resources. Section 6 of the Order provides general provisions which must be followed to minimize conflict between the industries and ensure the safety of operations. Three exceptions to this policy will be permitted if the drilling will occur under the following conditions from:

(a) A Drilling Island associated with a Development Area established under this Order or a Drilling Island established under a prior Order;

(b) A Barren Area and the Authorized Officer determines that such operations will not adversely affect active or planned potash mining operations in the immediate vicinity of the proposed drill-site; or

(c) A Drilling Island, not covered by (a) above or single well site established under this Order by the approval and in the sole discretion of the Authorized Officer, provided that such site was jointly recommended to the Authorized Officer by the oil and gas lessee(s) and the nearest potash lessee(s).

When the Authorized Officer determines that unitization is necessary for orderly oil and gas development and proper protection of potash deposits, no well shall be drilled for oil or gas except pursuant to a unit plan approved by the authorized officer.

The drilling or the abandonment of any well on said lease shall be done in accordance with applicable oil and gas operating regulations including such requirements as the Authorized Officer may prescribe as necessary to prevent the infiltration of oil, gas or water into formations containing potash deposits or into mines or working being utilized in the extraction of such deposits.

To minimize impacts to potash resources, the proposed well is confined within the boundaries of the established Cheddar Drill Island (See Potash Memo and Map in attached file for Drill Island description).

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.

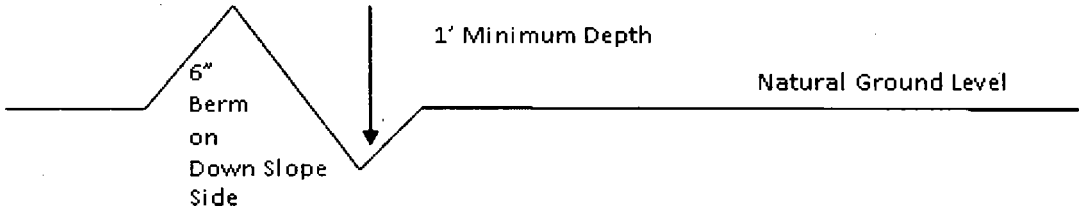
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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

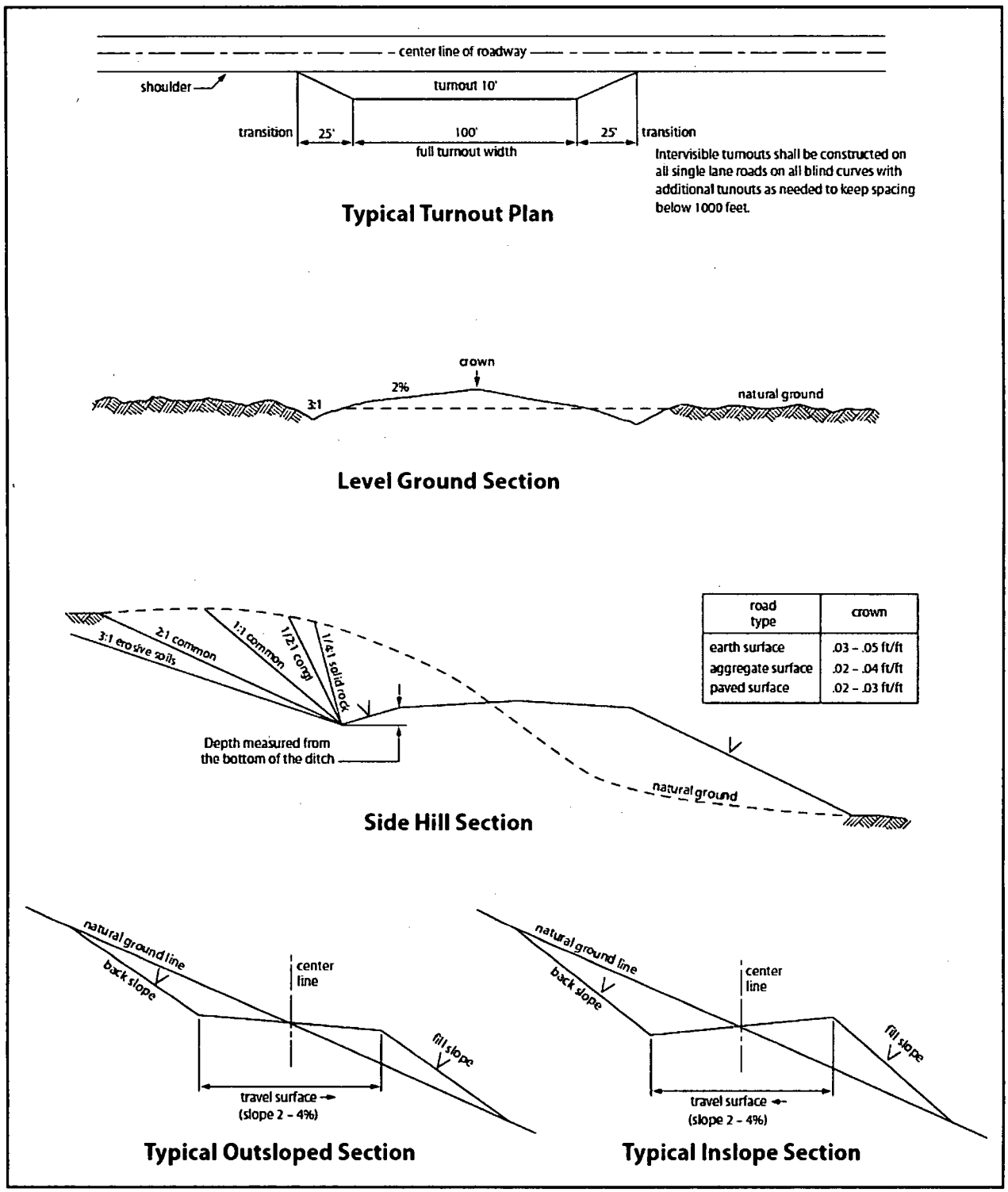


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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).

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 for LPC Sand/Shinnery Sites

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

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

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

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

*Pounds of pure live seed:

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

GMT
Exploration Company LLC

GMT Exploration

Lea County, NM (NAD 83)
Cheddar Federal Com pad.
Cheddar 2BS Federal Com 1H

Cheddar 2BS Federal Com 1H
Design #4

Anticollision Report

15 June, 2017

NEWSCO

Centralizer Program:

Surface:
- 3 welded bow spring centralizers, one on each of the bottom 3 joints, plus one on the shoe joint (4 minimum)
- No Cement baskets will be run

Production:
- 1 welded bow spring centralizer on a stop ring 6' above float shoe
- 1 centralizer every other joint to the top of the tail cement
- 1 centralizer every 4 joints to 500' below the top of the lead cement
- The actual number and placement of centralizers will be determined from hole deviation and potential production zones. Centralizers will be run for maximum practical standoff and through all potential productive zones.

- All casing strings below the conductor shall be tested, prior to drilling out the casing shoe, to 0.22 psi/ft of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the internal yield pressure of the casing. If pressure declines more than 10 percent in 30 minutes, corrective action will be taken.

  No freshly hard banded pipe will be rotated in the surface casing

  - GMT will not employ an air-drill rig for the surface casing. The casing shoe will be tested by drilling 5'-10' out from under the shoe and pressure testing to the maximum expected mud weight equivalent as shown in the mud program listed in the drilling plan.

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Reference Design #4

Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
Interpolation Method:	MD Interval 100.00ft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 11,000.00 ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 06/15/17

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	20,821.84	Design #4 (Cheddar 2BS Federal Com 1H	MWD	OWSG MWD - Standard

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Bilbrey 32 State Com 1						
Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1 - Bilbre	19,188.48	10,615.89	1,644.69	1,203.66	3.729	CC
Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1 - Bilbre	19,200.00	10,615.82	1,644.73	1,203.52	3.728	ES
Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1 - Bilbre	19,300.00	10,615.28	1,648.47	1,205.67	3.723	SF
Bilbrey 32 State Com 2						
Bilbrey 32 State Com 2 - Bilbrey 32 State Com 2 - Bilbre	17,216.39	10,588.71	1,642.91	1,289.58	4.650	CC, ES
Bilbrey 32 State Com 2 - Bilbrey 32 State Com 2 - Bilbre	17,300.00	10,588.25	1,645.04	1,290.41	4.639	SF
Cheddar Federal Com pad.						
Cheddar 3BS Federal Com 1H - Cheddar 3BS Federal C	10,100.00	10,085.68	95.00	24.74	1.352	Level 3, CC, ES, SF
Pepper Jack 2BS Federal Com 4H - Pepper Jack 2BS Fe	20,821.88	19,800.20	1,981.82	1,626.87	5.583	CC, ES, SF
Grenache 32 State Com 2H						
Grenache 32 State Com 2H - Grenache 32 State Com 2H	16,326.84	10,757.53	1,808.53	1,673.05	13.349	CC
Grenache 32 State Com 2H - Grenache 32 State Com 2H	20,821.88	15,241.14	1,838.41	1,580.31	7.123	ES, SF

Offset Design Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1

Offset Site Error: 0.00 ft
Offset Well Error: 0.00 ft

Survey Program: 261-Inclinometer only

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	51.00	51.00	0.00	0.45	11.07	8,123.17	1,589.20	8,277.17				
100.00	100.00	151.00	151.00	0.14	1.35	11.07	8,123.17	1,589.20	8,277.17	8,275.68	1.49	5,560.117	
200.00	200.00	251.00	251.00	0.50	2.24	11.07	8,123.17	1,589.20	8,277.17	8,274.43	2.74	3,023.013	
300.00	300.00	261.00	261.00	0.86	2.33	11.07	8,123.17	1,589.20	8,277.66	8,274.47	3.19	2,598.448	
400.00	400.00	451.00	451.00	1.22	6.07	11.07	8,123.17	1,589.20	8,277.17	8,269.88	7.29	1,135.921	
500.00	500.00	551.00	551.00	1.58	8.04	11.07	8,123.17	1,589.20	8,277.17	8,267.55	9.62	860.857	
600.00	600.00	651.00	651.00	1.94	10.01	11.07	8,123.17	1,589.20	8,277.17	8,265.22	11.94	693.037	
630.54	630.54	681.54	681.54	2.05	10.61	11.07	8,123.17	1,589.20	8,277.17	8,264.51	12.65	654.098	
700.00	700.00	699.00	698.99	2.29	10.95	11.07	8,123.17	1,589.20	8,277.33	8,264.08	13.25	624.831	
800.00	800.00	851.01	851.00	2.65	13.95	11.07	8,123.17	1,589.20	8,277.17	8,260.57	16.60	498.614	
900.00	900.00	951.01	951.00	3.01	15.92	11.07	8,123.17	1,589.20	8,277.17	8,258.24	18.93	437.280	
1,000.00	1,000.00	1,051.01	1,051.00	3.37	17.89	11.07	8,123.17	1,589.20	8,277.17	8,255.91	21.26	389.382	
1,066.32	1,066.32	1,117.33	1,117.32	3.61	19.19	11.07	8,123.17	1,589.20	8,277.17	8,254.37	22.80	363.011	
1,100.00	1,100.00	1,150.00	1,149.97	3.73	19.84	11.07	8,123.17	1,589.20	8,277.17	8,253.60	23.57	351.239	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1 — **Offset Site Error:** 0.00 ft

Survey Program: 261-Inclinometer only — **Offset Well Error:** 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
1,200.00	1,200.00	1,150.00	1,149.97	4.09	19.84	11.07	8,123.17	1,589.20	8,277.78	8,253.86	23.92	346.002	
1,300.00	1,300.00	1,351.03	1,351.00	4.45	23.94	11.07	8,123.17	1,589.20	8,277.17	8,248.78	28.39	291.576	
1,400.00	1,400.00	1,451.03	1,451.00	4.80	25.98	11.07	8,123.17	1,589.20	8,277.17	8,246.38	30.79	268.842	
1,500.00	1,500.00	1,551.03	1,551.00	5.16	28.03	11.07	8,123.17	1,589.20	8,277.17	8,243.98	33.19	249.396	
1,600.00	1,600.00	1,651.03	1,651.00	5.52	30.07	11.07	8,123.17	1,589.20	8,277.17	8,241.58	35.59	232.574	
1,700.00	1,700.00	1,661.00	1,660.96	5.88	30.27	11.07	8,123.17	1,589.20	8,277.66	8,241.50	36.15	228.971	
1,800.00	1,800.00	1,851.04	1,851.00	6.24	34.30	11.07	8,123.17	1,589.20	8,277.17	8,236.63	40.54	204.181	
1,900.00	1,900.00	1,951.04	1,951.00	6.60	36.42	11.07	8,123.17	1,589.20	8,277.17	8,234.15	43.02	192.418	
2,000.00	2,000.00	2,051.04	2,051.00	6.95	38.54	11.07	8,123.17	1,589.20	8,277.17	8,231.67	45.49	181.937	
2,100.00	2,100.00	2,151.04	2,151.00	7.31	40.66	11.07	8,123.17	1,589.20	8,277.17	8,229.19	47.97	172.538	
2,200.00	2,200.00	2,161.00	2,160.93	7.67	40.87	11.07	8,123.17	1,589.20	8,277.66	8,229.11	48.54	170.524	
2,300.00	2,300.00	2,351.07	2,351.00	8.03	45.37	11.07	8,123.17	1,589.20	8,277.17	8,223.77	53.40	155.013	
2,400.00	2,400.00	2,451.07	2,451.00	8.39	47.73	11.07	8,123.17	1,589.20	8,277.17	8,221.05	56.12	147.489	
2,460.28	2,460.28	2,511.34	2,511.28	8.60	49.16	11.07	8,123.17	1,589.20	8,277.17	8,219.40	57.76	143.297	
2,500.00	2,500.00	2,535.00	2,534.92	8.75	49.72	11.07	8,123.17	1,589.20	8,277.18	8,218.72	58.46	141.577	
2,600.00	2,600.00	2,535.00	2,534.92	9.11	49.72	11.07	8,123.17	1,589.20	8,277.98	8,219.16	58.82	140.728	
2,700.00	2,700.00	2,751.08	2,751.00	9.46	55.42	11.07	8,123.17	1,589.20	8,277.17	8,212.29	64.88	127.575	
2,800.00	2,800.00	2,768.00	2,767.88	9.82	55.86	11.07	8,123.17	1,589.20	8,277.58	8,211.90	65.69	126.019	
2,900.00	2,900.00	2,951.12	2,951.00	10.18	61.57	11.07	8,123.17	1,589.20	8,277.17	8,205.41	71.75	115.355	
3,000.00	3,000.00	3,051.15	3,051.00	10.54	65.10	11.07	8,123.17	1,589.20	8,277.17	8,201.52	75.64	109.424	
3,041.30	3,041.30	3,092.46	3,092.30	10.69	66.65	11.07	8,123.17	1,589.20	8,277.17	8,199.83	77.34	107.030	
3,100.00	3,100.00	3,108.00	3,107.79	10.90	67.23	11.07	8,123.17	1,589.20	8,277.28	8,199.15	78.13	105.947	
3,191.61	3,191.61	3,242.82	3,242.61	11.23	72.90	11.07	8,123.17	1,589.20	8,277.17	8,193.04	84.13	98.386	
3,200.00	3,200.00	3,246.00	3,245.72	11.26	73.04	11.07	8,123.17	1,589.20	8,277.17	8,192.88	84.29	98.195	
3,300.00	3,300.00	3,351.36	3,351.00	11.61	78.01	11.07	8,123.17	1,589.20	8,277.17	8,187.54	89.63	92.349	
3,363.99	3,363.99	3,397.00	3,396.59	11.84	79.97	11.07	8,123.17	1,589.20	8,277.19	8,185.37	91.81	90.151	
3,400.00	3,400.00	3,444.00	3,443.57	11.97	81.82	11.07	8,123.17	1,589.20	8,277.17	8,183.38	93.79	88.254	
3,500.00	3,500.00	3,551.47	3,551.00	12.33	85.92	11.07	8,123.17	1,589.20	8,277.17	8,178.92	98.25	84.248	
3,600.00	3,600.00	3,651.51	3,651.00	12.69	90.25	11.07	8,123.17	1,589.20	8,277.17	8,174.22	102.94	80.405	
3,664.31	3,664.31	3,715.86	3,715.31	12.92	93.21	11.07	8,123.17	1,589.20	8,277.17	8,171.04	106.13	77.990	
3,700.00	3,700.00	3,745.00	3,744.39	13.05	94.54	11.07	8,123.17	1,589.20	8,277.17	8,169.58	107.59	76.935	
3,800.00	3,800.00	3,851.65	3,851.00	13.41	98.22	11.07	8,123.17	1,589.20	8,277.17	8,165.54	111.62	74.152	
3,900.00	3,900.00	3,951.66	3,951.00	13.77	101.21	11.07	8,123.17	1,589.20	8,277.17	8,162.19	114.97	71.991	
4,000.00	4,000.00	4,051.68	4,051.00	14.12	104.94	11.07	8,123.17	1,589.20	8,277.17	8,158.10	119.07	69.518	
4,063.47	4,063.47	4,115.18	4,114.47	14.35	107.59	11.07	8,123.17	1,589.20	8,277.17	8,155.22	121.94	67.878	
4,100.00	4,100.00	4,143.00	4,142.25	14.48	108.84	11.07	8,123.17	1,589.20	8,277.17	8,153.85	123.32	67.117	
4,200.00	4,200.00	4,251.79	4,251.00	14.84	113.37	11.07	8,123.17	1,589.20	8,277.17	8,148.96	128.21	64.559	
4,257.88	4,257.88	4,309.70	4,308.88	15.05	115.79	11.07	8,123.17	1,589.20	8,277.17	8,146.33	130.83	63.265	
4,300.00	4,300.00	4,331.00	4,330.14	15.20	116.67	11.07	8,123.17	1,589.20	8,277.19	8,145.32	131.87	62.766	
4,391.82	4,391.82	4,443.72	4,442.82	15.53	120.04	11.07	8,123.17	1,589.20	8,277.17	8,141.60	135.57	61.056	
4,400.00	4,400.00	4,450.00	4,449.11	15.56	120.18	11.07	8,123.17	1,589.20	8,277.17	8,141.43	135.74	60.979	
4,500.00	4,500.00	4,551.89	4,551.00	15.92	122.38	11.07	8,123.17	1,589.20	8,277.17	8,138.87	138.30	59.849	
4,530.70	4,530.70	4,582.59	4,581.70	16.03	123.05	11.07	8,123.17	1,589.20	8,277.17	8,138.09	139.07	59.516	
4,600.00	4,600.00	4,600.00	4,599.10	16.27	123.42	11.07	8,123.17	1,589.20	8,277.33	8,137.63	139.70	59.251	
4,700.00	4,700.00	4,751.90	4,751.00	16.63	127.43	11.07	8,123.17	1,589.20	8,277.17	8,133.10	144.06	57.455	
4,757.85	4,757.85	4,809.75	4,808.85	16.84	128.95	11.07	8,123.17	1,589.20	8,277.17	8,131.37	145.80	56.772	
4,800.00	4,800.00	4,831.00	4,830.08	16.99	129.52	11.07	8,123.17	1,589.20	8,277.19	8,130.69	146.51	56.497	
4,879.78	4,879.78	4,931.70	4,930.78	17.28	132.41	11.07	8,123.17	1,589.20	8,277.17	8,127.48	149.69	55.297	
4,900.00	4,900.00	4,939.00	4,938.06	17.35	132.62	11.07	8,123.17	1,589.20	8,277.18	8,127.21	149.97	55.193	
5,000.00	5,000.00	5,051.94	5,051.00	17.71	135.73	11.07	8,123.17	1,589.20	8,277.17	8,123.73	153.44	53.945	
5,100.00	5,100.00	5,067.00	5,066.04	18.07	136.14	11.07	8,123.17	1,589.20	8,277.60	8,123.39	154.21	53.677	
5,200.00	5,199.98	5,251.94	5,250.98	18.41	141.24	-168.53	8,123.17	1,589.20	8,278.88	8,119.32	159.55	51.888	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1

Offset Site Error: 0.00 ft

Survey Program: 261-Inclinometer only

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,300.00	5,299.84	5,332.00	5,331.00	18.73	143.44	-168.52	8,123.17	1,589.20	8,284.03	8,122.23	161.80	51.201	
5,400.00	5,399.45	5,332.00	5,331.00	19.05	143.44	-168.48	8,123.17	1,589.20	8,293.41	8,131.76	161.65	51.306	
5,500.00	5,498.70	5,550.71	5,549.70	19.37	149.47	-168.46	8,123.17	1,589.20	8,304.49	8,137.21	167.28	49.644	
5,600.00	5,597.71	5,599.00	5,597.95	19.70	150.80	-168.47	8,123.17	1,589.20	8,318.44	8,149.56	168.88	49.255	
5,700.00	5,696.71	5,599.00	5,597.95	20.03	150.80	-168.47	8,123.17	1,589.20	8,333.44	8,164.23	169.21	49.249	
5,800.00	5,795.71	5,847.76	5,846.71	20.36	157.65	-168.52	8,123.17	1,589.20	8,345.90	8,169.57	176.33	47.332	
5,900.00	5,894.72	5,946.76	5,945.72	20.70	160.38	-168.54	8,123.17	1,589.20	8,359.70	8,180.34	179.36	46.609	
6,000.00	5,993.72	6,045.77	6,044.72	21.04	163.11	-168.56	8,123.17	1,589.20	8,373.51	8,191.12	182.39	45.910	
6,100.00	6,092.72	6,080.00	6,078.88	21.38	164.05	-168.56	8,123.17	1,589.20	8,387.56	8,203.91	183.66	45.670	
6,200.00	6,191.73	6,080.00	6,078.88	21.73	164.05	-168.56	8,123.17	1,589.20	8,402.72	8,218.73	183.99	45.669	
6,300.00	6,290.73	6,342.85	6,341.73	22.08	170.67	-168.61	8,123.17	1,589.20	8,414.93	8,224.05	190.88	44.084	
6,400.00	6,389.74	6,441.86	6,440.74	22.43	173.17	-168.63	8,123.17	1,589.20	8,428.74	8,235.05	193.69	43.517	
6,500.00	6,488.74	6,540.86	6,539.74	22.78	175.66	-168.65	8,123.17	1,589.20	8,442.55	8,246.05	196.50	42.965	
6,600.00	6,587.74	6,558.00	6,556.81	23.14	176.09	-168.66	8,123.17	1,589.20	8,456.76	8,259.49	197.26	42.870	
6,700.00	6,686.75	6,558.00	6,556.81	23.50	176.09	-168.66	8,123.17	1,589.20	8,472.11	8,274.50	197.60	42.874	
6,800.00	6,785.75	6,837.94	6,836.75	23.86	182.82	-168.71	8,123.17	1,589.20	8,483.99	8,279.38	204.61	41.464	
6,900.00	6,884.75	6,936.95	6,935.75	24.22	185.20	-168.73	8,123.17	1,589.20	8,497.80	8,290.49	207.31	40.991	
7,000.00	6,983.76	7,035.00	7,033.77	24.59	187.56	-168.75	8,123.17	1,589.20	8,511.61	8,301.63	209.98	40.535	
7,100.00	7,082.76	7,035.00	7,033.77	24.95	187.56	-168.75	8,123.17	1,589.20	8,526.02	8,315.69	210.33	40.537	
7,200.00	7,181.77	7,035.00	7,033.77	25.32	187.56	-168.75	8,123.17	1,589.20	8,541.56	8,330.89	210.67	40.544	
7,300.00	7,280.77	7,333.00	7,331.77	25.69	195.42	-168.80	8,123.17	1,589.20	8,553.06	8,334.26	218.80	39.090	
7,400.00	7,379.77	7,432.00	7,430.77	26.07	198.03	-168.82	8,123.17	1,589.20	8,566.88	8,345.15	221.74	38.636	
7,500.00	7,478.78	7,502.00	7,500.71	26.44	199.87	-168.83	8,123.17	1,589.20	8,580.75	8,356.84	223.91	38.322	
7,600.00	7,577.78	7,502.00	7,500.71	26.82	199.87	-168.83	8,123.17	1,589.20	8,595.47	8,371.21	224.26	38.328	
7,700.00	7,676.78	7,502.00	7,500.71	27.19	199.87	-168.83	8,123.17	1,589.20	8,611.33	8,386.73	224.61	38.339	
7,800.00	7,775.79	7,828.07	7,826.79	27.57	209.24	-168.89	8,123.17	1,589.20	8,622.16	8,387.93	234.23	36.811	
7,900.00	7,874.79	7,927.08	7,925.79	27.95	212.08	-168.91	8,123.17	1,589.20	8,635.98	8,398.59	237.40	36.378	
8,000.00	7,973.80	7,999.00	7,997.64	28.33	214.14	-168.92	8,123.17	1,589.20	8,649.85	8,410.06	239.79	36.072	
8,100.00	8,072.80	7,999.00	7,997.64	28.71	214.14	-168.92	8,123.17	1,589.20	8,664.55	8,424.41	240.14	36.081	
8,200.00	8,171.80	7,999.00	7,997.64	29.10	214.14	-168.92	8,123.17	1,589.20	8,680.38	8,439.88	240.49	36.094	
8,300.00	8,270.81	8,323.17	8,321.81	29.48	222.70	-168.98	8,123.17	1,589.20	8,691.28	8,441.97	249.31	34.861	
8,400.00	8,369.81	8,422.17	8,420.81	29.87	225.31	-169.00	8,123.17	1,589.20	8,705.11	8,452.85	252.25	34.509	
8,500.00	8,468.81	8,521.18	8,519.81	30.26	227.92	-169.02	8,123.17	1,589.20	8,718.94	8,463.74	255.19	34.166	
8,600.00	8,567.82	8,529.00	8,527.53	30.64	228.12	-169.02	8,123.17	1,589.20	8,733.24	8,477.49	255.75	34.147	
8,700.00	8,666.82	8,719.29	8,717.82	31.03	233.14	-169.05	8,123.17	1,589.20	8,746.59	8,485.52	261.08	33.502	
8,800.00	8,765.82	8,818.30	8,816.82	31.42	235.76	-169.07	8,123.17	1,589.20	8,760.42	8,496.40	264.02	33.181	
8,900.00	8,864.83	8,917.30	8,915.83	31.81	238.37	-169.09	8,123.17	1,589.20	8,774.25	8,507.29	266.96	32.867	
9,000.00	8,963.83	9,016.30	9,014.83	32.21	240.98	-169.10	8,123.17	1,589.20	8,788.08	8,518.18	269.90	32.560	
9,100.00	9,062.84	9,059.00	9,057.49	32.60	242.11	-169.11	8,123.17	1,589.20	8,802.10	8,530.72	271.37	32.435	
9,200.00	9,161.84	9,214.35	9,212.84	32.99	246.93	-169.14	8,123.17	1,589.20	8,815.75	8,539.24	276.51	31.883	
9,300.00	9,260.84	9,313.36	9,311.84	33.39	250.00	-169.16	8,123.17	1,589.20	8,829.58	8,549.67	279.91	31.545	
9,400.00	9,359.85	9,337.00	9,335.43	33.78	250.74	-169.16	8,123.17	1,589.20	8,843.74	8,562.75	280.99	31.473	
9,500.00	9,458.85	9,337.00	9,335.43	34.18	250.74	-169.16	8,123.17	1,589.20	8,858.97	8,577.62	281.35	31.487	
9,600.00	9,557.87	9,610.44	9,608.87	34.57	260.20	-169.22	8,123.17	1,589.20	8,870.97	8,579.55	291.42	30.441	
9,700.00	9,657.21	9,709.78	9,708.21	34.96	263.63	-169.28	8,123.17	1,589.20	8,882.19	8,585.94	296.25	29.982	
9,800.00	9,756.89	9,788.00	9,786.32	35.33	266.34	-169.31	8,123.17	1,589.20	8,890.02	8,590.00	300.02	29.631	
9,900.00	9,856.79	9,909.47	9,907.79	35.69	270.83	-169.34	8,123.17	1,589.20	8,894.38	8,589.13	305.25	29.138	
10,000.00	9,956.78	9,944.00	9,942.26	36.03	272.11	10.26	8,123.17	1,589.20	8,895.66	8,588.73	306.94	28.982	
10,100.00	10,056.78	10,109.52	10,107.78	36.36	278.04	10.26	8,123.17	1,589.20	8,895.42	8,582.21	313.22	28.400	
10,200.00	10,156.76	10,207.00	10,205.15	36.69	281.54	10.67	8,123.17	1,589.20	8,894.72	8,578.21	316.50	28.103	
10,300.00	10,255.31	10,207.00	10,205.15	36.97	281.54	11.02	8,123.17	1,589.20	8,879.70	8,573.21	306.49	28.973	
10,400.00	10,348.41	10,401.25	10,399.41	37.18	288.74	12.01	8,123.17	1,589.20	8,843.73	8,553.18	290.56	30.437	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1

