PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Caza Operating, LLC
LEASE NO.:	NMNM92199
WELL NAME & NO.:	6H-Copperline West 29 Federal
SURFACE HOLE FOOTAGE:	55'/N & 775'/W
BOTTOM HOLE FOOTAGE	335'/S & 970'/W
LOCATION:	Section 29, T.23 S., R.34 E., NMPM
COUNTY:	Lea County, New Mexico

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

A. Hydrogen Sulfide

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

B. CASING

1. The **13 3/8** inch surface casing shall be set at approximately **1075** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.

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

   b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

   c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours

after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

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

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.

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

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

C. PRESSURE CONTROL

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

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

D. SPECIAL REQUIREMENT (S)

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.

Well Name
Operator shall submit a sundry to add 'com' to the well name.

MHH07022018

Approval Date: 08/04/2018

GENERAL REQUIREMENTS

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

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

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

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

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

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

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

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

A. CASING

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

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

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

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

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

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

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

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

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the

plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

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

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

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

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

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

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

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

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

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SURFACE HOLE FOOTAGE:	55'/N & 775'/W
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COUNTY:	Lea County, New Mexico

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

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

Hydrology

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.

A leak detection plan will be submitted to the BLM Carlsbad Field Office for approval prior to pipeline installation. The method could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

Range

Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

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.

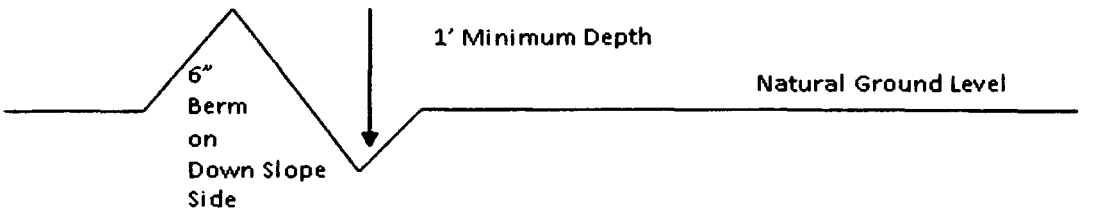
Ditching
Ditching shall be required on both sides of the road.

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:

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

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

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

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

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

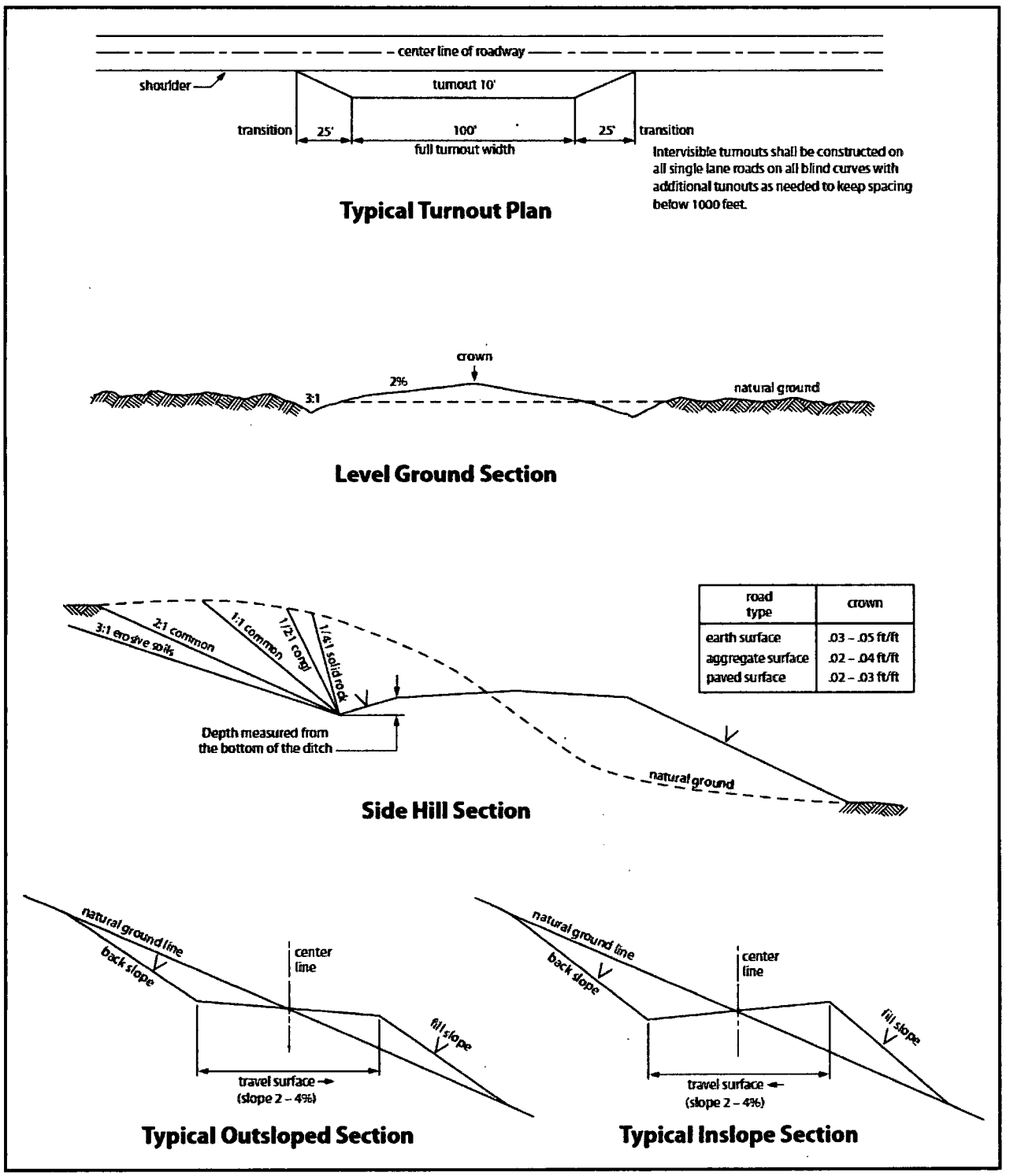


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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.

VRM Facility Requirement
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 2 for Sandy Sites

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

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

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

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

*Pounds of pure live seed:

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

Caza Oil and Gas

West Copperline
West Copperline 29 Fed 6H
West Copperline 29 Fed 6H
West Copperline 29 Fed 6H

Plan: 160719 West Copperline 29 Fed 6H

MOJO Standard Plan

27 September, 2016

#NAME?

13 3/8	surface csg in a	17 1/2	inch hole.	Design Factors			SURFACE	
Segment	**#/ft**	**Grade**	**Coupling**	**Joint**	**Collapse**	**Burst**	**Length**	**Weight**
"A"	54.50	J 55	ST&C	8.94	2.32	1.04	1,055	57,498
"B"							**0**	**0**
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,451			**Tail Cmt does not circ to sfc**			Totals:	1,055	57,498

Comparison of Proposed to Minimum Required Cement Vol

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
17 1/2	0.6946	**748**	1346	**806**	67	**8.90**	1511	**2M**	1.56

9 5/8	casing inside the	13 3/8	_	Design Factors			INTERMEDIATE	
Segment	**#/ft**	**Grade**	**Coupling**	**Joint**	**Collapse**	**Burst**	**Length**	**Weight**
"A"	40.00	J 55	LT&C	2.58	1.27	0.72	3,900	156,000
"B"	**40.00**	**L 80**	**LT&C**	15.87	**1.18**	**1.04**	**1,145**	**45,800**
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,063						Totals:	5,045	201,800

ment volume(s) are intended to achieve a top of 0 't from surface or a 1055 overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
12 1/4	0.3132	**1712**	3469	**1651**	110	**10.00**	2942	**3M**	0.81
Setting Depths for D V Tool(s):		**3100**					sum of sx	Σ CuFt	Σ%excess
excess cmt by stage % :		**193**	44				1636	3309	100

Class 'C' tail cmt yld > 1.35

Burst Frac Gradient(s) for Segment(s): A, B, C, D = 1.01, b, c, d All > 0.70, OK.