Offset Site Error: 0.00 ft

Survey Program: 261-Inclinometer only

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,500.00	10,431.98	10,484.89	10,482.98	37.32	292.02	13.80	8,123.17	1,589.20	8,790.11	8,530.35	259.76	33.839	
10,600.00	10,502.38	10,549.00	10,547.03	37.40	294.55	17.01	8,123.17	1,589.20	8,720.61	8,498.36	222.25	39.238	
10,700.00	10,556.53	10,609.50	10,607.53	37.46	296.94	23.24	8,123.17	1,589.20	8,638.27	8,444.74	193.53	44.635	
10,800.00	10,592.06	10,629.00	10,626.99	37.50	297.71	37.22	8,123.17	1,589.20	8,546.74	8,330.60	216.14	39.543	
10,900.00	10,607.42	10,629.00	10,626.99	37.53	297.71	74.90	8,123.17	1,589.20	8,450.02	8,126.12	323.90	26.089	
11,000.00	10,607.60	10,629.00	10,626.99	37.60	297.71	90.46	8,123.17	1,589.20	8,351.96	8,016.66	335.30	24.909	
11,100.00	10,607.06	10,629.00	10,626.99	37.73	297.71	90.46	8,123.17	1,589.20	8,253.94	7,918.51	335.44	24.607	
11,200.00	10,606.51	10,629.00	10,626.99	37.94	297.71	90.46	8,123.17	1,589.20	8,155.97	7,820.33	335.64	24.300	
11,300.00	10,605.97	10,629.00	10,626.99	38.22	297.71	90.46	8,123.17	1,589.20	8,058.05	7,722.13	335.92	23.988	
11,400.00	10,605.42	10,629.00	10,626.99	38.57	297.71	90.46	8,123.17	1,589.20	7,960.19	7,623.91	336.27	23.672	
11,500.00	10,604.87	10,629.00	10,626.99	38.99	297.71	90.46	8,123.17	1,589.20	7,862.37	7,525.68	336.69	23.352	
11,600.00	10,604.33	10,629.00	10,626.99	39.47	297.71	90.46	8,123.17	1,589.20	7,764.61	7,427.44	337.18	23.028	
11,700.00	10,603.78	10,629.00	10,626.99	40.02	297.71	90.46	8,123.17	1,589.20	7,666.91	7,329.19	337.72	22.702	
11,800.00	10,603.24	10,629.00	10,626.99	40.63	297.71	90.46	8,123.17	1,589.20	7,569.27	7,230.93	338.33	22.372	
11,900.00	10,602.69	10,629.00	10,626.99	41.30	297.71	90.46	8,123.17	1,589.20	7,471.69	7,132.69	339.00	22.040	
12,000.00	10,602.15	10,629.00	10,626.99	42.02	297.71	90.46	8,123.17	1,589.20	7,374.17	7,034.45	339.72	21.706	
12,100.00	10,601.60	10,629.00	10,626.99	42.80	297.71	90.46	8,123.17	1,589.20	7,276.73	6,936.23	340.50	21.371	
12,200.00	10,601.05	10,629.00	10,626.99	43.62	297.71	90.46	8,123.17	1,589.20	7,179.35	6,838.02	341.33	21.034	
12,300.00	10,600.51	10,629.00	10,626.99	44.50	297.71	90.46	8,123.17	1,589.20	7,082.05	6,739.85	342.20	20.696	
12,400.00	10,599.96	10,629.00	10,626.99	45.42	297.71	90.46	8,123.17	1,589.20	6,984.82	6,641.70	343.12	20.357	
12,500.00	10,599.42	10,629.00	10,626.99	46.38	297.71	90.46	8,123.17	1,589.20	6,887.67	6,543.59	344.08	20.018	
12,600.00	10,598.87	10,629.00	10,626.99	47.38	297.71	90.46	8,123.17	1,589.20	6,790.61	6,445.53	345.08	19.678	
12,700.00	10,598.33	10,629.00	10,626.99	48.41	297.71	90.46	8,123.17	1,589.20	6,693.63	6,347.51	346.12	19.339	
12,800.00	10,597.78	10,629.00	10,626.99	49.48	297.71	90.46	8,123.17	1,589.20	6,596.74	6,249.56	347.19	19.001	
12,900.00	10,597.23	10,629.00	10,626.99	50.59	297.71	90.46	8,123.17	1,589.20	6,499.95	6,151.66	348.29	18.662	
13,000.00	10,596.69	10,629.00	10,626.99	51.72	297.71	90.46	8,123.17	1,589.20	6,403.25	6,053.83	349.42	18.325	
13,100.00	10,596.14	10,629.00	10,626.99	52.88	297.71	90.46	8,123.17	1,589.20	6,306.66	5,956.07	350.58	17.989	
13,200.00	10,595.60	10,629.00	10,626.99	54.07	297.71	90.46	8,123.17	1,589.20	6,210.17	5,858.40	351.77	17.654	
13,300.00	10,595.05	10,629.00	10,626.99	55.28	297.71	90.46	8,123.17	1,589.20	6,113.80	5,760.82	352.99	17.320	
13,400.00	10,594.50	10,629.00	10,626.99	56.52	297.71	90.46	8,123.17	1,589.20	6,017.55	5,663.33	354.22	16.988	
13,500.00	10,593.96	10,629.00	10,626.99	57.78	297.71	90.46	8,123.17	1,589.20	5,921.42	5,565.94	355.48	16.657	
13,600.00	10,593.41	10,629.00	10,626.99	59.06	297.71	90.46	8,123.17	1,589.20	5,825.42	5,468.66	356.76	16.329	
13,700.00	10,592.87	10,629.00	10,626.99	60.36	297.71	90.46	8,123.17	1,589.20	5,729.56	5,371.50	358.06	16.002	
13,800.00	10,592.32	10,629.00	10,626.99	61.67	297.71	90.46	8,123.17	1,589.20	5,633.84	5,274.47	359.37	15.677	
13,900.00	10,591.78	10,629.00	10,626.99	63.00	297.71	90.46	8,123.17	1,589.20	5,538.27	5,177.57	360.71	15.354	
14,000.00	10,591.23	10,629.00	10,626.99	64.35	297.71	90.46	8,123.17	1,589.20	5,442.87	5,080.81	362.05	15.033	
14,100.00	10,590.68	10,629.00	10,626.99	65.71	297.71	90.46	8,123.17	1,589.20	5,347.63	4,984.21	363.42	14.715	
14,200.00	10,590.14	10,629.00	10,626.99	67.09	297.71	90.46	8,123.17	1,589.20	5,252.57	4,887.77	364.79	14.399	
14,300.00	10,589.59	10,629.00	10,626.99	68.48	297.71	90.46	8,123.17	1,589.20	5,157.69	4,791.51	366.18	14.085	
14,400.00	10,589.05	10,629.00	10,626.99	69.88	297.71	90.46	8,123.17	1,589.20	5,063.01	4,695.43	367.58	13.774	
14,500.00	10,588.50	10,629.00	10,626.99	71.29	297.71	90.46	8,123.17	1,589.20	4,968.54	4,599.54	369.00	13.465	
14,600.00	10,587.96	10,629.00	10,626.99	72.72	297.71	90.46	8,123.17	1,589.20	4,874.29	4,503.87	370.42	13.159	
14,700.00	10,587.41	10,629.00	10,626.99	74.15	297.71	90.46	8,123.17	1,589.20	4,780.28	4,408.42	371.85	12.855	
14,800.00	10,586.86	10,629.00	10,626.99	75.60	297.71	90.46	8,123.17	1,589.20	4,686.51	4,313.21	373.30	12.554	
14,900.00	10,586.32	10,629.00	10,626.99	77.05	297.71	90.46	8,123.17	1,589.20	4,593.00	4,218.25	374.75	12.256	
15,000.00	10,585.77	10,629.00	10,626.99	78.51	297.71	90.46	8,123.17	1,589.20	4,499.78	4,123.56	376.21	11.961	
15,100.00	10,585.23	10,629.00	10,626.99	79.98	297.71	90.46	8,123.17	1,589.20	4,406.85	4,029.16	377.68	11.668	
15,200.00	10,584.68	10,629.00	10,626.99	81.46	297.71	90.46	8,123.17	1,589.20	4,314.23	3,935.07	379.16	11.378	
15,300.00	10,584.14	10,629.00	10,626.99	82.94	297.71	90.46	8,123.17	1,589.20	4,221.96	3,841.31	380.64	11.092	
15,400.00	10,583.59	10,629.00	10,626.99	84.43	297.71	90.46	8,123.17	1,589.20	4,130.04	3,747.91	382.14	10.808	
15,500.00	10,583.04	10,629.00	10,626.99	85.93	297.71	90.46	8,123.17	1,589.20	4,038.51	3,654.88	383.63	10.527	
15,600.00	10,582.50	10,629.00	10,626.99	87.44	297.71	90.46	8,123.17	1,589.20	3,947.39	3,562.25	385.14	10.249	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1

Offset Site Error: 0.00 ft

Survey Program: 261-Inclinometer only

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
15,700.00	10,581.95	10,629.00	10,626.99	88.95	297.71	90.46	8,123.17	1,589.20	3,856.71	3,470.06	386.65	9.975	
15,800.00	10,581.41	10,629.00	10,626.99	90.46	297.71	90.46	8,123.17	1,589.20	3,766.50	3,378.34	388.16	9.703	
15,900.00	10,580.86	10,629.00	10,626.99	91.98	297.71	90.46	8,123.17	1,589.20	3,676.80	3,287.11	389.68	9.435	
16,000.00	10,580.32	10,629.00	10,626.99	93.51	297.71	90.46	8,123.17	1,589.20	3,587.64	3,196.43	391.21	9.171	
16,100.00	10,579.77	10,629.00	10,626.99	95.04	297.71	90.46	8,123.17	1,589.20	3,499.07	3,106.33	392.74	8.909	
16,200.00	10,579.22	10,629.00	10,626.99	96.57	297.71	90.46	8,123.17	1,589.20	3,411.13	3,016.85	394.28	8.652	
16,300.00	10,578.68	10,629.00	10,626.99	98.11	297.71	90.46	8,123.17	1,589.20	3,323.87	2,928.05	395.82	8.398	
16,400.00	10,578.13	10,629.00	10,626.99	99.66	297.71	90.46	8,123.17	1,589.20	3,237.35	2,839.99	397.36	8.147	
16,500.00	10,577.59	10,629.00	10,626.99	101.21	297.71	90.46	8,123.17	1,589.20	3,151.63	2,752.72	398.91	7.901	
16,600.00	10,577.04	10,629.00	10,626.99	102.76	297.71	90.46	8,123.17	1,589.20	3,066.77	2,666.31	400.46	7.658	
16,700.00	10,576.50	10,629.00	10,626.99	104.31	297.71	90.46	8,123.17	1,589.20	2,982.85	2,580.83	402.01	7.420	
16,800.00	10,575.95	10,628.92	10,626.95	105.87	297.71	90.45	8,123.17	1,589.20	2,899.95	2,496.38	403.57	7.186	
16,900.00	10,575.40	10,628.38	10,626.40	107.43	297.69	90.44	8,123.17	1,589.20	2,818.16	2,413.05	405.11	6.957	
17,000.00	10,574.86	10,627.83	10,625.86	109.00	297.67	90.42	8,123.17	1,589.20	2,737.58	2,330.92	406.65	6.732	
17,100.00	10,574.31	10,627.29	10,625.31	110.57	297.65	90.40	8,123.17	1,589.20	2,658.32	2,250.11	408.20	6.512	
17,200.00	10,573.77	10,626.74	10,624.77	112.14	297.62	90.38	8,123.17	1,589.20	2,580.50	2,170.74	409.75	6.298	
17,300.00	10,573.22	10,626.19	10,624.22	113.71	297.60	90.36	8,123.17	1,589.20	2,504.25	2,092.95	411.31	6.089	
17,400.00	10,572.68	10,625.65	10,623.68	115.29	297.58	90.34	8,123.17	1,589.20	2,429.73	2,016.87	412.86	5.885	
17,500.00	10,572.13	10,625.10	10,623.13	116.87	297.56	90.32	8,123.17	1,589.20	2,357.10	1,942.68	414.42	5.688	
17,600.00	10,571.58	10,624.56	10,622.58	118.45	297.54	90.30	8,123.17	1,589.20	2,286.53	1,870.55	415.98	5.497	
17,700.00	10,571.04	10,624.01	10,622.04	120.03	297.52	90.28	8,123.17	1,589.20	2,218.23	1,800.68	417.54	5.313	
17,800.00	10,570.49	10,623.47	10,621.49	121.62	297.50	90.26	8,123.17	1,589.20	2,152.40	1,733.30	419.11	5.136	
17,900.00	10,569.95	10,622.92	10,620.95	123.21	297.47	90.24	8,123.17	1,589.20	2,089.30	1,668.62	420.68	4.967	
18,000.00	10,569.40	10,622.37	10,620.40	124.80	297.45	90.23	8,123.17	1,589.20	2,029.15	1,606.91	422.24	4.806	
18,100.00	10,568.85	10,621.83	10,619.85	126.39	297.43	90.21	8,123.17	1,589.20	1,972.25	1,548.44	423.82	4.654	
18,200.00	10,568.31	10,621.28	10,619.31	127.98	297.41	90.19	8,123.17	1,589.20	1,918.88	1,493.49	425.39	4.511	
18,300.00	10,567.76	10,620.74	10,618.76	129.58	297.39	90.17	8,123.17	1,589.20	1,869.33	1,442.37	426.96	4.378	
18,400.00	10,567.22	10,620.19	10,618.22	131.18	297.37	90.15	8,123.17	1,589.20	1,823.93	1,395.38	428.54	4.256	
18,500.00	10,566.67	10,619.65	10,617.67	132.78	297.34	90.13	8,123.17	1,589.20	1,782.98	1,352.86	430.12	4.145	
18,600.00	10,566.13	10,619.10	10,617.13	134.38	297.32	90.11	8,123.17	1,589.20	1,746.80	1,315.10	431.70	4.046	
18,700.00	10,565.58	10,618.55	10,616.58	135.98	297.30	90.09	8,123.17	1,589.20	1,715.70	1,282.42	433.28	3.960	
18,800.00	10,565.03	10,618.01	10,616.03	137.59	297.28	90.07	8,123.17	1,589.20	1,689.95	1,255.09	434.87	3.886	
18,900.00	10,564.49	10,617.46	10,615.49	139.19	297.26	90.05	8,123.17	1,589.20	1,669.80	1,233.35	436.45	3.826	
19,000.00	10,563.94	10,616.92	10,614.94	140.80	297.24	90.04	8,123.17	1,589.20	1,655.46	1,217.42	438.04	3.779	
19,100.00	10,563.40	10,616.37	10,614.40	142.41	297.21	90.02	8,123.17	1,589.20	1,647.07	1,207.45	439.62	3.747	
19,188.48	10,562.91	10,615.89	10,613.91	143.83	297.20	90.00	8,123.17	1,589.20	1,644.69	1,203.66	441.03	3.729	CC
19,200.00	10,562.85	10,615.82	10,613.85	144.02	297.19	90.00	8,123.17	1,589.20	1,644.73	1,203.52	441.21	3.728	ES
19,300.00	10,562.31	10,615.28	10,613.31	145.63	297.17	89.98	8,123.17	1,589.20	1,648.47	1,205.67	442.80	3.723	SF
19,400.00	10,561.76	10,614.73	10,612.76	147.24	297.15	89.96	8,123.17	1,589.20	1,658.24	1,213.85	444.39	3.731	
19,500.00	10,561.21	10,629.00	10,626.99	148.86	297.71	90.46	8,123.17	1,589.20	1,674.00	1,227.44	446.56	3.749	
19,600.00	10,560.67	10,629.00	10,626.99	150.47	297.71	90.46	8,123.17	1,589.20	1,695.46	1,247.29	448.17	3.783	
19,700.00	10,560.12	10,629.00	10,626.99	152.09	297.71	90.46	8,123.17	1,589.20	1,722.47	1,272.68	449.79	3.830	
19,800.00	10,559.58	10,629.00	10,626.99	153.71	297.71	90.46	8,123.17	1,589.20	1,754.77	1,303.37	451.41	3.887	
19,900.00	10,559.03	10,629.00	10,626.99	155.33	297.71	90.46	8,123.17	1,589.20	1,792.08	1,339.05	453.03	3.956	
20,000.00	10,558.49	10,629.00	10,626.99	156.95	297.71	90.46	8,123.17	1,589.20	1,834.08	1,379.44	454.65	4.034	
20,100.00	10,557.94	10,629.00	10,626.99	158.57	297.71	90.46	8,123.17	1,589.20	1,880.47	1,424.21	456.27	4.121	
20,200.00	10,557.39	10,629.00	10,626.99	160.19	297.71	90.46	8,123.17	1,589.20	1,930.93	1,473.04	457.89	4.217	
20,300.00	10,556.85	10,629.00	10,626.99	161.81	297.71	90.46	8,123.17	1,589.20	1,985.15	1,525.64	459.51	4.320	
20,400.00	10,556.30	10,629.00	10,626.99	163.44	297.71	90.46	8,123.17	1,589.20	2,042.83	1,581.69	461.13	4.430	
20,500.00	10,555.76	10,629.00	10,626.99	165.06	297.71	90.46	8,123.17	1,589.20	2,103.68	1,640.92	462.76	4.546	
20,600.00	10,555.21	10,629.00	10,626.99	166.69	297.71	90.46	8,123.17	1,589.20	2,167.43	1,703.05	464.38	4.667	
20,700.00	10,554.67	10,629.00	10,626.99	168.31	297.71	90.46	8,123.17	1,589.20	2,233.85	1,767.84	466.01	4.794	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1 - Bilbrey 32 State Com 1

Offset Site Error: 0.00 ft

Survey Program: 261-Inclinometer only

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
20,800.00	10,554.12	10,629.00	10,626.99	169.94	297.71	90.46	8,123.17	1,589.20	2,302.70	1,835.06	467.64	4.924	
20,821.88	10,554.00	10,629.00	10,626.99	170.29	297.71	90.46	8,123.17	1,589.20	2,318.06	1,850.06	467.99	4.953	

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Bilbrey 32 State Com 2 - Bilbrey 32 State Com 2 - Bilbrey 32 State Com 2 - Bilbrey 32 State Com 2

Offset Site Error: 0.00 ft

Survey Program: 353-Inclinometer only

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	14.00	14.00	0.00	0.15	14.59	6,151.14	1,600.91	6,356.05				
100.00	100.00	114.00	114.00	0.14	1.25	14.59	6,151.14	1,600.91	6,356.05	6,354.67	1.39	4,575.619	
200.00	200.00	214.00	214.00	0.50	2.34	14.59	6,151.14	1,600.91	6,356.05	6,353.21	2.84	2,237.790	
300.00	300.00	314.00	314.00	0.86	3.43	14.59	6,151.14	1,600.91	6,356.05	6,351.76	4.29	1,481.067	
314.53	314.53	328.53	328.53	0.91	3.59	14.59	6,151.14	1,600.91	6,356.05	6,351.55	4.50	1,411.709	
400.00	400.00	353.00	353.00	1.22	3.86	14.59	6,151.14	1,600.91	6,356.35	6,351.27	5.08	1,252.191	
500.00	500.00	514.00	514.00	1.58	7.28	14.59	6,151.14	1,600.91	6,356.05	6,347.20	8.85	717.811	
600.00	600.00	614.00	614.00	1.94	9.40	14.59	6,151.14	1,600.91	6,356.05	6,344.72	11.34	560.620	
700.00	700.00	714.00	714.00	2.29	11.53	14.59	6,151.14	1,600.91	6,356.05	6,342.23	13.82	459.906	
734.60	734.60	748.60	748.60	2.42	12.26	14.59	6,151.14	1,600.91	6,356.05	6,341.38	14.68	432.994	
800.00	800.00	765.00	764.97	2.65	12.61	14.59	6,151.14	1,600.91	6,356.24	6,340.98	15.26	416.470	
900.00	900.00	914.03	914.00	3.01	15.52	14.59	6,151.14	1,600.91	6,356.05	6,337.52	18.53	343.003	
1,000.00	1,000.00	1,014.03	1,014.00	3.37	17.47	14.59	6,151.14	1,600.91	6,356.05	6,335.21	20.84	304.969	
1,018.62	1,018.62	1,032.65	1,032.62	3.44	17.84	14.59	6,151.14	1,600.91	6,356.05	6,334.78	21.27	298.801	
1,100.00	1,100.00	1,055.00	1,054.96	3.73	18.27	14.59	6,151.14	1,600.91	6,356.33	6,334.33	22.00	288.924	
1,200.00	1,200.00	1,214.04	1,214.00	4.09	21.66	14.59	6,151.14	1,600.91	6,356.05	6,330.31	25.74	246.905	
1,263.35	1,263.35	1,277.39	1,277.35	4.31	23.00	14.59	6,151.14	1,600.91	6,356.05	6,328.74	27.32	232.668	
1,300.00	1,300.00	1,305.00	1,304.95	4.45	23.59	14.59	6,151.14	1,600.91	6,356.06	6,328.02	28.04	226.702	
1,400.00	1,400.00	1,305.00	1,304.95	4.80	23.59	14.59	6,151.14	1,600.91	6,356.99	6,328.59	28.40	223.873	
1,500.00	1,500.00	1,514.05	1,514.00	5.16	28.22	14.59	6,151.14	1,600.91	6,356.05	6,322.67	33.38	190.394	
1,524.12	1,524.12	1,538.17	1,538.12	5.25	28.76	14.59	6,151.14	1,600.91	6,356.05	6,322.05	34.00	186.919	
1,600.00	1,600.00	1,558.00	1,557.93	5.52	29.20	14.59	6,151.14	1,600.91	6,356.30	6,321.59	34.72	183.097	
1,700.00	1,700.00	1,714.07	1,714.00	5.88	32.93	14.59	6,151.14	1,600.91	6,356.05	6,317.24	38.81	163.768	
1,766.30	1,766.30	1,780.37	1,780.30	6.12	34.52	14.59	6,151.14	1,600.91	6,356.05	6,315.42	40.64	156.411	
1,800.00	1,800.00	1,813.00	1,812.92	6.24	35.30	14.59	6,151.14	1,600.91	6,356.05	6,314.52	41.54	153.014	
1,900.00	1,900.00	1,813.00	1,812.92	6.60	35.30	14.59	6,151.14	1,600.91	6,356.86	6,314.96	41.90	151.724	
2,000.00	2,000.00	2,014.08	2,014.00	6.95	40.13	14.59	6,151.14	1,600.91	6,356.05	6,308.97	47.09	134.991	
2,100.00	2,100.00	2,035.00	2,034.88	7.31	40.63	14.59	6,151.14	1,600.91	6,356.55	6,308.60	47.95	132.578	
2,200.00	2,200.00	2,214.12	2,214.00	7.67	44.94	14.59	6,151.14	1,600.91	6,356.05	6,303.44	52.61	120.808	
2,300.00	2,300.00	2,314.13	2,314.00	8.03	47.35	14.59	6,151.14	1,600.91	6,356.05	6,300.68	55.38	114.774	
2,352.28	2,352.28	2,366.40	2,366.28	8.22	48.61	14.59	6,151.14	1,600.91	6,356.05	6,299.23	56.82	111.853	
2,400.00	2,400.00	2,384.00	2,383.85	8.39	49.03	14.59	6,151.14	1,600.91	6,356.13	6,298.71	57.42	110.696	
2,500.00	2,500.00	2,514.15	2,514.00	8.75	52.04	14.59	6,151.14	1,600.91	6,356.05	6,295.27	60.79	104.558	
2,543.35	2,543.35	2,557.50	2,557.35	8.90	53.05	14.59	6,151.14	1,600.91	6,356.05	6,294.11	61.95	102.603	
2,600.00	2,600.00	2,573.00	2,572.84	9.11	53.40	14.59	6,151.14	1,600.91	6,356.19	6,293.68	62.51	101.683	
2,700.00	2,700.00	2,714.16	2,714.00	9.46	56.94	14.59	6,151.14	1,600.91	6,356.05	6,289.65	66.41	95.715	
2,731.72	2,731.72	2,745.88	2,745.72	9.58	57.74	14.59	6,151.14	1,600.91	6,356.05	6,288.74	67.32	94.422	
2,800.00	2,800.00	2,763.00	2,762.82	9.82	58.17	14.59	6,151.14	1,600.91	6,356.26	6,288.27	67.99	93.490	
2,900.00	2,900.00	2,914.18	2,914.00	10.18	62.11	14.59	6,151.14	1,600.91	6,356.05	6,283.76	72.29	87.924	
3,000.00	3,000.00	3,014.18	3,014.00	10.54	64.72	14.59	6,151.14	1,600.91	6,356.05	6,280.80	75.26	84.458	
3,100.00	3,100.00	3,114.21	3,114.00	10.90	67.33	14.59	6,151.14	1,600.91	6,356.05	6,277.83	78.23	81.249	
3,163.67	3,163.67	3,177.88	3,177.67	11.13	69.00	14.59	6,151.14	1,600.91	6,356.05	6,275.93	80.12	79.330	
3,200.00	3,200.00	3,206.00	3,205.76	11.26	69.73	14.59	6,151.14	1,600.91	6,356.06	6,275.07	80.99	78.483	
3,300.00	3,300.00	3,314.24	3,314.00	11.61	72.24	14.59	6,151.14	1,600.91	6,356.05	6,272.20	83.85	75.801	
3,331.61	3,331.61	3,345.85	3,345.61	11.73	72.97	14.59	6,151.14	1,600.91	6,356.05	6,271.36	84.70	75.044	
3,400.00	3,400.00	3,363.00	3,362.74	11.97	73.37	14.59	6,151.14	1,600.91	6,356.26	6,270.92	85.34	74.482	
3,500.00	3,500.00	3,514.26	3,514.00	12.33	77.02	14.59	6,151.14	1,600.91	6,356.05	6,266.70	89.35	71.135	
3,600.00	3,600.00	3,522.00	3,521.73	12.69	77.21	14.59	6,151.14	1,600.91	6,356.72	6,266.83	89.90	70.711	
3,694.49	3,694.49	3,708.75	3,708.49	13.03	82.28	14.59	6,151.14	1,600.91	6,356.05	6,260.74	95.31	66.686	
3,700.00	3,700.00	3,712.00	3,711.70	13.05	82.37	14.59	6,151.14	1,600.91	6,356.06	6,260.63	95.42	66.611	
3,800.00	3,800.00	3,814.30	3,814.00	13.41	85.79	14.59	6,151.14	1,600.91	6,356.05	6,256.86	99.19	64.077	
3,840.13	3,840.13	3,854.43	3,854.13	13.55	87.13	14.59	6,151.14	1,600.91	6,356.05	6,255.38	100.68	63.132	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Bilbrey 32 State Com 2 - Bilbrey 32 State Com 2 - Bilbrey 32 State Com 2 - Bilbrey 32 State Com 2