5 1/2	casing inside the	9 5/8	_	Design Factors			PRODUCTION	
Segment	**#/ft**	**Grade**	**Coupling**	**Body**	**Collapse**	**Burst**	**Length**	**Weight**
"A"	17.00	P 110	BUTT	2.76	1.52	1.93	10,425	177,225
"B"	**17.00**	**P 110**	**BUTT**	9.93	**1.29**	**1.93**	**5,846**	**99,382**
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,294						Totals:	16,271	276,607

B Segment Design Factors would be: 26.427744 1.36 if it were a vertical wellbore.

No Pilot Hole Planned	MTD	Max VTD	Csg VD	Curve KOP	Dogleg°	Severity°	MEOC
	16271	11640	11640	10425	90	6	11965

ment volume(s) are intended to achieve a top of 0 't from surface or a 5045 overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
8 3/4	0.2526	**3500**	7646	**4157**	84	**9.10**			1.35

Class 'H' tail cmt yld > 1.20

MOJO Standard Plan

Company:	Caza Oil and Gas	**Local Co-ordinate Reference:**	Well West Copperline 29 Fed 6H
Project:	West Copperline	**TVD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Site:	West Copperline 29 Fed 6H	**MD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Well:	West Copperline 29 Fed 6H	**North Reference:**	Grid
Wellbore:	West Copperline 29 Fed 6H	**Survey Calculation Method:**	Minimum Curvature
Design:	160719 West Copperline 29 Fed 6H	**Database:**	EDM 5000.1 Single User Db

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

Site	West Copperline 29 Fed 6H				
Site Position:		**Northing:**	467,584.27 usft	**Latitude:**	32° 16' 57.724 N
From:	Lat/Long	**Easting:**	799,451.93 usft	**Longitude:**	103° 29' 53.210 W
Position Uncertainty:	.1.0 usft	**Slot Radius:**	16 "	**Grid Convergence:**	0.45 °

Well	West Copperline 29 Fed 6H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	467,584.27 usft	**Latitude:**	32° 16' 57.724 N
	+E/-W	0.0 usft	**Easting:**	799,451.93 usft	**Longitude:**	103° 29' 53.210 W
Position Uncertainty		1.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,562.0 usft

Wellbore	West Copperline 29 Fed 6H				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	7/19/2016	6.93	60.12	48,148

Design	160719 West Copperline 29 Fed 6H			
Audit Notes:				
Version:	**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**
	0.0	0.0	0.0	177.47

Survey Tool Program	**Date** 9/27/2016			
From (usft)	**To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
0.0	16,271.0	160719 West Copperline 29 Fed 6H (Wes	MWD	MWD - Standard

Company:	Caza Oil and Gas	**Local Co-ordinate Reference:**	Well West Copperline 29 Fed 6H
Project:	West Copperline	**TVD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Site:	West Copperline 29 Fed 6H	**MD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Well:	West Copperline 29 Fed 6H	**North Reference:**	Grid
Wellbore:	West Copperline 29 Fed 6H	**Survey Calculation Method:**	Minimum Curvature
Design:	160719 West Copperline 29 Fed 6H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
0.0	0.00	0.00	0.0	-3,580.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
100.0	0.00	0.00	100.0	-3,480.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
120.0	0.00	0.00	120.0	-3,460.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
20" Conductor										
200.0	0.00	0.00	200.0	-3,380.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
300.0	0.00	0.00	300.0	-3,280.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
400.0	0.00	0.00	400.0	-3,180.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
500.0	0.00	0.00	500.0	-3,080.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
600.0	0.00	0.00	600.0	-2,980.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
700.0	0.00	0.00	700.0	-2,880.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
800.0	0.00	0.00	800.0	-2,780.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
900.0	0.00	0.00	900.0	-2,680.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
1,000.0	0.00	0.00	1,000.0	-2,580.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
1,023.5	0.00	0.00	1,023.5	-2,557.0	0.0	0.0	0.0	0.00	467,584.27	799,451.93
Rustler										
1,055.0	0.00	0.00	1,055.0	-2,525.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
13 3/8"										
1,100.0	0.00	0.00	1,100.0	-2,480.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
1,200.0	0.00	0.00	1,200.0	-2,380.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
1,223.5	0.00	0.00	1,223.5	-2,357.0	0.0	0.0	0.0	0.00	467,584.27	799,451.93
Top of Salt										
1,300.0	0.00	0.00	1,300.0	-2,280.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
1,400.0	0.00	0.00	1,400.0	-2,180.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
1,500.0	0.00	0.00	1,500.0	-2,080.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
1,600.0	0.00	0.00	1,600.0	-1,980.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
1,700.0	0.00	0.00	1,700.0	-1,880.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
1,800.0	0.00	0.00	1,800.0	-1,780.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
1,900.0	0.00	0.00	1,900.0	-1,680.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93

Company:	Caza Oil and Gas	**Local Co-ordinate Reference:**	Well West Copperline 29 Fed 6H
Project:	West Copperline	**TVD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Site:	West Copperline 29 Fed 6H	**MD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Well:	West Copperline 29 Fed 6H	**North Reference:**	Grid
Wellbore:	West Copperline 29 Fed 6H	**Survey Calculation Method:**	Minimum Curvature
Design:	160719 West Copperline 29 Fed 6H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
2,000.0	0.00	0.00	2,000.0	-1,580.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
2,100.0	0.00	0.00	2,100.0	-1,480.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
2,200.0	0.00	0.00	2,200.0	-1,380.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
2,300.0	0.00	0.00	2,300.0	-1,280.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
2,400.0	0.00	0.00	2,400.0	-1,180.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
2,500.0	0.00	0.00	2,500.0	-1,080.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
2,600.0	0.00	0.00	2,600.0	-980.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
2,700.0	0.00	0.00	2,700.0	-880.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
2,703.5	0.00	0.00	2,703.5	-877.0	0.0	0.0	0.0	0.00	467,584.27	799,451.93
Base of Salt										
2,800.0	0.00	0.00	2,800.0	-780.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
2,900.0	0.00	0.00	2,900.0	-680.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
3,000.0	0.00	0.00	3,000.0	-580.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
3,100.0	0.00	0.00	3,100.0	-480.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
3,200.0	0.00	0.00	3,200.0	-380.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
3,300.0	0.00	0.00	3,300.0	-280.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
3,400.0	0.00	0.00	3,400.0	-180.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
3,500.0	0.00	0.00	3,500.0	-80.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
3,600.0	0.00	0.00	3,600.0	19.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
3,700.0	0.00	0.00	3,700.0	119.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
3,800.0	0.00	0.00	3,800.0	219.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
3,900.0	0.00	0.00	3,900.0	319.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
4,000.0	0.00	0.00	4,000.0	419.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
4,100.0	0.00	0.00	4,100.0	519.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
4,200.0	0.00	0.00	4,200.0	619.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
4,300.0	0.00	0.00	4,300.0	719.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
4,400.0	0.00	0.00	4,400.0	819.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93