Offset Site Error: 0.00 ft

Survey Program: 353-Inclinometer only

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
3,900.00	3,900.00	3,870.00	3,869.68	13.77	87.65	14.59	6,151.14	1,600.91	6,356.21	6,254.80	101.41	62.677	
4,000.00	4,000.00	4,014.37	4,014.00	14.12	93.52	14.59	6,151.14	1,600.91	6,356.05	6,248.41	107.64	59.049	
4,055.29	4,055.29	4,069.69	4,069.29	14.32	95.86	14.59	6,151.14	1,600.91	6,356.05	6,245.87	110.18	57.687	
4,100.00	4,100.00	4,089.00	4,088.55	14.48	96.68	14.59	6,151.14	1,600.91	6,356.11	6,244.94	111.16	57.179	
4,194.27	4,194.27	4,208.76	4,208.27	14.82	101.79	14.59	6,151.14	1,600.91	6,356.05	6,239.45	116.61	54.508	
4,200.00	4,200.00	4,214.00	4,213.48	14.84	102.02	14.59	6,151.14	1,600.91	6,356.05	6,239.20	116.86	54.391	
4,300.00	4,300.00	4,314.57	4,314.00	15.20	105.98	14.59	6,151.14	1,600.91	6,356.05	6,234.87	121.18	52.451	
4,400.00	4,400.00	4,414.59	4,414.00	15.56	109.18	14.59	6,151.14	1,600.91	6,356.05	6,231.32	124.74	50.955	
4,500.00	4,500.00	4,514.62	4,514.00	15.92	112.00	14.59	6,151.14	1,600.91	6,356.05	6,228.14	127.91	49.691	
4,600.00	4,600.00	4,527.00	4,526.36	16.27	112.34	14.59	6,151.14	1,600.91	6,356.66	6,228.05	128.61	49.426	
4,700.00	4,700.00	4,714.64	4,714.00	16.63	116.03	14.59	6,151.14	1,600.91	6,356.05	6,223.39	132.67	47.910	
4,800.00	4,800.00	4,814.64	4,814.00	16.99	118.01	14.59	6,151.14	1,600.91	6,356.05	6,221.06	135.00	47.083	
4,900.00	4,900.00	4,914.64	4,914.00	17.35	119.98	14.59	6,151.14	1,600.91	6,356.05	6,218.73	137.33	46.284	
5,000.00	5,000.00	5,014.64	5,014.00	17.71	121.95	14.59	6,151.14	1,600.91	6,356.05	6,216.40	139.66	45.512	
5,100.00	5,100.00	5,114.64	5,114.00	18.07	123.92	14.59	6,151.14	1,600.91	6,356.05	6,214.07	141.99	44.765	
5,200.00	5,199.98	5,214.68	5,213.98	18.41	125.60	-165.01	6,151.14	1,600.91	6,357.74	6,213.82	143.92	44.174	
5,300.00	5,299.84	5,314.54	5,313.84	18.73	127.26	-165.00	6,151.14	1,600.91	6,362.80	6,217.14	145.66	43.683	
5,400.00	5,399.45	5,414.16	5,413.45	19.05	128.91	-164.97	6,151.14	1,600.91	6,371.22	6,224.00	147.22	43.278	
5,500.00	5,498.70	5,513.41	5,512.70	19.37	130.57	-164.94	6,151.14	1,600.91	6,382.99	6,234.40	148.59	42.956	
5,600.00	5,597.71	5,612.41	5,611.71	19.70	132.21	-164.97	6,151.14	1,600.91	6,396.59	6,246.08	150.52	42.498	
5,700.00	5,696.71	5,711.42	5,710.71	20.03	134.16	-165.00	6,151.14	1,600.91	6,410.20	6,257.43	152.78	41.958	
5,800.00	5,795.71	5,810.42	5,809.71	20.36	136.14	-165.04	6,151.14	1,600.91	6,423.81	6,268.75	155.06	41.427	
5,900.00	5,894.72	5,909.42	5,908.72	20.70	138.12	-165.07	6,151.14	1,600.91	6,437.43	6,280.07	157.35	40.911	
6,000.00	5,993.72	6,008.43	6,007.72	21.04	140.10	-165.10	6,151.14	1,600.91	6,451.04	6,291.40	159.64	40.409	
6,100.00	6,092.72	6,107.43	6,106.72	21.38	142.07	-165.13	6,151.14	1,600.91	6,464.66	6,302.72	161.93	39.921	
6,200.00	6,191.73	6,118.00	6,117.28	21.73	142.29	-165.14	6,151.14	1,600.91	6,478.88	6,316.40	162.48	39.875	
6,300.00	6,290.73	6,305.45	6,304.73	22.08	145.66	-165.20	6,151.14	1,600.91	6,491.90	6,325.75	166.15	39.072	
6,400.00	6,389.74	6,404.46	6,403.74	22.43	147.44	-165.23	6,151.14	1,600.91	6,505.52	6,337.27	168.25	38.665	
6,500.00	6,488.74	6,503.46	6,502.74	22.78	149.22	-165.26	6,151.14	1,600.91	6,519.15	6,348.79	170.36	38.268	
6,600.00	6,587.74	6,602.46	6,601.74	23.14	151.00	-165.29	6,151.14	1,600.91	6,532.77	6,360.31	172.46	37.880	
6,700.00	6,686.75	6,701.49	6,700.75	23.50	152.55	-165.32	6,151.14	1,600.91	6,546.40	6,372.07	174.33	37.551	
6,800.00	6,785.75	6,800.50	6,799.75	23.86	154.05	-165.35	6,151.14	1,600.91	6,560.03	6,383.87	176.16	37.239	
6,900.00	6,884.75	6,899.50	6,898.75	24.22	155.54	-165.38	6,151.14	1,600.91	6,573.67	6,395.68	177.99	36.934	
7,000.00	6,983.76	6,998.50	6,997.76	24.59	157.04	-165.41	6,151.14	1,600.91	6,587.30	6,407.49	179.81	36.634	
7,100.00	7,082.76	7,097.51	7,096.76	24.95	158.54	-165.45	6,151.14	1,600.91	6,600.94	6,419.30	181.64	36.341	
7,200.00	7,181.77	7,196.51	7,195.77	25.32	160.35	-165.48	6,151.14	1,600.91	6,614.58	6,430.79	183.78	35.992	
7,300.00	7,280.77	7,295.52	7,294.77	25.69	162.26	-165.51	6,151.14	1,600.91	6,628.22	6,442.20	186.01	35.633	
7,400.00	7,379.77	7,394.52	7,393.77	26.07	164.16	-165.54	6,151.14	1,600.91	6,641.86	6,453.61	188.25	35.282	
7,500.00	7,478.78	7,493.52	7,492.78	26.44	166.07	-165.57	6,151.14	1,600.91	6,655.50	6,465.02	190.48	34.940	
7,600.00	7,577.78	7,592.53	7,591.78	26.82	167.97	-165.60	6,151.14	1,600.91	6,669.15	6,476.43	192.72	34.606	
7,700.00	7,676.78	7,620.00	7,619.25	27.19	168.50	-165.61	6,151.14	1,600.91	6,683.18	6,489.59	193.59	34.522	
7,800.00	7,775.79	7,790.54	7,789.79	27.57	172.78	-165.66	6,151.14	1,600.91	6,696.44	6,498.26	198.18	33.789	
7,900.00	7,874.79	7,889.54	7,888.79	27.95	175.27	-165.69	6,151.14	1,600.91	6,710.09	6,509.10	200.99	33.384	
8,000.00	7,973.80	7,988.54	7,987.80	28.33	177.75	-165.72	6,151.14	1,600.91	6,723.75	6,519.94	203.81	32.991	
8,100.00	8,072.80	8,087.55	8,086.80	28.71	180.24	-165.75	6,151.14	1,600.91	6,737.40	6,530.78	206.62	32.607	
8,200.00	8,171.80	8,122.00	8,121.21	29.10	181.10	-165.76	6,151.14	1,600.91	6,751.37	6,543.54	207.83	32.485	
8,300.00	8,270.81	8,285.60	8,284.81	29.48	185.54	-165.80	6,151.14	1,600.91	6,764.72	6,552.14	212.58	31.823	
8,400.00	8,369.81	8,372.00	8,371.17	29.87	187.88	-165.83	6,151.14	1,600.91	6,778.39	6,563.14	215.25	31.491	
8,500.00	8,468.81	8,372.00	8,371.17	30.26	187.88	-165.83	6,151.14	1,600.91	6,792.95	6,577.35	215.60	31.507	
8,600.00	8,567.82	8,582.65	8,581.82	30.64	193.59	-165.89	6,151.14	1,600.91	6,805.70	6,584.08	221.62	30.709	
8,700.00	8,666.82	8,681.69	8,680.82	31.03	195.99	-165.92	6,151.14	1,600.91	6,819.36	6,595.02	224.34	30.397	
8,800.00	8,765.82	8,780.71	8,779.82	31.42	197.99	-165.95	6,151.14	1,600.91	6,833.03	6,606.35	226.69	30.143	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Bilbrey 32 State Com 2 - Bilbrey 32 State Com 2 - Bilbrey 32 State Com 2 - Bilbrey 32 State Com 2

Offset Site Error: 0.00 ft

Survey Program: 353-Inclinometer only

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
8,900.00	8,864.83	8,879.71	8,878.83	31.81	199.89	-165.98	6,151.14	1,600.91	6,846.70	6,617.78	228.92	29.908	
9,000.00	8,963.83	8,968.00	8,967.12	32.21	201.59	-166.00	6,151.14	1,600.91	6,860.38	6,629.42	230.96	29.704	
9,100.00	9,062.84	8,968.00	8,967.12	32.60	201.59	-166.00	6,151.14	1,600.91	6,874.92	6,643.60	231.32	29.721	
9,200.00	9,161.84	9,176.72	9,175.84	32.99	206.84	-166.06	6,151.14	1,600.91	6,887.71	6,650.84	236.87	29.078	
9,300.00	9,260.84	9,219.00	9,218.10	33.39	207.90	-166.08	6,151.14	1,600.91	6,901.62	6,663.34	238.28	28.964	
9,400.00	9,359.85	9,374.75	9,373.85	33.78	211.97	-166.12	6,151.14	1,600.91	6,915.07	6,672.39	242.67	28.496	
9,500.00	9,458.85	9,435.00	9,434.06	34.18	213.55	-166.14	6,151.14	1,600.91	6,928.85	6,684.26	244.59	28.328	
9,600.00	9,557.87	9,572.81	9,571.87	34.57	217.01	-166.19	6,151.14	1,600.91	6,942.30	6,693.64	248.66	27.919	
9,700.00	9,657.21	9,672.15	9,671.21	34.96	219.51	-166.27	6,151.14	1,600.91	6,953.40	6,701.02	252.37	27.552	
9,800.00	9,756.89	9,685.00	9,684.04	35.33	219.83	-166.31	6,151.14	1,600.91	6,961.66	6,708.02	253.64	27.447	
9,900.00	9,856.79	9,871.75	9,870.79	35.69	224.53	-166.35	6,151.14	1,600.91	6,965.46	6,706.46	259.00	26.894	
10,000.00	9,956.78	9,873.00	9,872.01	36.03	224.57	13.25	6,151.14	1,600.91	6,967.18	6,707.77	259.42	26.857	
10,100.00	10,056.78	10,071.77	10,070.78	36.36	228.97	13.25	6,151.14	1,600.91	6,966.48	6,702.32	264.17	26.371	
10,200.00	10,156.76	10,089.00	10,087.99	36.69	229.35	13.65	6,151.14	1,600.91	6,966.28	6,701.85	264.43	26.345	
10,300.00	10,255.31	10,270.32	10,269.31	36.97	233.19	14.15	6,151.14	1,600.91	6,950.36	6,690.35	260.02	26.730	
10,400.00	10,348.41	10,338.00	10,336.98	37.18	234.62	15.34	6,151.14	1,600.91	6,915.43	6,672.40	243.02	28.456	
10,500.00	10,431.98	10,338.00	10,336.98	37.32	234.62	17.42	6,151.14	1,600.91	6,863.24	6,646.54	216.70	31.671	
10,600.00	10,502.38	10,517.40	10,516.38	37.40	239.13	21.67	6,151.14	1,600.91	6,793.69	6,602.15	191.54	35.469	
10,700.00	10,556.53	10,571.55	10,570.53	37.46	240.50	29.20	6,151.14	1,600.91	6,712.36	6,536.24	176.12	38.113	
10,800.00	10,592.06	10,587.00	10,585.97	37.50	240.89	44.64	6,151.14	1,600.91	6,621.98	6,418.32	203.66	32.515	
10,900.00	10,607.42	10,587.00	10,585.97	37.53	240.89	77.98	6,151.14	1,600.91	6,526.55	6,254.09	272.46	23.954	
11,000.00	10,607.60	10,587.00	10,585.97	37.60	240.89	89.94	6,151.14	1,600.91	6,429.83	6,151.35	278.48	23.089	
11,100.00	10,607.06	10,587.00	10,585.97	37.73	240.89	89.94	6,151.14	1,600.91	6,333.20	6,054.59	278.62	22.731	
11,200.00	10,606.51	10,587.00	10,585.97	37.94	240.89	89.94	6,151.14	1,600.91	6,236.68	5,957.86	278.83	22.368	
11,300.00	10,605.97	10,587.00	10,585.97	38.22	240.89	89.94	6,151.14	1,600.91	6,140.27	5,861.16	279.10	22.000	
11,400.00	10,605.42	10,587.00	10,585.97	38.57	240.89	89.94	6,151.14	1,600.91	6,043.98	5,764.52	279.45	21.628	
11,500.00	10,604.87	10,587.00	10,585.97	38.99	240.89	89.94	6,151.14	1,600.91	5,947.80	5,667.93	279.87	21.252	
11,600.00	10,604.33	10,587.00	10,585.97	39.47	240.89	89.94	6,151.14	1,600.91	5,851.76	5,571.40	280.36	20.872	
11,700.00	10,603.78	10,587.00	10,585.97	40.02	240.89	89.94	6,151.14	1,600.91	5,755.85	5,474.94	280.91	20.490	
11,800.00	10,603.24	10,587.00	10,585.97	40.63	240.89	89.94	6,151.14	1,600.91	5,660.08	5,378.57	281.52	20.106	
11,900.00	10,602.69	10,587.00	10,585.97	41.30	240.89	89.94	6,151.14	1,600.91	5,564.46	5,282.28	282.18	19.719	
12,000.00	10,602.15	10,587.00	10,585.97	42.02	240.89	89.94	6,151.14	1,600.91	5,469.00	5,186.09	282.91	19.331	
12,100.00	10,601.60	10,587.00	10,585.97	42.80	240.89	89.94	6,151.14	1,600.91	5,373.70	5,090.02	283.68	18.943	
12,200.00	10,601.05	10,587.00	10,585.97	43.62	240.89	89.94	6,151.14	1,600.91	5,278.58	4,994.07	284.51	18.553	
12,300.00	10,600.51	10,587.00	10,585.97	44.50	240.89	89.94	6,151.14	1,600.91	5,183.64	4,898.26	285.38	18.164	
12,400.00	10,599.96	10,587.00	10,585.97	45.42	240.89	89.94	6,151.14	1,600.91	5,088.89	4,802.59	286.30	17.775	
12,500.00	10,599.42	10,587.00	10,585.97	46.38	240.89	89.94	6,151.14	1,600.91	4,994.35	4,707.09	287.26	17.386	
12,600.00	10,598.87	10,587.00	10,585.97	47.38	240.89	89.94	6,151.14	1,600.91	4,900.03	4,611.77	288.26	16.999	
12,700.00	10,598.33	10,587.00	10,585.97	48.41	240.89	89.94	6,151.14	1,600.91	4,805.93	4,516.64	289.30	16.612	
12,800.00	10,597.78	10,587.00	10,585.97	49.48	240.89	89.94	6,151.14	1,600.91	4,712.08	4,421.71	290.37	16.228	
12,900.00	10,597.23	10,587.00	10,585.97	50.59	240.89	89.94	6,151.14	1,600.91	4,618.49	4,327.02	291.47	15.845	
13,000.00	10,596.69	10,587.00	10,585.97	51.72	240.89	89.94	6,151.14	1,600.91	4,525.17	4,232.57	292.61	15.465	
13,100.00	10,596.14	10,587.00	10,585.97	52.88	240.89	89.94	6,151.14	1,600.91	4,432.14	4,138.38	293.77	15.087	
13,200.00	10,595.60	10,587.00	10,585.97	54.07	240.89	89.94	6,151.14	1,600.91	4,339.42	4,044.47	294.96	14.712	
13,300.00	10,595.05	10,587.00	10,585.97	55.28	240.89	89.94	6,151.14	1,600.91	4,247.04	3,950.87	296.17	14.340	
13,400.00	10,594.50	10,587.00	10,585.97	56.52	240.89	89.94	6,151.14	1,600.91	4,155.00	3,857.60	297.41	13.971	
13,500.00	10,593.96	10,587.00	10,585.97	57.78	240.89	89.94	6,151.14	1,600.91	4,063.34	3,764.68	298.66	13.605	
13,600.00	10,593.41	10,587.00	10,585.97	59.06	240.89	89.94	6,151.14	1,600.91	3,972.09	3,672.15	299.94	13.243	
13,700.00	10,592.87	10,587.00	10,585.97	60.36	240.89	89.94	6,151.14	1,600.91	3,881.26	3,580.02	301.24	12.884	
13,800.00	10,592.32	10,587.00	10,585.97	61.67	240.89	89.94	6,151.14	1,600.91	3,790.90	3,488.35	302.56	12.530	
13,900.00	10,591.78	10,587.00	10,585.97	63.00	240.89	89.94	6,151.14	1,600.91	3,701.03	3,397.15	303.89	12.179	
14,000.00	10,591.23	10,587.00	10,585.97	64.35	240.89	89.94	6,151.14	1,600.91	3,611.70	3,306.46	305.24	11.832	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Bilbrey 32 State Com 2 - Bilbrey 32 State Com 2 - Bilbrey 32 State Com 2 - Bilbrey 32 State Com 2 — **Offset Site Error:** 0.00 ft

Survey Program: 353-Inclinometer only — **Offset Well Error:** 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
14,100.00	10,590.68	10,587.00	10,585.97	65.71	240.89	89.94	6,151.14	1,600.91	3,522.94	3,216.34	306.60	11.490	
14,200.00	10,590.14	10,587.00	10,585.97	67.09	240.89	89.94	6,151.14	1,600.91	3,434.79	3,126.82	307.97	11.153	
14,300.00	10,589.59	10,587.00	10,585.97	68.48	240.89	89.94	6,151.14	1,600.91	3,347.32	3,037.95	309.36	10.820	
14,400.00	10,589.05	10,587.00	10,585.97	69.88	240.89	89.94	6,151.14	1,600.91	3,260.56	2,949.79	310.77	10.492	
14,500.00	10,588.50	10,587.00	10,585.97	71.29	240.89	89.94	6,151.14	1,600.91	3,174.58	2,862.40	312.18	10.169	
14,600.00	10,587.96	10,587.00	10,585.97	72.72	240.89	89.94	6,151.14	1,600.91	3,089.45	2,775.85	313.60	9.851	
14,700.00	10,587.41	10,587.00	10,585.97	74.15	240.89	89.94	6,151.14	1,600.91	3,005.23	2,690.19	315.04	9.539	
14,800.00	10,586.86	10,587.00	10,585.97	75.60	240.89	89.94	6,151.14	1,600.91	2,922.01	2,605.53	316.48	9.233	
14,900.00	10,586.32	10,587.00	10,585.97	77.05	240.89	89.94	6,151.14	1,600.91	2,839.87	2,521.94	317.93	8.932	
15,000.00	10,585.77	10,587.00	10,585.97	78.51	240.89	89.94	6,151.14	1,600.91	2,758.91	2,439.51	319.40	8.638	
15,100.00	10,585.23	10,587.00	10,585.97	79.98	240.89	89.94	6,151.14	1,600.91	2,679.23	2,358.37	320.87	8.350	
15,200.00	10,584.68	10,587.00	10,585.97	81.46	240.89	89.94	6,151.14	1,600.91	2,600.97	2,278.62	322.34	8.069	
15,300.00	10,584.14	10,587.00	10,585.97	82.94	240.89	89.94	6,151.14	1,600.91	2,524.23	2,200.40	323.83	7.795	
15,400.00	10,583.59	10,587.00	10,585.97	84.43	240.89	89.94	6,151.14	1,600.91	2,449.18	2,123.86	325.32	7.529	
15,500.00	10,583.04	10,587.00	10,585.97	85.93	240.89	89.94	6,151.14	1,600.91	2,375.96	2,049.14	326.82	7.270	
15,600.00	10,582.50	10,587.00	10,585.97	87.44	240.89	89.94	6,151.14	1,600.91	2,304.76	1,976.44	328.32	7.020	
15,700.00	10,581.95	10,587.00	10,585.97	88.95	240.89	89.94	6,151.14	1,600.91	2,235.76	1,905.93	329.83	6.779	
15,800.00	10,581.41	10,587.00	10,585.97	90.46	240.89	89.94	6,151.14	1,600.91	2,169.18	1,837.83	331.35	6.547	
15,900.00	10,580.86	10,587.00	10,585.97	91.98	240.89	89.94	6,151.14	1,600.91	2,105.25	1,772.38	332.87	6.325	
16,000.00	10,580.32	10,587.00	10,585.97	93.51	240.89	89.94	6,151.14	1,600.91	2,044.21	1,709.81	334.39	6.113	
16,100.00	10,579.77	10,587.00	10,585.97	95.04	240.89	89.94	6,151.14	1,600.91	1,986.33	1,650.41	335.92	5.913	
16,200.00	10,579.22	10,587.00	10,585.97	96.57	240.89	89.94	6,151.14	1,600.91	1,931.90	1,594.44	337.46	5.725	
16,300.00	10,578.68	10,587.00	10,585.97	98.11	240.89	89.94	6,151.14	1,600.91	1,881.21	1,542.21	339.00	5.549	
16,400.00	10,578.13	10,587.00	10,585.97	99.66	240.89	89.94	6,151.14	1,600.91	1,834.58	1,494.03	340.54	5.387	
16,500.00	10,577.59	10,587.00	10,585.97	101.21	240.89	89.94	6,151.14	1,600.91	1,792.31	1,450.22	342.09	5.239	
16,600.00	10,577.04	10,587.00	10,585.97	102.76	240.89	89.94	6,151.14	1,600.91	1,754.74	1,411.10	343.64	5.106	
16,700.00	10,576.50	10,587.00	10,585.97	104.31	240.89	89.94	6,151.14	1,600.91	1,722.16	1,376.96	345.20	4.989	
16,800.00	10,575.95	10,587.00	10,585.97	105.87	240.89	89.94	6,151.14	1,600.91	1,694.86	1,348.10	346.76	4.888	
16,900.00	10,575.40	10,587.00	10,585.97	107.43	240.89	89.94	6,151.14	1,600.91	1,673.10	1,324.78	348.32	4.803	
17,000.00	10,574.86	10,587.00	10,585.97	109.00	240.89	89.94	6,151.14	1,600.91	1,657.10	1,307.22	349.88	4.736	
17,100.00	10,574.31	10,587.00	10,585.97	110.57	240.89	89.94	6,151.14	1,600.91	1,647.03	1,295.58	351.45	4.686	
17,200.00	10,573.77	10,588.80	10,587.77	112.14	240.94	90.00	6,151.14	1,600.91	1,642.99	1,289.92	353.08	4.653	
17,216.39	10,573.68	10,588.71	10,587.68	112.39	240.94	90.00	6,151.14	1,600.91	1,642.91	1,289.58	353.33	4.650	CC, ES
17,300.00	10,573.22	10,588.25	10,587.22	113.71	240.92	89.98	6,151.14	1,600.91	1,645.04	1,290.41	354.63	4.639	SF
17,400.00	10,572.68	10,587.71	10,586.68	115.29	240.91	89.97	6,151.14	1,600.91	1,653.14	1,296.95	356.19	4.641	
17,500.00	10,572.13	10,587.16	10,586.13	116.87	240.89	89.95	6,151.14	1,600.91	1,667.21	1,309.46	357.76	4.660	
17,600.00	10,571.58	10,587.00	10,585.97	118.45	240.89	89.94	6,151.14	1,600.91	1,687.10	1,327.77	359.33	4.695	
17,700.00	10,571.04	10,587.00	10,585.97	120.03	240.89	89.94	6,151.14	1,600.91	1,712.61	1,351.69	360.92	4.745	
17,800.00	10,570.49	10,587.00	10,585.97	121.62	240.89	89.94	6,151.14	1,600.91	1,743.49	1,380.99	362.50	4.810	
17,900.00	10,569.95	10,587.00	10,585.97	123.21	240.89	89.94	6,151.14	1,600.91	1,779.46	1,415.37	364.09	4.887	
18,000.00	10,569.40	10,587.00	10,585.97	124.80	240.89	89.94	6,151.14	1,600.91	1,820.22	1,454.54	365.68	4.978	
18,100.00	10,568.85	10,587.00	10,585.97	126.39	240.89	89.94	6,151.14	1,600.91	1,865.45	1,498.18	367.27	5.079	
18,200.00	10,568.31	10,587.00	10,585.97	127.98	240.89	89.94	6,151.14	1,600.91	1,914.85	1,545.98	368.87	5.191	
18,300.00	10,567.76	10,587.00	10,585.97	129.58	240.89	89.94	6,151.14	1,600.91	1,968.09	1,597.62	370.46	5.312	
18,400.00	10,567.22	10,587.00	10,585.97	131.18	240.89	89.94	6,151.14	1,600.91	2,024.87	1,652.80	372.06	5.442	
18,500.00	10,566.67	10,587.00	10,585.97	132.78	240.89	89.94	6,151.14	1,600.91	2,084.90	1,711.24	373.66	5.580	
18,600.00	10,566.13	10,587.00	10,585.97	134.38	240.89	89.94	6,151.14	1,600.91	2,147.91	1,772.65	375.26	5.724	
18,700.00	10,565.58	10,587.00	10,585.97	135.98	240.89	89.94	6,151.14	1,600.91	2,213.65	1,836.78	376.87	5.874	
18,800.00	10,565.03	10,587.00	10,585.97	137.59	240.89	89.94	6,151.14	1,600.91	2,281.88	1,903.41	378.47	6.029	
18,900.00	10,564.49	10,587.00	10,585.97	139.19	240.89	89.94	6,151.14	1,600.91	2,352.38	1,972.30	380.08	6.189	
19,000.00	10,563.94	10,587.00	10,585.97	140.80	240.89	89.94	6,151.14	1,600.91	2,424.96	2,043.27	381.69	6.353	
19,100.00	10,563.40	10,587.00	10,585.97	142.41	240.89	89.94	6,151.14	1,600.91	2,499.43	2,116.13	383.29	6.521	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Bilbrey 32 State Com 2 - Bilbrey 32 State Com 2 - Bilbrey 32 State Com 2 - Bilbrey 32 State Com 2

Offset Site Error: 0.00 ft

Survey Program: 353-Inclinometer only

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
19,200.00	10,562.85	10,587.00	10,585.97	144.02	240.89	89.94	6,151.14	1,600.91	2,575.63	2,190.72	384.90	6.692	
19,300.00	10,562.31	10,587.00	10,585.97	145.63	240.89	89.94	6,151.14	1,600.91	2,653.41	2,266.89	386.52	6.865	
19,400.00	10,561.76	10,587.00	10,585.97	147.24	240.89	89.94	6,151.14	1,600.91	2,732.63	2,344.51	388.13	7.041	
19,500.00	10,561.21	10,587.00	10,585.97	148.86	240.89	89.94	6,151.14	1,600.91	2,813.19	2,423.44	389.74	7.218	
19,600.00	10,560.67	10,587.00	10,585.97	150.47	240.89	89.94	6,151.14	1,600.91	2,894.95	2,503.59	391.36	7.397	
19,700.00	10,560.12	10,587.00	10,585.97	152.09	240.89	89.94	6,151.14	1,600.91	2,977.83	2,584.85	392.98	7.578	
19,800.00	10,559.58	10,587.00	10,585.97	153.71	240.89	89.94	6,151.14	1,600.91	3,061.73	2,667.13	394.59	7.759	
19,900.00	10,559.03	10,587.00	10,585.97	155.33	240.89	89.94	6,151.14	1,600.91	3,146.57	2,750.36	396.21	7.942	
20,000.00	10,558.49	10,587.00	10,585.97	156.95	240.89	89.94	6,151.14	1,600.91	3,232.28	2,834.45	397.83	8.125	
20,100.00	10,557.94	10,587.00	10,585.97	158.57	240.89	89.94	6,151.14	1,600.91	3,318.79	2,919.33	399.45	8.308	
20,200.00	10,557.39	10,587.00	10,585.97	160.19	240.89	89.94	6,151.14	1,600.91	3,406.03	3,004.96	401.07	8.492	
20,300.00	10,556.85	10,587.00	10,585.97	161.81	240.89	89.94	6,151.14	1,600.91	3,493.96	3,091.27	402.70	8.676	
20,400.00	10,556.30	10,587.00	10,585.97	163.44	240.89	89.94	6,151.14	1,600.91	3,582.53	3,178.21	404.32	8.861	
20,500.00	10,555.76	10,587.00	10,585.97	165.06	240.89	89.94	6,151.14	1,600.91	3,671.68	3,265.73	405.94	9.045	
20,600.00	10,555.21	10,587.00	10,585.97	166.69	240.89	89.94	6,151.14	1,600.91	3,761.37	3,353.80	407.57	9.229	
20,700.00	10,554.67	10,587.00	10,585.97	168.31	240.89	89.94	6,151.14	1,600.91	3,851.58	3,442.38	409.20	9.413	
20,800.00	10,554.12	10,587.00	10,585.97	169.94	240.89	89.94	6,151.14	1,600.91	3,942.26	3,531.43	410.82	9.596	
20,821.88	10,554.00	10,587.00	10,585.97	170.29	240.89	89.94	6,151.14	1,600.91	3,962.15	3,550.97	411.18	9.636	

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Cheddar Federal Com pad. - Cheddar 3BS Federal Com 1H - Cheddar 3BS Federal Com 1H - Design #

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	179.54	-149.88	1.19	149.89				
100.00	100.00	100.00	100.00	0.14	0.14	179.54	-149.88	1.19	149.89	149.60	0.29	522.668	
200.00	200.00	200.00	200.00	0.50	0.50	179.54	-149.88	1.19	149.89	148.89	1.00	149.334	
300.00	300.00	300.00	300.00	0.86	0.86	179.54	-149.88	1.19	149.89	148.17	1.72	87.111	
400.00	400.00	400.00	400.00	1.22	1.22	179.54	-149.88	1.19	149.89	147.45	2.44	61.490	
500.00	500.00	500.00	500.00	1.58	1.58	179.54	-149.88	1.19	149.89	146.73	3.15	47.515	
600.00	600.00	600.00	600.00	1.94	1.94	179.54	-149.88	1.19	149.89	146.02	3.87	38.716	
700.00	700.00	700.00	700.00	2.29	2.29	179.54	-149.88	1.19	149.89	145.30	4.59	32.667	
800.00	800.00	800.00	800.00	2.65	2.65	179.54	-149.88	1.19	149.89	144.58	5.31	28.252	
900.00	900.00	900.00	900.00	3.01	3.01	179.54	-149.88	1.19	149.89	143.87	6.02	24.889	
1,000.00	1,000.00	1,000.00	1,000.00	3.37	3.37	179.54	-149.88	1.19	149.89	143.15	6.74	22.241	
1,100.00	1,100.00	1,100.00	1,100.00	3.73	3.73	179.54	-149.88	1.19	149.89	142.43	7.46	20.103	
1,200.00	1,200.00	1,200.00	1,200.00	4.09	4.09	179.54	-149.88	1.19	149.89	141.72	8.17	18.339	
1,300.00	1,300.00	1,300.00	1,300.00	4.45	4.45	179.54	-149.88	1.19	149.89	141.00	8.89	16.860	
1,400.00	1,400.00	1,400.00	1,400.00	4.80	4.80	179.54	-149.88	1.19	149.89	140.28	9.61	15.602	
1,500.00	1,500.00	1,500.00	1,500.00	5.16	5.16	179.54	-149.88	1.19	149.89	139.57	10.32	14.519	
1,600.00	1,600.00	1,600.00	1,600.00	5.52	5.52	179.54	-149.88	1.19	149.89	138.85	11.04	13.576	
1,700.00	1,700.00	1,700.00	1,700.00	5.88	5.88	179.54	-149.88	1.19	149.89	138.13	11.76	12.748	
1,800.00	1,800.00	1,800.00	1,800.00	6.24	6.24	179.54	-149.88	1.19	149.89	137.41	12.47	12.015	
1,900.00	1,900.00	1,900.00	1,900.00	6.60	6.60	179.54	-149.88	1.19	149.89	136.70	13.19	11.362	
2,000.00	2,000.00	2,000.00	2,000.00	6.95	6.95	179.54	-149.88	1.19	149.89	135.98	13.91	10.777	
2,100.00	2,100.00	2,100.00	2,100.00	7.31	7.31	179.54	-149.88	1.19	149.89	135.26	14.63	10.248	
2,200.00	2,200.00	2,200.00	2,200.00	7.67	7.67	179.54	-149.88	1.19	149.89	134.55	15.34	9.770	
2,300.00	2,300.00	2,300.00	2,300.00	8.03	8.03	179.54	-149.88	1.19	149.89	133.83	16.06	9.333	
2,400.00	2,400.00	2,400.00	2,400.00	8.39	8.39	179.54	-149.88	1.19	149.89	133.11	16.78	8.935	
2,500.00	2,500.00	2,500.00	2,500.00	8.75	8.75	179.54	-149.88	1.19	149.89	132.40	17.49	8.568	
2,600.00	2,600.00	2,600.00	2,600.00	9.11	9.11	179.54	-149.88	1.19	149.89	131.68	18.21	8.231	
2,700.00	2,700.00	2,700.00	2,700.00	9.46	9.46	179.54	-149.88	1.19	149.89	130.96	18.93	7.919	
2,800.00	2,800.00	2,800.00	2,800.00	9.82	9.82	179.54	-149.88	1.19	149.89	130.25	19.64	7.630	
2,900.00	2,900.00	2,900.00	2,900.00	10.18	10.18	179.54	-149.88	1.19	149.89	129.53	20.36	7.362	
3,000.00	3,000.00	3,000.00	3,000.00	10.54	10.54	179.54	-149.88	1.19	149.89	128.81	21.08	7.111	
3,100.00	3,100.00	3,100.00	3,100.00	10.90	10.90	179.54	-149.88	1.19	149.89	128.09	21.80	6.877	
3,200.00	3,200.00	3,194.99	3,194.98	11.26	11.22	179.54	-151.46	1.20	151.55	129.07	22.48	6.742	
3,300.00	3,300.00	3,289.78	3,289.64	11.61	11.53	179.54	-156.17	1.24	156.52	133.37	23.14	6.763	
3,400.00	3,400.00	3,384.15	3,383.68	11.97	11.83	179.54	-163.96	1.31	164.78	140.97	23.81	6.921	
3,500.00	3,500.00	3,483.13	3,482.15	12.33	12.16	179.54	-174.05	1.39	174.97	150.48	24.49	7.145	
3,600.00	3,600.00	3,582.61	3,581.11	12.69	12.49	179.54	-184.20	1.47	185.17	160.00	25.17	7.356	
3,700.00	3,700.00	3,682.09	3,680.07	13.05	12.82	179.54	-194.35	1.56	195.37	169.52	25.86	7.556	
3,800.00	3,800.00	3,781.56	3,779.03	13.41	13.15	179.54	-204.50	1.64	205.58	179.03	26.54	7.745	
3,900.00	3,900.00	3,881.04	3,877.99	13.77	13.49	179.54	-214.65	1.72	215.78	188.54	27.23	7.923	
4,000.00	4,000.00	3,980.52	3,976.94	14.12	13.84	179.54	-224.79	1.81	225.98	198.06	27.92	8.093	
4,100.00	4,100.00	4,080.00	4,075.90	14.48	14.18	179.54	-234.94	1.89	236.18	207.57	28.62	8.253	
4,200.00	4,200.00	4,179.48	4,174.86	14.84	14.53	179.54	-245.09	1.98	246.39	217.08	29.31	8.406	
4,300.00	4,300.00	4,278.96	4,273.82	15.20	14.88	179.54	-255.24	2.06	256.59	226.58	30.00	8.552	
4,400.00	4,400.00	4,378.43	4,372.78	15.56	15.23	179.54	-265.39	2.14	266.79	236.09	30.70	8.690	
4,500.00	4,500.00	4,477.91	4,471.74	15.92	15.59	179.54	-275.54	2.23	276.99	245.60	31.40	8.822	
4,600.00	4,600.00	4,577.39	4,570.70	16.27	15.94	179.54	-285.69	2.31	287.20	255.10	32.10	8.948	
4,700.00	4,700.00	4,676.87	4,669.66	16.63	16.30	179.54	-295.84	2.39	297.40	264.60	32.79	9.068	
4,800.00	4,800.00	4,776.35	4,768.62	16.99	16.66	179.54	-305.99	2.48	307.60	274.11	33.49	9.184	
4,900.00	4,900.00	4,875.82	4,867.58	17.35	17.02	179.54	-316.13	2.56	317.80	283.61	34.20	9.294	
5,000.00	5,000.00	4,975.30	4,966.54	17.71	17.38	179.54	-326.28	2.64	328.01	293.11	34.90	9.399	
5,100.00	5,100.00	5,074.78	5,065.49	18.07	17.75	179.54	-336.43	2.73	338.21	302.61	35.60	9.500	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Cheddar Federal Com pad. - Cheddar 3BS Federal Com 1H - Cheddar 3BS Federal Com 1H - Design #

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.00	5,199.98	5,174.42	5,164.61	18.41	18.11	-0.07	-346.60	2.81	346.67	310.39	36.29	9.554	
5,300.00	5,299.84	5,274.29	5,263.96	18.73	18.48	-0.07	-356.79	2.90	351.65	314.74	36.91	9.526	
5,400.00	5,399.45	5,374.27	5,363.42	19.05	18.85	-0.07	-366.99	2.98	353.15	315.65	37.50	9.417	
5,500.00	5,498.70	5,474.25	5,462.88	19.37	19.22	-0.08	-377.19	3.06	351.15	313.11	38.04	9.230	
5,600.00	5,597.71	5,574.17	5,562.28	19.70	19.59	-0.08	-387.38	3.15	347.25	308.54	38.71	8.970	
5,700.00	5,696.71	5,674.09	5,661.68	20.03	19.96	-0.08	-397.57	3.23	343.34	303.95	39.39	8.717	
5,800.00	5,795.71	5,774.02	5,761.08	20.36	20.33	-0.08	-407.77	3.32	339.44	299.37	40.07	8.472	
5,900.00	5,894.72	5,873.94	5,860.48	20.70	20.71	-0.09	-417.96	3.40	335.53	294.78	40.75	8.234	
6,000.00	5,993.72	5,973.86	5,959.89	21.04	21.08	-0.09	-428.16	3.48	331.62	290.19	41.43	8.004	
6,100.00	6,092.72	6,073.79	6,059.29	21.38	21.46	-0.09	-438.35	3.57	327.72	285.60	42.12	7.781	
6,200.00	6,191.73	6,173.71	6,158.69	21.73	21.83	-0.10	-448.55	3.65	323.81	281.01	42.80	7.565	
6,300.00	6,290.73	6,273.64	6,258.09	22.08	22.21	-0.10	-458.74	3.74	319.90	276.41	43.49	7.356	
6,400.00	6,389.74	6,373.56	6,357.50	22.43	22.59	-0.11	-468.94	3.82	316.00	271.82	44.18	7.152	
6,500.00	6,488.74	6,473.48	6,456.90	22.78	22.97	-0.11	-479.13	3.90	312.09	267.22	44.87	6.955	
6,600.00	6,587.74	6,573.41	6,556.30	23.14	23.34	-0.11	-489.32	3.99	308.19	262.62	45.57	6.764	
6,700.00	6,686.75	6,673.33	6,655.70	23.50	23.72	-0.12	-499.52	4.07	304.28	258.02	46.26	6.578	
6,800.00	6,785.75	6,773.25	6,755.11	23.86	24.10	-0.12	-509.71	4.16	300.37	253.42	46.96	6.397	
6,900.00	6,884.75	6,873.18	6,854.51	24.22	24.48	-0.13	-519.91	4.24	296.47	248.81	47.65	6.221	
7,000.00	6,983.76	6,973.10	6,953.91	24.59	24.86	-0.13	-530.10	4.32	292.56	244.21	48.35	6.051	
7,100.00	7,082.76	7,073.03	7,053.31	24.95	25.25	-0.13	-540.30	4.41	288.65	239.60	49.05	5.885	
7,200.00	7,181.77	7,172.95	7,152.71	25.32	25.63	-0.14	-550.49	4.49	284.75	235.00	49.75	5.724	
7,300.00	7,280.77	7,272.87	7,252.12	25.69	26.01	-0.14	-560.68	4.58	280.84	230.39	50.45	5.567	
7,400.00	7,379.77	7,372.80	7,351.52	26.07	26.39	-0.15	-570.88	4.66	276.94	225.78	51.15	5.414	
7,500.00	7,478.78	7,472.72	7,450.92	26.44	26.77	-0.15	-581.07	4.75	273.03	221.17	51.86	5.265	
7,600.00	7,577.78	7,572.64	7,550.32	26.82	27.16	-0.16	-591.27	4.83	269.12	216.56	52.56	5.120	
7,700.00	7,676.78	7,672.57	7,649.73	27.19	27.54	-0.16	-601.46	4.91	265.22	211.95	53.27	4.979	
7,800.00	7,775.79	7,772.49	7,749.13	27.57	27.93	-0.17	-611.66	5.00	261.31	207.34	53.97	4.842	
7,900.00	7,874.79	7,872.41	7,848.53	27.95	28.31	-0.18	-621.85	5.08	257.40	202.72	54.68	4.708	
8,000.00	7,973.80	7,972.34	7,947.93	28.33	28.69	-0.18	-632.05	5.17	253.50	198.11	55.39	4.577	
8,100.00	8,072.80	8,072.26	8,047.33	28.71	29.08	-0.19	-642.24	5.25	249.59	193.50	56.10	4.449	
8,200.00	8,171.80	8,172.19	8,146.74	29.10	29.46	-0.19	-652.43	5.33	245.69	188.88	56.80	4.325	
8,300.00	8,270.81	8,272.11	8,246.14	29.48	29.85	-0.20	-662.63	5.42	241.78	184.26	57.51	4.204	
8,400.00	8,369.81	8,372.03	8,345.54	29.87	30.24	-0.21	-672.82	5.50	237.87	179.65	58.22	4.085	
8,500.00	8,468.81	8,471.96	8,444.94	30.26	30.62	-0.21	-683.02	5.59	233.97	175.03	58.94	3.970	
8,600.00	8,567.82	8,571.88	8,544.35	30.64	31.01	-0.22	-693.21	5.67	230.06	170.41	59.65	3.857	
8,700.00	8,666.82	8,671.80	8,643.75	31.03	31.39	-0.23	-703.41	5.75	226.15	165.79	60.36	3.747	
8,800.00	8,765.82	8,774.72	8,746.15	31.42	31.79	-0.24	-713.65	5.84	222.01	160.92	61.08	3.634	
8,900.00	8,864.83	8,882.71	8,853.87	31.81	32.19	-0.25	-721.19	5.90	214.87	153.05	61.82	3.476	
9,000.00	8,963.83	8,989.96	8,961.06	32.21	32.57	-0.26	-724.65	5.93	204.00	141.44	62.56	3.261	
9,100.00	9,062.84	9,091.74	9,062.84	32.60	32.91	-0.28	-724.91	5.93	190.16	126.91	63.26	3.006	
9,200.00	9,161.84	9,190.74	9,161.84	32.99	33.23	-0.30	-724.91	5.93	176.08	112.14	63.94	2.754	
9,300.00	9,260.84	9,289.74	9,260.84	33.39	33.56	-0.33	-724.91	5.93	162.00	97.37	64.63	2.506	
9,400.00	9,359.85	9,388.75	9,359.85	33.78	33.88	-0.36	-724.91	5.93	147.92	82.60	65.32	2.264	
9,500.00	9,458.85	9,487.75	9,458.85	34.18	34.21	-0.40	-724.91	5.93	133.84	67.83	66.01	2.027	
9,600.00	9,557.87	9,586.77	9,557.87	34.57	34.53	-0.45	-724.91	5.93	119.88	53.14	66.75	1.796	
9,700.00	9,657.21	9,686.11	9,657.21	34.96	34.86	-0.49	-724.91	5.93	108.46	40.91	67.56	1.606	
9,800.00	9,756.89	9,785.79	9,756.89	35.33	35.19	-0.53	-724.91	5.93	100.52	32.23	68.29	1.472	Level 3
9,900.00	9,856.79	9,885.69	9,856.79	35.69	35.52	-0.55	-724.91	5.93	96.06	27.10	68.95	1.393	Level 3
10,000.00	9,956.78	9,985.68	9,956.78	36.03	35.85	179.05	-724.91	5.93	95.00	25.43	69.57	1.366	Level 3
10,100.00	10,056.78	10,085.68	10,056.78	36.36	36.18	179.05	-724.91	5.93	95.00	24.74	70.26	1.352	Level 3, CC, ES, SF
10,149.26	10,106.03	10,134.93	10,106.03	36.52	36.34	179.44	-724.91	5.93	95.66	25.19	70.48	1.357	Level 3
10,200.00	10,156.76	10,185.67	10,156.76	36.69	36.51	179.44	-724.91	5.93	95.72	25.06	70.66	1.355	Level 3

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Cheddar Federal Com pad. - Cheddar 3BS Federal Com 1H - Cheddar 3BS Federal Com 1H - Design #

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,300.00	10,255.31	10,284.21	10,255.31	36.97	36.84	179.50	-724.91	5.93	111.59	43.05	68.53	1.628	
10,400.00	10,348.41	10,377.31	10,348.41	37.18	37.15	179.59	-724.91	5.93	147.60	83.80	63.80	2.313	
10,500.00	10,431.98	10,460.88	10,431.98	37.32	37.43	179.66	-724.91	5.93	202.18	145.39	56.79	3.560	
10,600.00	10,502.38	10,531.28	10,502.38	37.40	37.66	179.69	-724.91	5.93	272.94	224.84	48.10	5.675	
10,700.00	10,556.53	10,585.43	10,556.53	37.46	37.84	179.67	-724.91	5.93	356.79	318.00	38.79	9.197	
10,800.00	10,592.06	10,620.96	10,592.06	37.50	37.96	179.54	-724.91	5.93	450.07	419.20	30.87	14.580	
10,900.00	10,607.42	10,636.32	10,607.42	37.53	38.02	178.05	-724.91	5.93	548.70	520.95	27.75	19.772	
11,000.00	10,607.60	10,636.50	10,607.60	37.60	38.02	14.73	-724.91	5.93	648.69	615.37	33.32	19.467	
11,100.00	10,607.06	10,635.96	10,607.06	37.73	38.01	12.83	-724.91	5.93	748.69	716.29	32.39	23.111	
11,200.00	10,606.51	10,635.41	10,606.51	37.94	38.01	11.36	-724.91	5.93	848.68	816.83	31.85	26.643	
11,300.00	10,605.97	10,634.87	10,605.97	38.22	38.01	10.19	-724.91	5.93	948.68	917.11	31.57	30.046	
11,400.00	10,605.42	10,634.32	10,605.42	38.57	38.01	9.24	-724.91	5.93	1,048.68	1,017.20	31.48	33.310	
11,500.00	10,604.87	12,668.77	11,730.90	38.99	43.23	179.96	427.83	-2.06	1,126.03	1,091.30	34.73	32.422	
11,600.00	10,604.33	12,768.77	11,730.53	39.47	43.76	179.96	527.83	-2.75	1,126.21	1,090.70	35.52	31.710	
11,700.00	10,603.78	12,868.77	11,730.17	40.02	44.34	179.96	627.83	-3.44	1,126.39	1,090.04	36.35	30.985	
11,800.00	10,603.24	12,968.76	11,729.81	40.63	44.97	179.96	727.82	-4.13	1,126.58	1,089.34	37.24	30.254	
11,900.00	10,602.69	13,068.76	11,729.44	41.30	45.66	179.96	827.82	-4.83	1,126.76	1,088.59	38.17	29.523	
12,000.00	10,602.15	13,168.76	11,729.08	42.02	46.39	179.96	927.82	-5.52	1,126.94	1,087.81	39.13	28.796	
12,100.00	10,601.60	13,268.76	11,728.71	42.80	47.18	179.96	1,027.81	-6.21	1,127.12	1,086.98	40.14	28.078	
12,200.00	10,601.05	13,368.76	11,728.35	43.62	48.01	179.96	1,127.81	-6.91	1,127.30	1,086.12	41.18	27.372	
12,300.00	10,600.51	13,468.76	11,727.99	44.50	48.88	179.96	1,227.81	-7.60	1,127.49	1,085.23	42.26	26.680	
12,400.00	10,599.96	13,568.76	11,727.62	45.42	49.79	179.96	1,327.80	-8.29	1,127.67	1,084.31	43.36	26.005	
12,500.00	10,599.42	13,668.76	11,727.26	46.38	50.74	179.96	1,427.80	-8.98	1,127.85	1,083.35	44.50	25.347	
12,600.00	10,598.87	13,768.76	11,726.90	47.38	51.73	179.96	1,527.80	-9.68	1,128.03	1,082.38	45.65	24.708	
12,700.00	10,598.33	13,868.76	11,726.53	48.41	52.75	179.96	1,627.79	-10.37	1,128.22	1,081.38	46.84	24.088	
12,800.00	10,597.78	13,968.76	11,726.17	49.48	53.80	179.96	1,727.79	-11.06	1,128.40	1,080.36	48.04	23.488	
12,900.00	10,597.23	14,068.76	11,725.81	50.59	54.89	179.96	1,827.79	-11.76	1,128.58	1,079.31	49.27	22.908	
13,000.00	10,596.69	14,168.76	11,725.44	51.72	56.00	179.96	1,927.78	-12.45	1,128.76	1,078.25	50.51	22.347	
13,100.00	10,596.14	14,268.76	11,725.08	52.88	57.14	179.96	2,027.78	-13.14	1,128.94	1,077.17	51.77	21.807	
13,200.00	10,595.60	14,368.76	11,724.71	54.07	58.31	179.97	2,127.78	-13.83	1,129.13	1,076.08	53.05	21.285	
13,300.00	10,595.05	14,468.76	11,724.35	55.28	59.50	179.97	2,227.77	-14.53	1,129.31	1,074.97	54.34	20.782	
13,400.00	10,594.50	14,568.76	11,723.99	56.52	60.71	179.97	2,327.77	-15.22	1,129.49	1,073.84	55.65	20.297	
13,500.00	10,593.96	14,668.76	11,723.62	57.78	61.94	179.97	2,427.77	-15.91	1,129.67	1,072.70	56.97	19.830	
13,600.00	10,593.41	14,768.76	11,723.26	59.06	63.20	179.97	2,527.77	-16.60	1,129.85	1,071.55	58.30	19.380	
13,700.00	10,592.87	14,868.76	11,722.90	60.36	64.47	179.97	2,627.76	-17.30	1,130.04	1,070.39	59.65	18.946	
13,800.00	10,592.32	14,968.76	11,722.53	61.67	65.76	179.97	2,727.76	-17.99	1,130.22	1,069.22	61.00	18.528	
13,900.00	10,591.78	15,068.76	11,722.17	63.00	67.07	179.97	2,827.76	-18.68	1,130.40	1,068.04	62.36	18.126	
14,000.00	10,591.23	15,168.76	11,721.80	64.35	68.39	179.97	2,927.75	-19.38	1,130.58	1,066.84	63.74	17.738	
14,100.00	10,590.68	15,268.76	11,721.44	65.71	69.73	179.97	3,027.75	-20.07	1,130.76	1,065.64	65.12	17.364	
14,200.00	10,590.14	15,368.76	11,721.08	67.09	71.08	179.97	3,127.75	-20.76	1,130.95	1,064.43	66.51	17.003	
14,300.00	10,589.59	15,468.76	11,720.71	68.48	72.44	179.97	3,227.74	-21.45	1,131.13	1,063.22	67.91	16.656	
14,400.00	10,589.05	15,568.76	11,720.35	69.88	73.82	179.97	3,327.74	-22.15	1,131.31	1,061.99	69.32	16.321	
14,500.00	10,588.50	15,668.76	11,719.99	71.29	75.21	179.97	3,427.74	-22.84	1,131.49	1,060.76	70.73	15.997	
14,600.00	10,587.96	15,768.76	11,719.62	72.72	76.61	179.97	3,527.73	-23.53	1,131.67	1,059.52	72.15	15.685	
14,700.00	10,587.41	15,868.76	11,719.26	74.15	78.02	179.97	3,627.73	-24.23	1,131.86	1,058.28	73.58	15.384	
14,800.00	10,586.86	15,968.76	11,718.90	75.60	79.44	179.97	3,727.73	-24.92	1,132.04	1,057.03	75.01	15.092	
14,900.00	10,586.32	16,068.76	11,718.53	77.05	80.87	179.97	3,827.72	-25.61	1,132.22	1,055.78	76.44	14.811	
15,000.00	10,585.77	16,168.76	11,718.17	78.51	82.31	179.97	3,927.72	-26.30	1,132.40	1,054.52	77.89	14.539	
15,100.00	10,585.23	16,268.76	11,717.80	79.98	83.76	179.97	4,027.72	-27.00	1,132.58	1,053.25	79.33	14.277	
15,200.00	10,584.68	16,368.76	11,717.44	81.46	85.21	179.97	4,127.71	-27.69	1,132.77	1,051.98	80.78	14.022	
15,300.00	10,584.14	16,468.76	11,717.08	82.94	86.68	179.97	4,227.71	-28.38	1,132.95	1,050.71	82.24	13.776	
15,400.00	10,583.59	16,568.76	11,716.71	84.43	88.15	179.98	4,327.71	-29.08	1,133.13	1,049.43	83.70	13.538	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Cheddar Federal Com pad. - Cheddar 3BS Federal Com 1H - Cheddar 3BS Federal Com 1H - Design # — Offset Site Error: 0.00 ft

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

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
15,500.00	10,583.04	16,668.76	11,716.35	85.93	89.62	179.98	4,427.70	-29.77	1,133.31	1,048.15	85.16	13.308	
15,600.00	10,582.50	16,768.76	11,715.99	87.44	91.11	179.98	4,527.70	-30.46	1,133.50	1,046.87	86.63	13.085	
15,700.00	10,581.95	16,868.76	11,715.62	88.95	92.60	179.98	4,627.70	-31.15	1,133.68	1,045.58	88.10	12.868	
15,800.00	10,581.41	16,968.76	11,715.26	90.46	94.10	179.98	4,727.69	-31.85	1,133.86	1,044.29	89.57	12.658	
15,900.00	10,580.86	17,068.76	11,714.90	91.98	95.60	179.98	4,827.69	-32.54	1,134.04	1,042.99	91.05	12.455	
16,000.00	10,580.32	17,168.76	11,714.53	93.51	97.11	179.98	4,927.69	-33.23	1,134.22	1,041.69	92.53	12.258	
16,100.00	10,579.77	17,268.76	11,714.17	95.04	98.62	179.98	5,027.68	-33.93	1,134.41	1,040.39	94.01	12.066	
16,200.00	10,579.22	17,368.76	11,713.80	96.57	100.14	179.98	5,127.68	-34.62	1,134.59	1,039.09	95.50	11.881	
16,300.00	10,578.68	17,468.76	11,713.44	98.11	101.66	179.98	5,227.68	-35.31	1,134.77	1,037.78	96.99	11.700	
16,400.00	10,578.13	17,568.76	11,713.08	99.66	103.19	179.98	5,327.67	-36.00	1,134.95	1,036.47	98.48	11.525	
16,500.00	10,577.59	17,668.76	11,712.71	101.21	104.72	179.98	5,427.67	-36.70	1,135.13	1,035.16	99.97	11.354	
16,600.00	10,577.04	17,768.76	11,712.35	102.76	106.25	179.98	5,527.67	-37.39	1,135.32	1,033.85	101.47	11.189	
16,700.00	10,576.50	17,868.76	11,711.99	104.31	107.79	179.98	5,627.67	-38.08	1,135.50	1,032.53	102.97	11.028	
16,800.00	10,575.95	17,968.76	11,711.62	105.87	109.34	179.98	5,727.66	-38.77	1,135.68	1,031.21	104.47	10.871	
16,900.00	10,575.40	18,068.76	11,711.26	107.43	110.88	179.98	5,827.66	-39.47	1,135.86	1,029.89	105.97	10.719	
17,000.00	10,574.86	18,168.76	11,710.89	109.00	112.43	179.98	5,927.66	-40.16	1,136.04	1,028.57	107.47	10.571	
17,100.00	10,574.31	18,268.76	11,710.53	110.57	113.99	179.98	6,027.65	-40.85	1,136.23	1,027.25	108.98	10.426	
17,200.00	10,573.77	18,368.76	11,710.17	112.14	115.54	179.98	6,127.65	-41.55	1,136.41	1,025.92	110.49	10.286	
17,300.00	10,573.22	18,468.76	11,709.80	113.71	117.10	179.98	6,227.65	-42.24	1,136.59	1,024.60	111.99	10.149	
17,400.00	10,572.68	18,568.76	11,709.44	115.29	118.67	179.98	6,327.64	-42.93	1,136.77	1,023.27	113.51	10.015	
17,500.00	10,572.13	18,668.76	11,709.08	116.87	120.23	179.98	6,427.64	-43.62	1,136.95	1,021.94	115.02	9.885	
17,600.00	10,571.58	18,768.76	11,708.71	118.45	121.80	179.98	6,527.64	-44.32	1,137.14	1,020.60	116.53	9.758	
17,700.00	10,571.04	18,868.76	11,708.35	120.03	123.37	179.99	6,627.63	-45.01	1,137.32	1,019.27	118.05	9.634	
17,800.00	10,570.49	18,968.76	11,707.99	121.62	124.95	179.99	6,727.63	-45.70	1,137.50	1,017.94	119.56	9.514	
17,900.00	10,569.95	19,068.75	11,707.62	123.21	126.52	179.99	6,827.63	-46.40	1,137.68	1,016.60	121.08	9.396	
18,000.00	10,569.40	19,168.75	11,707.26	124.80	128.10	179.99	6,927.62	-47.09	1,137.87	1,015.26	122.60	9.281	
18,100.00	10,568.85	19,268.75	11,706.89	126.39	129.68	179.99	7,027.62	-47.78	1,138.05	1,013.92	124.12	9.169	
18,200.00	10,568.31	19,368.75	11,706.53	127.98	131.26	179.99	7,127.62	-48.47	1,138.23	1,012.59	125.64	9.059	
18,300.00	10,567.76	19,468.75	11,706.17	129.58	132.85	179.99	7,227.61	-49.17	1,138.41	1,011.24	127.17	8.952	
18,400.00	10,567.22	19,568.75	11,705.80	131.18	134.44	179.99	7,327.61	-49.86	1,138.59	1,009.90	128.69	8.847	
18,500.00	10,566.67	19,668.75	11,705.44	132.78	136.02	179.99	7,427.61	-50.55	1,138.78	1,008.56	130.22	8.745	
18,600.00	10,566.13	19,768.75	11,705.08	134.38	137.62	179.99	7,527.60	-51.25	1,138.96	1,007.21	131.74	8.645	
18,700.00	10,565.58	19,868.75	11,704.71	135.98	139.21	179.99	7,627.60	-51.94	1,139.14	1,005.87	133.27	8.548	
18,800.00	10,565.03	19,968.75	11,704.35	137.59	140.80	179.99	7,727.60	-52.63	1,139.32	1,004.52	134.80	8.452	
18,900.00	10,564.49	20,068.75	11,703.99	139.19	142.40	179.99	7,827.59	-53.32	1,139.50	1,003.18	136.33	8.359	
19,000.00	10,563.94	20,168.75	11,703.62	140.80	144.00	179.99	7,927.59	-54.02	1,139.69	1,001.83	137.86	8.267	
19,100.00	10,563.40	20,268.75	11,703.26	142.41	145.60	179.99	8,027.59	-54.71	1,139.87	1,000.48	139.39	8.178	
19,200.00	10,562.85	20,368.75	11,702.89	144.02	147.20	179.99	8,127.58	-55.40	1,140.05	999.13	140.92	8.090	
19,300.00	10,562.31	20,468.75	11,702.53	145.63	148.80	179.99	8,227.58	-56.10	1,140.23	997.78	142.45	8.004	
19,400.00	10,561.76	20,568.75	11,702.17	147.24	150.40	179.99	8,327.58	-56.79	1,140.41	996.43	143.99	7.920	
19,500.00	10,561.21	20,668.75	11,701.80	148.86	152.01	179.99	8,427.57	-57.48	1,140.60	995.08	145.52	7.838	
19,600.00	10,560.67	20,768.75	11,701.44	150.47	153.62	179.99	8,527.57	-58.17	1,140.78	993.72	147.06	7.757	
19,700.00	10,560.12	20,868.75	11,701.08	152.09	155.22	179.99	8,627.57	-58.87	1,140.96	992.37	148.59	7.679	
19,800.00	10,559.58	20,968.75	11,700.71	153.71	156.83	179.99	8,727.57	-59.56	1,141.14	991.02	150.13	7.601	
19,900.00	10,559.03	21,068.75	11,700.35	155.33	158.44	179.99	8,827.56	-60.25	1,141.32	989.66	151.66	7.525	
20,000.00	10,558.49	21,168.75	11,699.98	156.95	160.05	180.00	8,927.56	-60.94	1,141.51	988.30	153.20	7.451	
20,100.00	10,557.94	21,268.75	11,699.62	158.57	161.67	180.00	9,027.56	-61.64	1,141.69	986.95	154.74	7.378	
20,200.00	10,557.39	21,368.75	11,699.26	160.19	163.28	180.00	9,127.55	-62.33	1,141.87	985.59	156.28	7.307	
20,300.00	10,556.85	21,468.75	11,698.89	161.81	164.90	180.00	9,227.55	-63.02	1,142.05	984.23	157.82	7.236	
20,400.00	10,556.30	21,568.75	11,698.53	163.44	166.51	180.00	9,327.55	-63.72	1,142.24	982.88	159.36	7.168	
20,500.00	10,555.76	21,668.75	11,698.17	165.06	168.13	180.00	9,427.54	-64.41	1,142.42	981.52	160.90	7.100	
20,600.00	10,555.21	21,768.75	11,697.80	166.69	169.75	180.00	9,527.54	-65.10	1,142.60	980.16	162.44	7.034	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Cheddar Federal Com pad. - Cheddar 3BS Federal Com 1H - Cheddar 3BS Federal Com 1H - Design #