Company:	Caza Oil and Gas	**Local Co-ordinate Reference:**	Well West Copperline 29 Fed 6H
Project:	West Copperline	**TVD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Site:	West Copperline 29 Fed 6H	**MD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Well:	West Copperline 29 Fed 6H	**North Reference:**	Grid
Wellbore:	West Copperline 29 Fed 6H	**Survey Calculation Method:**	Minimum Curvature
Design:	160719 West Copperline 29 Fed 6H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
4,500.0	0.00	0.00	4,500.0	919.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
4,600.0	0.00	0.00	4,600.0	1,019.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
4,700.0	0.00	0.00	4,700.0	1,119.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
4,800.0	0.00	0.00	4,800.0	1,219.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
4,900.0	0.00	0.00	4,900.0	1,319.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
5,000.0	0.00	0.00	5,000.0	1,419.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
5,045.0	0.00	0.00	5,045.0	1,464.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
9 5/8"										
5,100.0	0.00	0.00	5,100.0	1,519.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
5,113.5	0.00	0.00	5,113.5	1,533.0	0.0	0.0	0.0	0.00	467,584.27	799,451.93
Delaware										
5,200.0	0.00	0.00	5,200.0	1,619.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
5,300.0	0.00	0.00	5,300.0	1,719.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
5,400.0	0.00	0.00	5,400.0	1,819.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
5,500.0	0.00	0.00	5,500.0	1,919.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
5,600.0	0.00	0.00	5,600.0	2,019.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
5,700.0	0.00	0.00	5,700.0	2,119.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
5,800.0	0.00	0.00	5,800.0	2,219.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
5,808.5	0.00	0.00	5,808.5	2,228.0	0.0	0.0	0.0	0.00	467,584.27	799,451.93
Cherry Canyon										
5,900.0	0.00	0.00	5,900.0	2,319.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
6,000.0	0.00	0.00	6,000.0	2,419.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
6,100.0	0.00	0.00	6,100.0	2,519.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
6,200.0	0.00	0.00	6,200.0	2,619.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
6,300.0	0.00	0.00	6,300.0	2,719.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
6,400.0	0.00	0.00	6,400.0	2,819.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
6,500.0	0.00	0.00	6,500.0	2,919.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
6,600.0	0.00	0.00	6,600.0	3,019.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93

MOJO Standard Plan

Company:	Caza Oil and Gas	**Local Co-ordinate Reference:**	Well West Copperline 29 Fed 6H
Project:	West Copperline	**TVD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Site:	West Copperline 29 Fed 6H	**MD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Well:	West Copperline 29 Fed 6H	***North Reference:***	*Grid*
Wellbore:	West Copperline 29 Fed 6H	**Survey Calculation Method:**	Minimum Curvature
Design:	160719 West Copperline 29 Fed 6H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
6,700.0	0.00	0.00	6,700.0	3,119.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
6,800.0	0.00	0.00	6,800.0	3,219.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
6,900.0	0.00	0.00	6,900.0	3,319.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
7,000.0	0.00	0.00	7,000.0	3,419.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
7,100.0	0.00	0.00	7,100.0	3,519.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
7,108.5	0.00	0.00	7,108.5	3,528.0	0.0	0.0	0.0	0.00	467,584.27	799,451.93
Brushy Canyon										
7,200.0	0.00	0.00	7,200.0	3,619.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
7,300.0	0.00	0.00	7,300.0	3,719.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
7,400.0	0.00	0.00	7,400.0	3,819.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
7,500.0	0.00	0.00	7,500.0	3,919.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
7,600.0	0.00	0.00	7,600.0	4,019.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
7,700.0	0.00	0.00	7,700.0	4,119.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
7,800.0	0.00	0.00	7,800.0	4,219.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
7,900.0	0.00	0.00	7,900.0	4,319.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
8,000.0	0.00	0.00	8,000.0	4,419.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
8,100.0	0.00	0.00	8,100.0	4,519.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
8,200.0	0.00	0.00	8,200.0	4,619.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
8,300.0	0.00	0.00	8,300.0	4,719.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
8,400.0	0.00	0.00	8,400.0	4,819.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
8,500.0	0.00	0.00	8,500.0	4,919.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
8,600.0	0.00	0.00	8,600.0	5,019.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
8,668.5	0.00	0.00	8,668.5	5,088.0	0.0	0.0	0.0	0.00	467,584.27	799,451.93
Bone Spring/ Gloreitta										
8,700.0	0.00	0.00	8,700.0	5,119.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
8,800.0	0.00	0.00	8,800.0	5,219.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
8,900.0	0.00	0.00	8,900.0	5,319.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93

MOJO Standard Plan

Company:	Caza Oil and Gas	**Local Co-ordinate Reference:**	Well West Copperline 29 Fed 6H
Project:	West Copperline	**TVD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Site:	West Copperline 29 Fed 6H	**MD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Well:	West Copperline 29 Fed 6H	**North Reference:**	Grid
Wellbore:	West Copperline 29 Fed 6H	**Survey Calculation Method:**	Minimum Curvature
Design:	160719 West Copperline 29 Fed 6H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
9,000.0	0.00	0.00	9,000.0	5,419.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
9,100.0	0.00	0.00	9,100.0	5,519.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
9,200.0	0.00	0.00	9,200.0	5,619.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
9,300.0	0.00	0.00	9,300.0	5,719.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
9,400.0	0.00	0.00	9,400.0	5,819.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
9,500.0	0.00	0.00	9,500.0	5,919.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
9,600.0	0.00	0.00	9,600.0	6,019.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
9,700.0	0.00	0.00	9,700.0	6,119.5	0.0	0.0	0.0	0.00	467,584.27	799,451.93
Start Build 3.00										
9,753.5	1.61	90.00	9,753.5	6,173.0	0.0	0.7	0.0	3.00	467,584.27	799,452.68
1st Bone Spring Sand										
9,800.0	3.00	90.00	9,800.0	6,219.5	0.0	2.6	0.1	3.00	467,584.27	799,454.55
9,900.0	6.00	90.00	9,899.6	6,319.1	0.0	10.5	0.5	3.00	467,584.27	799,462.39
Start 1100.0 hold at 9900.0 MD										
10,000.0	6.00	90.00	9,999.1	6,418.6	0.0	20.9	0.9	0.00	467,584.27	799,472.85
10,100.0	6.00	90.00	10,098.5	6,518.0	0.0	31.4	1.4	0.00	467,584.27	799,483.30
10,200.0	6.00	90.00	10,198.0	6,617.5	0.0	41.8	1.8	0.00	467,584.27	799,493.75
10,300.0	6.00	90.00	10,297.4	6,716.9	0.0	52.3	2.3	0.00	467,584.27	799,504.21
10,301.1	6.00	90.00	10,298.5	6,718.0	0.0	52.4	2.3	0.00	467,584.27	799,504.32
2nd Bone Spring Sand										
10,400.0	6.00	90.00	10,396.9	6,816.4	0.0	62.7	2.8	0.00	467,584.27	799,514.66
10,500.0	6.00	90.00	10,496.3	6,915.8	0.0	73.2	3.2	0.00	467,584.27	799,525.11
10,600.0	6.00	90.00	10,595.8	7,015.3	0.0	83.6	3.7	0.00	467,584.27	799,535.56
10,700.0	6.00	90.00	10,695.3	7,114.8	0.0	94.1	4.2	0.00	467,584.27	799,546.02
10,763.6	6.00	90.00	10,758.5	7,178.0	0.0	100.7	4.4	0.00	467,584.27	799,552.66
2nd Bone Spring Lime										
10,800.0	6.00	90.00	10,794.7	7,214.2	0.0	104.5	4.6	0.00	467,584.27	799,556.47
10,900.0	6.00	90.00	10,894.2	7,313.7	0.0	115.0	5.1	0.00	467,584.27	799,566.92