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
20,700.00	10,554.67	21,868.75	11,697.44	168.31	171.37	180.00	9,627.54	-65.79	1,142.78	978.80	163.98	6.969	
20,800.00	10,554.12	21,968.75	11,697.08	169.94	172.99	180.00	9,727.53	-66.49	1,142.96	977.44	165.53	6.905	
20,821.88	10,554.00	21,989.46	11,697.00	170.29	173.32	180.00	9,748.25	-66.63	1,143.00	977.15	165.85	6.892	

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Cheddar Federal Com pad. - Pepper Jack 2BS Federal Com 4H - Pepper Jack 2BS Federal Com 4H - D

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	118.32	-1,208.38	2,242.17	2,547.06				
100.00	100.00	98.00	98.00	0.14	0.14	118.32	-1,208.38	2,242.17	2,547.06	2,546.78	0.28	8,971.372	
200.00	200.00	198.00	198.00	0.50	0.49	118.32	-1,208.38	2,242.17	2,547.06	2,546.06	1.00	2,555.875	
300.00	300.00	298.00	298.00	0.86	0.85	118.32	-1,208.38	2,242.17	2,547.06	2,545.35	1.71	1,486.472	
400.00	400.00	398.00	398.00	1.22	1.21	118.32	-1,208.38	2,242.17	2,547.06	2,544.63	2.43	1,047.984	
500.00	500.00	498.00	498.00	1.58	1.57	118.32	-1,208.38	2,242.17	2,547.06	2,543.91	3.15	809.264	
600.00	600.00	598.00	598.00	1.94	1.93	118.32	-1,208.38	2,242.17	2,547.06	2,543.20	3.86	659.122	
700.00	700.00	698.00	698.00	2.29	2.29	118.32	-1,208.38	2,242.17	2,547.06	2,542.48	4.58	555.973	
800.00	800.00	798.00	798.00	2.65	2.65	118.32	-1,208.38	2,242.17	2,547.06	2,541.76	5.30	480.740	
900.00	900.00	898.00	898.00	3.01	3.00	118.32	-1,208.38	2,242.17	2,547.06	2,541.05	6.02	423.441	
1,000.00	1,000.00	998.00	998.00	3.37	3.36	118.32	-1,208.38	2,242.17	2,547.06	2,540.33	6.73	378.346	
1,100.00	1,100.00	1,098.00	1,098.00	3.73	3.72	118.32	-1,208.38	2,242.17	2,547.06	2,539.61	7.45	341.931	
1,200.00	1,200.00	1,198.00	1,198.00	4.09	4.08	118.32	-1,208.38	2,242.17	2,547.06	2,538.89	8.17	311.911	
1,300.00	1,300.00	1,298.00	1,298.00	4.45	4.44	118.32	-1,208.38	2,242.17	2,547.06	2,538.18	8.88	286.737	
1,400.00	1,400.00	1,398.00	1,398.00	4.80	4.80	118.32	-1,208.38	2,242.17	2,547.06	2,537.46	9.60	265.322	
1,500.00	1,500.00	1,498.00	1,498.00	5.16	5.15	118.32	-1,208.38	2,242.17	2,547.06	2,536.74	10.32	246.884	
1,600.00	1,600.00	1,598.00	1,598.00	5.52	5.51	118.32	-1,208.38	2,242.17	2,547.06	2,536.03	11.03	230.843	
1,700.00	1,700.00	1,698.00	1,698.00	5.88	5.87	118.32	-1,208.38	2,242.17	2,547.06	2,535.31	11.75	216.758	
1,800.00	1,800.00	1,798.00	1,798.00	6.24	6.23	118.32	-1,208.38	2,242.17	2,547.06	2,534.59	12.47	204.294	
1,900.00	1,900.00	1,898.00	1,898.00	6.60	6.59	118.32	-1,208.38	2,242.17	2,547.06	2,533.88	13.18	193.185	
2,000.00	2,000.00	1,998.00	1,998.00	6.95	6.95	118.32	-1,208.38	2,242.17	2,547.06	2,533.16	13.90	183.222	
2,100.00	2,100.00	2,098.00	2,098.00	7.31	7.31	118.32	-1,208.38	2,242.17	2,547.06	2,532.44	14.62	174.236	
2,200.00	2,200.00	2,198.00	2,198.00	7.67	7.66	118.32	-1,208.38	2,242.17	2,547.06	2,531.73	15.34	166.090	
2,300.00	2,300.00	2,298.00	2,298.00	8.03	8.02	118.32	-1,208.38	2,242.17	2,547.06	2,531.01	16.05	158.672	
2,400.00	2,400.00	2,398.00	2,398.00	8.39	8.38	118.32	-1,208.38	2,242.17	2,547.06	2,530.29	16.77	151.888	
2,500.00	2,500.00	2,498.00	2,498.00	8.75	8.74	118.32	-1,208.38	2,242.17	2,547.06	2,529.57	17.49	145.661	
2,600.00	2,600.00	2,598.00	2,598.00	9.11	9.10	118.32	-1,208.38	2,242.17	2,547.06	2,528.86	18.20	139.924	
2,700.00	2,700.00	2,698.00	2,698.00	9.46	9.46	118.32	-1,208.38	2,242.17	2,547.06	2,528.14	18.92	134.622	
2,800.00	2,800.00	2,798.00	2,798.00	9.82	9.81	118.32	-1,208.38	2,242.17	2,547.06	2,527.42	19.64	129.707	
2,900.00	2,900.00	2,898.00	2,898.00	10.18	10.17	118.32	-1,208.38	2,242.17	2,547.06	2,526.71	20.35	125.138	
3,000.00	3,000.00	2,998.00	2,998.00	10.54	10.53	118.32	-1,208.38	2,242.17	2,547.06	2,525.99	21.07	120.880	
3,100.00	3,100.00	3,207.92	3,207.74	10.90	11.28	118.19	-1,200.91	2,241.09	2,544.94	2,522.76	22.18	114.742	
3,200.00	3,200.00	3,417.83	3,416.35	11.26	12.03	117.77	-1,178.27	2,237.82	2,538.47	2,515.19	23.29	109.011	
3,300.00	3,300.00	3,623.33	3,618.42	11.61	12.78	117.08	-1,141.53	2,232.51	2,527.81	2,503.43	24.38	103.664	
3,400.00	3,400.00	3,822.52	3,811.27	11.97	13.55	116.14	-1,092.32	2,225.39	2,513.22	2,487.74	25.48	98.625	
3,500.00	3,500.00	4,013.87	3,992.83	12.33	14.34	114.98	-1,032.66	2,216.76	2,495.05	2,468.46	26.59	93.833	
3,600.00	3,600.00	4,110.25	4,083.19	12.69	14.76	114.32	-999.44	2,211.96	2,475.29	2,447.94	27.35	90.514	
3,700.00	3,700.00	4,203.99	4,171.06	13.05	15.19	113.66	-967.13	2,207.28	2,455.85	2,427.75	28.10	87.383	
3,800.00	3,800.00	4,297.73	4,258.92	13.41	15.63	113.00	-934.82	2,202.61	2,436.76	2,407.89	28.87	84.392	
3,900.00	3,900.00	4,391.47	4,346.79	13.77	16.08	112.32	-902.50	2,197.93	2,418.02	2,388.37	29.66	81.535	
4,000.00	4,000.00	4,485.21	4,434.66	14.12	16.54	111.64	-870.19	2,193.26	2,399.65	2,369.20	30.45	78.807	
4,100.00	4,100.00	4,578.94	4,522.53	14.48	17.01	110.95	-837.88	2,188.59	2,381.63	2,350.38	31.25	76.204	
4,200.00	4,200.00	4,672.68	4,610.40	14.84	17.49	110.25	-805.56	2,183.91	2,364.00	2,331.93	32.07	73.719	
4,300.00	4,300.00	4,766.42	4,698.27	15.20	17.98	109.54	-773.25	2,179.24	2,346.75	2,313.85	32.89	71.347	
4,400.00	4,400.00	4,860.16	4,786.14	15.56	18.47	108.82	-740.94	2,174.57	2,329.89	2,296.16	33.73	69.083	
4,500.00	4,500.00	4,953.90	4,874.00	15.92	18.97	108.09	-708.62	2,169.89	2,313.43	2,278.86	34.57	66.922	
4,600.00	4,600.00	5,047.64	4,961.87	16.27	19.48	107.35	-676.31	2,165.22	2,297.38	2,261.96	35.42	64.860	
4,700.00	4,700.00	5,141.37	5,049.74	16.63	20.00	106.60	-644.00	2,160.55	2,281.76	2,245.48	36.28	62.891	
4,800.00	4,800.00	5,235.11	5,137.61	16.99	20.52	105.84	-611.68	2,155.87	2,266.56	2,229.41	37.15	61.012	
4,900.00	4,900.00	5,328.85	5,225.48	17.35	21.04	105.07	-579.37	2,151.20	2,251.79	2,213.77	38.03	59.218	
5,000.00	5,000.00	5,422.59	5,313.35	17.71	21.57	104.30	-547.06	2,146.53	2,237.47	2,198.57	38.91	57.506	
5,100.00	5,100.00	5,516.33	5,401.21	18.07	22.10	103.51	-514.74	2,141.85	2,223.61	2,183.81	39.80	55.871	

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Cheddar Federal Com pad. - Pepper Jack 2BS Federal Com 4H - Pepper Jack 2BS Federal Com 4H - D

Offset Site Error: 0.00 ft
Survey Program: 0-MWD
Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.00	5,199.98	5,609.44	5,488.50	18.41	22.64	-77.19	-482.65	2,137.21	2,209.82	2,169.13	40.69	54.310	
5,300.00	5,299.84	5,701.24	5,574.55	18.73	23.17	-78.37	-451.00	2,132.63	2,195.82	2,154.27	41.55	52.848	
5,400.00	5,399.45	5,791.61	5,659.26	19.05	23.69	-79.62	-419.85	2,128.13	2,181.82	2,139.41	42.41	51.442	
5,500.00	5,498.70	5,880.44	5,742.53	19.37	24.21	-80.94	-389.23	2,123.70	2,168.01	2,124.74	43.28	50.095	
5,600.00	5,597.71	5,968.39	5,824.97	19.70	24.73	-82.04	-358.91	2,119.31	2,154.83	2,110.68	44.15	48.811	
5,700.00	5,696.71	6,056.34	5,907.41	20.03	25.25	-83.14	-328.59	2,114.93	2,142.62	2,097.60	45.02	47.591	
5,800.00	5,795.71	6,144.28	5,989.85	20.36	25.77	-84.24	-298.28	2,110.54	2,131.40	2,085.50	45.90	46.432	
5,900.00	5,894.72	6,232.23	6,072.29	20.70	26.30	-85.35	-267.96	2,106.16	2,121.20	2,074.40	46.79	45.332	
6,000.00	5,993.72	6,320.17	6,154.72	21.04	26.82	-86.47	-237.64	2,101.78	2,112.01	2,064.33	47.69	44.290	
6,100.00	6,092.72	6,408.12	6,237.16	21.38	27.35	-87.60	-207.33	2,097.39	2,103.87	2,055.28	48.58	43.304	
6,200.00	6,191.73	6,496.06	6,319.60	21.73	27.88	-88.74	-177.01	2,093.01	2,096.77	2,047.28	49.49	42.371	
6,300.00	6,290.73	6,584.01	6,402.04	22.08	28.41	-89.88	-146.70	2,088.62	2,090.73	2,040.34	50.39	41.490	
6,400.00	6,389.74	6,671.95	6,484.48	22.43	28.95	-91.02	-116.38	2,084.24	2,085.76	2,034.47	51.30	40.659	
6,500.00	6,488.74	6,759.90	6,566.92	22.78	29.48	-92.17	-86.06	2,079.85	2,081.87	2,029.66	52.21	39.876	
6,600.00	6,587.74	6,847.85	6,649.36	23.14	30.02	-93.32	-55.75	2,075.47	2,079.06	2,025.95	53.12	39.140	
6,700.00	6,686.75	6,935.79	6,731.80	23.50	30.56	-94.48	-25.43	2,071.08	2,077.34	2,023.31	54.03	38.449	
6,800.00	6,785.75	7,023.74	6,814.23	23.86	31.10	-95.63	4.89	2,066.70	2,076.71	2,021.77	54.94	37.801	
6,807.95	6,793.62	7,030.73	6,820.79	23.89	31.14	-95.72	7.30	2,066.35	2,076.71	2,021.70	55.01	37.751	
6,900.00	6,884.75	7,111.68	6,896.67	24.22	31.64	-96.79	35.20	2,062.31	2,077.17	2,021.32	55.85	37.195	
7,000.00	6,983.76	7,199.63	6,979.11	24.59	32.18	-97.94	65.52	2,057.93	2,078.72	2,021.97	56.75	36.628	
7,100.00	7,082.76	7,287.57	7,061.55	24.95	32.72	-99.09	95.84	2,053.54	2,081.35	2,023.70	57.66	36.100	
7,200.00	7,181.77	7,375.52	7,143.99	25.32	33.27	-100.24	126.15	2,049.16	2,085.07	2,026.52	58.56	35.608	
7,300.00	7,280.77	7,463.47	7,226.43	25.69	33.81	-101.39	156.47	2,044.77	2,089.87	2,030.42	59.45	35.152	
7,400.00	7,379.77	7,551.41	7,308.87	26.07	34.36	-102.53	186.78	2,040.39	2,095.74	2,035.39	60.34	34.730	
7,500.00	7,478.78	7,639.36	7,391.30	26.44	34.90	-103.67	217.10	2,036.00	2,102.67	2,041.44	61.23	34.340	
7,600.00	7,577.78	7,727.30	7,473.74	26.82	35.45	-104.80	247.42	2,031.62	2,110.65	2,048.53	62.11	33.981	
7,700.00	7,676.78	7,815.25	7,556.18	27.19	36.00	-105.92	277.73	2,027.24	2,119.67	2,056.68	62.99	33.651	
7,800.00	7,775.79	7,903.19	7,638.62	27.57	36.55	-107.03	308.05	2,022.85	2,129.71	2,065.85	63.86	33.350	
7,900.00	7,874.79	7,991.14	7,721.06	27.95	37.10	-108.14	338.37	2,018.47	2,140.77	2,076.05	64.72	33.076	
8,000.00	7,973.80	8,079.09	7,803.50	28.33	37.65	-109.24	368.68	2,014.08	2,152.82	2,087.24	65.58	32.827	
8,100.00	8,072.80	8,167.03	7,885.94	28.71	38.21	-110.32	399.00	2,009.70	2,165.85	2,099.42	66.43	32.603	
8,200.00	8,171.80	8,254.98	7,968.38	29.10	38.76	-111.40	429.32	2,005.31	2,179.85	2,112.57	67.27	32.402	
8,300.00	8,270.81	8,357.41	8,064.66	29.48	39.39	-112.62	463.91	2,000.31	2,194.61	2,126.44	68.17	32.191	
8,400.00	8,369.81	8,473.59	8,175.21	29.87	40.07	-113.89	499.24	1,995.20	2,209.29	2,140.18	69.11	31.969	
8,500.00	8,468.81	8,594.28	8,291.49	30.26	40.73	-115.08	531.21	1,990.58	2,223.53	2,153.51	70.02	31.757	
8,600.00	8,567.82	8,719.29	8,413.25	30.64	41.36	-116.17	559.18	1,986.53	2,237.07	2,166.18	70.89	31.556	
8,700.00	8,666.82	8,848.37	8,540.14	31.03	41.94	-117.16	582.52	1,983.15	2,249.67	2,177.93	71.74	31.361	
8,800.00	8,765.82	8,981.16	8,671.66	31.42	42.48	-118.01	600.61	1,980.54	2,261.08	2,188.54	72.55	31.167	
8,900.00	8,864.83	9,117.23	8,807.15	31.81	42.97	-118.73	612.86	1,978.77	2,271.12	2,197.80	73.32	30.975	
9,000.00	8,963.83	9,256.08	8,945.86	32.21	43.39	-119.30	618.78	1,977.91	2,279.60	2,205.54	74.05	30.783	
9,100.00	9,062.84	9,371.06	9,060.84	32.60	43.70	-119.67	619.29	1,977.84	2,286.72	2,212.02	74.70	30.610	
9,200.00	9,161.84	9,470.06	9,159.84	32.99	43.95	-119.97	619.29	1,977.84	2,293.77	2,218.46	75.31	30.457	
9,300.00	9,260.84	9,569.07	9,258.84	33.39	44.21	-120.27	619.29	1,977.84	2,300.89	2,224.97	75.92	30.306	
9,400.00	9,359.85	9,668.07	9,357.85	33.78	44.47	-120.57	619.29	1,977.84	2,308.08	2,231.54	76.53	30.157	
9,500.00	9,458.85	9,767.07	9,456.85	34.18	44.74	-120.87	619.29	1,977.84	2,315.32	2,238.17	77.15	30.011	
9,600.00	9,557.87	9,866.10	9,555.87	34.57	45.00	-121.20	619.29	1,977.84	2,322.57	2,244.78	77.78	29.859	
9,700.00	9,657.21	9,965.44	9,655.21	34.96	45.26	-121.54	619.29	1,977.84	2,328.54	2,250.06	78.48	29.672	
9,800.00	9,756.89	10,065.11	9,754.89	35.33	45.53	-121.77	619.29	1,977.84	2,332.72	2,253.57	79.15	29.470	
9,900.00	9,856.79	10,165.01	9,854.79	35.69	45.80	-121.91	619.29	1,977.84	2,335.08	2,255.26	79.82	29.255	
10,000.00	9,956.78	10,265.00	9,954.78	36.03	46.07	57.67	619.29	1,977.84	2,335.64	2,255.13	80.51	29.011	
10,051.18	10,007.95	10,316.18	10,005.95	36.20	46.21	57.67	619.29	1,977.84	2,335.64	2,254.81	80.82	28.898	
10,100.00	10,056.78	10,343.32	10,033.10	36.36	46.29	57.66	619.38	1,977.84	2,335.78	2,254.72	81.07	28.813	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Cheddar Federal Com pad. - Pepper Jack 2BS Federal Com 4H - Pepper Jack 2BS Federal Com 4H - D

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,200.00	10,156.76	10,374.94	10,064.68	36.69	46.39	57.98	620.80	1,977.83	2,337.79	2,256.33	81.46	28.698	
10,300.00	10,255.31	10,400.00	10,089.63	36.97	46.48	58.32	623.17	1,977.81	2,334.68	2,253.22	81.46	28.660	
10,400.00	10,348.41	10,450.00	10,138.97	37.18	46.69	59.71	631.14	1,977.75	2,323.61	2,242.56	81.06	28.667	
10,500.00	10,431.98	10,467.78	10,156.33	37.32	46.78	61.86	635.00	1,977.73	2,304.87	2,224.51	80.36	28.683	
10,600.00	10,502.38	10,500.00	10,187.43	37.40	46.95	65.04	643.38	1,977.67	2,279.60	2,199.46	80.13	28.448	
10,700.00	10,556.53	10,522.90	10,209.23	37.46	47.08	68.97	650.38	1,977.62	2,248.89	2,168.30	80.58	27.908	
10,800.00	10,592.06	10,550.00	10,234.65	37.50	47.24	73.70	659.79	1,977.56	2,214.28	2,132.49	81.79	27.072	
10,900.00	10,607.42	10,565.87	10,249.31	37.53	47.35	78.68	665.85	1,977.52	2,177.52	2,094.35	83.17	26.183	
11,000.00	10,607.60	10,582.29	10,264.30	37.60	47.46	80.34	672.55	1,977.47	2,141.35	2,057.63	83.72	25.579	
11,100.00	10,607.06	10,600.00	10,280.25	37.73	47.58	80.79	680.26	1,977.42	2,108.83	2,024.76	84.07	25.084	
11,200.00	10,606.51	10,621.90	10,299.63	37.94	47.74	81.34	690.46	1,977.35	2,080.20	1,995.64	84.56	24.602	
11,300.00	10,605.97	10,650.00	10,323.89	38.22	47.94	82.03	704.62	1,977.25	2,055.51	1,970.33	85.18	24.132	
11,400.00	10,605.42	10,674.98	10,344.86	38.57	48.14	82.63	718.20	1,977.16	2,034.75	1,948.91	85.84	23.704	
11,500.00	10,604.87	10,700.00	10,365.24	38.99	48.34	83.21	732.70	1,977.06	2,017.92	1,931.36	86.56	23.313	
11,600.00	10,604.33	10,750.00	10,403.99	39.47	48.78	84.32	764.27	1,976.84	2,004.77	1,917.13	87.64	22.874	
11,700.00	10,603.78	10,800.00	10,439.85	40.02	49.24	85.35	799.10	1,976.60	1,995.16	1,906.37	88.79	22.471	
11,800.00	10,603.24	10,850.00	10,472.52	40.63	49.72	86.30	836.92	1,976.34	1,988.65	1,898.67	89.99	22.099	
11,900.00	10,602.69	10,917.59	10,511.22	41.30	50.42	87.42	892.29	1,975.96	1,984.76	1,893.31	91.45	21.703	
12,000.00	10,602.15	10,994.94	10,547.15	42.02	51.26	88.47	960.72	1,975.49	1,982.83	1,889.75	93.08	21.302	
12,100.00	10,601.60	11,082.86	10,576.38	42.80	52.25	89.33	1,043.54	1,974.93	1,982.12	1,887.24	94.89	20.889	
12,200.00	10,601.05	11,178.79	10,593.42	43.62	53.36	89.84	1,137.84	1,974.28	1,981.98	1,885.14	96.84	20.466	
12,300.00	10,600.51	11,278.33	10,595.79	44.50	54.52	89.92	1,237.28	1,973.60	1,981.98	1,883.09	98.88	20.044	
12,400.00	10,599.96	11,378.33	10,595.29	45.42	55.71	89.92	1,337.28	1,972.91	1,981.97	1,880.98	100.99	19.625	
12,500.00	10,599.42	11,478.33	10,594.79	46.38	56.92	89.92	1,437.28	1,972.22	1,981.97	1,878.81	103.17	19.211	
12,600.00	10,598.87	11,578.33	10,594.29	47.38	58.16	89.93	1,537.27	1,971.54	1,981.97	1,876.57	105.40	18.804	
12,700.00	10,598.33	11,678.33	10,593.78	48.41	59.41	89.93	1,637.27	1,970.85	1,981.97	1,874.27	107.70	18.403	
12,800.00	10,597.78	11,778.33	10,593.28	49.48	60.69	89.93	1,737.27	1,970.17	1,981.97	1,871.92	110.05	18.010	
12,900.00	10,597.23	11,878.33	10,592.78	50.59	61.98	89.93	1,837.26	1,969.48	1,981.97	1,869.52	112.45	17.626	
13,000.00	10,596.69	11,978.33	10,592.28	51.72	63.29	89.93	1,937.26	1,968.79	1,981.96	1,867.07	114.89	17.250	
13,100.00	10,596.14	12,078.33	10,591.78	52.88	64.62	89.93	2,037.25	1,968.11	1,981.96	1,864.57	117.39	16.884	
13,200.00	10,595.60	12,178.33	10,591.28	54.07	65.97	89.93	2,137.25	1,967.42	1,981.96	1,862.04	119.92	16.527	
13,300.00	10,595.05	12,278.33	10,590.77	55.28	67.32	89.93	2,237.25	1,966.74	1,981.96	1,859.46	122.50	16.180	
13,400.00	10,594.50	12,378.32	10,590.27	56.52	68.70	89.94	2,337.24	1,966.05	1,981.96	1,856.85	125.11	15.842	
13,500.00	10,593.96	12,478.32	10,589.77	57.78	70.08	89.94	2,437.24	1,965.37	1,981.95	1,854.20	127.75	15.514	
13,600.00	10,593.41	12,578.32	10,589.27	59.06	71.48	89.94	2,537.24	1,964.68	1,981.95	1,851.52	130.43	15.196	
13,700.00	10,592.87	12,678.32	10,588.77	60.36	72.89	89.94	2,637.23	1,963.99	1,981.95	1,848.81	133.14	14.886	
13,800.00	10,592.32	12,778.32	10,588.27	61.67	74.31	89.94	2,737.23	1,963.31	1,981.95	1,846.07	135.87	14.587	
13,900.00	10,591.78	12,878.32	10,587.77	63.00	75.74	89.94	2,837.23	1,962.62	1,981.95	1,843.31	138.64	14.296	
14,000.00	10,591.23	12,978.32	10,587.26	64.35	77.17	89.94	2,937.22	1,961.94	1,981.94	1,840.52	141.43	14.014	
14,100.00	10,590.68	13,078.32	10,586.76	65.71	78.62	89.94	3,037.22	1,961.25	1,981.94	1,837.70	144.24	13.741	
14,200.00	10,590.14	13,178.32	10,586.26	67.09	80.08	89.95	3,137.21	1,960.56	1,981.94	1,834.87	147.07	13.476	
14,300.00	10,589.59	13,278.32	10,585.76	68.48	81.54	89.95	3,237.21	1,959.88	1,981.94	1,832.01	149.93	13.219	
14,400.00	10,589.05	13,378.32	10,585.26	69.88	83.02	89.95	3,337.21	1,959.19	1,981.94	1,829.13	152.81	12.970	
14,500.00	10,588.50	13,478.32	10,584.76	71.29	84.50	89.95	3,437.20	1,958.51	1,981.94	1,826.23	155.70	12.729	
14,600.00	10,587.96	13,578.32	10,584.25	72.72	85.98	89.95	3,537.20	1,957.82	1,981.93	1,823.32	158.61	12.495	
14,700.00	10,587.41	13,678.32	10,583.75	74.15	87.48	89.95	3,637.20	1,957.13	1,981.93	1,820.39	161.54	12.269	
14,800.00	10,586.86	13,778.32	10,583.25	75.60	88.98	89.95	3,737.19	1,956.45	1,981.93	1,817.44	164.49	12.049	
14,900.00	10,586.32	13,878.32	10,582.75	77.05	90.48	89.95	3,837.19	1,955.76	1,981.93	1,814.48	167.45	11.836	
15,000.00	10,585.77	13,978.32	10,582.25	78.51	91.99	89.96	3,937.19	1,955.08	1,981.93	1,811.51	170.42	11.630	
15,100.00	10,585.23	14,078.32	10,581.75	79.98	93.51	89.96	4,037.18	1,954.39	1,981.92	1,808.52	173.41	11.429	
15,200.00	10,584.68	14,178.32	10,581.25	81.46	95.03	89.96	4,137.18	1,953.70	1,981.92	1,805.52	176.41	11.235	
15,300.00	10,584.14	14,278.32	10,580.74	82.94	96.56	89.96	4,237.17	1,953.02	1,981.92	1,802.50	179.42	11.046	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Cheddar Federal Com pad. - Pepper Jack 2BS Federal Com 4H - Pepper Jack 2BS Federal Com 4H - D — **Offset Site Error:** 0.00 ft