MOJO Standard Plan

Company:	Caza Oil and Gas	**Local Co-ordinate Reference:**	Well West Copperline 29 Fed 6H
Project:	West Copperline	**TVD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Site:	West Copperline 29 Fed 6H	**MD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Well:	West Copperline 29 Fed 6H	**North Reference:**	Grid
Wellbore:	West Copperline 29 Fed 6H	**Survey Calculation Method:**	Minimum Curvature
Design:	160719 West Copperline 29 Fed 6H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
11,000.0	6.00	90.00	10,993.6	7,413.1	0.0	125.4	5.5	0.00	467,584.27	799,577.38
Start Turn 50.00										
11,100.0	6.00	140.00	11,093.1	7,512.6	-4.0	134.0	9.9	5.06	467,580.26	799,585.97
Start DLS 10.24 TFO 20.41										
11,200.0	16.00	153.00	11,191.2	7,610.7	-20.3	143.7	26.7	10.24	467,563.94	799,595.61
Start DLS 10.25 TFO 16.19										
11,271.5	23.13	158.20	11,258.5	7,678.0	-42.2	153.4	48.9	10.25	467,542.09	799,605.31
3rd Bone Spring Sand										
11,300.0	26.00	159.50	11,284.4	7,703.9	-53.2	157.6	60.1	10.25	467,531.04	799,609.58
Start DLS 10.26 TFO 15.01										
11,400.0	36.00	164.00	11,370.0	7,789.5	-102.1	173.5	109.7	10.26	467,482.13	799,625.40
Start DLS 10.27 TFO 24.73										
11,500.0	45.50	170.00	11,445.7	7,865.2	-165.7	187.8	173.8	10.27	467,418.59	799,639.73
Start DLS 10.24 TFO 23.67										
11,572.7	52.39	173.77	11,493.5	7,913.0	-219.9	195.4	228.4	10.24	467,364.32	799,647.37
Wolcamp										
11,600.0	55.00	175.00	11,509.6	7,929.1	-241.8	197.6	250.3	10.24	467,342.46	799,649.52
Start DLS 10.40 TFO 25.29										
11,700.0	64.50	179.90	11,560.0	7,979.5	-328.0	201.2	336.5	10.40	467,256.29	799,653.18
Start Build 10.00										
11,800.0	74.50	179.90	11,595.0	8,014.5	-421.5	201.4	430.0	10.00	467,162.75	799,653.34
Start Build 10.50										
11,900.0	85.00	179.90	11,612.7	8,032.2	-519.8	201.6	528.2	10.50	467,064.48	799,653.51
Start Build 7.18										
11,965.0	89.67	179.90	11,615.8	8,035.3	-584.7	201.7	593.0	7.18	466,999.57	799,653.63
Start Turn -0.02										
12,000.0	89.67	179.89	11,616.0	8,035.5	-619.7	201.8	628.0	0.02	466,964.57	799,653.69
12,100.0	89.67	179.87	11,616.5	8,036.0	-719.7	202.0	727.9	0.02	466,864.57	799,653.89
12,200.0	89.67	179.86	11,617.1	8,036.6	-819.7	202.2	827.8	0.02	466,764.57	799,654.13

Company:	Caza Oil and Gas	**Local Co-ordinate Reference:**	Well West Copperline 29 Fed 6H
Project:	West Copperline	**TVD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Site:	West Copperline 29 Fed 6H	**MD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Well:	West Copperline 29 Fed 6H	**North Reference:**	Grid
Wellbore:	West Copperline 29 Fed 6H	**Survey Calculation Method:**	Minimum Curvature
Design:	160719 West Copperline 29 Fed 6H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
12,300.0	89.67	179.84	11,617.7	8,037.2	-919.7	202.5	927.7	0.02	466,664.57	799,654.39
12,400.0	89.67	179.82	11,618.3	8,037.8	-1,019.7	202.8	1,027.7	0.02	466,564.58	799,654.69
12,500.0	89.67	179.80	11,618.8	8,038.3	-1,119.7	203.1	1,127.6	0.02	466,464.58	799,655.03
Start 3771.0 hold at 12500.0 MD										
12,600.0	89.67	179.80	11,619.4	8,038.9	-1,219.7	203.4	1,227.5	0.00	466,364.58	799,655.37
12,700.0	89.67	179.80	11,620.0	8,039.5	-1,319.7	203.8	1,327.4	0.00	466,264.58	799,655.72
12,800.0	89.67	179.80	11,620.6	8,040.1	-1,419.7	204.1	1,427.3	0.00	466,164.59	799,656.07
12,900.0	89.67	179.80	11,621.1	8,040.6	-1,519.7	204.5	1,527.2	0.00	466,064.59	799,656.42
13,000.0	89.67	179.80	11,621.7	8,041.2	-1,619.7	204.8	1,627.1	0.00	465,964.59	799,656.77
13,100.0	89.67	179.80	11,622.3	8,041.8	-1,719.7	205.2	1,727.1	0.00	465,864.59	799,657.12
13,200.0	89.67	179.80	11,622.9	8,042.4	-1,819.7	205.5	1,827.0	0.00	465,764.59	799,657.47
13,300.0	89.67	179.80	11,623.4	8,042.9	-1,919.7	205.9	1,926.9	0.00	465,664.60	799,657.82
13,400.0	89.67	179.80	11,624.0	8,043.5	-2,019.7	206.2	2,026.8	0.00	465,564.60	799,658.17
13,500.0	89.67	179.80	11,624.6	8,044.1	-2,119.7	206.6	2,126.7	0.00	465,464.60	799,658.52
13,600.0	89.67	179.80	11,625.2	8,044.7	-2,219.7	206.9	2,226.6	0.00	465,364.60	799,658.87
13,700.0	89.67	179.80	11,625.7	8,045.2	-2,319.7	207.3	2,326.6	0.00	465,264.61	799,659.21
13,800.0	89.67	179.80	11,626.3	8,045.8	-2,419.7	207.6	2,426.5	0.00	465,164.61	799,659.56
13,900.0	89.67	179.80	11,626.9	8,046.4	-2,519.7	208.0	2,526.4	0.00	465,064.61	799,659.91
14,000.0	89.67	179.80	11,627.5	8,047.0	-2,619.7	208.3	2,626.3	0.00	464,964.61	799,660.26
14,100.0	89.67	179.80	11,628.0	8,047.5	-2,719.7	208.7	2,726.2	0.00	464,864.61	799,660.61
14,200.0	89.67	179.80	11,628.6	8,048.1	-2,819.7	209.0	2,826.1	0.00	464,764.62	799,660.96
14,300.0	89.67	179.80	11,629.2	8,048.7	-2,919.7	209.4	2,926.1	0.00	464,664.62	799,661.31
14,400.0	89.67	179.80	11,629.8	8,049.3	-3,019.6	209.7	3,026.0	0.00	464,564.62	799,661.66
14,500.0	89.67	179.80	11,630.4	8,049.9	-3,119.6	210.1	3,125.9	0.00	464,464.62	799,662.01
14,600.0	89.67	179.80	11,630.9	8,050.4	-3,219.6	210.4	3,225.8	0.00	464,364.63	799,662.36
14,700.0	89.67	179.80	11,631.5	8,051.0	-3,319.6	210.8	3,325.7	0.00	464,264.63	799,662.71
14,800.0	89.67	179.80	11,632.1	8,051.6	-3,419.6	211.1	3,425.6	0.00	464,164.63	799,663.05

Company:	Caza Oil and Gas	**Local Co-ordinate Reference:**	Well West Copperline 29 Fed 6H
Project:	West Copperline	**TVD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Site:	West Copperline 29 Fed 6H	**MD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Well:	West Copperline 29 Fed 6H	**North Reference:**	Grid
Wellbore:	West Copperline 29 Fed 6H	**Survey Calculation Method:**	Minimum Curvature
Design:	160719 West Copperline 29 Fed 6H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
14,900.0	89.67	179.80	11,632.7	8,052.2	-3,519.6	211.5	3,525.5	0.00	464,064.63	799,663.40
15,000.0	89.67	179.80	11,633.2	8,052.7	-3,619.6	211.8	3,625.5	0.00	463,964.63	799,663.75
15,100.0	89.67	179.80	11,633.8	8,053.3	-3,719.6	212.2	3,725.4	0.00	463,864.64	799,664.10
15,200.0	89.67	179.80	11,634.4	8,053.9	-3,819.6	212.5	3,825.3	0.00	463,764.64	799,664.45
15,300.0	89.67	179.80	11,635.0	8,054.5	-3,919.6	212.9	3,925.2	0.00	463,664.64	799,664.80
15,400.0	89.67	179.80	11,635.5	8,055.0	-4,019.6	213.2	4,025.1	0.00	463,564.64	799,665.15
15,500.0	89.67	179.80	11,636.1	8,055.6	-4,119.6	213.6	4,125.0	0.00	463,464.65	799,665.50
15,600.0	89.67	179.80	11,636.7	8,056.2	-4,219.6	213.9	4,225.0	0.00	463,364.65	799,665.85
15,700.0	89.67	179.80	11,637.3	8,056.8	-4,319.6	214.3	4,324.9	0.00	463,264.65	799,666.20
15,800.0	89.67	179.80	11,637.8	8,057.3	-4,419.6	214.6	4,424.8	0.00	463,164.65	799,666.54
15,900.0	89.67	179.80	11,638.4	8,057.9	-4,519.6	215.0	4,524.7	0.00	463,064.66	799,666.89
16,000.0	89.67	179.80	11,639.0	8,058.5	-4,619.6	215.3	4,624.6	0.00	462,964.66	799,667.24
16,100.0	89.67	179.80	11,639.6	8,059.1	-4,719.6	215.7	4,724.5	0.00	462,864.66	799,667.59
16,200.0	89.67	179.80	11,640.1	8,059.6	-4,819.6	216.0	4,824.4	0.00	462,764.66	799,667.94
16,271.0	89.67	179.80	11,640.6	8,060.1	-4,890.6	216.3	4,895.4	0.00	462,693.66	799,668.19
TD at 16271.0 - 5 1/2"										

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,055.0	1,055.0	13 3/8"	13-3/8	17-1/2
16,271.0	11,640.6	5 1/2"	5-1/2	8-3/4
5,045.0	5,045.0	9 5/8"	9-5/8	12-1/4
120.0	120.0	20" Conductor	20	26

Company:	Caza Oil and Gas	**Local Co-ordinate Reference:**	Well West Copperline 29 Fed 6H
Project:	West Copperline	**TVD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Site:	West Copperline 29 Fed 6H	**MD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Well:	West Copperline 29 Fed 6H	**North Reference:**	Grid
Wellbore:	West Copperline 29 Fed 6H	**Survey Calculation Method:**	Minimum Curvature
Design:	160719 West Copperline 29 Fed 6H	**Database:**	EDM 5000.1 Single User Db

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,023.5	1,023.5	Rustler		0.00	
11,572.7	11,493.5	Wolcamp		0.00	
10,763.6	10,758.5	2nd Bone Spring Lime		0.00	
7,108.5	7,108.5	Brushy Canyon		0.00	
8,668.5	8,668.5	Bone Spring/ Gloreitta		0.00	
10,301.1	10,298.5	2nd Bone Spring Sand		0.00	
1,223.5	1,223.5	Top of Salt		0.00	
9,753.5	9,753.5	1st Bone Spring Sand		0.00	
5,808.5	5,808.5	Cherry Canyon		0.00	
11,271.5	11,258.5	3rd Bone Spring Sand		0.00	
2,703.5	2,703.5	Base of Salt		0.00	
5,113.5	5,113.5	Delaware		0.00	

Company:	Caza Oil and Gas	**Local Co-ordinate Reference:**	Well West Copperline 29 Fed 6H
Project:	West Copperline	**TVD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Site:	West Copperline 29 Fed 6H	**MD Reference:**	WELL @ 3580.5usft (Original Well Elev)
Well:	West Copperline 29 Fed 6H	**North Reference:**	Grid
Wellbore:	West Copperline 29 Fed 6H	**Survey Calculation Method:**	Minimum Curvature
Design:	160719 West Copperline 29 Fed 6H	**Database:**	EDM 5000.1 Single User Db

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
9,700.0	9,700.0	0.0	0.0	Start Build 3.00
9,900.0	9,899.6	0.0	10.5	Start 1100.0 hold at 9900.0 MD
11,000.0	10,993.6	0.0	125.4	Start Turn 50.00
11,100.0	11,093.1	-4.0	134.0	Start DLS 10.24 TFO 20.41
11,200.0	11,191.2	-20.3	143.7	Start DLS 10.25 TFO 16.19
11,300.0	11,284.4	-53.2	157.6	Start DLS 10.26 TFO 15.01
11,400.0	11,370.0	-102.1	173.5	Start DLS 10.27 TFO 24.73
11,500.0	11,445.7	-165.7	187.8	Start DLS 10.24 TFO 23.67
11,600.0	11,509.6	-241.8	197.6	Start DLS 10.40 TFO 25.29
11,700.0	11,560.0	-328.0	201.2	Start Build 10.00
11,800.0	11,595.0	-421.5	201.4	Start Build 10.50
11,900.0	11,612.7	-519.8	201.6	Start Build 7.18
11,965.0	11,615.8	-584.7	201.7	Start Turn -0.02
12,500.0	11,618.8	-1,119.7	203.1	Start 3771.0 hold at 12500.0 MD
16,271.0	11,640.6	-4,890.6	216.3	TD at 16271.0

Checked By: _____ Approved By: _____ Date: _____

Caza Oil and Gas, Inc

H2S Drilling Operations Plan

Copperline West 29 Fed 6H

Lea County, New Mexico

Prepared by: Steve Morris

Date: 04/28/2018

Table of Contents

H2S Contingency Plan Section

Scope:

This contingency plan provides an organized plan of action for alerting and protecting the public within an area of exposure prior to an intentional release, of following the accidental release of a potentially hazardous volume of hydrogen sulfide. The plan establishes guidelines for all personnel whose work activity may involve exposure to Hydrogen Sulfide Gas (H2S).