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

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
15,400.00	10,583.59	14,378.32	10,580.24	84.43	98.09	89.96	4,337.17	1,952.33	1,981.92	1,799.48	182.44	10.863	
15,500.00	10,583.04	14,478.32	10,579.74	85.93	99.62	89.96	4,437.17	1,951.65	1,981.92	1,796.44	185.48	10.685	
15,600.00	10,582.50	14,578.32	10,579.24	87.44	101.16	89.96	4,537.16	1,950.96	1,981.91	1,793.39	188.52	10.513	
15,700.00	10,581.95	14,678.32	10,578.74	88.95	102.71	89.96	4,637.16	1,950.27	1,981.91	1,790.34	191.58	10.345	
15,800.00	10,581.41	14,778.32	10,578.24	90.46	104.25	89.97	4,737.16	1,949.59	1,981.91	1,787.27	194.64	10.182	
15,900.00	10,580.86	14,878.32	10,577.73	91.98	105.80	89.97	4,837.15	1,948.90	1,981.91	1,784.19	197.71	10.024	
16,000.00	10,580.32	14,978.32	10,577.23	93.51	107.36	89.97	4,937.15	1,948.22	1,981.91	1,781.11	200.80	9.870	
16,100.00	10,579.77	15,078.32	10,576.73	95.04	108.92	89.97	5,037.15	1,947.53	1,981.91	1,778.02	203.89	9.721	
16,200.00	10,579.22	15,178.32	10,576.23	96.57	110.48	89.97	5,137.14	1,946.84	1,981.90	1,774.92	206.98	9.575	
16,300.00	10,578.68	15,278.32	10,575.73	98.11	112.04	89.97	5,237.14	1,946.16	1,981.90	1,771.81	210.09	9.434	
16,400.00	10,578.13	15,378.32	10,575.23	99.66	113.61	89.97	5,337.14	1,945.47	1,981.90	1,768.70	213.20	9.296	
16,500.00	10,577.59	15,478.32	10,574.73	101.21	115.18	89.98	5,437.13	1,944.79	1,981.90	1,765.58	216.32	9.162	
16,600.00	10,577.04	15,578.32	10,574.22	102.76	116.75	89.98	5,537.13	1,944.10	1,981.90	1,762.45	219.44	9.031	
16,700.00	10,576.50	15,678.32	10,573.72	104.31	118.33	89.98	5,637.12	1,943.41	1,981.89	1,759.32	222.58	8.904	
16,800.00	10,575.95	15,778.32	10,573.22	105.87	119.91	89.98	5,737.12	1,942.73	1,981.89	1,756.18	225.71	8.781	
16,900.00	10,575.40	15,878.32	10,572.72	107.43	121.49	89.98	5,837.12	1,942.04	1,981.89	1,753.03	228.86	8.660	
17,000.00	10,574.86	15,978.32	10,572.22	109.00	123.07	89.98	5,937.11	1,941.36	1,981.89	1,749.88	232.01	8.542	
17,100.00	10,574.31	16,078.32	10,571.72	110.57	124.65	89.98	6,037.11	1,940.67	1,981.89	1,746.73	235.16	8.428	
17,200.00	10,573.77	16,178.32	10,571.21	112.14	126.24	89.98	6,137.11	1,939.99	1,981.88	1,743.57	238.32	8.316	
17,300.00	10,573.22	16,278.32	10,570.71	113.71	127.83	89.99	6,237.10	1,939.30	1,981.88	1,740.40	241.48	8.207	
17,400.00	10,572.68	16,378.32	10,570.21	115.29	129.42	89.99	6,337.10	1,938.61	1,981.88	1,737.23	244.65	8.101	
17,500.00	10,572.13	16,478.32	10,569.71	116.87	131.02	89.99	6,437.10	1,937.93	1,981.88	1,734.06	247.82	7.997	
17,600.00	10,571.58	16,578.32	10,569.21	118.45	132.61	89.99	6,537.09	1,937.24	1,981.88	1,730.88	251.00	7.896	
17,700.00	10,571.04	16,678.32	10,568.71	120.03	134.21	89.99	6,637.09	1,936.56	1,981.88	1,727.69	254.18	7.797	
17,800.00	10,570.49	16,778.32	10,568.21	121.62	135.81	89.99	6,737.08	1,935.87	1,981.87	1,724.51	257.37	7.701	
17,900.00	10,569.95	16,878.32	10,567.70	123.21	137.41	89.99	6,837.08	1,935.18	1,981.87	1,721.32	260.56	7.606	
18,000.00	10,569.40	16,978.32	10,567.20	124.80	139.01	89.99	6,937.08	1,934.50	1,981.87	1,718.12	263.75	7.514	
18,100.00	10,568.85	17,078.32	10,566.70	126.39	140.61	90.00	7,037.07	1,933.81	1,981.87	1,714.92	266.95	7.424	
18,200.00	10,568.31	17,178.32	10,566.20	127.98	142.22	90.00	7,137.07	1,933.13	1,981.87	1,711.72	270.15	7.336	
18,300.00	10,567.76	17,278.32	10,565.70	129.58	143.82	90.00	7,237.07	1,932.44	1,981.86	1,708.52	273.35	7.250	
18,400.00	10,567.22	17,378.32	10,565.20	131.18	145.43	90.00	7,337.06	1,931.75	1,981.86	1,705.31	276.56	7.166	
18,500.00	10,566.67	17,478.32	10,564.69	132.78	147.04	90.00	7,437.06	1,931.07	1,981.86	1,702.10	279.77	7.084	
18,600.00	10,566.13	17,578.32	10,564.19	134.38	148.65	90.00	7,537.06	1,930.38	1,981.86	1,698.88	282.98	7.004	
18,700.00	10,565.58	17,678.32	10,563.69	135.98	150.26	90.00	7,637.05	1,929.70	1,981.86	1,695.66	286.19	6.925	
18,800.00	10,565.03	17,778.32	10,563.19	137.59	151.87	90.00	7,737.05	1,929.01	1,981.86	1,692.44	289.41	6.848	
18,900.00	10,564.49	17,878.32	10,562.69	139.19	153.49	90.01	7,837.04	1,928.32	1,981.85	1,689.22	292.63	6.773	
19,000.00	10,563.94	17,978.32	10,562.19	140.80	155.10	90.01	7,937.04	1,927.64	1,981.85	1,686.00	295.86	6.699	
19,100.00	10,563.40	18,078.32	10,561.69	142.41	156.72	90.01	8,037.04	1,926.95	1,981.85	1,682.77	299.08	6.626	
19,200.00	10,562.85	18,178.32	10,561.18	144.02	158.34	90.01	8,137.03	1,926.27	1,981.85	1,679.54	302.31	6.556	
19,300.00	10,562.31	18,278.32	10,560.68	145.63	159.96	90.01	8,237.03	1,925.58	1,981.85	1,676.31	305.54	6.486	
19,400.00	10,561.76	18,378.32	10,560.18	147.24	161.58	90.01	8,337.03	1,924.89	1,981.84	1,673.07	308.77	6.418	
19,500.00	10,561.21	18,478.32	10,559.68	148.86	163.20	90.01	8,437.02	1,924.21	1,981.84	1,669.83	312.01	6.352	
19,600.00	10,560.67	18,578.32	10,559.18	150.47	164.82	90.01	8,537.02	1,923.52	1,981.84	1,666.60	315.25	6.287	
19,700.00	10,560.12	18,678.32	10,558.68	152.09	166.44	90.02	8,637.02	1,922.84	1,981.84	1,663.35	318.48	6.223	
19,800.00	10,559.58	18,778.32	10,558.17	153.71	168.06	90.02	8,737.01	1,922.15	1,981.84	1,660.11	321.73	6.160	
19,900.00	10,559.03	18,878.32	10,557.67	155.33	169.69	90.02	8,837.01	1,921.46	1,981.84	1,656.87	324.97	6.099	
20,000.00	10,558.49	18,978.32	10,557.17	156.95	171.31	90.02	8,937.00	1,920.78	1,981.83	1,653.62	328.21	6.038	
20,100.00	10,557.94	19,078.32	10,556.67	158.57	172.94	90.02	9,037.00	1,920.09	1,981.83	1,650.37	331.46	5.979	
20,200.00	10,557.39	19,178.32	10,556.17	160.19	174.57	90.02	9,137.00	1,919.41	1,981.83	1,647.12	334.71	5.921	
20,300.00	10,556.85	19,278.32	10,555.67	161.81	176.19	90.02	9,236.99	1,918.72	1,981.83	1,643.87	337.96	5.864	
20,400.00	10,556.30	19,378.32	10,555.17	163.44	177.82	90.02	9,336.99	1,918.03	1,981.83	1,640.61	341.21	5.808	
20,500.00	10,555.76	19,478.32	10,554.66	165.06	179.45	90.03	9,436.99	1,917.35	1,981.82	1,637.36	344.47	5.753	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Cheddar Federal Com pad. - Pepper Jack 2BS Federal Com 4H - Pepper Jack 2BS Federal Com 4H - D

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
20,600.00	10,555.21	19,578.32	10,554.16	166.69	181.08	90.03	9,536.98	1,916.66	1,981.82	1,634.10	347.72	5.699	
20,700.00	10,554.67	19,678.32	10,553.66	168.31	182.71	90.03	9,636.98	1,915.98	1,981.82	1,630.84	350.98	5.647	
20,800.00	10,554.12	19,778.32	10,553.16	169.94	184.34	90.03	9,736.98	1,915.29	1,981.82	1,627.58	354.24	5.595	
20,821.88	10,554.00	19,800.20	10,553.05	170.29	184.70	90.03	9,758.85	1,915.14	1,981.82	1,626.87	354.95	5.583	CC, ES, SF

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Grenache 32 State Com 2H - Grenache 32 State Com 2H - Grenache 32 State Com 2H - Design #2

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	10.00	10.00	0.00	0.01	19.81	4,998.34	1,800.97	5,312.90				
100.00	100.00	110.00	110.00	0.14	0.18	19.81	4,998.34	1,800.97	5,312.90	5,312.57	0.32	N/A	
200.00	200.00	210.00	210.00	0.50	0.54	19.81	4,998.34	1,800.97	5,312.90	5,311.86	1.04	5,110.678	
300.00	300.00	310.00	310.00	0.86	0.90	19.81	4,998.34	1,800.97	5,312.90	5,311.14	1.76	3,024.687	
400.00	400.00	410.00	410.00	1.22	1.25	19.81	4,998.34	1,800.97	5,312.90	5,310.42	2.47	2,147.966	
500.00	500.00	510.00	510.00	1.58	1.61	19.81	4,998.34	1,800.97	5,312.90	5,309.71	3.19	1,665.277	
600.00	600.00	610.00	610.00	1.94	1.97	19.81	4,998.34	1,800.97	5,312.90	5,308.99	3.91	1,359.722	
700.00	700.00	710.00	710.00	2.29	2.33	19.81	4,998.34	1,800.97	5,312.90	5,308.27	4.62	1,148.912	
800.00	800.00	810.00	810.00	2.65	2.69	19.81	4,998.34	1,800.97	5,312.90	5,307.55	5.34	994.696	
900.00	900.00	910.00	910.00	3.01	3.05	19.81	4,998.34	1,800.97	5,312.90	5,306.84	6.06	876.980	
1,000.00	1,000.00	1,010.00	1,010.00	3.37	3.41	19.81	4,998.34	1,800.97	5,312.90	5,306.12	6.78	784.178	
1,100.00	1,100.00	1,110.00	1,110.00	3.73	3.76	19.81	4,998.34	1,800.97	5,312.90	5,305.40	7.49	709.137	
1,200.00	1,200.00	1,210.00	1,210.00	4.09	4.12	19.81	4,998.34	1,800.97	5,312.90	5,304.69	8.21	647.204	
1,300.00	1,300.00	1,310.00	1,310.00	4.45	4.48	19.81	4,998.34	1,800.97	5,312.90	5,303.97	8.93	595.220	
1,400.00	1,400.00	1,410.00	1,410.00	4.80	4.84	19.81	4,998.34	1,800.97	5,312.90	5,303.25	9.64	550.965	
1,500.00	1,500.00	1,510.00	1,510.00	5.16	5.20	19.81	4,998.34	1,800.97	5,312.90	5,302.54	10.36	512.836	
1,600.00	1,600.00	1,610.00	1,610.00	5.52	5.56	19.81	4,998.34	1,800.97	5,312.90	5,301.82	11.08	479.643	
1,700.00	1,700.00	1,710.00	1,710.00	5.88	5.91	19.81	4,998.34	1,800.97	5,312.90	5,301.10	11.79	450.485	
1,800.00	1,800.00	1,810.00	1,810.00	6.24	6.27	19.81	4,998.34	1,800.97	5,312.90	5,300.39	12.51	424.670	
1,900.00	1,900.00	1,910.00	1,910.00	6.60	6.63	19.81	4,998.34	1,800.97	5,312.90	5,299.67	13.23	401.652	
2,000.00	2,000.00	2,010.00	2,010.00	6.95	6.99	19.81	4,998.34	1,800.97	5,312.90	5,298.95	13.94	381.002	
2,100.00	2,100.00	2,110.00	2,110.00	7.31	7.35	19.81	4,998.34	1,800.97	5,312.90	5,298.23	14.66	362.371	
2,200.00	2,200.00	2,210.00	2,210.00	7.67	7.71	19.81	4,998.34	1,800.97	5,312.90	5,297.52	15.38	345.477	
2,300.00	2,300.00	2,310.00	2,310.00	8.03	8.07	19.81	4,998.34	1,800.97	5,312.90	5,296.80	16.10	330.088	
2,400.00	2,400.00	2,410.00	2,410.00	8.39	8.42	19.81	4,998.34	1,800.97	5,312.90	5,296.08	16.81	316.012	
2,500.00	2,500.00	2,510.00	2,510.00	8.75	8.78	19.81	4,998.34	1,800.97	5,312.90	5,295.37	17.53	303.087	
2,600.00	2,600.00	2,610.00	2,610.00	9.11	9.14	19.81	4,998.34	1,800.97	5,312.90	5,294.65	18.25	291.178	
2,700.00	2,700.00	2,710.00	2,710.00	9.46	9.50	19.81	4,998.34	1,800.97	5,312.90	5,293.93	18.96	280.170	
2,800.00	2,800.00	2,810.00	2,810.00	9.82	9.86	19.81	4,998.34	1,800.97	5,312.90	5,293.22	19.68	269.963	
2,900.00	2,900.00	2,910.00	2,910.00	10.18	10.22	19.81	4,998.34	1,800.97	5,312.90	5,292.50	20.40	260.474	
3,000.00	3,000.00	3,010.00	3,010.00	10.54	10.57	19.81	4,998.34	1,800.97	5,312.90	5,291.78	21.11	251.629	
3,100.00	3,100.00	3,110.00	3,110.00	10.90	10.93	19.81	4,998.34	1,800.97	5,312.90	5,291.07	21.83	243.366	
3,200.00	3,200.00	3,210.00	3,210.00	11.26	11.29	19.81	4,998.34	1,800.97	5,312.90	5,290.35	22.55	235.628	
3,300.00	3,300.00	3,310.00	3,310.00	11.61	11.65	19.81	4,998.34	1,800.97	5,312.90	5,289.63	23.26	228.366	
3,400.00	3,400.00	3,410.00	3,410.00	11.97	12.01	19.81	4,998.34	1,800.97	5,312.90	5,288.91	23.98	221.539	
3,500.00	3,500.00	3,510.00	3,510.00	12.33	12.37	19.81	4,998.34	1,800.97	5,312.90	5,288.20	24.70	215.108	
3,600.00	3,600.00	3,610.00	3,610.00	12.69	12.73	19.81	4,998.34	1,800.97	5,312.90	5,287.48	25.42	209.040	
3,700.00	3,700.00	3,710.00	3,710.00	13.05	13.08	19.81	4,998.34	1,800.97	5,312.90	5,286.76	26.13	203.305	
3,800.00	3,800.00	3,810.00	3,810.00	13.41	13.44	19.81	4,998.34	1,800.97	5,312.90	5,286.05	26.85	197.877	
3,900.00	3,900.00	3,910.00	3,910.00	13.77	13.80	19.81	4,998.34	1,800.97	5,312.90	5,285.33	27.57	192.730	
4,000.00	4,000.00	4,010.00	4,010.00	14.12	14.16	19.81	4,998.34	1,800.97	5,312.90	5,284.61	28.28	187.845	
4,100.00	4,100.00	4,110.00	4,110.00	14.48	14.52	19.81	4,998.34	1,800.97	5,312.90	5,283.90	29.00	183.201	
4,200.00	4,200.00	4,210.00	4,210.00	14.84	14.88	19.81	4,998.34	1,800.97	5,312.90	5,283.18	29.72	178.781	
4,300.00	4,300.00	4,310.00	4,310.00	15.20	15.24	19.81	4,998.34	1,800.97	5,312.90	5,282.46	30.43	174.570	
4,400.00	4,400.00	4,410.00	4,410.00	15.56	15.59	19.81	4,998.34	1,800.97	5,312.90	5,281.74	31.15	170.552	
4,500.00	4,500.00	4,510.00	4,510.00	15.92	15.95	19.81	4,998.34	1,800.97	5,312.90	5,281.03	31.87	166.715	
4,600.00	4,600.00	4,610.00	4,610.00	16.27	16.31	19.81	4,998.34	1,800.97	5,312.90	5,280.31	32.59	163.047	
4,700.00	4,700.00	4,710.00	4,710.00	16.63	16.67	19.81	4,998.34	1,800.97	5,312.90	5,279.59	33.30	159.537	
4,800.00	4,800.00	5,082.80	5,082.55	16.99	17.92	19.84	4,967.58	1,799.35	5,309.23	5,274.31	34.91	152.067	
4,900.00	4,900.00	5,182.66	5,182.28	17.35	18.25	19.85	4,982.41	1,798.56	5,304.09	5,268.50	35.60	149.007	
5,000.00	5,000.00	5,282.53	5,282.00	17.71	18.57	19.86	4,977.25	1,797.78	5,298.96	5,262.68	36.28	146.056	
5,100.00	5,100.00	5,382.39	5,381.73	18.07	18.90	19.87	4,972.08	1,797.00	5,293.83	5,256.86	36.97	143.210	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Grenache 32 State Com 2H - Grenache 32 State Com 2H - Grenache 32 State Com 2H - Design #2

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.00	5,199.98	5,482.32	5,481.52	18.41	19.23	-159.75	4,966.91	1,796.22	5,290.33	5,252.71	37.62	140.637	
5,256.80	5,256.72	5,539.12	5,538.25	18.59	19.42	-159.76	4,963.97	1,795.78	5,289.80	5,251.84	37.96	139.352	
5,300.00	5,299.84	5,582.31	5,581.38	18.73	19.56	-159.76	4,961.73	1,795.44	5,290.11	5,251.90	38.21	138.439	
5,400.00	5,399.45	5,682.24	5,681.17	19.05	19.89	-159.76	4,956.56	1,794.66	5,293.16	5,254.39	38.77	136.527	
5,500.00	5,498.70	5,781.99	5,780.78	19.37	20.22	-159.75	4,951.40	1,793.87	5,299.49	5,260.20	39.29	134.891	
5,600.00	5,597.71	5,881.58	5,880.24	19.70	20.56	-159.79	4,946.25	1,793.10	5,307.60	5,267.66	39.94	132.906	
5,700.00	5,696.71	5,981.18	5,979.70	20.03	20.89	-159.84	4,941.09	1,792.32	5,315.72	5,275.12	40.59	130.950	
5,800.00	5,795.71	6,080.77	6,079.16	20.36	21.23	-159.88	4,935.94	1,791.54	5,323.84	5,282.58	41.25	129.049	
5,900.00	5,894.72	6,180.37	6,178.62	20.70	21.56	-159.92	4,930.79	1,790.76	5,331.96	5,290.04	41.92	127.199	
6,000.00	5,993.72	6,279.97	6,278.07	21.04	21.90	-159.96	4,925.63	1,789.98	5,340.09	5,297.50	42.58	125.401	
6,100.00	6,092.72	6,379.56	6,377.53	21.38	22.24	-160.00	4,920.48	1,789.20	5,348.21	5,304.96	43.25	123.651	
6,200.00	6,191.73	6,479.16	6,476.99	21.73	22.58	-160.04	4,915.32	1,788.42	5,356.35	5,312.42	43.92	121.948	
6,300.00	6,290.73	6,578.75	6,576.45	22.08	22.92	-160.08	4,910.17	1,787.64	5,364.48	5,319.88	44.60	120.291	
6,400.00	6,389.74	6,678.35	6,675.91	22.43	23.26	-160.12	4,905.02	1,786.86	5,372.62	5,327.35	45.27	118.678	
6,500.00	6,488.74	6,777.95	6,775.37	22.78	23.60	-160.16	4,899.86	1,786.08	5,380.76	5,334.81	45.95	117.108	
6,600.00	6,587.74	6,877.54	6,874.83	23.14	23.94	-160.20	4,894.71	1,785.30	5,388.90	5,342.27	46.63	115.578	
6,700.00	6,686.75	6,977.14	6,974.29	23.50	24.29	-160.24	4,889.55	1,784.52	5,397.05	5,349.74	47.31	114.089	
6,800.00	6,785.75	7,076.73	7,073.75	23.86	24.63	-160.28	4,884.40	1,783.74	5,405.19	5,357.21	47.99	112.637	
6,900.00	6,884.75	7,176.33	7,173.21	24.22	24.98	-160.32	4,879.25	1,782.96	5,413.34	5,364.67	48.67	111.223	
7,000.00	6,983.76	7,275.92	7,272.67	24.59	25.32	-160.36	4,874.09	1,782.18	5,421.50	5,372.14	49.36	109.845	
7,100.00	7,082.76	7,375.52	7,372.13	24.95	25.67	-160.40	4,868.94	1,781.40	5,429.65	5,379.61	50.04	108.501	
7,200.00	7,181.77	7,475.12	7,471.59	25.32	26.02	-160.44	4,863.79	1,780.62	5,437.81	5,387.08	50.73	107.191	
7,300.00	7,280.77	7,574.71	7,571.05	25.69	26.36	-160.48	4,858.63	1,779.84	5,445.97	5,394.55	51.42	105.913	
7,400.00	7,379.77	7,674.31	7,670.51	26.07	26.71	-160.52	4,853.48	1,779.07	5,454.13	5,402.02	52.11	104.666	
7,500.00	7,478.78	7,773.90	7,769.97	26.44	27.06	-160.56	4,848.32	1,778.29	5,462.30	5,409.50	52.80	103.449	
7,600.00	7,577.78	7,873.50	7,869.43	26.82	27.41	-160.60	4,843.17	1,777.51	5,470.47	5,416.97	53.49	102.262	
7,700.00	7,676.78	7,973.10	7,968.88	27.19	27.76	-160.64	4,838.02	1,776.73	5,478.64	5,424.45	54.19	101.103	
7,800.00	7,775.79	8,072.69	8,068.34	27.57	28.11	-160.68	4,832.86	1,775.95	5,486.81	5,431.93	54.88	99.972	
7,900.00	7,874.79	8,172.29	8,167.80	27.95	28.46	-160.72	4,827.71	1,775.17	5,494.99	5,439.41	55.58	98.866	
8,000.00	7,973.80	8,271.88	8,267.26	28.33	28.81	-160.76	4,822.55	1,774.39	5,503.17	5,446.89	56.28	97.787	
8,100.00	8,072.80	8,371.48	8,366.72	28.71	29.16	-160.80	4,817.40	1,773.61	5,511.35	5,454.37	56.98	96.732	
8,200.00	8,171.80	8,471.08	8,466.18	29.10	29.51	-160.83	4,812.25	1,772.83	5,519.53	5,461.86	57.67	95.702	
8,300.00	8,270.81	8,550.00	8,545.00	29.48	29.79	-160.86	4,808.16	1,772.21	5,527.76	5,469.45	58.30	94.811	
8,400.00	8,369.81	8,600.00	8,594.95	29.87	29.97	-160.88	4,806.01	1,771.89	5,536.78	5,477.95	58.83	94.113	
8,500.00	8,468.81	8,600.00	8,594.95	30.26	29.97	-160.88	4,806.01	1,771.89	5,547.13	5,487.94	59.19	93.722	
8,600.00	8,567.82	8,659.77	8,654.70	30.64	30.18	-160.91	4,804.56	1,771.67	5,558.32	5,498.57	59.75	93.024	
8,700.00	8,666.82	8,700.00	8,694.93	31.03	30.32	-160.93	4,804.28	1,771.62	5,570.86	5,510.61	60.25	92.466	
8,800.00	8,765.82	8,780.90	8,775.82	31.42	30.60	-160.97	4,804.28	1,771.62	5,584.15	5,523.27	60.89	91.713	
8,900.00	8,864.83	8,879.90	8,874.83	31.81	30.95	-161.01	4,804.28	1,771.62	5,597.48	5,535.89	61.59	90.884	
9,000.00	8,963.83	8,978.90	8,973.83	32.21	31.29	-161.06	4,804.28	1,771.62	5,610.81	5,548.52	62.29	90.072	
9,100.00	9,062.84	9,077.91	9,072.84	32.60	31.64	-161.11	4,804.28	1,771.62	5,624.14	5,561.15	63.00	89.278	
9,200.00	9,161.84	9,176.91	9,171.84	32.99	31.98	-161.15	4,804.28	1,771.62	5,637.48	5,573.78	63.70	88.500	
9,300.00	9,260.84	9,275.91	9,270.84	33.39	32.33	-161.20	4,804.28	1,771.62	5,650.82	5,586.42	64.40	87.739	
9,400.00	9,359.85	9,374.92	9,369.85	33.78	32.68	-161.25	4,804.28	1,771.62	5,664.17	5,599.06	65.11	86.994	
9,500.00	9,458.85	9,473.92	9,468.85	34.18	33.02	-161.29	4,804.28	1,771.62	5,677.52	5,611.70	65.82	86.264	
9,600.00	9,557.87	9,572.94	9,567.87	34.57	33.37	-161.36	4,804.28	1,771.62	5,690.75	5,624.18	66.57	85.485	
9,700.00	9,657.21	9,672.28	9,667.21	34.96	33.72	-161.47	4,804.28	1,771.62	5,701.58	5,634.17	67.42	84.574	
9,800.00	9,756.89	9,771.96	9,766.89	35.33	34.07	-161.54	4,804.28	1,771.62	5,709.12	5,640.93	68.19	83.718	
9,900.00	9,856.79	9,871.86	9,866.79	35.69	34.42	-161.58	4,804.28	1,771.62	5,713.36	5,644.45	68.91	82.916	
10,000.00	9,956.78	9,971.85	9,966.78	36.03	34.77	18.02	4,804.28	1,771.62	5,714.36	5,644.79	69.57	82.137	
10,100.00	10,056.78	9,973.12	9,968.05	36.36	34.77	18.02	4,804.28	1,771.62	5,715.21	5,645.29	69.92	81.739	
10,200.00	10,156.76	10,000.00	9,994.92	36.69	34.87	18.40	4,804.91	1,771.62	5,716.86	5,646.71	70.15	81.491	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Grenache 32 State Com 2H - Grenache 32 State Com 2H - Grenache 32 State Com 2H - Design #2