Objective:

Prevent any and all accidents, and prevent the uncontrolled release of H2S into the atmosphere.

Provide proper evacuation procedures to cope with emergencies.

Provide immediate and adequate medical attention should an injury occur.

Implementation: This plan, with all details, is to be fully implemented 1000' before drilling into the first sour zone.

Emergency Response Procedure: This section outlines the conditions and denotes steps to be taken in the event of an emergency.

Emergency Equipment and Procedure: This section outlines the safety and emergency equipment that will be required for the drilling of this well.

Training Provisions: This section outlines the training provisions that must be adhered to 1000' before drilling into the first sour zone.

Emergency Call Lists: Included are the telephone numbers of all persons that would need to be contacted, should an H2S emergency occur.

Briefing: This section deals with the briefing of all persons involved with the drilling of this well.

Public Safety: Public safety personnel will be made aware of the drilling of this well.

Check Lists: Status check lists and procedural check lists have been included to ensure adherence to the plan.

General Information: A general information section has been included to supply support information.

Emergency Procedures Section

Emergency Procedures

I. **In the event of any evidence of H2S level above 10 ppm, take the following steps immediately:**
   A. Secure breathing apparatus.
   B. Order non-essential personnel out of the danger zone.
   C. Take steps to determine if the H2S level can be corrected or suppressed, and if so, proceed with normal operations.

II. **If uncontrollable conditions occur, proceed with the following:**
   A. Take steps to protect and/or remove any public downwind of the rig, including partial evacuation or isolation. Notify necessary public safety personnel and the New Mexico Oil & Gas of the situation.
   B. Remove all personnel to the safe briefing area.
   C. Notify public safety personnel for help with maintaining roadblocks and implementing evacuation.
   D. Determine and proceed with the best possible plan to regain control of the well. Maintain tight security and safety measures.

III. **Responsibility:**
   A. The company approved supervisor shall be responsible for the total implementation of the plan.
   B. The company approved supervisor shall be in complete command during any emergency.
   C. The company approved supervisor shall designate a backup supervisor in the event that he/she is not available.

Emergency Procedure Implementation

I. **Drilling or Tripping:**
   A. All Personnel
      1. When alarm sounds, don escape unit and report to upwind safe briefing area.
      2. Check status of other personnel (buddy system).
      3. Secure breathing apparatus.
      4. Wait for orders from supervisor.
   B. Drilling Foreman
      1. Report to the upwind safe briefing area.
      2. Don breathing apparatus and return to the point of release with the Tool pusher of Driller (buddy system).
      3. Determine the concentration of H2S.
      4. Address the situation and take appropriate control measures.
   C. Tool Pusher
      1. Report to the upwind safe briefing area.
      2. Don breathing apparatus and return to the point of release with the Drilling Foreman or the Driller (buddy system).

3. Determine the concentration.
4. Address the situation and take appropriate control measures.

D. Driller
1. Check the status of other personnel (in a rescue attempt, always use the buddy system).
2. Assign the least essential person to notify the Drilling Foreman and Tool Pusher, in the event of their absence.
3. Assume the responsibility of the Drilling Foreman and the Tool Pusher until they arrive, in the event of their absence.

E. Derrick Man and Floor Hands
1. Remain in the upwind safe briefing area until otherwise instructed by a supervisor.

F. Mud Engineer
1. Report to the upwind safe briefing area.
2. When instructed, begin check of mud for PH level and H2S level.

G. Safety Personnel
1. Don breathing apparatus.
2. Check the status of all personnel.
3. Wait for instructions from Drilling Foreman or Tool Pusher.

II. Taking a Kick:
A. All personnel report to the upwind safe briefing area.
B. Follow standard BOP procedures.

III. Open Hole Logging:
A. All unnecessary personnel should leave the rig floor.
B. Drilling Foreman and Safety personnel should monitor the conditions and make necessary safety equipment recommendations.

IV. Running Casing or Plugging:
A. Follow "Drilling or Tripping" procedures.
B. Assure that all personnel have access to protective equipment.

Simulated Blowout Control Drills

All drills will be initiated by activating alarm devices (air horn). One long blast on the air horn for ACTUAL and SIMULATED blowout control drills. This operation will be performed by the Drilling Foreman or Tool Pusher at least one time per week for each of the following conditions, with each crew:

Drill #1	On-bottom Drilling
Drill #2	Tripping Drill Pipe

In each of these drills, the initial reaction time to shutting in the well shall be timed as well as the total time for the crew to complete its entire put drill assignment. The times must be recorded on the IADC Driller's log as "Blowout Control Drill".

Drill No.:		
Reaction Time to Shut-in:	minutes,	seconds.
Total Time to Complete Assignment:	minutes,	seconds.

I. Drill Overviews:
   A. Drill No. 1 – On-bottom Drilling
      1. Sound the alarm immediately.
      2. Stop the rotary and hoist the Kelly joint above the rotary table.
      3. Stop the circulatory pump.
      4. Close the drill pipe rams.
      5. Record casing and drill pipe shut-in pressures and pit volume increases.
   B. Drill No. 2 – Tripping Drill Pipe:
      1. Sound the alarm immediately.
      2. Position the upper tool joint just above the rotary table and set the slips.
      3. Install a full opening valve inside blowout preventer tool in order to close the drill pipe.
      4. Close the drill pipe rams.
      5. Record the shut-in annular pressure.

II. Crew Assignments
   A. Drill No. 1 – On-bottom Drilling:
      1. Driller
         a) Stop the rotary and hoist the Kelly joint above the rotary table.
         b) Stop the circulatory pump.
         c) Check flow.
         d) If flowing, sound the alarm immediately.
         e) Record the shut-in drill pipe pressure.
         f) Determine the mud weight increase needed or other courses of action.
      2. Derrick Man
         a) Open choke line valve at BOP.
         b) Signal Floor Man #1 at accumulator that choke line is open.
         c) Close choke upstream valve after pipe rams have been closed.
         d) Read the shut-in annular pressure and report readings to Driller.
      3. Floor Man #1
         a) Close the pipe rams after receiving the signal from the Derrick Man.
         b) Report to Driller for further instructions.
      4. Floor Man #2
         a) Notify the Tool Pusher and Operator Representative of the H2S alarms.
         b) Check for open fires and, if safe to do so, extinguish them.
         c) Stop all welding operations.
         d) Turn-off all non-explosive proof lights and instruments.

e) Report to Driller for further instructions.

5. Tool Pusher
   a) Report to the rig floor.
   b) Have a meeting with all crews.
   c) Compile and summarize all information.
   d) Calculate the proper kill weight.
   e) Ensure that proper well procedures are put into action.
6. Operator Representative
   a) Notify the Drilling Superintendent.
   b) Determine if an emergency exists and if so, activate the contingency plan.

B. Drill No. 2 – Tripping Pipe:
   1. Driller
      a) Sound the alarm immediately when mud volume increase has been detected.
      b) Position the upper tool joint just above the rotary table and set slips.
      c) Install a full opening valve or inside blowout preventer tool to close the drill pipe.
      d) Check flow.
      e) Record all data reported by the crew.
      f) Determine the course of action.
   2. Derrick Man
      a) Come down out of derrick.
      b) Notify Tool Pusher and Operator Representative.
      c) Check for open fires and, if safe to do so, extinguish them.
      d) Stop all welding operations.
      e) Report to Driller for further instructions.

   3. Floor Man #1
      a) Pick up full opening valve or inside blowout preventer tool and slab into tool join above rotary table (with Floor Man #2)
      b) Tighten valve with back-up tongs.
      c) Close pipe rams after signal from Floor Man #2.
      d) Read accumulator pressure and check for possible high pressure fluid leaks in valves or piping.
      e) Report to Driller for further instructions.
   4. Floor Man #2
      a) Pick-up full opening valve or inside blowout preventer tool and tab into tool joint above rotary table (with Floor Man #1)
      b) Position back-up tongs on drill pipe.
      c) Open choke line valve at BOP.
      d) Signal Floor Man #1 at accumulator that choke line is open.
      e) Close choke and upstream valve after pipe rams have been closed.
      f) Check for leaks on BOP stack and choke manifold.

g) Read annular pressure.
h) Report readings to the Driller.

5. Tool Pusher
   a) Report to the rig floor.
   b) Have a meeting with all of the crews.
   c) Compile and summarize all information.
   d) See that proper well kill procedures are put into action.
6. Operator Representative
   a) Notify Drilling Superintendent.
   b) Determine if an emergency exists, and if so, activate the contingency plan

Ignition Procedures

Responsibility:

The decision to ignite the well is responsibility of the DRILLING FOREMAN in concurrence with the STATE POLICE. In the event of the Drilling Foreman is incapacitated, it becomes the responsibility of the RIG TOOL PUSHER. This decision should be made only as a last resort and in a situation where it is clear that:

1. Human life and property are endangered.
2. There is no hope of controlling the blowout under the prevailing conditions.

If time permits, notify the main office, but do not delay if human life is in danger. Initiate the first phase of the evacuation plan.

Instructions for Igniting the Well:

1. Two people are required for the actual igniting operation. Both men must wear self-contained breathing apparatus and must use a full body harness and attach a retrievable safety line to the D-Ring in the back. One man must monitor the atmosphere for explosive gases with the LEL monitor, while the Drilling Foreman is responsible for igniting the well.
2. The primary method to ignite is a 25mm flare gun with a range of approximately 500 feet.
3. Ignite from upwind and do not approach any closer than is warranted.
4. Select the ignition site best suited for protection and which offers an easy escape route.
5. Before igniting, check for the presence of combustible gases.
6. After igniting, continue emergency actions and procedures as before.
7. All unassigned personnel will limit their actions to those directed by the Drilling Foreman.

NOTE: After the well is ignited, burning Hydrogen Sulfide will convert to Sulfur Dioxide, which is also highly toxic. Do not assume the area is safe after the well is ignited.

Training Program

When working in an area where Hydrogen Sulfide (H2S) might be encountered, definite training requirements for all personnel must be carried out. The Company Supervisor will ensure that all personnel at the well site have had adequate training in the following:

1. Hazards and Characteristics of Hydrogen Sulfide.
2. Physicals effects of Hydrogen Sulfide on the human body.
3. Toxicity of Hydrogen Sulfide and Sulfur Dioxide.
4. H2S detection, emergency alarm and sensor location.
5. Emergency rescue.
6. Resuscitators.
7. First aid and artificial resuscitation.
8. The effects of Hydrogen Sulfide on metals.
9. Location safety.

Service company personnel and visiting personnel must be notified if the zone contains H2S, and each service company must provide adequate training and equipment for their employees before they arrive at the well site.

Emergency Equipment Requirements

Lease Entrance Sign:

Should be located at the lease entrance with the following information:

CAUTION- POTENTIAL POISON GAS HYDROGEN SULFIDE

Well Control Equipment:

- A flare line will be located a minimum of 150' from the wellhead to be ignited by a flare gun.
- The choke manifold will include a remotely operated choke.
- A mud/gas separator will be installed to separate gas from the drilling mud.

Mud Program:

The drilling mud program has been designed to minimize the volume of hydrogen sulfide (H2S) circulated to surface. The operator will have the necessary mud products on location to minimize the hazards while drilling in H2S-bearing zones.

Metallurgy:

- All drill strings , casings, tubing, wellhead equipment , the blowout preventer , the drilling spool, kill lines, choke manifold and lines, and all valves shall be suitable for H2S service.
- All elastomers used for packing and seals shall be H2S trim.

Respiratory Equipment:

- Fresh air breathing equipment should be placed at the safe briefing areas and should include the following: Two SCBA's will be placed at each briefing area. A moveable breathing air trailer with 2 SCBA's, 5 work/escape units, ample breathing air hose and manifolds will be on location. The breathing air hose will be installed on the rig floor and derrick along with breathing air manifolds so that it will not restrict work activity. All employees that may wear respiratory will complete a MEQ and be quantitative fit tested 1000' prior to the 1st zone that may contain H2S.

Windsocks or Wind Streamers:

- A minimum of two 10" windsocks located at strategic locations so that they may be seen from any point on location. More will be used if necessary for wind consciousness.
- Wind streamers (if preferred) should be placed at various locations on the well site to ensure wind consciousness at all times. (Corners of location).

Hydrogen Sulfide Detector and Alarms:

- 1 - Four channel H2S monitor with audible and visual alarms, strategically located to be seen and heard by all employees working on the well site. All sensors will be bump tested or calibrated if necessary on a weekly basis. The alarms will be set to visually alarm at 10 PPM and audible at 14 PPM.
- Four (4) sensors located as follows: #1 -Rig Floor, #2 & #3- Bell Nipple, #4- End of flow line where wellbore fluid is discharged.
- Portable color metric tube detector with tubes will be stored in the Tool Pusher trailer.

Well Condition Sign and Flags:

The Well Condition Sign with flags should be placed a minimum of 150' before entry to the location. It should have three (3) color coded flags (green, yellow and red) that will be used to denote the following location conditions:

GREEN - Normal Operating Conditions

YELLOW - Potential Danger

RED - Danger, H2S Gas Present

Auxiliary Rescue Equipment:

- Stretcher (drilling contractor)
- 2- 100' OSHA approved Rescue lines (drilling contractor)
- First Aid Kit properly stocked (drilling contractor)

Mud Inspection Equipment:

Garret Gas Train or Hach Tester for inspection of Hydrogen Sulfide in the drilling mud system.

Fire Extinguishers:

Adequate fire extinguishers shall be located at strategic locations (provided by drilling contractor)

Blowout Preventer:

- The well shall have hydraulic BOP equipment for the anticipated BHP.
- The BOP should be tested upon installation.
- BOP, Choke Line and Kill Line will be tested as specified by Operator.