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,300.00	10,255.31	10,000.00	9,994.92	36.97	34.87	18.84	4,804.91	1,771.62	5,705.63	5,637.41	68.22	83.636	
10,400.00	10,348.41	10,000.00	9,994.92	37.18	34.87	20.05	4,804.91	1,771.62	5,676.72	5,612.59	64.14	88.509	
10,500.00	10,431.98	10,000.00	9,994.92	37.32	34.87	22.28	4,804.91	1,771.62	5,631.14	5,572.54	58.59	96.106	
10,600.00	10,502.38	10,026.47	10,021.32	37.40	34.96	26.16	4,806.76	1,771.62	5,569.85	5,516.69	53.16	104.784	
10,700.00	10,556.53	10,050.00	10,044.70	37.46	35.04	32.81	4,809.43	1,771.62	5,496.28	5,445.64	50.64	108.535	
10,800.00	10,592.06	10,050.00	10,044.70	37.50	35.04	44.46	4,809.43	1,771.62	5,412.26	5,357.21	55.05	98.321	
10,900.00	10,607.42	10,050.00	10,044.70	37.53	35.04	65.57	4,809.43	1,771.62	5,321.57	5,254.66	66.91	79.528	
11,000.00	10,607.60	10,050.00	10,044.70	37.60	35.04	73.16	4,809.43	1,771.62	5,228.26	5,158.35	69.91	74.784	
11,100.00	10,607.06	10,050.00	10,044.70	37.73	35.04	73.16	4,809.43	1,771.62	5,135.12	5,065.07	70.05	73.308	
11,200.00	10,606.51	10,050.00	10,044.70	37.94	35.04	73.16	4,809.43	1,771.62	5,042.24	4,971.98	70.26	71.770	
11,300.00	10,605.97	10,050.00	10,044.70	38.22	35.04	73.16	4,809.43	1,771.62	4,949.63	4,879.10	70.53	70.175	
11,400.00	10,605.42	10,050.00	10,044.70	38.57	35.04	73.16	4,809.43	1,771.62	4,857.32	4,786.44	70.88	68.531	
11,500.00	10,604.87	10,050.00	10,044.70	38.99	35.04	73.16	4,809.43	1,771.62	4,765.32	4,694.03	71.29	66.845	
11,600.00	10,604.33	10,050.00	10,044.70	39.47	35.04	73.16	4,809.43	1,771.62	4,673.64	4,601.88	71.76	65.125	
11,700.00	10,603.78	10,050.00	10,044.70	40.02	35.04	73.16	4,809.43	1,771.62	4,582.32	4,510.02	72.30	63.378	
11,800.00	10,603.24	10,050.00	10,044.70	40.63	35.04	73.16	4,809.43	1,771.62	4,491.36	4,418.47	72.90	61.612	
11,900.00	10,602.69	10,050.00	10,044.70	41.30	35.04	73.16	4,809.43	1,771.62	4,400.80	4,327.25	73.55	59.834	
12,000.00	10,602.15	10,050.00	10,044.70	42.02	35.04	73.16	4,809.43	1,771.62	4,310.65	4,236.40	74.26	58.051	
12,100.00	10,601.60	10,050.00	10,044.70	42.80	35.04	73.16	4,809.43	1,771.62	4,220.95	4,145.94	75.01	56.270	
12,200.00	10,601.05	10,050.00	10,044.70	43.62	35.04	73.16	4,809.43	1,771.62	4,131.72	4,055.91	75.82	54.495	
12,300.00	10,600.51	10,050.00	10,044.70	44.50	35.04	73.16	4,809.43	1,771.62	4,043.00	3,966.33	76.67	52.733	
12,400.00	10,599.96	10,050.00	10,044.70	45.42	35.04	73.16	4,809.43	1,771.62	3,954.81	3,877.25	77.56	50.989	
12,500.00	10,599.42	10,050.00	10,044.70	46.38	35.04	73.16	4,809.43	1,771.62	3,867.20	3,788.70	78.50	49.266	
12,600.00	10,598.87	10,050.00	10,044.70	47.38	35.04	73.16	4,809.43	1,771.62	3,780.20	3,700.74	79.47	47.569	
12,700.00	10,598.33	10,050.00	10,044.70	48.41	35.04	73.16	4,809.43	1,771.62	3,693.87	3,613.39	80.48	45.900	
12,800.00	10,597.78	10,072.44	10,066.87	49.48	35.11	73.80	4,812.87	1,771.63	3,607.78	3,525.97	81.81	44.099	
12,900.00	10,597.23	10,075.09	10,069.48	50.59	35.12	73.88	4,813.33	1,771.63	3,522.79	3,439.87	82.92	42.484	
13,000.00	10,596.69	10,077.89	10,072.23	51.72	35.13	73.96	4,813.83	1,771.63	3,438.60	3,354.54	84.06	40.907	
13,100.00	10,596.14	10,100.00	10,093.90	52.88	35.20	74.60	4,818.27	1,771.63	3,355.59	3,270.11	85.48	39.257	
13,200.00	10,595.60	10,100.00	10,093.90	54.07	35.20	74.60	4,818.27	1,771.63	3,273.06	3,186.42	86.64	37.779	
13,300.00	10,595.05	10,100.00	10,093.90	55.28	35.20	74.60	4,818.27	1,771.63	3,191.54	3,103.72	87.82	36.342	
13,400.00	10,594.50	10,100.00	10,093.90	56.52	35.20	74.60	4,818.27	1,771.63	3,111.09	3,022.07	89.03	34.946	
13,500.00	10,593.96	10,100.00	10,093.90	57.78	35.20	74.60	4,818.27	1,771.63	3,031.81	2,941.56	90.25	33.593	
13,600.00	10,593.41	10,100.00	10,093.90	59.06	35.20	74.60	4,818.27	1,771.63	2,953.79	2,862.29	91.50	32.282	
13,700.00	10,592.87	10,100.00	10,093.90	60.36	35.20	74.60	4,818.27	1,771.63	2,877.13	2,784.36	92.76	31.016	
13,800.00	10,592.32	10,100.00	10,093.90	61.67	35.20	74.60	4,818.27	1,771.63	2,801.94	2,707.89	94.04	29.794	
13,900.00	10,591.78	10,100.00	10,093.90	63.00	35.20	74.60	4,818.27	1,771.63	2,728.34	2,633.00	95.34	28.616	
14,000.00	10,591.23	10,100.00	10,093.90	64.35	35.20	74.60	4,818.27	1,771.63	2,656.47	2,559.81	96.66	27.484	
14,100.00	10,590.68	10,123.57	10,116.78	65.71	35.27	75.28	4,823.92	1,771.63	2,586.01	2,487.70	98.30	26.306	
14,200.00	10,590.14	10,129.79	10,122.78	67.09	35.29	75.46	4,825.57	1,771.63	2,517.77	2,418.04	99.73	25.245	
14,300.00	10,589.59	10,150.00	10,142.13	68.48	35.36	76.04	4,831.37	1,771.63	2,451.78	2,350.43	101.36	24.189	
14,400.00	10,589.05	10,150.00	10,142.13	69.88	35.36	76.04	4,831.37	1,771.63	2,387.82	2,285.09	102.73	23.244	
14,500.00	10,588.50	10,150.00	10,142.13	71.29	35.36	76.04	4,831.37	1,771.63	2,326.39	2,222.28	104.11	22.345	
14,600.00	10,587.96	10,150.00	10,142.13	72.72	35.36	76.04	4,831.37	1,771.63	2,267.71	2,162.20	105.51	21.494	
14,700.00	10,587.41	10,170.54	10,161.59	74.15	35.42	76.62	4,837.96	1,771.63	2,211.68	2,104.50	107.18	20.635	
14,800.00	10,586.86	10,181.31	10,171.69	75.60	35.45	76.92	4,841.69	1,771.63	2,158.78	2,050.04	108.73	19.854	
14,900.00	10,586.32	10,200.00	10,189.05	77.05	35.51	77.45	4,848.62	1,771.63	2,109.13	1,998.73	110.40	19.105	
15,000.00	10,585.77	10,200.00	10,189.05	78.51	35.51	77.45	4,848.62	1,771.63	2,062.87	1,951.04	111.83	18.446	
15,100.00	10,585.23	10,221.71	10,208.91	79.98	35.57	78.05	4,857.37	1,771.63	2,020.20	1,906.66	113.54	17.792	
15,200.00	10,584.68	10,250.00	10,234.28	81.46	35.65	78.83	4,869.89	1,771.63	1,981.44	1,866.11	115.33	17.181	
15,300.00	10,584.14	10,250.00	10,234.28	82.94	35.65	78.83	4,869.89	1,771.63	1,946.52	1,829.73	116.79	16.666	
15,400.00	10,583.59	10,280.08	10,260.53	84.43	35.73	79.64	4,884.56	1,771.63	1,915.68	1,797.08	118.60	16.153	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Grenache 32 State Com 2H - Grenache 32 State Com 2H - Grenache 32 State Com 2H - Design #2

Offset Site Error: 0.00 ft
Offset Well Error: 0.00 ft

Survey Program: 0-MWD

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
15,500.00	10,583.04	10,300.00	10,277.48	85.93	35.79	80.16	4,895.02	1,771.63	1,889.05	1,768.76	120.29	15.704	
15,600.00	10,582.50	10,334.96	10,306.31	87.44	35.88	81.06	4,914.79	1,771.63	1,866.57	1,744.45	122.12	15.285	
15,700.00	10,581.95	10,369.29	10,333.40	88.95	35.97	81.90	4,935.87	1,771.63	1,848.24	1,724.32	123.92	14.915	
15,800.00	10,581.41	10,409.50	10,363.45	90.46	36.08	82.84	4,962.58	1,771.63	1,833.89	1,708.14	125.75	14.584	
15,900.00	10,580.86	10,450.00	10,391.75	91.98	36.18	83.73	4,991.54	1,771.63	1,823.30	1,695.75	127.55	14.295	
16,000.00	10,580.32	10,512.14	10,431.01	93.51	36.34	84.98	5,039.67	1,771.63	1,816.01	1,686.56	129.45	14.029	
16,100.00	10,579.77	10,576.74	10,466.04	95.04	36.51	86.09	5,093.90	1,771.63	1,811.56	1,680.26	131.30	13.797	
16,200.00	10,579.22	10,650.00	10,498.11	96.57	36.70	87.12	5,159.71	1,771.64	1,809.30	1,676.16	133.14	13.589	
16,300.00	10,578.68	10,733.99	10,524.20	98.11	36.94	87.96	5,239.47	1,771.64	1,808.55	1,673.57	134.99	13.398	
16,326.84	10,578.53	10,757.53	10,529.39	98.53	37.01	88.13	5,262.43	1,771.64	1,808.53	1,673.05	135.48	13.349	CC
16,400.00	10,578.13	10,823.58	10,538.87	99.66	37.21	88.44	5,327.76	1,771.64	1,808.70	1,671.87	136.82	13.219	
16,500.00	10,577.59	10,919.58	10,541.23	101.21	37.52	88.53	5,423.70	1,771.64	1,809.30	1,670.61	138.69	13.046	
16,600.00	10,577.04	11,019.57	10,541.68	102.76	37.90	88.56	5,523.69	1,771.65	1,809.96	1,669.34	140.62	12.871	
16,700.00	10,576.50	11,119.57	10,542.14	104.31	38.35	88.59	5,623.68	1,771.65	1,810.63	1,668.00	142.63	12.695	
16,800.00	10,575.95	11,219.56	10,542.60	105.87	38.87	88.63	5,723.67	1,771.65	1,811.29	1,666.58	144.70	12.517	
16,900.00	10,575.40	11,319.55	10,543.05	107.43	39.45	88.66	5,823.66	1,771.66	1,811.95	1,665.10	146.85	12.339	
17,000.00	10,574.86	11,419.54	10,543.51	109.00	40.09	88.69	5,923.66	1,771.66	1,812.61	1,663.56	149.05	12.161	
17,100.00	10,574.31	11,519.54	10,543.97	110.57	40.79	88.72	6,023.65	1,771.66	1,813.28	1,661.96	151.32	11.983	
17,200.00	10,573.77	11,619.53	10,544.42	112.14	41.54	88.76	6,123.64	1,771.66	1,813.94	1,660.30	153.65	11.806	
17,300.00	10,573.22	11,719.52	10,544.88	113.71	42.34	88.79	6,223.63	1,771.67	1,814.61	1,658.58	156.03	11.630	
17,400.00	10,572.68	11,819.51	10,545.34	115.29	43.20	88.82	6,323.62	1,771.67	1,815.28	1,656.82	158.46	11.456	
17,500.00	10,572.13	11,919.51	10,545.79	116.87	44.10	88.85	6,423.61	1,771.67	1,815.94	1,655.00	160.94	11.283	
17,600.00	10,571.58	12,019.50	10,546.25	118.45	45.05	88.88	6,523.61	1,771.68	1,816.61	1,653.14	163.47	11.113	
17,700.00	10,571.04	12,119.49	10,546.71	120.03	46.03	88.92	6,623.60	1,771.68	1,817.28	1,651.24	166.04	10.945	
17,800.00	10,570.49	12,219.49	10,547.17	121.62	47.06	88.95	6,723.59	1,771.68	1,817.95	1,649.30	168.65	10.779	
17,900.00	10,569.95	12,319.48	10,547.62	123.21	48.11	88.98	6,823.58	1,771.69	1,818.61	1,647.32	171.30	10.617	
18,000.00	10,569.40	12,419.47	10,548.08	124.80	49.21	89.01	6,923.57	1,771.69	1,819.28	1,645.30	173.98	10.457	
18,100.00	10,568.85	12,519.46	10,548.54	126.39	50.33	89.04	7,023.56	1,771.69	1,819.95	1,643.25	176.70	10.300	
18,200.00	10,568.31	12,619.46	10,548.99	127.98	51.49	89.08	7,123.56	1,771.69	1,820.62	1,641.17	179.45	10.146	
18,300.00	10,567.76	12,719.45	10,549.45	129.58	52.67	89.11	7,223.55	1,771.70	1,821.30	1,639.07	182.23	9.995	
18,400.00	10,567.22	12,819.44	10,549.91	131.18	53.87	89.14	7,323.54	1,771.70	1,821.97	1,636.93	185.04	9.847	
18,500.00	10,566.67	12,919.43	10,550.36	132.78	55.11	89.17	7,423.53	1,771.70	1,822.64	1,634.77	187.87	9.702	
18,600.00	10,566.13	13,019.43	10,550.82	134.38	56.36	89.20	7,523.52	1,771.71	1,823.31	1,632.59	190.72	9.560	
18,700.00	10,565.58	13,119.42	10,551.28	135.98	57.63	89.23	7,623.51	1,771.71	1,823.99	1,630.39	193.60	9.421	
18,800.00	10,565.03	13,219.41	10,551.73	137.59	58.93	89.27	7,723.50	1,771.71	1,824.66	1,628.16	196.50	9.286	
18,900.00	10,564.49	13,319.40	10,552.19	139.19	60.24	89.30	7,823.50	1,771.72	1,825.33	1,625.92	199.42	9.153	
19,000.00	10,563.94	13,419.40	10,552.65	140.80	61.57	89.33	7,923.49	1,771.72	1,826.01	1,623.65	202.36	9.024	
19,100.00	10,563.40	13,519.39	10,553.10	142.41	62.91	89.36	8,023.48	1,771.72	1,826.69	1,621.37	205.31	8.897	
19,200.00	10,562.85	13,619.38	10,553.56	144.02	64.27	89.39	8,123.47	1,771.72	1,827.36	1,619.08	208.28	8.774	
19,300.00	10,562.31	13,719.37	10,554.02	145.63	65.65	89.42	8,223.46	1,771.73	1,828.04	1,616.77	211.27	8.653	
19,400.00	10,561.76	13,819.37	10,554.47	147.24	67.03	89.46	8,323.45	1,771.73	1,828.72	1,614.45	214.27	8.535	
19,500.00	10,561.21	13,919.36	10,554.93	148.86	68.43	89.49	8,423.45	1,771.73	1,829.39	1,612.11	217.28	8.419	
19,600.00	10,560.67	14,019.35	10,555.39	150.47	69.84	89.52	8,523.44	1,771.74	1,830.07	1,609.76	220.31	8.307	
19,700.00	10,560.12	14,119.34	10,555.85	152.09	71.27	89.55	8,623.43	1,771.74	1,830.75	1,607.40	223.35	8.197	
19,800.00	10,559.58	14,219.34	10,556.30	153.71	72.70	89.58	8,723.42	1,771.74	1,831.43	1,605.03	226.40	8.089	
19,900.00	10,559.03	14,319.33	10,556.76	155.33	74.14	89.61	8,823.41	1,771.75	1,832.11	1,602.65	229.46	7.984	
20,000.00	10,558.49	14,419.32	10,557.22	156.95	75.59	89.65	8,923.40	1,771.75	1,832.79	1,600.26	232.53	7.882	
20,100.00	10,557.94	14,519.32	10,557.67	158.57	77.05	89.68	9,023.40	1,771.75	1,833.47	1,597.86	235.61	7.782	
20,200.00	10,557.39	14,619.31	10,558.13	160.19	78.52	89.71	9,123.39	1,771.75	1,834.15	1,595.45	238.71	7.684	
20,300.00	10,556.85	14,719.30	10,558.59	161.81	80.00	89.74	9,223.38	1,771.76	1,834.84	1,593.03	241.80	7.588	
20,400.00	10,556.30	14,819.29	10,559.04	163.44	81.48	89.77	9,323.37	1,771.76	1,835.52	1,590.61	244.91	7.495	
20,500.00	10,555.76	14,919.29	10,559.50	165.06	82.97	89.80	9,423.36	1,771.76	1,836.20	1,588.18	248.03	7.403	

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

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Offset Design Grenache 32 State Com 2H - Grenache 32 State Com 2H - Grenache 32 State Com 2H - Design #2

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

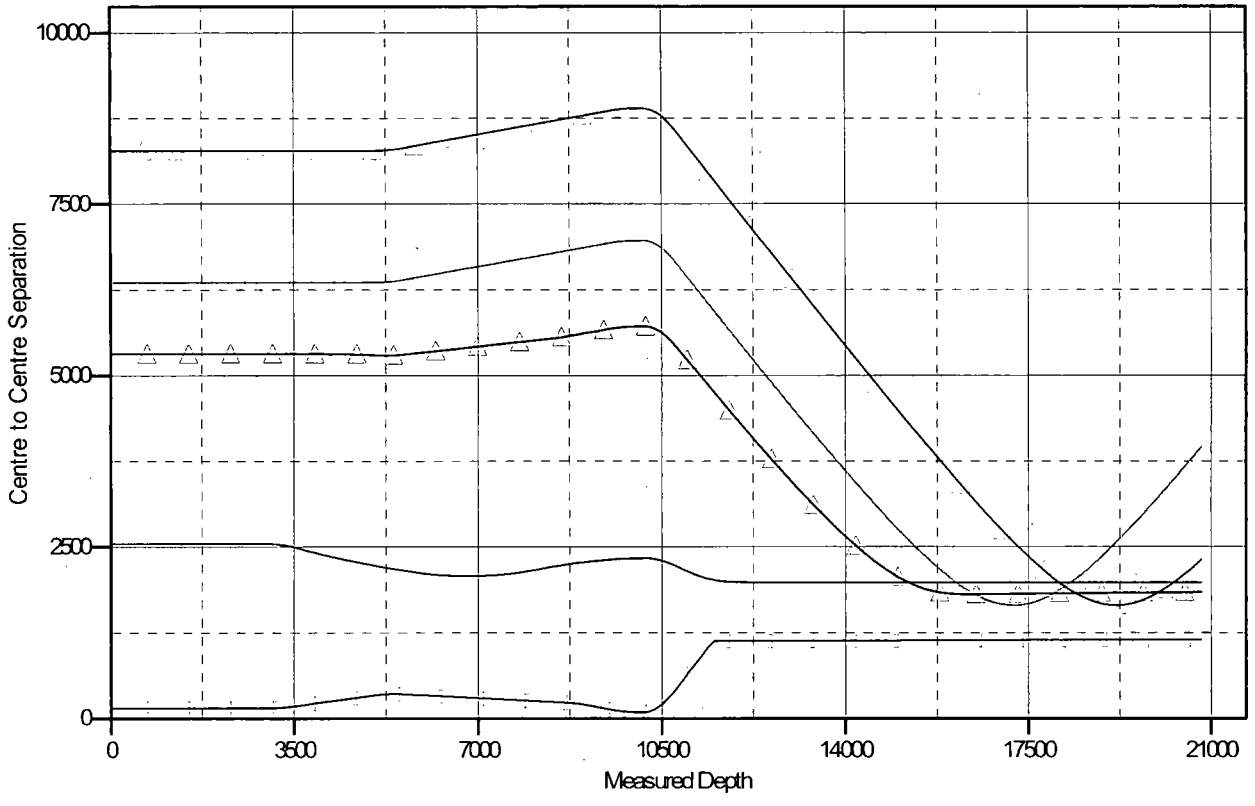
Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
20,600.00	10,555.21	15,019.28	10,559.96	166.69	84.47	89.83	9,523.35	1,771.77	1,836.89	1,585.74	251.15	7.314	
20,700.00	10,554.67	15,119.27	10,560.41	168.31	85.97	89.87	9,623.34	1,771.77	1,837.57	1,583.29	254.28	7.227	
20,800.00	10,554.12	15,219.26	10,560.87	169.94	87.48	89.90	9,723.34	1,771.77	1,838.26	1,580.84	257.41	7.141	
20,821.88	10,554.00	15,241.14	10,560.97	170.29	87.81	89.90	9,745.21	1,771.77	1,838.41	1,580.31	258.10	7.123	ES, SF

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 3716.00ft (Original Well Elev
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Cheddar 2BS Federal Com 1H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.34°

Ladder Plot



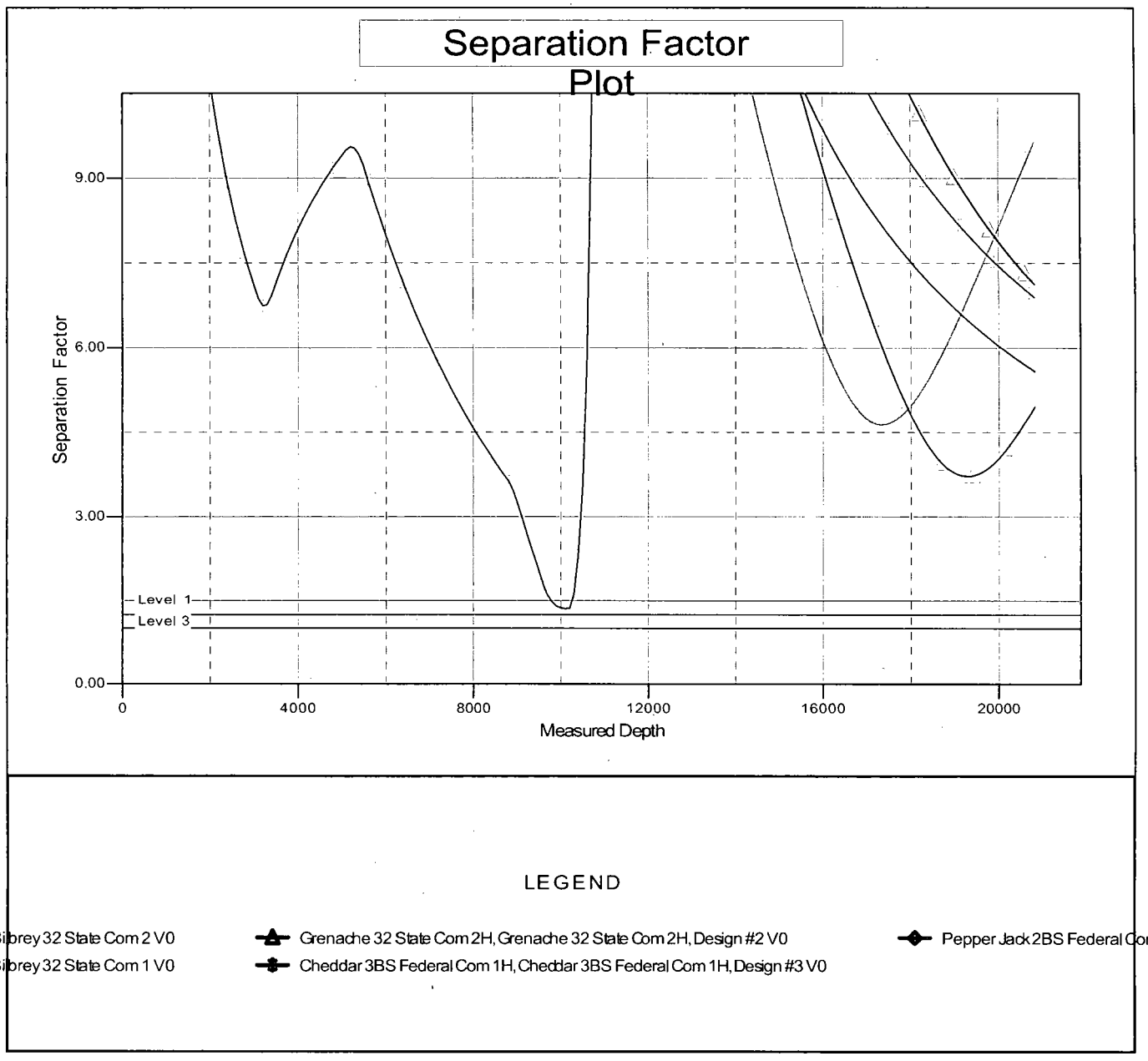
LEGEND

Bilbrey 32 State Com 2 V0
Bilbrey 32 State Com 1 V0
Grenache 32 State Com 2H, Grenache 32 State Com 2H, Design #2 V0
Cheddar 3BS Federal Com 1H, Cheddar 3BS Federal Com 1H, Design #3 V0
Pepper Jack 2BS Federal Cor

Company:	GMT Exploration	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Project:	Lea County, NM (NAD 83)	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Reference Site:	Cheddar Federal Com pad.	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Cheddar 2BS Federal Com 1H	**Database:**	EDM 5000.1 Single User Db
Reference Design:	Design #4	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 3716.00ft (Original Well Elev
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Cheddar 2BS Federal Com 1H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.34°



GMT
Exploration Company LLC

GMT Exploration

Lea County, NM (NAD 83)
Cheddar Federal Com pad.
Cheddar 2BS Federal Com 1H

Cheddar 2BS Federal Com 1H

Plan: Design #4

Standard Planning Report

15 June, 2017

NEWSCO

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Company:	GMT Exploration	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Project:	Lea County, NM (NAD 83)	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site:	Cheddar Federal Com pad.	**North Reference:**	Grid
Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Cheddar 2BS Federal Com 1H		
Design:	Design #4		

Project	Lea County, NM (NAD 83)		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Cheddar Federal Com pad.				
Site Position:		**Northing:**	515,157.17 usft	**Latitude:**	32° 24' 52.790 N
From:	Lat/Long	**Easting:**	735,445.93 usft	**Longitude:**	103° 42' 15.520 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	13-3/16"	**Grid Convergence:**	0.34 °

Well	Cheddar 2BS Federal Com 1H					
Well Position	**+N/-S**	0.00 ft	**Northing:**	515,157.17 usft	**Latitude:**	32° 24' 52.790 N
	+E/-W	0.00 ft	**Easting:**	735,445.93 usft	**Longitude:**	103° 42' 15.520 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	0.00 ft	**Ground Level:**	3,696.00 ft

Wellbore	Cheddar 2BS Federal Com 1H				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	05/13/17	7.04	60.22	48,045

Design	Design #4				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**	
	0.00	0.00	0.00	359.61	

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	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	
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,504.73	8.09	179.60	5,503.38	-28.54	0.20	2.00	2.00	0.00	179.60	
9,573.17	8.09	179.60	9,531.29	-601.39	4.15	0.00	0.00	0.00	0.00	
9,977.89	0.00	0.00	9,934.67	-629.93	4.35	2.00	-2.00	0.00	180.00	
10,173.77	0.00	0.00	10,130.55	-629.93	4.35	0.00	0.00	0.00	0.00	
10,926.38	90.31	359.61	10,608.00	-149.87	1.07	12.00	12.00	-0.05	359.61	
20,821.87	90.31	359.61	10,554.00	9,745.25	-66.63	0.00	0.00	0.00	0.00	PBHL Cheddar 2BS F

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Site:	Cheddar Federal Com pad.	**North Reference:**	Grid
Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Cheddar 2BS Federal Com 1H		
Design:	Design #4		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	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
Rustler									
670.00	0.00	0.00	670.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
Salt Top									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware Mountain Group									
4,630.00	0.00	0.00	4,630.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00

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Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Cheddar 2BS Federal Com 1H		
Design:	Design #4		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Delaware Bell Canyon									
4,735.00	0.00	0.00	4,735.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	2.00	179.60	5,199.98	-1.75	0.01	-1.75	2.00	2.00	0.00
5,300.00	4.00	179.60	5,299.84	-6.98	0.05	-6.98	2.00	2.00	0.00
5,400.00	6.00	179.60	5,399.45	-15.69	0.11	-15.69	2.00	2.00	0.00
5,500.00	8.00	179.60	5,498.70	-27.88	0.19	-27.88	2.00	2.00	0.00
Start 4068.44 hold at 5504.73 MD									
5,504.73	8.09	179.60	5,503.38	-28.54	0.20	-28.54	2.00	2.00	0.00
Cherry Canyon									
5,561.71	8.09	179.60	5,559.80	-36.56	0.25	-36.57	0.00	0.00	0.00
5,600.00	8.09	179.60	5,597.71	-41.96	0.29	-41.96	0.00	0.00	0.00
5,700.00	8.09	179.60	5,696.71	-56.04	0.39	-56.04	0.00	0.00	0.00
5,800.00	8.09	179.60	5,795.71	-70.12	0.48	-70.12	0.00	0.00	0.00
5,900.00	8.09	179.60	5,894.72	-84.20	0.58	-84.20	0.00	0.00	0.00
6,000.00	8.09	179.60	5,993.72	-98.28	0.68	-98.28	0.00	0.00	0.00
6,100.00	8.09	179.60	6,092.72	-112.36	0.78	-112.36	0.00	0.00	0.00
6,200.00	8.09	179.60	6,191.73	-126.44	0.87	-126.44	0.00	0.00	0.00
6,300.00	8.09	179.60	6,290.73	-140.52	0.97	-140.52	0.00	0.00	0.00
6,400.00	8.09	179.60	6,389.74	-154.60	1.07	-154.60	0.00	0.00	0.00
6,500.00	8.09	179.60	6,488.74	-168.68	1.16	-168.68	0.00	0.00	0.00
6,600.00	8.09	179.60	6,587.74	-182.76	1.26	-182.76	0.00	0.00	0.00
6,700.00	8.09	179.60	6,686.75	-196.84	1.36	-196.84	0.00	0.00	0.00
6,800.00	8.09	179.60	6,785.75	-210.92	1.46	-210.92	0.00	0.00	0.00
6,900.00	8.09	179.60	6,884.75	-225.00	1.55	-225.00	0.00	0.00	0.00
7,000.00	8.09	179.60	6,983.76	-239.08	1.65	-239.09	0.00	0.00	0.00
7,100.00	8.09	179.60	7,082.76	-253.16	1.75	-253.17	0.00	0.00	0.00
Brushy Canyon									
7,176.57	8.09	179.60	7,158.57	-263.94	1.82	-263.95	0.00	0.00	0.00
7,200.00	8.09	179.60	7,181.77	-267.24	1.85	-267.25	0.00	0.00	0.00
7,300.00	8.09	179.60	7,280.77	-281.32	1.94	-281.33	0.00	0.00	0.00
7,400.00	8.09	179.60	7,379.77	-295.40	2.04	-295.41	0.00	0.00	0.00
7,500.00	8.09	179.60	7,478.78	-309.48	2.14	-309.49	0.00	0.00	0.00
7,600.00	8.09	179.60	7,577.78	-323.56	2.23	-323.57	0.00	0.00	0.00
7,700.00	8.09	179.60	7,676.78	-337.64	2.33	-337.65	0.00	0.00	0.00
7,800.00	8.09	179.60	7,775.79	-351.72	2.43	-351.73	0.00	0.00	0.00
7,900.00	8.09	179.60	7,874.79	-365.80	2.53	-365.81	0.00	0.00	0.00
8,000.00	8.09	179.60	7,973.80	-379.88	2.62	-379.89	0.00	0.00	0.00
8,100.00	8.09	179.60	8,072.80	-393.96	2.72	-393.97	0.00	0.00	0.00
8,200.00	8.09	179.60	8,171.80	-408.04	2.82	-408.05	0.00	0.00	0.00
8,300.00	8.09	179.60	8,270.81	-422.12	2.91	-422.13	0.00	0.00	0.00
Lower Brushy Canyon Marker									
8,367.53	8.09	179.60	8,337.66	-431.63	2.98	-431.64	0.00	0.00	0.00
8,400.00	8.09	179.60	8,369.81	-436.20	3.01	-436.21	0.00	0.00	0.00
8,500.00	8.09	179.60	8,468.81	-450.28	3.11	-450.29	0.00	0.00	0.00
8,600.00	8.09	179.60	8,567.82	-464.36	3.21	-464.38	0.00	0.00	0.00
Bone Spring									
8,634.99	8.09	179.60	8,602.46	-469.29	3.24	-469.30	0.00	0.00	0.00
8,700.00	8.09	179.60	8,666.82	-478.44	3.30	-478.46	0.00	0.00	0.00