Confined Space Monitor:

There should be a portable multi-gas monitor with at least 3 sensors (02, LEL & H2S). This instrument should be used to test the atmosphere of any confined space before entering. It should also be used for atmospheric testing for LEL gas before beginning any type of Hot Work. Proper calibration documentation will need to be provided. (Supplied by Drilling Contractor)

Communication Equipment:

- Proper communication equipment such as cell phones or 2 -way radios should be available at the rig.
- Radio communication shall be available for communication between the company man's trailer, rig floor and the tool pusher's trailer.
- Communication equipment shall be available on the vehicles.

Special Control Equipment:

- Hydraulic BOP equipment with remote control on the ground.
- Rotating head at the surface casing point.
- BOP, Choke Manifold and Process Flow Diagrams (see the attached - previously submitted)
- Patriot Rig #5 SM Choke Manifold Equipment (see the attached - previously submitted)

Evacuation Plan:

- Evacuation routes should be established prior to spudding the well.
- Should be discussed with all rig personnel.

Designated Areas:

Parking and Visitor area:

- All vehicles are to be parked at a pre-determined safe distance from the wellhead.
- Designated smoking area.

Safe Briefing Areas:

- Two safe briefing Areas shall be designated on either side of the location at the maximum allowable distance from the well bore so they offset prevailing winds or they are at a 180 degree angle if wind directions tend to shift in the area.
- Personal protective equipment should be stored at both briefing areas or if a moveable cascade trailer is used, it should be kept upwind of existing winds. When wind is from the prevailing direction, both briefing areas should be accessible.

NOTES:

- Additional personal H2S monitors are available for all employees on location.
- Automatic Flare Igniters are recommended for installation on the rig.

CHECK LISTS

Status Check List

Note: Date each item as they are implemented.

1. Sign at location entrance.
2. Two (2) wind socks (in required locations).
3. Wind Streamers (if required).
4. SCBA's on location for all rig personnel and mud loggers.
5. Air packs, inspected and ready for use.
6. Spare bottles for each air pack (if required).
7. Cascade system for refilling air bottles.
8. Cascade system and hose line hook up.
9. Choke manifold hooked-up and tested. (Before drilling out surface casing.)
10. Remote Hydraulic BOP control (hooked-up and tested before drilling out surface casing).
11. BOP tested (before drilling out surface casing).
12. Mud engineer on location with equipment to test mud for H2S.
13. Safe Briefing Areas set-up.
14. Well Condition sign and flags on location and ready.
15. Hydrogen Sulfide detection system hooked-up & tested.
16. Hydrogen Sulfide alarm system hooked-up & tested.
17. Stretcher on location at Safe Briefing Area.
18. 2-100' OSHA Approved Life Lines on location.
19. 1-20# Fire Extinguisher in safety trailer.
20. Confined Space Monitor on location and tested.
21. All rig crews and supervisor trained (as required).
22. Access restricted for unauthorized personnel.
23. Drills on H2S and well control procedures.
24. All outside service contractors advised of potential H2S on the well.
25. NO SMOKING sign posted.
26. H2S Detector Pump w/tubes on location.
27. 25mm Flare Gun on location w/flares.
28. Automatic Flare Igniter installed on rig.

Procedural Check List

Perform the following on each tour:

1. Check fire extinguishers to see that they have the proper charge.
2. Check breathing equipment to insure that they have not been tampered with.
3. Check pressure on the supply air bottles to make sure they are capable of recharging.
4. Make sure all of the Hydrogen Sulfide detection systems are operative.

Perform the following each week:

1. Check each piece of breathing equipment to make sure that they are fully charged and operational. This requires that the air cylinder be opened and the mask assembly be put on and tested to make sure that the regulators and

masks are properly working. Negative and positive pressure should be conducted on all masks.
2. BOP skills.
3. Check supply pressure on BOP accumulator stand-by source.
4. Check all breathing air mask assemblies to see that straps are loosened and turned back, ready to use.
5. Check pressure on cascade air cylinders to make sure they are fully charged and ready to use for refill purposes if necessary.
6. Check all cascade system regulators to make sure they work properly.
7. Perform breathing drills with on-site personnel.
8. Check the following supplies for availability:
    - Stretcher
    - Safety Belts and ropes.
    - Spare air bottles.
    - Spare oxygen bottles (if resuscitator required).
    - Gas Detector Pump and tubes.
    - Emergency telephone lists.
9. Test the Confined Space Monitor to verify the batteries are good and that the unit is in good working condition and has been properly calibrated according to manufacturer's recommendations.

Briefing Procedures

The following scheduled briefings will be held to ensure the effective drilling and operation of this project:

Pre-Spud Meeting

Date: Prior to spudding the well.

Attendance: Drilling Supervisor
Drilling Engineer
Drilling Foreman
Rig Tool Pushers
Mud Engineer
All Safety Personnel
Key Service Company Personnel

Purpose: Review and discuss the well program, step-by-step, to ensure complete understanding of assignments and responsibilities.

Evacuation Plan

General Plan

The direct lines of action prepared by Caza SAFETY, to protect the public from hazardous gas situations are as follows:

1. When the company approved supervisor (Drilling Foremen, Tool Pusher or Driller) determine that Hydrogen Sulfide gas cannot be limited to the well location, and the public will be involved, he will activate the evacuation plan. Escape routes are noted on the Area Map.
2. Company safety personnel or designee will notify the appropriate local government agency that a hazardous condition exists and evacuation needs to be implemented.
3. Company approved safety personnel that have been trained in the use of the proper emergency equipment will be utilized.
4. Law enforcement personnel (State Police, Local Police Department, Fire Department, and the Sheriff's Department) will be called to aid in setting up and maintaining road blocks. Also, they will aid in evacuation of the public if necessary.

NOTE: Law enforcement personnel will not be asked to come into a contaminated area. Their assistance will be limited to uncontaminated areas. Constant radio contact will be maintained with them.

5. After the discharge of gas has been controlled, "Company" safety personnel will determine when the area is safe for re-entry.

Emergency Assistance Telephone List

PUBLIC SAFETY: 911 or

Lea County Sheriff or Police ..... (575) 396-3611

Fire Department ..... (575) 397-9308

Hospital ..... (575) 492-5000

Ambulance 911

Department of Public Safety ..... (392) 392-5588

Oil Conservation Division ..... (575) 748-1823

New Mexico Energy, Minerals & Natural Resources Department ..... (575) 748-1283

Caza Oil and Gas, Inc:

Office .....(423) 682-7424

VP Operations: Tony Sam

Office .....(423) 682-7424

Cell .....(432) 556-6708

Project Manager: Steve Morris

Cell .....(972) 835-3315

Project Manager: Joel Stockford

Cell .....(972) 835-3349

The geologic zones that will be encountered during drilling may contain hazardous quantities of H2S. The accompanying map illustrates the affected areas of the community. The residents within this radius will be notified via a hand delivered written notice describing the activities, potential hazards, and conditions of evacuation, evacuation drill siren alarms and other precautionary measures.

Evacuee Description:

Residents: THERE ARE NO RESIDENTS WITHIN 3000' ROE.

Notification Process:

A continuous siren audible to all residence will be activated, signaling evacuation of previously notified and informed residents.

Evacuation Plan:

All evacuees will migrate laterally toward the wind direction.

Caza Oil and Gas, Inc. will identify all home bound or highly susceptible individuals and make special evacuation preparations, interfacing with the local and emergency medical service as necessary.

MAPS AND PLATS

See the attached map showing the 3000' ROE clarification.