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Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Cheddar 2BS Federal Com 1H		
Design:	Design #4		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,800.00	8.09	179.60	8,765.82	-492.53	3.40	-492.54	0.00	0.00	0.00
Avalon Shale Top									
8,831.80	8.09	179.60	8,797.31	-497.00	3.43	-497.01	0.00	0.00	0.00
8,900.00	8.09	179.60	8,864.83	-506.61	3.50	-506.62	0.00	0.00	0.00
9,000.00	8.09	179.60	8,963.83	-520.69	3.60	-520.70	0.00	0.00	0.00
9,100.00	8.09	179.60	9,062.84	-534.77	3.69	-534.78	0.00	0.00	0.00
9,200.00	8.09	179.60	9,161.84	-548.85	3.79	-548.86	0.00	0.00	0.00
9,300.00	8.09	179.60	9,260.84	-562.93	3.89	-562.94	0.00	0.00	0.00
9,400.00	8.09	179.60	9,359.85	-577.01	3.98	-577.02	0.00	0.00	0.00
9,500.00	8.09	179.60	9,458.85	-591.09	4.08	-591.10	0.00	0.00	0.00
Start Drop -2.00									
9,573.17	8.09	179.60	9,531.29	-601.39	4.15	-601.40	0.00	0.00	0.00
9,600.00	7.56	179.60	9,557.87	-605.04	4.18	-605.06	2.00	-2.00	0.00
1st Bone Spring Sand									
9,679.36	5.97	179.60	9,636.68	-614.39	4.24	-614.40	2.00	-2.00	0.00
9,700.00	5.56	179.60	9,657.21	-616.46	4.26	-616.48	2.00	-2.00	0.00
9,800.00	3.56	179.60	9,756.89	-624.41	4.31	-624.42	2.00	-2.00	0.00
9,900.00	1.56	179.60	9,856.79	-628.87	4.34	-628.89	2.00	-2.00	0.00
Start 195.88 hold at 9977.89 MD									
9,977.89	0.00	0.00	9,934.67	-629.93	4.35	-629.95	2.00	-2.00	0.00
10,000.00	0.00	0.00	9,956.78	-629.93	4.35	-629.95	0.00	0.00	0.00
10,100.00	0.00	0.00	10,056.78	-629.93	4.35	-629.95	0.00	0.00	0.00
Carbonate									
10,164.81	0.00	0.00	10,121.59	-629.93	4.35	-629.95	0.00	0.00	0.00
Start DLS 12.00 TFO 359.61									
10,173.77	0.00	0.00	10,130.55	-629.93	4.35	-629.95	0.00	0.00	0.00
10,200.00	3.15	359.61	10,156.76	-629.21	4.35	-629.22	12.00	12.00	0.00
10,300.00	15.15	359.61	10,255.31	-613.34	4.24	-613.36	12.00	12.00	0.00
2nd Bone Spring Sand									
10,359.67	22.31	359.61	10,311.78	-594.20	4.11	-594.21	12.00	12.00	0.00
10,400.00	27.15	359.61	10,348.41	-577.33	3.99	-577.34	12.00	12.00	0.00
10,500.00	39.15	359.61	10,431.98	-522.75	3.62	-522.76	12.00	12.00	0.00
10,600.00	51.15	359.61	10,502.38	-451.99	3.13	-452.00	12.00	12.00	0.00
10,700.00	63.15	359.61	10,556.53	-368.14	2.56	-368.15	12.00	12.00	0.00
Possible Horizontal Target Top									
10,714.97	64.94	359.61	10,563.08	-354.68	2.47	-354.68	12.00	12.00	0.00
10,800.00	75.15	359.61	10,592.06	-274.86	1.92	-274.87	12.00	12.00	0.00
10,900.00	87.15	359.61	10,607.42	-176.24	1.25	-176.24	12.00	12.00	0.00
Start 9895.50 hold at 10926.38 MD									
10,926.38	90.31	359.61	10,608.00	-149.87	1.07	-149.87	12.00	12.00	0.00
11,000.00	90.31	359.61	10,607.60	-76.25	0.56	-76.25	0.00	0.00	0.00
11,100.00	90.31	359.61	10,607.06	23.75	-0.12	23.75	0.00	0.00	0.00
11,200.00	90.31	359.61	10,606.51	123.74	-0.81	123.75	0.00	0.00	0.00
11,300.00	90.31	359.61	10,605.97	223.74	-1.49	223.74	0.00	0.00	0.00
11,400.00	90.31	359.61	10,605.42	323.74	-2.17	323.74	0.00	0.00	0.00
11,500.00	90.31	359.61	10,604.87	423.73	-2.86	423.74	0.00	0.00	0.00
11,600.00	90.31	359.61	10,604.33	523.73	-3.54	523.74	0.00	0.00	0.00
11,700.00	90.31	359.61	10,603.78	623.72	-4.23	623.74	0.00	0.00	0.00
11,800.00	90.31	359.61	10,603.24	723.72	-4.91	723.74	0.00	0.00	0.00
11,900.00	90.31	359.61	10,602.69	823.72	-5.59	823.74	0.00	0.00	0.00
12,000.00	90.31	359.61	10,602.15	923.71	-6.28	923.73	0.00	0.00	0.00
12,100.00	90.31	359.61	10,601.60	1,023.71	-6.96	1,023.73	0.00	0.00	0.00
12,200.00	90.31	359.61	10,601.05	1,123.71	-7.65	1,123.73	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Company:	GMT Exploration	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Project:	Lea County, NM (NAD 83)	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site:	Cheddar Federal Com pad.	**North Reference:**	Grid
Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Cheddar 2BS Federal Com 1H		
Design:	Design #4		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,300.00	90.31	359.61	10,600.51	1,223.70	-8.33	1,223.73	0.00	0.00	0.00
12,400.00	90.31	359.61	10,599.96	1,323.70	-9.02	1,323.73	0.00	0.00	0.00
12,500.00	90.31	359.61	10,599.42	1,423.69	-9.70	1,423.73	0.00	0.00	0.00
12,600.00	90.31	359.61	10,598.87	1,523.69	-10.38	1,523.73	0.00	0.00	0.00
12,700.00	90.31	359.61	10,598.32	1,623.69	-11.07	1,623.72	0.00	0.00	0.00
12,800.00	90.31	359.61	10,597.78	1,723.68	-11.75	1,723.72	0.00	0.00	0.00
12,900.00	90.31	359.61	10,597.23	1,823.68	-12.44	1,823.72	0.00	0.00	0.00
13,000.00	90.31	359.61	10,596.69	1,923.67	-13.12	1,923.72	0.00	0.00	0.00
13,100.00	90.31	359.61	10,596.14	2,023.67	-13.80	2,023.72	0.00	0.00	0.00
13,200.00	90.31	359.61	10,595.60	2,123.67	-14.49	2,123.72	0.00	0.00	0.00
13,300.00	90.31	359.61	10,595.05	2,223.66	-15.17	2,223.71	0.00	0.00	0.00
13,400.00	90.31	359.61	10,594.50	2,323.66	-15.86	2,323.71	0.00	0.00	0.00
13,500.00	90.31	359.61	10,593.96	2,423.66	-16.54	2,423.71	0.00	0.00	0.00
13,600.00	90.31	359.61	10,593.41	2,523.65	-17.22	2,523.71	0.00	0.00	0.00
13,700.00	90.31	359.61	10,592.87	2,623.65	-17.91	2,623.71	0.00	0.00	0.00
13,800.00	90.31	359.61	10,592.32	2,723.64	-18.59	2,723.71	0.00	0.00	0.00
13,900.00	90.31	359.61	10,591.78	2,823.64	-19.28	2,823.71	0.00	0.00	0.00
14,000.00	90.31	359.61	10,591.23	2,923.64	-19.96	2,923.70	0.00	0.00	0.00
14,100.00	90.31	359.61	10,590.68	3,023.63	-20.65	3,023.70	0.00	0.00	0.00
14,200.00	90.31	359.61	10,590.14	3,123.63	-21.33	3,123.70	0.00	0.00	0.00
14,300.00	90.31	359.61	10,589.59	3,223.62	-22.01	3,223.70	0.00	0.00	0.00
14,400.00	90.31	359.61	10,589.05	3,323.62	-22.70	3,323.70	0.00	0.00	0.00
14,500.00	90.31	359.61	10,588.50	3,423.62	-23.38	3,423.70	0.00	0.00	0.00
14,600.00	90.31	359.61	10,587.96	3,523.61	-24.07	3,523.70	0.00	0.00	0.00
14,700.00	90.31	359.61	10,587.41	3,623.61	-24.75	3,623.69	0.00	0.00	0.00
14,800.00	90.31	359.61	10,586.86	3,723.61	-25.43	3,723.69	0.00	0.00	0.00
14,900.00	90.31	359.61	10,586.32	3,823.60	-26.12	3,823.69	0.00	0.00	0.00
15,000.00	90.31	359.61	10,585.77	3,923.60	-26.80	3,923.69	0.00	0.00	0.00
15,100.00	90.31	359.61	10,585.23	4,023.59	-27.49	4,023.69	0.00	0.00	0.00
15,200.00	90.31	359.61	10,584.68	4,123.59	-28.17	4,123.69	0.00	0.00	0.00
15,300.00	90.31	359.61	10,584.14	4,223.59	-28.85	4,223.69	0.00	0.00	0.00
15,400.00	90.31	359.61	10,583.59	4,323.58	-29.54	4,323.68	0.00	0.00	0.00
15,500.00	90.31	359.61	10,583.04	4,423.58	-30.22	4,423.68	0.00	0.00	0.00
15,600.00	90.31	359.61	10,582.50	4,523.58	-30.91	4,523.68	0.00	0.00	0.00
15,700.00	90.31	359.61	10,581.95	4,623.57	-31.59	4,623.68	0.00	0.00	0.00
15,800.00	90.31	359.61	10,581.41	4,723.57	-32.28	4,723.68	0.00	0.00	0.00
15,900.00	90.31	359.61	10,580.86	4,823.56	-32.96	4,823.68	0.00	0.00	0.00
16,000.00	90.31	359.61	10,580.32	4,923.56	-33.64	4,923.67	0.00	0.00	0.00
16,100.00	90.31	359.61	10,579.77	5,023.56	-34.33	5,023.67	0.00	0.00	0.00
16,200.00	90.31	359.61	10,579.22	5,123.55	-35.01	5,123.67	0.00	0.00	0.00
16,300.00	90.31	359.61	10,578.68	5,223.55	-35.70	5,223.67	0.00	0.00	0.00
16,400.00	90.31	359.61	10,578.13	5,323.54	-36.38	5,323.67	0.00	0.00	0.00
16,500.00	90.31	359.61	10,577.59	5,423.54	-37.06	5,423.67	0.00	0.00	0.00
16,600.00	90.31	359.61	10,577.04	5,523.54	-37.75	5,523.67	0.00	0.00	0.00
16,700.00	90.31	359.61	10,576.50	5,623.53	-38.43	5,623.66	0.00	0.00	0.00
16,800.00	90.31	359.61	10,575.95	5,723.53	-39.12	5,723.66	0.00	0.00	0.00
16,900.00	90.31	359.61	10,575.40	5,823.53	-39.80	5,823.66	0.00	0.00	0.00
17,000.00	90.31	359.61	10,574.86	5,923.52	-40.48	5,923.66	0.00	0.00	0.00
17,100.00	90.31	359.61	10,574.31	6,023.52	-41.17	6,023.66	0.00	0.00	0.00
17,200.00	90.31	359.61	10,573.77	6,123.51	-41.85	6,123.66	0.00	0.00	0.00
17,300.00	90.31	359.61	10,573.22	6,223.51	-42.54	6,223.66	0.00	0.00	0.00
17,400.00	90.31	359.61	10,572.67	6,323.51	-43.22	6,323.65	0.00	0.00	0.00
17,500.00	90.31	359.61	10,572.13	6,423.50	-43.91	6,423.65	0.00	0.00	0.00
17,600.00	90.31	359.61	10,571.58	6,523.50	-44.59	6,523.65	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Company:	GMT Exploration	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Project:	Lea County, NM (NAD 83)	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site:	Cheddar Federal Com pad.	**North Reference:**	Grid
Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Cheddar 2BS Federal Com 1H		
Design:	Design #4		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,700.00	90.31	359.61	10,571.04	6,623.49	-45.27	6,623.65	0.00	0.00	0.00
17,800.00	90.31	359.61	10,570.49	6,723.49	-45.96	6,723.65	0.00	0.00	0.00
17,900.00	90.31	359.61	10,569.95	6,823.49	-46.64	6,823.65	0.00	0.00	0.00
18,000.00	90.31	359.61	10,569.40	6,923.48	-47.33	6,923.64	0.00	0.00	0.00
18,100.00	90.31	359.61	10,568.85	7,023.48	-48.01	7,023.64	0.00	0.00	0.00
18,200.00	90.31	359.61	10,568.31	7,123.48	-48.69	7,123.64	0.00	0.00	0.00
18,300.00	90.31	359.61	10,567.76	7,223.47	-49.38	7,223.64	0.00	0.00	0.00
18,400.00	90.31	359.61	10,567.22	7,323.47	-50.06	7,323.64	0.00	0.00	0.00
18,500.00	90.31	359.61	10,566.67	7,423.46	-50.75	7,423.64	0.00	0.00	0.00
18,600.00	90.31	359.61	10,566.13	7,523.46	-51.43	7,523.64	0.00	0.00	0.00
18,700.00	90.31	359.61	10,565.58	7,623.46	-52.11	7,623.63	0.00	0.00	0.00
18,800.00	90.31	359.61	10,565.03	7,723.45	-52.80	7,723.63	0.00	0.00	0.00
18,900.00	90.31	359.61	10,564.49	7,823.45	-53.48	7,823.63	0.00	0.00	0.00
19,000.00	90.31	359.61	10,563.94	7,923.44	-54.17	7,923.63	0.00	0.00	0.00
19,100.00	90.31	359.61	10,563.40	8,023.44	-54.85	8,023.63	0.00	0.00	0.00
19,200.00	90.31	359.61	10,562.85	8,123.44	-55.54	8,123.63	0.00	0.00	0.00
19,300.00	90.31	359.61	10,562.31	8,223.43	-56.22	8,223.63	0.00	0.00	0.00
19,400.00	90.31	359.61	10,561.76	8,323.43	-56.90	8,323.62	0.00	0.00	0.00
19,500.00	90.31	359.61	10,561.21	8,423.43	-57.59	8,423.62	0.00	0.00	0.00
19,600.00	90.31	359.61	10,560.67	8,523.42	-58.27	8,523.62	0.00	0.00	0.00
19,700.00	90.31	359.61	10,560.12	8,623.42	-58.96	8,623.62	0.00	0.00	0.00
19,800.00	90.31	359.61	10,559.58	8,723.41	-59.64	8,723.62	0.00	0.00	0.00
19,900.00	90.31	359.61	10,559.03	8,823.41	-60.32	8,823.62	0.00	0.00	0.00
20,000.00	90.31	359.61	10,558.49	8,923.41	-61.01	8,923.62	0.00	0.00	0.00
20,100.00	90.31	359.61	10,557.94	9,023.40	-61.69	9,023.61	0.00	0.00	0.00
20,200.00	90.31	359.61	10,557.39	9,123.40	-62.38	9,123.61	0.00	0.00	0.00
20,300.00	90.31	359.61	10,556.85	9,223.40	-63.06	9,223.61	0.00	0.00	0.00
20,400.00	90.31	359.61	10,556.30	9,323.39	-63.74	9,323.61	0.00	0.00	0.00
20,500.00	90.31	359.61	10,555.76	9,423.39	-64.43	9,423.61	0.00	0.00	0.00
20,600.00	90.31	359.61	10,555.21	9,523.38	-65.11	9,523.61	0.00	0.00	0.00
20,700.00	90.31	359.61	10,554.67	9,623.38	-65.80	9,623.60	0.00	0.00	0.00
20,800.00	90.31	359.61	10,554.12	9,723.38	-66.48	9,723.60	0.00	0.00	0.00
TD at 20821.87									
20,821.87	90.31	359.61	10,554.00	9,745.25	-66.63	9,745.48	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
VP Cheddar 2BS Federa	0.00	0.00	9,934.67	-855.90	6.24	514,301.28	735,452.17	32° 24' 44.321 N	103° 42' 15.506 W
- plan misses target center by 225.98ft at 9977.89ft MD (9934.67 TVD, -629.93 N, 4.35 E)									
- Point									
PBHL Cheddar 2BS Fed	0.00	0.00	10,554.00	9,745.25	-66.63	524,902.40	735,379.30	32° 26' 29.225 N	103° 42' 15.628 W
- plan hits target center									
- Point									
FTP Cheddar 2BS Fede	0.00	0.00	10,608.00	-149.87	1.07	515,007.30	735,447.00	32° 24' 51.307 N	103° 42' 15.517 W
- plan misses target center by 0.01ft at 10926.37ft MD (10608.00 TVD, -149.87 N, 1.07 E)									
- Point									

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Cheddar 2BS Federal Com 1H
Company:	GMT Exploration	**TVD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Project:	Lea County, NM (NAD 83)	**MD Reference:**	WELL @ 3716.00ft (Original Well Elev)
Site:	Cheddar Federal Com pad.	**North Reference:**	Grid
Well:	Cheddar 2BS Federal Com 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Cheddar 2BS Federal Com 1H		
Design:	Design #4		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
670.00	670.00	Rustler		0.31	359.61
1,000.00	1,000.00	Salt Top		0.31	359.61
4,630.00	4,630.00	Delaware Mountain Group		0.31	359.61
4,735.00	4,735.00	Delaware Bell Canyon		0.31	359.61
5,561.71	5,560.00	Cherry Canyon		0.31	359.61
7,176.57	7,160.00	Brushy Canyon		0.31	359.61
8,367.53	8,340.00	Lower Brushy Canyon Marker		0.31	359.61
8,634.99	8,605.00	Bone Spring		0.31	359.61
8,831.80	8,800.00	Avalon Shale Top		0.31	359.61
9,679.36	9,640.00	1st Bone Spring Sand		0.31	359.61
10,164.81	10,125.00	Carbonate		0.31	359.61
10,359.67	10,315.00	2nd Bone Spring Sand		0.31	359.61
10,714.97	10,565.00	Possible Horizontal Target Top		0.31	359.61

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
5,100.00	5,100.00	0.00	0.00	Start Build 2.00
5,504.73	5,503.38	-28.54	0.20	Start 4068.44 hold at 5504.73 MD
9,573.17	9,531.29	-601.39	4.15	Start Drop -2.00
9,977.89	9,934.67	-629.93	4.35	Start 195.88 hold at 9977.89 MD
10,173.77	10,130.55	-629.93	4.35	Start DLS 12.00 TFO 359.61
10,926.38	10,608.00	-149.87	1.07	Start 9895.50 hold at 10926.38 MD
20,821.87	10,554.00	9,745.25	-66.63	TD at 20821.87

GMT Exploration Company LLC

Project:	Lea County, NM (NAD 83)
Site:	Cheddar Federal Com pad.
Well:	Cheddar 2BS Federal Com 1H
Wellbore:	Cheddar 2BS Federal Com 1H
Design:	Design #4
Latitude:	32° 24' 52.790 N
Longitude:	103° 42' 15.520 W
GL:	3696.00
KB:	WELL @ 3716.00ft (Original Well Elev)

NEWSCO

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
VP Cheddar 2BS Federal Com 1H P4	9934.67	-855.90	6.24	514301.28	735452.17	32° 24' 44.321 N	103° 42' 15.506 W
PBHL Cheddar 2BS Federal Com 1H P4	10554.00	9745.25	-66.63	524902.40	735379.30	32° 26' 29.225 N	103° 42' 15.628 W
FTP Cheddar 2BS Federal Com 1H P4	10608.00	-149.87	1.07	515007.30	735447.00	32° 24' 51.307 N	103° 42' 15.517 W

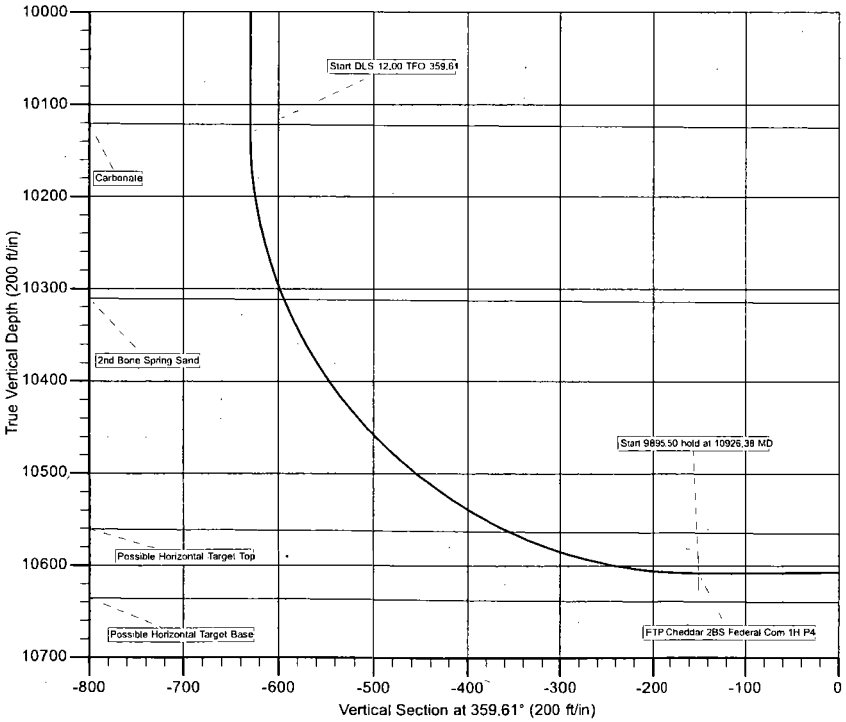
WELL DETAILS: Cheddar 2BS Federal Com 1H

Ground Level: 3696.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	515157.17	735445.93	32° 24' 52.790 N	103° 42' 15.520 W	

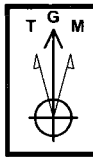
SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5100.00	0.00	0.00	5100.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
5504.73	8.09	179.60	5503.38	-28.54	0.20	2.00	179.60	-28.54	Start 4068.44 hold at 5504.73 MD
9573.17	8.09	179.60	9531.29	-601.39	4.15	0.00	0.00	-601.40	Start Drop -2.00
9977.89	0.00	0.00	9934.67	-629.93	4.35	2.00	180.00	-629.95	Start 195.88 hold at 9977.89 MD
10173.77	0.00	0.00	10130.55	-629.93	4.35	0.00	0.00	-629.95	Start DLS 12.00 TFO 359.61
10926.38	90.31	359.61	10608.00	-149.87	1.07	12.00	359.61	-149.87	Start 9895.50 hold at 10926.38 MD
20821.87	90.31	359.61	10554.00	9745.25	-66.63	0.00	0.00	9745.48	TD at 20821.87



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
670.00	670.00	Rustler
1000.00	1000.00	Salt Top
4630.00	4630.00	Delaware Mountain Group
4735.00	4735.00	Delaware Bell Canyon
5559.80	5561.71	Cherry Canyon
7158.57	7176.57	Brushy Canyon
8337.66	8367.53	Lower Brushy Canyon Marker
8602.46	8634.99	Bone Spring
8797.31	8831.80	Avalon Shale Top
9636.68	9679.36	1st Bone Spring Sand
10121.59	10164.81	Carbonate
10311.78	10359.67	2nd Bone Spring Sand
10563.08	10714.97	Possible Horizontal Target Top

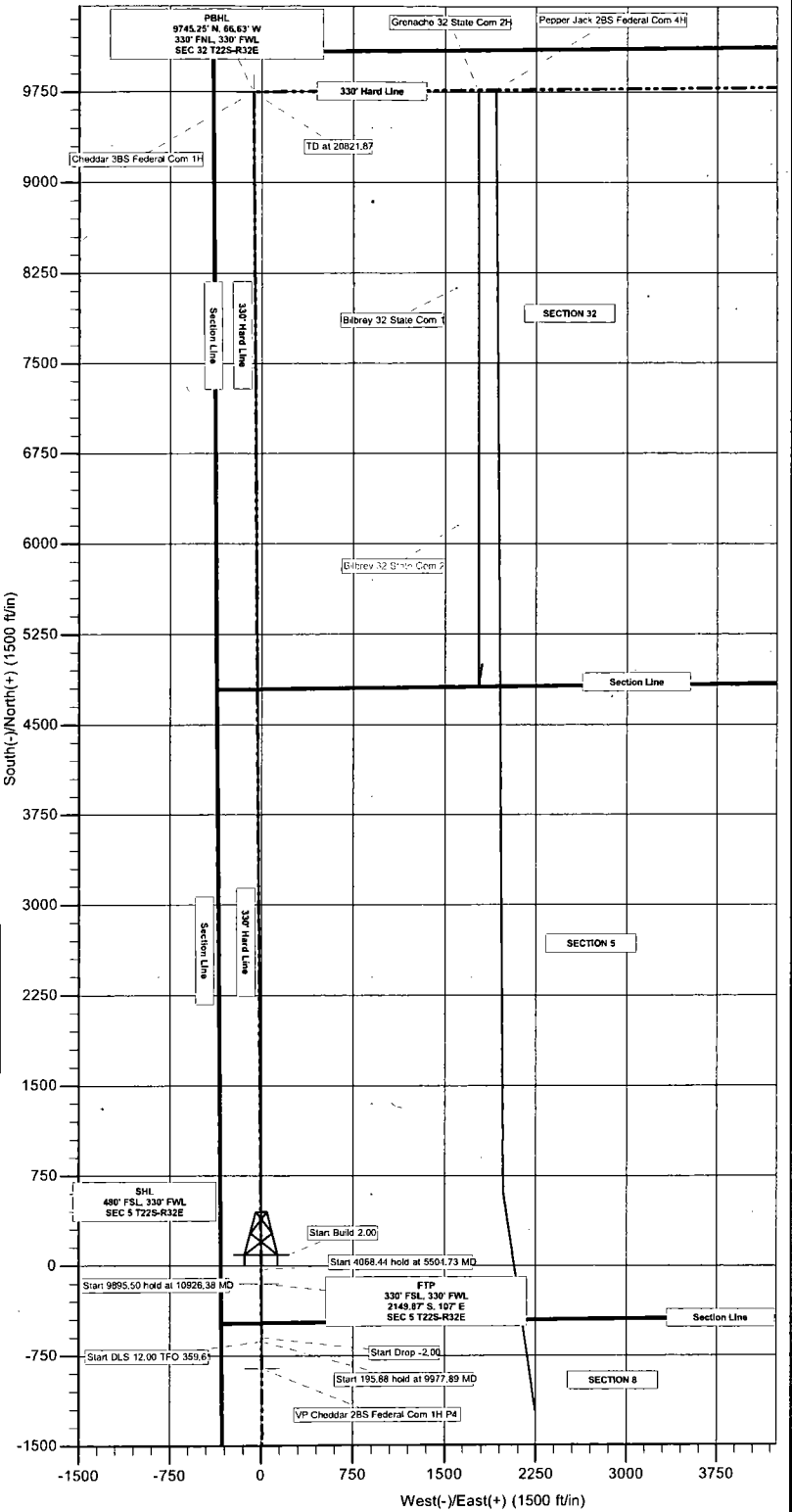


Azimuths to Grid North
True North: -0.34°
Magnetic North: 6.70°

Magnetic Field
Strength: 48045.3snT
Dip Angle: 60.22°
Date: 05/13/2017
Model: IGRF2015

PROJECT DETAILS: Lea County, NM (NAD 83)

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



Plan: Design #4 (Cheddar 2BS Federal Com 1H/Cheddar 2BS Federal Com 1H)

Created By: TRACY WILLIAMS Date: 15:46, June 15 2017